University District Community Council
4534 University Way N.E.
Seatttle,WA 98105

February 23, 2010

Paula Hammond
Secretary of Transportation
Wasington State Department of Transportation
c/o Jenifer Young
SR 520 Project Office
600 Stewart St., Suiet 520
Seattle, WA 98101

RE: Supplemental Draft Environmental Statement
SR 520 Bridge Replacement and HOV Project

Dear Secretary Hammond and Environmnetal Manager Young:

C-001-001

The University District Community Council favors Alternative A+ without the Arboretum ramps. Alternative A is a significant improvement over the version of Alternative A in the 2006 draft environmental impact statement. Alternative A would accomplish the statutory purposes of the project with the least damage to the Arboretum, the Union Bay wetlands, the environment, the UW Campus and the surrounding communities. Options K and L are not acceptable. Not only do they do irreparable damage to the environment, neither design serves transit, motorists or freight mobility as well as Alternative A; and each design causes substantially more congestion on local streets in North East Seattle than Alternative A.

C-001-002

A scan from the source documents to the Executive summary shows a progressive softening of the faults of Option K:.

Example 1: The Transportation Discipline Report ("TDR") page 6-40, reports that traffic at the intersection of NE Pacific Street and Montlake Boulevard would exceed its capacity by 38% during the evening rush hour, 2030, affecting intersection to the north, south, and west.; it would rate an LOS F. . Exhibit 6-3 of the shows that Alternative A has a better traffic flow on 8 of 11 intersections in North East Seattle and is equal on the other three.

The SDEIS, page 5-18, states that Option K would degrade operations "at only one intersection (Montlake Boulevard/NE Pacific Street) during the afternoon peak hour .... because there would be more vehicles traveling northbound through the intersection. AN inset to the diagram on Exhibit 5.1-10, at page 5-15, shows the intersection with a red dot, LOS F.

The Executive Summary, page 29 clips this down to "Under Options K and L, traffic volumes north and south of the Montlake Cut would increased when compared to the No Build Alternative and Option A."

Example 2: The TDR pages 6-39 and 12-9 and 10 states that Option K's eastbound off ramp to its turnaround leading to its SPUI during the 2030 P.M. peak would operate over capacity during peak hours and congestion would back up on to SR 520 mainline. It also notes that about 1000 vehicles per hour would change lanes within 500 feet.

The SDEIS and the Executive Summary make no mention of either effect.. The softening resembles sunlight playing on a mesa in the desert. The discipline reports lay bare the truths about Option K in the sunlight of mid-afternoon; the SDEIS eases up like a later afternoon sun; and the executive summary washes out the faults like the twilight rays of a setting sun. Both documents should be reviewed toward a more critical and accurate disclosure of the consequences of Options K and L.

C-001-003

Trucks hauling materials should use SR 520 to I-5 or to the eastside wherever possible. Use of North East Pacific Street, 15th Avenue N.E., and N.E. 45th St. should be avoided to the maximum extent. These streets pass University Hospital and along already streets already heavily congested with bus and business traffic. University District streets will be used for construction of Sound Transit stations and other projects in our vicinity and that imposes a substantial sacrifice upon our residents and businesses for accommodating public works and area development.

C-001-004

Wherever appropriate, the many recommendations and representations contained in the discipline reports and in the SDEIS for avoiding, and mitigating adverse consequences in the design, construction, and operation of the project should be included in the record of decision and made a part of an intergovernmental agreement for the project along with a recommendation for a corridor management agreement.

Yours truly

Matt Fox
President

C-002-001

MR. FOX: Hello. Thank you for this opportunity to speak. I'm Matt Fox. I'm president of the U District Community Council and, needless to say, the Community Council favors alternative A-Plus without the Arboretum ramps.

Alternative A is a significant improvement over the version of Alternative A in the 2006 draft EIS. It would accomplish the statutory purposes of the project with the least damage to the Arboretum, the Union Bay wetlands, the environment, the UW campus, and the surrounding communities.

Options K and L are not acceptable. For all I've heard, I guess I'm shocked about how much bigger A-Plus is. K and L are over 240 feet wide in places where A is 160 feet. So those have equal, if not greater, impacts in terms of being large freeways.

Not only do these options do irreparable damage to the environment, neither of those designs serves transit, motorists, or freight mobility as well as Alternative A, and each design causes substantially more congestion on local streets and Northeast Seattle than Alternative A.

C-002-002

Trucks hauling materials during the construction process should use SR 520 to I-5 or to the Eastside wherever possible. Use of Northeast Pacific Street, 15th Avenue, and Northeast 45th should be avoided to the maximum extent. These streets pass University Hospital and along these streets already heavily congested with bus and business traffic. U District streets are already used for construction of Sound Transit stations and other major projects, and we already have

C-002-002

a lot of traffic that we're experiencing as a result of that.

C-002-003

Wherever appropriate, the many recommendations and representations contained in the discipline reports and in the SDEIS for avoiding and mitigating adverse consequences in the design and construction and operation of the project should be included in the Record of Decision and made a part of the intergovernmental agreement for the project, along with the recommendation for corridor management.

C-002-004

One thing the U District Community Council -- I can give you the letter with some more comments -- but one thing we support is definitely a firm commitment on the part of WSDOT not to restripe this new facility, regardless of which alternative you chose, to more than six lanes.

We've seen that happen on the West Seattle Bridge, where we're told that we must have 12-foot-wide lanes, absolutely, for safety purposes, and then they restripe them to 9 and put a bus lane in. I was for the bus lane, but there is a precedent for that. We'd like to see further restrictions on the number of lanes on the facility.

And the U District Community Council definitely supports future light-rail transit on 520 and is glad that all the alternatives consider this, but that's likely at least 10 years away. With the current I-90 light-rail line that's still in its infancy, light-rail trains that are a possibility in the distant future should not be allowed to delay this project we've already been studying for 10 years, particularly since light rail to the U District is 10 years behind

C-002-004

already.

So there is a plan, it is the least impactful on most neighborhoods and gives the best results and the best bang for your buck, so that's what we support.

Thank you.

(End of comment.)

C-003-001

MS. MILLER: I'm Paige Miller. I'm speaking on behalf of the Arboretum Foundation. Recent polling has confirmed that the public on both sides of the lake, east and west, care deeply about two things related to SR 520: making it work for high-capacity transit, including light rail, and minimizing the harm to the Arboretum.

Option A-Plus does neither one. It eliminates the Montlake Flyer stop and doesn't connect all the bus riders to the new Sound Transit station at the University, and it plans for a roadway across the lake and the Arboretum that is far wider than it needs to be.

The current four-lane roadway is about 55 feet wide. It should never have been built across the Arboretum in the early 1960s, but there it is. So okay. Now we must accept the addition of two more lanes for transit and perhaps high-capacity vehicles, but why does that mean that the road needs to be nearly tripled in width, to 150 feet?

Triple the width to add two more lanes? Or is all of this width simply a way to make the roadway concrete-ready for eight or even 10 lanes in the future. We believe the road does not need to be more than 100 feet wide, plenty for six lanes but not restripable for eight.

C-003-002

The SDEIS proposes a viaduct across the lake, double-deck, to handle through traffic above and maintenance vehicles below. It will create a wall near and across the Arboretum. It needs to be lower and less obtrusive across the lake and across Foster Island.

C-003-003

The SDEIS shows the noise from the new roadway in the Arboretum will be even more intrusive than it is today but states that noise walls are not cost-effective. We need quiet pavement as a design feature,

C-003-003 not more noise and not noise walls that visually cut the Arboretum off from the water.

C-003-004 Option A-Plus or Sub A will continue to use Lake Washington Boulevard as a long on- and off-ramp through the Arboretum. We need an option that moves traffic off the historic Park Boulevard and over to the four-lane city arterial of 24th and Montlake, where it belongs.

C-003-005 And finally, we need a roadway that is built transit-ready within the promised six lanes so that we don't face a process like this in another few years to make the roadway even wider to retrofit light rail onto it. This is the only way to truly protect the State's only recognized Arboretum, and it can be done and within the scope of the SDEIS.

In short, make it narrower, lower, no ramps, and less traffic on Lake Washington Boulevard, and transit-ready, not a recipe for more concrete later.

Thank you very much.

(End of comment.)

C-004-001 MR. DUBMAN: Hi. Thank you. I'm Jonathan Dubman from Montlake. I know the project team very well. I've been involved in this project for almost a dozen years or more. And I'm from the Montlake neighborhood and here on behalf of the Coalition For A Sustainable 520. That includes the community councils of Madison Park, Laurelhurst, Montlake, North Capitol Hill, Portage Bay, Roanoke Park, the boating community; and our coalition is also joined by the Mayor and the City Council and the Sierra Club and the Husky Bicycle Club in opposing the A-Plus plan.

And that is not because we don't think that 520 needs to be replaced. It does need to be replaced. But the A-Plus plan has a number of serious flaws. And just starting from I-5, in very brief

C-004-002 summary, they are: We have a Portage Bay viaduct that is seven lanes. The State law says that the corridor is supposed to be six lanes.

C-004-003 The seven-lane Portage Bay viaduct is wider, in part, to support transit viability through there. But then, as the previous commenter mentioned, the transit is actually removed -- transit access is actually removed from the highway itself, limiting access to commuters to five buses a day.

C-004-004 Then, coming to Montlake, we have a second drawbridge that does not bring bus stops any closer to the rail station, does not really improve transit reliability or fix the traffic-congestion issues in that area. It costs $81 million we don't have, takes down our homes, makes a giant interchange, and can never be used for light rail.

C-004-005 Meanwhile, we have the entire interchange where, even after 13

C-004-005 years of study on this project, as far as I can tell, nobody has spent a day thinking about how light rail might actually be inserted into that interchange, despite the fact that we're supposedly building this floating bridge wide enough for -- beefy enough to accommodate it.

C-004-006 I think I'm out of time now. But it's too big, too high, too wide for the Arboretum, doesn't work for transit, doesn't work for trains, doesn't work for bikes, doesn't work for traffic, doesn't work for Seattle, doesn't work for the region, the state, this nation, and the economy, or the planet. We're going to work to make it better.

Thank you.

(End of comment.)

From: Rocki Horton [mailto:rhorton@satsop.com]
Sent: Thursday, March 04, 2010 4:08 PM
To: SR 520 Bridge SDEIS
Subject: Support Letter for 520 Pontoon Project

Please delivery this e-mail and attachment to the attention of Jennifer Young.

Thank you,

Rocki Horton
Satsop Development Park
Phone: 360-482-1606
Fax: 360-482-1555

*** eSafe2 scanned this email for malicious content ***
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Satsop Development Park

Grays Harbor Public Development Authority

50 Enterprise Lane, Suite 101, Elma, WA 98541 • 360.482.1600 • 1.866.5SATSOP • FAX 360.482.1555 • www.satsop.com

March 3, 2010

The Honorable Christine Gregoire
Office of the Governor
P.O. Box 40002
Olympia, WA 98504-0002

Re: Support for the SR 520 Bridge Replacement and HOV Program

Dear Governor Gregoire:

C-005-001

It is my pleasure to forward to you a resolution recently adopted by the Board of Directors of the Grays Harbor Public Development Authority (GHPDA), expressing our strong support for your leadership to keep the SR 520 Bridge project on schedule and moving forward.

The GHPDA oversees the Satsop Development Park, located in eastern Grays Harbor County. The Park is the site for WSDOT's construction of a "mock-up" test pontoon, as part of the overall pontoon construction project which is slated for Grays Harbor. While our community may be physically removed from the actual 520 Bridge itself, we are very much affected by the project. Grays Harbor worked tirelessly to earn the pontoon construction siting and we are committed to that partnership. Our county, with an unemployment rate of over 14%, is looking forward to the positive economic impacts this project will create. Every job makes a difference here in Grays Harbor, and this project will profoundly improve our community's economic circumstances.

Our Board of Directors is comprised of Port Commissioner Jack Thompson; County Commissioner Al Carter; PUD Commissioner Tom Casey; and private business members John van Dijk, Steve Poler, Shelli Hopsecger and Art Tanner. All stand in strong support of your efforts to keep this project moving forward. We would like to point out the following:

C-005-002

• The SR 520 Pontoon Construction Project would construct new pontoons that would be used to restore the existing traffic capacity of the Evergreen Point Bridge in the event of a catastrophic failure. WSDOT is preparing an EIS to evaluate the effects of building these pontoons and storing them until they are needed. These pontoons cannot be transported and assembled on the lake until either, 1) a catastrophic failure occurs or 2) a decision is reached as part of the I-5 to Medina Bridge Replacement and HOV Project. Having pontoons ready for such a catastrophic failure would allow the bridge to be restored several years faster than if the pontoons were constructed in response to a disaster. *Maintaining the schedule of the SDEIS is critical to maintaining the schedule to replace the floating bridge portion of the corridor.*

• In January 2008, you directed WSDOT staff to develop an accelerated plan and schedule to replace the vulnerable SR 520 structures. That resulted in a letter to the Legislature from the Governor's Office in March 2008 indicating the need to move forward more quickly and outlining how that would be achieved by opening the new bridge to drivers in 2014. That letter supported legislative action that occurred in 2008 to move the project forward. Moving forward with construction of the bridge replacement is tied to the completion of the SDEIS process on the I-5 to Medina segment of the corridor. As a result, *in order to meet the 2014 schedule a preferred alternative must be selected by Spring 2010 to complete the environmental process and begin construction by 2012.*

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C-005-003

• To date, $3 million has been expended out of the State Motor Vehicle Account along with an additional $551 million of Nickel & TPA Package funds. Addressing additional alternatives will only add to the taxpayer burden of cost, further delay the process and increase the risk of a catastrophe.

Delaying this project to study yet more alternatives is not acceptable. If we allow this project to get sidetracked another two to three years, we are allowing a never ending cycle that will be repeated time and again. Three years from now there could very likely be new elected officials at the local level who will again want to "take another look" at the project, and so on into perpetuity when clearly the legal requirements for alternatives review have been met and exceeded.

Thank you, Governor Gregoire, for your dedication to the SR 520 Bridge Replacement and HOV Program moving forward. If there is any way in which we can be of service to you in this endeavor, please do not hesitate to ask.

Sincerely Yours,

Tami Garrow

Tami L. Garrow
President and CEO

Cc: Senator Jim Hargrove
Senator Brian Hatfield
Senator Tim Sheldon
Representative Dean Takko
Representative Brian Blake
Representative Lynn Kessler
Representative Kevin Van De Wege
Representative Kathy Haigh
Representative Fred Finn

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GRAYS HARBOR PUBLIC DEVELOPMENT AUTHORITY
RESOLUTION NO. 2010-02

A Resolution of the Grays Harbor Public Development Authority (hereinafter "GHPDA") in support of moving forward to replace the SR 520 bridge in Seattle.

WHEREAS GHPDA is committed to advocating for successful statewide solutions to our transportation challenges.

WHEREAS statewide safety and economic health is fundamentally linked to an efficient transportation infrastructure system, with the ability to move people and goods a must to maintain and enhance our economy and growth in family-wage jobs.

WHEREAS we believe the SR 520 replacement project is essential to our State's economy and job-base, and its significant risk of structural failure requires decisive leadership.

WHEREAS we believe a new bridge has the potential to improve mobility, enhance safety and the environment, and create good construction jobs at a time when they are needed most.

WHEREAS we believe sufficient time has been devoted to the process, and we wish to work with legislators, government agencies and stakeholders to play a constructive role in expediting any remaining decision-making.

WHEREAS it's important that we move forward because as we all know, the longer we wait the more expensive the project becomes.

WHEREAS a broad group of labor, civic, and business interests share a common desire to move the SR 520 replacement project forward.

WHEREAS a diverse Legislative Workgroup and team of experts has invested hundreds of hours over the past several months to review and analyze crucial data, solicit input from stakeholders, and ultimately recommend a draft design and funding plan for the 520 bridge replacement.

WHEREAS after much study, public outreach and deliberation, a preferred option was subsequently adopted by this Legislative Working Group as its preferred alternative on December 8, 2009.

AND WHEREAS we understand this option called A+ provides strong transit connections and congestion relief, creates jobs, provides a relatively affordable solution, and reduces construction and operating impacts on the environment, residents and adjacent businesses and facilities.

NOW THEREFORE, BE IT RESOLVED that the Grays Harbor Public Development Authority Board of Directors supports moving forward at this time without delay to replace the SR 520 Bridge.

ADOPTED by the Board of Directors of the Grays Harbor Public Development Authority this 16th day of February 2010 and duly authenticated in open session by the signatures of all Board members voting in favor thereof.

Commissioner Al Carter
Director Position No. 1

Commissioner Tom Casey
Director

ABSENT
Commissioner Jack Thompson
Director Position No. 3

Steve Poler
Director Position No. 4

John Van Dijk
Director Position No. 5

Shelli Hopsecger
Director Position No. 6

Art Tanner
Director Position No. 7

From: Jared Ross [mailto:jross@nwlaborers.org]
Sent: Monday, February 08, 2010 11:49 AM
To: SR 520 Bridge SDEIS
Subject: Public Comment

C-006-001

I believe that this project will greatly help the traffic in King County, and the people of grays harbor will reap the benefits of the construction end. That county deserves to gain from this project. Also by having a PLA on this project will ensure everyone gets paid what they deserve. Because we all know that a lot of contractors, mostly on prevailing wage projects, don't pay the right wages and then hold the thought of losing their job over the head of the worker. Thanks for taking the time to read this e-mail.

Jared Ross
Washington & Northern Idaho
District Council of Laborers
360-269-0779
jross@nwlaborers.org

*** eSafe1 scanned this email for malicious content ***
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From: Steve Morgan [mailto:stevespersonal@bluesky-church.com]
Sent: Wednesday, February 17, 2010 11:37 AM
To: SR 520 Bridge SDEIS
Subject: Please consider

C-007-001 Please consider applying the toll only during commute days (Monday through Friday) and allowing the weekends to be free for the recreation of our local citizens. This also includes attending church. I lead a church in Bellevue that has many members living in Seattle (and I know there are many churches in the area on both sides of the bridge that have the same circumstance). It will be very challenging for us if people must pay a toll to use the bridge to attend church. I really appreciate your consideration!

Steve Morgan
Blue Sky Church

From: Erin O'Connor [mailto:erinoc28@comcast.net]
Sent: Monday, March 08, 2010 2:45 PM
To: Young, Jenifer (Consultant); SR 520 Bridge SDEIS
Cc: Brooks, Allyson; 'Houser, Michael (DAHP)'; governor.gregoire@governor.wa.gov; Turner, Joyce; Arnold-Williams, Robin; Brown, Marty; edward.murray@leg.wa.gov; frank.chopp@leg.wa.gov; jamie.pedersen@leg.wa.gov; mike.mcginn@seattle.gov; 'Richard Conlin'; mike.obrien@seattle.gov; tom.rasmussen@seattle.gov; 'Jean Godden'; tim.burgess@seattle.gov; Nick.Licata@Seattle.Gov; 'Sally Clark'; bruce.Harrell@Seattle.gov; sally.bagshaw@seattle.gov; Meredith, Julie; Everett, Randolph (FHWA); Williams, Scott; ken.juell@wsdto.wa.gov; Karen.Gordon@seattle.gov; 'Ted Lane'; 'Cheryl Thomas'
Subject: EOC Comments on December 2009 Cultural Resources Discipline Report in Jan 2010 SDEIS

Erin O'Connor
2612 10th Ave E
Seattle, WA 98102
March 8, 2010

Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart Street, Suite 520
Seattle,WA 98101

Dear Ms. Young:

C-008-001

We expect the attached comments to influence the accuracy and thoroughness of the *Cultural Resources Discipline Report* that goes into the *Final Environmental Impact Statement*. These comments will also serve the growing record of our exchanges, over four drafts, with WSDOT consultants over persistent inaccuracies that have led to flawed findings plus the introduction of new misinformation with respect to the Roanoke Park Historic District and historic resources in the Portage Bay neighborhood in *the Cultural Resources Discipline Report* part of the January 22, 2010, *Supplemental Draft Environmental Impact Statement*.

A pattern of repeated mistakes and omissions and the introduction of new mistakes in the four drafts of the *Cultural Resources Discipline Report* we have seen persists. Our prompt, thoroughgoing, and painstaking reviews and sequential commenting that would have made many of the mistakes easy to correct call into question whether the *Cultural Resources Discipline Report* has been competently prepared.

The extensive *Seattle Times* coverage of the sorry history of the Hood Canal Graving Dock project included Governor Gary Locke's reflection that

"It is really unfortunate that so much money has been spent on the project, and that the experts didn't detect the magnitude of this historic site at the beginning."

A subsequent external analysis of the project by Foth and Van Dyke and Associates, "an engineering consulting firm specializing in archaeology and cultural resource management on large scale construction projects," found that

"The permit streamlining process entered the project late and the timeline limited the ability of the permitting agencies to fully consider site alternatives.

"Overly focused on Endangered Species Act concerns, there was inadequate attention given to archaeological, socioeconomic and geological considerations." The archaeologists contributing to the

C-008-001

Cultural Resources Discipline Report (or its equivalent at that time) for the graving dock project estimated that only 25 burials would be found within the construction site, whereas "335 individuals and their funerary objects, along with some 1,000 of isolates" and 10,000 artifacts had been unearthed by the time the project was halted.

The report also found

"Considerable weakness in the archaeological assessment" and said that WSDOT "did not follow consistent protocols or gather sufficient information for addressing compliance with the cultural resources assessment and consultation requirements of Section 106 of the National Historic Preservation Act."

The report also noted

"WSDOT's lack of timely notification and involvement of the Lower Elwha Tribe and the State Historic Preservation Officer and the divergent opinions that increasingly surfaced as the true extent of the village was discovered."[1]

According to a History Link Essay on the project WSDOT paid less than $7,000 for the original survey.

According to a brief wikimapia.org account of the project,

"This case stands out as a fine case study of what is wrong with low bid contracting of all sorts. If the state had hired contractors who had then undertaken an in-depth and properly conducted study of the location, then they would have identified that there were intact archaeological deposits (thereby warranting further study)."

A March 20, 2003, joint letter from the Army Corps of Engineers and the Washington Department of Ecology responding to WSDOT's application for permits for construction of the graving dock highlights a similar inadequacy in WSDOT's research, this time in WSDOT's Environmental Investigation Results report (October 25, 2002), WSDOT's Geotechnical and Hydrologic Study report (December 3, 2002), and WSDOT's Supplemental Environmental Investigation Results (December 3, 2002). The letter notes that

"The chemical measurements were incomplete and did not include important contaminants" and that "the sampling was insufficient in number and spatial extent."

The letter also says that the permit's proposal for disposing of excavated materials

> "also threatens historic/cultural resources, a fact not mentioned in the permit application."

House Bill 2624 signed into law by Governor Gregoire March 31, 2008, legislated new standards for the treatment of human remains, including not just tribal remains but also remains found in all pioneer cemeteries.[2]

The parallels with WSDOT's flawed Section 106 process and findings, now with respect to the historic built environment for the SR 520 Bridge Replacement and HOV Project, are striking. We had hoped that

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[1] The Foth analysis project, conducted in collaboration with the State of Washington's Joint Legislative Audit Review Committee (JLARC) received the 2007 Impact Audit of the Year Award from the National Legislative Program Evaluation Society (NLPES).

[2]Although WSDOT was forced to choose a new site and a reburial ceremony was held after the Tribe had brought a lawsuit on treatment of the remains and the site, the some 10,000 artifacts unearthed by WSDOT at the original site reside now in 900 cedar boxes at the Burke Museum. WSDOT refuses to release the artifacts to the Tribe until the Tribe has constructed a cultural center to house them. WSDOT has leased the site to the Tribe but has not taken any steps to help finance a cultural center. Fund-raising to build a center on land that is leased, not owned, is difficult.

C-008-001

analogous higher standards, without the need for lawsuits, audits, and new legislation, would be brought to bear on the representation, assessment, effects findings, and avoidance, minimization, and mitigation strategies for historic resources of the built environment for this project. Instead, we kept receiving apologies and excuses, through four drafts of the *Cultural Resources Discipline Report* for the SDEIS, that there simply was not enough time to do the job properly. The refusal to take that time or to grant that time to its consultants—that is, the refusal to perform accurate and substantiated assessments and findings—reflects poorly on the professionalism and credibility of WSDOT.

C-008-002

We request remedy of the many mistakes in the December 2009 *Cultural Resources Discipline Report* and a Memorandum of Agreement between WSDOT and the Portage Bay/Roanoke Park Community Council that discusses ways of avoiding, minimizing, and mitigating the obvious adverse effects that this project will have on the historic resources of the built environment in the Roanoke Park Historic District and the Portage Bay neighborhood.

C-008-003

In addition, with the prospect of phased implementation looking increasingly more likely and the consequent projection in the *SDEIS* of deferral indefinitely of the construction of the lid at East Roanoke Street over I-5 and the lid between 10th Avenue East and Delmar Drive East over SR 520, we request that projections of noise, air quality, and other effects on the Roanoke Park Historic District and the Portage Bay neighborhood reflect data for both lidded and unlidded construction and operation. (Note that at least one member of the Legislative Workgroup has already proposed not constructing the lid over I-5 at East Roanoke Street as an economizing measure.)

C-008-004

The current *CRDR* bases its findings of no adverse effects on lidded, noise-walled designs. We also request that noise data be developed from measurements and projections of noise levels at bedroom height.

And even though WSDOT test results for quieter pavement have been skewed by improper installation, we request that data on the designed use of quieter pavement on the bridges, highway, and local arterials and the effects predicted for bedroom heights be presented in the *FEIS* noise discipline report.[3]

C-008-005

Misinformation and diminutions in the *Cultural Resources Discipline Report* of the extent and significance of historic resources in the Roanoke Park Historic District and of historic resources in the Portage Bay neighborhood that will be affected by this project, repeated now in the December 2009 *Visual Quality and Aesthetics Discipline Report* and other discipline reports in the *SDEIS*, have been put at the service of findings of "no adverse effect" and thus no need for a Memorandum of Agreement to address adverse effects to the historic resources in these neighborhoods.

The diminishing language needs to be corrected, the adverse effects need to be acknowledged, and the mitigation of the adverse effects should be taken up in a Memorandum of Agreement.

C-008-006

WSDOT's refusal, announced in its *Indirect and Cumulative Effects Discipline Report*, to mitigate cumulative effects on the ground that it has no jurisdiction over other agencies is a distortion of the intent of the cumulative effects definition. With the exception of the Sound Transit University Tunnel project, which WSDOT promises to discuss with that agency, the past, present, and reasonably foreseeable effects on historic resources in our communities come from WSDOT projects. WSDOT presumably has jurisdiction over itself. "There is already a bridge there, so a [wider, higher] replacement bridge [moved north in front of more of our homes] would not be an adverse effect," for example, cries out for a cumulative adverse effects finding instead.

C-008-007

Hiding local cumulative effects in region-wide study areas is another evasive tactic that masks real adverse effects—on the salmon in Portage Bay, the Montlake Cut, Union Bay, and Lake Washington, for instance, where huge amounts of money have been spent to make the waters hospitable to salmon after the damage

[3] Consultation with the Arizona Department of Highways on installment and maintenance of quieter pavement would be a good idea. Quiet pavement in Flagstaff has survived chains, studded tires, and freezing and thawing for more than seventeen years.

C-008-007

done by the first SR 520 project. WSDOT would undo that work and expenditure and excuse the ruin with a net loss figure that takes in the waters of the whole Puget Sound region.

C-008-008

So much evasiveness and bad faith on the part of WSDOT in the *SDEIS* of January 22, 2010, does not bode well for communities who have earnestly tried to work with this agency and who have been forced by WSDOT's fecklessness to do much of the work of the agency.

Sincerely,

Erin O'Connor
Historic Resources Chair, Portage Bay/Roanoke Park Community Council
Roanoke Neighborhood Elms Fund
Friends of Roanoke Park

Cc: Dr. Allyson Brooks, State Historic Preservation Officer, DAHP
Michael Houser, State Architectural Historian, DAHP
Governor Christine Gregoire
Sen. Edward Murray
Rep. Frank Chopp
Rep. Jamie Pedersen
Mayor Mike McGinn
Seattle Councilmember Richard Conlin, Chair, Regional and Sustainable Development; Chair, SR 520
Seattle Councilmember Mike O'Brien, Vice-Chair, Regional and Sustainable Development
Seattle Councilmember Tom Rasmussen, Chair, Transportation
Seattle Councilmember Jean Godden, Vice-Chair, Transportation; Member, Regional and Sustainable Development
Seattle Councilmember Tim Burgess, Alternate, Regional and Sustainable Development; Member, Transportation
Seattle Councilmember Nick Licata, Member, Transportation
Seattle Councilmember Sally Clark, Alternate, Transportation
Seattle Councilmember Bruce Harrell, Alternate, Transportation
Seattle Councilmember Sally Bagshaw
Julie Meredith, P. E., SR 520 Program Director, WSDOT
Randolph Everett, Major Projects Oversight Director, FHWA
Scott Williams, Cultural Resources Program Manager, WSDOT
Ken Juell, Cultural Resources Specialist, WSDOT
Karen Gordon, City Historic Preservation Officer, Seattle
Ted Lane, President and Transportation Chair, Portage Bay/Roanoke Park Community Council
Cheryl Thomas, Beautification Chair and Alternate Representative PB/RP CC
Dan Bricklin, Esq.
Wes Larson, Esq.

C-008-009

Formal Comments on December 2009 Iteration of WSDOT's *Cultural Resources Discipline Report* included in the January 22, 2010, release of the *Supplemental Draft Environmental Impact Statement* for the SR 520 Bridge Replacement and HOV Project

The three early parts of these comments take up the Multiple Adverse Effects of the construction and operation of the project on historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood, the Cumulative Adverse Effects of the project, and the Flawed Section 106 Negotiation Process with WSDOT consultants. **The rest of the comments, in the attached file,** take up in a condensed version specific errors and oversights, page by page, with respect to historic resources in these neighborhoods and the thus flawed effects findings in the December 2009 *Cultural Resources Discipline Report*.

Multiple Adverse Effects

C-008-010 More than a third of the contributing 80 historic resources and almost half of the individually eligible 57 historic resources in the Roanoke Park Historic District and many resources in the Portage Bay neighborhood both surveyed and unsurveyed would suffer multiple adverse effects from the demolition, construction, and operation of the SR 520 Bridge Replacement and HOV Project from all of its options and most extremely from Option A and its suboptions. Additional historic resources on the western side of the Roanoke Park Historic District and unsurveyed properties in the Portage Bay neighborhood would suffer adverse effects from hauling, demolition vibration and dust, reconstruction, and operation, particularly if lids are deferred as they are said to be in descriptions of the Phased Implementation Scenario predicted in the *SDEIS* to be the most likely outcome.

Construction

C-008-011 Properties in the Portage Bay basin are noted for their **views**, which would be adversely affected by construction of the wider Portage Bay Bridge moved farther north, construction just south of the NOAA Fisheries Building, and the construction of an additional connector across or under the Montlake Cut. Barges, work bridges, machinery, and construction activity would introduce high contrast changes over a seven-and-a-half-year to eight-year construction period (*Section 4(f) Evaluation*, p 65) to the views east from more than a third of the Roanoke Park Historic District's contributing historic resources and almost half of the historic district's individually eligible historic resources and would thus significantly affect setting, feeling, and characteristic use of the historic district.

The same **visual blight** would be imposed on the three individually eligible historic resources in the Portage Bay neighborhood that have thus far been surveyed and on many more historic resources in the Portage Bay neighborhood that have not been surveyed—on houses along both sides of Delmar Drive East that enjoy spectacular views of the bay and on historic resources in the houseboat community and on both sides of Fuhrman-Boyer Avenue East.

C-008-012
- We request that the survey of historic resources in the Portage Bay neighborhood be complete and that it include historic resources on both sides of Delmar Driver East, resources along both sides of Fuhrman-Boyer Avenue East including the bungalow resources on East Gwinn Street, and historic resources in the houseboat community.[4]

C-008-013
- We request that historic resources in the Portage Bay neighborhood discovered in the course of completing the survey be included in the Area of Potential Effects (APE) for the project—in other words that the APE boundary be redrawn to include these vulnerable historic resources.

C-008-014
- We request that references to views enjoyed by "only a few" of historic resources in the Roanoke Park Historic District and the Portage By neighborhood be amended to reflect the true count and that the adverse effects on views and other aspects of the historic resources from construction of the project be acknowledged.

C-008-015
- We request that a Memorandum of Agreement treat the obvious adverse effects on historic resources of construction with strategies for avoidance, minimization, and mitigation.

C-008-016 The effects of the seven-and-a-half-year to eight-year construction activity described below would be compounded by the current staging, excavation, and hauling of Sound Transit's deep-bore (300-foot deep) twin tunnel construction project under the Montlake Cut. Trucks will haul excavated material from the deep hole across the Montlake Bridge to SR 520. Construction is expected to last until some time in 2016. WSDOT's declining to put the multiple and cumulative effects of these two simultaneous major projects into its effects findings "because it doesn't have jurisdiction over other agencies" (Chapter 7, p 7-1) is disingenuous. And its refusal to consider as **cumulative effects** "the incremental impact of its [SR 520 Project] action when added to other past, present, and reasonably foreseeable future actions" of its own

[4] Note in addition that the survey of historic resources in the North Capitol Hill neighborhood does not even include Carl F. Gould's own residence (unaltered), designed by Gould, on East Lynn Street.

C-008-016

projects is perverse unless the agency hopes thus to avoid, not adverse cumulative effects, but having to negotiate a Memorandum of Agreement on avoiding, minimizing, and mitigating these effects.

C-008-017

- Increases in **noise** from demolition, hauling, staging, and construction at many sites at bedroom height of historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood over the seven-and-a-half-year to eight-year construction period can be expected.

- Nighttime construction **glare** and **noise** from many staging, hauling, and construction sites over the seven-and-a-half-year to eight-year construction period are likely.

C-008-018

- Increased **diesel traffic** during peak construction periods over seven-and-a-half to eight years on local arterials on the west and south borders of the Roanoke Park Historic District and on Fuhrman-Boyer Avenue East and Delmar Drive East in the Portage Bay neighborhood is expected. Diesel traffic is more polluting and noisier than auto traffic.

C-008-019

- Traffic **congestion and air pollution** from idling vehicles detouring along residential streets in both the Roanoke Park Historic District and the Portage Bay neighborhood can be expected.

- Damage to buildings, landscaping, and parked cars (and life and limb) from detouring vehicles speeding along residential streets can be expected as well.

C-008-020

- **Concrete dust** from the demolition of the East Roanoke Street, 10th Avenue East, Delmar Drive East, and Portage Bay bridges and the consequent erosion and soiling of buildings, dusty windows, and damage to landscaping, including the mature shade trees on its south side for which the Roanoke Park Historic District is noted, are expected.

- **Fugitive dust** and **fugitive emissions** from diesel engines and machinery during hauling, staging, and construction with their contribution to the erosion and soiling of buildings, dusty windows, vibration, and damage to landscaping including the mature trees that buffer the district from the present operation of freeways on its west and south borders are to be expected.

C-008-021

- The **removal** in fifty-foot-wide swaths during construction **of vegetation** that helps to buffer the historic resources from the effects of the present operation of SR 520 on the south is to be expected as well.

C-008-022

- The very real threat from demolition and construction **vibration** to historic resources perched on steep, landslide-prone hills all over the area from I-5 to Portage Bay and the accompanying threat to historic resources below these properties will loom over these properties during the seven-and-a-half to eight years of demolition and construction vibration.

C-008-023

- **Lessened use** of the contributing Roanoke Park because of its proximity to detours, haul routes, staging sites, and demolition and construction sites is to be expected.

- Intermittent and shifting **curtailed access** to homes and neighborhood schools during the seven-and-a-half-year to eight-year construction period is expected.

C-008-024

- The no doubt accurate **perceived damage to healthy livability** of historic resources and the consequent **lowering of values** and **changes of population** during an extended seven-and-a-half-year to eight-year construction project is to be expected. Single families with children are likely to move away and to be replaced by lower-income renters. The families served by the Portage Bay/Roanoke Park Community Council have among them 126 children under the age of 20, including 79 children under the age of 14. These figures are likely an undercount because in this age parents don't like to disclose this kind of information. The change to this single-family, owner demographic would be an **adverse secondary, or indirect, effect**.

Operation

C-008-025

- From operation, permanent damage to setting and feeling by **high contrast changes to the views** for which properties in the Portage Bay basin are noted, especially caused by the wider and higher Portage Bay Bridge, with massive noise walls in Options A and L, moved farther north in front of these properties, is expected.

- From operation of Option A, **views** of the delicate span of the Montlake Bridge and its Carl F. Gould towers would suffer permanent damage from the adjacent second bascule bridge.

- From operation, **views** from many historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood, of Portage Bay, the Colonial Revival Seattle Yacht Club and the brick and terra-cotta NOAA Fisheries Building, both designed by John Graham, Sr., would suffer permanent damage from the intrusion of the out-of-scale wider and higher adjacent bridge shifted north and right beside the Fisheries Building.

C-008-026

- From operation, a permanent increase in **noise levels** from bus traffic and more vehicle traffic in the two new lanes would reach the bedrooms of residents of the Roanoke Park Historic District and in the historic resources in the Portage Bay neighborhood.

C-008-027

- From operation, a permanent increase in **air pollution** would cause damage to historic resources from exterior erosion and soiling, dusty windows, and damage to vegetation from more lanes for bus and vehicle traffic.

C-008-028

- From operation, a permanent increase in **vibration** from the increase in bus and vehicle traffic on the replacement bridge moved north closer to historic resources and the consequent risk of landslides under historic resources perched on steep hillsides can be expected. (Houses close to the present four-lane SR 520 experience detectable although tolerable vibration already.)

C-008-029

- An **accurate perceived permanent damage to the healthy livability** of historic resources from the project's operation from I-5 to SR 520 and in the Portage Bay basin and a consequent lowering of values and changes in population are to be expected. Single families with children are likely to move away and to be replaced by lower-income renters. The many families with young children have been growing as has the number of single families with children in the Roanoke Park Historic District and the Portage Bay neighborhood. With the operation of a wider, closer SR 520 bridge and increases in traffic, noise, air pollution, and nighttime glare, that single-family, owner demographic trend is likely to change, and that would be an **adverse, secondary, or indirect**, effect.

C-008-030

Cumulative Adverse Effects

"An effect that results from the **incremental** effect of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions. Cumulative effects can result from **individually minor but collectively noticeable actions taking place over a period of time**."

The collective, multiple foreseeable adverse effects of this WSDOT project described in these condensed comments along with the cumulative nature of these collective, multiple foreseeable adverse effects added to past and present adverse effects of WSDOT projects on these historic resources call for a Memorandum of Agreement between WSDOT and the neighborhoods served by the Portage Bay/Roanoke Park Community Council.

WSDOT's statement of refusal in the *SDEIS* to engage in cumulative effects findings because it doesn't have jurisdiction over other agencies—itself a questionable rationale—does not excuse it from considering the adverse cumulative effects of its own projects, past, present, and future. Such an obligation to consider adverse cumulative effects of its own past projects, present projects, and future projects should forestall in the *CRDR* and other discipline reports the ubiquity in many of the discipline reports of arguments such as "there is already a bridge there, so a replacement bridge would not create an adverse effect." WSDOT's determined efforts throughout the *SDEIS* not to acknowledge the temporal, historical aspect of the

C-008-030

cumulative effects definition, which is stated in clear language, should be challenged before more damage, perhaps past a tipping point, is done.

Flawed Section 106 Negotiation Process

C-008-031

- We weren't given sufficient meeting time to take up the specifics of our corrections to the September 2009 version of the *CRDR* , the second draft we had reviewed and offered corrections for, or of the writer's many additions and changes to the September 2009 version in the third, 11/16/2009, iteration of the report and our comments on them. The writer, Lori Durio, who was talking to us via telephone, had to close her participation in the meeting, and Environmental Lead Marsha Tolon stayed a bit longer although she was due at another meeting. Connie Walker Gray, the other architectural historian who had been working with us, did not attend the meeting.

C-008-032

- We appreciated the news that editorial and mechanical suggestions we had made in response to the third review question about how the September 2009 document could be improved were passed on to the editor of the document, and we won't repeat many of those suggestions in this round of comments. We will mention editorial problems with the new, December 2009, version of the *Cultural Resources Discipline Report* that interfere with consistency and sense and therefore with clarity, accuracy, and earned, legitimate, and logical conclusions about effects.

C-008-033

- We are dismayed, after so many efforts on our part—over three drafts—to correct misinformation and omissions, that the fourth draft, the flawed December 2009 version of the *CRDR*, was included in the January 22, 2010, release of the *Supplemental Draft Environmental Impact Statement*. Even more dismaying than the continued dissemination of misinformation in the *CRDR* is realizing that misinformation in the *CRDR* has been carried over to other parts of the *SDEIS*, such as the Section 4(f) evaluation, Chapter 4 on the project area's environment, Chapter 7 on indirect and cumulative effects, and most egregious to the Roanoke Park Historic District and the Portage Bay neighborhood, both noted for their panoramic and memorable views of high vividness, the December 2009 *Visual Quality and Aesthetics Discipline Report*. Note that these unaltered views were rated and described more favorably in the 2005 *VQADR* than in the December 2009 version of the *VQADR* and that the effects of even the old four-lane and six-lane alternatives on views were said to be profound, that is, "very noticeable." Has the discipline of aesthetics changed so much? Or is a strategy of denigrating present circumstances in order to find no adverse future effects from the project at work?

C-008-034

- We learned in the Monday, November 30, 2009, meeting that our speedy review of the 11/16/2009 iteration of the 213-page *Cultural Resources Discipline Report*, which we received via e-mail nine days later, on Wednesday, November 25, 2009, which review we accomplished over Thanksgiving in time for the Monday morning meeting discussion November 30, 2009, would nevertheless be unlikely to result in substantive corrections to representations of the Roanoke Park Historic District and other historic resources within the APE and to effects findings with respect to the Roanoke Park Historic District and Portage Bay neighborhood historic resources in the version of the *Cultural Resources Discipline Report* that would go into the *SDEIS*. The revised 11/16/2009 version of the *CRDR* could have been and should have been delivered to us in a timely way. Our comments and corrections should have appeared in the December 2009 *CRDR*.

C-008-035

- We were told in a telephone conversation subsequent to our 11/30/2009 meeting that Lori Durio, the writer of the *Cultural Resources Discipline Report*, had three reports due for the *SDEIS*, and while we are sympathetic, we think that the poor quality and the incompleteness of the previous iterations and now of the *SDEIS* version of the *Cultural Resources Discipline Report* are inexcusable. This report after all purports to describe the effects of the construction and operation of a years-long, massive transportation project on our historic homes and some ways of mitigating those inevitable effects on our historic district and on historic resources in the Portage Bay.

C-008-036

- New mistakes were introduced into the table of **eligible** historic resources, Exhibit 15 (formerly Exhibit 13). We had asked in the interest of balance and completeness that similar column heads and information comparable to the column heads and information in the table on eligible historic resources, Exhibit 15

C-008-036 (formerly Exhibit 13), be introduced into Exhibit 13 (formerly Exhibit 12) of **listed** historic resources. Instead the Roanoke Park Historic District, which is listed in the National Register for Historic Places and the Washington Heritage Register, was moved into Exhibit 15, for properties "eligible" for listing. A description of the Street Address/Location for the Roanoke Park Historic District in Exhibit 15 sites the historic district on the northeast side of the intersection of SR 520 and I-5. Better for conveying the single-family residential nature of the district would be to describe it specifically, as the eligible Montlake Historic District is described in Exhibit 15 and as the Roanoke Park Historic District is described in its NRHP nomination: the Roanoke Park Historic District is roughly bounded by East Roanoke Street, Harvard Avenue East, East Shelby Street, and 10th Avenue East. See this correction and additional corrections for Exhibits 13 and 15 and other pages in the sequential comments section of this document.

C-008-037
- Per our request, the entire nomination form for the Roanoke Park Historic District is now included in Attachment 4. However, in Part 7 of the *CRDR*, a layout problem that originated with the photo of the Mayor Ole Hanson House on one page and its description on the following page next to a photo of the Storm House leads to misidentification of all of the 50-some photographed properties. The Hanson House photo and its information should be on the same page so that all of the subsequent photos will be correctly identified by their descriptions on the same pages as the house photos they describe.

C-008-038
- We had a chance in the one-hour and a little more meeting Monday morning, November 30, 2009, to discuss specific changes to the six-page Executive Summary of the *Cultural Resources Discipline Report* and to ask further about procedural matters including when we would have an opportunity to consult on Section 4(f) findings with respect to the Roanoke Park Historic District and the other historic resources our Community Council represents. We learned then that the Section 4(f) negotiation process, which we had inquired about many times in the course of our meetings with WSDOT consultants, had bypassed us, that we would have no opportunity to review and comment on the report, and that the report would go directly into the *SDEIS* without our having seen the report.

C-008-039
- We request that our comments here on the December 2009 *Cultural Resources Discipline Report* be considered, that they be discussed with us where the WSDOT consultants agree and differ, and that corrections be entered in the *Cultural Resources Discipline Report* for the *Final Environmental Impact Statement*. We hope that the final version of the *CRDR* will finally be free of repeated and new mistakes in depictions of the historic resources in neighborhoods represented by the Portage Bay/Roanoke Park Community Council. Effects findings (and "no adverse effects" findings) based on faulty information must be corrected.

C-008-040
- We request, too, that misinformation about the Roanoke Park Historic District and the Portage Bay neighborhood that has tainted effects findings in other chapters and discipline reports of the January 22, 2010, *SDEIS* be corrected in those chapters and reports as well.

C-008-041
- We request earlier and more review time for the next iteration—an interim draft before the *Final Environmental Impact Statement*—of the *Cultural Resources Discipline Report* and an opportunity to discuss our comments with the writer and the other WSDOT consultants. No matter how long it takes. The rush to publication is not warranted when shoddy work is published.

- We request opportunities to review, inform, and comment on the next iteration of the Section 4(f) Evaluation report as early as possible.

- We request that WSDOT consultants reach out to the North Capitol Hill Neighborhood Association and the Eastlake Community Council as representatives in Section 106 negotiations over historic resources that lie within those local governments' jurisdictions and within the Area of Potential Effects. We had assumed that this would be done. The owners of those historic resources have not been invited to become consulting parties to Section 106 negotiations.

- WSDOT did not reach out to the Portage Bay/Roanoke Park Community Council and ask us to be a consulting party in Section 106 negotiations and waited many months to meet with us after our request

C-008-041

January 18, 2009, to become a consulting party. Much time that could have been devoted to the production of an accurate report was lost. Although we had been told that the Section 106 process would resume in January 2010, we heard only last week, on March 4, 2010, from the WSDOT consultants. We are invited to a training on Section 106 negotiation March 16, 2010, to be conducted by the Department of Archaeology and Historic Preservation (DAHP)—this after our struggling with incorrect and constantly changing instruction and information on Section 106 for over a year.

C-008-042

- If such delays and the poor quality of WSDOT work come from overwork and understaffing, WSDOT needs to staff up. The lack of time and lack of staff that have led to the poor quality of the *Cultural Resources Discipline Report* and to the misinformation disseminated from the report into other chapters and discipline reports of the *SDEIS* are not fair to the communities whose fate depends on WSDOT consultants' doing accurate, logical Section 106 work.

C-008-043

- WSDOT and federal and state government should consider as well the evident conflicts of interest that have dogged the Section 106 process in the State of Washington. The contractors employed by WSDOT to lead us through the process and at the same time negotiate with us have been lax about the conditions—lack of time and staff, misinformation about the process—that have led to the poor research and misinformation on which their findings of "no adverse effects," agreeable to WSDOT, have been based. This has put the communities at a considerable disadvantage. Section 106 law needs to address this conflict of interest. Perhaps DAHP, an agency with its own powers and budget now coming in to instruct us in Section 106 process, should have been introduced into the negotiation process sooner as an advocate for the historic resources we amateurs have been trying to protect. The performance of the consultant professionals in architectural history and Section 106 negotiation contracted by WSDOT have been so compromised by a lack of staff and time and by loyalty to their employer that they have abandoned concern for the preservation of the historic resources they have been charged to protect.

Specific comments are attached.

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Comments on the December 2009 *Cultural Resources Discipline Report* in the January 22, 2010, *SDEIS*

As in the past three of our reviews of CRDR *drafts, more than a little repetition, for which we apologize, arises from our effort to keep corrections sequential so that they will be easy to make.*

C-008-044

Executive Summary p. i (covered in Monday, November 30, 2009, meeting with WSDOT consultants)

- i, third para The writer agreed to change "several" in reference to the hundreds of historic properties within the study area—the Area of Potential Effects (APE)—to "many."

C-008-045

- We mentioned at that point that the editorializing addition of much diminishing language ("only," "slightly," "minor," "not substantially," or "not substantial,"—before a finding of "therefore no adverse effect"—and the frequent insertion of the vague words "generally speaking"—again before a finding of "therefore, no adverse effect") in the 11/16/2009 iteration of the *Cultural Resources Discipline Report* was distressing to us as were incomplete and minimizing descriptions of the intensity and the extent of effects that have to do with the Roanoke Park Historic District and the other historic resources with which our community council is concerned. The writer agreed to make changes to this language if we would point out the other instances, which we will do in the course of these comments.

C-008-046

- ii, second para under "Seattle" head The writer declined again to add the 101 properties in the Roanoke Park Historic District and the 80 contributing properties in the Roanoke Park Historic District to the 12 count of historic built environment listed properties in the Seattle study area in this paragraph. That one of the listed 12 properties is a 101-property district containing 80 contributing historic resources and we believe 57 individually eligible historic resources is relevant to conveying the great number of historic listed and eligible properties in the Seattle study area. Representing the district as one property leads to a perception that there aren't many listed historic resources in the Seattle study area. The number is relevant because the large number of listed and eligible historic resources in the APE calls for an especially delicate approach applied widely to design, construction, and operation of a project of such great magnitude in such a small, historic setting.

- iii, second para The writer declined again to include the 101 properties and 80 contributing properties in the count of "surveyed built environmental properties" because the listed properties, unlike the 217 unlisted properties (and 141 eligible properties) mentioned in this paragraph had not been "surveyed," a strict reading in which a change of verb would permit the breadth and number of historic resources in the APE to be truly represented in this report. The net effect is the continued diminution of the number of historic resources in the Seattle study area.

C-008-046

- For the third time, the writer declined to include individually eligible properties in the Roanoke Park Historic District to these counts, this time on the basis that none of them would be individually eligible because they are in an already listed district. State Architectural Historian Michael Houser of the Department of Archeology and Historic Preservation said, "Not true" (e-mail exchange December 3, 2009), that "many individual properties in historic districts have been listed." A follow-up question to Michael Houser to be sure that this was true of properties after district listing produced the same reply, and "some folks just like that individual listing." We are aware of Roanoke Park Historic District residents who want to pursue that individual listing and relieved that we have not misinformed them that they can.

- We formally request again that a count of properties in the Roanoke Park Historic District eligible for individual listing be mentioned in the counts on pp ii and iii as a count of individually eligible properties in the Montlake Historic District has been mentioned in these summaries. If the writer does not have time to determine the individual eligibility of properties among the 80 contributing Roanoke Park Historic District resources, we request that WSDOT have a qualified consultant make these determinations in a fair and complete account.

- In the course of these comments, we will suggest many historic resources within the Roanoke Park Historic District, which lies entirely within the APE, that we think are eligible for individual listing and on what basis. Our initial survey concluded that **28** historic resources of 80 contributing resources in the RPHD would be eligible for listing on the basis of Criterion C alone, as exemplars of the work of notable architects and builders. Our survey among the 80 contributing resources of historic resources that might be individually eligible for listing on the basis of Criterion A alone, for their associations with both events and broad patterns of our history, came up with **8** candidates. In other words, a total of 36 historic resources would be individually eligible for listing on the basis of either Criterion A or Criterion C. We think that another **21** historic resources among the 80 contributing properties would be eligible on the basis of both Criterion A and Criterion C. Realizing that our objectivity might be constrained by our fondness for the history and the architecture of the district, we look forward to a professional evaluation of individual eligibility to corroborate or amend our estimated total number of **57** individually eligible historic resources and would appreciate the forwarding of the result to the State Historic Preservation Officer for concurrence. And we request that this information inform accounts of the number of historic resources in the Area of Potential Effects.

- We formally request again that properties in the Roanoke Park Historic District both contributing and eligible for individual listing be brought to bear on effects findings for the Roanoke Park Historic District in the *Cultural Resources Discipline Report* as they are in effects findings for the eligible Montlake Historic District. State Architectural Historian Michael Houser, State Historic Preservation Officer Dr. Allyson Brooks, and the National Register have already concurred on identification of contributing properties, easily available in the nomination's table containing addresses, names of houses, and contributing (80) or non-contributing (21) status. Our successful nomination of the Roanoke Park Historic District for listing in the National Register and the Washington Heritage Register, readily available and already accessed by the writer at our suggestion, includes detailed architectural and cultural descriptions as well as high quality black and white photos that along with visits to the district can inform determinations of individual eligibility and whether on the basis of Criterion A or Criterion C or both as well, as has been done for the Montlake Historic District.

C-008-047

- The writer did agree to bring at least consideration of Roanoke Park Historic District contributing properties to bear on effects descriptions and findings in the *Cultural Resources Discipline Report* as has been done for both individual properties identified as contributing and individual properties identified as individually eligible in the report's effects findings for the eligible historic resources in the Montlake Historic District. With respect to effects findings in the Roanoke Park Historic District, this has not been done consistently in the December 2009 *SDEIS* version of the *CRDR*. In the course of these review comments, we will point out places in the *CRDR* in addition to the

C-008-047 Executive Summary where both kinds of determinations—contributing and individually eligible—should be mentioned.

C-008-048 • Although not all of the 57 contributing historic resources we think might be eligible for individual listing on the basis of Criterion A or Criterion C or both will suffer direct effects from the construction and operation of the project, the whole district will suffer if a good proportion—well more than half—of those 80 contributing and 57 individually eligible resources experience direct, indirect, multiple and/or cumulative adverse effects. Many of them will.

C-008-049 • iii, first bulleted item The writer also agreed to include in the Executive Summary a total of all historic resources and not count the two historic districts as one property each, so that the Executive Summary can convey the total, a large number, of historic resources in the Seattle study area. As we have indicated, this is relevant because the large number of historic resources within the Seattle study area calls for an especially delicate approach applied widely to design, construction, and operation of a project of such great magnitude in such a small, historic setting. We would like to see the number of individually eligible resources included in this item describing the Roanoke Park Historic District as the number of individually eligible resources in the Montlake Historic District have been included in the sister bulleted item on page iii.

C-008-050 • iii, paragraph after second bulleted item The 231 count of properties either listed in or eligible for the NRHP seems to be off. The **33** individually eligible properties outside the two historic districts added to the **35** individually eligible properties in the MHD would result in a sum of 68 individual properties either listed or eligible for the NRHP. If the MHD and the RPHD were counted as one property each, 33 plus 2 would be 35. If individually eligible properties in the RPHD, estimated at **57**, were added to the 33 individually eligible properties outside the two historic districts and the 35 individually eligible properties in the MHD, the sum at most would be 125. Not all of the **141** contributing properties in the MHD or of the **80** contributing properties in the RPHD are individually eligible. If just contributing properties in the two districts were added to the **33** individually eligible properties outside the two districts, the sum would be 254. What does the 231 count include?

C-008-051 • We have expressed many times in previous comments and in meetings with WSDOT consultants the importance of accuracy and clarity in the Executive Summary, which might be all that many busy people will read of the *Cultural Resources Discipline Report*. We have noted that these passages have been inadequate and confusing, and they remain inadequate and confusing and under-represent the extent and the significance of historic resources in the Area of Potential Effects.

C-008-052 • iii, last paragraph (continued on iv) The preliminary nature of construction effects findings should be emphasized up front in this discussion, not parenthetically at the end of its second paragraph. Given the large number of contributing properties and we believe individually eligible properties and the foreseeable multiple and cumulative adverse effects of design, construction, and operation of all three of the six- and seven-lane options on historic properties in the Roanoke Park Historic District not discussed in the report, we think that the Roanoke Park Historic District should have been and should be included in this bulleted preliminary list of historic properties that might suffer adverse effects.

Note that the paragraph refers to both construction and operation effects as preliminary but says that additional adverse effects might be added once construction details are known. Why are "operation" effects, which have also been identified as preliminary, not subject to such emendation?

C-008-053 • iv, bulleted list We request that the Roanoke Park Historic District be included in this preliminary finding of historic resources that might suffer adverse effects from project construction and operation. We also request that the contributing and individually eligible status of historic

C-008-053

resources in the Roanoke Park Historic District be brought to bear on effects findings later in the report as such status is brought to bear on effects findings for the historic resources in the Montlake Historic District.

C-008-054

- We request that historic resources in the Portage Bay neighborhood likely to experience adverse effects from the project be mentioned in this preliminary list, as well.

C-008-055

- vi, "Pontoon Production and Transport" discussion We wondered again why the highly specific closing section on Pontoon Production and Transport had been tacked on to the end of the Executive Summary, which was otherwise general and summarizing. We wondered, too, as we had in our first review comments, why land hauling (and detours and staging) in addition to water hauling had not been considered in this section if hauling routes were going to be discussed so specifically at all in a summary. The writer declined to take up land hauling (and presumably detours and staging) in this section and agreed at Marsha Tolon's suggestion to write something early in the Summary that would provide a rationale for including this specific water hauling information in the Summary. The writer added a sentence to the first paragraph of the Executive Summary saying that pontoon transport effects are discussed at the end of the Executive Summary but does not provide a rationale for this detailed treatment of pontoon transport in a summary.

C-008-056

- For reasons of time, we did not repeat the query in our earlier review comments why the accustomed uses seven days a week of St. Patrick's Church and possible effects on these uses from land hauling had not been taken up in this curiously specific section on the effects of water hauling on the Boating Community's accustomed Opening Day. The writer told us that someone at WSDOT wanted the section on Pontoon Construction and Hauling to be included in the Executive Summary and did not say why our earlier request for discussion of land hauling and specifically of hauling effects on the customary uses of St. Patrick's Church were not included in this section or even in a section of its own in this summary. We request in the interest of balance that this be done if the specific section on water hauling will remain in the Executive Summary.

Introduction p. 1

C-008-057

- 1, first bulleted item Include Laurelhurst and the Boating Community among the Seattle project area communities.

C-008-058

- 4, first para under "Seattle" head Say "as well as the existing local street bridges across **I-5 and** SR 520." Replacement of the East Roanoke Street bridge across I-5 is a part of the project.

C-008-059

- 4, second para under "Seattle" head Mention first the different designs for the Portage Bay Bridge under the three options. The difference between a six-lane and a seven-lane bridge is substantial enough to be mentioned in this paragraph.

C-008-060

- 5, Exhibit 4 showing Options A, K, and L in the Montlake and University of Washington areas should be preceded by a map showing the different configurations of the Portage Bay Bridge in the three options.

C-008-061

- 6, first para "A new seven-lane bridge" (last draft) has been changed to "six-lanes (four general-purpose lanes , two HOV lanes) plus a westbound auxiliary lane"? What is the difference between an auxiliary lane and a lane?

C-008-062

- 6, second para "Suboptions [plural] for Option A" are the subject of the opening sentence. The second sentence of the para speaks of "The suboption [singular]."

C-008-063

- 7, first para Concluding that quieter pavement cannot be considered mitigation ignores its inclusion not as mitigation but as part of the design of Option K. Note, too, that the results of WSDOT tests of quieter pavement have been so far skewed by improper installation. WSDOT might consult with the highway department of Flagstaff, Arizona, where quieter pavement has

C-008-063 successfully withstood studded tires, chains, and freezing and thawing over a goodly amount of time, for 17 years back in 2007.

C-008-064
- 8, first para Update this description. The rows of three ten-foot-tall concrete columns are not shown in recent sketches. The pontoons themselves would be taller, rising more than their current 10 feet out of the water, and their visible height above the water should be added to the height of the columns. The "new spans" (span?) are (is?) estimated to be at least 29 feet, not 22 feet, higher than the existing floating bridge. Noise walls variously said to be from 8 to 12 feet or 8 to 14 feet will add to the height of the floating span.

C-008-065
- 8 Do the descriptions on this page refer to all of the options, or is the discussion still about Option L? According to Exhibit 5's title, the discussion refers to all of the options. Page 8 should therefore open with language to help the reader see the transition from description of Option L to description that applies to all of the options.

C-008-066
- 11, bulleted list Would the second and third items in the phased implementation bulleted list be built at the same time? The map on page 12 shows both the Portage Bay Area and the West Approach Area as Priority 2. This would affect the intensity and the extent of construction effects.

C-008-067
- 11, last para Can "structures" be collectively called a "scenario"? Should say "The phased replacements of vulnerable structures are collectively referred to as the Phased Implementation scenario"?

C-008-068 ***Regulatory Context p. 17***

- 17, first para Mention "mitigate" along with "avoid or reduce" as in the last para on this page ("avoid, minimize, or mitigate"), and explain, per our earlier request, the technical meanings of these three terms with examples.

C-008-069
- 18, first para, first full sentence (next to last sentence of first para) Include "view sheds" in the list of kinds of historic resources that can experience adverse effects. (And "visual effects" to any discussion of the kinds of effects that might be experienced by historic resources.) The project will affect view sheds that are historic, particularly from the Roanoke Park Historic District, whose period of greatest development was 1908 through 1912, with its views of the grounds and surrounding water, forests, and mountains in the year leading up to, the year during (1909), and the years immediately after the Alaska-Yukon-Pacific Exposition. The Roanoke Park Historic District and the Portage Bay neighborhood are still known for these views, which contribute a great deal to the setting and feeling and the desirability of the predominately single-family historic homes in these neighborhoods.

C-008-070
- 18, second para, first three sentences The writer said that the fact that the present historic SR 520 bridge is a SEPA-protected Scenic Highway with a significant view shed including Mt. Rainier has nothing to do with Section 106 negotiations. The historic present bridge is already said to experience an adverse effect from its prospective demolition, and the noise walls designed into Option A's new seven-lane bridge and Option L's six-lane bridge would adversely affect this view shed, which includes Mt. Rainier and other snow-topped Cascade Mountains and which has been enjoyed by drivers over the present historic bridge since its opening in 1963. Although bicyclers and walkers have never had access to the viewshed from the bridge, bicyclers and walkers across the new SR 520 bridge would be deprived by massive noise walls of this spectacular view shed as well.

C-008-071
- The number of historic resources in the Roanoke Park Historic District that enjoy such views, described as "expansive" and of "high vividness" (2005 *Visual Quality and Aesthetics Discipline Report*), of the University of Washington campus, Portage Bay, the historic Montlake Cut, the

C-008-071

historic Montlake Bridge, the historic Seattle Yacht Club and marina, the historic NOAA Fisheries Building, Lake Washington, the lights of Kirkland and Bellevue, the treed hills beyond, and the Cascade Mountains, is understated in the report. These views have been largely unchanged since well before 1972, the cutoff date for consideration of historic resources.

C-008-072

- As we will enumerate later in these comments, more Roanoke Park Historic District properties than the report indicates (saying "a few") and many Roanoke Park Historic District contributing and individually eligible properties, which status the report doesn't mention in its Roanoke Park Historic District effects findings, enjoy these historic views. These contributing and individually eligible resources would be adversely affected by the seven-and-a-half-year to eight-year construction project's visual blight, disruption, diesel pollution, noise, vibration, damage to buildings and landscaping from air pollution and vibration, dusty windows, and nighttime glare. Many historic contributing and individually eligible properties on steep hillsides on the east and north sides of the historic district and unsurveyed resources on steep hillsides on both the north and south sides of Delmar Drive East in the Portage Bay neighborhood already experiencing periodic landslides will be vulnerable to the increased vibration from demolition and construction.

C-008-073

- From operation, the increased width and height, also moved north, of both the wider Portage Bay Bridge and the wider floating span in front of views from the district in all options would be an adverse effect. These operation effects on the views so characteristic of the Roanoke Park Historic District and the Portage Bay neighborhood, along with increased traffic noise and traffic emissions, damage to buildings (erosion and soiling from increased air pollution, vibration damage, and landslides), dusty windows, and damage to landscaping from air pollution and vibration, would affect the setting and feeling and therefore the desirability of heretofore single-family historic properties in the Roanoke Park Historic District and would be adverse effects of the project. Historic, architect-designed resources in the Portage Bay neighborhood, some of which have not been surveyed and included in the Area of Potential Effects (on hillsides on both sides of Delmar Drive East, in the houseboat community, and on both sides of Fuhrman-Boyer Avenue East) and the individually eligible Gunby, Alden Mason, and Kelley houses would also be adversely affected by the increased width and height, moved north, of the Portage Bay Bridge.

C-008-074

- Traffic on the current bridge has produced mild tremors in the houses closest to the freeway for years. More traffic, moved closer, will exacerbate this effect. We would not agree with a finding such as "There is already a tremor there, so more would not be an adverse effect." (See "There is already a bridge there . . . ,"(pp 174, 175, 186). The concept of a literal tipping point is more appropriate to this kind of judgment. Note that the Portage Bay neighborhood experienced landslides during construction of the present bridge back in the 1960s and that residences on the north side of Delmar Drive East including houses designed by Arthur Loveless, Paul Thiry, and Roland Terry (unsurveyed and not included in the *CRDR*) have experienced landslides in recent years.

C-008-075

- Demolition, construction, and operation of Option A's seven-lane Portage Bay Bridge would have an especially egregious effect on views from many of the district's contributing and individually eligible properties. So would construction and operation of Option A's second bascule bridge adversely affect watery views of the exquisite Carl F. Gould Montlake bascule bridge from many contributing and individually eligible historic single-family properties of the Roanoke Park Historic District and in the Portage Bay neighborhood. (See the discussion later in these Formal Comments of the under-representation of the number of properties that currently enjoy these views in the Potential Effects of the Project section of the *Cultural Resources Discipline Report*.)

C-008-076

Historic Context p. 21

- 32, last paragraph, third sentence from end of para Should refer to the establishment of "Roanoke Park," not "Interlaken Park," which was established in the 1890s and over many years, although its western terminus, Bagley Viewpoint, might have been established around 1908. Check Don Sherwood's history for Interlaken Park and Bagley Viewpoint, where the two are treated

C-008-076 separately. The Roanoke Park land was acquired by the Parks Department in 1908, and the park was established in 1910.

C-008-077
- 44, first para, first sentence WSDOT did not reach out to owners of individually eligible residential properties outside historic districts as potential consulting parties. Unless their local governments initiated representation of these owners (which the Portage Bay/Roanoke Park Community Council did upon a belated realization that these owners had not been contacted by WSDOT), they went without representation in Section 106 negotiations.

C-008-078
- Nor did the WSDOT consultants identify all of the eligible historic resources in the Portage Bay neighborhood that might be adversely affected by the project, including architected residences by Arthur Loveless, Paul Thiry, and Roland Terry along the north side of Delmar Drive East, architected residences along the south hillside of Delmar Drive East, resources in the houseboat community in northwest Portage Bay, and historic residences along the east and west sides of Fuhrman-Boyer Avenue East. In addition, the commercial Anhalt Building still intact at the intersection of Eastlake Avenue East and Fuhrman-Boyer East will be doubly stressed by hauling for the project along both arterials and has not been included in the survey of eligible historic resources.

C-008-079
- 44, first para, reference to Historic Property Inventory Forms (HPIFs) Mention Attachment 3 as the location of revised or added HPIFs and Attachment 4 as the location of nomination forms for already listed historic resources.

C-008-080
- 44, last para These figures for historic resources in the Seattle segment seem low (eight properties listed in the NRHP) unless districts (misleadingly as elsewhere) are counted as one property and thus diminish the reader's impression of the number and breadth of historic resources in the APE. Include language such as "including the 80 contributing properties, of which 57 properties are individually eligible for listing, in the Roanoke Park Historic District." Again, the sheer number of historic resources in the APE, in such a small setting, calls for a delicate touch.

- 49, first para and bulleted list under Built Environmental Resources head Again "eight properties in the Seattle segment listed in the NRHP" minimizes the actual number of Seattle segment historic properties by treating the 101 property district, of which 80 are contributing properties and 57 are individually eligible properties, as one property. We repeat that the large number of historic resources in the Seattle segment calls for an especially careful approach to design, construction, and operation of such a large project in such a small setting.

- 49, first bulleted item Note that of the 101 properties in the Roanoke Park Historic district, 80 are contributing properties and that of these, 57 are individually eligible. Again, treating an entire district as one property does not convey the large number of historic resources in the Seattle segment.

C-008-081
- 49, second bulleted item The name of the house in the National Register and the Washington Heritage Register is the William **H.** Parsons House. As a Seattle City Landmark, it is the Harvard Mansion. Note, too, that this thrice-time individually listed historic resource is in the listed Roanoke Park Historic District—that is, does not stand alone as the following items do.

C-008-082 ***Methodology, p. 53***
- 55, bulleted list The examples should indicate which of the three kinds of adverse effect each is as this is where text is explaining at least what an indirect effect is. The other two kinds, direct and cumulative, should have been explained on the preceding and/or on this page, too, with helpful examples.

C-008-083
- 55, first para after bulleted list, second sentence Say "and the two six-lane alternatives and one seven-lane alternative." (WSDOT used to describe Option A as "the seven-lane alternative." If

C-008-083 WSDOT no longer describes Option A as the seven-lane alternative, use the clunky "and one six lane alternative with an auxiliary lane on the Portage Bay Bridge," which is WSDOT's most recent description of Option A.

C-008-084
- 55, first para after bulleted list Delete the third and fourth sentences. For clarity because the passage might be understood in this sense, and if this passage were meant to justify describing the features of the three options in these two areas only once, the sentence might say, "Although the different options may have different effects on historic resources in the areas near the I-5 and SR 520 interchange and between I-5 and the Portage Bay Bridge, the features of the project in these areas are the same in each of the options." Saying "so the analysis of effects in these areas is discussed only once" cannot be justified. And this section of the Methodology chapter is entitled "Effects Analysis," not "Feature Description." That the features of the three options within these areas are the same does not mean that the three options would not have differing potential effects on these areas. This blanket dismissal via faulty reasoning of the differing effects of the three options on the area between I-5 and Portage Bay has led to a deceptive minimization of adverse effects.
    - The construction and operation effects of the different options—say, view impediment or noise, erosion and soiling from air pollution—on the historic resources in the area between I-5 and the Portage Bay Bridge, on the Roanoke Park Historic District, for instance, or on the historic resources in the Portage Bay neighborhood, are quite different and will require at least three discussions, of each option's effects on each area.
    - The construction and operation of the seven-lane Portage Bay Bridge in Option A would have a different effect on views, noise, and air quality in the Roanoke Park Historic District and on views, noise, and air quality in the Portage Bay neighborhood than construction and operation of the six-lane Portage Bay Bridge of Options K and L would.
    - The operation of Option A's second bascule bridge would have a different effect on views of the historic Carl F. Gould Montlake Bridge from the Roanoke Park Historic District and from historic resources in the Portage Bay neighborhood than the invisible tunnel of Option K or the bascule bridge farther east and out of sight of Option L would.
    - Option K's depressed profile would affect views from these areas differently than Option L's elevated profile would affect views from the areas.
- Delete this recently added text that fails to justify not treating the differing effects of the three options on the areas of the project between I-5 and Portage Bay, and treat the differing effects of all three options on the Roanoke Park Historic District and historic properties in the other areas between I-5 and Portage Bay under the "Option A," "Option K," and "Option L" heads as is done for the areas in the APE east of Portage Bay in the "Potential Effects of the Project" section and in other sections of the text where construction and operation effects on these areas are discussed or summarized under the individual option heads.

C-008-085
- 55, last para "Examples of mitigation" Having seen the term in the *Cultural Resources Discipline Report*, we inquired in an earlier meeting with WSDOT consultants whether there was such a thing as "compensatory mitigation." The writer said, "No." Include "compensatory mitigation," and provide an example in the list here of possible mitigations since it is offered as a kind of mitigation by that name later in the text (p 192).

C-008-086
Historic Resources in the Study Area p. 57
- 62, first para under "Historic Built Environment Properties in the Seattle Study Area" head Say "In the Seattle study area, there are eight properties listed in the NRHP**, including the 101 properties of the Roanoke Park Historic District, of which 80 are contributing resources**

C-008-086 **and 57 are individually eligible for listing.** This will convey a more accurate impression of the number of listed properties in the Seattle study area.

C-008-087
- 64-68 "Exhibit 13. Previously Identified Historic Properties in the Seattle Segment" (Exhibit 12 in the 11/16/2009 draft) and "Exhibit 15. Summary of NRHP-Eligible Properties Identified in the Seattle Segment" (Exhibit 13 in the 11/16/2009 draft) should have comparable column heads and contain comparably full treatments of the historic properties.
    - The full description of the Montlake Historic District location in Exhibit 15 under the column head "Street Address/Location" should be balanced by an equally full description of the Roanoke Park Historic District location under that column head ("Roughly bounded by . . .") in Exhibit 13.
    - A "Property Name" column should be included in Exhibit 13 as in Exhibit 15.
    - The "Period of Significance 1905 to 1952" for the Montlake Historic District in Exhibit 153 under the column head "Date of Construction" should be matched by an equally informative "Period of Significance 1899 to 1939" for the Roanoke Park Historic District under the column of that name in Exhibit 13.
    - The discussion of the Montlake Historic District under "NRHP Eligibility" that discloses the criterion (C) under which the Montlake Historic District is NRHP eligible and includes a second paragraph describing the total number of properties in the Montlake Historic District, the total number of contributing properties in the Montlake Historic District, the number of individually eligible properties in the Montlake Historic District, and the number of non-contributing properties in the Montlake Historic District should be matched by an equally informative two paragraphs covering those two kinds of information (Criteria A and C; 101 properties, 80 contributing properties, 57 individually eligible properties, 21 non-contributing properties) under the column head "Listed Status" for the Roanoke Park Historic District.
    - Note that the NRHP- and WHR-listed and City Landmark-designated William **H.** Parsons House (called the Harvard Mansion as a City Landmark) in Exhibit 13 is **in** the Roanoke Park Historic District.

C-008-088 In response to our request that these changes be made to Exhibit 13 (then Exhibit 12), the writer instead mistakenly inserted the **listed** Roanoke Park Historic District entry into Exhibit 15's table of **eligible** historic resources. This mistake needs to be undone, and Exhibit 13 needs to be as informative along the lines mentioned above as Exhibit 15 is. Note, too, that the location of the Roanoke Park Historic District as described in the table "on the northeast side of the intersection of I-5 and SR 520" is inaccurate. That intersection is in the North Capitol Hill neighborhood. The "roughly bounded by" description we recommended in our earlier comment, along the lines of the "roughly bounded by" description of the Montlake Historic District in Exhibit 15's Street Address/Location column would be accurate: "Roughly bounded by East Roanoke Street, Harvard Avenue East, East Shelby Street, and 10th Avenue East" would be accurate geographically and also do a better job of conveying the single-family residential character of the district than describing it as "on the northeast side of the intersection of I-5 and SR 520" does.

Such treatment seems to be in accord with a widespread depiction in the *CRDR* of the Roanoke Park Historic District as so afflicted, so damaged already, that "no adverse effects" findings can arise out of reasoning such as the notorious "there is already a bridge there, so a replacement bridge would not be an adverse effect." By means of a lot of work on the part of its residents in cooperation with the City's Department of Parks and Recreation, Department of Neighborhoods, SDOT, and other agencies, the Roanoke Park Historic District is a remarkably cohesive single-family residential historic district. Its setting and feeling and its characteristic use are intact. A lessening of these characteristics would result in secondary (indirect), multiple (collective), and cumulative adverse effects.

C-008-089

- 81, subhead under "Roanoke Park Historic District" The subhead should say "**Listed** under Criteria A and C," not "Eligible under Criteria A and C."

- 81, first sentence The subject of the sentence is "**The** Roanoke Park Historic District . . ." Again, delete the unattractive new description of the Roanoke Park Historic District as "located on the northeast side of the intersection of SR 520 and I-5." The original, now second sentence, of the paragraph describes the location of the Roanoke Park Historic District accurately and as it is described in its nomination: "Roughly bounded by East Roanoke Street, Harvard Avenue East, East Shelby Street, and 10th Avenue East . . ." This description conveys the single-family residential integrity of the Roanoke Park Historic District. Say "**the William H.** Parsons House **(the Harvard Mansion as a City Landmark)**."

- 81, first para, third sentence Say "The National Register nomination form **for the Roanoke Park Historic District**" to prevent confusion that the nomination form for the immediately preceding referent, the William H. Parsons House, is meant. Make it easy for the reader to find the nomination by means of a finer description of its location: Vol 4, Attachment 4, Parts 6 and 7.

  We have verified that the entire nomination form for the Roanoke Park Historic District is now included in Vol 4, Attachment 4, Parts 6 and 7. However, a layout problem with the nomination photos and their descriptions in Part 7 ripples through the entire sequence of photos so that, for instance, the photo of the Storm house is identified on its page as the Mayor Ole Hanson House, the photo of the Neterer House is identified on its page as the Storm House, the photo of the William H. Parsons House (the Harvard Mansion) is identified on its page as the King-Friedman House, and so on through the entire sequence of black and white photos. Please fix this series of mistakes.

- 81, third full para Although introduced by "According to the nomination," the beginning of the following text repeats the mistake that the RPHD is "eligible for listing" rather than up-to-date information from the NRHP nomination. This statement does not come from the nomination, as we pointed out in several reviews of the *CRDR*. The Roanoke Park Historic District is no longer "eligible for listing" but is listed.

- 87, Exhibit 16. We had asked for greater contrast between contributing and non-contributing properties on the map so that the difference will show up better in black and white printouts. We look forward to seeing this revision of the exhibit, which was not accomplished in time for the *SDEIS* release.

- 88, fifth full paragraph The Roanoke Park Historic District is not "**eligible** for listing under Criterion A." The Roanoke Park Historic District has been **listed** in the National Register and the Washington Heritage Register on the basis of Criterion A **as well as Criterion C**.

C-008-090

Such misleading mistakes have dogged descriptions of and effects findings with respect to the Roanoke Park Historic District in the successive drafts of the *CRDR*. We would like to trust that careless mistakes of this nature and more significant misrepresentations will be corrected in the version of the *CRDR* that goes into the *FEIS*.

C-008-091

- 89–90 bulleted list of architects. The list takes up a whole line for each name—a lot of space used up for no good reason—and could be run-in as a short paragraph. We appreciate the writer's additional research on Harry W. Kent and the Kenworth trucking company, but the description in the *CRDR* of the Roanoke Park Historic District scants important events and patterns associated with the district—early Seattle history writing, early significant judicial decisions, early and distinguished journalism. With the extra space, a much better account of the district's significance could be provided first.

C-008-092

  - The end of the sentence about Louisa Boren Denny, midway through the last para on p 88, would be a good place for a new paragraph about the many other prominent Dennys

C-008-092

who lived in the district and to mention that many of these Dennys wrote the early histories of Seattle.

- Louisa Boren and David T. Denny's eldest child, Emily Inez Denny, who wrote *Blazing the Way* (1909), lived in the district with her mother and the family of her youngest brother, Victor W. S. Denny, a miner and assayer of gold and silver. Arthur and Mary Ann Boren Denny's granddaughters Sophie Frye Bass, who wrote *Pig-Tail Days in Old Seattle* (1937) and *When Seattle was a Village* (1947), also an archivist of note after whom the library at MOHAI was named, and Roberta Frye Watt, who wrote *Four Wagons West* (1931), daughters of Arthur and Mary Ann's eldest child, Louisa Denny Frye, lived in the district, too. (See the Elmer E. Green–designed Gates-Bass Mansion, A and C, 1909, in Exhibit 16.) Their younger sister Elizabeth Frye Bogue and her husband, Virgil Bogue, author during the City Beautiful movement of the *Seattle Comprehensive Plan* of 1911 and longtime collaborator of the Olmsted brothers, also lived in the district. (Interestingly, engineer Virgil Bogue proposed a tunnel under Lake Washington to connect the west side and the east side.) Their cousin Mabel Denny Thompson, daughter of Arthur and Mary Ann Boren Denny's oldest son, Orion Orville ("Double O" to the nieces and nephews), also lived in the neighborhood.

- The account of the Dennys could be followed by a new paragraph in which the Bernice Stern, Alice Franklin Bryant, and Jean Ross material could be used.

- This account of other notable women from the district could be followed by a paragraph on the distinguished superior court judge Jeremiah Neterer, who lived in a contributing and individually eligible house (A and C, Andrew Willatsen, 1915) in the district and presided over many landmark cases of the day, including the bootlegger Roy Olmstead's [this the correct spelling] trial that involved an early decision on the admissibility of evidence gained by wiretapping and the long-running legal disputes between private power owners Stone & Webster vs. public power advocate J. D. Ross. Many of the neighborhood's attorneys took part in these cases, on both sides. Neterer also presided over early union disputes that involved his neighbor across the alley in a contributing and individually eligible house (A and C, Frederick A. Sexton, 1908), U. S. Attorney Robert C. Saunders.

- [New paragraph] Mayor Ole Hanson and his elected successor, Hugh M. Caldwell, both lived in the district, in contributing historic houses, and were both caught up in the Stone & Webster disputes and court cases.

- The Harry W. Kent paragraph could follow then. If it had to be shorter, that would be all right. The information on the Dennys, the women, and the Honorable Jeremiah Neterer is of greater significance.

- Also of great interest is that Samuel L. Crawford, who founded the *Intelligencer* newspaper and stayed on as editor after its merger with the *Post* to create the *Post-Intelligencer*, at the time of its demise last year the oldest newspaper in the city, also lived in the district, along with William A. Prosser, news editor of the *Post-Intelligencer*. Ed Guthman, the Pulitzer-Prize winning journalist whose investigative reporting led to the exoneration of Melvin Rader and other members of the University of Washington faculty accused of Communist conspiracy by the Cantwell Committee, grew up in the district.

C-008-093

- 89, third para Should say "Also **listed** on the basis of Criterion C," not "Also eligible under Criterion C."

C-008-094

- 89–90 Run the names of the architects into the paragraph, after the colon, with their names simply separated by commas. That will leave more space for the suggested material above that points to

C-008-094 the significance of the Roanoke Park Historic District on the basis of both Criterion A and Criterion C.

C-008-095
- 91, para beginning "In addition to the elms in the park," add "in its southern curb beds" to the end of the last sentence. This is important because a haul route along the southern curb beds, with possible adverse effects from fugitive dust and emissions and from vibration to the mature trees that characterize the district, has been identified. These trees in the south of the district also buffer the historic resources in the district from some of the effects of SR 520. They do not, as alleged later in this report, interfere with the panoramic, memorable views of high vividness east from many, not "a few," historic resources (34 houses in all, 31 of 80 contributing resources, and 26 of 57 individually eligible resources) in the Roanoke Park Historic District.

C-008-096
- 92, first para After the first sentence, observe that the contributing Elmer E. Green–designed Gates-Bass Mansion (1909) shown in Exhibit 17 is also eligible for individual listing on the basis of Criterion A and Criterion C. It was designed by Elmer E. Green (1909) and was the home of Denny history writers Sophie Frye Bass and Roberta Frye Watt. (As is done p 94, under the two photos, for Exhibits 20 and 21, which show historic properties in the Montlake Historic District eligible for listing under Criterion C.) It is one of the more ornate . . ." "The Betterton-Hillman House at 2601 Broadway Avenue East and its twin next door, the Mayor Ole Hanson House at 2609 Broadway Avenue East, both designed by Elmer E. Green, are substantial residences with . . ." What a shame that only Elmer E. Green houses are shown. One of the two Huntington and Gould houses or one of the two Frederick A. Sexton houses, or one of the two Edwin J. Ivey houses could have conveyed what an architecturally important collection of houses is contained in the roughly 9 blocks of the Roanoke Park Historic District. The account of the Roanoke Park Historic District in even this fourth iteration, released for the SDEIS, has not been done with care.

C-008-097
Potential Effects of the Project, Construction p 135
- What would be the effects on congestion of variable tolling in the No-Build Alternative—that is, effectively what will happen if the variable tolling project does go into operation in spring 2011 before construction, and what would be the effects on congestion of tolling of SR-520 alone and tolling of both SR 520 and I-90?

C-008-098
- 135, Delete the out of date "6-Lane Alternative" head, and treat the area between I-5 and Portage Bay under the three "Option A" (141) "Option K" (149), and "Option L" (160) heads.
    - Use a bulleted list similar to the one on p 147 for multiple construction effects of Option A on the Montlake Historic District to itemize the multiple construction effects on the Roanoke Park Historic District and the historic resources in the Portage Bay neighborhood of Option A. (See our summary of effects pp 5–6.)
    - Use a bulleted list similar to the one on p 157 for multiple construction effects of Option K on the Montlake Historic District to itemize the multiple construction effects on the Roanoke Park Historic District and the historic resources in the Portage Bay neighborhood of Option K.
    - Use a bulleted list similar to the one on p 166 for multiple construction effects of Option L on the Montlake Historic District to itemize the multiple construction effects on the Roanoke Park Historic District and the historic resources in the Portage Bay neighborhood of Option K.

C-008-099
- 135, para under "6-Lane Alternative" head (which should be deleted) The first sentence of the paragraph says, "This section discusses potential construction effects and notes all known effects from the project on historic properties." The paragraph goes on to qualify its construction effects judgments and to indicate as before that they are preliminary. This pattern of making a statement and then qualifying it is confusing. Let the reader know immediately of the preliminary nature of

C-008-099 construction effects findings in this iteration of the *Cultural Resources Discipline Report*. Something such as, "This section discusses preliminary identifications of potential adverse construction effects from the project on historic properties. Effects findings here will be finalized only with the concurrence of the State Historic Preservation Officer (SHPO)."

C-008-100
- 135, para under "6-Lane Alternative" head, second sentence Says the effects will be thoroughly analyzed before publication of the *FEIS*. Having not had enough review time and meeting time to discuss with WSDOT consultants their analyses of effects before publication of the *SDEIS*, we ask that explicit provision for post analysis discussion with consulting parties and proposals for avoidance, minimization, and mitigation be discussed with consulting parties and entered into a Memorandum of Agreement before publication of the *FEIS*.

C-008-101
- 135, para under "6-Lane Alternative" head (which should be deleted) The faulty reasoning in earlier statements in the Methodology section about effects analysis (p 55) is repeated: "As noted in the Methodology Section [no initial cap on "section"], for the area near the I-5 and SR 520 interchange, and between I-5 and the Portage Bay bridge [the earlier version of this rationale said "between I-5 and Portage Bay"], the project is [features are] the same under each option, so the analysis of effects is discussed here only once." This faulty reasoning cannot justify the absence of discussion of effects and the different effects of each of the three options on the area between I-5 and the Portage Bay Bridge. The three options will have differing effects on views, noise, vibration, nighttime glare, and air quality in this area, for instance, during demolition and construction. Delete the two sentences.

- Because the report says that less is known of demolition and construction details in the area near the I-5 and SR 520 interchange, treat the two areas, the area near the I-5 and SR 520 interchange and the area between I-5 and Portage Bay, separately. If more is known about the design and construction plans of the I-5 and SR 520 interchange before the publication of the *FEIS* (and more should be known by then) and if WSDOT is still treating the three options by then (let's hope not!), include that information in the three sections devoted to Option A (147), Option K (157), and Option L (166).

C-008-102

I-5 and SR 520 Interchange, Construction, Options A, K, and L

- 135, under the "Historic Built Environment" head Of the area near the I-5 and SR 520 interchange, say something to the effect of "The redesign, demolition, and construction of the SR 520 and I-5 HOV ramp and interchange is likely to have an adverse effect on the eligible Chung House at 1980 Harvard Avenue East (C, 1932) and possibly on the eligible Talder House (C, 1909) at 2352 Broadway Avenue East. When demolition and construction details are known, possible effects of demolition and construction (and effects of operation in the operation section of this chapter) of this part of the project on historic resources will be more fully evaluated. If the SHPO concurs, avoidance, minimization, and mitigation measures will be proposed in a Memorandum of Agreement."

C-008-103
- 135, Move the material from pp 135 last para to 141 first para into appropriate sections: the discussion of the I-5 and SR 520 interchange (above) and the sections devoted to Option A, Option K, and Option L.

C-008-104

Area Between I-5 and Portage Bay, Construction, Options A, K, and L

Construction—Staging, Options A, K, and L

- 142, under "Historic Built Environment" head, talk about the taking of the Bagley Viewpoint and construction staging effects there on the Roanoke Park Historic District under Option A. The Bagley Viewpoint is very close, across the street from, the contributing and individually eligible (both Criterion A and Criterion C, Elmer E. Green, 1909) Gates-Bass Mansion at 1018 East

C-008-104

Roanoke Street and the contributing and individually eligible (A, 1907) Booth House at 1004 East Roanoke Street and is close to the contributing and individually eligible Dalley House (C, Huntington & Gould, 1910) at 2608 10th Avenue East. Staging there would also detract from enjoyment of and access to the contributing Roanoke Park itself; and the contributing houses at 2612, 2616, and 2622, 2632, and 2636 10th Avenue East in the Roanoke Park Historic District would experience adverse effects. This staging, with diesel noise and pollution, vibration, nighttime glare, and fugitive dust, would have an adverse effect on at least these 9 contributing historic resources and on the 3 of these 9 contributing resources closest to the staging area that are eligible for individual listing. These staging effects and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

C-008-105

- Speak also to the effects of the taking of land along the front of the individually eligible Fire Station #22.

C-008-106

Construction—Vegetation Removal, Options A, K, and L

- 136, last para, first, second, and third sentences The argument that getting rid of vegetation (50-foot-wide swath along the WSDOT right of way north and south) that has buffered contributing and individually eligible houses in the Roanoke Park Historic District including the contributing and individually eligible Gates-Bass Mansion at 1018 East Roanoke Street, the contributing and individually eligible Booth House at 1004 East Roanoke Street, the contributing and individually eligible Dalley House at 2808 10th Avenue East, and the contributing houses at 2612, 2616, 2622, 2632, and 2636 10th Avenue East along with the contributing Roanoke Park itself, the contributing Betterton-Hillman House at 2601 Broadway Avenue East, the contributing and individually eligible Mayor Ole Hansan House at 2609 Broadway Avenue East, the contributing and individually eligible Storm House at 2611 Broadway Avenue East, the possibly individually eligible Winter house at 2617 Broadway Avenue East (C, 1942) and use of the possibly individually eligible St. Patrick Church (A and C, Krontz & Wrede, 1961) at 815 East Edgar Street, along with the individually eligible Boyd House at 2422 Federal Avenue East, the individually eligible Gunby House (C, John T. Jacobsen, 1940) at 1118 East Roanoke Street on the north and the individually eligible Alden Mason House (A and C, Victor Steinbrueck, 1949) on the south, the individually eligible Fire Station #22 at 901 East Roanoke Street, the individually eligible Keuss Building at 2351 10th Avenue East, the individually eligible Glover Homes Building at 914 East Miller Street, the individually eligible Wicklund-Jarr House at 910 East Miller Street, the individually eligible East Miller Condominium at 904 East Miller Street, and the individually eligible Sagamura House at 2408 Broadway Avenue East from SR 520 provides a good opportunity to get rid of the invasive species that have been smothering splendid stands of mature trees (because WSDOT has failed to deal with the invasives in those areas over many years) is unacceptable, along the lines of "we've already blighted it, so it's OK to get rid of it." It's one thing to acknowledge the need to remove buffering vegetation for the sake of the project, another to pretend that this is a good thing.

C-008-107

- Removing mature trees that buffer these **12** contributing resources and St. Patrick Church in the Roanoke Park Historic District including **7** possibly individually eligible resources plus **9 more individually eligible resources outside the district** that would be exposed to more of the **present** SR 520's noise, visual, and air pollution for an unspecified amount of time would be an adverse effect. A Memorandum of Agreement should specify that vegetation removal be delayed as long as possible and remedied as soon as possible after removal.

- The vegetation removal will expose these contributing and individually eligible historic resources in the Roanoke Park Historic District (those identified above and in the Portage Bay and North Capitol Hill neighborhoods) to construction effects of the widening of the SR 520 roadway, the demolition and rebuilding of replacement bridges at East Roanoke Street and 10th Avenue East and Delmar Drive East, the building of the lids at East Roanoke and 10th and Delmar, and the demolition and reconstruction of the Bagley Viewpoint and the Portage Bay Bridge. These effects of vegetation removal and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

C-008-108

- 137, top of page Replanting with native plant materials near a freeway, where conditions are most unlike the conditions in which native plant materials thrived 160 years ago, seems like a misguided idea. Hardier choices are appropriate, and the communities would like language in the Memorandum of Agreement to say that they will be consulted on choices of species for both replacement buffering vegetation and lid landscaping.

C-008-109

Construction—Detours, Options A, K, and L

- 137, first full para The last iteration of the *Cultural Resources Discipline Report* proposed a **detour** to and from Fuhrman-Boyer Avenue East up and down 11th Avenue East. This iteration proposes a detour through the Roanoke Park Historic District. Both are objectionable for any length of time, let alone nine months. The 11th Avenue East detour around a steep blind curve would be dangerous for both residents and motorists. A detour through the Roanoke Park Historic District (presently DO NOT ENTER going north on 10th Avenue East and with a traffic diverter in Broadway Avenue East at East Edgar Street—both hard won by the community in order to discourage through traffic—would be dangerous for residents, bicyclists, walkers, and the district's many young children accustomed to slow moving residential traffic. This would be a substantial change to the setting, feeling, and characteristic use of the historic district. In addition, historic resources in the district would be subject to increased fugitive dust and emissions from idling vehicles and speeding through traffic, noise, vibration, congestion, and erosion and soiling of buildings along with damage to landscaping from air pollution and vibration. Note that in the 2600, 2700, and 2800 blocks of 10th Avenue East and Broadway Avenue East in the district, many residents and visitors to Roanoke Park park their cars on both sides of the relatively narrow streets of the district. These cars would be subject to fugitive dust and emissions and possible damage from traffic traveling at speed through the district. These effects of detours and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

C-008-110

- 137, second full paragraph At Rob Berman's request a sketch for a more appropriate design for the intersection of 10th Avenue East and East Roanoke Street, the chief gateway to the Roanoke Park Historic District, has been furnished, has met with WSDOT's approval, and has been passed to the city's SDOT for evaluation. We would like the Memorandum of Agreement to discuss adopting this plan.

C-008-111

Construction—Temporary Closures and Haul Routes, Options A, K, and L

- 137, second full para **Temporary closures** over a 15-month period that would "restrict access to the four contributing [good to see "contributing" mentioned with respect to the Roanoke Park Historic District in the report, although two of them are individually eligible as well] properties along East Roanoke Street" (1018 and 1004 East Roanoke Street, Roanoke Park and 2601 Broadway Avenue East), would also restrict access to its garage of the contributing house at 2612 10th Avenue East and to their garages of the contributing and individually eligible houses at 2609 and 2611 Broadway Avenue East and of the possibly individually eligible Winter house at 2617 Broadway Avenue East (C, 1942) and to the parking lot of the possibly individually eligible St. Patrick Church (A and C, Krontz & Wrede, 1961) at 815 East Edgar Street. (**10** contributing resources among which **8** are possibly individually eligible.)

C-008-112

- 137, last para, Say, "This potential **haul route** along two borders of the Roanoke Park Historic District would adversely affect the setting and feeling of the historic district with increased fugitive dust and diesel emissions, noise, vibration, traffic, congestion, dusty windows, and damage to buildings from erosion and soiling and to landscaping from dust and vibration that would make many contributing and individually eligible historic properties in this part of the Roanoke Park Historic District less desirable as single-family residences."

C-008-113

  - Along Harvard Avenue East, 8 contributing, 1 thrice individually listed, 6 individually eligible and 2 possibly individually eligible historic resources would be adversely affected by this haul route: the contributing and individually eligible Brady-Alexander House (C, 1900—the second oldest house in the historic district) on the northeast corner

C-008-113

of Harvard Avenue East and East Shelby Street, the contributing and individually eligible Dawson House (A and C, 1907) on the southeast corner of Harvard Avenue East and East Shelby Street, the contributing Barter-Devers House (C, 1908) at 2832 Harvard Avenue East, the contributing and individually eligible Stephens House (C, 1913) at the northeast corner of Harvard Avenue East and East Hamlin Street, the contributing and individually eligible Gleason House (C, 1909) on the southeast corner of Harvard Avenue East and East Hamlin Street, the contributing Stokes House (1906) at 2722 Harvard Avenue East, the individually listed William H. Parsons House (A and C, Edward J. Duhamel, 1903; the Harvard Mansion as a City Landmark) on the northeast corner of Harvard Avenue East and East Edgar Street, the accustomed parking (in its lot) and characteristic uses of the possibly eligible St. Patrick's Church (A and C, Krontz & Wrede, 1961), the contributing and individually eligible King-Friedman House (A and C, 1910), and the contributing and individually eligible Clemmer House (A and C, 1910). (**8** contributing, **1** thrice listed, and **8** possibly individually eligible resources)

- This haul route would also adversely affect in the Roanoke Park Historic District 2 contributing and individually eligible resources along East Roanoke Street, including its contributing and individually eligible Gates-Bass Mansion (A and C, Elmer E. Green, 1909), and its contributing and individually eligible Booth House (A, 1907). On 10th Avenue East, the contributing and individually eligible Dalley House (C, Huntington & Gould, 1910), and the contributing Gifford, Fish, Bogue, Bloxom, and Horner houses would be adversely affected by this haul route. On Broadway Avenue East, the contributing Betterton-Hillman House (Elmer E. Green, 1912), the contributing and individually eligible Mayor Ole Hanson House (A and C, Elmer E. Green, 1911), the contributing and individually eligible Storm House (A and C, McClelland & Pinneh, 1924), the possibly eligible Winter House (C, 1942), and the possibly eligible St. Patrick Church (A and C, Krontz & Wrede, 1961) would be adversely affected by the haul route. (**9** contributing and **7** possibly individually eligible resources)

C-008-114

- Discuss effects of the **haul route** along Fuhrman-Boyer Avenue East on historic resources in the Portage Bay neighborhood, including the as yet unsurveyed historic resources on the north and south Delmar Drive East hillsides, historic resources in the houseboat community, and historic resources along both sides of Fuhrman-Boyer Avenue East: "This potential haul route would adversely affect the setting and feeling of residential historic resources with increased fugitive dust and diesel emissions, noise, vibration, traffic, congestion, dusty windows, and damage to buildings from erosion and soiling and to landscaping from pollution and vibration that would make individually eligible historic properties less desirable as single-family residences."

- 137, last para, 140 Says "with average construction activity, truck trips would range from one to two trips per hour." Add in their appropriate sections the information that there would be **one to two trips per hour under Option A and Option L, and 1-5 trips per hour under Option K. During peak construction periods truck trips would range from 2-8 trips per hour under Option A, 2-20 trips under Option K, and 2-12 trips per hour under Option L.** The omission of the rest of the information from Marsha Tolon's 7/17/2009 letter would deceive the reader into thinking that truck trips would be confined to one to two trips per hour. We object to this misrepresentation of information relevant to effects findings. Provide an indication of how many and how often historic resources along this haul route would experience peak construction periods, and provide a comparison of the peak period volume of truck trips with normal arterial truck trip volumes. Note that diesel emissions are more polluting than auto emissions and that construction trucks are much noisier than autos.

C-008-115

- These effects of temporary closures and haul routes and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

C-008-116

Construction—Demolition, and (Re)Construction of the three arterial bridges and construction of the two lid sover I-5 at East Roanoke Street and over SR520 between 10th Avenue East and Delmar Drive East , Option A

- 140–141 Move the discussion of effects on the properties mentioned in these paragraphs to the appropriate Option A, Option K, and Option L sections of the chapter's consideration of potential construction effects.

C-008-117

- 140 Say, ". . . the entire Roanoke Park Historic District **including its individually listed** William **H.** Parsons House (Edward J. Duhamel, 1903)," to prevent mistaken impression that the Parsons House is outside the Roanoke Park Historic District as the other individual houses mentioned in the rest of the list are.

- 142 The same. Say, "The Roanoke Park Historic District **including its individually listed** William **H.** Parsons House,"

C-008-118

- **East Roanoke Street, 10th Avenue East, and Delmar Drive East Bridges, Demolition and Construction, Option A** The demolition and reconstruction of the East Roanoke Street bridge over I-5, the 10th Avenue East Bridge over SR 520, and the Delmar Drive East bridge over SR 520—of all three bridges—is likely to adversely affect contributing and individually eligible houses and use of the contributing Roanoke Park (1910) in the Roanoke Park Historic District along the 2600 block of Broadway Avenue East including the contributing Betterton-Hillman House at 2601 Broadway Avenue East (Elmer E. Green, 1912), the contributing and individually eligible Mayor Ole Hanson House at 2609 Broadway Avenue East (A and C, Elmer E. Green, 1911), the contributing and individually eligible Storm House (A and C, McClelland & Pinneh, 1924). All of these historic resources and the possibly eligible Winter house at 2617 Broadway Avenue East (C, 1942) and the possibly eligible St. Patrick Church (A and C, Wrede & Krontz, 1961) will suffer extreme concrete dust and ensuing building exterior erosion and soiling, dusty windows, damage to landscaping from dust and vibration, noise, vibration, and nighttime construction glare from the demolition and reconstruction of the East Roanoke Street, 10th Avenue East, and Delmar Drive East bridges. (**4** contributing and **5** possibly individually eligible resources would suffer adverse effects from all three bridge and lid projects.

    - **East Roanoke Bridge** The demolition and reconstruction of the East Roanoke Street bridge alone are likely to produce extreme effects of concrete dust and ensuing building exterior erosion and soiling, dusty windows, damage to landscaping from dust and vibration, noise, vibration, and nighttime construction glare in the areas of the Roanoke Park Historic District adjacent to I-5 near East Roanoke Street and along Harvard Avenue East, including the contributing and individually eligible Clemmer House (Criteria A and C, 1910) at 2612 Harvard Avenue East, the contributing and individually eligible King-Friedman House (A and C, 1910) at 2616 Harvard Avenue East, and the individually listed William H. Parsons House (the Harvard Mansion as a city-designated landmark, A and C, Edward J. Duhamel, 1903) at 2706 Harvard Avenue East. In addition to the aforementioned **4** contributing and **5** possibly individually eligible historic resources in the 2600 block of Broadway Avenue East, **2** contributing and individually eligible and **1** thrice-listed historic resources would be adversely affected by demolition and construction of the lid over I-5 at East Roanoke Street construction.

    - **10th Avenue East and Delmar Drive East Bridges** Demolition and reconstruction of the two bridges in the area of the Roanoke Park Historic District across from the 10th Avenue East and Delmar Drive East bridges are likely to cause adverse effects from demolition concrete dust and ensuing building exterior erosion and soiling, dusty windows, damage to landscaping from air pollution and vibration, noise, vibration, and nighttime construction glare on historic resources including buffering mature trees and other vegetation along the south border of the district, and to **8** contributing and possibly **3** individually eligible historic resources: the contributing and individually eligible Booth House (A, 1907) at 1004 East Roanoke Street, the contributing and individually eligible Gates-Bass Mansion (A and C, Elmer E. Green,

C-008-118

1909) at 1018 East Roanoke Street, the contributing and individually eligible Dalley House (C, Huntington & Gould, 1910) at 2608 10th Avenue East, the contributing Gifford House at 2612 10th Avenue East (1924), the contributing Fish House at 2616 10th Avenue East (1922), the contributing Jenner-Bogue House at 2622 10th Avenue East (1923), the contributing Bloxom House (C, 1917) at 2632 10th Avenue East, and the contributing Horner House (C, 1925) at 2636 10th Avenue East, as well as the aforementioned **4** contributing and possibly **5** individually eligible historic resources in the 2600 block of Broadway Avenue East.

- **Delmar Drive East Bridge** Demolition concrete dust and vibration, ensuing building exterior erosion and soiling, dusty windows, damage to landscaping from dust and vibration, noise, and nighttime construction glare from the Delmar Drive East part of the project is highly likely to have an adverse effect on the individually eligible Gunby House at 1118 East Roanoke Street (C, John T. Jacobsen, 1940), the individually eligible Alden Mason House at 2545 Fuhrman-Boyer Avenue East (A and C, Victor Steinbrueck, 1949), and the individually eligible Kelley House at 2518 Fuhrman-Boyer Avenue East (C, 1909). Portage Bay itself along with its marinas and boats will be vulnerable to heavy concrete dust and to possible soil deposits if the demolition activity produces vibration sufficient to start landslides. All of the contributing and individually eligible houses along the 2600 and 2700 blocks of 10th Avenue East, including **11** contributing houses, **4** of which are possibly individually eligible as well, will be vulnerable to landslides produced by bridge demolition vibration. As recently as May 2005, the Seattle Department of Planning and Development identified the east side of 10th Avenue East as a "Landslide Prone Hazard Area."

- Along the north side of Delmar Drive East, where houses sit on the edges of precipitous, landslide-prone hillsides that already experience periodic landslides, Arthur Loveless–, Paul Thiry–, and Roland Terry–designed houses as yet unsurveyed and outside the Area of Potential Effects[1] will be exposed to heavy demolition dust and vibration, ensuing building exterior erosion and soiling, dusty windows, damage to landscaping from air pollution and vibration, noise, and nighttime glare from the demolition and construction of the Delmar Drive East bridge. Access to these houses will be blocked by the closure of Delmar Drive East. Note that the properties on which these houses sit already suffer periodic landslides. These properties need to be included in the CRDR's survey, and measures to prevent construction landslides need to be included in a Memorandum of Agreement with the Portage Bay/Roanoke Park Community Council.

- Architect-designed houses on the steep, landslide-prone hillside on the south side of Delmar Drive East have not been surveyed yet, either, and are likely to suffer the heavy demolition dust and vibration, building erosion and soiling, damage to landscaping from air pollution and vibration, dusty windows, noise, and nighttime glare from the Delmar Drive East Bridge demolition and construction activity, as well.

- Adverse effects to both historic buildings and vegetation from all three arterial bridge and lid projects should be anticipated, and ways of avoiding, minimizing, and/or mitigating the multiple effects of this extremely dusty, clogging, building eroding and soiling, noisy, and earth-shaking demolition and construction activity should be discussed in a Memorandum of Agreement.

C-008-119

- The reconstruction plan for the bridge over I-5 at East Roanoke Street and the 10th Avenue East bridge over SR 520 is to build half lids to serve traffic as temporary bridges north of the present East Roanoke Street Bridge and either east or west of the present 10th Avenue East Bridge over SR 520. The closure of Delmar Drive East, as we understand it, means that a temporary bridge (half lid) will not be constructed adjacent to the present Delmar Drive East bridge over SR 520 at

[1] It's difficult to determine, looking at the maps, whether these properties on Delmar Drive East lie within the Area of Potential Effects. Please advise. If they are not, we suggest that both they and the historic resources on the south hillside of Delmar Drive East should be included in the Area of Potential Effects.

C-008-119 Delmar Drive East, although building one there to avoid the closure of Delmar Drive East could be considered.

C-008-120
- Finishing and landscaping the lids over I-5 and SR 520 immediately after the replacement bridges have been constructed and put into operation would spare historic resources from many of the further adverse effects of the project's total seven-and-a-half-year to eight-year construction phase and provide an opportunity for monitoring and fine-tuning to perfect measures to avoid, minimize, and mitigate operation effects on historic resources. Here it is relevant to mention that the features in this area are the same for all three options and that building the lids could therefore take place early and even before the rest of the project is undertaken.

C-008-121
- Note that in the Phased Implementation scenario, said in the SDEIS to be the most likely scenario, lid construction would be deferred indefinitely. We request discussion of the adverse effects of this damaging prospect and treatment of the lid timing issue and construction mitigation in a Memorandum of Agreement.

C-008-122
- The effects of demolition and (re)construction of the three arterial bridges and two lids and ways of avoiding, minimizing, or mitigating the multiple effects should be discussed in the Memorandum of Agreement.

C-008-123 *Construction—Demolition and (Re)construction of the **Seven-Lane Portage Bay Bridge, Option A***
- 140 third para, third sentence Saying "The temporary work bridges, barges, and heavy equipment used for demolition and construction of the Portage Bay Bridge **might** also introduce visual effects to the area" is unduly tentative. They will introduce adverse **visual effects** to the area.

C-008-124
- 141 The discussion treats the effects of the 6 years of demolition and construction of the Portage Bay Bridge without mentioning the adverse effects of this six-year period, with **views** of temporary work structures and barges, demolition noise and vibration, concrete dust and ensuing building erosion and soiling, dusty windows, damage to landscaping from dust and vibration, construction noise, and nighttime construction glare to historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood. Adverse effects of the construction of the Portage Bay Bridge, which in addition to being more than twice as wide or wider, depending on the option chosen, and higher, will be moved to the north in front of more homes in the Roanoke Park Historic District and in the Portage Bay neighborhood, are not discussed. These adverse construction effect on the Roanoke Park Historic District and the Portage Bay neighborhood should be discussed and avoidance, minimization and mitigation taken up in a Memorandum of Agreement.

C-008-125
- Again, we request that identification of the contributing and individually eligible historic resources in the Roanoke Park Historic District be brought to bear on effects findings as the contributing and individually eligible status of historic resources in the Montlake Historic District is routinely brought to bear on effects findings for that historic district.

C-008-126
- 141 Moving from west to east, discuss the effects of Option A construction on the area between I-5 and Portage Bay, presently omitted. Discuss historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood including historic resources on the north and south hillsides of Delmar Drive East that would be adversely affected by demolition and the construction of Option A's seven-lane Portage Bay Bridge, which include **visual blight**, noise, vibration, air pollution and consequent building exterior erosion and soiling, dusty windows, nighttime glare, and vegetation removal and damage.

C-008-127
  - Historic properties on East Roanoke Street that would experience adverse effects from the demolition and construction of the seven-lane Portage Bay Bridge of Option A include the contributing and individually eligible Gates-Bass Mansion (A and C, Elmer E. Green, 1909) at 1018 East Roanoke Street, the contributing and individually eligible

C-008-127

Booth House (A, 1907) at 1004 East Roanoke Street, and the contributing Roanoke Park (1910). Along the 2600 block of the district's 10th Avenue East, the contributing and individually eligible Dalley House (C, Huntington & Gould, 1910) at 2608 10th Avenue East, the contributing Gifford House at 2612 (1924), the contributing Fish House at 2616 (1922), the contributing Jenner-Bogue House at 2622 (1923) the contributing Bloxom House (1917) at 2632, and the contributing Horner House (1925) at 2636 10th Avenue East would experience these adverse effects. (**9** contributing, **3** of which are also individually eligible)

- In the 2700 block of the Roanoke Park Historic District's 10th Avenue East, historic properties adversely affected by the demolition and construction of the seven-lane Portage Bay Bridge of Option A would include the contributing and individually eligible Beckwith-Thompson House (A, 1910) at 2700, the contributing and individually eligible Saunders House (A and C, Frederick A. Sexton, 1908) at 2701, the contributing and individually eligible Parshall House (C, Thomas L. West, 1911) at 2706, the contributing and individually eligible Siegley House (C, E. H. Sanders, 1909) at 2712, the contributing and individually eligible Cavanaugh House (C, 1909) at 2722, the contributing and individually eligible Conly House (A, 1916) at 2726, and the contributing and individually eligible Finley House (A and C, 1909) at 2731 10th Avenue East. (**7** contributing, of which all **7** are also individually eligible)

- Historic resources in the Portage Bay neighborhood that would be adversely affected by the demolition and construction of the seven-lane Portage Bay Bridge of Option A include the individually eligible Gunby House (C, John T. Jacobsen, 1940), the individually eligible Alden Mason House (A and C, Victor Steinbrueck, 1949), and the individually eligible Kelley House (C, 1909), which will be adjacent to the wider, higher bridge moved farther north of Option A.

- Other potentially eligible resources in the Portage Bay neighborhood have not been surveyed, including the Arthur Loveless, Paul Thiry, and Roland Terry houses on the north side of Delmar Drive East and the architect-designed houses at the top of the Delmar Drive East south hillside, which might or might not lie within the APE, and the houseboat community in the west end of Portage Bay, the potential historic bungalow district along East Gwinn Street between Harvard Avenue East and Fuhrman-Boyer Avenue East, and historic resources along many of the other streets that make up the point, and many of the other historic resources along both sides of Fuhrman-Boyer Avenue East, which have been left out of the APE. Most of these properties would be affected by hauling and construction, and some of them would be affected by demolition as well.

C-008-128

- Without the lids that have been designed into the project, that are an integral part of the project, and because the "temporary" construction effects would go on for seven-and-a-half to eight years, these construction effects on historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood would be tantamount to permanent effects and ultimately lead to "demolition by neglect" as property values plummeted, and even then **visual blight**, noise, dust, vibration, and diesel emissions would mean that people would not be able to sell their homes for amounts approaching their present worth. Many of the houses would be rented out to lower income renters, those not in a position to avoid living so close to a mammoth, many-years-long freeway construction project. Many of the houses would become rooming houses. A general deterioration would ensue in the absence of owner-residents who work steadily to improve their historic houses and their communities. Repairs would tend to be done on the cheap, with little regard for the historic integrity that owner-residents have prized and maintained over 100 years. With the deterioration of the social fabric of the communities would come a deterioration of the setting and feeling and characteristic single-family use of the Roanoke Park Historic District and of the historic resources in the Portage Bay neighborhood.

C-008-128

- An accurate **perception that the neighborhoods had become unhealthy** would mean that many families with young children would move away. A recent snapshot, block-to-block survey of the number of children under the age of 20 conducted by the Portage Bay/Roanoke Park Community Council revealed that the predominantly single-family homes in the Roanoke Park Historic District and the Portage Bay neighborhood shelter 126 young children under the age of 20, of which 79 are under the age of 14. Note that the reluctance of many parents in this day and age to release such information means that these numbers of children are probably higher.

C-008-129

- Finishing and landscaping the lids over I-5 and SR 520 immediately after the replacement bridges have been constructed and put into operation would spare historic resources from many of the further adverse effects of Option A's seven-lane Portage Bay Bridge project's six-year construction phase and provide an opportunity for monitoring and fine-tuning to perfect measures to avoid, minimize, and mitigate subsequent permanent operation effects on historic resources.

- Scheduling lid construction for an early part of the Phased Implementation scenario rather than deferring lid construction indefinitely would address some of these adverse construction effects. This question and other means of avoiding, minimizing, and mitigating effects of the construction of the Portage Bay Bridge need to be addressed in a Memorandum of Agreement..

C-008-130

Construction—Portage Bay Bridge and Second Bascule Bridge, Option A, Views

- **Views** to the east, of Portage Bay, the historic NOAA Fisheries Building, the historic Seattle Yacht Club and marinas, the historic Montlake Cut, the historic Montlake Bridge, Lake Washington, the lights of Bellevue and Kirkland, trees in the foothills, and the Cascade Mountains from many of the contributing and individually eligible houses in the Roanoke Park Historic District and historic resources in the Portage Bay neighborhood both surveyed and unsurveyed would be adversely affected by the construction of Option A's seven-lane Portage Bay Bridge and second bascule bridge. Construction of the Portage Bay Bridge expected to last 6 years and of the second bascule bridge expected to last 27 months would be **both visible and audible**. These construction effects would be compounded by Sound Transit's deep-bore 300-foot-deep twin tunnel project, which is not even mentioned in the *Cultural Resources Discipline Report*. That project is underway now and is expected to go on until some time in 2016.

C-008-131

- Note that the statement that "only a few" historic resources in the Roanoke Park Historic District enjoy this panoramic **view shed** of high vividness is a diminution of the number of houses that enjoy this viewshed and of the extent and the quality of the views enjoyed by these historic resources. This misinformation, repeated in the December 2009 *Visual Quality and Aesthetics Discipline Report*, a reversal of the description in the 2005 *VQADR*, has contributed to a finding of "no adverse effect" and a consequent refusal to engage in a Memorandum of Agreement. The diminishing language needs to be corrected, the adverse effects need to be acknowledged, and the adverse effects should be taken up in a Memorandum of Agreement.

- The East Edgar Street, East Hamlin Street, and East Shelby Street hills continue to slope at the top of the Roanoke Park Historic District plateau from the east side of 10th Avenue East to the plateau's high point along Broadway Avenue East. Residents in the large houses at the intersections of the Roanoke Park Historic District as far west as the west side of Broadway Avenue East at some intersections enjoy views east variously including Portage Bay, the historic Fisheries Building, the historic Seattle Yacht Club and marinas, the historic Montlake Cut, the historic Montlake Bridge, Lake Washington, the lights of Bellevue and Kirkland, trees in the foothills, and the Cascade Mountains. Many more historic resources in the Roanoke Park Histoirc District than "a few" enjoy these memorable "expansive" views of "high vividness."

    - Houses from which these expansive views of high vividness may be enjoyed include most obviously the contributing and individually eligible Gates-Bass Mansion at 1018 East Roanoke Street (A and C, Elmer E. Green, 1909) and most of the houses along the east side of 10th Avenue East: the contributing Gifford House (1924) at 2612, the

C-008-131

contributing Fish House (1922) at 2616, the contributing and individually eligible Bogue House (A, 1923) at 2622, the contributing Bloxom House (1917) at 2632, the contributing Horner House (1925) at 2636, the contributing and individually eligible Beckwick-Thompson House (A, 1910) at 2700, the contributing and individually eligible Parshall House (C, Thomas L. West, 1911) at 2706, the contributing and individually eligible Siegley House (C, 1909) at 2712, the contributing and individually eligible Cavanaugh House (C, E. H. Sanders, 1909) at 2722, the contributing and individually eligible Conly House (A, 1916) at 2726, the contributing and individually eligible Mayer House (C, Hunt & Wheatley, 1924) at 2802, the contributing and individually eligible Spencer House (C, Ed Merritt, 1909) at 2808, the contributing Turner House (1903) at 2812, the contributing and individually eligible Richardson House (C, Julian G. Everett, 1912) at 2816, the contributing and individually eligible Phillips-Hyde House (C, Huntington & Gould,1909) at 2822, the contributing and individually eligible Higgins House (A, 1909) at 2832, and the contributing and individually eligible Patten House (A and C, 1909) at 2836. (The contributing and individually eligible Booth House at 1004 East Roanoke Street [A, 1907] and the contributing and individually eligible Dalley House at 2608 10th Avenue East [C, Huntington & Gould, 1909] have their views impeded by trees and other houses.) (**20** contributing, **13** of which are also individually eligible)

- The four houses on the north side of East Shelby Street at its east end that enjoy these views are the contributing and individually eligible Prosser-Dowling House (A and C, Hunt & Jones, 1909) at 912, the contributing and individually eligible Slater House (C, 1910) at 920, the contributing and individually eligible Ross House (A, 1912) at 926, and the contributing Dart House (C, 1909) at 1000. On the south side of East Shelby Street, the contributing and individually eligible Twelves House (A and C, Edwin J. Ivey, 1923) at 817, the contributing and individually eligible Denny House (A and C, 1910) at 2838 Broadway Avenue East, and the contributing Sutherland House (1908) at 2837 10th Avenue East also enjoy these views. (**7** contributing, of which **5** are also individually eligible)

- On the north and south sides of East Hamlin Street, the contributing and individually eligible Sullivan-Walker House (A and C, 1899—the oldest house in the district) at 2736 Broadway Avenue East, the contributing and individually eligible Finley House (A and C, 1909) at 2731 10th Avenue East, the contributing and individually eligible Hunter House (A and C, Frederick A. Sexton, 1909) at 2801 Broadway Avenue East, the contributing and individually eligible Johanson House (A, and C, attributed to Cutter & Malmgren, 1909) at 2800 Broadway Avenue East, and the contributing and individually eligible Wentworth-Elliott House (A and C, Merritt, Hall & Merritt, 1910) at 918 East Hamlin Street enjoy these views east as well. (**5** contributing, all **5** of which are individually eligible)

- As do, before leafing out, the contributing and individually eligible Neterer House (A and C, Andrew Willatsen, 1915) at 2702 Broadway Avenue East and the contributing and individually eligible Saunders House (A and C, Frederick A. Sexton, 1908) at 2701 10th Avenue East. (Other houses along the west side of 10th Avenue East have partial views of Lake Washington and the Cascades from their high vantage points.) (**2** contributing, **both** of which are individually eligible)

C-008-132

- All of these 34 contributing resources—more than a third of the Roanoke Park Historic District's 80 contributing resources and almost half of the district's 57 individually eligible historic resources—would suffer damage from the adverse effects to the setting and feeling of the Roanoke Park Historic District from the visual blight alone, and from pollution, noise, and nighttime glare at the various sites during the seven-and-a-half-year to eight-year construction project. (The State Historic Preservation Officer will decide finally whether the adversely affected contributing

C-008-132

resources identified here include properties also individually eligible for National Register and Washington Heritage Register listing.)

In addition, as has been noted, some of these 34 resources both contributing and contributing and individually eligible—and one listed resource along Harvard Avenue East, more contributing and individually eligible resources along the west side of 10th Avenue East, the as yet unmentioned contributing and individually eligible resources along the east and west sides of Broadway Avenue East, and the four historic contributing and individually eligible resources along East Roanoke Street including the contributing Roanoke Park itself—would experience adverse effects from staging, vegetation removal, detours, temporary closures and haul routes, demolition and (re)construction of the three arterial bridges and two lids, demolition and (re)construction of the seven-lane Portage Bay Bridge, and construction of the second bascule bridge of Option A.

- These multiple adverse effects of demolition and (re)construction to so many contributing and individually eligible resources and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

C-008-133

Construction— Demolition and Construction, Option K

- 149, Discuss the construction effects of the six-lane Option K on the historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood.
    - The construction effects on historic resources would come from staging, vegetation removal, detours, temporary closures and haul routes, demolition and construction of three bridges and two lids, and demolition and construction of the six-lane Portage Bay Bridge.
    - Construction effects of the six-lane Portage Bay Bridge would be almost as damaging in its effects as construction of Option A's seven-lane Portage Bay Bridge. See the earlier discussion of these effects with respect to Option A, and include them here.
    - Construction of Option K's tunnels under the Montlake Cut, with freezing, boring, and excavation, would be visible and audible for almost four years. Coincident with this part of the SR 520 project in Option K would be Sound Transit's project to excavate, haul, and construct a 300-foot-deep twin tunnel across the Montlake Cut. This project is underway and is expected to go on until 2016.
    - Option K's lower profile at various sites in the project as a whole might mean that visual blight from construction might be a less adverse effect over the seven-and-a-half-year construction phase.

C-008-134

- Without the lids that have been designed into the project, that are an integral part of the project, and because the "temporary" construction effects would go on for seven-and-a-half to eight years, these effects on historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood would be tantamount to permanent effects and lead to ultimate "demolition by neglect" as property values plummeted, and even then visual blight, noise, dust, vibration, and diesel emissions would mean that people would not be able to sell their homes for any amount approaching their present worth. Many of the houses would be rented out to lower income renters, those not in a position to avoid living so close to a mammoth, many-years-long freeway construction project. Many of the houses would become rentals and rooming houses. A general deterioration would ensue in the absence of owner-residents who work steadily to improve their historic houses and their communities. Repairs would tend to be done on the cheap, with little regard for the historic integrity that owner-residents have prized and maintained over 100 years. With the deterioration of the social fabric of the neighborhoods, would come a deterioration of the setting and feeling and characteristic single-family use of the Roanoke Park Historic District and of the historic resources in the Portage Bay neighborhood.

C-008-135

- An accurate **perception that the neighborhoods had become unhealthy** would mean that many families with young children would move away. A recent snapshot, block-to-block survey of the number of young children under the age of 20 conducted by the Portage Bay/Roanoke Park Community Council revealed that the predominantly single-family homes in the Roanoke Park Historic District and the Portage Bay neighborhood shelter 126 children, 79 of which are under 14. Note that the reluctance of many parents in this day and age to release such information means that these numbers of children are probably higher. A Memorandum of Agreement should treat avoiding, minimizing, and mitigating these adverse secondary, or indirect, effects.

C-008-136

- Finishing and landscaping the lids over I-5 and SR 520 immediately after the replacement bridges have been constructed and put into operation would spare historic resources from many of the further adverse effects of Option K's six-lane Portage Bay Bridge project's six-year construction phase and provide an opportunity for monitoring and fine-tuning to perfect measures to avoid, minimize, and mitigate subsequent permanent operation effects on historic resources.

- The multiple effects of demolition and (re)construction in Option K and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

Construction—Demolition and Construction, Option L

C-008-137

- 160, Discuss the construction effects of the six-lane Option L on the historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood.

    - The construction effects on historic resources would come from staging, vegetation removal, detours, temporary closures and haul routes, demolition and construction of bridges and lids, and construction of the six-lane Portage Bay Bridge.

    - Construction of Option L's six-lane Portage Bay Bridge over a six-year period would be almost as damaging in its effects as construction of Option A's seven-lane Portage Bay Bridge. See the earlier discussion of these effects with respect to Option A, and include them here.

    - Construction of Option L's second bascule bridge farther to the east and out of sight of these neighborhoods might have little effect on the neighborhoods that surround the Portage Bay basin. Note that any noise from the second bascule bridge construction project that reached the Roanoke Park Historic District or historic resources in the Portage Bay neighborhood would be compounded by noise from Sound Transit's project to construct a 300-foot-deep twin tunnel across the Montlake Cut. This project is underway and is expected to last until some time in 2016.

    - Option L's elevated profile at various sites in the project as a whole would mean that visual blight from construction might be a more adverse effect over the seven-and-a-half-year construction phase.

C-008-138

- Without the lids that have been designed into the project, that are an integral part of the project, and because the "temporary" construction effects would go on for seven-and-a-half years, these effects on historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood would be tantamount to permanent and lead to ultimate "demolition by neglect" as property values plummeted, and even then visual blight, noise, dust, vibration, and diesel emissions would mean that people would not be able to sell their homes for any amount approaching their present worth. Many of the houses would be rented out to lower income renters, those not in a position to avoid living so close to a mammoth, many-years-long freeway construction project. Many of the houses would become rooming houses. A general deterioration would ensue in the absence of owner-residents who work steadily to improve their historic houses and their communities. Repairs would tend to be done on the cheap, with little regard for the historic integrity that owner-residents have prized and maintained over 100 years. With the deterioration of the social fabric of the neighborhoods would come a deterioration of the setting

C-008-138 and feeling and the characteristic single-family use of the historic district and of the historic resources in the Portage Bay neighborhood.

C-008-139
- An accurate **perception that the neighborhoods had become unhealthy** would mean that many families with young children would move away. A recent snapshot, block-to-block survey of the number of young children under the age of 20 conducted by the Portage Bay/Roanoke Park Community Council revealed that the predominantly single-family homes in the Roanoke Park Historic District and the Portage Bay neighborhood shelter 126 young children including 79 under the age of 14. Note that the reluctance of many parents in this day and age to release such information means that these numbers of children are probably higher.

C-008-140
- Finishing and landscaping the lids over I-5 and SR 520 immediately after the replacement bridges have been constructed and put into operation would spare contributing and potentially individually eligible historic resources from many of the further adverse effects of Option L's six-lane Portage Bay Bridge project's six-year construction phase and provide an opportunity for monitoring and fine-tuning to perfect measures to avoid, minimize, and mitigate subsequent permanent operation effects on historic resources.

- The effects of demolition and (re)construction in Option L and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

C-008-141
- Note that the decline in livability described in many of the *SDEIS* discipline reports and in the *Health Impact Assessment* (regretfully, not included in the *SDEIS*) would lead to "demolition by neglect" of historic resources in these areas adjacent to the SR-520 Bridge Replacement and HOV Project. The lids designed into the project are integral, not mitigation, but early **timing** of their completion could be regarded as a construction mitigation of this secondary, indirect, adverse effect in a Memorandum of Agreement.

C-008-142
Potential Effects of the Project, Operation section p 170

- Because the report says that less is known of details in the area near the I-5 and SR 520 interchange, treat the two areas, the area near the I-5 and SR 520 interchange and the area between I-5 and Portage Bay, separately.

C-008-143
I-5 and SR 520 Interchange, Operation, Options A, K, and L

- Of the I-5 and SR 520 interchange, say something to the effect of "The operation of the SR 520 and I-5 interchange is likely to have an adverse effect on the eligible Chung House at 1980 Harvard Avenue East (1932) and possibly on the eligible Talder House (1909) at 2352 Broadway Avenue East. When design and operation details are known, possible effects of operation of this part of the project on historic resources will be more fully evaluated."

C-008-144
Area Between I-5 and Portage Bay, Operation, Options A, K, and L

Operation—I-5 and 10th & Delmar Lids, Options A, K, and L

- Without the lids that have been designed into the project, that are an integral part of the project, the operation effects on historic resources in the Roanoke Park Historic District and Portage Bay neighborhood would lead to ultimate "demolition by neglect" as property values plummeted, and even then noise, air pollution, and visual blight would mean that people would not be able to sell their homes for any amount approaching their present worth. Many of the houses would be rented out to lower income renters, those not in a position to avoid living so close to a mammoth freeway. Many of the houses would become rooming houses. A general deterioration would ensue in the absence of owner-residents who work steadily to improve their historic houses and their communities. Repairs would tend to be done on the cheap, with little regard for the historic integrity that owner-residents have prized and maintained over 100 years. With the deterioration of the social fabric of the neighborhoods, would come **a deterioration of the setting and feeling and characteristic single-family use** of the historic district and the historic resources in the Portage Bay neighborhood.

C-008-145

- An accurate **perception that the neighborhoods had become unhealthy** would mean that many families with young children would move away. A recent block-to-block, snapshot survey of the number of young children under the age of 20 conducted by the Portage Bay/Roanoke Park Community Council revealed that the predominantly single-family homes in the Roanoke Park Historic District and the Portage Bay neighborhood shelter 126 children including 79 under the age of 14. Note that the reluctance of many parents in this day and age to release such information means that these numbers of children are probably higher. This demographic would undergo a drastic alteration. A Memorandum of Agreement should treat these adverse secondary, or indirect, effects and ways of avoiding, minimizing, and mitigating them.

C-008-146

Operation, Portage Bay Bridge, Options A, K, and L

- Because the **view shed** is so important to the setting and feeling of the neighborhoods on the steep western and southern hillsides of the Portage Bay basin, we urge the writer to make use of the comments that follow here in discussions of the operation effects of Options A, K, and L on historic residences in the Roanoke Park Historic District and the Portage Bay neighborhood including historic residences that should be in the APE along both sides of Fuhrman-Boyer Avenue East, many as yet unsurveyed, an unsurveyed historic bungalow district along East Gwinn Street between Harvard Avenue East and Fuhrman-Boyer Avenue East, and unsurveyed historic resources along the other streets that make up the point, the unsurveyed houseboat community in west Portage Bay, and the as yet unsurveyed historic resources on the north and south hillsides of Delmar Drive East that might or might not be and should be included in the APE.

C-008-147

- We urge consideration of the 2005 *VQADR* because it is more candid with respect to adverse effects findings than the December 2009 *SDEIS* version of the *VQADR*, because the aesthetic principles the earlier report employed in its effects findings have not gone out of date, and because the earlier report's representations of these neighborhoods and its effects findings have not been tainted by the numerous misrepresentations and omissions in the 2009 *CRDR*, which obviously informed both the later *VQADR*'s account of historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood and the later *VQADR*'s much more sanguine effects findings.

C-008-148

- The *Visual Quality and Aesthetics Discipline Report* of 2005 for the SR 520 Bridge Replacement and HOV project observes of the present Portage Bay Bridge that **"the Portage Bay Bridge is a dominant part of many views from the hills around the bay and from the bay itself" (p 19).** The report also notes that **the present SR 520 structures "are not visually compatible with the natural-appearing landscapes or the smaller scale of the neighborhoods" (p 24) and that "the columns and highway break up the visual composition of natural-appearing areas and neighborhoods" (p 24).** The wider, higher prospective bridge, shifted north, and with massive concrete noise walls will be even less compatible with the natural-appearing landscapes and the smaller scale of the neighborhoods. And the higher, wider prospective six- or seven-lane bridge with massive noise walls in Options A and L, moved north in front of these historic resources, will break up **the visual composition of natural-appearing areas and small-scale neighborhoods and bays to an extremely damaging degree**. This is a cumulative adverse effect.

C-008-149

  - A section of the 2005 *Visual Quality and Aesthetics Discipline Report* on viewer sensitivity to prospective changes to these views says, **"residents around Portage Bay and along the western shore of Lake Washington form the largest viewer group, with views of the roadway in Seattle. This includes East Roanoke Park . . ."** The report goes on, **"Residents and park and trail users in this [Seattle] area have high sensitivity to landscape aesthetics because they either are in their home community or expect a pleasant, natural-appearing landscape for recreation."** The Portage Bay Bridge demolition and construction over six years and the permanent operation of the higher, wider bridge, shifted north and with noise walls, will degrade views to an extreme extent.

C-008-150

- Under "Potential Effects of the Project," the 2005 *Visual Quality and Aesthetics Discipline Report* says that effects of the proposed alternatives on the visual quality and aesthetics of a landscape would differ according to changes in width, elevation, addition or removal of structures and vegetation, and the degree to which new structures would contrast or blend with the existing landscape. It rates visual quality changes on the basis of low, moderate, or high contrast. **High contrast is described as "easily noticeable contrast between scale or character of proposed facilities and existing environment in which viewers are sensitive to visual change and expect attractive views or surroundings and substantial changes in shadow levels of light and glare that would be easily noticeable."**

C-008-151

- Of the most modest alterations to the Portage Bay Bridge, in the old Four-Lane Alternative, the 2005 *Visual Quality and Aesthetics Discipline Report* says that the new bridge would shift to the north and be 10 to 20 feet higher and about 50 feet wider than the current 54-foot-wide bridge and that the change in scale would be **very noticeable** to motorists and to viewers looking at the bridge anywhere in the Portage Bay basin. The 2005 *Visual Quality and Aesthetics Discipline Report* also observes that the northward placement of the bridge would **noticeably change** the view eastward from Roanoke Park homes north of the bridge by encroaching on their views to the south. It goes on, "Sound walls in the Portage Bay/Roanoke Park area would result in **very high changes to the visual character of SR 520 and to the quality of views from and toward the roadway.** At 18 to 22 feet along North Capitol Hill, the walls would drastically and negatively alter the motorist's experience and could block views from residences adjacent to the wall. A 10-foot-high sound wall could encroach on Bagley Viewpoint and obstruct views to the south."

C-008-152

- Of the view from outside the roadway of the Four-Lane Portage Bay Bridge, the 2005 *Visual Quality and Aesthetics Discipline Report* said, "the addition of 8- to 10-foot-high sound walls on the south side of the Portage Bay Bridge would create **a profile that is very different from [that of] the existing bridge. The walls, in combination with the taller girders and the greater bridge width, would make the bridge structure more massive and box-like, and would greatly increase the visual presence of the bridge.** Moreover, the sound walls would not be consistent with the Scenic Route classification of SR 520 from the driver's viewpoint because the high sound walls would block lateral views outward from the roadway and would partially obstruct long-distance views of the Cascades." (Note that according to a February 1, 2010, letter from Julie Meredith, P. E., SR 520 Program Director, WSDOT, and Randolph Everett, Major Projects Oversight Director, FHWA, the designs for Options A and L now include noise walls on both the north and the south sides of the Portage Bay Bridge.)

- Of the Six-Lane Alternative (before Options A, K, and L had been developed and before Roanoke Park had become the Roanoke Park Historic District), the 2005 *Visual Quality and Aesthetics Discipline Report* said that "sound walls in [the] Roanoke Park [Historic District] would be 12 to 14 feet high on the south side of the highway." It's not clear whether sound walls will also be on the north side of the highway.

- Of a new Bagley Viewpoint to be designed into the 10th & Delmar lid in the Six-Lane Alternative [before Options A, K. and L had been developed], the 2005 *Visual Quality and Aesthetics Discipline Report* said that **the placement of 10-foot-high sound walls near the viewpoint could affect the view.**

C-008-153

- The 2005 *Visual Quality and Aesthetics Discipline Report* also said that in the Six-Lane Alternative [Options A. K. and L had not yet been developed] "vegetation below Bagley Viewpoint and in 50-foot-wide swaths on the north and south sides of the roadway would be removed."

C-008-154

- The 2005 *Visual Quality and Aesthetics Discipline Report* observed that in the Six-Lane Alternative [before Options A, K. and L had been developed], **"the Portage Bay Bridge would be more than twice the width [even wider in the seven-lane Option A] but similar in style" and that the northward alignment and added width would have a moderate to high visual quality effect on views toward and from the roadway.** The report also observed **that "the roadway would be within 70 to 100 feet of a few homes just below the Bagley Viewpoint**" and that **"the view eastward from Roanoke Park homes would noticeably change because of proximity of the Portage Bay Bridge."** The 2005 *Visual Quality and Aesthetics Discipline Report* of course does not say how much closer the then unplanned seven-lane Portage Bay Bridge of Option A would be to the homes below the Bagley Viewpoint or how **much more noticeably** the view eastward from Roanoke homes would change under the seven-lane Option A.

C-008-155

- The 2005 *Visual Quality and Aesthetics Discipline Report* added, **"sound walls on the south [and now north?] side[s] of the Portage Bay Bridge would compound the visual effects of the taller girders and make the highway structure appear more massive when seen from viewpoints outside of the roadway."**[2]

C-008-156

- 170, first para What would be the effect of **variable tolling** in the No Build Alternative, considering both tolling SR-520 alone and tolling I-90 as well as SR-520? Tolling is expected to begin in spring 2011, which means it will initially take place on the four-lane bridge.

C-008-157

- 172 The "6-Lane Alternative" head is out of date. Option A has seven lanes on the Portage Bay Bridge with noise walls. Option K has six lanes on the Portage Bay Bridge with quieter pavement. Option L has six lanes on the Portage Bay Bridge with noise walls.

C-008-158

- 172 Note that the 10th Avenue East & Delmar Drive East lid would visually shield the Roanoke Park Historic District from the wider roadway beneath the lid but that it would not visually shield the Roanoke Park Historic District from the wider and higher Portage Bay Bridge moved north in front of the Roanoke Park Historic District.

C-008-159

- 172, third para, second and third sentences The Andrew Gunby House would not be shielded from noise by the 10th & Delmar lid, nor would it be visually shielded by the lid.

C-008-160

- 172, end of third para Include quieter pavement data here, too.

C-008-161

- 172, ff Were noise levels measured at bedroom height?

C-008-162

- 173 Note that the width of the Portage Bay Bridge would be greater in Option A and that whether sound walls are used would affect the profile of the Portage Bay Bridge.

C-008-163

- 173, next to last para Many more contributing (and individually eligible) houses than those mentioned have views of the Portage Bay Bridge, and those views would be adversely affected by the wider, higher Portage Bay Bridge moved north: houses on the east side of East Shelby Street, for instance, and houses at the intersections of East Hamlin Street and East Edgar Street with the east side of Broadway Avenue East and the west side of 10th Avenue East. See the earlier discussion of contributing and individually houses that enjoy these views in the Construction Effects part of these comments, pp 28–31.

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[2] In a letter dated February 1, 2010, Julie Meredith, P. E., SR 520 Program Director, and Randolph Everett, FHWA Major Projects Oversight Manager, say that "If noise walls are included on the Portage Bay Bridge under any option, they would run the entire length of the bridge on both sides." Still to be examined as an alternative to the visual blight of noise walls is the use of quieter pavement, not as mitigation, which the FHWA does not endorse, but as an integral part of any design adopted.

C-008-164

- 173, last para An out-of-scale six- or seven-lane higher bridge running beside notable buildings such as the John Graham, Sr.–designed terra-cotta and brick NOAA Fisheries Building and the diminutive John Graham, Sr., Seattle Yacht Club would have an adverse effect on views of those historic buildings, and the scale of the project would visually intrude on views of Portage Bay from many contributing and individually eligible properties in both the Roanoke Park Historic District and theas yet not fully surveyed Portage Bay neighborhood. These historic resources are noted for their views. **The foreseeable effects of the new project added to past and present effects would be a cumulative adverse effect.**

C-008-165

- Once again, note that the operation effects, like the demolition and construction effects, vary in the three options. And note again that Option A is according to WSDOT "the seven-lane option." The report should treat historic resources in the area between I-5 and Portage Bay as it does the historic resources in the neighborhoods east of Portage Bay with respect to effects from operation of the three different options.

- Discuss operation effects on historic resources in the Roanoke Park Historic District and historic resources in the Portage Bay neighborhood from all three options in the sections devoted to Option A, Option K, and Option L as is done for other historic resources and the other historic district in the APE in this section on the effects of operation of the three different options.

C-008-166

- 174, first para, last three sentences: "Only a small portion of the district has a view of [**34** of 80—more than one-third of contributing—and **26** of 57—almost half of individually eligible houses] and would be adversely affected by, the replacement bridge. In addition , there is already a bridge there, so its [higher and wider] replacement [moved farther north in front of historic residences] would not be a substantial change from existing conditions. Therefore, the visual effect from the new bridge would not be an adverse effect." The "therefore" based on false representation of the number of contributing and individually eligible historic resources in the district that have views of the Portage Bay Bridge and on the imprecise words "would not be a substantial change" is not earned. **The new bridge's greater height and width moved farther north in front of more homes added to past and present effects would be a cumulative adverse effect.**

C-008-167

- 174, bulleted list of effects on the Roanoke Park Historic District needs to consider the effects separately of the seven-lane Option A and the six-lane Options K and L and the effects if the building of the lids is deferred in the Phased Implementation scenario, said in the *SDEIS* to be the most likely scenario.

C-008-168

- 174, last para, third sentence The seven-lane Portage Bay Bridge of Option A is said to be 35 feet wider than the existing bridge. On p 181, second para, first sentence, the six-lane Portage Bay Bridge of Option K is said to be "approximately 35 feet wider than the existing bridge." Which one will be 35 feet wider—the six-lane or the seven-lane?

C-008-169

- 175, second para, third to last sentence "Only a small portion of the district has a view of, and would be visually affected by, the replacement [Portage Bay] bridge" is simply not true. See the itemized discussion of the number and the status (contributing and individually eligible) of resources from which views east are enjoyed above, pp 30–31, in the Construction section of these comments.

C-008-170

- 175, second para The last three sentences repeat the specious reasoning re the wider and higher new Portage Bay Bridge from p 174: the infamous "there is already a bridge there, so its [wider and higher] replacement [moved north] would not be a substantial change from existing conditions" denies the definition of cumulative effects and denies the effects finding of the 2005 *Visual Quality and Aesthetics Discipline Report*. ("Would not be substantial" is not substantiated here or elsewhere.)

C-008-171

- 175, last para and 176, first para Changes from the second bascule bridge of Option A to the watery setting and feeling of the delicate span of the Montlake Bridge would also be an adverse effect on views of the historic Carl F. Gould Montlake Bridge from the Roanoke Park Historic District and the Portage Bay neighborhood, including unsurveyed historic resources in the Portage Bay neighborhood. Note that residents of these neighborhoods walk down to East Shelby Street to enjoy the most spectacular view of the Montlake Bridge and Montlake Cut that they have partial views of from their own homes.

C-008-172

- 175, third para The Montlake Bridge is a part of the view from more houses than "on 10th Avenue East between East Hamlin and East Shelby Street." Large, tall houses along the east and west sides of East Shelby Street and at intersections on Broadway Avenue East and the west side of 10th Avenue East enjoy views of the Montlake Bridge as well. Again a diminution of the number and a disregard for the contributing and individually eligible status of historic resources leads to a finding of no adverse effect in a district known for its spectacular views, where spectacular views contribute "substantially" to setting and feeling.

- 175, third para "Although it would affect the setting and feeling of **this edge of the district** and of these contributing [!] properties, this effect would not be adverse" under-represents the number of affected properties and those that are both contributing and individually eligible. More resources than those at this "edge" of the district would be affected by the adverse effects on views. The finding that "this effect would not be adverse" is not substantiated in any way.

- 177, third para "primarily visible from the rear of houses on 10th Avenue East" condescends to the decks, terraces. living rooms, and upstairs rooms from which the view is enjoyed along the east side of 10th Avenue East and under-represents the number of contributing and individually eligible historic resources from which the view is enjoyed, including many views from the fronts and sides of houses at intersections.

C-008-173

- 177, third para "The width of Portage Bay geographically separates the Montlake Bridge from the Roanoke Park Historic District" seems like an obvious observation. And of course the views across the beautiful waters of the bay and the cut to the delicate span are prized. Is the remark about the geographic separation meant to suggest that the viewer must be on top of the bridge or underneath it or beside it in order to enjoy views of it? The watery expanse before the view of the bridge is part of the charm of the view from one of the neighborhood's beloved viewpoints.

C-008-174

- 179, bulleted list The following items similar to the bulleted list of operation effects on the Montlake Historic District describe operation effects on the Roanoke Park Historic District and on historic resources, both surveyed and unsurveyed in the Portage Bay neighborhood:

    - "Change to setting caused by wider Portage Bay Bridge"
    - "Change to setting caused by new bascule bridge"
    - "Change to setting caused by widened roadway" on East Roanoke Street
    - "Change to setting" by diminution of Bagley Viewpoint and vegetation removal for widening of the SR 520 roadway "resulting in some loss of landscaped buffer" for the Gates-Bass Mansion and historic houses along at least the 2600 block of 10th Avenue East and Broadway Avenue East and possibly more contributing and individually eligible historic residences in the south part of the district
    - Beneficial change to setting from introducing lid over I-5 at East Roanoke Street and over SR 520 between 10th Avenue East and Delmar Drive East—if the lids are constructed. The statement in the *SDEIS* that the Phased Implementation scenario, with its indefinite

C-008-174

deferral of lids, is the most likely scenario throws the prospect of timely lid construction into doubt.

- To be added: Adverse multiple and cumulative effects on setting from increased noise, air pollution, vibration, and nighttime traffic glare from a wider highway with more vehicle traffic, particularly from operation of the seven-lane Portage Bay Bridge.

- To be added: Adverse secondary, indirect, effects from perceptions of desirability and healthy livability from the direct effects and a consequent change to setting and feeling and characteristic use of the historic district and the historic resources in the Portage Bay neighborhood.

C-008-175

- These effects and others mentioned on pages 4 through 7 of these comments should be mitigated through stipulations outlined in a Memorandum of Agreement.

C-008-176

- 173–174 See the discussion of the 2005 *Visual Quality and Aesthetics Discipline Report* above for its perspective on the **high contrast changes** that even a four-lane or a six-lane alternative would lead to. The minimizing discussion and conclusions here are at the very least debatable, out of touch with the very real adverse effects of Option A's seven-lane-wide and higher Portage Bay Bridge with noise walls, moved farther north, on **views** from more of the historic resources than those along the east side of 10th Avenue East. Similar adverse effects would result from the wider and higher six-lane Portage Bay Bridge of Options K and L moved north. Correct the information in the passage here, and move the discussion into the following Option A, Option K, and Option L sections.

C-008-177

- The East Edgar Street, East Hamlin Street, and East Shelby Street hills continue to slope at the top of the Roanoke Park Historic District plateau from the east side of 10th Avenue East to the plateau's high point along Broadway Avenue East. Residents in the large houses at intersections of the Roanoke Park Historic District as far west as the west side of Broadway Avenue East enjoy views east variously including Portage Bay, the historic Fisheries Building, the historic Seattle Yacht Club and marinas, the historic Montlake Cut, the historic Montlake Bridge, Lake Washington, the lights of Bellevue and Kirkland, trees in the foothills, and the Cascade Mountains.

    - Houses from which these views may be enjoyed include most obviously the contributing and individually eligible Gates-Bass Mansion at 1018 East Roanoke Street (A and C, Elmer E. Green, 1909) and most of the houses along the east side of 10th Avenue East: the contributing Gifford House (1924) at 2612, the contributing Fish House (1922) at 2616, the contributing Bogue House (1923) at 2622, the contributing Bloxom House (1917) at 2632, the contributing Horner House (1925) at 2636, the contributing and individually eligible Beckwick-Thompson House (A and C,1910) at 2700, the contributing and individually eligible Parshall House (C, Thomas L. West, 1911) at 2706, the contributing and individually eligible Siegley House (C, 1909) at 2712, the contributing and individually eligible Cavanaugh House (C, E. H. Sanders, 1909) at 2722, the contributing Conly House (1916) at 2726, the contributing and individually eligible Mayer House (C, Hunt & Wheatley, 1924) at 2802, the contributing and individually eligible Spencer House (C, Ed Merritt, 1909) at 2808, the contributing Turner House (C, 1903) at 2812, the contributing and individually eligible Richardson House (A and C, Julian G. Everett, 1912) at 2816, the contributing and individually eligible Phillips-Hyde House (C, Huntington & Gould,1909) at 2822, the contributing and individually eligible Higgins House (A, 1909) at 2832, and the contributing and individually eligible Patten House (A and C, 1909) at 2836. All of these contributing and individually eligible resources would suffer degradation of their views and increased noise from the operation of Option A's seven-lane Portage Bay Bridge and second bascule bridge, not only from the sight of the massive Portage Bay Bridge, with its increased height and view-blocking noise walls, but also from the impairment by the

C-008-177

second bascule bridge of views of the delicate span of the Carl F. Gould Montlake Bridge. (Note that the views east of the Booth and Dalley houses at the south end of the historic district are impeded by trees and other houses.)

- The four houses on the north side of East Shelby Street at its east end that enjoy these views are the contributing and individually eligible Prosser-Dowling House (A and C, Hunt & Jones, 1909) at 912, the contributing and individually eligible Slater House (C, 1910) at 920, the contributing and individually eligible Ross House (A and C, 1912) at 926, and the contributing Dart House (1909) at 1000. On the south side of East Shelby Street, the contributing and individually eligible Twelves House (A and C, Edwin J. Ivey, 1923) at 817, the contributing and individually eligible Denny House (A and C, 1910) at 2838 Broadway Avenue East, and the contributing Sutherland House (1908) at 2837 10th Avenue East also enjoy these views.

- On the north and south sides of East Hamlin Street, the contributing and individually eligible Sullivan-Walker House (A and C, 1899—the oldest house in the district) at 2736 Broadway Avenue East, the contributing and individually eligible Finley House (A and C, 1909) at 2731 10th Avenue East, the contributing and individually eligible Hunter House (A and C, Frederick A. Sexton, 1909) at 2801 Broadway Avenue East, the contributing and individually eligible Johanson House (A, and C, attributed to Cutter & Malmgren, 1909) at 2800 Broadway Avenue East, and the contributing and individually eligible Wentworth-Elliott House (A and C, Merritt, Hall & Merritt, 1910) at 918 East Hamlin Street enjoy these views east as well.

- As do the contributing and individually eligible Neterer House (A and C, Andrew Willatsen, 1915) at 2702 Broadway Avenue East and the contributing and individually eligible Saunders House (A and C, Frederick A. Sexton, 1908) at 2701 10th Avenue East. (Other houses along the west side of 10th Avenue East have partial views of Lake Washington and the Cascades from their high vantage points.)

C-008-178

- All of these historic resources in the Roanoke Park Historic District would suffer permanent damage to setting and feeling and characteristic single-family use from the visual blight, pollution, noise, and nighttime glare at various sites during operation of the project.

Operation, Option A

C-008-179

- 174 Option A, Historic Built Environment head Moving from west to east, discuss the permanent effects of Option A operation on the area between I-5 and Portage Bay, presently omitted. Discuss historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood including the unsurveyed historic resources on the north and south hillsides of Delmar Drive East that would be adversely affected by the permanent operation of Option A's seven-lane Portage Bay Bridge, higher and moved north, with sound walls, which adverse effects would include visual blight, noise, vibration, air pollution and consequent building exterior erosion and soiling, dusty windows, damage to landscaping from air pollution and vibration, nighttime glare, and the loss and damage of vegetation.

C-008-180

- Note that the east end of the Roanoke Park Historic District, including the contributing and individually eligible Gates-Bass Mansion and the contributing and individually eligible houses along 10th Avenue East would suffer permanent blocking of views south from noise walls on the north and south sides of the Portage Bay Bridge. (See the 2005 *Visual Quality and Aesthetics Discipline Report.*)

- Visitors to the new, much diminished Bagley Viewpoint would have their views permanently impeded by a ten-foot-high noise wall on the south side of the Viewpoint. (See the 2005 *Visual Quality and Aesthetics Discipline Report.*)

C-008-181
- Note that the 10th & Delmar lid will end at the current Bagley Viewpoint and that the historic resources in the Portage Bay neighborhood north of the new Portage Bay Bridge, including many as yet unsurveyed houses, would have no buffering from the visual blight, noise, air pollution and consequent building exterior erosion and soiling, damage to landscaping from air pollution and vibration, dusty windows, vibration, nighttime traffic glare, and the loss and damage of vegetation in operation of the seven-lane Portage Bay Bridge of Option A.

C-008-182
- In operation, degradation in Option A of the views for which the Roanoke Park Historic District is noted would have a permanent adverse effect on the Roanoke Park Historic District. Historic resources in the Portage Bay neighborhood, including unsurveyed historic resources on the hills along the north and south sides of Delmar Drive East, in the houseboat community, and along both sides of Fuhrman-Boyer Avenue East would suffer permanent adverse effects on views as well.

C-008-183
- 174, last para second and third sentences Says "The new Option A Portage Bay bridge would be seven lanes wide, with an overall width of at least 108 feet, which is 35 feet wider than the existing bridge." Check the present width of the Portage Bay Bridge (54 feet?) and check the projected width in Option A of the Portage Bay Bridge. The 2005 *Visual Quality and Aesthetics Discipline Report* says that the Portage Bay Bridge would be 50 feet wider than the present bridge in the Four-Lane Alternative. The new width of a seven-lane bridge would be much wider than the new width of the Four-Lane Alternative, and the seven-lane bridge would be more than the 35 feet wider than the existing bridge that the *Cultural Resources Discipline Report* claims here.

C-008-184
- The eventual operation of a massive seven-lane bridge with sound walls, a bridge that will be higher than the present bridge, shifted farther north, and more air polluting causing erosion and soiling of historic resources, would be a permanent adverse effect on contributing and individually eligible historic resources in the Roanoke Park Historic District and on individually eligible resources in the Portage Bay neighborhood.

C-008-185
- None of the contributing and individually eligible properties in the Roanoke Park Historic District are noted in Option A operation effects findings even though they will be adversely affected by the operation of the new Portage Bay Bridge, which in addition to being higher and more than twice as wide with noise walls will be moved to the north in front of more homes in the Roanoke Park Historic District—even though contributing historic resource status and individually eligible property status in the Montlake Historic District are routinely brought to bear on operation effects findings.

C-008-186
- In operation, the second bascule bridge would permanently detract from the delicate span of the Carl F. Gould Montlake Bridge visible from many contributing and individually eligible historic houses in the Roanoke Park Historic District. This view is prized by walkers through the district as well.

C-008-187
- Considering in toto these multiple operation effects and the multiple long-term demolition and construction effects of Option A on contributing and individually eligible resources discussed earlier in these comments one would conclude that the Roanoke Park Historic District would be adversely affected by changes to the setting and feeling of the district and its single-family characteristic use.

C-008-188
- Considering in toto the multiple effects from the operation and construction of Option A on individually eligible historic resources in the Portage Bay neighborhood, one would conclude that these eligible historic resources would be adversely affected by changes to their setting and feeling and changes from their characteristic single-family use. Note that individually eligible historic resources along both sides of Fuhrman-Boyer Avenue East including those in the houseboat community, among the bungalows along East Gwinn Street and historic resources and historic resources along the steep hillsides on the north and south sides of Delmar Drive East have not

C-008-188 been identified in the *Cultural Resources Discipline Report*'s survey of historic resources in the Portage Bay neighborhood.

C-008-189 *Operation, Option K*

- 181, second para Moving from west to east, discuss the effects of Option K operation on the area between I-5 and Portage Bay, presently omitted. Discuss historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood including the unsurveyed historic resources on the north and south hillsides of Delmar Drive East that would be adversely affected by the permanent operation of Option K's six-lane Portage Bay Bridge, which include visual blight, noise, vibration, air pollution and consequent building exterior erosion and soiling, damage to landscaping from air pollution and vibration, dusty windows, nighttime traffic glare, and vegetation removal and damage. Refer to the discussion above of the 2005 *Visual Quality and Aesthetics Discipline Report*'s findings with respect to adverse effects on views from even the old Four-Lane Alternative and from the wider old Six-Lane Alternative.

C-008-190

- At six-lanes, Option K's Portage Bay Bridge with no noise walls would not be as damaging in its operation effects on views as Option A's seven-lane Portage Bay Bridge with noise walls. See the earlier discussion of effects on views from Option A. Six lanes, higher and wider and moved farther north would still have a noticeable effect on views, however. Speak also to the noise reduction effects of the quieter pavement designed into Option K.

C-008-191

- 181, second para Note that the 10th & Delmar lid ends at the current Bagley Viewpoint and that with Option K's quieter pavement and lack of noise walls the historic resources in the Portage Bay neighborhood north and south of the new Portage Bay Bridge, including many as yet unsurveyed historic houses, might have only modest buffering from the noise and no buffering from the vibration, air pollution, eroding and soiling of buildings, dusty windows, and vegetation removal and damage of the six-lane Option K moved closer to these historic resources. The conclusion that the Portage Bay neighborhood historic resources mentioned in this passage would not suffer an adverse effect from the operation of the Portage Bay Bridge moved closer to these resources seems dubious.

C-008-192

- Option K's quieter pavement might mean that operation of the six-lane project would have the adverse effect of increased noise from buses and autos—moreso than in the operation of Option A, which includes sound walls. The effects of the two kinds of noise deterrents at bedroom levels need to be studied and included in the *Cultural Resources Discipline Report*. Unlivable historic resources would quickly deteriorate.

C-008-193

- The absence of noise walls and the narrower width of the Portage Bay Bridge would mean that the historic viewshed would be less damaged in Option K than in Option A (or Option L), but viewers of the roadway in the Roanoke Park Historic District and Portage Bay neighborhood would still experience a high contrast between the new views and the present views and thus a cumulative adverse effect from the movement of a wider and higher Portage Bay Bridge farther to the north in Option K (and in Option A and Option L).

C-008-194

- Option K's double tunnel under the Montlake Cut would not have a permanent visual effect on historic resources in the Portage Bay basin. Note that construction of Sound Transit's deep-bore twin tunnel under the Montlake Cut is underway and that staging, excavation, hauling, and construction effects of this project will last until some time in 2016. Understanding that WSDOT will not mitigate this cumulative effect of the construction of the two projects "because it doesn't have jurisdiction over another agency," we do expect WSDOT to coordinate with Sound Transit over the effects of the two projects on historic resources in the Portage Bay basin.

C-008-195

- Option K's lower profile at most sites along the roadway with the exception of the six-lane Portage Bay Bridge, which even then would have a lower profile thanks to the absence of noise walls, would make it the least damaging option as far as views are concerned.

C-008-195

- The absence of noise walls and the use of quieter pavement, however, might have an adverse effect in the form of noise, vibration, air pollution, and nighttime traffic glare in operation of Option K.

- Taking the multiple construction and operation effects in toto, one concludes that even the least damaging Option K would have an adverse effect on these historic resources and require a Memorandum of Agreement.

C-008-196

Operation, Option L

- 185, second para Moving from west to east, discuss the permanent effects of Option L operation on the area between I-5 and Portage Bay, presently omitted. Discuss historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood including the individually eligible historic resources on the north and south hillsides of Delmar Drive East that would be adversely affected by the permanent operation of Option L's wider and higher Portage Bay Bridge with noise walls, moved farther north, which include visual blight, noise, vibration, air pollution and consequent building exterior erosion and soiling, dusty windows, damage to landscaping from air pollution and vibration, nighttime traffic glare, and vegetation removal and damage. Refer to the discussion above of the 2005 *Visual Quality and Aesthetics Discipline Report* for its perspective on the high contrast with present views that would be a result of even the Four-Lane Alternative and of Option L's Six-Lane Alternative moved farther north and with noise walls.

C-008-197

- Option L's six-lane Portage Bay Bridge with its noise walls would be almost as massive and almost as damaging in its operation effects as Option A's seven-lane Portage Bay Bridge. See the earlier discussion of these effects with respect to Option A, and include them here.

- Note that the east end of the Roanoke Park Historic District, including the Gates-Bass Mansion, the contributing and individually eligible houses along 10th Avenue East, and contributing and individually eligible houses at some of the Roanoke Park Historic District's intersections would suffer view blocking 8-to-10-foot noise walls along the north and south sides of the Portage Bay Bridge.

- Option L's noise walls would have a permanent adverse effect on views from historic resources in the Portage Bay neighborhood as well.

C-008-198

- 186, first para See discussions of the views and which of many contributing and individually eligible resources in the Roanoke Park Historic District enjoy these views east earlier in these comments (pp 26–29), and change this statement that "only a small portion of the district has a view of, and would be visually affected by, the replacement bridge [the replacement Portage Bay Bridge]. In addition there is already a bridge there, so its replacement would not be a substantial change from existing conditions. Therefore the visual effect from the new bridge would not be an adverse effect on the Roanoke Park **H**istoric **D**istrict or its contributing elements." The movement north of the wider, higher bridge with noise walls would affect views from a substantial number of contributing (34 contributing resources, more than a third) and possibly individually eligible (a preliminary count of 26—almost half) resources in the Roanoke Park Historic District that currently enjoy the "expansive" views of "high vividness" that contribute to the setting and feeling as well as the single-family use of resources in the district.

C-008-199

- We object to the minimization of the number of contributing (and individually eligible) historic resources in the district whose desirability would be affected by permanent degradation of these views.

C-008-200

- We object again to the cavalier and oft-repeated conclusion that "there is already a bridge there, so its [wider, higher, with noise walls, moved farther north] replacement would not be a substantial change from existing conditions." See the 2005 *Visual Quality and Aesthetic Discipline Report*,

C-008-200 which concluded that even a new four-lane or six-lane Portage Bay Bridge with noise walls would appear massive and produce a great alteration to the extent and the nature of views from all sites in the Portage Bay basin.

C-008-201 • Operation of Option L's second bascule bridge some distance east of the Montlake Bridge would be unlikely to have permanent adverse effects on views of the Montlake Bridge from the historic resources on the west side of the Portage Bay basin. Note, however, that construction of Sound Transit's deep-bore twin tunnel under the Montlake Cut is underway and that visible and audible staging, excavation, hauling, and construction effects of this project would last until some time in 2016.

C-008-202 • Option L's elevated profile at most sites along the roadway would have permanent adverse effects on views from the Roanoke Park Historic District and historic resources in the Portage Bay neighborhood.

C-008-203 • 190, third para, last sentence The new floating portion of the floating bridge is said to be "slightly higher than the existing floating portion." With a maintenance deck resting on pontoons that rise ten feet out of the water topped by tall columns that are topped by the road deck which in turn is topped by noise walls, the floating bridge would be considerable higher than the current 8 to 10 feet above the water.

C-008-204 • 190, last para on Phased Implementation Scenario "As noted earlier, none of these effects [noise and visual effects] would differ substantially from the existing conditions, and none would be considered adverse" is a flawed a conclusion in this context—even moreso now because of lid construction deferral.

Mitigation, p 191

C-008-205 • 191, first para Refresh the reader's understanding of direct, indirect, collective or multiple, and cumulative effects here, and refresh the reader's understanding of the technical meanings of avoid, minimize, and mitigate.

C-008-206 • 191, second para Why the change from "must" to "may" in the second sentence of the passage "Agency officials must provide the public with information about the project and its effects on historic properties, and seek public comment and input. Agency officials **may** [used to say "must"] involve the public in accordance with the agency's published NEPA procedures for public involvement in order to comply with this aspect of Section 106." Which of these obligations and possible inclinations as described is purely discretionary, so much so that "may" rather than "must" is appropriate?

C-008-207 • 191, third para Is data recovery a minimization or a mitigation? Called a minimization here but a mitigation on p 192.

C-008-208 • 192, last para Data recovery called a "mitigation" here. These terms remain fuzzy and should have clear definitions with helpful examples and clear, precise use throughout the *Cultural Resources Discipline Report*.

C-008-209 • 192, third para "Compensatory mitigation" is used and seems to mean any measure that is not conventional data recovery, at least as far as archeological mitigation is concerned. Is compensatory mitigation open as a mitigation measure for cultural resources and historic resources of the built environment as well? (As on p 193, second bulleted item, in a section on avoiding or minimizing adverse effects on historic properties of the built environment: "Install landscaping or landscaped buffers to compensate in those areas where buffer zones are being removed or reduced, and where new or relocated traffic lanes intrude on the character of a historic district or the settings of individual historic properties.") Early installation, during early parts of construction, of landscaped buffering needs to be negotiated in a Memorandum of Agreement.

C-008-210
- 193 second bulleted item Removing buffering vegetation should be delayed as long as possible. Replacing removed buffering vegetation should be an early priority, during construction.

C-008-211
- 194, first bulleted item Clean buildings (and vegetation) **periodically and as needed**, not just at the conclusion of the long, seven-and-a-half to eight-year project. Also note that operation of more vehicles on the SR 520 highway, on ramps, and exits closer to historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood and on arterials will permanently increase erosion and soiling from air pollution. What can WSDOT do about this adverse effect on historic buildings?

C-008-212
- 194 last bulleted item Say ". . . and avoid obscuring views of **and from** historic properties."

C-008-213
- 195, first para, first bulleted item See replacement this iteration of "positive change" for "beneficial effect" in "These measures have a positive change on the adjacent historic properties by reducing anticipated noise." Reducing anticipated noise is not a positive change. Reducing present noise would be a positive change. Given the increased size and number of lanes in all alternatives of the project and the lack of good data on noise walls collected at bedroom height and the lack of any information on the ability of quieter pavement to reduce noise coming from this expanded highway project, the statement doesn't have a sound (no pun) basis.

C-008-214
- 195 In the order established in the document of moving from west to east, speak first of mitigation in the area from I-5 to Portage Bay including North Capitol Hill, the Roanoke Park Historic District, and the Portage Bay neighborhood including the unsurveyed historic resources on the north and south hillsides of Delmar Drive East, in the houseboat community, and along both sides of Fuhrman-Boyer Avenue East. Then speak of mitigation for the Seattle Yacht Club, mitigation for the Montlake Historic District, etc., moving east. Note again that historic resources in the Portage Bay neighborhood's houseboat community, the potential historic bungalow district along East Gwinn Street from Harvard Avenue East to Fuhrman-Boyer Avenue East, and other historic resources on both sides of Fuhrman-Boyer Avenue East have not been surveyed and included in the APE. And note again that historic resources on the north and south hillsides of Delmar Drive East, which might or might not have been included in the APE, have not been surveyed.

C-008-215
- 195 first para, fourth bulleted item Lids are designed into the project and are not mitigation. Be sure that lids are described in the Introduction, which seems to be the only place where description of the project is taken up. Not much information on the options is provided there. A construction mitigation measure might include early completion and landscaping of lids to protect historic resources from the long seven-and-a-half-year to eight-year construction project.

C-008-216
A separate letter will follow, containing recommendations for measures to offset the multiple direct, indirect, and cumulative adverse effects that would be visited on historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood by the construction and operation of the SR 520 Bridge Replacement and HOV project.

Erin O'Connor
2612 10th Ave E
Seattle, WA 989102
April 14, 2010

Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart Street, Suite 520
Seattle,WA 98101

Dear Ms. Young:

C-008-217

Although we are dismayed at the prospect of adverse effects on our historic resources from the SR 520 Bridge Replacement and HOV Project, we are confident that a fair and accurate consideration of the setting, feeling, and characteristic use of our historic resources and the likely multiple, indirect, and cumulative adverse effects from construction and operation of the project will lead to efforts on WSDOT's part to avoid, minimize and mitigate those adverse effects and to cement understandings in a Memorandum of Agreement. Following are some measures that make sense in light of the nature of these adverse effects during construction and in anticipation of operation.

Construction

- **Construct solid fencing and plant buffering vegetation** to protect historic resources in the Roanoke Park Historic District and historic properties in the Portage Bay neighborhood from the effects of demolition and reconstruction of the three bridges over I-5 on East Roanoke Street and over SR 520 on 10th Avenue East and Delmar Drive East, from the effects of construction of the two new lids, and from the effects of the demolition and reconstruction of the Portage Bay Bridge, which will be moved closer to and in front of more homes in the Roanoke Park Historic District and the Portage Bay neighborhood.

- **Without the lids that have been designed into the project, that are an integral part of the project, and because the "temporary" construction effects would go on for seven and a half to eight years,** these effects on historic resources in the Roanoke Park Historic District and Portage Bay neighborhood would be tantamount to ultimate "demolition by neglect" as property values plummeted, and even then visual blight, noise, dust, vibration, and diesel emissions would mean that people would not be able to sell their homes for amounts approaching their present worth. Many of the houses would be rented out to lower income renters, those not in a position to avoid living so close to a mammoth, many-years-long freeway construction project. Some, perhaps many, of the houses would become rooming houses as happened after the construction of I-5 and SR 520 and the economic decline of the 1970s. As we saw then on the borders of the district, a general deterioration would ensue in the absence of owner-residents who work steadily to improve their historic houses and their communities. Repairs would tend to be done on the cheap, with little regard for the historic integrity that owner-residents have maintained over 100 years. With the deterioration of the social fabric of the neighborhoods, would come a deterioration of the setting and feeling of the Roanoke Park Historic District and of the historic resources in the Portage Bay neighborhood.

- Families with young children especially would be likely to move away to protect their children from the **protracted health effects of a seven-and-a-half-to-eight-year construction project.** A snapshot survey conducted by the Portage Bay/Roanoke Park Community Council reported that 126 young people under the age of 20 live in the district. 79 of these children are under the age of 14. (Because parents are reluctant to reveal this kind of information in today's social climate, the number of young children is probably underreported.)

C-008-217

- These would be serious indirect adverse effects on the single-family with children demographic of our neighborhoods and on businesses and schools in the neighborhoods.

    - According to WSDOT consultant Larry Kyle, the construction plan for the bridge replacements is to build **half lids** to serve traffic as temporary bridges north of the present East Roanoke Street Bridge and east of the present 10th Avenue East Bridge over SR 520. (The closure of Delmar Drive East, as we understand it, means that a temporary bridge [half lid] will not be constructed adjacent to the present Delmar Drive East bridge over SR 520 at Delmar Drive East.)

    - **Finishing and landscaping the lids over I-5 and SR 520 immediately after the replacement bridges have been constructed and put into operation** would spare historic resources from many of the further adverse effects of the preferred option's six- or seven-lane Portage Bay Bridge project's six-year construction phase and the highway widening phase and would provide **an opportunity for monitoring and fine-**tuning to perfect measures to avoid, minimize, and mitigate subsequent operation effects on historic resources.

    - Deferring lid construction, as is predicted in the SDEIS's indication that the Phased Implementation Scenario is the most likely construction scenario, would lead to major adverse construction effects on historic resources that could be avoided or minimized. The most vulnerable parts of the project, most in need of replacement, should of course be taken care of first. But lids could go a long way toward easing construction effects. **Note that both the I-5 and the 10th and Delmar lids are designed and option neutral. Their early installation would be an expression of good faith on WSDOT's part, an expression badly needed at this stage of WSDOT's relations with the communities and institutions adjacent to the project.**

- **Adverse effects to both buildings and vegetation from demolition and construction effects** of all three arterial bridge projects and the two lid projects should be anticipated, and ways of avoiding or minimizing, the effects of this extremely dusty, clogging, eroding and soiling, noisy, and earth-shaking demolition and construction activity should be discussed in a Memorandum of Agreement.

- WSDOT should stay in touch with the residents. WSDOT should furnish **current contact phone numbers and an e-mail address** so that residents can keep WSDOT apprised of effects, and WSDOT should make speedy response to resident notifications. **Developing a website and reporting periodic monitoring results would be a good idea as well.**

- Every precaution should be taken to ensure that historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood are not affected during construction by vibration, excavation, or heavy equipment. **Monitor vibration levels** for all demolition and construction activity.

    - **Monitor noise periodically at bedroom height** and ensure compliance with local noise regulations for construction and equipment operation. "Periodically" could mean regularly and whenever a new kind of construction activity starts up and during that activity.

    - **Monitor air quality periodically from the construction footprint to 300 meters from any construction activity.** (300 meters is the distance the *Health Impact Assessment* says highway pollution would reach.) "Periodically" could mean both regularly and whenever a new kind of construction activity starts up and during that activity.

    - **Install fencing and landscaping or landscaped buffers in the Roanoke Parklands South East and West and other areas** where historic resources would be exposed to construction and

C-008-217

operation effects of the project to offset the removal or reduction of vegetation in buffer zones and where new or relocated traffic lanes intrude on the character of the historic district or the settings of individual historic properties.

- **Install historically faithful double-paned windows** in houses likely to be affected by seven and a half to eight years of increased construction noise.
- **Wash windows** of affected historic buildings periodically.
- **Protect exteriors of affected historic buildings** from an accumulation of excessive dirt and dust during demolition, staging, hauling, and construction, and clean them in an appropriate manner periodically during construction and at the conclusion of construction. WSDOT is to consult with the SHPO and/or the Seattle Historic Preservation Officer before implementing any protection or cleaning methods.
- **Protect mature trees** from vibration and an accumulation of excessive dirt and dust during demolition, staging, hauling, and construction. Wash them periodically.
- Locate any construction sheds, barricades, or material storage away from historic properties, and **avoid obscuring views of and views from historic properties**.
- **Provide construction access directly to and from the construction zone along arterials** to eliminate construction truck traffic and detours along residential streets in the Roanoke Park Historic District and the Portage Bay neighborhood.
- Make every effort to keep the historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood accessible and functional during and after construction. **Residents should have priority in reaching their homes and accustomed parking places.**

Operation

- Depending on the option, **noise walls and/or quieter pavement** have been incorporated into the design of the project to reduce noise along the proposed roadway. The choice of noise reduction method along the segments of the project should be made in light of both effectiveness and potential visual effects. **The use of more than one method should be considered**. Minimization of noise at expansion joints should be a priority. **Measure and compare the respective noise reducing methods at bedroom height in both the Roanoke Park Historic District and the Portage Bay neighborhood.** WSDOT should consult with the Arizona Department of Transportation, which has experienced great success with quieter pavement over many years with studded tires, chains, and freezing and thawing in the Flagstaff area, on proper installation and maintenance of quieter pavement.
- New lids have been designed to cover I-5 at the East Roanoke Street crossing and to cover SR 520 at 10th Avenue East and Delmar Drive East. These **lids are to be landscaped and have pedestrian crossings, providing a new green space in each area and reuniting the communities on either side.** The landscaped lids will also help to minimize the visual and audible effects of I-5 and SR 520. (See the discussion of early lid construction and landscaping as mitigation in the "Construction" section above.)
- **New bicycle/pedestrian paths are to be built along the I-5 and 10th and Delmar lids** to reconnect the Roanoke Park and North Capitol Hill neighborhoods, the Roanoke Park and Eastlake neighborhoods, and the Roanoke Park and Portage Bay neighborhoods, particularly with respect to the many schools in these neighborhoods, and to enhance pedestrian access, which was made unpleasant when I-5 and SR 520 were built in the 1960s.

C-008-217

- **Every measure should be taken to ensure that historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood are not affected by visual blight, vibration, noise, air pollution, and nighttime glare in operation** of the new arterial bridges, the widened highway, the SR 520 bridges (including the Portage Bay Bridge, the West Approach, and the floating bridge), and ramps.

- As mitigation, WSDOT should work with the Roanoke Park Historic District to **engage designers or sponsor a competition to provide historic markers for the Roanoke Park Historic District** at East Shelby Street on Harvard Avenue East and on three gateways to the Roanoke Park Historic District: East Roanoke Street at Harvard Avenue East, the main gateway at 10th Avenue East at its intersection with East Roanoke Street, and Delmar Drive East at its intersection with East Roanoke Street. Historic lighting fixtures would be a part of this design project.

- In addition, WSDOT has been working with the Roanoke Park Historic District to come up with a **treatment of the streets that run along the Roanoke Park Historic District on its south and west sides that is sympathetic with the residential, tree-lined setting of the Roanoke Park Historic District, urban intersections, and in the interests of traffic calming**. Rob Berman, the SR 520 Program Planning Manager, asked us for a plan, which we have furnished. The plan has met with WSDOT's approval and has been passed to SDOT for their evaluation. When approval has been granted, this intention should be recorded in the Memorandum of Agreement.

- **The introduction of traffic calming devices on the arterials to keep traffic moving at a slow and steady speed, less polluting than idling or high speeds**, would contribute to a lessening of the air pollution that threatens the structural integrity of materials in the built historic environment and that would harm the mature shade trees that so contribute to the atmosphere and feeling of the district's setting.

- **The undergrounding of wires on the bridges and along the arterials** would permit the planting of tree canopy so characteristic of the setting of the historic district the streets run beside and help to reduce the accurate perception that air pollution from two more lanes of gas-powered vehicles had worsened air quality in our neighborhoods.

- **The use of quiet pavement on SR-520 as it runs along the West Approach, the Portage Bay Bridge, and the highway to I-5, on ramps, and on Harvard Avenue East, East Roanoke Street, 10th Avenue East, Delmar Drive East, and Fuhrman-Boyer Avenue East** would further contribute to the quiet atmosphere and feeling for which the Roanoke Park Historic District and the Portage Bay neighborhood are noted.

- Having undergrounded overhead wires and constructed substantial lid columns, **plant large shade trees to create a canopy over the streets that run alongside the Roanoke Park Historic District on the west and the south, along the three arterial replacement bridges, along the edges of the lids and on lid columns, and along Fuhrman-Boyer Avenue East.**

All of these measures to avoid, minimize, and mitigate the construction and operation of the SR 520 Bridge Replacement and HOV project should be recorded and committed to in a Memorandum of Agreement between WSDOT and the Portage Bay/Roanoke Park Community Council to protect and enhance the historic resources in the Roanoke Park Historic District and the historic resources in the Portage Bay neighborhood.

Sincerely,

Erin O'Connor
Historic Resources Chair, Portage Bay/Roanoke Park Community Council
Roanoke Neighborhood Elms Fund
Friends of Roanoke Park

From: Erin O'Connor [mailto:erinoc28@comcast.net]
Sent: Wednesday, April 14, 2010 1:39 PM
To: Young, Jenifer (Consultant); SR 520 Bridge SDEIS; Brooks, Allyson
Cc: 'Houser, Michael (DAHP)'; Karen.Gordon@seattle.gov; chris.gregoire@gov.wa.gov; Turner, Joyce; Arnold-Williams, Robin; Brown, Marty; edward.murray@leg.wa.gov; frank.chopp@leg.wa.gov; jamie.pedersen@leg.wa.gov; mike.mcginn@seattle.gov; 'Richard Conlin'; mike.obrien@seattle.gov; tom.rasmussen@seattle.gov; jean.godden@seattle.gov; tim.burgess@seattle.gov; Nick.Licata@Seattle.Gov; warneda@consultant.wsdot
Subject: Addendum on Mitigation for Adverse Effects of 520 project on Historic Resources in Roanoke Park Historic District and Portage Bay Neighborhood

Dear Ms. Young:

As promised at the end of our March 2009 formal comments on the *SDEIS* December 2009 *Cultural Resources Discipline Report* (below and attached), we are sending you an addendum (attached) on proposed mitigation measures (meant to be understood as avoidance, minimization, and mitigation measures) of the adverse direct, indirect, and cumulative effects of the SR 520 Bridge Replacement and HOV Project construction and operation on historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood. We trust that these proposed mitigation measures will be included in a Memorandum of Agreement between WSDOT and the Portage Bay/Roanoke Park Community Council.

Sincerely,

Erin O'Connor
Historic Resources Chair, Portage Bay/Roanoke Park Community Council
Roanoke Neighborhood Elms Fund
Friends of Roanoke Park

From: Alicia Graham [mailto:aliciag@seattlechamber.com]
Sent: Wednesday, March 24, 2010 2:54 PM
To: SR 520 Bridge SDEIS
Cc: mweed@mainstreetep.com; elizabeth.j.warman@boeing.com; Charles Knutson; Phil Bussey; mdaudon@snwsc.com
Subject: Greater Seattle Chamber's Comment on SR 520 Bridge Replacement SDEIS

Hello,

Please find attached a letter from the Greater Seattle Chamber of Commerce, responding to the supplemental draft EIS for the SR 520, I-5 to Medina: Bridge Replacement and HOV Project. We are sending a hard copy as well to Jenifer Young.

Thank you,
Alicia

Alicia Graham
Program Coordinator, Public Affairs
Greater Seattle Chamber of Commerce
aliciag@seattlechamber.com
P: (206) 389-7262 | F: (206) 903-3440
1301 5th Ave. Ste. 2500, Seattle, WA 98101-2611
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C-009
05/26/2011 13:03 PM

GREATER Seattle CHAMBER OF COMMERCE

1301 5th Avenue
Suite 2500
Seattle, WA 98101-2611

206.389.7200
206.389.7288 FAX
www.seattlechamber.com

March 24, 2010

Washington State Department of Transportation
Attn: Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart St., Suite 520
Seattle, WA 98101

Dear Ms. Young,

C-009-001

The Greater Seattle Chamber supports the December 2009 findings of the Legislative Workgroup supporting Option A+ for the Westside landing and overall funding of the SR 520 bridge replacement. We believe that this option will improve our transportation infrastructure and balance many community and environmental needs while preserving our region's economic vitality.

This option, derived from Option A with Sub-Options in the Supplemental Draft Environmental Impact Statement, provides strong transit connections and congestion relief. It provides a good mix of traffic mitigation for Lake Washington and Montlake Boulevards, and it improves connections to the north to areas such as the University District, University Village and Seattle Children's Hospital. Decreased congestion in these areas translates to faster, more reliable transit service and also improves freight mobility in the corridor. The A+ Option also anticipates and allows for future capacity improvements.

In addition, the A+ Option reduces and reasonably mitigates construction and operating impacts on the environment, residents and adjacent businesses and facilities. It would largely be built within the existing footprint, avoiding costly right-of way acquisitions. This option also greatly reduces the need for excavation and storing of soils, has fewer archeological, shoreline and direct shading impacts and is likely more permitable.

Most importantly, the A+ Option is cost-effective. The Option stays within budget and respects the $4.65 billion cap established by the state legislature for expenditures. It avoids expensive extras and technical challenges, and can be designed and constructed minimizing excessive risk. This option best serves major employers and their commuters as well as freight and delivery movement, and recognizes the importance of preserving the SR 520 corridor and keeping it safe for its many thousands of daily travelers.

The A+ Option offers a fresh and innovative solution, supported by many stakeholders, that best balances capacity, transit, community and economic considerations. Most of all, the option offers a path forward for a project that has been plagued by impasse and deadlock for many years. For these reasons, the Greater Seattle Chamber of Commerce strongly supports Option A+ to replace the SR 520 bridge.

Sincerely,

Mark Weed
Chair, Transportation Committee

Elizabeth Warman
Vice Chair, Transportation Committee

North East Seattle Community Organizations

MARCH 2010

Paula Hammond
Secretary of Transportation
Attention: Jenifer Young
Environmental Manager
SR 520, I-5 to Medina: Bridge Replacement and HOV Project
SR 520 Project Office
600 Stewart Street, Sutie 520
Seattle, WA 98101

RE: Supplemental Draft Environmental Impact Statement
SR 520, I-5 to Medina Bridge Replacement and HOV Project

Dear Secretary Hammond and Environmental Manager Young:

C-010-001

After considering the alternatives presented, we favor Alternative A+ without any ramps connecting SR 520 and Lake Washington Boulevard East.

Alternative A+ can move the project forward. It is the only design within the statutory budget of $ 4.65 Billion Dollars; it does the least damage to the Arboretum and Seattle parks, the Union Bay wetlands, the University Campus and the surrounding neighborhoods; it is friendly to transit; and it mitigates its impact to the Montlake and Roanoke Park neighborhoods by adding lids at strategic locations.

The Arboretum is a priceless heritage and internationally recognized. Removing SR 520 ramps from the Arboretum entirely allows the entire area to revert to Arboretum use as the Olmsted plan had envisioned. The return of all the area now occupied by ramps would provide WSDOT with replacement in kind for wetlands taken for the mainline bridge on the north of the Arboretum and would redirect SR 520 traffic out of the Arboretum to other City arterials. This would assist getting the needed permits for the project.

WSDOT recommended the auxiliary lane on Portage Bay as smoothing the entry and exit of vehicles on to the Portage Bay bridge and assisting the flow of traffic on Montlake Boulevard East. The traffic analysis bears out this recommendation.

Yours truly

Nicolette Bromberg
Belvedere Terrace Community Council

Ryan Rockwell
President, Hawthorne Hills Community Council

Jody Chatalas
President, Ravenna-Bryant Community Council

Matt Fox
President, University District Community Council

Kent Wills
President, University Park Community Club

Lynn Ferguson
President, Windermere North Community Association

From: Susan Holliday [mailto:susanholliday@mac.com]
Sent: Monday, April 12, 2010 8:50 AM
To: SR 520 Bridge SDEIS
Subject: SDEIS comments

here is our response to SDEIS. If you would also like me to mail you a copy of our comments, please let me know.

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Save Union Bay Association
Response Statement to SR 520 Project SDEIS

SUMMARY

C-011-001 We have reviewed the SDEIS for the 520 bridge replacement project and appreciate the opportunity to discuss some topics within the SDEIS that we feel are missing or not described in adequate detail for WSDOT or public analysis. These topics are:

- The wetland mitigation opportunities discussed, particularly aquatic bed vegetation enhancement, do not include most of the aquatic bed areas infested by milfoil in Union Bay, many of which are closer to, and more directly affected by the proposed project.
- The wetland and shoreline mitigation opportunities do not include or discuss the damage to shoreline and wetland vegetation caused by the invasive mammal, nutria.

C-011-002
- The project, as described in the SDEIS, does not provide suitable refugia for the fish and wildlife species that will be displaced, or will avoid the project footprint during construction.

C-011-003
- The SDEIS does not discuss the risk of releasing milfoil and other invasive species from the project footprint during construction.

C-011-004
- In order to adequately mitigate for the impacts associated with the proposed project, we suggest that the following be considered as parts of the overall mitigation approach:
- Enhance the aquatic bed wetlands that cover most of Union Bay by reducing the coverage of milfoil and other invasive plants. This will provide both wetland mitigation (enhancement), and, if conducted prior to construction, will offset the effects to lake habitats and wildlife by providing enhanced refugia for displaced species during and after construction. Long-term control of invasive species will also offset the permanent fish and wildlife habitat losses that will result from the project, including effects on ESA-listed fish species.
- Include restoration of shoreline areas damaged by nutria as part of the shoreline and wetland mitigation approach.

C-011-004

- Eradicate invasive species within the project footprint (which includes boat and barge travel corridors, anchoring locations, temporary work platforms, as well as the construction footprint, PRIOR TO CONSTRUCTION. This will reduce the risk of releasing thousands of milfoil fragments and other invasive species into the surrounding areas of Union Bay and Lake Washington.

Introduction

C-011-005

Save Union Bay Association (SUBA) is a neighborhood association consisting of interested individuals and waterfront owners living on Union Bay. There are currently 120 members. Over the 35 years operating, we have dealt with issues of Union Bay including milfoil, sewage spills, Green Lake pipeline, and eutrophication. We are concerned about the disruption that construction of the new SR520 bridge will have on Union Bay and want to work with DOT to offset this impact.

The SDEIS identified effects during construction within the Elements of Nature (Chapter 6). We are concerned about the effects within the following elements during construction on the overall ecosystem of Union Bay (UB): recreation, noise, air quality, water resources, ecosystems, geology and soils, hazardous materials, and navigation.

Although the SDEIS did a good job of describing effects that will occur within the 520 work corridor along UB, there was no mention of the effects on the rest of UB. We contend that there will be multiple effects throughout the UB environment and we want the SR520 program to mitigate these impacts.

Our SDEIS Response statement begins with an overview of Union Bay, describing both the general characteristics of the bay and also the recreational and wildlife usage. We then describe the three most important problems threatening the integrity of Union Bay (UB) and its fragile ecosystem:

- infestation of invasive aquatic plants;
- shoreline habitat degradation by nutria (an invasive mammal), and
- a shallow bay made worse by ongoing sedimentation from sewage overflows, fertilizer use, and erosion.

These problems contribute to algal growth, high water temperatures, low oxygenation, high phosphorus, and wetland degradation. These elements combine to hasten eutrophication. Save Union Bay Association (SUBA) is in the process of developing an Integrative Aquatic Vegetation Management Plan (IAVMP) for Union Bay. Our priority is to preserve the health of the UB ecosystem by managing the invasive aquatic plants, enhancing the habitat, and improving the aquatic ecology.

C-011-006

It is important to understand this situation in order to gain perspective. It is our belief that bridge construction will result in increased use of the bay north of the

C-011-006

work corridor. All species will react to and cope with construction activities by moving away from the construction zone. It is most likely that they will look nearby for suitable habitat, migration routes, feeding and nesting grounds and recreation (humans). Hence, they will be drawn to the north-northwest side of Union Bay because it closely resembles the wetlands near SR520.
The current problems of UB (invasive aquatic plants, nutria denuded shoreline, shallow depth and poor water quality due to recent CSO overflows) will make it more difficult for species to use the bay. Many waterfowl and fish have deserted the wetlands of UB north of SR520 because there is not access due to overgrowth of invasive aquatic plants, and there is inadequate shoreline vegetation for protective cover from eagles and other predators. It is important to understand how all of the features of the bay interact in order to accomplish bridge construction while providing adequate resources for the species impacted by the construction. For example, although restoration of UB wetlands may partially mitigate wetland loss near SR520, if the waterfowl and fish can not access the wetlands due to milfoil and waterlily mats, then the habitat addition will be meaningless.

C-011-007

In the following statement, we respond to each of the Elements of Nature described in the SDEIS which SUBA believes will have impacts on species, wetlands, and recreation outside of the work corridor. There was no discussion in the SDEIS of impacts beyond the work corridor in UB. Our suggestions for mitigation address the three problems we believe are impacting the bay and thus, would affect movement of species from the work corridor into the rest of the bay. Because construction will impact habitat, we suggest that mitigation be performed before construction begins to eradicate the invasive aquatic plants within and near the work corridor so that construction will not spread invasive plant fragments throughout Union Bay. We are defining work corridor as that area within the project footprint which includes boat and barge travel corridors, anchoring locations, temporary work platforms, as well as the construction footprint, from the southwest end of Portage Bay to the east end of Lake Washington. Providing alternate nesting sites for protected birds/waterfowl nesting within the work corridor and improving wetlands in Union Bay (invasive species control) would enable fish and wildlife species to locate and begin to adapt to new habitat before construction displaces them.

Overview of Union Bay Environment and Ecological Concerns

C-011-008

Union Bay is at the west side of Lake Washington where Lake Washington empties into the ship canal. Union Bay (UB) is in a shallow glacially carved basin covered by a deep layer of peat. It has a surface area of 985,000 squared meters and ranges in depth from 3-12 ft except where it has been dredged to 30 ft in the navigation channel. Union Bay has the largest green belt in the city along its shoreline; its shorelands provide rich habitat and yet half of this natural area sits on top of a toxic dump site. Over 2/3 of the shoreline is state/city property. 100 residential properties also front Union Bay.

C-011-008

Union Bay is a favorite spot for recreation. Water sports enthusiasts crowd the bay. People sail, canoe and kayak in UB to explore the inlets around the Arboretum and the Union Bay Natural Area (UBNA); to observe birds and waterfowl; and for enjoyment. Often UW students will rent canoes and paddle to a shaded shoreline to picnic and swim. Hikers and bicyclists use the trails around Union Bay. The Arboretum and Foster Island as well as the UBNA host many people from birdwatchers to sports teams jogging down the paths. In the Laurelhurst neighborhood, there is public shoreline access at Belvoir Park and Waterway #1. Many people launch kayaks or canoes from these sites. Motor boats also fill the bay, whether anchored and enjoying water sports; slowly moving while fishermen cast their lines; or traveling through the bay.

Union Bay and its shorelands host a variety of ecosytems from open water to wetlands and from prairie to forest. It provides habitat for many species of mammals, amphibians, birds, reptiles, and fish. There are several species federally listed as threatened (ESA). Others are protected by the Migratory Bird Treaties. There are over 200 species of birds and waterfowl that either live here or migrate through on an annual basis.

There are three major problems in Union Bay that have affected the ecology of UB and hastened eutrophication. It is important to understand these issues to fully appreciate the impact of the SR520 construction project.

Non-native invasive aquatic plants (Eurasian watermilfoil, Brazilian elodea, fragrant waterlilies, and purple loosestrife) have changed the water quality, interfered with recreational uses, and severely affected waterfowl and fish habitat in Union Bay.

Milfoil was first introduced into Lake Washington in 1974. By 1985, 50 acres of Union Bay were infested with milfoil. By 2007, 75% of Union Bay contained well-established milfoil stands. Dense stands of milfoil interfere with all recreational uses (sailing, swimming, canoeing, motor boating) and destroy the natural ecosystem. In the summer, their density in the water as well as floating fragment mats prevent adequate water circulation, resulting in increased water temperature, decreased oxygenation, increased algal blooms and degraded habitat for fish. This makes it very difficult for juvenile salmon to survive throughout Union Bay.

Although milfoil is the primary invasive aquatic plant in Union Bay, fragrant water lilies also heavily infest the bay. By 2007, they extended out 30 feet from the western shoreline forming a thick dense mat. These plants interfere with recreational uses and ecosystem balance due to their density. The thickly matted waterlilies create a threat for waterfowl because it forces them to swim in open water, further from shore, making it more difficult for them to hide among shoreline reeds and making them easy targets for the eagles that nest along the shore. Waterlily mats also provide shelter for salmonid predators.

C-011-009

A second problem area is erosion and destruction of the shoreline by nutria, a non-native invasive rodent. They have eaten roots of native plants denuding the shoreline of plants needed to hold the dirt in place. The loss of reeds, cattails and other native wetland plants has had a devastating effect on the ecology of the area. The loss of plants has meant a loss of shelter and nesting areas for waterfowl and birds. The increase of erosion into the lake has decreased water habitat for fish.

C-011-010

The final problem is sedimentation which has resulted in the lake becoming shallower. A large portion of sedimentation has occurred secondary both to milfoil and waterlily mats binding into mud islands and also from nutria burrows and denuded shorelines collapsing into the water. Sedimentation has also occurred because there are several CSO outfalls that drain into UB and overflow during periods of heavy rain. For example, measurements of the lake bottom during high water in June, reveal that directly in front of the Belvoir outfall, there is no change in depth since 1980 but in the area where the outfall currents reduce and dissipate, the depth has been reduced from 5ft to 2.5 ft. There have been two major sewage overflows into Union Bay. One (Belvoir outfall), in 1988, released 5 million gallons of raw sewage into the bay. The second one (University Slough), in 2008 released 8 million gallons. The frequent CSO overflows and the major sewage spills have contributed to eutrophication because they have created a nutrient rich environment for aquatic plants to flourish, have been responsible for algal blooms (including cyanobacteria-toxic blue green algae), and have decreased the overall depth of the lake. Run-off from residences and other property around the lake have also increased the phosphorus load in the bay and contributed to water quality degradation and sedimentation.

C-011-011

Save Union Bay Association is addressing the problems of invasive aquatic plants and shoreline destruction by nutria. Since 2009, we have been working with USDA Wildlife Division to eradicate nutria from UB. Over 250 nutria have been removed from the bay. The USDA is also doing research into shoreline restoration of the areas damaged by nutria. In February 2010, SUBA received a grant from the Washington State Department of Ecology to develop a plan to reduce and manage milfoil and other invasive aquatic vegetation in UB. We contracted with Herrera Environmental Consultants to perform an aquatic plant survey and to write an IAVMP (Integrative Aquatic Vegetation Management Plan). This integrative lake management plan will provide an overview of the problems of UB and their interrelationships and present an on-going solution. It will provide a template for ecological stewardship of UB. The plan should be completed by August 2010. We will then apply for an implementation grant from DOE.

C-011-012

SDEIS Omissions

There was no mention in the SDEIS of impacts of bridge construction or lane alternatives on the ecosystem of Union Bay outside the work corridor. (We are defining work corridor as the entire project footprint which includes boat and barge travel corridors, anchoring locations, temporary work platforms, as well as the construction footprint,) Our position is that the entire bay area will be affected by many of the elements described in the SDEIS. The SDEIS described impacts from construction on species inhabiting or migrating through the work corridor but it did not discuss how the species will cope with the 7-10 year construction project. SUBA contends that, as habitat near SR520 is impacted, the species using that area will move to other areas of Union Bay where similar wetland habitat exists. These wetland areas are degraded more than the southern shore within the SR520 corridor because there is less water mixing, less boat traffic, and more invasive species. The north residential shoreline contains some shoreline habitat restoration but the salmon are unable to nest there due to the area in front of these properties being clogged with milfoil, waterlilies, and algae. In addition, not mentioned in the SDEIS is the impact simply from construction itself- the movements and voices of people and machines creating noise, waves, and air-ground movement. These activities will frighten many species and result in their distancing themselves from the source of this activity. (e.g., Currently, waterfowl on the bay may be content to swim or nest near SR520 despite the car movement on the bridge but, as people and machines line the sides of the bridge or during pile driving, these species will seek calmer waters.)

The SR 520 project FEIS should contain information about the impacts to all of Union Bay and proposed mitigation to facilitate species continued existence on UB.

Impact of Bridge Construction on SUBA's Three Priority Areas

C-011-013

Save Union Bay Association has identified the major problems in Union Bay and is working to manage and solve them. Our top priority is to reduce the infestation of milfoil. We believe that, when the density of invasive aquatic plants is reduced, then the water will circulate better improving oxygenation, temperature, and nutrient load. Improving the aquatic ecosystem should make UB more hospitable to fish- especially to salmonids- which currently are unable to travel through most of the bay due to thick aquatic plant growth and high water temperature. The direct impacts of bridge construction on our priority areas are:

1. Invasive aquatic plants. The SR 520 work corridor is choked with milfoil. Milfoil spreads and re-roots from stem fragments. As work is undertaken in this area, these plants will be disturbed and fragments will float to other parts of UB and propagate. Barges and other boats bringing in supplies for bridge construction will probably bring in milfoil fragments from Lake Union and will probably break off stem fragments from the milfoil in Union Bay. This disruption will also create more milfoil infestation in UB.

C-011-014

2. Shoreline-habitat destruction. Nutria and beaver live near SR520. SUBA is currently undertaking a nutria eradication program to deal with the shoreline destruction caused by this invasive mammal. As their habitat is destroyed/impacted by SR520 construction, they will seek new habitat away from this area- most likely along the University of Washington shoreline. We have already eradicated the nutria from this area and are now focusing our efforts on the Arboretum and Portage Bay. Movement of nutria back to the UW will result in more shoreline destruction. There are three beaver dams in the work corridor. The USDA biologists believe that the beaver were impacted by human activities on Foster Island and moved their dam to a more remote location between the cattails in this same general area. Every time beaver move, they take down many more trees to build their home. Bridge construction will impact the beaver living next to SR520 such that it is likely they will move again. The closest habitat is in UB north of the work corridor.

C-011-015

3. Lake biochemistry and sedimentation. SUBA is concerned about the rich nutrient substrate in Union Bay. The spongy peat bottom is indirectly impacted by any nearby construction vibration and weight. Sedimentation, run off and spills impact the lake's biochemistry and contribute to algal and invasive plant growth. Because Union Bay is shallow with poor water quality in many areas, SR520 construction is likely to have a greater impact on UB than Lake Washington.

Proposed Additions to the SDEIS and Requested Mitigation

C-011-016

Save Union Bay Association's primary concern is the environmental impact of bridge construction on Union Bay. Construction of any of the 6 lane alternative options will impact the environment, slightly more or less depending on the option eventually chosen. Our perspective is that, given the problems currently facing Union Bay, without intervention, the bay will not be able to support the changes engendered by SR520 construction. We need to improve habitat throughout UB and improve access to the area north of the work corridor before bridge construction occurs to enable species to relocate and thrive during construction. SUBA is concerned that construction of SR520 will have bay wide impacts within the following elements of the environment:

1. Recreation

C-011-017

Construction will impact water recreation by limiting small craft access to wetlands around SR520. Canoeists and kayakers will probably explore the wetlands north/northwest of SR520 instead. Larger boats will also be impacted because many of them anchor along the 520 corridor during UW football games or simply during warm summer days. The logical response of boaters during construction is to motor north of the construction area. Large boats as well as small craft will probably move to the N-NW side of UB to be further from the noise, dust, vibration, glare, and accidental damage from construction equipment. Construction will also impact people enjoying nature on the south shore (Arboretum, Foster Island, Montlake Park). Some of these paths will be closed during construction. People visiting the open areas along the Arboretum

C-011-017 shoreline will be impacted by noise, dust, vibration, and reduced visual quality. Most people will visit the UBNA on the northwest shore of Union Bay instead. At UBNA, they can have a similar experience as they would have had at the Arboretum (hiking, biking, bird watching, viewing the lake and mountains). People will also utilize the other shoreline parks/access areas on the north shore (Belvoir Place Park, Waterway #1, Waterway #2). More people using UBNA and these other areas will result in more auto traffic in the neighborhood and more degradation to the land and shoreline as people utilize the area.
Mitigation: Improve boat access throughout Union Bay. Work with UW/UBNA to maintain the integrity of their restoration efforts. Work with Seattle Parks Dept and DNR to maintain integrity of the other areas and to improve boat access to them.

C-011-018 2. Noise

Noise and vibrations will impact all species in the area. Despite all efforts at noise reduction, noise will still be loudest at or near the construction site dissipating with distance. All species will seek habitat areas/migration routes that are further from the source of the noise and vibration
Mitigation: Improve access and habitat on the N-NW side of Union Bay. Provide gravel areas for Chinook salmon nesting and provide access to these areas (ie., decrease milfoil, waterlilies, and blue-green algae). Recommended areas for habitat enhancement are described under the “ecosystem” element. Improve N-NW areas frequented by people who are avoiding the southern shoreline.

C-011-019 3. Air Quality

People (boaters, trail walkers) and other species will be affected by air quality/dust close to the construction site. They will seek areas further from the site, most likely the north and NW side of Union Bay. (e.g., UBNA, Belvoir Park, Waterway #2 and Waterway #1).

Mitigation: Improve access and habitat on the N-NW side of UB.

C-011-020 4. Water Resources

Construction will result in increased water turbidity at the construction site. Sediments may be removed from the bay as part of the construction activities such as dewatering. Fish and other swimming/diving species will be affected by the turbidity and will move away from the construction site in search of cleaner water and to escape predators.

Mitigation: Improve access and habitat in UB

C-011-021 5. Ecosystems

Construction and implementation of any option will reduce or disturb fish habitat, displace state and federally listed bird species, and affect wildlife by removing vegetation. Loss of wetlands, shading from the new bridge, removal of vegetation, and pile driving will all reduce wildlife habitat. Night lights, vibrations, and run off contaminants will affect water quality, species survival and salmon migration. In addition, these changes will cause disorientation and stress in all

C-011-021

species and can alter their natural behavior. Species will disperse to similar habitats located in UB.

C-011-022

Mitigation: To decrease the impact of SR520 construction on species and wetlands, it is suggested that you mitigate the ecosystem affects before bridge construction begins. In this way, species can begin to adapt to new environments under favorable conditions. Specific mitigation suggestions include:

- Preserve nesting sites of protected migratory birds and waterfowl. It is suggested that you create new, compensatory nesting sites and put these in place by 2011- before construction begins. It is suggested that you help train the species to relocate to these new sites. In this way, they will be able to learn new behaviors in a relatively stress free environment. Trying to discover a new nesting site while construction is occurring- with noise, new obstructions, dust, and humans in the 520 work corridor would be very difficult for the migratory Canada geese and cliff swallows and would probably result in death of several birds. SUBA would like SR 520 Mitigation Specialists to work with USDA (Justin Dayton and Aaron Loucks) and other knowledgeable experts to determine appropriate relocation sites and nesting areas.

C-011-023

- Reduce milfoil in the 520 work corridor (which includes boat and barge travel corridors, anchoring locations, temporary work platforms, as well as the construction footprint) from Portage Bay to the east end of Lake Washington. Milfoil and other invasive aquatic plants are a major problem within Union Bay. Milfoil spreads by plant fragments whereas waterlilies spread by root deposits. Construction will cause disruption/uprooting to these invasive plants located within the SR520 work corridor. Plants will be loosened by actions ranging from pile driving to water transportation of materials around the site. It is pointless for SUBA to work at reducing milfoil in the center of UB (to improve access and habitat throughout the bay) if, at the same time, SR520 construction is increasing milfoil fragments. It is recommended that SR520 program eliminate invasive aquatic plants in the 520 work corridor and adjacent environment before construction activities begin. It is recommended that SR520 continue to work with SUBA during construction to monitor milfoil and assist in removal of invasive aquatic plants.

C-011-024

- Preserve habitat, migration, and reproduction of federally listed migratory fish. Because of construction effects of noise, turbidity, vibration, human activity, shading, and wetland destruction, it is reasonable to assume that the fish will alter their migratory/ habitat routes through UB to the N-NW of the construction. Because construction is a 7 year endeavor, there will be long- term effects on fish if they are not enabled to survive in the N-NW waters of UB. Due to the current conditions of UB, survival would be limited. High water temperature, low oxygenation, overgrowth of milfoil, shallow water, and poor habitat make the N-NW area of UB inhospitable to salmon. To improve the viability of salmon in UB, it is recommended that SR 520 project:
- Reduce milfoil and other invasive plants.

C-011-024

- Improve the wetlands, including the islands in the NW corner of UB. It is quite likely that, in some areas of nutria-denuded shoreline, shallow gravel areas could be created to provide spawning grounds for Chinook Salmon. This NW corner (waterway #2) used to connect to streams up which the salmon would migrate.
- Present an education program to waterfront owners describing the effects of their shoreline on fish nesting/predator protection.
- Work with homeowners to modify their shoreline to establish beach areas/shallow gravel areas for salmon spawning grounds.
- Improve access to the private property shorelines that have been restored to provide salmon spawning areas. (reduce milfoil)
- Improve access to Waterway #1 that has been restored to provide salmon nesting areas. (reduce milfoil, waterlilies, blue green algae, and other algal growth.)
- Improve access to the University Slough up which salmon migrated in the past. (reduce milfoil, waterlilies, blue green algae, and other algal growth.)
- Modify the shoreline and dock of Belvoir Place Park and naturalize it so it can provide salmon habitat.
- Improve access to Belvoir Place Park. (reduce milfoil and waterlilies)
- Improve access, wetlands, and shorelands along the south shore of Union Bay near Madison Park

C-011-025

- Compensate for wetlands lost during SR 520 construction. Most of Union Bay north of the shipping lanes is considered wetland due to the shallow depth (less than 6 feet) and vegetated cover. The entire Bay should be under consideration as a wetland mitigation site. The removal of invasive species would be similar to the wetland enhancement opportunities discussed in the SDEIS. The only change would be to extend the boundary of the wetland mitigation sites under consideration to the shipping lanes (towards the project area).
- Restore Shorelines damaged by Nutria. On the NW corner of UB is a small inlet that closely resembles the wetland area near SR520. This wetland is currently devastated due to nutria damage. It is suggested that this wetland be restored so that species can find suitable habitat located nearby during SR520 construction. Without the wetland vegetation, this area is no longer safe for nesting because it is too accessible for eagles and other predators. It is recommended that you work with USDA, DNR, and UW shoreline restoration experts to improve the shoreline vegetation and to improve aquatic access to this area.

C-011-026

6. Geology and Soils: Cofferdams, pile driving, and other construction activity will cause sediments to spread within UB. Union Bay is very shallow. An increase in sedimentation will hamper aquatic species survival.

Mitigation: It is recommended that any sediments removed from the bay not be replaced. Improve access throughout Union Bay so aquatic species can avoid the dangers associated with shading and turbidity.

C-011-027

7. Hazardous Materials: Contaminated sediments exist in Union Bay. Mitigation: It is recommended that any hazardous sediments encountered during construction be removed from UB.

C-011-028

8. Navigation: Construction along the shipping lanes in Union Bay will cause many motorboats to travel slightly further to the north of the construction corridor. Union Bay is very shallow and infested with milfoil. It is likely that boats will have their motors clogged with milfoil or get stuck as they attempt to distance themselves from construction effects (noise, activity, barges).

Mitigation: Reduce milfoil and improve accessibility to UB north of the construction area. Maintain navigable channels through UB.

Conclusions

C-011-029

Currently, Union Bay is facing several problems that are increasing eutrophication. The construction of the SR520 bridge will add to the degradation that the bay is experiencing by destruction of habitat on the southern shorelands and relocation of species to the north of the work corridor. In order to accomplish construction with minimal impacts, it is important first to improve the aquatic ecology of UB. All habitat in Union Bay will be impacted to some extent by noise, vibration, light, and activity within the construction zone. As species distance themselves from the noxious intrusions within the construction area, they will seek habitat nearby- north of the work corridor. Because UB is so heavily infested with milfoil, it will be difficult for aquatic species to survive in the shallow, warm waters of the center-north side of UB. The highest priority to compensate for bridge construction is to reduce the milfoil that is choking the bay. The second priority is shoreline restoration to improve wetland habitat in Union Bay and improve the natural shoreline along the north shore private residences and parks.

Save Union Bay Association wants to work with the SR520 Mitigation Specialists to find ways to minimize ecosystem impacts during bridge construction and to maintain and improve the aquatic environment once the new bridge is in place.

Save Union Bay Association Board of Directors
Susan Holliday, PhD, President
Bill Watts, MD, Secretary
Steve Sulzbacher, PhD, Treasurer
Colleen McAleer, MBA
Bruce Carter, PhD
saveunionbayassn@gmail.com

Susan Holliday
3909 NE Surber Dr
Seattle, WA 98105
206-523-6809
susanholliday@mac.com

From: Earl Bell [mailto:earljbell@hotmail.com]
Sent: Friday, April 09, 2010 8:02 PM
To: SR 520 Bridge SDEIS
Subject: SDEIS Distribution List

C-012-001

Our organization, the University Park Community Club, submitted comments on the original DEIS. We are concerned that we were not included on the Distribution List for the SDEIS.

Our position is quite congruent with WSDOT's but, if it were otherwise, we should not have been excluded. Please be sure to add our Club to the list.

Earl J. Bell
UPCC Treasurer

Hotmail: Trusted email with powerful SPAM protection. Sign up now.

From: Pete Delaunay [mailto:pete@delaunay.com]
Sent: Monday, April 12, 2010 4:49 PM
To: SR 520 Bridge SDEIS
Cc: 'Anne Preston'; 'wendy delaunay'; 'trish gasparich'; 'lynn rovig'; 'Torri Canda'; 'stacey hammond'; 'the jennings'
Subject: SR 520 DEIS Comment
Importance: High

Portage Bayshore Association,
2524 Boyer Ave. E. -- Seattle, Washington 98102
www.portagebayshore.org

April 12, 2010

TO: WSDOT – SR 520 DEIS
FR: Pete DeLaunay, President, Portage Bayshore Condominium HOA

RE: Opposition to WSDOT SR 520 DEIS and Construction Option A

C-013-001 The Bayshore property is located in the Portage Bayshore neighborhood of Seattle -- and just south of the existing Portage Bay viaduct -- on Boyer Ave. E. The Bayshore property is a community of 24 condominium units and 30 moorage slips, 15 of which are located under the building which extends over the water. The building's foundation/marina footings were installed when the building and marina was constructed in 1958. SR 520 construction will disrupt our property for several years. I am writing on behalf of condo and moorage slip owners to raise concerns about several topics not adequately addressed in the DEIS:

C-013-002 1. Noise Mitigation - The Bayshore property is well within 300 feet of the construction corridor at the Portage Bay viaduct. We request construction processes for noise mitigation during construction. **And bridge deck evaluation of 'quiet pavement' on the bridge vs. I-405 test; and use of sound walls on the sides of the Portage Bay viaduct.**

C-013-003 2. Bayshore Property Impacts: We request digital video of our current structure and mitigation for damage for dust/air quality from bridge removal as well as vibration on the Bayshore construction footprint/ pilings and the impact on the foundation and marina moorings.

C-013-004 3. Bayshore Marina Impact/ Access: The Bayshore property includes 30 moorage slips – just southwest of the existing SR 520 viaduct that accommodate recreational, non liveaboard, boats from 24ft to 40ft in length. We request mitigation of financial impacts and marina access.

C-013-005 4. Parking/Boyer Ave. Disruption: The Bayshore property owners and renters will be

C-013-005 impacted by parking, congestion and potential closures of Boyer Ave. With Delmar closed for 9-12 months, increased. We request mitigation of Boyer Ave. traffic impacts from heavy equipment.

C-013-006 5. State Environmental Policy Act intentions: We request consideration of reclamation of the South Portage Bay environment. Original SR 520 construction affected the bay in many ways: slit build up, water quality, shoreline, native species, native plants, and salmon habitat. Reclaiming South Portage Bay with removal of silt, invasive plant life, restoration of shoreline (see www.fabnia.org) and better recreational access will provide an important dimension to Seattle's urban quality of life.

Thank you for your attention and response to the issues we have raised on behalf of 40 owners who respectfully request your vigilance to mitigate impacts of the SR 520 project fairly.

C-013-007 We believe WSDOT is biased, as we believe local officials and agencies of government are under pressure from business interests anxious for mass cross-lake transit at any cost. Thus WSDOT has controlled the release of information only favorable to the least costly option.

C-013-008 Option A does not have the "broad-based support from local communities" that WSDOT asserts. The legislative workgroup's recommendation to put 7 lanes across Portage Bay, ignores our neighborhoods, and the Seattle City Council's resolution that calls for no more than 6 lanes.

C-013-009 Option A ignores our concerns to mitigate highway noise. Although WSDOT convened an expert panel on noise, there is no provision in Option A for any noise-abatement systems.

C-013-010 Option A adds a second drawbridge across the Montlake cut, destroying homes (some of which may be historic). And it fails to improve transit speed or reliability and overloads the intersections on either side. WSDOT's own analysis predicts the volume of traffic able to cross the cut will not increase beyond what can cross it even if we do nothing at all.

C-013-011 Option A ignores years of cooperative work with WSDOT to build a 21st century highway vs. just laying concrete at any environmental or health expense.

As a result hundreds of SR 520 adjacent neighborhood households are now unalterably opposed to the current proposals.

In conclusion, we urge you to respect Seattle's Portage Bay urban environment that integrates fragile shorelines, eagles, herons, beavers, salmon and perch with dense residential Seattle neighborhoods. Should our urban environment be

C-013-011

treated differently than old growth timber, rivers and streams, or endangered species?

We advocate 'building SR 520 right' this time. We seek a construction solution for a safer more efficient SR 520 bridge that respects our urban environment with quiet pavement, park like lids and mitigation of noise, dust, vibration, congestion and the impact of heavy equipment and traffic redirection in our urban neighborhoods. .

WSDOT A+ recommendation fails us. Noise, disruption, and a design that adds to the blight that most communities hope to reduce or eliminate. We urge you and the Seattle City Council to insist on a construction plan that genuinely mitigates noise and construction with a design that respects our urban residential environment.

From: VGunby@aol.com [mailto:VGunby@aol.com]
Sent: Monday, April 12, 2010 9:01 PM
To: SR 520 Bridge SDEIS
Subject: Fwd: Ravenna Bryant Community Association's SR 520 SDEIS Comments

Dear SR 520 Environmental Manager Jennifer Young,
I sent this Comments package with 2 files from the Ravenna Bryant Community Association and found that the address that I used in the SDEIS which was sr520comments@wsdot.wa.gov was returned to my SPAM file.

So I am resending to you by a forward. Please confirm/reply that you have received this e-mail forwarded to you and with and the two attached files.

Thanks!

Virginia Gunby, SR 520 Representative Ravenna Bryant Community Associaition
vgunby@aol.com

*** eSafe1 scanned this email for malicious content ***
*** IMPORTANT: Do not open attachments from unrecognized senders ***

Jennifer Young, Environmental Manager
SR 520 Project Office
600 Stewart St., Suite 520
Seattle WA 98101

Dear SR 520 Environmental Manager Jennifer Young,

Attached are two files, one prepared in 2008, outlining constituents interests on SR 520 issues and the other signed by the President Jody Chatalas, with the RBC'a Public Comments and Concerns on the SE 520 2010 SDEIS.

Thanks you for WSDOT's review and we urge that the west-side project be started as soon as the Final SEIS is completed, so that the project can move on to construction"On Time and On Budget".

Yours truly,
Jody Chatalas, President,
Virginia Gunby, RBCA's Westside SR 520 Representative

Ravenna Bryant Community Association
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C-014-001

Letter of Support of Virginia Gunby on 520 Issues

This note will certify that our Board of Directors heard from you a request from the SR520 mediators tat it will reconsider our earlier evaluation of SR 520 alternative designs asn that we received a presentation of the East Montlake Interchange Concept also known as the Six Lane Single Point Urban Interchange with Tunnel under Montlake Cut or Option J for short. The presentation was made by Mark Stoner, a designer of the concept. Our board members also asked questions to understand it fully and then we discussed it. The consensus of our board was to retain our current stance. Our current stance is reflected in the Environment and Design principles set forth in Parts 3 and 4 of the document, entitled Communities Forming Agreements of SR520, dated January 15, 2008 also presented at our board meeting.

In 2006 City Councilmember Richard Conlin, then chair of the Seattle City Council Transportation Committee, made a presentation of the Pacific Street Interchange concept to our general meeting f community residents. He was followed by a presentation by Larry Sinnott of an alternate design of SR520 within its existing corridor but adding a parallel bridge to allow transit to cross the Ship Canal in its own lanes. After hearing both presentations, our residents by a near unanimous vote designated Larry Sinnott as our representative to speak to the City Council in favor of replacing the current SR520 with a four lane structure with transit only lanes added and of authorizing a parallel bridge for transit and widening Montlake Boulevard NE up to NE Pacific Street only.

During the City's Stakeholder Advisory Committee process, we joined with the other Northeast Seattle community and environmental organizations in endorsing the green alternative. We posted advance notice on our website and received community input beforehand and approval by residents afterward. As a condition to participating in mediation, our community association had to acquiesce to a six-lane concept with HOV lanes for SR520. Our board made that concession reluctantly over objections of many of our resident members. It did so on the understanding that we would participate to keep SR 520 and all its entrances/exits south of the Lake Washington Ship Canal and to oppose any widening of Montlake Boulevard of NE Pacific St. except in the immediate vicinity of a parallel bridge.

The voting public provides a god reference pint for assessing the public interest. Our community association joined with most other northeast Seattle community associations in opposing Proposition 1 of the RTID on the November 2007 ballot due to its potential for funding SR520 with the Pacific Street Interchange. This confirms that our stance reflects our constituents and the public interest as shown by the public at a recent election.

We won't repeat our many reasons for our stance since you've stated them well during the mediation process. We think you're doing a very fine job on a difficult task and we appreciate everything you've done. Consider this a strong vote of confidence from our board.

Ravenna-Bryant Community Association
3/30/10
6535 Ravenna Avenue NE,
Seattle, WA 98115

RE: SR 520 2010 SDEIS COMMENTS and CONCERNS

C-014-002

In February 2008 the **Ravenna-Bryant Comm. Association**, wrote to the 520 Mediation group listing our Community Objectives for the SR 520 West-Side Project. We used our Objectives to provide comment on the 2010 SR 520 SDEIS. The A option, without the Arboretum Ramps is our Preferred 520 Design. It would be improved with new preferential transit lanes on city arterials and traffic lights on Montlake Blvd. E and NE, and Pacific St NE, and would speed transit service, particularly during the am and pm peak hours. Moving transit on the arterials will reduce 520's destined traffic on Montlake E. and stop the rebuilding the Ramp's in our largest, Olmsted designed city park. That is the "trade-off" we support and a refinement in the plan that is needed with the city of Seattle support and involvement.

C-014-003

In the SR 520 SDEIS some of our original objectives have been met, some haven't or their status is unknown. *With over 14,000 pages, including the Appendixes, it is a difficult document to comprehensively review*.

1. Our adopted objective of no more than four general-purpose lanes and two lanes for high occupancy vehicles for Transit has been met by both A and A+ designs. (The one difference between A and A+ is that A+ keeps the Arboretum Ramps.) The eight lane option was eliminated by the Governor. ***All of the SDEIS design options meet the six lane objective. RBCA supports the A option's west side design because it is more transit and environmentally friendly and within the $4.65B Project Budget.***
2. We oppose expanding the SR 520 on the west-side footprint to 8 lanes, due to the sensitive 1st class wetlands, endangered species-salmon run, protected tribal fishing treaties on Lake Washington, and public need to protect our adjacent large, unique, public park, the Washington State Arboretum and the Boulevard. (Section 2 (4) (b) (v) of the 2010 ESSB 6392 SR 502 bill passed and too be signed on 3/10/10, requires WSDOT to prepare an Arboretum mitigation plan, including wetland mitigation by 12/31/10 for the SR 520 FEIS.)

C-014-004

3. We have great concerns about the K Tunnel and L diagonal Bascule Bridge designs that impact the sensitive environment and have 520 entrances and exits located in park lands, and to and from SR 520 north of the Ship Canal. Both result in a significant increase in vehicle traffic on the north and north-east Seattle arterials and neighborhoods, which would be detrimental to the quality of communities and livability north of the Ship Canal.

4. We are pleased to learn in the SDEIS that proposed K, L & M designs are not financially or environmentally feasible. The unstudied new M proposal would require another year or more of design and study before a new SDEIS could be prepared and circulated. RBSA does not support any more delay or added public funds spent to study any west side designs that could relocate the existing 520 interchange further to the east in park lands, far from the crossroads.

C-014-005

5. Minimizing traffic impacts in the north and northeast neighborhoods is important for keep our communities livable and less congested. Our concerns includes: 25th and 35th NE, NE 45th, NE 55th, NE 65th, NE 75th, Montlake Blvd E. and NE Ravenna Blvd, Sand Point Way, and the entire group of streets surrounding the University of Washington, University Village

C-014-005 and Children's Hospital. *Not enough DEIS analysis is available on 520's impacts on local arte*rials.

C-014-006 6. RBCA and A design supporters in the SR 520 Mediation Group focused on Transit/HOV-related solutions for the new HOV lanes, staying within the budget and "doing the least harm". The result is our A west side design with HOV lanes.

C-014-007 7. RBCA supports the city of Seattle SDOT's UW Area 2009 Project 32 Traffic Action Strategy that recommends installing variable Message Transportation Information sign(s) on Montlake Blvd.NE near NE 45th for north-end transportation users to learn about current 520-related traffic. Issues such as Montlake bridge openings, the LRT/BRT schedules for service east and south, or optional alternate non-congested modes/routes, HOV lane/riders pick-up area info, traffic back-ups on the SR 520 Portage Bay ramps to I-5, and other relevant Travel Information. If installed early and available on the web, the new information could replace the SDEIS suggested need for a new southbound HOV lane addition on Montlake Blvd.NE. from NE 45th to Pacific St NE.

C-014-008 8. RBCA opposes a proposal in the SDEIS to add a HOV lane on southbound Montlake Blvd NE. This project should be postponed until there is improved Traffic Information and signs operating. to help reduce SOV trips through this congested area. I**f ever built**, the arterial HOV lane should only use right-of-way on the east side of Montlake Blvd.NE, from Pacific St.NE to NE 45th. Large trees, adjacent to the Burke Gilman Bike/Ped trail, should not be removed on the west side of Montlake Blvd.NE.

C-014-009 9. The adjacent city arterial streets and SR 520 should fully embrace new pedestrian, bicycle, and vehicle safety, enhanced aesthetics, and a **"Complete Streets Plan**" with trip reduction Demand Management programs to promote transit, reduce and channelize traffic destined for E/W-SR 520, encourage walking, reduce street noise and CO2.

C-014-010 10. We support the initiation of Pre-Construction-Tolling on 520 in 2011 as a way part to closethe $2.65 B gap in project funds, by having the users pay for the project. We urge a proactive SR 520 Transportation Demand Management (TDM) program that could to help to reduce the daily city arterial traffic jams and SOV trips and to use a part of the SR 520 Tolls to help subsidize the costs of increased and improved, sustainable Transit Operations on the SR 520 Corridor.

C-014-011 11. The Puget Sound Regional Council's new adopted 2040 Regional Transportation Plan includes a new TDM program called (12) **SMART Corridors** for the 4-county Region. The new **SMART Cross-Lake Corridor includes both SR 520 and I-90.** Joint performance is monitored as part of the Corridor Management Program. The PSRC's program staff will review the multi-mode performance and efficiency for moving people, cars and freight on SR 520. The PSRC will prepare a long-term, integrated SR 520 Corridor Performance Plan, with performance objectives for all modes. Staff will, track and report on the overall performance, also reflecting the actual experiences of 520 users. Long and short term goals for SR 520's overall and modal performance objectives will be adopted. PSRC staff will report on whether the 520 goals/objectives were met annually, and recommend changes, if needed to improve performance for all users and modes. An annual SR 520 Performance Report would be made available to the adjacent communities, large employers, transportation Agencies and users of the 520 Corridor. The SMART Corridor Report would recommend changes, if needed, to improve the overall performance and to keep SR 520 performance sustainable over time.

C-014-012

12. RBCA supports an A design for 520 that works for transit, is environmentally sound, that reduces the impacts on the Arboretum by removing the Arboretum ramps permanently, protects our waterways, wetlands, fish, and wildlife habitat, and reduces Green House Gas global pollution. We learned recently from the Seattle Parks Department staff that McCurdy Park land *will be entirely taken for SR 520 Right-of-Way. This is a major concern*. We urge mitigation for the loss of McCurdy Park and on the landscaped McCurdy Lid, planned for over SR 520. The final design should nott include any **Arboretum Ramps**,. The new Trails planned for Lid should have user informational signage that indicates the history of McCurdy park, Mohai, the Monflake Cut and the historic Native cultural areas nearby and unique wetlands.

C-014-013

13. The RBCA's representative has been involved with 520 since 1997, first with the Translake Study and now with the recent west-side SR 520 studies. Our organization adopted a process objective of promoting a transparent 520 process to obtain all relevant information, including traffic studies, feasibility studies and details about how all major elements, including transit would be incorporated within the west-side design and plans. We find in that the SR 520 A design meets most of our objectives, after many hours of Mediation informational meetings and group discussions.

But the SR 520 SDEIS it is lengthy, encyclopedic, and does not focus on some major public issues such as Transit

Connectivity and reducing traffic on arterial streets near 520. We urge that the SR 520 FEIS be more succinct, and

provide more details, answers and solutions for the major substantive and recent controversial SR 520 related issues.

C-014-014

14. Final Recommendations: We regret groups opposed to the A and A+ options have circulated misinformation about the SR 520 designs. SR 520 is a complex project with many details. The misinformation have seldom been corrected by the Press or at Public WSDOT Meetings. We also support more emphasis by WSDOT on plans with SR 520 to support increased transit use on SR 520 and I-90 state corridors. This includes:
A) New Plans for connecting **a multi-modal, west-side design between SR 520 and nearby local Seattle city**
arterials. For example- Public Information on the new 520 related METRO local Bus routes/service, the

Sound Transit's Bus Rapid Transit/Cross-lake routes/services, and the North Link LRT south routes, and how SR

520's impacts on land-uses and city arterial traffic congestion could be mitigated and reduced. and

B) Preparing Public Information on the evolution of SR 520 from BusRT to Light Rail Transit. How will the SR 520's BRT

use the center SR 520-HOV lanes, and what is the conversion Plan for moving BRT/HOVs out of the HOV lanes for the

future LRT system. Is there a design for an LRT connection at Montlake Blvd., or to a less sensitive Corridor**?** and

C) I-5 Express Lane Plan Revision is needed to change the current connection and planned operations of the 520 HOV

Lane into I-5 and from I-5 to SR 520 EXPRESS lanes to move more people all-day-on two-way HOV/Transit service on

C-014-014 the underutilized I-5 EXPRESS lanes.

C-014-015 RBCA reaffirms that **we are adamantly opposed to SR 520 ever widening SR 520.** We urge progress in the preparation of a long-term inter-local SR 520/I-90 HCT Cross-Lake Agreement. The Agreement is needed now onthe new SR 520's 6-lanes, and the future Phases for LRT modes and vehicle operations. It should include the maximum width needed for LRT operations and must include no future widening of SR 520. The SR 520 LRT NOW! supporter's questions must be answered today, and for the next generation. Long range SR 520 Agreement policies should address the existing long-range LRT Plan, financing and protecting future adjacent communities including residents, the Arboretum, the historic Washington Park Arboretum and Blvd., the University of Washington Campus and the Medical School, and the city of Seattle's livability.

C-014-016 RBCA continues to be open to new ideas and to working positively with relevant organizations, entities and WSDOT representatives to achieve a consensus on the final SR 520 west side plan, so that it will be constructed soon, and be availablel for all involved communities, before a windstorm of earthquake damages the existing bridge and corridor.

Thanks for WSDOT's SR 520 staffing and for the opportunity to offer Public Comment on the 2010 SR 520 SDEIS issues and our related concerns.

Sincerely,

Jody Chatalas, President

File: SR

520DEIS RavennaBryant32010.doc

Ravenna/Bryant SR 520 Constituent Issues DRAFT1/20/08

Background: Since last September, 35 SR 520 Mediation Stakeholders have been meeting in Seattle to study and agree on a design for the west-side of the rebuilt SR 520. The eastside of 520 has been designed by WSDOT to that community's satisfaction .It has precluded the west options for SR 520.

(520 is the longest floating bridge in the world, completed in 1963, 60' wide, (4 lanes with minimal shoulders) was structurally strengthened in the 1990s and has a life of less than 20 years, due to now obsolete construction standards, and does not meet earthquake and maximum wind standards. With leaking pontoons it is lower in the lake. The bridge and transition segment, plus the replacement of the Portage Bay Bridge to meet new standards is required. A straighter corridor with 4/2 new HOV lanes, wider shoulders, adds capacity for SOVs, in the new 4 mainline lanes, that HOVs used on old bridge.)

Range of Costs

Total Replacement Cost: Estimated to $3.8-$.4.3B (Separate Budget Attach. 1)

The Current Ravenna/Bryant Community Association's constituent's interests-:

1. Oppose the Pacific Interchange (North of the Cut)design alternative, or any new reincarnations that are located North of the Montlake "Cut"- (See "J" below) Mediators say Pac.Int is out.)

2. Actions to oppose any SR 520 design options that would increase traffic through the R/B communities, 25thNE and 35NE, NE 50th, NE65th and NE 75th - .north end Communities.

--- a.) A related issue is opposing the proposed widening of Montlake Blvd., with at least 2 lanes, between Montlake/Pacific Place intersection and the University Village/NE 50th area..

Current Design Alternatives: The biggest problem so far has been that the Mediation process has been weak providing information promised last September, at our first meeting. (The Jan. 08 Meeting Summary removed the Retrofit option from the table. Maurice Cooper, sponsor, from the Madison Park Community, has withdrawn his support for this option.)

1. The "**G**" option is a proposed short tunnel or green lidded above water section, adjacent to Foster Island and the 1st ClassWetlands. One option removes the existing Arboretum ramps, and revises any new on/off ramps to the west. The "short tunnel, "G" would be used with either a 4-lane Retrofit option and a future 2-lane transit bridge if needed, or a new 4/2HOV-lane cross lake bridge. (Graphic of "G" option Attach 2)

+ Plus-Decreases noise, visual impacts, storm water pollution, least harm to Arboretum, improves habitat, adds significant green space from Montlake to Lake Washington, Berm reduces costs

-Minus- Permitting constraints, impact on fish of permanent fill, construction impacts, sensitive Seismic area, coffer dam dewatering and pilings down to 100' bedrock, Tribal concerns, costs, impact on Arboretum

2. The **"J"** option graphics was available at our last Board meeting**.** The designer of the extensive Montlake green lid, with a 7% grade tunnel under and up the other side of the ship-canal with a curves option was at the last R/B Board meeting with graphics of the proposal. It is on the Feb. Agenda as a new east 6-lane Bascule bridge (about a ¼ mile east of the Montlake bridge, with or without Arboretum ramps. All vehicles

travelling east of west on SR 520 would enter on a new 6 lane south Stadium (parking lot) highway and it is not known how the bridge would interchange to move users to east and westbound SR 520 lanes from the Bascule bridge without creating another generation the Pacific Interchange,

+ Plus-Removes SR 520 traffic from the Montlake area to the south Uof W stadium.
Uof W doesn't support any portion of the SR 52o on the campus.

-Minus 7% grades are of tunnel, sharp curve to/from are difficult for buses, trucks and slows traffic

Bascule bridge is subject to openings for large vessels and sailboats, except at peak hours.

Transit service reliability is impacted. by bridge openings.

2. SR 520 V.Gunby DRAFT

3 **Base-6 Options—**WSDOT and Seattle's A-1, 2,3 with 4'narrower width design, 6 not 9 lanes across Portage Bay—Approx. width narrowest 138,' with 15'bike/ped lanes, w/o ramps, merge lanes etc the width would be wider. A WSDOT Montlake Design Workshop is to be held in March to discuss these options and any revisions to the area, to reduce noise, community and environmental impacts. Suggested additions have been:

*-East Transit ramps in/out the HOV lanes, Transit controlled traffic lights, reserved AM/PM
city arterial lanes for buses in the north end near the new ST Campus Transit Station

*-Stacked lanes to narrow corridor, lower profile,
*-Green lids over interchange,
*-Remove flyer stop/replace under over pass, Keep flyer stop
*-Emphasize transit/moving people to the new ST/LRT Campus station and into the new I-5 express lanes to and from the CBD,
*-A parallel Montlake Bridge with new access and egress ramps to sort out the east and west traffic at Montlake.
*-Eliminate "U" turn at Hamlin and Shelby
*-Noise walls good to reduce impacts, bad for visual impacts-
*-Storm-water collection and protection of the adjacent wetlands, parks and open space
*-Tolls, on SR 520/I-90 before, during or after construction
*-Managing construction to reduce impact on the surrounding community
*-GHG emissions reduction

Discussion Questions:

1. What are the Ravenna/Bryant community's priorities for the westside SR 520 Design?
2. What are your views on the process, or the options described?
3. What messages do you want to send back from this community to the Mediation members?

Other-

4. In light of the proposed construction of SR 520, the LRT Station and Tunneling, the Childrens Hospital expansion, the U of W stadium reconstruction and major development in the U village area Should Ravenna/Bryant request that the city initiate an Northeast Area Transportation Study ASAP?

FYI-Legal/EIS Issues

A.)A **2006 DEIS** was issued on the project with 4 options, e two 4-lane and two 6-lane options. "Base-6 and the Pacific Interchange appear to be WSDOT's options. The 2007 Legislature and the Governor in ESHB 6099, authorized *the Mediation of a 6-lane design option* on the west side. All prospective members of the Mediation were pledged to study only alternatives for the 6-lane option. This was after the 2006 DEIS, but before the SEIS and FEIS were completed or a "Preferred Alternative" was declared in Record of Decision ROD process.
(Note: The SR 520 "de facto" Preferred Alternative was decided prior to the completion of the DEIS/SEIS/FEIS or the finding of a Preferred Alternative.
B.) The University President was asked by the Gov. for the University stay "neutral" on SR 520 project, and not involve the staff or faculty in any study of the design that could have less impact on the campus facilities.
C.) A Pontoon DEIS Hearing was held on 1/17/09 in Gray Harbor WA on sites, technique and options for the construction of a "graving" dock to use for new pontoons, in case of the bridge sinking from a catastrophic storm. The description of the process states that starting this process will not preclude design decisions made by the Mediation. (Planning, Designing and Building early is estimated to save $400 M.)
File:RavBryantSR520Constitissues12908.doc

From: Judith Thornton [mailto:thornj0@comcast.net]
Sent: Tuesday, April 13, 2010 10:46 AM
To: SR 520 Bridge SDEIS
Cc: billandlin@aol.com
Subject: Cultural Resources on Union Bay

TO: Jenifer Young
SR520 Environmental Manager
SR520 Project Office, Suite 520
600 Stewart Street
Seattle, WA 98101
or e-mail
SR520Bridge_SDEIS@wsdot.wa.gov.

Dear Ms. Young:

C-015-001

Thank you for the opportunity to comment on the need to protect valuable archeological sites during the re-building of Highway 520. I am a neighbor on Union Bay who happened to discover an archeological artifact, a mahogany red chert biface, in my garden above Waterway 1 on Union Bay. From this discovery, the Friends of Waterway 1 learned that Waterway 1 and many other locations on Union Bay are important sites of pre-contact historical resources. We are working with archeologists at the University of Washington and Burke Museum, with the Muckleshoot Tribe archeologist, Laura Murphy, and with Washington Department of Natural Resources aquatics archeologist Maurice Murphy to identify and preserve valuable cultural resources. We ask that WSDOT assure similar protection to cultural resources in its plans for Highway 520.

Thank you for your efforts on behalf of the historical and cultural resources of the city.

Judith Thornton
Friends of Waterway 1
and volunteer for Laurelhurst Community Club

cc. Colleen McAlleer,
Laurelhurst Community Club

Queen City Yacht Club
2608 BOYER AVE EAST SEATTLE, WASHINGTON 98102 (206) 709-2000

April 15, 2010

Jenifer Young
SR 520, I-5 to Medina: Bridge Replacement and HOV Project
Environmental Manager
SR 520 Project Office
600 Stewart Street, Suite 520
Seattle, WA 98101

RECEIVED
APR 14 REC'D
WSDOT - SR 520
PROJECT OFFICE

Dear Ms. Young:

C-016-001

We thank the Washington State Department of Transportation for the opportunity to comment on Supplemental Draft Environmental Impact Statement (SDEIS) dated January 22, 2010 for the SR 520, Interstate 5 (I-5) to Medina: Bridge Replacement and High-Occupancy Vehicle (HOV) Project (also referred to as the SR 520, I-5 to Medina project)

Unfortunately in the absence of more construction detail the omissions and lack of specificity in the SDEIS have made it difficult to understand all the potential effects of the project.

Despite the vagueness of the present information about your project, we know enough to have significant concerns. Your project will impact each of our activities for numerous years of construction, and negatively impact our ability to attract and retain members. We will expect WSDOT to mitigate those impacts. We have grave concerns about the permanent impact of the project on our facility and business and we call on WSDOT to work with us to identify ways that such impacts may be avoided.

Queen City Yacht Club (Queen City) understands that the 520 bridge needs attention and is willing to work diligently and in good faith with WSDOT to create a safe and efficient solution to its many problems. If our concerns are considered in moving forward during the design phase we believe that many of the impacts to Queen City can be materially reduced or mitigated. If our concerns are not addressed at the design phase, on the other hand, the

C-016-001 impacts to Queen City could be extremely severe, and could place us in a position of having to defend our ability to survive, to both our detriment and the detriment of the project.

C-016-002 BACKGROUND:

We are enclosing our October 25, 2006 SR 520 DEIS Comment Letter, which will provide you with background on Queen City and its concerns with this project.

C-016-003 Queen City is a nonprofit organization founded in 1916 making it one of the oldest civic organizations in the City of Seattle. It purchased its property on Portage Bay in 1934. Our facility consists of our clubhouse building, landscaped grounds, paved parking lot and a marina consisting of three docks containing 230 moorage slips. It is located in part of the Boyer and East Roanoke neighborhoods and currently has 480 members.

Our business model requires that we derive income from membership initiation fees, annual dues and moorage rents. The moorage facility is not only a critical generator of rental income in itself, but is a significant recruiting incentive for attracting new members, which generates new initiation fees. Similarly, our clubhouse generates important revenue from facility rentals. Our parking lot is important to serve both the moorages and clubhouse activities. In short, each part of our facility works with the other parts and depends on the other parts to keep the club viable as a whole. Physical impacts that disrupt the functioning of one part of our facilities may end up having a disproportionate impact on the viability of Queen City, because what may seem like a relatively minor physical impact, in fact damages the ability of the remainder of the property to function as it should.

OUR PRESENT CONCERNS

Because each of the elements of our property must work in concert with one another, even the temporary loss of any portion of our facilities caused by your project will have a materially detrimental effect on the functioning and potentially the survival of Queen City.

C-016-004 1. ENCROACHMENT ON QUEEN CITY FAILITIES

The State has openly stated, in advance of the comment period for the SDEIS, that it has selected Option A+ as the option it will build. The elements of this option are not described or discussed in sufficient detail in

C-016-004

the SDEIS and precise information about its elements has been difficult to ascertain. Without the information about the specifics of Option A+ we are hampered in our ability to comment on the draft SDEIS, and may not be able to determine what impacts Option A+ will have on the Queen City property until it is too late to provide meaningful comments. We believe this to be a violation of both NEPA and SEPA requirements.

Option A+ adds an additional 7th lane to the Portage Bay Bridge which places the new roadway outside of your current right of way and encroaches on our Dock 3 and possibly our parking lot. This is in contradiction of assurances given by WSDOT during the mediation process that the Portage Bay Bridge will remain within the existing right-of-way. While Queen City can accept proportionate expansion of the physical roadway beyond its current physical footprint, the bridge must remain within the WSDOT current right of way. Expansion beyond that footprint will encroach on our vital moorage property and thus result in a loss of critical scale in our moorage.

During the Mediation process and in several discussions WSDOT agreed to expand the Portage Bay Viaduct proportionately out from the center line of the current right of way in each direction. The SDEIS document is silent on this agreement. The SDEIS must either acknowledge that WSDOT continues to honor that commitment, or disclose the extent to which WSDOT now intends to violate it. Page 3-14 of the SDEIS describes the construction process for the Portage Bay Bridge as the building of a new bridge just north of the existing bridge then tearing down the existing bridge to build the remaining new portion south of the first portion. This construction method appears to be contrary to our agreements. We are further confused by the description on page 42 of the Construction Techniques and Activities Discipline Report which describes a completely different approach to the Portage Bay Bridge construction process. We request that WSDOT provide specifics on how the construction process can keep the new bridge center line on the existing center line and how it fits within the existing right-of-way. We request that this description be included in the final EIS and that WSDOT make a firm public commitment to this issue.

C-016-005

2. LOSS OF MOORAGE:

The Project Effects and Mitigation, During Construction, Land Use and Economic Activity Section (Executive Summary, Page 54) of the SDEIS acknowledges a temporary loss of boat slips at Queen City and states that

C-016-005

this loss would be mitigated through relocation or other options to be identified. In order for Queen City to survive, it is critical that specific information be provided at your earliest convenience to allow Queen City to identify just how much boat moorage will be lost, over what period, and what specific mitigation will be provided in order to identify future impacts to the functioning of the entire facility and to assist you in meeting our mitigation needs. "Other options to be identified" are of course part of what the EIS process is expected to accomplish. But to be adequate, the EIS must in fact identify the mitigation that will be provided. Identification of those "other options" cannot be put off until some later time.

As stated above, the loss of moorage has implications beyond the direct and immediate loss of moorage revenue and the displacement of existing members who currently utilize the slips to be taken. It can have a ripple effect impacting our ability to attract and retain membership and the viability of our facility as a whole. The impacts felt from this will last beyond the completion of the project and impact our viability for years to come.

C-016-006

3. QUEEN CITY ACCESS - BOYER AND EAST ROANOKE AND VICINITY

Road closures and detours are described in a general manner in your report. Your report states the conclusion that these are "not expected to have a substantial affect on SR 520 operations". (Executive Summary Page 39) This comment causes us concern. The purpose of the EIS process is to identify and deal with impacts not just to your highway, but also to the community surrounding it. Your conclusion that 520 operations will not be substantially affected by road closures and detours ignores the impacts of the project on the neighborhoods. For the SDEIS to be adequate it must disclose not only the impacts of the construction on the operation of SR 520, but also the impact on the operation of local streets that are affected by the construction and the ultimate reconfiguration of access to SR 520.

Your document does acknowledge that local street operations will be affected but provides only general statements on those affects. Access to our facilities is critical for our continued public and member operations. Your report does not provide sufficient detail to permit an intelligent analysis of these effects. For the SDEIS to be adequate, it must provide that information, and must describe the mitigation that will be provided to insure that our property remains accessible to our members throughout the construction process and after completion of the project. To the extent that

C-016-006

there will be periods when our facility is not accessible, or access is restricted, we need to know when those periods will be, and what mitigation will be provided as soon as possible so that we can make plans to protect our viability

C-016-007

4. TRANSPORTATION:

Queen City members and the public rely on reliable transit and lack of congestion to access our facilities. It is also possible that during construction Queen City members will need to rely on remote parking to access our facilities it appears that Boyer Ave. E. is a potential haul route, which may substantially change the accessibility of our facility during the construction period. The SDEIS notes that construction staging and schedules have not been determined and that WSDOT will continue to coordinate with local and regional transit authorities to determine haul routes and traffic detours. (See exhibit 6.1-3, page 6-6). To insure the continued viability of Queen City we request that WSDOT include us in those discussions and that the final decisions become a part of the construction bid documents issued by WSDOT to bidders.

C-016-008

5. NOISE:

During construction: Mitigation is required for residential areas if exterior noise levels are greater than 67dBA based on federal Noise Abatement Criteria. Pile driving and demolition of the Portage Bay Bridge will exceed 90 dBA within 200 feet of our club. (See exhibit 67.3 - page 6-70) Pounding will occur between 7AM and 7PM except Sundays and holidays from between 3 and 6 months.

After Construction: The City of Seattle maximum sound level between 7:00am and 10:00pm is 55 dBA.

The SDEIS states that because of these excessive levels noise measures must be considered. However, the SDEIS is vague on specific requirements or mitigation measures to be taken either during or after construction. We request that those options found in the "Noise Reduction Strategies Expert Review Panel Report Sept. 2008" become a part of the final EIS and included in the construction bid documents issued by WSDOT to bidders of this project.

C-016-009

6. VIBRATION:

All of the options call for the construction of temporary bridges using vibrating hammer pile driving equipment. The discussion of the affects of these operations and the mitigation procedures associated with them are incomplete. With all the pile driving and cofferdam dewatering so near to Queen City docks there is likely to be movement and settlement of our pile support structures

Insofar as we are aware, WSDOT has done nothing to ascertain whether the Queen City docks and pilings could be damaged or collapse as a result of the impact.

We request that procedures for mitigating the affects of vibration be addressed in the final EIS and become a part of the construction bid documents issued by WSDOT to bidders of this project.

C-016-010

7. PORTAGE BAY

The SDEIS is deficient in its analysis of the impact of your project on the historic and recreational use of Portage Bay, Union Bay and the Lake Washington Ship Canal by the boating public. It fails to recognize their role in maritime history and their status as premier recreational resources for swimming, boating, University crew training, sailing lessons, private canoes and kayaks as well as power boats, bird watching, nature walks, and access to the several marinas. The proposed expansion of 520 will take property from Portage Bay, and will also degrade the public's ability to enjoy the remaining property, because of the added height and doubling of bulk, threatening shadows, and noise. We request that WSDOT include analysis of the impacts of the project and mitigate the impact of construction to insure the continued use of these recreational resources.

C-016-011

8. OPENING DAY OF BOATING SEASON

We ask that the final EIS pay particular attention to eliminate interference with Opening Day of Boating Season activities in Portage Bay, Union Bay and the Montlake Cut. Queen City welcomes the opportunity to work with WSDOT to mitigate conflicts with this International event. In addition, boating activities by Queen City members and public participants occur

C-016-012

parks, or recreation areas or wildlife areas, can be approved only if there is no feasible and prudent alternative to using that land and if the project is planned to minimize harm to the property. The SDEIS has acknowledged Montlake Playfield Park as having 4f status but has failed to acknowledge 4f status and review of the substantial taking of other parklands, interfering with their use for wildlife and recreational purposes both on water and on land. The SDEIS also fails to prove that all reasonable alternatives have been evaluated. The SDEIS also fails to recognize additional protection provided under Section 6f for certain areas where federal funds have been used to create an amenity (such as the Arboretum Waterfront Trail) regardless of the land on which it resides.

C-016-013

11. INADAQUATE ANALYSIS OF ALL REASONABLE ALTERNATIVIES

As noted elsewhere, the elements of Option A+ are not described or discussed in sufficient detail. In addition, Option M (a submerged tunnel concept) was presented at the same time as Option A+. WSDOT declined to conduct its analysis stating their concern for safety issues that could arise during the additional six months required to do the analysis. The SDEIS is also delinquent in providing analysis for a repair/retrofit option to address these safety issues now. Retrofitting could be done immediately, without waiting years for the funding to become available for the construction of the rest of SR 520. WSDOT has a proven and admirable record for seismic retrofitting bridges along the entire I-5 corridor and there is no reason that cannot be done here. Retrofitting will substantially reduce costs and limit environmental damage to little more than what exists today. We believe the failure to study these options is contrary to the purpose of an EIS and not in the best interests of the public or the environment. The public has the right to know and understand the design and its implications at the point when the public has a right to comment. In addition, we believe that the law requires that WSDOT disclose the actual A+ design in its entirety to identify its impacts and to identify mitigation. This has not been done and we believe that the SDEIS process and report are fatally flawed.

SUMMARY

In summary, Queen City recognizes that the SR 520 bridge replacement is necessary. It will also have potentially profound impacts on the Montlake area and Portage Bay both during construction and after it is completed. Without careful planning, it threatens the continued viability of Queen City Yacht Club. NEPA and SEPA require that before beginning a project with

C-016-013

significant adverse environmental impacts, the agency in charge must disclose those impacts and describe the mitigation to be proposed. We recognize the challenge that presents for WSDOT, but the fact that the project has so many significant adverse environmental impacts is not a reason why the environmental disclosure can be less than what NEPA and SEPA require; to the contrary, it is a reason why the disclosures must be all that NEPA and SEPA require. We appreciate the opportunity to review and comment on the SDEIS and have a continuing interest in working with WSDOT to resolve the issues.

Sincerely,

Edward J. Jennerich
Commodore, Queen City Yacht Club

ENCLOSURES:

Queen City Yacht Club October 25, 2006 SR 520 DEIS Response Letter

Queen City Yacht Club
2608 BOYER AVE. EAST SEATTLE, WASHINGTON 98102 (206) 709-2000

RECEIVED
OCT 23 2006
SR 520
PROJECT OFFICE

October 25, 2006

C-016-014

Mr. Paul Krueger
Environmental Manager
Washington State Department of Transportation
SR 520 Project Office
414 Olive Way, Suite 400
Seattle, WA 98101

RE: Queen City Yacht Club Response to SR 520 DEIS

Dear Mr. Krueger:

We thank the Department of Transportation for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the 520 Bridge Replacement Project.

We would like to comment on a number of items in this report that we perceive as impacting our property and comment further on impacts to the environment of Portage Bay. We understand that you have not yet designed this project to any great extent and we hope that you will take these comments into consideration in your design in order to minimize impacts caused by the project.

As discussed in this letter, the Project may have very serious impacts on the Queen City Yacht Club. If our concerns are considered in moving forward with the design however, we believe that many of those impacts could be materially reduced, if not eliminated, without adverse impact on either the cost or the functionality of the Project. Ignoring our concerns may have its own cost implications on the Project. We strongly encourage the Project team to work with us as the design progresses so that the Project can move forward in a manner that is maximally satisfactory to all.

1. Background. Queen City Yacht Club was founded more than 90 years ago, in 1916, making it one of the oldest civic organizations in the City of Seattle. The founding premise was that it was a club for boaters of moderate means, who wanted the sport of boating without unnecessary frills. That attitude has prevailed to date.

C-016-014

Our Club is actively involved in numerous civic activities of importance to the community, as well as providing boating opportunities, social events and recreation for our members and their families. Today we have more than one thousand members.

In 1934, Queen City Yacht Club was able to purchase the property on Portage Bay at 2608 Boyer Avenue East. This unique property has been integral to the growth and development of the Club. The Club's property is irreplaceable, because in addition to owning the uplands, we own the submerged lands on which our moorage is built. These conditions would be difficult if not impossible to recreate anywhere in the Seattle area.

Our Portage Bay facility consists of our main clubhouse, landscaped grounds, paved parking lot and three docks containing 230 mooring slips. The clubhouse is a three story building containing approximately 9800 square feet of improved interior space. It was constructed by our members in the 1930's. In 1999, our members raised more than two million dollars in pledges from our membership to fully renovate the Clubhouse.

Our 230 slip moorage facility was largely built by our members. Our members perform almost all of the maintenance on the moorage. The moorage facility is one of the Club's most significant assets. It not only generates annual moorage rental revenue, but is a significant recruiting incentive for new members to join our club. The moorage at Queen City is known area-wide, as one of the best deals in boating.

Queen City Yacht Club is a non-profit organization which devotes its resources to serving the needs of its members, and providing boating education to the young people in our community. In order to meet its annual expenses, the Club depends upon the revenue obtained from dues from current members, revenue generated by moorage, and the revenue derived from attracting new members. The loss of any portion of our facilities caused by your project will have a severe and material impact on the survival of our organization. The impact from loss of use during the construction of your project could similarly hurt us. Thus we are most concerned about the amount of our property that the Project will require, and particularly its impact on Dock 3, our parking, and the clubhouse.

What we can see in your plans is that in each scenario you have moved your bridge any where from sixty to ninety feet north of its present alignment, which moves it directly onto and over our property. This portends the potential loss of our southernmost dock (Dock 3), a portion of our parking lot at least during construction, and a permanent impact on our facility by having the bridge nearer, if not over, our facility. A permanent loss of Dock 3 and significant portions of our parking lot will wreak havoc on both our immediate and long-term finances, and will permanently cripple our ability to regenerate membership which is vital to our long term survival.

C-016-014

2. Consideration of Other Alignments and Properties. It appears to us that significant vacant or less-developed property lies to the south of your proposed alignment all the way from the west shore of Portage Bay to Interstate 5. However, the DEIS does not appear to give any consideration to an alternative alignment to the south, which could use that vacant or less-developed property and spare the Club's property, particularly Dock 3. If a more southern alignment has been considered, the DEIS does not disclose what specific consideration was given and why it is not presented as an alternative in this report.

The DEIS does comment on a desire to "straighten" the portion of the roadway that crosses Portage Bay. However, the diagrams on page ES1-14, suggest that the roadway jogs north at the Queen City Yacht Club, and would be straighter if the roadway were moved to the south, instead of to the north. In any event, the absence of assessing the impacts caused by the decision to move the roadway northward seems to ignore the weighing and balancing process that should be occurring at the DEIS stage.

We ask the State to remember, that you are building the Project in an urban environment where curves and alignments are frequently impacted by the need to deal constructively with project impacts. If there are benefits to the road alignment from it being pushed further north as you propose, those benefits should be compared to the cost and impact, including the impact that by potentially taking Dock 3, the Project may imperil the continued survival of the Club. The public and decision makers should be the ones to decide which impacts are most significant and which impacts should be avoided. But without the information, they can't do so.

The report also does not discuss what alternatives may exist to narrow the bridge at Portage Bay to avoid or lessen the impacts to our Club and to the environment. Is it essential to have full ten-foot shoulders at this location? It appears from the diagram on page ES1-14 that the east and west roadways are separated by some number of feet at the point of the Queen City Yacht Club. Is that truly necessary? Why? Because moving the Project even a few feet to the south could have the effect of preserving Dock 3, it is critical to the Queen City Yacht Club that there be a full consideration of all the alternatives that could move the alignment further south.

The assumed bridge alignment described in your report does not consider whether the existing alignment and right of way of the bridge could be utilized as the permanent alignment for the new bridge by the creative use of traffic detours and construction staging during the construction of the Portage Bay portion. Again, if that would be possible it could result in the maintenance of Dock 3, with significantly lower adverse impacts on Queen City Yacht Club.

C-016-014

We do not understand why a decision to move the roadway to the north by 60 feet, which clearly causes such damage, is necessary or desirable and see no discussion of the relative value impacts you considered in reaching this decision. Again, because of the lack of detail in your report, we cannot tell what will occur beneath the bridge and whether you intend to pursue design considerations that will restore our facilities after completion of your project, thus mitigating the impacts of the Project on our use. We certainly urge you to do so, and will be willing to work cooperatively and creatively with you to minimize the long-term impact on Queen City Yacht Club, even if the construction impacts are necessarily more significant.

3. Actual State Land Needs. The DEIS itself seems to suggest that the Project intends to take all of our Dock 3 lands, although all that may be needed is a construction easement, particularly if the final design occupies a smaller footprint and is located further south. *See*, page ES2-47. Appendix K, pp. 59-66 is not much more enlightening. We urge the Project team to very carefully analyze whether it can get by with only a construction easement, and to engage Queen City Yacht Club in discussion on how we can access our property during construction and thereafter. As we explained above, a blanket taking of Dock 3 guts the Club's ability to generate revenue and threatens our existence. It is essential that the Project approach the designation of the area to be acquired carefully and with a full dialog with us. Additionally, the report fails to analyze and distinguish the state's actual land needs for construction purposes, as well as its actual needs for land acquisition in perpetuity. The report does not appear to consider or justify a partial construction taking, either, nor has it engaged us in discussions as to how we can access this northernmost portion of our property during construction and thereafter. Further, the report does not consider the impact of its taking on the Queen City Yacht Club's ability to rebuild its dock, or in the alternative, gain access to its property north of the construction zone during the Project.

4. Irreplaceable Property. The report's recommendation that the state condemn the Yacht Club's property fails to consider that this taking eliminates an irreplaceable piece of fee-owned aquatic property, one of the few parcels of lake bottom remaining around the Portage Bay, Lake Union and Lake Washington areas that is not encumbered by a DNR lease. Few, if any, options for replacing this invaluable land exist for Queen City Yacht Club. The report fails to consider less intrusive options such as taking DNR parcels of land to the south and positioning the bridge in that direction.

5. High Revenue-Generating Property versus Lesser Revenue-Generating Property. Additionally, the report fails to consider the overall economic impact of taking a high revenue-generating piece of property over lesser revenue-generating properties, and even non-revenue generating properties, to the south. In addition to the severe loss of revenue to our club, our long-term financial survival is jeopardized by the loss of existing members who will leave the Club as a result of the loss of moorage. Moreover, our ability to attract new members as existing members die or move away will be crippled by the fact that we will have less moorage available as an incentive to membership. In sum, The Queen City Yacht Club's ability to survive the taking of our property is in serious doubt if Dock 3 is taken.

C-016-014

6. Concrete Piling Placement and Access to Property. The report fails to identify construction and design alternatives that would minimize the impacts of the final project on our club.

7. Existing and Future Environmental Damage. The DEIS also fails to address the environmental damage created by the existing structure on the sediment levels of Portage Bay. As a long term resident organization on the Bay, our Club has observed that the sediment levels have risen since the construction of the existing bridge. This has steadily made the bay more shallow, diminished water-quality levels in the Bay and made our property less accessible, impacting our ability to maneuver boats within our property and near the existing bridge. The report does not address how the state will remedy the existing sedimentation problem or mitigate and eliminate further silting of the surrounding properties during construction and in the final design of the new bridge.

8. Mitigation of Width of Bridge through Portage Bay. The report does not clarify the actual width of the bridge as it passes through the Portage Bay corridor. At present, the report appears to construct the bridge with shoulders that would be appropriate for wide open stretches in eastern Washington, but this design fails to consider narrowing the shoulders and width of the bridge through this area to mitigate harm to the environment and to the surrounding properties. Narrowing the shoulders and overall width would potentially avoid our property altogether.

9. Impact on Remaining Property. The bridge designs depicted in the DEIS significantly impact the value of our remaining property, for it builds the bridge nearly adjacent to our newly renovated clubhouse and diminishes the overall waterfront footprint of our property. We would encourage the Project to consider design and construction that mitigates or eliminates these impacts to our facilities.

10. Construction Sequence of Bridge. The report is silent on the impact of the construction sequence of the bridge as it relates to the Portage Bay corridor. Moreover, it fails to consider or discuss alternatives that would lessen the impact upon our property. Specifically, the DEIS appears to consider a construction process that fabricates a 30-foot wide temporary construction bridge and a new 60-foot wide bridge all to the north of the existing to allow traffic to flow during construction of the permanent bridge. This method of construction disallows a straightening of the bridge at the west end of the Portage Bay viaduct. This method displaces the greatest amount of private property, especially that of Queen City Yacht Club.

A method that would mitigate the impact to our property would be to reconsider the alignment across Portage Bay to the south, and adopting a construction sequence that uses temporary roadways and detours in conjunction with the existing structure, to minimize impacts on our property. Other construction sequencing alternatives would appear to exist, including building portions of the new structure, diverting some of the traffic onto the new structure and then building the remaining structure.

C-016-014

11. Support for Pacific Street Interchange Option. Finally, Queen City Yacht Club values its neighborhood and endorses measures to enhance the quality of life in the Montlake and Portage Bay communities. In concert, we also recognize the importance of a regional transportation solution. Our review of the options as set forth by the state lead us to the conclusion that the Pacific Street Interchange Option improves traffic flow through the Montlake community better than any other option. Traffic is managed at the point of congestion instead of backing up onto the bridge. Additionally, moving more of the traffic off the bridge at a Pacific Street Interchange would enable the designers to look again at the real needs for capacity over Portage Bay.

In conclusion, the state's proposed bridge plan, as depicted in the DEIS, may cripple and materially impact Queen City Yacht Club's ability to exist. The bridge plan further fails to mitigate the impact on revenue-generating property and on the environment.

We look forward to a positive dialogue with your designers, engineers, and land use teams to resolve these issues and make this project a win-win for all parties involved.

Sincerely,

Gary Stone
Chairman
Queen City Yacht Club
520 Mitigation Committee

cc: Robert Yates, Commodore
William McGillin, Vice Commodore
Past Commodore Jeff Ewell, Chairman, Board of Trustees
Elaine Spencer, Graham & Dunn
Scott Grimm, Past Commodore

State Route 520 Mediation
Boating Community

April 15, 2010

Jenifer Young
SR 520, I-5 to Medina: Bridge Replacement and HOV Project
Environmental Manager
SR 520 Project Offices
600 Stewart Street, Suite 520
Seattle, WA 98101

Received
APR 1 4 2010
SR520 Document Control

Dear Ms. Young:

C-017-001

We thank the Washington State Department of Transportation for the opportunity to comment on Supplemental Draft Environmental Impact Statement (SDEIS) dated January 22, 2010 for the SR 520, Interstate 5 (I-5) to Medina: Bridge Replacement and High-Occupancy Vehicle (HOV) Project (also referred to as the SR 520, I-5 to Medina project)

The absence of more construction details and the omissions and lack of specificity in the SDEIS have made it difficult to understand all the potential effects of the project.

Despite the vagueness of the present information about your project, we know enough to have significant concerns. Your project will impact each of our activities for numerous years of construction, and negatively impact our ability to attract and retain members.

BACKGROUND - As representatives of the various boating interests within the Portage Bay, Lake Washington, Montlake Cut, recreational boaters, kayakers, canoeists, and rowers, we have serious reservations about the impact of the plans contained in the SDEIS. There is considerable lack of specificity in the document which must be addressed and mitigated before the plans move forward.

C-017-002

OUR PRESENT CONCERNS

CULTURAL HERITAGE - The flow of commercial and recreational boat traffic on the navigable waterway of Portage Bay and Lake Washington Shipping Canal is critical to the preservation of our nautical heritage. Boating is an historic feature of the Puget Sound area culture and economy stretching back to tribal times and continuing through European settlement in the modern era. Recreational boating continues to inspire important cultural and economic events and activities. Portage Bay, at the nexus of the ship canal and Lake as a protected venue for use of the rowing community: for racing and practicing that is a part of the University of Washington, as well as the Junior and Senior

C-017-002 rowers of this area. The SDEIS fails to recognize their role in maritime history and their status as premier recreational resources.

Seattle Yacht Club, founded in 1892, and Queen City Yacht Club, founded in 1916, have long-standing ties to the local community and provide important community related activities and services. The current SDEIS threatens their current viability and the adverse effects on these two venerable institutions have not been sufficiently documented or addressed.

C-017-003 **MARITIME VIABILITY -** The SDEIS is deficient in analyzing the impact on the preservation of existing (or additional) moorage, floating homes and boating services on Portage Bay, both as a feature of the overall regional supply and as a unique feature of this area. Moorage and boating services are in limited supply in the region because of the premium on waterfront and submerged real estate in the area. Any diminishment of the current supply in Portage Bay would have ripple effects throughout the boating community and the businesses that provide for its needs. It is critical that specific information be provided at your earliest convenience to allow the Boating Community to identify future impacts to the functioning of the entire recreational resource and to assist you in meeting our mitigation needs.

C-017-004 The Boating Community is also concerned about the impact of having two bridge openings in a restricted channel. This could have serious, dangerous consequences for boaters. We are also concerned about the height of the proposed viaduct across Lake Washington, estimated at thirty feet above the water level. There has been no determination in the SDEIS of the impact of such a tall structure on vessels, particularly sailing vessels on the Lake. We also have concerns over the unsightly visual impact such a structure will have on the recreational boating as well as other recreational activities.

C-017-005 **PORTAGE BAY -** The proposed expansion of 520 will take property from Portage Bay, and will also degrade the public's ability to enjoy the remaining property, because of the added height and doubling of bulk, threatening shadows, and noise. We request that WSDOT include analysis of the impacts of the project and mitigate the impact of construction to insure the continued use of these recreational resources. The Boating Community has concerns for the environmental impact of such a structure on salmon habitat and the introduction or unintentional support for invasive species. We are also concerned about the impact of noise levels both during and after construction of the bridge and the negative impact this will have on the Boating Community and area residents to enjoy the Bay and its resources.

C-017-006 **OPENING DAY OF BOATING SEASON -** We ask that the final EIS pay particular attention to eliminate interference with Opening Day of Boating Season activities in Portage Bay, Union Bay and the Montlake Cut. We welcome the opportunity to work with WSDOT to mitigate conflicts with this International event. In addition, boating activities by members of the public occur during the entire year and should also be considered and the impacts on boating activities be mitigated to the extent possible.

SUMMARY

C-017-007

The Boating Community recognizes that the SR 520 bridge replacement is necessary. We also recognize that it will have profound impacts on Portage Bay both during construction and after it is completed. NEPA and SEPA require that before beginning a project with significant adverse environmental impacts, the agency in charge must disclose those impacts and describe the mitigation to be proposed. We recognize the challenge that presents for WSDOT, but the fact that the project has so many significant adverse environmental impacts is not a reason why the environmental disclosure can be less than what NEPA and SEPA require; to the contrary it is a reason why the disclosures must be all that NEPA and SEPA require. We appreciate the opportunity to review and comment on the SDEIS and have a continuing Interest in working with WSDOT to resolve the issues.

Sincerely,

Gary R. Stone
SR 520 Boating Community Mediation Representative

From: Earl Bell [mailto:earljbell@hotmail.com]
Sent: Tuesday, April 13, 2010 7:30 PM
To: SR 520 Bridge SDEIS
Cc: Ruedi Risler
Subject: UPCC Comments on the SR 520 SDEIS

UPCC Comments on the SR 520 SDEIS
Addendum to DEIS Comments

C-018-001 The Comments submitted by the University Park Community Club (UPCC) pursuant to the call for public comment on this project contained in the DEIS published 7/18/2006 are hereby referenced (October 4, 2006).

The UPCC participated as a recognized party in the prolonged 520 Mediation Panel begun in the Fall of 2007 and finally abandoned in 2009. As an active organization in this issue we wish to elaborate on our remarks that were prepared and submitted nearly four years ago. While some of the issues then are still being debated today, the 13th of April 2010, one issue that was neglected in our original DEIS comments has emerged and requires our position be extended. These comments in no way modify our original position in support of a six-lane bridge with two lanes dedicated to public transit.

Our major environmental concern then was the ecological integrity of Union Bay, and by extension, the Montlake Cut and adjacent Portage Bay. These remain today but to them must now be added a concern about the connection of the new bridge's access and egress with Lake Washington Blvd. S. ("Boulevard") which passes through the Arboretum and carries today an even heavier load of passenger vehicles than in 2006.

The UPCC neighborhood, while not directly impacted by ramps connecting to the Boulevard, nonetheless is deeply concerned about the health of the Arboretum and its vital role as a city park and open space. It is an irreplaceable treasure; our members and residents have a strong interest in its protection.

Accordingly, we oppose connecting the Boulevard to access ramps for the new 520 Bridge and join other communities who share our wish to see the removal of such ramps from a final option to be selected by the WS Department of Transportation. We support moving to a Final EIS and getting the project implemented.

Submitted on behalf of the UPCC Board,

Earl J. Bell

c: Seattle City Council

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C-018-002

UNIVERSITY PARK COMMUNITY CLUB

OCTOBER 4, 2006

Paul Krueger
Environmental Manager
SR 520 Bridge Replacement Project

Comments sent to sr520deiscomments@wsdot.wa.gov

These are Comments submitted by the University Park Community Club (UPCC) pursuant to the call for public comment on this project contained in the DEIS dated August 18, 2006. We join those individuals and organizations who have stated their concerns or their opposition to the Pacific Street Interchange Option (PSIO). As the manner in which all of the alternatives and options are presented serves to make it appear that this option under the six-lane alternative is the WSDOT "putative preferred alternative" (PPA) most of our comments will be addressed to it specifically.

First, we lay out our objections to the PPA and then we follow with what we believe is an alternative that will accomplish much of what is sought from this investment without the necessity of a total transformation of the neighborhoods north of the Ship Canal.

Put most succinctly, the UPCC does not see anything in the DEIS that is persuasive that the PPA would be anything but harmful to the environment north of the Ship Canal. It *might,* however, succeed in doing something for the Montlake neighborhood in terms of re-routing traffic that would pass through towards another adjacent area, but at what cost in terms of peace and tranquility for these other areas is nowhere examined in the DEIS.

To us, the Pacific Street Interchange, while it appears to offer some possibility of improving throughput of vehicles through this busiest of intersections, does so only by an "improvement" that is completely out of scale. The impact on one of our major recreational areas (e.g., the UW waterfront) would be devastating, not only in terms of diminished opportunity for recreation but also in terms of environmental impact. However, even if there were magically no impacts in the area surrounding the Interchange, the consequences at short distances from it are not spelled out or even cursorily mentioned in the DEIS. For example, there is no mention of projected congestion estimates for any intersection north of NE 45th or west of 15th AV NE. Those projections that are shown are in the vicinity of Montlake Blvd north of Pacific Street. Communities like ours are left wondering what it might look like in 2030 if the alternatives were built. The DEIS is not helpful to this process. No information is given regarding projections for general increase in traffic volumes in surrounding areas such as Ravenna, Wallingford, Bryant or Laurelhurst.

Members of our community know that any project of this scale will have unintended consequences that will likely be anywhere from significant to devastating. What troubles us is the lack of any attention in the DEIS to the consequences that *are* intended. The PSIO has been put forth as a sort of panacea for solving a problem that may not be amenable to solution: the movement of people and goods using automotive vehicles other than rapid transit without severe impacts on the areas through which the vehicles pass. This is a long term project. While no light rail is foreseen across the 520 bridge in the next expansion of the light rail system, it is

certainly reasonable to expect such an expansion during the 50+ year lifetime of the new bridge. The DEIS contains mentions in passing that the bridge pontoons would be designed to be able to carry rail rapid transit, but there is no design for how this would be achieved.

If we really want to reduce the Montlake mess we have to turn to public transport and move the

bulk of the projected demand to this transport modality. This has not seriously been considered in the DEIS. There is not even a clear plan of how passengers transfer between different bus lines.
There must be a valid concept of how a new light rail line would continue on either side of the bridge and connect to other lines and buses. For instance, the intersection near Marsh Island should be designed to accommodate the wider curves needed for light rail to make the turn towards Husky Stadium. Once light rail gets to the Pacific Street intersection is it going to go over all the planned new construction or below? Can the mezzanine floor of the presently planned station be modified for an underground east-west station for a line to Ballard, or is the 520 line going to make a turn and connect to the downtown line? We should not box ourselves in and prevent solutions needed in the future.

This Putative Preferred Alternative is the most expensive alternative, mostly because it involves the ambitious Union Bay Bridge but it will also be due to numerous lids and other benefits for the Montlake neighborhood. It is instructive to note the comments from the report of the Governor's Expert Review Panel dated September 1, 2006:

"The SR 520 project premised its finance plan on $573 million of secured funding and over $3.6 billion of anticipated funding. We think that premise is overly optimistic. Overall, we find it unreasonable to assume the project will realize sufficient funding from secured and anticipated funding sources. We doubt that an anticipated $153 million in sales tax revenue will be transferred to the project. We have assumed that only the six-lane alternative, if selected, will receive Regional Transportation Improvement District (RTID) ballot measure funding of $800 million. Moreover, we find no basis to believe that any of the second increment of the RTID funding target of $1.4 billion will be available to the project.

Consequently, we find that the funding sources identified in the SR 520 finance plan fall far short in secured and anticipated funding categories. This shortfall is of particular concern, given the impacts to regional circulation if the structure should fail. The lack of alternative routes makes it essential to fully fund the solution chosen for SR 520 bridge alternative."

Thus, with the recent adjustments due to inflationary pressure and the Seattle City Council's apparent preference for the most expensive option, the process is dangerously close to assurance that the PPA will not be fully funded. This being the case, the UPCC urges the adoption of the 6-lane alternative with a second Montlake bridge as the most prudent way to proceed given the current fiscal situation of the State. The six-lane alternative is acceptable as an alternative only if the "HOV lanes" are dedicated not for HOV use but for *transit use exclusively*. To do otherwise would be to court a lack of full funding and thus to delay the immediate undertaking of bridge replacement.

The UPCC recognizes that the six-lane alternative is the likely selection by WSDOT and other decision-making bodies involved in the final selection. With the two

additional lanes dedicated to transit, we could support the six lane alternative. Nonetheless, the UPCC wishes to emphasize its opposition to the Pacific Street Interchange Option no matter what level of funding turns out to be available. Our opposition, as outlined above, is not based entirely upon cost, but lack of benefits for our and other communities north of the Ship Canal as well as the lack of a viable public transit solution.

Please direct any questions or requests for clarification to the email address shown on page one.

I have been authorized and directed to submit these comments on behalf of the Executive Board of the University Park Community Club.

Earl J. Bell
Board Member

From: Kari Olson [mailto:kolson_fip_interlakenpark@msn.com]
Sent: Wednesday, April 14, 2010 10:31 PM
To: SR 520 Bridge SDEIS
Cc: Council Agenda; Richard Conlin; Tim Burgess; Tom Rasmussen; Mike McGinn
Subject: State Route 520

Dear Environmental Manager Jenifer Young:

C-019-001 The Friends of Interlaken/Boren Park are of the opinion and advocate of option N for SR520 which in reality is keeping the existing floating bridge and westside configurations as they currently are.
Toll's are a necessary element to build up funding sources for future need's for the 520 corridore.

C-019-002 Our perspective is to optimize mass transit to moving the greatest amounts of people at a given time frame toward connective destinations. In theory, the desire for light rail on a floating bridge may be doable on paper or computerized programing, but in reality the concept has yet to be accomplished.

The connectivity toward moving people and good's to other destinations is by rail around Lake Washington and other bodies of water, islands and so forth. Objectively, this mode of transportation is reliable when properly managed and maintained.

Eastern cities have long history of rail services to moving mass people and good's to and from, and within close proximrty to where services are needed and where people need to go. Chicago, New York, Atlanta are prime examples. Whether Seattle and surrounding cities and districts ever build up to these densities remains to be seen.

C-019-003 But the objective first and foremost is moving greatest numbers of people within a given time frame. To do this and retain higher environmental and asethetic values expected then there must be measures adopted that reduces the number of single occupancy vehicles durning the given time frame mentioned earlier.

Peak hours on and off ramps from I-5, 520 must be regulated so vehicles are not allowed to exit or enter roadways within travel corridore's (misguided assumption driver's shave a few minutes off their commute time by eciting I-5 "cutting through" side streets and neighborhood's to re-enter 520 instead of exiting freeways as is intended).

Also eliminate specific "free" parking areas adjacent to city park properties (exempt of neighborhood permit zoning), regulate to further discourage single user's all day parking...(i.e., Tukwila residents driving in wee AM hours to park on city streets adjacent to city parks and taking "public transportation" downtown or to university/college or other), repeating pracitice daily except for weekends.

C-019-003 In order to curtail the level of vehicles within the city corridores, there must be ample means of alternatiave modes of transportation to accomplish these goals. Peak hours to some degree is with light rail, but the a greater and more reliable degree will need to be transit options capable of carrying the capacity needs.

C-019-004 Option A, K, L, M, and or whatever othe alphabetical letter is added, revised addresses to a lesser degree the need of moving greater numbers of commuters at a given time and unfortunately and seemingly cater's to the conviences of the lone commuter from North, South, East and West through the Montlake Interchange.

Option A+ doesn't do enough to address problems of communter's using the interchange as they already do today. The expansion of SR520 ultimately amplifies the continuity of bottleneck effects currently experienced on Montlake and Lake Washington Boulevards. The new interchange may for short term ease conjestion until driver's figure out ways to circulmvent the objective and return to routine habits...

C-019-005 Option N -- No rebuild forces us to be "creative" finding mean's that promise change in human behavior. Eliminating bus service and forcing people to take light rail is not changing those behaviors, instead seemingly hinders rather than promoting options. Those who rely solely on public transportation systems cannot always take light rail to and from their destinations. Add more bus services with better connectivity and time tables assures a better "fit" option and choices.

C-019-006 Using earthquakes and windstorms fear tactics works short term. Our whole region is vunerable to both. Windstorms are the norm and most frequent type of disaster experienced yearly. People don't like to be reminded, so engrossed are they communication, communting and work little else seem's to matter until they have to deal with inconviences.

Economics place a moritorium on human migration across the country. Regions are not experiencing growth and prosperity and may not experience it for quite some time. We've room and time to grow, to give serious thought about what we're about to create. 13 years of planning, meetings, public forums, mitigations, committee's may all be for naught should all that time and money spent builds a bridge that for all intents and purposes was thought to fix, but in reality didn't because haste makes waste after all is said and done -- why, oh why didn't we do it right when we had the chance?

"The Friends of Interlaken/Boren Park"
Seattle's Urban Forest Stewards
Naturalist - Kari A. Olson
(206) 240-2445

From: SR520users@aol.com [mailto:SR520users@aol.com]
Sent: Thursday, April 15, 2010 7:54 AM
To: SR 520 Bridge SDEIS
Cc: Hammond, Paula; Dye, Dave
Subject: Comment on SDEIS for "SR 520, I-5 to Medina: Bridge Replacement and HOV Project"

Ms. Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart Street, Suite 520
Seattle, Washington 98101

C-020-001

This project recalls *The Economist*'s notice to the entire English-speaking world that the greater Seattle area "probably has the worst transport planning in North America" on June 30, 2005.

That prominent international journal's studied judgment of boundless good intentions was validated, promptly, when the Seattle monorail project collapsed from serial bad judgments that completely wasted $125 million in tax dollars needlessly imposed on city residents.

Five years later, any remaining doubt still possible about the worst transportation planning brought forth on this continent has been removed by a multibillion-dollar highway project to add "high capacity transportation" east and west through the pivotal State Route 520 corridor, and by another multibillion-dollar, **intersecting-but-unconnected**, rail-transit project to upgrade "high capacity transportation" north and south through a light-rail spine largely within Seattle's boundaries.

This reality gives the lie to falsely claimed concerns about an SR 520 corridor which is "**Congested, unreliable, and does not encourage maximum transit and carpool use**" (bolding in Executive Summary at page 6), since nominal multibillion-dollar solutions are designed to discourage **both** maximum-possible transit use and **also** maximum-feasible relief from "severe traffic congestion."

What makes this lack of functional connectivity especially bizarre is indisputable emphases by our state Legislature on the quintessential importance both of **interconnected** High Occupancy Vehicle facilities, bus-rapid-transit and vanpools using those HOV highway lanes, and rail-transit projects (which all initially derive from one path-breaking bill adopted as our state's omnibus "High Capacity Transportation Systems" act in 1990), and also of **compulsory** planning for regional transportation involving such HCT systems being not only "multimodal" but also "cost effective" (which two additional legal requirements subsequently obtain from a likewise visionary and absolutely explicit statute mandating that regional planning here **must** be "based on a least cost planning

C-020-001 methodology that identifies the most cost-effective facilities, services, and programs" as adopted in 1994).

C-020-002 Equally maddening after over 15 years of **nominal** transportation planning to devise the irrationality of one multibillion-dollar project literally intersecting with another such multibillion-dollar project at the University of Washington without any **genuine** attention to designing optimal connectivity, from buses to trains, is a planning bureaucracy responsible for this utter fiasco at the state Department of Transportation, Sound Transit and Puget Sound Regional Council that continues to yap endlessly on, without surcease of sorrow, about a **purported** "multimodal" transportation commitment here.

Making matters even worse, not only is Sound Transit the official "lead agency" for its light-rail program, but it also took steps to be specially designated as a "co-lead agency" for adding two HOV lanes to the Evergreen Point Floating Bridge for its express buses – and, while acting as "lead" and "co-lead," doing nothing or next to nothing to connect its light-rail trains with its express buses, at the UW campus, despite obtaining $1.313 billion from the U.S. Treasury based on major transit- volume potentials there. Further, that regional transit agency utilized its insider "colead" position to exploit fuel-tax funds for the design of bridge pontoons, in order to benefit its future rail plans, **as a patently unlawful non-"highway use" in violation of our state Constitution's 18th Amendment**.

With newly elected Seattle Mayor Mike McGinn urging that huge gaping holes in **real** "multimodal" planning require reconsideration – since 20 years of convenient political rhetoric cannot transform two decades of disregard for our state "High Capacity Transportation Systems" act and 16 years of defiance for its explicit "least cost planning" requirements into anything but insubordination toward and insolence for state law – belligerent objections to this sanity insist, effectively, that the "worst transport planning in North America" has succeeded in running out the clock for **actual** planning by flouting state statutes, and that a multibillion-dollar charade obvious even to a neophyte politician must prevail because adequate funds are lacking to build **true** "multimodal" transportation here.

C-020-003 All fallacies deriving from missing elements at beginning, middle and end of said illogical objections notwithstanding, reality is that both a projected $2.6 billion shortfall for SR 520 bridge replacement, today, and also another $101.2 billion deficit in regional funding for follow-on transportation plans, during the next 30 years, each has substantially resulted from willful failures to comply with our state's admirably farsighted legislation adopted in 1990 to create **interconnected** "High Capacity Transportation Systems" and expanded four years later to require "**least cost planning**" statewide.

In short, immense problems with **nominal** planning for the SR 520 corridor devolve from violations of the Washington State Constitution, our state's pivotal HCT law and core regional transportation planning requirements expressly

C-020-003

mandating "a least cost planning methodology that identifies the most cost-effective facilities, services, and programs" (**each disregarded by this wasteful project**).

This remarkable hat-trick of misfeasance by breaching our state Constitution, substantive state HCT obligations and critical state planning duties, taken together, yields disastrous multibillion-dollar tax misuses passing off a mindless mix of political rhetoric endorsing "multimodal" transportation for misfeasant acts, which prevent essential connectivity, as bureaucrats rush to pile on another $103.8 in new taxes to fill a huge void resulting primarily from refusals to fulfill direct least-cost-planning requirements easily honored through basic comparative cost-benefit analyses well understood, for at least 2,350 years, since Aristotle identified the importance of proper allocations of limited financial resources, in his *Politics*, and since his student, Alexander, revolutionized transportation planning by applying comparative cost-benefit principles in order, thereby, to systematize military transport.

The only means to rectify the worst transportation planning in the history of the state of Washington, **as made out by this project**, is through major revisions to correct ruinous failures from incompetent regional misplanning, thus far, so as to provide for optimal "multimodal" connections between multibillion-dollar SR 520 and Link light-rail facilities (as well as through reimbursements for **all** state funds misappropriated to this date, in violation of our state Constitution's 18th Amendment, as legally required to avoid subjecting this badly conceived SR 520 muddle to constitutional litigation).

Respectfully submitted,

Will Knedlik, Chairman
SR 520 Users Alliance
SR520Users@aol.com

From: Peggy Cahill [mailto:cahill@bnd-law.com]
Sent: Thursday, April 15, 2010 11:57 AM
To: SR 520 Bridge SDEIS (2)
Cc: bricklin@bnd-law.com; Claudia Newman
Subject: Comment Letter on SDEIS

Ms. Young:

Attached please find a comment letter from David A. Bricklin on the SDEIS for the I-5 to Medina Portion of the SR-520 Project. The original of the letter will be mailed to you today.

Thank you for your attention to this matter.

Peggy S. Cahill
Legal Assistant
Bricklin & Newman, LLP
1001 Fourth Avenue
Suite 3303
Seattle WA 98154
ph.: 206.264.8600
fax: 206.264.9300

Spokane Office:
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Suite 300
Spokane, WA 99201

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Reply to: Seattle Office

April 14, 2010

Jennifer Young
Environmental Manager
SR 520 Project Office
600 Stewart Street, Suite 520
Seattle, WA 98101

Re: Supplemental Draft EIS for the I-5 to Medina Portion of the SR-520 Project

Dear Ms. Young:

I write on behalf of the Coalition for a Sustainable 520 and its members to provide comments on portions of the SDEIS for the above-referenced project. Thank you for this opportunity to comment.

C-021-001

All Reasonable Alternatives Have Not Been Included

SEPA (and NEPA) were adopted to assure that government agencies made decisions "by deliberation, not default." *Stemple v. Dept. of Water Resources*, 82 Wn.2d 109, 118 (1973). There has been much deliberation regarding addressing the transportation needs in the SR 520 corridor. But despite that, there is still the risk that the lead agencies are defaulting on their obligations to rigorously examine all reasonable alternatives. The alternatives analysis is the "heart of the environmental impact statement." 40 C.F.R. § 1502.14. It must "[r]igorously explore and objectively evaluate **all** reasonable alternatives . . ." 40 C.F.R. § 1502.14(a). The EIS must "[d]evote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits." 40 C.F.R. § 1502.14(b). Reasonable alternatives include those that are "not within the jurisdiction of the lead agency." 40 C.F.R. § 1502.14(c).

Determining the range of reasonable alternatives flows from the project's purpose and need. The SDEIS states that the project's purpose remains the same today as it was when the purpose statement was first crafted by the Trans-Lake Washington Study Committee in 2000:

> The purpose of the project is to improve mobility for people and goods across Lake Washington within the SR 520 corridor from Seattle to Redmond in a manner that is safe, reliable, and cost-effective, while avoiding, minimizing, and/or mitigating impacts on affected neighborhoods and the environment.

C-021-001

SDEIS at 1-3. This purpose statement is notable in its focus on moving "people and goods" not motor vehicles. Yet every single alternative examined in the SDEIS involves spending billions of dollars to increase the capacity of SR 520 for motor vehicles only. None of the alternatives include light rail. Light rail offers the possibility of accomplishing the project's purposes at lower environmental costs. The decision to omit light rail from any of the alternatives examined in the SDEIS is inexplicable and renders the SDEIS fatally flawed.

The viability of a light rail option has been documented in the recent draft report prepared for the City of Seattle's Mayor: *SR 520 Light Rail Alternatives, Draft Report*, Nelson/Nygaard Consulting Associates (Apr. 2010). A copy of the report is available at www.seattle.gov/mayor/.[1]

The benefits of a rail option are many. At the top of the list, rail offers opportunities to reduce greenhouse gas emissions. In this day and age, an alternative that offers the promise of reducing GHG emission should be examined in great detail in the environmental review process. Your failure to develop and analyze a rail alternative is disheartening given the commitment of the federal and state governments to reducing GHG emissions in the coming years.

C-021-002

State legislation establishes demanding standards for *reducing* our GHG emissions. The legislation calls for GHG emissions to be reduced to 1990 levels by 2020. By 2050, we are to reduce GHG emissions to 50 percent of 1990 levels. RCW 70.235.020.

The State is not going to meet these standards if it continues to pour billions of dollars into constructing highways for motor vehicles in areas where light rail is a viable option. Few areas of the State have opportunities for light rail. Residential densities and employment opportunities are high enough in the SR 520 corridor to support rail. It is a dereliction of duty by WSDOT to fail to seize this opportunity and do everything it can to explore the opportunities for rail in this corridor now.

C-021-003

The SDEIS explains that a rail option was excluded as a result of planning that started in 1998. The SDEIS seems to take the point of view that because rail was eliminated from consideration many years ago, that the momentum behind that decision somehow excuses analyzing a rail alternative in detail in this EIS in 2010. That rationale is flawed in several respects.

C-021-004

First state law mandates WSDOT, Sound Transit, and others to develop a transportation plan "that ensures the effective and efficient coordination of bus service **and light rail services throughout the State Route Number 520 corridor**." RCW 47.01.410 (emphasis supplied). That multi-modal transportation plan is to be "closely coordinated" with the 520 bridge replacement and HOV projects. *Id.* Excluding light rail from every alternative considered in the SDEIS does not reflect "close coordination" between this project and the legislative mandate to "ensure" light rail "throughout the State Route Number 520 corridor."

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[1] I presume the City of Seattle Mayor's Office is providing a paper copy of that report. If you are unable to obtain it otherwise, please contact me and I will be happy to provide you with a copy.

C-021-005 Second, none of the prior planning efforts that resulted in the "no rail" decision for SR 520 had the benefit of the analysis in an EIS. Government decisions on major projects are not allowed to be made until after the decision makers are informed by the content of an adequate EIS. Relying on recommendations made without the benefit of an EIS puts the proverbial cart before the horse. Your agencies' recommendations on how to spend billions of taxpayer dollars must be informed by the contents of an adequate EIS. You should not be justifying the exclusion of reasonable alternatives based on studies that did not enjoy the input of an adequate EIS.

C-021-006 Third, reliance on years of prior planning also is misplaced because the world has changed greatly in the intervening years. Nearly a decade ago, in the early years of the so-called "Trans-Lake Washington Project," rail was jettisoned from consideration for the SR 520 corridor. SDEIS at 1-10. Much has changed regarding our knowledge about climate change. New policies adopted at the city, state, national, and international levels reflect our increasing awareness of the reality of global warming and the need for bold action to avert its worst consequences.

C-021-007 In 2007, the United Nations' Intergovernmental Panel on Climate Change (IPCC) released its frequently cited report reflecting the new scientific consensus that is causing global warming. As summarized by the U.N. News Center in its press release announcing the report:

> The IPCC, which brings together the world's leading climate scientists and experts, concluded that major advances in climate modeling and the collection and analysis of data now give scientists "very high confidence" – at least a nine out of ten chance of being correct – in their understanding of how human activities are causing the world to warm. **This level of confidence is much greater than the IPCC indicated in their last report in 2001.** The report confirmed that it is "very likely" that greenhouse gas emissions have caused most of the global temperature rise observed since the mid-twentieth century. Ice cores, going back 10,000 years, show a dramatic rise in greenhouse gases from the onset of the industrial age. The co-chair of the IPCC working group stated, "There can be no question that the increase in these greenhouse gases are dominated by human activity."

The United Nations went on to summarize the key findings of the report:

> The report describes an accelerating transition to a warmer world – an increase of three degrees Celsius is expected this century – marked by more extreme temperatures including heat waves, new wind patterns, worsening drought in some regions, heavier precipitation in others, melting glaciers and arctic ice, and rising global average sea levels.

C-021-007

The 2007 report from the IPCC represented a major step forward in the scientific understanding of global warming issues. According to the United Nations, "IPCC Chair Rajendra Pachuari said the science has 'moved on' and the extent of knowledge and the research carried now is several steps beyond what was possible for the last report." "This report by the IPCC represents the most rigorous and comprehensive assessment possible of the current state of climate science and has considerably narrowed the uncertainties of the 2001 report," according to Michel Jarraud, Secretary General of the World Metereological Organization. Executive Director of the United Nations Environment Program was quoted as stating: "[T]his new report should spur policy makers to get off the fence and put strong and effective policies in place to tackle greenhouse gas emissions."

The IPCC was released several years after the Trans-Lake Washington study participants decided not to include rail on SR 520 in the near term. But this information was available to the drafters of the SDEIS in 2009 and 2010 and should have been used by them in determining a regional range of alternatives to simply building more pavement for motor vehicles.

As earth-shaking as the IPCC report in 2007 was (or should have been), scientific analysis since then should be causing alarm bells to ring even louder. The recent Copenhagen Climate Science Congress, attended by 2,000 scientists, concluded with this "Key Message 1:"

> Recent observations confirm that, given high rates of observed emissions, the worst-case IPCC scenario trajectories (or even worse) are being realized. For many key parameters, the climate system is already moving beyond the patterns of natural variability within which our society and economy have developed and thrived. These parameters include global mean surface temperatures, sea-level rise, ocean and ice sheet dynamics, ocean acidification, and extreme climatic events. There is a significant risk that many of the trends will accelerate, leading to an increasing risk of abrupt or irreversible climatic shifts.

International Scientific Congress Climate Change: Global Risks, Challenges, and Decisions (Mar. 12, 2009). (This Scientific Congress was held in advance of the December 2009 Climate Change Conference that drew political leaders from around the world.)

More than our scientific understanding of global warming has changed in recent years. The political firmament is shifting, too. At the national level, in 2007, the Supreme Court rejected Bush administration efforts to preclude EPA from regulating greenhouse gas emissions. *Massachusetts v. EPA,* 549 U.S. 497 (2007). The Supreme Court held that the EPA could regulate those emissions as long as the EPA determines they contribute to climate change. *Id.*

The Supreme Court decision was followed by the election of President Obama, which opened the doors for new federal initiatives to combat greenhouse gas emissions. Pursuant to the Supreme Court decision, the EPA has proposed rules regulating GHG emissions from motor vehicles. On

C-021-007 another front, directly relevant to this project, on January 13, 2010, the United States Department of Transportation announced a "dramatic change from existing policy" regarding the funding of major transit projects. DOT Secretary LaHood stated, "We want to base our decisions on how much transit helps the environment, how much it improves development opportunities, and how it makes our communities better places to live." No longer would transit funding decisions be based simply on alleviating congestion "in making funding decisions, the FTA will now evaluate the environmental, community, and economic development benefits provided by transit projects, as well as the congestion relief benefits from such projects." U.S. DOT Press Release (Jan. 13, 2010).

The shifting political climate also is evidenced by the passage of the American Clean Energy and Security Act by the House of Representatives last summer. The bill sets a goal of reducing overall greenhouse gas emissions by 17 percent from 2005 levels by the year 2020, and 83 percent by 2050.

C-021-008 In like manner, Washington State adopted greenhouse gas reduction standards in legislation adopted in 2008. The legislation states: "The state **shall limit emission of greenhouse gases to achieve the following emission reductions . . .**" RCW 70.235.070(1)(a) (emphasis supplied). As noted above, the statute establishes that by 2020, emissions shall be reduced to 1990 levels. By 2035, GHG emissions are to be 25 percent below 1990 levels and by 2050, they are to be 50 percent below 1990 levels.

The new law also requires agencies distributing capital funds for infrastructure projects to consider whether the entity receiving the funds has adopted policies to reduce greenhouse gas emissions. The agencies must also consider whether the project is consistent with the State's limit on the emissions of greenhouse gases established in RCW 70.235.020 and the statewide goals to reduce annual per capita miles traveled by 2050. RCW 70.235.070.

C-021-009 Policy shifts have occurred recently at the local level, too. The Seattle City Council's 2010 priorities include the adoption of a "carbon neutral goal for Seattle with specific milestones and implementation steps . . ."[2]

C-021-010 In sum, whatever may have led the Trans-Lake Washington Project group to exclude rail from SR 520 nearly a decade ago cannot be cited in 2010 as justification for refusing to consider rail within the range of alternatives today.

C-021-011 Climate change is the most significant and daunting environmental issue facing this generation. We cannot pass up opportunities to reduce GHG emissions based on dated policy recommendations developed without the benefit of an EIS, without the benefit of our current knowledge of the seriousness of GHG emissions, and without the guidance provided by current governmental policies calling for significant reductions in those emissions in the coming years and decades.

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[2] Http://www.Seattle.gov/Council/Issues/Council_Priorities.htm#1.

C-021-012 We recognize the existence of political and economic forces (and their friends in the mainstream media) that resist adding a new study of rail at this time. They argue that studying rail now will cause delays and that the project has been "studied to death." First, if delays ensue, they are not the result of those asking that the SDEIS be revised to include a rail option. If the SDEIS had included a rail option in the first place, there would be no need for any delay at all. If an analysis of rail at this stage causes any delay, it is because of the failure of the authors of the SDEIS to include a rail option in the SDEIS in the first place when it was published earlier this year. Don't shoot the messenger.

Second, the new information about climate issues and government policies addressing global warming are issues of the highest environmental magnitude. We understand that at some point, planning must stop and decisions must be made. If there were new information policies about a relatively minor environmental issue, the need for making a decision might outweigh the need for additional study. But as stated above and as recognized by virtually every credible source, there is not a more important environmental issue than dealing with climate change. This SDEIS recognizes that close to 50 percent of the State's GHG emissions come from the transportation sector. One of the most heavily traveled transportation corridors in the State is the SR 520 corridor. We are about to make a decision regarding transportation options in that corridor that will be with us for the next 50 to 100 years. How can we possibly in good conscience (thinking not only of ourselves, but of the next generation) make a decision of this magnitude and with such long-lasting impacts without taking a hard look at a rail option now?

Third, reliance on the old recommendations to exclude consideration of rail in the SR 520 corridor is misplaced because it is inconsistent with Sound Transit's current plan for the SR 520 corridor. Sound Transit has not ruled out constructing light rail in the 520 corridor. Rather, Sound Transit's current plan ("ST 2") calls for an analysis of opportunities to develop high capacity transit, including light rail, in that corridor. Yet all of the alternatives currently under consideration would effectively eliminate the opportunity to bring rail to this corridor. *See* Nelson/Nygaard report. An EIS is required to assess opportunities that will be lost if the proposal goes forward. RCW 43.21C.030(2)(b)(v). But rather than disclose that all of the studied alternatives will doom light rail in this corridor, the SDEIS suggests light rail can be readily added later. Such a claim is debunked by the extensive analysis in the Nelson/Nygaard report. As those authors state, we have one chance to get this right – and that time is now.

C-021-013 The failure of the SDEIS to provide a detailed assessment of a rail option infects other portions of the SDEIS, too. For instance, in the discussion of the project's consistency with local land use plans and policies (SDEIS at 5-42, *et seq.*), there is no acknowledgement that proceeding with the current proposal would stymie the region's long-term plans that call for possible inclusion of rail in the SR 520 corridor. As just noted, Sound Transit (and other regional planning bodies) still consider rail in the SR 520 corridor a viable option that requires further study. Yet this project would effectively eliminate that option from future consideration (for the next 50 to 100 years). That inconsistency should be disclosed in the EIS.

C-021-014 In like manner, the Section 4(f) analysis (SDEIS, Attachment 6) totally ignores the light rail option and fails to provide any consideration of the ability of that alternative to avoid or reduce impacts to parklands protected by federal law. A light rail option could eliminate the need for HOV ramps and, thereby, reduce the footprint of the project and its impacts on protected Section 4(f) lands. Yet this avoidance and minimization strategy was not analyzed because rail had been eliminated as an alternative to be studied in detail in the EIS. *See* Attachment 6 at 121. This is yet another fatal flaw in the SDEIS.

The failure to consider rail as a means of reducing impacts to parks is ironic given the Governor's quote in the SDEIS that called for Seattle communities to develop a design for the project in Seattle that "will best serve the neighborhoods, University of Washington, **and parks and natural resources.**" SDEIS at 1-16 (emphasis supplied). The Governor called on WSDOT "to provide support" to that effort. It is not too late. A rail alternative could be the best option for protecting parks and our most vulnerable natural resource – our atmosphere under attack from GHG emissions. We urge the FHWA and WSDOT to provide support for that effort now.

C-021-015 Segmentation

The SDEIS assesses impacts (and alternatives) only within a part of the SR 520 Project corridor. As the SDEIS recognizes, the earlier Draft EIS evaluated the entire SR 520 corridor from I-5 in Seattle to 108th Avenue NE in Bellevue (just shy of I-405). In contrast, though, the SDEIS chops that corridor in two. The current SDEIS evaluates only the portion of the corridor from I-5 to Medina. This is error.

Federal Highway Administration regulations set forth three criteria that must be met to justify conducting environmental review for only a segment of a longer highway project. The segment evaluated in the EIS "shall:"

> (1) Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
>
> (2) Have independent utility or independent significance, *i.e.*, be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
>
> (3) Not restrict consideration of alternatives for reasonably foreseeable transportation improvements.

23 C.F.R. § 771.111(f).

The I-5 to Medina segment analyzed in the SDEIS fails all three of these tests.

C-021-016

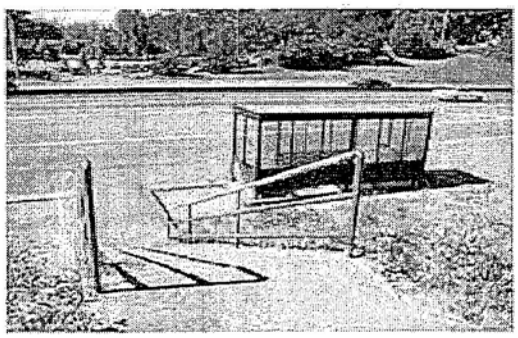
Logical Terminus

The SDEIS explains the logic of the two endpoints in Section 1.14: "These termini are logical because the I-5/SR 520 interchange is a major system interchange in the City of Seattle, while Evergreen Point Road is the location of a major transit transfer point for the Eastside." We have no quarrel with recognizing the I-5/SR 520 interchange as a major system interchange and a logical terminus for the western end of the project. A parallel eastern terminus is SR 520's intersection with I-405 in Bellevue or its intersection with SR 202 in Redmond. But there is no comparable "major system interchange" at Evergreen Point Road. The SDEIS claim that Evergreen Point Road in Medina is a logical endpoint because it is a "major transit transfer point" is illogical in several respects.

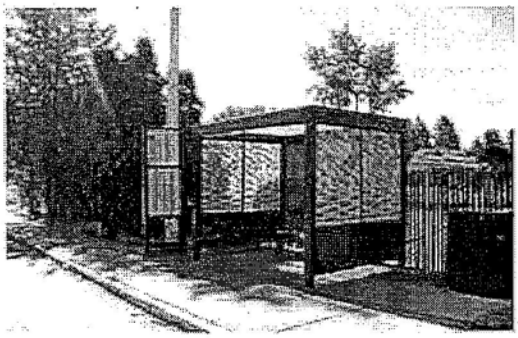
First, an infinitesimal number of persons traveling along SR-520 use the Evergreen Point Freeway Station. According to data in the SDEIS, of the 160,000 people who use the bridge on an average weekday, only 1,000 of them are transit riders who use the Evergreen Point Freeway Station. That is, barely more than one-half of one percent of persons crossing the bridge use the Evergreen Point Freeway Station.[3] That hardly makes it a "major" transit transfer point.

Second, even if the comparison is made to transit riders crossing the bridge, the numbers are not much better. According to the EIS, there are 15,000 transit riders passing across the bridge on an average weekday (ES 2-1). The 1,000 transit riders using the Evergreen Point Freeway Station constitute just seven percent of all transit riders crossing the bridge. The Evergreen Point Freeway Station simply is not a "major" transfer point.

Third, the minor role of the Evergreen Point Freeway Station is visually conveyed by these pictures of the facility:



Evergreen Point Freeway
Transit Station – Westbound



Evergreen Point Freeway
Transit Station – Eastbound

SR 520 Transit station Usage summary Page 2
WSDOT Aug 2005

[3] According to the EIS, 160,000 people cross the bridge on an average weekday (ES 1-2) of which only 1,000 are transit riders using the Evergreen Point Freeway Station (SDEIS at 2-8 and Ex. 2-5).

C-021-016 These small bus stops on the side of a major freeway hardly constitute a "logical terminus" for this environmental analysis.

Fourth, in justifying Evergreen Point Road as the western terminus for the segment of this project stretching east to Redmond, the SDEIS asserts: "The existing freeway transit stop at Evergreen Point Road is a key hub for transit on the Eastside, connecting north-south routes with east-west routes across Lake Washington; . . ." SDEIS at 1-36. Key hub? Connecting north-south routes? According to Metro's Route Map, there are no major north-south bus routes using the Evergreen Point Transfer Station. The only two routes that do not simply pass through the transfer station while remaining on 520 are Route 261 and Route 271. Each of these routes travel south for a short distance and then turn east through downtown Bellevue and then beyond to points further east in Overlake (Route 261) and southeast in Eastgate (Route 271). Characterizing the Evergreen Point Transfer Station as a "logical terminus" on the basis of it being a "key hub" linking east-west with north-south routes is pure fiction. For all of these reasons, the first test in the federal regulation is not met. Evergreen Point is not a major hub and is not a logical terminus.

C-021-017 Independent Utility

Limiting environmental analysis to this western segment also fails the second test which requires that the project have "independent utility," "even if no additional transportation improvements in the area are made." Certainly the "no action" alternative would have independent utility by eliminating safety issues associated with the existing, aging structures. But the proposal is to do much more than that, *i.e.*, to expand the road to include new HOV lanes across the lake and in Seattle. The SDEIS claims that these HOV lanes "will complete the SR-520 HOV system in keeping with regional planning." SDEIS at 1-23. Hardly! Completion of this segment would not complete the SR-520 HOV system in keeping with regional planning. The Eastside project would have to be completed as well.

Eastbound on SR 520 from the Evergreen Point Station, there are no HOV lanes until considerably east of Evergreen Point Road. Constructing eastbound HOV lanes in Seattle and on the bridge would create a huge backup where that traffic has to merge with the general purpose lanes due to the absence of any eastbound HOV lanes from Evergreen Point east.

The eastern segment of this now bi-sected project (*i.e.,* the segment east of Evergreen Point Road) is described as including this major element:

> Construct a new eastbound HOV lane from Lake Washington to the existing HOV lane west of the I-405 interchange. **This improvement** would complete the currently discontinuous HOV network on the Eastside and improve travel time reliability for buses and carpools.

C-021-017 SDEIS, Appendix Q at 1-4 (emphasis supplied). Not unless the west of Medina segment is combined with the east of Medina segment will there be a continuous eastbound HOV system in the SR 520 corridor.

Westbound, HOV lanes exist from I-405 to Lake Washington, but they are on the outside of the right-of-way. The project in Seattle and on the bridge call for the HOV lanes to be on the inside of the other lanes. "This change would enhance safety by eliminating the need for merging vehicles to weave across the faster-moving HOV lanes to reach the general purpose lanes." Thus, completing the SR 520 HOV system involves more than building HOV lanes in Seattle and on the bridge. The Eastside HOV lanes must be moved so that they form a continuous protected lane inside of the general purpose lanes. Unless the westbound HOV lanes east of Lake Washington are relocated to the inside, the SR 520 HOV system will not be complete, contrary to the claim in the EIS that the Seattle and bridge segment of the project alone will "complete the SR 520 HOV system."

C-021-018 Segmentation Precludes Alternatives

Carving out the Seattle and Lake Washington portion of the corridor as a separate segment also violates the third test of the federal regulation, *i.e.*, it will "restrict consideration of alternatives for other reasonably foreseeable transportation improvements." As we have already seen, adding rail to this corridor is a "reasonably foreseeable transportation improvement," yet all the alternatives under consideration for this segment would not just "restrict" consideration of light rail, but effectively eliminate it. That would be a loss not just for Seattle communities, but for Eastside communities, too.

In like manner, proceeding with the eastern segment in advance of the Seattle and bridge segment threatens the feasibility of adding rail to the Seattle and bridge segment. Unless provision is made now for rail east of Evergreen Point Road, the decisions made on the eastern segment will "restrict," if not effectively preclude, consideration of adding rail to this corridor at any time in the reasonably near future.

Segmenting the overall project also threatens consideration of alternatives for the Seattle and bridge segment because of funding limitations. There is only so much money that the federal and state agencies can find to fund this project overall. Revenue sources for the entire project have not been found. *See, e.g.,* SDEIS at 2-34. Project cutbacks seem inevitable. By segmenting the project and allowing the eastern segment to go first, scarce funds will be devoted to designing, building, and mitigating impacts on the eastern segment, effectively limiting options when the time comes to design, build, and develop mitigation for the western segment. For all these reasons, the third criterion is not met and this attempted segmentation must be abandoned. A new Supplemental Draft EIS should be prepared that evaluates the entire project. No further action should be taken to implement the eastern segment (east of Evergreen Point Road) until a Final Supplemental EIS is published.

C-021-019

Section 4(f) Lands

Section 4(f) of the Department of Transportation Act and Section 138 of the Federal-Aid Highway Act preclude the use of parklands for highway projects absent extraordinary circumstances.[4] Prior to enactment of Section 4(f), parklands had been an easy mark for highway projects. Building highways in parks typically involves less expense and less political and practical problems than building a highway through established residential or commercial areas. As the Supreme Court stated in the seminal 4(f) case of *Citizens to Preserve Overton Park v. Volpe*,[5] Section 4(f) "expresses the Congressional will 'that protection of parkland was to be given paramount importance.'"

In *Overton Park*, the highway departments argued that parkland should be used because of cost, safety, and other factors. The highway departments claimed they had discretion to consider these other factors and to determine "whether, on balance, alternative feasible routes would be 'prudent.'" *Id.* at 412. The Supreme Court rejected these contentions:

> But no such wide-ranging endeavor was intended. It is obvious that in most cases considerations of cost, directness of route, and community disruption will indicate that parkland should be used for highway construction whenever possible. Although it may be necessary to transfer funds from one jurisdiction to another, there will always be a smaller outlay required from the public purse when parkland is used since the public already owns the land and there will be no need to pay for right-of-way. And since people do not live or work in parks, if a highway is built on parkland no one will have to leave his home or give up his business. Such factors are common to substantially all highway construction. Thus, if Congress intended these factors to be on an equal footing with preservation of parkland there would have been no need for the statutes.
>
> Congress clearly did not intend that cost and disruption of the community were to be ignored by the Secretary. But the very existence of the statutes indicates that protection of parkland was to be given paramount importance. **The few green havens that are public parks were not to be lost unless there were truly unusual factors present in a particular case or the cost or community disruption resulting from alternative routes reached extraordinary magnitudes.** If the statutes are to have

[4] These provisions are currently codified at 23 U.S.C. § 138 and 49 U.S.C. § 303. They were originally enacted as § 4(f) of the Department of Transportation Act of 1966 and are still commonly referred to as "Section 4(f)."

[5] 401 U.S. 402, 412-13 (1971).

C-021-019

> any meaning, the Secretary cannot approve the destruction of parkland unless he finds that alternative routes present unique problems.

Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402 at 411-12 (1971) (emphasis supplied; footnotes omitted). *See also Arlington Coalition on Transportation v. Volpe*, 458 F.2d 1323, 1335 (4th Cir. 1972) ("Congress has declared through sections 138 and 4(f) that conservation of parkland is of the **utmost primary importance**") (emphasis supplied).

Section 4(f) prohibits FHWA from approving any project:

> which requires the use of any publically owned land from a public park, recreation area, or wildlife and water fowl refuge of national, State, **or local significance** as determined by the federal, State, **or local officials having jurisdiction thereof**, or any land from an historic site of national, State, or local significance as so determined by such officials unless (1) there is no feasible and prudent alternative to the use of such land and (2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife and water fowl refuge, or historic site resulting from such use.

23 U.S.C. § 138(a).

The legislation not only provides the utmost protection for parklands, but it also provides local governments with a major role in deciding whether local parklands can be used for a highway project. The Act protects publicly owned park lands "of local significance," and the Act reserves to the "local officials having jurisdiction" the right to determine whether municipally owned park lands have "local significance." 28 U.S.C. § 138(a). In like manner, a finding that an impact to a municipally owned park is *de minimis* requires concurrence by the municipality. 28 U.S.C. § 138(b)(iii)(B). This local concurrence cannot be inferred. There must be an explicit determination by the local government. *Arlington Coalition on Transportation v. Volpe, supra*, 458 F.2d at 1336. *See also* 23 C.F.R. 774.11(c) (in the absence of an explicit determination by the officials with jurisdiction over a park that it is insignificant, park property "will be presumed to be significant").

In making the "significance" determination, "the desirability of using the particular parkland in question as a highway must be ignored and only the value of the park as a park can be considered. Were this not so, land valuable to the community as a park could be used for a highway even though 'feasible and prudent alternatives' existed because federal or State officials had decided that using the park for highway purposes was desirable according to criteria other than whether such alternatives existed, the *only criterion* allowed by the Acts." *Id.* (emphasis in original).

C-021-020 There is no requirement that land that functions as a park be formally designated as a park to enjoy the protection of Section 4(f). *Stewart Park & Reserve Coalition, Inc. v. Slater*, 352 F.3d 545 (2nd Cir. 2003).

Some of the lands at issue here are owned by the State and managed by WSDOT. If WSDOT were to determine that these lands that have been used as park land for decades are not "significant," the Federal Highway Administration has the duty to independently review that determination and reach its own conclusion. 23 C.F.R. § 774.11(d).

C-021-021 Under separate cover, my clients are providing you with a detailed analysis of the project's use of and impacts to significant parklands protected by Section 4(f). That analysis demonstrates that the EIS and its Attachment 6 do not comply with the requirements of either NEPA, SEPA, or Section 4(f). Lands that have local significance for park purposes have been ignored in the analysis. Impacts to lands that have been identified as Section 4(f) lands have not been adequately assessed. The EIS and the accompanying 4(f) analysis fail to recognize and disclose numerous project impacts that will substantially impair the activities, features, and attributes of these park lands. That substantial impairment constitutes constructive use of the park lands and triggers Section 4(f) requirements. 23 C.F.R. § 774.15(a). The failure of the EIS and its Attachment 6 to fairly and fully acknowledge the substantial impairment of these park lands renders the EIS and the accompanying 4(f) analysis inadequate and void.

My clients' comments regarding the impacts to the parks (and the comments of many other citizens, too) are echoed also by the Seattle Board of Park Commissioners. Their recent resolution states that the Parks Board "cannot endorse any of the alternatives . . . due to the profound negative environmental impacts the project would have on the Washington Park Arboretum and the other City of Seattle Parks along the SR 520 corridor." The resolution goes on to explain that "the visual impacts and noise associated with the project, both during construction and after it is completed, will be significant" for Montlake Playfield. The resolution notes that the SDEIS "fails to recognize Lake Washington Boulevard as a historic resource or a park and recreation resource." "This officially designated park boulevard is a 204-acre, 9.2 mile long linear park wholly owned by the City and under the jurisdiction of Seattle Parks and Recreation." The project's "increased traffic through the heart of the Arboretum limits access to the Japanese Garden from the rest of the Arboretum, reduces the air quality due to vehicle emissions, increases noise from traffic and makes crossing Lake Washington Boulevard unsafe." The resolution further explains that recent improvements to Washington Park Arboretum "will likely be negatively impacted" by the project. The Parks Board has adopted a plan for future improvements to the Park, yet "redevelopment of SR 520 has the potential to negate the potential to undertake some or all of these projects to the detriment of the Arboretum and contrary to the goals set out in the Master Plan." The failure of the SDEIS and the Section 4(f) analysis to fully disclose these impacts renders the disclosure functions of those documents inadequate. These impacts also demonstrate the impropriety of using these park lands for the project and failing to minimize impacts as required by Section 4(f).

C-021-022 The EIS and the Section 4(f) analysis also failed to consider the substantial impairment that will occur to park lands if construction of the lids is deferred. Given the considerable funding uncertainties and the lead agencies' acknowledgment that the project may be completed in phases, there is a significant possibility that the lids will be deferred for a considerable period of time, if they ever are built. Analysis of that issue should not be delayed until that decision point arrives. At that juncture, with most of the rest of the project built and money available to complete the Seattle section (but not enough money for the lids), there will be severe pressure to complete the highway project and build the lids at some unspecified time later. That possibility must be addressed now. This dynamic also further demonstrates the impropriety of segmenting this project into an east and west segment.

C-021-023 The EIS and Section 4(f) analysis also are inadequate in their failure to consider the possibility of alternatives that would avoid or minimize the amount of park lands to be used by this project. The rail option, discussed above, for instance, would result in a narrower footprint in some areas, thereby, reducing the amount of park land used for the project. The analysis also fails to consider the alternative of double decking the roadway to drastically reduce the width of the project and its use of adjacent park lands.

C-021-024 Finally, the EIS and the Section 4(f) analysis are inadequate in their treatment of measures to mitigate the use of and adverse impacts to park lands. Both NEPA and Section 4(f) require the lead agencies to develop and assess all reasonable measures available to mitigate these adverse impacts. As detailed in the accompanying letter from my client, that task remains undone. Of particular (but not exclusive) concern is the extent to which the analysis relies on the unfunded lids. Given the severe funding constraints, exacerbated by your current decision to allow the Eastside segment to proceed in advance of the Seattle segment, there seems to be a significant possibility that the lids never will be built. The EIS and the Section 4(f) analysis must take that into account.

C-021-025 Based on the various inadequacies described in this letter, the lead agencies should proceed promptly to develop a new Supplemental Draft EIS that, among other things, addresses the entire project, not just the Seattle/bridge segment and which includes a reasonable range of alternatives, including a light rail alternative. It is unfortunate that decisions made by the lead agencies in the early stages of drafting this document led to such a flawed document. Those decisions will, unfortunately, result in the loss of some time in planning for this project. The sooner the agencies rectify these errors, the sooner this project can get back on the right path. Ignoring these errors or making excuses for them now will simply delay the inevitable and result in yet more lost time. If a mid-course correction is made quickly now, the amount of time lost can be minimized and this project can still move into the construction phase in a reasonable time frame.

Thank you for your consideration of these comments.

Very truly yours,

BRICKLIN & NEWMAN, LLP

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DAB:psc

cc: Clients

Friends of SR 520\SDEIS Comment Letter to Jennifer Young

Erin O'Connor
2612 10th Ave E
Seattle, WA 989102
April 14, 2010

Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart Street, Suite 520
Seattle,WA 98101

Dear Ms. Young:

C-022-001

Although we are dismayed at the prospect of adverse effects on our historic resources from the SR 520 Bridge Replacement and HOV Project, we are confident that a fair and accurate consideration of the setting, feeling, and characteristic use of our historic resources and the likely multiple, indirect, and cumulative adverse effects from construction and operation of the project will lead to efforts on WSDOT's part to avoid, minimize and mitigate those adverse effects and to cement understandings in a Memorandum of Agreement. Following are some measures that make sense in light of the nature of these adverse effects during construction and in anticipation of operation.

Construction

- **Construct solid fencing and plant buffering vegetation** to protect historic resources in the Roanoke Park Historic District and historic properties in the Portage Bay neighborhood from the effects of demolition and reconstruction of the three bridges over I-5 on East Roanoke Street and over SR 520 on 10th Avenue East and Delmar Drive East, from the effects of construction of the two new lids, and from the effects of the demolition and reconstruction of the Portage Bay Bridge, which will be moved closer to and in front of more homes in the Roanoke Park Historic District and the Portage Bay neighborhood.

C-022-002

- **Without the lids that have been designed into the project, that are an integral part of the project, and because the "temporary" construction effects would go on for seven and a half to eight years,** these effects on historic resources in the Roanoke Park Historic District and Portage Bay neighborhood would be tantamount to ultimate "demolition by neglect" as property values plummeted, and even then visual blight, noise, dust, vibration, and diesel emissions would mean that people would not be able to sell their homes for amounts approaching their present worth. Many of the houses would be rented out to lower income renters, those not in a position to avoid living so close to a mammoth, many-years-long freeway construction project. Some, perhaps many, of the houses would become rooming houses as happened after the construction of I-5 and SR 520 and the economic decline of the 1970s. As we saw then on the borders of the district, a general deterioration would ensue in the absence of owner-residents who work steadily to improve their historic houses and their communities. Repairs would tend to be done on the cheap, with little regard for the historic integrity that owner-residents have maintained over 100 years. With the deterioration of the social fabric of the neighborhoods, would come a deterioration of the setting and feeling of the Roanoke Park Historic District and of the historic resources in the Portage Bay neighborhood.

- Families with young children especially would be likely to move away to protect their children from the **protracted health effects of a seven-and-a-half-to-eight-year construction project.** A snapshot survey conducted by the Portage Bay/Roanoke Park Community Council reported that 126 young people under the age of 20 live in the district. 79 of these children are under the age of 14. (Because parents are reluctant to reveal this kind of information in today's social climate, the number of young children is probably underreported.)

C-022-002

- These would be serious indirect adverse effects on the single-family with children demographic of our neighborhoods and on businesses and schools in the neighborhoods.

C-022-003

  - According to WSDOT consultant Larry Kyle, the construction plan for the bridge replacements is to build **half lids** to serve traffic as temporary bridges north of the present East Roanoke Street Bridge and east of the present 10th Avenue East Bridge over SR 520. (The closure of Delmar Drive East, as we understand it, means that a temporary bridge [half lid] will not be constructed adjacent to the present Delmar Drive East bridge over SR 520 at Delmar Drive East.)

  - **Finishing and landscaping the lids over I-5 and SR 520 immediately after the replacement bridges have been constructed and put into operation** would spare historic resources from many of the further adverse effects of the preferred option's six- or seven-lane Portage Bay Bridge project's six-year construction phase and the highway widening phase and would provide **an opportunity for monitoring and fine-**tuning to perfect measures to avoid, minimize, and mitigate subsequent operation effects on historic resources.

  - Deferring lid construction, as is predicted in the SDEIS's indication that the Phased Implementation Scenario is the most likely construction scenario, would lead to major adverse construction effects on historic resources that could be avoided or minimized. The most vulnerable parts of the project, most in need of replacement, should of course be taken care of first. But lids could go a long way toward easing construction effects. **Note that both the I-5 and the 10th and Delmar lids are designed and option neutral. Their early installation would be an expression of good faith on WSDOT's part, an expression badly needed at this stage of WSDOT's relations with the communities and institutions adjacent to the project.**

- **Adverse effects to both buildings and vegetation from demolition and construction effects** of all three arterial bridge projects and the two lid projects should be anticipated, and ways of avoiding or minimizing, the effects of this extremely dusty, clogging, eroding and soiling, noisy, and earth-shaking demolition and construction activity should be discussed in a Memorandum of Agreement.

C-022-004

- WSDOT should stay in touch with the residents. WSDOT should furnish **current contact phone numbers and an e-mail address** so that residents can keep WSDOT apprised of effects, and WSDOT should make speedy response to resident notifications. **Developing a website and reporting periodic monitoring results would be a good idea as well.**

C-022-005

- Every precaution should be taken to ensure that historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood are not affected during construction by vibration, excavation, or heavy equipment. **Monitor vibration levels** for all demolition and construction activity.

  - **Monitor noise periodically at bedroom height** and ensure compliance with local noise regulations for construction and equipment operation. "Periodically" could mean regularly and whenever a new kind of construction activity starts up and during that activity.

  - **Monitor air quality periodically from the construction footprint to 300 meters from any construction activity.** (300 meters is the distance the *Health Impact Assessment* says highway pollution would reach.) "Periodically" could mean both regularly and whenever a new kind of construction activity starts up and during that activity.

  - **Install fencing and landscaping or landscaped buffers in the Roanoke Parklands South East and West and other areas** where historic resources would be exposed to construction and

C-022-005

operation effects of the project to offset the removal or reduction of vegetation in buffer zones and where new or relocated traffic lanes intrude on the character of the historic district or the settings of individual historic properties.

- **Install historically faithful double-paned windows** in houses likely to be affected by seven and a half to eight years of increased construction noise.
- **Wash windows** of affected historic buildings periodically.
- **Protect exteriors of affected historic buildings** from an accumulation of excessive dirt and dust during demolition, staging, hauling, and construction, and clean them in an appropriate manner periodically during construction and at the conclusion of construction. WSDOT is to consult with the SHPO and/or the Seattle Historic Preservation Officer before implementing any protection or cleaning methods.
- **Protect mature trees** from vibration and an accumulation of excessive dirt and dust during demolition, staging, hauling, and construction. Wash them periodically.
- Locate any construction sheds, barricades, or material storage away from historic properties, and **avoid obscuring views of and views from historic properties**.
- **Provide construction access directly to and from the construction zone along arterials** to eliminate construction truck traffic and detours along residential streets in the Roanoke Park Historic District and the Portage Bay neighborhood.
- Make every effort to keep the historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood accessible and functional during and after construction. **Residents should have priority in reaching their homes and accustomed parking places.**

C-022-006

Operation

- Depending on the option, **noise walls and/or quieter pavement** have been incorporated into the design of the project to reduce noise along the proposed roadway. The choice of noise reduction method along the segments of the project should be made in light of both effectiveness and potential visual effects. **The use of more than one method should be considered**. Minimization of noise at expansion joints should be a priority. **Measure and compare the respective noise reducing methods at bedroom height in both the Roanoke Park Historic District and the Portage Bay neighborhood.** WSDOT should consult with the Arizona Department of Transportation, which has experienced great success with quieter pavement over many years with studded tires, chains, and freezing and thawing in the Flagstaff area, on proper installation and maintenance of quieter pavement.

C-022-007

- New lids have been designed to cover I-5 at the East Roanoke Street crossing and to cover SR 520 at 10th Avenue East and Delmar Drive East. These **lids are to be landscaped and have pedestrian crossings, providing a new green space in each area and reuniting the communities on either side.** The landscaped lids will also help to minimize the visual and audible effects of I-5 and SR 520. (See the discussion of early lid construction and landscaping as mitigation in the "Construction" section above.)
- **New bicycle/pedestrian paths are to be built along the I-5 and 10th and Delmar lids** to reconnect the Roanoke Park and North Capitol Hill neighborhoods, the Roanoke Park and Eastlake neighborhoods, and the Roanoke Park and Portage Bay neighborhoods, particularly with respect to the many schools in these neighborhoods, and to enhance pedestrian access, which was made unpleasant when I-5 and SR 520 were built in the 1960s.

C-022-008
- **Every measure should be taken to ensure that historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood are not affected by visual blight, vibration, noise, air pollution, and nighttime glare in operation** of the new arterial bridges, the widened highway, the SR 520 bridges (including the Portage Bay Bridge, the West Approach, and the floating bridge), and ramps.

C-022-009
- As mitigation, WSDOT should work with the Roanoke Park Historic District to **engage designers or sponsor a competition to provide historic markers for the Roanoke Park Historic District** at East Shelby Street on Harvard Avenue East and on three gateways to the Roanoke Park Historic District: East Roanoke Street at Harvard Avenue East, the main gateway at 10th Avenue East at its intersection with East Roanoke Street, and Delmar Drive East at its intersection with East Roanoke Street. Historic lighting fixtures would be a part of this design project.

C-022-010
- In addition, WSDOT has been working with the Roanoke Park Historic District to come up with a **treatment of the streets that run along the Roanoke Park Historic District on its south and west sides that is sympathetic with the residential, tree-lined setting of the Roanoke Park Historic District, urban intersections, and in the interests of traffic calming**. Rob Berman, the SR 520 Program Planning Manager, asked us for a plan, which we have furnished. The plan has met with WSDOT's approval and has been passed to SDOT for their evaluation. When approval has been granted, this intention should be recorded in the Memorandum of Agreement.

C-022-011
- **The introduction of traffic calming devices on the arterials to keep traffic moving at a slow and steady speed, less polluting than idling or high speeds**, would contribute to a lessening of the air pollution that threatens the structural integrity of materials in the built historic environment and that would harm the mature shade trees that so contribute to the atmosphere and feeling of the district's setting.

C-022-012
- **The undergrounding of wires on the bridges and along the arterials** would permit the planting of tree canopy so characteristic of the setting of the historic district the streets run beside and help to reduce the accurate perception that air pollution from two more lanes of gas-powered vehicles had worsened air quality in our neighborhoods.

C-022-013
- **The use of quiet pavement on SR-520 as it runs along the West Approach, the Portage Bay Bridge, and the highway to I-5, on ramps, and on Harvard Avenue East, East Roanoke Street, 10th Avenue East, Delmar Drive East, and Fuhrman-Boyer Avenue East** would further contribute to the quiet atmosphere and feeling for which the Roanoke Park Historic District and the Portage Bay neighborhood are noted.

C-022-014
- Having undergrounded overhead wires and constructed substantial lid columns, **plant large shade trees to create a canopy over the streets that run alongside the Roanoke Park Historic District on the west and the south, along the three arterial replacement bridges, along the edges of the lids and on lid columns, and along Fuhrman-Boyer Avenue East.**

C-022-015
All of these measures to avoid, minimize, and mitigate the construction and operation of the SR 520 Bridge Replacement and HOV project should be recorded and committed to in a Memorandum of Agreement between WSDOT and the Portage Bay/Roanoke Park Community Council to protect and enhance the historic resources in the Roanoke Park Historic District and the historic resources in the Portage Bay neighborhood.

Sincerely,

Erin O'Connor
Historic Resources Chair, Portage Bay/Roanoke Park Community Council
Roanoke Neighborhood Elms Fund
Friends of Roanoke Park

From: Erin O'Connor [mailto:erinoc28@comcast.net]
Sent: Wednesday, April 14, 2010 1:39 PM
To: Young, Jenifer (Consultant); SR 520 Bridge SDEIS; Brooks, Allyson
Cc: 'Houser, Michael (DAHP)'; Karen.Gordon@seattle.gov; chris.gregoire@gov.wa.gov; Turner, Joyce; Arnold-Williams, Robin; Brown, Marty; edward.murray@leg.wa.gov; frank.chopp@leg.wa.gov; jamie.pedersen@leg.wa.gov; mike.mcginn@seattle.gov; 'Richard Conlin'; mike.obrien@seattle.gov; tom.rasmussen@seattle.gov; jean.godden@seattle.gov; tim.burgess@seattle.gov; Nick.Licata@Seattle.Gov; warneda@consultant.wsdot
Subject: Addendum on Mitigation for Adverse Effects of 520 project on Historic Resources in Roanoke Park Historic District and Portage Bay Neighborhood

Dear Ms. Young:

C-022-016

As promised at the end of our March 2009 formal comments on the *SDEIS* December 2009 *Cultural Resources Discipline Report* (below and attached), we are sending you an addendum (attached) on proposed mitigation measures (meant to be understood as avoidance, minimization, and mitigation measures) of the adverse direct, indirect, and cumulative effects of the SR 520 Bridge Replacement and HOV Project construction and operation on historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood. We trust that these proposed mitigation measures will be included in a Memorandum of Agreement between WSDOT and the Portage Bay/Roanoke Park Community Council.

Sincerely,

Erin O'Connor
Historic Resources Chair, Portage Bay/Roanoke Park Community Council
Roanoke Neighborhood Elms Fund
Friends of Roanoke Park

(Letter 1)
From: Rob Wilkinson [mailto:rob@artonfile.com]
Sent: Thursday, April 15, 2010 10:03 AM
To: SR 520 Bridge SDEIS
Cc: Fran Conley; Richard Conlin; Jonathan Dubman; Anita Bowers; Gary Stone
Subject: SDEIS response

Shelby/Hamlin Neighborhood Association
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Phone: 206 300 0702
Email: rob@artonfile.com

April 15, 2010

Contact: Rob Wilkinson

Jennifer Young
Environmental Manager
SR 520 Program Office
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Seattle, WA 98101

Jennifer Young:

C-023-001 We respectively submit this letter to describe the cumulative affects of the SR520 replacement project on the Hamlin Shelby neighborhood located on the west side of the Montlake Boulevard. The cumulative environmental, social, health, aesthetic and financial outcomes we foresee from the selection of Plan A or A+ will seriously affect the quality of life in our neighborhood, our health and the value of our homes. Plan K, M provide superior transportation benefits and would avoid the majority of these impacts. A smaller tolled-managed facility has not been considered but in our evaluation would avoid park and other impacts detailed in this report. Attached are responses to various technical discipline reports prepared by professionals and volunteers who live on Hamlin and Shelby Streets and by other organizations with similar interests to ours.

We agree with all of the SDEIS comments from the Coalition for a Sustainable 520.

C-023-002 **Background:**

The Hamlin Shelby neighborhood consists of 70 homes. Most of the homes were constructed between 1920 and 1940. The housing stock is of historic importance. It is frequently the destination for architectural and garden tours. The homes have been upgraded over the years but for the most part retain their original

C-023-002 character with carefully designed remodels that are stylistically similar to their originals. The Montlake Blvd. and the Montlake Bridge were completed in 1925. They were originally designed to provide a cross canal connection to the University of Washington and to other points to the north. This changed in 1963. The Montlake Blvd. now doubles as both freeway access ramp and local arterial. No effort was made to mitigate the impact from the original SR520 project and all efforts today focus on fish, water and wetlands protection while failing to adequately address the human environment including the preservation of cultural or historic assets, noise reduction, property value impacts or health impacts from dust and tail pipe emissions. The SDEIS does not distinguish the unique differences between heavily urban and rural environments and the unique

C-023-003 opportunities and challenges presented by each. It treats wetlands as naturally occurring phenomena instead of as an accident of human intervention that it was. The SDEIS does not consider how intentional acts of human intervention could replace or restore these parks and wetlands through the thoughtful development of new parklands, lids and green space corridors that serve both the human and

C-023-004 natural environment. The traffic forecasts are based upon a complex and changing set of seemingly minor alterations to each alternative but with significant traffic effects for each. Because there is no “set” plan even within each SDEIS alternative, it is impossible for a reasonable person to understand what these traffic impacts might be. Plan A+, for example, has not been evaluated at all yet has been unofficially announced as the preferred alternative questioning the validity of the EIS process all together. There is no detailed analysis on the range of tolling strategies possible, however it is assumed that tolls will be used.

C-023-005 These impacts to the human environment were well understood in the 1950’s when the City Engineer responsible for the 520 project proclaimed that the 520 project “would not be a pretty site.” He later blamed the state for the design and the tolling authority that supervised this project. Then Community Development Director, John D. Spaeth stated that; “the bridge location violated the integrity of Seattle neighborhoods”.

Today we have one alternative Plan A that further violates the integrity of Seattle neighborhoods but in spectacular fashion. Version 1.0 of SR 520 preserved the Montlake Bridge and adjoining neighborhoods. Version 2.0 in Plan A will seriously degrade the Montlake Bridge and diminish in value the neighborhoods that adjoin it by its shear size, scale and functional defects.

C-023-006 The eclectic style of architecture in the Hamlin Shelby Montlake subdivision features a mixture of stately homes and Craftman cottages. The neighborhood is well known in Seattle for its historic connection to the Montlake Cut, Opening Day of Boating season, its wide streets and parking strips, unique and period street lighting, a waterfront park that serves as a neighborhood meeting place and the historic Seattle Yacht Club that anchors the neighborhood on its western end. The charming and quaint homes resonate with everyone who visits here. It has long been considered one the most desirable neighborhoods in Seattle to live.

C-023-006 Plan A and A+ will place pressure on the long-term sustainability of this intact neighborhood. Economic pressures threaten the up zoning of this property. The effects of a widened Montlake Blvd., degraded Montlake Bridge, the eight years to build out the Montlake interchange and Portage Bay Viaduct will diminish property values and attract real estate speculation to purchase and hold property for later conversion to higher density use. Rentals will replace owner occupied homes. The neighborhood will lose its most fervent preservation advocates – homeowners. Further pressure will result from the proximity to the University of Washington light rail station and from the University of Washington itself. Early signs of the conversion of homes to rental property have already begun. There are more rentals in this neighborhood than ever before. As the tipping point between rentals and owner occupied homes is reached, the loss of the historical importance of this neighborhood realized. It will be Seattle's loss. It is avoidable with Plan K, M and with a smaller tolled-managed facility.

C-023-007 **Summary of Concerns:**

Toll Managed 4-lane alternative: There is ample reason to believe that traffic volume constraints on I-5 and the lack of HOV connectivity to the express lanes in the evening or morning peak do not justify a six lane SR520 roadway. The SDEIS fails to evaluate a toll managed least impact solution that would avoid the significant impacts to linked parks and historic assets and destruction to wetlands and near shore environments that will directly affect the Hamlin Shelby neighborhood. This is a serious omission in the SDEIS that we believe violates provisions of the 4F section of the National Environmental Protection Act NEPA. The SDEIS does not consider lower impact alternatives that provide equivalent mobility benefits.

C-023-008 **I-5 expansion?** The SDEIS estimates an increase of 20,000 vehicles/day that cannot be assimilated into I-5 without the widening of I-5 along with modifications to the Washington State Convention Center. There is no assumption found in the SDEIS that includes a widened I-5.

C-023-009 **Health Impacts:** There is little information in the SDEIS that reflects the unique micro-climate found in the Hamlin Shelby neighborhood that is located in a depressed pocket behind a hill that shields the neighborhood from prevailing southerly winds that flush these air pollutants away. This is most noticeable during temperature inversions when levels of nuisance or toxic pollutants concentrate in this basin. New research has shown that a significant rise in cancers and respiratory illnesses are connected with proximity to highways even after adjusting this data for other causes. Plan A+ may increase both tail pipe emissions and road dust by placing an enlarged interchange upwind from many homes and on a major pedestrian and bicycle corridor. Plan K and M shifts this interchange further east away from most homes allowing prevailing winds to blow

C-023-009 pollutants away from homes to Union Bay. Also, a more intact lid without ramps and vehicle canyons will not allow pollutants to escape into the adjacent neighborhood in Plan K and M. The differences in lid design and interchange location between the alternatives from the perspective of air pollution impacts has not been evaluated in the SDEIS.

There is no long-term plan described in the SDEIS to monitor pollutant levels or implement mitigation measures should these levels exceed current or future acceptable limits. There are no plans to address air constituent levels should they exceed new standards as future studies redefine safe levels for air born substances. It is reasonable to request that on-going monitoring for the life span of this project be conducted to protect the health of nearby residents. Without independently verifiable monitoring of air quality and a mitigation strategy for correcting these problems, our neighborhood will likely experience an increase in health risks associated with this project over its 70-year lifespan.

C-023-010 There are no plans to provide on-going monitoring of the noise levels or mitigation plans to reduce noise levels. Noise, in general, has been found to contribute to stress, loss of sleep and other health related problems. There has been no study of these potential health impacts.

C-023-011 **Montlake Lid:** The SDEIS claims that all of the alternatives will provide reconnecting lids in selected areas throughout the SR 520 corridor. This will not be the case for Plan A and A+ as it relates to Montlake. The lid surface in Montlake will be used for general purpose and HOV ramps hence limiting most of its potential benefits. There is no definition of a “lid” in the SDEIS, but our definition is a quiet, peaceful environment suitable for passive recreational use. We estimate that 80% of the lid in Montlake will be unusable for this purpose. This was calculated by subtracting the width of ramps and vehicle canyons from the lid surface area and adding an additional 100% buffer to each ramp, roadway, or vehicle trench to reduce noise, smells and other nuisance substances from reaching people.

C-023-012 **Bikes and Pedestrians:** Plan A and A+ severely denigrates the pedestrian and bicycle environment of the Montlake Blvd. corridor from the University of Washington to East Lake Washington Blvd., the Arboretum and beyond. The widening of Montlake Blvd, increase in traffic, safety conflicts with notoriously dangerous slip ramps, a new HOV intersection in A+ will combine to create an unpleasant and hazardous experience in one of the most heavily used bike and pedestrian corridors in the city. Plan A and A+ routes bikes and pedestrians in non-direct ways to avoid these conflicts. There will be insufficient space to size an appropriate bike path on either side of the Montlake Blvd. south of the Ship Canal that does not conflict with sidewalks for pedestrian use. As cross-lake bike trips increase we do not see adequately sized bike trails to accommodate this demand in Plan A or A+. Alternatives K and M provide superior bike and

C-023-012

pedestrian opportunities and do not require a second Montlake cut bridge to accommodate this expected increase in demand.

We believe the standards in the SDEIS for pedestrian and bicycle use do not reflect city or state goals for improving health or for achieving ambitious carbon neutral goals. We see the demands on the stretch of Montlake Blvd. from the Montlake Bridge to 520 for HOV, SOV and bikes and pedestrians will exceed the space available. The emphasis on roadways with only marginal or no improvements in north/ south mobility does not justify the priority given to vehicles over pedestrians and bikes.

C-023-013

Traffic: The SDEIS mentions a significant increase in HOV and transit use. Over one- third of all traffic on 520 today begins and ends their trip at the current interchange. With Plan A or A+ we would expect a dramatic increase in the use of this interchange as tolls on 520 provide incentives for HOV and transit use. We expect demand to increase with growth at the University of Washington projected to be 15% in the next 10 years, new mix-use development projects at and around the University Village area with large parking structures and the expansion of Children's Hospital at late stages of planning and approval. Should the HOV traffic increase on the mainline by approximately 20,000 vehicles per day (vpd) we would expect to see approximately one-third of these vehicles entering or exiting at the Montlake interchange in Plan A or A+ consistent with these trends.

But with bridge openings and signals north and south of the Ship Canal operating at (or near) a failure level of service we project that congestion will substantially increase. We predict that severe north-bound backups to match southbound backups will cause local transit to experience serious delays. A second Montlake Bridge provides only a 300 ft. advantage for buses coming off of 520 heading toward the UW but would do little for buses operating on 24th or Roanoke avenues. Moreover the destruction of historic homes, the degradation of an historic bridge, damage to the Montlake Cut, loss of the view corridor for the Montlake Bridge and the loss of historic homes to achieve a 300ft. advantage in mobility is not worth the impact. Plan K and M or potentially a toll-managed four lane facility would avoid these impacts and provide a faster and more reliable connection. Also analysis of signal priority for buses and HOV lanes to the north has not been examined in the SDEIS and could yield less damaging outcomes.

Traffic modeling is an unreliable way to evaluate alternatives when estimating traffic volumes on local streets including the Montlake Blvd. and Montlake Bridge. A far more reliable strategy for determining infrastructure needs for Seattle streets and bridges would be to accept the principal practiced in medicine to "do no harm". This would favor a more incremental approach where the mainline volumes can be measured in real world terms and modifications made as necessary (perhaps using tolling as a way to reduce infrastructure requirements) to accommodate unexpected demand or improve efficiencies in other ways.

C-023-013

Many toll amounts and strategies from fixed to dynamic tolling have been considered for SR520 but how they will work in real world terms is at best a guess. The degradation of the Montlake Bridge, converting an historic boulevard into a freeway spur, loss of historic homes, damage to the Montlake Cut are not guesses. They are real.

C-023-014

Historic Assets: Plan A and A+ calls for the addition of a new bridge parallel to the historic Montlake Bridge. We consider this intrusion as both unacceptable and unnecessary. The loss of the historical value, beauty and context for the Montlake Bridge is a clear violation of a number of provisions in the National Environmental Protection Act. This bridge is on the National Register of Historic places. It is designated by the City of Seattle and Washington State as an historic structure. It is the symbol used by the Montlake neighborhood that defines our community. It would also require the condemnation of historic homes, devaluation of many more, destruction of the historic Olmsted designed Montlake Blvd. and the significant loss of the aesthetic charm and character of nearby neighborhoods. WSDOT traffic analysis predicts that only marginal to no improvements in capacity over the no build option will result.

There has been no investigation into the use of bus signal priority strategies or the addition of Q-jump HOV lanes north of the Ship Canal to provide buses with priority crossing the Montlake Bridge that could avoid the construction of a second parallel bridge. Before the historic Montlake Bridge, Montlake Cut and Montlake Blvd. are degraded we believe that other feasible alternatives must be thoroughly investigated. Plans K, M and a toll managed four-lane alternative would avoid the damage to these important historic assets.

C-023-015

Noise: Plan A and A+ will not reduce noise from the Portage Bay Viaduct. There are no plans for quiet pavement. Noise walls on this bridge would be an unacceptable visual impact and may even amplify noise to nearby hillsides. The increase in noise on the Montlake Blvd. between the Montlake Bridge and SR520 is a known impact. Yet there are no stated plans for addressing these impacts for nearby homes.

C-023-016

Transit Connectivity: Plan A and A+ does not connect in an acceptable way two significant public investments in transit despite State law that requires a fast and reliable connection to the light rail station at the UW. Billions of dollars will be invested on 520 with a significant percentage of this devoted to improving transit performance. Sound Transit's north link light rail station at the UW is currently under construction. The connection between these two major state and regional investments requires the crossing of two bascule bridges that will frequently open for boat traffic. Plan A and A+ SDEIS findings claim that bridge openings and five signal intersections from NE Pacific St. to East Lake Washington Blvd. will not delay transit. We dispute these findings.

C-023-016

Plan A without the Arboretum ramps would further congest this stretch of roadway by adding significant volumes to the Montlake interchange. Plan A+ adds an additional signal intersection that would result in four interchanges in a distance of approximately 1000ft. from the Montlake Bridge to the East Lake Washington Blvd. signal. The SDEIS does not consider non-peak hours for transit use. We find this unacceptable when evaluating the long-term opportunities for transit service improvements in this corridor. The SDEIS peak hour definition does not reflect patterns of use associated with the UW, hospitals and major shopping center that do not adhere to normal 8am to 5pm work schedules. This analysis has been omitted in the SDEIS.

Our neighborhood will ever never be connected via transit service to our principal shopping destinations at the University Village with Plan A or A+. Metro and Sound Transit's near-term analysis does not see opportunities for extending service to NE Seattle. We reject this "assumption" as demand for access to the light rail station from the NE portion of the city will be significant and will certainly see major increases over the 70 year life span of this facility. Metro and Sound Transit argue that past trends dictate future patterns of transit use. They argue that NE Pacific St by the UW Hospital will remain the primary transit route with minimal demand projected from the NE portion of the City. We categorically reject this assumption because it is not based upon real data as buses are restricted from using the Montlake Blvd. corridor due to congestion. Without real data to test or even calibrate the demand models we believe these numbers are guesses and not reliable for planning purposes. Growth along the Sand Point corridor, changing public behavior that favors transit use, increased demand from a new light rail station at the UW justifies a thorough review of this analysis.

The mode shift from car to transit will become a clear priority for all of us and should be anticipated in the infrastructure needed to support this goal. Plan A or A+ fails to achieve an acceptable level of reliability for transit over other alternatives in the SDEIS. We question the underlying assumptions in the transit modeling that favors the delay caused by bridge openings and poor intersection performance over a fixed span alternative that connects directly to the light rail station at the UW. Plan K and M provide this direct connection.

We question the traffic forecasting that quickly produced more favorable drive times and general performance improvement for Plan A and A+ as the Legislative Working Committee appeared poised to select this alternative. We question assumptions being used when traffic results from a similar alignment, the Pacific Interchange Plan produced such dramatically better results than Plan K. The mediation members were not advised by WSDOT of the benefits of widening the Montlake Blvd. north of the Ship Canal while advising the supporter of Plan A and A+ that such widening would dramatically improve performance.

C-023-017

Parks: The potential for mitigation of park impacts or new park opportunities will be minimal with Plan A and A+. The retention of the loop ramp by the Hop In

C-023-017

grocery store eliminates the connection between the Montlake Play field and the Arboretum. The lid over the 520 mainline will be crisscrossed with ramps and roadways eliminating this potential green space connection to the Arboretum. Our neighborhood access to the parks and other amenities will decline beyond current levels as the size of the interchange in Montlake increases and the experience of walking or riding a bike are degraded. A below grade crossing of the Montlake Blvd to extend the Dawson trail to the east represents a safety problem and should be rejected. The linked network of parks will be further degraded due to the scale of this project. Plan K, M and a toll-managed four lane alternative would avoid these impacts.

The SDEIS inaccurately claims that Plan K and M would require the taking of more park space than other alternatives. The analysis does not include the new park space created by a Montlake lid or the various connections between parks that Plan K and M will feature that Plan A and particularly Plan A+ will not. There is no qualitative analysis of the differences between the alternatives for parks that forecast potential use, popularity, quality of experience, connectivity and other factors. Many other aspects of this project are modeled including traffic, costs, air and noise quality etc. but no similar analysis has been made for parklands. Hence there is no qualitative assessment of the parklands only an assessment of the acreage removed from use. Moreover, there is no difference described in the SDEIS that distinguishes parklands removed temporarily for construction versus parklands removed permanently. Plan A and A+ do not replace park lands with usable spaces for human enjoyment. Plan K, M and a toll-managed four lane facility do.

C-023-018

Social Organizations: The Seattle Yacht Club is an important institution in our neighborhood. It is an historic building that anchors the west side of our neighborhood. It has not been mentioned in the SDEIS for the significant role it plays in humanizing an area located very near an active freeway. The proximity of the Portage Bay Viaduct and the low quality design considered in Plan A and A+ will degrade the Seattle and Queen City Yacht Clubs and could result in the decline of their business activities. This would result in the further decline in our property values should this facility no longer be viable or be diminished in popularity. The Seattle Yacht Club is the prime sponsor of the Opening Day of Boating season that is one of the most popular events of the year for everyone attracting on good days over 100,000 people. The loss or damage to this facility would be a loss to Seattle and negatively affect the future of this popular Seattle experience. The Seattle Yacht Club is among many reasons residents purchased homes in the Hamlin and Shelby neighborhood in the first place.

C-023-019

Access: There is no description of access changes to our neighborhood with Plan A or A+. We anticipate that with a widened boulevard and the heavy use by transit that we will experience additional wait times entering or exiting our neighborhood.

C-023-020

NEPA Validity: High-level elected officials have stated that a decision has been made on SR520 to select Plan A+ before the results of the SDEIS public comments have been reviewed and analyzed. We consider this a violation of the NEPA requirements to fairly and objectively evaluate alternatives and we challenge the validity of the entire process for this reason. Further there is no known plan for SR520 that is coherent from east to the west. Each segment has conflicting goals that result in a confused set of objectives described in a SDEIS that a thoughtful person would be unable to properly understand or evaluate.

C-023-021

Walking: Walking to schools, the Montlake Playfield, the trails that connect west Montlake Park along the Montlake Cut to the Arboretum, the University of Washington, University Village and the walking experience many residence have as they cross the Montlake Bridge to work or attend classes at the University of Washington will all be seriously degraded with Plan A and A+. These impacts are all avoided with Plan K, M and a toll-managed four lane alternative.

The widened Montlake Blvd. makes crossing to the other side challenging and unpleasant. A second Montlake bridge creates another barrier along the Montlake waterfront trail to reach Foster Island. It will degrade this experience. A second bridge will degrade views from the Montlake Bridge to the east. Plan A will be produce a dehumanized and busy interchange in Montlake many times the size of the current facility and a toxic environment on the lid itself for human enjoyment. There will be less incentive for walking and bike riding and less incentive to visit the parks and other amenities currently enjoyed by the residents of Shelby and Hamlin.

C-023-022

Construction Impacts: The impacts during an eight-year construction period will be substantial. The use of the Montlake Blvd. and Montlake Bridge to handle the additional truck traffic will increase noise, pollution, dust and health risks. We believe that baseline evaluations of current conditions will provide a gage to measure the impacts during construction and provide compensation to homeowners who will be damaged by increased truck traffic, noise, property damage and other unknown or unanticipated problems common with projects of this scale constructed over such a long time period.

C-023-023

Conclusion:

The cumulative effects are substantial with Plan A or A+. They are largely avoided with Plan K, M or a toll managed four -lane alternative. The Hamlin Shelby neighborhood located to the west of the Montlake Blvd. is at ground zero for the impacts associated with Plan A and A+ and represents a substantial percentage of the overall impacts the Montlake Neighborhood will experience. We anticipate both short and long term declines in property values presenting the very real prospect of losing one of Seattle best collection of Craftsman architecture as property values diminish, speculation increases, owner occupied

C-023-023 homes turn to rentals and the people that advocate for preservation are gone – home owners. There will be an increase in noise on the Montlake Blvd from the additional traffic. This noise will project deeply into the neighborhood and will combine with the noise generated by traffic from the Portage Bay Viaduct. More traffic and buses (particularly while idling in backups from poorly functioning interchanges and metered ramps) will likely produce additional pollution that could affect our health. We believe our neighborhood is at increased risk for pollution caused disease. Studies to date have not analyzed our neighborhood microclimate nor has the state monitored all of the constituents that may increase health risks.

C-023-024 Access to our neighborhood is not detailed in the SDEIS. There are concerns that the increased use of the Montlake Blvd. as a freeway spur for buses and cars will change signal timing and cause additional delays in accessing our neighborhood in favor of maintaining traffic flow on the Montlake Blvd. There is

C-023-025 no consideration for sound walls or other noise abatement measures along the Montlake Blvd. despite the widening of this arterial, the visual blight it will cause and the increased noise levels from vehicles starting and stopping in the inevitable congestion caused by Plan A and A+. Plan K and M will significantly reduce all of these impacts and return the Montlake Blvd. to its historic use as a boulevard and not freeway spur.

C-023-026 We are concerned the about the shear size and scale of Plan A and A+ and the lack of emphasis on quality design in all segments of the project. The visual blight that the original architects of SR520 acknowledged will be repeated again and in a grander style. None of the structures in alternative A or A+ in scale and detail respect the natural or manmade landscape they will inhabit. Parklands will be quantitatively and qualitatively destroyed – all avoidable impacts with Plan K, M or a toll-managed four lane alternative.

C-023-027 The opportunity to create a continuous greenway that links together parks from North Capitol Hill to the Arboretum will be permanently eliminated. The social fabric of our neighborhood will be affected with a decline in the experience of walking, meeting neighbors and sharing the enjoyment of living in quiet and attractive residential neighborhood. Instead, our neighborhood will become a traffic island where the only safe and pleasant way in or out will in a car.

C-023-028 **Mitigation:**

We are requesting mitigation should Plan A or A+ be selected to address the noise, pollution, loss of property values and the short and long term loss of historic structures associated with this project. Mitigation measures will be expected to purchase homes so devalued by the project that investments are substantially lost, to purchase homes that cannot be sold at values equal to property values for equivalent properties to avoid speculation in these properties,

C-023-028 to provide long term monitoring of air pollution levels that could trigger installation of filtration systems in homes to remove toxic particulates and to preserve the view corridor, context and historic significance of the Montlake bridge that would be irreparably harmed in Plan A or A+.

C-023-029 We do not believe that other alternatives including Q-jump HOV lanes north of the Ship Canal or signal priority for transit have been fully explored that would eliminate the need for a second Montlake Bridge. We will expect quiet pavement on all paved surfaces and cleaning of homes on a regular basis during and after construction. We expect triple pane windows and other noise abatement measures to be installed in homes that experience noise at current or higher levels. Sound walls along the Montlake Boulevard should be considered at the request of home owners facing the boulevard. This will no longer be the Montlake Blvd. in Plan A or A+ south of the Montlake Cut but the Montlake Urban Interchange Freeway Spur and the treatment on either side should reflect this change in use.

C-023-030 We strongly believe that Plans K and M or a toll managed four lane option (that has not been studied) would provide superior transit service, reduced impacts to the Hamlin Shelby Neighborhood and preserve historic assets. We believe Plans K and M would improve north and south mobility, reduce travel times to and from the north, create superior bike and pedestrian amenities along the Montlake Blvd to serve cross SR520 trips. Plans K and M would improve the experience of walking to the Arboretum or other destinations south of the Ship Canal. They would produce quieter and safer streets and connect directly transit on SR520 with the LR hub at the UW. We believe the impacts itemized in this letter and the accompanying responses to the discipline reports are avoidable with Plan K or M or a four lane toll managed facility.

We look forward to working with the state on the resolution of these issues.

Respectively submitted,

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C-023-031

(Letter 2)

Comments on the Supplemental Draft Environmental Impact Statement (SDEIS); SR 520 I-5 to Medina: Bridge Replacement and HOV Project Impact on Health; Neighborhoods Exposed to Potential Deleterious Air Quality

The SDEIS treats air quality in several sections that include estimated traffic volumes, measures of air quality and air quality models, and discussion of mitigation both during and up to many years after Project completion. The regulations governing air quality components are described and applied to current and projected air quality.

Conclusions discussed in the SDEIS generally find no levels of pollutants with potential deleterious effects on human health, both as measured currently and modeled at points after project conclusion.

The SDEIS notes several potential issues affecting future air quality:

Changes in the composition of fuels and vehicle exhaust components. Improved pollution controls and changes in fuels and/or power sources will reduce potential deleterious impacts from vehicle sources.

Changes in vehicle miles travelled and total vehicle trips (crossings) within the areas described. These changes are impacted by tolls, and changes resulting from HOV and transit substitution for driver only and low numbers of passengers in automobiles and trucks.

A recent (2010)Report from the Environmental Health Institute (reference below*, Introduction, p. 1-4) links traffic emissions with ambient air pollution, and concentrations of ambient pollutants with human exposure to pollutants from traffic with effects on human health. In the Executive Summary, (Overall Conclusions, p. xv), the evidence reviewed suggests that between 300 and 500 yards from major arterials there is a causal relationship between traffic –related air pollution and exacerbation of asthma. In addition, there was suggestive evidence that this pollution is potentially related to increased risk for several other diseases of the lung and cardiovascular system. The Report also noted that evidence used in coming to these conclusions was based on past estimates from emissions from older vehicles and might not be applicable for estimating health associations in the future.

The Air Quality Discipline Report (The Report) of the SDEIS found the Project is not expected to cause or contribute to any new violation of the National Ambient Air Quality Standards (NAAQS), has low potential for mobile source air toxic emissions (MSAT), and meets conformity requirements of the pertinent Federal and State regulations.

Studies were made of carbon monoxide (CO) concentrations at five intersections in the vicinity of the Project considered the worst-case intersections based on traffic delays and traffic volumes. The assumption was, if these intersections were shown as not violating the NAAQS, all intersections in the Project are would not cause a violation.

Several of the neighborhoods along Montlake Blvd and elsewhere in the Project area that are in close proximity to arterials and often congested during morning

C-023-031

and afternoon peak traffic were not measured. The five intersections with 1 and 8 hour CO measurements and projected CO levels to 2030 were selected using a decision rule. Other methods of selecting sites for measurement and projected CO levels were not used.

Findings:

A recent extensive study of traffic-related air pollution examined the potential for illness related to living within 300 to 500 yards of major arterials. This finding indicates a need for caution in evaluating the future impact of traffic which may be increased and/or congested when the Project is completed. Documentation of exposure to deleterious vehicle exhaust for those living in proximity to this congestion will be important. Robustness of the models used in the DSEIS may be insufficient to point to dangerous exposures from vehicle exhaust. Use of different models, and/ or using different inputs including the important wait times during periods of traffic congestion, could be employed.

The Project will be in use for many years. Estimates of air quality in the future are only estimates. Many changes in vehicles, fuels, ambient air and climate in the Project area, miles travelled, global warming as this may affect local climates, pollutants and related can be projected, but assumptions vary widely and cause projections to have significant spread. The SDEIS discussed many of these potential variables, but how these may affect residents in proximity to the Project remains an open question. Further, intersections that were measured may not represent the neighborhoods most affected by vehicular air pollution when the Project is in operation.

Only CO was measured and modeled. There are a number of other emission components that can have adverse effects on health. As above, these were neither measured nor modeled.

The Report adhered to Federal and State air quality regulations. The scope of examination into air quality and its relationship to the Project was thereby constrained.

*HEI Panel on the Health Effects of Traffic-Related Air Pollution. 2010. Traffic-Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects. HEI Special Report 17. Health Effects Institute, Boston, MA

(Letter 3)

C-023-032

Mitigation Section of SR 520 DSEIS

1. For the West side, establish an LID or similar legal structure incorporating all neighborhoods within 300-500 yards adjacent to major arterials (or within areas determined to be exposed to traffic related air pollution). The LID will function to protect the air quality and mitigate adverse effects of air quality on the population within the LID. The LID will be funded by the Project. LID governance will be from the neighborhoods and established in the LID formation. Staffing and contracting to carry out the work of the LID will be determined by LID governance. The LID

C-023-032

will have appropriate expert advisors and staff in those scientific and related areas for which the entity is responsible.

2. The LID will, with this expert advice, establish the sampling frame for measuring air quality effects from vehicle exhaust within the LID areas (baseline and regular monitoring as the Project is implemented and operational), contract for air sampling and findings, and use expert reviewers for analysis and interpretation of results. The LID will also determine traffic patterns on the major arterials, including wait times, and how traffic impacts air quality.
3. With expert advice, determine the health status of those living within the LID boundaries. The LID will regularly sample this population for the presence of adverse health effects (as recommended by experts) and which adverse health effects are related to, associated with, and/or causally attributable to reduced air quality caused by vehicle exhaust and other sources that impact on the air quality to which residents of the LID are exposed.
4. The LID will recommend ways of mitigating vehicle derived reduced air quality, when and where such reduced air quality is found. Mitigation may include modifications in air quality within homes in the LID area that bring air quality to acceptable levels, if feasible. Modifications may also include changes in traffic patterns, wait times, and related.
5. If air quality is compromised by traffic caused air pollution to the point at which mitigation methods do not bring the air quality for residents of the LID to acceptable levels, and adverse health effects of residents of the LID area are found or reported, and/or at the request of residents of the LID, the LID may purchase the property of residents at fair values to be determined by impartial valuation to be established by the LID. The Project will fund the LID, including, funds for this purpose. Properties so acquired may be sold, rebuilt, or in other ways disposed of with proceeds returned to the LID.
6. Adverse effects from vehicle caused air quality deterioration, including presence of increased levels of particulate matter, which cause damage to residences within the LID area, will be mitigated as determined by the LID and at the expense of the Project and included in funds made available to the LID.
7. Air quality standards change as information shows that changes in quality have adverse effects on health. For example, new information may indicate that components of vehicle exhaust not previously found to be injurious to human health are now determined to be injurious. Experts advising the LID will be asked to review such findings and recommend how these findings will change the above air quality sampling, the extent of the areas affected by these air quality changes, mitigation methods, and related. The LID will keep apprised of the state of knowledge about effects on air quality from vehicle exhaust and make

C-023-032 adjustments in its methods of maintaining surveillance of air quality and protecting the health of the LID population.

C-023-033 (Letter 4)
Linked parks and recreation areas near SR 520

Caveat: I am not a lawyer. My understanding is that federal Section 4f of the 1966 Dept. of Transportation Act as amended in 2005 says that a transportation project requiring the use of publicly owned parks, or recreation areas or wildlife areas, can be approved only if there is no feasible and prudent alternative to using that land and if the project is planned to minimize harm to the property. So the state must prove that reasonable alternatives have been evaluated and don't work. Section 6(f) gives additional protection to certain areas where federal funds have been used to create an amenity (such as the Arboretum Waterfront Trail) regardless of the land on which it resides.

I understand further that while the focus of the 4f law is on properties formally dedicated or operated as parks, recreational areas or wildlife refuges, a history of actual use of any public properties for these purposes can extend 4f protection to such public properties even though they do not have such formal dedication.

C-023-034 The numbers below tie to the Greenlink Map

(1) Interlaken Park at its south east end connects to the Arboretum. The SDEIS identifies it as a city park, and acknowledges that there are 4f issues because they plan to do some construction at Delmar which they deem not significant. They are focusing on curbing rather than on the treed area which will be disrupted by that construction. The SDEIS should have acknowledged 4f status to Interlaken for the more serious reasons stated below. At its north west end Interlaken Park links to

C-023-035 (**2) Bagley Park Overlook** which before 520 was built was part of Interlaken Park. Bagley Park is in daily use as a rest place and viewpoint, looking over Portage Bay to Lake Washington and the Cascades.

The SDEIS identifies Bagley as a significant city park because it has been so identified by the Seattle Parks Department and it historical significance. It will be excavated out of existence to handle the planned widening of SR520. The SDEIS does note that the taking of Bagley makes it 4F property and that it might be mitigated by creating a viewpoint on a new lid at that point. What it fails to note is that because Bagley Park is part of the historical and visual entrance path to Interlaken, Interlaken Park is affected by the Bagley removal and qualifies for 4f review for that reason as well as the reason given in the SDEIS.
Bagley Park links to

C-023-036

(3) Parklands East and (4) Parklands West
These areas, north of the fence line demarking SR520 right of way, have been maintained by the Seattle Park Department and Roanoke Park volunteers for a very long time; both areas were re-landscaped a decade ago by volunteers who worked with plans approved by the Seattle Parks Department. This land has been long considered part of Roanoke Park. They are definitely in the Roanoke Park landscape unit. Parkland West (4), adjacent to the fire station is on WSDOT right of way, but has been managed by the Seattle Park Department for more than a decade and also maintained by community volunteers. It is an open to the public area, and provides a visual landscape connection across Roanoke Street and Tenth Avenue East to Roanoke Park.

Parkland East (3), has also been managed by the Seattle Park Department also for more than a decade, is fully accessible to the public, provides a significant area for children as they wait for school bus pick up and drop off, and provides visual park continuity from Bagley to Roanoke Park. Part of (3) is owned by Seattle and part is owned by WSDOT.

The SDEIS shows most of Parklands East and West as WSDOT right of way and totally ignores their significance.

Because both Parklands (4) and (5) have operated as public park land and have been managed by Seattle Parks as Park buffer areas to the SR520 highway for 50 years with the support and agreement of WSDOT, they deserve 4F status.

The Parklands are across the street from

C-023-037

(5) Roanoke Park. Roanoke Park is a destination park for many people because of the beauty of its trees and gardens, which are maintained by neighborhood volunteers and the Seattle Parks Department. The original trolley line ran to, and ended at, Roanoke Park 100 years ago when it felt like country because there were so few homes in the area. The Olmstead Brothers in designing Interlaken Park envisioned Roanoke Park as a lovely gateway to Interlaken and, via the Bagley Stairs, (see below) to Portage Bay. These Park functions have been used as such for over 100 years.

The SDEIS shows Roanoke Park as a city park, and plots it as abutting the SR520 affected area but fails to give it the 4f status. Roanoke Park should receive 4f status because of the impact the proposed re-alignment of Tenth as it intersects with Roanoke, because the adverse impact destruction of Parklands East and Parklands West will have on noise from SR520, and because it abuts Roanoke Street which has been identified as a haul route. Roanoke Park will also be adversely impacted by the widening of SR520, which will leave the park much closer to the highway, and by the increased size and speed of the roadway and increased amount of traffic on flyovers.

C-023-037

The SDEIS proposes the Tenth Avenue to Delmar Lid as a solution to the noise problem in the area. The location of the lid will only partially protect Roanoke Park from noise. Given that there is no commitment in the SDEIS construction to any of the lids, it is critical that the adverse 4f impact to Roanoke Park due to the construction proposed be fully described in the SDEIS which now ignores them.

The SDEIS shows the connection between Interlaken and the Arboretum, but does not show or discuss the Interlaken/Bagley/Parklands/Roanoke Park Roanoke Park connection. The SDEIS fails to note that rebuilding the connection of Interlaken to Roanoke Park will also require the Roanoke lid, which is presented as an optional mitigation. Please see "Tenth Avenue to Delmar Lid Discussion " below.

Interlaken Park also links across 11th to the

C-023-038

(6) South Forest Area, south of 520 and within the SR520 right of way. These 50 year old trees are the result of remediation from the original construction. It is beautiful and mature landscaping. It is now an important visual and sound barrier, both from north Capitol Hill and from Bagley and Roanoke Parks and the adjacent Roanoke historic neighborhood. These trees offer important greenscape continuity. This is WSDOT right of way, some of which is well back from the highway now and also after the planned construction (all alternatives.) While it is fenced to keep the public from walking too close to the 520 highway, it is definitely in the visual landscape unit which extends from Interlaken.

The SDEIS describes this area only as WSDOT right of way. However, I believe federal law requires that since the public and park functions of this land are 4f functions, any diminishment of these lands and functions be evaluated in the SDEIS, even if WSDOT owns it and calls it right of way.

Also the SDEIS description of the WSDOT right of way is erroneous. Importantly, the actual WSDOT right of way property line between Tenth and Delmar is significantly further south than is described in the SDEIS, including the grassy verge that WSDOT maintains. This area connects visually to the

C-023-039

(7) North forest area on the north side of SR520, which is also adjacent to Parklands. Its 50 year old trees are the backdrop for the landscape from Roanoke Park. These are very important buffers to both Interlaken Park and to Roanoke Park, and without these trees the noise and pollution would be much worse in the Roanoke Historic District and in Roanoke Park. The north forest area is also part of the original grand entrance and connection between Interlaken and Roanoke Park including the Bagley Park transition.

Also, for all who travel across the Tenth Avenue bridge, the forests on both sides of 520 frame the stunning and unique East-West vista corridor, a tree-lined vista

C-023-039

from the Olympic mountains to the Cascade mountains. The 50 year old linked forests of trees between Portage Bay and I5 are also part of a view corridor along SR520 which has significant value both to neighbors and to the many travelers on 520 and on the city streets.

Again, the SDEIS treats the area only as right of way, failing to reflect on the significance of a 50 year old stand of pines and other trees. Because of its connection function, I believe that both forest areas should have been listed as 4f property.

Both Interlaken and the Forest Areas have some areas too steep to walk on, and some with unofficial trails. The steep treed hills are part of the ambiance of the parks and make the walk or ride through the park the joy that it is.

C-023-040

Bagley Park also links to
(8) Bagley Stair Trail, used since 1908 as a treed parkland with a stair and path trail from the Bagley Park Viewpoint down to the waterfront, immediately north of SR 520. These stairs are used frequently by residents for a variety of purposes, including as a to-downtown- Seattle route that connects to Colonnade Park via Miller at 10th. The value of this connection to walkers will increase with the development of South Lake Union.

Historically, the Bagley Stair Trail has been maintained by both the Seattle Park Department and by volunteers with recent work by WSDOT on its adjacent right of way.

The Bagley Stair Trail will be destroyed by 520 construction. The mature trees that protect the neighborhood from 520 will go. The SDEIS Ch 2, page 2-9 indicates that the Bagley Stair Trail has been identified as important to local residents and suggests it might be rebuilt as part of the proposed new Delmar to Tenth lid, but it does not as a 4f item. We do not understand where the space to rebuild is; we do not know exactly where the new construction will stop. The SDEIS should have called out the Bagley Stairs as a discrete, historic 4F park feature with mandated replacement.

See also “Bagley Stair detail” below .
The Bagley Stair trail ends across Boyer street from

C-023-041

(9) Roanoke Street End Park is currently undeveloped, but has been eyed by the community as a developable area for many years, held back by years of failure by WSDOT to maintain its right of way in accessible condition. The City of Seattle and its residents value highly all points of public access to Portage Bay. The community has a history of turning these street ends into small parks, sitting and wildlife viewing areas such as the one on the other side of Queen City Yacht Club.

C-023-041

Roanoke Street is a narrow remnant as it reaches the water because most of it has been taken by WSDOT; the highway, supported on pillers is some 50 feet above. In other locations this type of access has been developed for boat launching, for example. Trees along the undeveloped remainder of Roanoke Street provide a SR520 screen to neighbors to the north. Roanoke Street widens in the water section. Queen city leases some of Roanoke Street for open moorage.

WSDOT plans to put a waste water treatment facility near this street end. Future construction should include plans to enhance public access to the water front at this location.

The SDEIS ignores this Roanoke Street End green space, which leads to.

C-023-042

(10) Portage Bay
Portage Bay is a major recreational area, used for swimming, boating, University crew training, sailing lessons, private canoes and kayaks as well as power boats, bird watching, nature walks, etc. The deep open water in the middle is owned by the State. The Bay is also the focal point of hundreds of houses on Capitol Hill, both north and south of 520, and of many people at the University of Washington.

Many people travel around it daily by foot or bike, or by road, or by water. Portage Bay is a destination recreation area for tourists, who are taken through on tour boats, and for many local day trips.

The proposed expansion of 520 would take property from Portage Bay, and would also reduce the public's ability to enjoy the remaining property, because of the added height and doubling of bulk, threatening shadows, and noise. The expansion will be detrimental to wildlife in Portage Bay. Please see "Taking of Portage Bay"

C-023-043

Along the west side of Portage Bay are a series of (**11) Street End Parks,** long acknowledged by the city as an important way for people to enjoy the waterfront. Edgar Street End park is adjacent to the Queen City Yacht Club. Hamlin Street End Park and Shelby Street End Park provide vistas out between the house boats and offer swimming and water access to neighbors as well as the houseboat residents. Neighbors have constructed and still maintain these parks.

(**12) South Portage Bay Park** has been recently developed by neighbors into a natural area with native plans conducive to birds and wildlife, and water access for canoes, etc. This area was acquired by the Park Department in 1968 as part of Montlake Park and has not yet been split out as a separate park by the Seattle Park Department. The SDEIS treats this area as part of Montlake Playfield Park, to which it is adjacent. Ignoring what has been going on in this area was a way for the SDEIS not to identify how important the park department and residents regard the wildlife and wetland and lake area. (See discussion below.)

C-023-044

(13) Montlake Playfield Park is a major city park bordering Portage Bay, with activities ranging from a playfield to bird watching and canoeing and kayaking.

The SDEIS says the expansion will require 2.2 acres of new right of way in Portage Bay (Chapter 5 page 34, Table 5.2-2.) The SDEIS deliberately hides from whom that taking will occur but in fact most if not all will come from Montlake Playfield Park. In addition there will be need for significant construction right of way acreage to be "borrowed" from Montlake Playfield Park (See Chapter 6, Exhibit 6.2-2) In addition the construction activity of demolishing the existing bridge and building the temporary bridge and the new bridges will all take their toll on Montlake Playfield Park and represent constructive use which is not described in the SDEIS (See more discussion of these issues below in item (24) The Portage Bay Property to Be Taken

Montlake Playfield Park connects to the north to
(14) Portage Bay Park Area in SR520 Right of Way

The SR520 Right of way came out of Montlake Playfield Park property. The Park's history include a map showing SR520 and the wildlife areas along the shoreline with the notation of "Easement for Freeway" with the suggestion that it had restrictions on it and that the amount of land covered is 4.7 acres. (It would be interesting to see the exact nature of that transaction; King Country record maps do not note any restrictions on this right of way.) The existing bridge is 60 feet wide and the section of land that the city provided is some 1400 feet long, suggesting that bridge now covers only 2 acres, leaving 2.7 acres uncovered and not used by the bridge. That land has been used by the public as open space and by wildlife as open space and refuge for the last 50 plus years. I believe that qualifies it for 4f status. This land lies to the south of the bridge. (The expanded bridge will keep its southern presence and expand primarily to the north, doubling the amount of water covered.)

C-023-045

Montlake Playfield Park connects on its east boundary to the
(15) Bill Dawson Trail (a bike and pedestrian trail) which goes under 520, and leads towards the Arboretum, ending across Montlake Boulevard from the Lake Washington Parkway entrance to
(16) The Arboretum.

The Bill Dawson trail, at the Northwest Fisheries Science Center/NOOA property line is only a fence away from a route that would provide easy access to West Montlake Park. One of the possible applications of 6f mitigations should include a direct link to West Montlake Park from the Bill Dawson trail.

The Bill Dawson Trail now leads via Montlake Boulevard to **(17) West Montlake Park** and to the **(18)Ship Canal Trail** which connects to Foster Island and the Arboretum. The Bill Dawson Trail via the Montlake bridge connects to the public

C-023-045

walkways along the north side of the cut, including the Burke Gilman Trail and distant points. This routing also makes for a nice loop walk around Portage Bay, a University Bridge to Montlake Bridge loop.

The Bill Dawson Trail (16) also leads towards, but stops a block away from, **(19) McCurdy Park,** and the adjacent (**20) East Montlake Park** which leads to the **(21) Arboretum Waterfront Trail** to Foster Island and the rest of the Arboretum (One can also cross Montlake and go to **(16) LAKE WASHINGTON Blvd** access into the Arboretum.

It is important to note that some of the WSDOT right of way in the Arboretum, **the RS Thompson area (22)** has been used as parkland for the last 50 years and is totally surrounded by parkland. It is also a very actively used area with a nice parking lot for easy access. Few, if any users of the parking lot and the walking area would perceive that this land was any different from Arboretum land and paths and trails interconnect. This land lies in direct view of the entrance sign to the Arboretum. I believe that much of the area within the WSDOT right of way qualifies for 4f status and needs to be treated that way. The SDEIS here as elsewhere treats WSDOT right of way as though it were already paved, land the state can do with whatever it wills.

C-023-046

(23) University Canal Lands
These lands with their mature and very beautiful landscaping offer a very important visual continuity to the trees which line Lake Washington Blvd, emphasizing that one is entering into Arboretum Lands. The loss of these lands is a significant loss to Lake Washington Blvd and should be identified as a 4f loss for that reason as well as the other reasons that have been identified. The impact of widening SR520 at Montlake Boulevard is severe because of the magnitude of the widening. It creates a major challenge to recreating an attractive entrance way to the Arboretum.

C-023-047

24) The Portage Bay property to be taken.
The expansion of the Portage Bay Bridge would require taking of Portage Bay Property. Except for tiny parcels at each end, the property needed by WSDOT is part of Montlake Playfield Park, managed by the Seattle Parks Department.

The proposed new Portage Bay Bridge design calls for taking out the current bend to the south made by the current bridge and expanding the total bridge width on the north side. WSDOT has lots of excess right of way to the south, so all of the new right of way needed is to the north. The expansion to the north runs the complete length of the bridge. The straightening causes there to be a thicker band of right of way taken on the eastern half than on the western half of the bridge (see dots on map.) This expansion of the right of way will require taking of Montlake Parklands.

C-023-047

But we should recognize that the non-bridged area to the south, even though it is owned by WSDOT also deserves qualification as 4f parkland. See **(14) Portage Bay Park Area in SR520 Right of Way** Seen this way, all of the expansion of SR520, whether to the north or to the south will be over parkland. It does appear, however, that most of the bridge expansion is to the north. None of the current coverage is given up so the shift north is totally additional coverage.

C-023-048

Under Option A, the "preferred alternative" the water acreage being covered by the bridge is being more than doubled (at the narrowest middle part of the bridge its width is only being increased 83 percent, but the road flares much wider toward both ends.) The SDEIS has deliberately hidden this information from the public and obfuscated and minimized it. It does not provide the calculation of current water coverage vs. the options being considered. It appears that the current bridge covers two acres of lake and the new one will expand primarily to the north for a total coverage of more than four acres (see item 14 above.)

C-023-049

The SDEIS has acknowledged that Montlake Playfield Park has 4f status because there will be construction occupation of a corner of the park. It should also acknowledge 4f status and review for the substantial taking of parklands, interfering with its use for the Parks' wildlife and recreational purposes both on water and on land. For example, both kayakers and beavers use the channels the beavers cut through the lily pads during the summer, channels cut above the "submerged" lands which the SDEIS describes as of no value. There is an active beaver lodge at the south east end of SR520. In addition to the general public, both Seattle Yacht Club and Queen City Yacht Club use the Montlake Park lands north of the current SR520 right of way in their recreational activities as well.

This water-parkland is used for water activities including canoeing, kayaking and swimming. It is also an integral part of the visual experience of being in Montlake Park, or the east side of Capitol Hill including all the parks there, and including West Montlake Park.

The SDEIS in its Discipline Report on 4 F Issues does acknowledge that it will take some Montlake Playfield Park lands, but doesn't identify where or how much. It also deliberately does not identify the submerged lands as parkland on any of its otherwise detailed maps and asserts that the taking is not of consequence and therefore it is not covered by 4f:

"Montlake Playfield originally extended north of the current SR 520 alignment. Because of the rising water level of Portage Bay, however, 6.8 acres of the original playfield (not included in the 27-acre usable site) are now submerged in Portage Bay. A portion of the submerged land would be acquired from the City of Seattle for the 6-Lane Alternative options. However, the affected submerged land is not currently used for recreational purposes, is not accessible to the public for recreational use, and is not designated as parkland on the *Seattle Park Guide* (City of Seattle 2006). In addition, there are no formal plans for its recreational

C-023-049

use in the future. As a result, the affected submerged lands are not protected by Section 4(f).” Source: SDEIS Page 33 of Section 5, Discipline Report on 4 F issues.

C-023-050

This statement has several errors:
A. The statement that the lands “originally extended” north of the current SR520 alignment implies incorrectly that they no longer do! SR520’s current acres of right of way across Portage Bay came out of Montlake Playfield Park holdings which now lie on both the north and south sides of WSDOT right of way.

B. The argument that the land became submerged and therefore useless is false. It was always submerged. And its “submerged” value was recognized when concern arose about the amount of the lake’s surface being taken over by moorage and houseboats. This land was valued as preserving open water and valuable shoreline at the time of its acquisition in addition to its offering space for playfields.

C. While some of the ball playing area and track was expanded using fill, the objective was to increase the height and thereby drainage of the fields which were well inside the bounds of the wetlands. The actual wetland edge of the park remained unchanged according to park history. In any event filling of wetlands ceased everywhere, stopped some 50 years ago with the recognition by both citizens and the park department that all Wetlands had value. When Forward Thrust funds were used in 1968 to expand Montlake Playfield Park to the west, preservation of wetlands for wildlife was part of the master plan for that expansion, a mission being enhanced by years of work on the South Portage Bay Park area, planting more native vegetation and creating access paths and a canoe and kayak launch site.

D. The argument that these lands are not used is a SDEIS deception, as is the SDEIS’ failure to show these parklands on the parkland maps provided of the area (only solid ground ownership is shown in most depictions). The water portion of the park is used extensively both visually by thousands of people per day, and on the surface by various forms of water recreation, and by wildlife.

E. The SDEIS paragraph quoted above argues that the Seattle Park Department thinks only of the solid land area of Montlake Playfield Park as being park land. It quotes the Park Department’s 27 acre size statement as covering only the solid ground area; seeking to imply that the Park Department does not consider significant the submerged land ownership. However, my preliminary calculations indicate that one can only describe the park as being 27 acres by including the 6.8 acres which the SDEIS claims are the non-usable submerged lands. I believe that Seattle Parks has included the underwater area in its statement of the Park’s size. (I am seeking confirmation from the Park Department.)

C-023-050

The historic and continued efforts of the Park Department to facilitate preservation and access to these areas, with the creation of South Portage Bay Park and long planned improvements to Montlake Playfield Park, clearly demonstrate the "submerged lands" deserve 4F status.

F. The SDEIS is disingenuous at best in not describing in the Discipline Report on 4f the acreage of additional right of way that WSDOT will need to take from Montlake Park for new Right of Way. The taking of just one acre would legally require full review (See http://environment.fhwa.dot.gov/4f/4fmparks.asp) A comparison of Existing vs. Planned ROW is shown in Attachment 6 Draft 4f/6f Evaluation, Exhibit 28, Effects on Montlake Playfield. It is easy to see that more than an acre of land will have to be taken under Option A. A different part of the SDEIS implies the permanent taking will be on the order of 2.3 acres (See Discussion in Item (13) Montlake Playfield Park above.)

G. The SDEIS does not discuss the adverse impact increasing the height of the east half of the Portage Bay Bridge will have on Montlake Playfield Park. The current bridge is easily blocked by trees, and the sound transmission is much less than will occur at the planned new height. Further, there are no commitments to either sound mitigation for the new bridge, using sound walls or quiet pavement. It is a significant failure for the SDEIS not to quantify this adverse impact on Montlake Playfield Park, a serious 4f impact.

C-023-051

Notes on the proposed lid Tenth Avenue to Delmar

Care needs to be taken to manage the south to north transition of the lid, the transition from 11th and the end of Federal Street and the higher portion of the hill near 10th Avenue as the ground slopes to Roanoke Street. There is no discussion of the south to north transition issues the Tenth Avenue to Delmar lid will present although one of the objectives of the lid, besides noise containment, is described as bridging neighborhoods otherwise cut apart by SR520. The break is most significant north-south because SR520 lies in an East-West trench with few cross over points. Making that north south connection by using a lid to connect Federal Street to Roanoke Park, for example, would be very valuable.

Unfortunately, the SDEIS describes the Tenth to Delmar Lid and all other lids as at the discretion of WSDOT, not mandatory remediation. Further, the picture shown is a lid over the actual excavated area. This 1950's style design would leave walls on the north and south sides which would collect graffiti and ivy and areas for the homeless to occupy. It is critical that the importance of the connection of Roanoke Park to Interlaken be recognized so that the lid proposed is, A. Seen as mandatory, and B. Seen as requiring lid design integrated with wall design such that the walls will be able to hold fill stacked up against them (Meaning trees can be planted at the edges of the lid and the walls will disappear at surface level because they have been backfilled.), and C. that fill being removed as part of the construction be reserved for placement against those

C-023-051 walls so that the hillside can be contoured as it was before SR520 was built. Done well, this will require negligible additional cost and will create usable recreation area equivalent to the current area of Roanoke Park. Keeping the fill near the site of excavation offers the potential to reduce adverse hauling impact on adjacent historical neighborhood as well as reducing excavation cost. Lids have weight constraints such that they are basically tree free. Tying the lid into the hill on an integrated basis will permit trees to grow near the edges of the lid and create a wonderful landscape as well as path transitions.

C-023-052 A major failure of the SDEIS is that it fails to acknowledge that under the No Build Alternative the landscaping would be preserved and the degradation of the adjacent Park areas by an expanded highway system would not occur. If the decision is to destroy what we have, then that destruction on and off right of way should be identified. That in turn should create a mitigation mandate, not a WSDOT option to mitigate which is what the SDEIS now describes.

C-023-053 Notes on the Bagley Stair Trail
This links along the remains of undeveloped Roanoke Street (9) immediately north of SR 520 to Boyer/Street. While this strip was once a street, it has been used since 1908 as a treed parkland, linking Roanoke Park to our waterfront parks using stairs and paths built 100 years ago and in continual use since! (See Map: Improvement of Shelby Street et.al. Grading etc. Local Improvement District No 1895, Approved by The Board of Public Works March 1908.) Stairs and pathways were constructed from 11Th Avenue at Bagley Park down to 12Th Avenue and its short leg north-east to Boyer, and also straight east to Boyer. (The stairway adjacent to Boyer was blocked off by a retaining wall on Boyer when SR520 was built and that last direct-to-Boyer section of the path from 12th Avenue along Roanoke Street fell into disuse. The community would like to see is that connection reinstalled.

C-023-054 (Letter 5)
Dear Governor Gregoire,

We are opposed to Plan A as described in the SDEIS:

I feel it is important to share with you our personal story in order to attach a family, a face, and a life to the decision the state is making purely on budgetary considerations. There appears to be no recognition for the people in our community or for the generations to come.

On August 5th 2009, our son Declan was born almost 6 weeks prematurely. Please see the attached photo. He spent close to one month in the NICU at Swedish fighting for his life. On an average day he would stop breathing up to 8 times and needed intervention. He was intubated, on a respirator, and feed by gavage. He will not be able to tolerate the air quality that will prevail in our

C-023-054

neighborhood because of Plan A's short term and long term effects. The dust, particles, and unknown airborne elements during construction pose a huge risk. The general air pollution and emissions will be devastating. Declan has had breathing issues since birth. We simply cannot knowingly put our son in harms way.

We bought our home in 2005. In it is our life savings. We have 5 children and at the time considered this our best investment for our children and desired the quality of life Montlake offered them. My Husband and I made the very difficult decision to put our house on the market 3 weeks ago based on the extreme health related issues Plan A guarantees for our son and other children as well. We had to list our home at a price that is less than what we paid for it. We will not be able to sell it unless we take a huge financial hit. Every single realtor and potential buyer loved our home but used terminology such as "Black Plague" to describe our situation, based solely on the 520 initiative. If the state can give the University of Washington $500 million for inconveniences, then they can easily buy us out. Please let me know how to proceed to make this happen before construction begins. For those who elect to stay, we request compensation for lost property value, retrofitting of windows and an air filtration system to mitigate the harmful effects this project will bring.

It would certainly be a gesture of good faith and create positive press to a neighborhood devastated. A class action suit is inevitable unless you exhibit the leadership and take quick decisive action to do the right thing for the people you govern.

All construction options pose short term issues and disruption. The Pacific Interchange option and iterations of that would have a long term positive outcome for us, the city of Seattle and the state. I would think that simply retrofitting the 520 bridge would still be on the table as a viable option. At the very least until the state can afford to do this project the right way.

We are vehemently opposed to Plan A because it destroys the historical Montlake Bridge and surrounding homes, encourages 7000 cars daily on Montlake Boulevard, is designed with insufficient lids, and will ultimately not improve the congestion merging onto interstate 5. I know you are aware of all the logistical reasons this project does not work but I thought it was important to marry a human story with the tragic story of the 520.

I am also emailing this to Mr. Steve Ballmer so that he can better understand the harm that was done by one of his employees who lacks the understanding of this project and ignited an "us vs. them" scenario. Please see attached. I believe Mr. Smith is using his position to unfairly sway the masses to advocate for an unjust plan.

C-023-054

This letter comes to you in order to illustrate the health risks that are eminent and potentially deadly for 1 of your youngest constituents. For what it's worth, my husband is a police officer and puts on a uniform everyday to serve and protect you, Mr. Ballmer, and the people of our state. I look forward to hearing from you on how you will uphold your oath to serve and protect us.

However dire our situation is, I understand that your job is to make decisions that benefit the majority. So please review with renewed concern how most aspects of Plan A are not only harmful to my family, but to the rest of my community. I would hate to see Montlake ravaged by an ill conceived plan and a short-sighted government. I would hope you feel the same.

Best regards,

Michele Love- Kane
1879 East Hamlin St.
Seattle, WA 98112

From: Brad Smith (LCA) **His email is:** bradsmi@microsoft.com
Sent: Tuesday, February 23, 2010 10:11 AM
To: All Employees of MS in Puget Sound
Subject: Replacing the 520 Bridge

Only rarely do we reach out to employees and provide information on public policy issues, but in this instance we felt it was appropriate to do so.

C-023-054

One of Microsoft's top public policy priorities during the current legislative session in Washington State is the timely replacement and expansion of the SR-520 bridge across Lake Washington. More than 5,000 Microsoft employees use this bridge to commute to and from work each day. The current bridge is almost 50 years old, has twice as many vehicles using it as intended, and is overdue in its need to be replaced.

During the next couple of weeks lawmakers in Olympia will decide whether to continue to move forward with the work to construct a new bridge. Three years ago, the legislature approved a replacement design calling for a six-lane span – four general purpose and two HOV lanes – funded in part by state revenue and in part by tolls. Now the legislature will decide whether to start construction. While some work still must be done to finalize a compromise on the span's western configuration, we believe it's important to keep the project on track.

Because the issue is at a critical juncture, we're taking the unusual step of asking for your help in encouraging the legislature to keep the 520 bridge project moving forward. And even if you have a different view, as always we encourage everyone to share their views with their elected representatives. To learn more about the issue and how you can follow up, please click here: (http://520bridge.posterous.com)
Thanks.
Brad Smith
Senior Vice President and General Counsel

C-023-055

(Letter 6)
Summary of Development in the DPD record for The City of Seattle filed by 2009, within 3.6 miles of SR520 Interchange- Affecting east/west travel, and north/south travel on Montlake Blvd. Omitted in the SR520 SDEIS Cumulative effects Discipline Report of 12/09

1. Permit #3007521 Master Plan Expansion for Seattle Children's Hospital
   4800 Sandpoint Way NE, Seattle , WA 98105
   - submitted (corrected) on 08/03/07
   Proposed expansion of 1.3 million additional square feet
   by 2030, adding 400 additional patient beds and 1200 staff
   Parking stalls to increase to 3100 on campus
   Location: 2.0 miles from SR520 interchange
   Status: Seattle City Council Ruling expected April 1, 2010-construction anticipated 07/31/10

2. Permit #3008972 University Village Shopping Center Expansion
   4500 25th Ave NE, Seattle, WA 98105
   - submitted on 07-29-08
   Proposed expansion of 105,000 square feet of retail and restaurant space and additional 702 parking spaces

C-023-055

Location: .8 mile from SR520 Interchange
Status-in for permit approval-construction by 12/10

3. Permit #3009681 QFC retail and residential units expansion
2746 NE 45th Street, Seattle WA 98105
-submitted on 05-22-09
Proposed expansion of 31,000 square feet of new retail development and 350 new residential units and 700 new parking stalls
Location .9 miles from SR520 Interchange
Status-in for permit approval-construction by 3/30/11

4. Warren G. Magnuson Park recreation development
Permits #3010260 (08/17/09), #6203388 (5/29/09) and 36223077 (08/04/09)
City of Seattle Parks and Recreation-approved 06/2009 and is under construction
7400 Sandpoint Way NE, Seattle, WA 98115
Arena Sports facility-80,000 square feet- 500 daily users projected
Tennis Complex-10 tennis courts and Clubhouse-100 projected users
Soccer and new lighted ball fields-12 fields X average 24 players= 288 users
North Shore Building #11- office/ daycare/ restaurant development 25,000 square feet projected 120 daily users

Location is 3.6 miles from SR 520 Interchange Status-construction <u>in progress</u>-anticipated completion by 12/2011

Total development is approximately 1,600,000 square feet, with increased daily vehicular trips of 3808 additional on Montlake Blvd (conservative estimates)
(sources:Seattle Children's Hospital 1200, Retail 2100, and Recreation 508 trips)

C-023-056

(Letter 7)
SDEIS Comment Summary
Chapter Report: Chapter 2. Alternatives

Chapter 2 Alternatives	2.11	Exhibit 2-6	Tony Oppermann	WSDOT claims the new highway will only be six lanes wide, but the Exhibit shows a diagram **9** lanes wide for Option A and **8** lanes wide for Options K & L.
"		Exhibit 2-9	"	WSDOT claims the new highway will only be six lanes wide, but the Exhibit 2-9 shows Option A on this Exhibit with a footprint of **<u>14</u>**

C-023-056

				<u>to 18</u> lanes wide, **255 feet wide! Four times the present width right in the middle of the residential area!**
"		Exhibit 2-10	"	WSDOT claims the new highway will only be six lanes wide, but the Exhibit shows from **<u>11 to 14</u>** lanes going through the Montlake area. **This is too large a discrepancy to allow WSDOT to proceed without major reductions in highway widths.**
"			"	General comment on Chapter 2. The present SR 520, four lane roadway is 60 foot wide or 15 feet per lane. Six, 12 foot lanes plus a six foot shoulder for both east and west bound roadways could be built on an 84 foot wide bridge. The present proposed roadway is 31 foot wider than necessary (at 115 feet). This width far exceeds the proposed, or claimed width of a six lane replacement. The proposed bike/pedestrian lane should be reduced from 14 foot to a more reasonable 8 foot width or about the width of the Burke Gilman trail as the use of the trail by pedestrians will not come near the foot traffic on the Burke Gilman.

C-023-056

(Letter 8)
SDEIS Comment Summary
Chapter Report: Chapter 8: Other Considerations

Chapter 8 Other considerations	8.2	10-12	Oppermann	The existing four lanes of SR 520 are on a sixty foot wide roadway. A six lane roadway could therefore be built on a 90 foot bed (fifteen feet per lane). The WSDOT is telling us that the new bridge will 'only' be six lanes but they don't tell us that the roadway will be **12 to 14 "lanes" wide**. The true amount of surface area and actual widths should be delineated and shown so the public can see the real inpact to the area.

(Letter 9)
Discipline Report Comment Summary
Discipline Report: Water Resources

Report	Page #	Line #'s	Reviewer	Comment
Water Resources Discipline	3	Exhibit 1	Tony Oppermann	Not listed that should be: Jurisdiction: WA State Dept. of Fish and Wildlife. Regulations: Hydraulic Code of Washington. Purpose/Intent: Permit to "use, divert, obstruct or change any of the salt or fresh waters of the state.
"	8	1	"	Many design options have been proposed by the community, clear up to the K, L and M level. The so called "preferred option" is still the WSDOT plan with a + suffix. Since Alternative A is the original WSDOT design, I feel that WSDOT has not made an honest effort to consider any option other than their own.

C-023-056

“	8	Paragraph 2	“	Project Alternatives. This SDEIS does not really evaluate the real current alternatives!! It should address the A+ and the M alternatives. Much of the information in this document has already been reviewed and determinations made to either include, modify or delete elements of those previous alternatives. I would like to see a document that address the A+ and M alternatives.
“	10	Paragraph Seattle	“	Removal of the SR520 bus (flyer) stations will just throw X number of buses into the mixmaster at the interchange of SR 520 and Montlake Blvd. Montlake Blvd. between Pacific St. and SR520 will become a huge bus and vehicle parking lot! And will add several minutes to the bus commute from both the eastside and the University into Seattle and also the return routes. Flyer stations should be kept on SR520 and/or modified to provide service for people going to Seattle, to the north (I-5) and into the University area at Montlake.

C-023-056

"	11?	Exhibit 6	"	The basic problem here is that you have a lot of traffic going north and south intersecting with a lot of traffic going east and west. Alternative A(+) keeps all this traffic in **ONE** location, Montlake Blvd. from Pacific Street to SR520. A giant mixmaster! Options K and L (and M) dilute this mess (thus decreasing the problem) over three locations and allows individuals options that will allow them to get to where they want to go without dealing with ALL the other vehicles (including buses that no longer stop on SR520 but have to go into the mixmaster too).
"	12	5-6	"	A transit only off-ramp from west bound SR 520 would do nothing to help traffic going north on Montlake Blvd. If west bound traffic wanting to go north on Montlake Blvd. (a large volume) is required to exit in the Arboretum, the traffic in the neighborhood of the proposed off ramp will be horrible – likely service level FFF from the day it opens. (Also, the affect on a beautiful old residential area would be devastating.) There would likely be a steady load of traffic on Lake Washington Blvd. during daylight hours from the exit to Montlake Blvd. and then on the Blvd. to the north and south.

C-023-056

“	12	8-10	“	Another bascule bridge in the middle of this mixmaster would only serve as a parking area for the increase in traffic that will occur in this area, not to mention the destruction of an historical Seattle view point and the loss of two fine homes. Again, traffic would not flow any faster or efficiently because of the intersection at Pacific Ave. and the load of traffic from the bascule bridges to SR 520.
“	12	24-30	“	A suboption to A proposes, essentially to move the existing on and off ramps to and from SR 520 to the west. This is a horrible proposal!! The existing ramps should remain in the same location as present (and rebuilt in the same location if necessary). Placing these ramps to the west, as shown on some plans, puts them virtually in the front yards of several very fine, older (historic) homes. The present location is in the Arboretum which is not ideal but creative mitigation plans (landscape and vegetation) can be developed that would reduce the present inpact on the site.

C-023-056

"	12	30-35	"	A suboption to A proposes an eastbound onramp to SR 520 from the Montlake Blvd. bridge over the highway into the (left hand) HOV lane. Left hand on and off ramps have always been traffic headaches (e.g. the Mercer St. off ramp from northbound I-5). This would also require installation of another traffic light in an area already burdened with too many.
"	13	22	"	A suboption for K would construct a 'right turn only' off ramp from eastbound SR 520 to southbound Montlake Boulevard. After casual observation of this intersection for 40 years, it appears this would be unnecessary and would certainly not be cost beneficial.
"	13	35-38	"	"Suboptions for Option L would include adding a left-turn movement from Lake Washington Boulevard for direct access to SR 520 and adding capacity on northbound Montlake Boulevard NE to NE 45th Street". There is no explanation or diagram that I could find that explains this statement.
"	77	12	"	Why dissolved zinc would increase only in Options K and L is not explained.

C-023-056

"			"	General comment. Options K, L and M all provide relief for traffic flowing through this area. They siphon off some of the vehicles from the main heavy flow and allow them to bypass the interchange at SR 520 and Montlake Blvd. thus avoiding having to deal with every vehicle that travels through this intersection. Option A+ pours all the traffic from all directions into one small area which can only slow everything down.

C-023-057

(Letter 10)
Comments regarding the Visual Quality and Aesthetics Discipline Report contained in the SR520 Bridge Replacement SDEIS

The Visual Quality and Aesthetics Discipline Report (VQADR) begins with the statement that "The construction and modification of our roadways, which are publicly owned, can considerably affect the quality and character of the landscape". Living as we do in one of the most beautiful natural settings encompassing a metropolitan area, this statement should remind us, as we contemplate building one of the area's largest and most expensive physical structures, that design quality and sensitivity to the landscape should be paramount concerns.

As a Montlake resident and former director of the Henry Art Gallery at the University of Washington, I have watched with interest and trepidation as various options for SR520 have been explored. As a member of the Seattle Arts Commission for 6 years, I also represented the Commission on the Light Rail Review Committee. This committee reviewed the station designs as proposed by Sound Transit, providing input on aesthetics and design issues. As is the case with SR520, the design parameters of the light rail stations were necessarily constrained by engineering requirements. However, Sound Transit wisely sought to balance engineering concerns with aesthetic interests and conducted design competitions for the individual stations. The result is a series of stations that are functional and beautiful.

While the VQADR provides a dispassionate and lengthy analysis of the effects of the bridge options on the visual quality and character in the 520 corridor, the conclusions (like the photographs in the illustrations) are made at such a

C-023-057

distance that it is, in fact, very difficult to make an informed judgment about the aesthetic impact of the designs. A constructed object of this scale is too large to be considered from a single vantage point and the report appropriately selects numerous vantage points for analysis, using the Federal Highway Administration visual quality assessment method. The problem with this approach is that it neglects, in the end, to consider the design as a whole. If one thinks about great bridge experiences, while in transit or viewed at a distance, it is the design as a whole that registers, something much more than the sum of individual vignettes.

Little in the report suggests that the design of the bridge will be the result of a design competition or other effort to ensure that the team responsible for building the structure, one we will drive on and look at for generations, is concerned as much about the enduring quality of the design, as the enduring elements of the construction. After all the years of discussion, it would be an appalling turn of events to build the floating equivalent of the Alaskan Way Viaduct on Lake Washington. The report's illustrations of a new floating bridge sitting on ten-foot tall columns and extending 22 feet higher than the current bridge (not including sound and view blocking walls) uncomfortably echo the profile of the Viaduct. A positive comment tucked in the report, suggesting that boater's views will be improved by the elevated structure, is a bit like saying that pedestrians on First Avenue in some parts of downtown Seattle have a nice view of Elliot Bay, neglecting the fact that pedestrians a bit farther uphill have a splendid view of elevated concrete.

If Option A is the current frontrunner, there are significant visual quality and aesthetic impacts to be considered:

The expanded breadth of the bridge and the interchange would, as noted in the report, significantly reduce open space and restrict views in the Portage Bay and Montlake landscape units, particularly if sound walls extend the height of the highway and ramps.

The report states: "If the design of the Portage Bay Bridge is noteworthy and architecturally appropriate in terms of style and scale for the setting, vividness and unity would remain high, and intactness could increase. On the other hand, a design that does not consider style or scale may adversely affect visual quality". So, how is this design quality to be guaranteed? Who will champion this necessary design quality?

The negative aesthetic impacts of the massive new interchange are considered in some detail. The lid sounds nice, but unlike Option K, divides rather than unites the adjacent communities. There is not enough detail in the VQADR to visualize the labyrinth of on and off ramps, flyover ramps, and thruway that crisscross the Portage Bay and Montlake landscape units, as well as the lid itself. There are enough cautionary comments in the report to make one uneasy about the potential for a design mess at the Montlake Intersection: intertwined car, bike,

C-023-057

transit and HOV lanes covering a large area and only partially obscured by a lid structure.

The addition of a second bridge adjacent to the historically significant Montlake Bridge is a negative from a design standpoint as the current bridge is appropriately scaled for the Cut and can be viewed from the east and west. A second bridge will block the view from the east and undercut the visual strength of the single historic bridge. The widening of Montlake Boulevard to accommodate thousands of additional cars for the new bridge turns a boulevard into a highway ramp and does severe damage to the visual “intactness” of one of Seattle’s oldest neighborhoods, as well as the transition to the University of Washington.

Well designed bridges do more than go from point A to point B, they marry science and art to create a structure that adds to, not subtracts from, the beauty of the world. Every time we deposit a toll, we will be reminded that we are paying for this structure. Shouldn’t it be a goal for this project that the 520 bridge is worth paying for because it looks good and is a pleasure to cross? The VQADR points out the many beautiful elements surrounding the bridge: Lake Washington, Mt. Rainier, University of Washington campus, and downtown skylines. A well-designed bridge needs to measure up to these surroundings and, perhaps, like the Golden Gate Bridge, become a source of regional pride. The financing of this bridge depends on tolls from commuters, occasional users, and tourists. There is a psychological difference between paying a fee and buying a ticket, the former feels more like a tax, the latter more like paying for an experience. The language of the VQADR is mostly that of “mitigation” (of effects along the corridor) and is strikingly lacking in aspiration for a bridge design that holds engineering and aesthetic interests as equal values. Our goal should be to create a bridge that people will want to cross, not have to cross, because the experience of traveling on the bridge, as well as viewing it from afar, are points of pride for all involved.

Richard Andrews
andr49@earthlink.net

C-023-058

(Letter 11)
Jenifer Young
SR 520, I-5 to Medina: Bridge Replacement and HOV Project
Environmental Manager
SR 520 Project Office
600 Stewart Street, Suite 520
Seattle, WA 98101

Dear Ms. Young:

We thank the Washington State Department of Transportation for the opportunity to comment on Supplemental Draft Environmental Impact Statement (SDEIS) dated January 22, 2010 for the SR 520, Interstate 5 (I-5) to Medina: Bridge Replacement and High-Occupancy Vehicle (HOV) Project (also referred to as the SR 520, I-5 to Medina project)

We would like to comment on a number of items that we perceive as impacting our property and comment further on impacts to the environment of Portage Bay. We would like to comment on a number of items that we perceive as impacting our property and comment further on impacts to the environment of Portage Bay. Unfortunately in the absence of more construction detail the omissions and lack of specificity in the SDEIS have made it difficult to understand all the potential effects of the project.

Despite the vagueness of the present information about your project, we know enough to have significant concerns. Your project will impact each of our activities for numerous years of construction, and negatively impact our ability to attract and retain members. We will expect WSDOT to mitigate those impacts. We have grave concerns about the permanent impact of the project on our facility and business and we call on WSDOT to work with us to identify ways that such impacts may be avoided.

Queen City Yacht Club (Queen City) understands that the 520 bridge needs attention and is willing to work diligently and in good faith with WSDOT to create a safe and efficient solution to its many problems. If our concerns are considered in moving forward during the design phase we believe that many of the impacts to Queen City can be materially reduced or mitigated. If our concerns are not addressed at the design phase, on the other hand, the impacts to Queen City could be extremely severe, and could place us in a position of having to defend our ability to survive, to both our detriment and the detriment of the project.

BACKGROUND:

We are enclosing our October 25, 2006 SR 520 DEIS Comment Letter, which will provide you with background on Queen City and its concerns with this project.

C-023-058

Queen City is a nonprofit organization founded in 1916 making it one of the oldest civic organizations in the City of Seattle. It purchased its property on Portage Bay in 1934. Our facility consists of our clubhouse building, landscaped grounds, paved parking lot and a marina consisting of three docks containing 230 moorage slips. It is located in part of the Boyer and East Roanoke neighborhoods. It currently has 450 members.

Our business model requires that we derive income from membership initiation fees, annual dues and moorage rents. The moorage facility is not only a critical generator of rental income in itself, but is a significant recruiting incentive for attracting new members, which generates new initiation fees. Similarly, our clubhouse generates important revenue from facility rentals. Our parking lot is important to serve both the moorages and clubhouse activities. In short, each part of our facility works with the other parts and depends on the other parts to keep the club viable as a whole. Physical impacts that disrupt the functioning of one part of our facilities may end up having a disproportionate impact on the viability of Queen City, because what may seem like a relatively minor physical impact, in fact damages the ability of the remainder of the property to function as it should.

OUR PRESENT CONCERNS

Because each of the elements of our property must work in concert with one another, even the temporary loss of any portion of our facilities caused by your project will have a materially detrimental effect on the functioning and potentially the survival of Queen City.

1. ENCROACHMENT ON QUEEN CITY FAILITIES

The State has openly stated, in advance of the comment period for the SDEIS that it has selected Option A+ as the option it will build. The elements of this option are not described or discussed in sufficient detail in the SDEIS and precise information about its elements has been difficult to ascertain. Without the information about the specifics of Option A+ we are hampered in our ability to comment on the draft SEIS, and may not be able to determine what impacts Option A+ will have on the Queen City property until it is too late to provide meaningful comments. We believe this to be a violation of both NEPA and SEPA requirements.

Option A+ adds an additional 7th lane to the Portage Bay Bridge which places the new roadway outside of your current right of way and encroaches on our Dock 3 and possibly our parking lot. This is in contradiction of assurances given by WSDOT during the mediation process that the Portage Bay Bridge will remain within the existing right-of-way. While Queen City can accept proportionate expansion of the physical roadway beyond its current physical footprint, the bridge must remain within the WSDOT current right of way. Expansion beyond

C-023-058

that footprint will encroach on our vital moorage property and thus result in a loss of critical scale in our moorage.

During the Mediation process and in several discussions WSDOT agreed to expand the Portage Bay Viaduct proportionately out from the center line of the current right of way in each direction. The SDEIS document is silent on this agreement. The SEIS must either acknowledge that WSDOT continues to honor that commitment, or disclose the extent to which WSDOT now intends to violate it. On Page 3-14 of the SDEIS describes the construction process for the Portage Bay Bridge describes the building a new bridge just north of the existing bridge then tearing down the existing bridge to build the remaining new portion south of the first portion. This construction method appears to be contrary to our agreements. We are further confused by the description on page 42 of the Construction Techniques and Activities Discipline Report which describes a completely different approach to the Portage Bay Bridge construction process. We request that WSDOT provide specifics on how the construction process can keep the new bridge centerline on the existing center line and how it fits within the existing right-of-way. We request that this description be included in the final EIS and that WSDOT make a firm public commitment to this issue.

2. LOSS OF MOORAGE:

The Project Effects and Mitigation, During Construction, Land Use and Economic Activity Section states that the “boat slips on the South Side of Queen City would be removed during construction” (Page SDEIS Executive Summary).Your report does not make clear how many boat slips will be lost and for how long. It is critical that this information be provided at your earliest convenience to allow Queen City to identify future impacts to the functioning of the entire facility and to assist you in meeting our mitigation needs.

The mitigation “Effects during Construction” Section (Page 42 of the Executive Summary) of the SDEIS acknowledges this temporary loss of boat slips at Queen City and states that this loss would be mitigated through relocation or other options to be identified. In order for Queen City to survive, it is critical that specific information be provided at your earliest convenience to allow Queen City to identify just how much boat moorage will be lost, over what period, and what specific mitigation will be provided. “Other options to be identified” are of course part of what the EIS process is expected to accomplish. But to be adequate, the EIS must in fact identify the mitigation that will be provided. Identification of those “other options” cannot be put off until some later time.

As stated above, the loss of moorage has implications beyond the direct and immediate loss of moorage revenue and the displacement of existing members who currently utilize the slips to be taken. It can have a ripple effect impacting our ability to attract and retain membership and the viability of out facility as a

C-023-058

whole. The impacts felt from this will last beyond the completion of the project and impact our viability for years to come.

3. QUEEN CITY ACCESS - BOYER AND EAST ROANOKE AND VICINITY

Road closures and detours are described in a general manner in your report. Your report states the conclusion that these are “not expected to have a substantial affect on SR 520 operations”. (Executive Summary Page 39) This comment causes us concern. The purpose of the EIS process is to identify and deal with impacts not just to your highway, but also to the community surrounding it. Your conclusion that 520 operations will not be substantially affected by road closures and detours ignores the impacts of the project on the neighborhoods. For the SEIS to be adequate it must disclose not only the impacts of the construction on the operation of SR 520, but also the impact on the operation of local streets that are affected by the construction and the ultimate reconfiguration of access to SR 520.

Your document does acknowledge that local street operations will be affected but provides only general statements on those affects. Access to our facilities is critical for our continued public and member operations. Your report does not provide sufficient detail to permit an intelligent analysis of these effects. For the SEIS to be adequate, it must provide that information, and must describe the mitigation that will be provided to insure that our property remains accessible to our members throughout the construction process and after completion of the project. To the extent that there will be periods when our facility is not accessible, or access is restricted, we need to know when those periods will be, and what mitigation will be provided as soon as possible so that we can make plans to protect our viability

4. TRANSPORTATION:

Queen City members and the public rely on reliable transit and the current lack of congestion to access our facilities. It appears that Boyer Ave. E. is a potential haul route, which may substantially change the accessibility of our facility during the construction period. The SDEIS notes that construction staging and schedules have not been determined and that WSDOT will continue to coordinate with local and regional transit authorities to determine haul routes and traffic detours. (See exhibit 6.1-3, page 6-6). To insure the continued viability of Queen City we request that WSDOT include us in those discussions and that the final decisions become a part of the construction bid documents issued by WSDOT to bidders.

It is possible that during construction Queen City members will need to rely on remote parking and reliable transit to access our facilities. The SDEIS notes that construction staging and schedules have not been determined and that WSDOT will continue to coordinate with local and regional transit authorities to determine

C-023-058

haul routes and traffic detours. (See exhibit 61.3 – page 6-6). To insure the continued access to Queen City during construction we request that WSDOT include our participation in those discussions and that the final decisions become a part of the construction bid documents issued by WSDOT to bidders.

5. NOISE:

During construction: mitigation is required for residential areas if exterior noise levels are greater than 67dBA based on federal Noise Abatement Criteria. Pile driving and demolition of the Portage Bay Bridge will exceed 90 dBA within 200 feet of our club. (See exhibit 67.3 - page 6-70) Pounding will occur between 7AM and 7PM except Sundays and holidays from between 3 and 6 months. After Construction: The City of Seattle maximum sound level between 7:00am and 10:00pm is 55 dBA.

The SDEIS states that these levels will be exceeded and that noise measures must be considered. However, the SDEIS is vague on specific requirements or mitigation measures to be taken either during or after construction. We request that the those options found in the “Noise Reduction Strategies Expert Review Panel Report Sept. 2008” become a part of the final EIS and included in the construction bid documents issued by WSDOT to bidders of this project.

6. VIBRATION:

All of the options call for the construction of temporary bridges using vibratory hammers pile driving equipment. The discussion of the affects of these operations and the mitigation procedures associated with them are incomplete. With all the pile driving and cofferdam dewatering so near to Queen City docks there is likely to be movement and settlement of our pile support structures

Insofar as we are aware, WSDOT has done nothing to ascertain whether the Queen City docks and pilings could be damaged or collapse as a result of the impact.

We request that procedures for mitigating the affects of vibration be addressed in the final EIS and become a part of the construction bid documents issued by WSDOT to bidders of this project.

7. PORTAGE BAY

The SDESI is deficient in its analysis of the impact of your project on the historic and recreational use of Portage Bay, Union Bay and the Lake Washington Ship Canal by the boating public. It fails to recognize their role in maritime history and their status as premier recreational resources for swimming, boating, University crew training, sailing lessons, private canoes and kayaks as well as power boats, bird watching, nature walks, and access to the several marinas. The proposed

C-023-058

expansion of 520 will take property from Portage Bay, and will also degrade the public's ability to enjoy the remaining property, because of the added height and doubling of bulk, threatening shadows, and noise. We request that WSDOT include analysis of the impacts of the project and mitigate the impact of construction to insure the continued use of these recreational resources.

8. OPENING DAY OF BOATING SEASON

We ask that the EIS pay particular attention to eliminate interference with Opening Day of Boating Season activities in Portage Bay, Union Bay and the Montlake Cut. Queen City welcomes the opportunity to work with WSDOT to mitigate conflicts with this International event. In addition, boating activities by Queen City members and public participants occur during the entire year and should also be considered and the impacts on boating activities be mitigated to the extent possible.

9. ENVIRONMENT

As noted on page 58 of the SR 520 SDEIS Executive Summary there will be increased shading caused by temporary work bridges in Portage Bay during construction and the wider permanent bridge structure creating a loss of salmon habitat. The report refers to Best Management Practices to control the "during construction shading" but needs to be more specific on control measures to prevent an increase in areas providing refuge for predators and non native animals.

The SDEIS omits an analysis of containment of dust and debris falling and blowing into the lake, on our boats, our docks, and our property?

The SDEIS does not discuss the issue of limiting the inadvertent transplanting or transporting of non-native invasives (milfoil or eulodia) within the Bay. Queen City in a joint program with Seattle Yacht Club has worked diligently and at our own expense to eradicate invasives and improve the aquatic habitat. We are concerned that your construction project will lead to a suspension of this program leading to a re-emergence of the invasives.

The SDEIS does not discuss Bay depths, silting and disturbance likely to be caused during construction operations which may cause the displacement of bottom mud and possibly contaminated substances which in turn could lead to new shoaling of portions of the Bay thus, limiting its recreational value and its role in marine navigation. The Final SEIS needs to discuss this and needs to disclose the mitigation that will be provided to prevent displacement of bottom mud.

The SDEIS is not specific in its discussion of alternate means of construction such as the use of derrick barges to reduce or eliminate reliance on temporary

C-023-058

work bridges. An analysis of their use must be included in the final EIS and included construction bid documents issued by WSDOT to bidders of this project.

10. 1966 DEPT. OF TRANSPORTATION ACT AS AMENDED IN 2005

The project takes land from numerous publicly owned parks and recreation areas. Section 4f of the 1966 Dept. of Transportation Act as amended in 2005 requires all transportation projects requiring the use of publicly owned parks, or recreation areas or wildlife areas, can be approved only if there is no feasible and prudent alternative to using that land and if the project is planned to minimize harm to the property. The SDEIS has acknowledged that Montlake Playfield Park as having 4f status but has failed to acknowledged 4f status and review of the substantial taking of other parklands, interfering with their use for wildlife and recreational purposes both on water and on land. The SDEIS also fails to prove that all reasonable alternatives have been evaluated. The SDEIS also fails to recognize additional protection provided under Section 6f for certain areas where federal funds have been used to create an amenity (such as the Arboretum Waterfront Trail) regardless of the land on which it resides.

11. ADEQUATE ANALYSIS OF OPTION A+

As noted elsewhere, WSDOT is on record as having already selected a 520 design known as “A+”, even in advance of this SDEIS. The SDEIS’s reference to this option is inadequate. We believe this to be contrary to the purpose of an EIS. The public has the right to know and understand the design and its implications. We believe that the law requires that WSDOT study the actual design to identify its impacts and to identify mitigation. This has not been done and we believe that this makes the report fatally flawed.

In summary, QCYC recognizes that the SR 520 bridge replacement is necessary. It will also have potentially profound impacts on the Montlake area and Portage Bay both during construction and after it is completed. Without careful planning, it threatens the continued viability of QCYC. NEPA and SEPA require that before beginning a project with significant adverse environmental impacts, the agency in charge disclose those impacts and describe the mitigation to be proposed. We recognize the challenge that presents for WSDOT, but the fact that the project has so many significant adverse environmental impacts is not a reason why the environmental disclosure can be less than what NEPA and SEPA require; to the contrary it is a reason why the disclosures must be all that NEPA and SEPA require. We appreciate the opportunity to review and comment on the SDEIS and have a continuing Interest in working with WSDOT to resolve the issues.

C-023-058 Sincerely,

Ed Jennerich
Commodore, Queen City Yacht Club

ENCLOSURES:

Queen City Yacht Club October 25, 2006 SR 520 DEIS Response Letter

C-023-059 **Reviewer:** Robert E. Hayden, Ph.D.

Section: Social Elements Discipline Report

Parenthesis ( ): These are my comments for particular points.
X/: These are comments that I make periodically throughout this report.

Page/Comment

2/Mentions Montlake and U. District neighborhoods being impacted. (What effect does construction have on the U. District? Doesn't mention Roanoke. Confusing the U. District with the UW).

C-023-060 **3/**Mentions lids in Montlake. (What lids?)

C-023-061 **4/**Says that project will not create physical impediments to make it more difficult for residents to access community services. (What about having to cross more lanes of traffic and a further distance to access buses using 520? Also second Montlake Bridge will impede traffic even more especially since no more capacity will exist on either Pacific Street or Montlake Blvd. North Pacific Street).

C-023-062 **4/**Says that project will improve travel time for fire, medical, police, and other public services through the corridor. (How?)

C-023-063 **8/**Mentions interchange options in Montlake and UW area. Says nothing about the U. District.

C-023-064 **9 Diagram A**/Shows Westbound to Northbound Transit only ramp with no lid. (How do carpools exit 520?)

C-023-065 **16/**Under Phased Implementation, lids will be deferred. Says will develop and implement all mitigation to satisfy regulatory requirements. (Not what will be needed.)

C-023-066 **19/**Study area only within 1/2 mile of 520, except bulge north at UW (15th Ave).

C-023-067 **23/**Label Laurelhurst as on West Side of Union Bay. (Wrong side).

C-023-068 **30-32/**Community cohesion is not discussed, just describes the area.

C-023-069 **32/**Population characteristics only address immediate vicinity: Only used Montlake and McGilvra Schools as comparisons, and (omitted Seward School).

C-023-070 **34/**Parks are incomplete and contain incorrect information: Lists Ship Canal Waterfront Trail as a paved pathway (when in fact only a portion is paved and only accessible by stairs or along gravel path). (Omitted West Montlake Park completely).

C-023-071 **35/**Says that recreation areas allow residents to connect socially, (but doesn't address Montlake Blvd. disconnect).

C-023-072 **36/**Says that 5 schools are in the study area, (but excludes McGilvra School, which they used earlier as a demographic characteristic comparison).

C-023-073 **40/**Speaks about transit, (but not about connections, nor mentions the Montlake Bridge and the problems associated with it being raised).

C-023-074 **X/**Did not mention anything about the yacht clubs: SYC or QCYC, boats, and the houseboats in Portage Bay. Also did not say anything about the Hamlin and Shelby neighborhoods being cut off from the rest of Montlake, but did say the Hunts Pt. is cut off from the rest of Medina.

C-023-075 **47-48 Exhibit 14/ (**Potential detour routes are highly questionable.)

C-023-076 **50 Exhibit 16/**Haul Routes will be along Montlake Blvd, Pacific, 15th, and 45th, (problem is that these roads are in gridlock 6 hours per day. Should force trucks to use 520, since WSDOT is not doing anything to improve the traffic in the Montlake area during or after construction).

C-023-077 **51/**Say that no effect on relocation of any community services or changes in service area (but omits any impact on the yacht clubs.

C-023-078 **52/**Says that detour routes may result in traffic congestion. (This is an understatement).

X/Lake Washington Blvd. ramp closures during construction will make Montlake Blvd. nonworking. A standstill.

56/North Capitol Hill Detour route will not work due to the steep grades on residential streets (They should build a temporary bridge over 520 first. Bikes will not be able to go up 11th, and pedestrians and disabled persons will find the route difficult as well.)

C-023-079 **57/**Say that Portage Bay construction efforts will be the same for all plans. (But should be less for K and L because of smaller footprint through Montlake.) Noise levels will be high within 1000 feet of pile driving, up to 80 dBA which is the equivalent of a garbage disposal.

C-023-080 **59/**No construction related effects are anticipated for schools, social institutions or government facilities in Portage Bay/Roanoke (excluded QCYC).

60/Construction activity in Montlake will last from 45-78 months.

C-023-081 **61/(**They need a way to mitigate the pile driving on the Portage Bay viaduct before the noises are made. Closure of the west bound Lake WA Blvd. ramp will pile cars onto Montlake for up to 2 yrs, but say that they will put something in place that will help minimize the delays, (however in the Transportation Discipline Report it just states that it will not effect traffic on 520, and it will maintain the Montlake Westbound ramp exit at a grade E throughout the construction process (Grade F is gridlock).

62/Option A Montlake Blvd. 45 months of noise, dust and traffic congestion including new bridge and up to 90 trucks per day.

64/Bill Dawson trail closed for up to 3 years, and Arboretum Waterfront Trail closed 30-54 months.

C-023-082 **65/**Community services in Montlake will be effected. Says that school kids from North Montlake will find that it is harder to get to school. Says that Montlake's Seattle Public Library will not be impacted by additional traffic congestion associated with the closure of the LWBlvd ramps. (What they mean is that the increased traffic will not be noticeable since the area is already at a standstill). (Also they do not say anything about the effects on the SYC).

C-023-083 **68/**Longer travel time for students who use 520 and Montlake Blvd. to get to and leave school. Says that there will be no additional travel time for option A. (How so, since they will not be adding capacity to roadways North or West of the Pacific St.

C-023-083 interchange, yet they will be dumping two more lanes of traffic from the South to this point).

C-023-084 **74/**Says that transporting pontoons to Lake WA will have no effect on social elements because no social elements are located in water bodies (excluding the SYC, QCYC, houseboats, Aqua Verde Kayak Rentals, and all other boats in Portage Bay). Says that it will temporarily effect recreational users in the Montlake Cut. (What about the impact of raising the Montlake Bridge for each pontoon to pass under?)

C-023-085 **X/**Study does not address the issue of the raising and lowering of the Montlake Bridge, and what impact a second bridge will have on the neighborhoods and all the social elements connected to this element.

C-023-086 **78-80/**On Community Cohesion the study says that the footprint of 520 will be as narrow and low as possible. The project will not negatively effect community life, persons, groups, or impede access for those who live and work in the area. Says that project would result in no noticeable change in air quality, and says that lids will bring communities back together and art will be incorporated into the design of the lids.

C-023-087 **80/**Noise modeling indicates that the project would result in beneficial effects on noise levels (What the…?) (And doesn't include the yacht clubs as effected elements.)

82 Exhibit 23/Number of residences where noise levels exceed the NAC=Noise Abatement Criteria in Montlake north of 520: Existing 37, No Build 47 (Do not say why this number would increase. Why would this increase if nothing were built?), 6 Lane Alternative 28 (Do not say why this would decrease).

C-023-088 **83/**Says project would improve travel time for transit, carpools, and vanpools (not SOV's Single Occupancy Vehicles).

84/Says that switch to more HOV's would reduce congestion for fire, emergency vehicles, and police (but still could have as many or more SOV's because of higher capacity to exit onto Montlake). Says that project does not result in any negative changes to pedestrians, bicycles, and transit facilities.

C-023-089 **87/**No effects associated with any community service or transit facilities in Portage Bay/Roanoke (omit QCYC).

C-023-090 **88/**Will remove one house in Montlake. (Which one?)

C-023-091 **89/**Says that taking 2 houses for Montlake Bridge will not effect community cohesion (but doesn't mention wider Montlake Blvd and loss of yards and sidewalks and buffer to road). Says that taking gas station will effect community. Says that no negative effects will occur along Montlake Blvd. (What the …?)

C-023-092 **90/**Says that operating the new project will not result in effects on schools, religious institutions, social institutions, or government facilities in the Montlake neighborhood (but omits some of the main social institutions from consideration).

C-023-093 **91/**Says that the project results in improvements in connections between transit improvements and improves transit travel times (but mentions nothing about the raising of the Montlake Bridge). Says that the new bascule bridge will benefit buses by reducing congestion and delay (except when bridges go up).

C-023-094 **92/**Improvements in transit would improve travel time to UW (but says nothing about travel to the University Village or Seattle Children's Hospital, because it does nothing along this corridor).

C-023-095 **X/**No change in transit connectivity to Northeast Seattle, nor a decrease in car travel time along Montlake Blvd. from NE Seattle. How will employees travel to and from NE Seattle along a corridor that has no transit and cars stand in traffic?

C-023-096 **100/**Will use measures to minimize disruptions to access to businesses and properties. Says that they could use barges for construction mitigation.

C-023-097 **103/**Says that they can make transit stops accessible for people with disabilities. (Why have they not done that before?)

C-023-098 **X/**Throughout the report they say that soundwalls are only in option L and can potentially be used under A, but not under K. This is a biased assumption. Not initially included in K because wanted to use quiet pavement instead, but ruling by WSDOT is that quiet pavement is not a proven abatement method because it wears away. So why can't noise walls also be incorporated into K?

C-023-099 **Summary:** The scope of the study area does not take into consideration enough of the area that the new highway will impact. The main issue in Seattle is the movement of cars and people along the 520 corridor, from North and South to and across the corridor, and all those who live, work, and play near 520. Anyone who uses public transit to move through this corridor will find the A+ plan as not making any significant changes from the no build option. Movement to and from the NE section of Seattle will not be enhanced. The University Village and Seattle Children's Hospital will still not be adequately connected to the Montlake interchange. Major social institutions in the immediate area of the project have been omitted from the report: The Seattle Yacht Club and the Queen City Yacht Club are not even mentioned, even though they are the two social institutions most effected by the new and old 520 corridor. The raising and lowering of the Montlake Bridge is not addressed in this study and how it effects the Montlake neighborhood in its current configuration nor in Option A plans for a new Montlake interchange. Without this being taken into consideration the plans are completely insufficient, because 18 hours of our life in this corridor are not being addressed. The assumptions that gridlock in Montlake will continue under Option A as it is with the No Build scenerio should not be acceptable as an outcome for this project, and to say that this will not effect any of the social elements in Montlake is also unacceptable. WSDOT's social elements study is really showing that WSDOT never properly mitigated any of the effects from the original building of 520, and so the new project will have little effect on changing any of the current issues. And because it will change few of the existing conditions, it will thus have little or no effect on social elements in the area.

Olmsted
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Washington State Dept of Transportation
SR 520 Project Team
Jenifer Young
SDEIS Environmental Manager
600 Stewart St., Suite 520
Seattle, WA 98101

April 15, 2010

Re: Comments to SR 520 SDEIS

Dear WSDOT Planners,

C-024-001

The Friends of Seattle's Olmsted Parks (FSOP) are guardians of the historic Olmsted Brothers designed Park and Boulevard System here in Seattle. We are a citizen advisory board to the Seattle Parks and Recreation Dept on issues related to the Olmsted Brothers designed Park and Boulevard System. FSOP is one of the largest local affiliates of the National Association of Olmsted Parks. Our Board is very concerned about your under-recognition, mis-representation and misleading portrayal of Lake Washington Boulevard in this SDEIS.[1]

Lake Washington Boulevard (LWB) is Seattle Parks property, not a City street, and should not be an extended freeway on-ramp. It was laid out in 1903 by John Charles Olmsted on his very first trip to Seattle, design by the Olmsted Brothers firm and construction began in 1904 well before the Montlake Neighborhood was platted (1909), and long before the Washington Park Arboretum was designed (1934). You have chosen not to include it as a potential individual historic property, even after much insistence and documentation from this Board and our representatives. We have been told that the Section 106 reviewers at first "lumped" it in with the WP Arboretum, but in the end they "lumped" it in with the potential Montlake Historic District, neither of which is appropriate. We request that Lake Washington Boulevard from Montlake to Madison be acknowledged as its own separate historic park resource apart from either the Arboretum or Montlake. It is part of a larger city-wide boulevard system that has historic significance all on its own. (See our October 31, 2006 letter to Paul Krueger in response to the DEIS at that time.)

C-024-001 This lack of acknowledgement of Lake Washington Boulevard as a significant Park resource is all the more disturbing because traffic volumes on LWB vary widely between these options and sub-options, as your numbers from Attachment 7 Transportation Exhibit 6-1 and 6-2 show:

	AM	%	PM	%
Option A	900	100	1200	100
Subopt A	1900	211	1800	150
Option K	2000	222	2100	175
Option L	2000	222	2100	175

Increasing traffic by half or more than double is a very significant impact and should be identified! 2 That increased traffic does in fact diminish the character of the entire boulevard, and consequently the entire Park and Boulevard System of this city for residents and visitors, when it is over-run by freeway traffic. LWB is the essential connecting spine of the Park and Boulevard design. Your catalog of affected properties does not recognize this diminished character when LWB is aggregated with either Montlake or the Arboretum. Even your maps mis-label the boulevard section from the curve near E Calhoun St to the curve near E Roanoke St as 26th Av E, which is not correct!3 We hope you will undertake better research before deliberations and presentations for the Preferred Alignment choice and the Final EIS.

C-024-002 FSOP is also concerned about your minimal evaluation of the eastbound bus/HOV on-ramp in Suboption A (A+).4 The southbound Montlake Blvd queuing lane for this on-ramp will encroach on, if not actually carve up, the Montlake Blvd medians, which are also Park Dept property and date from the 1909 AYP Exhibition. This SDEIS has no diagram or plan of sufficient scale to show how this bus/HOV queuing lane, combined with the existing southbound Montlake Blvd 520 queuing lanes, combined with some provision for through traffic, could actually work without over-running the historic Park Dept medians. Your sketchy evaluation also under-represents the additional width in wetland and over water area for tapering-in this bus/HOV lane into the mainline of 520 all the way out to Foster Island. 5

C-024-003 FSOP is also very concerned about your evaluations of the Montlake/McCurdy lid in Option A and Suboption A (A+). You laud the benefits of reconnecting neighborhoods with pedestrian and bicycle paths and you cite the Health Impact Study that supports those ideas, but the lid design in Suboption A has a full-time freeway off-ramp running diagonally across it and an on-ramp dominating one corner. Both of these ramps attract significant volumes of traffic to the boulevard bordering the south edge of this lid. How is such a traffic-dominated landscape the least bit pedestrian friendly or any kind of reconnection for a neighborhood divided by the original highway construction? These LWB ramps of Suboption A also add width to the mainline of 520 for ramp tapering, which means more wetland and over water area taken. You do say that Option A has the better trails and bike paths, but you don't say that Suboption A entirely eliminates those same connecting trails and bike paths.6 We believe you are too quick to say there are no additional effects due to the suboptions.

C-024-004 You have incorporated some of the changes from the recent 520 Legislative Workgroup sessions, but the major and significant differences between the SDEIS Option A and SDEIS Suboption A (A+) should have been in here already and should have had a better airing. Traffic volume differences on LWB in the Arboretum, the negative physical impacts of the eastbound

C-024-004 bus/HOV on-ramp, and the non-functional neighborhood connecting lids, should all get a better explanation in your last presentations and discussions before the Preferred Alignment is identified.

Sincerely,

Larry Sinnott, AIA
FSOP Boardmember and Representative to SR 520 Mediation

Brooks Kolb
President, Friends of Seattle's Olmsted Parks

Footnotes
1) 4-32, 5-46, 5-90, 5-96, Att.6 4f/6f p 29, 37, 43, 48, 59, 60,
2) 4-32, 5-39, 5-46, 5-61, Att.6 4f/6f Exh 52,
3) Exh. 4.6-1, Exh 5.6-3, and all other maps, Att.6 4f/6f p 49, 81,
4) 5-21, 5-24,
5) 5-39, 5-61, 5-78, 5-90, 5-97, 5-136, Att.6 4f/6f p 81,
6) 5-28, 5-42, 5-44, 5-46, 5-53, 5-59, 5-63, 5-90, Att. 7 Transp. 8-32,

Seattle Yacht Club

Established in 1892

April 14, 2010

CERTIFIED MAIL / RETURN RECEIPT #7009 2820 0001 7283 4113

Jenifer Young, Environmental Manager
SR 520 Project Office
600 Stewart Street, Suite 520
Seattle, WA 98101

Re: SR 520 SDEIS

Dear Ms. Young:

C-025-001 This letter presents Seattle Yacht Club's ("SYC"), formal response and comments, including all attachments, on the Supplemental Draft Environmental Impact Statement ("SDEIS") issued on January 22, 2010 regarding the SR 520, I-5 to Medina Bridge Replacement and HOV project (project). We have reviewed the documents closely and believe the proposed project will have direct and indirect impacts on Seattle Yacht Club ("SYC") both during and after construction. In order to mitigate these impacts, SYC request that the additional analysis and mitigation indentified in this letter be included in the Supplemental Final Environmental Impact Statement ("SFEIS").

C-025-002 **1 - SUMMARY OF COMMENTS**

SYC, a not-for-profit Washington corporation formed in 1909, owns and operates a historically designated clubhouse and marina located in Seattle's historic Montlake neighborhood. The SYC clubhouse, marina, and grounds are listed on the National Register of Historic Places (NRHP). This SYC property is located with in the Area of Potential Effect (APE) on Portage Bay and is immediately adjacent to that section of SR 520 that is referred to in the SDEIS as the Portage Bay Bridge ("Bridge"). In addition to our concerns over the impacts to our building and grounds we are particularly concerned about the impacts to Portage Bay and area of traditional significance to the members of our Club.

C-025-003 SYC does not object to the rebuilding of SR 520 between I-5 and Medina. Representatives of the Club have engaged in constructive discussions with WSDOT and its Montlake neighbors about this project for over a decade. Despite the efforts of the community to provided input in the design through the mediation process and other forums, the omissions and lack of specificity in the SDEIS make it difficult to properly assess the potential impacts and adverse effects. The project is presented with indeterminate details on tolling and funding sources and minimal construction detail. None of the State's proposals adequately address the impacts of the proposed project on the neighborhoods immediately adjacent to the Bridge or SYC's historic property.

1807 East Hamlin Street • Seattle, Washington 98112 • telephone 206.325.1000 • fax 206.324.8784

C-025-004 SYC has serious concerns about the proposed project and its expected impact on its historic property and operations. Some of SYC's concerns include:

- Impacts during construction, including limitations of access to the Club via water and land, increased dirt, air pollution, noise, etc.
- The proposed widening and relocation to the north of the existing bridge.
- Environmental degradation such as air and water pollution and noise, among others.
- The impact of tolling on our members' and guests' access to our facilities and adjacent recreational waterfront.
- Degraded north / south travel times from north Capital Hill to Seattle Children's Hospital will inhibit our members' and guests' access to our facility though added congestion of this corridor.
- Interference with SYC traditional cultural activities at our Portage Bay property and adjacent waters.
- The cumulative impacts that degrade our facility such that our membership and revenues from rentals will be reduced.

C-025-005 Omissions and lack of specificity in the SDEIS make it difficult, and sometimes impossible, to properly assess the potential impacts and adverse effects upon SYC. We understand the purpose of the EIS process is to make it possible for potentially impacted parties to better understand how a project will or might affect them. Yet, in this case, where the project is presented in the SDEIS as a group of alternative and competing plans and because each alternate has different road widths, interchanges, access ramps, and heights; with indeterminate tolling and funding; and unknowable construction details due to the decision to pursue a design-build contract; the potential of the EIS process is not realized.

2 - SPECIFIC COMMENTS

C-025-006 **The Bridge Footprint**
The SDEIS does not include any GPS coordinates or other specific markers that allow the project's proposed locations to be determined. All of the proposed options provide for a wider, higher and more northerly positioned bridge carrying more traffic. Each of these bridge features will increase the noise, air pollution and visual impacts on our property. The Bridge, as shown in drawings in the SDEIS, Exhibit 2-6 on page 2-11, appears to come right to the edge of those portions of Portage Bay used for Opening Day and our permanent moorage. More specificity regarding the proposed bridge location is required in order to adequately review and comment. Any new Bridge needs to be located within the footprint of the existing bridge.

C-025-007 **Recreational access to Portage Bay, in the Montlake Cut, Arboretum Waterways and Union Bay**
A significant failing of the SDEIS is the presentation of issues relating to recreation in the Recreation Discipline report. At page 4-28, the full page list of "Recreation Resources in the Project Vicinity" fails to even mention Portage Bay. Portage Bay, the Montlake Cut, Arboretum waterways and Union Bay are vital and heavily used recreational areas for water related activities including swimming, fishing, kayaking, canoeing, and for crew team practices and races. Portage Bay is the central feature of the boating activities of rowing clubs, canoe and kayak rentals, at least three marinas, and the houseboats on the shores of Portage Bay and Lake Union. Portage Bay is used for many events that are vital to the Club's activities including Opening Day, the Junior Sailing program, Special People's Cruise, sailboat

C-025-007 races, and family sail nights. Despite the importance of these activities to the SYC and the community, the SDEIS does not review the impacts of construction on these activities. Nor does it review the long-term impact of any new bridge on the recreational activities after construction.

C-025-008 The failure to speak to the impacts on Portage Bay is also in evidence at page 3-3. There, all of the "typical construction equipment" is listed. However, no barges are included. Without any attempt to describe the numbers, placement, and duration of barges in Portage Bay, it is impossible to assess their impact. Barges located in Portage Bay have the potential of adversely impacting Opening Day, junior sailing programs, small boat racing programs, marina, and restaurant operations. Assessing the degree of impact is impossible as the SDEIS does not include any analysis of how WSDOT will avoid or minimize adverse effects to recreation from construction in Portage Bay.

C-025-009 Additionally, the Montlake Cut is the only marine access from Lake Washington to Portage Bay, Lake Union, the Ship Canal and Puget Sound. Thousands of recreational boat trips through the Cut are made each year. Yet it is also not listed in the SDEIS as a recreational resource. The SDEIS indicates on pages 106-107 that the Montlake Cut and the second bascule bridge will be closed for a period of three weeks during construction. If this closure occurs during the Opening Day time period holding that event would be impossible. The SDEIS makes no mention of scheduling this work to avoid or minimize adverse effects. There may also be long-term impacts to the SYC through increased limitations on the movement of sailboats and other large vessels that are taller the 46'-0" between Lake Washington and Portage Bay with the requirement of opening a second Montlake bridge.

C-025-010 A significant failing of the SDEIS is the presentation of issues relating to recreation in the Recreation Discipline report.

C-025-011 **Noise:**
Allowable noise levels are set by the City of Seattle and we expect the construction process and end design to meet those requirements. While we agree that noise is a *direct* effect since it is detected by people only while close to the SR 520 corridor, for SYC there are also probable *indirect* effects for SYC from the increase in noise from the bridge being closer and with more lanes of traffic. Specifically these impacts include less SYC club usage in all forms with resultant economic impacts of less moorage revenue, less banquet revenue, and less outside restaurant revenue as moorage holders and club patrons respond to the lessened desirability of mooring boats and holding events at the Club.

The SDEIS's assumptions about transit usage and the proportion of quieter vehicles on the road over time are indefensible claims for this report time frame of 2030 (only 20 years). An analyst could just as easily conclude there will be more noise resulting from population growth and more vehicles and mass transit vehicles on the road.

The technical report at pages 5-6 shows the no build bridge as 60 feet wide but the 6 lane at 115+ feet wide (and this does not include the width of the westbound 520 Montlake on-ramp) putting all that traffic and noise much closer to SYC than in the no build alternative. This proximity will certainly increase noise and pollution at the Club.

C-025-012 Finally, the SDEIS states that construction would produce noise and vibration, especially from major construction activities such as pile driving, demolishing existing structures, hauling, and concrete

C-025-012 pumping. During heavy construction periods, noise levels could reach very high levels (85 to 105 A-weighted decibels [dBA]) at 50 to 100 feet from the activities, and these effects would be above the traffic sound levels normally experienced within 500 feet of the right-of-way. We believe short-term and long-term measures are needed to avoid any increased noise arising from the Portage Bay Bridge.

C-025-013 **Air Pollution**

The SDEIS fails to address several critical issues relating to air pollution raised by this project as outlined below. Without addressing these issues the general report is inadequate, incomplete and unacceptable.

a. The SDEIS does not review the Ozone Impacts per EPA standards for this project.
b. The SDEIS does not review Air Toxic Impacts for this project does not present an adequate assessment.
c. The SDEIS does not address the deposition of Air Toxic particles for this project.

C-025-014 **Tolls**

Another significant limitation of the SDEIS is an analysis of the impact of this project from the planned tolling. In the DSEIS, WSDOT makes the assumption that no tolling would be imposed under the "No Build" Option. This is contradictory in that the SDEIS states that tolling was authorized by the Legislature in order to manage congestion (page 1-33) even though under the current statute it is limited to a preconstruction toll. WSDOT fails to analyze whether, with a toll operated in a manner to reduce traffic congestion, a four lane configuration might be adequate for the Project needs. This is in violation of WSDOT's duty to avoid and minimize the impact on historic Montlake Neighborhood and SYC and a material defect in the SDEIS.

C-025-015 Additionally, the lack of specific information about the potential tolling rates makes it impossible to fully analyze the impacts of those tolls on the SYC. The uncertainties of tolling are compounded by the fact that the Legislature has authorized only preconstruction tolling and the final tools have not yet been determined. The SDEIS states its assumption that a maximum toll rate of $3.81 would apply but indicates that the actual rates have not been determined (page 1-34). Regardless of the final rate, tolling has the potential to severely impact the continued operation of the Club as approximately 30% of our members reside east of Lake Washington. Many of these members may choose to find other locations to moor their boats and patronize businesses that do not require paying a toll.

Access to the Club

C-025-016 Land Access

The SYC is also concerned that the SDEIS provides inadequate concern for limitations to the Montlake neighborhood and Portage Bay during construction. The SDEIS acknowledges that local street operations will be affected but provides only general statements on those affects and/or potential remediations. Access to our facilities is critical for our continued public and member operations. The SDEIS does not provide sufficient detail to permit an intelligent analysis of these impacts.

C-025-017 Marine Access

Additionally, the SDEIS completely omits navigation issues for the boating and recreation community during the construction period other than vague comments on bridge related closures. The ability to access SYC from the water side and for boats to move freely through Portage Bay is crucial to general Club activities, the operation of the sailing school, and events sponsored for the community events such

C-025-017 as Opening Day. Any changes to access to the waters of Portage Bay would have significant impacts on club revenues and our ability to maintain our historic facility.

C-025-018 **Impact on Club Operations**
The ability to maintain the historic structure is dependent upon the economic and operational viability of the Club. The SDEIS at page 61 of the Land Use, Economics, and Relocations Discipline Report states "Operation (of the completed 520 project) would not indirectly affect the REGIONAL economy, except through beneficial effects of improved transportation efficiency." The SDEIS omits an analysis of LOCAL economic effects of the project. It ignores entities like SYC that are located within the construction zone and immediately adjacent to the completed Project, focusing instead on entities at commuter beginning or end points.

C-025-019 The SDEIS does state on page 62 (under the "Social Elements" section) of the technical report that

> Construction effects on adjacent communities would include increases in noise, dust, traffic congestion and lane closures; partial closures of sidewalks and bicycle routes/pedestrian trails; and visual clutter in residential, business, and park areas adjacent to construction zones. These effects could temporarily affect community cohesion and limit connections to community resources, patronage at neighborhood businesses, or use of recreational amenities.

We agree with this description of adverse effects but also believe some of the effects would extend beyond the construct period and become permanent rather than temporary in nature. The much larger bridge (a 115+ feet wide bridge plus additional encroachment towards SYC and into Portage Bay from the proposed westbound on-ramp onto 520 from the Montlake Interchange vs. the 60 feet wide no-build alternative) will significantly change the visual environment at the club. This additional visual obtrusion and an almost certain increase in noise, filth, and air pollution will have reduce the appeal of the SYC as a facility for banquets, dining, moorage, and social interaction. The loss of this appeal will cause a significant negative economic impact on the SYC.

SYC's operational and economic viability depends on the revenues generated by members and guests having good access to our facility. SYC is a member operated club rather than professionally managed. Member committees decide and implement Club policies. Access and usage limitations would directly and immediately impair the member committees' ability to manage its historic structure and traditional activities.

C-025-020 The analysis for the "Economic Activity" section of the technical report only focuses on macro level economic impacts and omits micro or local level economic impacts. This omission makes a review of this issue impractical at this time.

C-025-021 **Cultural Resources Analysis**
The SYC believes that the impacts to Cultural Resources, required under NEPA and under Section 106, have not been fully examined. The Cultural Resources report underestimates the effects to the National Register listed Seattle Yacht Club due to the significantly increased encroachment of the new Portage Bay Bridge. The project will result in adverse effects under 36CFR 800.5 as it will "*diminish* the integrity" by significantly degrading the setting and feeling of the property. The report also fails to consider how cumulative effects from visual changes, disruptions to access during construction, and long-term

C-025-021 modifications to mooring and sailing classes may result in economic losses that would result in a change in use of the historic property.

C-025-022 WSDOT has also failed to consider the importance of Portage Bay as a property of cultural significance to the members of the SYC. Our community has utilized Portage Bay continuously for over 90 years to practice traditional boating activities. The sheltered, freshwater marine environment is essential to the continued operation of our sailing program, a key means by which we transmit knowledge of boating. Portage Bay is also integrally linked to our Club as it is the location of our Opening Day Celebrations. The events are an essential aspect of our group's heritage. The SYC is preparing a determination of eligibility for the eligibility of Portage Bay as a traditional cultural property to submit to the Washington Department of Archaeology and Historic Preservation. We expect that WSDOT will work with us to ensure that the project does not effect our traditional use of Portage Bay.

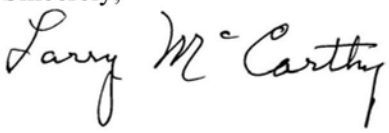
CONCLUSION

C-025-023 In conclusion, the SYC is disheartened by WSDOT's failure to meets is its statutory obligation to adequately consider and document its efforts to avoid and minimize the impacts of the project. As a result, the potential of the EIS process to allow members of the public to understand the alternatives and provide meaningful comments on how these alternatives will impact our community is not realized. However, SYC remains hopeful that if there is to be a new Portage Bay Bridge that it will be environmentally responsible and not destructive of the neighborhoods through which it passes. We hope that WSDOT will addresses the concerns raised in this letter so that the resulting project will remain within the footprint of the existing bridge, offer access and exits no less favorable than those that now exist and of similar size, create no further degradation of water and air resources, maintain or improve existing noise levels, and have no adverse visual impact over that already existing. Such a bridge would not have cumulative effects that exceed the impacts on the community of the existing bridge and would not interfere with SYC traditional culture and activities in the waters of Portage Bay.

Should you have questions or wish to discuss these comments, please contact Steve Hall, SYC's General Manager. His phone is (206) 325-1000.

Attached are more detailed comments addressing specific aspects of the SDEIS.

Sincerely,



Larry McCarthy, Commodore
Seattle Yacht Club

cc: Jack McCullough, Esq., McCullough Hill PS
Kimberly Demuth, Entrix, Inc.

Attachments included

	ment Page/line Cultural Resources Discipline - Vol 1	Name	Comment by WSDOT	Reviewer comment
C-025-024	P iii	E. Van	Once a preferred alternative design has been selected and more detailed construction effects can be evaluated, additional effects determination on historic properties --can be made	This should be noted for follow-up.
C-025-025	P vi	E. Van	Comment by WSDOT re pontoon towing	Towing could possibly have an adverse impact on sailing classes or the Special Peoples Cruise.
C-025-026	P ix	E. Van	Listing of affected historic properties	SYC not listed
C-025-027	P 95	E. Van	The SYC is a recreational and cultural institution that supports and enhances the residential quality of the neighborhood (Montlake Historical District)	WSDOT quote that can be used in response letter.
C-025-028	P 135	E. Van	Once a prefered alternative is selected and construction details can be evaluated, construction effects on historic properties will be thoroughly analyzed before publication of the final EIS"	Note that this does not say that the effects will discussed with consulting parties nor suggest possible additional mitigation.
C-025-029	EX 43	E. Van	Potential Detour Routes. All options would close Lake Washington Blvd. ramps.	The current west bound ramp onto Montlake Blvd. provides the only safe access to SYC. The Lake Washington ramp provides no ability to access a left turn lane to Hamlin. This area will also be a haul route.
C-025-030	P 140	E. Van	Inwater construction activities are allowed only from Octobe 1 through April 15.	There is no discussion of barge traffic nor anchoring which could adversely impact SYC public sail classes, Opening Day and Special
C-025-031	P 164	E. Van	Discusses the absence of in-water construction activities from April 15 through Oct. 1	See comment next above.

	nent Page/line Cultural Resources Discipline - Vol 1	Name	Comment by WSDOT	Reviewer comment
C-025-032	P 169	E. Van	Pontoon Construction and Transport. Pontoons would not be towed on Opening Day and there would be no room for other boats during towing.	Opening Day activities occur 1 week prior and 1 week after Opening Day. Interference with activities at that time would adversely impact Opening Day itself.
C-025-033	P 194	E. Van	Mitigation. Discusses cleaning of historic buildings at the conclusion of construction.	Construction is expected to last four years for the Montlake Interchange and Portage Bay bridge. Mitigation should include annual inspection and cleaning, if warranted.
C-025-034	P 195	E. Van	Mitigation. WSDOT would coordinate with SYC so that pontoon towing would not interfere with Opening Day or other important social maritime activities.	How and when? What about barges with build-materials moving in and out or anchored in Portage Bay?
C-025-035	P 196-7	E. Van	List of mitigation properties.	SYC is not included in the list.

From:

Sent:

To: Kip Cramer

Cc:

Subject: SR 520 SDEIS and Section 4(f)/6(f)Evaluation; comments onKip<

Comments:

C-025-036

1. The references to the Seattle Yacht Club are included as an Historical Property in the Montlake Historical District. No mention is made for the disruption of the Club's OPERATIONS I.E. (a) Food and Beverage Revenue impacts, both during construction and the completed project. and, (b) disruptions to member usage of the facilities (docks , special functions (wedding receptions), and Opening Day, et al). These potential revenue changes could bring the Club into financial distress both in terms of current member obligations, and make it harder for the Club to attract new members to insure its continuation as a viable facility.

2. These items of omission may be addressed in other sections of the SDEIS , but, they are not in this section.

3. The SDEIS indicates that any and all impacts are de minimus, for the section reviewed here. For this facility to be only minimally impacted flies in the face of commonsense .

4/7/2010

Seattle Yacht Club Comments on
SR 520 Bridge Replacement HOV Project SDEIS Report
(Construction Windows) (2)

C-025-037

Subject: Adverse Effects on Cultural Resources

Reference: Chapter # 3, Page 3 - 7
Section #4(f)/6(f) Evaluation, Page 17

Standing: Seattle Yacht Club (SYC) is a **Consulting Party** to the planning and construction of the SR 520 bridge replacement project. SYC is a historic site and is listed on the **NRHP**. As such, SYC has applied for and was granted "**Consulting Party**" status by WSDOT and there by qualify for Section 106 protections. In addition, WSDOT is obligated to make a 4(f) analysis that requires them to avoid, minimize or mitigate any use of a historic property.

Cultural Element:

C-025-038

Seattle Yacht Club realizes that the SR 520 project contractors must have access and egress to the SR 520 highway rights of way in order to accomplish the bridge replacement and other activities.

In Chapter #3, page 3-7, WSDOT explains that certain agencies require that contractors cannot perform "In Water" construction work in the Lake Washington Ship Canal from October 1 through April 15 of each year. In draft Section # 4(f)/6(f) Evaluation of the SDEIS, WSDOT explains that the Pontoon Towing will take place during the months of March through April.

Attachment #7, titled "Cultural Resources Discipline Report for the SDEIS", at page 140 explains how the Window of Opportunity for not working in the water and for towing bridge pontoons into Lake Washington from Aberdeen conveniently do not conflict with the cultural activities of the club. This assertion by WSDOT is not correct and therefore SYC is Adversely Effected.

C-025-039

SYC appreciates that WSDOT will **not** be towing pontoons on and during Opening Day of Boating Season. Our Sailing Instruction classes run 5 days a week from 9:00 am to 3:00 pm each day, generally mid June until Labor Day. Our Marina is open 24/7. To facilitate SYC cooperation with the bridge replacement project, SYC would appreciate receiving any notices that WSDOT and/or the contractor can give on Ballard Locking Operations associated with their vessels and/or Pontoon Towing.

C-025-039 SYC would be pleased if WSDOT would give notice to Mr. Brian Ledbetter of the Seattle Yacht Club so that he can coordinate the Waterfront Activities with the needs of WSDOT and their contractors.

C-025-040 The Seattle Yacht Club objects to any bridge design and/or construction activity that further encroaches into the navigable waters of Portage Bay; especially in those areas designated by Section 106 as an **Areas of Potential Effect** (APE). Seattle Yacht Club's sailing culture is and will be **Adversely Effected** under Options A, K and L by the SR520 Bridge Replacement and HOV Project during construction. The Club fully expects the Memorandum of Agreement to include provisions that will completely mitigate all **Cultural Resource** conflicts arising from the SR 520 bridge project.

3/24/2010

DRAFT

Air Quality Discipline Report Review

C-025-041 The Air Quality Discipline report and the DEIS discussion and conclusions based on this report are deficient and must be redone. Specific deficiencies are:

1. Ozone impacts were not addressed. The region is currently undergoing a reclassification to non-attainment by USEPA. A non-attainment designation will require strict additional controls on VOC sources even consideration of reduced auto use within the region. Offsets for any projected increases VMT will have to be mitigated.

C-025-042 2. The impacts of the air toxics emissions associated with the 520 bridge replacement were not properly addressed. The existing high risk associated with current diesel particulates (DP) will be negatively influenced by the proposed project alternatives. Any such increases are probably not acceptable risks to the community adjacent to the proposed property.

C-025-043 3. The added cancer risk associated with the construction phase of the project was not quantified. A constructive time frame of seven or more years would add 10% to a lifetime cancer risk.

C-025-044 4. The deposition of air toxics is not adequately addressed. Roadway runoff is partially mitigated by collection and treatment techniques. However, the direct aerial deposition into the aquatic environment is not mentioned or

C-025-044 discussed. Dioxins/ furans are a listed toxic air pollutant by USEPA. They are emitted by mobile sources, in particular diesel engines. They readily bioaccumulate. They surely impact sensitive ecosystems. This may be a broader oversight, but should be discussed in the DEIS in a qualitative manner.

These four issues are discussed in more detail:

C-025-045 **Ozone Impacts**

EPA is currently in the administrative process of designating the Puget Sound region as non-attainment for ozone. The region is in non-attainment of the current 8-hour standard of 75 ppb based on monitoring data from the Enumclaw Mud Mountain site. EPA is tightening the standard to a level between 60 and70 ppb. There are no definitive strategies available to comply with such options short of restrictive auto use. Conformity and offsets will be required. Hence, any increase in traffic associated with the 520 project alternatives will have to be offset somewhere in the region.

The DEIS will have to be redrafted to address this issue and not simply defer it to future permitting consideration.

C-025-046 **Air Toxics**

The current cancer risk of diesel particulate exposure in the PS region is at unacceptable levels based on analyses by PSCAA and DOE. Levels of DP in the air translates to a cancer risk of more than 400 chances per million according to these Agencies. 100 chances per million is the accepted criteria for cleanup of Superfund sites.

The DEIS fails to assess the air toxics impacts of the alternative options by claiming that the projected traffic counts are below a stated

C-025-046 threshold specified by FHWA Guidance, i.e., 144,000 VPD. This guidance does not apply to the 520 project situation. The claim in the Discipline Report that current Federal DP emission regulations regarding diesel fuel sulfur reduction and off road vehicle emissions will mitigate further impacts are not defensible. Neither the DOE nor PSCAA have set a goal for reducing the air toxics risks in the Region. Oregon DEQ has set One in a million risk per pollutant. DEQ has conducted a comprehensive modeling project for the Portland Region, which maps the risk levels by geographical location, including near freeways and interchanges. This modeling protocol is directly applicable to the 520 DEIS project. The results of such modeling will reflect the potential cancer risk impacts of the 520 alternatives, including the potential risk benefits of reduced traffic volumes in the 520 corridor.

C-025-047 **Construction Related and Toxic Risks**

Construction machinery is mostly diesel powered. Ambient DP levels will increase to levels above existing levels during the 7 or more years of bridge construction. The incremental exposure that will occur during construction will be in addition to the 70 year lifetime assumed for day to day exposure. These risks were not quantified in the Discipline Report, as they should have been.

Air Toxics Deposition

As described above.

Seattle Yacht Club Comments on
SR 520 Bridge Replacement HOV Project SDEIS Report
(Filth) (7)

Subject: Adverse Effects on Cultural Resources
(Deposition of solid Particulate Pollutants)

Reference: Chapter # 3, Pages 3 – 11 Air Quality
Chapter # 4, Pages, 4 – 53 Air Quality
Chapter # 5, Page 5, 5 – 112 Air Quality
Chapter #6, Page, 6 – 72 Air Quality

Standing:

Seattle Yacht Club (SYC) is a **Consulting Party** to the planning and construction of the SR 520 bridge replacement project. SYC is a historic site and is listed on the **NRHP**. As such, SYC applied for and was granted "**Consulting Party**" status by WSDOT and there by qualify for Section 106 protections. In addition, WSDOT is obligated to make a 4(f) analysis that requires them to avoid, minimize or mitigate any use of a historic property.

Cultural
Element:

C-025-048

Governor Gregoire and the Washington State Legislature want WSDOT to recognize that building highways through communities causes considerable disruption to the inhabitants. For that reason the Governor signed into law a request that the Mediation panel prepare a Projects Impacts Plan (PIP) that included a Health Impacts Analysis (HIA). A HIA is a project feature that is not required by the traditional NEPA/SEPA Statement.

The HIA report has been prepared and submitted to Governor Gregoire by the Seattle/King County Health Department and the Puget Sound Clean Air Agency. The HIA report found that there are several affects resulting from the construction of a highway through a neighborhood that can affect the health of the nearby residents. For example a highway may be constructed through a neighborhood that cuts off a popular hiking/biking trail. This results in a reduced exercise opportunity for the residents and thus an increase in health risks.

C-025-049

Particulate Matter (PM) measuring 2.5 to 10 Microns can be found along the roadway of SR 520. PM is a fine powdery material composed of ground up tires, brake pad linings and unburned diesel fuel. PM when inhaled presents a health risk.

C-025-049

In addressing Air Quality, the Federal Government sets the allowable concentration levels for gaseous pollutants that are emitted from automobiles and other sources. Preventative measures must be taken that keep the air quality within the concentration standards. Solid particulates (PM) in smoke from sources such as fireplaces are not strictly regulated. But in fact, air stagnation alerts are broadcasted on the nightly news.

SR 520 generates large volumes of particulate matter. Depositions of these homogenous collections of particulates are visible nearly every where one might look adjacent to SR 520. Certainly citizen's health is affected when they breathe in these materials. But more antagonizing than breathing these pollutants is their constant deposition on roofs, sidewalks, parking lots, cars, boats and sundecks. This is truly a Health Impact.

Besides being a clear Impact on the neighborhood, it is a nuisance. Consider when you want to have a deck or patio party. Either surface will have to be pressure washed before having the party. Even with covered moorage the particulate matter filters in and onto the boats which then have to be washed off or your clothing will become contaminated. This black filth generated by SR 520 is everywhere. The closer to SR 520 the more filth you have to deal with. Boat owners, whether sail or power driven, go to considerable expense to keep their boats clean. There is a saying in the boating community, "Cleanliness is next to Godliness."

The Seattle Yacht Club objects to any bridge design and/or construction activity that does not include provisions to control the deposition of solid particulate pollutants, especially in those areas designated by the Section 106 as **Areas of Potential Effect** (APE). Seattle Yacht Club's boating culture is and will be **Adversely Effected** under Options A, K and L by the SR520 Bridge Replacement and HOV Project during construction. The Club fully expects the Memorandum of Agreement to include provisions that will mitigate all **Air Quality** conflicts arising from the SR 520 Portage Bay bridge project.

3/24/2010

Seattle Yacht Club Comments on
SR 520 Bridge Replacement HOV Project SDEIS Report
(Opening Day)

Subject: Adverse Effects on Cultural Resources (1)

Reference: Chapter # 5, Page 5-82 to 5-87 Cultural Resources- Portage Bay.
Chapter # 6, Page 6-57 & 6-59 Cultural Resources-Portage Bay.

Standing: Seattle Yacht Club (SYC) is a **Consulting Party** to the planning and construction of the SR 520 bridge replacement project. SYC is a historic site and is listed on the **NRHP**. As such, SYC applied for and was granted "**Consulting Party**" status by WSDOT and there by qualify for Section 106 protections.

Cultural Element:

C-025-050 Each year on the first Saturday in May, Seattle Yacht Club sponsors "The Opening Day of Boating Season" (Opening Day). This festive event kicks off the season long calendar of boating activities. The program for the day starts with a Commissioning Ceremony that recognizes the Commodores from over 100 visiting Yacht Clubs from the Pacific Northwest and Canada. The ceremony is followed by an International Rowing Regatta sponsored by the University of Washington Crew that features the Windemere Cup challenge race. Rowing crews from all over the world have been invited to challenge race. The regatta is followed by the World Famous Parade of Boats through the Montlake Cut that lasts up to four hours. Decorated boats are judged and receive awards for design decoration in many categories. Thousands of spectators line the race course and Montlake Cut in their boats to view the festivities. Opening Day is the last "free to the public" major event left in Seattle. The waters of Portage Bay and the Montlake Cut are an excellent venue for these events.

Opening Day has been staged each year since before the turn of the past century. First held on Elliott Bay, Opening Day was moved to Portage Bay and the Montlake Cut on May 1, 1920, ninety years ago. Nearly a full week of activities proceeds and follows Opening Day. The Canadian Yacht Clubs participate in an International Exchange that reaches across our common border.

C-025-051 The Seattle Yacht Club objects to any bridge design and/or construction activity that further encroaches into the navigable waters of Portage Bay and the Montlake Cut; especially in those areas designated by Section 106 as **Areas of Potential Effect** (APE). Seattle Yacht Club's boating culture is and will be **Adversely Effected** under Options A, K and L by the SR 520 Bridge Replacement and HOV Project both during construction and in commercial operation. The Club fully expects the Section (106) Memorandum of

C-025-051 Agreement to include provisions that will completely mitigate all **Cultural Resource** conflicts arising from the SR 520 bridge project.

3/24/2010

Seattle Yacht Club Comments on
SR 520 Bridge Replacement HOV Project Report
(Montlake Mess) (6)

Subject: Adverse Effects on Cultural Resources (Hamlin/Shelby access/egress)

Reference: Chapter # 4, Pages, 4-1
Chapter # 5, Page 5-1
Chapter #6, Page, 6-1

Standing: Seattle Yacht Club (SYC) is a **Consulting Party** to the planning and construction of the SR 520 bridge replacement project. SYC is a historic site as listed on the **NRHP**. As such, SYC applied for and was granted "**Consulting Party**" status by WSDOT and there by qualify for Section 106 protections. In addition, WSDOT is obligated to make a 4(f) analysis that requires them to avoid, minimize or mitigate any use of a historic property.

Cultural Element:

C-025-052 The "Montlake Mess" is a traffic congested situation that was created in the area adjacent to the south end of the Montlake bascule bridge on Montlake Boulevard at the intersections of East Hamlin Street and East Shelby Street. Both Hamlin and Shelby Streets have fully operational traffic control green/red stop signal lights. The Montlake Mess serves as a de facto interchange for the intersection of Lake Washington Blvd, SR 520 and Montlake Blvd with eight on/off ramps. Back-up congestion exists several hours each day. It is a life threatening experience for Hamlin/Shelby residents entering or leaving this area of Montlake Blvd.

The Seattle Yacht Club membership's only access or egress to their historic clubhouse and moorages is from this severely congested Boulevard via East Hamlin and East Shelby Streets. Cars heading north on Montlake Blvd from Shelby St. experience extremely long waits for a green light before entering north bound traffic.

Our examination of the SR 520 SDEIS indicates that nothing has been presented in the highway designs of Option A or Option L to relieve congestion on Montlake Blvd except for a second bascule bridge that will make the congestion even worse.

The Seattle Yacht Club objects to any bridge design and/or construction activity that further adds to the congestion that presently exists, especially in those areas designated by Section 106 as **Areas of Potential Effect** (APE). Seattle Yacht Club's historic boating culture is and will be **Adversely Effected** under Options A and L by the SR520 Bridge Replacement and HOV Project during construction. The Club fully expects the

C-025-052

Memorandum of Agreement to include provisions that will completely mitigate all **Cultural Resource** conflicts arising from the SR 520 bridge project. The Seattle Yacht Club perceives that Option K, similar to a previous option referred to as the Pacific Street Interchange plan, would in fact relieve a major portion of the congestion at the University of Washington and the western portal of the SR 520 program.

3/24/2010

Discipline Report Comment Summary

Discipline Report: Environmental Justice

Report	Page #	Line #'s	Reviewer	Comment
C-025-053	3	4-19	B Shafer	These two paragraphs state reasons why the project should be implemented even though low income populations would experience disproportionately high and adverse effects because of tolling. No discussion is provided of alternatives to tolling, such as increasing gas taxes or property taxes. Additional information detailing the reasons for selecting tolling over other funding sources needs to be added. The additional information should address the impact of these alternative funding sources on low-income populations.
C-025-054	94	3-10	B Shafer	This paragraph states that WSDOT "might target transit improvements....." to mitigate the burden tolls would present to low-income or LEP drivers. This statement does not describe any proposed mitigation that WSDOT would be obligated to undertake. This paragraph should be deleted or rewritten to indicate specific actions that WSDOT will take to mitigate the impact on low-income or LEP drivers. It should be noted that the preferred alternative eliminates the transit station in the Montlake area which currently may be used by low-income or LEP individuals.

C-025-055

Indirect and Cumulative Effects

(Chapter 7 SDEIS, and associated Discipline Report)

Key Findings:

C-025-056 The SDIES omitted Portage Bay as a major recreational asset/location and therefore did not adequately study and mention potential indirect and cumulative effects on entities and operations in this location. This area is a major boating and water activities center in the region. It is adjacent to 520 currently and is further encroached on during and after the construction of a new *wider* 520 bridge. The encroachment is even *greater* when including the longer/wider westbound

C-025-057 Montlake 520 on-ramp. With significant yacht club operations and community activities ranging from Opening Day, moorage, banquet and restaurant operations, sailing school, family sailing programs, special people's cruise, and other community events too numerous to mention, there will clearly be direct and indirect effects of the 520 expansion on usage and economics that clearly need to be protected as much as possible.

C-025-058 The SDEIS mainly analyzes the 520 project from a "commuter" suburb-to-city viewpoint and omitted and/or did minimal analysis of impacts to assets/entities in the *middle* of 520 around the Portage Bay area. This is more than a just a spot people drive by on their commute to work and is indeed a recreational, social, historic, and economic destination in itself and deserves more consideration in terms of construction impacts.

C-025-059 The SDEIS does not mention the extra width of the proposed westbound Montlake on-ramp to 520 that would further encroach on the Fisheries property and move the bridge that much closer to SYC. The negative impacts of greater noise, filth, visual degradation, and economic impact from less desirable moorage, reduced banquet revenues and reduced revenue from outdoor restaurant operations are foreseeable.

C-025-060 The SDEIS does not analyze the I-5/520 interchange bottleneck in this section and therefore does not correctly consider indirect effects that could impact the Portage Bay environment and entities such as The Seattle Yacht Club and Queen City Yacht Club. With population growth and two more mass transit lanes carrying more mass transit vehicles, it is foreseeable that this bottleneck will get worse and therefore have a negative impact on air quality, noise, access/egress, economics, etc. for the Portage Bay area in general and the yacht clubs specifically.

C-025-061 The SDEIS addresses construction related effects from a macro view (e.g. Puget Sound region economic impacts, point-to-point regional commuter transportation, etc.) and therefore omitted analysis of significant impacts at the micro or neighborhood level for the Portage Bay area.

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
... are caused by the action and are later in time or farther removed in distance, but are still reasonably forese
typically involve a chain of cause-and-effect relationships that can take time to develop and can occur at a dist
from the project site. This makes some indirect effects difficult to predict accurately, although they must be
reasonably foreseeable, and usually requires a **qualitative estimate**... (page 2 of technical report)
...Other indirect effects can take months or years to become apparent (page 23 of technical report)

Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction over the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, pg 8 Ch 4, pg 4-33 Ch 5, p 5-53	16	Erik Sabiers	Baseline Conditions	The process for setting Baseline Conditions was stated to be completed from Surveys, Interviews, and Literature searches (tech report pg. 24, last line). Bay, Seattle Yacht Club, Queen City YC, etc. were omitted. We are not awa surveys or interviews that were done with SYC or QCYC for setting baseline conditions. In fact, Portage Bay in general and SYC, QCYC, etc. were entire omitted in the SDEIS (ch. 4 "The Project Area's Environment) as a Recreati Center, a big omission, considering the SDEIS Ch 4, pg 4-33 DOES referenc Waterfront Activities Center and the Canoe House. Further, in the "Recreat section 5.4 of Chapter 5 of the SDEIS starting on p 5-53, again Portage Bay including SYC and QCYC, are omitted as a recreation center, despite the fac UW recreational facilities and others ARE referenced. Portage Bay hosts 2 very active yacht clubs, acts as a base for Opening Day boating season, is a base for various sailing activities ranging from an activ sailing school to family sailing evenings, and is also an origination point and gathering place for many other community water and non-water based acti events. It is difficult to correctly assess the potential affects to a resource a analyze unintended consequences/indirect effects when the resource itself i recognized in the first place.

C-025-062

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

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Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, pg 8 Ch 7, Pg 17 Ch 5, Sec 5.1, p 5-4	18 8 Last Paragraph	Erik Sabiers	Traffic Growth	Some Indirect Effects are partly predicated on the SDEIS's assumptions ab growth in Ch. 5. Put plainly, we believe the SDEIS's assumptions (Ch. 5, S 5-4, last paragraph) about daily vehicle traffic will prove to be incorrect in term and the SDEIS's conclusions that *"the 6-lane alternative would actual in a small net decrease in daily vehicle traffic demand on SR 520"* because *"addition of the toll, improved HOV reliability, and reduced travel times wo increase the incentive to carpool or take the bus"* are highly speculative ar unsubstantiated and further do not particularly take into consideration trav activities other than the suburb-to-Seattle work commute. The SDEIS's opinions defy logic. The SDEIS's own projections in Ch 5, p 5 population growth in the area is expected to be 1.1 Million by 2030 and po the region is expected to increase from approximately 3.6 million in 2007 t million in 2040 as documented in Vision 2040. Absurdly, p. 50 of the tech says "the project will not generate additional regional traffic, particularly as increasing the capacity for single-occupancy vehicles." Population trends W generate additional traffic and additional lanes for mass transit WILL add a vehicles...the mass transit vehicles themselves (see Ch 7, page 18, line 16

C-025-063

C-025-064

C-025-0068

Discipline Report Comment Summary

Discipline Report: Environmental Justice

Report	Page #	Line #'s	Reviewer	Comment
	3	4-19	B Shafer	These two paragraphs state reasons why the project should be implemented even though low income populations would experience disproportionately high and adverse effects because of tolling. No discussion is provided of alternatives to tolling, such as increasing gas taxes or property taxes. Additional information detailing the reasons for selecting tolling over other funding sources needs to be added. The additional information should address the impact of these alternative funding sources on low-income populations.
	94	3-10	B Shafer	This paragraph states that WSDOT "might target transit improvements....." to mitigate the burden tolls would present to low-income or LEP drivers. This statement does not describe any proposed mitigation that WSDOT would be obligated to undertake. This paragraph should be deleted or rewritten to indicate specific actions that WSDOT will take to mitigate the impact on low-income or LEP drivers. It should be noted that the preferred alternative eliminates the transit station in the Montlake area which currently may be used by low-income or LEP individuals.

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
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Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction over the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, pg 8 Ch 4, pg 4-33 Ch 5, p 5-53	16	Erik Sabiers	Baseline Conditions	The process for setting Baseline Conditions was stated to be completed from Surveys, Interviews, and Literature searches (tech report pg. 24, last line). Bay, Seattle Yacht Club, Queen City YC, etc. were omitted. We are not awa surveys or interviews that were done with SYC or QCYC for setting baseline conditions. In fact, Portage Bay in general and SYC, QCYC, etc. were entire omitted in the SDEIS (ch. 4 "The Project Area's Environment) as a Recreati Center, a big omission, considering the SDEIS Ch 4, pg 4-33 DOES referenc Waterfront Activities Center and the Canoe House. Further, in the "Recreat section 5.4 of Chapter 5 of the SDEIS starting on p 5-53, again Portage Bay including SYC and QCYC, are omitted as a recreation center, despite the fac UW recreational facilities and others ARE referenced. Portage Bay hosts 2 very active yacht clubs, acts as a base for Opening Day boating season, is a base for various sailing activities ranging from an activ sailing school to family sailing evenings, and is also an origination point and gathering place for many other community water and non-water based acti events. It is difficult to correctly assess the potential affects to a resource a analyze unintended consequences/indirect effects when the resource itself i recognized in the first place.

C-025-066

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

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...Other indirect effects can take months or years to become apparent (page 23 of technical report)

Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, pg 8 Ch 7, Pg 17 Ch 5, Sec 5.1, p 5-4	18 8 Last Paragraph	Erik Sabiers	Traffic Growth	Some Indirect Effects are partly predicated on the SDEIS's assumptions ab growth in Ch. 5. Put plainly, we believe the SDEIS's assumptions (Ch. 5, S 5-4, last paragraph) about daily vehicle traffic will prove to be incorrect in term and the SDEIS's conclusions that *"the 6-lane alternative would actual in a small net decrease in daily vehicle traffic demand on SR 520"* because *"addition of the toll, improved HOV reliability, and reduced travel times wo increase the incentive to carpool or take the bus"* are highly speculative ar unsubstantiated and further do not particularly take into consideration trav activities other than the suburb-to-Seattle work commute. The SDEIS's opinions defy logic. The SDEIS's own projections in Ch 5, p 5 population growth in the area is expected to be 1.1 Million by 2030 and po the region is expected to increase from approximately 3.6 million in 2007 t million in 2040 as documented in Vision 2040. Absurdly, p. 50 of the tech says "the project will not generate additional regional traffic, particularly as increasing the capacity for single-occupancy vehicles." Population trends W generate additional traffic and additional lanes for mass transit WILL add a vehicles...the mass transit vehicles themselves (see Ch 7, page 18, line 16

C-025-067

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

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Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

Report	Page #	LINE #'s	Reviewer	Topic	Comment
C-025-068 Indirect & Cumulative Effects	Ch 7, pg 8 Ch 7, Pg 17 Ch 5, Sec 5.1, p 5-4 continued	18 8 Last Paragraph	Erik Sabiers	Traffic Growth	The combination over time WILL mean greater traffic. More population ar associated cars + more transit lanes and associated more transit vehicles = traffic. Lastly, the SDIES does not adequately discuss and address the bott I-5/520 interchange. As the Seattle Times points out on Friday 3-10-2010 front page, "The New 520 bridge won't solve I-5 merge mess." Senator Ed says "the 520 project is based on a traditional suburb-to-Seattle commute that is becoming obsolete." He also says the plan does not "adapt to the fa 5 is full." More traffic approaching an unsolved I-5 bottleneck equals more congestion around Montlake/Portage Bay.
C-025-069 Indirect & Cumulative Effects	Ch 7, Pg 17	24	Erik Sabiers	Transportation	UW Medical Center Master Plan - improvements are likely to occur at same 520 construction (pg 51 of technical report). This would create cumulative congestion at the time of the projects AND permanently in the area.
C-025-070 Indirect & Cumulative Effects	Ch 7, Pg 17	24	Erik Sabiers	Transportation	UW Campus Master Plan - improvements are likely to occur at same time a construction. This will create cumulative congestion during the projects AN permanently in the area.
C-025-071 Indirect & Cumulative Effects	Ch 7, Pg 17	25	Erik Sabiers	Transportation	North Link Light Rail Station at Husky Stadium - improvements will be goin the same time as 520 construction resulting in cumulative congestion durin projects.

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
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Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

C-025-072

Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, pg 8 Ch 7, Pg 17 Ch 5, Sec 5.1, p 5-4 continued	18 8 Last Paragraph	Erik Sabiers	Traffic Growth	The combination over time WILL mean greater traffic. More population ar associated cars + more transit lanes and associated more transit vehicles = traffic. Lastly, the SDIES does not adequately discuss and address the bott I-5/520 interchange. As the Seattle Times points out on Friday 3-10-2010 front page, "The New 520 bridge won't solve I-5 merge mess." Senator Ed says "the 520 project is based on a traditional suburb-to-Seattle commute that is becoming obsolete." He also says the plan does not "adapt to the fa 5 is full." More traffic approaching an unsolved I-5 bottleneck equals more congestion around Montlake/Portage Bay.
Indirect & Cumulative Effects	Ch 7, Pg 17	24	Erik Sabiers	Transportation	UW Medical Center Master Plan - improvements are likely to occur at same 520 construction (pg 51 of technical report). This would create cumulative congestion at the time of the projects AND permanently in the area.
Indirect & Cumulative Effects	Ch 7, Pg 17	24	Erik Sabiers	Transportation	UW Campus Master Plan - improvements are likely to occur at same time a construction. This will create cumulative congestion during the projects AN permanently in the area.
Indirect & Cumulative Effects	Ch 7, Pg 17	25	Erik Sabiers	Transportation	North Link Light Rail Station at Husky Stadium - improvements will be goin the same time as 520 construction resulting in cumulative congestion durin projects.

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

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the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

	Report	Page #	LINE #'s	Reviewer	Topic	Comment
C-025-073	Indirect & Cumulative Effects	Ch 7, Pg 17	32	Erik Sabiers	Transportation	Truck traffic traveling through the 520 construction zone. This will be an is affecting Montlake/SYC access as the SDEIS states.
C-025-074	Indirect & Cumulative Effects	Ch 7, Pg 17	34	Erik Sabiers	Transportation	Additional Lane closures and road detours. This will be an issue affecting Montlake/SYC access as the SDEIS states.
C-025-075	Indirect & Cumulative Effects	Ch 7, Pg 17	38	Erik Sabiers	Transportation	The SDEIS states that other projects in addition to the 520 project will cau term and permanent modifications to access. What will they be? There is mention of specific modifications for SYC to address or respond to. With re just the 520 project, actual design features are still being debated, so it is impossible for SYC to respond to actual design features when they are not in the SDEIS.
C-025-076	Indirect & Cumulative Effects	Ch 7, Pg 18 Ch 7, Pg 25	2, 7 37	Erik Sabiers	Transportation	The SDEIS states cumulatively that traffic would improve after constructior during regular operation. This is based on pure speculation and cannot be substantiated. Based on population trends and the I-5/520 bottleneck alon SDEIS's statements are questionable. See comment re: traffic & congestio the second entry above.
C-025-077	Indirect & Cumulative Effects	Ch 7, Pg 18	16, 19	Erik Sabiers	Transportation	The SDEIS states there will be *"Additional Buses"* and *"Increased frequenc service"* along the 520 corridor. This will increase vehicles on the road and filth and noise and reduce air quality.

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

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Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

	Report	Page #	LINE #'s	Reviewer	Topic	Comment
C-025-078	Indirect & Cumulative Effects	Ch 7, Pg 18	27, 28	Erik Sabiers	Transportation	The SDEIS states *"Tolling would reduce demand for use of the SR 520 corr single occupancy vehicles."* Therefore the SDEIS AGREES with our though Eastside SYC members will make the drive less frequently because of tolls therefore have a negative economic and social impact to the club. These t not commuter trips so the likelihood of using mass transit is not as viable.
C-025-079	Indirect & Cumulative Effects	Ch 7, Pg 18	34, 35	Erik Sabiers	Transportation	Mitigation such as traffic control, public outreach, details on street closures might only have limited relief on SYC activities because we are in the MIDI construction zone and this type of mitigation seems more referenced to co point-to-point and not with respect to the communities in center of the cor zone.
C-025-080	Indirect & Cumulative Effects	Ch 7, Pg 20	9	Erik Sabiers	Transportation	The SDEIS states that the 520 project *"would convert existing land uses to transportation right-of-way"* and that this would only be a *"small portion total land in the Puget Sound region over the next 30 years."* We disagree reference point being the total Puget Sound region. Some of these conver transportation right-of-way could occur IN Montlake and therefore could ha impact on access/egress to the Seattle Yacht Club on Hamlin and affect the terms of usage and economics.

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
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Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
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Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, Pg 20	24	Erik Sabiers	Economic Activity	(Also page 61 of the technical report) The SDEIS states *"Operation (of the completed 520 project) would not indirectly affect the REGIONAL economy through beneficial effects of improved transportation efficiency."* This omit analysis of LOCAL economic effects of the project. This ignores entities like are in the middle of the construction zone (and who would be affected duri after construction) as opposed to entities at commuter beginning or end po SDEIS does state on page 62 (under the "Social Elements" section) of the report that *"construction effects on adjacent communities would include in noise, dust, traffic congestion and lane closures; partial closures of sidewa bicycle routes/pedestrian trails; and visual clutter in residential, business, areas adjacent to construction zones. These effects could temporarily affec community cohesion and limit connections to community resources, patron neighborhood businesses, or use of recreational amenities."*

C-025-081

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

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C-025-082

Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, Pg 20 continued	24	Erik Sabiers	Economic Activity	We agree with this but also believe some of what is stated will be permane not temporary in nature. A 115+ ft wide bridge (PLUS additional encroach towards SYC and into Portage Bay from the proposed longer westbound on onto 520 from the Montlake Interchange) vs. the 60 ft wide no-build altern would bring noise, filth, air pollution, and visual obtrusion that much more Portage Bay and towards SYC and will have an impact on banquet, restaura moorage, and social operations of clubs like SYC an QCYC that will carry ar meaningfully negative economic impact. It seems the analyst for the "Ecor Activity" section of the technical report only focused on macro level econon impacts and omitted micro or local level economic impacts.

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
... are caused by the action and are later in time or farther removed in distance, but are still reasonably forese
typically involve a chain of cause-and-effect relationships that can take time to develop and can occur at a dis
from the project site. This makes some indirect effects difficult to predict accurately, although they must be
reasonably foreseeable, and usually requires a **qualitative estimate**... (page 2 of technical report)
...Other indirect effects can take months or years to become apparent (page 23 of technical report)

Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

Report	Page #	LINE #'s	Reviewer	Topic	Comment
C-025-083 Indirect & Cumulative Effects	Ch 7, Pg 21	6	Erik Sabiers	Social	Pg 62 of the technical report states that *"construction effects on adjacent communities would include increases in noise, dust, traffic congestion and closures; partial closures of sidewalks and bicycle routes/pedestrian trails; visual clutter in residential, business, and park areas adjacent to constructi These effects could temporarily affect community cohesion and limit conne community resources, patronage at neighborhood businesses, or use of rec amenities."* First, Portage Bay, SYC, QCYC, etc. should be recognized as th recreational and social assets they are (instead of being omitted in the SDE such). Second, some of these effects of construction would also exist post- construction and should be mitigated as much as possible to protect the so historical community and related activities.

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
... are caused by the action and are later in time or farther removed in distance, but are still reasonably forese
typically involve a chain of cause-and-effect relationships that can take time to develop and can occur at a dis
from the project site. This makes some indirect effects difficult to predict accurately, although they must be
reasonably foreseeable, and usually requires a **qualitative estimate**... (page 2 of technical report)
...Other indirect effects can take months or years to become apparent (page 23 of technical report)

Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, Pg 23 Ch 7, Pg 24	23, 24 13	Erik Sabiers	Recreation	The SDEIS says *"most indirect effects on park and recreational resources w positive by encouraging greater use of recreational resources, improving co and linkages between parks, and improving noise levels and visual quality location."* Separately, Pg 5/6 of the technical report shows the no build bri 60ft wide but the 6 lane at 115+ ft wide (and this does not include the widt westbound 520 Montlake on-ramp). First, the SDEIS ignores SYC, QCYC, a Portage Bay in general as a major recreation center for the area and theref consider the construction impacts appropriately to this area. Indeed, const and the operating end-result could "DIScourage" rather than "encourage" g use of Portage Bay/SYC/QCYC because of greater noise, worse air quality, v visual effects from a bridge built that much further into Portage Bay and clo SYC, greater congestion because the I-5/520 interchange bottleneck is not improved materially, and worse problems with access/egress.

C-025-084

C-025-085

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
... are caused by the action and are later in time or farther removed in distance, but are still reasonably forese
typically involve a chain of cause-and-effect relationships that can take time to develop and can occur at a dis
from the project site. This makes some indirect effects difficult to predict accurately, although they must be
reasonably foreseeable, and usually requires a **qualitative estimate**... (page 2 of technical report)
...Other indirect effects can take months or years to become apparent (page 23 of technical report)

Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, Pg 23 Ch 7, Pg 24 continued	23, 24 13	Erik Sabiers	Recreation	Second, The SDEIS seems to focus mostly on macro level beginning-to-en commuter type impacts and focuses little on effects to recreational areas li Bay/SYC/QCYC that are in the middle of the 520 line where "connectivity," aesthetics, and air/noise/etc. would likely not be improved but rather wors the short and long-term. Noise walls, appealing exterior noise wall design vegetation, quiet pavement, street sweepers, minimizing width of the west 520 Montlake on-ramp, etc. all could be important project features to mini negative or invasive impacts of 520 construction and expansion.

C-025-086

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
... are caused by the action and are later in time or farther removed in distance, but are still reasonably fores
typically involve a chain of cause-and-effect relationships that can take time to develop and can occur at a dis
from the project site. This makes some indirect effects difficult to predict accurately, although they must be
reasonably foreseeable, and usually requires a **qualitative estimate**... (page 2 of technical report)
...Other indirect effects can take months or years to become apparent (page 23 of technical report)

Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, Pg 25 Ch 7, Pg 26	21 22	Erik Sabiers	Visual and Aesthetics	The SDEIS states *"the project would not produce indirect effects on visual and aesthetics because all changes to structures, landforms, and vegetatio be confined to direct impacts within the project area along the SR 520 corr* find this incorrect for the Portage Bay area since a larger footprint bridge (the width of the westbound 520 Montlake on-ramp) with it's related increas noise, filth, and visual effects encroaching on SYC, QCYC, moorage, and Pc in general would definitely produce indirect effects related to SYC club usag related economics. Some indirect effects specifically could be lesser usage facilities in general in the Portage Bay area, less desire for moorage, fewer banquets held, effects on the sailing school and programs, etc. Minimizing effects somewhat via context-sensitive architectural and design standards vegetation (per page 26, line 22), narrowing the westbound 520 Montlake and utilizing noise walls, quiet pavement, and street sweepers could be hel project features.

C-025-087

C-025-088

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
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typically involve a chain of cause-and-effect relationships that can take time to develop and can occur at a dis
from the project site. This makes some indirect effects difficult to predict accurately, although they must be
reasonably foreseeable, and usually requires a **qualitative estimate**... (page 2 of technical report)
...Other indirect effects can take months or years to become apparent (page 23 of technical report)

Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

C-025-089

Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, Pg 26	35	Erik Sabiers	Cultural	The SDEIS *"did not identify any indirect effects on cultural resources"* yet t technical report on page 82 states *"construction-related effects on historic in the project vicinity could include increased noise, fugitive dust, vibration, visual quality effects. Temporary street closures would cause traffic detours could increase traffic in and around identified historic properties. These eff would be minimized through mitigation measures that protect building faca comply with local noise regulations, and maintain access."* SYC's historical should not be ignored. SYC is a cultural resource and this includes traditio activities like Opening Day as well as many other events and gatherings.

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
... are caused by the action and are later in time or farther removed in distance, but are still reasonably forese
typically involve a chain of cause-and-effect relationships that can take time to develop and can occur at a dis
from the project site. This makes some indirect effects difficult to predict accurately, although they must be
reasonably foreseeable, and usually requires a **qualitative estimate**... (page 2 of technical report)
...Other indirect effects can take months or years to become apparent (page 23 of technical report)

Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, Pg 28	5	Erik Sabiers	Noise	WSDOT considers all noise-related effects to be direct. While we agree tha a direct effect since it is detected by people only while close to the SR 520 for SYC and QCYC there are also probable indirect effects such as less SYC usage in all forms including related economic impacts of less moorage reve banquet revenue, and less outside restaurant deck revenue as moorage ho club patrons recognize the lessened desirability of mooring boats and holdi at the clubs. Further. the SDEIS's assumptions about transit usage and pr of quieter vehicles on the road over time seem like unsubstantiable claims report time frame of 2030 (only 20 years). An analyst could just as easily there will be more noise resulting from population growth and more vehicle mass transit vehicles on the road. Also, Pg 5/6 of the technical report sho build bridge at 60ft wide but the 6 lane at 115+ ft wide (and this does not the width of the westbound 520 Montlake on-ramp) putting all that traffic a that much closer to SYC/QCYC than in the no build alternative. Finally, the technical report on pg 85 states that construction would produc and vibration, especially from major construction activities such as pile driv demolishing existing structures, hauling, and concrete pumping. During hea construction periods, noise levels could reach very high levels (85 to 105 A decibels [dBA]) at 50 to 100 feet from the activities, and these effects wou above the traffic sound levels normally experienced within 500 feet of the r way. We believe short-term and long-term measure are needed to control potential negative effects of increased noise.

C-025-090

C-025-091

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
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typically involve a chain of cause-and-effect relationships that can take time to develop and can occur at a dis
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reasonably foreseeable, and usually requires a **qualitative estimate**... (page 2 of technical report)
...Other indirect effects can take months or years to become apparent (page 23 of technical report)

Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

Report	Page #	LINE #'s	Reviewer	Topic	Comment
C-025-092 Indirect & Cumulative Effects	Ch 7, Pg 29	14	Erik Sabiers	Air Quality	We agree that the project would produce indirect effects on air quality duri construction period from hauling construction materials and from particulat from excavation of fill material. Adverse filth affects the SYC clubhouse, b moor at SYC, outside banquet activity, the sailing school, and outside resta deck revenue. However, the SDEIS completely ignores any potential long- increase in air quality despite the fact that p 88 of the technical report stat *"emissions would occur over the long term"* and that *"expanded transit...w offset INCREASES in vehicle emissions from HIGHER traffic volumes."* Gre congestion at the West side I-5/520 bottleneck from increased overall traff would increase noise, CO levels, and filth. Lastly, for a given level of noise quality, just the fact that the bridge footprint would creep further north an substantially further north at the location of the westbound 520 Montlake c makes it worse for the Portage Bay recreational area.

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
... are caused by the action and are later in time or farther removed in distance, but are still reasonably forese
typically involve a chain of cause-and-effect relationships that can take time to develop and can occur at a dis
from the project site. This makes some indirect effects difficult to predict accurately, although they must be
reasonably foreseeable, and usually requires a **qualitative estimate**... (page 2 of technical report)
...Other indirect effects can take months or years to become apparent (page 23 of technical report)

Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

Report	Page #	LINE #'s	Reviewer	Topic	Comment
C-025-093 Indirect & Cumulative Effects	Ch 7, Pg 29	33	Erik Sabiers	Air Quality	The SDEIS statement that *"the project is not expected to create any new v nor increase the frequency of an existing violation of the CO standard"* see unsubstantiated statement and is unlikely to be true since more traffic on t from the Eastside will still bottleneck on the West side right at Portage Bay 5/520 interchange and cause worse air and noise pollution and filth. Nothi Technical report discusses the West side I-5/520 bottleneck PLUS a larger bridge PLUS population growth PLUS more transit vehicles on the road EQU the potential for lower air quality.
C-025-094 Indirect & Cumulative Effects	Ch 7, Pg 32	9	Erik Sabiers	Water	The SDEIS states that the project would not have an adverse effect on wat because storm water runoff would be mitigated. The technical report is ON referencing storm water treatment and does not consider or analyze effects and road filth that occurs during dry weather which ultimately settles on ne structures and surface water. This disturbs water quality in Portage Bay, a the environment and recreational activities such as SYC sailing school.

Discipline Report Comment Summary

Discipline Report: **Indirect and Cumulative Effects Analysis**

Indirect effects (sometimes called secondary impacts or effects) are defined as effects that:
... are caused by the action and are later in time or farther removed in distance, but are still reasonably forese
typically involve a chain of cause-and-effect relationships that can take time to develop and can occur at a dis
from the project site. This makes some indirect effects difficult to predict accurately, although they must be
reasonably foreseeable, and usually requires a **qualitative estimate**... (page 2 of technical report)
...Other indirect effects can take months or years to become apparent (page 23 of technical report)

Cumulative Effects - WSDOT does NOT mitigate cumulative effects because it does not have jurisdiction ove
the many non-WSDOT projects that contribute to them. Ch 7, p 7-1,line 6.

C-025-095

Report	Page #	LINE #'s	Reviewer	Topic	Comment
Indirect & Cumulative Effects	Ch 7, Pg 39		Erik Sabiers	Navigation	This section of the SDEIS and the technical report completely omits naviga issues for the boating and recreation community during the construction pe than bridge related closures. The ability to access SYC, QCYC, etc. from th side is crucial to general club activities and finances not to mention specific community events such as Opening Day, Sailing School, etc.

Comment Page/line	Commentator Name	Comment by WSDOT	Reviewer comment
SDEIS Report, Ch 7 Indirect and Cumulative Effects			
C-025-096 p 7-5	E. Van	Assumption - WSDOT considered construction to be short term and temporary. Therefore, only direct or indirect effects of operating the facility would contribute to cumulative effects	Both construction and operation of the project may have the effect of removing significant parking at the NOAA property utilized in connection with Opening Day activities. Construction and location of the project in Portage Bay may adversely effect the Opening Day operations.
C-025-097 p 7-18	E. Van	The report discusses construction period mitigation measures impacting a number of institutions.	The historic Seattle Yacht Club is not included in the discussion.
C-025-098 p 7-21	E. Van	Social Elements Effects. No indirect effects would result from the project	Impact of tolling and construction may adversely effect usage of Seattle Yacht Club impacting its cultural contribution to the community.
Attachment 7 Discipline Reports Indirect and Cumulative Effects			
C-025-099 p7, Option A	E. Van	"-would include a transit-only off-ramp from westbound 520 to northbound Montlake Blvd."	No auto exit ramp to Montlake Blvd to provide access to Seattle Yacht Club (SYC). No description of eastbound exit to Montlake traveling north.
C-025-100 p18-19 Cumulative Effects	E. Van	"--the analysts considered only direct or indirect effects of operating the completed facility as potential project contributions to cumulative effects."	This gives no consideration to the combination of construction activities coupled with tolling that would cumulatively affect the activities of SYC, a historic structure.
C-025-101 p30-31 History of the Project - Montlake	E. Van	A description of development of the area known as Montlake.	It contains no mention of the historic nature of the area, including SYC.

Comment Page/line SDEIS Report, Ch 7 Indirect and Cumulative Effects	Commentator Name	Comment by WSDOT	Reviewer comment
C-025-102 p58 Land Use	E. Van	"No substantial change to the overall urbanized land use pattern in Seattle would occur, and no indirect effects on land use pattern would occur."	There is no discussion on the dilatory impacts that would occur on the Montlake interchange neighborhoods and the SYC.
C-025-103 p63-64 Social related cumulative effects	E. Van	The report concluded there would be no long term adverse effect on social elements. Therefore, no assessment was pursued.	There was no mention of the potential effects on the social nature of historic properties.
C-025-104 p70-76 Effects on Recreation	E. Van	There is significant discussion re the effects on recreation re parks, and the UW.	There was no discussion on effects on boating or sailing in Portage Bay, sailing classes, Open-Day parade nor the Special Peoples Cruise. Opening Day was mentioned on page74-75, but there was no discussion on the effects of the project or efforts to mitigate the effects.
C-025-105 p 82 Direct and Indirect on Cultural Resources	E. Van	Effects on historic properties would be minimized through mitigation measures that would protect building facades, comply with local noise regulations and maintain access.	There has been no attempt to engage discussions on mitigation with SYC.
C-025-106 p 82 Direct and Indirect affects on Cultural Resources	E. Van	"There are no identified indirect effects to cultural resources"	Indirect effects on cultural resources of the Seattle Yacht Club will include impacts on usage of the property during construction and as a result of tolling which will adversely impact usage of the property: usage of the sailing facilities, and interaction with the community at large, all of which contribute to the historic nature of the property.

Comment Page/line SDEIS Report, Ch 7 Indirect and Cumulative Effects	Commentator Name	Comment by WSDOT	Reviewer comment
C-025-107 p 90 - 91 Air Quality	E. Van	The discussion on air quality does not mention particulate matter, such as tire rubber fragments or exhausts	Air quality should include particulate matter, such as from tires and exhaust that are carried on the prevailing wind and deposited on the historic property.
C-025-108 p 99	E. Van	Water resources - concludes no adverse effect because of storm water runoff treatment.	Does not discuss impacts due to contaminants carried by air.
C-025-109 p 122 Navigation	E. Van	Channels would be closed at times but construction would be staged so that channels would not be closed on the same day. A local notice to mariners would be issued by the Coast Guard.	The channels are not identified precluding specific comment. However, there is no mention of keeping channels open for the conduct of Opening Day or Sail class activities.

Comment Page/line Attachment 7 Discipline Reports Land Use, Economics and Relocation	Commentator Name	Comment by WSDOT	Reviewer comment
C-025-110 Exhibit 31	E. Van	Identification and location of business and institutions	The Exhibit does not identify the locations of MOHAI, NOAA nor the SYC, all of which may be severely impacted
C-025-111 p 4	E. Van	The 6 lane alternative would temporarily increase congestion and affect access to businesses and residents. Some businesses could experience fluctuations in retail sales.	There is no mention of loss of revenue impact on SYC, which may limit the ability to maintain the historic facility.
C-025-112 p 23	E. Van	SYC is mentioned as a yacht club.	There is no mention that the club is also an historic property. It presumes unimportance.
C-025-113 p 62	E. Van	The report discusses minor revenue losses from construction and night-time lane closures that would have a minor effect on local business revenues.	Many of SYC revenue activities occur in the evenings, when loss of revenue could severely impact revenue necessary to support the facility.
C-025-114 p 102-103	E. Van	WSDOT states that signage that clearly marks detour routes and indicates that stores are open during construction will be provided.	The report mentions QCYC and the UW but not SYC. Also mitigation is underway for adverse impacts to several businesses/institutions but not SYC.
C-025-115 p 103	E. Van	QCYC is mentioned for mitigation for temp-orary lost moorage and the UW for special events.	SYC should be included for mitigation for events such as Opening Day weekend, sailing activities and other events, such as the Special Peoples Cruise.
C-025-116 p 113	E. Van	Negative Effects remaining after completion from land use acquisitions	There is no mention of continuing negative effects from land use invasive effects.

Comment Page/line	Commentator Name	Comment by WSDOT	Reviewer comment
Attachment 7 Discipline Reports Land Use, Economics and Relocation			
Seattle's Comprehensive Plan			
LU 241, p 1-12, item 1.	E. Van	"All environmental effects would be mitigated acceding to governmental regulations The 6-Lane Alternative would be consistent with this policy."	The report does not discuss mitigation for ~~adverse~~ adverse impacts to historical properties.
LU 269, p 1-14 , item 2.b.	E. Van	Mentions the Seattle policy for Lake Union and Portage Bay to protect the views in all environments.	WSDOT makes no comment about the impacts on the city view of the bridge and intersections
LU 269, p 1-15, item TG 7	E. Van	Regarding protection of neighborhood streets from through traffic. WSDOT concludes the ------would not substantially change local traffic patterns.	What does "substantially" mean? SYC needs protection for accessibility.

C-025-117

C-025-118

C-025-119

Seattle Yacht Club Comments on
SR 520 Bridge Replacement HOV Project SDEIS Report
(Dock Zero) (3)

Subject: Adverse Effects on Cultural Resources

Reference: Chapter # 5, Page 5-82 to 5-87(Cultural Resources, Portage Bay)
Chapter #6, Page 6-57 & 6-59(Cultural Resources, Portage Bay)

Standing: Seattle Yacht Club (SYC) is a **Consulting Party** to the planning and construction of the SR 520 bridge replacement project. SYC is a historic site and is listed on the **NRHP**. As such, SYC applied for and was granted "Consulting Party" statue by WSDOT and there by qualify for Section 106 protections.

Cultural Element:

C-025-120 Each year, Seattle Yacht Club invites Yacht Clubs from all over the Pacific Northwest and Canada to come celebrate "The Opening day of Boating Season" (Opening Day). This festive event kicks off the season long calendar of boating activities. The program for the day starts with a Commissioning Ceremony that recognizes the Commodores from over 100 visiting Yacht Clubs from all over the Pacific Northwest and Canada. An International Invitational Rowing Regatta featuring the Windemere Challenge Cup sponsored by the University of Washington Crew follows the ceremony. The World Famous Parade of Boats through the Montlake Cut lasts up to four hours following the crew races.

Many of the visiting Yachtsmen travel great distances to participate in Opening Day. As such SYC, the Queen City Yacht Club and several other clubs in the adjacent areas attempt to provide guest moorage for the visitors. SYC erects a temporary dock as guest mooragee in the quiet, (except for SR 520 noise) well protected waters of Portage Bay for our visitors. The waters of Portage Bay are an excellent venue for these Opening Day activities

C-025-121 The Seattle Yacht Club objects to any bridge design and/or construction activity that further encroaches into the navigable waters of Portage Bay; especially in those areas designated by the Section 106 as an **Areas of Potential Effect** (APE). Seattle Yacht Club's sailing culture is and will be **Adversely Effected** under Options A, K and L by the SR520 Bridge Replacement and HOV Project during construction. The Club fully expects the Memorandum of Agreement to include provisions that will completely mitigate all **Cultural Resource** conflicts arising from the SR 520 bridge project.

3/24/2010

Seattle Yacht Club Comments on
SR 520 Bridge Replacement HOV Project SDEIS Report
(Sailing Classes) (5)

Subject: Adverse Effects on Cultural Resources

Reference: Chapter # 5, Page 5-58 & 59 Cultural Resources - Portage Bay
Chapter # 6, Page 6-58 & 85 Cultural Resources - Portage Bay

Standing: Seattle Yacht Club (SYC) is a **Consulting Party** to the planning and construction of the SR 520 bridge replacement project. SYC is a historic site and is listed on the **NRHP**. As such, SYC applied for and was granted "**Consulting Party**" status by WSDOT and there by qualify for Section 106 protections.

Cultural Element:

C-025-122 Great effort has been put forth by the Seattle Yacht Club to preserve its traditions and culture. Each summer since its establishment in 1892, the Club has sponsored sailing classes and regattas to preserve the Art and Science of sailing. These sailing classes on Portage Bay are available to all youths of the Seattle and Puget Sound vicinity. Sailing education consists of boating safety, boat handling, sailing equipment utilization, rules of competition and sailing tactics. Many Olympic and International class competitors have graduated from this sailing education program. Portage Bay waters are an excellent venue for these purposes.

C-025-123 The Seattle Yacht Club objects to any bridge design and/or construction activity that further encroaches into the navigable waters of Portage Bay or interferes with the conduct of these sailing classes, especially in those areas designated by the Section 106 as **Areas of Potential Effect** (APE). SYC's sailing culture is and will be **Adversely Effected** under Options A, K and L by the SR520 Bridge Replacement and HOV Project both during construction and in commercial operation. SYC fully expects the Memorandum of Agreement to include provisions that will completely mitigate all **Cultural Resource** conflicts arising from the SR 520 bridge replacement project as they relate to the conduct of SYC's sailing education program.

3/24/2010

Seattle Yacht Club Comments on
SR 520 Bridge Replacement HOV Project SDEIS Report
(Access/egress to Slips) (4)

Subject: Adverse Effects on Cultural Resources

Reference: Chapter # 4, Pages, 4 – 77, Navigation
Chapter # 5, Page 5, 5 - 151
Chapter #6, Page, 6 - 107

Standing: Seattle Yacht Club (SYC) is a **Consulting Party** to the planning and construction of the SR 520 bridge replacement project. SYC is a historic site and is listed on the **NRHP**. As such, SYC applied for and was granted "**Consulting Party**" status by WSDOT and there by qualify for Section 106 protections. In addition, WSDOT is obligated to make a 4(f) analysis that requires them to avoid, minimize or mitigate any use of a historic property.

Cultural Element:

C-025-124 Seattle Yacht Club realizes that the contractors must have access and egress to the SR 520 highway rights of way in order to accomplish the bridge replacement and other activities. In like manner, the SYC boat owners must have access and egress to their moorages. Any blockage of the fairways leading to the moorages by boats, barges and other floating materials will adversely affect the Seattle Yacht Club. It would appreciate any notices that WSDOT and or the contractor can give to enable its cooperation in the bridge replacement project. It would also appreciate timely notices regarding WSDOT's Pontoon Towing and Ballard Lock Operation to minimize any effect on its activities.

C-025-125 The Seattle Yacht Club objects to any bridge design and/or construction activity that further encroaches into the navigable waters of Portage Bay, especially in those areas designated by the Section 106 as **Areas of Potential Effect** (APE). Seattle Yacht Club's sailing culture is and will be **Adversely Effected** under Options A, K and L by the SR520 Bridge Replacement and HOV Project during construction. The Club fully expects the Memorandum of Agreement to include provisions that will completely mitigate all **Cultural Resource** conflicts arising from the SR 520 bridge project.

3/24/2010

Seattle Yacht Club Comments on
SR 520 Bridge Replacement HOV Project SDEIS Report
(Indirect & Cumulative Effects) (8)

Subject: Indirect & Cumulative Effects on Cultural Resources

Reference: Chapter # 7, Page 7-81 to 7-85 (Cultural Resources, Portage Bay)
Discipline Report - Indirect & Cumulative Effects Analysis

Standing: Seattle Yacht Club (SYC) is a **Consulting Party** to the planning and construction of the SR 520 bridge replacement project. SYC is a historic site and is listed on the **NRHP**. As such, SYC applied for and was granted "Consulting Party" status by WSDOT and there by qualify for Section 106 protections.

Cultural Element:

C-025-126 Chapter 7 of the SR 520 Bridge Replacement and HOV, SDEIS report addresses the Indirect and Cumulative Impacts. We noted that WSDOT uses the words "Impacts" and "Effects" interchangeably. At page 7-1 Indirect Effects are defined as those Impacts that are the result of a previous or distant action. Cumulative Impacts are effects that result from a collective or incremental set of actions. WSDOT declares that it does not mitigate Cumulative Impacts because it does not have jurisdiction over all of the contributing actions that result in the cumulative effects. That may not always be the case.

C-025-127 The SDEIS is suppose to identify all effects a proposed action might have on the environment or the effected area's resources, such as the SR 520 project. Impacts such as direct effects, indirect effects, operational effects, construction effects, permanent effects, positive effects, adverse effects all operating in an effected area.

C-025-128 Indirect and cumulative Impacts are considered to identify to the public the effects that a resource might experience in addition to those that are revealed by the normal project assessments

C-025-129 WSDOT examined a number of disciplines using FHA prescribed methodologies. Seattle Yacht Club found that the cultural resources they have great concern with did not have an indirect and cumulative effects assessment. Portage Bay is a cultural resource that the Seattle Yacht Club and the Boating Community depends upon to maintain their many historic activities associated with our traditional cultural properties such as Opening Day of Boating Season each Spring

C-025-130 Seattle Yacht Club objects to any bridge or highway design that further encroaches into Portage Bay. That would be an adverse effect that degrades that Historic nature of the Montlake Community and the waters of Portage Bay.

4/10/2010

February 18, 2010

Subject: Review of SR 520 EIS Navigable Waters Discipline Report

C-025-131 The undersigned was requested to review subject document from the point of view of the impact of the proposed SR 520 Bridge and feeder routes on the interests of the Seattle Yacht Club, its properties and activities with respect to Navigable waters. I have completed my review and offer the following comments (previously communicated verbally to Messrs. Bob Ranzenbach, Gary Stone and Commodore Ed Jennerich, QCYC and Vice President, RBAW).

Attachment 7, Section 12 of the SR 520 Environmental; Impact Statement was prepared by Parametrix, Inc. for Washington State Department of Transportation and the Federal Highway Administration. This document deals with the potential impact of the construction of and resulting SR 520 floating bridge proposed to replace the existing SR 520 Albert D. Rossellini Floating Bridge over Lake Washington and the feeder routes crossing Portage Bay and the Montlake Cut as well as the routes through navigable waters of the Pacific Ocean, Juan De Fuca Straights, Puget Sound and Lake Washington Ship Canal to be traversed by sections of the new SR 520 Bridge from the point of manufacture to the point of installation in Lake Washington. The report limits consideration to the established navigable channels in the various bodies of water involved through which commercial and recreational marine traffic normally pass to traverse the involved bodies of water.

C-025-132 The impact of the new bridge and feeder bridges or construction thereof does not consider the impact on bodies of water used by recreational, commercial and emergency service marine traffic associated with either the normal activities of Seattle Yacht Club and/or the Queen City Yacht Club and/or waterfront properties or moored houseboats and other marine commercial and/or recreational users of waters adjacent to the navigable channels in the affected bodies of water.

The major change in SR520 affecting navigable waters is the removal of the draw span mitigated by raising the clearance height of the eastern high rise passage under the bridge to approximately 70 feet vertical clearance. The impact would be limiting only to the passage of vessels and other watercraft with a superstructure, mast, boom or other top hamper exceeding 70 feet in height from passage to Lake Washington south of SR 520.

Some inconvenience to marine traffic will be experienced during the construction of an additional Montlake Cut bridge but closures are to be limited to a few days during the construction period.

The report lacks details of the impact on waters and shorelines outside the navigation channel through Portage Bay. While the construction of temporary construction bridges both north and south of the existing Portage Bay bridge while that bridge is rebuilt is described in the report, the extent of such temporary bridge's incursion into Portage Bay waters to the North of the existing bridge is not defined nor is the presence of floating cranes, barges, etc. to be used in the reconstruction mentioned, much less defined as to position and impact.

C-025-132 The major threat to Seattle Yacht Club and similarly to Queen City Yacht Club properties and operations could potentially be loss of moorage space for SYC's Dock "0" used during Opening Day of Yachting on the first weekend of May annually as well as access to permanent moorage on the South sides of both yacht clubs' fixed moorage facilities. Such loss would create a loss of revenue for SYC and QCYC in displaced moorage, restriction of visitor moorage and related club use revenues and hinder normal marine/on-the-water club programs currently conducted in the Portage Bay waters.

Further, no mention is made of the potential impact on the shorelines of Portage Bay, waterfront properties and floating home moorages caused by temporary structures and floating construction equipment.

I conclude that a full assessment of the potential impact cannot be determined without the additional information required to determine the position of temporary structures associated with the "construction bridges" and the floating construction equipment positions and duration of stay associated with the temporary bridges.

Viggo C. Bertelsen, Jr.

Comment Page/line Attachment 7 Discipline Reports Social Elements	Commentator Name	Comment by WSDOT	Reviewer comment
C-025-133 p 1	E. Van	NEPA requires a systematic, interdisciplinary approach when considering environmental and community factors in decision making,--	An important element for our focus
C-025-134 p 20	E. Van	Affected areas include the Montlake Historic District	The report does not mention the Seattle Yacht Club, an historic facility.
C-025-135 p 21	E. Van	Map of the study area identifies many major features.	The map does not identify MOHAI, NOAA, or the Seattle Yacht Club, an historic facility.
C-025-136 p 30-43	E. Van	Discussion of the existing social characteristics of the study area	There is no mention of the waterside activities nor the Seattle Yacht Club and its historic nature.
C-025-137 p 47	E. Van	A comment that construction activities associated with the project could cause residents and users of facilities to avoid the disrupted areas.	These activities could severely impact usage and financial structure bearing on the ability of the Seattle Yacht Club to maintain its historic property.
C-025-138 p 48	E. Van	Exhibit 14, Detour routes. Shows 520 exit westbound onto Montlake northbound.	Believe this will create heavy, slow traffic adversely impacting usage of the Seattle Yacht Club, an historic facility, without adequate traffic control.
C-025-139		Exhibit 15. Construction staging. Displays work bridges in Portage Bay.	Possible waterway access restrictions to Seattle Yacht Club facilities.

SR 520- Attachment No. 8
Supplemental Draft Environmental Impact Statement
Review Comments

by: Jeff Howard
3/14/10

C-025-140 Attachment no. 8 to the SR 520 SDEIS is a summary of the development history of the project, which started in 1998. This summary discusses alternatives considered and rejected, as well as the three Montlake alternatives studied in more depth. This document does not contain specific technical issues, so the comments are limited to the overall alternatives considered, and their potential impact to SYC.

The relative impacts to SYC are primarily related to the horizontal distance between the proposed Portage Bay viaduct and the SYC main station facilities, with closer distances having the most significant negative impacts. The horizontal distance and viaduct height will impact most of the direct environment issues, including noise, visual, air quality, fugitive dust and road debris.

As shown on Exhibit 9 (page 76) of Attachment No. 8, the existing 4 lane highway is 60 feet wide. As shown on Exhibit 10 (page 76), the proposed 6-lane alternative is 115 feet wide at the Evergreen Point bridge section, or almost twice as wide.

The proposed Portage Bay bridge is even wider. The extent of the extra width, and the distance to SYC facilities will depend on which of the three final Montlake alternatives (A, K or L) is chosen, and if the interchange includes exclusive transit lanes and flyer stops.

From the standpoint of distance, Alternative A, the Montlake Interchange, with bus transit stops is the worst, and the Pacific Interchange alternatives (K and L), would be the best because they move the existing Montlake Interchange further east. As discussed on pages 64 and 66, the Montlake Interchange requires 9 lanes across Portage Bay (6 normal lanes plus two auxiliary lanes and one westbound acceleration lane from the Montlake Freeway transit station. **These three additional lanes would add approximately another 60 feet to the Portage Bay bridge, bringing the total width to about 175 feet, or about three times wider than the current bridge.**

C-025-141 The other issue that is not addressed in Attachment 8 is the proposed esthetics of the Portage Bay bridge. Exhibit 4, page 56 shows sound walls on both sides of the bridge. What will these walls look like? How high? Bridge profile?

Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart St., Suite 520
Seattle, WA 98101

RE: SR 520 SDEIS Public Comments

Dear Ms. Young:

C-026-001 On behalf of the Cascade Bicycle Club and our over 12,000 members, we appreciate the opportunity to provide comments on the SR 520 SDEIS alternatives. We appreciate the analysis and extensive effort by the State Department of Transportation in working to create a design that responds to the needs of the current users and future generations. With a significant percentage of Cascade's membership residing in the affected neighborhoods, we are vested in the outcome of this project. If designed right, we believe the SR 520 replacement will provide much needed opportunities for cyclists throughout the region, while significantly increasing this transportation mode.

However, we do not find the SR 520 alternatives as proposed to present the type of infrastructure design that will be desired 75 years from today (projected project life-span). With this premise, we encourage the State to adopt a preferred SR 520 alternative that demonstrates a stronger commitment to sustainable modes of transportation and the movement of people, while lessening the impact on the surrounding environment and communities.

While we have concerns with all alternatives as proposed in the SDEIS, we are particularly concerned with Alternative A (plus sub options), as this has the least support for bicycling and walking, but also because this alternative is within the direction currently supported by the Legislative Working Group.

C-026-002 **Concerns and Recommendations, particularly in response to SDEIS A plus sub options:**

Bicycle and Pedestrian Access/Safety: Our primary concern with the proposed alternatives, particularly Alternative A, is the lack of support for nonmotorized travel through the project corridor. Of prime concern is the Montlake interchange. The design as proposed under Alternative A significantly reduces mobility for bicyclists and pedestrians by presenting daunting and unsafe intersection crossings. We encourage the State to adopt a preferred alternative that includes an urban (human)-scale interchange that eliminates slip lanes from/onto SR 520. In addition, we strongly encourage the State to include a regional pedestrian and bicycle facility (designed to regional standard) that facilitates safe and efficient movement through the Montlake interchange and corridor.

C-026-003 Project Scale/ Built Footprint: The proposed alternatives present an expansion of the floating bridges and significantly larger interchanges and connecting infrastructure, as compared to the existing design. Under the Seattle City Council's direction, the SR 520 project should seek to minimize the impact especially in sensitive areas such as the arboretum. By reintroducing the Lake Washington ramps into the configuration and potentially adding a second bascule bridge over the Montlake Cut, the project footprint is much larger than it is today. We recommend the State adopt a

C-026-003 preferred alternative that scales back the built footprint of the project in order to reduce the impact on surrounding neighborhoods the environment.

C-026-004 Environmental Impact: The proposed alternatives as designed present significant environmental impacts – both in habitat loss and degradation to air and water quality. In addition to this, the projected traffic volumes through the project corridor fail to support the State's climate obligations. We encourage the State to adopt an alternative that not only seeks to mitigate these environmental impacts, but also significantly reduces them through a context sensitive design.

C-026-005 Transit Access/Integration: A critical oversight in all the proposed SR 520 alternatives is the lack of direct connections between light rail and bus service. With an additional 70,000 daily riders projected on the U-link by 2030, there is a need for better integration between these high-demand transit services (as echoed in HB 3096). In addition to this, the removal of the Montlake Flyer stop further reduces transit accessibility in the proposed alternatives. The adopted alternative should optimize transit connections and opportunities, by providing direct connections and transfers between light rail, bus, and nonmotorized infrastructure and service, while supporting transit priority through key corridors.

C-026-006 We also encourage the State to evaluate additional transit priority opportunities beyond the scope of the project that may reduce the need for current features of the proposed design, such as a second bascule bridge over the Montlake Cut. One project that should be included in this evaluation is the provision of BAT lanes on 23rd Ave.

C-026-007 The adopted SR 520 Bridge design should be configured to allow for a feasible conversion to provide light rail service when appropriate. Given the massive construction effort required to replace the SR 520 Bridge, provisions should be made now to ensure that this does not become impracticable at a later date. We recommend the State consider current research regarding light rail feasibility through the corridor and ultimately adopt a preferred alternative that is configured to support high occupancy transit.

C-026-008 Finally, we strongly encourage the State to review and consider the additional SR 520 alternatives that have been analyzed by the City of Seattle (Nelson Nygaard) prior to selecting a preferred alternative.

We appreciate your attention to our concerns and recommendations. The replacement of the SR 520 Bridge and connecting infrastructure is one of the most significant transportation projects of our time, and we strongly encourage your consideration of the key issues raised by the various stakeholders.

Sincerely,

Tessa Greegor

Principal Planner

Cascade Bicycle Club

Montlake Community Club

Working together to maintain and nurture the natural environment
and history of Seattle's Montlake neighborhood

montlake-board@googlegroups.com

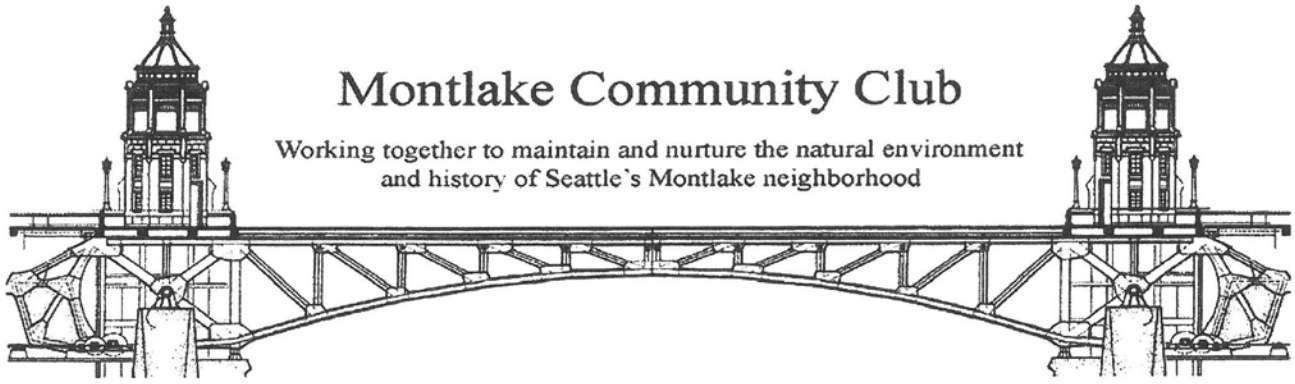
Washington State
Department of Transportation

SR 520, I-5 to Medina: Bridge Replacement and HOV Project

Supplemental Draft Environmental Impact Statement

Montlake Community Response

15 April 2010



Montlake Community Club

Working together to maintain and nurture the natural environment
and history of Seattle's Montlake neighborhood

montlake-board@googlegroups.com

15 April 2010

Washington State Department of Transportation
Ms. Jenifer Young
Environmental Manager
SR 520 Office
600 Stewart Street, Suite 520
Seattle, Washington 98101

Subject: Supplemental Draft Environmental Impact Statement
Re: Review Comments

Dear Ms. Young:

C-027-001

As requested by the Washington State Department of Transportation (WSDOT), the Montlake Community Club has reviewed the January 2010 Supplemental Draft Environmental Impact Statement (DEIS) for the SR 520, I-5 to Medina: Bridge Replacement and HOV Project. In general, the Montlake community is most heavily impacted by the project and we believe several fundamental aspects of the project are not addressed adequately in the SDEIS. Members of the community are concerned about both the design of the project and the process of construction.

The Montlake Community Club's highest priority concerns with the current plans are:

- Construction effects – restricted access, impact on businesses, gridlock, and noise.
- The taking of homes in the path of the proposed second bascule bridge over the Lake Washington Ship Canal, parallel to the historic Montlake Bridge.
- Re-routing of the existing Arboretum ramp traffic onto our neighborhood streets.
- The width of the corridor between Foster Island and the Portage bay Bridge.
- Increase in traffic on Montlake Blvd, 24th Ave and other residential streets.

C-027-002

The proposed construction, with a duration of up to 78 months, an average of 13 to 50 truckloads per day, with a peak 120 to 300 truckloads per day on East Shelby, East Hamlin streets and Montlake Boulevard will create a collapse of the neighborhood's access to their homes. For the Portage Bay Bridge with the duration of 72 months with an average of 11 to 12 truckloads per day with a peak of 50 truckloads per day traveling through the community business district on 24TH and turning on Boyer past the Children's Clinic and the St. Demetrious church, the impact would cause the businesses to fail financially, access to the medical center to be conflicted and

C-027-002 the religious activities at the church that is listed as eligible for national registration to be severely impacted, not to mention the fact that 70 foot truck/ trailer assemblies will not be able to turn onto Boyer Avenue from 24TH Avenue.

C-027-003 Following our review of the above conditions, we met with a representative from the WSDOT's program engineering office to confirm the above with the existing site and neighbor conditions. It was confirmed that the proposed plan was not feasible and required major revisions. The attached response substantiates the above findings and further describes the other impacts including noise, air contamination, pedestrian and bicycle routes, and affects on fisheries and wetlands. A basic recommendation to mitigate the above impacts is to pursue the use of barges and conveyor systems to deliver and return supplies equipment and debris. Refer to Jim Harper's statement, response No. 9.

C-027-004 Regarding the design options, the residents of Montlake are concerned about the rerouting of traffic that will be caused by the removal of the existing Arboretum ramps. Approximately 20,000 vehicles per day use the section of Lake Washington Blvd that runs through the Arboretum, and a large percentage of those vehicle use the existing Arboretum ramps to get to and from the east side. Under the current proposals for the westside interchange, some or all of that traffic would be rerouted onto our residential streets. This is unacceptable. The benefits of removing the existing ramps do not offset the obvious harm done by turning existing neighborhood streets into de facto freeway ramps and arterials. We are not proposing that the existing ramps remain, simply that better design options be developed. Whatever the final design is, it must adhere to the "do no harm" principle. It must not appreciably increase traffic volumes or congestion on existing streets, and it must discourage cut-through traffic either by its basic design or by using bollards and turn restrictions. This will require close coordination with the Seattle Department of Transportation throughout the design process since most the existing streets in Montlake belong to SDOT, not WSDOT.

C-027-005 Two other design components of the project, the excessive width of the corridor through Montlake and the construction of a second bascule over the ship canal parallel to the historic Montlake bridge, will have devastating impacts on the Historic Montlake District through the taking of historic homes and the degradation of the area around the remaining homes. The proposed width of the corridor and the addition of a second bascule bridge are strongly opposed by members of the community, and the permanent harm done to the environmental, historical, social and cultural fabric of our community has not been addressed completely or honestly in the SDEIS.

C-027-006 The Community offers the following comments and recommendations for your consideration. These comments have been organized as follows: General comments with respect to 520 Project SDEIS, followed by Discipline Report Comment Summaries as tabbed sections.

Response:

1. Topic: Construction Activities – Chapter 3
Project Area's Environment – Chapter 4
Effects During Construction – Chapter 6

Reviewer: Jon H. Decker, AIA

C-027-006

Summary Statement: The descriptions related to the impact to the Montlake Community requires more specificity in order for the Community to accurately assess the impact, for example the use of neighborhood streets for haul routes, the inclusion of the Montlake Football Field as part of the right-of-way and the construction of the bridge foundation within shallow water wetlands. Refer to Attachments 1A, 1B, 1C and 1D.

2. Topic: Construction Activities – Chapter 3
Haul Routes

Reviewer: Richard D. Dunn

C-027-007

Summary Statement: The Montlake neighborhood streets E. Hamlin and E. Shelby will be the two most negatively impacted streets in any area of the SR 520, I-5 to Medina: Bridge Replacement and HOV Project-under any of the three options described in the SDEIS. Between the staging areas in the UW open area next to the Montlake Cut, Mohai, the Lake Washington Blvd areas and the Montlake Blvd site there will be construction activity in close proximity to houses on these streets for the length of the project. The demolition of Mohai and its removal and the construction of the second bascule bridge on Montlake Blvd will bookend this small community with loud projects at both ends of the streets. Rebuilding the westbound Montlake exit will create tremendous noise for the people on E. Hamlin. To also use E. Hamlin and E. Shelby as haul routes for the Mohai debris removal, materials delivery and the other activities associated with the staging of the project will be overkill. Another route for this activity must be used. Attachment 4 describes the issues and provides the haul route alternative (one that is in the SDEIS) 3-4 in Chapter 3. Refer to Attachments 2A, 2B, 2C, and 2D.

3. Topic: Cultural Resources

Reviewer: Paula Opperman

C-027-008

Summary Statement: In the SDEIS the permanent adverse impacts of the construction of the A+ version of the 520 replacement to the historic neighborhood, building and sites are seriously understated. Discussion of mitigation is unclear, absent or inadequate when discussed. There are no identified benefits for many of the aspects of the project design for example, the addition of a 2nd bascule bridge and the doubling of the footprint of the bridge through the historic Montlake neighborhood.

4. Topic: Noise

Reviewer: Marie Hagman

C-027-009

Summary Statement: The current SDEIS report fails to adequately fulfill reasonable noise evaluations in its studies. Additionally, it neglects to offer a critical analysis of different noise reduction options to reduce overall output of noise. Although the current report gives reference to a projected radius of area affected by the noise, it neglects to explain why it is reasonable to make 500 feet the extent of the noise study when, clearly, areas beyond 500 feet will also likely be just as affected by construction noise. Additionally, it has been found that areas on the limit of 500 feet already exceed allowable noise limits (dba) for residential areas. Alternatives must be pursued to avoid unnecessary impact to Montlake and its surrounding communities.

C-027-010

As alternatives were discussed in the report, many elements on how to reduce noise pollution neglected to be mentioned. In the event that noise walls, for instance, did not meet "WSDOT reasonableness and/or feasibility criteria" (121), these walls would not be used. However, no other options were mentioned. Furthermore, in reviewing page 169 of the current SDEIS report, it has been determined that neither quieter pavement nor noise walls were financially evaluated. However, it should be deemed necessary to conduct a full cost/benefit analysis before these options are removed.

5. Topic: 24th Avenue Business District

Reviewer: Anita Bowers

C-027-011

Summary Statement: The SDEIS fails to mention the Montlake Business District beyond the Hop in Market and 76 Service Station, leaving out of the assessment 12 viable businesses that reside alongside 84 lovely homes on 24th Avenue. A cursory statement, "there is no impact/damage to adjacent neighborhoods" leads one to believe that WSDOT did not do due diligence in its review of the Montlake Neighborhood.

A neighborhood's local business is an integral part of its community and when it experiences a negative impact, the neighborhood often follows. The failure and loss of a business has a direct financial impact on the owners, their employees, the adjacent businesses, home values and, thus, the vibrancy of the neighborhood. Montlake is totally engaged with their business district which has resulted in 100% occupancy and a wide variety of services. Its proximity, being situated on a Haul Road with projected increased traffic is unacceptable to the Montlake Community.

6. Topic: 24th & Montlake Boulevard – Pedestrian, Bicycles

Reviewer: Don Argus

C-027-012

Summary I reviewed the EIS for the impact of 520 construction activities through

C-027-012 Statement: Montlake on pedestrians (including wheelchair users) and cyclist. I found that the project will be very disruptive – all pedestrian and bike crossings of the corridor will be cut, some for years.

The plan is unacceptable in that the project is planning to allow pedestrian access on only one side of Montlake Boulevard at a time, and does not indicate that the full width of walks and paths will be maintained at all times. We need assurance that disruptions will be minimized and staggered.

7. Topic: Noise

Reviewer: Chuck Budnik

C-027-013 Summary Statement: Noise mitigation measures for the Montlake Community (noted throughout the SDEIS report) are subjective and speculative. Residents of Montlake demand that the FHWA criterion of 67 db must be abated by 10 db, during and upon completion of SR 520 alignment and the Montlake Blvd E expansion.

8. Topic: Fisheries, Wetlands

Reviewer: Tony Opperman

C-027-014 Summary Statement: The SDEIS fails to adequately address the long term construction and permanent impacts of the proposed bridge replacement considering the large scale of the project. This is not just a basic replacement in kind with the addition of two lanes. The SDEIS describes a tripling, and in some areas quadrupling of the width of the roadway. Mitigation for major changes in traffic routing and the huge impacts to the Montlake community are not discussed.

9. Topic: Haul Routes

Reviewer: Jim Harper

C-027-015 Summary Statement: One of the major impacts of the bridge replacement construction will be truck traffic through the community via the designated haul routes and residential streets. We are looking for ways to minimize this traffic impact.

In reviewing the SDEIS it is apparent that there are a number of areas where barges could be substituted for trucks. One shallow draft barge can handle approximately 150 truckloads of material, or construction debris. After all, this is a marine construction project.

Construction materials and debris could easily be barged from various loading

C-027-015

locations at the site to an existing industrial staging and distribution area located on the north end of Lake Washington at Kenmore.

We would appreciate information pertaining to the use of barges and the potential overall impact on reducing the use of neighborhood streets.

10. Topic: Social Elements

Reviewer: Robert Hayden

C-027-016

Summary Statement: The scope of the study area does not take into consideration enough of the area that the new highway will impact. The primary issue in Seattle is not only the movement of cars and people along the 520 corridor, but what happens when they exit 520. This was not adequately addressed in this report. What was outlined in the report is that traffic will not be enhanced in the North/South Montlake corridor with the A or A+ option, and anyone who uses public transit to move through this corridor will find the A+ plan as not making any significant changes from the no build option. Movement to and from the NE section of Seattle will not be enhanced. The University Village and Seattle Children's Hospital will still not be adequately connected to the Montlake interchange, especially as it relates to public transit as no buses travel to the U Village directly from the Montlake interchange.

C-027-017

Major social institutions in the immediate area of the project have been omitted from the report: The Seattle yacht Club and the Queen City Yacht Club are not even mentioned, even though they are two of the social institutions most impacted by the new and old 520 corridor.

C-027-018

The raising and lowering of the Montlake Bridge is not addressed in this study and how it impacts the Montlake neighborhood neither in its current configuration nor in Option A's plans for a new Montlake Bridge and Montlake interchange. Without this being taken into consideration the plans are completely insufficient, because 18 hours of our life in this corridor are not being addressed. The assumptions that gridlock in Montlake will continue under Option A as it is with the No Build scenario should not be acceptable as an outcome for this project, and to say that this will not effect any of the social elements in Montlake is also unacceptable.

C-027-019

WSDOT's social elements study is really showing that WDOT never properly mitigated any of the effects from the original building of 520, and so the new project will have little effect on changing any of the current issues. And because it will change few of the existing conditions, it will thus have little or no effect on social elements in the area.

11. Topic: Indirect and Cumulative Effects

Reviewer: Chris Stuk

C-027-020

Summary Statement: Chapter 7 of the SDEIS appears to have omitted some of the major, foreseeable construction projects located within the area affected by the new Westside interchange. Even if some of those projects do not meet all of the stated requirements for inclusion, they could have a significant impact of traffic volumes, congestion, noise and pollution and should be included. A partial list of omitted projects is included in the attached comments on Chapter 7. More work is necessary to ensure all major, foreseeable projects are included in the evaluation of direct, indirect, and cumulative effects.

12. Topic: Montlake Lid, Pedestrian, Bicycle, and Transit

Reviewer: Greg Lindhorst

C-027-021

Summary Statement: The Montlake Interchange is a very complex system, connecting freeway, transit, pedestrians, bicycle paths, and at the same time trying to reconnect the two parts of the Montlake neighborhood. Details matter. Important details of the design are missing from the SDEIS, making it difficult to fully evaluate the proposal, especially for pedestrians where safety is the primary concern. The current interchange design, with its long and numerous entry and exit ramps to 520, appears to favor freeway access over pedestrian, bicycle, and transit use at the very heart of the Montlake neighborhood. The Montlake Lid proposed with Option A falls well short of the goals of creating a useable green space, connecting parks from the Arboretum to the Montlake Playfields, and reconnecting the Montlake neighborhood. There are unanswered questions and conflicting statements make about the impact of removing the Montlake Flyer stop, one of the most used bus stops in the Seattle area.

Sincerely,

Jon H. Decker, AIA
Vice President
Montlake Community Club

Montlake Neighborhood / Response Team Roster

	Areas of Interest	Team Members
1.	Effects During Construction	Jon H. Decker
2.	Haul Routes	Dick Dunn
3.	Historic Cultural Resources	Paula Opperman
4.	Noise	Marie Hagman
5.	24th Ave. Business District	Anita Bowers
6.	24th & Montlake Boulevard – Pedestrians, Bicycles	Don Argus
7.	Noise	Chuck Budnik
8.	Fisheries, Wetlands	Tony Opperman
9.	Haul Routes	Jim Harper
10.	Social Elements	Robert Hayden
11.	Indirect and Cumulative Effects	Chris Stuk
12.	Montlake Lid, Pedestrian, Bicycle, and Transit	Greg Lindhorst

1

C-027-022

C-027-023

C-027-024

C-027-025

Comment Summary

Construction Activities - Chapter 3

Section	Page #	Line #'s	Reviewer	Comment
Disposal	3-10	37-40	Decker	The disposal of items in accordance with federal, state and local laws and ordinances is too general Provide reference to specific laws and ordinances pertaining to each authority having jurisdiction (AH
Site Preparation	3-4	12-41	Decker	The Best Managed Practices (BMP) related to the construction of work bridges in Portage Bay requir related to access and working in "shallow water." The use of barges in water that is 3ft. deep is not f from shore a viable consideration without horrific impact to the wetlands and natural environment, ref evaluation regarding the requirement for consideration of other design options to avoid damages.
Montlake Interchange Option A	Exhibit 3-8		Decker	The Option A Map shows a "staging area" larger than the 2 homes scheduled for demolition. This co requires detailed review and confirmation as part of the DEIS Chapter 7 and NHPA Section 106 proc diagram shows "limits of construction" exceeding the Highway Department "right of way." This condit additional review/approval and if legally possible, mitigation and repair to potential damages requires the MOA process.
Pontoon Towing	3-40	33-40	Decker	The schedule for the delivery of the Pontoons through the Lake Washington Ship Canal is not include The NHPA Section 106 process, established that the Ship Canal and Portage Bay was not to be mad the Spring "Opening Day" event week.

Comment Summary

The Project Area's Environment - Chapter 4

Section	Page #	Line #'s	Reviewer	Comment
Historic Properties in Seattle	Exhibit 4.6-1	NA	Decker	The Area of Potential Effect (APE) requires revision to include the "haul routes" that impact all of 24th A Boyer Avenue East.

Comment Summary

Effects During the Construction of the Project - Chapter 6

	Section	Page #	Line #'s	Reviewer	Comment
C-027-027	Transportation	6-1	11-21	Decker	The effects of ramp and road closures have a significant impact on the functionality of the Montlake Co requires as part of the DEIS a plan of interactive involvement between WSDOT and the Community.
C-027-028	Haul Routes	6-5	14-28	Decker	Hamlin and Shelby Streets are local residential streets and because of the need for safety and access homes cannot be considered "haul routes" for other than standard size trucks not requiring ordinance v
C-027-029	Haul Routes	6-7	5-8	Decker	The access ramps into construction zone(s) from SR 520 West/East has been reviewed and approved "may" to "shall."
C-027-030	Land Use	6-19	18-26	Decker	An intrusion on to the Montlake Community by the construction area expanding beyond the WSDOT rig meet the Communities approval as part of the Memorandum of Agreement (MOA) that include mitigatio reference Exhibit 6.2-2. page 6-20. Construction easements must also require the same approval proc Exhibit 6.2-3.
	Minimize Negative Effects	6-26	16-17	Decker	Economic effect on business in the area of Montlake would be large and therefore must be negotiated the Memorandum of Agreement (MOA).
C-027-031	Social Elements Effects	6-27-	1-30	Decker	The impact to the Montlake Community during construction will be major and must be established throu negotiation prior to construction in order that mitigation is included as part of the bidding process as ge conditions. Also specific conditions regarding the Montlake Community an specifically the Hamlin/Shel included in the MOA, including mitigation.
	Recreation Resources Effects	6-41	4-		The impact to Montlake Park and its use, requires additional information regarding the construction pro full understanding in order to develop the terms and conditions of the MOA. As part of the additional in is the use of the area between the existing and proposed right-of-way regarding the use of the Montlake

2

The Effects of the SR 520 Project on E. Hamlin/E. Shelby

C-027-032

The effects of the current 6-lane A+ proposal will be to destroy life in this area of Montlake for up to six years—eight or nine if one counts the Sound Transit project which is underway now. No ordinary mitigation measures will be sufficient to alter this fact. Nor will ordinary financial compensation be sufficient to remedy the fact.

Point 1: There will be an extreme adverse impact on life in the E. Hamlin/E. Shelby area of Montlake for most of the years of construction:

Five staging areas in the immediate vicinity of residences

a. **UW open area adjacent to the UW Light Rail Station**
b. **Mohai parking lot and building location**
c. **Lake Washington Blvd adjacent to 520**
d. **Lake Washington Blvd adjacent to exit ramp**
e. **Montlake Blvd (site of second bascule bridge under A+)**

Three of the staging areas are close enough to homes to be significant sources of loud noise, dust and pollution. The UW open area, Montlake Blvd and Mohai staging areas are within 500 feet of several houses in the neighborhood. The demolition of Mohai, construction of 520 lids, ramps, and all of the other construction activities will be drawn out for years. The project Transportation Discipline Report (Chapt 10-3) points out that "construction would typically occur 6 days per week and daily construction durations would be 16 hours. Most construction hauling would last 10 hours each day. The contractor would have access to the site 24 hours a day." "The Sound Transit University Link Station construction, which started in early 2010 would be constructed before construction begins on I-5 to Medina: Bridge Replacement and HOV Project."

For option A+, construction of the west approach and Montlake interchange and lid will encompass all of the six anticipated construction years. This will come after the 27 months of construction on Sound Transit. Assuming construction starts in 2012, that means even with no overruns or delays , the neighborhood will experience construction activities from 2010 to 2017, eight construction years for 16 hours a day—much of it within 500 feet of homes. It will be longer than that if construction work is done on a phased basis. These activities will negatively effect local resident's lives through noise, increased toxic emissions, reduced property values (it may not even be possible to sell a house during the construction period), dust and lack of access to local streets.

Haul route impact

East Hamlin and East Shelby streets are proposed to be used as truck haul routes for the staging area at Mohai. Chapter 6, page 6-7 states that "peak-hour traffic on E. Hamlin and E. Shelby is currently low, approximately 40-50 vehicles per hour

C-027-032

during the morning and afternoon peak hours. Construction truck volumes would increase traffic by approximately 10 to 40 percent on these streets during peak construction periods" An increase of 40% on 50 vehicles is 20 vehicles, making a total of 70 an hour—more than one every minute. People who live on these streets will find it difficult to use them to access Montlake Blvd, especially when truck traffic backs up into the U that forms E. Hamlin, E. Park E. and E. Shelby, as it surly will when all of the vehicles reach the traffic light at Montlake Blvd.

East Hamlin and E. Shelby are 25 feet wide. Many residents must park their cars on the streets due to inadequate or no garages. Many homes on these streets are within 35 feet of the street. Large trucks making frequent trips past these houses will cause vibration and damage to the homes, many of which were built on uncompacted spoils from digging the Montlake Cut 95 years ago. Large trucks hauling uphill on Shelby as they leave the staging area will stop and start up again at the traffic light on Montlake causing extreme noise and diesel fumes for the residents on this street. This noise will exceed the allowable 86 dBA stipulated in the Noise Discipline Report, page 60.

The frequent and extended use of these streets as haul routes by diesel trucks, and their proximity to construction/staging sites, raises the specter of air pollutants.

"The regulated pollutants of concern for fugitive dust are PM2.5 and PM10. Engine and motor vehicle exhaust would result in emissions of VOC, NOX, PM10, PM2.5 and MSATs. Construction would be phased over a period of approximately 7 years.

For conformity purposes, emissions from construction activities that exceed 5 years must be evaluated. When a design option is selected and if its construction will last for 5 or more years, a detailed construction emissions analysis will be included in the Final EIS." (Air Quality Discipline Report, page 27)

In simpler words, no evaluation of the local effects of air pollutants during construction has been performed, and policy decisions will be made before these are performed, despite known health problems associated with extended proximity to diesel fumes:

[from a summary of the health risks associated with diesel fumes, not from the SDEIS[
"Breathing diesel exhaust is the most common method of exposure. As we breathe, the fine particles and toxic gases in diesel exhaust can enter into the lungs. Being exposed to diesel exhaust for short periods of time may cause headaches, nausea, chest tightness, wheezing, coughing and irritation of the eyes, nose and throat.

Exposure to diesel exhaust over long periods of time (usually years) may increase the chances of getting cancer. Those workers who already have respiratory illnesses, such as bronchitis, emphysema and/or asthma, may be adversely affected if they are exposed to long-term, or chronic exposure to diesel exhaust"

C-027-032

Point 2: There will be extreme long-term harm to E. Hamlin/E. Shelby:

a) **Many of the mature trees and greenery that define the neighborhood , especially in the greenery between 520 and E. Hamlin, will be lost (some have already been taken out and more will be with the 520 width expansion). The widened footprint of the 520 bridge and Montlake exit will encroach on the back yards of the people who live on south side of E. Hamlin. Beautiful trees in the UW open area have been cut down by Sound Transit and more will be with the second bascule bridge across the Montlake Cut.**
b) **A small neighborhood will be further reduced in size due to the loss of houses to be taken out by the additional bascule bridge. Additional houses near the second bridge will be rendered unlivable due to noise.**
c) **The increase in the 520 bridge width will harm plant and animal life within the Arboretum waterfront park that is part of daily neighborhood life.**
d) **The E. Hamlin/E. Shelby neighborhood has several residents who have lived there for decades, with many social ties between neighbors. The extended nature of the 520 construction project will drive many people away, destroying much of the social fabric of the neighborhood. Those who can will move during the construction period.**

Combined with the Sound Transit project, the minimum projected duration of the construction activity for the Sound Transit/520 projects exceeds the duration of home ownership for some residents of the neighborhood. For elderly residents, there will be no future after the 520 construction project: the construction project will define their experience in the neighborhood. Further, some will need to sell their residences at some point across the project duration, which may not be possible without taking a significant financial loss—if, indeed, it is possible to sell at all.

For these reasons, we believe the 6-lane 520 construction project as currently envisioned must be considered as destroying the E. Hamlin/E. Shelby neighborhood, or at least rendering the neighborhood unlivable for close to a decade. No ordinary mitigation measures will be sufficient to alter this fact, nor will ordinary financial methods be sufficient to compensate residents for the local effects of this massive undertaking.

Actions:

E. Hamlin and E. Shelby cannot be used as haul routes. Barges would be far more efficient, economically and practically. And, they are provided for in the SDEIS , Chapter 3, 3.9. Direct access to and egress from the Mohai staging area via the westbound Montlake Blvd off ramp would be much more efficient and less dangerous and this is provided for in the SDEIS, Chapter 3, 3.4. Absent these, the use of 24th Avenue East to Lake Washington Blvd to Montlake Blvd would be the

C-027-032

preferred haul route from the Mohai staging area. Twenty fourth Ave East is an arterial. East Hamlin and East Shelby are neighborhood streets.

No second bascule bridge which destroys houses should be built. A second bridge will simply get twice as many northbound vehicles to the Pacific Avenue intersection faster where they will encounter a traffic light. Pacific Ave. will be widened but, as yet, there are no plans to widen Montlake north of Pacific. Definitely, no second bascule bridge should be built as part of option L. Option L would have a devastating impact during and after construction on the residents of E. Hamlin, E. Park and E. Shelby nearest Mohai (as pointed out in the SDEIS, Chapt 5, 5-93) much as option A+ will for residents of Shelby Street who live near the bascule bridge (SDEIS, chapt 5, 5-88). If a second Montlake Blvd bascule bridge must be built, it should be constructed offsite and be barged to its position and be erected from crane-mounted barges, as provided for in the SDEIS, Chapter 3, 3-22. The tunnel under Option K, although painful during its construction, would be the far better Montlake Cut crossing as compared with A+ and L.

Whatever gets built must feature sound walls. These walls must be installed before construction activity begins. This is particularly important for the Mohai staging area. Residents of E. Shelby, E. Park E. and E. Hamlin will be subjected to a decade of construction noise of one form or another—much of it above the 90 dba, heavy trucks and motorcycles at 25 feet, according to the Noise Discipline Report, page 21. Sound walls along both sides of Montlake Blvd from 520 to the Montlake Cut must be installed prior to the start of construction of any aspect of the project.

There should be strict adherence to hours of operation for construction machinery as pointed out in the SDEIS. No construction machinery within 500 feet of residences should be operated prior to 8:00 a.m. on week days and prior to 9:00 a.m on weekends. No construction machinery should be operated after 5:00 p.m. any night of the week.

Construction workers accessing staging areas cannot be allowed to park on E. Hamlin and E. Shelby nor can they be allowed to drive on these streets to access any staging area. Once the project is completed E. Hamlin and E. Shelby should not be the ingress and egress streets for entering the new East Montlake Park. There will need to be another entrance to the park. E. Hamlin and E. Shelby should be exclusively neighborhood streets and not conduits for park traffic. Parking for users of this park needs to be provided in the park area.

This will be a long and stressful project for the residents of E. Hamlin and E. Shelby, and those who are left in that neighborhood at the completion of the 520 project will be happy to see it end. There are features of the project that are appealing, such as sound walls, lids with green space and the bike trail. Being in the middle of the demolition and construction while all of this is being built will be a nightmare, however.

Discipline Report Comment Summary
Discipline Report Construction Techniques and Activities (Haul Routes)

Report	Page	Line #'s	Reviewer	Comment	
SDEIS	3.1		Dunn	The use of E. Hamlin and E. Shelby as haul routes, even intermittently, is an unacceptable plan to the residents of these neighborhood streets. The SDEIS says an access ramp may be provided directly into the construction zone from the SR 520 westbound Montlake off-ramp. Outbound trucks could also re-enter the westbound Montlake near the intersection with Montlake Blvd. These trucks could either go straight to access the 520 westbound on-ramp or turn left and travel to the 520 eastbound on-ramp to reach their final destinations.	
SDEIS	3.1		Dunn	The use of E. Hamlin and E. Shelby streets as haul routes should not be undertaken, even intermittently, for the following reasons: DANGER TO CHILDREN: Thirty eight children live in the 47 houses on E. Hamlin and E. Shelby Streets. This does not count the children who come to the house at Montlake Blvd and E. Hamlin each school day. This house is a daycare/school. Every weekday morning 56 families drop off children ranging in age from three to five at that intersection. Every weekday afternoon the same parents return to pick up the children. Visibility at the intersection is not good because of the high fence around the day care center. Merging traffic coming off the northbound Montlake exit from 520 mixes with bicycle and pedestrian traffic at this intersection. Delivery trucks choosing to use E. Hamlin/E. Shelby instead of the U-turn signal at E. Hamlin and neighborhood traffic also turn right at the intersection. This is already a challenging intersection for safety. Adding haul route trucks to it will increase the danger.	

C-027
05/26/2011 13:17 PM

Discipline Report Comment Summary
Discipline Report Construction Techniques and Activities (Haul Routes)

SDEIS	3.1		Dunn	BICYCLE TRAFFIC: As stated above, there is a lot of bicycle traffic on E. Hamlin and E. Shelby. These streets are part of the popular Lake Washington Bicycle Loop and every day hundreds of commuters to the UW and recreational bikers ride these streets.	
Discipline Report	32		Dunn	DISPLACEMENT OF ON—STREET PARKING: E. Hamlin and E. Shelby are narrow neighborhood streets—25 feet wide. Many residents along them park their cars on them because their garages are either inadequate or non-existent. Those who are able to use their garages as garages access them via alleys which run east and west behind their houses. The alleys are accessed by shorter north/south alleys at the lends of the streets. The use of E. Hamlin and E. Shelby would eliminate parking for many people who have no option other than to park on the streets.	
Discipline Report	32		Dunn	CONGESTION/EMERGENCY VEHCILES: E. Hamlin and E. Shelby are one-way streets which combine with E. Park E. to form a U. E. Hamlin heading east , E. Park E. Heading north/south and E. Shelby heading west. The exit traffic signal at Montlake Blvd and E. Shelby St. is a bottle neck at times currently. Add 120 to 300 construction trucks per day to what already exists and the backup of vehicles into the U will be severe, effecting emergency and delivery vehicles and everyone who lives on the streets.	

C-027-003
SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only
For Internal Use Only -- 05/26/2011 14:11 PM

C-027
05/26/2011 13:17 PM
SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only
C-022-037

SDEIS	6.7		Dunn	VIBRATION: Houses on E. Hamlin and E. Shelby were built on uncompacted spoils from digging the Montlake Cut 95 years ago. These houses are especially vulnerable to vibration. One hundred twenty to three hundred large trucks a day will create vibration. Many houses along the proposed haul are within 35 feet of the street. Years of vibration will take a toll on many of these homes—some of serious historical significance and many built in the 1920's.	
Executive Summary	39			NOISE: Mohai is to be used for parking and staging the 520 Project. If E. Shelby is used as a haul route out of the staging area to Montlake Blvd, trucks leaving the staging area will go west up the E. Shelby grade to the traffic signal on Montlake. They will do so in lower and noisier gears. As they stop and start up again at the traffic signal on Montlake they will produce noise that will not meet the 86 dBA standard for noise.	
SDEIS	6.42		Dunn	A major concern to the residents of E. Hamlin and E. Shelby deals with what happens to the neighborhood after the 520 construction project is completed. If E. Hamlin and E. Shelby are used as access/haul routes from Montlake Blvd to and from the staging area at Mohai, this would probably result in taking out the curbs on E. Park E. and opening up direct access to the staging area. This will be terrible for the neighbors. Almost as bad would be a situation at the project's completion where the curbs are not replaced and Hamlin/Shelby become what they are today—an alternate for those who prefer not to use the U-turn light at Hamlin. Or, they could become ingress and egress streets for the new East Montlake Park. That would be bad as well.	

For Internal Use Only -- 05/26/2011 14:11 PM

C-027
05/26/2011 13:17 PM
SR 520 Bridge Replacement and HOV Project
C-022-037
2010 SDEIS Comments and Responses -- Comments Only

SDEIS	6-27		Dunn	For the residents of E. Hamlin and E. Shelby the six years of construction on the 520 project will be extremely unpleasant. Haul routes, staging area at Mohai, demolition of Mohai, demolition of the 24th Street bridge, demolition of the Montlake Bridge, demolition of the 520 bridge and then the construction of the lids and bridges that will replace everything that has been destroyed will subject these people to pressures unlike any associated with any other construction project in Seattle's history. What financial mitigation doses WSDOT have in mind for the E. Hamlin/E. Shelby neighbors that can possibly compensate for the loss of property value and health that will come from all of this?	
				On the drawing of new trails, parks, streets, etc. it looks like Lake Washington Blvd or some other street goes north directly into E. Park E. then goes on to E. Shelby St. Can that be? Currently, it is not possible to access E. Hamlin, E. Park E. or E. Shelby accept via Montlake Avenue. It once was,but because so many people who came from Broadmoor and Madison Park used these streets as a shortcut to get to Montlake via E. Shelby, 24th Ave East was divided (the right hand street went into Mohai and the left hand street was closed off). One of the great injustices will be if E. Hamlin/E. Shelby residents endure six years of construction in our front yards and then have E. Hamlin and E. Shelby become access streets to to East Montlake Park or a short cut to Montlake from Lake Washington Blvd.	

For Internal Use Only -- 05/26/2011 14:11 PM

C-027
05/26/2011 13:17 PM
SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only
C-027003

Discipline Report Comment Summary
Discipline Report: Cultural Resources

Report	Page #	Line #'s	Reviewer	Comment	
Cult. Res.	ii	3-9	P. Oppermann	Buffer Area "one property deep" doesn't seem enough for the magnitude of this project.	
Cult. Res.	ii	14-16		Reference leaves out Historic Montlake district unless included in the Known or Anticipated construction limits. (Item 1 of APE components)	
Cult. Res.	ii	23-36		Consideration of the Miller Landfill and Foster Island as potential NRHP may have limited consideration of Options other than A+ due to anticipated mitigation	
Cult. Res.	iii	32-34		Quality decisions about the "preferred option" cannot be made without study of all of the potential impacts of construction	
Cult. Res.	iv	10-19		None of these adverse impacts would occur with Options other than A or A+	
Cult. Res.	iv	27-29		Quality decisions about the "preferred option" cannot be made without the Section 106 determination for all Options of the Project	
Cult. Res.	vi	27-29		Transportation of the pontoons WOULD affect Seattle Yacht Club and other boating communities' use of the Montlake Cut on more than the Opening Day of Yachting Season.	
Cult. Res.	1	10-11		Leaves out the Community of Laurelhurst. Or are they deleted because they are not a Cultural Resource. This whole report minimizes the long term effects of construction of this project.	
Cult. Res.	3	32-36		The six lane alternative is a misnomer. The width of the bridge is going to double and in some places more than double. In communities so impacted by the width of the bridge, cut down the shoulder width in the center and on the right. Don't add the auxiliary lane to create 7 lanes on the Portage Bay viaduct.	
Cult. Res.	4	18-21		The lids for Montlake Blvd are only for part of the east side of the Blvd. Add a lid to the West side as well which will reconnect the West side of Montlake to the Montlake Playfield and "blunt" the visual impact of the project from NOAA and Hamlin street.	
Cult. Res.	6	4		West Bound auxiliary lane increases visual impact for NOAA, SYC, Hamlin Street, Roanoke and Queen City Yacht Club, and University community.	
Cult. Res.	6	5-6		Transit only off ramp would increase traffic to Lake Washington Blvd which is going to be severely impacted by all options that close the Lake Washington Blvd on and off ramps.	
Cult. Res.	6	6-7		Adding the 2nd Montlake Bridge does very little to improve traffic and the visual impacts to walkers, bikers, boat traffic, Husky fans of football and especially crew	

For Internal Use Only -- 05/26/2011 14:11 PM

Discipline Report Comment Summary
Discipline Report: Cultural Resources

				racing and car traffic that crosses the bridge is **severe** and worst of all is **permanent**. The lane for transit and the two lanes Northbound for traffic on Montlake Blvd would once again Narrow down and the beginning of the backup would move between 300 to 400 feet North. This bridge would provide little gain in moving traffic and would do irreparable harm to the Montlake Bridge, the Lake Washington Ship Canal and the Montlake Historical District.	
Cult. Res.	6	19-24		These options would increase the traffic on Lake Washington Blvd since all non transit traffic wishing to get go North or South Bound would have to exit at Lake Washington Blvd. Now at least the traffic is dispersed with at least two exit choices.	
Cult. Res.	6	26-28		This option would be smart for getting transit onto the bridge and into the HOV lanes. However it would add ANOTHER traffic light to Montlake Blvd for a total of 4 in less than .2 of a mile. Also it would put heavy slow buses into the "fast lane of traffic" or WSDOT would have to add another long merge lane for buses and once again widening the 520 corridor through Montlake.	
Cult. Res.	6	36-38		This part of Option K is preferred and would have less impact on NOAA, Hamlin Street(West of Montlake Blvd), SYC, Roanoke and the Queen City YC.	
Cult. Res.	7	20-21		Adding another right turn only lane eastbound onto Montlake Blvd would add one more lane to an already wide footprint for little gain	
Cult. Res.	10	18-19		This indicates that the towing would be at the height of boating season and would have an impact on the use of the Lake Washington Ship Canal by canoes and boaters	
Cult. Res.	11	14-16		Leave out the construction of the 2nd Montlake Bridge, the auxiliary lane at Portage bay and building the new on ramps on Lake Washington Blvd to get closer to defer costs.	
Cult. Res.	12	5-7		Don't defer the lids	
Cult. Res.	15	21-22		Same comment as Page ii lines 14-16. Montlake not included nor is Laurelhurst	
Cult. Res.	17	14-17		Montlake Bridge and the Lake Washington Ship Canal fit as "objects that possess integrity of location design and setting as NRHP and yet little in the EIS mentions the impact of A and A+ on **permanently severely** impacting the location and setting of these two places	
Cult. Res.	17	19-21		The Montlake Bridge was designed by the Carl Gould the same person that designed Suzzallo Library and the crossing of the cut was meant to be a Gateway to the University of Washington. Altering the setting of the bridge will damage	

Discipline Report Comment Summary
Discipline Report: Cultural Resources

				its significance.	
Cult. Res.	17	31-34		To minimize and to mitigate are only to be done when you cannot avoid impacts. Avoidance should be the first priority. Adding auxiliary lanes, new on and off ramps, adding shoulders that are not on the bridge now and adding more bridges should be **avoided**.	
Cult. Res.	18	3-4		Doubling the width and increasing the height of the bridge plus adding new on and off ramps and a bascule bridge will "significantly affect the quality of the human environment" both during construction but more importantly it will affect the human environment permanently.	
Cult. Res.	19	6		Adding the 2nd bridge next to the current Montlake Bridge and altering the view of it from the street, bridge and from the water is an "unsympathetic change" to a Seattle landmark.	
Cult. Res.	19	6		Changing the view of Montlake Bridge from the street, bridge and the water seems to violate one of the criteria for a Seattle Land Mark.	
Cult. Res.	20	1-2		Reconfiguration of a project may be a mitigating factor for the Montlake Bridge as a Seattle Landmark	
Cult. Res.	48	1-2		This sentence doesn't seem to connect to the previous page or the paragraph that follows.	
Cult. Res.	48	36-37		It needs to be determined if Foster island is to be formally declared as TCP prior to construction so appropriate mitigation could be determined as does site mapping need to occur.	
Cult. Res.	55	11-12		Change caused by building the 2nd bascule bridge in the view of and from the Montlake Bridge, from the bridge and the water meets criteria listed to establish adverse effects.	
Cult. Res.	95	17-19		Included in Montlake Historical District Lake Washington Blvd which was part of the original Olmstead Plan. This area is highly impacted by the addition of off and on ramps. It benefits by the removal of RH Thompson Ramps only to be negatively impacted by the addition of ramps.	
Cult. Res.	96	1-5		Montlake Blvd. was part of the Olmstead Park Boulevard Plan. It was one of the gateways to the Alaska Yukon Pacific Exposition. It shouldn't be affected with the addition of another bridge, increased traffic or widening.	
Cult. Res.	96	26-30		Montlake was compromised by the construction of 520 according to the WSDOT SEDIS. Isn't there something about "Do no more harm" that should be invoked here especially for a recognized historic district.	

Discipline Report Comment Summary
Discipline Report: Cultural Resources

Cult. Res.	135	17-20		"Construction effects . . . only thorough analyzed when final option is chosen." This hampers making a decision on which option is the best option	
Cult. Res.	136	37-40		Support the construction of lids but the Portage Bay viaduct is too wide. Cut the Auxiliary lane.	
Cult. Res.	141	24-28		Discusses the construction period 72 months. There are conflicting estimates of the construction periods through the whole SDEIS	
Cult. Res.	142	14-16 &30		Oppose the 7 lane plus wider shoulders that would take portion of NOAA property. Potential of the Abandonment of the buildings	
Cult. Res.	145	9-11		Option A would result in an adverse effect on NOAA FSC buildings. Narrow the corridor by abandoning the idea of an auxiliary lane and the wider shoulders in the middle and on the outside of lanes in each direction.	
Cult. Res.	145	20-21		"Constructing a new bascule bridge ...could have an adverse effect on the bridge." It is the permanent impact of changing the setting and view that would cause an adverse effect on the Montlake bridge and the Lake Washington Ship Canal.	
Cult. Res.	146	3-6		What about effecting navigation as well as Yacht Club activities.	
Cult. Res.	146	37-40		Could the buffer be preserved by cutting down on the shoulders on the sides and center of the new bridge.	
Cult. Res.	147	4-5		These houses would be physically affected by increased noise, and dust even after the finish of the bridge	
Cult. Res.	147	14-23		Lowering the main line of 520 would help the visual impact after lidding. No lids are planned West of Montlake Blvd. How will the lid planned East of Montlake Blvd be impacted if the planned transit lane is built?	
Cult. Res.	147	28-35		Previous comments above address the issue of the necessity to do any of these takings.	
Cult. Res.	147	36-37		Is the taking of 3000 square feet of land plus widening 24th Ave East and Montlake place only for the construction period or for the whole project. It is not clear in the SDEIS	
Cult. Res.	148	4-17		The most significant of the adverse effects would be avoided by narrowing and making deeper the footprint of the 520 corridor, installing lids over the as much as possible. The 2nd Montlake bridge should not be installed for so little benefit to traffic. The Historic District has already been seriously compromised by 520.	
Cult. Res.	149	3-4		Adding the HOV eastbound on ramp would install a 4th traffic light on Montlake Blvd. It would also affect the lid that could be constructed to reconnect the	

Discipline Report Comment Summary
Discipline Report: Cultural Resources

				Montlake Neighborhood.	
Cult. Res.	149	6-9		Constructing these on ramps would negatively affect the homes along the Lake Washington Blvd already compromised by 520. Leave the Lake Washington on ramp east bound and off ramp west bound. Do not make the West bound off ramp at 520 transit only. It spreads out the impact of traffic rather than stacking it up all on a short strip of Lake Washington Blvd.	
Cult. Res.	149	4-7		The acquisition of right of way on Foster Island for Option K despite its cost and length of time of construction would be more beneficial to the Montlake Historic District than all of the disruptions caused by new Lake Washington Blvd ramps and the 2nd Montlake Bridge.	
Cult. Res.	149	25-33		Lowering the profile of this bridge across Foster Island is a positive. Construction of K would over the long term have less destructive visual and traffic impact to the Montlake Bridge and Montlake Historic Districts. Changes in the setting of the TCP would be preferred to the changes of the human environment on Montlake Blvd and in the homes along both Montlake and Lake Washington BLVD	
Cult. Res.	156	34-36		Testing of the disruption these University Building would experience could be done as part of the construction of the Sound Transit Tunnel. If they "cope" with the Sound Transit Construction, the tunneling for Option K would most likely be tolerated. WSDOT has determined that "No Adverse effects would be experienced	
Cult. Res.	157	21		Removal of the current Lake Washington Boulevard ramps would increase traffic on East Lake Washington Blvd and Montlake Blvd which should be avoided. Do no more harm with any new construction in the neighborhoods.	
Cult. Res.	157	22-25		Removal of the old RH Thompson ramps would be a positive for both the Montlake Historic District and Lake Washington Blvd	
Cult. Res.	157	29-30		Is this 6.98 acres going to be the same or less with Option A+. It is not clear	
Cult. Res.	164	12-16		This section addresses the construction period but doesn't address noise when the project is complete.	
Cult. Res.	164	34-37		This section fails to mention boat traffic during Husky Football season	
Cult. Res.	167	32		The only reason to add a 2nd Montlake bridge would be if there was a plan to widen Montlake blvd in front of Husky stadium to University Village. To add a second Bridge with only one extra lane on Montlake (transit only in some plans) increases capacity for cars to stack up for an addition 640 ft. In fact why add a 2nd	

Discipline Report Comment Summary
Discipline Report: Cultural Resources

				bridge to get a total of 1416 feet of one lane "car stacking capacity" in a historic neighborhood.	
Cult. Res.	169	24-26		There would be periodic adverse affects to boating as the pontoons are towed through Portage Bay and the Montlake cut. The tow times would include Husky football season.	
Cult. Res.	170	17-19		Unless the new construction significantly reduces idle time on the Pacific Interchange, and Montlake Blvd they will be NO reduction in noise or air pollution. In fact the second bridge and the immediate narrowing down of the extra lanes just north of the 2nd bridge appears to be a "car holding or car stacking plan rather than making the traffic move faster. In addition with the closing of the current Lake Washington ramps the plan brings more cars to the already congested Montlake interchange.	
Cult. Res.	171	5-12		Do no more harm to the Montlake Historic District. At least the no build option would do that. None of the plans would do anything to improve the visual impact or the physical barrier of the freeway to the west of the Montlake Blvd. One WSDOT consultant says it will add an additional 100 feet of corridor to the current configuration. Using the information from the ESDIS it would double the footprint of the concrete from 64 to something like 115+	
Cult. Res.	173	27-39		Portage Bay Bridge would be higher and a whole lot wider with a serious diminution of the view	
Cult. Res.	174	4-7		The construction of a wider higher bridge over Portage Bay might not compromise the NRHP but it would significantly change the visual experience and setting and feeling of the Queen City and Seattle Yacht Clubs and anyone who uses Montlake Playground, Portage Bay, and the West Montlake park.	
Cult. Res.	174	30-34		The EIS says the Portage Bay Bridge would be only 35 feet wider that the current bridge but if you add 3 lanes plus two 10 foot wide shoulders plus 2 4 foot wide center lanes, it adds up to 58 feet. It is too wide.	
Cult. Res.	174	37-39		The EIS says the project will be 111 feet closer to NOAA and that means it will be 111 feet closer to the Seattle Yacht Club. Noise walls will not compensate for the loss of view.	
Cult. Res.	175	19-21		Wider (by a significant amount) Higher Bridge would have a negative visual effect for all communities as well as Roanoke Park.	
Cult. Res.	176	3-5		There is no mitigation conceivable that would not seriously affect the view from the current Montlake bridge and from the Lake Washington Ship Canal. This	

C-027
05/26/2011 13:17 PM
SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only
C-027-032

Discipline Report Comment Summary
Discipline Report: Cultural Resources

				view from the water and from the bridge is a treasure to the City, the University, the neighborhood and the thousands of people who walk over and boat under this historic bridge.	
Cult. Res.	177	5		The assumption that the noise at the Canoe House is going to decline with construction of Option A. More noise over the second bascule bridge and a floating bridge that is closer to the Canoe House? Can't prove it but it seems like an outlandish assumption.	
Cult. Res.	177	11-13		The view from the east end of the cut of the Montlake bridge would be destroyed and how is that not adverse. It doesn't affect the bridge but it an adverse effect to the Lake Washington Ship Canal. There is also an adverse affect to the view from the bridge to the east and from the 2nd bridge to the west. The issue is building the 2nd bridge is an enormous adverse effect on the Montlake Neighborhood for no documentable gain for traffic.	
Cult. Res.	177	35-36		The partial lid covers almost nothing west of Montlake Blvd. Also the lid to the east will be smaller if the left hand turn for HOV vehicles into the HOV lanes on the bridge is built.	
Cult. Res.	178	2-4		Same comment as above. Nothing is done to reunite the Montlake Historic District on the West side of Montlake Blvd with a lid. A lid is a preferred option to the trail under 520.	
Cult. Res.	178	11-12		This means the freeway will be 66 feet closer to houses on Hamlin street on the east side of Montlake Blvd.	
Cult. Res.	179	12-13		Strongly support removing the RH Thomson ramps to nowhere.	
Cult. Res.	179	15-17		More work needs to be done to plan so that the impact on the Historic Montlake District is not so adverse.	
Cult. Res.	179	29-32		While removing the HR Thomson on ramps is a great idea, removing the current on and off ramps in the Arboretum changes one bad effect to another. It also increases traffic on East Lake Washington Blvd and does nothing to keep more traffic out of the Historic Montlake District. Do no more harm than is already done	
Cult. Res.	180	13-14		There would be an addition of another traffic light Southbound on Montlake Blvd for a total of 3 within 800 feet and a 4th within another 200 feet. That is 4 traffic lights within 1000 feet. If you count the traffic light at the Pacific Avenue that is 5 traffic lights within approximately 1800 feet. How can anyone think that the expense of tunneling with maybe one traffic light isn't the best long term plan to	

For Internal Use Only -- 05/26/2011 14:11 PM
Page 2 of 558

Discipline Report Comment Summary
Discipline Report: Cultural Resources

				move traffic and to spare a neighborhood.	
Cult. Res.	180	17-20		The Montlake Historic District needs no more traffic directed into it. Leave the current on ramps in the Arboretum.	
Cult. Res.	181	25-27		Support lowering the profile of 520 through Montlake to Portage Bay with a lid westbound toward NOAA.	
Cult. Res.	182	11		It seems that creative design and engineering could take care of this problem.	
Cult. Res.	186	13-15		This mentions a lid west of Montlake Blvd but illustrations indicate is very small.	
Cult. Res.	191	27-35		Survey the Miller Street landfill to determine if K is feasible. K disturbs less of the Montlake Historical District and prevents the 2nd bascule bridge and in the long term has less impact that A or A+	
Cult. Res.	192	2-4		Do the studies to determine whether the profile of 520 could be lowered.	
Cult. Res.	194	23-24		Recommend an independent contractor	
Cult. Res.	196	28-29		It may not physically affect the Montlake bridge to construct another but it will **permanently** ruin one of the great sites in Seattle for little or no gain.	

Discipline Report Comment Summary

Discipline Report:_____

Report	Page #	Line #'s	Reviewer	Comment	
Att7_Noise_DRPart1	27		Marie Hagman	The report states that "the noise study area that may be affected by noise from the project includes all lands within 500 feet of the project". Why is 500 feet the extent of the noise study? There are areas on the limit of this area that already exceed the allowable noise limits for residential areas of 55 dba.	
	44		Marie Hagman	The report states "The analysts considered taking additional noise measurements. However, they rejected that option because the I-5 to Medina project corridor is currently being used to test several pavement types to determine if pavement could be used to help reduce traffic noise." No areas on the Seattle side of the 520 bridge are using the test pavement. Additional noise measurements should be collected to cover more of the impacted area.	
Att7_Noise_DRPart2	121		Marie Hagman	The report states that "In areas where the evaluated noise walls would not meet the WSDOT reasonableness and/or feasibility criteria (for example, between Montlake Boulevard NE and the Arboretum), noise walls are not proposed." But no alternative option is presented for mitigation in these areas.	
Att7_Noise_DRPart2	169		Marie Hagman	Noise reduction of quieter pavement was not evaluated the way noise walls were evaluated. A full cost/benefit analysis should be performed before these options are removed.	

C-027-035
C-027-038
C-027-036
C-027-037

Discipline Report Comment Summary

Discipline Report: Montlake Business District

Report	Page #	Line #'s	Reviewer	Comment	
Projects Areas Environment	*pg. 4-19*	*Line 6-33*	*Bowers*	*The omission of the Montlake Business District within the description of Montlake is a grave error which is reflected in almost every section of the SDEIS as it refers to the Montlake Community.*	***example***
Project Operation and Permanent Effects.	pg. 5-38	line 37-40	Bowers	The loss of the 76 Service Station will severly impact customer traffic at the Hop In Market and loss of employment for Montlake employees.	
	pg. 5-40	line 29-32	Bowers	The only Montlake Business that would benefit from the efficient movement of goods and services is the 76 Service Station which would be removed in Option A. Again, not recognizing the nature of the Montlake Business District is reflected in all the SDEIS comments regarding business.	
	pg. 5-41	line 11-22	Bowers	There is a parking lot in the front and back of Hop In. To state that 'they are 'rarely used' shows a lack of understanding of Hop In's business and a concern regarding who made the assessments. It is 'grab and go', espresso and light market shopping. Customer's time in the store ranges from 3 to 10 minutes. At any given time you will find the parking pattern to be in movement and should it be lost it would be detrimental to the business. If Option A is chosen,there would be a loss of the front parking lot, impacting customer's decision to stop and therefore the most damaging.	
Effects during construction of the project	pg. 6-2	line 14-15	Bowers	Any increase of non-local traffic on 24th will have a negative financial impact on the Montlake Business District.	
	pg. 6-6	Ex. 6.1-3	Bowers	24th Avenue as a Haul Route would have a negative financial impact on the Montlake Business District.	

Discipline Report Comment Summary

Discipline Report: Montlake Business District

	Report	Page #	Line #'s	Reviewer	Comment
C-027-042		pg. 6-6	14-15	Bowers	To designate Montlake Boulevard as the 'Primary Route' for construction trucks fails to recognize the entire Montlake Business District as an integral part of the community.
C-027-043		pg. 6-26	16-18	Bowers	All of the Montlake Business's reside on 24th Avenue and an alternative access or detour route is not feasible.
C-027-044		pg. 6-31	line 6-11	Bowers	A 5year period of construction related traffic on the Montlake Business District could easily cause the failure of many of the businesses.
C-027-045	Indirect and cumulative effects	pg.7-5	line 1-10	Bowers	The assumptions that construction related effects are short term and temporary is incorrect. The Montlake Business District could not sustain financially through the construction period as it is proposed.
C-027-046		pg. 7-20	line 20-26	Bowers	It is because the project runs through an already 'developed urban area' that it will change land use and development patterns, in particular, the Montlake Business district.
C-027-047		pg. 7-20	line 26-30	Bowers	The conclusion that the long-term operation of the proposed project would not directly or indirectly affect the economy is incorrect when considering the Montlake Business District. There are close to 100 homes on 24th whose property values are intrinsically related to the Business District's.
C-027-048		pg. 7-21	line 7-11	Bowers	The Montlake Business District is a gathering place for neighbors. Many of the Businesses are owned or operated by Montlake neighbors and it is that 'cohesion' between business and neighbor that has made it so successful. To state that the negative effects on this 'social element' of Montlake is to lack any understanding of a neighborhood.

Discipline Report Comment Summary

Discipline Report:_____

Report	Page #	Line #'s	Reviewer	Comment	
Montlake Services	Not addressed in SDEIS	Not addressed in SDEIS	Bowers	There are three services in Montlake that will be negatively impacted by both the traffic on the Haul Roads and increased traffic on 24th after the Bridge construction is completed.	
				1. The new Montlake Library on 24th and McGraw. The Montlake Community worked with City to attain this new library along with four parking spaces on 24th for its use. Theses will be lost along with neighbor's ability to access the library and/or send their children for events, to do homework and research. There is a conference room that is used by all Montlake organizations. The proximity to a street that has large truck traffic on it will discourage families and children from frequenting it.	
				2. One block off of 24th on McGraw is the Montlake Elementary School. This Historic Building has served the local community for close to 90 years. A large number of the students must cross 24th in order to get to their school. Even before construction begins it is a dangerous crossing and as a haul road it would not be feasible for children to cross on their own.	
				3. On the corner of 24th and Boyer, where two proposed haul routes meet, is the Boyer Children's Clinic, a nonprofit organization that provides therapy, education, medical and family support for children with Cerebral Palsy and other developmental delays for over 65 years. The clinic sees many patients in a day and they come from the Seattle area and beyond. There is not an option for many of the patients to go elsewhere and forcing these families to fight their way through the haul route traffic is unconscionable.	

Discipline Report Comment Summary

Discipline Report:_____

Discipline Report Comment Summary

Discipline Report:_____

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Discipline Report Comment Summary

Discipline Report:_____

Topic: Impact of Construction on Bicycling and Pedestrians

Reviewer: Don Argus

Summary Statement:

C-027-050

A. Closures: Each of the pedestrian and bicycle crossings of the 520 corridor through our neighborhood will be cut by construction activities:
1. The Arboretum Waterfront Trail on Foster Island;
2. The 24th Avenue Bridge
3. Montlake Boulevard (one side at a time)
4. The Bill Dawson Trail

Delmar Drive will also be cut.

These crossings will be cut for varying lengths of time, from 9 months up to 84 months. As Montlake Boulevard will be the only crossing open throughout construction, foot and bicycle traffic will be concentrated there. It is not sufficient or acceptable to restrict pedestrians to one side only; the sidewalks on both sides need to be open at all times.

C-027-051

No mention is made in the EIS of the width of temporary sidewalks and bike paths. The sidewalk/bike path on the east side of Montlake Boulevard at Pacific is currently restricted in width in front of the Sound Transit excavations, demonstrating the need to specify the width: the narrow path creates conflict between pedestrians and cyclists, and leaves inadequate room for pedestrians to wait for the light to change. The 520 project conditions need to require sidewalks to be open to their full width.

The closures of the other crossings should be staggered, and minimized in duration.

C-027-052

B. Accessibility: no mention is made in the EIS of any provision to maintain the accessibility of pedestrian routes during construction. Of particular concern is the temporary pedestrian overpass to be constructed over Montlake Boulevard at Pacific Street under Options K and L. Pedestrian paths should meet ADA guidelines at all times. The EIS should indicate the location and duration of any gaps in accessibility along pedestrian routes.

C-027-053

C. Widening of ROWs under Option A: East Montlake Place E south to Louisa Street is part of the project area in Option A. No mention is made in the EIS to describe the work proposed along this corridor. Nor is it stated whether or not the right of way will be widened. It is

C-027-053

unacceptable that proposed work along East Montlake Pl. is not described, as adjacent property owners are not able to assess the impact on their environment.

Topic: Impact of Haul Routes

Reviewer: Don Argus

Summary Statement:

C-027-054

Potential obstacles to the passage of truck/trailer combinations exist along the proposed haul routes. It is unacceptable that no mention is made of what modifications will be required for such vehicles to negotiate the large planted traffic island at the intersection of Boyer and Lynn, or to make the sharp turn at 24th and Boyer.

Discipline Report Comment Summary

Discipline Report:_____

Report	Page #	Line #'s	Reviewer	Comment
Chapter 3:	3-5	11, Exhibit 3-3	DwA	Under all design options, Delmar Drive will be closed for nine months during 2015. Comment: pedestrians and cyclists will need to negotiate even steeper hills.
	3-6	13-17	"	"
	3-14	14-20	"	Work bridges will be used across the width of Portage Bay for a period of five years (Fall 2012 to Fall 2017). Question: will the work brideges prevent the use of the new kayak put-in behind the Montlake Community Center?
	3-15	Exhibit 3-7,	"	"
	3-21	Exhibit 3-9	"	During construction of the Montlake lid in Option A, a pedestrian path will be open on only one side of Monlake Blved, first on one side then on the other as sequencing progresses. Comment: this will be inconvenient, frustrating and possibly dangerous to pedestrians, who will have to cross and recross Montlake Boulevard. Comment: No mention is made of wheelchair accessibility. How will wheelchair users be accommodated?
	3-28	7-21	"	Pacific Street closed for nine months in front of UWMC. Question: How will hospital access be preserved, especially for pedestrians and cyclists?
	3-36		"	Option L, Suboption for added Montlake Blvd capacity: three pedestrian footbridges over Montlake Blvd NE of Pacific Street will be removed and replaced. Question: How will pedestrians be accommodated while these bridges are not in service?
Chapter 5:	5-4	9-20	"	Comment: the Montlake Triangle lid in Options K and L is preferable to no-build in

C-027-056
C-027-057
C-027-058

Discipline Report Comment Summary

Discipline Report:_____

				Opt A.
Chapter 6:	6-12	9-41	"	All designs: -Bill Dawson trail under 520 closed for 2 to 3 years -24th Ave Bridge closed during construction -Pedestrian and bicycle access restricted to one side only during construction; greater hazards for cyclists. -Flyer stop will be closed permanently: cyclists will need to board buses at NE Pacific Street. -bike lockers removed. Comment: these closures will severely restrict bicycle and pedestrian connectivity during construction. What phasing and scheduling is being planned to minimize and stagger closures?
	6-12	2-8	"	Delmar Drive detour; longer or steeper routes for pedestrians and bicycles. Comment: pedestrians and cyclists will need to negotiate even steeper hills.
		10-19	"	Montlake Blvd: pedestrian access one side only; pedestrian overpass just south of Pacific Street. Comment: this will be inconvenient, frustrating and possibly dangerous to pedestrians, who will have to cross and recross Montlake Boulevard. Comment: No mention is made of wheelchair accessibility. How will wheelchair users be accommodated?
		20-22	"	Bike routes rerouted. Question: Will the bike route detours be safe?
		24-27	"	During Construction, Arboretum Waterfront Trail cut where passes under 520. Question: What is being done to minimize the length of the closure?
Attachment 7: Recreation		51	"	"Under Option A, periodic construction closures of the East Campus Bicycle Route and the Burke-Gilman Trail

C-027-058
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C-027-060
C-027-061
C-027-062
C-027-063

Discipline Report Comment Summary

Discipline Report: _____

				access spur are anticipated as Montlake Boulevard is widened from two to three lanes. Detours would be provided for Option A for the duration of construction." Question: Will these detours provide continuous connectivity?
		51-2	"	"Under option K, Tunnel construction would require permanent relocation of the WAC and the periodic closure of the Canoe House. The East Campus bicycle route, climbing wall, and Burke-Gilman Trail access spur would not be accessible for the duration of the construction of the tunnel and the new intersection at Pacific Street. Detours for the campus access spur of the Burke-Gilman trail would be provided for Option K for the duration of construction." Question: how long will the closures last?
			"	"Under Option L, at the UW Open Space north of the Montlake Cut, the bridge construction would relocate the climbing wall and portions of the East Campus Bicycle Route for the duration of construction. Detours for the campus access spur of the Burke-Gilman trail would be provided for Option L for the duration of construction. Construction of the bridge span and support columns would require the periodic closure of the trails. Question: how long will the closures last?
		52-4	"	Under all design options, construction of the proposed improvements would require the periodic closure of the section of the Arboretum Waterfront Trail located under SR 520 on Foster Island, as detailed below in the discussion of the individual options and as shown on Exhibit 22. The trail segment between East Montlake Park and the northern portion of Foster Island could be accessed from the East Montlake Park trailhead, although this trail access would be subject to closures due to sequenced construction activities at East Montlake and McCurdy parks. During such closures, trail users would be unable to use any portion of the trail between East Montlake Park and the limits

Discipline Report Comment Summary

Discipline Report:_____

				of construction. Question: how long will the closures last?
	56	21-25	"	Option K would not provide a right-of-way to accommodate the continuity of the Arboretum Waterfront Trail until the road widening and land bridge construction were complete. This would leave up to an 84-month span in which there would be no continuity of this trail on Foster Island or within East Montlake Park. Comment: 84 months is a very long time; How could this period be shortened?
	57	2-4	"	Reconstruction of the 26th Avenue East and Lake Washington Boulevard intersection would temporarily affect the park and bicycle and pedestrian access between 3 and 12 months. Question: In what way will access be affected? Will access be cut continuously or periodically?
	57	14-18	"	Option L would not provide a right-of-way to accommodate the continuity of the Arboretum Waterfront Trail until the road widening and bridge construction were complete. This would leave up to a 72-month span in which there would be no continuity of this trail on Foster Island or within East Montlake Park. Comment: 72 months is a very long time; How could this period be shortened?
	57	30-32	"	SPUI construction and reconstruction of the 26th Avenue East and Lake Washington Boulevard intersection would temporarily affect the park and bicycle and pedestrian access for 24 to 30 months. Question: In what way will access be affected? Will access be cut continuously or periodically?
	59	35-6	"	Phased Implementation Scenario: Access to the Bill Dawson Trail and the Arboretum Waterfront Trail would be restricted during construction.

Discipline Report Comment Summary

Discipline Report:_____

				Question: Would access be restricted for a longer period under this scenario than in others?
	66	10-13	"	"The Arboretum Waterfront Trail currently crosses under SR 520 in a low and narrow pedestrian underpass that many trail users find unpleasant and uncomfortable. The new SR 520 structure would allow the trail to pass between columns of an elevated structure, improving the user experience by opening views at ground level. Because the highway mainline would be higher than the existing roadway, the structure would become a more dominant and noticeable feature and would affect the visual environment for trail users. Comment: as the roadway will be wider, the underpass will be longer, offsetting any improvement in openness.
	74	12-21		"How could the project mitigate effects that cannot be avoided? Construction Effects:" "Construction effects that cannot be avoided: Trails and bicycle routes would be temporarily routed around construction sites to minimize trail closures. Trails would be kept open as often as safely possible. Simultaneous closures would be avoided when feasible. "Construction would require periodic closures of the Arboretum Waterfront Trail and the Bill Dawson Trail beneath SR 520 and the Arboretum Waterfront Trail access at East Montlake Park. "Construction would be coordinated to avoid simultaneous closures of these two locations and to maintain trail access from at least one direction." Comment: trail closures are onerous to pedestrians and cyclists, as detours will be longer in length than the trail being closed.
Attachment 7:Cumulative Effects	71	30-34		Trails under SR 520 (for example, Bill Dawson Trail) and adjacent to construction (for example, Ship Canal Waterside Trail, Arboretum Waterfront Trail, and Points Loop Trail) would be closed during construction for varying time periods. Detour routes for bicycle routes would be established.

Discipline Report Comment Summary

Discipline Report:_____

				Comment: trail closures are onerous to pedestrians and cyclists, as detours will be longer in length than the trail being closed.

Report Comment Summary

Report:

Report	Page #	Line #'s	Reviewer	Comment
EIS	1-7	17-18	C.S.Budnik	Change "could" to "should"
	1-13	39		change "requested" to "demanded"
	1-26	8-11		Quiet pavement tests and quiet functional roadways in other states and theie jourisdictions on East coast have adequately proven the validity of noise reduction formulations. The fact that WSDOT and their contractors have been incapable of laying quiet pavement for noise mitigation should not preclude its usage. Incompetence is no excuse for ignoring mitigation obligations.
	1-35	36-38		Add to sentence ending on line 38 -- i.e., those benefits and mitigations that have previously not been provided on the existing 520 corridor.
	2-4	10-13		Quiet pavement has been succesfully demonstrated on numerous East Coast corridors and the lack of in-state testing should not preclude its usage on the proposed 520 roads.

Report Comment Summary

Report: _____

Report	Page #	Line #'s	Reviewer	Comment
EIS	5-66	32-34	C.. Budnik	Negative effects of sound walls on drivers views should not be a priority over negative effects of noise on nearby homes and wildlife. Affected nearby residents whose homes were built 50-60 yrs prior to existing 520 route must have mitigation priority. The statement made regarding in-filling more residences closer to the highway than when it was built (pg 7-28 line 21-24) is clearly not valid to the situationin the Montlake community. Width expansion of the proposed highway to 7+ lanes places the traffic much closer to homes that were built in the 1910's and the 1920's. If sound walls and or lids are not financially feasible as noted in the EIS for specific zones in Montlake, then the triple pane windows mitigation is a must, to reduce the traffic noise.
	5-77	32-35		Negative visual effects should not take precedent over traffic noise. Both demand corrective action.
	5-79	25-29		Same comment applies as above pg 5-77
	5-81	1± -12		Same comment applies as noted for Pg 5-77 and 5-79

Report Comment Summary

Report: _____

Report	Page #	Line #'s	Reviewer	Comment
EIS	6-72	1-22	C.S. Budnik	Listed potential noise mitigation measures should be
				individually quantified to determine achievable sound level
				reductions relative to maximum allowable levels noted for
				operational scenarios in Table 6.7.5 Page 6-68.
	7-28	27-30		Erroneous/contradictory statement---
				The A+ option has a reasonably foreseable future project
				scheduled to be built close enough to SR 520 that will
				contribute to a cumulstive noise increase effect.
				That project is the Montlake second bascule bridge which
				will have major noise impact on the Shelby/Hamlin homes
				during the construction phase (obviously) as well as a
				continueing noise generator with traffic idling along
				Montlake Blvd E. More lames and more traffic on those
				lanes will obviously increase noise by idling automobiles
				when the bascule bridge is up.
				NO SPECIFIC MITIGATION MEASURES ARE QUANTIFIABLY DEFINED
				TO ALLEVIATE THIS DIRECT AND CUMULATIVE NOISE EFFECT.

Report Comment Summary

Report:

Report	Page #	Line #'s	Reviewer	Comment
EIS	7-4	Table 7-2	C.S. Budnik	WSDOT's position position regarding cumulative effect is clearly contrdictory and illogical. 1)WSDOT states (Pg 7-4 Table 7-2 Item 8) that mitigation of cumulative effects is beyond WSDOT'S jourisdiction and therefore has no responsibility for cause & effect. 2) However, the external factors that degrade the Montlake area historic Resources are clearly defined in the EIS, i.e., increased auto traffic volume resulting from a larger capacity bridge & it's effects . 3)Therefore, the increased auto traffic growth caused by the original 520 alignment, coupled with the new capacity of the current proposal, causes a "direct" increase in in noise and chemical pollutants for the Montlake community. IT FOLLOWS THAT THE RESPONSIBILITY FOR MITIGATION OF DIRECT CUMULATIVE EFFECTS RESTS EXCLUSIVELY WITH WSDOT.

Discipline Report Comment Summary

Discipline Report: NOISE

Report	Page #	Line #'s	Reviewer	Comment
NOISE	172	11-34	C.S.Budnik	To confirm probability of compliance to FHWA & SMC
	173	1-35		noise ordnances , listed noise mitigation measures
	174	1-20		should/must be individually quantified for potential
				sound level reductions.
				The "I" inthe EIS reqires firm/quantified values not
				merely speculation of feasibility.

Discipline Report Comment Summary

Discipline Report: Water Resources

Report	Page #	Line #'s	Reviewer	Comment	
Water Resources Discipline	3	Exhibit 1	Tony Oppermann	Not listed that should be: Jurisdiction: WA State Dept. of Fish and Wildlife. Regulations: Hydraulic Code of Washington. Purpose/Intent: Permit to "use, divert, obstruct or change any of the salt or fresh waters of the state.	
"	8	1	"	Many design options have been proposed by the community, clear up to the K, L and M level. The so called "preferred option" is still the WSDOT plan with a + suffix. Since Alternative A is the original WSDOT design, I feel that WSDOT has not made an honest effort to consider any option other than their own.	
"	8	Paragraph 2	"	Project Alternatives. This SDEIS does not really evaluate the real current alternatives!! It should address the A+ and the M alternatives. Much of the information in this document has already been reviewed and determinations made to either include, modify or delete elements of those previous alternatives. I would like to see a document that address the A+ and M alternatives.	
"	10	Paragraph Seattle	"	Removal of the SR520 bus (flyer) stations will just throw X number of buses into the mixmaster at the interchange of SR 520 and Montlake Blvd. Montlake Blvd. between Pacific St. and SR520 will become a huge bus and vehicle parking lot! And will add several minutes to the bus commute from both the eastside and the University into Seattle and also the return routes. Flyer stations should be kept on SR520 and/or modified to provide service for people going to Seattle, to the north (I-5) and into the University area at Montlake.	
"	11?	Exhibit 6	"	The basic problem here is that you have a lot of traffic going north and south intersecting with a lot of traffic going east and west. Alternative A(+) keeps all this traffic in **ONE** location, Montlake Blvd. from Pacific Street to SR520. A giant mixmaster! Options K and L (and M) dilute this mess (thus decreasing the problem) over	

Discipline Report Comment Summary
Discipline Report: Water Resources

				three locations and allows individuals options that will allow them to get to where they want to go without dealing with ALL the other vehicles (including buses that no longer stop on SR520 but have to go into the mixmaster too).	
"	12	5-6	"	A transit only off-ramp from west bound SR 520 would do nothing to help traffic going north on Montlake Blvd. If west bound traffic wanting to go north on Montlake Blvd. (a large volume) is required to exit in the Arboretum, the traffic in the neighborhood of the proposed off ramp will be horrible – likely service level FFF from the day it opens. (Also, the affect on a beautiful old residential area would be devastating.) There would likely be a steady load of traffic on Lake Washington Blvd. during daylight hours from the exit to Montlake Blvd. and then on the Blvd. to the north and south.	
"	12	8-10	"	Another bascule bridge in the middle of this mixmaster would only serve as a parking area for the increase in traffic that will occur in this area, not to mention the destruction of an historical Seattle view point and the loss of two fine homes. Again, traffic would not flow any faster or efficiently because of the intersection at Pacific Ave. and the load of traffic from the bascule bridges to SR 520.	
"	12	24-30	"	A suboption to A proposes, essentially to move the existing on and off ramps to and from SR 520 to the west. This is a horrible proposal!! The existing ramps should remain in the same location as present (and rebuilt in the same location if necessary). Placing these ramps to the west, as shown on some plans, puts them virtually in the front yards of several very fine, older (historic) homes. The present location is in the Arboretum which is not ideal but creative mitigation plans (landscape and vegetation) can be developed that would reduce the present inpact on the site.	
"	12	30-35	"	A suboption to A proposes an eastbound onramp to SR 520 from the Montlake Blvd. bridge over the highway into the (left hand) HOV lane. Left hand on and off ramps have always been traffic headaches (e.g. the Mercer St. off ramp from northbound I-5). This would also	

Discipline Report Comment Summary
Discipline Report: Water Resources

				require installation of another traffic light in an area already burdened with too many.	
"	13	22	"	A suboption for K would construct a 'right turn only' off ramp from eastbound SR 520 to southbound Montlake Boulevard. After casual observation of this intersection for 40 years, it appears this would be unnecessary and would certainly not be cost beneficial.	
"	13	35-38	"	"Suboptions for Option L would include adding a left-turn movement from Lake Washington Boulevard for direct access to SR 520 and adding capacity on northbound Montlake Boulevard NE to NE 45th Street". There is no explanation or diagram that I could find that explains this statement.	
"	77	12	"	Why dissolved zinc would increase only in Options K and L is not explained.	
"			"	General comment. Options K, L and M all provide relief for traffic flowing through this area. They siphon off some of the vehicles from the main heavy flow and allow them to bypass the interchange at SR 520 and Montlake Blvd. thus avoiding having to deal with every vehicle that travels through this intersection. Option A+ pours all the traffic from all directions into one small area which can only slow everything down.	

6

Discipline Report Comment Summary

Discipline Report:_____

	Report	Page #	Line #'s	Reviewer	Comment	
C-027-070	SDEIS	3-1	4-9	Harper	What construction activities from barge floating on the lake, and what location?	
C-027-071	SDEIS	3-2	14-22	Harper	Can barges be used for construction staging areas?	
C-027-072	SDEIS	3-3	30	Harper	What materials will be hauled by barge, and can they be increased to eliminate truck trips on the designated haul routes?	
	SDEIS	3-4	11-13	Harper	Residential streets, (11th Ave E. & E. Miller St., E. Shelby, E. Hamlin, and Boyer Ave E.) are not suitable for truck haul routes.	
	SDEIS	3-4	37	Harper	How many haul route trips could be eliminated if barges were used?	
C-027-073	SDEIS	3-9	5-6	Harper	What haul routes would be used for roadway and bridge demolition? Were barges evaluated for disposal and recycling of the debris?	
	SDEIS	3-9	38	Harper	Construction debris does not have to go through the Ballard Locks, but could be offloaded by barge at the industrial complex in Kenmore. Has this site been evaluated for a distribution staging area?	
C-027-074	SDEIS	3-12	15	Harper	Can barges be substituted for trucks instead of utilizing the designated haul routes?	
	SDEIS	3-14	15-17	Harper	Shallow draft barges could be used in Portage Bay and need to be evaluated as a substitute for trucks.	
C-027-075	SDEIS	3-24	6-7	Harper	Where does the excavated soul inside the retaining walls go? Will it be trucked on the designated haul routes?	
C-027-076	SDEIS	3-25	8-9	Harper	Will the Union Bay fill material be trucked or barged? If it is to be trucked what is the haul route?	
C-027-077	SDEIS	6-2	1-2	Harper	This is a major problem for the neighborhoods. The construction corridor delays will force vehicles to use alternate routes that will overwhelm the residential streets.	
C-027-078	SDEIS	6-3	5-8	Harper	Boyer Ave East detour as referenced will increase delays for Metro transit vehicles. Boyer Ave E. will not support transit vehicles in addition to it's roll as a "truck haul route". Please explain Metros use of Boyer Ave East.	
	SDEIS	6-8	7-8	Harper	If barges were used how would that affect the total number of truck trips per day?	

10

C-027-079

Reviewer: Robert E. Hayden, Ph.D.

Section: Social Elements Discipline Report

Parenthesis ( ): These are my comments for particular points.
X/: These are comments that I make periodically throughout this report.

Page/Comment

2/Mentions Montlake and U. District neighborhoods being impacted. (What effect does construction have on the U. District? Doesn't mention Roanoke. Confusing the U. District with the UW).

3/Mentions lids in Montlake. (What lids?)

4/Says that project will not create physical impediments to make it more difficult for residents to access community services. (What about having to cross more lanes of traffic and a further distance to access buses using 520? Also second Montlake Bridge will impede traffic even more especially since no more capacity will exist on either Pacific Street or Montlake Blvd. North Pacific Street).

4/Says that project will improve travel time for fire, medical, police, and other public services through the corridor. (How?)

8/Mentions interchange options in Montlake and UW area. Says nothing about the U. District.

9 Diagram A/Shows Westbound to Northbound Transit only ramp with no lid. (How do carpools exit 520?)

16/Under Phased Implementation, lids will be deferred. Says will develop and implement all mitigation to satisfy regulatory requirements. (Not what will be needed.)

19/Study area only within 1/2 mile of 520, except bulge north at UW (15th Ave).

23/Label Laurelhurst as on West Side of Union Bay. (Wrong side).

30-32/Community cohesion is not discussed, just describes the area.

32/Population characteristics only address immediate vicinity: Only used Montlake and McGilvra Schools as comparisons, and (omitted Seward School).

34/Parks are incomplete and contain incorrect information: Lists Ship Canal Waterfront Trail as a paved pathway (when in fact only a portion is paved and only accessible by stairs or along gravel path). (Omitted West Montlake Park completely).

35/Says that recreation areas allow residents to connect socially, (but doesn't address Montlake Blvd. disconnect).

36/Says that 5 schools are in the study area, (but excludes McGilvra School, which they used earlier as a demographic characteristic comparison).

40/Speaks about transit, (but not about connections, nor mentions the Montlake Bridge and the problems associated with it being raised).

X/Did not mention anything about the yacht clubs: SYC or QCYC, boats, and the houseboats in Portage Bay. Also did not say anything about the Hamlin and Shelby neighborhoods being cut off from the rest of Montlake, but did say the Hunts Pt. is cut off from the rest of Medina.

47-48 Exhibit 14/ (Potential detour routes are highly questionable.)

50 Exhibit 16/Haul Routes will be along Montlake Blvd, Pacific, 15th, and 45th, (problem is that these roads are in gridlock 6 hours per day. Should force trucks to use 520, since WSDOT is not doing anything to improve the traffic in the Montlake area during or after construction).

C-027-079

51/Say that no effect on relocation of any community services or changes in service area (but omits any impact on the yacht clubs.

52/Says that detour routes may result in traffic congestion. (This is an understatement).

X/Lake Washington Blvd. ramp closures during construction will make Montlake Blvd. nonworking. A standstill.

56/North Capitol Hill Detour route will not work due to the steep grades on residential streets (They should build a temporary bridge over 520 first. Bikes will not be able to go up 11th, and pedestrians and disabled persons will find the route difficult as well.)

57/Say that Portage Bay construction efforts will be the same for all plans. (But should be less for K and L because of smaller footprint through Montlake.) Noise levels will be high within 1000 feet of pile driving, up to 80 dBA which is the equivalent of a garbage disposal.

59/No construction related effects are anticipated for schools, social institutions or government facilities in Portage Bay/Roanoke (excluded QCYC).

60/Construction activity in Montlake will last from 45-78 months.

61/(They need a way to mitigate the pile driving on the Portage Bay viaduct before the noises are made. Closure of the west bound Lake WA Blvd. ramp will pile cars onto Montlake for up to 2 yrs, but say that they will put something in place that will help minimize the delays, (however in the Transportation Discipline Report it just states that it will not effect traffic on 520, and it will maintain the Montlake Westbound ramp exit at a grade E throughout the construction process (Grade F is gridlock).

62/Option A Montlake Blvd. 45 months of noise, dust and traffic congestion including new bridge and up to 90 trucks per day.

64/Bill Dawson trail closed for up to 3 years, and Arboretum Waterfront Trail closed 30-54 months.

65/Community services in Montlake will be effected. Says that school kids from North Montlake will find that it is harder to get to school. Says that Montlake's Seattle Public Library will not be impacted by additional traffic congestion associated with the closure of the LWBlvd ramps. (What they mean is that the increased traffic will not be noticeable since the area is already at a standstill). (Also they do not say anything about the effects on the SYC).

68/Longer travel time for students who use 520 and Montlake Blvd. to get to and leave school. Says that there will be no additional travel time for option A. (How so, since they will not be adding capacity to roadways North or West of the Pacific St. interchange, yet they will be dumping two more lanes of traffic from the South to this point).

74/Says that transporting pontoons to Lake WA will have no effect on social elements because no social elements are located in water bodies (excluding the SYC, QCYC, houseboats, Aqua Verde Kayak Rentals, and all other boats in Portage Bay). Says that it will temporarily effect recreational users in the Montlake Cut. (What about the impact of raising the Montlake Bridge for each pontoon to pass under?)

X/Study does not address the issue of the raising and lowering of the Montlake Bridge, and what impact a second bridge will have on the neighborhoods and all the social elements connected to this element.

78-80/On Community Cohesion the study says that the footprint of 520 will be as narrow and low as possible. The project will not negatively effect community life, persons, groups, or impede access for those who live and work in the area. Says that project would result in no

C-027-079

noticeable change in air quality, and says that lids will bring communities back together and art will be incorporated into the design of the lids.

80/Noise modeling indicates that the project would result in beneficial effects on noise levels (What the…?) (And doesn't include the yacht clubs as effected elements.)

82 Exhibit 23/Number of residences where noise levels exceed the NAC=Noise Abatement Criteria in Montlake north of 520: Existing 37, No Build 47 (Do not say why this number would increase. Why would this increase if nothing were built?), 6 Lane Alternative 28 (Do not say why this would decrease).

83/Says project would improve travel time for transit, carpools, and vanpools (not SOV's Single Occupancy Vehicles).

84/Says that switch to more HOV's would reduce congestion for fire, emergency vehicles, and police (but still could have as many or more SOV's because of higher capacity to exit onto Montlake). Says that project does not result in any negative changes to pedestrians, bicycles, and transit facilities.

87/No effects associated with any community service or transit facilities in Portage Bay/Roanoke (omit QCYC).

88/Will remove one house in Montlake. (Which one?)

89/Says that taking 2 houses for Montlake Bridge will not effect community cohesion (but doesn't mention wider Montlake Blvd and loss of yards and sidewalks and buffer to road). Says that taking gas station will effect community. Says that no negative effects will occur along Montlake Blvd. (What the …?)

90/Says that operating the new project will not result in effects on schools, religious institutions, social institutions, or government facilities in the Montlake neighborhood (but omits some of the main social institutions from consideration).

91/Says that the project results in improvements in connections between transit improvements and improves transit travel times (but mentions nothing about the raising of the Montlake Bridge). Says that the new bascule bridge will benefit buses by reducing congestion and delay (except when bridges go up).

92/Improvements in transit would improve travel time to UW (but says nothing about travel to the University Village or Seattle Children's Hospital, because it does nothing along this corridor).

X/No change in transit connectivity to Northeast Seattle, nor a decrease in car travel time along Montlake Blvd. from NE Seattle. How will employees travel to and from NE Seattle along a corridor that has no transit and cars stand in traffic?

100/Will use measures to minimize disruptions to access to businesses and properties. Says that they could use barges for construction mitigation.

103/Says that they can make transit stops accessible for people with disabilities. (Why have they not done that before?)

X/Throughout the report they say that soundwalls are only in option L and can potentially be used under A, but not under K. This is a biased assumption. Not initially included in K because wanted to use quiet pavement instead, but ruling by WSDOT is that quiet pavement is not a proven abatement method because it wears away. So why can't noise walls also be incorporated into K?

11

Discipline Report Comment Summary

Discipline Report: Chapter 5, Project Operation and Permanent Effects

Report	Page #	Line #'s	Reviewer	Comment	
Chapter 5	5-90 (and 2-28)		C. Stuk	The additional ramps shown page 2-28, Exhibit 2-16 affect far more houses on Lake WA Blvd than are listed on page 5-90. As designed, these ramps will route all of the traffic that uses the existing Arboretum ramps onto the residential section of Lake WA Blvd, and this is not acceptable. If new Lake WA Blvd ramps are deemed necessary to get traffic from SR 520 to the roadway that runs through the Arboretum, there should be a new access road to the east of the residential section of Lk WA Blvd to accommodate that traffic. It could be contained completely within the WSDOT right of way and it would not adversely impact the Arboretum.	

Discipline Report Comment Summary

Discipline Report: Chapter 5, Project Operation and Permanent Effects

Discipline Report Comment Summary

Discipline Report: Chapter 7, Indirect and Cumulative Effects

Report	Page #	Line #'s	Reviewer	Comment	
Chapter 7	see comment for page numbers		C. Stuk	Page 7-8 of Chapter 7 states that the start of the time frame for the cumulative effects analysis is the middle of the nineteenth century, and page 24 of the Indirect and Cumulative Effects discipline report (in Attachment 7) implies that it's the start of the proposed action. What are the implications of starting the study at those different times? Presumably the outcome of the analysis could change if the time frame changes dramatically.	C-027-081
Chapter 7	pg 7-11, Exhibit 7-4a		C. Stuk	This exhibit shows Montlake and U District development projects. It doesn't show major projects like the addition to Childrens' Hospital, the expansion of U Village, the possibility of 350 condo units being built as part of QFC project 3009681, the Sound Transit light rail station at 65th St and 25th Ave E, forseeable effects of UW being classified as an urban village (increased density, taller buildings, etc). Even if these projects and others like them don't meet all of the stated requirements for inclusion in the SDEIS, they are forseeable and should be included because of their potential impact. More work is required to identify such projects and include them in the direct, indirect and cumulative effects.	C-027-082
Chapter 7	7-23		C. Stuk	The report states that the indirect effects on recreation are generally positive and that connectivity and linkages to parks are improved. Any plan that re-routes the vehicles that currently use the arboretum ramps onto the residential section of Lake WA Blvd will turn that stretch of road into a virtual barricade between the neighborhood and the recreation area across the street. This will also greatly impact the livability of that area of the neighborhood.	C-027-083
Chapter 7	7-18		C. Stuk	The last paragraph states that cumulative contruction-related effects could be mitigated by developing a plan to control traffic, etc. Given the duration and invasiveness of this project, such a plan is a "must."	C-027-084
Chapter 7	7-19		C. Stuk	The second paragraph claims a range of benefits the project would provide. Page 5-13 (last para) and 5-14(first para) suggests no improvement in operations on local streets during the AM commute and	C-027-085

Discipline Report Comment Summary
Discipline Report: Chapter 7, Indirect and Cumulative Effects

				only slight improvement in 2 out of 39 local intersections during the PM commute. And with some of the options, congestion actually increases. With the removal of the existing Arboretum ramps, it's hard to believe that access improves. This paragraph is not supported by WSDOT's own data.	
Chapter 7		7-20	C. Stuk	Detours and construction traffic will have a negative effect on the local businesses. Some have even mentioned closing if the effects are severe. One of the plans removes our only local service station. Closure of these businesses will have a long-term negative effect on the community.	

Discipline Report Comment Summary

Discipline Report: Attachment 7, Air Quality

Report	Page #	Line #'s	Reviewer	Comment	
Attachment 7, Air Quality DR	pg 25 and Attachment 2		C. Stuk	Air quality was modeled at several intersections in Montlake, and those were chosen because of poor level of service (LOS). The main insection in Montlake (Montlake Blvd and SR 520) has worse LOS than some of the other intersections chosen for modeling, yet it wasn't included in the comparative study. This will be the hub of the construction activity and the busiest intersection once the project is finished. Air quality should be modeled at that location.	

Discipline Report Comment Summary
Discipline Report:__Chapter 7, Indirect and Cumulative Effects_____

Discipline Report Comment Summary

Discipline Report:___n/a (Miscellaneous Comments)_____

Report	Page #	Line #'s	Reviewer	Comment	
n/a (misc comments)			C. Stuk	Tolling the segment of SR 520 from I-5 to Montlake will lead to cut-through traffic because some drivers will want to avoid the toll. This cut-through traffic has a negative impact on livability that doesn't appear to be addressed in the SDEIS. Charging a single toll paid as vehicles cross the floating span would eliminate this.	C-027-088
n/a (misc comments)			C. Stuk	Montlake currently has two streets functioning as north-south arterials for vehicles traveling through Montlake: 23rd/24th/Montlake, and Lake WA Blvd. It also two SR 520 interchanges: Montlake Blvd ramps and Lake WA Blvd ramps. The SDEIS states neither of the two streets can accommodate all the north-south traffic alone, so both routes must be preserved. By eliminating the existing Lake WA Blvd ramps in the Arboretum, all of the traffic from both north-south routes is dumped into the residential part of Montlake. This may improve an area of the Arboretum by removing the existing ramps, but it will have significant negative impact on the residents living in the northeast corner of the neighborhood. A better design must be developed. The unofficial "M" plan (a derivative of Plan K presented to WSDOT in 2009) had a configuration worth studying.	C-027-089
n/a (misc comments)			C. Stuk	The designs don't appear to be developed enough to make a fair and reasonable assessment of the impacts on local traffic patterns, cut-through traffic, social elements, noise, safety, air quality, recreation, etc. All of the drawings of the various interchange options stop at the edge of the WSDOT right of way which makes it appear that there are no impacts to the SDOT streets. Before a decision can be made on a preferred option, the designs must be developed further and shared with the public.	C-027-090

Discipline Report Comment Summary

Discipline Report:___n/a (Miscellaneous Comments)_____

12

Discipline Report Comment Summary
Discipline Report: Montlake Lid, Pedestrian, Bicycle, and Transit

Report	Page #	Line #'s	Reviewer	Comment	
SDEIS	2-3	12-19	Lindhorst	Please clarify that the bike lane not only travels through the Montlake interchange, but below the interchange, allowing pedestrians and cyclists to cross Montlake Boulevard freely without needing to stop, as suggested by the elevation cross-section of Exhibit 2-9. Also, because of the elevation differences, please clarify how the connection between the Montlake lid and the 520 bicycle lane would work. Cyclists coming from the UW should be able to enter/exit the 520 bike lane from the Montlake Boulevard bike lanes without needing to dismount. Likewise Cyclists coming from south of 520 will need an option for entering the 520 bike lane, be it Montlake Boulevard or a bike lane across the lid that connects further east.	
SDEIS	2-14	27-28	Lindhorst	The bike lanes across the draw bridges of Option A are most welcome. However, these bike lanes need to continue on Montlake Boulevard until they reach the 520 bike lane. Bicyclists must also have a safe way to travel on Montlake Boulevard, south past the 520 interchange, making use of lanes on the street or bike trails on the Montlake lid. There must be clear and easily navigable bike paths between 520 and the Burke-Gillman trail.	
SDEIS	2-14	7-9	Lindhorst	With Option A and suboptions, an emphasis is placed on getting busses on and off of 520, and to the UW Montlake Triangle. This requires crossing a draw bridge, with both predictable and unpredictable openings and subsequent delays. What impact has the drawbridge had on today's Metro bus scheduling and on-time performance? If the drawbridge goes up, HOV/transit traffic will back up to the Montlake interchange and quickly block the HOV lane heading to I-5. Has this been modeled? How long would it take to return the HOV lane to full speed operation after the drawbridge opens?	
SDEIS	2-14	13	Lindhorst	With Option A, a new signal will be placed on Montlake Boulevard. Has the traffic flow analysis for this additional light been done? This section of Montlake Boulevard is notorious for backing up, in either direction, the addition of another light may make the situation significantly worse.	

Discipline Report Comment Summary
Discipline Report: Montlake Lid, Pedestrian, Bicycle, and Transit

Report	Page #	Line #'s	Reviewer	Comment	
SDEIS	2-14	37	Lindhorst	Option K utilizes a tunnel under the Montlake Cut for all general purposes lanes and HOV/transit traffic that come on and off of 520. We should also evaluate taking only the HOV/transit traffic through a tunnel, and leaving the general purpose lanes to the ramps and interchanges of Option A+. Taking the HOV/transit traffic through a tunnel better connects it to the U-Link station at Husky Stadium than in Option A+, making transit connections much more efficient. This tunnel would be considerably smaller than the tunnel required for all traffic to/from 520, and should therefore be much cheaper and easier to put in place, similar to the tunnel being dug for the U-Link line.	C-027-094
SDEIS	2-14	28	Lindhorst	The new bascule bridge should be wide enough to accommodate a bike lane separated from the vehicular traffic lanes by a physical barrier, as well as being separated from the pedestrian sidewalk. When restriping the old bascule bridge, a physical barrier should be put in place to separate the bike lane from vehicular traffic. Please clarify the width of both bike lanes, ensuring they are not any narrower than the bike lane currently on I-90.	C-027-095
SDEIS	2-16	Exhibit 2-9	Lindhorst	Please clarify the need for a road across 520 at 24th Ave E. Obviously MOHAI uses this road today, as do many cyclists. But with MOHAI leaving, is there a need for vehicular travel across the lid here? I believe a pedestrian/cyclist trail would suffice, leading to greater safety on the lid. Service vehicles could still reach the water treatment facilities from Hamlin and Shelby streets.	C-027-096
SDEIS	2-16	Exhibit 2-9	Lindhorst	The HOV/transit ramps coming on/off 520 to Montlake Boulevard forces the "hole" in the lid between Montlake Boulevard and 24th Ave. Instead, we should have the HOV/transit lanes come on/off 520 east of 24th Ave, roughly where MOHAI is now, and travel north of 520 to reach Montlake Boulevard. This would allow us to close the hole in the Montlake lid, making it a much more desirable green space, reconnects the neighborhood better, and reduces noise.	C-027-097

Discipline Report Comment Summary
Discipline Report: Montlake Lid, Pedestrian, Bicycle, and Transit

Report	Page #	Line #'s	Reviewer	Comment	
SDEIS	2-16	Exhibit 2-9	Lindhorst	With respect to the Montlake Interchange, the Nelson\Nygaard's report to the Seattle City Council proposes a more "urban" interchange, optimized more for pedestrians than for long and wide entry/exit ramps (called "slip ramps" by the consultant) to and from the freeway. The urban approach results in less lanes needing to be crossed in order to move across 520. I strongly support a more "urban" approach to this interchange.	C-027-098
SDEIS	2-19	Exhibit 2-10	Lindhorst	Please clarify the pedestrian crosswalks that will be available at the Montlake interchange with 520. In particular, will it be possible to walk across the east side of the intersection between Montlake Boulevard and Lake Washington Boulevard, onto the Montlake lid, and to the west bound bus stop at the HOV lane off ramp? Is it possible to walk further, to Hamlin street from here? How will west bound bus commuters who get off at the Montlake lid travel to the southbound busses on the other side of Montlake Boulevard? Also please clarify the pedestrian safety impact of adding more lanes to these intersections.	C-027-099
SDEIS	2-21	Exhibit 2-12	Lindhorst	Option L utilizes a bridge across the Montlake Cut for all general purposes lanes and HOV/transit traffic that come on and off of 520. We should also evaluate taking only the HOV/transit traffic through a tunnel, and leaving the general purpose lanes to the ramps and interchanges of Option A+. Taking the HOV/transit traffic through a tunnel better connects it to the U-Link station at Husky Stadium, making transit connections much more efficient. Since the bridge only carries two lanes, it should be considerably cheaper and a smaller footprint than the bridge described for Option L.	C-027-100

C-027
05/26/2011 13:17 PM
SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only
C-027-10

Discipline Report Comment Summary
Discipline Report: Montlake Lid, Pedestrian, Bicycle, and Transit

Report	Page #	Line #'s	Reviewer	Comment	
SDEIS	5-22	31-34	Lindhorst	There are conflicting statements in the SDEIS concerning the ability for Eastbound commuters to board busses at the bus stop near the onramp for East 520. Page 5-22 states "Access to SR 520 bus service in the Montlake interchange area would be reduced, and transit riders that currently use the Montlake Freeway Transit Station would be required to use bus service that operates directly between the Eastside and the University District and light rail between downtown Seattle and the Montlake Triangle." Page 5-23 states "With Option A, riders could board an eastbound bus at the traffic island located at the entrance to the eastbound SR 520 on-ramp or at the Montlake Triangle, and, if required, transfer at Evergreen Point Freeway Transit Station." Please clarify the plans. If direct access to SR 520 buses at the on ramp is not allowed, this poses a problem for the many Eastbound commuters who live south of 520. Not only have we added 10 minutes more walking and 5 minutes more bus riding time to their commute, commuters are not susceptible to two unpredictable draw bridge openings. Instead of forcing Montlake, Madison Park, and North Capitol Hill commuters to travel to Pacific, allow boarding of some set of 520 Eastbound buses at the top of the East 520 on ramp.	
SDEIS	5-23	38	Lindhorst	One advantage of the existing Flyer station is that many Eastbound and Westbound busses stop at the station, providing many opportunities for crossing the lake. If instead, Eastbound riders load on the Montlake Lid, these riders would only have the option of the busses coming from the University/Montlake Triangle/U-Link area. Please clarify the impact on the wait time for an Eastbound bus. This would also have an impact on the wait time for Westbound busses that would stop at Montlake, as experienced at stations east of Lake Washington along the 520 corridor.	

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Page 607

Discipline Report Comment Summary
Discipline Report: Montlake Lid, Pedestrian, Bicycle, and Transit

Report	Page #	Line #'s	Reviewer	Comment	
SDEIS	5-26	31-32	Lindhorst	Many bus commuters who use the Montlake Flyer stop live south of 520. One of the main concerns for commuters is predictability - if they leave their home at a certain time, they can expect to be at their office at a certain time. By forcing these commuters to travel up to Pacific to catch the bus to cross the lake, they not only need to cross one drawbridge while walking/cycling Northbound, but they then have to cross another drawbridge while traveling on the bus Southbound to get on 520. Drawbridges go up and down and stop pedestrian and vehicle traffic, sometimes at unpredictable times. Not only have we added 10 minutes more walking and 5 minutes more bus riding time to their commute, commuters are now susceptible to two unpredictable draw bridge openings. Instead of forcing Montlake, Madison Park, and North Capitol Hill commuters to travel to Pacific, create a bus stop at the top of the Eastbound HOV onramp to 520.	C-027-101
SDEIS	5-30	7-8	Lindhorst	Please clarify how an additional 100 vehicles per hour is possible in the morning, with no additional volume in the afternoon.	C-027-102
SDEIS	5-39	11-24	Lindhorst	The Lake Washington Boulevard ramps do have an impact on the ability to get to and from the Montlake lid. Because of the ramps, there would be significantly more traffic on Lake Washington Boulevard, making it more treacherous to cross and making it more difficult to connect our parks (walk from the Arboretum, across the Montlake Lid, and then to the Montlake Playfields).	
SDEIS	5-44	35-39	Lindhorst	In this passage the SDEIS states that the "The lids would benefit community cohesion by reconnecting neighborhoods originally bisected by SR 520 and I-5, providing linkages between adjacent and nearby parks, improving views toward the highway from nearby residences, and providing safe passage across I-5 and SR 520 at these locations." Under Option A this goal is not attained in a practical way as the lid is broken up and bisected by the HOV ramps and the option for the new Arboretum ramps. Option K and L provide a much larger and useful green space, that is safer to access. If we stick with Option A (or Option A+), we need to find a way to close the hole in the Montlake Lid and make this space more usable.	C-027-103

C-027
05/26/2011 13:17 PM
SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only

Discipline Report Comment Summary
Discipline Report: Montlake Lid, Pedestrian, Bicycle, and Transit

Report	Page #	Line #'s	Reviewer	Comment	
SDEIS	5-106	Exhibit 5.7-3	Lindhorst	Based on the expected benefits presented in the SDEIS, I strongly support including noise walls in the final design. I understand that there is a tradeoff with visual aesthetics, but believe the benefits to the overall region outweigh this concern.	C-027-103
SDEIS	5-112	20-33	Lindhorst	Why was the air quality at the intersection of Montlake Boulevard and Lake Washington Boulevard not modeled? There are homes and businesses close to this intersection, not to mention commuters who will use the bus stops on either side of Montlake Boulevard here. With the many lanes of traffic roaring nearby, we should model the air quality at this intersection.	C-027-104
SDEIS	5-153	12	Lindhorst	Lids should be considered an integral part of the redesign of the Montlake and other interchanges. Under the phased implementation plan, the lids should not be deferred if the roadways in proximity to the lids are being rebuilt. In the case of the Montlake interchange, the lid is designed to help mitigate the extra traffic flowing in/out and under this interchange, and it is unacceptable to rebuild the interchange without the associated lid.	C-027-106
SDEIS	5-153	21-34	Lindhorst	The bike lane is a welcome addition to the 520 bridge, and can help relieve traffic congestion. If a phased implementation is used, if possible, we should create the bike lane across the lake and connect the bike lane on both ends of the bridge with paved ramps that connect to existing streets or bike trails. On the Westside, cyclists are already very familiar with the area around MOHAI, as this is part of the Lake Washington Loop bike route, or the bike lane could be reached from Marsh or Foster Islands, until the rebuild of the Montlake interchange and lid was complete.	
SDEIS	5-154	9-10	Lindhorst	If Option A is selected, the Montlake Freeway Transit station should not be closed until construction begins on the HOV/transit onramp off of Montlake Boulevard. Being one of the most heavily used transit stops in our bus system, it is important to minimize the time that bus commuters need to work with interim, and likely less efficient, solutions to get across the lake.	C-027-107

For Internal Use Only -- 05/26/2011 14:11 PM
Page 609

Discipline Report Comment Summary
Discipline Report: Montlake Lid, Pedestrian, Bicycle, and Transit

Report	Page #	Line #'s	Reviewer	Comment	
SDEIS	6-12	34-36	Lindhorst	Many bus commuters who use the Montlake Flyer stop live south of 520. One of the main concerns for commuters is predictability - if they leave their home at a certain time, they can expect to be at their office at a certain time. By forcing these commuters to travel up to Pacific to catch the bus to cross the lake, they not only need to cross one drawbridge while walking/cycling Northbound, but they then to cross another drawbridge while traveling on the bus Southbound to get on 520. Drawbridges go up and down and stop pedestrian and vehicle traffic, sometimes at unpredictable times. Not only have we added 10 minutes more walking and 5 minutes more bus riding time to their commute, commuters are not susceptible to two unpredictable draw bridge openings. Please find another solution during construction.	C-027-108
SDEIS	6-12	36-38	Lindhorst	Bike rack space on busses to cross the lake is already well below the need, sometimes forcing 30 to 40 minute wait times for cyclists (SDEIS page 5-27). It is unacceptable to reduce this further, even if it is only during construction. Additional buses should be added, or a bicycle specific bus should be added (Similar to Microsoft's Bike Connector that travels to/from the Hop-In Market).	C-027-109
SDEIS	6-12	28-30	Lindhorst	It is important the pedestrians and cyclists are able to safely cross 520 during the entire construction period. This statement is the SDEIS is very much appreciated.	C-027-110
SDEIS	6-75	8-10	Lindhorst	Pedestrians and cyclists will need to cross 520, at the Montlake interchange, throughout the construction period. For their health, it is critical that air quality be maintained at acceptable levels throughout the construction period. As people will be coming into close proximity with construction activities at choke points such as the 520 crossing, monitoring and reporting of air quality should be a part of the construction plan. Monitoring and reporting should be provided by an independent party, not under contract by the general contractors.	C-027-111

From: Nancy Brainard [mailto:nbrainard@qwest.net]
Sent: Thursday, April 15, 2010 3:18 PM
To: SR 520 Bridge SDEIS
Subject: SDEIS Comments

C-028-001 The SR 520 SDEIS is deficient on several critical fronts

Most serious are its failures to study key measures that could avoid damage to the surrounding urban and natural environment. Specifically:

- Failure to adequately study the noise reduction that can be achieved by designing and properly installing the best kind of quieter pavement into the road. (I live less than 100 feet from 520 on a hill above the roadbed. Sound walls here will not help. Noise here today is already above federal health standards.)

C-028-002
- Failure to adequately study the feasibility (for mobility) and the benefits (to the urban and natural environment) of reducing 520's six lanes (plus shoulders) to four lanes (plus shoulders) from Montlake to I-5.

C-028-003
- Failure to adequately study the feasibility and benefits of an immersed tube tunnel (rather than a second bridge) to carry 520 traffic that is headed across the Montlake cut.

C-028-004
- Failure to adequately study the impacts that surrounding neighborhoods will suffer if the lids referred to in the SDEIS as "optional" are not built.

C-028-005 In addition, I add my support to the further comments submitted by the Coalition for a Sustainable SR 520, The Madison Park Community Council, The Montlake Community Council, the Shelby-Hamlin Group, the Roanoke Park/Portage Bay Community Council, the Seattle Yacht Club, the Queen City Yacht Club and the Laurelhurst Community Club.

I submit the above comments as an experienced representative of the North Capitol Hill Neighborhood Association on SR 520 issues, who has served on the state-funded Local Impact Committee, the City of Seattle's Stakeholders Advisory Committee and the state's Mediation Team. Thank you for your attention.

Nancy Brainard
2419 Federal Ave. E.
Seattle, WA 98102

Jennifer Young, Environmental Manager
SR 520, I-5 to Medina Bridge Replacement and HOV Project
SR 520 Project Office
600 Stewart Street, Ste. 520
Seattle, WA 98101

April 15, 2010

Sent electronically

Dear Ms. Young:

C-029-001

We are writing in response to the SDEIS for the SR 520 project. First we want to endorse and support the comments from Canterbury Shores SR 520 Committee and the Board of Directors of Canterbury Shores and we support the letter from Jim Hagan on the 520 plans. We have adopted those reports as additional reports on behalf of the Madison Park Community Council.

The proposed SR 520 design would inflict permanent long-standing damage to vital Seattle neighborhoods, destroy precious wetlands, wildlife areas and wildlife (beaver and heron, potentially nesting eagles) on the north east end of the arboretum and cause permanent visual and noise damage along the western side of the 520 corridor (Madison Park to I-5). Also, the design does not improve traffic congestion on surface streets in Seattle or I-5 going north and south. In all likelihood, it would add to congestion on surface streets.

C-029-002

In addition, we would like to reply to a number of issues in the SDEIS:

1) Process: Omission.

We appreciated the earlier work on 520 with the mediation committee. What is of grave concern to us, however, was the process after the 520 design went to the Legislative Work Group (LWG). The LWG announced the final design recommendations in mid-November 2009, with a public comment period ending December 4th—a totally inadequate public comment time for a final design of a project of this magnitude. While there were numerous community meetings on the various alternatives prior to the alternatives going to the Legislative Work Group (LWG), there were virtually none after the final design A+ was proposed. The City Council had a meeting; a Town Hall by our 43rd District state legislators was held, but only one WSDOT public meeting was held to address the SDEIS.

'Due process' is a fundamental right in the United States. There was no due process to vet the impacted communities on the design once the final decision was made. We urge WSDOT to work with the impacted communities as the final design is drawn to prevent unilateral and adverse impacts.

C-029-003

2) Construction Priorities: Omission/error

The SDEIS stated the goal for 520 Replacement:

The purpose of the project is to improve mobility for people and goods across Lake Washington within the SR 520 corridor from Seattle to Redmond in a manner that is safe, reliable, and cost effective, while avoiding, minimizing, and/or mitigating impacts on affected neighborhoods and the environment. Page 1-4, SDEIS

It was repeatedly stated in the SDEIS that the bridge is in danger of structural failure from storms and earthquakes. If there were to be an incremental approach to SR 520, the first priority would be the floating part of the bridge, because it is the most vulnerable to earthquake and storms, the second would be the bridge over Portage Bay, and the third would be the west approach of 520.

If the project is phased, WSDOT would first complete the project components that are vulnerable to windstorms and earthquakes.

Exhibit 2-21 shows how these vulnerable elements are prioritized. The highest-priority components in the project area are:

- *The floating portion of the Evergreen Point Bridge, which is vulnerable to windstorms. This is the highest priority in the corridor because of the frequency of severe storms and the high associated risk of catastrophic failure.*
- *The Portage Bay Bridge, which is vulnerable to earthquakes. This is a slightly lower priority than the floating bridge because the frequency of strong earthquakes is much less than that of severe storms.*
- *The west approach of the Evergreen Point Bridge, which is also vulnerable to earthquakes.* ***Replacing these components would allow WSDOT to fulfill the safety and reliability aspect of the project purpose and need, while the remainder of the project would fulfill the mobility aspect.*** *It is important to note that, while the new bridge(s) might be the only parts of the project in place for a period of time, WSDOT's intent is to build a complete project that fully meets all aspects of the purpose and need.* SDEIS, 2-24

However, the legislature and the Governor have released the funding for the safety work for the floating part of SR 520 to be used for work on the East Side of 520, which is *not* one of the priorities listed in the SDEIS.

C-029-004

The SDEIS also reported that after its public comment period, the number one lesson learned was to "protect and enhance the neighborhoods" (SDEIS 1-39-41).

What have we learned from these outreach efforts?

WSDOT continues to hear comments from the public similar to those that were heard before and during the comment period for the Draft EIS. Comments provided during ongoing outreach activities have included the following common themes:

- *Protect and enhance neighborhoods and community connectivity.*
- *Maintain local parks and trails and add a new bicycle path.*
- *Include noise reduction measures throughout the SR 520 corridor.*
- *Minimize air pollution.*

C-029-004

- *Toll the SR 520 Bridge (Evergreen Point Bridge) to raise revenue for the project, but carefully consider toll rates.*
- *Improve and expand the HOV and bus system.*

This plan in fact does the reverse of these public comment priorities.

So what is the priority for 520? Barge ahead? Or address the safety concerns outlined in Chapter 1 of the SDEIS?

C-029-005

3) Retrofitting: Omission.

Statements were made in the SDEIS that retrofitting would be as expensive as building a new bridge. But, no evident calculations were included to support this statement. Given that both I-5 and Highway 99 have been retrofitted, why was this not addressed with more detail/evidence in the report or documented in some fashion?

C-029-006

4) Noise: Omission/error

Noise is a significant health risk. Many parts along the west corridor of 520 will be adversely impacted by noise from construction and post construction use of 520. The matter is of such concern that the impact of noise was addressed at some length the Seattle-King County Department of Public Health:
http://www.kingcounty.gov/healthservices/health/ehs/hia.aspx

The only 'solutions' addressed in the SDEIS were quieter pavement and 'noise' walls eight to 14 feet tall.

Not addressed in the SDEIS is the impact of concrete walls on the weight of the bridge or their visual impact on surrounding neighborhoods. What is the impact of noise walls on air quality inside those walls? What is the impact of gale force winds on a higher concrete structure with 8 to 14 foot solid concrete walls?

Has the concrete barrier design been reviewed by the appropriate, independent structural or civil engineers?

C-029-007

The SDEIS indicated that only 16 residences would be impacted by noise. It appears that the condominiums and apartments with many residents may have been counted as one 'residence' rather than the numerous separate residents who live in those buildings. The Canterbury Shores alone has 90 units many with multiple residents, and this does not include the number of people living in Canterbury Shores or the other condominiums and apartments on the NE part of Madison Park.

C-029-008

5) Environment: Error and Omission.

Construction would destroy one beaver lodge. There are in fact three beaver lodges in the in the Arboretum area. One active lodge is in the footprint of the construction bridge

C-029-008

at the north east end of the Arboretum, between Broadmoor Golf Course and 520. Where would these beavers go? Given the construction will take up to seven years, there would be no local area where they could build a lodge. The SDEIS clearly states that there is no planned mitigation for the wildlife.

The proposed project would remove a large beaver lodge in Union Bay adjacent to Foster Island, which would displace the animals, but is not expected to reduce the viability of the beaver population in this area. Operation of any of the options would have minimal effects on bald eagles and peregrine falcons. 5-140

Not only are beavers present, there are nearby nesting eagles and heron whose feeding grounds are located at the northeast end of the Arboretum. The impact is just as dire in this area as it is for Foster Island and Marsh Island. What are the mitigation plans for destroying or replacing feeding grounds? Has this environmental impact been reviewed with the state Department of Fish and Wildlife? If not, that is an omission.

The SDEIS also states that new bridge will have an adverse impact on the wetlands area because of the shadow effect caused by the height and width of the new bridge. Given the fact that we live in an eco-system, what impact will the loss of the wetlands have on salmon and other fish? If we lose them do we lose other wildlife dependent on these feeding grounds—in the water and on land? The height and width of the bridge needs to be examined to mitigate the impact on remaining salmon runs to and from Puget Sound. What impact will the dredging have on salmon? Given that salmon are a major cultural and historic resource of the Pacific Northwest, we ask that WSDOT work with the state Fish and Wildlife Department to mitigate the impact of the bridge on fish and wildlife in and around Lake Washington.

Wildlife and Habitat
There are no mitigation measures proposed specifically for wildlife. SDEIS, 5-146

C-029-009

6) East West vs. North South/impact on local traffic: Error and Omission

Apparently, WSDOT did not work with SDOT to analyze the impact of the new design on traffic in the greater Seattle area. This needs to be addressed prior to construction. For example, WSDOT traffic analysis did not include a major intersection to and from 520: 23rd Ave. and Madison. Without examining and modeling traffic alternatives, traffic in Seattle has the potential of being adversely impacted with greater congestion on city streets.

The impact of the 520 design on traffic flows appears not to have been thoroughly addressed. The SDEIS itself indicates that congestion going north and south would have only marginal improvements. Unless North/South traffic flow is addressed and congestion resolved, that congestion will continue to have a negative impact on 520. Traffic cannot get on or off the new bridge because the north/south capacity is not adequate to 'absorb' an increased influx of cars.

C-029-009 *Local traffic operations along Montlake Boulevard NE and NE Pacific Street would improve with Option A compared to the No Build Alternative. Option A traffic patterns would improve operations at four intersections in the Montlake area and* ***degrade*** *operations at one intersection in the NE 45th Street interchange area and two intersections at the Roanoke/Harvard interchange. Page 5-14*

C-029-010 **7) Limited solution to larger problem: Error and omission**

While the purpose of the 520 design was to focus on the safety and capacity of 520, why were no other solutions examined other than an expanded bridge? A major impact would be to reduce the number of cars using 520. This could be accomplished in part with an expansion of park and ride sites on the East and West Sides. These lots would drive people to transit, not cars. Consider the difference between the East Coast vs. LA. The East Coast realized that it could not rely totally on cars for transportation. While they have a rail system we do not, creating park and rides now would accomplish two things—drive people to buses while we plan for rail and reduce traffic on the bridge more quickly. This has the advantage of adding jobs now as well.

C-029-011 Also, some of the comments from the Seattle King County Public Health Department report on the health impacts of 520 were not addressed. Their recommendations included interim traffic design changes, traffic management for the construction period and creating incentives for transit ridership. Why were these and other alternatives not explored?

C-029-012 **8) Lighting: Omission**

There is virtually no information on what the new lighting will look like, its location and impact. It was noted that lighting would be necessary for the pedestrian and bike lane. If there are higher signs and lights on 520, where will they be placed and what impact will the height of the lights have on neighboring communities?

C-029-013 **9) Health Impact: Omission.**

The Seattle King County Department of Public Health cited a number of health issues related to construction and noise. These were not addressed in the SDEIS:

a) Particulate matter. This has not been addressed for the construction phase or post construction.
b) Air quality. While air quality was addressed, there is no air quality, noise or particulate impact study on the impact of 8-14 foot noise barriers on the noise, air quality and particulate matter impact within those noise barriers.
c) Vibrations from pile driving.

10) Visual blight and health impact: Omission.

If the number one finding from community participation was to *"protect and enhance the neighborhoods,"* then the Seattle King County Public Health Department's Health Impact recommendations need to be examined in this regard. The 520 design with 8 to 14 feet noise walls would be a significant visual blight along the lake.

C-029-013

The bridge design must support the needs of the neighborhoods, not just the convenience of the WSDOT for bridge maintenance. The height of the proposed bridge at 20 feet above the water with an 8-14 foot concrete noise walls would be an incredible visual blight that impacts the quality of life of the boating community as well as the residential communities all around the lake.

These barriers, while reducing noise, would have an adverse impact on the health of people living near this bridge and an adverse impact on the economic vitality of the western corridor. It would lower property values and render economically viable communities vulnerable to the adverse impact of height, noise and quality of life we now enjoy.

The possibility of driving people out of these communities is real and significant. If the economic health of Seattle communities is not considered as a factor, this is a significant design omission.

C-029-014

11) Safety: Error/omission

a) Funding for Safety. The original goal of re-designing 520 was to improve the safety of the bridge. The first section of the SDEIS went to great lengths to talk about the imminent structural dangers facing 520 from storms to earthquakes. It went to great lengths to show its vulnerability to structural damage. More than twice the number of cars cross the bridge now than it was designed for. (SDEIS, 1-4 to 5).

However, the legislature and the Governor released funds the week of March 29 to the east side to begin construction. These were federally designated funds. Do they have the authority to do that? And, if so, where will the funds come from to replace that money for the safety upgrades?

If safety is the highest concern, it is not reflected in the SDEIS itself. Funding for safety upgrades need to be addressed.

C-029-015

b) Height of bridge. There are several safety concerns with the height of the bridge. One was addressed above re: concrete barriers and wind storms. Concrete is not flexible.

Another safety concern with the height of the new bridge is ice. If the proposed bridge is 25' plus feet above the water, compared to its' current 11 foot height, what impact would a winter storm have on the bridge? The height means there is more room for ice on and *below* the bridge deck. What plans does WSDOT have for snow and ice removal that would be both safe for drivers and environmentally safe as well?

C-029-016

12) Cost over runs? Who pays the bill?

Finally, it is not clear who pays the bill. Where will the money come from *specifically*, and who will have to foot the bill if there are cost overruns? If the

C-029-016

money for safety improvements for 520 has now been given for improvements on the east side, does this mean the east side is off the hook if there are overruns on the west side? By starting on the east side first, rather than last, as indicated in the SDEIS, their work will have been well into completion by the time the floating bridge work and the western interchanges will have been started or completed. Does that leave Seattle holding the bill? And if so, where will that money come from? From property taxes on homes whose values have been negatively impacted by the bridge itself?

C-029-017

In conclusion: There are significant errors and omissions in the SDEIS, changes in the process and priorities, and sequencing of construction from that outlined in the SDEIS itself. These issues need to be addressed before we move forward with any construction—east side or west side.

We recognize the importance of moving ahead. We also recognize significant structural and capacity issues remain and need to be addressed. We look forward to a good faith effort to work with SDOT and WSDOT to create a stable, safe and environmentally 'friendly' bridge and a construction process that has minimal impact on the quality of life in Seattle. We look forward to creating a final design that addresses these important issues so the adjoining communities have a voice in the impact of the bridge on effective transportation and vibrant neighborhoods.

Sincerely,

Ken Myrabo, President, Madison Park Community Council, on behalf of the Madison Park Community

Cc: Governor Christine Gregoire
County Executive Dow Constantine
Senator Ed Murray, Representatives Chopp and Pedersen
Mayor Mike McGinn
King County and City Council Members
Senators Murray and Cantwell, Congressman McDermott

April 15, 2010

Jenifer Young
SR 520, I-5 to Medina: Bridge Replacement and HOV Project
Environmental Manager
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C-030-001

I am President of the Portage Bay/Roanoke Park Community Council (PB/RP CC) and I wish to offer the following comments on the SR-520 SDEIS. The comments incorporate, by reference, the comments made by other residents of the PB/RP community (including, but not limited to: Alice Byers, Robert Buchanan, Gerry Conley, Ron Melnikoff, Erin O'Connor, Walter Oelwein, Joan Stewart and Douglas Stewart) and by Fran Conley, Coordinator for the Sustainable 520 Coalition, and Jerry G. Lilly, President, JGL Acoustics, Inc.

My comments are divided into two categories: (a) The adequacy of the DEIS and (b) Errors and omissions contained in the SDEIS.

C-030-002

(a) The adequacy of the DEIS

(1) Upon completion of SR-520's Scoping Phase, WSDOT issued a scoping document summarizing what it had learned and the approach it would follow. The document stated that mitigation would be "integral to and inseparable from" the SR-520 project. However, the SDEIS says that mitigation may or may not occur depending on the availability of funds. The phrase "integral to and inseparable from" was used by WSDOT officials and consultants in numerous public meeting when discussing community and environmental impacts and we were assured the mitigation commitment was the basis upon which the project would proceed. It was only in the SDEIS that WSDOT revealed that community mitigation was not firm but depended on the availability of funding. If community mitigation is no longer "integral to and inseparable from" the SR-520 project, its scoping documents are no longer relevant, information presented to and received

C-030-002

from WSDOT during public meetings is no longer relevant, and the entire scoping and public participation process needs to be redone.

C-030-003

(2) The SR-520 planning process had an extended mediation process established by the legislature (Engrossed Substitute Senate Bill [ESSB 6099]). At the mediation committee's initial meetings there was disagreement about how many lanes SR-520 would have. The legislature had stipulated a 6-lane roadway with one lane in each direction for HOV and transit use and said that the roadway should be able to accommodate light rail in the future. One group argued that the legislature had mandated 6 vehicle lanes and that future light rail would be accommodated by expanding the roadway to 8 lanes. Another group argued that the 6-lane roadway had to be designed so that future light rail could be accommodated without adding more lanes. Because the two sides could not agree, the matter was referred to the mediation's Oversight Committee which was composed of the Governor and elected members of the state legislature. The finding of the Oversight Committee was that there was to be a total of 6-lanes in the SR-520 corridor, including the accommodation for future light rail. The recent Nelson-Nygaard (N/N) review of the SDEIS commissioned by the City of Seattle reported that WSDOT's SR-520 design will not accommodate light rail. If light rail is to be added to SR-520 in the future it will require an entirely new effort – including the possibility of having to build a new bridge and light rail corridor. The current design does not meet the legislative mandate given to WSDOT.

C-030-004

(3) WSDOT has taken the position that it will only consider alternatives moved forward by the SR-520 Mediation Committee. There are recreational open spaces and park lands within the PB/RP community that will be adversely impacted construction of an expanded SR-520 corridor (see comments submitted by Gerald Conley on this point for more details). Federal requirements under Section 4-F require that WSDOT investigate all available alternatives when open spaces and park lands will be adversely impacted and only if none are available will such impacts be considered unavoidable and mitigation pursued. Because WSDOT limited its SDEIS analysis to only those alternatives that came out of the mediation process, this was not done. And worse yet, the SDEIS states that mitigation may or may not be provided depending on the availability of funding The SDEIS is therefore inadequate and needs to be redone.

C-030-005

(4) The Roanoke Historic District is an 18.25 acre area bordered by 10th Avenue East on the east, Harvard Avenue East on the west, East Shelby Street on the north and East Roanoke Street (and SR-520) on the south. It is a residential area of 99 homes within a framework of tree-lined streets, well maintained grounds and distinctive natural features. Over two-thirds of its homes are of architectural significance and it is one of only two residential districts in the City of Seattle listed on the Federal Register of Historic Districts. Section 106 requires that no historic places be impacted, or if they are, mitigation must be provided. The SDEIS discusses possible detour routes through the historic district, noise levels of over 100 dB within the historic district during construction, and the use of streets adjacent to the historic district as haul routes during construction (for additional details, see the comments submitted by Erin O'Connor). The SDEIS provides, at best, trivial attention to these impacts. If the final SDEIS remains in its current form both with regard to impact identification and the stipulation of required mitigation, we will appeal to the State Historic Preservation Officer (SHPO) not to sign the Section 106 required Memorandum of Agreement with WSDOT. And worse yet, the SDEIS again states that mitigation may or may not be provided depending on the availability of funding

C-030-006

(5) It is my understanding that courts have ruled that a project such as the SR-520 corridor cannot divided up into segments and individually analyzed in different EISs when the design of one segment will influence the impacts of, and alternatives available to, the other. WSDOT obtained a no significant impact Record of Decision (ROD) for that segment of SR-520 east of Medina. According to the recent N/N report commissioned by the City of Seattle however, the design for SR-520 east of Lake Washington precludes the possibility of building a six-lane SR-520 corridor that accommodates light rail on the west side. Since Seattle's mayor has said he wants to study the possibility of having a six lane SR-520 corridor that would accommodate light rail, WSDOT's current segmentation of the corridor combined with its stated intent to begin construction on the east side appears to violate the no segmentation rule.

C-030-007

(6) ESSB 6099 called for the SDEIS to contain a Health Impact Assessment of how the replacement and expansion of the SR-520 corridor could affect public Health. A generic overview of public health issues was conducted by King County Public Health and the Puget Sound Clean Air Agency and delivered to WSDOT (see comments by Douglas Stewart for more details). It was presented to the SR-520

C-030-007

Mediation Committee. The public health information contained in the report was never applied to the impact assessment of alternatives. Since – for example - the report found public health impacts were significantly impacted (reduced) by lids, and the size of the Montlake lid varies considerably by alternative, the public health information contained in the SDEIS was never used to assess different alternatives but only for making generalized, generic comments. This violates the mandate contained in ESSB 6099 and needs to be redone.

C-030-008

(7) ESSB 6099 required WSDOT study ways to reduce noise impacts within communities adjacent to SR-520. At the urging of the Mediation Committee WSWDOT convened an Expert Noise Panel to study this issue and recommend ways to reduce such impacts. The Panel meet, drafted a report, and presented it to the Mediation Committee. Thereafter, it was totally ignored by WSDOT in the SDEIS's assessment of noise impacts. (see comments by Steve Silverberg, Jim Simpkins and Alice Byers and the separately submitted comments by Jerry G. Lilly, President, JGL Acoustics, Inc.) WSDOT's position was that the only noise mitigation method meeting Federal Highway Administration (FHWA) standards is the use of noise walls, and that was the only type of mitigation contained in the SDEIS. However, a large number of the noise reducing options contained in the Expert Noise Panel's report could be incorporated in the design of the SR-520 corridor – thereby reducing noise and (possibly) eliminating the need to build noise walls. The so-called "K" option, for example, explicitly called for the use of rubberized asphalt quiet pavement to reduce noise in the SR-520 corridor, but this option was never used in the alternatives assessments conducted by WSDOT. This information is needed to make sound decisions about noise reduction along the SR-520 corridor and its omission means that the entire analysis of different alternatives' noise impacts needs to be redone.

C-030-009

(b) Errors and omissions contained in the DEIS

(1) Page 1-21, 4th bullet in the margin box: Currently reads, "Six lanes plus an auxiliary lane on the Portage Bay Bridge." Since the so-called auxiliary lane runs from one edge of the Portage Bay Bridge to the other, it should clearly be labeled as, "Seven lanes, one of which is an auxiliary lane."

C-030-010

(2) Page 1-23, 1st paragraph under the heading *What is the 6-lane Alternative?:* Currently reads: "The six lane alternative would widen the SR 520 corridor to six

C-030-010

lanes from I-5 in Seattle to Evergreen Point Road in Medina." This is incorrect, it should read, "The six lane alternative would widen the SR 520 corridor to six lanes main line lanes (i.e., not counting on- and off-ramps) from I-5 in Seattle to Evergreen Point Road in Medina, except for the Portage Bay bridge which would have seven lanes."

C-030-011

(3) Page 1-25, 1st paragraph under the heading *Noise Reduction*: Currently reads: "…including a WSDOT requirement … to attain a 10-decibel or greater reduction in the first row of properties affected by project noise." While this is true it is misleading. Documents distributed to impacted residences during construction of the Harvard and Boylston Avenues East noise walls clearly state that while WSDOT prefers a noise reduction of at least 10-decibels, it will construct noise walls when the noise reduction is 3-decibels or more. The SDEIS should be revised to reflect WSDOT's operating policies instead of its intents or targets.

C-030-012

(4) Page 2-1, 1st paragraph under the heading *What is the No Build Alternative?:* Currently reads: "For the transportation analysis included in this document, it was assumed that traffic in the No Build (NB) Alternative would not be tolled." Throughout the SDEIS, comparisons are made between traffic volumes, speeds, and other traffic-related variables between the NB and other alternatives. Because no information is presented about the NB alternative under a tolling assumption, these comparisons are meaningless. For example, Exhibit 5.1-3 (page 5-6) comparing peak vehicle demand and throughput between the NB alternative and alternatives A, K, and L shows westbound traffic slightly lower in the morning and slightly higher in the afternoon. Is this the result of the new roadway's alignment and wider shoulders or does it result from the A, K and L alternatives being tolled while the NB alternative is not? This type of information is necessary for making informed decisions, yet it is concealed throughout the SDEIS. Analysis of traffic volumes and flows for a tolled NB alternative is critically necessary to make informed decisions about how to optimize the SR-520 corridor. It needs to be provided throughout the SDEIS.

(5) Page 2-5, bottom paragraph: Currently reads, "Since traffic modeling assumptions were applied consistently across options, they show the relative performance of each option in comparison to No Build." As discussed above under (4), this is not true. Because the NB alternative is not tolled while the other alternatives are tolled in the traffic modeling, the relative performance of A, K,

C-030-012 and L alternatives cannot be compared with the NB alternative. Such comparisons are only valid when all alternatives are analyzed under the same assumptions.

C-030-013 (6) Page 2-9, 2nd full paragraph: Currently reads, "One idea discussed in mediation is to build a parking lot with a driveway entrance on the southwest corner of Roanoke and Boylston." Correct but very misleading. My mediation notes show the idea of a parking lot was briefly discussed and then rejected by the representatives of both the Roanoke and Eastlake neighborhoods. It was raised again during a post-mediation meeting between WSDOT and PB/RP CC representatives and was once again rejected.

C-030-014 (7) Page 2-10, 1st full paragraph: Currently reads: "Option A would have two general-purpose lanes and an HOV lane in each direction, plus a westbound auxiliary lane, making it about 10 feet wider than Options K or L." This is incorrect. Table 2.2, page 2-12, shows the width of the different options ranging from 10 to 21 feet. Also, a more accurate statement about the Portage Bay Bridge is, *Option A would have two general-purpose lanes and an HOV lane in an eastbound direction and three general-purpose lanes and an HOV lane in an westbound direction*. There is nothing in SR-520's Option A design that would distinguish the roadway or use characteristics of an auxiliary lane relative to a general purpose lane. The distinction is meaningless except that it identifies the lane as being on the Portage Bay Bridge.

C-030-015 (8) Page 2-34, 1st bullet under paragraph 4: Currently reads, "The floating portion of the Evergreen Point Bridge…is the highest priority in the corridor…because of the high risk of catastrophic failure." The last session of the Washington State legislature transferred funds from construction of the floating portion of the bridge to construction of SR-520's east of Lake Washington land-based roadway. The DEIS must (a) explain how this is compatible with the floating portion of the bridge being the project's priority or (b) the statement needs to be deleted.

C-030-016 (9) Page 2-38, 3rd paragraph: Currently reads, "…the Portage Bay Bridge would be built to its ultimate width – seven lanes for option A, six lanes for options K and L." This contradicts page 1-23, 1st paragraph, reads: "The six lane alternative would widen the SR 520 corridor to six lanes from I-5 in Seattle to Evergreen Point Road in Medina."

C-030-017

(10) Page 3-2, Exhibit 3-1 shows the Delmar/SR-520 and SR-520/I-5 lids used as staging areas. These lids are adjacent to the Roanoke Historic District. How will impacts of these staging areas on the Historic District be either avoided or mitigated – as required under Section 106? This issue is not discussed in the SDEIS.

C-030-018

(11) Page 3-4, 1st complete paragraph: Currently reads, "…several residential streets would also be used for truck haul routes, including 11th Avenue East and East Miller Street." This creates a haul route through a residential area and next to Seattle Prep school. The impact of a haul route on the school needs to be discussed.

C-030-019

(12) Page 3-5, Table 3-2, *Estimated Number of Peak Construction Period Haul Route Trips on Local Highways:* The table is both incorrect and misleading. For option A, the table reports 350 trips per day and 45 trips per hour on SR-520, and 270 trips per day and 35 trips per hour on I-5 (although not discussed in the SDEIS, the assumption appears to be that hauling will take place 8 hours per day). The correct number of trips per day is 43.8 on SR-520 and 33.8 on I-5. Similar errors exist for the other options. Additionally, this number of trips equals one truck trip every 1.4 minutes on SR-520 and every 1.8 minutes on I-5. During the 3-hours of so-called *rush hour* traffic, neither SR-520 nor I-5 can accommodate an additional truck entering the roadway every 1.4 and 1.8 minutes, respectively.

C-030-020

(13) Page 3-6, paragraph under the heading Delmar Drive East: Currently reads, "The Delmar Drive East bridge would be closed for approximately 9 months under all options. While it's closed, traffic would be detoured to 10th Avenue East." 10th Avenue East runs directly through the federally certified Roanoke Historic District, and the use of a street in a certified historic district street violates Section 106 requirements. The SDEIS must acknowledge that it will violate the tranquility of the historic district and address how this will be avoided or mitigated.

(14) Page 3-13, 1st paragraph under the heading *10th Avenue East/Delmar Drive East Lid*: Currently reads, "Delmar Drive East would remain closed for 9 to 12 months ." This contradicts the statement on page 3-6 that the bridge will be closed "approximately 9 months." The purpose of the SDEIS is to provide

C-030-020 information on worst case impact scenarios to decision makers. The statement on page 3-6 should read, "the bridge will be closed approximately 12 months."

C-030-021 (15) Page 5-2, 1st paragraph under heading *How is travel demand predicted to grow in the SR 520 corridor?*: Currently reads: "Between today and the year 2030, the region will … need to accommodate close to 50 percent more traffic." This is a misleading statement since table 5-1-1, page 5-5 shows the following:

	SR-520	total cross lake	SR-520 % change	total % change
existing	115,000	313,000		
NB	135,000	397,200	17.4%	26.9%
A	131,000	397,900	13.9%	27.1%
K/L	133,800	397,900	16.3%	27.1%

Total cross lake travel will increase by only half that amount and SR-520 will increase by only a third.

C-030-022 (16) Page 5-5, Table 5.1-1, *Daily Vehicle Demand*. This table must contain an error. Adding additional lanes and tolling SR-520 causes total cross lake vehicle trips to increase by two-tenths of one percent over a 20 year period. This needs to be explained.

C-030-023 (17) Page 5-40, entire section under the heading *How would the project affect economic activity?*: The economic analysis in this section is inadequate for the following reasons: (a) only project benefits are discussed and there is no acknowledgement of any economic costs resulting from the project even though businesses in the Montlake Blvd., North Capitol Hill (at Miller and 10th) and Roanoke Park (at Harvard and Eastlake) will experience street closures and suffer negative impacts from having the streets in front of them used as haul routes for as much as six years of construction – a long enough period of time to permanently impact their ability to survive; (b) there is a likelihood that houses negatively impacted during construction will flood the market and permanently lose value; even if they regain their value after construction, property tax revenues will decrease during the multi-year construction period (c) Table 5.2-4 is in error. It states that a decrease of $1.8 million in taxable value within the City of Seattle will result in a property tax decrease of $4,940 – an implied levy rate of 2.6944. The actual King County levy rate charged on Seattle properties in 2008

C-030-023

was 8.6879 – which would have resulted in a property tax decrease of $12,382, two and a half times greater than the SDEIS estimate; (d) the accepted, standard methodology to calculate the economic impact of the project on property tax revenues collected in Seattle is to calculate the net present value (NPV) of property tax decreases over the life of the project, the one-year tax effects contained in table 5.2-4 is both unusual and misleading. The SDEIS needs to address and present findings for each of these elements of economic cost.

C-030-024

(18) Page 5-99, the entire section under the heading *What has been done to avoid or minimize adverse effects on cultural resources?:* The only historic district impacted by the project that is currently listed in both the National Register of Historic Places (NRHP) and the Washington Heritage Register (WHR) is the Roanoke Park Historic District. IT IS NOT EVEN DISCUSSED IN THE SDEIS even though WSDOT's plans include having a detour route go right through the District. This is really an amazing omission – particularly since representatives of the PB/RP CC have held numerous meetings with WSDOT staff and consultants about their concerns over the impacts the project could have the District.

(19) Page 5-100, the entire section under the heading *How could the project mitigate avoidable adverse effects on cultural resources?:* The only historic district impacted by the project that is currently listed in both the National Register of Historic Places (NRHP) and the Washington Heritage Register (WHR) is the Roanoke Park Historic District. IT IS NOT EVEN DISCUSSED IN THE SDEIS even though WSDOT's plans include having a detour route go right through the District. This is really an amazing omission – particularly since representatives of the PB/RP CC have held numerous meetings with WSDOT staff and consultants about their concerns over the impacts the project could have the District.

C-030-025

(20) Page 6-8, Table 6.1-4, *Summary of Effects of Truck Traffic in Seattle*: The table's footnote "a" states that the calculations are based on a 10 hour haul day. This is in error. The "Per Hour" results in the table only work if they are calculated on the basis of an 8 hour haul day.

C-030-026

(21) Page 6-23, paragraph under the section heading *How would construction affect economic activity?:* Currently reads: "On balance, the positive effects [of

C-030-026

the project] … would be more widely dispersed through the local and regional economies than the location-specific negative effects of increased traffic congestion and noise. For this reason, construction of the 6-Lane Alternative is expected to have a net beneficial economic effect." This statement is both incorrect and misleading. It is incorrect because the project's widely dispersed benefits are not a "reason" for it to have a net beneficial economic effect. In fact, because the SDEIS does not even identify – let alone estimate/calculate - the project's potential non-construction economic costs, it is impossible to estimate its net economic effects. It is misleading because even if the statement were correct, the proper conclusion would be: "since the project's positive effects would be more widely dispersed through the regional economy than the location-specific negative effects of increased traffic congestion and noise, the project is expected to have a net beneficial economic effect on the region but a net negative economic effect on areas adjacent to the SR-520 corridor."

I appreciate the opportunity to submit the above comments for the PB/RP CC.

Sincerely

s/ Theodore Lane
President, PB/RP CC

April 15, 2010

Jenifer Young
Environmental Manager
SR520 Program Office
600 Stewart Street, Suite 520
Seattle, WA 98101
SR520Bridge_SDEIS@wsdot.wa.gov

Dear Ms. Young,

C-031-001 Enclosed is the analysis and comments of the SDEIS on the SR-520: Medina bridge Replacement and HOV Project SDEIS on behalf of the Laurelhurst Community Club which I am a Trustee for the Board.

I respectfully submit my remarks with the hope that that will be reviewed and answered in complete before the process of rebuilding SR520 begins.

Thank you for your attention to our comments and your diligent work on the project.

Sincerely,

Colleen McAleer
3137 West Laurelhurst Drive NE
Seattle, WA 98105
206 525-0219
billandlin@aol.com

C-031-001

SDEIS Comments for SR520 Laurelhurst Community Club April 15, 2010

Introduction

1. Options included in the SDEIS
   -lack of inclusion of Plan M and 4 lane
   - light rail imbedded not evaluated in plans
   -100 feet centerline to the north discrepancy

2. Noise issues-lack of inclusion for Laurelhurst
   -techniques for noise mitigation unacceptable and causing more
   - problems with sound deflection using one sided noise walls

3. Air quality-emissions effects on residential population
   - health impacts within bridge vicinity
   -report from Marcia Baker

4. Traffic-lack of inclusion of land use projects in NE Seattle filed by SDEIS
   - LWB ramp problems in Plan A-all traffic routes north in A and L
   - benefits of continuous flow with tunnel Plans K and M
   -planned growth in the NE not included (attached)
   - bascule bridge openings-non-peak impacts 50% increase waits

5. Pedestrian and bike access and safety
   -grade separated crossings -only with Option K
   -University of WA adding another surface pedestrian crossing resulting in increased queues on Montlake Blvd

6. Transit connectivity and lack of access at new Sound Transit station-

7. Visual Quality-bridge moving closer, blocking view sheds and Mt. Rainier.
   -Limited visuals included in SDEIS.

8. Wetlands, water quality and 4-f
   -Save Union Bay findings-fish,
   - Sidles report on waterfowl (see attached)

9. Construction issues-temporary bridges, lighting, barges
   -Mundy report on noise, traffic, recreation restrictions for 7-10 years

10. Cultural disturbances-temporary and permanent-fish impacts shading,
    -artifact findings from native American tribes

11. Cumulative Effects-environmental, traffic, visual, noise and construction

C-031-001

Exhibit Directory for SDEIS-Laurelhurst Community Club
April 15, 2010

Exhibit 1 Capacity recommendations by Maurice Cooper

Exhibit 2 GPS 100 foot northern location of Floating Bridge Segment 1

Exhibit 3 LCC noise documents

Exhibit 4 List of affected Laurelhurst citizens -noise and visual impacts

Exhibit 5 SDEIS Comments from Bill Mundy

Exhibit 6 Marcia Baker-Air Quality and Greenhouse Gas

Exhibit 7 Traffic Modeling analysis Carl De Marken

Exhibit 8 Tilghman Transportation Analysis

Exhibit 9 Cumulative Development Land Use Projects in NE Seattle

Exhibit 10 Photos of Laurelhurst residence by Aaron Weholt-Legal Media

Exhibit 11 Photos -Webster Point residence (new bridge design) -Weholt

Exhibit 12 Save Union Bay analysis and Mitigation recommendations

Exhibit 13 Connie Sidles Expert Birding Inventory near Foster Island

Exhibit 14 Construction Discipline Report Analysis-Jean Amick

Exhibit 15 Muckleshoot Artifact Report-Judy Thorton

Exhibit 16 Cumulative Effects Discipline Report -comments by McAleer

Exhibit 17 Bascule Bridge Opening Data from 2008

Laurelhurst Community Club
Comments on the SDEIS for SR520 Project
April 15, 2010

Introduction

C-031-002

Laurelhurst Community Club (LCC), a 100 year old Seattle community organization, has a long history of participating actively in the re-build of the SR520 bridge which defines its southern border. Residents and the LCC Board had significant input on the RH Thompson Expressway, the Trans-Lake Washington Study, The Trans-Lake Washington Project and the State Mediation Process for the SR520 Bridge Replacement and HOV Project.

The goals of the community have been consistent: the repair to ensure the safety of the structure, provide for access, mobility and egress for residents to and around SR520, minimize the footprint, reduce bridge noise, minimize visual blight, prohibit damage and loss of natural resources such as parks and wildlife habitat, and achieve a design that enhances the use of non-motorized travel.

The attached SDEIS comments fall into two primary categories.
-The first are notes on any omission of important information that is not included in the environmental report itself.
-The second are notes on data that is incorrect, or manufactured as a "fact" to justify one design advantage over another.

Laurelhurst Community Club has attended meetings for 13 years, and most recently has been an official participant in the design process from State Mediation which developed the three most recent options in the SDEIS.

C-031-003

While excellent public and community forums were held, many of the viable suggestions were not incorporated into the final SDEIS. The Health Impact Assessment (September, 2008) was mandated by the State of Washington in SB # 6099. This widely distributed booklet documents a range of health issues that are a direct result of the re-build of the new bridge. However, the results are not necessarily incorporated in the optimal designs and mitigation presented in the SDEIS.

C-031-004

Our community agrees with the problems in the challenging process of the SDEIS in the Coalition for a Sustainable SR520 report submitted by Fran Conley on the group's behalf.

C-031-005

I. Options included in the study A, K and L

A. Three options were carried into the SDEIS from the Mediation process.

Plan A and Plan K had support from groups of Westside stakeholders, while Plan L had one supporter. Several times, LCC and Westside neighborhoods asked that Plan L be dropped . Instead, WSDOT insisted upon carrying option L to the SDEIS, which lacked community support in order to fulfill an obligation to the process, rather than include a third viable option supported by Westside Communities mandated for the SDEIS.

The SDEIS omitted Plan M which was a slimmed down, less expensive and less environmentally impacting tunnel plan under the Montlake Cut. Meaningful design work was carried forward after Mediation on this design (M), and it was viable as an option until that process was abruptly halted by WSDOT in the fall of 2009. The original supporters of Plan K had abandoned it by that time in support of Plan M , a more environmentally sensitive and less expensive option.

In addition, Plan A from Mediation featured a Montlake Interchange without ramps from the east to Lake Washington Blvd. It was morphed quickly to Option A+ in the Legislative Workshop which added the ramps back to relieve the traffic gridlock that made Plan A dysfunctional. One of the key reasons for lack of support for Plan A was that it created more gridlock on the Western side which requires LWB ramps, and thus, its supporters opposed.

At press time for the SDEIS, there were no Westside communities who supported the 3 Design Options included for study. The exception remaining is Mark Weed who represented the Seattle Chamber of Commerce's "transportation committee", supporting Plan L alone.
There were no Seattle neighborhoods who supported any of the 3 options as described in the SDEIS (Plans A, if it included the LWB ramps suboption, K or L).

This refutes the goals of the SDEIS (Page 24 in the Executive Summary) which states that these 3 options met the Mediation "goals " and were carried into the SDEIS.

Thus, the objectives of SB#6099 were not met in spirit, but rather led into a truncated decision process unsupported by the vast majority of stakeholders most impacted by the new structure on the Westside.

B. Design Options Omitted from study: Plan M and Four Lane Options

C-031-005

1) **Plan M** (page 26 in the SDEIS Executive Summary) is given 2 sentences while in reality, had support of Montlake, Portage Bay, Roanoke Park, Madison Park , the Boating Community, North Capital Hill and Laurelhurst communities. This unprecedented Westside consensus that morphed from the 3 years of interactive participation was cast aside due to rules, artificial process and compressed deadlines. (See Conley's report on process) in spite of the fact that the State of Washington lacked funding to build it.

2) Plan M description.
It is the optimal design for SR520 which has a 700 foot underpass under the Montlake Cut which increases mobility and has visual and noise benefits over other options.

Its design features include:
-a separation of local traffic on the Montlake Bridge for north/south travel
-a continuous flow of vehicles to access the SR520 bridge without the addition of 3 stoplights
- a grade separated crossing at the new Sound Transit Station linking directly to Metro busses and to the University of Washington Campus and Hospital which increases pedestrian/cyclist safety and reduces vehicular wait times.
- reduces noise due to lowering traffic noises below grade level
- reduces visual blight with lower profiles on the water, through neighborhoods and has a berm to green up the Arboretum experience.

C-031-006

2**). The 4 Lane Option**
-With tolling and increased design, connectivity and improved access to transit, a Four Lane alternative with HOV lanes and shoulders was not included in the SDEIS.

-The 4 lane alternative had major support from these Mediation communities on the Westside: Madison Park, Portage Bay, Roanoke Park, Laurelhurst, the Boating Community, Eastlake, The University District and North Capital Hill.
Including the "no build" was a glaring problem since the current structure was deemed "unsafe" and not a viable option to evaluate in the SDEIS.

-See Maurice Cooper's report on " Capacity" (Exhibit 1)which describes enhancements to a four lane design that can result in a 20% increase in capacity, rather than the addition of 2 more lanes, with its ability to simply move the bottleneck to the interchange at I-5.

C-031-007

3) Capacity for light rail in the future.
Building light rail in 20-50 years will require center lanes to be imbedded with rails, and pontoon structures to carry its added weight. The SDEIS does not include a rigorous analysis of the potential addition for pontoons or center lane design.

C-031-008

C. Option discrepancies- location of the northern boundary of the bridge
One key bridge component resulting from Mediation was the location of the floating bridge at the Western high rise.

C-031-008

- WSDOT's David Dye and Dave Warner acknowledged that The Laurelhurst Community Club and The Madison Park Community Club had agreed that the centerline for the new SR520 bridge would be moved 100 feet to the north of existing.
-The team of bridge engineers agreed on this feasibility on numerous meetings. The SDEIS in Section 1, page 30 under "Floating Bridge area" states that "A new floating span would be located approximately 190 feet north of the existing bridge at the west end and 160 feet north of the existing bridge at the east end"

This location is not accurate for the agreements that were verified by Gary Stone on his boat with the GPS coordinates given by WSDOT and agreed to for all option by the Laurelhurst and Madison park Communities.
(Exhibit #2)Thus, this information is not accurate, and the design should be corrected in the final draft.

C-031-009

D. Lighting on all bridge options have not been described. The SDEIS is incomplete

II. Noise issues and mitigation techniques

C-031-010

A. The Health Impact Assessment of September, 2008

This analysis was required by WA State SB #6099 and offers a comprehensive study of the impact of noise from the SR520 project.
King County and Seattle Public Health Agencies list very serious side effects from intense construction noise, and an increase of permanent noise resulting form a larger 6 lane SR520 bridge. (Page 56 "Noise")

1. Health impacts listed from the HIA
Specifically, serious physical negative impacts will result including:
Degraded Hearing or total loss
Cardiovascular Disease, including high blood pressure,
Communication interference from higher background noise
Sleep Disturbance caused by excessive road noise.
Impaired work and Learning performance degradation due to noise

The negative effects from excess noise emitted from the expansion and construction of the SR520 bridge have been documented many times as a high priority for the Laurelhurst and other surrounding neighborhood.

The Laurelhurst Community Club representative at the State Mediation process worked in concert with neighborhoods surrounding the bridge from both East and West to formulate strategies to reduce noise. The Noise Expert Review panel, City Council and The Legislative Workgroup were also given a document which addressed concerns about noise for the rebuild of SR520.
(see Exhibit #3)

C-031-010

B. Why noise factors are significant

Chronic sound pollution can trigger the body's stress response, and it also can cause excessive stress hormones to be produced.

There are numerous studies conducted by Professor Gary Evans of Cornell University which found that loud environmental noise interferes with children's ability to learn. In addition, researchers in Austria and Germany also concluded that children in noisier neighborhoods experience marginally higher systolic blood pressure, greater heart rates and higher overnight cortisol levels which indicate modestly elevated levels of physiological stress. As a result, constant noise pollution can be linked to the later development of high blood pressure, heart disease and stroke and the lowering of the body's natural immune system.

These studies added to Dr. Evans findings that children and adults (in later studies) exposed to chronic noise can have serious health, learning and task motivation impairments.

C-031-011

C. Analysis of the SDEIS

1.Measurement of noise

It is an egregious omission in the SDEIS that no noise mitigation for the Laurelhurst neighborhood is specified. On page 20 of the Noise Discipline Report, the transmission of sound is described in detail. Lines 1-6 state that sound travel across reflective surfaces (e.g. the water on lake Washington) with minimal attenuation (absorption). In addition, weather can accentuate these conditions (lines 7-15) which states that noise levels can increase during temperature inversions as the warmer air atop the trapped layer of cooler air causes a deflection of skyward-bound sound waves back to the receivers (homes)at ground level. This weather condition describes Seattle at least 60% of the year. To dismiss this effect is an unacceptable in measuring noise from SR520 under "normal" Seattle/Puget Sound area conditions.

2. The criteria for an acceptable noise level is defined as 66dBA in the Noise Discipline Report (page 23) by FHWA and WSDOT. Page 27, lines 20-25, states that only residences within 500 feet are considered (under WSDOT policy). However, this noise (page 20) will carry across **reflective** surfaces such as water **at the same noise level as within 500 feet** and this sound should be measured accurately and mitigated.

The report claims that 7 locations in Laurelhurst were "modeled", but SDEIS Exhibit 10 shows that only 2 locations were actually measured, and of that only 1 for 24 hours. No weather conditions were described. The other location was a very short term one at Belvoir Park, quite a long distance from the bridge, and read for only 15 minutes, providing insufficient readings for total noise received. (page 41) The single reading of 57 dBAs is insufficient.

Attached(Exhibit #4) is a list of 70 residences who have complained about loud "bridge noise" in this neighborhood, that interferes with their sleep and outdoor activities in their yards.

C-031-011

3. Page 33 of the report notes that topography affects sound transmission. (lines 21-33). Given that information, the report states that "Laurelhurst (page 34) has no noise reducing features in its topography". In fact, the new location of the 6 lane bridge brings it closer to Laurelhurst by 150 (190 feet in your SDEIS report) feet, to the north. These factors **will increase** the noise transmission to residences located at the shorelines and at the top of the hill which will carry the noise upwards as it deflects from the water.

4. Noise mitigation proposed by WSDOT for SR520 for Laurelhurst is absent.(SDEIS exhibit 53) The report (page 103) states that "modeled" noise levels will not exceed NAC. Even on the single measurement for one day, it is However, because a new 6 lane bridge is physically closer by 150 feet and carries more traffic at a higher rates of speed, all of these generate more noise to residents. Further, the noise walls proposed on the southern side will create excess noise echo back to bikers, pedestrians and residences to the north of the bridge.

C-031-012

D. Noise comparison to no build

The noise discipline report is **not accurate** when it states that the "no build alternative" would result in more noise (page 69). This is **not true** due to increase volumes will result in slower speeds and thus less noise emitted. The "no build" leaves the bridge in its current location, rather than bringing more noise closer to the Laurelhurst neighborhood.

C-031-013

E. Construction noise impacts

1) Construction noises should be mitigated as a top priority. the project will take between 4-8 years of pile driving and the use of loud equipment. Pile driving (page 65) is estimated to produce intense noise of 99 to 105 bBA. This is unacceptable to residences. **The 2009 "tests for pile driving techniques" and its results are not included in the SDEIS** for community impacts. This is a serious flaw in the noise discipline report, and needs to be published for adjacent neighborhoods and park users.

C-031-014

2)Pages 172-174 list potential noise reducers during construction. All of these should be required when the project goes out to bid. Monetary incentives should be part of the contract to entice maximum noise reduction during construction. Such practices as restricting use of "back-up" beepers and using spotters makes an enormous difference in reducing annoying noise. Reducing noise from construction is of the highest value to surrounding communities on both the Eastside and Westside to enable their citizens to function more normally.

C-031-015

3) Refer to the Report from Bill Mundy (Exhibit #5), page 3 on construction noise:

There is a significant INCONSISTENCY between WSDOT maximum noise levels and those of the City of Seattle and Washington State Labor and Industries.

- For Seattle:

C-031-015

- Maximum sound level between 7:00am and 10:00pm is 55 dBA. This would be for the permanent operation;
- The maximum exceedence during construction for heavy equipment is 25 dBA;
- Therefore, the total maximum noise level for the 54 month construction period during any day would be 80 dBA (80 dBA is "moderately loud" and equivalent to standing within two feet of an operating garbage truck).

- For WA. Labor and Industries:
  - Noise cannot exceed 85 dBA over an 8 hour period. (WAC 296-817-300).

C-031-016 There is NO mention of pile driving noise in Exhibit 23, page 64. This is a serious OMISSION because in Exhibit 22 it shows that pile driving results in the most serious noise levels of all equipment and ranges between 99 to 105 dBA.

C-031-017 SDEIS Exhibit 26, page 67 and 68, shows pile driving noise level profiles. This exhibit is INCORRECT. The exhibit DOES NOT include the area where the temporary bridge is to be built. Even with this ERROR WSDOT's noise profile exceeds City of Seattle and WA L&I maximum noise limits. This is a serious OMISSION. Your documents show that 2042 piles will be driven (Table 6.7.1) over the 54 month period. Exhibit 8, page 26 is a table showing relative loudness. The reference point is 80 dBA, the noise a garbage truck makes when one is standing within two feet of it and this is not with an idling engine. 100 dBA is 4 times louder, the equivalent to a jet taking off. 100 dBA is classified as "very loud." Interestingly, the noise effects on fish and mammals are discussed, they are NOT discussed regarding humans.

C-031-018 SDEIS Exhibit 31 (approximately page 85). Noise Levels. The following are the noise levels listed for NMP without sound walls: MP1-66, MP2-67, MP3-67, MP4-67. All of these are right at NAC maximums and exceed City of Seattle maximums of 55 dBA. Given that, Exhibit 33 is MISLEADING for it is based on the assumption of sound walls. This is a "best case" scenario and extremely unlikely as sound walls are optional, not required. Due to a lack of funds and WSDOT prior statements, it is more likely than not that sound walls will NOT be constructed in the NMP segment. The SDEIS states regarding mitigation:

- "measures must be considered;"
- "mitigation measures … must be recommended (page 107).

This is NOT the same as requiring mitigation measures to reduce noise levels to an acceptable level.

C-031-019 OMMITTED from the noise section is how the "beep beep beep" of construction vehicles and equipment, when they back up, is quantified. According to a person I interviewed who lived on Mercer Island, in close proximity to the I-90 project, the "beep beep beep" was so annoying that they had to move. And, it was something that went on for 24 hours per day, often 7 days per week. If one has to listen to this for 54 months from 7:00am to 10:00pm it would, indeed, be annoying. It would be more than annoying for 24 hours per day, seven days per week. Based on my review of the DSEIS this noise is not dealt with, it is therefore an OMISSION. If it is dealt with please provide the reference or documentation.

Vibration

C-031-020 Vibration Mitigation (page 172).

This discussed how noise might be mitigated. There is NOTHING on vibration mitigation. This is an OMISSION.
The SDEIS states there is "no effective method to reduce vibration." (page 174). If it can't be reduced how can "it be kept to a minimum."?

If noise and vibration levels are above legal limits what can be done? "Vibration monitoring" (page 61) will NOT cure the problem.

C-031-021 Noise and Vibration, Pile Removal.

The noise and vibration material deals with the 2042 piles that will be driven over the 54 month construction period. It does NOT deal with the process of removing the piles and the noise and vibration that will result from the removal process. This is a serious OMISSION for the experience at CS indicates that the noise and vibration resulting from the removal of the piles is much greater than driving them. We have also discovered that if piles cannot be removed through extraction (pulling them) they are cut off at the lake bottom. The DSEIS does not deal with the debris that remains, for example the creosote laden piles. This is a serious OMISSION, especially due to the remaining hazardous material.

Not only will people be adversely affected by excess construction noise, it will severely impact wildlife such as the bald eagle during its nesting season. (page 66)In addition, fish will be disturbed as these noises actually transmit directly under water.

C-031-022 **F. Noise Mitigation Recommendations**

1. Mitigation for excess noise from the 6 lane bridge is incomplete (Noise Discipline Report, page 107).
Many suggestions listed are effective such as use of heavy landscaping and highway design alignments. However, **the exclusive use of noise walls by WSDOT for mitigation is completely adverse to all of the recommendations made by adjacent neighborhoods, parks and institutions.**

C-031-023 2. The Noise Expert Review Panel published their findings dated November 24, 2008. These meetings were attended by Mediation representatives and the results were comprehensive.
Unfortunately, WSDOT has not integrated these comprehensive and efficient ways to reduce noise into the SDEIS.
Only lids and noise walls are recommended (page 171, lines 28-29) The legitimate reason given is that noise walls are the only federally approved mitigation used by WSDOT. Because they are visually unacceptable and/or do not work effectively with the "bowl" of

C-031-023 residences along the 520 spans, these noise mitigation techniques for SR520 should be included in the SDEIS.

The Noise Expert Review Panel's recommendations included:

1. Installation of quieter pavements with periodic renewal of surfaces for effectiveness.
2. Reduce or eliminate use of studded tires on bridge.
3. Design of gentler grades.
4. Use of sound absorptive material on all safety barriers
5. Parallel **transparen**t barriers on structure (with absorptive bases) for noise reduction between vehicles and bike and pedestrians.
6. Use of short, opaque absorptive barriers, designed low to protect view sheds
7. Absorptive treatment/ textures on retaining walls.
8. Quieter expansion joints on bridge surfaces, especially on high rise segments.
9. Use of under deck covering or coating with sound absorption materials.
10. Traffic calming of adjacent arterials.
11. Quieter pavement on adjacent arterials.
12. Use of absorptive materials on inside of lids
13. Dense vegetation on tops of lids or exterior of walls
14. Jersey barriers to be fabricated out of sound absorption materials
15. Prohibition of the use of compression brakes
16. Construction noise plan including penalties and incentives.
17. Addition of more lids and tunnels

WSDOT has included speed, ramp and grade designs and use of lids in some areas.

The SDEIS falls short in the inclusion of these other effective measures to reduce the negative health impacts on nearby residents and park and recreational users.

C-031-024 **3. Noise walls as Mitigation**

a) Pages 113-120 include the explanation of the placement and function of noise walls to reduce noise from the highway. Most of the discussion is focused on the cost/benefit analysis of sound reduction by standards set by WSDOT.
Page 116, lines 35-38 state, "Noise walls would only be constructed if WDSOT determines that they are feasible and reasonable" and yet states that "WSDOT policy also provides for local jurisdiction and community input to the process of assessing mitigation measures"

This process for local input took place via the noise expert review panel, but the results were not recommended in the SDEIS by WSDOT.

b) Page 119 discusses the effectiveness of noise walls with "above grade" receivers. This type of topography is characteristic of **most** of the 520 corridor on the Westside

C-031-024

approach. Many homes are located up on hills surrounding the bridge in Madison Park, Laurelhurst, North Capital Hill , Portage Bay and Roanoke Park in a "bowl".
Lines 12-15 in the SDEIS states,
"Noise walls are less effective at reducing transportation noise at locations where receivers are elevated above the roadway (such as North Capital Hill) because the receivers are closer to noise that is diffracted over the top of the noise wall."

c) Thus, residences **over the proposed noise wall of 10 feet would have no benefit from their inclusion as mitigation.** Further, they could carry the sound further to residences above the projection of the noise wall, even to greater distances, increasing impacts.

4. Location of Noise Walls

a) Pages 129-138 and pages 148 and 159 specify which neighborhoods that qualify for noise mitigation using sound walls.
SDEIS Exhibit 54 shows that noise walls would be erected on the south side of SR520 only along Madison Park (pages 135 and 136). The north side (which moves to the north by 155 feet is not protected by installing the same noise walls.
This creates an "echo effect" for the cyclists and walkers and Laurelhurst residences which is shown on USDOT noise wall illustration on page 115.
b) All traffic noises will bounce off the noise walls on the south side, and reflect back to the north side which first hits the bikers and pedestrians right on the bridge. Then the noise carries over the reflective surface of water to Laurelhurst residences, increasing significantly the currently measured decibels. Add to that, the increase in noise due to cloud cover, and noise is magnified to warrant mitigation.

c) Thus, the SDEIS falls short in evaluating the global effect of adding noise walls to only the south side of the bridge. Magnification and reflection of more noise from the south side back to pedestrians, bikers and residences to the north of the noise walls is not measured nor mitigated adequately.

C-031-025

Summary on Noise Impacts and recommended mitigation
In summary, the SDEIS Noise Discipline Report for SR520 is flawed in failing to identify the complete range of impacted receptors of bridge noise, fails to include a range of acceptable and effective mitigation measures and worse, includes techniques such as one-sided noise walls which will create an increase of noise across to bikers, pedestrians.

C-031-026

III. Air Quality
A. The SDEIS fails to address the full impact of air pollution increases that will result in adding two more lanes of vehicular traffic in a new 6 lane SR520 bridge. The Executive Summary (pages 33-34) states that" all options would meet air quality standards".

C-031-027

B. The report inserted here by Marcia Baker (exhibit#6) details the goals of Seattle to reduce greenhouse gas emissions by 7% over 190 levels by 2012, and the goal of the

C-031-027

Western Climate Initiative to which Washington State belongs is an overall emissions reduction of 15% below 2005 levels by 2020.

Road transportation accounts for 52% of these emission and in Seattle it is 62%. Thus, the SDEIS with adding 2 more lanes of vehicles and, each mile of new highway lane (HOV or not) is projected to increase CO2 by about 100,000 tons over the next 50 years. (This estimate includes optimistic estimates of projected increases in fuel efficiency.)

Adding 2 more lanes of traffic has negative health impacts on Seattle's neighborhood residents who live so close to the newly expanded bridge. These are dense, urban population centers.
Excess emissions will increase adverse health impacts. Asthma, cardiovascular disease and cancers have been tied to more air pollution (see references from Marcia Baker's comments on air quality).

C-031-028

C. Statements in the SDEIS that there will be no adverse air quality impacts are not true.
1. On page 88 of the Cumulative Discipline Report it states that air emissions and the construction process will not change the baseline of NAAQS. The use of heavy construction machinery, excavations and hauling alone will generate pollutants that will be emitted onto residents in nearby neighborhoods, including Laurelhurst.

2. The SDEIS must address specific standards and require construction techniques in the contracts to protect residents for the 4-8 years of continual construction.
Currently, the report omits these important health impacts identified in the Health Impact Assessment Report.

3.The report included here by Marcia Baker notes that we cannot ignore the global impacts of poor air quality and must recognize the commitments the validity of reducing our carbon footprint which the SDEIS falls short.

C-031-029

D. Comments On Greenhouse Gas Emissions and Air Quality Sections of WSDOT SDEIS by Marcia Baker

1. Assumptions. The SDEIS analysis of air pollutants and greenhouse gas emissions from the various alternatives is completely dependent on their projections by 2030.
-Congestion will decrease relative to present levels over the entire area as a result of HOV lanes and tolls.
-Average vehicular speed on 520 will be over 30mph
2. Comments on these assumptions
The projection that increasing the number of lanes open to vehicular traffic will reduce congestion in the long term is not born out by most data in the analyses: on the contrary:
-recent data based reviews (Litman, 2009) show that in congested areas over 90% of increased lane capacity is filled within 5-10 years.
-The period after which time savings due to added road capacity equals time lost during road construction is estimated to range from 2.75 years to infinity. (on occasion, the construction time lost is never recouped!)

C-031-029

References
(1) Brugge et al (2007) Environmental Health vol 6, p 23
(2) Buonocore et al (2009) American Journal of Public Health (2009) Supplement 3 p S629 (Harvard School of Public Health and community groups analyzing such in particles in Boston neighborhoods)

C-031-030

IV. Transportation and Traffic Analysis

A. The obvious goal of not just rebuilding the SR520 bridge for safety, but also to enhance the mobility of the region, and plan for its future growth.

The SDEIS reveals that the option presented do not achieve these goals for creating a better transportation system.

C-031-031

B. The geographic location of the Laurelhurst Community sets it apart from the other neighborhoods surrounding the SR520 bridge and its access to I-5, the primary federal highway in the region. Laurelhurst is a peninsula, with only two ways to access the major highways of SR520 and I-5:
-Egress from the 5 corners stoplight at NE 45th St and Mary Gates Memorial Drive, then through to SR 513 (Montlake Blvd) to SR520, to points East or Westbound to I-5
-Egress from the 5 corners at NE 45th St and Mary Gates Memorial Dr westbound up the 2 lanes westbound, and 1 lane eastbound through 12 stoplights to I-5 north or south.
Thus, Laurelhurst residences value mobility as a top priority of SR520 and its access.

C-031-032

C. Travel times

1. Data discrepancies
Throughout the Mediation process to determine travel times on .8 mile on Montlake Blvd, the data was constantly changing. Every week, new reasons were given such as "the model had new assumptions" and participants could not get an accurate number on the actual predicted travel times between the 3 alternatives.
See critique in modeling methodology (Exhibit # 7) by Carl De Marken
Also see Tilghman Traffic Analysis (Exhibit #8)

C-031-033

2. Omission of planned development in NE Seattle within 3.6 miles of SR520 by 2020

In addition, there significant data missing from the calculations, especially in NE Seattle from the addition of University Village, The QFC parcel for additional retail and adding 350 residential units, the addition of 400 more rooms at Seattle Children's Hospital, and the expansion in recreational, restaurant and office facilities at Warren G. Magnuson Park. All of these are detailed by permit numbers (Exhibit #9) which were clearly in the Seattle DPD process, several handed to the WSDOT team in person, but in the end omitted in their traffic analysis report:

C-031-033 This data heavily impacts the accuracy of the SDEIS and requires that it be recalculated, incorporating the additional daily trip generation.

C-031-034 **D. Traffic and Transportation**

In the goal of presenting 3 viable options for transportation solutions, the SDEIS process falls short.

The Tilghman Transportation Group investigated the SDEIS for inconsistencies and missing analyses. (See exhibit #8)

Some of the findings include:

1. The SDEIS (Chapter 4-3) is lacking in full disclosure and analysis of existing back ups on City of Seattle arterials. Back ups "can" extend as far north as NE 25th Ave and to NE 45th Street, and NE Pacific Street. The SDEIS needs to expand on the domino effects of mobility throughout the access points to SR520. Traffic congestion will be worsened by cumulative growth effects, particularly in NE Seattle, and the SDEIS needs to widen its picture of the impacts in it access points, both to the north and south to Madison Street.

2.The whole process of interconnection of the new SR520 with SDOT was almost non-existence. The Westside communities and all Seattle residents were not represented in developing optimal solutions during the 2006-2009 timeline when the 3 options in the SDEIS were developed.

3.Under new mayoral leadership, more information and collaboration could be accomplished in developing more optimal solutions for City streets and SR520.

C-031-035 4. Traffic access routes Options A, K and L in the SDEIS

a) Plan A shows a degradation in mobility for access to SR520 from the north and south Westside residents. Without having the Lake Washington Blvd Ramp for access to Seattle neighborhoods south of the SR520 (Montlake, North Capital Hill, Madison Park, Broadmoor, and Madrona) all traffic north and south bound share one set of off ramps routed to the north.

b) This shared off ramp does not have adequate capacity to handle a reasonable flow of traffic for both directions. **The result instead is a back up queue on SR520 westbound and further gridlock created by Plan A** on a ramp where there is minimal existing congestion today.

c) In addition, travel time and distance is increased for vehicles traveling south by doubling the exit distance. This is a poor transportation design for Seattle residents access to a new bridge, and creates a larger carbon footprint for more travel times than needed.

C-031-036 d) Plan L is also flawed as a transportation system.

Access to and from SR520 from all points south are routed first across the Montlake bascule bridge, and then again as a loop onto another bascule bridge. The existing condition of using a bascule bridge to access a major state highway has already proven ill conceived. Adding another is a recipe for gridlock and congestion through the Montlake Bridge Interchange. The SDEIS states that Plan L the Montlake intersection would still operate at LOS service F (lowest possible rating) on page 29 of the Executive Summary.

C-031-036

Thus, Plan L offers no improvement, rather creates more congestion and longer travel times to access SR520 and should not be considered a viable Westside SR 520 option.

e) Plan K is the only option offering key improvements as a transportation system:
-Vehicles accessing SR520 can enter directly via a tunnel under the Montlake Cut which results in shorter travel times (15 minutes on Montlake Blvd). This is for both north and south bound trips.
-Increases capacity on Montlake from the separation of SR520 traffic and local north/south traffic will allow for expected growth in NE Seattle (see cumulative effects-planned land use projects) which are projected to generate 3800 new trips daily by 2020.
-Grade separation at Pacific Place, the University of Washington Triangle bus stops and the Sound Transit Light Rail Station allows two benefits not achieved by the other SDEIS options. This reduces wait time at stoplights for vehicles as well as quicker crossings from the transit centers for pedestrians.
Page 28 states that "the greatest effect on traffic volumes would occur at the Montlake Blvd Interchange area", and Plan K (or omitted Plan M) offers a real solution to relieve some of the anticipated congestion.

C-031-037

E. Impacts of the Bascule Bridge on traffic and access to SR520

In the description of Plan A and Plan L, both designs include traversing a bascule bridge from the north to access SR520 (page 29 in the Executive Summary).

The opportunity to eliminate such a travel impediment should be an overarching goal in the design of a 6 lane SR520 for the following reasons:

1. The U.S. Coast Guard tracked the Montlake Bridge openings for the past 10 years (page 124-Cumulative Effects on Navigation). There are close to 3,000 bridge openings requiring 2 minutes each to clear, creating a backlog of vehicular traffic. This data is not included in the traffic analysis in the SDEIS and it crucial to the mobility around SR520. Non-peak travel is as important in NE Seattle access as any other time of day.
   - The University Village Shopping Center operates 7 days/week at "off peak" hours, and is especially affected by bridge openings on the weekends when recreation boats require opening of the Montlake Bridge
   -Seattle Children's Hospital also operates 7 days a week, much during"'off peak" hours.
   -Warren G Magnuson Park's recreational facilities and large community events occur on weekends, definitely defined as "off peak" hours.
   -The University of Washington popular sporting events occur during "off peak" hours and severely impact traffic around the Montlake Interchange

C-031-037

Thus, these non, "off peak" traffic impact are omitted from the SDEIS and should be included to accurately evaluate the operations of Options A and l which include a bascule bridge inherent in their design.
Traffic mobility is equally important to citizens during "off peak' times, especially weekends and must be analyzed in the SDEIS.

2. The U.S. Coast Guard estimates that the addition of a second bascule bridge in Plan A or Plan L will increase by 50%, resulting in bridge traffic to be stopped 20 more minutes per day from May through September.(Exhibit #17)

3. The SDEIS is deficient in omitting the critical off peak traffic studies, especially along Montlake Blvd. which will be severely impacted by the use of a bascule bridge in Plans A and L.
Plans K and M eliminate this design obstacle and should be evaluated "off peak" performance as well.

C-031-038

V. Pedestrian and Bicyclist Access and Safety

The SDEIS (4-8) describes the current lack of bicycle and pedestrian access to existing SR520.
A. The addition of a separated bike and pedestrian lane (14 feet) on the north side of the new SR520 will achieve access that will encourage non-motorized crossing of SR520. This will benefit all options, albeit this width seem excessively wide.

1.-Plans A and L will still require cyclists and pedestrians to mingle in more vehicular traffic on bascule bridges from the Westside to go eastbound in their designs.

2. -Plan K (and M) have bicyclists follow traffic separated safer pathways aligned with more connectivity through the Arboretum and existing bike trails- a safer approach..

B. Plans A and L have pedestrians at the new Sound Transit Station crossing traffic at grade level SDEIS (4-8 and 4-9). This type of crossing is problematic for two reasons:
1)-pedestrians are exposed to safety hazards from traffic and stoplights which also creates more "wait time" penalty
2)-vehicles attempting to access SR520 are adding to greenhouse gas with their wait time emissions from longer stops at traffic signals.

C-031-039

C. The University of Washington is proposing to add an additional pedestrian crossing at Pacific Street across from the new Sound Transit Light Rail Station (SDOT 12/09) and eliminate the skybridge as previously approved. The Tilghman Traffic Report (Exhibit 8) analyzed this additional impact on mobility in the Montlake (SDEIS Report page 3,section H). Another stoplight added with longer crossing times and reduced available space for vehicles to queue, results in degraded performances of travel times for Plan A and L.

C-031-039

Plan K avoids this due to due the design of grade separation of pedestrians and cyclists over vehicular traffic and reduces wait time penalties which facilitate transit use.

C-031-040

VI. Transit connectivity

Senate Bill #6099 requires a Westside SR520 bridge design to ensure the optimal connectivity of transit to the Sound Transit Light Rail Station.

A. Option A **does not** accomplish this mandate, leaving a long 1200 foot distance between bus service and the Light Rail station. With weather elements always in play, the lack of direct connectivity creates a penalty, rather than an enhancement to encourage use of transit.
B. Option L also leaves transit riders at a long distance from the new Sound Transit Light Rail station.
Both options have pedestrians crossing at grade level, and transversing a bascule bridge with its delays to connect to busses and onward to other destinations.

C. Both Option K and omitted Option M offer direct connections from Sound Transit Light Rail to busses at the University Triangle. The ease of walking at a grade separated crossing to the University without the delays of both Montlake Bridge openings and the closer proximity of transit connections make this option the best choice.

Plans A and L fall short of the mandate of SB 6099 and should be eliminated.
Only options K and M will accomplish this goal for transit connectivity.

C-031-041

VII. Visual Quality

The SDEIS insufficiently addresses the permanent visual impacts that will be left by the 6 lane options proposed. Impacts (pages 31-32 Executive Summary) are lumped together in the statement, ""all options would affect visual quality as a result of the new lids and wider bridges and roadways that would be shifted in some areas and lowered in other areas". Photos reveal the completely unacceptable bridge height of 30 feet which obscures view corridors. Neighborhoods were promised a "low profile" and clearly this is not acceptable and destroys open space views.

From the both Eastside and the Westside, neighborhoods have thrived and been built up to enjoy the view sheds of Lake Washington, the Cascade mountains, Mount Rainier and the Olympic Mountains. In urban neighborhoods the relief and value attributed to these visual treasures can be measured by the more expensive land and taxable home values that have these view sheds.

C-031-041

A. The SDEIS statement on Visual Quality is not accurate

1) All options create a wider footprint affecting EVERY neighborhood in its adjacency. The new designs are more than double the current width, creating visual blight.

2) The 30 foot high profile across lake Washington for a new 6 lane bridge ranges from a low profile of 12-15 feet in Plan K and M to a massive 30 foot profile in Plans A and L.

3) The addition of 15 foot noise walls in addition to any bridge design creates an even higher visual barrier to be seen by nearby residents.

4) Option A has an additional bascule bridge which adds an enormous visual blockade to the Monltlake neighborhood

5) Option A adds a seventh lane on the Portage Bay bridge, wiping out view sheds and basic sunlight to the Seattle and Queen City Yacht Clubs, Portage Bay residents, and house boat residents.

6) Option L erects a 40 foot high bascule bridge which obstructs view corridors from the University of Washington, the Arboretum, Montlake, North Capital Hill , Madison Park and Laurelhurst communities.

7) Option A with LWB ramps create a lid in Montlake cut into 2 parts with a freeway ramp. The LWB ramps also create massive visual blight in Montlake.

Only plan K and M improve the visual impact of the 6 lane option by:
1) Lowering the floating bridge profile, preserving Lake Washington view sheds.

2) Covering the passage through the Arboretum with a berm.

3) Creating a pedestrian green passage at the University of Washington Light Rail station
to the campus and bus routes.

4) Creating a land bridge to connect the experience for park users in the Arboretum.

5) Maximizing the size of lids spaces-not by dividing them into freeway ramps.

C-031-042

B. The photos depicting the visual changes from the new design are not accurate.

1. The photos included in section 4.5, pages 34 and 35 are shot at an existing location and not corrected to show the northern shift in the location of the bridge.

2. Attached (Exhibit #10 and 11) are photos that depict the changes in the Laurelhurst neighborhood view sheds due to the new 6 lane bridge.

C-031-042

The photos were taken in 2 residences on Webster Point in Laurelhurst.(3008 East Laurelhurst Dr NE and 3012 East Laurelhurst Dr NE)

The photos demonstrates the enormous impact of visual blight with corrections for:
-the location of the bridge 190 feet closer to the north
-30 foot high heights in the floating bridge section
-density of the new design on the new pontoon design

3. Clearly, these photos demonstrate a degraded view shed from residents who have paid top dollar in real estate values to view Lake Washington, Mt. Rainier and the Cascade and Olympic Mountains. This loss is unaccounted for in the SDEIS and should be enumerated as a potential reimbursement to homeowners on both sides of the 6 lane options. Lower real estate taxes from loss of real estate values are omitted from the SDEIS.

4. The SDEIS should be re-done to show quantitatively the real impacts of the new footprint in proximity, width and height in all affected neighborhoods to show the real loss of view sheds.

5. In addition, please refer to the Exhibit #4 which lists all residents who are impacted by the new SR520 footprint in Laurelhurst.

C-031-043

VIII. Wetlands , Water Quality and Parkland (4-f)

The Laurelhurst neighborhood southern border is on Union Bay which is a precious wetland area that has been nurtured from its near demise, back to a viable habitat for rare and native wildlife and plants.

A. Union Bay Ecosystem

The organization, Save Union Bay Association (SUBA) has been active in maintaining and restoring the ecological issues that have developed for the past 40 years.

In addition, Seattle City Council President, Richard Conlin, and Councilperson, Sally Clark have been instrumental in helping SUBA become an entity under Seattle Public Utilities for a lake management district, and obtaining resources to continue to restore its viability.

Attached is the report from SUBA (Exhibit #12) which was written in conjunction from Josh Wozniak from Herrera Consultants (water ecology experts). The report outlines the concerns about Union Bay, both during the construction phases, as well as the permanent effects on the condition of the water quality of the bay and its wildlife habitat.

B. Mitigation

Avoidance of harm and mitigation is suggested in this report for Union Bay to enhance its ability to replace the wetlands that will be eliminated with all of the Option A, L or K.

C-031-043 The restoration of native habitat from damage from nutria invasion will help as well as the reductions of invasive milfoil and waterlilies that are impediments to the viability of Union Bay.
See Exhibit # 12 for the full report on Save Union Bay, co-authored all by scientists and officers who reside in the proximity of SR520.

C. Water quality and 4-f Parklands

C-031-044 Changes in the turbidity, and quality of water in and around the new 6 lane option are described in the report from SUBA

LCC has concerns that the full impact on water quality for fish, wildlife and recreational uses by humans are not adequately vetted in the SDEIS. More data and mitigation plans need to be delineated.

C-031-045 D. Exhibit #13 complied by Connie Sidles who is an expert birder, (Audubon member) is an inventory of the birds that have been recently documented using the habitats of Foster Island, Portage Bay and Union Bay. There are 85 species of birds who have been seen in the environment affected by SR520. In addition, there are 18 rare birds and 7 very rare birds who may never return unless an inviting habitat and wetland is provided.

To lose this irreplaceable wildlife in our ecosystem would be a shameful legacy of destruction of their habitat by concrete and must be prevented.
The SDEIS must include a more extensive plan for these birds, and not limit its scope to just the migrating ones required by federal law.

C-031-046 In addition to wetlands the LCC has great concern for the destruction of the extensive network of parklands that surrounds the SR 520 project . The loss of parks is unacceptable, and the law mandates that these impacts be avoided by another viable option. See full report by Gerry Conley on 4-f issues.

IX. Construction issues

C-031-047 **A. Impacts**
The Laurelhurst Community will be heavily impacted by the re-build and expansion of SR520 for a minimum of 8 years. Chapter 6 of the SDEIS attempts to describe the construction impacts that will affect surrounding neighborhoods throughout the project.

1. Attached is our full analysis (excel Exhibit #14) compiled by Jean Amick.

2. In addition the adverse affects on residents of this prolonged project are listed by the report by Bill Mundy (Exhibit #5) in regard to visuals and noise concerns:

C-031-047

Effects During Construction (Chapter 6).

There is either NO or ONLY superficial discussions of construction affects on NMP regarding boat access, noise, vibration and wildlife. (page 6-46 to 6-49). Also, see the above comments relating to the Discipline Reports.

C-031-048

B.View Impacts during Construction

In Chapter 6 it states: "*Under all design options, the greatest temporary change to visual character and quality would result from demolition of the Lake Washington ramps to and from the Arboretum and construction and presence of construction and detour bridges because of their size and complexity. Vegetation would be removed in 30- to 60-foot-wide swaths for the work bridges. Subsequent construction of the permanent new west approach bridges would compound the effects. The combination of the construction bridges, detour bridges, finger piers, and the existing and new bridges would result in substantial degradation of visual character and quality of the south part of Union Bay. The structures would block water- and ground-level view for viewers near the structures. The viewers most affected by this change would be commuters crossing the bridges, park users and boaters, and residents in north Madison Park. Views from the Broadmoor Golf Course would be screened most of the year by tall trees along the shoreline.*" (page 6-54 and 6-55). This statement:

- Is inconsistent (an ERROR) with your statement regarding views (Views, Volume I, page 70) where it states: "*possibly blocking views of Laurelhurst Hills but revealing more open water in Union Bay.*"
- *More"openwater" cannot be true with a bay covered in barges and work bridges!*
- Does NOT discuss mitigation, an OMISSION.

C-031-049

Noise. (re: page 6-65+)

The following is relevant information and comments from several tables in this section:
Table 6.7.1: Equipment – Pile Drivers, Noise Level – 99-105 dBA, Number of piles to be driven: 1987 + 55 for Lake Washington Blvd or 2042 piles total.
Table 6.7.2: Maximum City of Seattle sound level, residential – 55 dBA.
Table 6.7.3: Maximum Exceedence:

Minutes/hour	Exceedence
15	+5 dBA
5	+10 dBA
1.5	+15 dBA

For driving in and pulling out the 2042 pilings (that is 4084 operations) the maximum noise criteria for the City, State, and federal government (NAC) will be exceeded. What is the effective mitigation? The answer to this has been OMITTED.
Table 6.7.4.:Noise Levels that "should NEVER be exceeded."

dBA	Time Duration Exceedence Prohibited
90	Continuously*
93	20 minutes
96	15 minutes

C-031-049

99 7.5 minutes

*I believe this is an error, for it means at 90 dBA or greater the noise level cannot be exceeded.
Therefore, if any piles are driven the noise levels will be exceeded. But, this must NEVER happen. What is the answer to this dilemma? It has been OMITTED.
In addition, just so we are on the "same page," don't suggest these noise levels will not reach NMP. First, your noise profiles do not take into account the construction bridge. Second, they do not take into account pile removal. Third, they do not take into account the vibration index.

C-031-050

Vibration (reference page 6-69).

Data and analysis on vibration testing has been OMITTED.
Reference "Construction Vibration Effects" page 6-69. In the middle of the paragraph it states "*It is unlikely that vibration levels would exceed 0.5 inches per second at distances greater than 100 feet from the construction sites*." In that regard:

- Distances from the construction bridge have been OMITTED;
- Data and analysis has been OMITTED regarding vibration tests and levels;
- Based on the experiences at Canterbury Shores regarding driving and pulling piles the vibration level exceeded 1.27 inches per second. This data and the effects have been OMITTED.
- Due to the poor quality of graphics in Exhibit 6.7-3 (at least on my CD), it is not possible to tell where the noise contours are in relation to the land (i.e. shoreline, land improvements, etc.). This must be an ERROR.

C-031-051

In addition to the above observations, **work place lightening is not included in the SDEIS.**
Bright work lighting can have severe adverse affects on fish and wildlife, boaters, drivers on the existing bridge and to residents who must look at bright lights during the construction process.

C-031-052

Effects During Construction (Chapter 6).

There is either NO or ONLY superficial discussions of construction affects on NMP regarding boat access, noise, vibration and wildlife. (page 6-46 to 6-49). Also, see the above comments relating to the Discipline Reports.

C-031-053

View Impact.

In Chapter 6 it states: "*Under all design options, the greatest temporary change to visual character and quality would result from demolition of the Lake Washington ramps to and from the Arboretum and construction and presence of construction and detour bridges because of their size and complexity. Vegetation would be removed in 30- to 60-foot-wide swaths for the work bridges. Subsequent construction of the permanent new west approach bridges would compound the effects. The combination of the construction bridges, detour bridges, finger piers, and the existing and new bridges would result in*

C-031-053

substantial degradation of visual character and quality of the south part of Union Bay. The structures would block water- and ground-level view for viewers near the structures. The viewers most affected by this change would be commuters crossing the bridges, park users and boaters, and residents in north Madison Park (underline mine). Views from the Broadmoor Golf Course would be screened most of the year by tall trees along the shoreline." (page 6-54 and 6-55). This statement:

- Is inconsistent (an ERROR) with your statement regarding views (Views, Volume I, page 70) where it states: "*possibly blocking views of Laurelhurst Hills but revealing more open water in Union Bay.*"
- Does NOT discuss mitigation, an OMISSION.

C-031-054

Noise. (re: page 6-65+)

The following is relevant information and comments from several tables in this section:
Table 6.7.1: Equipment – Pile Drivers, Noise Level – 99-105 dBA, Number of piles to be driven: 1987 + 55 for Lake Washington Blvd or 2042 piles total.
Table 6.7.2: Maximum City of Seattle sound level, residential – 55 dBA.
Table 6.7.3: Maximum Exceedence:

Minutes/hour	Exceedence
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1.5	+15 dBA

For driving in and pulling out the 2042 pilings (that is 4084 operations) the maximum noise criteria for the City, State, and federal government (NAC) will be exceeded. What is the effective mitigation? The answer to this has been OMITTED.
Table 6.7.4.:Noise Levels that "should NEVER be exceeded."

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93	20 minutes
96	15 minutes
99	7.5 minutes

*I believe this is an error, for it means at 90 dBA or greater the noise level cannot be exceeded.
Therefore, if any piles are driven the noise levels will be exceeded. But, this must NEVER happen. What is the answer to this dilemma? It has been OMITTED.
In addition, just so we are on the "same page," don't suggest these noise levels will not reach NMP. First, your noise profiles do not take into account the construction bridge. Second, they do not take into account pile removal. Third, they do not take into account the vibration index.

C-031-055

C. Vibration (reference page 6-69).

Data and analysis on vibration testing has been OMITTED.
Reference "Construction Vibration Effects" page 6-69. In the middle of the paragraph it states "*It is unlikely that vibration levels would exceed 0.5 inches per second at distances greater than 100 feet from the construction sites.*" In that regard:

C-031-055

- Distances from the construction bridge have been OMITTED;
- Data and analysis has been OMITTED regarding vibration tests and levels;
- Based on the experiences at Canterbury Shores regarding driving and pulling piles the vibration level exceeded 1.27 inches per second. This data and the effects have been OMITTED.
- Due to the poor quality of graphics in Exhibit 6.7-3 (at least on my CD), it is not possible to tell where the noise contours are in relation to the land (i.e. shoreline, land improvements, etc.). This must be an ERROR.

C-031-056

D. Lighting

The SDEIS must include a plan for construction lighting that is compatible with the Health Impact Assessment from the SB#6099. There is no plan currently included.

C-031-057

E. Traffic and Mobility

Another major concerns noted in Amick's comments for LCC during the construction phase include mobility and transportation routes for access by vehicles, pedestrians and cyclists during construction. Road closures and crossovers will have severe impacts on NE Seattle access to SR520 and I-5. This is especially true with the cumulative effects of planned land use development such as University Village Shopping Center, QFC retail space and apartments and the addition of 400 more beds and 1200 more staff at Seattle Children's Hospital, along with the completion of the Sound Transit Light Rail Station, all within 1.5 milers of the SR520 project.

Thus, The SDEIS has omitted key information for construction impacts and lacks concrete noise and visual mitigation techniques for building any 6 lane option.

X. Environmental Justice and fish stock quality

C-031-058

A. The Muckleshoot Tribe

This native American tribe has had long cultural ties to the region surrounding the SR520 bridge. The SDEIS describes the issue briefly in the Executive Summary(page 41)

1. Not only with the tribe have diminished access to fishing, but recently there has been a finding of an archeological artifact in Union Bay, near Waterway #1 by Judith Thorton, a University of Washington Professor. A rare mahogany red chert biface was unearthed. Dr. Thorton is in contact with the Burke Museum and the Muckleshoot Tribe archeologist, Laura Murphy to assess the implications of the
(See Exhibit #15)
2. It is essential that the SDEIS address the location of such potential important cultural findings and ways to protect their demise in the construction of SR520.

C-031-059

B. Fish Migration temperatures and shading impacts

C-031-059

1. In regard to the enhancement of the environment for improving the quality of fish stock, please refer to the report submitted by Maurice Cooper, an expert in the field of fish migration and habitat and engineer. (Exhibit #16)

2. The SDEIS presents an erroneous assumption about the migration of salmon through the Lake Washington passage and on through the Montlake Cut.
With the phenomenon of gradually increasing warmer waters in Lake Washnigton in the summer , migrating salmon have been documented to travel under the bridge structure, whose shaded effects provide cooler water streams that salmon prefer.

The SDEIS (page 46 in the Executive Summary) depicts the negative impact on fish travel and habitat due to shading by each option.
3. Plan K has the lowest profile of the 3 options and that would enable the shading needed to cool the water passages for the salmon.

Thus, the concept that shading is bad for fish is untrue, and not documented. This cooling will become even more important as Global warming continues to raise the temperatures in Lake Washington over the life of the new SR520.

Plan K with its lower profile best protects the fish stocks and should be the preferred option. Plans A and L will produce a warmer temperature and less protection for the summer migration of salmon.

C-031-060

XI. Cumulative Effects
A critique of the Cumulative effects in numerous categories is attached (Excel Exhibit #16).
The document includes inaccuracies in the SDEIS and omissions. Most topics have been addressed in the remarks above. but the page and report references are detailed.

Comments point out inaccuracies in the SDEIS as well as omissions.

Key issues are land use omissions, traffic effects, air quality, visual quality, greenhouse gas, noise and water resources which will be affected by the 8 year project in dense urban neighborhoods and in environmentally sensitive areas.
Specific pages are referenced in this exhibit and must be reviewed.

Summary

C-031-061

The Laurelhurst Community Club supports the re-build of a safer SR520 bridge that meets the transportation goals and is built with a context sensitive design.
In addition, would like to continue active participation in is design and mitigation processes as the final plan develops.
In analyzing the SDEIS, the current three options presented fail to meet the criteria that offers the State of Washington an optimal design for the next 50-75 years.

C-031-061

The lack of inclusion of Option M which included a short immersed tube tunnel under the Montlake Cut is a glaring omission of a design solution which has the potential to achieve the region's goals for greater mobility of transit, pedestrians, cyclists and vehicles.
Plans A and L fall short on improving mobility in Seattle to and from SR520. Rather, these plans will cause further traffic congestion by their inherently faulty designs.

An SDEIS design that provides for the future growth of the region must include features (in Plan K) such an improved grade separated connection between transit modes to facilitate transit use and reduce greenhouse gases.
Plans K or M with the tunnel feature under the Montlake Cut are the only designs that include that logical provision.

Plans K and M were "fully loaded" in inclusive mobility and environmentally friendly features from the start, including a berm in the Arboretum and safer pedestrian crossings. However, after Mediation, excess costs including a $500,000,000 kickback to the University of Washington for a parking garage replacement was added to the design after the Mediation process ended.
The actual costs of the tunnel in option M is only $49.5 million, well within the budget of the $4.65 billion total. Unfortunately, the actual cost analysis and data was buried in a cost report that was only revealed on the date that the Legislative Work Group was voting on their "preferred" option. Thus, the tunnel plan costs were over stated by a half billion dollars (at the very least).

In addition, the SDEIS process was hurried along at the end of the calendar year of 2009 by Legislators who were facing the worst budget deficit and recession in the history of the State of Washington. Their mottos were "just get it done" and "go with the cheapest". The results were that Plan A chosen as a preferred solution-easy to understand and the cheapest estimate on the table.

Laurelhurst Community Club believes that the State and its **citizens can do better because we know better.**
WDSOT can produce a more rigorous SDEIS and include more global and environmentally sound options which should be driving this process and bridge design.

Looking back in 25 years from the ribbon cutting of the new bridge, the Governor, the State of Washington, the Cities of Seattle and Bellevue and their surrounding communities who will pay for it, should be able to look at the decision today, and know it was an investment in a transportation system that provides solutions for mobility and preserves the resources that are so valued by its citizens.

Report prepared by:
Colleen McAleer
4/15/2010
Laurelhurst Community Club Trustee and State Mediation Representative for SR520

Exhibit Directory for SDEIS-Laurelhurst Community Club
April 15, 2010

Exhibit 1 Capacity recommendations by Maurice Cooper

Exhibit 2 GPS 100 foot northern location of Floating Bridge Segment 1

Exhibit 3 LCC noise documents

Exhibit 4 List of affected Laurelhurst citizens -noise and visual impacts

Exhibit 5 SDEIS Comments from Bill Mundy

Exhibit 6 Marcia Baker-Air Quality and Greenhouse Gas

Exhibit 7 Traffic Modeling analysis Carl De Marken

Exhibit 8 Tilghman Transportation Analysis

Exhibit 9 Cumulative Development Land Use Projects in NE Seattle

Exhibit 10 Photos of Laurelhurst residence by Aaron Weholt-Legal Media

Exhibit 11 Photos -Webster Point residence (new bridge design) -Weholt

Exhibit 12 Save Union Bay analysis and Mitigation recommendations

Exhibit 13 Connie Sidles Expert Birding Inventory near Foster Island

Exhibit 14 Construction Discipline Report Analysis-Jean Amick

Exhibit 15 Muckleshoot Artifact Report-Judy Thorton

Exhibit 16 Cumulative Effects Discipline Report -comments by McAleer

Exhibit 17 Bascule Bridge Opening Data from 2008

APPENDIX J Cooper on 520 capacity

Technical notes on 520 4-lane

Capacity Constraints on the Existing SR-520 Bridge

A Technical Memorandum

March 2010

Maurice B. Cooper, P.E.

There are many non-structural capacity-limiting constraints on freeway traffic throughput; these include (i) visibility limits due to precipitation, darkness and driving into direct sunlight (a particular problem on SR-

C-031-062

There are many non-structural capacity-limiting constraints on freeway traffic throughput; these include (i) visibility limits due to precipitation, darkness and driving into direct sunlight (a particular problem on SR-520 because of its east-west alignment, which means that, at rush hour, half the traffic is usually driving directly into the sun), (ii) traffic mix, particularly the auto to truck ratio, and (iii) culturally conditioned driver behavior - for example, drivers in the U.S. are more inclined than those in Europe to be doing other things whilst driving.

There are also certain structural factors which limit traffic capacity, such as the physical condition of the pavement surface.

This memorandum is, however, limited to specific and unique features of the existing SR-520 bridge which cause it to operate at below its possible maximum. These are basically of three types:

C-031-063

1) On and off-ramp design:

Both east and west end approaches to the bridge are severe bottlenecks.

On the east side of the lake, the problems start at the Bellevue Way on-ramp, where drivers have particular trouble with the weave across the HOV lanes to access the mainline, at a location where the roadway is curving and traffic slowing erratically because of the backup from the next on-ramp.

The next on-ramp is the access westbound from Medina at 84th Avenue Northeast. This on-ramp design is the worst in the 3-mile SR-520 bridge segment. In addition to the cross-HOV weave, there is an immediate and severe width constraint because of a solid bridge abutment, coupled with the visibility limitation imposed by the bridge abutment itself. The on-ramp leads to a freeway segment which, at this point, suffers from both unusually severe changes in vertical and horizontal alignment.

APPENDIX J Cooper on 520 capacity

C-031-064

On the west end of the bridge the first problem is caused by the proximity of the merge between SOV and HOV traffic from Montlake Boulevard to the merge between this traffic and the freeway mainline.

The second problem is caused by the abruptness of the end of the on-ramp coming from Lake Washington Boulevard, where the at-grade, on-land portion of the roadway transitions instantaneously to the low-level, structural concrete viaduct portion of the bridge.

Off-ramp design for the SR-520 bridge was handled considerably better than on-ramp design. Neither off-ramps on the eastside, namely at 84th Avenue Northeast nor at Bellevue Way Northeast have significant impact on traffic flow. On the Westside, there is driver confusion because of the proximity of the Lake Washington Boulevard and the Montlake Boulevard exits, but a greater limitation is the frequent backup of traffic down from Montlake Boulevard caused by the equally frequent bascule bridge openings on Montlake Boulevard itself.

C-031-065

2) Lane and Shoulder Width:

Lane width is frequently cited as a traffic-capacity limitation in the literature. On the SR-520 bridge, lane width is adequate throughout. Shoulder width is, however, totally inadequate. This causes driver distraction because of fear of either touching the outside curb with a tire - curbs are not generally included in freeway design because of this issue, and certainly not adjacent to traffic lanes as they are on SR-520 - or, in the worst case, scraping the side of the car on the inside concrete Jersey barrier.

C-031-066

3) Horizontal and Vertical Curvature

For the majority of the length of the SR-520 bridge, the roadway is totally straight. However the bridge curves both horizontally and vertically on the approach and departure to/from the western high-rise structure over the ship channel off the east shore of Madison Park. These curves are significantly sharper than modern freeway design standards. The fact that the curves are effectively superimposed yields a distinct roadway capacity limitation.

Typical freeway design does not have any of the above limitations.

Freeway capacity is rated by traffic flow in terms of the number of vehicles per lane per hour. Under normal driving conditions, and without any of the above three constraints, capacities can be expected to be in the range of 2,100 to 2,200 vehicles per lane per hour. The three

C-031-066

conditions cited above are each approximately responsible for a reduction in capacity of 200 vehicles per lane per hour, with the bridge as constructed currently and normally operating at about 1,500 to 1,600 vehicles per lane per hour. Hence if any or all of the design constraints are removed the lane capacity may reasonably be expected to rise accordingly.

C-031-067

Bridge Re-Design Recommendations and Associated Traffic Capacity Gains:

The cost of re-building the bridge to remove the traffic-limiting constraints could be seen to be a constraint in itself. Hence the question becomes, in an engineering sense, what modifications are appropriate and sensible.

The horizontal and vertical curvature constaints are absolutely inherent in the bridge design and would require a major cost commitment to remove and hence, from an efficiency perspective, should probably be left alone.

The bridge approaches and on and off-ramp configurations are relatively simple to modify and should therefore be modified, in order to capture the available additional 200 vehicles per lane per hour capacity.

The shoulder width issue is more complex because of the design of the existing bridge pontoons. However a pragmatic re-design is possible, by removing the existing pedestrian walkway and lowering that section to roadway grade, and by removing the outermost roadway walls and attaching a new structural barrier to the outside walls of the pontoon box structure itself. This proposed modification would not yield the full gain in capacity which could be realized through full-width shoulders, but is likely to yield half of that capacity increase, i.e. approximately 100 vehicles per lane per hour.

In conclusion, it is readily possible, at modest expense, to increase the capacity of the existing SR 520 bridge by about 300 vehicles per lane per hour, or by some 20 per cent.

For comparison purposes, a totally new, 4-lane bridge, in a straight alignment, with full shoulders, and re-designed on and off-ramps, can be expected to have an increased capacity of 40 percent.

Exhibit 2 GPS 100 foot northern location of Floating Bridge Segment 1

C-031-068

From: moz cooper <mozcooper@hotmail.com>
To: billandlin@aol.com; fran@roanokecap.com
Cc: ted@thomaslaneassoc.com; pmiller@arboretumfoundation.org; nbrainard@qwest.net; seattlebelchers@comcast.net; jon@dubman.com; gbstone@comcast.net; jeanseattle@earthlink.net; rosencrantz6@hotmail.com
Subject: RE: GPS segment A
Date: Mon, Jun 2, 2008 12:49 pm

Fran., et al.,

To reinforce Colleen's point, the main issue is unquestionably noise. Whatever happens, or doesn't happen with the bridge, the installation of quiet pavement is paramount. The immediate issue in our neighborhood is, if early tolling is to be implemented, and soon, then what are we getting for it? Evidently quiet pavement would be the request - maybe demand. Or maybe WSDOT will go blindly ahead thinking everyone is just happy as clams to be taxed for no tangible benefit - the uproar may surprise them.

As to our new bridge issues, the key one is height. If the 4 to 5 feet above the water is committed by WSDOT, then we will have less concern about the 100 versus 200 feet movement north of the alignment. The key word here is "if". I'm sure Colleen; Gary and Jean - our happy boaters on Saturday - would agree with this, and share Madison Park's height-of-the-bridge concern.

See y'all Thursday.

Maurice.

To: fran@roanokecap.com
Subject: GPS segment A
Date: Mon, 2 Jun 2008 12:59:15 -0400
From: billandlin@aol.com
CC: ted@ThomasLaneassoc.com; mozcooper@hotmail.com; pmiller@arboretumfoundation.org; nbrainard@qwest.net; seattlebelchers@comcast.net; jon@dubman.com; gbstone@comcast.net; jeanseattle@earthlink.net; rosencrantz6@hotmail.com

Hi Fran and all,
Of course we are absolutely a coalition-no overstepping boundaries intended here, but there is some time saving delegation/specialization of some tasks when it does not change the overall design,schedule or budget which affect the whole group.
On May 20th, David Dye asked specifically of our 2 neighborhoods directly affected by this part of the bridge, to give him a "yes or no" if 100 feet" would be acceptable" so that WSDOT could nail down the footprint under their very tight time constraints for creating the final documents. We promised him a definitive answer by May 31st so the starting point A segment could be integrated in the Parkway Plan drawings for the next meeting.

It appeared that only Madison Park and Laurelhurst was affected/interested to go out for the "look" when Gary volunteered to direct the mission. As it turned out, we waited until Maurice to be on board after his return from his trip and it was very helpful to experience the location from the bridge and the land.

After our tour, we reinforced that all strongly agree that quiet pavement is still the most germaine part of our Plan K (or any A Plan) for that matter, and hope that we can gather a symposium of experts to make this work on 520-in some permanent way and form.

Cheers!

Colleen

C-031-068

-----Original Message-----
From: Fran Conley <fran@roanokecap.com>
To: billandlin@aol.com
Cc: ted@ThomasLaneassoc.com; mozcooper@hotmail.com; pmiller@arboretumfoundation.org; nbrainard@qwest.net; seattlebelchers@comcast.net; jon@dubman.com; gbstone@comcast.net; jeanseattle@earthlink.net; Robert Rosencrantz <rosencrantz6@hotmail.com>
Sent: Sun, 1 Jun 2008 10:18 pm
Subject: Re: New item and possible agenda items for 6/17

I think we need to ask other members of the coalition whether it's ok with them if the center of the bridge is no greater than 100 feet north of the current location. Reactions, people?,,... understanding that those most affected... Laurelhurst, Madison Park, and the boating community... have agreed below.

Our next meeting is this Thursday, June 5, 2 PM at Solid Ground.

I'd like to ask everyone again to be sure to check in with each other, not just with WSDOT, at our upcoming meeting. We are a coalition; we derive our power from the fact that we hang together and support each other.

Fran

billandlin@aol.com wrote:

> Hi Fran and all,
> We can add one more item that was **decided** on Saturday morning to our list:
> "The center line of the new bridge structure will be no greater than 100 feet north of the current location."
>
> Gary Stone gratiously took Maurice, Jean Amick and myself out to locate the GPS points provided by WSDOT.
> It was extremely helpful and the difference in 200 vs 100 feet was enormous.
> We all agreed that it should not be moved any farther north than 100 feet.
>
> On another note, I will be on a conference call to suggest items for the 6/17 official mediation.
> Some points will be obvious:
> -a review of the Parkway Plan K with various options
> -a review of Plan A with various options
> -is anyone serious about L?
>
> Other topics:
> -Report from the international tunnel experts-recommendations and findings-what is our best option?
> -Preliminary review/update from an indepedent transit consultant on mobility/ system functioning for designs
> -Traffic modeling scenarios for all options
> -New budget data
> -Requests for immediate mitigation for Westsiders from early tolling-quiet pavement?
> -Preliminary report on Tribal issues
> -Data from fish and environmental issues
>
> That should cover 6 hours!
> Let me know your feedback by Monday at noon.
> Thanks,
> Colleen

Exhibit 3 LCC noise documents

C-031-068

To: Seattle City Council
Communities' request to retain noise protection ordinance laws

Residences in the nearby proximity of construction projects request that existing noise restrictions be of the highest priority in protecting the quality of life in Seattle's dense residential neighborhoods. The current laws are reasonable and we urge the Seattle City Council to retain the regulations as they are written.

The affected neighborhoods adjacent to the 5 -6 year construction of 520 replacement bridge include Madison Park, The Arboretum, Laurelhurst, Montlake, the University of Washington, North Capital Hill, Eastlake and Roanoke Park to the west, and Hunt's Point, Medina and Clyde Hill to the east.
These citizens' residences are the backbone of cities and towns' established communities. The Viaduct replacement will be on the borders of downtown, Belltown and lower Queen Anne as well.

Seattle Children' Hospital will generate 20 years of noisy construction. A home should be a haven away from the daily assault of the stress of congestion and noise experienced from the work day, rather than itself being a source of such.
The density of our urban growth has made the City rich in diversity, but the laws must not be rescinded that protect their environment.

Children should be able to play in their yards and neighborhood parks as well as seniors at home sitting out on their patios without 24 hour noise assaults.
Kayakers in Union and Portage Bays, bicyclists, pedestrians and birders should be able to enjoy a peaceful setting, connecting them more closely to nature. Some time must be allocated for residents to enjoy a respite from the daily stress and noise to re-charge their senses.
With our recent budget cuts and escalating unemployment to families, we must protect the precious environment of the home, parks and public facilities.

Construction noise from repetitious pile driving and pounding carries loudly across Lake Washington and Puget Sound. Jarring sounds from machinery of the structure create a constant irritation to residents.
Trucks loading, unloading and traveling through residential streets are also a source of noise.
These sources of constant pounding noises carry repetitive sounds even through the double pane windows of nearby residences.
Concrete road surfaces amplify these road noises as well.
Seattleites keep their windows open in an effort to save their carbon footprint and will not be able to be at home with comfortable temperatures if their windows must be closed tightly to prevent intrusive construction noise.

C-031-068

December 4, 2009
To: The Legislative Work group
From: Coalition for the Sustainable SR520
Montlake, Madison Park, Laurelhurst, Roanoke Park,North Capital Hill and the Boating Community with respect to guidelines from the Arboretum
Re: Communities' request for noise abatement for SR 520

I. Introduction

Citizens of Washington State whose residences are in the nearby proximity of SR 520 requested in the State Mediation process of 2007-08 that noise reduction be of the highest priority in the design of the new bridge structure and its ramps. Noise reduction continues to be the most important concern. It is not addressed in the current SDEIS SR520 Bridge Design and we request that it be included as part of its integral design.

The communities directly affected by the noise impacts include Madison Park, The Arboretum, Laurelhurst, Montlake, the University of Washington Hospital and Campus, North Capital Hill, the University District, Eastlake and Roanoke Park to the west, and Hunt's Point, Medina and Clyde Hill to the east.
These citizens' residences are the backbone of the cities' established communities.
Bt definition, residences should be a haven from the daily assault of stress from congestion and noise experienced from the workday, rather than be the source of such bombardment.

For recreational users such as the kayakers in Union and Portage Bays, bicyclists, pedestrians and birders in the Arboretum should be able to enjoy a peaceful environment, connecting them more closely to nature without being blasted by SR520 bridge noises. Fish and wildlife are also negatively impacted by greater decibels generated by the expansion of this structure, and our goal is to promote better (not worse) habitats.

The high pitch noises from traffic on today's 520 bridge carry loudly across Lake Washington. Jarring sounds from vehicles (especially trucks shifting gears) as they change speeds on the high rises of the structure create a constant irritation to residents, particularly at night and on cloudy days. Windows must be closed tightly to block sound rather than left open for fresh and cooler air on hot summer days and nights.
Expansion joints are also a source of constant pounding noises that carry repetitive sounds even through the double pane windows of nearby residences.
Concrete road surfaces that wear poorly amplify these road noises, not mitigate them.

II. Why is the noise generated from SR520 such an important issue?

Chronic sound pollution can trigger the body's stress response, and it also can cause excessive stress hormones to be produced.
There are numerous studies conducted by Professor Gary Evans of Cornell University and currently with the Obama Administration, which found that loud environmental noise interferes with children's ability to learn.

C-031-068

In addition, researchers in Austria and Germany also concluded that children in noisier neighborhoods experienced measurable higher systolic blood pressure, greater heart rates and higher overnight cortisol levels which indicate elevated levels of physiological stress. As a result, constant noise pollution can be linked to the later development of high blood pressure, heart disease and stroke and the lowering of the body's natural immune system. These studies added to Dr. Evans findings that children and adults (in later studies) exposed to chronic noise can have serious health, learning impairment effects.
The playfield in Montlake sits adjacent to SR 520, the Madison Park public beach and the Laurelhurst beach are within earshot of the bridge, as well as families' back yards.

III. What can be done to mitigate noise from such a structure? Can design features reduce noise?
During the State Mediation process, WSDOT hosted 3 1/2 days of meetings with global experts on sound mitigation. They suggested numerous proven techniques for noise:
A. Sound walls for noise reduction were suggested including various materials such as clear, textured and using various heights.
Nearby communities however, have asked that these not be used on the westside of SR520 for the following reasons:
-the sound wall will create more of a fishbowl affect which will likely magnify the noise.
-noise walls create a tunnel effect for the users of SR 520 as they drive over Lake Washington especially for bicyclists, rather than a more aesthetic experience.
-noise walls will further obstruct views from adjacent residences who are already heavily impacted with doubling the size, and it also appears, doubling the height of the bridge.
- noise walls add significantly more weight to the SR520 structure which will add more costs to the overall project, requiring bigger pontoons to support them.

B. Westside communities are formally requesting that the Legislative Workgroup require that WSDOT use alternate techniques in the construction of SR520 to reduce noise:

1. We request the use of quiet pavement (open grade friction course asphalt rubber) be applied throughout the bridge and its ramps to create a quieter passage of vehicles. We have the understanding that it will have a shorter lifespan of 5-8 years before replacement is needed. Funds from tolling will have to set earmarked for this resurfacing.

2. We request that the jersey barriers be made of sound absorption materials along the guard rails and in the center median strip. They can be considered low "sound walls".
3. We request the use of under the bridge quieting techniques such as ceiling tiles and appropriate under coatings that absorb sound.

4. Sound absorption materials should be used at expansion joints to reduce noise in the gaps and regular maintenance be given to these joints.
5. All utility and maintenance facilities associated with the bridge should use sound absorption materials and maximum insulation

6. Vegetation barriers and dense plantings can be effective in noise reduction and should be implemented especially in the Arboretum and they can also reduce visual blight.

Exhibit 4 List of affected Laurelhurst citizens -noise and visual impacts

69 Names

April 14, 2010

Louise	David	**Luthy**	4505 N E 33rd St.	**527-0214**
Laura	Jim	**Donald**	4315 N E 33rd St.	**985-9962**
Mary	Bill	**Watts**	4219 N E 33rd St.	**524-5567**
Jennifer	Dean	**Maher**	3049 E Laurelhurst Dr N E	**729-7797**
Diane	Steve	**Adam**	3131 E Laurelhurst Dr N E	**522-0925**
Charles	Charles	**Evans**	3012 E Laurelhurst Dr N E	**525-1651**
Eva	Lee	**Rogge**	3042 E Laurelhurst Dr N E	**524-2975**
Jana	Dan	**Flinn**	3112 E Laurelhurst Dr N E	**523-2614**
Delney	Gil	**Hilen**	3011 E Laurelhurst Dr N E	**525-7748**
Betty	Reimert	**Ravenholt**	3156 E Laurelhurst Dr N E	**525-0503**
Diane	Pat	**Colee**	3120 E Laurelhurst Dr N E	**528-9973**
Linda	Kevin	**Wold**	3054 E Laurelhurst Dr N E	**522-0522**
Graciela	Rick	**Rutkowski**	3125 E Laurelhurst Dr N E	**522-7898**
Colleen	Marty	**Taucher**	3124 E Laurelhurst Dr N E	**528-1964**
Tracy	Terry	**Quigley**	3033 E Laurelhurst Dr N E	**524-6088**
Susan	Kevin	**Barrett**	3135 E Laurelhurst Dr N E	**524-2033**
Alta	Stan	**Barer**	3048 E Laurelhurst Dr N E	**527-6122**
Jean ***	Russ	**Amick**	3008 E Laurelhurst Dr N E	**525-7065**
Anne Northrup	Ralph	**Hawkins**	3141 E Laurelhurst Dr N E	**525-7369**
Roella	Mickey	**Mc Coy**	3023 E Laurelhurst Dr N E	**524-3821**
Sherry	Charlie	**Atterbury**	3045 E Laurelhurst Dr N E	**528-1230**
	Dave	**Walter**	3140 E Laurelhurst Dr N E	**523-7215**
Catherine	Jim	**Allchin**	3038 E Laurelhurst Dr N E	**522-8083**
Joan	Jim	**Bassingthwaite**	3150 E Laurelhurst Dr N E	**523-5056**
Anne Moudon	Jim	**Seferis**	3310 E Laurelhurst Dr N E	**524-5011**
Britta	Kevin	**Steele**	3128 E Laurelhurst Dr N E	**525-2455**
Margaret Rosenfield	Dan	**Weld**	3100 E Laurelhurst Dr N E	**523-9058**
Meg Agnew	Steve	**Rupp**	3145 E Laurelhurst Dr N E	**525-9349**
Lisa Frenkel	Jim	**Mullins**	3134 E Laurelhurst Dr N E	**528-1366**
Christina		**Koons**	3302 E Laurelhurst Dr N E	**524-8946**
Anne	Jason	**Totah**	3151 E Laurelhurst Dr N E	**528-1559**
Patti Joyce	Angelo	**Calfo**	3303 E Laurelhurst Dr NE.	**325-5095**
Heather	Steve	**Murch**	3018 E Laurelhurst Dr N E	**525-5020**
Liz	Mark	**Hoffman**	3040 W Laurelhurst Dr N E	**522-3266**
Phyllis	Pete	**Dukes**	3156 W Laurelhurst Dr N E	**523-0022**
Leatrice		**Gutmann**	3110 W Laurelhurst Dr N E	**525-5092**
Ingrid	Stan	**Savage**	3027 W Laurelhurst Dr N E	**522-1695**

C-031-068

East & West L'hurst Drive NE, Webster Pt Rd NE, & NE 33rd!
April 14, 2010

69 Names

Robin	Jim	**Walker**	3022 W Laurelhurst Dr N E	**524-6879**
Suzy	Rick	**Titcomb**	3115 W Laurelhurst Dr N E	**523-9877**
Joyce		**Talbot**	3119 W Laurelhurst Dr N E	**522-2203**
Betsy	Dick	**Kirby**	3155 W Laurelhurst Dr N E	**523-0384**
Sally	Jeff	**Fiorini**	3132 W Laurelhurst Dr N E	**522-5802**
Annick	John	**Impert**	3163 W Laurelhurst Dr N E	**524-5987**
Debbie	Arley	**Harrell**	3109 W Laurelhurst Dr N E	**523-1107**
Chris	Fran	**Le Sourd**	3143 W Laurelhurst Dr N E	**524-3763**
Janine	Dick	**Lowden**	3144 W Laurelhurst Dr N E	**527-9333**
Sylvia	Jim	**Tupper**	3126 W Laurelhurst Dr N E	**523-7280**
Gay	Scott	**Easter**	3007 W Laurelhurst Dr N E	**527-8979**
Riva	Sheldon	**Biback**	3201 W Laurelhurst Dr N E	**523-5954**
Joanne	Jim	**Plourde**	3164 W Laurelhurst Dr N E	**523-3541**
Kathy	Chris	**Nielsen**	3150 W Laurelhurst Dr N E	**729-6327**
Linda	Rand	**Ebberson**	3030 W Laurelhurst Dr N E	**523-9825**
Jean		**Griffin**	3151 W Laurelhurst Dr N E	**524-1719**
Barbara Ferrante	Henry	**Popkin**	3102 W Laurelhurst Dr N E	**527-3366**
Heidi	Rick	**Rasmussen**	3211 W Laurelhurst Dr N E	**527-4988**
Patricia	Greg	**St James**	3004 W Laurelhurst Dr N E	**770-5735**
Colleen	Bill	**Mc Aleer**	3137 W Laurelhurst Dr N E	**525-0219**
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Tina	John	**Jacobs**	3033 W Laurelhurst Dr N E	**329-2284**
Mathew	Donna	**Bellew**	3129 W Laurelhurst Dr N E	**985-4014**
	Michael	**Corliss**	3101 W Laurelhurst Dr N E	
Helen		**Gurvich**	3006 Webster Pt Rd N E	**524-6224**
Shirley	Gary	**Cummings**	3005 Webster Pt Rd N E	**522-5551**
Betty		**Bottler**	3008 Webster Pt Rd N E	**720-2142**
Marlene		**Ivy**	3007 Webster Pt Rd N E	**525-2984**
Betty	Don	**Kennedy**	3002 Webster Pt Rd N E	**525-5344**
Dave	Dave	**Mc Callum**	3001 Webster Pt Rd N E	**525-1133**
Ginny		**Alvord**	3004 Webster Pt Rd N E	**708-0333**
Barbara		**Ferguson**	3011 Webster Pt Rd N E	**708-1113**

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April 1, 2010

Jenifer Young
SR520, I-5 to Medina: Bridge Replacement and HOV Project
Environmental Manager
SR520 Project Office
600 Stewart Street, Suite 520
Seattle, WA., 98101

Dear Ms. Young:

C-031-069

The following are comments from the Canterbury Shores Condominium regarding the SR520 Supplemental Draft Environmental Impact Statement (SDEIS), January 2010. Canterbury Shores is a 92 unit condominium located on the Northern Shore of North Madison Park. The comments that follow have been reviewed and approved by the Canterbury Shores Board of Directors.

Attachment 7, Discipline Reports

Air Quality

Dust. Particulate Matter (PM). There is NO analysis of PM during construction and operation on a seasonal basis. During summer months wind from the north significantly increases PM along North Madison Park (NMP) and at Canterbury Shores (CS). Your averages MISSTATE the seasonal effects.

Wetland

The amount of wetland that will be affected by construction is significantly underestimated. Material in the DSEIS excludes the impacts of the temporary bridge which will be built to the south of the existing bridge and the boat and barge traffic in this very shallow wetland area. There is NO indication of the type and extent of mitigation.

Wildlife

Great Blue Heron.

The Great Blue Heron (Heron) is a state listed priority species. The DSEIS states there are no species of special interest. The Blue Heron is NOT mentioned. Page 4-43 states "No large trees would be removed therefore potential rockery habitat for the Great Blue

C-031-069

Heron would not be affected." Large trees are NOT a determinant. Heron roost in mid-sized to small trees, especially in Arboretum Area 712 where their habitat will be destroyed by construction activity. This is an OMISSION.

Beaver.

Page 4-44 mentions and includes a photograph of one beaver lodge. Due to the nature of the graphics it is NOT possible to determine the location of the cited beaver lodge. However, in this vicinity there are three NOT one beaver lodge. The DSEIS text states the beaver lodge would be destroyed and they would have to construct a new one. It is highly likely that all three lodges would be destroyed as all three are in close proximity to the existing SR520 right of way. Beavers are very protective of their environment. The text states only their reproductive process would be affected.

- How will their reproductive process be affected?
- Where could they build a new beaver lodge?
- How long will it take to construct replacement beaver lodges?
- Where and how will beaver exist as they are replacing the lodges?
- How will the destruction of the lodges affect the beaver population?

There is NO discussion of these issues. There is NO discussion of mitigation.

Hazardous Material

Miller Street Landfill

The only site studied is the Arboretum Playfield. There is NO precise delineation of the Miller Street Landfill. Historical and anecdotal reports indicate a large area between the Arboretum and NMP was used as a landfill. The DSEIS cites a study (Ouet and Kiers, 2007) indicating methane gas was found. The precise location of their study is NOT cited or shown. When canoeing and kayaking through this area (south of the bridge) "air" bubbles rise to the surface therefore there is evidence of methane gas below the surface.

Sediments (page 36). Cited are two studies, 1992 and 2004, in Lake Washington and Portage Bay. The text states these studies indicate there are relatively low concentrations of PCB's, PAH's, and phthalates. There is NO indication of where these sites are. These two studies are NOT consistent with a study carried out by Canterbury Shores. The following indicates the CS study results:

The water sample was collected in a container provided by AMTEST Laboratories following their directions. It was delivered to AMTEST on October 4, 2002. The sample was analyzed by AMTEST and the results reported to us on October 24, 2002.

Diesel and Heavy Oil were found in significant quantities, as follows:

Diesel	*1,500 parts per billion (ppb)*
Heavy Oil	*5,700 ppb*

C-031-069

In both cases the EPA minimums, or clean up standards, according to AMTEST, are 1,000 ppb. Therefore, both diesel and heavy oil exceed the EPA minimums, the latter by a considerable amount.

The SDEIS does NOT state how the extent and type of hazardous material will be dealt with in the area extending between the western edge of the Arboretum to the eastern edge of NMP.

Land Use, Economics and Relocation

Estimated Construction Time. The DSEIS states construction time in the NMP vicinity will be 54 months (4.5 years). In numerous meetings with WSDOT personnel they have stated construction time will be between five to seven years. Therefore the SDEIS appears to be in ERROR.

Value Impacts. There is NO discussion in the SDEIS about the affect construction or the permanent operation will have on the value of property in the SR520 corridor.

Noise

With tolling the amount of traffic on 520 will be less than without tolling in any of the four cases (No Build, etc). Consequently vehicle speeds will be greater. Therefore the noise level will be greater. This relationship is NOT stated in the SDEIS.

Mitigation is required for residential areas if exterior noise levels are greater than 67dBA based on federal Noise Abatement Criteria (NAC). The following are the forecast noise levels (page 32):

Canterbury Shores, Monitoring Location 35, 65 dBA
Edgewater, Monitoring Location 36, 66 dBA.

Statistically there is no significant difference between 65, 66 & 67 dBA. This is especially true given the variability in measurements [time of day, weather, height of receiving location such as building story (Canterbury Shores is a four story building), person doing the measuring, the objectivity with which the measurements were taken (for example, the noise experts were not retained by an impartial entity but rather by WSDOT), etc.].

Throughout the DSEIS when dealing with noise mitigation and in particular noise walls, which are the only feasible type of noise mitigation strategy for NMP, it does NOT state noise walls will be constructed, rather it states they are "recommended." History shows that at the end of a construction project when funds are minimal or lacking the "recommended" items are frequently NOT provided.

There is a significant INCONSISTANCY between WSDOT maximum noise levels and those of the City of Seattle and Washington State Labor and Industries.

- For Seattle:
  - Maximum sound level between 7:00am and 10:00pm is 55 dBA. This would be for the permanent operation;

C-031-069

- The maximum exceedence during construction for heavy equipment is 25 dBA;
- Therefore, the total maximum noise level for the 54 month construction period during any day would be 80 dBA (80 dBA is "moderately loud" and equivalent to standing within two feet of an operating garbage truck).

- For WA. Labor and Industries:
  - Noise cannot exceed 85 dBA over an 8 hour period. (WAC 296-817-300).

There is NO mention of pile driving noise in Exhibit 23, page 64. This is a serious OMISSION because in Exhibit 22 it shows that pile driving results in the most serious noise levels of all equipment and ranges between 99 to 105 dBA.

Exhibit 26, page 67 and 68, shows pile driving noise level profiles. This exhibit is INCORRECT. The exhibit DOES NOT include the area where the temporary bridge is to be built. Even with this ERROR WSDOT's noise profile exceeds City of Seattle and WA L&I maximum noise limits. This is a serious OMISSION. Your documents show that 2042 piles will be driven (Table 6.7.1) over the 54 month period. Exhibit 8, page 26 is a table showing relative loudness. The reference point is 80 dBA, the noise a garbage truck makes when one is standing within two feet of it and this is not with an idling engine. 100 dBA is 4 times louder, the equivalent to a jet taking off. 100 dBA is classified as "very loud." Interestingly, the noise effects on fish and mammals are discussed, they are NOT discussed regarding humans.

Exhibit 31 (approximately page 85). Noise Levels. The following are the noise levels listed for NMP without sound walls: MP1-66, MP2-67, MP3-67, MP4-67. All of these are right at NAC maximums and exceed City of Seattle maximums of 55 dBA. Given that, Exhibit 33 is MISLEADING for it is based on the assumption of sound walls. This is a "best case" scenario and extremely unlikely as sound walls are optional, not required. Due to a lack of funds and WSDOT prior statements, it is more likely than not that sound walls will NOT be constructed in the NMP segment. The SDEIS states regarding mitigation:

- "measures must be considered;"
- "mitigation measures … must be recommended (page 107).

This is NOT the same as requiring mitigation measures to reduce noise levels to an acceptable level.

OMMITTED from the noise section is how the "beep beep beep" of construction vehicles and equipment, when they back up, is quantified. According to a person I interviewed who lived on Mercer Island, in close proximity to the I-90 project, the "beep beep beep" was so annoying that they had to move. And, it was something that went on for 24 hours per day, often 7 days per week. If one has to listen to this for 54 months from 7:00am to 10:00pm it would, indeed, be annoying. It would be more than annoying for 24 hours per day, seven days per week. Based on my review of the DSEIS this noise is not dealt with, it is therefore an OMISSION. If it is dealt with please provide the reference or documentation.

Vibration

C-031-069

Reference page 69, Vibration Effects. The DSEIS states it is: "Unlikely that vibration levels would exceed 0.5 inches per second at a distance greater than 100 feet from the construction site." This is INCORRECT.

- First, there is NO quantitative data provided showing vibration levels were based on the tests WSDOT did;
- We know WSDOT did tests for two reasons:
  1. We gave WSDOT permission to place a "vibration meter" on our property and we accompanied the person who placed it there;
  2. We witnessed and experienced the tests, both putting in the piles and taking them out (both which will occur as a part of the WSDOT construction activity).

Page 61 contains a table that shows the effects of various vibration levels and it states: the "threshold at which there is risk of architectural damage to normal dwellings – houses with plaster ceiling and walls." This is at a vibration level of 1.27 or greater. Management and residents at Canterbury Shores experienced the pile driving noise and vibration level tests.

- Regarding pile driving: it is highly likely that the levels for pile driving exceeded 1.27. During the tests there were many complaints about the noise levels to CS management.
- For pile removal there is no doubt they exceeded 1.27. Homeowners stated that objects on counters and shelves "jumped around." In fact, vibration was so bad numerous governmental agencies were contacted, including WSDOT. Exhibit 1 shows the e-mails that resulted.

Vibration Mitigation (page 172).

This discussed how noise might be mitigated. There is NOTHING on vibration mitigation. This is an OMISSION.
The SDEIS states there is "no effective method to reduce vibration." (page 174). If it can't be reduced how can "it be kept to a minimum."?

If noise and vibration levels are above legal limits what can be done? "Vibration monitoring" (page 61) will NOT cure the problem.

Noise and Vibration, Pile Removal.

The noise and vibration material deals with the 2042 piles that will be driven over the 54 month construction period. It does NOT deal with the process of removing the piles and the noise and vibration that will result from the removal process. This is a serious OMISSION for the experience at CS indicates that the noise and vibration resulting from the removal of the piles is much greater than driving them. We have also discovered that if piles cannot be removed through extraction (pulling them) they are cut off at the lake bottom. The DSEIS does not deal with the debris that remains, for example the creosote laden piles. This is a serious OMISSION, especially due to the remaining hazardous material.

C-031-069

Recreation

OMITTED from the SDEIS is an analysis and discussion of the effect of the temporary construction bridge to the south of the existing alignment and bridge on boat access to NMP water frontage property. The temporary bridge, barges and working boats will severely and/or completely make ingress and egress impossible.

Transportation

OMITTED. An analysis of the effect on traffic at the Lake Washington Blvd and Madison Street intersection.

View

Volume I.

Regarding the West Approach Landscape Unit. This OMITS the view affect on NMP homes (page 57). It MISSTATES how NMP views would be permanently affected: "possibly blocking views of Laurelhurst Hills but revealing more open water in Union Bay." (page 70). See the following comments under Volume II.

Volume II.

Exhibit 2-17 and 2-18 show existing and Option A (and the 2 other options also) views. Both exhibits are MISLEADING due to the INCORRECT way the photographs were taken (using an incorrect camera lens that does NOT show what the eye actually sees). Exhibit 2 shows what the view will actually be like from the north shore of NMP on a before and after basis. Exhibit 3 shows what the views will look like from the Madison Street pier, at the east end of Madison Street. These two exhibits were prepared by a professional photographer, Mr. Aaron Weholt, Legal Media, Seattle, WA.

Water Resources

Referencing Page 69. OMISSION. There is no discussion of how the south one-half of the bridge, the east-bound lanes, would be constructed. Also OMITTED is a discussion of the temporary construction bridge that will be located south of the east-bound lanes.

Construction Activities, Chapter 3, 1/5/2010.

The are NO graphics shown and there are NO specifics on the construction bridge to be located south of the current and new east-bound lanes. The purpose of this "construction bridge" is to demolish the existing bridge and build the new east-bound lanes. The construction time period, according to the SDEIS, is 4.75 years. This time period may be IN ERROR as WSDOT staff have indicated it will be between five to seven years. This

C-031-069

is a very significant OMISSION for the construction affects from noise, vibration, view blockage and water access will be huge.

Project Operation and Permanent Affects (Chapter 5).

Noise.

The SDEIS states "WSDOT's practice is to work with the owners of these properties (those where "noise abatement measures must be considered") during detailed project design to determine the mitigation measures that will be used." (page 5-104). No one from WSDOT, or any other public agency, has discussed this matter with CS management or owners. This is an OMISSION.
As was stated earlier, there is NO assurance of mitigation. Noise walls are the only mitigation proposed for NMP. All options state: "If noise walls are included …" (page 5-107). This is NOT as assurance that noise will be mitigated.
North Madison Park is NOT mentioned for noise mitigation. (page 5-109 and 5-110).

Wildlife and Habitat.

Referencing the sentence "Remove a large beaver lodge …" (page 5-140). There are at least three (3) beaver lodges in or in very close proximity to the 520 right-of-way in the arboretum. The SDEIS graphics DO NOT identify where any are located. There is NO scientific analysis or discussion of the effect construction will have on the beaver population

There are NO mitigation measures for wildlife. (page 5-146).

Navigation.

There is NO discussion on how navigation would be affected north of NMP and south of 520 during construction or permanently. (page 5-151).

Effects During Construction (Chapter 6).

There is either NO or ONLY superficial discussions of construction affects on NMP regarding boat access, noise, vibration and wildlife. (page 6-46 to 6-49). Also, see the above comments relating to the Discipline Reports.

View Impact.

In Chapter 6 it states: "*Under all design options, the greatest temporary change to visual character and quality would result from demolition of the Lake Washington ramps to and from the Arboretum and construction and presence of construction and detour bridges because of their size and complexity. Vegetation would be removed in 30- to 60-foot-wide swaths for the work bridges. Subsequent construction of the permanent new west approach bridges would compound the effects. The combination of the construction*

C-031-069

bridges, detour bridges, finger piers, and the existing and new bridges would result in substantial degradation of visual character and quality of the south part of Union Bay. The structures would block water- and ground-level view for viewers near the structures. The viewers most affected by this change would be commuters crossing the bridges, park users and boaters, and residents in north Madison Park (underline mine). Views from the Broadmoor Golf Course would be screened most of the year by tall trees along the shoreline." (page 6-54 and 6-55). This statement:

- Is inconsistent (an ERROR) with your statement regarding views (Views, Volume I, page 70) where it states: "*possibly blocking views of Laurelhurst Hills but revealing more open water in Union Bay.*"
- Does NOT discuss mitigation, an OMISSION.

Noise. (re: page 6-65+)

The following is relevant information and comments from several tables in this section:
Table 6.7.1: Equipment – Pile Drivers, Noise Level – 99-105 dBA, Number of piles to be driven: 1987 + 55 for Lake Washington Blvd or 2042 piles total.
Table 6.7.2: Maximum City of Seattle sound level, residential – 55 dBA.
Table 6.7.3: Maximum Exceedence:

Minutes/hour	Exceedence
15	+5 dBA
5	+10 dBA
1.5	+15 dBA

For driving in and pulling out the 2042 pilings (that is 4084 operations) the maximum noise criteria for the City, State, and federal government (NAC) will be exceeded. What is the effective mitigation? The answer to this has been OMITTED.
Table 6.7.4.:Noise Levels that "should NEVER be exceeded."

dBA	Time Duration Exceedence Prohibited
90	Continuously*
93	20 minutes
96	15 minutes
99	7.5 minutes

*I believe this is an error, for it means at 90 dBA or greater the noise level cannot be exceeded.
Therefore, if any piles are driven the noise levels will be exceeded. But, this must NEVER happen. What is the answer to this dilemma? It has been OMITTED.
In addition, just so we are on the "same page," don't suggest these noise levels will not reach NMP. First, your noise profiles do not take into account the construction bridge. Second, they do not take into account pile removal. Third, they do not take into account the vibration index.

Vibration (reference page 6-69).

Data and analysis on vibration testing has been OMITTED.

C-031-069

Reference "Construction Vibration Effects" page 6-69. In the middle of the paragraph it states "*It is unlikely that vibration levels would exceed 0.5 inches per second at distances greater than 100 feet from the construction sites.*" In that regard:

- Distances from the construction bridge have been OMITTED;
- Data and analysis has been OMITTED regarding vibration tests and levels;
- Based on the experiences at Canterbury Shores regarding driving and pulling piles the vibration level exceeded 1.27 inches per second. This data and the effects have been OMITTED.
- Due to the poor quality of graphics in Exhibit 6.7-3 (at least on my CD), it is not possible to tell where the noise contours are in relation to the land (i.e. shoreline, land improvements, etc.). This must be an ERROR.

Respectfully submitted,

Bill Mundy.

Attachments: Exhibits 1, 2 & 3.

COMMENTS ON GREENHOUSE GAS EMISSIONS AND AIR QUALITY SECTIONS OF WSDOT DEIS

MARCIA BAKER

C-031-070

1. Assumptions

The DEIS analysis of air pollutants and greenhouse gas emissions from the various alternatives is completely dependent on their projecting that by 2030

- Congestion will decrease relative to present levels over the entire area as a result of HOV lanes and tolls.
- Average vehicular speed on 520 will be over 30 mph

2. Comments on These Assumptions

The projection that increasing the number of lanes open to vehicular traffic will reduce congestion in the long term is not borne out by most data based analyses; on the contrary,

- Recent data based reviews (for example, Litman (2009)) show that in congested areas over 90% of increased lane capacity is filled in 5-10 years, and
- the period after which time savings due to added road capacity equals time lost during road construction is estimated to range from 2.75 years to infinity. (In the latter case the time lost during construction is never recouped.)

3. Greenhouse Gas Emissions

In Chapter 5 the claim is made that by 2030 all the options will decrease greenhouse gas emissions by up to 7% over those if we do not build. This projected reduction is highly unlikely :

- Data based analyses show that adding highway lanes always increase greenhouse gases over the long run, although they may decrease them in the short run. (E. g., Williams-Derry (2007)) Construction and maintenance for 50 years is estimated to produce about 3500 tons of CO_2 per mile, before counting emissions from vehicles.

C-031-070

(3) Chang et al (2009) Occupational and Environmental Medicine vol 66, p 90
(4) Community Inventory (2008) www.seattle.gov/climate/docs/2008-community-inventory-fullreport.pdf
(5) EPA (2006) www.epa.gov/pmdesignations/2006standards/index.htm
(6) Litman (2009) Generated Traffic and Induced Travel: Implications for Transport Planning at http://www.vtpi.org/gentraf.pdf.
(7) Shendell and Boothe (2008) Journal of Environmental Health 70, no 8, p 33
(8) Williams et al (2009) Environmental Health Perspectives 2009 vol 117, no 3, p 373
(9) Williams-Derry (2007) *www.sightline.org/research/energy/res$_p$ubs/analysis − ghg − roads*

Exhibit 7 Traffic Modeling analysis Carl De Marken

From: Carl de Marcken <carl@demarcken.org>
Date: February 11, 2010 12:11:01 AM PST
To: Richard Dunn <richardrdunn@comcast.net>
Cc: Marina Meila <mmp@stat.washington.edu>
Subject: 520 transportation issues

Richard,

C-031-071

Here are two brief essays concerning the methodologies used in the SDEIS to forecast traffic patterns in 2030 so as to evaluate the 6-lane option vs. the 4-lane option. One was written by Marina and one by me, independently, but they both concern the same issues - each makes a few points the other does not, though they overlap in many ways.

The (implicit) point is that the arguments for a wider highway are based on certain predictions, and at least as can be concluded from the EIS document, these predictions are suspect.

We are not signing these as professionals: the EIS as circulated is a summary and hardly the kind of document to draw strong conclusions from. But if the lawyer wants to pursue these issues further, he is welcome to get in touch with us.

Carl

METHODOLOGICAL FLAWS IN TRANSPORTATION ANALYSIS

Summary

The methodology used by the TDR team to evaluate design options may be fundamentally flawed, because it assumes a particular transportation demand model rather than acknowledging the fundamental uncertainties about Seattle demographics and transportation demand in 20 years. In particular, unrealistic assumptions are made that portray 6-lane alternatives in a favorable light. A sound methodology would acknowledge uncertainties and perform robust sensitivity analysis.

Contents

C-031-072

The SDEIS Transportation Discipline Report (TDR, hereafter) portrays 6-lane design alternatives in a favorable light [TDR 2-3]

1. Comparing the No Build Alternative with the 6-Lane Alternative, year 2030 congestion and HOV travel times between I-5 and SR 202 would be reduced between an average of 2 to 8 minutes during the morning peak period and 5 minutes during the evening peak period. However, during the peak of the evening commute period, the completion of the eastbound HOV lane could save both general-

C-031-072

adjusting parameters of a model to match a set of observations. However, just as an infinity of curves can match a small number of data points, an infinity of transportation models can fit a small set of observations from October of 2008, and there is no guarantee that whatever parameters selected by the calibration process will 2030 Seattle transportation well.

C-031-073

The possibility of a calibration stage fitting a set of observations used for calibration but failing to predict the future well is so likely that sound simulation modeling includes a post-calibration step known as "validation", in which the simulation is used to predict observed transportation data that was NOT used in the calibration stage. [See for example "Discrete-Event System Simulation" (Banks et alia), chapter 10, or most textbooks on fitting of statistical models.] If the predictions do not match these "held-out" observations, the results of other predictions can not be trusted.

But the TDR methodology diagram 4-4 does not show a validation step. This completely undermines the credibility of all simulation results.

C-031-074

Further, step 3 of the TDR methodology, "Code future conditions into CORSIM model", requires some particular future conditions to be chosen. The TDR states:

> The SDEIS 2030 No-Build & Cumulative Effects Definition Technical Memorandum (SR 520 Bridge Replacement and HOV Program 2008) and a supplement to that memo issued by the project office on March 28, 2008, contain detailed information about these travel demand model assumptions. They include all projects that were assumed to be complete by 2030, planned transit service, and other assumptions coded into the project's travel demand model for the No Build Alternative. Adjustments were also made to reflect expected changes in inflation and land use,1 specifically future population and employment growth forecasts, for the year 2030. These elements are major factors that influence travel behavior and patterns.

The last sentence is particularly telling: "These elements are major factors that influence travel behavior and patterns."

In other words, particular assumptions were made about traffic demand and transportation conditions in the year 2030, which strongly influence conclusions. These include untested stated assumptions about human behavior (in particular, that tolls will cause large numbers of people to switch to HOV transport); demand (such as that load remains heavily concentrated at peak periods); transportation infrastructure (particular transport services existing such as light

C-031-074

rail across the lake); and many other implicit assumptions such as that citizen pressure does not force HOV lanes to be opened for general use. It would be fantastic if all these assumptions turned out to be exactly true.

Sound method for modeling with suspect assumptions include various forms of either "sensitivity analysis" (testing the change in results for various changes in assumptions to derive confidence bounds) or "worst-case analysis" (testing at the boundaries of plausible futures) or "model averaging" (combining results across a diversity of possible future conditions). But the methodology described in the TDR does not indicate that any of these were performed, and no results presented in the TDR demonstrate any of these were performed.

C-031-075

Misleading presentation of results

The TDR states: "travel demand models are not intended to provide an absolute traffic volume forecast", advising that forecasted traffic flows should be used only for comparison between options, NOT for estimating absolute conditions.

But in many places in the TDR and executive summary, this distinction has been lost:

"Daily person trips across SR 520 would increase by up to 14,400 people (6 percent) because completing the HOV lane system between I-5 and SR 202 and/or tolling the corridor would increase carpools and bus use."

"General-purpose vehicle trips would decrease by up to 10,000 vehicles per day and general-purpose person trips would decrease by up to 13,500 persons per day."

Clearly, there is great appeal to the idea that the number of vehicles crossing each day will decrease and the number of people crossing will increase, but given that the TDR states only relative values are meaningful, this conclusion should not be drawn and should not be in the report.

Further, it is clear that certain assumptions, especially those surrounding the impact of tolling on usage of the HOV lane, will affect the relative standing of 6-lane vs. 4-lane alternatives. Given that no data has been presented demonstrating such assumptions are reliable, and that no analysis is presented as to the sensitivity of results to these assumptions, conclusions such as the two above are highly suspect and misleading.

C-031-075

Conclusion

It is impossible to conclusively evaluate the methodology used in traffic forecasting even from such a lengthy document as the TDR, given that it is but a summary of a vast amount of work performed by the TDR team. However the statement of methodology presented in the TDR, pointedly omitting any rigorous model validation procedures, suggests the methodology may be flawed and unreliable. And since results do not include any form of confidence bounds or other indication of sensitivity to forecasting and traffic modeling assumptions, they are highly misleading and should not be used for policy decisions and should not have been included in a report for the public.The draft EIS makes predictions about the comparative benefits of the No-Build vs Build options. I am concerned about the accuracy and the margin of error of these predictions.

The methodology for the obtaining those predictions is described in the Transportation Discipline Report. The report does not give evidence that errors at various levels in the model have been estimated accurately, so that the forecasts are credible.

C-031-076

I see the following flaws with the estimation methodology.

1. The simulation model is chosen by PSRC, the model inputs (demographic and land use forecasts) are established by PSRC, the model validation is done by PSRC teams, and the goals for development are also set by PSRC. There is no independent review of this process at any step.

C-031-077

2. Models are calibrated from current data. This process sets the models' internal parameters to values that best align the model predictions with the observed data. The problem is that, for models with many parameters, there can be many different parameter setting that can fit the current data equally well. However, these parameter setting will produce wildly different forecasts for the future, e.g for 2030. The report does not explain how the choice was made.

A standard statistical validation technicque to avoid the catastrophic ambiguity I described above is to test the model predictions on existing data, but to employ for this purpose independent or fresh data, which was not previously used in calibration. The accuracy of the model on the fresh data ris a better estimate of the ability of the model to represent the reality in the field.

C-031-078

3. The inaccuracies in the input variables (demographic, employment,

C-031-078 and land use forecasts were not considered). Nor is it explained how these inccuracies, which are unavoidable in any forecast, will propagate through the model and will affect its predictions. In other words, there is no evidence that the model used is "robust" to changes in the input data. For instance, a 10% error in the population growth may well translate into a 100% error in the traffic time estimate. The document does not demonstrate that the errors of this kind have been controlled for.

C-031-079 4. Another source of inaccuracies in the final predictions of traffic time, traffic volume etc are the variations in model parameters. The travel demand model has parameters for each of the 4 steps: trip generation, trip distribution, mode choice, trip assignment. It is the latter two steps that I want to discuss now. Essentially, the travel demand model hsas an internal model for how people will choose to travel in 2030, and by what route. At first glance, all the model parameters are validated by predicting current data. However, the current data is not detailed enough to guarantee that these parts of the model are accurate even for the present. The validation method, as it is explained in the document, only ensures that the model as a whole predicts traffic patterns at certain points and across certain screenlines, but does not guarantee that the model captures correctly the mechanisms of mode choice and travel assignment that produce these results. It is not known what the margin of error of the traffic forecasts are with respect to such inaccuracies.

C-031-080 In summary, I feel that transportation forecasts produced may be relied upon, only under the unlikely conditions when the economic, demographic and land use forecasts are accurate, when people make their choice in agreement with the model's step 3 and 4 parameters and not otherwise, and when cars, gas consumption, gas prices also evolve as forecasted. But that the current analysis does not cover any other scenario. Thus it does not support the conclusion that the benefits for transportation will continue to exist if the circumstances of the future become different from what was assumed in 2009.

Exhibit 8 Tilghman Transportation Analysis

TILGHMAN GROUP
TRANSPORTATION PLANNING

30 March 2010

Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart St., Suite 520
Seattle, WA 98101

Dear Ms. Young:

C-031-081 I have reviewed the SR-520: I-5 to Medina Bridge Replacement and HOV Project SDEIS on behalf of The Coalition for a Sustainable SR-520 and offer the following comments. My comments fall under four categories:

- Corridor Traffic Operations
- Assumptions
- Needed Clarifications
- Conclusions of the SDEIS

1. Corridor Traffic Operations

A. The SDEIS ably describes traffic operations on SR-520 and at intersections but gives much less attention to corridor operations on surface streets. While it indicates that congestion occurring at one location may affect others, it does not provide a clear picture of how traffic operates or will operate along corridors such as Montlake Boulevard, NE Pacific Street, or Lake Washington Boulevard through the Arboretum. For example:

- The document (SDEIS 4-3) gives only nodding recognition to existing backups indicating that they "can" extend as far north as NE 25th Avenue rather than saying that those long backups occur daily, and that they often extend further back. The same is true for NE Pacific Street.
- The Transportation Discipline Report (6-24) notes for the No Build option that "Mountlake Boulevard southbound would often be congested as far back as NE 45th Street". That is barely different than today's conditions, despite the significant increase in volume by 2030 and longer delays at the intersection of Montlake Blvd/NE Pacific Street. How is that possible?
- Similarly, for options K & L, "The increased congestion would affect adjacent intersection operations to the north, south, and west" of the Montlake Blvd/NE Pacific intersection

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C-031-081

(Transportation Discipline Report 6-40). How will the operations be affected? How will travel times be affected? How frequent will back-ups be?

- Option K's turnaround at the new Montlake interchange is projected to operate slowly during both morning and afternoon peak periods. Long queues occur for northbound traffic in the Arboretum during the morning commute now (although they are not discussed in the SDEIS), and volumes on Lake Washington Boulevard are projected to increase significantly with Option K. How will the turnaround's slow operation affect traffic driving through the Arboretum?

C-031-082

B. Pedestrian and bicycle routes are identified for each option but important elements of the user's experience are not discussed. For example:
   - Option A creates a much wider intersection at Montlake Blvd./24th Avenue East. Pedestrians would cross 5, 6 and 7 lanes, where they now cross 3, 4 and 5 lanes. What is the potential effect of wider crossings on pedestrian safety, walking time and pedestrians' willingness to walk?
   - Option A also creates a new signalized intersection on Montlake Blvd. at the 520 westbound ramps with a 5th leg for buses. Pedestrians face additional crossings as well as a wait at the new signal. How does this affect pedestrian safety and walking time along the Montlake corridor?
   - Riders transferring from the new SR-520 westbound bus stop under Option A to southbound local buses would have a new route to reach the southbound bus stop. Currently, riders can use the stairs and underpass to cross Montlake and then have only one lane of traffic to cross to reach the stop. While the new route is a shorter distance, it appears to require waiting at two signalized cross-walks. Would more time be required to make such a transfer than occurs now?
   - The SDEIS (5-28)calls Option A's reduction of volumes on Lake Washington Blvd. a benefit to cyclists and pedestrians but it does not characterize the effect of Option K & L's increases in volumes on cyclists and pedestrians on that road. What would the effect be?

2. Assumptions

C-031-083

A. The area of influence identified for the Montlake interchange does not adequately cover roads and intersections affected by traffic operations south of the interchange. While its influence extends nearly a mile to the north, the south boundary is located at the SR-520 Arboretum ramps. The boundary should extend further south to include 24th Avenue at Boyer, Lake Washington Blvd. at Boyer, and Lake Washington Blvd. at Madison. Given the identified shifts in volume among the options, their effects on the Arboretum and streets serving it should be fully understood.

C-031-084

B. Option A adds a second bridge across the Montlake Cut. Yet, the need for the second bridge is not readily apparent. For instance, traffic performance between the No Build alternative and Option SA (also known as Option A+ as preferred by the Legislative Working Group) differs only by one letter grade at two intersections. Unfortunately, there is too little information in the

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C-031-084 SDEIS to indicate whether the LOS results reflect borderline ratings or more significant differences in travel delay. Accordingly, the transportation benefit of the second bridge remains obscure. Yet, its impacts to views, home displacements, and neighborhood character are obvious. How was it determined that additional capacity across the Montlake Cut is required? If it is, indeed, required, are there other options to provide extra capacity that have fewer community impacts?

C-031-085 C. Transit demand modeling relied on an approach "not constrained by transit volume and service forecasts" (Transportation Discipline Report 4-8). This approach produces an ideal but not realistic transit demand forecast. How would a more realistic forecast reflecting transit agencies' service policies differ? To what extent did the unconstrained transit modeling result in a mode shift from general purpose vehicles?

C-031-086 D. Future transit vehicle occupancy assumes an average of 65 passengers per bus (Transportation Discipline Report 4-8) whereas today's buses average just under 30 passengers (derived from information in Transportation Discipline Report 8-3). That assumption exceeds the number of seats on the largest buses currently in service and implies that all peak period bus trips would operate with standing loads. How is such a vast increase in vehicle occupancy a reasonable and appropriately conservative assumption? If the demand forecast is to be believed, then the number of buses has most likely been understated.

C-031-087 E. As the SDEIS notes, elimination of the Montlake freeway transit station will force riders between the University District and Eastside to make transfers. Did the unconstrained transit demand modeling account for the disadvantage of a transfer? If not, what is the effect on transit demand and general purpose traffic of doing so?

C-031-088 F. A number of recently proposed developments in the Montlake area would increase traffic on study area streets. These projects include: University Village Shopping Center expansion; QFC additional recreational facility development at Warren G. Magnuson Park. Traffic volume forecasts used in the SDEIS need to be updated to include these specific projects. It should be noted that the University Village, QFC and Seattle Children's projects alone would account for over half of the SDEIS's background traffic growth on Montlake Blvd. north of NE Pacific Pl.

C-031-089 G. Pedestrian volumes were assumed to remain static (Transportation Discipline Report 4-15). That assumption conflicts with all other assumptions about population and employment growth, transit ridership increases, and traffic volume growth. Since pedestrian volumes at intersection crosswalks affect traffic operations, intersection level of service analysis should incorporate realistically higher pedestrian volumes at crosswalks.

C-031-090 H. A modified plan for pedestrian access to Sound Transit's light rail station has been proposed by the University of Washington. The proposal calls for a new surface crossing of Montlake Blvd. between NE Pacific St. and NE Pacific Place rather than a pedestrian bridge. If this proposal should be adopted, the SDEIS should be updated to include that crossing in its traffic analysis.

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3. Needed Clarifications

C-031-091 A. For all options, it would be very helpful to know the changes in travel time along arterial streets. That is a measure that readers can readily understand in comparing the effects of the options. Comparisons should begin with existing travel times and then estimate future times for all options, including No Build.

C-031-092 B. The analysis of SR-520 provides extensive information about variations in hourly volumes and operations. The analysis of local arterials, however, deals only with the morning and afternoon peak hour. How many hours experience similar levels of congestion now, and how many in the future?

C-031-093 C. How would bridge openings affect future traffic operations? The SDEIS notes that mid-afternoon openings can cause delay through the entire afternoon peak period now, so what would the effects be for each of the options?

C-031-094 D. Under Option A (including SA and A+), with a second bascule bridge, would the duration of bridge openings differ from today's times? If so, how would traffic be affected?

C-031-095 E. Option A claims a reduction in volumes on streets north of the Montlake Cut due to elimination of the Lake Washington Boulevard ramps to SR-520. This seems speculative given that the alternate routes of travel noted in the Transportation Discipline Report entail considerable out-of-direction travel, congestion in the NE 45th Street corridor, and limited I-5 access capacity from NE 45th Street. The volume reductions result in an improvement in LOS at Montlake Blvd NE/NE Pacific Street and at NE Pacific Street/15th Avenue NE over No Build conditions (Transportation Discipline Report 6-33). How realistic is such diversion? And how sensitive are the LOS results to that reduction in volume?

C-031-096 F. Option A is shown to reduce volumes on Lake Washington Boulevard. How far south is that the case? Does that reduction occur because of a diversion to E. Boyer Street to reach SR-520? If so, what are the consequences for intersections on E. Boyer and on E. Boyer itself?

C-031-097 G. Option A includes an auxiliary lane on westbound SR-520 across Portage Bay. Yet, even with that extra capacity, Option A has less westbound on-ramp throughput than other options. What function does that lane provide? What would traffic performance be for Option A without the auxiliary lane? Why would Option A+ have the auxiliary lane?

C-031-098 H. Option K would reconfigure Lake Washington Boulevard at the north end of the Arboretum. However, the text and maps do no fully illustrate changes in circulation resulting from that reconfiguration.

- How would the intersection with E. Foster Rd. be configured? What would be its operating quality?
- What is the change in volume on E. Roanoke Street with the one-way local access scheme on Lake Washington Boulevard?

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C-031-099

Summary of Cumulative Development in the DPD record for The City of Seattle 2010-2030 within 3.6 miles of SR520 Interchange

1. Permit #3007521 Master Plan Expansion for Seattle Children's Hospital
   4800 Sandpoint Way NE, Seattle , WA 98105
   - submitted (corrected) on 08/03/07
   Proposed expansion of 1.3 million additional square feet
   by 2030, adding 400 additional patient beds and 1200 staff
   Parking stalls to increase to 3100 on campus
   Location: 2.0 miles from SR520 interchange
   Status: Seattle City Council Ruling expected April 1, 2010-construction anticipated 07/31/10

2. Permit #3008972 University Village Shopping Center Expansion
   4500 25th Ave NE, Seattle, WA 98105
   - submitted on 07-29-08
   Proposed expansion of 105,000 square feet of retail and restaurant space
   and additional 702 parking spaces
   Location: .8 mile from SR520 Interchange
   Status-in for permit approval-construction by 12/10

3. Permit #3009681 QFC retail and residential units expansion
   2746 NE 45th Street, Seattle WA 98105
   -submitted on 05-22-09
   Proposed expansion of 31,000 square feet of new retail development and
   350 new residential units and 700 new parking stalls
   Location .9 miles from SR520 Interchange
   Status-in for permit approval-construction by 3/30/11

4. Warren G. Magnuson Park recreation development
   City of Seattle Parks and Recreation-approved 06/2009 and is under construction
   7400 Sandpoint Way NE, Seattle, WA 98115

   Arena Sports facility-80,000 square feet- 500 daily users projected
   Tennis Complex-10 tennis courts and Clubhouse-100 projected users
   Soccer and new lighted ball fields-12 fields X average 24 players= 288 users
   North Shore Building #11- office/ daycare/ restaurant development 25,000 square feet
   projected 120 daily users
   Location is 3.6 miles from SR 520 Interchange
   Status-construction in progress-anticipated completion by 12/2011

Total development is approximately 1,600,000 square feet, with increased daily vehicular trips of 3808 additional on Montlake Blvd (conservative estimates)
(sources:Seattle Children's Hospital 1200, Retail 2100, and Recreation 508 trips)

Exhibit 10 Photos of Laurelhurst residence by Aaron Wetholt-Legal Media

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Exhibit 11 Photos of Webster Point with new bridge design -Weholt

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C-031-100

Save Union Bay Association
Response Statement to SR 520 Project SDEIS

SUMMARY

We have reviewed the SDEIS for the 520 bridge replacement project and appreciate the opportunity to discuss some topics within the SDEIS that we feel are missing or not described in adequate detail for WSDOT or public analysis. These topics are:

- The wetland mitigation opportunities discussed, particularly aquatic bed vegetation enhancement, do not include most of the aquatic bed areas infested by milfoil in Union Bay, many of which are closer to, and more directly affected by the proposed project.
- The wetland and shoreline mitigation opportunities do not include or discuss the damage to shoreline and wetland vegetation caused by the invasive mammal, nutria.
- The project, as described in the DSEIS, does not provide suitable refugia for the fish and wildlife species that will be displaced, or will avoid the project footprint during construction.
- The DSEIS does not discuss the risk of releasing milfoil and other invasive species from the project footprint during construction.

In order to adequately mitigate for the impacts associated with the proposed project, we suggest that the following be considered as parts of the overall mitigation approach:

- Enhance the aquatic bed wetlands that cover most of Union Bay by reducing the coverage of milfoil and other invasive plants. This will provide both wetland mitigation (enhancement), and, if conducted prior to construction, will offset the effects to lake habitats and wildlife by providing enhanced refugia for displaced species during and after construction. Long-term control of invasive species will also offset the permanent fish and wildlife habitat losses that will result from the project, including effects on ESA-listed fish species.
- Include restoration of shoreline areas damaged by nutria as part of the shoreline and wetland mitigation approach.
- Eradicate invasive species within the project footprint (which includes boat and barge travel corridors, anchoring locations, temporary work platforms, as well as the construction footprint, PRIOR TO CONSTRUCTION. This will reduce the risk of releasing thousands of milfoil fragments and other invasive species into the surrounding areas of Union Bay and Lake Washington.

C-031-100

Introduction

Save Union Bay Association (SUBA) is a neighborhood association consisting of interested individuals and waterfront owners living on Union Bay. There are currently 120 members. Over the 35 years operating, we have dealt with issues of Union Bay including milfoil, sewage spills, Green Lake pipeline, and eutrophication. We are concerned about the disruption that construction of the new SR520 bridge will have on Union Bay and want to work with DOT to offset this impact.

The SDEIS identified effects during construction within the Elements of Nature (Chapter 6). We are concerned about the effects within the following elements during construction on the overall ecosystem of Union Bay (UB): recreation, noise, air quality, water resources, ecosystems, geology and soils, hazardous materials, and navigation.

Although the SDEIS did a good job of describing effects that will occur within the 520 work corridor along UB, there was no mention of the effects on the rest of UB. We contend that there will be multiple effects throughout the UB environment and we want the SR520 program to mitigate these impacts.

Our SDEIS Response statement begins with an overview of Union Bay, describing both the general characteristics of the bay and also the recreational and wildlife usage. We then describe the three most important problems threatening the integrity of Union Bay (UB) and its fragile ecosystem:

- infestation of invasive aquatic plants;
- shoreline habitat degradation by nutria (an invasive mammal), and
- a shallow bay made worse by ongoing sedimentation from sewage overflows, fertilizer use, and erosion.

These problems contribute to algal growth, high water temperatures, low oxygenation, high phosphorus, and wetland degradation. These elements combine to hasten eutrophication. Save Union Bay Association (SUBA) is in the process of developing an Integrative Aquatic Vegetation Management Plan (IAVMP) for Union Bay. Our priority is to preserve the health of the UB ecosystem by managing the invasive aquatic plants, enhancing the habitat, and improving the aquatic ecology.

It is important to understand this situation in order to gain perspective. It is our belief that bridge construction will result in increased use of the bay north of the work corridor. All species will react to and cope with construction activities by moving away from the construction zone. It is most likely that they will look nearby for suitable habitat, migration routes, feeding and nesting grounds and recreation (humans). Hence, they will be drawn to the north-northwest side of Union Bay because it closely resembles the wetlands near SR520.

The current problems of UB (invasive aquatic plants, nutria denuded shoreline, shallow depth and poor water quality due to recent CSO overflows) will make it more difficult for species to use the bay. Many waterfowl and fish have deserted the wetlands of UB north of SR520 because there is not access due to overgrowth of invasive aquatic plants, and there is inadequate shoreline vegetation for protective cover from eagles and other predators. It is important to understand how all of the features of the bay interact in order to accomplish bridge construction while providing adequate resources for the species impacted by the construction. For example, although restoration of UB wetlands

C-031-100

may partially mitigate wetland loss near SR520, if the waterfowl and fish can not access the wetlands due to milfoil and waterlily mats, then the habitat addition will be meaningless. In the following statement, we respond to each of the Elements of Nature described in the SDEIS which SUBA believes will have impacts on species, wetlands, and recreation outside of the work corridor. There was no discussion in the SDEIS of impacts beyond the work corridor in UB. Our suggestions for mitigation address the three problems we believe are impacting the bay and thus, would affect movement of species from the work corridor into the rest of the bay.

We suggest:

Before construction begins:

1. Eradicate the invasive aquatic plants within and near the work corridor so that construction will not spread invasive plant fragments throughout Union Bay. We are defining work corridor as that area within the project footprint fwhich includes boat and barge travel corridors, anchoring locations, temporary work platforms, as well as the construction footprint, from the southwest end of Portage Bay to the east end of Lake Washington.
2. Provide alternate nesting sites for protected birds/waterfowl nesting within the work corridor.
3. Improve wetlands in Union Bay (invasive species control) so that fish and wildlife species can locate and begin to adapt to new habitat before construction displaces them.
4. Improve water quality, wetlandsand shoreline at Waterway #1, Waterway #2, University Slough, and Belvoir Place Park (north side of Union Bay) to facilitate species use of these areas. (ie., decrease milfoil, waterlilies, and blue-green algae in these areas.)
5. Decrease milfoil and other invasive aquatic plants between the work corridor and Belvoir Place Park,Waterway #1, Waterway #2, and University Slough to ensure that salmon can access this area and survive.
6. Several private residences have naturalized their waterfront and have included shallow gravel beds for salmon nesting. Improve habitat access to these residences so salmon can utilize them. (ie., decrease invasive aquatic plants)

During and/or after construction:

1. Monitor and eradicate invasive aquatic plants as necessary.
2. Monitor the UB wetlands' and shorelands' enhancements and evaluate effectiveness regarding fish and other species.
3. Provide education and work with homeowners to reduce pollutants entering the bay and to improve their shorelines to facilitate fish protection and nesting.

Overview of Union Bay Environment and Ecological Concerns

Union Bay is at the west side of Lake Washington where Lake Washington empties into the ship canal. Union Bay (UB) is in a shallow glacially carved basin covered by a deep layer of peat. It has a surface area of 985,000 squared meters and ranges in depth from 3-12 ft except where it has been dredged to 30 ft in the navigation channel. Union Bay has the largest green belt in the city along its shoreline; its shorelands provide rich

C-031-100

habitat and yet half of this natural area sits on top of a toxic dump site. Over 2/3 of the shoreline is state/city property. 100 residential properties also front Union Bay.

Union Bay is a favorite spot for recreation. Water sports enthusiasts crowd the bay. People sail, canoe and kayak in UB to explore the inlets around the Arboretum and the Union Bay Natural Area (UBNA); to observe birds and waterfowl; and for enjoyment. Often UW students will rent canoes and paddle to a shaded shoreline to picnic and swim. Hikers and bicyclists use the trails around Union Bay. The Arboretum and Foster Island as well as the UBNA host many people from birdwatchers to sports teams jogging down the paths. In the Laurelhurst neighborhood, there is public shoreline access at Belvoir Park and Waterway #1. Many people launch kayaks or canoes from these sites. Motor boats also fill the bay, whether anchored and enjoying water sports; slowly moving while fishermen cast their lines; or traveling through the bay.

Union Bay and its shorelands host a variety of ecosytems from open water to wetlands and from prairie to forest. It provides habitat for many species of mammals, samphibians, birds, reptiles, and fish. There are several species federally listed as threatened (ESA). Others are protected by the Migratory Bird Treaties. There are over 200 species of birds and waterfowl that either live here or migrate through on an annual basis.

There are three major problems in Union Bay that have affected the ecology of UB and hastened eutrophication. It is important to understand these issues to fully appreciate the impact of the SR520 construction project.

Non-native invasive aquatic plants (Eurasian watermilfoil, Brazilian elodea, fragrant waterlilies, and purple loosestrife) have changed the water quality, interfered with recreational uses, and severely affected waterfowl and fish habitat in Union Bay. Milfoil was first introduced into Lake Washington in 1974. By 1985, 50 acres of Union Bay were infested with milfoil. By 2007, 75% of Union Bay contained well-established milfoil stands. Dense stands of milfoil interfere with all recreational uses (sailing, swimming, canoeing, motor boating) and destroy the natural ecosystem. In the summer, their density in the water as well as floating fragment mats prevent adequate water circulation, resulting in increased water temperature, decreased oxygenation, increased algal blooms and degraded habitat for fish. This makes it very difficult for juvenile salmon to survive throughout Union Bay.

Although milfoil is the primary invasive aquatic plant in Union Bay, fragrant water lilies also heavily infest the bay. By 2007, they extended out 30 feet from the western shoreline forming a thick dense mat. These plants interfere with recreational uses and ecosystem balance due to their density. The thickly matted waterlilies create a threat for waterfowl because it forces them to swim in open water, further from shore, making it more difficult for them to hide among shoreline reeds and making them easy targets for the eagles that nest along the shore. Waterlily mats also provide shelter for salmonid predators.

A second problem area is erosion and destruction of the shoreline by nutria, a non-native invasive rodent. They have eaten roots of native plants denuding the shoreline of plants needed to hold the dirt in place. The loss of reeds, cattails and other native wetland plants has had a devastating effect on the ecology of the area. The loss of plants has meant a loss of shelter and nesting areas for waterfowl and birds. The increase of erosion into the lake has decreased water habitat for fish.

C-031-100

The final problem is sedimentation which has resulted in the lake becoming shallower. A large portion of sedimentation has occurred secondary both to milfoil and waterlily mats binding into mud islands and also from nutria burrows and denuded shorelines collapsing into the water. Sedimentation has also occurred because there are several CSO outfalls that drain into UB and overflow during periods of heavy rain. For example, measurements of the lake bottom during high water in June, reveal that directly in front of the Belvoir outfall, there is no change in depth since 1980 but in the area where the outfall currents reduce and dissipate, the depth has been reduced from 5ft to 2.5 ft. There have been two major sewage overflows into Union Bay. One (Belvoir outfall), in 1988, released 5 million gallons of raw sewage into the bay. The second one (University Slough), in 2008 released 8 million gallons. The frequent CSO overflows and the major sewage spills have contributed to eutrophication because they have created a nutrient rich environment for aquatic plants to flourish, have been responsible for algal blooms (including cyanobacteria-toxic blue green algae), and have decreased the overall depth of the lake. Run-off from residences and other property around the lake have also increased the phosphorus load in the bay and contributed to water quality degradation and sedimentation.

Save Union Bay Association is addressing the problems of invasive aquatic plants and shoreline destruction by nutria. Since 2009, we have been working with USDA Wildlife Division to eradicate nutria from UB. Over 250 nutria have been removed from the bay. The USDA is also doing research into shoreline restoration of the areas damaged by nutria. In February 2010, SUBA received a grant from the Washington State Department of Ecology to develop a plan to reduce and manage milfoil and other invasive aquatic vegetation in UB. We contracted with Herrera Environmental Consultants to perform an aquatic plant survey and to write an IAVMP (Integrative Aquatic Vegetation Management Plan). This integrative lake management plan will provide an overview of the problems of UB and their interrelationships and present an on-going solution. It will provide a template for ecological stewardship of UB. The plan should be completed by August 2010. We will then apply for an implementation grant from DOE.

SDEIS Omissions

There was no mention in the SDEIS of impacts of bridge construction or lane alternatives on the ecosystem of Union Bay outside the work corridor. (We are defining work corridor as the entire project footprint which includes boat and barge travel corridors, anchoring locations, temporary work platforms, as well as the construction footprint,) Our position is that the entire bay area will be affected by many of the elements described in the SDEIS. The SDEIS described impacts from construction on species inhabiting or migrating through the work corridor but it did not discuss how the species will cope with the 7-10 year construction project. SUBA contends that, as habitat near SR520 is impacted, the species using that area will move to other areas of Union Bay where similar wetland habitat exists. These wetland areas are degraded more than the southern shore within the SR520 corridor because there is less water mixing, less boat traffic, and more invasive species. The north residential shoreline contains some

C-031-100

shoreline habitat restoration but the salmon are unable to nest there due to the area in front of these properties being clogged with milfoil, waterlilies, and algae.

In addition, not mentioned in the SDEIS is the impact simply from construction itself- the movements and voices of people and machines creating noise, waves, and air-ground movement. These activities will frighten many species and result in their distancing themselves from the source of this activity. (e.g., Currently, waterfowl on the bay may be content to swim or nest near SR520 despite the car movement on the bridge but, as people and machines line the sides of the bridge or during pile driving, these species will seek calmer waters.)

The SR 520 project FEIS should contain information about the impacts to all of Union Bay and proposed mitigation to facilitate species continued existence on UB.

Impact of Bridge Construction on SUBA's Three Priority Areas

Save Union Bay Association has identified the major problems in Union Bay and is working to manage and solve them. Our top priority is to reduce the infestation of milfoil. We believe that, when the density of invasive aquatic plants is reduced, then the water will circulate better improving oxygenation, temperature, and nutrient load. Improving the aquatic ecosystem should make UB more hospitable to fish- especially to salmonids- which currently are unable to travel through most of the bay due to thick aquatic plant growth and high water temperature. The direct impacts of bridge construction on our priority areas are:

1. Invasive aquatic plants. The SR 520 work corridor is choked with milfoil. Milfoil spreads and re-roots from stem fragments. As work is undertaken in this area, these plants will be disturbed and fragments will float to other parts of UB and propagate. Barges and other boats bringing in supplies for bridge construction will probably bring in milfoil fragments from Lake Union and will probably break off stem fragments from the milfoil in Union Bay. This disruption will also create more milfoil infestation in UB.
2. Shoreline-habitat destruction. Nutria and beaver live near SR520. SUBA is currently undertaking a nutria eradication program to deal with the shoreline destruction caused by this invasive mammal. As their habitat is destroyed/impacted by SR520 construction, they will seek new habitat away from this area- most likely along the University of Washington shoreline. We have already eradicated the nutria from this area and are now focusing our efforts on the Arboretum and Portage Bay. Movement of nutria back to the UW will result in more shoreline destruction. There are three beaver dams in the work corridor. The USDA biologists believe that the beaver were impacted by human activities on Foster Island and moved their dam to a more remote location between the cattails in this same general area. Every time beaver move, they take down many more trees to build their home. Bridge construction will impact the beaver living next to SR520 such that it is likely they will move again. The closest habitat is in UB north of the work corridor.

C-031-100

3. Lake biochemistry and sedimentation. SUBA is concerned about the rich nutrient substrate in Union Bay. The spongy peat bottom is indirectly impacted by any nearby construction vibration and weight. Sedimentation, run off and spills impact the lake's biochemistry and contribute to algal and invasive plant growth. Because Union Bay is shallow with poor water quality in many areas, SR520 construction is likely to have a greater impact on UB than Lake Washington.

Proposed Additions to the SDEIS and Requested Mitigation

Save Union Bay Association's primary concern is the environmental impact of bridge construction on Union Bay. Construction of any of the 6 lane alternative options will impact the environment, slightly more or less depending on the option eventually chosen. Our perspective is that, given the problems currently facing Union Bay, without intervention, the bay will not be able to support the changes engendered by SR520 construction. We need to improve habitat throughout UB and improve access to the area north of the work corridor before bridge construction occurs to enable species to relocate and thrive during construction. SUBA is concerned that construction of SR520 will have bay wide impacts within the following elements of the environment:

1. Recreation

Construction will impact water recreation by limiting small craft access to wetlands around SR520. Canoeists and kayakers will probably explore the wetlands north/northwest of SR520 instead. Larger boats will also be impacted because many of them anchor along the 520 corridor during UW football games or simply during warm summer days. The logical response of boaters during construction is to motor north of the construction area. Large boats as well as small craft will probably move to the N-NW side of UB to be further from the noise, dust, vibration, glare, and accidental damage from construction equipment. Construction will also impact people enjoying nature on the south shore (Arboretum, Foster Island, Montlake Park). Some of these paths will be closed during construction. People visiting the open areas along the Arboretum shoreline will be impacted by noise, dust, vibration, and reduced visual quality. Most people will visit the UBNA on the northwest shore of Union Bay instead. At UBNA, they can have a similar experience as they would have had at the Arboretum (hiking, biking, bird watching, viewing the lake and mountains). People will also utilize the other shoreline parks/access areas on the north shore (Belvoir Place Park, Waterway #1, Waterway #2). More people using UBNA and these other areas will result in more auto traffic in the neighborhood and more degradation to the land and shoreline as people utilize the area.

Mitigation: Improve boat access throughout Union Bay. Work with UW/UBNA to maintain the integrity of their restoration efforts. Work with Seattle Parks Dept and DNR to maintain integrity of the other areas and to improve boat access to them.

2. Noise

C-031-100

Noise and vibrations will impact all species in the area. Despite all efforts at noise reduction, noise will still be loudest at or near the construction site dissipating with distance. All species will seek habitat areas/migration routes that are further from the source of the noise and vibration

Mitigation: Improve access and habitat on the N-NW side of Union Bay. Provide gravel areas for Chinook salmon nesting and provide access to these areas (ie., decrease milfoil, waterlilies, and blue-green algae). Recommended areas for habitat enhancement are described under the "ecosystem" element. Improve N-NW areas frequented by people who are avoiding the southern shoreline.

3. Air Quality

People (boaters, trail walkers) and other species will be affected by air quality/dust close to the construction site. They will seek areas further from the site, most likely the north and NW side of Union Bay. (e.g., UBNA, Belvoir Park, Waterway #2 and Waterway #1).

Mitigation: Improve access and habitat on the N-NW side of UB.

4. Water Resources

Construction will result in increased water turbidity at the construction site. Sediments may be removed from the bay as part of the construction activities such as dewatering. Fish and other swimming/diving species will be affected by the turbidity and will move away fromthe construction in search of cleaner water and to escape predators.

Mitigation: Improve access and habitat in UB

5. Ecosystems

Construction and implementation of any option will reduce or disturb fish habitat, displace state and federally listed bird species, and affect wildlife by removing vegetation. Loss of wetlands, shading from the new bridge, removal of vegetation, and pile driving will all reduce wildlife habitat. Night lights, vibrations, and run off contaminants will affect water quality, species survival and salmon migration. In addition, these changes will cause disorientation and stress in all species and can alter their natural behavior. Species will disperse to similar habitats located in UB.

Mitigation: To decrease the impact of SR520 construction on species and wetlands, it is suggested that you mitigate the ecosystem affects before bridge construction begins. In this way, species can begin to adapt to new environments under favorable conditions. Specific mitigation suggestions include:

1. Preserve nesting sites of protected migratory birds and waterfowl. It is suggested that you create new, compensatory nesting sites and put these in place by 2011- before construction begins. It is suggested that you help train the species to relocate to these new sites. In this way, they will be able to learn new behaviors in a relatively stress free environment. Trying to discover a

C-031-100

new nesting site while construction is occurring- with noise, new obstructions, dust, and humans in the 520 work corridor would be very difficult for the migratory Canada geese and cliff swallows and would probably result in death of several birds. SUBA would like SR 520 Mitigation Specialists to work with USDA (Justin Dayton and Aaron Loucks) and other knowledgeable experts to determine appropriate relocation sites and nesting areas.

2. Reduce milfoil in the 520 work corridor from Portage Bay to the east end of Lake Washington. Milfoil and other invasive aquatic plants are a major problem within Union Bay. Milfoil spreads by plant fragments whereas waterlilies spread by root deposits. Construction will cause disruption/uprooting to these invasive plants located within the SR520 work corridor. Plants will be loosened by actions ranging from pile driving to water transportation of materials around the site. It is pointless for SUBA to work at reducing milfoil in the center of UB (to improve access and habitat throughout the bay) if, at the same time, SR520 construction is increasing milfoil fragments. It is recommended that SR520 program eliminate invasive aquatic plants in the 520 work corridor and adjacent environment before construction activities begin. It is recommended that SR520 continue to work with SUBA during construction to monitor milfoil and assist in removal of invasive aquatic plants.

3. Preserve habitat, migration, and reproduction of federally listed migratory fish. Because of construction effects of noise, turbidity, vibration, human activity, shading, and wetland destruction, it is reasonable to assume that the fish will alter their migratory/ habitat routes through UB to the N-NW of the construction. Because construction is a 7 year endeavor, there will be long-term effects on fish if they are not enabled to survive in the N-NW waters of UB. Due to the current conditions of UB, survival would be limited. High water temperature, low oxygenation, overgrowth of milfoil, shallow water, and poor habitat make the N-NW area of UB inhospitable to salmon. To improve the viability of salmon in UB, it is recommended that SR 520 project:
   - Reduce milfoil and other invasive plants.
   - Improve the wetlands, including the islands in the NW corner of UB. It is quite likely that, in some areas of nutria-denuded shoreline, shallow gravel areas could be created to provide spawning grounds for Chinook Salmon. This NW corner used to connect to streams up which the salmon would migrate.
   - Present an education program to waterfront owners describing the effects of their shoreline on fish nesting/predator protection.
   - Work with homeowners to modify their shoreline to establish beach areas/shallow gravel areas for salmon spawning grounds.
   - Improve access to the private property shorelines that have been restored to provide salmon spawning areas. (reduce milfoil)

C-031-100

- Improve access to Waterway #1 that has been restored to provide salmon nesting areas. (reduce milfoil, waterlilies, blue green algae, and other algal growth.)
- Improve access to the University Slough up which salmon migrated in the past. (reduce milfoil, waterlilies, blue green algae, and other algal growth.)
- Modify the shoreline and dock of Belvoir Place Park and naturalize it so it can provide salmon habitat.
- Improve access, wetlands, and shorelands along the south shore of Union Bay near Madison Park

4. Compensate for wetlands lost during SR 520 construction. Most of Union Bay north of the shipping lanes is considered wetland due to the shallow depth (less than 6 feet) and vegetated cover. The entire Bay should be under consideration as a wetland mitigation site. The removal of invasive species would be similar to the wetland enhancement opportunities discussed in the SDEIS. The only change would be to extend the boundary of the wetland mitigation sites under consideration to the shipping lanes (towards the project area).
5. Restore Shorelines damaged by Nutria. On the NW corner of UB is a small inlet that closely resembles the wetland area near SR520. This wetland is currently devastated due to nutria damage. It is suggested that this wetland be restored so that species can find suitable habitat located nearby during SR520 construction. Without the wetland vegetation, this area is no longer safe for nesting because it is too accessible for eagles and other predators. It is recommended that you work with USDA, DNR, and UW shoreline restoration experts to improve the shoreline vegetation and to improve aquatic access to this area.
6. Geology and Soils

Cofferdams, pile driving, and other construction activity will cause sediments to spread within UB. Union Bay is very shallow. An increase in sedimentation will hamper aquatic species survival.

Mitigation: It is recommended that any sediments removed from the bay not be replaced. Improve access throughout Union Bay so aquatic species can avoid the dangers associated with shading and turbidity.

7. Hazardous Materials

Contaminated sediments exist in Union Bay.

Mitigation: It is recommended that any hazardous sediments encountered during construction be removed from UB.

8. Navigation

Construction along the shipping lanes in Union Bay will cause many motorboats to travel slightly further to the north of the construction corridor. Union Bay is very shallow and infested with milfoil. It is likely that boats will have their motors clogged with milfoil or get stuck as they attempt to distance themselves from construction effects (noise, activity, barges).

C-031-100

Mitigation: Reduce milfoil and improve accessibility to UB north of the construction area. Maintain navigable channels through UB.

Conclusions

Currently, Union Bay is facing several problems that are increasing eutrophication. The construction of the SR520 bridge will add to the degradation that the bay is experiencing by destruction of habitat on the southern shorelands and relocation of species to the north of the work corridor. In order to accomplish construction with minimal impacts, it is important first to improve the aquatic ecology of UB. All habitat in Union Bay will be impacted to some extent by noise, vibration, light, and activity within the construction zone. As species distance themselves from the noxious intrusions within the construction area, they will seek habitat nearby- north of the work corridor. Because UB is so heavily infested with milfoil, it will be difficult for aquatic species to survive in the shallow, warm waters of the center-north side of UB. The highest priority to compensate for bridge construction is to reduce the milfoil that is choking the bay. The second priority is shoreline restoration to improve wetland habitat inUnion Bay and improve the natural shoreline along the north shore private residences and parks.

Save Union Bay Association wants to work with the SR520 Mitigation Specialists to find ways to minimize ecosystem impacts during bridge construction and to maintain and improve the aquatic environment once the new bridge is in place.

Save Union Bay Association Board of Directors
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Bill Watts, MD, Secretary
Steve Sulzbacher, PhD, Treasurer
Colleen McAleer, MBA, Mediation Representative
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Exhibit 13 Connie Sidles Expert Birding Inventory near Foster Island

C-031-101

BIRDS OF FOSTER ISLAND, Union Bay and Portage Bay (4/11/10)
(as prepared by Connie Sidles, Seattle Audubon master birder, in collaboration with other master birders of the state)

Pied-billed Grebe
Horned Grebe
Western Grebe
Double-crested Cormorant
Green Heron (rare on the lake)
Greater White-fronted Goose
Canada Goose
Trumpeter Swan (very rare)
Tundra Swan (very, VERY rare)
Wood Duck
Gadwall
Eurasian Wigeon (rare)
American Wigeon
Mallard
Blue-winged Teal
Cinnamon Teal (rare)
Northern Shoveler
Northern Pintail
Green-winged Teal
Canvasback
Redhead (very rare)
Ring-necked Duck
Greater Scaup
Lesser Scaup
Bufflehead
Common Goldeneye (rare)
Hooded Merganser
Common Merganser
Ruddy Duck (rare and getting rarer)
Short-eared Owl (very rare in the city)
Osprey
Bald Eagle (on the endangered list, I believe)
Red-tailed Hawk
Cooper's Hawk
Sharp-shinned Hawk (getting rarer, especially in the city)
American Coot
Killdeer
Mew Gull
Ring-billed Gull
California Gull
Herring Gull
Thayer's Gull (rare)
Glaucous-winged Gull
Caspian Tern
Rock Pigeon
Band-tailed Pigeon (rare away from old-growth forest)
Common Nighthawk (very, very rare)
Black Swift (rare)
Vaux's Swift
Belted Kingfisher
Downy Woodpecker
Northern Flicker
Western Wood-Pewee
Willow Flycatcher

C-031-101

Warbling Vireo
Steller's Jay
American Crow
Tree Swallow
Violet-green Swallow
Northern Rough-winged Swallow
Cliff Swallow
Barn Swallow
Black-capped Chickadee
Bushtit
Brown Creeper (unusual away from conifer forest)
Bewick's Wren
Marsh Wren
Ruby-crowned Kinglet
Golden-crowned Kinglet
Western Tanager (getting rare in the city)
American Robin
European Starling
Orange-crowned Warbler
Black-and-white Warbler (very, very rare)
Yellow Warbler
Yellow-rumped Warbler
Black-throated Gray Warbler
Townsend's Warbler
Common Yellowthroat
Wilson's Warbler
Spotted Towhee
Savannah Sparrow
Fox Sparrow
Song Sparrow
Golden-crowned Sparrow
Red-winged Blackbird

Total 85 species
18 rare
7 very rare

Discipline Report Comment Summary

Discipline Report:

Report	Page #	Line #'s	Reviewer	Selected Expertise	Comment
520 Bridge Replacement and HOV Project			Jean Amick		Why wouldn't A have same visual effects as L and K as due to presence of construction barges for porposed new bascule bridge across cut. What does LOWEST mean for A? Lowest in time? Heighth of barge? time barge there?
	3		Jean Amick		The addition of lids …at Montlake Blvd would hide the roadway and provide landscaped connection between the communities. Option A has roadway (ramp) directly across middle of lid at this location so roadway not hidden.
			Jean Amick		Option K removes more woodlands than what?
			Jean Amick		Option L bridge over Foster Is may (what does this mean?) pass under 520 via tunnel as today. **Give us the final design so we can make an intelligent comment on this design.**
	3,4		Jean Amick		..addition of sound walls…would eliminate … scenic views to drivers on 520. This is meant to be a transportation project, not an outdoor sculpture park…Drivers should not be distracted by the lovely views.
	7		Jean Amick		**In this exhibit/illustration, there are 6 vehicle lanes. In other exhibits there are 8 & 10. What is accurate?**
			Jean Amick		New reversible HOV ramp to HOV/Express I-5 lanes. This does not work in the evening.
	8		Jean Amick		..would maintain a low profile through the ..Arboretum. **How low is low?**
	Exhibit 4.		Jean Amick		A, K, L Bike Ped Path very unclear. Is there a GP lane across the lid at Montlake in A K & L in brown?
	11	11	Jean Amick		Rows of 3 10' tall ..columns…above pontoons..new spans aprx 22 ft higher than existing. How close together ate these 10' columns?
	14		Jean Amick		project omponent construction priorities: **Is this correct?** 1. Floating portion 2. Portage Bay Bridge 3. West approach at Evergreen Pt? Thus WSDOT would not do floating, eastside, then westside??
	16	26	Jean Amick		there is a huge difference whether one is looking AT or FROM the roadway
	17		Jean Amick		1. - … 6. The new bridge as designed in A will make a HUGE visual difference - not appealing to anyone looking at it.
		last lin	Jean Amick		Views…deifne study area please
		23	Jean Amick		This project is of **HIGH** VIEWER SENSITIVITY
	19	28	Jean Amick		**There is ZERO intactness for this project.** It is ruining the natural landscape of Lake Washington by putting a 32 foot high viaduct all across it. Breaking up the Lake by "features which are out of place".
	20		Jean Amick		**Breaking a lake into two parts shows LOW UNITY of project components in relationship in the landscape.**
			Jean Amick		

C-031
05/26/2011 13:21 PM
520 Bridge Replacement and HOV Project
SDEIS Comments and Responses -- Comments Only

Discipline Report Comment Summary

Discipline Report: _____

Report	Page #	Line #'s	Reviewer	Selected Expertise	Comment
Const Techniques	15		Jean Amick		Const of temp roadways. Where?
	17		Jean Amick		2 types paving. Hot mix asphalt & concrete. Where will lane widening occur?
	18		Jean Amick		Closure & Demo of some roads & ramps. ID'd in const. activites
			Jean Amick		* Sound walls cast into traffic barriers (in median?)...will this be on entire length of 520?
			Jean Amick		Location of barges with tall cranes floating on lake?
	20		Jean Amick		Piling installation
	22		Jean Amick		* Decking for Montlake (new & old?) bridges. Open vs closed? Is closed safer/fewer accidents?
	30		Jean Amick		* Do stormwater treatment ponds/wetlands breed mesquitos?
	31		Jean Amick		* Staging areas: Haul routes vehicle access that intersects with roadway network to be monitored by flaggers, police, etc. Designated haul route through Seattle to 520, 1-5, 405 (Exh. 15). Will Montlake Blvd be used? Hours?
Demolition old	34		Jean Amick		Demo NOISE?
	40		Jean Amick		"A" adds SB traffic capacity on Montlake Place E & 24th Ave E?
			Jean Amick		WHAT IS THE % GRADE OF HIGH RISE NOW? COMPARED TO FUTURE? I didn't understand the -.5% in exhibit.
	43		Jean Amick		When 24th Ave Bridge closed at start of construction, what do the many bikers do?
			Jean Amick		What do bus riders do in 1st yr of construction when Flyer Stop closed? Alternative route suggestion in SDEIS are not adequate for bus riders to continue on buses.
	55		Jean Amick		New bridge will be 190 feet N of old in W, 160 feet N on East side.
			Jean Amick		How close are the 10 ft high concrete columns atop the pontoons? Then deck is 22 ft above these 10 ft so bridge is 32 ft high off water, plus footage for side rails???
	59		Jean Amick		Portage Bay Viaduct - "north half 4 lanes, south half 6 lanes". How many total lanes?
			Jean Amick		
Exhibit 1-3			Jean Amick		Option A - has ramp designed right through middle of Montlake lid - BAD for peds and bikes if they can't cross without jumping traffic!
Visual Quality & Aesthetics Discipline Repo					
Intro	1		Jean Amick		"on behalf of the communities in proximity" to proposed project. Define: "in proximity" ?
	2		Jean Amick		construction impacts **"temporary"** changes to visual quality and character for up to **4 years**

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Discipline Report Comment Summary

Discipline Report: _____

Report	Page #	Line #'s	Reviewer	Selected Expertise	Comment
	22	4	Jean Amick		Correct: SR520 is visible from locations beyond the limits of the project vicinity.
	26		Jean Amick		Exhibit # 2-19 and 2-20 View from Webster Pt looking SE and looking SW to Arboretum
	57	19	Jean Amick		...park users ... and boaters' views. VERY IMPORTANT
	62	6	Jean Amick		new HOV..ramps might be more visible...WELL, WILL THEY?
	65	15	Jean Amick		**Vividness, intactness, and unity would not change from exisiting levels??? Why not, the roadway will be twice as wide?**
	70	17	Jean Amick		YES - noticeably greater width and ..noticeably greater height of the west approach.
		20	Jean Amick		this is transportation project, the panoramic and scenic views of motorists and transit riders are NOT a goal of this project.
		23	Jean Amick		**The new path under the bridge??? Specifically HOW is this different from the going through a tunnel as it does now?**
	72	12	Jean Amick		Is it six lanes or really 11 (including shoulders and bike.ped) or MORE? It is proposed to be 32 ft off the water. That is only 14 ft higher than existing??
		18	Jean Amick		Floating part will have columns 250 ft apart?
		21	Jean Amick		Changes to quality or character of neighborhood views would be slight to moderate because bridge is an existing element. **NEW BRIDGE WILL BE MORE THAN TWICE AS WIDE AND TWICE AS HIGH AND 100-190 FEET CLOSER TO NORTH (LAURELHURST COMMUNITY)...ERROR TO SAY CHANGES WILL BE SLIGHT FROM ADJACENT HOMES.**
	73	16	Jean Amick		Overall vividness, intactness, and unity for the Lake Washington landscape ..would remain high for all options... **WRONG** when looking at it from the north.
	75	6	Jean Amick		**of bridge? What % increase of light pollution will there be for surrounding neighborhoods? Reading further..**it says the floating bridge will not be illuminated except for navigation safety lights and lighting on the bike/ped path. **Your description of bike**
	77	19	Jean Amick		Sound walls "reduce visual quality for motorists by cutting off views.." THIS IS NOT IMPORTANT. THE LESS THE VIEW THE MORE THE DRIVER WILL CONCENTRATE ON THE ROAD.
	78	LAST PARAGRAPH			PUBLIC ART IN CORRIDOR....ZERO PRIORITY WITH State Budget Crunch. ADD IT WHEN ECONOMY PICKS UP and all the westside mitigation has been implemented. Emphasis Is on safety and mobility for this project.
	79	LAST PARAGRAPH			Design lids to reconnect divided communities...THE MONTLAKE LID HAS A VEHICLE RAMP GOING ACROSS IT...THUS NOT RECONNECTING THE COMMUNITY and thus NOT A LID as defined by WSDOT in the vocabulary terms in the SDEIS

Comment

There is no mention of lights or lighting. Does this mean that all work will be done in the daylight hours and there will be no temporary lights as we now see Sound Transit using at night at Husky Stadium ?

From Jean Amick, jeanseattle@earthlink.net
3008 E Laurelhurst Dr NE, Seattle, 98105
206-525-7065

Cultural resources Union bay

----Original Message-----
From: Judith Thornton <thornj0@comcast.net>
To: SR520Bridge_SDEIS@wsdot.wa.gov
Cc: billandlin@aol.com
Sent: Tue, Apr 13, 2010 10:46 am
Subject: Cultural Resources on Union Bay

TO: Jenifer Young
SR520 Environmental Manager
SR520 Project Office, Suite 520
600 Stewart Street
Seattle, WA 98101
or e-mail
SR520Bridge_SDEIS@wsdot.wa.gov.

Dear Ms. Young:

C-031-103 Thank you for the opportunity to comment on the need to protect valuable archeological sites during the re-building of Highway 520. I am a neighbor on Union Bay who happened to discover an archeological artifact, a mahogany red chert biface, in my garden above Waterway 1 on Union Bay. From this discovery, the Friends of Waterway 1 learned that Waterway 1 and many other locations on Union Bay are important sites of pre-contact historical resources. We are working with archeologists at the University of Washington and Burke Museum, with the Muckleshoot Tribe archeologist, Laura Murphy, and with Washington Department of Natural Resources aquatics archeologist Maurice Murphy to identify and preserve valuable cultural resources. We ask that WSDOT assure similar protection to cultural resources in its plans for Highway 520.

Thank you for your efforts on behalf of the historical and cultural resources of the city.

Judith Thornton
Friends of Waterway 1
and volunteer for Laurelhurst Community Club

cc. Colleen McAlleer,
Laurelhurst Community Club

Discipline Report Comment Summary

Discipline Report: _____

Report	Page #	Line #'s	Reviewer	Selected Expertise	Comment
Cumulative effects Discipline Report					
			McAleer	*Laurelhurst Community Club Mediation Representative*	
C-031-104 *Transportation Goals*	35				*The Vision 2040 calls out that transportation development can occur in a sustainable manner.. Without resulting in deterioration of the environment.*
	37	Lines 31-40			The current Plan A is 8-10 lanes through the Arboretum and Foster Island increasing to 7-9 lanes across Portage Bay to I-5. The replacement of SR520 represents a maximum footprint which is in directly in opposition to Transportation 2040 Draft EIS .
C-031-105 Other Projects	38	Lines 19-39			Attachment 1 titled "Reasonably Foreseeable Future Actions-Land Use Plans or Projects.
					Under the City of Seattle, there are omissions of 4 projects which had been submitted under permit request to City of Seattle DPD (see attached report)
Transpot'n	52	Lines 1-3			Four major projects resulting in over 1,600,000 sqare footage in development within 3.6 miles of the Montlake interchange.
					Traffic studies are flawed in not including these projects which are estimated to increase traffic volumes in excess of 3800 trips daily
					These include permit #s
					#3007521 on 08-03-07 for 400 additional rooms and 1,600,000 square feet
					expansion for Seattle Children's Hospital located 2.0 miles from Montlake Interchange. Additional trips projected daily 1200.

					#3008972 filed amended on 07-29-08-proposed expansion of 105,000 square feet of new retail/restaurant development with new parking garage adding 702 spaces adjacent to NE 45St Viaduct
					Applicant is University Village, located .8 mile from Montlake Interchange
					#3009681 on 5-22-09 proposed additional of 31,000 new retail development and addition of new 350 residential units and 700 new parking stalls
					Filed by QFC, Kroger Co, located .9 miles from Montlake Intersection
					#s 3010260 on 08-17-09, #6203388 on 05-29-09 and # 36223077 on 08-04-09
					Additional recreation facilities including 80,000 indoor square feet for Arena Sports, Indoor outdoor Tennis Courts and Clubhouse, Soccer and ballfields, lighted and North Shore Building #11 25,000 square feet of recreation, office and restaurant and day care
					Total daily users projected to increase :508 trip generations
					Applicant is City of Seattle, located within 3.6 miles of Montlake Interchange
					Considering the omission of the above planned growth which will affect trip generation and travel times along Montlake Blvd, the "Indirect and Cumulative Effects Analysis Discipline Report" is **not accurate** and fails to accurately predict the foreseeable growth in trip generation and increased travel times along Montlake Blvd and through and across East/West on SR520 and north/south travel through the SR520 Interchange at Montlake Blvd. There will be as many as 3800 additional trips daily when these projects are completed before the SR520 bridge is completed.
Transportation					
	Page 52	Lines 2-3	McAleer		Report claims that "no quantifiable, indirect effects were identified" for the transportation analysis. This claim is refuted by lack of inclusion of the above projects which will directly impact the traffic along Montlake Blvd to access SR520 with extra vehicle trips of up to 3800 a day.

C-031-105	Economic	Page 61	Lines 26-31	McAleer		Economic Activity. There is a claim that land use or development patterns would not change. However, for Alternative A without access to south of SR520 (no LWB ramps),the business districts in both Montlake and Madison Park would lack access and suffer an adverse economic effect. Secondly, the University of Washington and businesses north of SR 520 namely, the University Village Shopping Center would be negatively impacted due to adverse traffic congestion. The tax base of the new growth would be curtailed for the City of Seattle by lack of mobility.
C-031-107						In addition, freight could not access SR520 as well in Plan A and L due to the longer travel times and drawbridge delays.
C-031-108	Community	Page 62	Lines 28-36	McAleer		Claims that after construction, the 6 lane alternatives would add to" community cohesion" is not true. Plan A has a freeway ramp over the planned lid which carves up they value of community connectivity. Plan L cuts a large gouge across the Montlake neighborhood and adds 40 feet high massive drawbridge obstruction across neighborhoods and to the Arboretum's viewpoints. Madison Park in all cases is reduced as a walking community be the elevated bridge structures 30 feet in height and excess noise generated, above conversation levels in all 6 lane alternatives.
C-031-109	Social	Page 63	Lines 5-6	McAleer		"Operation of the 6 lane alternative would not change demographics or existing land use patterns". If in Plans A and L, there are no southbound access to Madison Park, Montlake, North Capital Hill and the Arboretum, all traffic is diverted first to the north in a shared ramp, and then turned south back to the neighborhood. This would render the access to all points north and south of SR520 Seattle businesses and residences gridlocked. The effect would be a diversion of businesses, sporting events at the University of Washington and a devaluation of residences which now live in close access to SR 520, particularly in Madison Park, Washington Park, Broadmoor, Shelby Hamlin, Montlake and Laurelhurst.

C-031-110	Public	Page 64	Lines 8-12	M cAleer		Claim that there are no long term effects on public service providers. If the traffic congestion on Montlake Blvd is not improved., Plans A and L offer no plan for improved mobility for the University of Washington Hospital and Seattle Children's Hospital and their staff and emergency vehicles. Having a bascule bridge as an access to SR520 creates a barrie,r and should be eliminated in a new bridge design. Only Plan K with a tunnel under Montlake Blvd can provide for improved travel times and 24 hour access to SR520 without the impingement of a bascule bridge opening.
C-031-111						Metro bus services are also adversely affec ted due to lack of predictable travel times on Montlake Blvd. Plan K offers increases in travel times and the only option which removes the unreliability of a bascule bridge opening for better ridership incentive.
C-031-112	Cultural	page 65	Lines 9-36	McAleer		Impacts to the fishing rights and preservation of the quality of fish environment by the Muckleshoot Tribe must be considered top priority. The salmon runs at this area are protected as endangered species. Plan K with the tunnel preserves fishing in this area by sinking the access to SR520 below in an tunnel. Fishing can then continue as before as fish pass closer to surface waters and they are only maintained under Plan K. Plan A and L cause less opportunity for fishing to to their second bascule bridge interference in the surface waters.
C-031-113						The 6 lane alternatives will be constructed with work bridges which will adversely harm fish habitat, loud pile driving will occur as well as disruptions in water turbidity. The law states that this should be avoided. The tunnel in Plan K can be dropped into place in 48 hours, rather than causing prolonged construction of a second bascule bridge in Plans A and L. Thus plan K is the preferred option.
C-031-114						Recent finding of Muckleshoot archeological artifacts off waterway #1 in Union Bay "mahogany red chert biface" -Care must be taken not to destroy such artifacts in the construction of the 6 lane option.

C-031-115	Recreation	Page 71	Lines 20-36	McAleer		Recreation effects are described in long and short term. All of the 6 Lane options remove parklands in an urban region which adversely affects state residents. Permanent transformation of greenspaces into concrete for vehicles passing through is counter to 4-f regulations and should be avoided . The impacts on neighboring communities will be severe. Trails will be stopped for pedestrians, kayakers , canoes and recreational boats will not have access to Union and Portage Bays. The University of Washington's nationally ranked crew teams may have to re-locate at great cost and inconvenience to students and faculty. Green spaces will be changed into staging areas for construction offering little respite from the projects' 4-8 year impacts.
C-031-116						The permanent removal of parklands also removes a repite area from the intensity of the project and removes habitat for passive recreation such as bird watching. The Arboretum will have difficulty with access and will be enveloped in noise from construction for 4-8 years.
C-031-117						Plan L is especially harmful as it adds a visual intrusion that will be seen and heard on bridge openings in nearby neighborhoods and in the adjacent parks.
C-031-118						Plan K with a lower height profile provides the least visual impact on park users. The clearance height for a kayaker or canoe padeler is 6 feet maximum, so no additional height is needed
		Page 73	Lines 3-5			Recreational users would enjoy better views of Mt Rainier with Bridge design K with its lower profile, rather than a barrier from Plans A or L that cut across the horizon.
			Lines 9-13			Plan K is the only 6-lane design that has a land bridge that will enhance the pedestrian experience in the Arboretum and links best to adjacent bike and pedestrian trails.
C-031-119			Lines 24-26			"Inclusion of Sound walls" is mentioned as a benefit for park users with the 6 lane option here but actually is NOT recommended by WSDOT in the Discipline Report on Sound! This is an inconsistency in the two documents.

C-031-120		Page 75	Lines 17-21			Claims that park users will be better with 6 lanes **is not true.** Connectivity is only better in Option K and noise levels will increase both during construction and permanently since noise walls are NOT called out in this area. Only the ramp removal in all options provide a benefit and this could happen without building any of the 6 lane options.
C-031-121		Page 75	Lines 34-37			Claim that a reduction in 5-7 acres of parkland is a small change. This is not true in densely populated urban communities such as Montlake and North Capital Hill and Portage Bay residents who use the existing park spaces frequently. Any loss of park lands creates a magnified loss in view of the bigger bridge to see and hear among nearby neighborhoods.
C-031-122	Parklands	page 78	Lines 1-4	McAleer		Visual changes states the project "would not produce indirect effects on visual quality and aesthetics because all changes .... Would be confined"
						<u>This statement is false.</u> The profiles of the 6 line options increase the lane widths through Foster Island and the Arboretum from 4 lane to 8-10 lanes, depending upon the design. Plan A class out a 7 lane profile across Portage Bay . The more than doubling of the concrete footprint directly adds a visual blight to The Arboretum, Foster Island trails, Montlake Playfield, Portage Bay trails, Madison Park Public Beach , Union Bay and the Seattle and Queen City Yacht Clubs. The high profiles of Plan A and L completely block out viewsheds of Mt Rainier for nearby residences and the University of Washington Rainier Vista.
						Thus, the permanent visual blight of the 6 lane options of Plans A and especially L should be considered as worst case plans, and Option K is the best solution to avoid those impacts.

C-031-123		Page 76	Lines 17-30	McAleer		Parklands in Seattle are protected under Ordinance 118477 which requires that all plans should minimize harm. All 6 lane options inflict harm to parklands. Plan K offers the mitigation of the best continuous lid over Montlake, as well as the additional building of the land bridge to benefit the users in the Arboretum. Further, Plan K minimizes visual blight and reduces noise by lowering its profile below grade. This option (K) should be considered #1 when mitigating the effects under 4-f and the Seattle Ordinance 118477, especially as it offers the solution closest in proximity to the damage incurred.
C-031-124	Visual	Page 77	Lines 19-27	McAleer		Visual Quality and Aesthetics direct and indirect effects
						Permanent location of the 6 lane option to 100 feet centerline closer to the Laurelhurst neighborhood was left out of the report. This is a significant visual impact to viewsheds and will cause more noise from the structure to residents, especially since the 6 lane options offer no noise mitigation to absorb sound on the north side of the new structure.
C-031-125			Line 33	McAleer		Plan K would have the least adverse visual effect after the berm would be planted and shield visual blight and has a lower bridge profile in height . Thus, it offers the best solution for reducing permanent visual blight. Plan L is the most offensive with the largest bascule bridge span elevated 40 feet over residences, and in full view of park users and residents in 4 adjacent neighborhoods.
C-031-126		Page 80	Lines 18-30	McAleer		To state that the long term presence of a new 6 lane SR520 bridge would not impact visual quality or aesthetics is **not true.**

C-031-126						The profile raised in height from 5-10 feet off the water now to 30 feet in the air permanently destroys the viewsheds of residents and park users, especially in the Arboretum, Madison Park, Laurelhurst, Montlake, The Seattle Yacht Club, The Queen City Yacht Cub and Portage Bay and Roanoke Park as well as in Union Bay. In addition, the increase in width from a 60 foot bridge to 118 feet leaves a permanent concrete footprint where there once was green in Seattle. These open spaces can never be replaced or mitigated in urban neighborhoods. Adding a seventh lane on Portage Bay creates permanent shadowing of recreational and boating facilities on Portage Bay. To state there is "no effect" is erroneous.
	Noise		page 85			
C-031-127				Lines 14-24	McAleer	Noise from construction expected to reach 85-100 weighted decibels ABOVE the normal traffic noise which already is over 60 decibels for the residences that border the site in the Laurelhurst neighborhood. (See attached document #2 of 52 homes that are affected, not including LaurelCrest Lane at the water level below. The additional noise will much greater than existing to the neighborhoods including Madison Park, Portage Bay, Roanoke Park, Montlake, North Capital Hill and make recreational activities at the Queen City Yacht Club, The Seattle Yacht Club and the Arboretum severely impacted. Raising these levels in dense urban residential neighborhoods and scarce open spaces will create unhealthy outcomes. (see attached report about the effects of noise on health- attachment #3)
C-031-128						When bridge moves to the north centerline of 100 feet, plus additional width of 55 feet, plus work barges located north of that. Thus, the CUMULATIVE affects of the noise , both during construction and permanently must be measured in total AND mitigated.

C-031-129			Lines 22-36	McAleer		The statement that **noise effects from traffic within the project area would be similar or slightly less is completely false.** There is NO planned mitigation for residences in Laurelhurst to reduce noise. Only noise walls of 15 feet are in the current WSDOT plan and they are erected only on the south side, bringing ALL of the traffic noise to the north into the residential homes in Laurelhurst as it bounces off the south side and projec ts to the north and upward into residences.
C-031-130		Page 87	Lines 12-18	McAleer		The statement that the 6 lane alternative would **decrease the number of residences exceeding NAC code noise levels is not accurate**. As stated above, the additional width, greater volume of vehicles, higher speeds and closer proximity to residences will INCREASE noises. WSDOT has ONLY offered noise walls as mitigation which have been expressly rejected because the actually carry more noise up to residences in the fishbowl geography of the area and unacceptable visual blight by adjacent neighborhoods,
C-031-131						The no-build scenario bridge would **not** increase noise as it has a smaller footprint, away from residences and slower travel speeds from vehicles. Thus, this statement in the SDEIS is false logic.
Air Quality		Page 88	Air Quality	McAleer		
C-031-132			Lines 4-11			Report states that air emissions and construction processes will not cause a change in the baseline of NAAQS. This cannot be true in 4-8 years of heavy highway construction, there will be adverse changes in air quality from use and emissions heavy equipment, excavation and hauling out waste in addition to maintaining 4 lanes of the current traffic. **The "no impact" is a false** assumption, without a basis in fact.

C-031-133			Lines 25-28			Statement that the project will provide indirect benefits to air quality from an increase rider ship of HOV fails to account that there are still 4 lanes of SOV on the 6 lane option "in addition" to the HOV, thus, as logic follows more vehicles=more emissions=poor air quality surrounding the residents and wildlife near the 6 lane bridge. Adverse air quality effects will be inhaled throughout 300 meters, or 975 feet of the dense residential neighborhoods of Madison Park, Laurelhurst ,Montlake, North Capital Hill, Portage Bay and Roanoke Park, as well as throughout Medina, Hunts Point on the Eastside. **To say there is any improvement in long term air quality is not accurate. Rather, the 6 lane project will result in increase in asthma, coronary heart disease, lung disease and cancers (see Health Assessment Report)**
C-031-134	Greenhouse Gas	Page 93	Lines 35-38	McAleer		Operations of Plans A, K or L "would consume less energy" than the no-build cannot be true-see above. When there are more vehicles using more lanes emitting a carbon footprint, there is more greenhouse gas emitted. So say otherwise because of any reasoning is simply false logic. All gains in more efficient fuels and vehicles benefit the "no build" just as much as the 6 lane build.
	Gas					
C-031-135		Page 97	Lines 34-36			The same statement that the 6 lane bridge will reduce vehicle miles traveled in total and thus reduce greenhouse gasses is again not true as the "no build" also benefits from reduction from tolling penalties, and more efficient vehicles and fuels, and has fewer vehicles capacity.

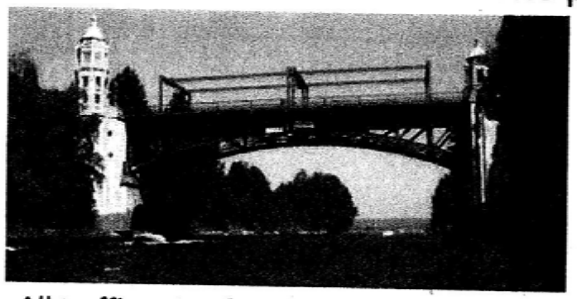
C-031-136		Page 98	Lines 10-13			The 6 lane bridge in Plan A , L or A+ has the worst connectivity to the riders of the Sound Transit Light Rail infrastructure. Only Plan K will offer a reduction in greenhouse gas in the long run as riders benefit from convenient connectivity. Plan K has a tunnel design which greatly reduces emissions from idling vehicles backing on Montlake Blvd, waiting for bascule bridge openings. The tunnel design of Plan K allows vehicles continuous flow to SR520, reducing the carbon footprint over the life of the SR520 bridge.
C-031-137	Water Resources	Page 102	Lines 23-30	McAleer		Construction will adversely affect water quality with an increase in turbidity, pile driving, building of temporary work bridges, operating and staging barges. The statement that there will be an improvement is false. The treatment of storm water will be an improvement in Lake Washington, but the destruction of the natural water purifying ecosystem in affect now will be destroyed in building a 6 lane bridge.
C-031-138		Page 103	Lines 17-32	McAleer		Option K with a lower profile is similar to the current 4 lane bridge. In tracking the actual salmon which are migrating in the summer, they prefer to swim in the cooler water created by the shading of the SR520 bridge. With Global warming on the increase over the next 50 years, this option (K) provides a lower profile with more shading to protect the salmon runs in the future. The shading also has a positive effect in the waters of Union and Portage Bays . It prevents milfoil formation and keeps invasive plants from growing in the water, thus protecting navigable waterways for these salmon runs (as documented by Mike Grady from US US Dept of Fisheries) To create less shade for the salmon runs in Plans A and L with a raised profile will cause more milfoil to grow, more waterlilies to spread and block the passage of migrating salmon. Thus, Plan K is a preferred alternative.

C-031-139		Page 113	Lines 24-29	McAleer	The statement that a higher bridge height on the western side will improve migration of juvenile fish is not fact. Salmon actually follow the shaded areas of the low profile bridge today, to swim in the cooler temperatures as they migrate in the higher lake temperatures in the summers. Global warming will further increase Lake WA temperatures, and a lower bridge profile in Plan K provides a better cooler path for these migrating salmon.
C-031-140	Wildlife	Page 115	Lines 24-26	McAleer	To state that there will be no permanent effects on wildlife is not accurate. There are physical habitats that are eliminated from expanding to a double profile of a 6 lane bridge. More wetlands are gone,green spaces are reduced and noise and turbidity in the waters of Union Bay will cause wildlife to leave this location. It is a loss for citizens and it affects the entire ecosystem. Species such as black crows will thive in a noisy urban environment at the expense of species such as the American bald eagle who inhabit a wide area from Madison Park throughout Laurelhurst and Union Bay for 6 months of the year. Fireworks on July 4th were cancelled in 2007 due to this nesting/noise problem in Union Bay. The 4-8 years of pile driving and building a double footprint will surely causethese protected eagles to leave. It is currently protected under the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act.
C-031-141		Page 118	Lines 1-9	McAleer	**To state that habitat loss will be off set by improvements in noise reduction is completely untrue.** The larger 6 lane bridge will be closer to all wildlife, resulting in more intense noise to their nests, fishing areas and habitat. There is no noise mitigation planned that offers to reduce sound in or nearby the waters by applying techniques such as under bridge accoustical tile to absorb sound. This would be appropriate mitigation, but is not offered.

C-031-142 Geology	Page119	Lines 4-10	McAleer		Soil erosion, landslides and disturbances in the waters during 4-8 years of construction will occur. To state that they are minor is to not consider the effects of pile driving, dredging and the presence of heavy equipment on or near a "vulnerable" structure. Storms with wind gusts over 50 mph occur several times a year as well as wave action that will cause a cumulative effect of the construction bridges, heavy equipment and barges. There will be permanent changes in the lake bed that can effect the shoreline residences throughout the project, and this can affect shoreline wave actions and navigability of the lake and bays for recreational activities, which is not noted.
C-031-143 Navigation	Page 124	Lines 1-6	McAleer	Navigation is affected by the design of a bascule bridges in plans A and L.	
Report prepared by Colleen McAleer 3137 West Laurelhurst Dr NE Seattle WA 98105 206 525-0219					Plan K eliminates use of a second bascule bridge and would allow vehicles to pass above while opening for 2500-3000 recreational and commercial boats per year. Plan K would reduce the greenhouse gasses from these idling vehicles substantially, and allow for easier passage of boats through the Montlake Cut.

C-031
05/26/2011 13:21 PM
C-031-14

The proposed second drawbridge: no help



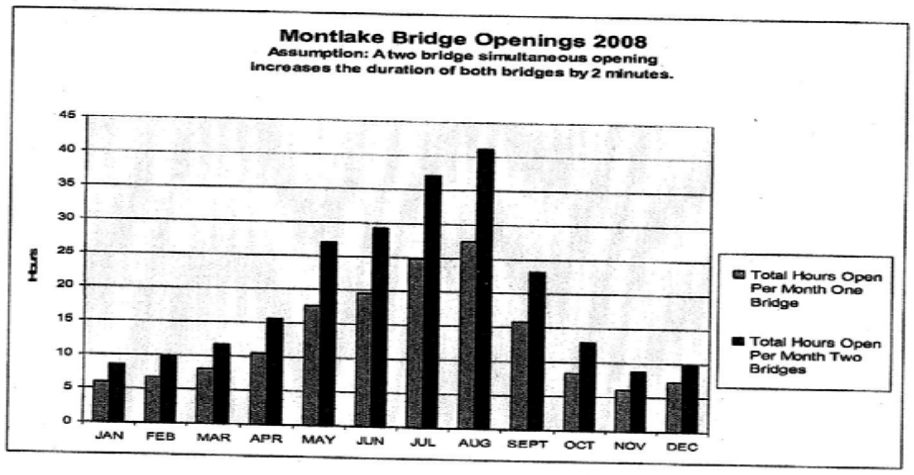
current

-All traffic going from 520 north now must go over the Montlake drawbridge. The bridge opens frequently, causing long traffic backups.

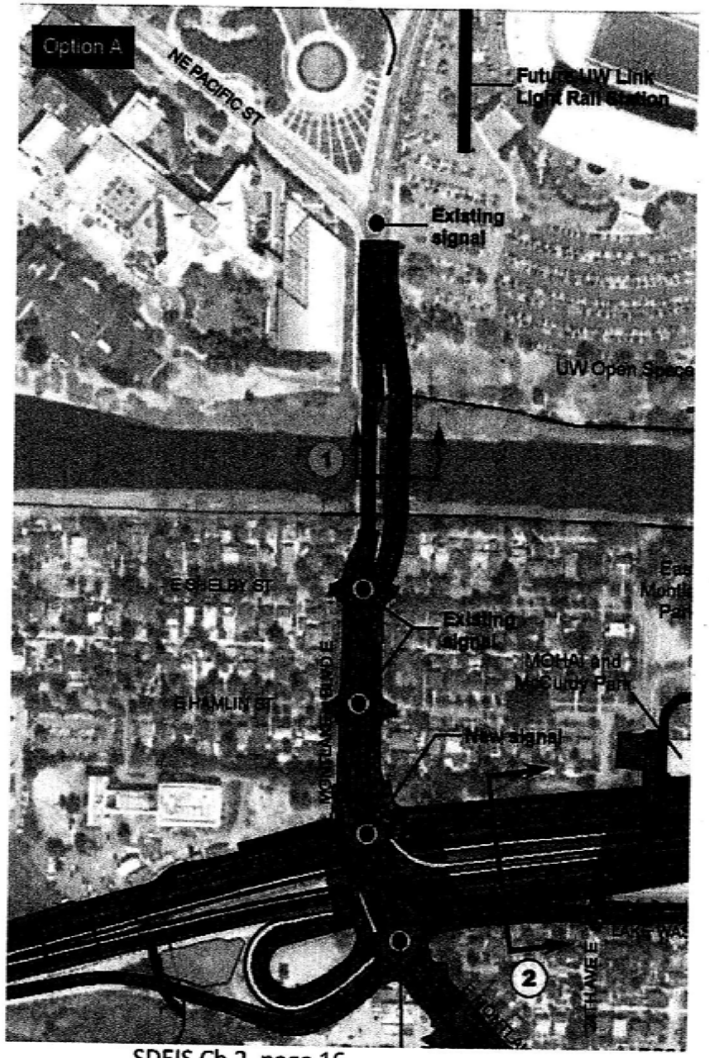
- The proposed 520 A adds a drawbridge just east of the current one. Traffic will still back up each time the bridges open.

- Stopping for a drawbridge makes bus timetables unreliable. Emergency vehicles for UW Hospital must stop and wait.

- A new bridge would detract from the beauty of the historic current bridge.



proposed



SDEIS Ch 2, page 16

Exhibit 17 Bascule Bridge Opening Data from 2008

For Internal Use Only -- 05/26/2011 14:11 PM

From: Brooks, Sandy [mailto:Sandy.Brooks@seattle.gov]
Sent: Wednesday, April 14, 2010 4:23 PM
To: Young, Jenifer (Consultant)
Cc: Hahn, Peter; Brown, Stephanie; McGinn, Mike; Conlin, Richard; Bagshaw, Sally; O'Brien, Mike; Licata, Nick; Godden, Jean; Rasmussen, Tom; Clark, Sally; Harrell, Bruce; Burgess, Tim; Gallagher, Timothy; pres@uw.edu
Subject: ABGC Comments on SR 520 I-5 to Medina: Bridge Replacement and HOV Project SDEIS

Hello Ms. Young,

Attached you'll find comments on the SR 520 I-5 to Medina: Bridge Replacement and HOV Project SDEIS from the Arboretum and Botanical Garden Committee (ABGC), which is charged with oversight of the Washington Park Arboretum.

Please acknowledge receipt of these comments and let me know if you have any questions.

Thank you.

Sandy Brooks
ABGC/Park Board Coordinator
(206) 684-5066
www.seattle.gov/parks/parkboard
"Creating community through people, parks and programs."
www.seattle.gov/parks

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Arboretum and Botanical Garden Committee (ABGC)

Members

Jack Collins, City of Seattle Mayoral appointee
Theresa Doherty, University of Washington
Tim Gallagher, City of Seattle, ABGC Secretary
Sandra Lier, University of Washington, ABGC Vice-chair
Kjris Lund, City of Seattle Mayoral appointee
Paige Miller, Arboretum Foundation
Iain Robertson, University of Washington
Dave Towne, Washington State Governor's appointee
Barbara Wright, Arboretum Foundation, ABGC Chair

April 14, 2010

Jennifer Young, Environmental Manager
SR 520 Project Office
600 Stewart Street, Suite 520
Seattle, WA 98101

RE: The Arboretum and Botanical Garden Committee's Comments to the SR520, I-5 to Medina: Bridge Replacement and HOV Project Supplemental Draft Environmental Impact Statement (SDEIS)

Dear Ms. Young,

The Arboretum and Botanical Garden Committee (ABGC) respectfully submits the following comments as its official response to the SR520, I-5 to Medina: Bridge Replacement and HOV Project SDEIS. Please add these comments to the official record.

Background

C-032-001

The Arboretum and Botanical Garden Committee (ABGC) is comprised of representatives from the City of Seattle, both City staff and citizen representatives, the University of Washington, the Arboretum Foundation, and a representative designated by the Governor for the State of Washington. The ABGC advises the University of Washington, City of Seattle and The Arboretum Foundation on the management and stewardship of the Washington Park Arboretum (hereafter Arboretum) for the benefit of current and future generations.

The Arboretum is a stunning gem of the Seattle Park system, a 230-acre oasis of gently rolling land, bucolic watery islets, and home to the best of the city's wildlife. It provides respite, scenery, recreation, and solace to thousands of visitors in every season of the year. It provides educational and volunteering opportunities to thousands of friends, sightseeing to thousands of visitors, and cultural enrichment in gardening styles and distant ecosystems to those who seek it out. Proposed upgrades to State Route 520 (SR 520) across the north end of the Arboretum threaten to significantly

C-032-001

impact the park for many, many years due to construction, and will impose a base set of permanent adverse impacts once the bridge is completed.

In May 2001, the Seattle City Council, University of Washington Board of Regents, and the Arboretum Foundation Board of Directors approved the Washington Park Arboretum Master Plan, creating a road map for Arboretum improvements over the next 20 years. The Master Plan ensures the Arboretum will effectively fulfill three primary purposes—conservation, recreation, and education—for decades to come. Together, University of Washington Botanic Gardens, Seattle Parks and Recreation, and the Arboretum Foundation are working to implement the Master Plan. Substantial public and private funds have been used to begin implementation of the Master Plan and to improve the Washington State's official Arboretum and visitors' experience to the park. The first Pacific Connection Gardens have been created, the Japanese Garden Gatehouse has been built and the Gateway to Chile Garden is being installed this year. All of these contributions, and much more, will be negatively impacted by the proposed SR 520 expansion project. Complete funding for the implementation of the Master Plan must be considered by WSDOT as a mitigation option due to the significant adverse impacts to the Arboretum as a result of the project.

The Arboretum and Botanical Garden Committee would like to ensure a design for the SR 520 bridge replacement that minimizes harm to the Arboretum and therefore, has adopted Guiding Principles for the SR 520 expansion (see below). In a special February 4, 2010 meeting, the ABGC agreed that "less is better" in all aspects of the SR 520 corridor design. Specifically, less noise, less width, less height, less pollution, less car traffic, and less impact on Lake Washington Boulevard is better.

Guiding Principles

The proposed SR 520 project in and around the Arboretum should:

1. Enhance the Arboretum through the design, construction and operation of SR 520 and the SR 520 I-5 to Medina: Bridge Replacement and HOV Project;
2. Avoid harm to the Arboretum and its collections;
3. Respect the historical, aesthetic, and design integrity of the Park;
4. Fully compensate the Arboretum for loss of property and function if harm is unavoidable;
5. Reduce traffic on Lake Washington Boulevard below levels that exist today on the boulevard between Montlake Boulevard and East Madison Street; and,
6. Preserve and restore the Arboretum as an accessible place of quiet and respite.

Given these guiding principles, the ABGC respectfully submits the following comments in response to the Supplemental Draft Environmental Impact Statement (SDEIS) issued on January 22, 2010:

C-032-002

The Arboretum is a long narrow park located along the bottom and west side of a narrow, north-south running valley drained by a stream that enters Lake Washington at Union Bay close to the current SR 520 off ramps. Lake Washington Boulevard, a historic park boulevard with a 25 mph speed limit, is part of the Olmsted-designed boulevard system for the city and runs along the bottom of the valley for the entire length of the Arboretum. The boulevard was intended to be an integral part of the park experience but traffic that uses the boulevard as an extended on and off ramp for SR 520 results in it having the opposite effect, a negative impact that pervades the Arboretum and park. The majority of traffic entering and leaving SR 520 via Lake Washington Boulevard travels the entire length of the boulevard through the heart of the arboretum. Egress and access to Lake Washington Boulevard from Boyer Street is very difficult. Thus almost all traffic using the park boulevard,18,000 vehicles per day on average, travels the entire length of Lake Washington Boulevard from Madison Street at the park's south end to SR 520 near its northern end. The shape of the valley concentrates rather than disperses noise and air pollution in Washington Park. Lake Washington Boulevard forms

C-032-002 the eastern boundary of the internationally recognized and historic Japanese Garden. A solid timber fence along this boundary minimally reduces, but does not eliminate, traffic noise in the garden rendering a garden intended for quiet contemplative strolling disturbed by constant traffic noise.

C-032-003 • **Adverse impacts that the Arboretum has suffered for nearly 50 years as a result of traffic on SR 520 and Lake Washington Boulevard should not be taken as the base condition from which to assess impacts of new development.** The ABGC requests that the Arboretum's physical nature, educational values, and visitor experience be enhanced by the construction of the SR 520 Bridge Replacement project.

C-032-004 ○ Avoiding the adverse impacts of the bridge on the Arboretum is critical. WSDOT's engineer's and roadway designers must recognize that the Arboretum is not just another City park, but the State's only recognized arboretum that contains valuable, irreplaceable specimen plantings whose lifecycles have been carefully documented through years of curation. If the current environmental laws were in place in the 1960's when SR 520 was built, the roadway would not cut across the Arboretum's precious wetlands and the ramps would not have connected to Lake Washington Boulevard. To the extent that adverse impacts cannot be avoided, these impacts should be minimized as much as possible.

C-032-005 ○ The construction footprint and impact areas within the Arboretum must be clearly delineated and reviewed by the ABGC.

C-032-006 ○ The direct effect of converting Arboretum parkland adjacent to the SR 520 corridor to transportation right-of-way must be fully mitigated.

C-032-007 ○ Design, construction, and impacts of the new SR 520 Bridge should address the potential for increased noise through the Arboretum. The project must be designed and constructed such that noise levels are below the levels experienced today.

C-032-008 ○ Continued and potentially increased noise pollution due to the SR 520 expanded roadway must be addressed and mitigated within the new design. State of the art noise reduction measures should be included in the final design, e.g. quieter pavement. Further modeling analyses are needed in order to understand the effect of noise walls across Foster Island and the trade-off between the impacts of visual blight (with noise walls present) and noise pollution (without noise walls).

C-032-009 ○ Visual impacts of the SR 520 Bridge structure should not detract from the Arboretum. Designing a "signature" bridge does not reduce the visual impact of a concrete and/or steel structure in the heart of the Arboretum.

C-032-010 ○ Public use and access of the Arboretum needs to be maintained during construction. Access includes pedestrian and bicycle connections from the Arboretum, over SR 520 and the Montlake lid and around the campus to Union Bay and Center for Urban Horticulture. Trails and bicycle routes must be kept open as much as safely possible and if closed will be temporarily routed around construction sites to minimize trail closures.

C-032-011 ○ Foster Island is considered an eligible Traditional Cultural Property (TCP). Bridge alignment position and width must be fine tuned so that the SR 520 Bridge crosses between the two historic islands in an effort to minimize any adverse effects to Foster Island.

C-032-012 ○ Complete funding for the implementation of the Master Plan must be considered as a mitigation option due to the significant adverse impacts of the SR 520 expansion to the Arboretum.

C-032-013
- All attempts must be made to avoid harm to the Arboretum and its collections; any adverse impacts to the Arboretum, both during construction and through the long-term operation of the SR 520 facility as it passes through the Arboretum, must be avoided.

C-032-014
  - Keep the project within existing WSDOT right-of-way and minimize any land acquisitions and encroachment into the Arboretum.

C-032-015
  - The height and width of the structure across Foster Island must minimize the visual and noise impacts of the highway structure and maximize the benefits to public access and ecological function across Foster Island.

C-032-016
  - Return any recreation facilities used during construction to preconstruction conditions.

C-032-017
  - Take every precaution to ensure that the Arboretum's plant collections are protected from excessive shading, vibrations, excavations, and damage from heavy equipment and construction.

C-032-018
  - Protect the plant collections within the Arboretum from the long-term impacts of the toxic pollution from the cars travelling on SR 520 across Foster Island and on Lake Washington Boulevard.

C-032-019
  - Monitor and ensure compliance with local noise regulations for construction and equipment operation; noise levels must be regularly monitored and compliance ensured throughout the Arboretum.

C-032-020
  - Enhance and restore riverine wetland in order to improve wildlife habitat and water quality conditions at the Arboretum. An example of such enhancement would include the daylighting and restoration of Arboretum Creek and augmenting its stream flow to encourage the return of fish runs. This type of mitigation near the headwaters of Arboretum Creek is compatible with the Arboretum's Master Plan.

C-032-021
  - Minimize removal of specimen trees in the Arboretum. If this is not possible, replant or replace trees, as instructed by the University of Washington Curation Committee, nearby. Otherwise, the University of Washington Curation Committee will direct where non-native trees should be replaced to enhance the collection.

C-032-022
  - The planter strips located along Lake Washington Boulevard must be preserved.

C-032-023
  - Install landscaping or landscaped buffers to compensate in those areas where buffer zones are being removed or reduced, and where new or relocated traffic lanes would intrude on the character of the Arboretum, most specifically Lake Washington Boulevard.

C-032-024
  - Mitigation needs to maintain the water storage volume of the existing storm water facilities and expansion of seep areas on hill slopes.

C-032-025
- Traffic entering and leaving SR 520 using Lake Washington Boulevard significantly increases the number of cars traveling along the boulevard which makes the boulevard dangerous to cross and adversely affects access to large parts of the Arboretum. The ensuing traffic pollution, noise, and visual distraction also prevents the use of a significant percentage of the total Arboretum for its intended educational and conservation purposes as well as its intended recreational uses. The SR 520 highway is a transportation facility running through the heart of a natural area and arboretum. The Arboretum has been and will continue to be fractured by SR 520 not just through the physical structure but the noise, pollution, and visual intrusion it has created. These impacts destroy the positive physical nature, educational value, and visitor experience of the Arboretum. As mitigation for this damage, and future damage to the park, a percentage of the tolls collected on the main line of SR 520 should be dedicated to improvements in the Arboretum.

C-032-025
- Unavoidable impacts must be mitigated, both those of shorter duration during the construction phase and the long-term impacts of facilitating increased traffic through the Arboretum.

C-032-026
- There should be no direct access to or from SR 520 and Lake Washington Boulevard. The SR 520 access ramps to and from Lake Washington Boulevard have encouraged and facilitated traffic through the Arboretum which resulted in turning a quiet park boulevard into a short-cut for thousand of cars to travel to and from SR 520. This increased traffic through the heart of the Arboretum cuts off the Japanese Garden from the rest of the Arboretum, reduces the air quality due to vehicle emissions, increases noise from traffic, and makes crossing Lake Washington Boulevard unsafe.

  The ABGC wants to ensure that no SR 520 on or off ramps are put into the Arboretum and that Lake Washington Blvd is not used for freeway access and egress by attaching it to any SR 520 ramps. The removal of these ramps and the freeway access from the boulevard are essential to the University's use of the Arboretum as an outdoor classroom and to the integrity of the general public's experience in the park.

C-032-027
  - Because Lake Washington Boulevard has been used as an extension of the on/off ramps to SR 520 for the past 47 years, the Arboretum should be compensated by WSDOT for the use of Lake Washington Boulevard for that period of time.

C-032-028
  - When the original SR 520 was built, federal law did not yet prohibit the use of park land when a prudent or feasible alternative exists and thus the new highway was sited across the north end of the Arboretum. On and off ramps were constructed connecting Lake Washington Boulevard, a park facility, to SR 520; thus using this parkway as the extended on and off ramps to the freeway. With the enactment of Section 4(f), WSDOT must now analyze whether there is a feasible and prudent alternative to placing new ramp facilities in the Arboretum and avoid placing facilities in the park if such alternative exists.

C-032-029
  - Lake Washington Boulevard, a park facility, currently functions as extended on and off ramps for a substantial amount of the traffic going to and from SR 520 on the east side of Seattle. The result is a constructive taking of the park facility for state transportation purposes. WSDOT must analyze whether it can design the SR 520 ramp system to avoid using Lake Washington Boulevard as a ramp access and egress for SR 520 and choose an alternative that avoids such use if it is feasible and prudent to do so.

C-032-030
  - If direct access to and from SR 520 to Lake Washington Boulevard is unavoidable and remains a part of the future project, the Arboretum should be duly compensated for the use of the boulevard in the future.

C-032-031
  - The most recent data from the Seattle Department of Transportation indicates that Lake Washington Boulevard carries 16,100 vehicles.[1] The SDEIS indicates that the ramps to and from Lake Washington Boulevard to SR 520 carry 3,000 vehicles in the AM and PM peak hours. Given 3,000 vehicles during two hours, the total amount of traffic that uses Lake Washington Boulevard exclusively to access SR 520 could be as high as 10,000 vehicles per day. Taken together, these traffic numbers indicate that as much as 62% of the traffic which uses Lake Washington Boulevard is directly related to SR 520. While Lake Washington Boulevard is a park boulevard, it is available for City residents to use as they travel throughout the City. However, this direct use of the boulevard as an access ramp to and from SR 520 is a highway use for which the

[1] Average Annual Daily Traffic (AAWDT) (5-day, 24-hour)

C-032-031 boulevard was never intended. If WSDOT intends to continue to use Lake Washington Boulevard for a highway on and off ramp, then WSDOT must compensate the City annually in the range of $1 - $2.1 million, based on present value and an 8% rate of return, for the use of the property in a proportional share to the percentage of traffic which uses the boulevard to access SR 520.

C-032-032
- If the SR 520 project includes direct access ramps to and from Lake Washington Boulevard to SR 520, additional tolls should be included on these ramps. Tolls should be used as a way of travel demand management to discourage people from using Lake Washington Boulevard to access SR 520. The revenue from these tolls should be dedicated to the Arboretum only. These mitigation funds would help mitigate the impacts of the increased noise, air emissions, and vehicular distraction on the physical nature, educational value, and visitor experience of the Arboretum.

C-032-033
- The increased use of Lake Washington Boulevard, as a result of its connection to SR 520 ramps, has cumulative adverse impacts on the educational and recreational use and quiet enjoyment of the Arboretum which can and should be mitigated through the removal of the ramp connections to Lake Washington Boulevard.

C-032-034
- As mitigation for the current and potential future excessive traffic on Lake Washington Boulevard, traffic calming measures must be implemented on the boulevard.

Thank you for the opportunity to review and comment on the Supplemental Draft Environmental Impact Statement for the I-5 to Medina: Bridge Replacement and HOV Project.

Sincerely,

Barbara Wright

Barbara Wright, Chair and
Members of the Arboretum and Botanical Garden Committee

cc: Mike McGinn, Mayor, City of Seattle
The Honorable Richard Conlin, Chair, Seattle City Council
The Honorable Sally Bagshaw, Seattle City Council
The Honorable Mike O'Brien, Seattle City Council
The Honorable Nick Licata, Seattle City Council
The Honorable Jean Godden, Seattle City Council
The Honorable Tom Rasmussen, Seattle City Council
The Honorable Sally Clark, Seattle City Council
The Honorable Bruce Harrell, Seattle City Council
The Honorable Tim Burgess, Seattle City Council
Mark Emmert, President, University of Washington
Tim Gallagher, Superintendent, Seattle Parks
Peter Hahn, Director, Seattle Department of Transportation
Stephanie Brown, Seattle Department of Transportation

From: Sara Garrettson [mailto:Sara@waroundtable.com]
Sent: Wednesday, April 14, 2010 8:39 AM
To: SR 520 Bridge SDEIS
Cc: Steve Mullin
Subject: 520 SDEIS comments - Washington Roundtable

Attached please find comments from the Washington Roundtable re: the SR 520 SDEIS. I am submitting them on behalf of Roundtable President Steve Mullin. Please let us know if you have any questions. Thank you.

Sara Garrettson
Washington Roundtable
206.623.0180 (p)
sarag@waroundtable.com

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WASHINGTON ROUNDTABLE

Comments on SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT

Submitted by:
Steve Mullin, president, Washington Roundtable
smullin@waroundtable.com
206-623-0180

SR 520, I-5 to Medina: Bridge Replacement and HOV Project

C-033-001 The Washington Roundtable strongly supports Option A with the suboptions listed in the Supplemental Draft Environmental Impact Statement. This option is the same as design Option A+ as recommended to the governor by the Legislative Workgroup in January, 2010.

Adoption of this option will ensure critical safety and commerce concerns are addressed quickly. The cost estimate for this option is within the targeted budget amount for the corridor project and it best addresses the various community, regulatory, treaty and environmental issues. It is clearly the best option to meet the purpose of the project as summarized in the SDEIS, "to improve mobility for people and goods across Lake Washington within the SR 520 corridor from Seattle to Redmond in a manner that is safe, reliable, and cost-effective, while avoiding, minimizing, and/or mitigating impacts on affected neighborhoods and the environment."

The Roundtable understands that a minority of stakeholder groups are interested in a pursuing a replacement bridge with less capacity or, alternatively, limiting the use of the new HOV lanes to transit-only (excluding carpools). The Roundtable would not support either action.

- This SDEIS adds to the analysis of the Draft EIS submitted in 2006. The Draft EIS rejected the four-lane option because it did not adequately address the growing need to move people and goods in the context of projected growth in regional population and commerce. The SDEIS clearly states that traffic congestion impairs the economy. The two HOV lanes included in the six-lane options ease traffic congestion by providing new roadway space to separate transit and 3+ carpools from general traffic.

- Further review of additional options that limit the new HOV lanes to transit-only (and exclude carpools) would be outside the scope of this SDEIS and require additional analysis thereby disrupting the schedule and increasing project risk. The expulsion of carpools from the HOV lane also would eliminate the traffic congestion benefits to the general purpose lanes.

C-033-002 The remaining design life of the Evergreen Point Bridge is currently estimated at 10 to 15 years. A severe storm could cause it to fail even sooner. The Portage Bay and west approach bridges are also vulnerable to collapse in a severe earthquake. The current risk is real and grows daily. The state has an obligation to its citizens to replace the bridge as soon as possible.

C-033-003 A wide variety of stakeholders – including elected officials as well as civic, neighborhood, business, labor and transit interests – have discussed and debated this project for more than 13 years. Safety and commerce concerns demand that the state continues to move forward. The Roundtable strongly urges adoption of Option A with suboptions as the preferred alternative.

From: Melnikoff & Garrison [mailto:melngar@mindspring.com]
Sent: Thursday, April 15, 2010 10:16 PM
To: SR 520 Bridge SDEIS
Subject: FW: FABNIA Comment Letter on WSDOT SR 520 Supplemental EIS
Importance: High

From: Melnikoff & Garrison [mailto:melngar@mindspring.com]
Sent: Thursday, April 15, 2010 9:58 PM
To: 'SDEIS@WSDOT.wa.gov'
Cc: 'anne.preston@kerry.com'; 'Chopp.Frank@leg.wa.gov'; 'Pedersen.Jamie@leg.wa.gov'; 'Murray.Edward@leg.wa.gov'; 'Christine.Gregoire@gov.wa.gov'; 'mike.mcginn@seattle.gov'; 'richard.conlin@Seattle.Gov'; 'sally.bagshaw@seattle.gov'; 'tom.rasmussen@seattle.gov'; 'nick.licata@seattle.gov'; 'jean.godden@seattle.gov'; 'sally.clark@Seattle.gov'; 'bruce.harrell@seattle.gov'; 'tim.burgess@seattle.gov'; 'mike.obrien@seattle.gov'; 'kcexce@kingcounty.gov'; 'larry.gossett@kingcounty.gov'; 'fran@roanokecap.com'; 'ted@thomaslaneassoc.com'; 'pete@delaunay.com'; 'wendy@delaunay.com'; 'carls@huitt-zollars.com'; 'landmarkLLC@earthlink.net'; 'kirkmckinley@yahoo.co'; 'bob.kelley@seattle.gov'
Subject: FABNIA Comment Letter on WSDOT SR 520 Supplemental EIS

Jennifer Young
Environmental Manager
SR 520 Program Office
600 Stewart Street, Suite 520
Seattle,WA 98102

Jennifer,

I am submitting the attached comment letter on the WSDOT SR 520 Supplemental Impact Statement for FABNIA. (The Fuhrman-Boyer Avenue Neighborhood Improvement Association). The letter is signed by Anne Preston, the FABNIA President, who is currently out of town. Please send any response to her at ann.preston@kerry.com.

Can you please confirm that you received this letter?

Thanks, Ron Melnikoff

Cathy Garrison and Ron Melnikoff
Seattle, Washington 98102
melngar@mindspring.com
206-329-3188 H
206-499-4579 C - Cathy

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April 15, 2010

Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart St., Suite 520
Seattle, WA 98101

E:Mail: SR520Bridge_SDEIS@wsdot.wa.gov

Dear Ms.Young:

C-034-001

FABNIA is a community Non Profit organization formed in 1995 to work on traffic and community development issues in the Fuhrman–Boyer Street corridor in the Portage Bay – Roanoke Park and Montlake neighborhoods. SR 520 bisects Fuhrman-Boyer Avenue, Delmar and 10th Avenue East.

We have worked with City of Seattle Parks and Transportation Departments to install street calming traffic circles/ bulb-outs, improve bicycle and walking opportunities on Fuhrman-Boyer Avenue and to improve south Portage Bay's natural area shoreline and its recreational use adjacent to the Montlake playfield.

Land use in Portage Bay - Roanoke Park and nearby parts of the Montlake Community is primarily single family with some multiple housing along Fuhrman-Boyer and Harvard Avenues. Recreational pedestrians, runners, and bicyclists use the neighborhood's residential streets plus the Delmar, Boyer-Fuhrman and Harvard arterials. Our neighborhood is served by Metro route #25. Increased traffic congestion on Harvard and Roanoke Avenues results in part from their access to I-5 and SR 520. Fuhrman-Boyer Avenue also has increased traffic volumes resulting from commuters moving east-west from the U-District, Wallingford, and Eastlake to the SR 520 Montlake interchange. It also has increased traffic from vehicles that avoid the peak hour and weekend traffic congestion that results from the Ship Canal bridge back-ups on the I-5 south bound ramp access to eastbound SR 520.

We previously submitted a set of comprehensive comments in a letter prepared with the Portage Bay Roanoke Park community council in the fall of 2006 on Draft NEPA Environmental Impact Statement (EIS). In the letter we noted that our neighborhood adjacent to SR 520 will have very significant construction and long-term operational impacts. We assume that all comments submitted on the original draft EIS along with those now submitted on the draft supplemental EIS will be reviewed. We assume that they will be incorporated into the final project EIS. The impacts identified in that letter have not substantially changed.

C-034-002

We request that we receive information that will allow us to comment on the Environmental Impact Assessment (EIA) that will be prepared for any 6(f) property acquisition process.

C-034-003

Our concerns on the Supplemental Draft EIS are largely the result of having more time to review the project as well as focusing on option A+ that is likely to be selected as the preferred alternative. Impacts in options L or K-M would affect our neighborhood area in a similar fashion. However, option K-M does include useful additional mitigation in the form of sound reduction pavement. The use of sound reduction pavement along with lighter, less costly and more aesthetic Plexiglas noise walls still deserves consideration. We do not understand why these methods that have proven their viability in European cities cannot be adopted here.

C-034-004

We are disappointed that these revised options do not even include an expanded ramp connection between SR 520 and southbound I-5. This ramp traffic is in part using Fuhrman-Boyer Avenue and other area arterials to avoid the peak hour and weekend traffic Ship Canal I-5 Bridge congestion.

C-034-005

We have also reviewed the recent draft City Consultant Report on SR 520 design options. We applaud the report's inclusion of a city street intersection design in place of the proposed Option A+ intersection design at the nearby SR 520/Montlake Boulevard interchange. The removal of Option A+ slip lane ramps with a traffic light street intersection design will allow pedestrians and bicyclists to safely cross the intersection. It will also allow for a smaller intersection area saving the adjacent grocery store and creation of a larger intersection related lid.

This option may likely reduce traffic speeds through the intersection as well as into or out from SR 520. The report consultant has noted that the intersection generates about 55% SR 520 project corridor traffic. A review of the SR 520 draft Supplemental EIS Transportation Discipline Report (Exhibits 5-3, 5-8 and 5-12) shows that the total or peak traffic volumes in Seattle of SR 520 do not vary greatly between the year 2030 no-build or build alternatives. This being the case the change in intersection design would likely change traffic flow and the peak hour travel time on the Portage Bay Bridge.

C-034-006

With the proposed 6-lane expansion of the SR 520, the westbound traffic will likely back up at the I-5 intersection. There is also a greater likelihood with the Montlake intersection design change that there may be a similar eastbound SR 520 backup into this key intersection. It does not make sense to pay for a 6-lane Portage Bay Bridge expansion that may create a peak hour parking lot. This increase of non-working capacity could also lead to future demands for the widening I-5 and adjacent Seattle arterials. There needs to be a more thorough review of the provision of a 4 lane Portage Bay Bridge. The traffic flow analysis should further demonstrate both the policy and cost effectiveness advantages of having a 4-lane Portage Bay Bridge option.

C-034-006 We would also like to review a cost benefit analysis of replacing the 4 lane Portage Bay Bridge with a 6-lane bridge. We do not understand how the cost of a 6-lane bridge can be justified over that of a 4-lane bridge if the traffic flow forecasts are very similar. We also do not understand how the proposal to add a 7th lane on Portage Bay Bridge meets the 6 lane legislative guidelines.

C-034-007 An increased size of the Portage Bay Bridge will cause greater construction and long-term impacts. These impacts will affect residents living on or near Boyer Avenue, the Queen City Yacht Club, recreational boat users and the wetland and shoreline habitat of South Portage Bay.

C-034-008 The Construction Activities section of the supplemental EIS contains some additional information on construction impacts. However, no specific information is provided on mitigation needed to offset the disruption caused by from the overlapping construction period for replacing SR 520 crossings of 10th Avenue East, Delmar and Boyer Avenues (Supplemental Draft EIS, Chapter 3, Exhibit 3-6). We do not understand how Delmar, Roanoke and 10th Avenue detour traffic and construction vehicle traffic will all be able to use Boyer Avenue. Boyer Avenue will also have temporary construction closures. The condition of the street's pavement will be impacted by the increased traffic that will include heavy construction trucks. Additionally, the neighborhood's METRO route 25 bus service and likely bicycle use will be eliminated or curtailed during the multi-year construction period.

C-034-009 During construction noise levels along Boyer Avenue near SR 520 are shown to exceed 90 db (Supplemental Draft EIS, Chapter 6, Exhibit 6.7-3). There is still no statement in the draft supplemental EIS concerning the need to provide mitigation for any residence sound proofing or vibration damage (Supplemental Draft EIS Noise Discipline Report, page 107).

C-034-010 The supplemental EIS recommends that construction period traffic use 11th Avenue East where it is a steep narrow one way residential street that provides the only access to the Seattle Prep parking garage (Supplemental Draft EIS, Chapter 3, Exhibit 3.2). This route would be both a safety and logistical nightmare. It might be possible to construct a temporary connection across WSDOT owned property on the south side of I-5. This would connect 10th Avenue East and the 11th Avenue intersection of Delmar during the period of the Delmar street closure.

A smaller bridge along with temporary truck construction access directly to SR 520 ramps directly to SR 520 will help reduce the extent of these impacts. This improvement in construction vehicle access would also be enhanced through the applicable use of barges on Portage Bay. There must be some areas in Portage Bay where the water would be deep enough to use this method.

C-034-011

A smaller 4-lane bridge will also less intrude into the unique wetland habitat of South Portage Bay. Our organization has worked for several years to improve the shoreline of South Portage Bay adjacent to the Montlake Playfield as well as street end parks located adjacent to Fuhrman-Boyer Avenue corridor. We have worked with the Seattle Department of Parks and Recreation restoring this habitat. This work effort has included removing Nutria and replacing invasive flora with native plants. We have also installed a shoreline nature trail and a kayak boat launch at the Montlake Playfield.

C-034-012

It is stated in Supplemental EIS Attachment 6Draft Section 4(f)/6(f) Evaluation on page 33 that construction and long-term impacts should not impact recreational activities within the Seattle Parks owned section of south Portage Bay. Part of this area would be acquired for the proposed 6 lane Portage Bay Bridge. This is not the case as canoeists and kayakers now have access to use these waters. It also refers to a 2005 Seattle Parks Document (Vegetation Management for Seattle Parks Viewpoints) that notes that invasive plants and overgrown vegetation restrict the views toward Portage Bay. This is no longer the situation as view blocking invasive plants have been cleared from the western section of the shoreline including the kayak area. Visitors to the Montlake Playfield may take their canoes, kayaks or rubber rafts under the bridge area to reach several street end parks and larger City owned parks along the nearby ship canal.

C-034-013

The construction activities and their associated dust and noise will impact beavers, herons, eagles and other native animals that now use the adjacent south Portage Bay wetlands and wooded shoreline. It will also deny or limit shoreline recreational uses. Restoration meeting 4(f) requirements will be required to return this unique habitat to its current state.

C-034-014

FABNIA requests that the applicable sections of the SR 520 final EIS and 4(F) documents include the following three mitigation commitments for both unavoidable short term construction impacts and long term operational impacts.

(1) The development of a park for the area under and adjacent to SR 520 from Delmar to the Portage Bay shoreline has been discussed with WSDOT representatives. The park can also include any stormwater treatment wetlands if provided at the shoreline. It needs to include the Frolund residential property that will be acquired for temporary bridge construction.

C-034-015

(2) Post-construction wildlife and plant restoration will be necessary in the South Portage Bay wetlands and its adjacent shoreline.

C-034-016

(3) Funding needs to be included to help complete the FABNIA and Seattle Department of Transportation developed plan for traffic calming on Fuhrman-Boyer Avenue. Funding should include street intersection traffic calming measures such as traffic circles and bulbouts.

C-034-017 The extent of this needed mitigation could be reduced with the construction of a 4-lane SR 520 section between I-5 and the Montlake interchange.

Sincerely,

Anne Preston

President
FABNIA (The Fuhrman-Boyer Avenue Improvement Association)

-----Original Message-----
From: Anita Bowers [mailto:anita_m_bowers@hotmail.com]
Sent: Thursday, April 15, 2010 10:25 PM
To: SR 520 Bridge SDEIS
Subject: Montlake and the SDEIS

Jennifer Young:
Environmental Manager
SR 520 Program Office
600 Stewart St., Suite 520
Seattle, WA 98101

Dear Ms. Young:

C-035-001 As you know, the Montlake Community Council has actively participated in the SR520 replacement process beginning before the Trans Lake Washington Study began. We have continued this involvement through the development of the Pacific Street Interchange plan that our neighborhood endorsed. We participated in the Seattle Local Impact Committee, the mediation process and now the SDEIS process that evaluates three alternatives Plan K with the M variations, Plan A and its sub option and Plan L.

Our community has sponsored numerous public meetings and forums to assess community views on the alternatives. We have attended dozens of technical working committee meetings sponsored by WSDOT. Volunteers have worked tirelessly to keep informed on project developments and to share their views with all of the members of our neighborhood through regular monthly meetings and through special meetings. Our active membership has contributed articles in both the paper and online version of our Montlake Flyer. We have worked in good faith with WSDOT to develop alternatives that support regional mobility goals for the 520 corridor and that respect the natural and human environment of the Montlake Neighborhood.

C-035-002 We have also actively supported and participated in the work of the Coalition for a Sustainable 520. Their comments to you have been thoroughly reviewed by our transportation committee. We support them all. The Coalition supported Plan K and more recently the modification to it called Plan M. Their recommendation to study a lower impact four-lane design with tolling is critical. We agree with their thoughtful recommendations.

C-035-003 We have been very concerned that the EIS process has been subverted by announcements of the unofficial selection of Plan A+. The Legislative Working Committee announced its preferred alternative recommendation before the SDEIS process was complete. The study of Plan M, a less costly alternative to Plan K with fewer wetlands impacts, was abruptly concluded before the thorough, objective analysis of its feasibility was made. Moreover, we have no information on the details of Plan A+ to make a thoughtful determination of the suitability of this plan for our neighborhood.

C-035-004 There are some very real concerns about the divisive affect this alternative will have on reuniting our neighborhood because of the size of the interchange and the dehumanized lid environment that contains ramps, roads and vehicle trenches. We are not clear on the traffic estimates but even minor modifications will have enormous consequences for all or part of our neighborhood. Estimates in Plan A and A+ of the increase in traffic on East Lake Washington Blvd are but one example.

C-035-005 A book, Montlake, An Urban Eden was written about our neighborhood. Montlake is surrounded by parks from Foster Island to North Capitol Hill. This string of parks is linked together to form a continuous green space enjoyed by our neighborhood. Yet Plan A and A+ threatens to degrade this network and to remove the opportunity to improve the connections between them. The integrity of the historic Montlake Bridge is a symbol of our neighborhood and is threatened in Plan A and A+ along with the bike and pedestrian corridor so popular with our residents. This bridge is both a gateway to our community and to the University of Washington and the experience of viewing it or crossing it must not be disturbed. The importance of protecting the view corridor of the Montlake Bridge equates to the University of Washington¹s protected status of the Rainier Vista in our opinion.

C-035-006 Finally, we are concerned that the SDEIS does not evaluate a four-lane alternative financed and managed by tolls that would avoid most of these impacts. We are concerned that the study of Plan M was abruptly and arbitrarily halted. We are concerned that the EIS process has become irrelevant as the state has apparently made its decision.

We look forward to sharing with you our thoughts and will continue play an active role in whatever form this takes.

Respectfully yours,

Anita Bowers
President
Montlake Community Council
2421 East Roanoke Street
Seattle, WA 98112

Jonathan Dubman
2014 E Calhoun St.
Seattle, WA 98112

April 15, 2010

Jennifer Young:

C-036-001 The Montlake Community Council has actively participated in every planning process related to SR 520. Our constructive engagement with WSDOT led to the development of the Pacific Street Interchange plan, which our neighborhood endorsed. We participated in the Local Impact Committee co-sponsored by WSDOT and the City of Seattle, then the Stakeholder Advisory Committee, the ESSB 6099 mediation process and now this SDEIS process.

Our community has sponsored numerous public meetings and forums to assess community views on the alternatives. We have attended dozens of executive, advisory and technical committee meetings sponsored by WSDOT. Volunteers have worked tirelessly to keep informed on project developments and to share their views with all of the members of our neighborhood through regular monthly meetings and through special meetings. Our active membership has contributed articles in both the paper and online version of our Montlake Flyer. We have worked in good faith with WSDOT to develop alternatives that support regional mobility goals for the 520 corridor and that respect the natural and human environment of the Montlake Neighborhood.

We have also actively supported and participated in the work of the Coalition for a Sustainable 520. Their comments to you have been thoroughly reviewed by our transportation committee. We support them all. The Coalition supported Plan K and more recently the modification to it called Plan M. Their recommendation to study a lower impact four-lane design with tolling is critical. We agree with their thoughtful recommendations.

C-036-002 We have been very concerned that the EIS process has been subverted by announcements of a quasi-official selection of Plan A+. The SR 520 Legislative Workgroup announced its preferred alternative recommendation before this SDEIS was issued, and the common assumption in the Washington State Legislature appeared to be that their decision was a meaningful one. The study of Plan M, an much less costly alternative to Plan K with lower construction impacts and potentially lower overall environmental impacts, was abruptly concluded before a thorough, objective analysis of its feasibility could be done. There appears to have been haste to terminate this process despite clear messages that have been delivered along that way that none of the Plan A variants was acceptable to our community.

C-036-003 There are deep and widespread concerns about the divisive effect the “A suboption” (or “A+” or any of the A plans) will have on this historic residential neighborhood, because of the size of the interchange and a dehumanized lid environment that contains ramps, roads and vehicle trenches. The traffic volume on Lake Washington Blvd. is of great concern not just to the Arboretum, and not just to the many Montlake neighbors along that street, but to all in our community and in the city who desire to access the Washington Park Arboretum via any means other than driving there. The only bicycle route heading south from Burke-Gilman trail, the UW rail station, and the proposed SR 520 regional trail goes through alleys in Montlake. We have an opportunity with the portion of Lake Washington Blvd. near SR 520 to realign the highway and reconfigure its right of way, perhaps to provide bicycle lanes along LWB, or a separated bicycle facility; perhaps using a pair of one-way couplets that might be more

C-036-003 pedestrian friendly. There are many possibilities, but what is shown in this DSEIS is a plan that does not work for our community; we do not believe that Plan A (without LWB ramps) will be built because of its traffic flaws; Meanwhile, the alternative has highway ramps running through the middle of it. Neither is an acceptable plan for our community.

C-036-004 Montlake is surrounded by parks from Foster Island to North Capitol Hill. This string of parks was once linked together to form a continuous green space enjoyed by all; the construction of SR 520 took jewels out of this emerald necklace. Yet the A plans theaten to further degrade this open space network and to miss this historic opportunity to restore connections between them.

C-036-005 Meanwhile, the very essence of our community, the historic Montlake Bridge, the symbol of our neighborhood – the views of it, and from it – and of the historic ship canal, the very special elements that make our community what it is, are all threatened in the A plans. The bike and pedestrian corridor so critical to accessing the University and its future rail station from the south are jeopardized by the giant interchange

The existing bridge is both a gateway to our community and to the University of Washington and the experience of viewing it or crossing it must not be disturbed. The importance of protecting the view corridor for the Montlake Bridge equates with the University of Washington's protection of the Rainier Vista view corridor.

C-036-006 We would like to see options evaluated that do not affect the vicinity of the Montlake Bridge and do not construct any new drawbridges in the corridor. We would like to see options evaluated that do not contain any slip ramps, that minimize the walk distance from bus to rail at the UW for both local and regional buses, that limit the traffic in front of residences on Lake Washington Blvd., that use tolling creatively to manage traffic, that incorporate a southbound HOV lane on Montlake Blvd. from approximately 45th St. to approximately Pacific St. for transit reliability and emergency vehicle access, that have less than 7 and preferably 5 or 4 lanes across Portage Bay, and that restore the access to buses traveling between downtown and the Eastside, and that allow for the addition of light rail without reconstructing the bridge or its approaches.

Finally, we want to see the full and fair evaluation of both a four-lane alternative and a four-lane plus dedicated transit alternative that use congestion pricing and other tools to manage travel demand on all of the lanes that vehicles are allowed to use, thus potentially avoiding the need for separate HOV lanes, with all the attendant costs and impacts, which are, as many are pointing out, very significant.

Thank you for the opportunity to comment. We look forward to participating in the next phase of this process.

Respectfully yours,

Jonathan Dubman
board member, Montlake Community Council
chair of SR 520 Committee

in consultation with Rob Wilkinson, SR 520 Committee, and Anita Bowers, President of the Montlake Community Council

From: Paige Miller [mailto:PMiller@arboretumfoundation.org]
Sent: Thursday, April 15, 2010 8:00 PM
To: SR 520 Bridge SDEIS (2)
Cc: Young, Jenifer (Consultant); Barbara Wright; Susan Black; seattlebelchers@comcast.net; Kathleen Pierce; Cheryl dos Remedios
Subject: The Arboretum Foundation's Comments on the SR520 SDEIS

The Arboretum Foundation's formal comments on the SR520 SDEIS are hereby submitted in the attachment to this email. We appreciate the extension of the deadline for all public comment to April 15th which allowed us the opportunity to review this extensive document and to prepare our comments.

Paige Miller

Paige Miller
Executive Director
Arboretum Foundation
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The Arboretum Foundation's Comments on SR 520, I-5 to Medina: Bridge Replacement and HOV Project Supplemental Draft Environmental Impact Statement (SDEIS) *(Issued 01/2010)* 04/15/2010

Table of Contents

C-037-001

Introduction

The Arboretum Foundation's Key Issues

Comment Organization

Transportation Act
I. Lake Washington Boulevard and Section 4(f) Analysis
II. WSDOT Peninsula and Section 4(f) Analysis

Historic and Cultural Resources Acts
I. Area of Potential Effect (APE) Definition
II. National Historic Rules and Procedures (NHPA) Section 106 Comments

National Environmental Policy Act (NEPA)
I. NEPA requirements and Lake Washington Boulevard
II. Wetlands Classification
III. Air Pollution
IV. Noise
V. Views and Aesthetics
VI. Shading
VII. Waterfront Trail blockages and conversions
VIII. Habitat Destruction

Traffic Modeling and High Capacity Transit Options
I. High Capacity Transit
II. WSDOT Traffic Modeling

Mitigation
Summary of Specific Planning Requests
Inaccurate Statements and Analysis Included in the SDEIS
Appendices (1-14)

C-037-001

Introduction

The Washington Park Arboretum is the State of Washington's only official arboretum and is a stunning gem of the Seattle Park system, a 230-acre oasis of gently rolling land, bucolic watery islets, and home to rare plant collections, cultural and historic assets, and diverse wildlife. The Arboretum provides respite, scenery, recreation, and solace to thousands of visitors in every season of the year. It provides educational and volunteering opportunities to thousands of friends, sightseeing to thousands of visitors, and cultural enrichment in gardening styles and distant ecosystems. A major purpose of the Arboretum Foundation is to preserve and enhance the outstanding qualities of the park, including the plant collections, recreation opportunities, educational opportunities, and physical assets that are prized by residents of Seattle, the King County, Washington State, and the national and international arboretum community.

In May 2001, the Seattle City Council approved the long-range Master Plan for the Washington Park Arboretum, creating a road map for Arboretum improvements over the next 20 years. The Master Plan ensures the Washington Park Arboretum will effectively fulfill three primary purposes—conservation, recreation and education—for decades to come. Together, the University of Washington Botanic Gardens, Seattle Parks and Recreation and the Arboretum Foundation are working to implement the Master Plan and enhance visitors' experiences. Substantial public and private funds have been invested to begin implementation of the Master Plan and enhance visitors' experience to the park. The first Pacific Connection Gardens have been created, the Japanese Garden Gatehouse has been built and the Gateway to Chile Garden is being installed this year. All of these investments, and much of the Arboretum's existing assets, will be significantly and negatively impacted by the proposed State Route 520 (SR 520) expansion project. The Arboretum Foundation is focusing its efforts on advocating for an "environmentally preferable (SR 520) alternative" that protects the Arboretum from harm.

The Arboretum Foundation understands that WSDOT must prepare a Final EIS and respond to the public and agency comments received on the draft (and supplemental draft). The Arboretum Foundation believes that there are significant environmental impacts and multiple environmental concerns that were not adequately evaluated in the DEIS or SDEIS and that would require a new SEPA/NEPA review process if they are not addressed in the Final EIS. Furthermore, since the EIS is intended to disclose the effects of a project at a stage when decision-making can still be shaped by the environmental analysis and by the comments of agency, tribal, and public reviewers, the **Arboretum Foundation would like to state clearly that Options K, L and A (and Option A+) significantly and adversely impact the Arboretum. In this document, we will elaborate on the reasons these are not reasonable options for the SR 520 expansion.**

Proposed upgrades to SR 520 across the north end of the Arboretum threaten significant adverse impacts to the whole Park for many, many years. The Arboretum Foundation's Board of Directors has approved the following five guiding principles.

1. Avoid harm to the Arboretum and its collections.
2. Preserve and restore Arboretum as an accessible place of quiet and respite.
3. Respect the historical, aesthetic, and design integrity of the Park.
4. Design improvements to promote health, safety, recreation and education in the Arboretum.
5. Fully compensate the Arboretum for loss of property and function if harm is unavoidable.

These five principles reflect the purposes and interests of the Arboretum Foundation. They also echo similar statements made by the Foundation's partners—the University of Washington, Seattle Department of Parks and Recreation—and the Arboretum and Botanical Garden Committee (ABGC), the governing board of the Washington Park Arboretum.

C-037-001 **The Arboretum Foundation's Key Issues**

The Washington Park Arboretum is a regional treasure and resource for our citizens and needs to be valued and protected. The new SR 520 Bridge will have significant adverse impacts on the Arboretum—every effort needs to be made to reduce those impacts and to enhance the Arboretum.

C-037-002 The impacts on the Arboretum can be minimized in three key ways:

1. **Reduce the traffic on Lake Washington Blvd to 4,000 cars per day; the amount of traffic the Olmsted Brothers designed it for.**

C-037-003 2. **Minimize the width of the bridge across Foster Island and the wetlands to reduce the impacts and the amount of land taken.**

C-037-004 3. **Provide for good bicycle and pedestrian connections in the Arboretum across the new roadway and to the community.**

C-037-005 To achieve these goals we:

1) **Request that WSDOT eliminate from all options the SR 520 ramps connecting directly to Lake Washington Blvd.** Lake Washington Blvd. is a park road and its use as a long on and off ramp to the highway puts a continuous stream of traffic through the park that severely damages pedestrian safety and the quiet enjoyment of much of the Arboretum, especially places adjacent to the road like the Japanese Garden. As described more fully below, the Arboretum Foundation believes that the Lake Washington Blvd. ramps are inconsistent with the park purpose of the boulevard and that such use is inconsistent with section 4(f).

C-037-006 2) **Request that WSDOT thoroughly analyze a 4-lane bridge with tolls and enhanced transit.** Federal law (section 4(f)) requires that highway projects avoid taking park land if there is a feasible and prudent alternative and requires that the State perform a thorough study of alternatives to find one that avoids or minimizes the taking of park land. While the SDEIS carefully documents the many acres of Seattle parks that will be taken, it has not analyzed the feasibility of alternatives designed to minimize the taking of park land all along the corridor, including the Arboretum wetlands and Foster Island. For that reason the SDEIS is inadequate. The section 4(f) analysis in the Final EIS must evaluate a 4 lane, tolled bridge alternative as well as options that both include and do not include the direct SR 520 ramp connections to Lake Washington Boulevard.

C-037-007 3) **Request that WSDOT minimize the noise and visual blight in the Arboretum and improve bike/pedestrian connectivity.** Current highway traffic across Foster Island and onto Lake Washington Blvd. has severe noise impacts on the Arboretum. All options, including Option A+, will impose even more noise, but the SDEIS makes clear that the State plans for **no** noise mitigation in the Arboretum. Further, WSDOT has not presented any information to help determine what the differing noise impacts would be of a higher vs. a lower bridge across Foster Island, nor have they modeled the differing visual impacts of the current options and how these work with the alternative bike/pedestrian connections. The Final EIS must evaluate these noise impacts and additional mitigation measures, including the changes resulting from different bridge heights.

C-037-008 4) **Request that WSDOT perform an accurate traffic study and model the traffic around the Arboretum to identify the measures that could be taken to manage traffic flow if the Lake Washington Blvd. ramps were removed.** The narrow area of the traffic analysis contained in the SDEIS is inadequate. The traffic analysis in the Final EIS must at a minimum include Madison St. up through the intersection with 23rd Ave. E. and the

C-037-008

23rd/24th/Montlake corridor. Studies of how to accommodate and prioritize Metro bus service on this corridor to improve service reliability must be conducted. These studies could include bus lanes and/or queue jump traffic light signalization. As noted elsewhere, the traffic analysis must also include traffic flows on Lake Washington Blvd., with and without the proposed SR 520 on ramps (See Appendix 2 for more details).

C-037-009

5) **Request that WSDOT make the new roadway light-rail ready when it is built, so that the Arboretum does not incur further damage from construction to widen the bridge at a later date.** The City of Seattle's consultant (Nelson/Nygaard) has concluded that Option A+ is not designed to accommodate light rail. It is too narrow and its pontoons have neither the load-bearing capacity nor stability to carry light rail. That means that future light rail could only be built by adding more width to the roadway. The roadway needs to be built to accommodate light rail within 6-lanes so that we can avoid adding more lane width in the future and tearing up the Arboretum yet again during a future construction project in 10-20 years.

C-037-010

6) **Request that the SDEIS' defined Area of Potential Effect (APE) be expanded to consider the Arboretum.** The Area of Potential Effects is the area within which an undertaking may directly or indirectly cause changes in the character or use of historic properties. The APE definition in the SDEIS is inadequate, because if fails to include the Arboretum, the Lake Washington Blvd. ramps, and other important properties. The APE in the Final EIS must be expanded to include these areas, and the related environmental analysis must be updated to reflect the impacts on the resources located within this larger area.

C-037-011

7) **Request that the full impact of the current options on fish and wildlife habitats in Arboretum Creek, which will be adversely impacted by the excessive traffic use of Lake Washington Boulevard, be properly evaluated.** These impacts should be addressed in the Final EIS.

C-037-012

8) **Request that WSDOT focus on avoidance of damage to the environment rather than mitigation.** However, if mitigation for damage is necessary, funding to the Washington Park Arboretum's Master Plan is a mitigation measure that the Arboretum Foundation would endorse.

Our Arboretum is 75 years old. It is an irreplaceable treasure. Please continue to be vigilant in your efforts to preserve and protect it.

C-037-013

Comment organization
Comments in this document have been arranged to reflect discipline areas contained within the SDEIS presented to us. These areas will be presented and reviewed in the following order: Topic, Findings, and Discussion.

Transportation Act

I. Topic:
The SDEIS does not adequately identify and analyze feasible and prudent alternatives to minimize harm to Washington Park Arboretum, as required by Section 4(f) of the 1966 Transportation Act.

Finding:
There are feasible and prudent alternatives that were not evaluated in the SDEIS including:

- Option A with adequate traffic analysis to mitigate impacts.
- A 4-lane option with a **tolled** roadway and enhanced transit option.
- A 6-lane roadway option with high capacity transit **(HCT)** in place.

All of these alternatives should be evaluated in the Final EIS, including the required 4(f) analysis.

Discussion:
The SDEIS document does not analyze impacts of the bridge expansion on Lake Washington Boulevard (LWB); an historic, cultural, education and recreation resource.
Section 4(f) of the Transportation Act of 1966 and federal regulations prohibit the Federal Highway Administration (FHWA) and state DOTs from approving a project or program that uses land from a significant public park, recreation area, wildlife or waterfowl refuge, or historic site without a determination that:

1. There is no feasible and prudent avoidance alternative to the use of the land; and
2. The project includes all possible planning to minimize harm to the property resulting from such use. (23 CFR 774)

The SDEIS fails to identify LWB as a historic and recreational resource, and thus fails to analyze whether there are feasible and prudent alternatives to the direct connection of LWB to SR 520. This direct ramp connection significantly increases car traffic on the boulevard, which causes adverse impacts on the park and is inconsistent with the requirements of Section 4(f). LWB is an Olmsted-designed park road and its use as a long on and off ramp to the highway currently puts a continuous stream of traffic through the park that severely damages pedestrian safety and the quiet enjoyment of much of the Arboretum. This stream of traffic will increase significantly if any of the current design options are implemented (See Appendix 10 for details).

The SDEIS DOES NOT evaluate a 4-lane alternative with tolls, a 6-lane option that is built to accommodate high capacity transit, or a correctly evaluated alternative without ramps, all of which would have less impact on the Washington Park Arboretum. New ramps will bring far more traffic to the boulevard than it was originally designed to carry, thus creating very direct and specific impacts to the cultural and historic resources.

There will be a significant decrease in traffic demand with a 4-lane **tolled** roadway and enhanced transit will absorb traffic, but the SDEIS has failed to analyze the feasibility and prudence of such options. In order to comply with 4(f) regulations this type of roadway should be evaluated

C-037-014 in the 4(f) analysis in the Final EIS. Furthermore, Option A without connecting ramps to Lake Washington Boulevard, as presented in the SDEIS, was not adequately evaluated under 4(f). The traffic analysis did not include looking at traffic improvements on the 23rd/24th/Madison corridor, at the Madison and 23rd intersection, along Madison to Lake Washington Boulevard and further south of Madison.

With the creation of new LWB ramps as proposed in all but one of the SDEIS options, Section 4(f) is again an issue. The construction of the new ramps attached to LWB will in effect become elongated ramps within the park and be a direct violation of Section 4(f), because WSDOT's own alternatives show that there are feasible and prudent alternatives that do not require this direct ramp connection to SR 520. WSDOT must accurately identify that the new ramps will be in direct conflict with 4(f) regulation and that there is a prudent alternative (See Appendix 5 for more details).

If the LWB ramps are included in the final project, traffic calming measures that would discourage or divert traffic on LWB should be evaluated as part of the Final EIS mitigation and might include elements such as improved turn traffic signal on 23rd and Madison and enhancement of 23rd as a major city arterial (See Appendices 2 and 5 for more details).

C-037-015 The SDEIS also states that "No permanent loss in total park area would result from the proposed 6-Lane Alternative…. (because) adverse effects on recreational lands would be mitigated as consistent with applicable requirements." The Arboretum is unique *because* of its size, collections and continuity, not simply because it is a park. The Arboretum Foundation does not want the focus of the SDEIS placed on mitigation of land lost, but rather on *avoidance* of taking land unnecessarily (See Appendices 8 and 13 for more details).

II. Topic:

C-037-016 **The SDEIS fails to analyze WSDOT property in the SR 520 corridor that is currently used as a park, in accordance with section 4(f) of the Department of Transportation Act; and Section 106 of the National Historic Preservation Act (NHPA) because it is a landfill and a potential archeological site.**

Finding:

The SDEIS does not identify and evaluate a WSDOT-owned parcel as a Section 4(f) resource. This land is currently used and managed as park land and will continue to do so in the future, and therefore this land should be considered "taken" from park use under the Section 4(f) of the Transportation Act of 1966.

Discussion:

Adjacent to LWB is a WSDOT-owned parcel that forms a peninsula extending into Union Bay and is enclosed by the LWB ramps. This area is commonly known as the WSDOT Peninsula (also known as the "Miller Street Landfill"), and although the public perceives this land to be part of the Arboretum, it is actually part of the existing WSDOT right-of-way for SR 520. The City of Seattle and WSDOT have a formal agreement that divides maintenance responsibilities for the peninsula between Seattle and the State. The agreement holds that, while the State allows Seattle to use and maintain portions of the property for park purposes, the property remains within WSDOT ownership and must be relinquished within 90 days if WSDOT needs it for transportation purposes. The City wishes to enhance this area further in conjunction with the implementation of the Washington Park Arboretum master plan. The Arboretum

C-037-016

Foundation argues that since this piece of land has been used as a park, and actively maintained that way for the past 45 years, it should be deemed a 4(f) resource and be evaluated as such in the Final EIS. Regardless of the SR 520 option chosen, or how the land is deeded, the peninsula area must continue to be used as park land and properly protected per section 4(f) and Section 106.

The federal appellate court decision of Stewart Park and Reserve Coalition Inc. v. Slater, 352 F.3d 545 (2nd Cir. 2003) holds that land acquired for transportation purposes can become a 4(f) resource by permissive interim use, where the land is managed as parkland for more than 30 years. Here, the WSDOT Peninsula/Miller Street Landfill has been managed as part of the Arboretum by the City of Seattle and others for more than 45 years. As a result, this land should be included as a 4(f) resource and be analyzed as such in the Final EIS.

The Arboretum Foundation would also like to stress that WSDOT consider that adverse effects, as defined by Section 106, may include reasonably foreseeable effects caused by an undertaking that may occur later in time or be farther removed in distance or be cumulative, such as traffic increases on LWB, and would like this evaluation to be completed in the Final EIS. The Arboretum Foundation would like to be included in negotiations regarding any mitigation of impacts on the WSDOT Peninsula/Miller Street Landfill.

C-037-017

Historic and Cultural Resources Act

III. Topic: The SDEIS fails to include the entire Arboretum within the defined Area of Potential Effect (APE) as required by the Historic Preservation Act.

Findings:
WSDOT fails to consider the interplay of the ***Geographic Area****,* ***Scale and Nature of the Undertaking,*** *and* ***Effects*** *throughout the entire Arboretum as required by* **Section 106 of the National Historic Preservation Act (NHPA)**. *This must be corrected in the Final EIS if the document is to be adequate.*

Discussion:
Section 36 CFR 800.16(d), of the National Historic Preservation Act states that the Area of Potential Effects is the area within which an undertaking may directly or indirectly cause changes in the character or use of historic properties. The Arboretum, as discussed below, includes numerous historic areas. Moreover, it is one property with continuous use by educators, visitors, recreationists, historians, programs and maintenance plans. A portion of the park cannot sustain impacts that the whole does not sustain. For example, noise impacts from the proposed action will impact areas of the Arboretum far south of the area currently defined as the APE. Pollution impacts, habitat degradation, and traffic impacts will be felt throughout the park. These impacts are not considered in the SDEIS due to WSDOT's limited defined area of the APE (See Appendices 4 and 7 for more details). This must be corrected in the Final EIS, the APE must be drawn more broadly, and the impacts in this larger area must be evaluated and mitigated.

IV. Topic: Section 106 applications for the whole of the Arboretum are not accurately reviewed in the SDEIS.

Findings:

C-037-017

Proposed actions threaten historic and cultural resources within the Arboretum that are eligible for listing on the National Register of Historic Places (NCRP), and the SDEIS does not identify these sites or evaluate the potential impacts to them. This inadequacy must be corrected in the FEIS.

Discussion:
The whole Arboretum and specific areas of the Arboretum are eligible for the NHRP (National Historic Rules and Procedures) and are APE sites due to potential archeological resources. The Washington Park Arboretum is unique; it is Washington State's only recognized arboretum, designed by the nationally significant named Landscape Architect, the Olmsted Brothers, and is a part of their body of work. Virtually all structures and features in the Arboretum are eligible for national historic register standing. Arboretum collections are of international significance. The Japanese Garden, threatened with impacts from LWB now qualifies as a Traditional Cultural Landscape (TCL). Foster Island also qualifies as a TCL because of Native American use over many centuries. Loss of land within the Arboretum cannot be mitigated by adding parkland elsewhere.

Section 106 of the National Historic Preservation Act requires review of project effects on archaeological sites, historic buildings, culturally important landscapes and sites, and cultural places of tribal groups. When viewed as a cultural resource, potential adverse effects on the Arboretum include changes in the character of the parks use and the introduction of visual or audible elements that diminish the integrity of the Arboretum's significant historic features. These adverse effects must be identified for the whole of the Arboretum in the Final EIS.

The *whole* Arboretum is a cultural resource and eligible for the National Register of Historic Places (NRHP) under:

- Criterion A (for its association with events that have made a significant contribution to the broad patterns of our history, including the Alaska-Yukon-Pacific Exposition, the development of the University of Washington, the work of the WPA, and the development of the parks system in Seattle);
- Criterion C (as the work of a master for its design by the noted Olmsted Brothers, as well as the many talented designers and architects who contributed to its multiple designed features); and
- Criterion D because of its potential to contribute information important to history including the archaeological site Foster Island, which has already been designated eligible for the NRHP.

Properties with traditional religious and cultural importance to a distinct cultural group, such as a Native American tribe, are eligible for the National Register. The Arboretum contains known ceremonial sites, traditional homes of a particular cultural group (Duwamish longhouse near Arboretum Creek), sites, buildings, structures and objects that are significant in American history, architecture, archaeology. A list of such resources includes LWB, the Gatehouse/Stone Cottage, the Holmdahl Rockery, the stone bridges and Arboretum Creek pond, the Japanese Garden, Wilcox bridge, the Barn, Arboretum Drive, Azalea Way, the former horserace course, the Woodland Garden, Rhododendron Glen, the Lookout/Gazebo and the Pinetum.

Potential adverse effects on these cultural and historic sites include changes in the character of the parks use and the introduction of visual or audible elements that diminish the integrity of the Arboretum's significant historic features. These adverse effects must be identified for the whole of the Arboretum in the FEIS. However, WSDOT postponed significance testing until additional

C-037-017 information on potential effects due to construction and development were determined. As part of the Section 106 process, WSDOT must consult with the Department of Archaeology and Historic Preservation (DAHP) to assure that significant cultural resources are identified, and to obtain DAHP's formal opinion on the property's significance and the impact of the agency's proposed action upon the property. **It should be noted that Section 106 requires that effects on significant cultural resources be considered during the public environmental review process. This was not done.**

C-037-018

National Environmental Policy Act

V. Topic: **The SDEIS fails to analyze the effects of the project on the entire Arboretum, including Lake Washington Boulevard, as required by the National Environmental Policy Act (NEPA).**

Finding:
The SDEIS improperly confines its impact analysis to the roadway right of way due to improper and inadequate APE area designation. This must be corrected in the Final EIS if it is to be considered adequate.

Discussion:
The WSDOT must evaluate:

1. Adverse effects that cannot be mitigated
2. Irreversible decisions made, or irretrievable resources used for building
3. Tradeoffs between the short-term use of environmental resources and long-term benefits from the project

(See Appendix 13 for more details)

C-037-019

VI. Topic: Wetlands classifications and full impact identification are not adequately evaluated in the SDEIS.

Findings:
The SDEIS misclassifies the wetlands at the north end of the Arboretum, and does not fully evaluate impacts nor assess mitigations. This must be corrected in the Final EIS.

Discussion:
The current proposal involves a 6-lane highway that will be considerably wider and higher than the existing corridor across the wetlands and islands of the Arboretum. The conversions of the Arboretum properties and trail adjacent to the existing SR 520 will include filling of wetlands and the removal of mature trees. Vegetation along the corridor will be removed in 30- to 60-foot-wide swaths to accommodate the work bridges. Subsequent construction of the permanent new west approach bridges would further compound these effects.

The SDEIS states that the wetlands within the Arboretum are Category II and III but the Arboretum Foundation believes that the wetlands within the Arboretum area also include Category I wetlands, not just II and III as reported in the SDEIS. Wetlands within the Arboretum include Category I wetland because they represent a unique or rare wetland type, contain ecological attributes that are impossible to replace within a human lifetime and provide a high level of functions. These are considered the highest quality wetlands on the lake and have long been a protected urban resource for education, wildlife viewing and recreational enjoyment (See Appendices 3 and 14 for more details).

C-037-020

VII. Topic: Air Pollution in the Arboretum was not properly evaluated in the SDEIS, nor did the SDEIS provide evidence that the proposed option will meet conformity requirements.

Findings:
WSDOT has not verified that the planned transportation projects will not cause or contribute to a violation of the federal standards for CO. WSDOT has also failed to analyze all of the air quality impacts resulting from the project, including traffic on local streets and intersections. This must be addressed in the Final EIS.

Discussion:
Because SR 520 will be a major transportation project located in a maintenance area for CO, it is subject to transportation conformity requirements. Conformity means that transportation activities will not produce new air quality violations, or worsen existing violations.

While the SDEIS is very specific about air quality requirements in the traffic corridor, there is no mention of the collections in the Arboretum and how they will be impacted by the degrading air quality, not only from the expanded SR 520 roadway but also from idling cars on LWB that are cueing up for on or off ramps to SR 520. The Final EIS must properly evaluate the impact of degrading air quality on the Arboretum collections and historical structures from cars on SR 520 and increased traffic on LWB using best available science. This applies to intersections and CO levels as well.

Acidic air pollutants are well-known to degrade historic structures throughout the world. There is no discussion of this effect of the proposed expansion or its construction period on the Arboretum historic structures (See Appendices 6 and 12 for more details).

C-037-021

VIII. Topic: Noise levels were not properly monitored in the Arboretum or along Lake Washington Boulevard as required by federal noise abatement criteria.

Findings:
Proper noise readings were not taken on Foster Island and WSDOT did not consider noise from LWB along its length or within the Arboretum. In the FEIS, WSDOT must properly evaluate noise readings throughout an enlarged APE that includes the entire Arboretum, provide projection data regarding noise levels with varying bridge heights, and must calculate noise impacts on the Arboretum without the use of noise walls.

Discussion:
The Federal Highway Administration (FHWA) has established very specific noise abatement criteria (NAC) for new highway projects. It is likely that these criteria will be exceeded and visitors' experiences negatively impacted in many areas within the Arboretum as a result of increased levels of noise associated with the SR 520 Bridge expansion. Currently the highest sound levels measured along the SR 520 corridor were: near Montlake Boulevard, along LWB, and at the SR 520 access ramps. Noise readings were not made along the full length of LWB in the Arboretum.

Potential mitigations for excess noise include noise walls. However, noise walls have been excluded from the proposed options because they did not meet "reasonableness" criteria.

C-037-021

WSDOT acknowledged that noise walls would significantly reduce the impact of noise but that they would forgo them due to excessive cost. Thus, WSDOT must calculate noise impact on the Arboretum without the noise walls.

The Arboretum Foundation also urges WSDOT to evaluate Quiet Pavement as a mitigation option and for possible inclusion in any design option. WSDOT must also monitor and ensure compliance with local noise regulations for construction and equipment operation (See Appendix 7 for more details).

C-037-022

IX. Topic: Alternative visual impacts from bridge design heights have not been modeled and no artist program has been considered for improving the aesthetic impact of the bridge.

Findings:
Visuals or modeling of alternative bridge heights have not been available from WSDOT for public consideration. No analysis has been completed for discussion as required by the National Environmental Policy Act. The effects of the current bridge options are negative; however, no enhancement program has been proposed to improve aesthetic impacts.

Discussion:
In Option A+ the highway main line provides 15 -18 feet of clearance above the crossing of the Arboretum Waterfront Trail on Foster Island, approximately 10 feet higher than the present structure. The highway would become a more dominant and noticeable feature, causing a negative visual impact in this area of the Arboretum and would negatively affect the visual environment for trail and park users. The Final EIS must recognize the negative effects of a more prominent roadway and bridge structure on Foster Island, while also recognizing that the permanent removal of the LWB ramps and R.H. Thomson Expressway ramps would remove visual clutter and improve views to and from the park over the long term. (See Appendices 1, 8 and 10 for more information.)

Landscape architects, landscape historians, and artists should be included early and throughout the design process. A public art program should be established to ensure the visual and cultural integrity of the entire 520 bridge replacement project, and to help ensure context-sensitive design. The funding level should be consistent with the 0.5% for the Arts Programs in the State, and it should be managed by a local arts agency with significant transportation experience, such as 4Culture, City of Seattle's Office of Arts & Cultural Affairs or Sound Transit STArt. The managing arts agency should be designated and the hiring of design team artist(s) should proceed with urgency. Context sensitive design can also help to mitigate project impacts.

C-037-023

X. Topic: The SDEIS does not include appropriate data and consideration of the adverse impacts of shading on fish and wildlife.

Findings:
The SDEIS does not evaluate the impacts on fish and wildlife of a narrower 4-lane tolled bridge, which is generally preferred for the preservation of existing fish habitat. Nor does it adequately evaluate the wider 6-lane options, which vary in height above the water. As a result, the public is unable to properly evaluate the options and their impacts on fish and wildlife. These impacts must be evaluated in the FEIS.

C-037-023

Discussion:
Shading of the aquatic region leads to degradation of the resource. Shading by the bridge over shallow, near-shore habitats, in the Arboretum, will have greater potential effects than shading in the deeper, open lake environment. The near shore generally provides areas of greater habitat complexity to support a diverse biological community. Therefore, increased shading in these areas would have a greater potential to affect a variety of species, and alter fish behavior or habitat use. While the SDEIS states that studies are still inconclusive, the Arboretum Foundation would like clarification about the impacts of shading on vegetation and near-shore habitats before any option is chosen. The Arboretum Foundation believes that a roadway that is narrower and lower would have less negative impact than a higher, wider bridge.

C-037-024

XI. Topic: The SDIES does not include sufficient information regarding blockage and conversion of the Waterfront Trail, both during and after the bridge expansion.

Findings:
The extent of the conversion is unknown, pending environmental review and the selection of the preferred alternative. No review opportunity is available. The SDEIS is inadequate to decision-making. This must be addressed in the Final EIS.

Discussion:
Portions of the Arboretum Waterfront Trail will be closed continuously during construction for 30 to 54 months, limiting access to Foster Island and blocking a regional trail linkage. Other portions of the Arboretum Waterfront Trail will be converted because of the expansion of the SR 520 right-of-way through the Arboretum.

This project will create a conversion at two previously funded projects for the Waterfront Trail (#66-037D and #85-9036D): the Land and Water Conservation Fund (LWCF) to the City of Seattle and the University of Washington and the Aquatic Lands Enhancement Account (ALEA) by the Washington Department of Natural Resources (DNR) which was awarded to the City for reconstruction of the boardwalk trail and installation of interpretive signs. The LWCF grant set of criteria must be met per the federal requirements. The ALEA grant was awarded for recreational facilities associated with a navigable waterway. This situation creates two conversions on the same property, and therefore WSDOT must find replacement property that will satisfy both grant programs' requirements. Replacement property must be located on a navigable waterway and meet the recreational needs for both the City of Seattle and University of Washington (See Appendix 11 for details).

C-037-025

XII. Topic: The SDEIS does not adequately evaluate adverse impacts to the fish and wildlife habitats in Arboretum Creek that result from excessive traffic use of Lake Washington Boulevard and project construction.

Findings:
Restoration of habitat – a City of Seattle goal – is hampered by the SDEIS' lack of analysis of traffic growth on Lake Washington Boulevard or of impacts during construction. This analysis should be included in the FEIS. Moreover, LWB should be returned to its design capacity of 4,000 cars per day and the habitat allowed to regenerate. This can only be accomplished by the removal of the LWB ramps.

C-037-025

Discussion

Arboretum Creek parallels LWB from the Japanese Garden Pond on the south to the lake where its estuary helps to form the wetlands there. Endangered species including sockeye salmon and trout can be found in Arboretum Creek but not upstream of its lower reaches due to man-made barriers and excessive pollution and sedimentation. The fish habitats encompassing Marsh Island and Foster Island are naturally vegetated and areas that provide cover for juvenile salmon passing through the lake on their way to Puget Sound. The Montlake Cut is the only entrance and exit for anadromous fish migrating to and from Lake Washington (see Appendix 14 for more information).

Moreover, vegetation clearing associated with construction work bridges will involve removing several large trees in and near the Arboretum. These trees provide habitat for eagles, raptors, songbirds and waterfowl. Beaver dams will also be impacted by this project.

Due to the limited APE designation in the SDEIS, negative impacts of traffic growth on LWB and SR 520 construction on these fragile fish and wildlife ecosystems were not assessed. In the Final EIS, the APE must be expanded and adequate evaluations performed.

C-037-026

High Occupancy Transit Options and Traffic Modeling

XIII. Topic: The SDEIS does not evaluate the feasibility of including High Capacity Transit (HCT) or light rail within the proposed design.

The Arboretum Foundation, at this writing, supports initiatives for High Capacity Transit to be included in the proposed action and for the Final EIS to review a new, more environmentally friendly alternative to better address traffic needs in the future.

Findings:

Although there is significant public and legislative support for including HCT on SR 520 at some future date within the life span of the proposed new bridge, WSDOT did not evaluate the feasibility of adding HCT to the current design options. Nor did WSDOT evaluate impacts to the Arboretum or other areas within the APE if the new bridge must be enlarged in order to accommodate HCT. This must be addressed in the Final EIS.

Discussion:

Washington State Senate Committee on Transportation passed legislation (ESSB 6099) in the 2007 Regular Session which requires that the bridge be convertible to High Capacity Transit and this has not been analyzed properly as required. The Arboretum Foundation supports a High Capacity Traffic option for two significant reasons:

1. Transit is likely to reduce the traffic/transportation counts along Lake Washington Boulevard, thus assisting in achieving the return to the design traffic load of 4000 cars per day for Lake Washington Boulevard; and
2. Widening and retrofitting the new bridge for HCT in 10 to 20 years or more will result in untenable and avoidable harm to the collections, wetlands, and the programs of the Arboretum. We must think in far longer terms than a 20, even 50 year horizon because a tree's life is 100 years. If transit is "added at a later time" all the impacts of the current project will be repeated.

C-037-026

The Final EIS must properly identify and evaluate the impact of HCT lanes and/or light rail on the width of the bridge, and the potential for these additions to the roadway to protect the environment and species within the Arboretum due to decreased SOV usage.

The Arboretum Foundation understands that WSDOT must prepare a new SDEIS when there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impact. While we have been told by WSDOT that Option A+ may not require another SDEIS to be prepared because the modifications are considered by them to be 'minor'; WSDOT states that the Transit Option has too many alterations in the roadway to be considered within the existing SDEIS and that a new SDEIS would be required to pursue this option. Clearly, WSDOT does not want to take the time or the money to create a new SDEIS to review a more environmentally friendly option. There is another option that would work with the environment and will suit the transportation needs, it simply does not exist in the current SDEIS and therefore, a new SDEIS must be created that evaluates more environmentally acceptable alternatives, or they must be evaluated in the Final EIS.

C-037-027

XIV. Topic: The WSDOT traffic modeling, that all of the options are based upon, is not accurate.

Findings:
The traffic analysis' performed in the SDEIS are based on old modeling methods and data which makes the WSDOT traffic projections irrelevant.

Discussion:
WSDOT cannot base their traffic projections on obsolete traffic modeling. The SDEIS is insufficient without proper traffic modeling and without the review of added capacity in the form of HOT and/or light rail. This must be addressed in the Final EIS.

The Arboretum Foundations representatives have spoken to numerous professionals in the traffic modeling field about the traffic modeling performed for WSDOT in the SDEIS. The clear conclusion of these professionals has been that the modeling is not accurate, that input data used was out of date, that the program used does not take into consideration many of the variables that make this traffic corridor unique and finally, the modeling did not extend south of the corridor to include LWB, Madison at 23rd or beyond.

This flawed traffic modeling makes any sound decisions about options impossible. Until the environmental analysis is able to reveal accurate traffic modeling throughout the full APE and beyond, a final option cannot be chosen.

C-037-028

Mitigation

For mitigation of impacts that cannot be avoided, the Arboretum Foundation, as well as the owners and managers of the Washington Park Arboretum, look to the 2001 City Council and UW Regents approved Master Plan for guidance. We have included a brief summary of our current concerns and requests regarding mitigation.

- Our first priority is completion of the Washington Park Arboretum's Master Plan projects, including replacing 4000 square feet of office area lost due to state acquisition of the MOHAI property.
- Design enhancements can dovetail with mitigations for impacts, such as daylighting Arboretum Creek, and making habitat enhancements as part of the highway's water quality projects is highly encouraged.
- Owner and public participation is needed to address the many cumulative effects of wetland conversion and loss. Mitigation should therefore include increased participation of non-governmental organizations, such as the Arboretum Foundation, and other stakeholders in restoration efforts. The Arboretum Foundation further requests to be included in working with WSDOT, the City of Seattle, the University of Washington, the National Park Service, and the Recreation and Conservation Office to identify appropriate replacement land for park property permanently acquired.
- There must also be consultation among WSDOT, FHWA, the SHPO, the Arboretum Foundation, ABGC, the City of Seattle, the UW and interested Tribes to determine appropriate mitigation for any potential adverse effect on Foster Island, a presumed TCP, and on LWB, from the SR 520 ramps all the way to Madison Street.
- Mitigation must be made for the long term impacts of the toxic pollution created by cars on SR 520 and LWB to the valuable plant collections and historic structures.
- We seek to daylight, restore and enhance Arboretum Creek and its tributaries and develop infrastructure to enhance summer low stream flows for fish.
- Potential adverse effects to a potential archaeological site on Foster Island must be avoided by using Ground Penetrating Radar to identify subsurface cultural features. The area is known to have been an above-ground burial site for natives prior to colonization by Europeans. A longhouse possibly occupied the banks of Arboretum Creek. Where and when this longhouse existed must be properly evaluated and recorded.
- Public use and access of the Arboretum must be maintained during construction.
- A public art program should be established for mitigation of visual impacts from the entire project. This should be funded on a par with other .5% for the Arts Programs in the State, even though WSDOT has no such legislation supporting this type of visual mitigation.
- The direct effect of converting nearly 3 acres of Arboretum parkland adjacent to the SR 520 corridor to transportation right-of-way must be fully mitigated.
- Because quieter pavement has not been demonstrated to meet all FHWA and WSDOT avoidance and minimization requirements in tests performed in Washington State, it cannot be considered as noise mitigation under WSDOT and FHWA criteria. The decision to build sound walls depends on neighborhood interest, the findings of the Noise Discipline Report (WSDOT 2009c), and WSDOT's reasonability and feasibility determinations. These two options must be further evaluated and consultation must occur with the Arboretum Foundation, ABGC and the City of Seattle over their use.

C-037-028

- The planter strips located along LWB are considered recreation facilities; they must be preserved.
- Install landscaping or landscaped buffers to compensate in those areas where buffer zones are being removed or reduced, and where new or relocated traffic lanes would intrude on the character of a historic district or the settings of individual historic properties. This will include consideration of LWB through the length of the Arboretum.
- Complete enhancement and restoration of the riverine wetland is required. These mitigation activities are compatible with the Arboretum's Master Plan.
- Restoration of approximately 1.09 acres of riparian wetlands near the headwaters of Arboretum Creek is also a priority.
- Mitigation needs to maintain the water storage volume of the existing storm water facility and expand seep areas on the hill slope.
- Identification of 0.88 acre of enhancement activities is a potential mitigation measure for land losses on Foster Island.
- Shoreline restoration opportunities were identified in the Initial Aquatic Mitigation Report and must be fully mitigated.
- After the ROD has been recorded, the Arboretum Foundation requests that WSDOT work with us to develop the engineering design for the project, including additional detail on project phasing, construction staging, construction techniques and the development of more specific designs for mitigation measures, documented in project permit applications.

C-037-029

Summary of Specific Planning Requests

The Arboretum Foundation has prepared a summary of a number of our specific comments and planning requests. This summary includes comments and requests previously made in other sections of this document and its appendices.

- The former Miller Street Landfill, Foster Island, the areas along Arboretum Creek that may have had a longhouse present and the whole of the Arboretum per Section 106 of the National Historic Preservation Act (NHPA) must be evaluated for significant cultural resources before an option is approved and certainly before all licensing, permitting, and funding decisions are completed.
- The Arboretum Foundation requests that Section 106 consultations begin with regards to the whole of the Arboretum, including the WSDOT Peninsula. The Area of Potential Effect (APE) must be expanded to include the Arboretum and the adjacent Lake Washington Boulevard.
- WSDOT must consult with the Department of Archaeology and Historic Preservation to assure that significant cultural resources are identified throughout the Arboretum, and to obtain DAHP's formal opinion on the impact of the proposed option upon the Arboretum. WSDOT has not evaluated the whole of the Arboretum, its Archeological and Historical significance and how increased traffic on SR 520 AND LWB will impact these areas. This must be completed as part of the Final EIS.

C-037-030
- Staging areas appear to be very destructive to trees, habitat and wildlife. Clear delineation of the areas to be used and a visual depiction of what they would look like are requested for the Final EIS.

C-037-031
- The Arboretum Foundation formally requests that all of these studies be completed and included in the Final EIS and be made publicly available before a ROD is issued.

C-037-032
- The SDEIS fails to evaluate a 4-lane tolled option, the addition of ramps, and the 4(f) implications and does not specify that LWB is a historic and recreation resource that would be harmed by the increase in car traffic on the boulevard. WSDOT must evaluate a 4 lane tolled option and the optional LWB ramps as part of the 4(f) analysis in the Final EIS, and it should identify that the new ramps will be in direct conflict with 4(f) regulations because there is a prudent and feasible alternative.

C-037-033
- The whole Arboretum must be included in the Area of Potential Effect (APE).

C-037-034
- As a cultural resource, adverse effects on the Arboretum include changes in the character of the parks use and the introduction of visual or audible elements that diminish the integrity of the Arboretum. These adverse effects must be identified for the whole of the Arboretum in the Final EIS, and mitigation should focus on avoidance first and THEN on proper mitigation to address project impacts.

C-037-035
- The Final EIS must not include the option for creating interim connections to the existing LWB ramps from Montlake. The addition of these ramps is unacceptable and will cause significant adverse impacts on the Arboretum.
- The Final EIS must include full disclosure of the impact on the Arboretum of the LWB ramp option, specifically what mature trees will be removed along the east side of LWB.

C-037-036
- Foster Island should be considered eligible for the NRHP as an archaeological site, and further archeological investigation must be included in the Final EIS before a final SR 520 option is chosen and construction begins.

C-037-037
- Regardless of the SR 520 option chosen, the WSDOT peninsula area must continue to be used as park land and properly protected per Section 106.
- Additional fieldwork is necessary to substantiate the WSDOT peninsula's historic significance.
- Section 106 of the National Historic Preservation Act (NHPA) requires that all federal agencies consider significant cultural resources as part of all licensing, permitting, and funding decisions.
- WSDOT must consult with the Department of Archaeology and Historic Preservation (DAHP) to assure that significant cultural resources are identified, and to obtain DAHP's formal opinion on the property's significance and the impact of the agency's proposed action upon the property. ***It should be noted that Section 106 requires that effects on significant cultural resources be considered during the public environmental review process.*** The Arboretum Foundation objects to the fact that this area has not been properly evaluated prior to the public review process. The fieldwork necessary to substantiate its historic significance has not been completed. This work must be completed as part of the Final EIS and before an option can be chosen.
- WSDOT must consider that adverse effects, as defined by Section 106, may include reasonably foreseeable effects that may occur later in time or be farther removed in distance or be cumulative, such as traffic increases on LWB, and would like this evaluation to be completed in the Final EIS.
- The Arboretum Foundation would like to be included in negotiations regarding any mitigation relating to the former Miller Street Landfill.

C-037-038
- The width of the bridge must be kept to a minimum.

C-037-039
- The SDEIS states that the wetlands within the Arboretum are Category II and III but the Arboretum Foundation believes that the wetlands within the Arboretum area also include Category I wetlands, not just II and III as reported in the SDEIS. These wetlands must be reevaluated for the Final EIS.

C-037-040
- The Final EIS must recognize that because of their proximity to Seattle, the Arboretum, and the UW, the wetlands provide social values through opportunities for both educational and recreational use.

C-037-041
- WSDOT must make every effort to complete the project over Foster Island in one phase in order to reduce the cumulative impact of construction on wetlands.

C-037-042
- The Arboretum must be properly mitigated for wetland loss, not only direct but indirect affects due to prolonged shading.

C-037-043
- Minimize pile driving near the Broadmoor eagle pair nest site during the early part of the bald eagle nesting season when the birds are most sensitive to disturbance (Jan. 1 to Aug. 15, but most susceptible to noise from Feb 1 - May 1).
- Avoid or minimize effects on the beaver lodge near Foster Island during construction.
- Limit construction clearing to minimal area needed.

C-037-044
- Return portions of any recreation facilities used during construction to preconstruction conditions.

C-037-045
- Minimize removal of specimen trees in the Arboretum. If this is not possible, replant or replace trees nearby.
- Move trees and other vegetation from the Arboretum and save or replant to mitigate effects to vegetation that is removed to accommodate the new structures and detour bridge.

C-037-046
- Construction activities along LWB would require clearing, grading, and paving activities where the new ramps would transition to the local roadway. This must all be repaired and returned to existing or better condition.

C-037-047
- The SDEIS must properly evaluate the impact of degrading air quality on the Arboretum collections and historical structures from cars on SR 520 and increased traffic on LWB. Specific standards for park areas must be used as baseline measures and the full length of LWB must be evaluated in the Final EIS.
- WSDOT must verify that the planned transportation projects will not cause or contribute to a violation of the federal standards for CO.
- WSDOT must also analyze the most congested intersections in the Arboretum and demonstrate that CO levels will be below CO standards after the project is in operation.

C-037-048
- The full noise impacts on the Arboretum must be measured along the length of LWB and into the park itself.
- The Final EIS must make explicitly clear that the Arboretum park experience will be significantly impacted by greater levels of noise associated with SR 520 Bridge.
- Additional suggestions must be made and mitigation measures included in the Final EIS to address the areas with the highest sound levels (SR 520 near Montlake Boulevard, along LWB, and at the SR 520 access ramps) other than noise walls which have been excluded because they did not meet reasonableness criteria.
- Quiet Pavement should continue to be evaluated as a mitigation option and possibly included into any design option.
- WSDOT must calculate noise impact on the Arboretum without the noise walls. WSDOT acknowledged that noise wall would significantly reduce the impact of noise but that they would forgo them due to excessive cost.
- WSDOT must also monitor and ensure compliance with local noise regulations for construction and equipment operation.

C-037-049
- The Arboretum Foundation would like clarification about the impacts of shading on vegetation and near-shore habitats.

C-037-050
- The Final EIS must recognize the negative effects of a more prominent roadway and bridge structure on Foster Island.

C-037-051
- The Arboretum Foundation requests to be included in a dialogue regarding an appropriate way to guarantee Seattle's ability to maintain the park waterfront trails in perpetuity and protect the state's previous investment.

C-037-052
- WSDOT must establish required detour routes in advance of the initiation of construction in order to protect LWB from excessive detour traffic.
- SDOT and WSDOT must formulate and implement a construction traffic management plan to minimize traffic effects on historic properties, especially LWB.
- Improvements in the Montlake interchange (to Louisa Street) will occur before the closure of the LWB ramps.
- The selected contractor must prepare a traffic management plan to be approved by the City of Seattle that would identify measures and practices to minimize construction effects.

C-037-053
- The Final EIS must identify a long-term plan regarding fish in this area of the project.

C-037-054
- The Final EIS must not include the option for creating interim connections to the existing LWB ramps from Montlake. The addition of these ramps is unacceptable.
- If the LWB ramps <u>are</u> included in the final project, impacts on LWB traffic patterns must be thoroughly analyzed and traffic calming measures that would discourage or divert

C-037-054 traffic on LWB should include elements such as improved turn traffic signal on 23rd and Madison and enhancement of 23rd as a major city arterial.

- If it is decided that LWB ramps will be included, full disclosure of all impact on the Arboretum is required including what mature trees will be removed along the east side of LWB.
- The SDEIS states that if the LWB ramps are removed, improvements on Montlake Boulevard can help traffic to operate similarly to existing conditions, and drivers would experience the same level of congestion that they currently experience. This should be evaluated in more detail in the Final EIS, including the 4(f) analysis.
- The SDEIS reports that the closure of the LWB ramps may result in no substantial effect on SR 520 operations and substantially reduced congestion in the Arboretum. This should be evaluated in more detail in the Final EIS, including the 4(f) analysis.
- The narrow area of the traffic analysis contained in the SDEIS is inadequate. The traffic analysis in the Final EIS must include Madison St. up through the intersection with 23rd Ave. E. and the 23rd/24th/Montlake corridor.

C-037-055
- HCT must be properly evaluated for all bridge options in the Final EIS.

C-037-056

Inaccurate Statements and analysis' made in the SDEIS:

The following are comments with which the Arboretum Foundation disagrees. They suggest a lack of understanding on the part of the authors of the document of the very real impacts they are having on this institution. They also suggest a bias in favor of a solution – at any cost – to get the highway constructed, disrespecting highly valued historic and cultural resources, indifference to future disruption and a less-than-holistic approach to accomplishing WSDOT's mission. These inaccuracies also are the basis for flawed analysis. Both the factual inaccuracies and the consequent flawed analysis should be reviewed and corrected in the Final EIS.

C-037-057

- The SDEIS states that "No permanent loss in total park area would result from the proposed 6-Lane Alternative…. (because) adverse effects on recreational lands would be mitigated as consistent with applicable requirements." The Arboretum is unique *because* of its size, collections and continuity, and cannot be evaluated in the same category as other parks. Furthermore, because of its unique character, the Final EIS must NOT focus on mitigation of land lost, but rather on *avoidance* of taking land unnecessarily.

C-037-058

- The SDEIS states that the addition of new LWB ramps would "introduce little additional effect to the Arboretum." The SDEIS further states that most of the length of the on- and off-ramps would run along the north and south sides of the main line, introducing little additional effect to the Arboretum. These statements reflect the physical positioning of the ramps, but they ignore the impact of the ramp connection with LWB. Traffic through the Arboretum would be greatly increased with the addition of the LWB ramps, thus adversely impacting the whole Arboretum. These adverse traffic impacts must be evaluated in the Final EIS and 4(f) analysis.

C-037-059

- The SDEIS states that although the northern section of the Arboretum was heavily affected by the original construction of SR 520 and has suffered a loss of integrity, the rest of the Arboretum remains intact. *This is not accurate.* The Arboretum has suffered from the use of LWB as a short cut to and from SR520. Increased traffic along LWB has grown exponentially over the years negatively impacting visitors experience, the educational capacity and the integrity of the Arboretum's woody collections. These significant adverse impacts must be evaluated in the Final EIS.

C-037-060

- According to the SDEIS Lake Washington Boulevard, Boyer Avenue, 24th Avenue East (north of Galer) and East Madison Street are all classified by the city of Seattle as arterials and increased traffic has no potential to constitute an effect on historic properties that may be located on LWB between E. Madison Street and 32nd Avenue or Boyer Avenue between 24th Avenue and LWB. *This assumption is inaccurate and must be corrected in the Final EIS.* Lake Washington Boulevard is an official park boulevard, and must be recognized as such in the Final EIS and 4(f) analysis.
- Although it was recommended that WSDOT include LWB between Madison Street and 32nd Avenue AND Boyer between 24th Avenue and LWB in the APE, WSDOT elected not do so in the SDEIS. This must be corrected for the Final EIS and the APE expanded. The traffic on LWB and the other areas is excessive and should be reduced, not increased by the expansion project.
- Lake Washington Boulevard is an official park boulevard, and must be recognized as such in the Final EIS. The distinction is crucial. It is imperative that WSDOT stop referring to Lake Washington Boulevard as a city street (as it does in the SDEIS) and consider its designation as an official Park Boulevard, with all its associated functions and purposes. It is crucial that decisions about the future design of the SR 520 improvements be made with the understanding that Lake Washington Boulevard was

C-037-060 never designed to function as an extension of direct-access ramps to and from SR 520. *These corrections must be* incorporated in the Final EIS.

- The Final EIS must state clearly that not only would the removal of the ramps positively impact the Arboretum but that some traffic analyses state that improvements on Montlake Boulevard can help traffic to operate similarly to existing conditions, and that removal of the ramps would result in no substantial effect on SR 520 operations.

C-037-061
- The Final EIS must remove any statements such as: "….because of the similarity to the existing condition, this would have no effect on historic properties" or that the canoe passage experience would be (positively) altered as a result of the higher profile, wider bridge structure and wider spaced columns…" These statements are simply not accurate and must be corrected.

C-037-062
- Statement made regarding the impact of the LWB ramps in the Arboretum must be corrected. The addition of new LWB ramps will introduce *significant* additional impacts on the Arboretum. Traffic through the Arboretum would be greatly increased with the addition of the LWB ramps, thus adversely impacting the whole Arboretum.

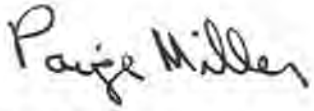
C-037-063
- The traffic analyses made by the WSDOT team in the Final EIS must take into consideration that Sound Transit would be in place on I-90, and from downtown Seattle to the UW, that there would be increased bus service and bike lanes on SR 520 and SR520 would be tolled.
- The Final EIS must update the traffic modeling by including the new tolling assumption in the analysis of the No Build Alternative and the preferred alternative.

C-037-064
- The Final EIS must make explicitly clear that the Arboretum park experience will be significantly impacted by greater levels of noise associated with SR520 Bridge.

C-037-065
- The Final EIS must recognize the negative effects of a more prominent roadway and bridge structure on Foster Island and excessive traffic on Lake Washington Boulevard.
- Artist(s) must be a part of the Design Team before the ROD is signed. This is necessary for the SR 520 project due to its intrusion of an irreplaceable cultural landscape.
- The SDEIS states that the new bridge on Foster Island "….because of the similarity to the existing condition, this would have no effect on historic properties." This is simply not accurate. Furthermore, the SDEIS states that canoe passage would still occur under SR520 but the experience would be (positively) altered as a result of the higher profile, wider bridge structure and wider spaced columns…" This is not accurate. These statements must be corrected in the Final EIS.

C-037-066
- The wetlands within the Arboretum must be properly evaluated. The Arboretum Foundation believes that the wetlands within the Arboretum area also include Category I wetlands, not just II and III as reported in the SDEIS. The wetlands should be reevaluated for the Final EIS.

These comments are submitted on behalf of the Arboretum Foundation. Thank you.
Sincerely,



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Appendices to Arboretum Foundation Response
To
WSDOT SR 520 SDEIS
April 15, 2010

C-037-067

Appendix 1: City's Shoreline Management Act:

The Arboretum Foundation requests that the Recreation and Conservation Office (RCO) staff provide a briefing on the potential conversion associated with proposed improvements to SR 520 in the Arboretum. The Arboretum Foundation requests to be included in a dialogue regarding an appropriate way to guarantee Seattle's ability to maintain the park waterfront trails in perpetuity and protect the state's previous investment.

C-037-068

Appendix 2: Traffic Management during construction:

The northern section of the Arboretum was heavily affected by the original construction of SR 520 and has suffered a loss of integrity, but it should be stressed that the rest of the Arboretum has been significantly impacted by the excessive use of LWB by traffic occasioned by on and off ramps to the freeway.

WSDOT must establish required detour routes in advance of the initiation of construction in order to protect LWB from excessive detour traffic. SDOT and WSDOT must formulate and implement a construction traffic management plan to minimize traffic effects on historic properties, especially LWB.

Improvements in the Montlake interchange (to Louisa Street) will occur before the closure of the LWB ramps.

The selected contractor must prepare a traffic management plan to be approved by the City of Seattle that would identify measures and practices to minimize construction effects.

C-037-069

Appendix 3: Planning Context:

The Growth Management Act (GMA) requires that state and local governments work cooperatively to identify and protect critical areas and natural resource lands. Since 1990, the City of Seattle and King County have been working to establish protection for designated fish and wildlife habitat areas and wetlands. The areas in the Arboretum have not been properly evaluated in the SDEIS in light of the GMA.

These wetlands will be adversely impacted during the construction of the bridge specifically; construction work bridges and detour bridges will shade wetland vegetation in the Arboretum areas. Staging areas will compact and destroy wetlands areas. Because the shading could occur for more than 5 years in some areas, it is expected that wetland functions would be negatively affected during the construction period. WSDOT must make every effort to complete the project over Foster Island in one phase in order to reduce the cumulative impact of construction on wetlands.

C-037-070

Appendix 4: Scope of the APE:

The scope of the project greatly affects the effort required to identify historic properties, and thus the way an APE is defined. WSDOT must consider different aspects of the scale and nature of undertaking when defining the APE:

C-037-070

1) If new construction—how large, how many stories with this bridge be, and how many square feet?
2) What is the extent of the ground disturbance? Are access roads or staging areas needed?
3) Are additions to or demolition of an existing building involved?
4) What is the scale of new construction in relation to the surrounding setting?

When defining an APE and WSDOT must remember that effect can be direct or indirect, beneficial or adverse:

1) Physical changes to the area—actual takings, ground disturbance
2) Visual changes, including changes to the appearance of the bridges or site. Also a change in view sheds.
3) Changes to existing pedestrian and traffic patterns.
4) Changes in land use.

Foster Island is a known archaeological site from the early Native American settlements in the area. While we understand that Archeological surveys are generally limited to the project footprint, the survey area for above ground resources—such as bridges and landscapes is larger and must take into account the potential for visual, auditory, and other effects.

C-037-071

Appendix 5: <u>Lake Washington Boulevard Ramps:</u>

In 1963, with the construction of the new SR 520 Bridge, the Arboretum lost 60 acres of wetlands and historically significant property. By removing the old LWB ramps, and not adding new ones, traffic volumes on LWB would drop, creating safer and quieter conditions for park and trail users. Removal of the LWB ramps and R.H. Thomson Expressway ramps would remove visual clutter and improve views to and from the park over the long term.

Option A without ramps would reduce vehicle traffic in the Arboretum by up to 900 vehicles per hour, improving the walking, bicycling, and recreation environment. The continued use of LWB by SR 520 traffic would diminish the integrity of the property's location, design, setting, and feeling.

The SDEIS states that if the LWB ramps are removed, improvements on Montlake Boulevard can help traffic to operate similarly to existing conditions, and drivers would experience the same level of congestion that they currently experience. The SDEIS also reports that the closure of the LWB ramps may result in no substantial effect on SR 520 operations and substantially reduced congestion in the Arboretum.

The SDEIS states that the addition of new LWB ramps would "introduce little additional effect to the Arboretum." The SDEIS further states that most of the length of the on- and off-ramps would run along the north and south sides of the main line, introducing little additional effect to the Arboretum. These statements are simply not true. Traffic through the Arboretum would be greatly increased with the addition of the LWB ramps, thus adversely impacting the whole Arboretum.

The Final EIS must state clearly that not only would the removal of the ramps positively impact the Arboretum but that some traffic analysis state that improvements on Montlake Boulevard can help traffic to operate similarly to existing conditions, and that removal of the ramps would result in no substantial effect on SR 520 operations.

The creation of new ramps would not abide by 4(f) regulations because there is a prudent alternative (no ramps) and because the SDEIS evaluation fails to identify LWB as a historic resource and a park and recreation resource. It is a parkway, owned by the Parks Department, not a city street. These errors must be corrected in the Final EIS, including the 4(f) analysis.

The new ramps would require an additional 27 permanent columns and 55 temporary piles. The piers would occupy approximately 760 more square feet of lake bed, this is unacceptable.

C-037-071 Adding new LWB ramps would require removal of the mature trees located along the east side of LWB.
The SDEIS further states that capacity improvements to handle traffic demand at Montlake might include interim connections to the existing LWB ramps. These could include a new flyover ramp from the new west approach bridge to the existing westbound LWB off-ramp and a connection from the existing eastbound on-ramp from LWB to the new west approach bridge. These ramps could remain in operation until full build out of the 6-Lane Alternative and would be removed and/or replaced in a later phase, depending on the Montlake interchange option constructed. This is unacceptable.

C-037-072 **Appendix 6: Air Pollution:**
The Final EIS must properly evaluate the impact of degrading air quality on the Arboretum collections and historical structures from cars on SR 520 and increased traffic on LWB. WSDOT must verify that the planned transportation projects will not cause or contribute to a violation of the federal standards for CO.
WSDOT must analyze the most congested intersections in the Arboretum and demonstrate that CO levels will be below CO standards after the project is in operation. Specific standards for park areas must be used as baseline measures and the full length of LWB must be evaluated. Indirect effects on air quality, primarily from trucks hauling construction materials to and from SR 520, must be evaluated relative to the impacts on the collections and historic structures. This analysis must be included in the Final EIS.

C-037-073 **Appendix 7: Noise:**
The Final EIS must make explicitly clear that the Arboretum park experience will be significantly impacted by greater levels of noise associated with SR520 Bridge. Suggestions must be made on how to deal with the area of the highest sound levels (SR 520 near Montlake Boulevard, along LWB, and at the SR 520 access ramps) other than noise walls which have been excluded because they did not meet WSDOT's financial criteria.
The full noise impacts on the Arboretum must be measured along the length of LWB and into the park itself and Quiet Pavement should continue to be evaluated as a mitigation option in the Final EIS and possibly included into any design option.

C-037-074 **Appendix 8: Views:**
The Final EIS must recognize the negative effects of a more prominent roadway and bridge structure on Foster Island and excessive traffic on Lake Washington Boulevard. While the studies are still inconclusive, the Arboretum Foundation would like clarification about the impacts of shading on vegetation and near-shore habitats. The Arboretum Foundation believes that a roadway that is narrow would have a greater positive impact than a higher, wide bridge.
The Final EIS must remove any statements such as: "….because of the similarity to the existing condition, this would have no effect on historic properties" or that the canoe passage experience would be (positively) altered as a result of the higher profile, wider bridge structure and wider spaced columns…" These statements are simply not accurate and must be corrected.
The original construction and future expansion of SR520 inhibits the Arboretum Creek's ability to support fish life.… endangered species including sockeye salmon and trout can be found in Arboretum Creek but they are unlikely upstream of its lower reaches due to man-made barriers. The Final EIS must identify these concerns and suggests avoidance and mitigation options.

C-037-075 **Appendix 9: Repair new damage completely and comprehensively:**

C-037-075 All areas used within the Arboretum for the expansion of the bridge must be repaired completely, comprehensively and agreed upon by the City of Seattle, University of Washington, Arboretum Foundation and the Arboretum Botanical Garden Committee (ABGC).
Staging areas appear to be very destructive propositions. Clear delineation of the areas used and a visual of what they would look like are requested before construction begins. Construction activities along LWB would require clearing, grading, and paving activities where the new ramps would transition to the local roadway. This must all be repaired and approved of by the City of Seattle, University of Washington, Arboretum Foundation and the Arboretum Botanical Garden Committee (ABGC). .

C-037-076 **Appendix 10: <u>Preserve & restore the Arboretum as an accessible place of quiet and respite:</u>**
Portions of the Arboretum Waterfront Trail will be closed continuously during construction for 30 to 54 months, depending on the design option chosen and its sequencing; this will limit access to Foster Island. This transportation project will create a conversion at two previously funded projects at the Washington Park Arboretum (#66-037D and #85-9036D). This situation creates two conversions on the same property, and therefore WSDOT must find replacement property that will satisfy both grant programs' requirements.
Seattle has until December 2010 to adopt the updated Washington State Shoreline Management Act (Chapter 90.58 RCW), until then usage of the shoreline in the Arboretum is not clearly identified.
Seattle's 2006 Parks and Recreation Development Plan also states that public shoreline access will be regarded with the same degree of importance as open space and will be planned to ensure a reasonable amount of public access along each shoreline. All of these Plans and Act must be aligned before a final decision can be made about the closure of the Waterfront Trail.

C-037-077 **Appendix 11: <u>Bikes and Pedestrians access must be maintained throughout construction:</u>**
Option A without ramps would reduce vehicle traffic in the Arboretum by up to 900 vehicles per hour, improving the walking, bicycling, and recreation environment. However, during construction boats would be prevented from passing beneath all structures and canoe paddling would be restricted to the waterways north of SR 520. Bicyclists will also be impacted by construction since 24th Avenue East, which is used by bicyclists and is part of the Lake Washington Loop Route, would be closed continuously for between 45 and 78 months. WSDOT must establish required detour routes in advance of the initiation of construction in order to accommodate bikes and pedestrians before and after construction; detour routes must be easy and continuous paths from the Arboretum to the University of Washington.

C-037-078 **Appendix 12: <u>Minimize traffic impacts on the Arboretum:</u>**
The Arboretum is of regional, national and even international significance and cannot be judged as a sum of its parts….As a historic designed landscape meant to educate and provide public beautification; it is an icon of the Seattle Parks system. It has been acknowledged by WSDOT that the northern section of the Arboretum was heavily affected by the construction of SR 520 and has suffered a loss of integrity, but it should be stressed that the rest of the Arboretum has been significantly impacted by the excessive use of LWB by traffic going to and coming from SR520.
WSDOT must establish required detour routes in advance of the initiation of construction in order to protect LWB from excessive detour traffic. For example, improvements in the Montlake interchange (and to Louisa Street) must occur before the closure of the LWB ramps. The selected contractor must prepare a traffic management plan to be approved by the City of Seattle that

C-037-078 would identify measures and practices to minimize construction effects. These detour routes and mitigation measures should be included in the Final EIS

C-037-079 **Appendix 13: <u>Respect the historical, aesthetic, and design integrity of the Arboretum:</u>**
The Arboretum should be considered separate from other City parks due to its historical significance, unique collections and usage. The Arboretum, in its entirety, should be identified as a TCP and eligible for inclusion and protection by the NRHP registry under:

- Criterion A (for its association with events that have made a significant contribution to the broad patterns of our history, including the Alaska-Yukon-Pacific Exposition, the development of the University of Washington, the work of the WPA, and the development of the parks system in Seattle) and
- Criterion C (as the work of a master for its design by the noted Olmsted Brothers, as well as the many talented designers and architects who contributed to its multiple designed features).

The Arboretum, in its entirety, should be identified as a TCP and eligible for inclusion and protection by the NRHP registry. The Arboretum contains ceremonial sites, traditional homes of a particular cultural group (Duwamish longhouse near Arboretum Creek), sites, buildings, structures (Wilcox Bridge, the stone cottage, the gates and the gazebo), and objects that are significant in American history (Japanese Garden), architecture, archaeology (Foster Island and the Miller Street Landfill), and that represents the work of a master (Olmsted). A full list of historical sites within the Arboretum might include: LWB, the Gatehouse/Stone Cottage, the Holmdahl Rockery, the stone bridges and Arboretum Creek pond, the Japanese Garden, Wilcox bridge, the Barn, Arboretum Drive, Azalea Way, the Woodland Garden, Rhododendron Glen, the Lookout/Gazebo and Pinetum, to name a few. The Final EIS must reevaluate the impact that SR 520 expansion will have on these properties.

While fourteen parks and recreational facilities are located along the Seattle portion of the SR520 project corridor, the Arboretum should be considered separate from these City parks due to its historical significance, unique collections and usage. The National Park Service's Guidelines defines a traditional cultural property (TCP) as a site "that is eligible for inclusion in the National Register [of Historic Places] because of its association with cultural practices or beliefs of a living community that:

(a) are rooted in that community's history, and
(b) are important in maintaining the continuing cultural identity of the community."

C-037-080 The Final EIS will identify the TCP status of Foster Island. This designation would make the island eligible for the NRHP, even though they haven't recognized the rest of the Arboretum as eligible for TCP status.
These NRHP laws require that consideration be given to protecting significant historic, archaeological, and traditional cultural sites from damage or loss from the project. Foster Island could also be considered eligible for the NRHP as an archaeological site, but at present its archaeological status is unknown. Further archeological investigation at Foster Island could result in the discovery of below-ground resources that could warrant determination of Foster Island as eligible under Criterion D as an archaeological site. These evaluations must be completed as part of the Final EIS before a final SR 520 option is chosen and construction begins.

C-037-081 **Appendix 14: <u>Include landscape architects, landscape historians, and artists early and throughout the design process.</u>**

C-037-081 A public art program should be established to ensure the visual and cultural integrity of the project, and to help ensure context-sensitive design. Context sensitive design can also help to mitigate project impacts.

C-037-082 **Appendix 15: Wetlands:**

The Arboretum Foundation would like a re-evaluation of the wetlands in the Final EIS. The AF believes that the wetlands within the Arboretum area also include Category I wetlands which would require enhanced mitigation.

WSDOT must make every effort to complete the project over Foster Island in one phase in order to reduce the cumulative impact of construction on wetlands. Wetlands located in transition areas between project phases would be affected more than once. Wetlands in the Arboretum would be affected to the greatest extent if interim connections to the existing LWB ramps were constructed for Phased Implementation and then subsequently removed to facilitate the new LWB ramps that may be constructed under Option A.

The federal wetland regulatory goal of No Net Loss and recently updated state and local regulations for protecting and managing critical areas under the Growth Management Act were both created to slow the cumulative decline of wetlands. The cumulative effect of wetland conversion and loss must be mitigated by increased participation of non-governmental organizations, such as the Arboretum Foundation, and other stakeholders in restoration efforts. **Long-term watershed-based mitigation and mitigation banking will also aid in the protection of this wetland resource. These issues should be addressed in the Final EIS.**

-----Original Message-----
From: T. Gould [mailto:4cleanair@usa.net]
Sent: Friday, April 16, 2010 3:32 AM
To: SR 520 Bridge SDEIS
Subject: Sierra Club comments-- 520 Replacement SDEIS

Hello,

Please find attached a comment letter on the SR 520 supplemental draft EIS. Thank you.

Tim Gould
Volunteer Chair, Transportation & Land Use Committee Sierra Club Cascade Chapter
(206) 675-0691

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15 April 2010

Jenifer Young, Environmental Manager
SR 520 Project Office
600 Stewart Street, Suite 520
Seattle, WA 98101

Comments on SR 520, I-5 to Medina: Bridge Replacement and HOV Project Supplemental Draft EIS

Dear Ms. Young:

C-038-001 We appreciate this opportunity to comment on the Supplemental Draft Environmental Impact Statement for the SR 520 Bridge Replacement and HOV Project. Sierra Club urges the development of transportation options that support state, county and city greenhouse gas (GHG) emission reduction goals. We favor GHG assessments that evaluate, rank, and select project elements and design configurations, rather than simply identify mitigation measures for a business-as-usual approach. These assessments should be based on GHG emissions from construction as well as from operation of the various travel modes through the SR 520 corridor over the life of the facility. Since high capacity transit (HCT) promotes compact, walkable residential and commercial areas around transit stations thereby reducing associated GHG emissions, design of the SR 520 bridge and its interchanges should optimize the role of transit.

C-038-002 **Objectives for SR 520 Project**

The Washington State Department of Transportation (WSDOT) and its partner agencies should pursue the following objectives with any eventual design selected for the SR 520 bridge replacement project:

1. emphasize the movement of people and goods rather than vehicles;
2. mitigate climate change impacts through reducing GHG emissions;
3. prioritize transit use including provision for light rail transit;
4. restore and protect the Arboretum and its wetlands, and Lake Washington;
5. improve air quality and reduce traffic noise, for human and environmental health;
6. promote thriving communities while reducing sprawl.

While the SR 520 bridge is a regional facility, it connects intimately with the communities and streetscape of the corridor through which it passes. In addition to regional mobility, the project must place an emphasis on walking, biking, and transit use in the surrounding

C-038-002

corridor. The selected design should enhance livable neighborhoods and provide opportunities for transit-oriented development (TOD) to reduce sprawl. Instead of a focus on congestion mitigation, the project should expand mobility options, including transit improvement projects that minimize greenhouse gas emissions.

C-038-003

Legislature prematurely narrows options before environmental analysis

Under both the National Environmental Policy Act and Washington's State Environmental Policy Act, WSDOT should analyze a set of reasonable alternatives—those considered to "feasibly attain or approximate a proposal's objectives". Sierra Club strongly believes this obligation of the lead agency WSDOT has been impeded through a narrowly defined set of options. The Legislature through passage of ESSB 6099 in 2007 artificially constrained the set of design alternatives. It continued the narrow focus of design alternatives with passage of ESHB 3096 in 2008.

Many of the design flaws in option "A+" that we identify below are the result of the Legislature's prescription for a six-lane facility. Yet the guidance given by the Legislature does not preempt the obligation of WSDOT to analyze and select a preferred alternative consistent with NEPA and SEPA processes.

Alternatives studied in the EIS do not recognize fiscal reality, the public's desire for a range of project scales with corresponding impacts, nor recent design modifications urged by the City of Seattle for the west side landing of the bridge and interchange. Furthermore, the EIS does not recognize that forecasts for growth extrapolated from recent decades will almost certainly be wrong due to the imminent decline of world oil production. The resulting end of cheap energy upon which our present transportation system is based will necessitate new approaches. Designs need to be evaluated relative to alternative scenarios for economic and traffic growth.

In short, the EIS process is broken. WSDOT cannot be expected to make an informed decision when its evaluations do not include a reasonable set of alternatives.

C-038-004

Fixation on reducing congestion ignores urban form and reduction of sprawl.

The design and function of the SR 520 replacement project will greatly influence future development in the region. A critical choice facing residents, commuters, and officials on the westside is whether to accommodate more vehicles entering Seattle or provide good options to encourage more transit usage. The solution that builds better urban form and reduces the incidence of sprawl is to better move people efficiently and conveniently through the corridor without adding to vehicle miles traveled, GHG emissions, and expanding infrastructure for vehicles.

Congestion is primarily a pricing problem best solved with tolling. We know from past experience and elsewhere that additional capacity produces latent demand for highway space and the new lane miles fill up producing more congestion. Instead, the focus must shift to emphasize the quality of the urban spaces. These guidelines are part of the alternative to congestion relief:

C-038-004

(1) Implement a mobility solution that improves air quality and reduces traffic noise, for human and environmental health

(2) Integration of transit-oriented development (TOD) into this major transit project

(3) Spend limited resources in most environmentally effective, least damaging manner.

C-038-005

No build alternative neglects use of tolling

Traffic demand management through tolling of the existing bridge is not included as part of the baseline scenario in the no build alternative. Yet the existing bridge will have tolls implemented by Spring 2011 through the Lake Washington Congestion Management Project. Variable toll rates set according to peak demand will invariably lead to improved traffic flow. Comparison of the no build alternative with assorted 6-lane alternatives does not consider the benefits from demand management.

WSDOT must incorporate predicted changes to commuter behavior resulting from tolling and construction closures in all corridor use projections and design work on reasonable alternatives. When models for traffic projection are not adequately sensitive to driver response to tolling, the result is an inaccurate characterization of traffic demand. The selection of alternatives evaluated in the EIS suffers from the inaccurate "need" for mobility.

More ambitious implementation of tolling needed

Sierra Club supports implementation of tolls on the SR 520 bridge as soon as is practical. The lack of real world data from tolling of SR 520 has contributed to unrealistic travel projections and the resulting deficient alternatives in this EIS. As noted in a December 2009 letter to the 520 Legislative Workgroup, we also support full general tolling of I-90 as soon as is practicable. The likelihood of traffic diversion from SR 520 to an I-90 corridor with only HOT lane tolling is too great to delay the inevitable tolling of both Lake Washington bridges. The current and past State Treasurer have recommended tolling of both Lake Washington bridges to create an acceptable finance plan.

Equity is a very important consideration when setting tolling policy. We strongly support the use of congestion management toll revenue for transit operations and maintenance. By providing better transit options, those travelers who might otherwise find tolls to present a hardship will have suitable alternatives for travel in the 520 corridor. Design and later installation of light rail transit should be considered a legitimate use for the congestion mitigation component of toll revenue.

Toll revenue from SR 520 must support transit operations in this same corridor. Good transit alternatives along with emphasizing privacy protection in all toll collection systems and technology will build public trust and support.

C-038-006

Minimize impacts on Arboretum

The rebuilding of the westside of SR 520 offers a generational opportunity to right a wrong of the previous generation, attaching a state highway access road to this regional jewel of the park system. A part of the 1903 Olmsted Plan for Seattle's boulevard system, Lake Washington Boulevard was never intended to carry the traffic volumes associated with

C-038-006

direct-access ramps to and from SR 520. The EIS 4(f) evaluation fails to identify Lake Washington Boulevard as either a historic resource or a park and recreation resource. WSDOT must recognize its designation as an official Park Boulevard in all subsequent design work.

Sierra Club supports the Arboretum Foundation guiding principles for the SR 520 expansion, such as the priorities calling for adding no ramps to the Arboretum and discouraging commuter traffic through the Arboretum. We urge the following elements be incorporated into a selected alternative for this project:

(1) No ramps to/from Lake Washington Blvd. E. since they funnel excessive traffic into and through the Arboretum;

(2) Reduce in-water impacts of structures through Arboretum, Foster Island, and other wetlands;

(3) Manage storm water runoff, including requiring any holding ponds to be earthquake proof, ensuring long term protection of Lake water quality;

(4) Design a consolidated, lowest impact overall project footprint.

C-038-007

Context-sensitive design standards should prevail

Rather than typical design standards more appropriate for interstate highways in rural areas, the SR 520 project should employ context-sensitive design standards. The following features should be integrated into all aspects of the SR 520 design. Its westside landing in the midst of a built-up urban area is in particular need of these treatments:

(1) Narrowed lane and shoulder widths to lower vehicular speed; reduce noise and air pollution; increase fuel efficiency; and save lives;

(2) Lower posted speed limit and design speed; maximum vehicle throughput is achieved at approximately 45 mph, not 60 to 65 mph;

(3) Bridge design employing wave attenuation features to minimize water splash and allow for reduced bridge height, and bridge form determined by rigorous acoustics evaluation, and visual aesthetics;

(4) Avoid wider, taller, more massive project configurations since they increase greenhouse gas emissions during construction and through embodied energy.

(5) Calming of traffic through use of all signalized ramps, and priority intersection movements for transit.

C-038-008

Retain transit flyer stops along SR 520 at Montlake Blvd.

The interchange design ought to include retention of the Montlake transit “flyer” stops, as they provide convenient access to downtown Seattle oriented bus routes for riders with other destinations or points of origin. Passengers going to and from the south of Montlake, for example North Capitol Hill, and those going to and from the University District and points further north all benefit from the better transit connectivity. A crucial feature to incorporate in the interchange layout and operation consists of:

- Safe local bike, walk, and transit connections to and from regional transit service

C-038-008

We are concerned the proposed added subsidy for separate bus service across the replacement SR 520 bridge for downtown and U District markets is problematic. The plan proposed by Metro Transit and Sound Transit to increase cross-Lake bus service to separately serve the University District and Downtown Seattle markets can be effective during peak periods. But we are concerned that this duplication of bus routing across the bridge may not be the best allocation of resources in off-peak times, and may prove to be fiscally unsustainable given the recent experience with transit funding shortfalls and tepid state leadership to champion this funding.

A configuration that would allow this transit stop to be retained as part of the interchange without necessitating further width could include some of these elements:

(1) the two inside lanes of SR 520 are transit only at Montlake Blvd. interchange, rising to a signalized intersection with Montlake Boulevard E.;

(2) transit flyer stops at same level as Montlake Blvd. for ease of connection with local transit service, with no elevators, escalators, or stairs;

(3) stacked flyer stops for reduced footprint with eastbound stop at level of Montlake Blvd. to comingle bus routes originating from Downtown Seattle and the U District, while westbound stop at level of SR 520 serving routes bound for Downtown Seattle;

(4) transit lane and exit or on-ramp lane placed together on one ramp structure connecting from SR 520 to stoplight intersection at Montlake Blvd.

C-038-009

Smaller footprint options need adequate evaluation and consideration

The implication of the State curtailing the set of evaluated options is that no refined, transit-optimized 4-lane option has been considered in this supplemental EIS. While a 4-lane option was included in the original 2006 draft EIS, substantial refinement has occurred to the various 6-lane options since publication of the Project Draft EIS. No such refinement has occurred with a 4-lane option, casting some doubt on the finding that it was inadequate to carry forward into this Supplemental EIS.

Funding for this project is still inadequate compared with the identified alternatives. One reason for inclusion of a refined 4-lane option is it may prove to be the only alternative that is financially and environmentally affordable. The restriction of evaluated alternatives to only 6-lane configurations does not allow the environmental review to determine the final configuration as intended under NEPA and SEPA. Other alternatives for design and use of the project right-of-way that should be evaluated include:

(1) Hybrid with four lanes between Montlake Blvd. and I-5, and six lanes between SR-202 and Montlake Blvd.

(2) Additional two lanes where included in highway footprint dedicated for transit use;

(3) Width of lanes and shoulders reduced from FHWA standards

This project is complicated owing to its location in a built-up urban area with sensitive wetlands. We owe ourselves and future generations a comprehensive evaluation of reasonable alternatives.

C-038-010

Design and construct the bridge to accommodate light rail transit

Sierra Club advocates for a replacement SR 520 bridge and corridor that prioritizes transit use. A project of this magnitude with its long-term implications for regional travel and growth patterns needs to be equipped with high-capacity transit to serve the region in an era of rising energy costs. Building a long-term facility that is not capable of accepting light rail in the future would be extremely short sighted.

The addition of light rail transit (LRT) to a new SR 520 bridge can provide a key segment in a more developed network of high capacity transit for our region. An alignment using the SR 520 corridor can directly connect Kirkland, Bellevue, or Overlake with the University of Washington and eventually extend west as a Seattle cross-town route through to Ballard. The recent work by City of Seattle transportation consultant Nelson\Nygaard illustrates the challenges of making this project capable of including LRT in its configuration. Sierra Club supports the following features to assist inclusion of LRT in the 520 project:

(1) dedicated high-capacity transit lanes capable of carrying light rail trains connecting major urban centers;

(2) construct bridge from outset to accommodate weight of light rail trains without costly retrofit in the future;

(3) phased approach with bus rapid transit (BRT) when new structure opens convertible to light rail when plan and finances are identified and ready;

(4) separate the east- and west-bound lanes of SR 520 near Foster Island for light rail alignment to drop below or rise above highway and diverge to connect with UW light rail station;

(5) minimize overall width especially by speed reduction in design standards to reduce need for wider bridge corridor to serve light rail needs. Keep bike / pedestrian path consistent with City of Seattle standards.

Sierra Club supports this EIS process examining the inclusion of LRT as part of the eventual configuration for SR 520. Even if an additional Supplemental EIS is needed, we cannot afford to preclude the addition of light rail simply to hold the project timeline to a somewhat arbitrary alternative selection schedule. The quality of the final outcome matters more than the amount of sunk cost and time already expended on this project. We face key challenges from climate change and rising energy costs; hence the imperative to "get this right" now before moving forward.

C-038-011

Sierra Club is committed to a future of smarter energy and transportation choices. The choices we make today will determine whether or not the region can navigate a path toward sustainability tomorrow. When investing in transportation infrastructure for half or three-quarters of a century, the region needs to take into account the imperative to reduce GHG emissions and to provide high quality transit in this corridor. The public will be best served when our resources are spent in the most environmentally effective, least damaging manner. Consistent with these values and objectives, Sierra Club urges WSDOT to revise the SR 520 project by:

C-038-011

* eliminating ramps to/from Lake Washington Blvd. E.;
* retaining the transit flyer stops along SR 520 at Montlake Blvd.;
* incorporating the response to tolling more accurately into traffic projections and resulting capacity assumptions and designs;
* adopting minimal impact design standards;
* designating any additional two lanes as transit only; and
* designing the bridge corridor to accommodate light rail transit within never more than a 6-lane footprint.

We appreciate the opportunity to discuss our perspectives regarding this important transportation investment.

Sincerely,

Morgan Ahouse
Chair, Sierra Club Cascade Chapter

cc: Mayor Mike McGinn, City of Seattle
Seattle City Council

From: Bill LaBorde [mailto:bill@TransportationChoices.org]
Sent: Thursday, April 15, 2010 11:52 PM
To: SR 520 Bridge SDEIS
Subject: Transportation Choices Coalition 520 comments

Please find attached a .pdf with the Transportation Choices Coalition comments on the SR 520 SDEIS.

Thank you,
Bill

Bill LaBorde
Policy Director
Transportation Choices Coalition
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Attention: SR520 Bridge SDEIS Comments
Jennifer Young
Environmental Manager
SR 520 Program Office
600 Stewart St., Suite 520
Seattle, WA 98101

VIA E-MAIL

April 15, 2010

Dear Ms. Young:

C-039-001

Thank you for the opportunity to comment on the Supplemental Environmental Impact Statement for the SR 520, I-5 to Medina Bridge Replacement project. Transportation Choices Coalition has a long history with this project, serving on the Trans-Lake Corridor Study Committee in the late 90s on through to the Mediation process in 2008. Throughout the development of SR 520 plans, we have consistently focused on the need for variable tolling to manage congestion on the corridor as well as fund much of the project itself; a robust transit mitigation plan for the construction phase followed by a *funded* transit plan for the corridor once the bridge becomes operational; and safe and sufficient bicycle and pedestrian access across the bridge and North/South through the Montlake interchange area. We also have consistently advocated for flexible use of tolling revenue to fund transit and other alternatives to driving across the bridge. These are the issues on which we will focus our comments on the SDEIS.

Design Alternatives

At this point, Transportation Choices Coalition does not feel it is constructive to weigh in favorably toward one alternative over another. We believe stakeholders are much closer to a consensus position on 520 than is commonly appreciated. While alternative options are presented in the SDEIS, most stakeholders are essentially working from the same template – variations of the A+ plan. We are really only left with a few, but important, details to work out.

C-039-002

Adaptability to Light Rail

The biggest design question that remains is how we will accommodate the region's inevitable desire to extend light rail across the 520 corridor at some point in the future. While we strongly support the regional consensus we are now proceeding on to build light rail across I-90 first, we know that metropolitan areas with mature, fully developed rail transit systems don't just have one line or two lines. Portland MAX, which started operations 24 years ago, now operates four lines. The 16 year

C-039-002

old Denver system has four lines and is growing. DC, Boston, San Francisco, Los Angeles have 5,6,7 lines criss-crossing each other throughout their respective regions.

These light rail development patterns should make it obvious that at some point we will want to take advantage of the SR 520 crossing to provide additional rail transit options for this region. Therefore, we believe it should be a very high priority of the state to not preclude forever the possibility of light rail on this bridge without alterations that would be unrealistic in terms of cost or disruption of operations. Adding significant extra width to the bridge to accommodate light rail in addition to a 6-lane bridge will be no easier in the future than it is today. People who live in Montlake or enjoy sanctuary in the Arboretum in the future will still care about the footprint of the bridge and will not easily accept additional width to accommodate light rail. Now is the time to get the design right and ensure we can operate light rail on that bridge within the 6-lane configuration.

Looking at the Nelson/Nygaard report commissioned by the Seattle Mayor's Office, it appears that there are three key issues for adapting the bridge for light rail within the existing 6-lane configuration – number of pontoons, width of the bridge and a gap between the north and south lanes around Foster Island to accommodate trackway diverging away from roadway as it enters the city. According to the city consultants, additional pontoons can be added later and the bridge has a width that could eventually accommodate light rail according to the same standards by which light rail will travel on I-90 (This may also require some reconstruction of the bike lane in the future to accommodate the heavier bicycle traffic likely to be seen on the 520 crossing). It appears that the only critical issue that must be addressed now for the bridge to eventually serve light rail is a redesign of the Foster Island approach. While this redesign may require some additional environmental and engineering work, we believe that WSDOT can make up for this time through adjustments to the phasing and that other Westside design changes desired by the city will allow WSDOT to still deliver the project within roughly the same timeline and project budget. A bridge that can eventually serve light rail in the city's and region's interests and should not be foreclosed by a state rushing the final stages of planning and engineering.

C-039-003

HOV Capacity and Transit Operations

With the corridor expected to carry 27-28,000 people per day by bus by 2030, that means 500-600 buses will be running across the bridge each weekday by 2030. This is BRT level service and demands the kind of dedicated roadway associated with BRT. For sake of the very functionality of SR 520 as a transit corridor, and given that tolling is likely to drive a significant increase in transit service to the bridge over time, we urge WSDOT to open the bridge with lanes 5 and 6 dedicated solely for transit service. At the very least, the bridge should be operated according to a corridor management plan that automatically triggers increasing HOV standards as speeds in the HOV lanes fall below 45 mph more than 5 percent of the time during peak hours as measured on at least a quarterly basis.

C-039-004 WSDOT has come a long way in integrating transit into their megaproject plans. Yet, whether it is with this project, the SR 99 tunnel project or I-405, the state has failed to adequately address the funding of that transit service. 520 already sees high transit use and, as the SDEIS notes, with tolls and more predictable travel times on the corridor, transit usage will increase dramatically. We believe the final EIS needs to adequately address the funding of that service. Tolling revenue is an obvious source to fund adequate transit service. A toll surcharge may be another option. Additionally, revenue from early tolling of the existing bridge can fund transit mitigation.

C-039-005 Beyond basic functionality of the corridor, reliable and affordable transit options are the only way we can address the economic justice concerns that come with high bridge tolls. Too many service workers, grocery store employees and single-earner families will simply not be able to afford a $6 or more daily bridge toll. The SDEIS acknowledges that "low-income populations would experience disproportionately high and adverse effects as a result of the tolling." SDEIS 5-49. Reliable and frequent transit service would mitigate these impacts for most. The Final EIS should address funding for transit service to address social justice concerns for both the early tolling phase and once the bridge enters operations.

C-039-006 Finally, transit mitigation for the construction period is not well defined in the SDEIS. A specific mitigation plan, with phasing and a budget to pay for transit service should be spelled out in the Final EIS.

C-039-007 **Montlake Area Transit Access**

We support the Seattle City Council's request for a series of transit access improvements throughout the Montlake Blvd. corridor, extending from Pacific Ave to the north and Madison Ave at the southern end. Montlake will continue to be a key transit link for bus commuters coming from the Eastside and heavy transit using Seattle neighborhoods like the Central District, East Capitol Hill and Montlake itself as they access the light rail system at UW and other parts of NE Seattle. Transit prioritization also reduces the need for harmful Arboretum ramps. Montlake transit improvements should include signal prioritization, including queue jumps between the 520 interchange and Pacific Ave. This area should also include transit only lanes to facilitate quick passage of buses through auto gridlock created by the dumping of cars from the bridge during peak hours and when the Montlake Bridge is frequently drawn for boat passage.

C-039-008 **Bicycle and Pedestrian Safety**

Bicycling and walking are a common means of transportation, as well as exercise, in the Montlake/UW area. The Montlake East-West corridor is already a critical pathway for bicycles and pedestrians traveling between neighborhoods south of the ship canal and the University of Washington, and between the Burke-Gilman Trail and Lake Washington Blvd. Non-motorized traffic will likely increase significantly with the new SR 520 bikeway connection and the presence of the Husky Stadium

C-039-008 Light Rail station. With all this non-motorized traffic having to cross a major freeway interchange, the opportunities for accidents are enormous. The safety of bicyclists and pedestrians must be paramount in designing the new bridge and interchange. On the entirety of the 520 corridor, all bicycle and pedestrian facilities should be designed to meet City of Seattle standards to assure safe entrance and exit from the bridge trail, provide room for passing, allowing cyclists to avoid road debris from being kicked up in their faces while also allowing enough room so that cyclists do not get blown into each other when strong winds gust across the bridge.

C-039-009 Ramp intersections should be narrowed, eliminating slip ramps to allow for safer crossings of the 520/Montlake intersection by bicyclists and pedestrians. A lid should be added between Montlake Blvd and 24th Ave. East that would make it safer to bicyclists and pedestrians traveling from Lake Washington Blvd and the Arboretum and neighborhoods east of 23rd to easily avoid the most dangerous part of the Montlake interchange. Along Montlake Blvd itself, the 520 project should include landscaping, pedestrian design features, bike lanes, appropriate lighting and signage to slow down auto traffic leaving and entering the 520 interchange while also making the boulevard inviting for pedestrians and bicyclists.

C-039-010 **Health Impact Assessment**

Beyond bicycling and pedestrian infrastructure, we want to reiterate our support for the conclusions of the SR 520 Health Impact Assessment jointly authored by the Puget Sound Clean Air Agency and Seattle-King County Health Department. These recommendations include measures to reduce construction-related noise and air pollution; connected non-motorized corridors; wayfinding systems; well-designed landscaping throughout the corridor and especially on lids and in areas used by pedestrians and bicyclists; public art and esthetic design measures where roadway intersects with walkways and neighborhoods; and innovative stormwater management practices to minimize run-off of vehicle related pollution into Lake Washington.

C-039-011 **Mitigation for Neighborhoods**

With expansion of the 520 highway from four lanes to six, most Montlake and Roanoke residents are getting more than they bargained for when first arriving in the neighborhood. WSDOT should actively work with neighbors to mitigate noise, visual impacts and air pollution. WSDOT should especially defer to neighbors, as well as the City and bicycle and pedestrian groups, in designing lids to ensure they will serve as assets to neighbors long into the future.

C-039-012 **Impacts on the Arboretum**

We believe that the Arboretum ramps should either be removed, or if they are found to be necessary for transit access, then traffic restrictions, pricing or traffic management systems should be in place to ensure the Arboretum is no more, and hopefully less, impacted by traffic from 520 than it is today.

C-039-012 Again, we thank you for the opportunity to weigh in on this well thought out and detailed SDEIS document. We look forward to continuing our involvement with the project and someday in the not too distant future seeing these efforts come to fruition.

Sincerely,

Bill LaBorde
Policy Director
Transportation Choices Coalition

Coalition for a Sustainable SR 520

Madison Park.. North Capitol Hill..Montlake.. Laurelhurst..Roanoke Park/Portage Bay. .Boating community

April 15, 2010

Ms. Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart ST, Stui520
Seattle, WA 98101

Dear Ms. Young,

The Coalition for a Sustainable SR 520 hereby submits its comments on the SDEIS for the SR 520 I-5 to Medina Project, consisting of this letter and Appendices A through Z. Most of the Appendices are on the attached CD.

We give heartfelt thanks to the many members of the community who created this response.

Fran Conley

Coordinator fran@roanokecap.com 206-328-4444
117 East Miller St, #205, Seattle 98102

Boating Community
by .....

Laurelhurst Community Council
by .....

Madison Park Community Council
by Maurice B. Cooper, P.E.

Montlake Community Council
by Jonathan M. Dubman

N. Capitol Hill Neighborhood Assoc.
by Nancy Brainard

Roanoke Park/Portage Bay Community Council
by Theodore Lave

Appendices

Printed and on CD

Appendix A: Comment Letter written by David Bricklin
Appendix B: Analysis of damage done to parks and public open space
Appendix C: Comment Letter from Tighlman Group on traffic
Appendix D: Letter from JGL Acoustics on noise

The following appendices are on the CD only:

Appendix E: Current funding for SR 520 program
Appendix F: Email on timing of EIS for pontoon project
Appendix G: 1954 map of "Option A"
Appendix H: Letter from Governor Gregoire to Seattle City Council
Appendix I: Excerpt from Publicola report on Federal court decision
Appendix J: Seattle Times Article quoting governor and Senator Tom
Appendix K: Report of Legislative Workgroup
Appendix M: Methodological flaws in transportation analysis
Appendix N; Traffic simulation flaws
Appendix O: References on traffic
Appendix P: Generated Traffic
Appendix Q: Capacity of 4 Lanes
Appendix R: Ramp at I-5 SR 520 Intersection
Appendix S: References on Traffic, Air, and Health
Appendix T: Analysis of SDEIS assertions on air and health
Appendix U: Comments on Health Impaces Assessment
Appendix V: Ruling on Uses of Tolls
Appendix W: Fish Impacts
Appendix X: Park Commissioner' Comments
Appendix Y: RFP Pontoon Bidding
Appendix Z: Errors and Omissions in Cultural Resources report

This document also incorporates by reference the comment letters from the Madison Park Community Council; the Montlake Community Council; the Shelby-Hamlin Group; the Roanoke Park/Portage Bay Community Council; the Seattle Yacht Club; the Queen City Yacht Club, and the Laurelhurst Community Club.

Summary

There are nine basic problems with the state's analysis (SDEIS) for the 520 corridor from I-5 to Medina:

C-040-001 I) The state has improperly separated the evaluation of the I-5 to Medina segment from the pontoons segment and from the east side segment. In fact, these are interdependent parts of one project.

C-040-002 II) The state appears to have made a decision already, and to be going through a paper environmental review process while subverting the intent of the laws.

C-040-003 III) The SDEIS does not demonstrate that people and goods would move better after the construction. The methodology for estimating demand and assessing congestion is fundamentally flawed.

C-040-004 IV) The state is planning to take protected parkland for most of the length of 520 on the west side, destroying a unique chain of linked parks and bays. Federal law requires seeking alternatives rather than taking parkland or harming historic areas.

C-040-005 V) The state has not analyzed obvious alternatives which might have better results and do less damage, including a tolled, transit-priority 4 lanes which might be adequate for some years until additional funding is available, and a 6 lane alternative with 2 lanes used for light rail.

C-040-006 VI) The SDEIS does not correctly describe the Current Proposals . The SDEIS also does not adequately describe the current congestion in Seattle, the planned projects will increase that congestion, and the lack of space for additional cars.

C-040-007 VII) The SDEIS does not adequately describe the effects of this highway expansion on air pollution and human health. The state has an obligation to seek alternatives which will do less damage.

C-040-008 VIII) The state plans to start expanding the east side of 520 this year. The whole program is at least $2 billion short on funding, and the state is choosing to use the available funds for an area which has no safety problems, rather than to do a safety project for which funding is available.

C-040-009 IX) The costs to businesses, families, and travelers are not fairly portrayed. Almost no mitigation of damages is promised. Noise reduction levels, limits on air pollution, offsets for construction damages, and lids are either ignored or presented as optional.

Comments

C-040-010

I) The SDEIS errs in breaking the environmental analysis of the 520 Program (from I-5 to Redmond) into segments.

Section I) A)

A) There are four components of the SR 520 Program; three of these are segments of the same construction project .

1) WSDOT 520 website: "there are four projects in the SR 520 Bridge Replacement and HOV Program:

I-5 to Medina: Bridge Replacement and HOV Project (hereafter I-5 TO MEDINA PROJECT)

Medina to SR 202: Eastside Transit and HOV Project (hereafter East Side Project)

Pontoon Construction Project (hereafter Pontoon Project)

Lake Washington Congestion Management Project

http://www.wsdot.wa.gov/projects/SR520Bridge /

2) The first three of these projects are large construction projects. WSDOT is doing separate environmental analyses on each of them. However, these are interdependent segments of the same project, see (B) below.

3) The fourth project, Lake Washington Congestion Management Project, consists of early tolling; active traffic management (electronic signage) and travel time signs. This project can be carried on independent of the other three and does not need to be covered in the same analysis.

Section I)B)

C-040-011

B) The SDEIS for the I-5 TO MEDINA PROJECT does not include necessary analysis of the East Side and the Pontoon Projects.

http://www.wsdot.wa.gov/Projects/SR520Br 1

1) The East side project is literally a continuation of the I-5 TO MEDINA PROJECT described in the DEIS, adding lanes.

C-040-011

2) The Pontoon project creates the flotation devices which support the 520 floating bridge described in the I-5 TO MEDINA PROJECT.

3) **The three projects are functionally inseparable**. To cross Lake Washington on SR 520, one must travel from the area covered by the SDEIS to the area covered by the East side project, and the roadway on which one travels is supported by the pontoons.

Section I)B) cont'd

4) **The three projects have intertwined and interdependent purposes.**

a) "The purpose of the SR 520, I-5 to Medina Bridge Replacement and HOV Project is to improve mobility for people and goods across Lake Washington within the SR 520 corridor from Seattle to Redmond in a manner that is safe, reliable, and cost-effective, while avoiding, minimizing and/or mitigating impacts on affected neighborhoods and the environment." *SDEIS Chapter 1, page 3*

b) Eastside: "The purpose of this project is to enhance travel time reliability, mobility, access, and safety for transit and carpools in the rapidly growing areas along the SR 520 corridor east of Lake Washington." *520 Medina to SR 202: Eastside Transit and HOV project Environmental Assessment. Chapter 2, page 1*

c) "Pontoons are the foundation of a floating bridge and can take several years to construct. They are large, hollow concrete structures designed to support the weight of the road, plus the cars, trucks and buses that use

C-040-011

the bridge daily. The Pontoon Construction Project is a critical step toward restoring the existing SR 520 bridge as soon as possible in the event of a catastrophic failure.
The timely availability of new pontoons is a critical element of restoring the bridge for drivers and maintaining a critical link - the SR 520 corridor - to the region's transportation system and economy."
http://www.wsdot.wa.gov/Projects/SR520/Pontoons.htm

Section I)B) cont'd

5) **In other documents, WSDOT shows that these projects are interdependent.**

a) The EIS published in 2006 treated 520 from I-5 on the west side to I-405 on the east side as one project. On Page 1-8, the purpose is defined as "to improve mobility for people and goods across Lake Washington within the SR 520 corridor from Seattle to Redmond …"
http://www.wsdot.wa.gov/projects/sr520bridge/DraftEIS.htm

b) The Lake Washington Congestion Management project includes both east and west sides of the Lake as part of the same congestion project

http://www.wsdot.wa.gov/Projects/LkWaMgt 1

Section I)C)

C-040-012

C) **Constructing any one of the three construction projects would preclude important design alternatives for the other projects.**

1) If the east side were constructed soon, as is currently planned, without provisions for light rail, and the I-5 TO MEDINA PROJECT final design includes light rail, we would have the ridiculous situation of a light rail line stopping at water's edge, or later mammoth redesign and reconstruction of a new light rail lane for the east side.

2) If the east side were constructed soon, as is currently planned, with room for 8 travel lanes (after striping the shoulders), and the I-5 to Medina Project

C-040-012

final analysis concludes that a narrow 6 lanes is best, the existence of the additional lanes on the east side project would put pressure to design to accommodate them.

3) If the west side were constructed as currently proposed (Option A or variations), it could not add light rail in the future. See Nelson Nygaard report on light rail alternatives, April 2010, incorporated here by reference.This is contrary to the legislative intent, and precludes an important option.

4) The pontoons as discussed in the SDEIS would not support light rail, but light rail is an active possibility for the I-5 TO MEDINA PROJECT . Additional pontoons would be needed, and they would change the size and environmental impact from that described in the SDEIS.

5) The pontoons determine the size and structure of the bridge superstructure described in the SDEIS for the I-5 TO MEDINA PROJECT. Constructing the pontoons as currently designed would preclude a smaller lower bridge over lake Washington.

Section I)D)

C-040-013

D) Because the state does not have enough funding for the full 520 program, construction of any one segment would limit the design options of the other segments.

a) The state funded the 520 program as a whole, another indication that the projects form one whole.
   (i) In 2009, ESSB 2211 Sec 8 says "for all projects in the state route number 520 corridor program, the legislature intends that the total cost will be no more than $4.65 billion".

   (ii) In 2009, ESSB 2211 then appropriates funds for "the replacement of the floating bridge and necessary landings" which is one piece of the I-5 TO MEDINA PROJECT, one of the three construction projects. This limited piece of a project not correspond to any definition of project.

   (iii) In 2010, ESSB 6392 removes the limitation of floating bridge and necessary landings, and says bonds may be issued for the "state route number 520 bridge replacement and HOV program", once more treating the program as a whole.

   (iv) In 2009, ESSB 1272 authorizes issuing $1.95 billion general obligation bonds for the "state route number 520 corridor projects"

C-040-013

b) Current estimates of shortfall in funding for the full 520 program are at least $2 billion of the $4.6 billion total.

http://www.wsdot.wa.gov/Projects/SR520Bridge/financing.htm

State funding		**$0.55 B**
Transportation Partnership Account	$0.50 B	
Nickel Package	$0.05 B	
SR 520 Account (tolling and future federal funding)		**$1.60 B**
Federal funds		**$0.22 B**
Total funding		**$2.37 B**
Program cost		**$4.65 B**
Less sales tax deferral	$0.30 B	
Program cost after sales tax deferral		**$4.35 B**
Total unfunded need		**$1.98 B**

(i) Unless additional funding is found, construction of any one segment will limit the ability to construct the others.

(ii) If the east side is constructed, there may not be funds to construct the safety-threatened bridge and west side.

(iii) If the east side is constructed, there may not be sufficient funding for the west side. The design may be changed, and the mitigation features reduced.

(iv) The most likely source of additional funding is to add tolls to the I-90 corridor; but there are legal and political obstacles to that action, and the results are unknowable.

(v) Even with tolls on I-90, the funding would be insufficient. Appendix E, Legislative Workgroup Nov. 2009 Additional taxes would be needed, and the willingness of citizens to vote for them is unknown.

Section I)E)

C-040-014

E) The timing of the environmental reviews makes it impossible to assess the impact on the human environment of the whole program.

1) The east side environmental analysis was published in December 2009 and the comment period ended on January 7, 2010.
http://www.wsdot.wa.gov/Projects/SR520Bridge/EastsideEA.htm

2) The EIS for the pontoon project is expected to be published in May 2010, after the comment period for the I-5 TO MEDINA PROJECT SDEIS is closed. [Appendix F]

3) The SDEIS for the I-5 TO MEDINA PROJECT was published on January 22, after the comment period for the eastside ended, and its comment period runs until April 15, before the EIS for the pontoon project will be published.
http://www.wsdot.wa.gov/Projects/SR520Bridge/SDEIS.htm

Section I)F)

C-040-015

F) **There appear to be significant conflicts of designs shown in the segments, so that it is currently impossible to know what will be built.**

1) Documents differ on the number of lanes and their purposes.
   a) RCW 47.01.408 says the bridge shall be designed for 6 total lanes, with 2 lanes that are for transit and high-occupancy vehicle travel and 4 general purpose lanes.

      Citizens have been told on numerous occasions, including at a mediation meeting, that 6 means 6; that is, that light rail and bus will be on lanes 5 and 6 and there will be no lanes 7 and 8.[find 6 = 6 document!]

   b) The bidding documents for the pontoon project show additional lanes (ie lanes 7 and 8) with light rail in the future. The SDEIS for the I-5 TO MEDINA PROJECT does not show or discuss light rail on the bridge or on the west side. The east side environmental analysis (incorporated by reference) does not show or discuss light rail.
      Lanes 5 and 6 can be built to support light rail; but if they are not designed now for that, it will be impossible to add light rail in the future without rebuilding the structures.

2) Current documents show busses and HOV on one lane on the east side and the bridge; but except for a ramp, there is no bus/HOV lane on the west side. This precludes meaningful bus rapid transit.

C-040-015

3) The Nelson Nygaard report (April 2010) indicates that the current design of the west side landing precludes light rail in the future.

4) We have been told that an emergency project to produce pontoons in case of failure is underway, but no information is divulged regarding the size, location, or impact of this project. It may be covered in the EIS expected in May, after the comment period for this SDEIS is closed.

G) Evergreen Point is not a logical terminus on the east side. Virtually all the 520 traffic at Evergreen Point continues east on 520. See Appendix C, letter from David Bricklin.

C-040-016

II) The state appears to have made a decision already, and to be going through a paper environmental review process while subverting the intent of the laws (NEPA and SEPA).

Section II) A)

A) The pre-ordained result is 6 or more traffic lanes, car-centric, across the lake and on the east side, with option A+ (perhaps with minor variations) on the west side. (hereafter Current Proposals)

1) The state has been pushing small variations on this design for years. Each of the state-run processes... the TransLake Study, the Mediation, the Legislative Workgroup... has inched closer to it. Participants in each of these groups urged further study of specific alternatives but were ignored.

2) Although all parties agree that in 1963 the highway should not have been put through an area of intense recreational use and unique environment, the state has not presented the preservation of the remaining natural area as a weighty element for any of these groups or the SDEIS . See section IV below.

3) In the EIS of 2006, the state promoted a version of this plan called "Base 6". This was defeated by voters.

4) In 2007, the state (ESSB 6099) defined the expected result and the task of the mediation group as a 6 lane highway with 2 HOV/transit lanes, and 4 general purpose lanes. This law is an attempt to pre-determine results before alternatives were fully considered.

5) In 2009, Mediation participants were given the definition above and not allowed to introduce alternative solutions.

C-040-016

6) Indeed, the currently preferred alternative was conceived in 1954 and has not advanced much since then See Appendix G.

Section II) B)

C-040-017

B) The public is being asked to comment on the SDEIS by April 15, 2010, even though many critical elements of the proposal are not yet known, so the public can not make effective comments.

1) The pontoon project is not yet published;

2) The "Cultural Resources" section which is crucial for the west side is not updated. The overall impact on the historic districts is not laid out.

3) The construction plans are not laid adequately out so that the public could assess their impacts;

4) The whole chain of linked parks and opens spaces along the west side has not been depicted and is not known to the public;

5) And Option A+, which is likely to be chosen, is not laid out in enough detail, see specifics below.

C-040-018

C) **The Current Proposals were in fact chosen as the preferred design before the SDEIS was published, although the most senior leaders of the program have avoided saying so.**

Section II) C)

1) The media have frequently reported the recommendation of the legislative workgroup in December 2009 as a decision, without any contradiction from state leaders.

2) In her letter to the city council, the governor indicates that only small changes will be accepted, and those must be made quickly. Appendix H

3) The governor and Sen. Rodney Tom, who was a member of the Legislative workgroup and is a leader in attempting to get 520 expanded, are quoted in media as opposing efforts to rethink the bridge… before the comment period ended. . Appendix L.

4) The state plans to proceed rapidly to construction of the east side segment of the Current Proposal before the other segments are finalized.
   (i) The environmental assessment was published December 2009;

C-040-018

(ii) ESSB 6392 in March 2010 changed the use of the appropriated funding, from floating bridge only to anywhere on the project, with legislators saying the intent was to start the east side.

(iii) A "Finding of no Significant Impact" is expected April 2010 http://www.wsdot.wa.gov/Projects/SR520Bridge/eastsideenviro.htm

(iv) Permits for the east side project are expected to be received around May 2010; (P8 presentation to legislative workgroup 7/29/09)

(v) Construction of the east side project is expected to start around June 2010. (P8 presentation to legislative workgroup 7/29/09)

Section II) D)

C-040-019

D) The state has continued to press toward its Current Proposals even though the state does not have funding , rather than evaluate alternatives which could be done with foreseeably available funding.

Speaker Frank Chopp and Rep. Jamie Pederson in their minority report to the legislative workgroup say " Absent a commitment to engage in genuine discussion for a more viable option, we recommend that the Washington State Department of Transportation (WSDOT) address the immediate safety concerns on the existing bridge and work with the affected neighborhood communities and the City of Seattle to find a long term solution that better serves the region. "*P 5 Report of Legislative Workgroup*.

1) The state plans to start construction of the east side in a few months even though funding for the full program is not available, and design of the full program is incomplete so real total costs can not be known.

C-040-020

E) The state has used arbitrary deadlines to cut off analysis of alternatives.

Section II) E)

1) In 2008, the governor directed that the program be accelerated so that the new bridge could be open in 2014. This deadline was arbitrary. Safety fixes could have been done quickly and could still be done separate from expanding the highway.

2) The 2009 mediation process was cut off with an arbitrary deadline for reporting to the legislature. WSDOT insisted on including Alternative L, which no participant wanted at the time, and on not including an Improved-4-Lane alternative or more intensive study of transit, which many participants wanted and would have insisted on in subsequent meetings.

3) When the mediation process was cut off, one of the design options was a tunnel called "Alternative K". Mediation participants wanted to study a type of tunnel called an "immersed tube tunnel" Many months later, they learned that WSDOT

C-040-020

was studying only a much more expensive method called "Sequential Excavation". Because this more expensive method did not work well, months later WSDOT agreed to look at the immersed tube tunnel, now called "Option M"; but then analysis of Option M was stopped as soon as the legislative workgroup made its recommendation. The date cutoffs have been critical to eliminating alternatives without serious study.

4) The 2009 legislative workgroup was instructed to recommend a design alternative by the end of 2009, far before the engineering was far enough along to solve important problems, or establish reasonable cost ranges.

5) In turn, one of the reasons given by the legislative workgroup for not finishing the development of Option M was that it would delay the schedule. Appendix K http://www.wsdot.wa.gov/partners/sr520legislativeworkgroup/files/finalreport/RecommendationsRpt.pdf

6) The arbitrary deadline for the SDEIS means that "live" options for the west side were not analyzed, while obsolete options are.

   a) The SDEIS discusses three design options for the west side:
      (i) Option A, which simply expands the existing footprint while adding a second drawbridge over the Montlake Cut. (SDEIS page 2-6)

      (ii) Option K, which moves the interchange west, uses a tunnel under the Montlake Cut, and keeps the footprint narrower going towards I-5.

      (iii) Option L, whose footprint is similar to Option K, but which uses a second drawbridge going at a long diagonal over than Montlake Cut.

   b) All of these options were obsolete at the time the SDEIS was published.

      (i) For months before the SDEIS was published, all parties knew that Option A did not work for traffic mobility. Putting that option in the SDEIS gives the appearance of considering options without the reality.

      (ii) "Option A+" is Option A plus its suboptions. It is part of the Current Proposals. However, the SDEIS analysis mentions it only in passing and fails to analyze its overall impact, see YY below.

      (iii) For months before the SDEIS was published, all parties knew that Option K had been discarded in favor of Option M. As with Option A, its inclusion in the SDEIS simply gives the appearance of considering options without the reality.

      (iv) Option M is not included in the SDEIS because WSDOT dropped it when the legislative subgroup decided to recommend the Current

C-040-020

Proposals. The development of this option might have led to a real west side alternative to the Current Proposals.

(v) For months before the SDEIS was published, all parties knew that Option L was not practical. Its inclusion in the SDEIS gives the appearance of analysis of alternatives without the reality.

Section II) F)

C-040-021

F) The SDEIS has minimized attention to legislative directives that do not lead to the Current Proposals, and put heavy weight on directives that do lead there.

1) These laws include ESHB 1272; ESHB 2211; ESHB 2878; ESSB 5352 ESSB 6099; ESSB 6392.

2) State law shows an intent for a 6 lane total(RCW 47.01.408), and WSDOT used this to preclude any analysis of less than 6 lanes. However, the Current Proposals have more than 6 lanes on almost all of the west side, and could be striped for additional lanes.

3) State law requires effective transit connections from SR 520 at the University of Washington light rail station (RCW 47.01.408), but the current proposals do not achieve that. Light rail passengers would have to walk about 1200 feet across a busy street to catch their bus.

4) State law requires both HOV and transit (same RCW), but virtually all WSDOT communications and analyses emphasize HOV rather than transit. SDEIS CH 2-2 in describing the 6 lane alternative emphasizes HOV and does not mention bus or rail.

5) State law requires that the bridge be designed to accommodate light rail, but the SDEIS does not analyze the impacts of a light rail system on the design, on deman, on congestion, or on avoidance of harm to 4f-protected properties.

6) Legislative intent of minimizing footprint is ignored. The Current Proposals have wide shoulders and wide footprint.
   a) ESSB 6099 states as a legislative goal: " Minimize the total footprint and width of the bridge, and seek appropriate federal design variances to safety and mobility standards, while complying with other federal laws";

Section II) G)

C-040-022

G) The SDEIS ignores verbal negotiated agreements with the communities because they do not lead to the Current Proposals which the state wants to build.

1) During the mediation, the communities insisted that primary effort must be to avoid damage rather than to mitigate it. The state agreed that "mitigation will be inherent to and inseparable from design". However, the design does not avoid or minimize damage harm, see Appendix B and each section below, inadequate lids are the only mitigation proposed, and the SDEIS clearly states that most of the lids are optional.

2) The communities insisted that noise is a primary concern and must be mitigated, and WSDOT agreed. However, there is no promised level of noise mitigation, see below.

3) The communities and WSDOT agreed that all alternatives would have narrow shoulders and not be wide enough to permit striping for additional travel lanes. The Current Proposals have broad shoulders which would permit such re-striping.

4) After extended negotiation, WSDOT agreed that the center line of the Portage Bay bridge would be in the future where it is now. The SDEIS shows the Portage Bay bridge moved to the north, nearer to more homes and to the yacht clubs.

Section II) H)

C-040-023

H) **There is a pattern in the errors and omissions detailed below; they consistently work towards defining the Current Proposals as the solution.**

Readers, please be aware of this pattern as you consider the errors and omissions.

Section III I)

C-040-024

I) **The state has manipulated the timing and content of cost estimates to discredit west side design options other than the one in the Current Proposals.**

1) As the mediation group worked on 3 designs, WSDOT called a press conference immediately prior to the mediation meeting. At the press conference and before members had a chance to see or question the cost numbers, WSDOT announced cost numbers for the 3 designs.

2) At that time, engineering was no more than 10% complete. At this stage, costs are not reliable. Furthermore, WSDOT's costing methodology is heavily dependant on a

C-040-024

risk factor which leads to choosing familiar alternatives rather than techniques with which the department is less familiar.

3) One of the designs included a tunnel under the Montlake Cut. WSDOT numbers for this tunnel were eleven times the costs for other new tunnels

Tunneling Costs
2009

Project	Length In Feet	Estimated Cost	Cost per Foot
Bremerton, WA Tunnel	960	$ 53,900,000	$ 56,146
Pittsburgh River Tunnel	2,240	$ 156,000,000	$ 69,643
Seattle Viaduct Tunnel	10,560	$ 2,200,000,000	$ 208,333
		Average above	*$ 111,374*
SR 520 Plan K Tunnel	900	$ 1,056,000,000	$ 1,173,333

WSDOT estimates are 11 times the average above

4) Participants asked many times for explanation of the costs. Although WSDOT hired a cost expert to review its numbers, we never received line items adding up to a total until after the legislative workgroup made its decision.

5) The cost numbers were a primary factor in the legislative workgroup's choice of Alternative A for the west side. The costs were probably the factor, with quick timing as the second factor, because the legislative workgroup did no meaningful comparison of the effects on parks, the environment, the historic areas, mobility on the city streets, etc see report of Legislative workgroup, Appendix K

6) After the legislative workgroup had voted, on the night before their final meeting, costs adding up to a total were published for the first time, on page30 of their draft report. Appendix J. The costs of the tunnel option as finally presented are extremely inflated by assuming half a billion dollars for a garage for the University of Washington, right of way, and mitigation. Thus the legislative workgroup's decision was made without any opportunity to see or analyze the costs, and these costs appear to be extremely biased towards the design favored by the state.

Section II) J)

C-040-025

J) The SDEIS does not show the pontoons or the 2 layer bridge to the public, but state officials now say it is too late to change them.

Please see Section V.

C-040-026

III) The SDEIS does not demonstrate that people and goods would move better after the construction. The methodology for estimating demand and assessing congestion is fundamentally flawed.

Section III) A)

A) The state has made inconsistent and questionable assumptions in order to conclude that the project purpose of improving mobility would be achieved by the SR 520 project as described in the SDEIS.

1) The purpose of the SR 520, I-5 to Medina Bridge Replacement and HOV Project is to improve mobility for people and goods across Lake Washington within the SR 520 corridor from Seattle to Redmond ... (SDEIS Chapter 1, page 3)

a) Because this purpose statement extends to Redmond, the purpose cannot be achieved without completion of the east side project. Results from another project can not be used to justify this project.

b) Mobility from I-5 to Medina depends on the traffic at the interchanges at I-5 and the bus stop at Evergreen Point. Assumptions about the evolution of traffic patterns at these spots are not clearly identified or tested (Traffic Discipline Report, Chapter 4).

2) The SDEIS asserts in various places that mobility would be improved by the 6-lane alternative. [Chapter 5, p 5 and following] However, this assertion is based on assumptions that are not clearly stated or tested.

a) Particular assumptions were made about traffic demand and transportation conditions in the year 2030, which strongly influence conclusions. These include untested stated assumptions about human behavior (In particular, that tolls will cause large numbers of people to switch to HOV transport); demand (such as that load remains heavily concentrated at peak periods); transportation infrastructure (particular transport services existing such a s light rail across the lake); and many other implicit assumptions such as that citizen pressure does not cause HOV lanes to be opened for general use. It is highly improbable that all these assumptions will turn out to be valid.

C-040-026

b) The SDEIS 2030 No-Build and Cumulative Effects Definition Technical Memorandum and supplement March 28, 2008 acknowledge that these assumptions drive the results "These elements (i. e., the input assumptions) are major factors that influence travel behavior and patterns.'

Section III) B)

C-040-027

B) The SDEIS omits discussion of demand and use of the SR 520 corridor during most of its expected life. .. all the years after 2030. Since the expansion of the 520 corridor is intended to last for 75 years, or at least until 2090, it appears the SDEIS assumes all conditions will remain static from 2030 to 2090.

1) It is an error to make statements about improvements in mobility without the qualification that they are based on use of a model which projects only to 2030.

2) Seattle's population growth is forecast to double by 2100, (Open Space Seattle) with increasing demand for transportation across Lake Washington. A plan for 520 must allow the flexibility to adapt to the larger population as it grows during the next century. The project would not be successful if it improved mobility only until 2030.

Section III) C)

C-040-028

C) The SDEIS does not test an adequate range of assumptions about the impacts of tolling on projected traffic levels on the No-Build, Existing, 4- or 6-lane options.

1) The SDEIS failed to examine the possibility that 4 lanes, tolled and transit-priority, would accommodate the expected demand.

2) The SDEIS compares the no-build alternative without tolling to the 6 lane alternative with tolling. This is misleading.

Section III) D)

C-040-029

D) The SDEIS Transportation Discipline Report (TDR, hereafter) reveals fundamental flaws in the methodology used to predict demand and use of the facility and nonstandard or nonexistent tests of model assumptions. Please refer to Appendices M and N for discussions of some of the major flaws in this modeling methodology. We cite here only a few.

1) The Puget Sound Regional Council chose the model, gave the model inputs (i. e., the controlling assumptions), did the model validation, and provided the goals for development. There was no independent review of the process at any step.

C-040-029

2) The Transportation Discipline Report omits customary and critical model validation procedures.

3) The model is calibrated from data from one month alone (October, 2008). Many different parameter settings can fit the data from the short (one month) period but would produce wildly different results. There is no explanation for how the choices were made and no discussion of uncertainties, and no robust sensitivity analysis as is standard professional practice.

4) The model is land based and does not adapt for behavioral choices. If, for instance light rail were available, it should affect vehicle traffic results .

5) The model relies on assumptions about how many people will live here, where, where they will want to go, how they will travel, what legislative and price restrictions will be in place concerning use of certain fuels, and other demographic and economic factors. Because of the number and importance of these assumptions, the model results themselves have to be treated as a set of assumptions, not fact, and a range of such assumptions (called "scenarios") should have been used in the analysis.
However, the current analysis rests on only one scenario. Thus it does not support the conclusion that the benefits for transportation will continue to exist if the circumstances of the future become different from what was ssumed in 2009.

6) The statements that general –purpose vehicles would decrease by up to 10,000 vehicles and 13,500 persons per day (Table 5.1.2, Ch 5) that "travel demand models are not intended to provide an absolute traffic volume forecast", advising that forecasted traffic flows should be used only for comparison between options, NOT for estimating absolute conditions.

7) The SDEIS says that completion of the eastbound HOV lane could save vehicles approximately 40 minutes (Chapter 5). However, completion of the eastbound HOV lane is not part of this I-5 to Medina project. Results from another project can not be used to justify this project.

C-040-030

Section III) E)

E) **The SDEIS lacks adequate studies of the impacts of the SR 520 project on I-5 and on city streets. Thus in effect it assumes these impacts will not modify traffic performance. These flaws are discussed in Appendix C and summarized here**

1) The model does not take into account crucial factors like on- street parking. It is further unable, according to discussions with WSDOT, to predict what will happen on affected city streets. Since the congestion on city streets will affect trip performance, the model is inadequate to predict overall travel time improvement or queuing times.

C-040-031

2) The model assumes the area impacted by modification to the Montlake Interchange is limited on the south by the SR-520 Arboretum ramps. (TDR- 4-7) This is inconsistent with current traffic and congestion patterns and discussions elsewhere in the document.
Likewise, on Capitol Hill the area defined as impacted is much smaller than the area profoundly impacted by SR 520, which reaches from the Harvard I-5 northbound onramp at least to 10th and East Miller.

C-040-032

3) Pedestrian volumes are assumed to remain static (TDR 4-15) That assumption conflicts with all other assumptions about population, transit ridership, changing behaviors, etc. Please provide more realistic assumptions on pedestrian volumes.

C-040-033

4) The SDEIS errs in not adequately quantifying the current and future congestion on all the Seattle arterials and at all important interchanges near 520.

a) The TDR does not provide data on the current vehicle levels and congestion in the following areas, all of which currently have severe congestion related to SR 520.

1. Madison at 23rd
2. Madison at Lake Washington Blvd
3. Montlake Boulevard at Pacific and at University Village;
4. 10th Avenue at Miller or Boston;
5. Harvard north of Roanoke, before the entrance to I-5.
6. I-5 southbound and northbound from 520

b) The TDR does not provide predicted vehicle levels and congestion in the same areas, taking into account the following major, planned developments in Seattle:

1. Large new condo buildings in the Broadway area
2. More commercial space at Eastlake
3. In the Montlake area and north, the expansions of
   a. Children's Hospital
   b. University Hospital
   c. University Village
   d. See appendix XX for data on the above developments.

C-040-034

5) The SDEIS model appears to assume the one way express lanes at the SR 520—I-5 junction will be adequate to maintain mobility at that junction through the year 2090. This assumption is inconsistent with present data and is highly unlikely to be valid at any time in the future.

C-040-035

6) The analysis of local arterials deals only with the morning and afternoon peak hour. The analysis thus assumes a standard traffic pattern that is irrelevant in the vicinity of Montlake Bridge, where traffic mobility is far more sensitive to bridge opening than to overall 'rush hours'. Without specific data and simulations of the impacts of bridge openings the model conclusions are of very limited applicability.

Section III) F)

C-040-036

F) The traffic and congestion predictions in the SDEIS (TDR and Chapter 5) are inconsistent with experience and published studies of urban highway expansion elsewhere. A number of traffic studies relevant to this point are summarized in Appendix P; a few of these are highlighted here. SDEIS must explain what assumptions led to results so inconsistent with these data based studies.

1) SDEIS projected improvements in traffic mobility are not supported by experience or data collected on other urban highways.

a) Under typical urban conditions, data demonstrate that more than half of added capacity is filled within five years of project completion by additional vehicle trips that would not otherwise occur, with continued but slower growth in later years. (Dargay and Goodwin, 1995). As a result, traffic congestion tends to maintain a self-limiting equilibrium: once congestion becomes a problem it discourages further growth in peak-period travel. Road expansion that reduces congestion in the short term attracts additional peak-period trips until congestion once again reaches a level that limits further growth. (Litman, 2010). whether the expansion is SOV or HOV. The experience and literature on this is critical and needs to be made clear to decision makers.

b) SDEIS predictions on travel time (Table 5.1.5) are inconsistent with published data that show that travel time does not decrease with expanded highway capacity. People tend to average about 75 minutes of daily travel time regardless of transport conditions (Levinson and Kumar 1995; Lawton 2001). National data indicate that as freeway travel increases, average commute trip distances

C-040-036

and speeds increase, but trip time stays about constant (Levinson and Kumar 1997).

c) SDEIS does not adequately analyze the effects of generated traffic on surrounding streets. In general, the more congested a road, the more traffic is generated by capacity expansion. Increased capacity on highly congested roads often generates considerable traffic (Marshall 2000). This generated traffic must move through surface streets in the vicinity of the highway.

SECTION III) G)

C-040-037

G) **The SDEIS does not adequately analyze the potential impacts of public transit on 520 itself or on neighboring surface streets and arterials.**

SDEIS ignores the likely possibility that light rail, or lanes dedicated to bus rapid transit, will be needed on 520 in the future. This lack alone renders this study inadequate as a predictive tool for transportation planning.
The demand for bus or light rail is likely understated with no supporting data. The projection of 65 passengers per bus, contrasted with today's 30 passengers per bus, seems impossible. SDEIS provides inadequate explanation of how the predicted number of buses could accommodate the predicted number of bus passengers.

C-040-038

IV) The state is planning to take protected parkland for most of the length of 520 on the west side, destroying a unique chain of linked parks and bays. Federal law requires seeking other alternatives rather than taking parkland or arming historic districts.

Section IV) A)

A) Along 520 from Roanoke Park to the Arboretum is a linked series of parks and publicly-used natural spaces

C-040-038

B) These spaces qualify for protection under the federal Section 4f rule. Appendix B enumerates and describes them.

1) The SDEIS fails to identify many of these spaces. See Appendix B

2) The SDEIS does not recognize that WSDOT right of way must be discussed as public park space if it has been used as such.

C-040-039

C) The SDEIS All of these spaces form a connected green space, heavily used by humans and by wildlife, which is completely irreplaceable. It has frequently been called "Seattle's chain of pearls."

1) Although the SDEIS discusses some of these parks, it does not put them this perspective of one unique, interconnected whole.

2) The linked nature of these parks makes it almost impossible to replace them, and therefore essential to avoid damaging them.

C-040-040

D) The state plans to repeat the errors of 1963, taking public recreation space for highway use.

1) For years, people have said "never again!" and "They couldn't do that now"

2) The Current Proposals more than double the width of 520 in Seattle. The state would take more park space now then it did in 1963.

C-040-041

E) The SDEIS does not prove, as required, that other alternatives which would do less damage are not feasible. See suggested alternatives below, Section V.

C-040-042

F) In addition, the area around Roanoke Park is a national historic area, the NOAA building is recognized as historic, and there are a number of historic sites and

C-040-042

areas in Montlake. Protection of these is mandatory. The SDEIS does not demonstrate:

1) That it evaluated alterantives which would avoid the damage, such as a 4 lane 520 or a 4 lane Portage Bay Bridge, or use of immersed tube tunnels or light rail in an immersed tube tunnel, see Section V below.

2) That it evaluated ways to change the Current Proposals to minimize the damage to the historic areas. Many of these ways are enumerated in the sections below and in appendix B.

3) That is took every reasonable step to mitigate the damage. On the contrary, the SDEIS is clear that lids are optional and no other mitigation is currently planned.

4) There are numerous errors and omissions in the Cultural Resources section. For a partial enumeration, see Appendix Z

C-040-043

V) The state has not analyzed obvious alternatives which might have better transportation results and do less damage.

The SDEIS has neglected to provide serious analysis of obvious alternatives to the Current Proposals.
Ch1.4 says all options have 6 lanes, 2 HOV
Ch1.7 reviews EIS options
Ch 1.8 says 4 lanes discarded
Ch1.9 defines alternative: no build and 6 lane, with HOV

Section V) A)

C-040-044

A) The SDEIS does not adequately address the impact of safety issues on alternatives.

1) Part of the project purpose is safety, and the state has presented the probability of bridge collapse as a major incentive for the 520 program.
   a) The SDEIS says that improvement of safety is a major purpose of the project. (Ch 1.3)
   b) The state has published a video showing possible collapse of the bridge. http://www.youtube.com/watch?v=qIiuDUgvZpY
   c) The SDEIS says it will design for a 7% probability of failure during 75 years.

2) However, the state's actual priorities in building do not correspond to the safety problems.
   a) The SDEIS presents a plan for possible phased implementation based on risk: (ATT 7, Description of Alternatives, P 71 and preceding).

C-040-044

However,the SDEIS does not mention that in real life the state is proceeding to build the East side project, where there are no safety risks, diverting resources from the vulnerable areas.

b) The state has one funding plan for this segment and the east side segment of the 520 program. Funding is quite uncertain; please see Section VIII below. Please explain why tolls on 520 are not being dedicated to the vulnerable areas, particularly since tolls on I-90 are uncertain.

C-040-045

3) The SDEIS has failed to present analysis of how much safety improvement would be achieved by the Current Proposals, and by the alternatives which it should have examined.

a) For each of the priority areas (eg p71) in the Description of Alternatives, What is the probability of failure in 25 years, and in 50 years, before and after the construction of the Current Proposals?

b) How is that weighed against the harm done... the damage to the natural environment, health, etc?

c) What range of safety goals is acceptable for each priority area?

C-040-046

4) The SDEIS asserts that bringing the 520 bridges up to current standards would not be cost effective without also adding lanes (Find this).

a) How much safety improvement could be achieved by a retrofit which is aimed at improving safety but short of current standards?

b) How can that improvemen in safety be weighed against the costs?

C-040-047

5) The state has enough money to fix all the current safety problems. The SDEIS does not explain why the state is embarking on a project which it does not have money to complete, rather than fixing the safety problems with funds that are forseeably available. Please explain.

Section V) B)

C-040-048

B) **State legislation does not excuse the lack of analysis of alternatives**

1) The legislation providing for a 6 lane highway, with 2 lanes used for HOV and transit and with narrow shoulders and rail connections, gives guidance.

C-040-048

2) However, the federal environmental laws still demand that the state evaluate alternatives that might avoid damage to the protected parks and historic areas.

Section V) C)

C-040-049

C) The "No Build" alternative is not realistic, and the state should create a "tolled, transit priority 4 lanes" alternative as a base.

1) The "No build" alternative is not feasible or logical and it is an error to present it as a valid a base case.
   a) It is an error to present as an alternative, a situation which is defined as a failure: SDEIS says that the current structures are likely to fail within 15 Years. Ch 1-4.
   b) It is an error to assume no tolls would be used on a no-build alternative in spite of the state's directive to use tolls for congestion management.
   c) The base case should include tolls, which is now a given, and transit priority, which is an obvious result of recent transportation policy statements.

2) The SDEIS should examine an alternative with 4 lanes, tolled, and with transit given priority, and noise reduction features.

   a) An analysis which says that an improved 4 improved lanes could handle tup to 40% more vehicles is attached, appendix Q . Please respond to its arguments. Should this not be tested?

   b) A tolled and transit-priority 4 lanes would do much less damage to the protected parklands and historic areas. The SDEIS should analyze these tradeoffs.

   c) A tolled and transit-priority 4 lanes might not accommodate the expected demand for the next 75 years, but for how long would it be likely to be effective? What is the feasibility and desireability of constructing this promptly, and then adding light rail when funding becomes available?

Section V) D)

C-040-050

D) Another obvious alternative which should have been examined, and should still be examined, is use of an immersed tube tunnel.

1) As indicated above, WSDOT stopped studying Option M, with an immersed tube tunnel, as soon as the legislative workgroup chose A+. However,
   a) The legislators were not told about, and did not understand, the necessity of protecting the parklands which run along the whole west side corridor, and

C-040-050

b) The legislators were not told about, and did not understand that the result of the Current Proposals would be permanent congestion in all the areas from Montlake to north Capitol Hill, and the accompanying health impacts of increase in chronic disease;
c) We believe that WSDOT spent most of its energies trying to prove that an immersed tube tunnel did not work, rather than creatively thinking about how to use one to solve the problems.

2) A six lane alternative where all lanes go underwater before Foster Island would almost eliminate the 4f issues of taking parklands and damaging historic sites, and would solve many of the city congestion problems. At least two lanes underwater would reduce the 4f issues. Variations of a tube tunnel which should be evaluated include
   a) 2 lanes from Foster Island to the UW light rail station;
   b) 2 lanes from Foster Island to South Lake Union, avoiding the inevitable congestion on I-5 and solving the Mercer weave; and
   c) Any other variations which would get people to their destinations without overcrowding I-5 or the city streets.

3) Although the costs for some of these alternatives might be higher, they might also achieve the objective of improving mobility while preserving parks and communities. In addition, a solution which appeals to people and solves big problems might be easier to fund and to obtain federal money.

Section V) E)

C-040-051

E) The SDEIS should analyze an alternative with 6 lanes of which 2 are light rail only.

1) It is well documented that light rail will cause less pollution and therefore be better both for health and for greenhouse gases; it would run on rail lines to stations and therefore not impact I-5 or city streets; and it could be designed to avoid most damage to parks and communities, particularly if it went underwater at or before Foster Island.
2) Recent polls and votes show that people want light rail. If we give people the kind of transportation they want, they are more willing to use it and pay for it.
3) The legislature wanted the bridge to be able to carry light rail, and under the Current Proposals it could not do so (Nelson Nygaard light Rail reportl, April 2010), and Section VI) A) below.

C-040-052

VI) The SDEIS does not correctly or fairly describe what it is planning to do (The Current Proposals) .

C-040-052

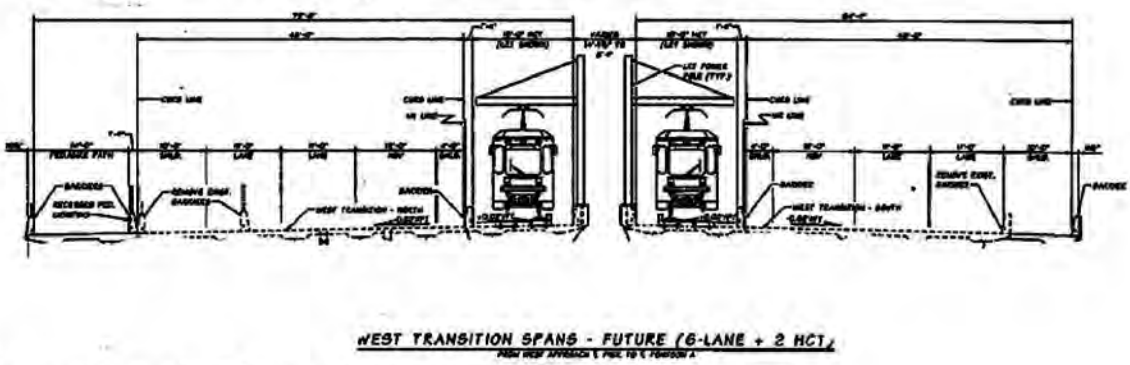
Since the Current Proposals, as described above, use option A+ or variations of it, **all comments and questions below on west side issues assume Option A+ or variations thereof.**

Section VI) A)

A) The SDEIS does not analyze adding 2 lanes for light rail, although both logic and the state's bidding-on-pontoons documents show that as an alternative. This is an error.

1) The SDEIS has no discussion of adding lanes for light rail. The SDEIS shows that the floating bridge will look like this (Ch 1, P24)

2) The state documents given to bidders on the pontoons show additional lanes for light rail in the future;



WEST TRANSITION SPANS - FUTURE (6-LANE + 2 HCT)

Souce: Appendix Y. Request for proposal

3) These documents depict very different bridges. If the state is planning to add light rail the SDEIS should show and analyze it.
   a) State law says the bridge should be constructed to support light rail in the future.
   b) Since the Current Proposals will cause severe congestion, it is reasonable to suppose that light rail might be added within 10-20 years.

C-040-052

c) The Nelson Nygaard study on light rail alternatives http://www.seattle.gov/mayor/PDF/SR520-MayorsDRAFTReport_040610.pdf, incorporated here by reference, indicates that light rail can not be put on the bridge that is depicted in the SDEIS, both because
   (i) the capacity of the structure and the flotation capacity of the pontoons are both less than would be required to have light rail on the 6 lane bridge, and re-building plus additional exterior pontoons would be required, and because
   (ii) Light rail can not go on the outside, so even if one expanded the bridge to 8 lanes and expanded the pontoon base, the currently proposed bridge would have to be strengthened in the middle.

4) If exterior pontoons were needed, or if the highway were expanded to 8 lanes of which 2 are light rail, the environmental effects would be quite different from those described in the Current Proposals. The SDEIS must analyze these alternatives, which its own bidding documents show the state is considering.

Section VI) B)

C-040-053

B) The "6 lane" alternative's name is misleading and should be changed.

The name of this alternative is misleading. In almost all of the west side, there are more than 6 lanes. Although many of these are ramps, they still take up space and contain moving vehicles.

1) The alternative's name is also misleading since it refers only to HOV and not to transit, where both are specified in the state law. This seems to be part of a pattern to minimize discussion of transit. The name should say "transit and HOV".

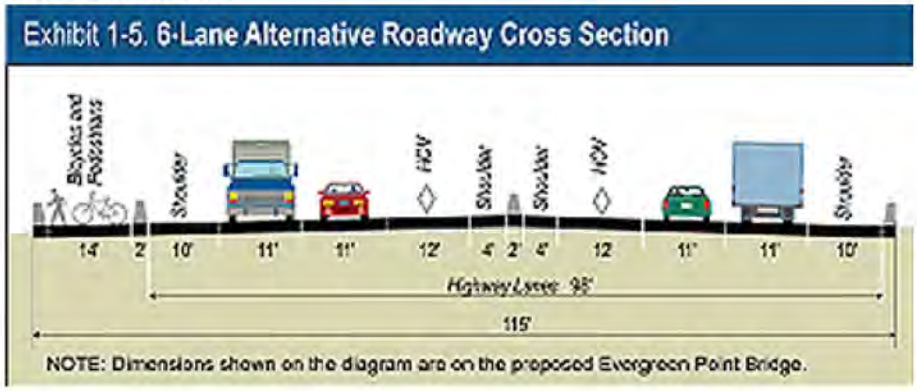
Section VI) C)

C-040-054

C) The width of the bridge should be narrowed so that 8 lanes are not physically possible.

C-040-054

1) Also the description is labelled 6 lanes and the analysis is based on 6 lanes, the SDEIS gives assurance is given that the bridge will remain 6 lanes. The SDEIS shows wide, 10 foot shoulders which could be re-striped for additional lanes. There is precedent in our region for such re-striping. Both the legislative direction and the verbal agreements with communities call for narrow shoulders



2) All the analysis in the SDEIS assumes the quantities of traffic, pollution, etc. that would result from 6 lanes. If there is any intention of allowing for the possibility of 8 lanes, the results should be analyzed. If not, the possibility must be precluded by the physical size of the bridge.

Section VI) D)

C-040-055

D) The SDEIS does not depict the bridge from the lake, or analyze the need for its height and massive blockage of views.

1) Please show a side view of the bridge in context and with all its features, so that its impact can be assessed. Using WSDOT data, we had a depiction constructed, showing how the bridge would look <u>before</u> adding the stabilizing pontoons on the sides and the noise walls above.

C-040-055

a) Please analyze the tradeoffs: The higher the bridge across the lake, the more impact on views,the more taking of public space used by the public, the worse the noise, and the more expense. How does one weight these costs against the benefits?

b) The SDEIS omitted explanations of why the bridge would be as high as planned, and double-layered.

c) The SDEIS omitted analysis of alternative actions which would do less damage to the environment. If the bridge is designed that way for ease of maintenance, what other options for maintenance exist, and how are they weighed against the damage to the public's use of the environment, and the noise, and the added expense?

d) The SDEIS does not explain why the SR 520 bridge can not be approximately as low as the I-90 bridge.

Section VI) E)

C-040-056

E) The SDEIS omits needed analysis related to the connections of SR 520 to I-5 and the nearby communities of Roanoke Park, Portage Bay, and north Capitol Hill.

1) The SDEIS errs in not describing the intersection adequately.
   a) Today, we finally obtained a visual of the intersection showing that the ramp at the intersection of I-5 and 520 will be considerably higher than the current one. This is the first time that information has been available. This is a material fact which was omitted from the SDEIS. More information is needed, so that readers can have a clear picture of the planned connections.
   b) The merging of the lanes from the Portage Bay Bridge to the I-5 conncections is necer clearly portrayed. It is always shown under a lid. This area needs to be clearly shown.

C-040-057

2) The SDEIS does not explain what are the expected effects of the additional traffic from 520 on the express lanes south of SR 520? How will this impact congestion on I-5?

3) And the effects of the additional on the mainline I-5, north and sout on I-5? What throughput can be expected? What are the implcations for congestion on I-5?

4) The SDEIS does not explain the expected effects of not having additional connections from SR 520 to I-5 north?

C-040-057

5) What is the expected effect of the Current Proposals on vehicle throughput and on congestion, in the following areas, all of which are heavily impacted by 520 traffic?

   (i) Harvard Street from 520 to the northbound onramp of I-5
   (ii) 10th Avenue from 520 to East Boston Street
   (iii) Impact on Delmar , both east and westbound.

6) The SDEIS omits analysis of the possibility that it is not possible to put more cars in the communities near the 520 offramp at Roanoke. There does not appear to be any way to make more traffic from 520 traffic flow freely either to the north or to the south. The possibility must be examined that it is simply not feasibe to put additional cars from SR 520 into this area.

Section VI) F)

C-040-058

F) The SDEIS omits many analyses related to the proposed 7 lanes of the Portage Bay Bridge.

a) Since no additional connections to I-5 north are planned, why have three additional lanes on Portage Bay Bridge?

   (i) If the purpose of these lanes is to stack up traffic waiting to go to I-5, how does that weigh against the taking of public use of the bay underneath, the additional strain on the water ecology, and the additional expense of constructing these lanes?

   (ii) If the purpose of these lanes is to enable traffic entering at Montlake to move more quickly up the Portage Bay bridge, how does that weigh against the factors above?

   (iii) The additional lane {auxiliary lane) for vehicles entering at Montlake going west has been described as a way for those vehicles to gain speed before merging. However, the SDEIS omits any analysis of this, including

      (i) This auxiliary lane would not be necessary if the Montlake interchange were further east, near the current Museum of History and Industry. Since that alternative is available, what is the justification for taking away public use of Portage Bay parkland, harming the ecology, and causing extra expense?

   (iv) What is the purpose of a lane enabling cars to go faster on the Portage Bay Bridge, since in a few hundred yards the seven lanes

C-040-058

have to merge into 5 operating lanes anyway, and there is a very high probability of backups because of the lack of additional connection to I-5 north of 520?

(v) The SDEIS lacks description of the width of the Portage Bay bridge as it approaches the Delmar area, and of the lane configuration at the planned merge of the 7 lanes into 5 active lanes, including the area under the lid.

C-040-059

b) Our analysis indicates that adding the 2 westbound lanes to the Portage Bay bridge so that there are 4 westbound lanes actually decreases the throughput compared to the existing 2 lanes, because there are only two functioning exit lanes in the afternoon, when traffic is heaviest, and 3 lanes in the morning. Vehicles on the Portage Bay bridge will be changing lanes and merging, and frequently will be backed up by congestion on I-5 anyway. We calculate that the main use of the additional westbound lanes is to hold cars, which will pollute heavily. Please respond.

c) For the eastbound lanes, the analsis is similar except that the backups will come from the overcongested Montlake area. Please respond.

C-040-060

d) Because the increased size of the Portage Bay Bridge will harm a number of park areas (Section IV and Appendix B), and because the idling cars on the bridge will have a major effect on local air pollution and health, alternatives which do less damage must be considered.
   (i) The Nelson Nygaard report on 520 project enhancement, April 2010, incorporated here be reference
   http://www.seattle.gov/council/attachments/2010sr520final.pdf
   indicated that the Portage Bay Bridge could work with 4 lanes.
   (ii) If the additional 520 lanes were mass transit and went to a station near UW, it would be easy to avoid the damage by keeping the Portage Bay bridge at 4 lanes.
   (iii) In the unlikely event that Portage Bay Bridge can not be kept to four lanes, it should be kept to 5 lanes.

Section VI) G)

C-040-061

G) The SDEIS omits many analyses related to the Montlake area

1) The SDEIS omits depicting the Montlake Interchange as it will be seen from the ground in Montlake.
   a) Please show drawings of the interchange from several ground and water level vantage points.
   b) Please show detailed drawings of bicycle and pedestrian paths.

C-040-062

2) The SDEIS omits necessary analysis of the second bascule bridge which would cross Montlake Cut.
   a) Please provide drawings showing the second bascule bridge and its impact on view from all sides and from the water .
   b) The SDEIS fails to acknowledge that the second bascule bridge both causes constructive taking of park land, and harming a historic site.
   c) The current Montlake Bridge is a historic site which would be damaged by the second bridge.
   d) The construction of a second bridge takes away constructive use of the Ship Canal Trail (4fd parkland) near the bridge, because people would be walking or biking or sitting under a large noisy structure, instead of in open air.
   e) The construction of the second bridge takes away viewpoints enjoyed by thousands of people each year, including water views from east and west; the muc-used view from 10th and Shelby; and views from the land to the east, on both north and south sides.
   f) The SDEIS fails to demonstrate that the second bascule bridge provides any advantages .
      (i) The SDEIS (Ch 6) contains no performance data that aloow an assessment of the impact of this second drawbridge.
      (ii) A compilation of data from the 2006 EIS indicates that the bridge adds almost no value.(Appendix XX Balick)
      (iii) Please demonstrate any advanatages of the second bridge on intersection efficiency, overall capacity, pedestrian and bicycle experience, and transit service.
   g) Because the proposed second drawbridge does harm to historic and park sites, alternatives must be evaluated to avoid this damage. Please present an analysis weighing any benefits of this bridge against the harms.

C-040-063

3) The SDEIS omits analysis of the possibility that it is not possible to put more cars in the area of the Montlake interchange. After years of study, no one has found a way to make more traffic from 520 traffic flow freely either to the north or to the south. The possibility must be examined that it is simply not feasibe to put additional cars from SR 520 into this area.

Section VI) H)

C-040-064

H) The SDEIS omits analysis of the area between Madison Park and Laurelhurst
   1) The SDEIS statement that only 18 homes in Madison Park will be affected is erroneous; at least 600 residences are on the north end of the peninsula, running along SR 520.

C-040-064

2) The height of 520 is a major factor for residents of this area and the damages to homes of the proposed higher elevation of 520 are not adequately described. The proposed height and bulk of this bridge would change these from homes with a front-seat lake view, to homes looking at a concrete barrier.

C-040-065

VII) The SDEIS does not adequately describe the effects of this highway expansion on air pollution and the harm to human health .

Section VII) A)

A) The SDEIS presents unrealistically optimistic projections of air quality.

1) The SDEIS conclusions on air quality are completely dependent on its predictions that congestion will decrease and average speeds will be over 30 mph. which in turn is dependent on overly optimistic assumptions. (Section III above)

2) Because of its inadequate examination of the effects of the expansion of SR 520 on the Seattle roads (see Section VI above), the SDEIS does not acknowledge that much of the Arboretum, the Montlake area, Portage Bay, Roanoke Park, and north Capitol Hill would have permanent heavy congestion, with idling cars spewing pollutants. Please include analysis of congestion and pollutants of these areas.

C-040-066

3) The projections use data only to the year 2030, where residents will be living with the results through 2090 or longer.

C-040-067

4) The SDEIS (Chapter 5) states that according to their models there will be no new violations nor increases in the frequency or severity of existing violations of the air quality standards associated with any of the build options. It was difficult to evaluate this projection because:

a) At 2030 projected vehicle traffic levels along arterials and local streets is associated with dramatic adverse health impacts (asthma, cardiovascular disease, cancer) for those spending significant amounts of time outside within about 0.2 -0.3 miles of major roads. (For example: Brugge et al (2007), Chang et al (2009); Shendell and Boothe (2008); Williams et al (2009), Buonocore et al (2009)). The impacts grow with length of arterial and are particularly highly correlated with concentrations of particles with diameters less than 2.5 microns (called 'fine' particles).

b) The only regulations cited in the DEIS are EPA (1992). It is unclear if they have incorporated more recent regulatory standards; (e.g. EPA (2006)).

C-040-067

c) Moreover, the SDEIS does not provide the 24-hour area concentrations of pollutants, the quantity regulated by EPA.

Section VII) B)

C-040-068

B) By not designing the expansion of SR 520 to <u>avoid</u> air pollution, the state is arguing that it is ok to harm human health and the global environment.

1) The argument: the economic plight of this community is such that people must have access to their cars to travel to work even though the resultant air pollution will adversely affect the health of citizens in ways which include premature death. Is there no other way that people can reach their jobs?

2) Further, the argument is that the economic plight of Puget Sound is so great that we can ignore the effects of increasing CO_2 emissions upon global warming and the adverse effects upon the rest of the world.

Section VII) C)

C) The SDEIS errs in not evaluating other alternatives, like light rail or tunnels, which might provide better mobility with far less air pollution.

1) Whaver the level of pollution in the future, it is not adequate to design a highway, present it in an SDEIS, and then attempt to mitigate the pollution caused by the design.

2) Instead, the design from the beginning should have as one of its primary goals the avoidance of air pollution (and noise pollution).

3) Please give responses to the following questions:
   a) What avenues were explored to find alternatives to the use of the automobile?
   b) What funding was requested for this putpose? What funding was provided? For what grants wer applications made?
   c) What instructions were WSDOT planners given to explore alternatives to the automobile to reduce pollution, by senior managers, the governor, or the legislature?
   d) Was exclusive Bus Rapid Transit considered as a less-polluting alternative for lanes 5 and 6?
   e) Was light rail considered as a less-polluting alternative for lanes 5 and 6? If so, who participated in the discussion and what were the conclusions?

Section VII) D)

C-040-069

D) The SDEIS does not adequately address the impacts of the Current Proposals on human health, and does not present the important information that its

C-040-069

proposals would unnecessarily cause some people to become chronically sick or to die.

1) Please include in the SDEIS statements from authorities. Here are examples;
   a) "A comprehensive evaluation of the research findings provides persuasive evidence that expousrue to fine partiulate air pollution has adverse effects on cardiopulmonary health" (Pope and Dockery, 2006)

   b) "Recent sudies have shown associations of long-term and short-term exposure to traffic air pollution with cardiovasculate mortality, morbidity, and subclinical paramenters."(Kan, Heiss, et al, 2008)

   c) "Short term and long-term exposures to air pollution have been consistently linked to cardiovascular disease morbidity and mortality." (Van Hee, Adar, etc al, 2009)

   d) "Cohort and case-control studies have also reported an assocation between long-term exposure to air pollution and fatal coronary heart disease." (Roselund, Bellander, et al, 2009)

C-040-070

2) The SDEIS has many other errors and omissions related to air quality and human health. Please respond to the issues raised by Dr. Doug Stewart in Appendix T.
   References are in Appendix S, Health Literature references

C-040-071

3) Preparing for the SDEIS, the state commissioned a Health Impact Assessment (HIA) . However, that SDEIS refers to that HIA only in passing and does not present the issues related to human health as criteria for assessing alternatives. For a critique of the HIA, please see Appendix U.

C-040-072

4) The SDEIS does not explain that light rail would produce much less pollution than cars,and does not present the data on that subject.
   a) The SDEIS does not explain how tradeoffs were made between expanding for cars, and using alternatives like bus rapid transit or light rail. Were health considerations of vehicle travelers and surrounding citizens considered in weighing the balance between single occupant vehicles and other forms of transportation? What data was considered regarding the potential adverse effects of traffic associated air pollution, on chronic respiratory illnesses, the development of asthma particularly in children, the development of heart disease, the development of cancer, the effects upon the development of children, the particular vulnerability of older people, and the risk to pregnancy.

C-040-072

5) The SDEIS does not explain that tunnels would reduce pollution on the west side, and does not provide analysis of the tradeoffs between surface car lanes and tunnels.

6) The SDEIS does not explore other designs that would result in less air pollution.

Section VII) E)

C-040-073

E) The SDEIS does not explain that the effect of the Current Proposals is to discourage physical activities which help human health.

a) The SDEIS (Ch 5-27) does not explain how important near 520 in Seattle are walking, bicycling, kayaking, canoing, and nature outings. It does not explain that the net effect of the Current Proposals is to reduce such activity.

b) See discussion of the takings of parkland and trails, Appendix B. Loss of these parks, trails, and water activity spaces discourages physical activity.

c) In Montlake and at the Roanoke 520 offramp, the Current Proposals create freeway-like movements of traffic, fast and multi-lane, completely inappropriate for a pedestrian or bicycle environment. This endangers people and discourages physical activity.

d) Along the Arboretum walking trail, the Bagley Stair trail, the Bill Dawson Trail, Montlake Park, and Roanoke Park, the highway structure will be so close, so big, and so noisy, that it will have a tremendous discouraging effect on physical activity.

Section VII) F)

C-040-074

F) The SDEIS errs in its discussion of greenhouse gases. In reality, building more lanes will lead to more emissions, and less-polluting alternatives like light rail are available.

1) In Chapter 5 the claim is made that by 2030 all the options will decrease greenhouse gas emissions by up to 7% over those if we do not build. This projected reduction is highly unlikely :

a) Data based analyses show that adding highway lanes always increase greenhouse gases over the long run, although they may decrease them in the short run. (E. g., Williams-Derry (2007)) Construction and maintenance for 50 years is estimated to produce about 3500 tons of CO2 per mile, before counting emissions from vehicles.

C-040-074

b) . Each mile of new highway lane, whether it is HOV or not, is projected to increase CO2 by about 100,000 tons over 50 years. This estimate is based on available data and includes optimistic estimates of projected increases in fuel efficiency.

2) Further, these reductions are insufficient.

The goal of the Seattle Climate Action Plan (SeaCAP06), was to reduce citywide greenhouse gas emissions by 7% over 1990 levels by 2012; the goal of the Western Climate Initiative (WCI), to which Washington State belongs, is overall emission reduction by 15 percent below 2005 levels by 2020. Road transportation currently accounts for 52 % of greenhouse gas emissions in the state of Washington, 62 % in the city of Seattle, and is the only sector of the Seattle economy whose emissions have grown over the past two years. (Community Inventory (2008)).

Thus even if we took the DEIS projections at face value, the GHG emissions they project for 2030 are not in keeping with the Seattle or WCI goals.

C-040-075

VIII) The state plans to start expanding the east side of 520 this year. The whole project is at least $2 billion short on funding, and the state is choosing to use the available funds for an area which has no safety problems, rather than to do a safety project for which funding is available.

Section VIII) A)

A) The SDEIS should explain why it is more important to go ahead on an expansion project which is $2 billion short on funding, than to do a safety project for which funding is available.

Section VIII) B)

B) The costs of the Current Proposals are likely to be higher than the $4.6 billion anticipated.

1) Engineering is far from complete;

2) As discussed in Appendix B, very substantial required mitigation is not even discussed or defined, and its costs are not included.

3) The mitigation required by agencies may not yet be covered; and

4) There is a high likelihood that community actions will postpone construction until the issues are resolved.

Section VIII) C)

C) The state does not have enough funding even for the currently estimated costs of the SR 520 program. Construction is now expected to start on the east side. This is likley to leave the I-5 to Medina project short on funds and constructed with no mitigation.

C-040-075

1) If the Current Proposals for the 520 program are built, the state lacks at least $2 billion committed funding, and at least $1 billion even if I-90 were tolled. See page 33 of appendix K. .

2) Additional funding shortfalls are likely;
   a) The funding plans are dependent on tolling a separate highway , I-90. This tolling has not be approved, would require exemptions from federal law, and may not be feasible under a recent ruling. See Appendix V.

   b) The State's analysis shows that new taxes will be needed Appendix E, and there is no assurance that voters will approve such taxes.

3) The SDEIS omits analysis of how the expected funding shortfalls are influencing design and construction plans. What levels of shortfall will lead to what changes in plans?

4) Starting constuction of the east side segment leaves less funding for the I-5 to Medina segment. The SDEIS refers repeatedly to a "phased implementation plan" under which the lanes would be built first, and lids and other mitigation would come later. The SDEIS errs in not explaining that the lack of funds is likely to lead to no mitigation for the west side for many years.

5) Particularly because of the safety issues, the SDEIS needs to analyze an alternative based on the funding which the state is confident of having. For instance, a safety retrofit of the four lanes could be done with funds available. A 4 lane tolled and transit prioritized 520 might be done with funds foreseeably available.

6) For the reasons above, the legislative desire to have an expanded SR 520 is not likely achievable. The state needs to present real alternatives to a 6 lane car-centric 520, alternatives such as those mentioned in Section V above, together with their costs, what they accomplish, and what they leave undone.

C-040-076

IX) Almost no mitigation of damages is promised. Noise reduction levels and technologies, offsets for construction damages, and lids are either ignored or presented as optional throughout the document.

A) Please see the discussions of lack of mitigation in Appendix B and in each of the sections above. The mitigation is required, and will be substantial.

C-040-077

B) Noise is the primary impact on area residents. The SDEIS does not propose to use the techniques recommended by the noise experts panel, and reasonable noise levels are not assured. See Appendix D.

C-040-078

C) However, the SDEIS does indicate that the Current Proposals attempt to avoid and mitigate the impact on fish. We believe the data use is questionable at best; please see and respond to Appendix W.

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Reply to: Seattle Office

April 14, 2010

Jennifer Young
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Re: Supplemental Draft EIS for the I-5 to Medina Portion of the SR-520 Project

Dear Ms. Young:

C-040-079 I write on behalf of the Coalition for a Sustainable 520 and its members to provide comments on portions of the SDEIS for the above-referenced project. Thank you for this opportunity to comment.

All Reasonable Alternatives Have Not Been Included

SEPA (and NEPA) were adopted to assure that government agencies made decisions "by deliberation, not default." *Stemple v. Dept. of Water Resources*, 82 Wn.2d 109, 118 (1973). There has been much deliberation regarding addressing the transportation needs in the SR 520 corridor. But despite that, there is still the risk that the lead agencies are defaulting on their obligations to rigorously examine all reasonable alternatives. The alternatives analysis is the "heart of the environmental impact statement." 40 C.F.R. § 1502.14. It must "[r]igorously explore and objectively evaluate **all** reasonable alternatives . . ." 40 C.F.R. § 1502.14(a). The EIS must "[d]evote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits." 40 C.F.R. § 1502.14(b). Reasonable alternatives include those that are "not within the jurisdiction of the lead agency." 40 C.F.R. § 1502.14(c).

Determining the range of reasonable alternatives flows from the project's purpose and need. The SDEIS states that the project's purpose remains the same today as it was when the purpose statement was first crafted by the Trans-Lake Washington Study Committee in 2000:

> The purpose of the project is to improve mobility for people and goods across Lake Washington within the SR 520 corridor from Seattle to Redmond in a manner that is safe, reliable, and cost-effective, while avoiding, minimizing, and/or mitigating impacts on affected neighborhoods and the environment.

C-040-079

SDEIS at 1-3. This purpose statement is notable in its focus on moving "people and goods" not motor vehicles. Yet every single alternative examined in the SDEIS involves spending billions of dollars to increase the capacity of SR 520 for motor vehicles only. None of the alternatives include light rail. Light rail offers the possibility of accomplishing the project's purposes at lower environmental costs. The decision to omit light rail from any of the alternatives examined in the SDEIS is inexplicable and renders the SDEIS fatally flawed.

The viability of a light rail option has been documented in the recent draft report prepared for the City of Seattle's Mayor: *SR 520 Light Rail Alternatives, Draft Report*, Nelson/Nygaard Consulting Associates (Apr. 2010). A copy of the report is available at www.seattle.gov/mayor/.[1]

The benefits of a rail option are many. At the top of the list, rail offers opportunities to reduce greenhouse gas emissions. In this day and age, an alternative that offers the promise of reducing GHG emission should be examined in great detail in the environmental review process. Your failure to develop and analyze a rail alternative is disheartening given the commitment of the federal and state governments to reducing GHG emissions in the coming years.

State legislation establishes demanding standards for *reducing* our GHG emissions. The legislation calls for GHG emissions to be reduced to 1990 levels by 2020. By 2050, we are to reduce GHG emissions to 50 percent of 1990 levels. RCW 70.235.020.

The State is not going to meet these standards if it continues to pour billions of dollars into constructing highways for motor vehicles in areas where light rail is a viable option. Few areas of the State have opportunities for light rail. Residential densities and employment opportunities are high enough in the SR 520 corridor to support rail. It is a dereliction of duty by WSDOT to fail to seize this opportunity and do everything it can to explore the opportunities for rail in this corridor now.

The SDEIS explains that a rail option was excluded as a result of planning that started in 1998. The SDEIS seems to take the point of view that because rail was eliminated from consideration many years ago, that the momentum behind that decision somehow excuses analyzing a rail alternative in detail in this EIS in 2010. That rationale is flawed in several respects.

First state law mandates WSDOT, Sound Transit, and others to develop a transportation plan "that ensures the effective and efficient coordination of bus service **and light rail services throughout the State Route Number 520 corridor**." RCW 47.01.410 (emphasis supplied). That multi-modal transportation plan is to be "closely coordinated" with the 520 bridge replacement and HOV projects. *Id.* Excluding light rail from every alternative considered in the SDEIS does not reflect "close coordination" between this project and the legislative mandate to "ensure" light rail "throughout the State Route Number 520 corridor."

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[1] I presume the City of Seattle Mayor's Office is providing a paper copy of that report. If you are unable to obtain it otherwise, please contact me and I will be happy to provide you with a copy.

C-040-079

Second, none of the prior planning efforts that resulted in the "no rail" decision for SR 520 had the benefit of the analysis in an EIS. Government decisions on major projects are not allowed to be made until after the decision makers are informed by the content of an adequate EIS. Relying on recommendations made without the benefit of an EIS puts the proverbial cart before the horse. Your agencies' recommendations on how to spend billions of taxpayer dollars must be informed by the contents of an adequate EIS. You should not be justifying the exclusion of reasonable alternatives based on studies that did not enjoy the input of an adequate EIS.

Third, reliance on years of prior planning also is misplaced because the world has changed greatly in the intervening years. Nearly a decade ago, in the early years of the so-called "Trans-Lake Washington Project," rail was jettisoned from consideration for the SR 520 corridor. SDEIS at 1-10. Much has changed regarding our knowledge about climate change. New policies adopted at the city, state, national, and international levels reflect our increasing awareness of the reality of global warming and the need for bold action to avert its worst consequences.

In 2007, the United Nations' Intergovernmental Panel on Climate Change (IPCC) released its frequently cited report reflecting the new scientific consensus that is causing global warming. As summarized by the U.N. News Center in its press release announcing the report:

> The IPCC, which brings together the world's leading climate scientists and experts, concluded that major advances in climate modeling and the collection and analysis of data now give scientists "very high confidence" – at least a nine out of ten chance of being correct – in their understanding of how human activities are causing the world to warm. **This level of confidence is much greater than the IPCC indicated in their last report in 2001.** The report confirmed that it is "very likely" that greenhouse gas emissions have caused most of the global temperature rise observed since the mid-twentieth century. Ice cores, going back 10,000 years, show a dramatic rise in greenhouse gases from the onset of the industrial age. The co-chair of the IPCC working group stated, "There can be no question that the increase in these greenhouse gases are dominated by human activity."

The United Nations went on to summarize the key findings of the report:

> The report describes an accelerating transition to a warmer world – an increase of three degrees Celsius is expected this century – marked by more extreme temperatures including heat waves, new wind patterns, worsening drought in some regions, heavier precipitation in others, melting glaciers and arctic ice, and rising global average sea levels.

C-040-079

The 2007 report from the IPCC represented a major step forward in the scientific understanding of global warming issues. According to the United Nations, "IPCC Chair Rajendra Pachuari said the science has 'moved on' and the extent of knowledge and the research carried now is several steps beyond what was possible for the last report." "This report by the IPCC represents the most rigorous and comprehensive assessment possible of the current state of climate science and has considerably narrowed the uncertainties of the 2001 report," according to Michel Jarraud, Secretary General of the World Metereological Organization. Executive Director of the United Nations Environment Program was quoted as stating: "[T]his new report should spur policy makers to get off the fence and put strong and effective policies in place to tackle greenhouse gas emissions."

The IPCC was released several years after the Trans-Lake Washington study participants decided not to include rail on SR 520 in the near term. But this information was available to the drafters of the SDEIS in 2009 and 2010 and should have been used by them in determining a regional range of alternatives to simply building more pavement for motor vehicles.

As earth-shaking as the IPCC report in 2007 was (or should have been), scientific analysis since then should be causing alarm bells to ring even louder. The recent Copenhagen Climate Science Congress, attended by 2,000 scientists, concluded with this "Key Message 1:"

> Recent observations confirm that, given high rates of observed emissions, the worst-case IPCC scenario trajectories (or even worse) are being realized. For many key parameters, the climate system is already moving beyond the patterns of natural variability within which our society and economy have developed and thrived. These parameters include global mean surface temperatures, sea-level rise, ocean and ice sheet dynamics, ocean acidification, and extreme climatic events. There is a significant risk that many of the trends will accelerate, leading to an increasing risk of abrupt or irreversible climatic shifts.

International Scientific Congress Climate Change: Global Risks, Challenges, and Decisions (Mar. 12, 2009). (This Scientific Congress was held in advance of the December 2009 Climate Change Conference that drew political leaders from around the world.)

More than our scientific understanding of global warming has changed in recent years. The political firmament is shifting, too. At the national level, in 2007, the Supreme Court rejected Bush administration efforts to preclude EPA from regulating greenhouse gas emissions. *Massachusetts v. EPA,* 549 U.S. 497 (2007). The Supreme Court held that the EPA could regulate those emissions as long as the EPA determines they contribute to climate change. *Id.*

The Supreme Court decision was followed by the election of President Obama, which opened the doors for new federal initiatives to combat greenhouse gas emissions. Pursuant to the Supreme Court decision, the EPA has proposed rules regulating GHG emissions from motor vehicles. On

C-040-079

another front, directly relevant to this project, on January 13, 2010, the United States Department of Transportation announced a "dramatic change from existing policy" regarding the funding of major transit projects. DOT Secretary LaHood stated, "We want to base our decisions on how much transit helps the environment, how much it improves development opportunities, and how it makes our communities better places to live." No longer would transit funding decisions be based simply on alleviating congestion "in making funding decisions, the FTA will now evaluate the environmental, community, and economic development benefits provided by transit projects, as well as the congestion relief benefits from such projects." U.S. DOT Press Release (Jan. 13, 2010).

The shifting political climate also is evidenced by the passage of the American Clean Energy and Security Act by the House of Representatives last summer. The bill sets a goal of reducing overall greenhouse gas emissions by 17 percent from 2005 levels by the year 2020, and 83 percent by 2050.

In like manner, Washington State adopted greenhouse gas reduction standards in legislation adopted in 2008. The legislation states: "The state **shall limit emission of greenhouse gases to achieve the following emission reductions . . .**" RCW 70.235.070(1)(a) (emphasis supplied). As noted above, the statute establishes that by 2020, emissions shall be reduced to 1990 levels. By 2035, GHG emissions are to be 25 percent below 1990 levels and by 2050, they are to be 50 percent below 1990 levels.

The new law also requires agencies distributing capital funds for infrastructure projects to consider whether the entity receiving the funds has adopted policies to reduce greenhouse gas emissions. The agencies must also consider whether the project is consistent with the State's limit on the emissions of greenhouse gases established in RCW 70.235.020 and the statewide goals to reduce annual per capita miles traveled by 2050. RCW 70.235.070.

Policy shifts have occurred recently at the local level, too. The Seattle City Council's 2010 priorities include the adoption of a "carbon neutral goal for Seattle with specific milestones and implementation steps . . ."[2]

In sum, whatever may have led the Trans-Lake Washington Project group to exclude rail from SR 520 nearly a decade ago cannot be cited in 2010 as justification for refusing to consider rail within the range of alternatives today.

Climate change is the most significant and daunting environmental issue facing this generation. We cannot pass up opportunities to reduce GHG emissions based on dated policy recommendations developed without the benefit of an EIS, without the benefit of our current knowledge of the seriousness of GHG emissions, and without the guidance provided by current governmental policies calling for significant reductions in those emissions in the coming years and decades.

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2 Http://www.Seattle.gov/Council/Issues/Council_Priorities.htm#1.

C-040-079

We recognize the existence of political and economic forces (and their friends in the mainstream media) that resist adding a new study of rail at this time. They argue that studying rail now will cause delays and that the project has been "studied to death." First, if delays ensue, they are not the result of those asking that the SDEIS be revised to include a rail option. If the SDEIS had included a rail option in the first place, there would be no need for any delay at all. If an analysis of rail at this stage causes any delay, it is because of the failure of the authors of the SDEIS to include a rail option in the SDEIS in the first place when it was published earlier this year. Don't shoot the messenger.

Second, the new information about climate issues and government policies addressing global warming are issues of the highest environmental magnitude. We understand that at some point, planning must stop and decisions must be made. If there were new information policies about a relatively minor environmental issue, the need for making a decision might outweigh the need for additional study. But as stated above and as recognized by virtually every credible source, there is not a more important environmental issue than dealing with climate change. This SDEIS recognizes that close to 50 percent of the State's GHG emissions come from the transportation sector. One of the most heavily traveled transportation corridors in the State is the SR 520 corridor. We are about to make a decision regarding transportation options in that corridor that will be with us for the next 50 to 100 years. How can we possibly in good conscience (thinking not only of ourselves, but of the next generation) make a decision of this magnitude and with such long-lasting impacts without taking a hard look at a rail option now?

Third, reliance on the old recommendations to exclude consideration of rail in the SR 520 corridor is misplaced because it is inconsistent with Sound Transit's current plan for the SR 520 corridor. Sound Transit has not ruled out constructing light rail in the 520 corridor. Rather, Sound Transit's current plan ("ST 2") calls for an analysis of opportunities to develop high capacity transit, including light rail, in that corridor. Yet all of the alternatives currently under consideration would effectively eliminate the opportunity to bring rail to this corridor. *See* Nelson/Nygaard report. An EIS is required to assess opportunities that will be lost if the proposal goes forward. RCW 43.21C.030(2)(b)(v). But rather than disclose that all of the studied alternatives will doom light rail in this corridor, the SDEIS suggests light rail can be readily added later. Such a claim is debunked by the extensive analysis in the Nelson/Nygaard report. As those authors state, we have one chance to get this right – and that time is now.

The failure of the SDEIS to provide a detailed assessment of a rail option infects other portions of the SDEIS, too. For instance, in the discussion of the project's consistency with local land use plans and policies (SDEIS at 5-42, *et seq.*), there is no acknowledgement that proceeding with the current proposal would stymie the region's long-term plans that call for possible inclusion of rail in the SR 520 corridor. As just noted, Sound Transit (and other regional planning bodies) still consider rail in the SR 520 corridor a viable option that requires further study. Yet this project would effectively eliminate that option from future consideration (for the next 50 to 100 years). That inconsistency should be disclosed in the EIS.

C-040-079

In like manner, the Section 4(f) analysis (SDEIS, Attachment 6) totally ignores the light rail option and fails to provide any consideration of the ability of that alternative to avoid or reduce impacts to parklands protected by federal law. A light rail option could eliminate the need for HOV ramps and, thereby, reduce the footprint of the project and its impacts on protected Section 4(f) lands. Yet this avoidance and minimization strategy was not analyzed because rail had been eliminated as an alternative to be studied in detail in the EIS. *See* Attachment 6 at 121. This is yet another fatal flaw in the SDEIS.

The failure to consider rail as a means of reducing impacts to parks is ironic given the Governor's quote in the SDEIS that called for Seattle communities to develop a design for the project in Seattle that "will best serve the neighborhoods, University of Washington, **and parks and natural resources.**" SDEIS at 1-16 (emphasis supplied). The Governor called on WSDOT "to provide support" to that effort. It is not too late. A rail alternative could be the best option for protecting parks and our most vulnerable natural resource – our atmosphere under attack from GHG emissions. We urge the FHWA and WSDOT to provide support for that effort now.

Segmentation

The SDEIS assesses impacts (and alternatives) only within a part of the SR 520 Project corridor. As the SDEIS recognizes, the earlier Draft EIS evaluated the entire SR 520 corridor from I-5 in Seattle to 108th Avenue NE in Bellevue (just shy of I-405). In contrast, though, the SDEIS chops that corridor in two. The current SDEIS evaluates only the portion of the corridor from I-5 to Medina. This is error.

Federal Highway Administration regulations set forth three criteria that must be met to justify conducting environmental review for only a segment of a longer highway project. The segment evaluated in the EIS "shall:"

> (1) Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
>
> (2) Have independent utility or independent significance, *i.e.*, be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
>
> (3) Not restrict consideration of alternatives for reasonably foreseeable transportation improvements.

23 C.F.R. § 771.111(f).

The I-5 to Medina segment analyzed in the SDEIS fails all three of these tests.

C-040-079

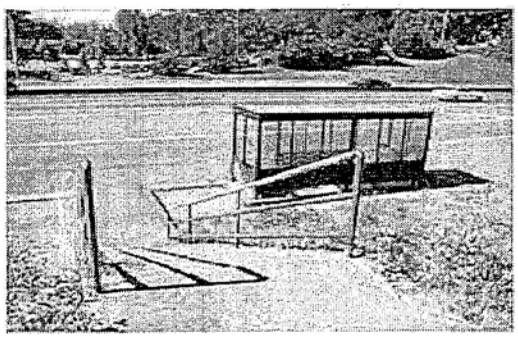
Logical Terminus

The SDEIS explains the logic of the two endpoints in Section 1.14: "These termini are logical because the I-5/SR 520 interchange is a major system interchange in the City of Seattle, while Evergreen Point Road is the location of a major transit transfer point for the Eastside." We have no quarrel with recognizing the I-5/SR 520 interchange as a major system interchange and a logical terminus for the western end of the project. A parallel eastern terminus is SR 520's intersection with I-405 in Bellevue or its intersection with SR 202 in Redmond. But there is no comparable "major system interchange" at Evergreen Point Road. The SDEIS claim that Evergreen Point Road in Medina is a logical endpoint because it is a "major transit transfer point" is illogical in several respects.

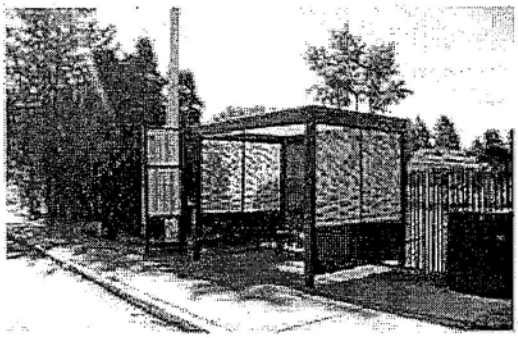
First, an infinitesimal number of persons traveling along SR-520 use the Evergreen Point Freeway Station. According to data in the SDEIS, of the 160,000 people who use the bridge on an average weekday, only 1,000 of them are transit riders who use the Evergreen Point Freeway Station. That is, barely more than one-half of one percent of persons crossing the bridge use the Evergreen Point Freeway Station.[3] That hardly makes it a "major" transit transfer point.

Second, even if the comparison is made to transit riders crossing the bridge, the numbers are not much better. According to the EIS, there are 15,000 transit riders passing across the bridge on an average weekday (ES 2-1). The 1,000 transit riders using the Evergreen Point Freeway Station constitute just seven percent of all transit riders crossing the bridge. The Evergreen Point Freeway Station simply is not a "major" transfer point.

Third, the minor role of the Evergreen Point Freeway Station is visually conveyed by these pictures of the facility:



Evergreen Point Freeway
Transit Station – Westbound



Evergreen Point Freeway
Transit Station – Eastbound

SR 520 Transit station Usage summary Page 2
WSDOT Aug 2005

[3] According to the EIS, 160,000 people cross the bridge on an average weekday (ES 1-2) of which only 1,000 are transit riders using the Evergreen Point Freeway Station (SDEIS at 2-8 and Ex. 2-5).

C-040-079

These small bus stops on the side of a major freeway hardly constitute a "logical terminus" for this environmental analysis.

Fourth, in justifying Evergreen Point Road as the western terminus for the segment of this project stretching east to Redmond, the SDEIS asserts: "The existing freeway transit stop at Evergreen Point Road is a key hub for transit on the Eastside, connecting north-south routes with east-west routes across Lake Washington; . . ." SDEIS at 1-36. Key hub? Connecting north-south routes? According to Metro's Route Map, there are no major north-south bus routes using the Evergreen Point Transfer Station. The only two routes that do not simply pass through the transfer station while remaining on 520 are Route 261 and Route 271. Each of these routes travel south for a short distance and then turn east through downtown Bellevue and then beyond to points further east in Overlake (Route 261) and southeast in Eastgate (Route 271). Characterizing the Evergreen Point Transfer Station as a "logical terminus" on the basis of it being a "key hub" linking east-west with north-south routes is pure fiction. For all of these reasons, the first test in the federal regulation is not met. Evergreen Point is not a major hub and is not a logical terminus.

Independent Utility

Limiting environmental analysis to this western segment also fails the second test which requires that the project have "independent utility," "even if no additional transportation improvements in the area are made." Certainly the "no action" alternative would have independent utility by eliminating safety issues associated with the existing, aging structures. But the proposal is to do much more than that, *i.e.*, to expand the road to include new HOV lanes across the lake and in Seattle. The SDEIS claims that these HOV lanes "will complete the SR-520 HOV system in keeping with regional planning." SDEIS at 1-23. Hardly! Completion of this segment would not complete the SR-520 HOV system in keeping with regional planning. The Eastside project would have to be completed as well.

Eastbound on SR 520 from the Evergreen Point Station, there are no HOV lanes until considerably east of Evergreen Point Road. Constructing eastbound HOV lanes in Seattle and on the bridge would create a huge backup where that traffic has to merge with the general purpose lanes due to the absence of any eastbound HOV lanes from Evergreen Point east.

The eastern segment of this now bi-sected project (*i.e.,* the segment east of Evergreen Point Road) is described as including this major element:

> Construct a new eastbound HOV lane from Lake Washington to the existing HOV lane west of the I-405 interchange. **This improvement** would complete the currently discontinuous HOV network on the Eastside and improve travel time reliability for buses and carpools.

C-040-079

SDEIS, Appendix Q at 1-4 (emphasis supplied). Not unless the west of Medina segment is combined with the east of Medina segment will there be a continuous eastbound HOV system in the SR 520 corridor.

Westbound, HOV lanes exist from I-405 to Lake Washington, but they are on the outside of the right-of-way. The project in Seattle and on the bridge call for the HOV lanes to be on the inside of the other lanes. "This change would enhance safety by eliminating the need for merging vehicles to weave across the faster-moving HOV lanes to reach the general purpose lanes." Thus, completing the SR 520 HOV system involves more than building HOV lanes in Seattle and on the bridge. The Eastside HOV lanes must be moved so that they form a continuous protected lane inside of the general purpose lanes. Unless the westbound HOV lanes east of Lake Washington are relocated to the inside, the SR 520 HOV system will not be complete, contrary to the claim in the EIS that the Seattle and bridge segment of the project alone will "complete the SR 520 HOV system."

Segmentation Precludes Alternatives

Carving out the Seattle and Lake Washington portion of the corridor as a separate segment also violates the third test of the federal regulation, *i.e.*, it will "restrict consideration of alternatives for other reasonably foreseeable transportation improvements." As we have already seen, adding rail to this corridor is a "reasonably foreseeable transportation improvement," yet all the alternatives under consideration for this segment would not just "restrict" consideration of light rail, but effectively eliminate it. That would be a loss not just for Seattle communities, but for Eastside communities, too.

In like manner, proceeding with the eastern segment in advance of the Seattle and bridge segment threatens the feasibility of adding rail to the Seattle and bridge segment. Unless provision is made now for rail east of Evergreen Point Road, the decisions made on the eastern segment will "restrict," if not effectively preclude, consideration of adding rail to this corridor at any time in the reasonably near future.

Segmenting the overall project also threatens consideration of alternatives for the Seattle and bridge segment because of funding limitations. There is only so much money that the federal and state agencies can find to fund this project overall. Revenue sources for the entire project have not been found. *See, e.g.,* SDEIS at 2-34. Project cutbacks seem inevitable. By segmenting the project and allowing the eastern segment to go first, scarce funds will be devoted to designing, building, and mitigating impacts on the eastern segment, effectively limiting options when the time comes to design, build, and develop mitigation for the western segment. For all these reasons, the third criterion is not met and this attempted segmentation must be abandoned. A new Supplemental Draft EIS should be prepared that evaluates the entire project. No further action should be taken to implement the eastern segment (east of Evergreen Point Road) until a Final Supplemental EIS is published.

C-040-079

Section 4(f) Lands

Section 4(f) of the Department of Transportation Act and Section 138 of the Federal-Aid Highway Act preclude the use of parklands for highway projects absent extraordinary circumstances.[4] Prior to enactment of Section 4(f), parklands had been an easy mark for highway projects. Building highways in parks typically involves less expense and less political and practical problems than building a highway through established residential or commercial areas. As the Supreme Court stated in the seminal 4(f) case of *Citizens to Preserve Overton Park v. Volpe*,[5] Section 4(f) "expresses the Congressional will 'that protection of parkland was to be given paramount importance.'"

In *Overton Park*, the highway departments argued that parkland should be used because of cost, safety, and other factors. The highway departments claimed they had discretion to consider these other factors and to determine "whether, on balance, alternative feasible routes would be 'prudent.'" *Id.* at 412. The Supreme Court rejected these contentions:

> But no such wide-ranging endeavor was intended. It is obvious that in most cases considerations of cost, directness of route, and community disruption will indicate that parkland should be used for highway construction whenever possible. Although it may be necessary to transfer funds from one jurisdiction to another, there will always be a smaller outlay required from the public purse when parkland is used since the public already owns the land and there will be no need to pay for right-of-way. And since people do not live or work in parks, if a highway is built on parkland no one will have to leave his home or give up his business. Such factors are common to substantially all highway construction. Thus, if Congress intended these factors to be on an equal footing with preservation of parkland there would have been no need for the statutes.
>
> Congress clearly did not intend that cost and disruption of the community were to be ignored by the Secretary. But the very existence of the statutes indicates that protection of parkland was to be given paramount importance. **The few green havens that are public parks were not to be lost unless there were truly unusual factors present in a particular case or the cost or community disruption resulting from alternative routes reached extraordinary magnitudes.** If the statutes are to have

[4] These provisions are currently codified at 23 U.S.C. § 138 and 49 U.S.C. § 303. They were originally enacted as § 4(f) of the Department of Transportation Act of 1966 and are still commonly referred to as "Section 4(f)."

[5] 401 U.S. 402, 412-13 (1971).

C-040-079

> any meaning, the Secretary cannot approve the destruction of parkland unless he finds that alternative routes present unique problems.

Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402 at 411-12 (1971) (emphasis supplied; footnotes omitted). *See also Arlington Coalition on Transportation v. Volpe*, 458 F.2d 1323, 1335 (4th Cir. 1972) ("Congress has declared through sections 138 and 4(f) that conservation of parkland is of the **utmost primary importance**") (emphasis supplied).

Section 4(f) prohibits FHWA from approving any project:

> which requires the use of any publically owned land from a public park, recreation area, or wildlife and water fowl refuge of national, State, **or local significance** as determined by the federal, State, **or local officials having jurisdiction thereof**, or any land from an historic site of national, State, or local significance as so determined by such officials unless (1) there is no feasible and prudent alternative to the use of such land and (2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife and water fowl refuge, or historic site resulting from such use.

23 U.S.C. § 138(a).

The legislation not only provides the utmost protection for parklands, but it also provides local governments with a major role in deciding whether local parklands can be used for a highway project. The Act protects publicly owned park lands "of local significance," and the Act reserves to the "local officials having jurisdiction" the right to determine whether municipally owned park lands have "local significance." 28 U.S.C. § 138(a). In like manner, a finding that an impact to a municipally owned park is *de minimis* requires concurrence by the municipality. 28 U.S.C. § 138(b)(iii)(B). This local concurrence cannot be inferred. There must be an explicit determination by the local government. *Arlington Coalition on Transportation v. Volpe, supra*, 458 F.2d at 1336. *See also* 23 C.F.R. 774.11(c) (in the absence of an explicit determination by the officials with jurisdiction over a park that it is insignificant, park property "will be presumed to be significant").

In making the "significance" determination, "the desirability of using the particular parkland in question as a highway must be ignored and only the value of the park as a park can be considered. Were this not so, land valuable to the community as a park could be used for a highway even though 'feasible and prudent alternatives' existed because federal or State officials had decided that using the park for highway purposes was desirable according to criteria other than whether such alternatives existed, the *only criterion* allowed by the Acts." *Id.* (emphasis in original).

C-040-079

There is no requirement that land that functions as a park be formally designated as a park to enjoy the protection of Section 4(f). *Stewart Park & Reserve Coalition, Inc. v. Slater*, 352 F.3d 545 (2nd Cir. 2003).

Some of the lands at issue here are owned by the State and managed by WSDOT. If WSDOT were to determine that these lands that have been used as park land for decades are not "significant," the Federal Highway Administration has the duty to independently review that determination and reach its own conclusion. 23 C.F.R. § 774.11(d).

Under separate cover, my clients are providing you with a detailed analysis of the project's use of and impacts to significant parklands protected by Section 4(f). That analysis demonstrates that the EIS and its Attachment 6 do not comply with the requirements of either NEPA, SEPA, or Section 4(f). Lands that have local significance for park purposes have been ignored in the analysis. Impacts to lands that have been identified as Section 4(f) lands have not been adequately assessed. The EIS and the accompanying 4(f) analysis fail to recognize and disclose numerous project impacts that will substantially impair the activities, features, and attributes of these park lands. That substantial impairment constitutes constructive use of the park lands and triggers Section 4(f) requirements. 23 C.F.R. § 774.15(a). The failure of the EIS and its Attachment 6 to fairly and fully acknowledge the substantial impairment of these park lands renders the EIS and the accompanying 4(f) analysis inadequate and void.

My clients' comments regarding the impacts to the parks (and the comments of many other citizens, too) are echoed also by the Seattle Board of Park Commissioners. Their recent resolution states that the Parks Board "cannot endorse any of the alternatives . . . due to the profound negative environmental impacts the project would have on the Washington Park Arboretum and the other City of Seattle Parks along the SR 520 corridor." The resolution goes on to explain that "the visual impacts and noise associated with the project, both during construction and after it is completed, will be significant" for Montlake Playfield. The resolution notes that the SDEIS "fails to recognize Lake Washington Boulevard as a historic resource or a park and recreation resource." "This officially designated park boulevard is a 204-acre, 9.2 mile long linear park wholly owned by the City and under the jurisdiction of Seattle Parks and Recreation." The project's "increased traffic through the heart of the Arboretum limits access to the Japanese Garden from the rest of the Arboretum, reduces the air quality due to vehicle emissions, increases noise from traffic and makes crossing Lake Washington Boulevard unsafe." The resolution further explains that recent improvements to Washington Park Arboretum "will likely be negatively impacted" by the project. The Parks Board has adopted a plan for future improvements to the Park, yet "redevelopment of SR 520 has the potential to negate the potential to undertake some or all of these projects to the detriment of the Arboretum and contrary to the goals set out in the Master Plan." The failure of the SDEIS and the Section 4(f) analysis to fully disclose these impacts renders the disclosure functions of those documents inadequate. These impacts also demonstrate the impropriety of using these park lands for the project and failing to minimize impacts as required by Section 4(f).

C-040-079

The EIS and the Section 4(f) analysis also failed to consider the substantial impairment that will occur to park lands if construction of the lids is deferred. Given the considerable funding uncertainties and the lead agencies' acknowledgment that the project may be completed in phases, there is a significant possibility that the lids will be deferred for a considerable period of time, if they ever are built. Analysis of that issue should not be delayed until that decision point arrives. At that juncture, with most of the rest of the project built and money available to complete the Seattle section (but not enough money for the lids), there will be severe pressure to complete the highway project and build the lids at some unspecified time later. That possibility must be addressed now. This dynamic also further demonstrates the impropriety of segmenting this project into an east and west segment.

The EIS and Section 4(f) analysis also are inadequate in their failure to consider the possibility of alternatives that would avoid or minimize the amount of park lands to be used by this project. The rail option, discussed above, for instance, would result in a narrower footprint in some areas, thereby, reducing the amount of park land used for the project. The analysis also fails to consider the alternative of double decking the roadway to drastically reduce the width of the project and its use of adjacent park lands.

Finally, the EIS and the Section 4(f) analysis are inadequate in their treatment of measures to mitigate the use of and adverse impacts to park lands. Both NEPA and Section 4(f) require the lead agencies to develop and assess all reasonable measures available to mitigate these adverse impacts. As detailed in the accompanying letter from my client, that task remains undone. Of particular (but not exclusive) concern is the extent to which the analysis relies on the unfunded lids. Given the severe funding constraints, exacerbated by your current decision to allow the Eastside segment to proceed in advance of the Seattle segment, there seems to be a significant possibility that the lids never will be built. The EIS and the Section 4(f) analysis must take that into account.

Based on the various inadequacies described in this letter, the lead agencies should proceed promptly to develop a new Supplemental Draft EIS that, among other things, addresses the entire project, not just the Seattle/bridge segment and which includes a reasonable range of alternatives, including a light rail alternative. It is unfortunate that decisions made by the lead agencies in the early stages of drafting this document led to such a flawed document. Those decisions will, unfortunately, result in the loss of some time in planning for this project. The sooner the agencies rectify these errors, the sooner this project can get back on the right path. Ignoring these errors or making excuses for them now will simply delay the inevitable and result in yet more lost time. If a mid-course correction is made quickly now, the amount of time lost can be minimized and this project can still move into the construction phase in a reasonable time frame.

C-040-079 Thank you for your consideration of these comments.

Very truly yours,

BRICKLIN & NEWMAN, LLP

David A. Bricklin

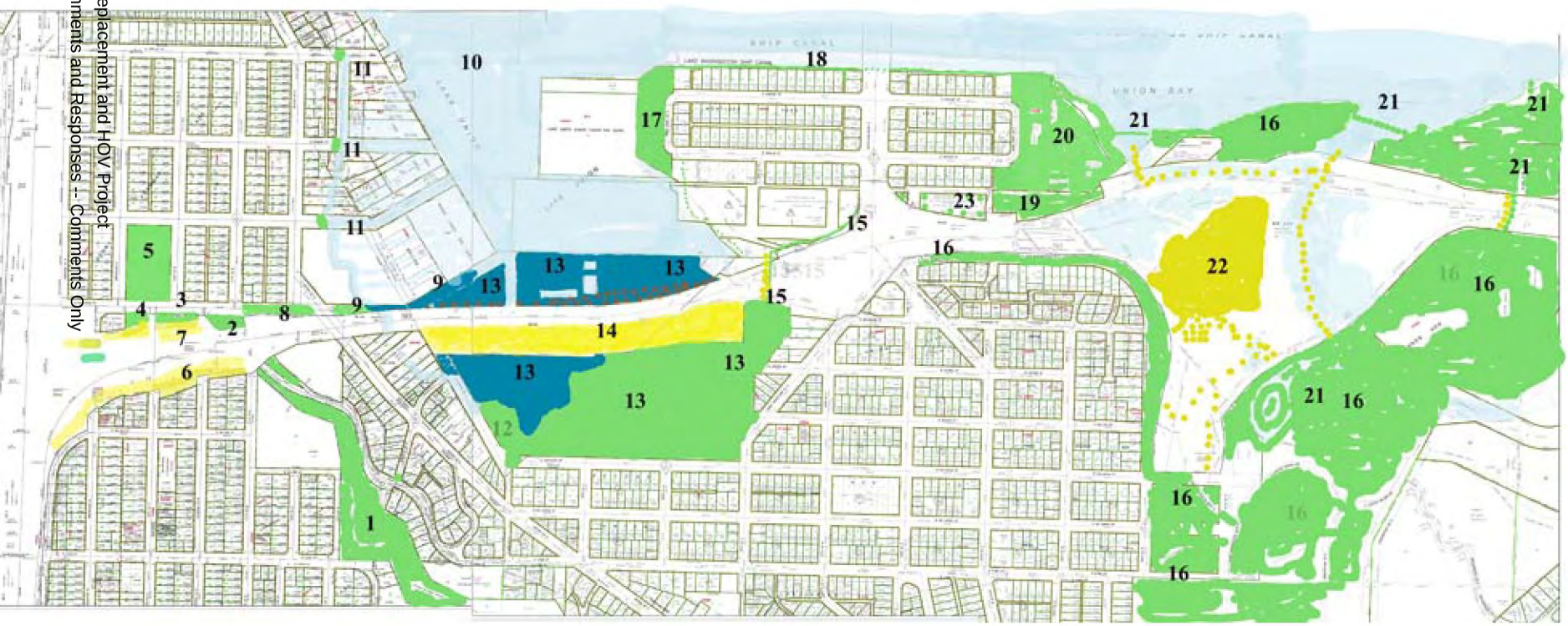
DAB:psc

cc: Clients

Friends of SR 520\SDEIS Comment Letter to Jennifer Young

Appendix B1 Map of linked parks

Linked parks near SR 520;
would be taken or harmed by proposed expansion



(1) Interlaken Park
(2) Bagley Viewpoint
(3) Parklands East
(4) Parklands West
(5) Roanoke Park
(6) South Forest Area
(7) North forest area
(8) Bagley Stair Trail
(9) Roanoke Street End Park
(10) Portage Bay
(11) Street End Parks
(12) South Portage Bay Park
(13) Montlake Playfield Park
(14) Portage Bay Park Area in 520 Right of Way
(15) Bill Dawson Trail
(16) Arboretum
(18) Ship Canal Trail
(19) McCurdy Park
(20) East Montlake Park
(21) Arboretum Waterfront Trail
(22) RH Thompson area
(23) University Canal Lands

SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only
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C-040-080

Appendix B: Analysis of impacts on linked parks and recreation areas

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Federal Section 4(f) of the 1966 Dept. of Transportation Act as amended in 2005 says that a transportation project requiring the use of publicly owned parks, or recreation areas or wildlife areas, can be approved only if

- there is no feasible and prudent alternative to using that land and
- if the project is planned to minimize harm to the property.

To adhere, the state must prove that reasonable alternatives have been evaluated and don't work. In addition, section 6(f) gives additional protection to certain areas where federal funds have been used to create an amenity (such as the Arboretum Waterfront Trail) regardless of the land on which it resides.

Additional 4(f) focus

While the focus of the 4(f) law is on properties formally dedicated or operated as parks, recreational areas or wildlife refuges, a history of actual use of any public properties for these purposes can extend 4(f) protection to such public properties even though they do not have such formal dedication.

The focus of the process is to identify what properties have to be treated with the extra care for detailed analysis to make sure first that the need for care is identified (i.e. it is 4(f) property); second avoids using that land if feasible and prudent; and third, if avoidance is not possible, minimizes the harm and/or provides appropriate mitigation.

The SDEIS has failed to properly identify all 4(f) property involved, often failed to assess the opportunity to avoid impacting such property, often failed to describe the full adverse impact the project makes on that 4(f) property and incorrectly dismissed the need to deal with that impact in numerous instances. Often the SDEIS dismissal is made based on the statement that the use is temporary because the period of use is contrasted to total project construction time. The forecast time for this project is some 8 years and it easily could be longer. But that fact cannot be used to affirm that everything that takes less time is temporary. Rather, properly applied, the time measure is intended to demonstrate the insignificance of the nature and duration of the occupancy being described. The scope of the work needs to be minor to qualify as temporary. Occupancy, for two or three years affirms the significance, not the insignificance of the project that has caused the use. Occupancy constitutes a use if it "interferes with the purpose of the resource, on either a temporary or permanent basis." See USDOTFHA section 4(f) Policy Paper, Office of Planning, Environment and Realty, Project Development and Environmental Review, March 1, 2005.

C-040-081

C-040-082

Lids

In addition, the SDEIS assumes that the proposed lids will be built and therefore that the 4(f) harm that would exist if the lids were not constructed does not have to be fully identified. However, the SDEIS also states that the lids are discretionary! SDEIS Chapter 5, Page 5-80: "Under all build options the following are some of the possible mitigation measures that may be performed by WSDOT."

Given the budgetary tightness of this project, billions of dollars short, discretionary items can be expected to be dropped. **The omission of descriptions of detailed harm to all 4(f) properties creates an impression that the mitigation proposed is in fact discretionary, when, in fact, the state is required to attempt to 1) Avoid, 2) Minimize and 3) Mitigate damage. In short, the properties are not receiving the assessments and protection to which they are they are legally entitled.**

It is clear in the SDEIS that the lids have been identified as the most discretionary aspect of this project and that they will be built last, if ever. The SDEIS describes the project's funding outlook as follows:

"Along with the rest of the nation, Washington State and the Puget Sound region are facing serious revenue shortfalls. ……**there is a gap between the estimated cost of the project and the revenue available to build it. Because of these funding limitations, there is a strong possibility that WSDOT will construct the project in phases over time**." (SDEIS, Chapter 2, Page 2-34.) The document goes on to say that priority would be given to construction of "the Evergreen Point Bridge's floating section, Portage Bay Bridge and the west approach to the Evergreen Pont Bridge. This plan is further described (SDEIS Chapter 5, page 5-152) If the project is phased, WSDOT would "…provide new structures to replace the vulnerable bridges in the SR520 corridor, as well as transitional sections to connect the new bridges to exiting facilities. It would include storm water facilities, noise mitigation and the width for the regional bicycle/pedestrian path, but **lids would be deferred until a subsequent phase."** Finally, (SDEIS Chapter 6, page 6-128) the document explains: "under the Phased Implementation scenario, corridor improvements in the I-5 and Montlake areas would be completed during later phases after vulnerable structures have been replaced. **Lids at I-5, 10th Avenue East and Delmar Drive East, and Montlake Boulevard would be deferred until a subsequent phase."**

The outlook for funding is jeopardized by two additional factors. There is a Federal law that makes it unclear that tolls on I-90 can be used to fund SR520. Second, Washington Legislators are diverting available SR520 funds to commencing work on non-safety related projects on the east side of Lake Washington. The phased implementation plan which the legislature has effectively launched is an intent to not mitigate at the time of construction. **Given the uncertainty of funding and the high probability of phased construction the SDEIS should analyze impacts assuming lids are not constructed.**

C-040-082

This project's lack of funding raises additional questions regarding the lids. Who will get to design them and with what guidelines? There are trade offs in terms of construction cost vs. aesthetics and safety and future maintenance cost. WSDOT has historically done a very poor job of maintaining lands for which it has responsibility, letting them go to blackberry and tree killing vines. The Seattle Park Department budget is constantly being reduced, so it is not funded to care for lids created to mitigate this project. The SDEIS fails to describe the lid program in a way that permits the public to know if it represents real mitigation or sound reduction at the expense of increased visual blight. Given the current environmental climate, this project should not start until all the funds to complete it are at hand and those funds should cover the full cost of all mitigation including landscape maintenance cost for a duration long enough to ensure an aesthetically attractive landscaping is successfully established.

C-040-083

Linked Parks

The numbers below tie to the Map "Linked Parks near SR 520" Appendix B1

(1) Interlaken Park

SDEIS description is in Chapter 4, page 4-27. Also Described in Attachment 6, page 31. Conclusion is that it would be 4(f) if used. Affirms the historical connection to Bagley. SDEIS describes a small portion of the park used for construction easement Ch 6 page 6-41.

Interlaken is a 52-acre regional park with woods and trails running from the Arboretum to Roanoke Park. Interlaken is a major walking and bike route running roughly south-east to north-west. Interlaken ends on both sides of Delmar at the Delmar bridge abutment, the Delmar bridge creating a gap between Interlaken Park and Bagley Viewpoint which was part of Interlaken Park until severed by SR 520 45 years ago. The Olmstead design envisioned that Roanoke Park was the gateway to the start of Interlaken Park at its north end, with Bagley Viewpoint, a partial block from Roanoke Park. Maintaining a park-like connection from Roanoke Park to Interlaken has been a Park Department objective that has been achieved.

The current plans for 520 impact Interlaken Park as follows:

1) Interlaken Park usage will be impaired by its use for construction staging, and replacement of Delmar Bridge. While the park is large, its access points are relatively rare and Interlaken Boulevard at Delmar is a primary and significant access point.

2) The proposal would wipe out the park-like connection between Roanoke Park and Interlaken. This includes the consistent mature tree landscaping between Roanoke Park, Parklands East, Forest Areas (see below), Bagley Viewpoint and Interlaken.

C-040-083

3) The physical linkage between Interlaken and Roanoke Park will be cut for 9 months because of the closing of Delmar associated with the replacement of the Delmar Bridge and the widening of the road below. When the Delmar Bridge is taken out the detour will require biking up a steep hill with lots of competing traffic, and then going through the Miller and 10th Avenue and the 10th Avenue and Roanoke signaled Intersections. This is high traffic in compressed space, slow routing now and it will be made worse because the 10th Avenue Bridge will be taken out and a temporary bridge put to the east, an alignment shift that will slow traffic. Also, the I-5 Roanoke Overpass will be being replaced with temporary bridging and forecast lid building. This same route will be a haul route, presumably with flagmen. Simultaneous construction in so many contiguous areas is going to lead to a noisy, dirty, clogged traffic world that people will seek to avoid. This will impair Interlaken's use for at least two years. Serenity and quiet, also significant attributes of this park, will also be destroyed. See Exhibit 3-6, Construction Elements and Durations in I-5 Area, SDEIS Chapter 3, page 3-12 which shows a 2-year time schedule. The text, Chapter 3, page 3-6 says that the Delmar Bridge will be out for approximately 9 months; Chapter 3 page 13 says Delmar will be closed for 9 to 12 months.

4) Also, as described below, widening of SR 520 exposes Interlaken to increased noise and visual blight.

5) The location of a replaced Bagley Viewpoint is not committed to, nor are its contents and linkages (see below.) The relocation of Bagley could easily cause a taking of Interlaken Park lands if the relocation occurs to the south. The SDEIS in failing to resolve the size and location of a Bagley relocation fails to address these issues.

In sum, Interlaken Park will be harmed by construction impact, by the destruction of mature trees and landscaping during the construction period, and harmed afterwards, the amount depending on the nature of the mitigation if any that is done. Given the high probability that lids will not be constructed at the time SR520 is rebuilt at Delmar, is very obvious that Interlaken and its peaceful green belt of connection to Roanoke will be damaged seriously. The widening of SR520 takes natural land out of production that is currently a sound absorbing and visual blight reducing mitigation. Given the total lack of real capability and commitment to mitigate, this important entry way to Interlaken must be seen as significantly damaged. Its features of a green belt, its activity of peaceful quiet recreation for pedestrians and bikers, and its attributes as a historical path connecting Roanoke Park and the Arboretum will be seriously impaired. The fact that the bridge will be out for 9 months adds to the loss of activity. The park will be left with significantly more noise at its north end than it has now due to the doubling of road way width and number of cars plus their increased speed. The combination of above factors means that what was a pleasant connection from Interlaken to Roanoke will be broken, significantly impairing a major current and historical function of Interlaken Park, i.e. being an easily accessed bike and pedestrian friendly, serene park

C-040-083

well linked in Boulevard style to Roanoke Park. The SDEIS is incorrect in not assigning 4f constructive use to Interlaken.

The SDEIS identifies Interlaken as a city park and acknowledges that there are 4(f) issues because they plan to do staging and construction at Delmar which they deem not significant in part because of a mis-use of the "temporary use" classification. They are focusing on curbing rather than on the treed area which will be destroyed by that construction. The SDEIS does state that street trees taken out by the lid construction will be replaced, but a mature tree is not replaced by a sapling. Further there are many trees creating the connection between parks and these many trees are in the declared construction area. The SDEIS should have also acknowledged 4(f) status to Interlaken for loss of the preciousness and historically significant connection to Bagley Park Overlook and Roanoke Park, given that said connection will be severed as part of the SR 520 doubling. (See also Parklands East and Parklands West.)

The SDEIS errs in neglecting to consider the relationship between these park areas, including the historical aesthetic significance of the linkage between the parks as well as the need for ease of access by park users.

- The SDEIS fails in its presumption that the harms can be dismissed as temporary taking. If the lid is built the disruption will be over a 2 year period. If the lid is not built, construction will cause very long lasting to permanent damage to the connection between Interlaken and Roanoke park, with greatly increased visual blight and noise and break and the elimination of mature foliage which has been reducing the impact of these problems for a road half the size of the one planned.
- The SDEIS fails to evaluate alternatives which avoid this damage.
- A 4 lane alternative on Portage Bay bridge, and elimination of I5 express lane connection would minimize the road width of SR520 and would reduce the amount of road widening required. This might permit the retention of Bagley and avoidance of replacement of Delmar and Tenth Avenue Bridges.
- If these bridges have to be replaced, postponing that construction until funds are available for lid completion would at least ensure that some of the damage done partially offset by the lid. Right now the timing is such as to create maximum damage with possibly no mitigation.
- The SDEIS fails to evaluate alternatives which would minimize the damage.
- See discussion of Parklands East and Parklands West and Forest Areas.
- See also Roanoke Park and Tenth Avenue discussion.
- The SDEIS proposals for mitigation are inadequate because the mitigation is not stated as required, and even if required there is high probability the mitigation will not occur at the time of construction if ever. The SDEIS has not documented the harm to this area effectively, which makes it much more likely that the needed mitigation will not be completed. The SDEIS should acknowledge that mitigation for these sites must address the park-like connection between these

C-040-083 parks, fulfilling the physical and aesthetic historical linkage intended by the Olmsteads.

C-040-084 **(2) Bagley Viewpoint** (which before 520 was built was part of Interlaken Park)

Described in SDEIS in Chapter 4 page 4-27. Also described SDEIS Attachment 6 page 30 and 31. Stairway access from below is acknowledged. SDOT pays parks to maintain it including the stairway. Parks is responsible for maintaining the vegetation.

Bagley Viewpoint is in daily use as a rest place and viewpoint, looking over Portage Bay to Lake Washington and the Cascades. Bagley Viewpoint was part of Interlaken Park before 520 was built, and is part of the Olmstead vision connecting Roanoke Park to Interlaken.

The SDEIS identifies Bagley Viewpoint as a significant city park because it has been so identified by the Seattle Parks Department, is historically significant and is a SEPA site. It will be removed to handle the planned widening of SR 520. The SDEIS notes that the taking of Bagley Viewpoint makes it 4(f) property and that it might be mitigated by creating a viewpoint on a new lid at that point. What it fails to note is that because Bagley Viewpoint is part of the historical and visual entrance path to Interlaken, Interlaken Park is affected by the Bagley Viewpoint removal and qualifies for 4(f) review for that reason as well as for the reason given in the SDEIS (see above). In addition, the damage done by taking Bagley Viewpoint is not clearly described and thus the mitigation cannot be designed or mandated to fit the need. Finally, the mitigation plans are not sufficiently clear with regard to amount and location of parking and the nature of the lid and how lid walls will be treated and how the lid will be fit into adjacent landscaping (see Notes on the Proposed 10th Avenue to Delmar Lid, page 38).

While the SDEIS does state that this taking cannot be avoided, it presumes that what has to come through this area is a 7 lane highway.

The SDEIS fails to evaluate alternatives for narrowing the bridge and thus not taking the Bagley viewpoint.

-The SDEIS should evaluate 520 with 4 lanes, tolled and transit priority.

- The SDEIS should evaluate a 4 lane Portage Bay Viaduct. The Nelson Nygaard report and common sense both indicate that the 4 lane Portage Bay viaduct might work well. See also the Coalition Comments Section VI.

- In the unlikely event that a 4 lane Portage Bay Bridge does not work well, the SDEIS should evaluate a 5 lane bridge.

In addition the SDEIS does not promise mitigation, nor does it describe the (possible) mitigation clearly so that it can be evaluated.

C-040-084

The SDEIS says:

- The SDEIS Ch2, 2-9 says that 10th Avenue to Delmar Lid would incorporate "redevelopment of the path from Bagley Viewpoint to Boyer Way, redevelopment of the Bagley Viewpoint Park and vista points to overlook Lake Union, Portage Bay and the panoramas eastward and westward." The view is also noted Ch 4 page 4-35.
- SDEIS Chapter 5, page 5-63 says "a new viewpoint would be designed an constructed on the 10th and Delmar lid to recreate the panoramic views of Portage Bay and the Cascade Mountains that were available when Bagley Viewpoint was first built."
- SDEIS Chapter 5, page 5-81 in the list of "possible mitigation measures," "Replace Bagley Viewpoint either on the new lid or reconstructed bridge. WSDOT would work with the Seattle Parks department to identify an appropriate site."
- The SDEIS Ch5, Page 5-67 says 10th Avenue East and Delmar lid "could also recreate a more substantial connection between Interlaken Park and Bagley Viewpoint." It goes on to say the viewpoint would be recreated and "the areas to the north and south of the lid surface would be planted to reestablish the tree buffer and street trees that were removed for construction." Which tree buffers and street trees are being discussed is not explained.
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So what is to be done, where it is to be done, and if it is to be done are all uncertainties. See also Ch 5 page 5-80.

The SDEIS omits:

- Bagley Viewpoint is an oasis of green and a critical link between Roanoke Park and Interlaken. Treating it only as a viewpoint fails to describe its full purpose as the entry way to Interlaken Park, visually connected by the mature green trees of both Bagley and Interlaken.
- Failing to identify the Bagley Viewpoint parking, an essential part of the viewpoint, and the number of cars for which parking should be provided also minimizes the importance of what needs to be replaced.
- The use of the words "could" and "either" and "possible" in the SDEIS indicate that WSDOT will determine if the mitigation is sufficient or necessary. The SDEIS does not describe the harm to the park in such a way that the mitigation needed is well defined and mandated.
- The SDEIS shows the planned location of proposed lid, lying on top of the north and south retaining walls flanking the roadway, creating the canyon through which SR 520 will flow; this proposal is that the he lid will directly cover the roadway, running from outside wall to outside wall. See Ch 3 page 3-12. These walls will be above grade due to the required lid height to provide clearance above the road. Building the lid this way is an aesthetic

C-040-084

disaster which does not foster neighborhood reconnection. See Notes on 10th Avenue and Delmar Lid, page 38, which discuses at the adverse impact of having the a lid with Ivy and graffiti collecting walls.

- The SDEIS omits a clear description of the harms to be mitigated by the 10th Avenue to Delmar Lid. Given that the lid will not at all likely to be built at the time SR520 is rebuilt is widened, this is a serious failing.
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It is important to note that the Bagley Viewpoint mitigation must be integrated with mitigation to Roanoke Park, Parklands East and Parklands West and Interlaken Park. The SDEIS, Ch2, page 2-9 discusses the role of Bagley Viewpoint and adds, "also important is the (10th to Delmar) lid's integration with the Roanoke Park historical district, located immediately north." While this is true, the SDEIS omits an integrated description of all of the elements and important mitigations of this lid. Properly done it will connect pedestrians to Interlaken Park land across the street at 11th Avenue on the south side of the lid, with Roanoke Park, across Roanoke Street on the north side of the lid, a connection severed by SR 520 in its original construction and mitigated with the development of Parklands East and Parklands West. The need for the lid to do these things is acknowledged on a cumulative basis, but the analysis did not start from the point of identifying the harm done to each area, assessment of avoidance options, and then the assessment of required mitigation and what it must do.

The SDEIS acknowledges that the taking of Bagley Viewpoint is a 4(f) taking. It acknowledges that it is an important SEPA sight. The issue is all about mitigation, when, how and if.

What would happen to the Bagley Viewpoint if the 10th Avenue to Delmar lid is not built? This is not described in the SDEIS. The SDEIS omits a clear description of the harms to be mitigated by the 10th Avenue to Delmar Lid; one is obviously to permit the replacement of Bagley Viewpoint in an appropriate fashion. Given the high probability that the lid will not come at the time of construction, and the distinct possibility that funds for completion may not be available for decades, this is a serious problem.

For example, where would that leave the replacement of Bagley? There will be no ground on which to place Bagley on the north side of the Delmar bridge. Placing Bagley on solid ground at the south end of the bridge facing east, would place it on Interlaken Park land. That is not mitigation; it is a taking of Interlaken Park. That leaves the option of building Delmar bridge such that a replacement of Bagley Viewpoint is included on the bridge when it is constructed. That would be a viewpoint with possibly parking but it would not replace the function that the Bagley Viewpoint served as a green link between Roanoke Park and Interlaken Park. And, without the lid behind, it would be an extremely noisy viewpoint, far more noisy than the Bagley Viewpoint is now. Bagley Viewpoint replaced will be missing its features and much of its attributes as a pleasant place to stay for a while and read or visit. It will lose its 230 degree cloak of green. The only function that it will retain will be a place where one can look at the view. If it is on

C-040-084 the bridge, will there be a path down to the water as there should be or will this be another missing function?.

Based on what we now know, there is certainty that Bagley will be taken and high probability that if it is replaced soon it will be on the Delmar bridge an very inferior placement relative to its current placement. The conclusion has to be that the taking of Bagley will not be appropriately mitigated in reasonable time if ever and that the SDEIS has not conveyed an accurate depiction of this mitigation.

C-040-085

(3) Parklands East and (4) Parklands West

Both Parklands East and Parklands West lie within the construction area of the project.
SDEIS Exhibit 6.2-1 Property Affected by Construction in the I-5 Area, Chapter 6, page 6-20.

This land has been part of the vegetative buffer between SR 520 and Roanoke Park since 1963 and was carefully designed as such. The ground is park-like with a combination of mature trees, garden beds and lawn. These areas, north of the fence line demarking SR 520 right of way, have been maintained by the Seattle Park Department and Roanoke Park volunteers for a very long time; both areas were re-landscaped a decade ago by volunteers who worked with plans approved by the Seattle Parks Department. The Seattle Park Department mows the grass in these areas each week and otherwise services them as needed. These lands blend into the forested areas on the other side of the fence line. (See, 8 North Forest Land below.)

The SDEIS notes the importance of these lands in describing the Roanoke Landscape Unit, Ch 4 page 4-35. “The pleasant landscape at Roanoke Park and streetscapes between 10th Avenue East and Delmar Drive East help to improve the experience” of a landscape unit that is mostly diminished by traffic.”

However, the SDEIS does not acknowledge these lands as park lands and omits discussion of the damage to these lands. It also omits clear discussion of or commitment to mitigation of these lands.

Plans call for the removal of the 10th Avenue Bridge, building a temporary new bridge to the east, building a new, larger 10th Avenue Bridge angled to north of the current alignment and widening of Roanoke Street. This construction can be expected to destroy all the mature vegetation in the area. The SDEIS omits discussion about whether any of the vegetation could be saved and possibly mated with a new lid. The SDEIS omits discussion of the impact of the operational 520 and construction activity on park lands and historic homes in the area.

Parkland East (3) - Additional Detail

Exhibit 5.4-1 Chapter 5 page 54. Note that the southern boundary of Parklands has been taken in SR 520 widening in this exhibit.

C-040-085

Parklands East is managed by the Seattle Park Department and fully accessible to the public. It provides an area for children as they wait for school bus pick up and drop off, and it provides visual and actual park continuity from Bagley Viewpoint to Roanoke Park. Part is owned by SDOT and part is owned by WSDOT.

The temporary 10th Avenue bridge is going to come right through these lands. The garden beds and trees would be destroyed. The end state of Parkland East is unclear; a lid might be built but has not been committed to (see prior discussion.)

The SDEIS does not acknowledge this area as park land; however, it is publicly accessible, historically used for park purposes and is maintained by the City as park land. The construction planned will destroy the trees which provide its primary feature, it will destroy the visual forest screen and sound deadening, destroying the peace and harmony that is currently one of its attributes, and it will become an unpleasant noisy place for pedestrians to pass, and school children to await their bus or rides.

The SDEIS fails to evaluate alternatives which avoid this damage such as

- A 4 lane Highway 520 from Montlake west;
- A 4 lane Portage Bay Bridge.
- Changing the planned width of 10th Avenue back to or closer to the current 60 feet rather than expanding to 100,
- Changing time of removal of Tenth Avenue bridge until lid expense is committed to.
- Avoiding widening of Roanoke Street.
- Reconstruct the Tenth Avenue bridge in place, two lanes at a time; two lanes are enough to keep traffic flowing, that is all Tenth carries the rest of the way to Broadway. Cut the bridge in half and replace it in two steps, two halves.

The SDEIS fails to evaluate alternatives which would minimize the damage.

- Change of construction boundaries to protect as much of this area as possible. Don't rebuilt 10th Avenue using a temporary bridge in the planned location. Set the target width of Tenth to 3 lanes plus two shoulders, basically what it is now (see discussion under Roanoke Park.)
- .
- The SDEIS proposals for mitigation are inadequate.
    - If the lid is not built, the area will suffer greatly from noise and visual blight.
    - It is a high probability that a lid will not be built at the time construction that widens SR520 occurs and all the damage associated with that widening. It therefore becomes highly likely that the lids will never be built as there is no enforcement mechanism for this mitigation when the approved funds run out.
    - If the lid is built, the area will have unsightly lid walls unless the plans are modified for backfill, leveling and landscaping to transition the lid to the

C-040-085

park area. Building the lids later rather than at the time the walls are built basically closes the option to do the landscaping well because the walls will be unable to take backfill.

Parkland West (4) - Additional Detail

Exhibit 5.2-1 Right of Way Acquisitions in the I-5 Area, Chapter 5, page 5-33. Exhibit 5.4-1 is a more detailed showing where the Fire station property line falls, indicating how much of Parklands West is City property. (Note this last exhibit shows a diminished Parkland West area due to the proposed widening and new alignment of 10th Avenue East, and the proposed widening of Roanoke Street.)

Parkland West, east of the Roanoke fire station contains some land owned by the City of Seattle, and the rest is WSDOT right of way. The Seattle land is fire station land, which is an historic site. The vegetation that immediately abuts the fire station is cared for by fire station personnel. The rest has been managed by the Seattle Park Department with aid from community volunteers. It is an open to the public area, hosts a bus shelter in its south-east corner and provides a visual landscape connection across Roanoke Street to Roanoke Park and along 10th Avenue East to Parklands East and Bagley Viewpoint.

This area will be dramatically impacted by widening of three roadways plus the change in alignment of 10th.

- SR 520 widening
- Proposed widening of 10th Avenue
- Proposed widening of Roanoke Street.
- Change in alignment of 10th Avenue, shifting it westward into the parcel

The cumulative effect is a very important taking of land in this park which has important park, safety, and traffic implications.

- The park land itself will be reduced, changing the nature of the experience as people approach the intersection, and the visual connection to Roanoke Park and Bagley Viewpoint will be diminished.
- The change will make the area less pleasant by reducing the land's ability to buffer the sight of SR 520 and the sound coming from it. This buffer is going to be increasingly needed because of the new 520 flyover ramps as well as the widening of the main roadway.
- The SDEIS omits consideration of Fire Department access and safety, which is a violation of federal rules. Widening Roanoke Street would reduce the safety area in front of the station and could cause the station to be unable to continue to use that location. The station has important historical status which precludes doing such damage without a full 4f SDEIS evaluation and proof that such damage is necessary.
- The SDEIS fails to provide any explanation of the reason for widening Roanoke Street. It fails to acknowledge that that expansion will also be encroaching both on Roanoke Park and on Parklands East and Parklands West. It appears that the intent is to increase the speed and throughput of this short section of road. But by failing to see how short that section is and that roads beyond are at capacity, it fails to

C-040-085

observe how wasteful and unnecessarily damaging this expansion would be. Given that the widening and increased speed would harm both adjacent park areas, it is incumbent on the SDEIS to demonstrate that it has analyzed ways first to avoid and second to minimize this damage. The SDEIS omits description of any alternatives and any explanation of why it is recommending this change rather than another with less impact.

- In addition, the SDEIS omits mention of traffic modeling that justifies the widening of 10th Avenue East. Its congestion is continuous with the streets that lead from it. The reason to widen the 10th Avenue Bridge are given as adding shoulders, but there is no need to do so unless parking is contemplated, plus the existing bridge is wider than is needed by a full lane. Four lanes are shown with two right turn lanes heading south on 10th from Roanoke Street. However, 10th is one lane all the way to Broadway, starting when parking occurs just north of Miller Street, less than a block from Roanoke Street. The reason there is only one right turn lane from Roanoke south onto 10th Avenue now is that having two lanes reduced traffic flow rather than increased it. The current striping is one lane plus a bike lane plus a shoulder wide enough for a bus to pull over for the bus stop. Widening 10th Avenue by 40 percent will create a 100 foot wide swath of Concrete across from Roanoke Park, an impossible to mitigate desert. Keeping the road narrow permits the visual blight to be reduced with trees growing close to the edge further softening the effect, reducing the adverse impact of traffic, noise, and pollution. Coming north on 10th there is only one lane until Miller, then traffic is able to shift lanes and position to make a right turn at Roanoke if desired. Having two lanes north and one lane south plus room for a bike lane and a shoulder for bus pull out is working well. Increasing the width of 10th Avenue East by taking 4f Park land would have to be justified in the SDEIS. If the argument is made that a strip of plantings will be made up the middle of the 10th Avenue bridge, it may be justified, but even then the bridge could be done at less than 80 feet rather than 100 feet.

- There is no discussion of the adverse visual impact of removal of all of the buffer trees from the area. The combination of bringing SR 520 closer to the property removing contiguous former buffer area, the taking of the actual areas into street use, and the destruction of the mature trees on the property all create significant damage to the features, activity, and function of this park area.

- Whereas before Parkland West was a fine place to have a bus stop in pleasant treed surroundings, the area would be so reduced by the planned work that the bus shelter would have to be moved onto the 10th Avenue Bridge where load restrictions and lack of soil preclude plants of any significant size. Lack of space is would likely mean the covered bus stop would have to be eliminated.

In summary Parkland West land is being taken from several directions in all alternatives in the SDEIS. Less land means that this Parkland is less able to perform its function of carrying the green belt from one side of Roanoke to the other and from one side of 10th

C-040-085

Avenue to the other. This loss of function is created by the combination of taking land and widening both streets. Second, some of the land being taken is in the most accessible and most visible area where most people walk, reducing garden bed and treed area significantly which engages passerbys and gives them relief from urban blight. This is a reduction in attributes. And the encroachment by a roadway with a new alignment increases not just proximity, but also increasing vehicle speed and noise creating a substantial diminishment of the green space harmony that will be experienced. SR520 widening and the removal of buffer vegetation makes things significantly worse, an additional substantial impairment. This combination creates permanent constructive use with or without lid construction.

The SDEIS does not acknowledge this area as park land; however, it is publicly accessible, historically used as Park land and is maintained by the Seattle Park Department as park land.

- The SDEIS fails to evaluate alternatives which avoid this damage.
- Don't increase the number of lanes on SR520 through this area.

- Delay replacement of the Tenth Avenue bridge or don't replace it. The reasons for its taking is not in the SDEIS. The replacement of the 10th Avenue bridge is presumed to be caused by the need to widen SR520 a need that might be eliminated with the 4 lane Portage Bay bridge alternative or other reduction from the many lanes planned. If that is not the cause, don't replace it until lid funds are in hand.

- Don't widen 10th Avenue or minimize the widening of 10th Avenue.

- Drop plans to widen Roanoke Street.

- The SDEIS fails to evaluate alternatives which would minimize the damage.
- Changing the timing of the bridge removal to the time when funds were available for lid construction would help ensure that mitigation was available at the time damage done by removal of 10th Avenue Bridge occurred.

- Changing time of doing any widening of SR520 near Parklands West until lid funds were assured.
-
- Develop a management plan for all vegetation between the fire house and Delmar and demonstrating how they can be preserved.

- The SDEIS proposals for mitigation are inadequate.
    - The cumulative damage to Parklands West will be only slightly mitigated by the portion of the 10th Avenue lid that is to lie north of 10th Avenue.

C-040-085

The rest of the public open space in Parklands will be exposed to much greater SR 520 exposure than it now has.

- There is no consideration of noise walls along the north side of SR 520 from the proposed lid to some point past the fire station in order to protect this parcel and Roanoke Park and its historical neighborhood from increased noise associated with the widening and the creation of the lid if it is built.
- There is no statement of harm that will occur if the lid is not built as proposed. If the 10th Avenue Bridge were to be made narrower, the non-bridge portion of the lid would need to be larger.

C-040-086

(5) Roanoke Park

The SDEIS describes Roanoke Park Ch4 page 26. Attachment 6 page 58 makes statements regarding haul route on residential streets. It does not discuss Roanoke Park as a haul route and its impact on the Park's activities, features and attributes that qualify for resource protection.

Roanoke Park is an historic park and a destination for many people because of its easy access and oasis feeling. It is a 2.2 acre Seattle park, part of the historical district which surrounds it. The park has a play area, walking trails and a children's basketball area. It is a horticultural showcase with mature trees and flowering shrubs and well maintained gardens. Roanoke Park is used by many day-care centers and schools as a play area. Children often come from Capitol Hill, down 10th to the Park. Many people drive to the park from surrounding neighborhoods to use it, or stop on their way past or use it as a freeway rest stop.

A trolley line ran to, and ended at, Roanoke Park 100 years ago when it felt like country because there were so few homes in the area. The Olmstead Brothers in designing Interlaken Park envisioned Roanoke Park as a lovely gateway to Interlaken and, via the Bagley Stairs (see below) to Portage Bay.

Impacts to Roanoke Park include:

- Without mitigation, the widening of SR 520 will increase the noise impact and visual blight to Roanoke Park.
- Instead of trees on Parklands East and Parklands West, park users will look at an arterial next to a highway. This will be particularly severe during the construction period when the 10th Avenue Bridge is removed. That bridge has acted as a sound lid for the past forty-five years.
- Roanoke Park Garden beds extend to the pavement of Roanoke Street. The plotted line of construction area comes well into those beds and thus represents a taking of Park Lands. See Attachment 6 Exhibit 25 page 61. Stately elms, the hallmark of Roanoke Park are also relatively close to the pavement.

C-040-086

Reconstructing Roanoke Street may jeopardize the survival of these 90 year old trees by doing damage to their roots. The SDEIS has failed to understand that Park lands come to the pavement and require protection even though WSDOT and street right of ways may come into the park. Any use of right of way that has been public land used for park purposes for the last 45 to 100 years is taking of park land.

- Widening 10th Avenue from 60 feet to 100 feet will expose Roanoke Park to unnecessary visual blight; the road would not need to be 80 feet wide even if a planting strip were placed into it, given the lack of need for more than a shoulder plus two lanes and shoulder going north; one lane, plus a bike lane and a shoulder is sufficient going south. A separate bike lane going north is not safe as it cold put the rider to the right of a car turning right at Roanoke. Bikes hit car speed coming down the hill so the bike lane needs to be in the right car lane. An 80 foot wide bridge would have room for a planter strip.

- The proposed temporary 10th Avenue bridge, plus removal and replacement of the 10th Avenue bridge, placement of the lid, etc. represents a two-year construction period and extreme chaos caused by the construction. This represents a significant impairment of the functions of Roanoke Park. During this period the school groups who currently walk to the park would have a dangerous trip to the park, and people who come from the south will no longer have easy access.

- Both 10th Avenue and Roanoke Street are to be haul roads; the noise, traffic and dust on Roanoke will adversely impact park visitors.

The SDEIS acknowledges Roanoke Park as a park, but does not acknowledge any constructive or other use. The SDEIS does not give Roanoke Park 4(f) status, but should because the park will be impacted by two or more years of construction, and then permanently harmed by having wider arterials and 520 closer to the park.

- Noise, dust from deconstruction and construction (including changes to 10th Avenue bridge, Roanoke bridge, Delmar bridge, SR 520 and I-5 lid)
- Increased traffic noise from 520 noise because of the 10th Avenue bridge removal
- Increased traffic noise due to removal of buffer vegetation in Parklands East and West . Higher speed traffic on 10th and Roanoke as a result of street realignment and widening
- The park abuts Roanoke Street which has been identified as a haul route
- Roanoke Park will also be adversely impacted by the widening of SR 520, which will leave the park much closer to the highway. In addition, the increased size and speed of the roadway and the increased amount of traffic on the new flyover express lane will increase noise.

C-040-086

The SDEIS fails to evaluate these impacts to Roanoke Park cumulatively and thus errs in assessing the impact to Roanoke Park. Roanoke Park's function is a safe place for children. It offers a pleasant, quiet place to be in beautiful green space. Dust, dirt and noise all rob the park of its ability to continue to provide these attributes and activities. Construction traffic increase the hazard of coming to the park and definitely will retard ease of access for those who would come to the park. For this two year period Roanoke Park will feel like a place under siege. It will not be able to function as a place of refuge. Given that the lid is extremely unlikely to be constructed at the time SR520 is widened, Roanoke will be increasingly subject to the noise of SR520. In addition, Roanoke Park is impaired by the loss of Bagley Viewpoint during this time as a connecting park to Interlaken, by the closure of Delmar for 9 months, and by the damage done to Parklands East and Parklands West. This creates a cumulative reduction in the quality of experience Roanoke Park can provide to those who come there and will result in a reduction in the number that do. It will also impair park activities, sun bathing, reading, Frisbee games, and the like because the experience in the park and access to the park will be degraded. This drop in features for two years of construction plus ongoing excessive noise, represents a significant, substantial impairment and makes it appropriate to classify as experiencing constructive use by the SR520 project.

- The SDEIS fails to evaluate alternatives which avoid this damage
    - The SDEIS acknowledges the damage, but does not evaluate opportunities to avoid it, nor does it commit to mitigation. SDEIS Chapter 6 page 6-40 says: "Construction of the 10th Avenue and Delmar Drive East lid would affect Rogers Playground, Roanoke Park, Bagley Viewpoint and Interlaken Park. Construction activities will last up to 27 months, creating increased noise, dust, and traffic in areas in close proximity to construction work . . . . Because Roanoke Park is adjacent to the proposed haul route along East Roanoke Street, noise and visual effects associated with truck traffic may affect park users."

    - The SDEIS assumes that a lid will be constructed at the time SR520 is expanded. We now know that is all but impossible. So the failure of the SDEIS to discuss what the lid was to mitigate means that the SDEIS does not describe the adverse impact lack of the lid will have on Roanoke Park.

    - And the SDEIS does not examine all the causes of harm, the widening of SR520 and associated construction could be changed by the 4 lane alternative. The widening of 10th could be stopped or reduced. The widening of Roanoke Street could be stopped or reduced. The harm to Parklands East and West could be stopped or reduced. There are many things which could reduce the adverse impact which the SDEIS has failed to evaluate.

C-040-086

- One of the causes of harm is having Roanoke be a haul route. This is a particularly poor idea for trucks that would have to go up 11th to Miller and then to Tenth Avenue and down to Roanoke. That route should be scrapped for a direct on SR520 routing.(a temporary bridge in the Boyer area to 520) Perhaps any trucks that would be coming to Roanoke via Delmar could also be routed that way. Stock piling material to place behind lid walls would also reduce the need to bring trucks past Roanoke Park.

- The SDEIS fails to evaluate alternatives which would minimize the damage such as those suggested above.

- The SDEIS proposals for mitigation are inadequate.
  - The SDEIS shows the connection between Interlaken and the Arboretum, but does not show or discuss the Interlaken/Bagley/Parklands/Roanoke Park connection. The SDEIS fails to note that rebuilding the connection of Interlaken to Roanoke Park will also *require* the Roanoke lid, which is presented as an optional mitigation. Please see "10th Avenue to Delmar Lid Discussion" below.

  - While Roanoke Park would benefit from the possible 10th and Delmar lid, that mitigation has not been committed to. In describing the impact on Roanoke Park of the 10th and Delmar Lid the SDEIS page 5-55 says, "Although no property would be acquired from Roanoke Park, the 10th Avenue East and Delmar Drive East lid would improve the park's setting and the experience of park users by reducing freeway noise, and creating a more continuous stretch of open space south of the park. The lid would create new open space and grassy areas for residents in the surrounding area. The 10th Avenue East and Delmar Drive East lid would include pathways to improve connectivity and to provide access across SR 520 improving safety for pedestrians and bicyclists."

  - The SDEIS proposes the 10th Avenue to Delmar Lid as a solution to the noise problem in the area. The proposed location of the lid will not protect Roanoke Park from noise from SR 520 noise coming west of the lid, including the new flyover lane.

  - Given that there is no commitment in the SDEIS for construction to any of the lids, and given that it is highly probable that the Tenth and Delmar lid will not be built and therefore will experience both the harm during construction and continuing and potentially permanent harm thereafter, and given the substantial impairment described above, the SDEIS was incorrect in not granting Roanoke Park Constructive Use designation as

C-040-086

part of the adverse 4(f) impact to Roanoke Park due to SR 520 construction

C-040-087

(6) South Forest Area (south of 520 and within the SR 520 right of way)

The South Forest Area is between Delmar & 10th on the south side of SR 520 and extending west along the contour toward Miller Street. This land has the potential to link Interlaken most of the way to Colonnade Park with a trail along the south side of SR 520. The South Forest Area is matched by the North Forest Area on the other side of SR 520.

The area is a grouping of 50-year old trees that are the result of remediation from the original SR 520 construction. It is beautiful and mature landscaping which provides an important visual and sound barrier, both from north Capitol Hill and from Bagley and Roanoke Parks and the adjacent Roanoke historic neighborhood. This land is WSDOT right of way, some of which is well back from the highway now and will remain so after the planned construction (all alternatives). The land is fenced to keep the public from walking too close to the 520 highway, but it provides important landscape continuity extending from Interlaken. Given the steep pitch of the sides of SR 520, all of these trees are seen and enjoyed by the public, used by wildlife, and have provided sound and visual protection of green space, protecting the surrounding historical and residential areas from SR 520 visual blight and noise. As such we believe these lands deserve 4f protection.

The SDEIS describes this area only as WSDOT right of way. However, this land has public and park functions which are 4(f) functions. Thus, any diminishment of these lands and functions should be evaluated in the SDEIS, even though it is WSDOT right of way.

The SDEIS description of the WSDOT right of way in this area is in error. The actual WSDOT right of way property line between 10th and Delmar is significantly further south than is described in the SDEIS, and includes the grassy verge that WSDOT maintains.

The SDEIS shows this forest lies within the construction area and then fails to discuss how much of it will be removed during construction. The SDEIS also fails to acknowledge that removing these trees adversely impacts Interlaken and the visual linkage to Bagley Viewpoint and Roanoke Park.

The function of these forests was to mitigate the existing SR520 and they do that, as an established buffer providing scenic beauty as well as sound absorption. That function and attribute will cease with the felling of these trees. In addition they serve to visually connect Interlaken with Bagley, Parklands East and Parklands West and Roanoke Park.

C-040-087

They also work to mask the visual blight of the road cuts. Expansion of SR520 will expose raw earth or concrete, and will necessitate the removal of many of these trees. The SDEIS circles all of the trees within view of the highway as being within the construction zone. There is no discussion of how many actually will be removed in the process. A very significant removal will be caused by the widening of the road and by the need for access during wall construction. This destruction eliminates the function of these trees and represents constructive use.

The SDEIS fails to evaluate alternatives which avoid this damage.

- Keep 520 at its current width in this area: a 4 land 520 or a 4 lane Portage Bay Bridge.
- Replace the 10th Avenue bridge in a way that preserves the treed area, and keep the 10th avenue bridge as narrow as possible. also impacts these trees as does the planned width.

The SDEIS fails to evaluate alternatives which would minimize the damage.

- The number of trees taken should be addressed in the SDEIS as part of a landscape plan. Areas that don't need to be destroyed by construction could be set aside and protected.

The SDEIS proposals for mitigation are inadequate.

- The proposed 10th and Delmar lid would mitigate some of this damage; however, that lid is not committed to and is highly likely not to take place at the time SR520 is expanded. The proposed lid design also has issues which are discussed in Notes on the Proposed 10th Avenue to Delmar Lid, page 38.

C-040-088

(7) North Forest Area

The North Forest Area is across SR 520 from the South Forest Area. It is also a mature stand of Pine trees that resulted from original 1963 mitigation. These forests link with forests west of 10th Avenue and mature trees from Bagley Viewpoint down to the waterfront on the north side of SR 520.

The North Forest Area's 50 year old pine trees are the backdrop for the landscape from Roanoke Park. These are very important buffers to both Interlaken Park and to Roanoke Park, and without these trees the noise and pollution would be much worse in the Roanoke Historic District and in Roanoke Park. The north forest area plays a role in maintaining the original grand entrance and connection between Interlaken and Roanoke Park including the Bagley Viewpoint transition. While there is a fence between these trees and Parklands East and Parklands West, that fence is really not seen, and thus these trees blend into the park area and support its purpose. These trees provide continuity of the park's visual impact and thus extend the park experience really making it a single experience of an integrated park buffer between Roanoke Park and SR 520.

C-040-088

Also, for all who travel across the 10th Avenue Bridge, the forests on both sides of 520 frame the stunning and unique East-West vista corridor, a tree-lined vista from the Olympic Mountains to the Cascade Mountains. The 50 year old linked forests of trees between Portage Bay and I-5 are also part of a view corridor along SR 520 which has significant value both to neighbors and to the many travelers on 520 and on the city streets.

As with the South Forest Area, the SDEIS describes this area only as WSDOT right of way. However, this land is visually accessible to the public, has provided a park like buffer and green relief to the highway blight and a refuge for wildlife, which taken together are 4(f) functions. Thus, any diminishment of these lands and functions should have been evaluated in the SDEIS, even though it is WSDOT right of way.

The SDEIS fails to acknowledge that these trees lie within the construction area and some or all will be removed as part of the construction. All lie within the yellow construction zone. The SDEIS also fails to acknowledge that removing these trees adversely impacts Roanoke Park and the visual linkage to Bagley Viewpoint and Interlaken. The function of these lands and of these trees is to serve as a buffer from the adverse impacts of SR520, both sound and visual blight. Removing them represents a significant impairment to these lands and significant damage to adjacent lands. These areas deserve 4(f) status. The loss of the trees represents a taking certainly qualifying as constructive use.

The SDEIS fails to evaluate alternatives which avoid this damage.

- Back to minimum required width of SR520 already discussed.
- Not placing temporary 10th Avenue Bridge in location planned. This could be the result of not replacing the 10th Avenue Bridge, or doing the replacement in a different way.

The SDEIS fails to evaluate alternatives which would minimize the damage.

- Keeping construction equipment away from all trees not directly in the excavation path. This would require a significant change in the yellow construction zone.

The SDEIS proposals for mitigation are inadequate.

- The proposed 10th and Delmar lid would mitigate some of this damage; however, that lid is not committed to. The proposed lid design also has issues which are discussed in Notes on the Proposed 10th Avenue to Delmar Lid, page 38.

C-040-089

(8) Bagley Stair Trail

See Exhibit 5.4-1 Permanent Park Acquisition at Bagley Viewpoint, Chapter 5 page 5-54.

C-040-089

The Bagley Stair Trail, immediately north of SR 520, links Bagley Viewpoint to the waterfront. It has been in use since 1908 as a treed parkland with a stair and path trail. These stairs are used frequently by residents for a variety of purposes, including as a to-downtown-Seattle route that connects to Colonnade Park via Miller at 10th. The value of this connection to walkers will increase as businesses continue to move into the South Lake Union area. Historically, the Bagley Stair Trail has been maintained by both the Seattle Park Department and by volunteers with recent work by WSDOT on its adjacent right of way.

The Bagley Stair Trail lies within the 520 construction area (Exhibit 27, Page 62 of Attachment 6.) The mature trees that protect the neighborhood from 520 noise and visual blight will be destroyed.

WSDOT took most of the public land adjacent to the stairs and path in 1962 and the SDEIS indicates that the remaining land would now become WSDOT right of way. The SDEIS fails to give this land 4(f) status, which is deserved because of its connection to the Bagley Viewpoint and its long use as public recreation land and Bagley Viewpoint related land.

This land functions as historical public land for recreational purposes. Turning it into an active construction zone represents constructive taking because for up to 6 years it will not be accessible and the actual path will be destroyed. Whether this path should be attached to a reincarnated Bagley Viewpoint will depend on the latter's location.

The SDEIS fails to evaluate alternatives which avoid this damage.

- A 4 lane 520, or a 4 lane Portage Bay bridge, might permit avoidance.

The SDEIS fails to evaluate alternatives which would minimize the damage.

- This stair and pathway was not taken seriously by the SDEIS so there is no real planning for it, including the potential to keep it open during most of the construction period. All we know is that it lies in the construction zone and may be off limits for years. This combined with the taking of Bagley Viewpoint is clearly constructive use.

The SDEIS proposals for mitigation are inadequate.

- The SDEIS indicates on Ch 2, page 2-9 that the Bagley Stair Trail is important to local residents and suggests it might be rebuilt as part of the proposed new Delmar to 10th lid. However, this mitigation is not committed to and the SDEIS omits a clear description of where and how the trail will be re-built.

C-040-090

(9) Roanoke Street End Park and (11) Street End Parks

C-040-090

Street end parks (11) provide an important way for people to access and enjoy Seattle's waterfront. Edgar Street End Park is adjacent to the Queen City Yacht Club. Hamlin Street End Park and Shelby Street End Park provide vistas out between the house boats and offer swimming and water access to neighbors as well as the houseboat residents. Neighbors have constructed and still maintain these parks.

The Bagley Stair trail leads, via Boyer Street, to the Roanoke Street End Park (9). While currently undeveloped, this area has been eyed by the community as a developable area for many years. The City of Seattle and its residents value highly all points of public access to Portage Bay, and SDOT is currently developing a street end park program that could support this area. The community has a history of turning these street ends into small parks, including sitting and wildlife viewing areas such as the one on the northwest side of Queen City Yacht Club.

Much of undeveloped Roanoke Street was acquired by WSDOT when it developed SR 520, but a narrow remnant remains as it reaches the water. SR 520, supported on pillars is about 60 feet above. In other locations this type of access has been developed for boat launching. Trees along this undeveloped remainder of Roanoke Street provide an SR 520 screen to neighbors to the north. Roanoke Street widens after it hits the water, and Queen City leases some of Roanoke Street for open moorage.

As part of the proposed SR 520, WSDOT plans to put a waste water treatment facility near this street end. The SDEIS omits consideration of the Roanoke Street End Park Area

This land will be taken by WSDOT into its right of way. That is a 4(f) taking.

- The SDEIS fails to evaluate alternatives which avoid this damage.
    - The Bagley Stair Trail led directly to the waterfront before the development of SR 520 blocked the trail with a retaining wall; this iteration of SR 520 should ameliorate that action by improving public access to the water at this location.

- The SDEIS fails to evaluate alternatives which would minimize the damage.
- The work that is done at the water's edge could be done in a way that enhanced future public access and offset the otherwise loss of public access that would result.

- The SDEIS proposals for mitigation are inadequate.
    - The SDEIS plans for waste water treatment omit consideration of this area as a public green space and historical public water access, creating the need to mitigate for future public access to the water. In particular, this area has great potential as a small boat launch location.

C-040-091

(10) Portage Bay

C-040-091

Portage Bay is a major recreational area, used for swimming, boating, University crew training, sailing lessons, private canoes and kayaks as well as power boats, bird watching, nature walks, etc. Many people travel around Portage Bay daily by foot or bike, or by road or by water. The deep open water in the middle of the Bay is owned by the State and is used primarily for water sports and recreation. Portage Bay is a destination recreation area for tourists, who are taken through on tour boats, and for many local day trips. The Bay is also the focal point of hundreds of houses on Capitol Hill, of other homes both north and south of 520, and of many facilities on the University of Washington campus.

The proposed expansion of 520 would adversely impact recreation on Portage Bay as well as adversely impact the historic neighborhoods in Montlake and Capitol Hill.

- The proposal would take property from Portage Bay. The law is clear that if a bridge has pillars in parkland it has to be treated as a 4(f) impact. See USDOT FHA Section 4(F) Policy Paper, Office of Planning, Environment and Realty Project Development and Environmental Review, March 1, 2005, page 27: "Question: do the requirements of Section 4(f) apply to bridging over a publicly owned public park, recreation area, wildlife or waterfowl refuge, or historic site? Answer: Section 4(f) will apply if piers or other appurtenances are physically located in the park, recreation area, wildlife, and waterfowl refuge, or significant historical property. " In this case, all of the area below the bridge, right of way and non-right of way is recreational area meriting 4f status.

- The proposal reduces the public's ability to enjoy the remaining property, because of the added height and doubling of bulk, threatening shadows, and noise. The public has a right to a peaceful and serene experience while engaging in water activities in this natural public recreational area.

- The expansion will be detrimental to wildlife in Portage Bay.

The SDEIS acknowledges impacts to Portage Bay, but does not fully investigate the minimum impact that could be made on Portage Bay.

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  - SDEIS Chapter 7 page 7-25 acknowledges "the wider roadway, retaining walls, noise walls, and other structural features introduced by the 6 lane Alternative would create more urban character. The more urban visual character would add to the cumulative effect of other present and future planned development projects contributing to the increasingly urban visual quality of the study area." This is a polite way of describing urban blight in a beautiful natural setting. By spinning the character of the

C-040-091

roadway in this positive light, the SDEIS fails to admit the damage and then fails to evaluate alternatives as required.

All of the water area in Portage Bay is public land used for recreational purposes. The expansion of SR520 will cover a new area at least equal to the area now covered by the bridge. Some of the bridge will rest on land owned by Montlake Playfield Park, discussed below, some will rest on land owned by WSDOT, which we will discuss later , see: (14) Portage Bay Park Area in SR 520 Right of Way

The WSDOT lands are public lands used for recreation and wildlife. Putting new highway on these lands represents a 4(f) taking of these lands. The amount taken permanently as well as for construction bridges is not identified in the SDEIS, but it is acres.

The SDEIS fails to evaluate ways to avoid this taking. There are two issues here, the first is how the bridges are being built and the second is how big the bridges will be. I use the plural here because the plan is to build a new north bridge and put the existing traffic on it. Then tear down the existing bridge and build a new south bridge. The two new bridges will then be described as the new bridge with east and west directions. This construction plan makes the North Bridge capable of handling all current traffic. Creating a twin give us capacity to transport double current traffic levels. That is probably why the extra lanes for access to the express lane on I5 appeared. It appears that the way the bridges are being built automatically creates excess capacity. Changing the size of the first bridge to 4 lanes with shoulders offers the potential to make the north bridge perhaps slightly wider than planned and then not replace the other bridge and not build a second bridge. The problem with selecting the wide bridge option is that then it has to go through the Roanoke Park area and create the carnage discussed above.

- The SDEIS fails to evaluate alternatives which would minimize the damage.
    - The SDEIS Chapter 5 page 5-66 says that the quality of the Portage Bay landscape unit “would not change as a result of the Portage Bay Bridge, but views in the vicinity of the new bridge would be more open. …The greater column spacing (from 100 feet on center currently to as much as 250 feet apart) would open up views under the bridge, especially looking northward from the south side of the bridge.” However, this is a subjective assessment that does not acknowledge that the new columns are much larger than the old. In addition, the option is shown without noise walls in the referenced Exhibit 5.5-2 page 5-67. And the primary cause of changed view from the water’s edge is the planned increased height of the bridge. This height increases the bulk and the distance noise travels. Most people view this as an adverse change.

- The SDEIS proposals for mitigation are inadequate.

C-040-091

- SDEIS proposes noise walls along the north side of SR 520 from the 10th and Delmar lid to the Montlake Lid and along the south side of SR 520 from 10th and Delmar lid to Montlake Boulevard. (Chapter 5 page 5-105.) There is no commitment to these walls, and the SDEIS does not demonstrate that they have adequately evaluated other alternatives that would benefit Portage Bay users or neighbors.
- Noise walls make the visual aspect of the bridge worse by greatly increasing its apparent mass. Thus, one is caught trading one blight for another, perhaps demonstrating that noise mitigation is not possible. The SDEIS fails to acknowledge the harm SR 520 is creating with increased noise may in fact not be able to be mitigated.

C-040-092

(13) Montlake Playfield Park and (12) South Portage Bay Park

The SDEIS Description: Chapter 4 page 4-29. Also described Attachment 6 page 32.

Montlake Playfield Park is a major city park bordering Portage Bay, with activities ranging from sports, to bird watching and canoeing and kayaking. It is a 27 acre regional park used for football, baseball, soccer and track. It also holds a community center used for classes and events.

South Portage Bay Park is considered by the Park Department to be a part of Montlake Playfield Park. It is mentioned separately here to emphasize the non-playfield orientation of this area, in which residents are following a master plan to develop the shoreline. The goal is to enhance access and quality of the shoreline resource. A small boat launch has recently been added.

The proposed expansion of SR 520 would impact Montlake Playfield Park and South Portage Bay Park:

- The parks will be adversely impacted by noise and visual blight. The higher structure and increased traffic will generate more noise over a longer distance.
- Submerged lands would be taken by the proposed expansion. This is not acknowledged in any detail in the SDEIS.
- The construction impact on Montlake Playfield was identified as small and temporary, arguing that the taking was in an unused section of the park. But in fact that area is a highly used area abutting the Bill Dawson Trail. These lands have been enjoyed by all users of this trail, creating the parkland atmosphere of that trail. Further this area has been actively used by wildlife and now is proximate to a beaver lodge which is enjoyed by Montlake Playfield wildlife enthusiasts. This taking is part of the taking associated with the Bill Dawson Trail. The loss is significant and does not qualify for the “temporary” exclusion the SDEIS is claiming.

C-040-093

SDEIS: Noise & Visual Blight at Montlake Park

C-040-093

The SDEIS does not discuss the adverse impact increasing the height of the east half of the Portage Bay Bridge will have on Montlake Playfield Park. The current bridge is easily blocked by trees, and the sound transmission is much less than will occur at the planned new height. The noise modeling results say that there are no noticeable noise changes with Option A, but no receivers were put in Montlake Playground Park. (SDEIS Exhibit 5.7-1 Ch5 page 5-103)

The SDEIS fails to evaluate alternatives which would avoid or minimize this damage, and fails to propose adequate mitigation.

- There are no commitments to sound mitigation for the new bridge. It is a significant failure for the SDEIS not to quantify this adverse impact on Montlake Playfield Park, a serious 4(f) impact.
- The SDEIS treats the South Portage Bay Park area as part of Montlake Playfield Park, to which it is adjacent. This fails to understand the impact of the expansion plans on the park wetland and wildlife as well as on the community of park volunteers and users.

C-040-094

SDEIS: Submerged Lands not acknowledged as parkland

The SDEIS does not identify how much submerged land will be taken from Montlake Playfield Park, and, in most exhibits, does not acknowledge that any of its land is being taken temporarily or permanently. (See for example, Exhibit 44 page 98 of Discipline Report Attachment 6: Draft Section 4(f) 6 of Evaluation which states for Montlake Park: "no permanent acquisition.) However, elsewhere that report (page 33) acknowledges that it will take some Montlake Playfield Park lands but doesn't identify where or how much. It also deliberately does not identify the submerged lands as parkland on any of its otherwise detailed maps. The standard map that it uses for Montlake Playfield doesn't include submerged lands at all: See Exhibit 4.2-1, Existing Land Use in Seattle, Chapter 4, page 12. Also see also Exhibit 4.4-1, Chapter 4 page 4-27, see also Exhibit 4.13-1, see also Exhibit 5.1-15 and Exhibit 5.2-2,page 5-34, and Exhibit 6.4-1 Construction Effects on Parks, page 6-39, and Exhibit 5.6-4 which maps the historic boundary of Montlake Playfield Park. See also Exhibit 53 Section 5(f) Effects for Options A, K and L which uses the same graphics for Montlake, i.e. no submerged lands. See Exhibit 54, Preliminary Least Harm Analysis by Section 4(f) Property which says there is no Section 4(f) use (indicating no lands taken). The latter ties to Exhibit 10, page 23, Attachment 6 IBID, Properties with a Section 4(f) use where Montlake Park is not shown.

The exception to describing Montlake Park as only solid ground comes in Exhibit 6.4-3, Chapter 6, page 6-41 where for the only time park property is shown as coming up to the south edge of existing WSDOT right of way. Property north of SR 520 is not shown in that exhibit and is never shown in the SDEIS.

C-040-095

The SDEIS asserts that the taking of Montlake Playfield Park lands permanently as well during the construction period is not of consequence and therefore it is not covered by 4(f):

C-040-095

"Montlake Playfield originally extended north of the current SR 520 alignment. Because of the rising water level of Portage Bay, however, 6.8 acres of the original playfield (not included in the 27-acre usable site) are now submerged in Portage Bay. A portion of the submerged land would be acquired from the City of Seattle for the 6-Lane Alternative options. However, the affected submerged land is not currently used for recreational purposes, is not accessible to the public for recreational use, and is not designated as parkland on the Seattle Park Guide (City of Seattle 2006). In addition, there are no formal plans for its recreational use in the future. As a result, the affected submerged lands are not protected by Section 4(f)." Source: SDEIS Attachment 6 Page 33.

Contradicting the above, in another section, the SDEIS says that Attachment 6, page 63, States Option A "would not entail a permanent incorporation of Montlake Playfield property. SR 520 would be widened to the north into NOAA Northwest Fisheries Science Center property and away from Montlake Playfield." This appears as deliberately sowing the impression that expansion to the north of the existing right of way is only on NOAA lands and not on Montlake Parkland when in fact both areas are being impacted.

Chapter 5 page 34, Table 5.2-2 says that the expansion will require 2.2 acres of new right of way in Portage Bay. It shows graphically where the land will be taken, so it is possible to determine that the land taken over water is largely submerged land taken from Montlake Playfield Park.

This quoted paragraph above regarding submerged land has several errors:

A. The statement that the lands "originally extended" north of the current SR 520 alignment implies incorrectly that they no longer do. SR 520's current acres of right of way across Portage Bay came out of Montlake Playfield Park holdings which now lie on both the north and south sides of WSDOT right of way.

B. The argument that the land became submerged and therefore useless is false. It was always submerged. And its "submerged" value was recognized when concern arose about the amount of the lake's surface being taken over by moorage and houseboats. This land was valued as preserving open water and valuable shoreline at the time of its acquisition in addition to its offering space for playfields.

C. While some of the ball playing area and track was expanded using fill, the objective was to increase the height and thereby drainage of the fields which were well inside the bounds of the wetlands. The actual wetland edge of the park remained unchanged according to park history. In any event filling of wetlands ceased everywhere, stopped some 50 years ago with the recognition by both citizens and the park department that all wetlands had value. When Forward Thrust funds were used in 1968 to expand Montlake Playfield Park to

C-040-095

the west, preservation of wetlands for wildlife was part of the master plan for that expansion, a mission being enhanced by years of work on the South Portage Bay Park area, planting more native vegetation and creating access paths and a canoe and kayak launch site.

D. The argument that these lands are not used is a SDEIS deception, as is the SDEIS' failure to show these parklands on the parkland maps provided of the area (see examples above.) The water portion of the park is used extensively both visually by thousands of people per day, and on the surface by various forms of water recreation, and by wildlife.

E. The SDEIS argues that the Seattle Park Department thinks only of the solid land area of Montlake Playfield Park as being park land. It quotes the Park Department's 27 acre size statement as covering only the solid ground area; seeking to imply that the Park Department does not consider significant the submerged land ownership. However, preliminary calculations indicate that one can only describe the park as being 27 acres by including the 6.8 acres which the SDEIS claims are the non-usable submerged lands. Thus, Seattle Parks appears to have included the underwater area in its statement of the Park's size. (Park Department confirmation is being requested.) But that argument carries no weight regardless of the acreage because the lands are park lands accessible to the public and used for recreation, wildlife and other park purposes.

The historic and continued efforts of the Park Department to facilitate preservation and access to these areas, with the creation of South Portage Bay Park and long planned improvements to Montlake Playfield Park, clearly demonstrate the "submerged lands" deserve 4(f) status. The SDEIS is disingenuous at best in not describing in the Discipline Report on 4(f) the acreage of additional right of way that WSDOT will need to take from Montlake Park for new Right of Way. The taking of just one acre would legally require full review (See http://environment.fhwa.dot.gov/4(f) /4(f) mparks.asp). A comparison of Existing vs. Planned ROW is shown in Attachment 6 Draft 4(f) /6f Evaluation, Exhibit 28, Effects on Montlake Playfield. It is easy to see that more than an acre of land will have to be taken under Option A. A different part of the SDEIS implies the permanent taking will be on the order of 2.3 acres (See Discussion in Item (13) Montlake Playfield Park above.)

C-040-096

SDEIS: Land used for construction at Montlake Park

The construction effect on Montlake Playfield is said to be limited to a tiny area to be used on land on the north east corner, 0.3 acres. SDEIS Table 6.4-1 page 6-38. However, in addition to land purchased for permanent right of way over the water, there will be need for additional lands to handle "temporary" bridge construction, taken from Montlake Playfield Park (See Chapter 6, Exhibit 6.2-2). The acreage for this additional need has not been identified.

C-040-096

The construction activity of demolishing the existing bridge and building the temporary bridge and the new bridges will all take their toll on Montlake Playfield Park and represent constructive use which is not described in the SDEIS. The total construction time for the Portage Bay Bridge is 6 years.

As described above, the submerged lands represent a taking of parklands. Montlake Playfield Park with its South Portage Bay park represents a multiple use public recreational facility. In such case significance is rated by the particular use. The wetland and water focused section of the park represents about 20 percent of the park or about 6 acres. The taking of two acres of this section of the park by the expansion of SR520 represents a significant taking of that portion of the park.

The lands taken for construction use in the northeast section of the park, adjacent to the Bill Dawson Trail are significantly public lands highly used as part of the Bill Dawson Trail.
Access to that area will be cut off for 3 years. This is a significant taking of Montlake Playfield park lands and interferes with its activity and function. This area is close to the beaver lodge which the park wildlife enthusiasts enjoy. As described below, Montlake Playfield Park is adjacent to public areas of WSDOT right of way which are used for public park purposes and therefore are also deserving of 4(f) status. Exhibit 6.4-3, Chapter 6, page 6-41, clearly shows that part of the Montlake Playfield track is on WSDOT right of way. It is also very probable that the kayak launching site next to the track is on WSDOT right of way, emphasizing that from everyone's point of view that WSDOT property, not used by SR 520 is being used as park land and deserves 4f status.

The SDEIS fails to acknowledge 4(f) status of Montlake Playfield's submerged lands and therefore it has failed to performed the analysis required for the substantial, adverse taking these water parklands, a taking adverse to both recreational and wildlife usage and to the peace and quiet and wild-land experience offered by the wetland and water of Montlake Playfield Park. For example, both kayakers and beavers use the channels the beavers cut through the lily pads during the summer, channels cut above the "submerged" lands which the SDEIS describes as of no value. There is an active beaver lodge at the south east end of SR 520. In addition to the general public, both Seattle Yacht Club and Queen City Yacht Club use the Montlake Park lands north of the current SR 520 right of way in their recreational activities as well.

This water-parkland is also an integral part of the visual experience of being in Montlake Park, or the east side of Capitol Hill and all the parks there, including West Montlake Park.

The SDEIS has acknowledged that Montlake Playfield Park has 4(f) status because there will be construction occupation of a portion of the park. However, it dismisses this qualification by saying the use is "temporary." However, neither the task nor the time

C-040-096

fit the 4(f) temporary classification. Building a new access bridge to be used to remove and replace the SR 520 off ramp does not fit the nature of a temporary use. Building a major haul route on park land is a significant use. The time of 3 years also does not fit temporary use. Further, this is a combination of forest and wetland used as a wild life refuge that will be significantly adversely impacted during construction and, because of the clearing done for that construction, after construction. The beaver colony living there is not likely to survive the experience. This is an example of current use of Montlake Playfield that will be adversely impacted by this taking. Further, this area of the park, bordering on the Bill Dawson Trail, is heavily used and the park like setting is part of what gives the trail its interest and why people like the trail.

What we have here is a combined constructive use of both Montlake Playfield park lands and the Bill Dawson Trail. Before the constructive use, both were enjoyed together. With the closing of the area neither are to be enjoyed and the cause, removal and construction of SR520 is the came. This section of the park offered wildlife viewing an increasing interest for Montlake Playfield and South Portage Bay Parks. The taking has to be seen in the context of the amount of shoreline in the park that is easily accessed and in this case this is normally a high traffic area. The taking lessens one of the uses of Montlake Park as an wildlife and open space area that is interesting to walk through. The closing of this areas to access and turning it into a major haul road not only turns off interest in that specific area but to the much larger associated area. That corner of the park will need to be avoided for three years. In addition, these lands and the WSDOT land on which this bridge is also being constructed are a mix of forest and wetland and are in fact being damaged by this construction use, impairing their recreational and wildlife use for both the construction period and thereafter. This is a significant loss in one of the attributes of the park, providing interesting wildlife viewing in mature vegetation along the shoreline and will harm its growing reputation as an interesting place for birders for the construction period.

In sum, the SDEIS fails to recognize the significance of the taking of Montlake Park lands, both submerged lands and non-submerged lands because it used logic that did not fit the circumstances. But taken together it is very clear that Montlake Playfield park is having a taking of parklands and its environment is being lessened as a result of the expansion of SR520. The SDEIS was not sensitive to these concerns but Montlake Playfield and South Portage Bay Park users are and so is the Seattle Park Commission, see Appendix X Letter From Park Commissioners.

Avoidance, Minimization, Mitigation at Montlake Park

- The SDEIS failed to evaluate alternatives which might permit avoiding this use. The key element here is whether the change in alignment is necessary, and whether the new bridge to the north needs to be so far north. A change in the size of the Portage Bay Bridge to 4 lanes might permit moving the bridge south enough to avoid taking a significant quantity of Montlake Playfield parklands.

C-040-096

See discussion elsewhere of potential for fewer lanes and therefore smaller Portage Bay bridge.

- The SDEIS fails to evaluate alternatives which would minimize the damage.
- See prior discussion of option to reduce noise.

- The SDEIS omits proposals for mitigation.
- The key point here is avoidance so that mitigation is not necessary.

C-040-097

(14) Portage Bay Park Area in SR 520 Right of Way

The existing SR 520 right of way for the Portage Bay Park Area comes out of Montlake Playfield Park property and comprises 4.7 acres. The existing bridge is 60 feet wide and the section of land that the city provided is some 1400 feet long, suggesting that bridge now covers only 2 acres of the lands it bought from Montlake Playfield Park in the late 50's. This leaves 2.7 acres uncovered and not used by the bridge. This land lies primarily to the south of the bridge. Since SR 520 was built, this land has been used by the public and by wildlife as open space, qualifying it for 4(f) status. See also above discussion of Montlake Park activity being carried out on those lands. As described in the Portage Bay section the use of these lands for a bridge represents a 4(f) use. The proposed construction plan will use these lands for both temporary construction bridges and also for the new permanent bridge. The SDEIS avoided detailing water coverage in Portage Bay, so we do not know these acreages. Construction of the Portage Bay bridge will take some 6 years and will utilize a process which takes a lot of heavy equipment and makes a lot of extreme noise and vibration. For the land taken for permanent use, there is a clear 4(f) taking. Given the length of time and the magnitude of the use there is clearly a constructive use of the lands used for construction even if they are not to be used permanently to support the bridge. Those lands used for a construction bridge, for example, are not available for the normal recreational activities of those lands for that period. I would expect the area to be fully posted with no trespassing signs.
One can expect that the lands closed for construction will be a significant part of the lands owned by WSDOT in Portage Bay, making construction use a significant use of that property.

The proposed bridge will double the amount of water covered, impacting the waters used by the public and by wildlife. Under Option A, the water acreage being covered by the bridge is being more than doubled (at the narrowest middle part of the bridge its width is only being increased 83 percent, but the road flares much wider toward both ends.) The SDEIS omits the calculation of current water coverage vs. the options being considered.

C-040-097

Some of these waters are technically SR 520 right of way and the balance is Montlake Playfield Park. **Given the use patterns of these lands for the last 45 years, recreation, wildlife, scenic beauty, buffer for SR 520, etc., all of the expansion of SR 520 will be over parkland deserving 4f status. Similar lands exist in the Arboretum area: see the R.H. Thompson Lands described below. The SDEIS failure identify the extent of 4f lands within the SR 520 right of way and to provide for all of them the avoidance and mitigation analysis required is an extremely significant error.**

The lands owned by WSDOT, but not actively covered by the bridge are
The SDEIS does not acknowledge the significance of the Portage Bay Area in the WSDOT right of way as a parkland. As a result:

- The SDEIS fails to evaluate alternatives which avoid this damage.
- The SDEIS fails to evaluate alternatives which would minimize the damage.
- The SDEIS omits proposals for mitigation.
- In addition for the use of Montlake Playfield's land near the Bill Dawson Trail, the SDEIS incorrectly regards that taking as a temporary use and therefore one not requiring avoidance and if not avoidable, mitigation.

C-040-098

(15) Bill Dawson Trail (a bike and pedestrian trail)
SDEIS Description Chapter 4 page 4-29. SDEIS Description Attachment 5 page 33.

The Bill Dawson Trail connects Montlake Playfield Park on its west boundary to Montlake Boulevard via a path under and along SR 520. The SDEIS notes that all of the land is publicly owned and the primary purpose is recreation regardless of land ownership. Therefore, the Bill Dawson Trail is subject to the provisions of Section 4(f) if the SR 520, I-5 to Medina Project would result in a use of this recreational resource. It also acknowledges that the trail is heavily used.

The SDEIS attachment 6 page 65 argues there is no 4(f). However, the trail is being taken in its totality for 3 years because the trail is being destroyed with the destruction and replacement of SR520; it will have to be relocated after the new SR520 is built. The scope of work is about as big as it can get. The temporary classification only fits if the scope of work is minor and the magnitude of the changes to the resource are minimal. That doesn't fit this case. Further the use does not qualify as temporary because the trail is shut down. It only exists to do a specific task over a relatively short distance. The purpose of this trail is a speedy access from the end of Montlake playfield to the bridge side of Montlake Avenue, bypassing a lot of long traffic lights and traffic and two freeway on ramps. That quick bypass option ceases to exist with the closure of the trail, a complete "interference with the activities or purpose of the resource," another indication that this closure doesn't fit the "temporary" classification the SDEIS is seeking to use. In addition, the impact is significant: the detour suggested is 1500 feet longer and through the construction zone, a freeway entrance and very long traffic lights. The

C-040-098

trail is completely gone. Walkers and cyclists are left back with city streets they had before the trail was established. Saying that is a detour that "rejoins the trail" is totally misleading because the detour bypasses the trail completely (See Position Paper - Section 4(f) Applicability Temporary Occupancy, Harold J. Brown, Nov 4, 1988). The task and the time for which this property will be used, building a whole new bridge, taking 2.5 to 3 years (See SDEIS Attachment 6 page 65) is not appropriately called a "Temporary Use." The Bill Dawson trail now passes through a section of interesting wetlands with mature vegetation. After construction the area will look greatly different.

- The SDEIS does acknowledge that the Bill Dawson trail qualifies for 4(f) review. The SDES may be correct that there was no way to keep the trail open, but alternatives must be evaluated.

- The SDEIS failed to acknowledge that there was a constructive use taking of this trail. Its arguments that the taking was temporary in spite of the taking lasting three years do not meet federal standards.

- There is need for mitigation other than saying that one can go back to the way things were before the trail existed. There will be fewer people passing through Montlake Playfield as a result of this change. They will bypass the park instead or will choose other routes to avoid the construction congestion that will be occurring there because without the trail the will not be able to avoid it.
- Because this is a heavily used pedestrian and bicycle trail, it must be replaced with an equivalent trail.

C-040-099

(16) The Washington Park Arboretum. (16) LAKE WASHINGTON Blvd.

See SDEIS description Attachment 6 page 37
*SDEIS description of Lake Washington and Montlake Boulevards as Olmstead Boulevards Chapter 4 page 4-32. SDEIS Description Chapter 4 page 4-30. See also SDEIS Foster Island and Marsh Island Chapter 4, page 4-30.*Lake Washington Boulevard is also adversely impacted by the taking of Canal Lands which balanced that Park Boulevard's entrance at Montlake.

Arboretum land (0.6 acres) is being taken by the expansion of SR 520, particularly on Foster Island. Also, the Arboretum has planned to use MOHI for office space and will therefore lose that facility.

In the Arboretum WSDOT already has a lot of right of way so the small take from Arboretum lands does not indicate the impact of the doubling of the footprint of the new SR520 in that area. Some of these lands are submerged and some are not. All are used for recreation and wildlife purposes and as such deserve 4(f) protection starting with taking steps to avoid use.

A very serious use of the Arboretum by SR520 now and in any expansion mode is the use of Lake Washington Boulevard as an on and off ramp to SR520 and the adverse

C-040-099 impact of increased traffic and increased noise and increased visual blight. See Letter from Park Commissioners Appendix X.

SDEIS under mitigation for "adverse effects that cannot be avoided or minimized (page 5-64) says that WSDOT is working on suitable replacement land (not identified) and other devices as well.

C-040-100 **(17) West Montlake Park**

The Bill Dawson Trail now leads via Montlake Boulevard to West Montlake Park. This park will be impacted by noise and visual blight by the expansion of SR 520.

C-040-101 **(18) Ship Canal Trail**

SDEIS Description of Ship Canal Waterside Trail Chapter 4 page 31; see also Attachment 5 page 35.

The Ship Canal Trail connects Foster Island and the Arboretum. It is a National Recreational Trail with special 6(f) status. (See also on same page Burke-Gilman Trail.) The trail will be blocked by the project and mitigation will be provided.

C-040-102 **(19) McCurdy Park**

SDEIS Description of McCurdy Park Chapter 4 page 4-30. See also Attachment 6 page 34. Confirmation these are 4(f) sites.

McCurdy Park is a 1.5 acre park adjacent to MOHAI and SR 520. It will be taken by this project, and City of Seattle will receive equivalent parkland in exchange. The R.H. Thompson lands have been targeted as the land to be exchanged. However, to the extent the R.H. Thompson lands are understood to be already parkland, they may be found to be an unacceptable exchange under the law because there would be a net reduction of public park land in the exchange and therefore the required mitigation would not be provided.

SDEIS Description of Potential Lids in Montlake Boulevard Area includes Option A's proposal of using a lid over SR520, east of Montlake Boulevard to link Arboretum land south of SR 520 with East Montlake Park, the lid helping the crossing over of the remains of McCurdy Park (taken by WSDOT for waste water treatment). This lid would contain the road that would enter, as it has historically, in front of MOHI which will cease to exist as part of this project because WSDOT needs that right of way.

C-040-103 **(20) East Montlake Park**

SDEIS Description of East Montlake Park Chapter 4 page 4-29.
SDEIS Description of East Montlake Park and McCurdy Park Attachment 6 page 34.

C-040-103 East Montlake Park is 7.1 acres. The western one third is owned by Seattle Parks and the eastern two thirds are owned by the Washington State Department of Natural Resources. All is managed by Seattle Parks Department.

The proposed expansion of SR 520 will take much of this park, but the balance will remain a park. A land exchange is being arranged with R.H. Thompson Lands proposed for the exchange. See discussion of this exchange under McCurdy Park and below under R.H. Thompson Lands.

C-040-104

(21) Arboretum Waterfront Trail

*SDEIS Description of Arboretum Waterfront Trail Chapter 4 page 4-*31

This trail connects to Marsh Island and Foster Island and then to the rest of the Arboretum. Land and Water Conservation Funds were used in the creation of this trail giving it a very special protected status.

Use is being halted during the construction period creating constructive use and the need for mitigation. Closure of this type of trail for 6 months creates an automatic Constructive Use requirement for mitigation, the provision of equivalent land providing the equivalent experience.

C-040-105

(22)The R.H. Thompson Lands

This area is a WSDOT right of way in the Arboretum. It has been used as parkland for the last 50 years and is totally surrounded by parkland. It is also a very actively used area with a nice parking lot for easy access. Few, if any users of the parking lot and the walking area would perceive that this land was any different from Arboretum land and paths and trails interconnect. This land lies in direct view of the entrance sign to the Arboretum. It is maintained by Seattle City Parks.

Because of its public access and park and wildlife use, probably all of the area within the WSDOT right not now used directly for highway use qualifies for 4(f) status and needs to be treated that way. The SDEIS here (as elsewhere) erroneously treats WSDOT right of way as not protected by 4(f). Additional examples include the water under SR 520 as well as the water south of Marsh Island. This Marsh Island area is heavily used by canoes coming to and from the Arboretum. That water area lies within the WSDOT right of way, but has been used for recreational purposes for 45 years. This land will be used by the proposed highway. (See Ch 5 page 5-60.) The SDEIS incorrectly assumes that expansion using WSDOT right of way in this area does not create the need for 4(f) harm evaluation and the requirement to minimize use of those lands as well as land established as park.

C-040-105

The SDEIS failure identify the extent of 4(f) lands within the SR 520 right of way and to provide for all of them the avoidance and mitigation analysis required is an extremely significant error.

The SDEIS Attachment 2, Agency Correspondence, un-numbered first page states that WSDOT plans to exchange the R.H. Thompson property as part of the mitigation. The SDEIS Chapter 7 page 24 says that "Unlike the experience of past years, however, today's transportation improvement projects include mitigation in the form of replacement parkland. No permanent loss in total park area would result from the proposed 6-Lane Alternative in combination with Medina to SR2012 project, Sound Transit's north Link, and East Link for light rail projects and other planned transportation improvement and land development or redevelopment projects." **This is making the argument that land taken will be replaced by other land equally suitable for park use. It pre-supposes a non-park use of the land being exchanged. However, the land in question, the R.H. Thompson Land is already park land as defined by 4(f), making the R.H. Thompson exchange questionable. Exchanging parkland for parkland may be acceptable to the owners, but it is not consistent with the objectives of federal law.**

The City of Seattle's Parkland Exchange Policy is quoted in SDEIS Chapter 7 page 7-25. Ordinance 118477 states that all park land must be preserved or mitigated by providing replacement "land or a facility of equivalent or better size, value, location and usefulness in the vicinity, serving the same community and the same park purpose." The intent is to see to it that "no long-term adverse effect on parkland and recreational resources would result from construction of the proposed project.

- The SDEIS fails to acknowledge that the WSDOT lands in the Arboretum area and elsewhere are publicly accessible park lands used for wildlife and recreation and therefore requiring 4(f) treatment.
- The SDEIS fails to evaluate alternatives which would avoid harm to these lands.
- The SDEIS fails to evaluate alternatives which would minimize the damage.
- The SDEIS has no proposals for mitigation

The use of open land for highway construction takes it over physically, with mass, shadow and noise. The new highway is to be higher than the old, increasing the impact on surrounding lands by increasing the distance the sound will travel, and also increasing the amount of noise with higher speeds. Open space used for recreation and wildlife is and subsequently taken for highway use is marred by that use, the attributes and functions of the land so taken are diminished, it becomes a less pleasant place for people and wildlife. Lands occupied by highways don't act and feel like parks. Doubling the size of this highway definitely increases the harm that is being done to the foot print area and beyond. There are also pollution issues and health issues of those who recreate or spend time next to highways. Small particulate emissions found close to

C-040-105 highways are hazardous to our health. All of this is to say that the taking of public recreational lands for highway use is a significant adverse taking.

C-040-106

(23) University Canal Lands

The University Canal Lands lie just to the north of SR 520 between Montlake and MOHAI. They have mature and very beautiful landscaping, and offer a very important visual continuity to the trees which line Lake Washington Blvd, emphasizing that one is entering into Arboretum Lands. Visually they provide an east-west continuity with McCurdy Park trees and help create a feeling of entering park land as one approaches MOHAI, East Montlake Park and McCurdy Park. The lands have been owned by the University of Washington for nearly 100 years. They are called Canal Lands because they front on what was once the canal through which logs were floated in the portage that gave Portage Bay its name. On the north side of this significant tract of land there is a significant grassy area with a picnic table, extending the park like setting to the contributing historic homes across the alley. The land has been a buffer between these residences and SR 520 for the last 45 years.

SDEIS shows that these lands will be taken for right of way Exhibit 5.2-3 Chapter 5, page 5-35.

Description of University lands as qualifying for 4(f) status is in Attachment 6 page 37, but this specific holding is not identified and only the University holdings north of the cut are described. The SDEIS shows, however, that the homes adjacent to this site contribute to the historical district.

These are publicly owned lands used as open space to support three adjacent parks: The Arboretum with its Lake Washington Boulevard Parkway park land is across SR 520 to the south, McCurdy is directly east, and this parcel serves as a gateway to East Montlake to the north. In addition, these lands on Montlake Boulevard set the tone of entering University Open space used for park type activities. I believe these lands qualify for 4f protection.

The loss of these lands will be a significant loss to Lake Washington Blvd and should be identified as a 4(f) loss for that reason as well as the other reasons that have been identified. The impact of widening SR 520 at Montlake Boulevard is severe because of the magnitude of the widening. It creates a major challenge to recreating an attractive entrance way to the Arboretum and to East Montlake Park because real trees can't be grown on lids.

- The SDEIS fails to acknowledge that these University Lands publicly accessible park lands used for recreation and wildlife and therefore require 4(f) avoidance if

C-040-106

possible. In this case with parkland on both sides of SR520 avoidance can only happen with reduced foot print, a smaller road. This is the critical assessment The SDEIS fails to evaluate alternatives which would avoid harm to these lands.

- The SDEIS fails to evaluate alternatives which would minimize the damage.
- The SDEIS has no proposals for mitigation

It is not clear to me what will be left of these lands and how that remainder will be used. Preserving the green belt here is particularly important given its many links to other green areas.

C-040-107

Notes on the Proposed 10th Avenue to Delmar Lid

Exhibit 3-6, Chapter 3, page 3-12 shows the location of retaining walls supporting the proposed lid between 10th Avenue and Delmar. Given the required height clearance of the roadway and height of the 10th and Delmar bridges and given the steep slope of the adjacent hillsides, it is clear that these walls will be above ground for a lid which is described as dropping from surface level on 10th Avenue to surface level on Delmar Street, making it a twisted plane. For the lid to be attractive, the contour of the hill should be re-established as it once was by filling in behind its walls. But that will take design of the walls integral to the lid such that the walls can hold back earth. If not, the walls will collect ivy and graffiti. In the above Exhibit, the limits to construction are what the SDEIS thinks is WSDOT right of way, but that right of way actually includes the clear patches in the photo. Thus, the landscaping should run from that verge to Roanoke Street in a nice slope which would act to integrate Roanoke Park, Bagley Viewpoint and Interlaken Park and further re-integrate the historic Roanoke neighborhood, with pedestrian connections to the now dead-end Federal Avenue East, to Interlaken at 11th Avenue East and to Bagley Viewpoint.

The purposes of the lid have been described in the SDEIS, but not in a cohesive fashion which establishes both that this is mandatory mitigation and that the mitigation must be done in a way that achieves not just sound mitigation but also mitigates damage to the adjacent parks and historic neighborhoods. In addition the SDEIS fails to describe the need in this high traffic area to not have exposed and ugly barrier walls that would restrict movement and create maintenance headaches.

SDEIS claims a noise reduction relative to current levels throughout the corridor but says "The addition of lids and landscape features over the highway would be the primary reasons for the reduction in noise levels." Chapter 5 page 5-170.

SDEIS Exhibit 5-4-1 Permanent Park Acquisition at Bagley Viewpoint CH 5 page 5-54 includes one lid depiction which just covers the highway section and a cartoon artist rendering of the lid. The issues of fitting the lid into the hillside without creating graffiti collecting walls have not been dealt with.

C-040-107

SDEIS, Chapter 5, page 5-44 says that community cohesion would be improved in the neighborhoods in the study area. "They all include landscape lids with pedestrian and bicycle pathways over I-5 at East Roanoke Street, 10th Avenue East and Delmar Drive East and in the vicinity of Montlake Boulevard East. The lids would benefit community cohesion by reconnecting neighborhoods originally bisected by SR 520 and I-5, providing linkages between adjacent and nearby parks, improving views toward the highway from nearby residences, and providing safe passage across i-5 and SR 520 at these locations.

SDEIS, Chapter 5, page 5-53 " Green open spaces, landscaping and pathways planned for the lids at I-5 10th and Delmar and in the Montlake area would provide new area for passive recreation. Trails across these lids would further improve connectivity for bicyclists and pedestrians."

Care needs to be taken to manage the south to north transition of the lid: the transition from 11th and the end of Federal Street and the higher portion of the hill near 10th Avenue as the ground slopes to Roanoke Street. There is no discussion of the south to north transition issues the 10th Avenue to Delmar lid will present although one of the objectives of the lid, besides noise containment, is described as bridging neighborhoods otherwise cut apart by SR 520. The break is most significant north-south because SR 520 lies in an East-West trench with few cross over points. Making that north south connection by using a lid to make a pedestrian connection from Federal Avenue East to Roanoke Park, for example, would be very valuable.

The SDEIS Right of Way description in Exhibit 5.2-1 purports to show WSDOT right of way south of Roanoke Street and East of 10th Avenue Bridge. The actual right of way is further to the south and includes the cleared areas in the photo.

Unfortunately, the SDEIS describes the 10th to Delmar Lid and all other lids as at the discretion of WSDOT, not mandatory remediation. Further, the picture shown is a lid over the actual excavated area of roadway with no backfilling. This 1950's style design would leave walls on the north and south sides which would collect graffiti and ivy and areas for the homeless and leave the slope too steep for use or maintenance.

It is critical that the importance of the connection of Roanoke Park to Interlaken be recognized so that the lid proposed is:
A. Seen as mandatory,
B. Seen as requiring lid design integrated with wall design such that the walls will be able to hold fill stacked up against them (Meaning trees can be planted at the edges of the lid and the walls will disappear at surface level because they have been backfilled.)
C. Constructed so that fill be removed as part of the construction be reserved for placement against those walls so that the hillside can be contoured as it was before SR 520 was built. The excavation material will be beach like sand, perfect for this

C-040-107

application. This will require negligible additional cost and will create usable recreation area equivalent to the current area of Roanoke Park. Keeping the fill near the site of excavation offers the potential to reduce adverse hauling impact on adjacent historical neighborhood as well as reducing excavation cost. Lids have weight constraints such that they are basically tree free. Tying the lid into the hill at lid surface level on an integrated basis will permit trees to grow near the edges of the lid and create a wonderful easily maintainable landscape as well as easy path transitions.

A major failure of the SDEIS is that it fails to acknowledge that under the No Build Alternative the landscaping would be preserved and the degradation of the adjacent park areas by an expanded highway system would not occur. If the decision is to destroy what we have, then that destruction on and off right of way should be identified. That in turn should create a mitigation mandate, not a WSDOT option to mitigate which is what the SDEIS now describes.

SDEIS Overview Maps and Exhibits

- SDEIS Map page 4-27 which shows all parks in affected area including Miller Park and Colonnade Park.
- SDEIS Table 4.4-1 Chapter 4, page 4.28 which lists all Recreation Resources in Project Vicinity.
- SDEIS VIEWSHED and Landscape Units map Chapter, page 4-35 and subsequent descriptions of same. There are 6: Roanoke, Portage Bay, Montlake, Union Bay, Lake Washington and Eastside Viewshed and Landscape Units.
- Historic Properties of Seattle Chapter 4, page 4-43. It is noteworthy how much of the area SR 520 passes through is historical. See also Historical Properties East side Chapter 4, page 4-50.
- Exhibit 4.7-1 Existing Noise Levels in the Seattle Project Area Chapter 4 page 4-52 for Seattle side and page 4-53 for east side.
- Chapter 4, page 4-62 Wetlands in the Seattle Area.
- Chapter 5, page 5-29 Future Trail Connectivity showing link Montlake Playfield Park to Arboretum and back to Montlake West Park.
- SDEIS Table 5.4-1 Permanent Park Acquisitions (acres) Chapter 5, page 5-54. Note that Montlake Park submerged lands are not described.
- SDEIS Table 6.4-1 Construction Effects on Parks (acres.) Chapter 6 page 6-38.
- Properties with a Section 4(f) Use in the Seattle Area Overview Map.
- 4(f) standards Attachment 6 page 57.
- Summary of Potential Section 4(f) Use Impacts Option Attachment 6 page 82.
- See also that the decisions on 4(f) and 6(f) were made by the TWG group. (Attachment 1 page 6) and their conclusions are on page 7. Meeting discussions are listed on Page 21 and might be valuable to get because they discussed 4(f) thresholds for Roanoke Park, the Bill Dawson Trail, the issue of permanent vs. temporary use, etc.

TILGHMAN GROUP
TRANSPORTATION PLANNING

14 April 2010

Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart St., Suite 520
Seattle, WA 98101

C-040-108

Dear Ms. Young:

I have reviewed the SR-520: I-5 to Medina Bridge Replacement and HOV Project SDEIS on behalf of The Coalition for a Sustainable SR-520 and offer the following comments. My comments fall under four categories:

- Corridor Traffic Operations
- Assumptions
- Needed Clarifications
- Conclusions of the SDEIS

1. Corridor Traffic Operations

A. The SDEIS describes traffic operations on SR-520 and at intersections but gives much less attention to corridor operations on surface streets. While it indicates that congestion occurring at one location may affect others, it does not provide a clear picture of how traffic operates or will operate along corridors such as Montlake Boulevard, NE Pacific Street, E. Roanoke Street, Harvard Avenue E., 10th Avenue E., or Lake Washington Boulevard through the Arboretum. For example:

- The document (SDEIS 4-3) gives only nodding recognition to existing backups on Montlake Blvd. indicating that they "can" extend as far north as NE 25th Avenue rather than saying that those long backups occur daily, and that they often extend further back. The same is true for NE Pacific Street.
- The Transportation Discipline Report (6-24) notes for the No Build option that "Montlake Boulevard southbound would often be congested as far back as NE 45th Street". That is barely different than today's conditions, despite the significant increase in volume by 2030 and longer delays at the intersection of Montlake Blvd/NE Pacific Street. How is that possible?

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C-040-108

- Similarly, for options K & L, "The increased congestion would affect adjacent intersection operations to the north, south, and west" of the Montlake Blvd/NE Pacific intersection (Transportation Discipline Report 6-40). How will the operations be affected? How will travel times be affected? How frequent will back-ups be?
- Option K's turnaround at the new Montlake interchange is projected to operate slowly during both morning and afternoon peak periods. Long queues occur for northbound traffic in the Arboretum during the morning commute now (although they are not discussed in the SDEIS), and volumes on Lake Washington Boulevard are projected to increase significantly with Option K. How will the turnaround's slow operation affect traffic driving through the Arboretum?

C-040-109

B. Pedestrian and bicycle routes are identified for each option but important elements of the user's experience are not discussed. For example:
    - Option A creates a much wider intersection at Montlake Blvd./24th Avenue East. Pedestrians would cross 5, 6 and 7 lanes, where they now cross 3, 4 and 5 lanes. What is the potential effect of wider crossings on pedestrian safety, walking time and pedestrians' willingness to walk?
    - Option A also creates a new signalized intersection on Montlake Blvd. at the 520 westbound ramps with a 5th leg for buses. Pedestrians face additional crossings as well as a wait at the new signal. How does this affect pedestrian safety and walking time along the Montlake corridor?
    - Riders transferring from the new SR-520 westbound bus stop under Option A to southbound local buses would have a new route to reach the southbound bus stop. Currently, riders can use the stairs and underpass to cross Montlake and then have only one lane of traffic to cross to reach the stop. While the new route is a shorter distance, it appears to require waiting at two signalized cross-walks. Would more time be required to make such a transfer than occurs now?
    - The SDEIS (5-28)calls Option A's reduction of volumes on Lake Washington Blvd. a benefit to cyclists and pedestrians but it does not characterize the effect of Option K & L's increases in volumes on cyclists and pedestrians on that road. What would the effect be?

C-040-110

2. Assumptions

A. The area of influence identified for the Montlake interchange does not adequately cover roads and intersections affected by traffic operations south of the interchange. While its influence extends nearly a mile to the north, the south boundary is located at the SR-520 Arboretum ramps. The boundary should extend further south to include 24th Avenue at Boyer, Lake Washington Blvd. at Boyer, 23rd Avenue at Madison, and Lake Washington Blvd. at Madison. Given the identified shifts in volume among the options, their effects on the Arboretum and streets serving it should be fully understood.

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C-040-110 On Capitol Hill, the area of influence should extend from the Harvard Avenue E/ I-5 on-ramp south to at least the 10th Avenue E/ Boston intersection. This area experiences almost daily backups from vehicles wanting to enter or leave SR 520.

C-040-111 B. Option A adds a second bridge across the Montlake Cut. Yet, the need for the second bridge is not readily apparent. For instance, traffic performance between the No Build alternative and Option SA (also known as Option A+ as preferred by the Legislative Workgroup) differs only by one letter grade at two intersections. Unfortunately, there is too little information in the SDEIS to indicate whether the LOS results reflect borderline ratings or more significant differences in travel delay. Accordingly, the transportation benefit of the second bridge remains obscure. Yet, its impacts to views, home displacements, and neighborhood character are obvious. How was it determined that additional capacity across the Montlake Cut is required? If it is, indeed, required, are there other options to provide extra capacity that have fewer community impacts?

C-040-112 C. Transit demand modeling relied on an approach "not constrained by transit volume and service forecasts" (Transportation Discipline Report 4-8). This approach produces an ideal but not realistic transit demand forecast. How would a more realistic forecast reflecting transit agencies' service policies differ? To what extent did the unconstrained transit modeling result in a mode shift from general purpose vehicles?

C-040-113 D. Future transit vehicle occupancy assumes an average of 65 passengers per bus (Transportation Discipline Report 4-8) whereas today's buses average just under 30 passengers (derived from information in Transportation Discipline Report 8-3). That assumption exceeds the number of seats on the largest buses currently in service and implies that all peak period bus trips would operate with standing loads. How is such a vast increase in vehicle occupancy a reasonable and appropriately conservative assumption? If the demand forecast is to be believed, then the number of buses has most likely been understated.

C-040-114 E. As the SDEIS notes, elimination of the Montlake freeway transit station will force riders between the University District and Eastside to make transfers. Did the unconstrained transit demand modeling account for the disadvantage of a transfer? If not, what is the effect on transit demand and general purpose traffic of doing so?

C-040-115 F. A number of recently proposed developments in the Montlake area would increase traffic on study area streets. These projects include: University Village Shopping Center expansion; QFC additional recreational facility development at Warren G. Magnuson Park. Traffic volume forecasts used in the SDEIS need to be updated to include these specific projects. It should be noted that the University Village, QFC and Seattle Children's projects alone would account for over half of the SDEIS's background traffic growth on Montlake Blvd. north of NE Pacific Pl.

C-040-116 G. Pedestrian volumes were assumed to remain static (Transportation Discipline Report 4-15). That assumption conflicts with all other assumptions about population and employment growth, transit ridership increases, and traffic volume growth. Since pedestrian volumes at intersection crosswalks affect traffic operations, intersection level of service analysis should incorporate realistically higher pedestrian volumes at crosswalks.

C-040-117 H. A modified plan for pedestrian access to Sound Transit's light rail station has been proposed by the University of Washington. The proposal calls for a new surface crossing of Montlake Blvd. between NE Pacific St. and NE Pacific Place rather than a pedestrian bridge. If this proposal should be adopted, the SDEIS should be updated to include that crossing in its traffic analysis.

3. Needed Clarifications

C-040-118 A. For all options, it would be very helpful to know the changes in travel time along arterial streets. That is a measure that readers can readily understand in comparing the effects of the options. Comparisons should begin with existing travel times and then estimate future times for all options, including No Build.

C-040-119 B. The analysis of SR-520 provides extensive information about variations in hourly volumes and operations. The analysis of local arterials, however, deals only with the morning and afternoon peak hour. How many hours experience similar levels of congestion now, and how many in the future?

C-040-120 C. How would bridge openings affect future traffic operations? The SDEIS notes that mid-afternoon openings can cause delay through the entire afternoon peak period now, so what would the effects be for each of the options?

D. Under Option A (including SA and A+), with a second bascule bridge, would the duration of bridge openings differ from today's times? If so, how would traffic be affected?

C-040-121 E. Option A claims a reduction in volumes on streets north of the Montlake Cut due to elimination of the Lake Washington Boulevard ramps to SR-520. This seems speculative given that the alternate routes of travel noted in the Transportation Discipline Report entail considerable out-of-direction travel, congestion in the NE 45th Street corridor, and limited I-5 access capacity from NE 45th Street. The volume reductions result in an improvement in LOS at Montlake Blvd NE/NE Pacific Street and at NE Pacific Street/15th Avenue NE over No Build conditions (Transportation Discipline Report 6-33). How realistic is such diversion? And how sensitive are the LOS results to that reduction in volume?

C-040-122 F. Option A is shown to reduce volumes on Lake Washington Boulevard. How far south is that the case? Does that reduction occur because of a diversion to E. Boyer Street and 24th Avenue E. to reach SR-520? If so, what are the consequences for intersections on E. Boyer and on E. Boyer itself?

C-040-123 G. Option A includes an auxiliary lane on westbound SR-520 across Portage Bay. Yet, even with that extra capacity, Option A has less westbound on-ramp throughput than other options. What function does that lane provide? What would traffic performance be for Option A without the auxiliary lane? Why would Option A+ have the auxiliary lane?

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C-040-124

H. Option K would reconfigure Lake Washington Boulevard at the north end of the Arboretum. However, the text and maps do no fully illustrate changes in circulation resulting from that reconfiguration.

- How would the intersection with E. Foster Rd. be configured? What would be its operating quality?
- What is the change in volume on E. Roanoke Street with the one-way local access scheme on Lake Washington Boulevard?
- Volumes with Options K & L increase significantly through the Arboretum. How would they affect the operation of Lake Washington Boulevard/E. Madison Street? And how long would southbound queues be at E. Madison? Queues now frequently extend back to the Japanese Garden in both morning and afternoon peak periods.

C-040-125

I. At E. Roanoke and Harvard Avenue E, the existing PM peak hour level of service is F. Vehicles waiting in queues now do not all clear the intersection on one signal cycle. For all future scenarios, volumes increase at this intersection. Yet, there is no sense of how queues will grow. How long will queues be and how much additional delay will occur on the approaches to this intersection? How will traffic on 10th Avenue E. operate?

4. Conclusions of the SDEIS

C-040-126

A. Exhibit 5-19 in the Transportation Discipline Report compares demand and throughput for the Portage Bay Bridge and the westbound on-ramp. Throughput varies for each Option, ranging from 74% to 86% of demand, substantially less than for No Build. The text, however, obscures this fact by discussing how the build options compare with one another. Had it compared them to No Build conditions, the text would state that the build options make conditions worse. Queues on local streets would be longer than under No Build. The difference in queuing, and not just in intersection LOS, should be disclosed so that the consequences for local traffic operations are clear.

C-040-127

B. The cumulative effects scenario includes regional transportation projects that may not be completed by 2030. Yet, the Transportation Discipline Report (11-15) concludes that, in comparison to the cumulative effects analysis, the SDEIS alternatives analysis "represents a conservatively high estimate of traffic and associated traffic effects". It is misleading, however, to say that the SDEIS is either conservative or high in its projections. The SDEIS and cumulative analysis scenarios are simply different networks with different results. There is no indication that the modeling done for the SDEIS reflects a high projection of traffic demand given the network assumed for the SDEIS alternatives. In fact, as I noted previously, the forecast of bus vehicles appears low. Furthermore, the Transportation Discipline Report (11-7) pointedly tells readers not to compare the results of the cumulative analysis directly with those of the other analyses, saying that they are instead for relative comparisons at the regional level.

C-040-128

C. Operating results for key intersections on Montlake Blvd. show very poor future performance. It is hardly acceptable to say that a particular option's LOS F is better than No Build's LOS F – both represent a system failure and therefore guarantee unwelcome environmental consequences.

C-040-128 Under those conditions, the build options simply allow more people to share in the poor performance. It would be useful to determine what measures would achieve better results so that decision makers know whether they have realistic choices to improve future operations.

C-040-129 D. Overall, the SDEIS needs to provide a more comprehensive measure of performance on arterial streets, comparable to its measures for SR-520 performance. Indications of travel time, queue lengths, and missed signal cycles would be instructive and for more informative for most readers. Similar measures for local transit trips and for pedestrian and bicycle travel also are necessary to provide a reasonably complete picture of transportation performance resulting from the project's various options.

Thank you for the opportunity to comment on this regionally and locally important project. I look forward to reviewing your responses to these comments.

Sincerely,

Ross Tilghman

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April 14, 2010

Bricklin & Newman
1001 Fourth Avenue, Suite #3303
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Attention: David Bricklin
Subject: SR-520 SDEIS, Noise Analysis Review

C-040-130

Ladies and Gentlemen:

This report presents review comments pertaining to the Supplemental Draft Environmental Impact Statement prepared by WSDOT for the SR-520 project as it pertains to the west end of the proposed project. I did not take time to review the entire document, but I have reviewed the sections relating to noise (SDEIS Chapters 5.7, 6.7, and the Noise Discipline Report). I have also reviewed the Novermber 24, 2008 final report on Noise Reduction Strategies prepared by the expert review panel. My comments are focused only on the west end of the project, extending from I-5 east to the floating bridge.

Construction Noise

Chapter 6.7 of the SDEIS discusses the issue of construction noise impacts. In the Key Points box it is disclosed that maximum noise levels could be as high as 105 dB at a distance of 50 feet from pile driving. Other sources could be as high as 92 dB at the same distance. These sound levels are 30 to 40 dB higher than any of the measured existing sound levels reported in Exhibit 10 on page 31 of the Noise Discipline Report (Part 1). The construction noise level increase (above the existing ambient noise levels) is not presented in the SDEIS as it should be.

It is stated at the bottom of page 6-64 of Chapter 6.7 of the SDEIS that most construction work could be performed within the limits of the Seattle Noise Ordinance (Table 6.7-2 of the SDEIS) if the work was performed during normal daytime hours. This is almost certainly false as anyone can easily see by comparing the typical construction equipment noise levels presented in Table 6.7-1 with the sound levels presented in Table 6.7-2. I suspect that what was intended by this sentence is that most construction work could be performed within the limits of the Seattle Noise Ordinance (SMC 25.08.425), which

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C-040-130 allows maximum noise levels to be as much as 25 dB higher than the values presented in Table 6.7-1 of the SDEIS. This statement cannot be true if pile driving and demolition work are taken into account. If the noise levels from pile driving are as high as is indicated in this document, this activity would not comply with the Seattle noise ordinance (SMC 25.08.425) in either the daytime or the nighttime. The bigger issue, however, is the noise impacts on the community, not just compliance with the noise ordinance. In order to determine the noise impact on the community the EIS must assess both the existing and predicted future noise levels (both construction noise and operational noise). This comparison cannot be found in the DSEIS.

C-040-131 It should be noted that construction noise within the city limits of Seattle is limited by SMC 25.08.425. As I have stated previously, it is likely that WSDOT will require a noise variance for pile driving operations during the daytime, as well as a noise variance for other activities if construction is expected to continue through the nighttime hours. With the exception of impact sources like pile driving (where compliance is based on the maximum noise level), compliance with the daytime construction noise ordinance is based on a 1-hour average (Leq) noise level. The predicted average construction noise levels at a distance of 50 feet range from 83 to 88 dB as shown in Table 6.7-5 of the SDEIS. The maximum allowable construction noise level (1-hour Leq) during daytime hours in a residential zone is 80 dB (55 + 25 = 80). Since the predicted average (Leq) sound levels presented in Table 6.7-5 are all above the 80 dB maximum allowable noise level allowed by the construction section of the Seattle Noise Ordinance, it seems all too evident that a noise variance would be required for both daytime and nighttime construction activities related to this project. The SDEIS should also present another table similar to Table 6.7-5 that compares the predicted construction noise levels (both Lmax and Leq) with the existing Leq and Lmax at residences that will be in close proximity to the construction activity. The table should show the expected increase in noise level due to construction activity, the duration (times of day and overall extent) of the construction activity, the probability of the noise interfering with normal daily activities (including sleep interference), and the number of residences that will experience this specific noise level increase. This information cannot be found in the current SDEIS. How likely is it that the noise will interfere with their sleep, and to what extent? Will it likely wake them once in a while or will it be so pervasive that people can barely sleep at all? Questions like these need answers if the EIS is to provide the information necessary for an informed decision.

C-040-132 Exhibit 6.7-2 shows the predicted "typical maximum pile driving noise levels" as a function of distance from the source of the noise. While the graph is accurate, the last sentence at the bottom of page 6-68 is misleading because it implies that the graph is a conservative estimate by ignoring the effects of ground attenuation and atmospheric

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C-040-132 absorption. While this is also true, a fair disclosure would note that both of these effects (ground attenuation and atmospheric absorption) are not significant factors for sound transmission over water or pavement and at distances less than 1,000 feet.

C-040-133 Of all of the construction noise issues relating to this project, pile driving will be the toughest to deal with in terms of noise control. Not only does pile driving generate the highest noise levels of all sources, the noise is impulsive in nature which makes it even more annoying and stressful than other types of noise. This critical information is not disclosed in the DSEIS. It should be disclosed prominently.

The contour plots showing the extent of pile driving noise in Exhibit 7.67-3 of the SDEIS clearly show that this noise will be audible over a large area of the city, including the Capitol Hill, Madison Park, Montlake, and Laurelhurst areas. The pile driving noise will be clearly audible anywhere inside the 75 dBA contour, and should also be audible (to a lesser degree) outside this contour. The impact noise levels will be extreme inside the 87 dBA (green) contour. There is very little discussion of noise mitigation in the SDEIS for the pile driving work. There is only brief mention of augering piles (which would be much quieter than pile driving), including a statement that an auger is not likely to be feasible (without any explanation as to why it would not be feasible). There is only a brief mention of coating the piles, using piston mufflers, and using pile pads to cushion the noise of impact, suggesting that these methods are less effective. Clearly, because of the extreme noise levels that are predicted, much more effort should be placed on these and other possible techniques for controlling pile driving noise.

Consideration should also be given to the use of suspended acoustic shields as a technique for reducing pile driving noise. This technique was used successfully in 1998 during the construction of King Street Center in the Pioneer Square district of downtown Seattle (see attached newspaper article and technical report). The piles used in that project were quite a bit smaller than those proposed for this project, so the impact noise levels for this project could be even higher.

C-040-134 Another glaring omission in the SDEIS is the lack of a discussion about a construction noise monitoring program. This will actually be required in order to determine if the project is in compliance with the Seattle Noise Ordinance. This is not something that can be initiated at the last minute. In order to be effective, a properly designed and executed construction noise monitoring program should have baseline ambient noise measurements collected over an extended period of time before construction begins. Without preconstruction noise measurements over an extended period of time, it may be impossible to distinguish construction noise from general environmental noise (with the

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C-040-134 obvious exception of pile driving noise which will be easily distinguished from the general environmental noise in the area).

C-040-135 The construction noise mitigation measures listed on page 6-72 of the SDEIS should be extended to include acoustic shields for pile driving. In addition, unless pile driving work on weekends and holidays is precluded, the EIS should disclose the impact of that noise on outdoor (and indoor) activities likely to be underway during those times.

C-040-136 The restriction of backup beepers during evening and nighttime hours is a good approach, but another step which could be implemented is the use of ambient sensitive beepers (which adjust the level of the beep commensurate with the ambient noise level at the time) or the use of broadband backup alarms which are less annoying than the standard tonal beepers, especially at distances greater than 100 feet from the vehicle.

C-040-137 Page 6-69 and the final paragraph of Section 6.7 of the SDEIS discuss vibration effects. The vibration level mentioned as a likely maximum for distances of 50 to 100 feet is 0.5 inch per second. While this might sound like a low vibration level, it really is not. The threshold of human perception (for a human being standing on the ground or on the floor of a building) is approximately 0.005 inch per second, which is only 1% of the level mentioned. According to ANSI Standard S3.29, the recommended maximum floor vibration level for residences during the daytime hours is equivalent to 0.008 inch per second. The commonly used safe limit for preventing damage to building structures is 2 inches per second, although minor damage has been observed[1] at vibration levels of 1 inch per second. The point here is that the vibration level referenced in the SDEIS looks like a relatively small value, but it is close to the threshold of causing damage to structures, and it is nearly 100 times the threshold of annoyance to private citizens living in their homes close to the construction site. As with the noise impacts, the EIS should disclose this impact in plain English, with a description of its likely effect on humans and structures. The EIS should include information on not only the intensity, but also the duration of these impacts.

C-040-138 It should also be pointed out that Option L will certainly cause a significant increase in construction noise for the residents of the Montlake area, due to its close proximity to the proposed new bridge and roadway around this residential development. The last paragraph on page 6-69 mentions construction noise impacts to the Burke-Gilman trail and the UW campus, but completely ignores the Montlake residential district which would have the greatest noise impact of all (pertaining to Option L).

[1] Handbook of Acoustical Measurements and Noise Control, Third Edition, Cyril M. Harris (editor), page 26.13, McGraw-Hill, 1991.

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C-040-139 One of the important recommendations offered by the Expert Review Panel in their Novermber 24, 2008 final report was to develop a construction noise plan that "involves substantial and targeted public input". I cannot agree more, and this plan should include noise monitoring stations at carefully selected locations to ensure that the project complies with the Seattle Noise Ordinance and includes the noise mitigation measures agreed to prior to the start of construction.

C-040-140 *Operational Noise*

Chapter 5.7 of the SDEIS discusses the issue of operational noise impacts. In the Key Points box it is noted that the number of residences that are expected to exceed the 67 dB noise abatement criteria (NAC) in 2030 will be less than the No Build Alternative, regardless of which alternative is selected. This analysis is based on the output of the traffic noise model TNM (version 2.5). According to Table 5.7-1, this is not necessarily true for all areas within the project. For example, under the No Build Alternative, 24 of the 83 residences in the Portage Bay/Roanoke area will exceed the NAC, but that number will increase from 24 to 26 for Option A, and the number increases to 27 for Options K and L. Even more disturbing is some of the data that is presented in Exhibit 5.7-1. If you look at the 4 residences (closest to the east end of the Montlake Cut) located in the Montlake district north of SR-520, you will see that they are all marked as green circles for the No Build Alternative and for Option A. The green circle means that the calculated noise level is between 49 dB and 65 dB. If you look at these same 4 residences under Option K (which includes a tunnel under the Montlake Cut, so there is no exposed traffic noise other than the tunnel entrance next to SR-520) you will note that the traffic noise level does not change for the three residences closest to the Montlake Cut, but the one residence closest to the tunnel entrance is expected to change from a green circle to a red circle, which indicates that the traffic noise level will cross over the 65 dB threshold. This conclusion is believable, but the data presented for Option L is not. As one can see from the figure, the three residences closest to the Montlake Cut are still shown as solid green circles (indicating no noticeable increase in noise level), even though a new arterial is passing right next to these homes! The fourth residence is shown as having a 3 to 6 dB decrease in noise level by the introduction of a new arterial that appears to pass directly through the center of the home. This is clearly not believable, and makes me question the validity of other data points in these figures.

C-040-141 The Key Point note on page 5-105 of the SDEIS suggests that noise barrier walls alongside the SR-520 roadway will be the primary method of mitigating the operational noise impacts of this project. The key note goes on to say that quieter pavements cannot be considered for use on this project because these pavements have not been

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C-040-141

demonstrated to meet the required noise mitigation standards in Washington State. While noise barrier walls are well known to be an effective and long-lasting means of reducing traffic noise if properly designed and installed, they are not the only approach that should be considered. In fact, 70% of the Expert Review Panel voted to recommend that open-grated friction course (OGFC) overlays be considered for this project. The remaining 30% voted that additional information should be acquired and assessed prior to making a final recommendation, but none of the expert panel members voted to reject the use of the OGFC pavement overlay as a viable candidate for a quiet pavement for this project. There are two major questions that impact the feasibility of this noise mitigation methodology. One issue is how much noise reduction can be achieved with the quieter pavements, and the second is how long will the noise reducing capabilities last before it must be replaced? Mr. Tim Sexton of WSDOT will be presenting a technical paper on April 19, 2010 at Noise-Con 2010 in Baltimore, MD discussing the results of recent testing on sections of quiet pavement in the Seattle area. According to his abstract, the results show that the "quiet pavement" was not significantly quieter that the control sections after 6 months of use. Reasons for the poor performance are not known, but the use of studded tires on some vehicles, frequent freeze-thaw cycles, and lower surface temperatures during installation are suggested as possible causes. Certainly, no one would want to rely on a noise mitigation method that is expensive and does not work. While it may not be prudent to rely on a technique that has not yet proven to be effective in this region, if WSDOT is eventually able to figure out how to make it work in this area, it could easily be added to the project at a later date. Adding noise barrier walls to the project after the fact would be extremely expensive and virtually impossible in the bridge sections due to structural considerations.

C-040-142

Noise barrier walls are proposed for both sides of SR-520 from the lid at 10th and Delmar all the way down to the Montlake interchange. In addition, there is a noise barrier wall proposed for the south side of SR-520 to protect the Madison Park neighborhood. The SDEIS does not indicate the height of the noise barrier walls (although the presumed heights can be found in the Noise Discipline Report), nor does any document indicate whether or not the barriers are reflective or sound absorptive on the side facing the traffic. This is an important detail that will affect the acoustical performance of the barrier. The EIS should disclose what assumptions were made regarding these items in developing the predictions of the noise reduction effects of the walls.

Presumably, the noise barriers will be designed to meet the WSDOT criteria using the FHWA traffic noise model (TNM version 2.5). The main problem with this is that Version 2.5 of TNM does not even attempt to model acoustic reflections from vertical surfaces, so it will underestimate the traffic noise levels in the Laurelhurst neighborhood because of the reflection off the noise barrier wall on the south side of SR-520 near

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C-040-142 Madison Park. The note on Exhibit 5.7-3 indicates that noise walls were not evaluated for the Laurelhurst neighborhood because the calculated noise levels did not exceed the NAC. Noise levels in Laurelhurst could be up to 3 dB higher than predicted by Version 2.5 of the TNM because of this limitation of the model. SR-520 traffic noise levels could be even more than 3 dB above the TNM predictions when there is a south wind or during certain atmospheric conditions. These metrological effects are not modeled by TNM, but they can be modeled by more advanced noise modeling software programs like CadnaA and SoundPlan, both of which employ the sound propagation models that are documented in ISO 9613-2.

C-040-143 The other problem with Version 2.5 of the TNM, relates to the consideration of parallel noise barriers. When noise barriers are located on both sides of the highway, the effectiveness of the noise barrier is reduced due to multiple reflections between the two vertical barriers. The degradation of the acoustical performance is significant when the ratio of the height of the barriers to the width of the roadway (distance between the barriers) is greater than 10 to 1. Parallel barriers are recommended for all Build options on the Portage Bay bridge, extending from the lid at 10th and Delmar all the way down to the Montlake Blvd. interchange. According to Exhibit 54 in the Noise Discipline Report, the height of these parallel barriers will be 10 feet on both sides of the highway. The width of the roadway would be less than 100 feet for all options, since there will be only 6 lanes of traffic (except for Option A which would have 7 lanes). These roadway dimensions would require an evaluation of the degradation of the acoustical performance of these noise barriers. Version 2.5 of TNM does not do this automatically. Assessing the degradation caused by the parallel barriers requires a special program run and the results have to be manually deducted from the values calculated from the original program run. This was not mentioned in the Noise Discipline Report, so I would assume that this has not yet been done. This effect will result in higher predicted noise levels on both sides of the Portage Bay bridge. The degradation caused by parallel noise barrier walls can be reduced by increasing the height of the noise barrier walls and/or installing noise barriers that are sound absorptive on the side facing the traffic.

C-040-144 One of the best design features of the proposed project (from an acoustic perspective) is the use of lids over the SR-520 roadway in the Montlake and Capitol Hill neighborhoods. Residents in the vicinity of these lids will enjoy significant traffic noise reductions. This is not true of the residences near the entrances and exits of the lids, however. Noise generated by traffic under the lids does not simply disappear. It will radiate out the lid openings, concentrating the traffic noise near the openings that would otherwise be distributed over a wide area. This effect is not modeled by Version 2.5 of the TNM.

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C-040-144

There are two ways to combat this increase in noise level: 1) introduce high noise barrier walls at the entrance and exits of the lids, and/or 2) adding sound absorptive materials to the underside of the lid. The concept of adding acoustical treatment to the inside of the tunnels and lids was something that was recommended by 90% of the Expert Review Panel. Appropriate materials are readily available for this type of application, and they should be incorporated into the project. Unless the project is revised to include full acoustic treatment inside the tunnel and the lidded portions of the project, the noise level projections presented in the EIS in these areas should be adjusted upward accordingly or noted as being lower than the true expected noise levels.

C-040-145

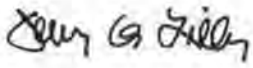
Summary

This review has pointed out several major deficiencies in the SDEIS, which can be briefly itemized as follows:

1. Construction noise impacts are not adequately addressed
2. Pile driving noise mitigation was not adequately addressed
3. A construction noise monitoring program was not even mentioned
4. Vibration impacts during construction are not adequately addressed
5. A construction noise plan with community input was not even mentioned
6. The effects of parallel barriers and the resulting noise impacts are not discussed
7. The importance of acoustical treatment in tunnels and lids and on the traffic side of the noise barriers is not discussed

If you have any questions concerning these results, do not hesitate to give me a call.

Very truly yours,
JGL Acoustics, Inc,



Jerry G. Lilly, P.E., President, FASA
Member INCE, ASTM, NCAC

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Subject: RE: EIS
From: "UCO Pontoon Contruction Project" <Pontoons@WSDOT.WA.GOV>
Date: Fri, 12 Mar 2010 16:50:32 -0800
To: "Fran Conley" <fran@roanokecap.com>

March 12, 2010

Dear Fran,

Thank you for your interest in the SR 520 Pontoon Construction Project.

The Washington State Department of Transportation (WSDOT) is preparing a draft environmental impact statement (EIS) to evaluate potential effects to the surrounding environment from constructing and storing pontoons. The draft EIS will be released for public and agency comment in May 2010. We look forward to sharing the results of the analysis for public review and comment in the coming months. The final EIS is planned for release in late 2010.

Thanks again for your interest. You may also visit the project Web site for the latest news and project information.

Sincerely,

Suanne Pelley
Communications Manager
SR 520 Bridge Replacement and HOV Program
http://www.wsdot.wa.gov/Projects/SR520Bridge

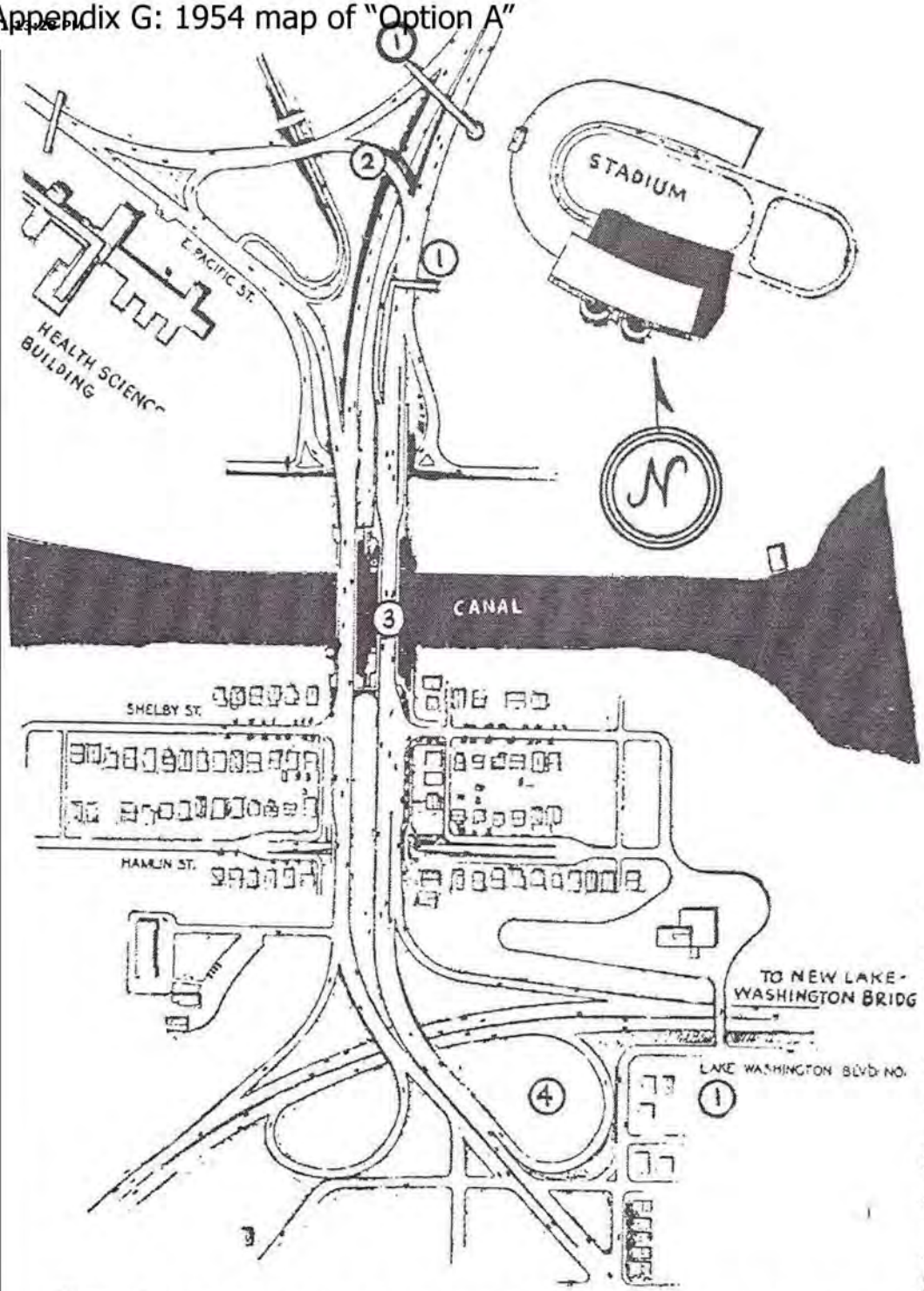
-----Original Message-----
From: Fran Conley [mailto:fran@roanokecap.com]
Sent: Sunday, February 28, 2010 10:06 AM
To: UCO Pontoon Contruction Project
Subject: EIS

Can you tell me, please, when you will publish the Draft EIS for the pontoon project?

Thanks

Fran Conley

Appendix G: 1954 map of "Option A"



Drawing of location of proposed second Montlake bridge to accommodate greater volume of north-south traffic

Source :the 1954 plan of the Seattle City Engineer for the exit from 520, as shown in the book by Eugene Smith ('Montlake, an Urban Eden', 2004), page 101.

STATE OF WASHINGTON

February 1, 2010

The Honorable Richard Conlin, Council President
The Honorable Sally Bagshaw, Councilmember
The Honorable Tim Burgess, Councilmember
The Honorable Sally J. Clark, Councilmember
The Honorable Jean Godden, Councilmember
The Honorable Bruce A. Harrell, Councilmember
The Honorable Tom Rasmussen, Councilmember
The Honorable Mike O'Brien, Councilmember
Seattle City Council
600 Fourth Avenue, 2nd Floor
P.O. Box 34025
Seattle, WA 98124-4025

Dear Councilmembers:

Thank you for your January 28, 2010 letter responding to the recommendation made by the SR 520 Legislative Workgroup on the Westside interchange option. Your willingness to work with us to complete the final design process for the SR 520 Bridge Replacement and HOV Program is greatly appreciated.

As you know, last year's Legislative Workgroup is only the most recent step in an extensive public process that began in 1997. We have been very grateful for the substantial public engagement from a diverse array of perspectives that has informed this process. Your offer to commission the Seattle Department of Transportation (SDOT) to engage with the Washington State Department of Transportation (WSDOT) in a technical discussion related to traffic on local Seattle streets, including transit connectivity to the new bridge will contribute greatly to the final design process.

Our primary objectives for any Westside interchange design selected for a new SR 520 are as follows: 1) the design selected must allow the project to be open to drivers in 2014, 2) the design must meet federal and state permitting requirements, and 3) the design must allow the project to be constructed within the $4.65 billion budget.

With regard to the schedule, we very much appreciate your recognition of our plan to open the replacement floating bridge to drivers in 2014. We share your sense of urgency to correct the critical public safety and seismic issues of the existing floating bridge and its approaches. Maintaining the pace of the necessary regulatory milestones is critical to achieving the schedule

for opening the bridge to traffic in 2014. This includes the selection of a preferred alternative by mid-April 2010. With 13 years of analysis and hundreds of millions of dollars invested in the corridor replacement, we feel strongly it is time to move forward on this much needed safety and mobility project. Therefore, the joint WSDOT-SDOT technical work and council deliberation must be completed within the objectives noted above and must be substantially completed by April 15th.

Your letter references the legislative direction within which we have worked regarding the number and types of lanes to be incorporated into the SR 520 Bridge Replacement. A six-lane configuration was endorsed by the Washington State Legislature in 2007 and 2008. As part of Engrossed Substitute Senate Bill 6099 approved in 2007, codified as RCW 47.01.405, the legislature stated that:

> *"The state must take the necessary steps to move forward with a state route number 520 bridge replacement project design that provides six total lanes, with four general purpose lanes and two lanes that are for high-occupancy vehicle travel that could also accommodate high capacity transportation, and the bridge shall also be designed to accommodate light rail in the future. High-occupancy vehicle lanes in the state route 520 corridor must also be able to support a bus rapid transit system."*

We have heard that some may wish to revisit the legislative direction regarding the use of the two additional lanes for high occupancy vehicles (HOV). The Supplemental Draft EIS focuses on alternatives based on the four general purpose lanes – two High Occupancy Vehicle (HOV) lanes option resulting from years of previous analyses and public input. Changing the configuration now would require a new environmental process. The office of the Attorney General tells us that revisiting these decisions from several years ago would set the project back at least 18 to 24 months. Our commitment to ensuring public safety does not allow that kind of delay.

The planned four general purpose and two HOV lanes included in the supplemental environmental impact statement best meets the travel needs of this growing region between now and 2030. However, it is important to note that decisions we make now on the design features of the facility do not preclude future options for high capacity transit in the corridor.

Working within the scope of the preliminary work done to date is fundamental to our ability to complete the regulatory steps on schedule. We therefore urge that any recommendations from the SDOT/WSDOT technical discussions that will affect WSDOT's selection of a preferred alternative in mid-April conform to the scope of the Westside interchange alternative recommended by the Legislative Workgroup and past legislative direction. There will be continued opportunities to refine the local elements of Westside interchange option until early fall before WSDOT prepares the final environmental statement.

We know you recognize the budget constraints associated with this project, and share your commitment to making lids and other project features that address impacts on the adjacent

community an integral part of the corridor improvements. These improvements are estimated as part of the $4.65 billion project budget and we will continue to advance them through the design and environmental process. Work is already underway to reduce the height of the bridge in response to feedback we have received on the proposed design.

We share your interest to increase transit service in this corridor, and the addition of carpool/transit lanes will improve transit service reliability as demand increases in the future. Forty-five new buses will be added to the SR 520 corridor, made possible by the Urban Partnership Agreement between the WSDOT, King County, Puget Sound Regional Council, and federal government. Also, the second phase of Sound Transit funds 100,000 additional service hours to further develop bus rapid transit in the SR 520 corridor. If additional transit service is needed in the corridor, the Washington State Legislature also approved Second Substitute Senate Bill 5433 in 2009, which gave King County the option of raising its property tax for the purpose of expanding transit service in the SR 520 corridor.

Your expressions of support and offer to help advance our design process are both timely and gratefully received. We look forward to working with you, the Mayor and the SDOT to address the issues associated with the Westside interchange options analyzed in the supplemental draft environmental impact statement. We have asked WSDOT to begin to work with SDOT as quickly as possible to develop a schedule and work plan for this effort.

Sincerely,

Christine O. Gregoire
Governor

Mary Margaret Haugen
State Senator, 10th Legislative District
Senate Transportation Committee Chairman

Judy Clibborn
State Representative, 41st Legislative District
House Transportation Committee Chairman

Attachment

The SR 520 Bridge Replacement and HOV Program

History

Project:

- Built in 1963 and now estimated to have 10-15 year life expectancy remaining. Windstorms and earthquakes pose the biggest risks to the structure.
- 1997: Trans-Lake Washington Study made recommendations for a draft Environmental Impact Statement (EIS)
- 2000: First broad EIS initiated
- 2005 Draft EIS narrows focus to 6-lane replacement options
- 2006: Governor's report 'A Path Forward to Action' identified the 6-lane alternative as the state's preference
- 2007-2008: Mediation groups review and refine project options with technical support from WSDOT
- 2010: Work will begin on pontoon construction. Supplemental Draft EIS released. The public may comment at a February hearing or through the web until March 8th. Options reviewed are 6-lane bridge replacements: Option A, adds a 2nd parallel drawbridge over Montlake Cut; Option K, adds a tunnel under Montlake Cut and Option L, adds a 2nd drawbridge and elevated interchange.

Previous Legislation highlights:

- ESSB 6099 (2007) required an SR 520 project impact plan to be developed with local input through the use of a mediator.
- ESHB 3096 (2008) Required an SR 520 finance plan, created a tolling implementation committee to evaluate tolling issues and survey citizens, and provided a sales tax deferral for the SR 520 bridge project.
- ESHB 2211 (2009) authorized tolling on the SR 520 corridor, set the maximum budget for the project at $4.65bn and created a legislative workgroup to make recommendations on the design of the project.

C-040-150

Appendix J: opposition to re-thinking

file:///C:/Documents%20and%20Settings/fran/Desktop/Appendices/Times%20Gregoire%20no%20rethink.htm
Seattle Times

Gregoire opposes Seattle officials' request to rethink 520 bridge

By Mike Lindblom

Seattle Times transportation reporter

Gov. Chris Gregoire pushed back Monday against Seattle lawmakers who are seeking separate transit lanes, instead of a pair of carpool lanes, for the future Highway 520 replacement bridge.

That change and others suggested by Seattle officials would require up to two more years of studies and delay the project, the governor contended.

Her comments put her at odds with House Speaker Frank Chopp of Seattle, a fellow Democrat. He and five other elected officials declared their support earlier Monday for the transit-only lanes.

"The mayor and the council now stand united against the current plan," Chopp said at a news conference, with marshes and abandoned road ramps in the foreground and the roar of morning traffic over Lake Washington.

Seattle Mayor Mike McGinn, City Councilmembers Nick Licata and Mike O'Brien, Democratic state Sen. Ed Murray and Democratic state Rep. Jamie Pedersen joined him, along with 100 supporters. These include the Cascade Bicycle Club; the Sierra Club; the Washington Park Arboretum Foundation; and the Coalition for a Sustainable SR 520, representing Madison Park, North Capitol Hill, Montlake, Roanoke Park, Portage Bay, Laurelhurst and the boating community.

Last week, the Seattle City Council issued a letter saying a greatly enlarged Montlake interchange and a 30-foot-high floating bridge deck, as proposed, are unacceptable â€" and asked the state for a 120-day period for the two governments to work out a new design maximizing transit opportunities.

State law calls for a toll bridge with two general-purpose lanes and one high-occupancy-vehicle lane in each direction. The governor's letter says in part: "Changing the

configuration now would require a new environmental process. The office of Attorney General tells us that revising these decisions from several years ago would set the project back at least 18 to 24 months. Our commitment to ensuring public safety does not allow that kind of delay."

But the letter acknowledges there would be technical discussions with the city before the state Department of Transportation (DOT) states its Montlake interchange choice this fall.

Sen. Rodney Tom, D-Bellevue, a leading advocate for a six-lane bridge as planned, said talks with the Seattle groups have lasted long enough: "To me, every time they turn the corner they come up with a new wrinkle. We have an agreement; let's move forward."

Debates and design research have been under way since 1997 to replace the nearly 47-year-old, four-lane bridge, at risk of sinking in a severe earthquake or windstorm.

....paragraphs omitted...

The $4.65 billion project is at least $2 billion short of funding, and the state has yet to choose a toll strategy to close some or all of that gap.

Mike Lindblom: 206-515-5631 or mlindblom@seattletimes.com

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C-040-151

METHODOLOGICAL FLAWS IN TRANSPORTATION ANALYSIS

Summary

The methodology used by the TDR team to evaluate design options may be fundamentally flawed, because it assumes a particular transportation demand model rather than acknowledging the fundamental uncertainties about Seattle demographics and transportation demand in 20 years. In particular, unrealistic assumptions are made that portray 6-lane alternatives in a favorable light. A sound methodology would acknowledge uncertainties and perform robust sensitivity analysis.

Contents

The SDEIS Transportation Discipline Report (TDR, hereafter) portrays 6-lane design alternatives in a favorable light [TDR 2-3]

1. Comparing the No Build Alternative with the 6-Lane Alternative, year 2030 congestion and HOV travel times between I-5 and SR 202 would be reduced between an average of 2 to 8 minutes during the morning peak period and 5 minutes during the evening peak period. However, during the peak of the evening commute period, the completion of the eastbound HOV lane could save both general-purpose and HOV vehicles approximately 40 minutes.

2. Tolling and the completion of the HOV lane with the 6-Lane Alternative would reduce daily vehicle volumes across SR 520 by up to 4,700 vehicles (or 3 percent) compared to the No Build Alternative. Some people would choose to take other modes of travel (such as transit, carpools, vanpools, and bike), change time of travel, or select a different route.

3. Daily person trips across SR 520 would increase by up to 14,400 people (6 percent) because completing the HOV lane system between I-5 and SR 202 and/or tolling the corridor would increase carpools and bus use.

4. General-purpose vehicle trips would decrease by up to 10,000 vehicles per day and general-purpose person trips would decrease by up to 13,500 persons per day.

This seems almost magical: vehicle trips will decrease substantially, with commensurate decreases in greenhouse gas emissions, yet peak transit times will reduce by 40 minutes and 14,400 more people will cross each day!

C-040-151

Methodological flaws

Exhibit 4-4 of the TDR presents the methodology used by the WSDOT team for predicting future traffic flows (steps irrelevant for current discussion omitted):

1. Calibrate existing CORSIM model to match field observations
2. Code future conditions into CORSIM model
3. Summarize results for year 2030 conditions

"The first step in the process was to verify that the simulation model correctly represented existing freeway operations process known as calibration. The team calibrated the CORSIM model against existing WSDOT freeway count data to ensure that the model's output for the morning and afternoon peak periods was accurately representing current volumes and operations of the freeway mainline and ramps. Most locations were calibrated to within 5 percent of actual volumes. The team verified that the congestion and travel times from the model reasonably matched field observations and data from WSDOT loop detectors. Existing data from October of 2008 were used in the calibration effort."

In the terminology of simulation studies, "calibration" refers to adjusting parameters of a model to match a set of observations. However, just as an infinity of curves can match a small number of data points, an infinity of transportation models can fit a small set of observations from October of 2008, and there is no guarantee that whatever parameters selected by the calibration process will fit 2030 Seattle transportation well.

The possibility of a calibration stage fitting a set of observations used for calibration but failing to predict the future well is so likely that sound simulation modeling includes a post-calibration step known as "validation", in which the simulation is used to predict observed transportation data that was NOT used in the calibration stage. [See for example "Discrete-Event System Simulation" (Banks et alia), chapter 10, or most textbooks on fitting of statistical models.] If the predictions do not match these "held-out" observations, the results of other predictions can not be trusted.

But the TDR methodology diagram 4-4 does not show a validation step. This completely undermines the credibility of all simulation results.

Further, step 3 of the TDR methodology, "Code future conditions into CORSIM model", requires some particular future conditions to be

C-040-151

chosen. The TDR states:

> The SDEIS 2030 No-Build & Cumulative Effects Definition Technical Memorandum (SR 520 Bridge Replacement and HOV Program 2008) and a supplement to that memo issued by the project office on March 28, 2008, contain detailed information about these travel demand model assumptions. They include all projects that were assumed to be complete by 2030, planned transit service, and other assumptions coded into the project's travel demand model for the No Build Alternative. Adjustments were also made to reflect expected changes in inflation and land use,1 specifically future population and employment growth forecasts, for the year 2030. These elements are major factors that influence travel behavior and patterns.

The last sentence is particularly telling: "These elements are major factors that influence travel behavior and patterns."

In other words, particular assumptions were made about traffic demand and transportation conditions in the year 2030, which strongly influence conclusions. These include untested stated assumptions about human behavior (in particular, that tolls will cause large numbers of people to switch to HOV transport); demand (such as that load remains heavily concentrated at peak periods); transportation infrastructure (particular transport services existing such as light rail across the lake); and many other implicit assumptions such as that citizen pressure does not force HOV lanes to be opened for general use. It would be fantastic if all these assumptions turned out to be exactly true.

Sound method for modeling with suspect assumptions include various forms of either "sensitivity analysis" (testing the change in results for various changes in assumptions to derive confidence bounds) or "worst-case analysis" (testing at the boundaries of plausible futures) or "model averaging" (combining results across a diversity of possible future conditions). But the methodology described in the TDR does not indicate that any of these were performed, and no results presented in the TDR demonstrate any of these were performed.

Misleading presentation of results

The TDR states: "travel demand models are not intended to provide an absolute traffic volume forecast", advising that forecasted traffic flows should be used only for comparison between options, NOT for estimating absolute conditions.

But in many places in the TDR and executive summary, this distinction

C-040-151

has been lost:

"Daily person trips across SR 520 would increase by up to 14,400 people (6 percent) because completing the HOV lane system between I-5 and SR 202 and/or tolling the corridor would increase carpools and bus use."

"General-purpose vehicle trips would decrease by up to 10,000 vehicles per day and general-purpose person trips would decrease by up to 13,500 persons per day."

Clearly, there is great appeal to the idea that the number of vehicles crossing each day will decrease and the number of people crossing will increase, but given that the TDR states only relative values are meaningful, this conclusion should not be drawn and should not be in the report.

Further, it is clear that certain assumptions, especially those surrounding the impact of tolling on usage of the HOV lane, will affect the relative standing of 6-lane vs. 4-lane alternatives. Given that no data has been presented demonstrating such assumptions are reliable, and that no analysis is presented as to the sensitivity of results to these assumptions, conclusions such as the two above are highly suspect and misleading.

Conclusion

It is impossible to conclusively evaluate the methodology used in traffic forecasting even from such a lengthy document as the TDR, given that it is but a summary of a vast amount of work performed by the TDR team. However the statement of methodology presented in the TDR, pointedly omitting any rigorous model validation procedures, suggests the methodology may be flawed and unreliable. And since results do not include any form of confidence bounds or other indication of sensitivity to forecasting and traffic modeling assumptions, they are highly misleading and should not be used for policy decisions and should not have been included in a report for the public.The draft EIS makes predictions about the comparative benefits of the No-Build vs Build options. There are reasons to be concerned about the accuracy and the margin of error of these predictions.

The methodology for the obtaining those predictions is described in the Transportation Discipline Report. The report does not give evidence that errors at various levels in the model have been estimated accurately, so that the forecasts are credible.

C-040-152

1. The simulation model is chosen by PSRC, the model inputs (demographic and land use forecasts) are established by PSRC, the model validation is done by PSRC teams, and the goals for development are also set by PSRC. There is no independent review of this process at any step.

2. Models are calibrated from current data. This process sets the models' internal parameters to values that best align the model predictions with the observed data. The problem is that, for models with many parameters, there can be many different parameter setting that can fit the current data equally well. However, these parameter setting will produce wildly different forecasts for the future, e.g for 2030. The report does not explain how the choice was made.

A standard statistical validation technicque to avoid the catastrophic ambiguity I described above is to test the model predictions on existing data, but to employ for this purpose independent or fresh data, which was not previously used in calibration. The accuracy of the model on the fresh data ris a better estimate of the ability of the model to represent the reality in the field.

3. The inaccuracies in the input variables (demographic, employment, and land use forecasts were not considered). Nor is it explained how these inccuracies, which are unavoidable in any forecast, will propagate through the model and will affect its predictions. In other words, there is no evidence that the model used is "robust" to changes in the input data. For instance, a 10% error in the population growth may well translate into a 100% error in the traffic time estimate. The document does not demonstrate that the errors of this kind have been controlled for.

4. Another source of inaccuracies in the final predictions of traffic time, traffic volume etc are the variations in model parameters. The travel demand model has parameters for each of the 4 steps: trip generation, trip distribution, mode choice, trip assignment. It is the latter two steps that I want to discuss now. Essentially, the travel demand model hsas an internal model for how people will choose to travel in 2030, and by what route. At first glance, all the model parameters are validated by predicting current data. However, the current data is not detailed enough to guarantee that these parts of the model are accurate even for the present. The validation method, as it is explained in the document, only ensures that the model as a whole predicts traffic patterns at certain points and across certain screenlines, but does not guarantee that the model captures correctly

C-040-152

the mechanisms of mode choice and travel assignment that produce these results. It is not known what the margin of error of the traffic forecasts are with respect to such inaccuracies.

In summary, I feel that transportation forecasts produced may be relied upon, only under the unlikely conditions when the economic, demographic and land use forecasts are accurate, when people make their choice in agreement with the model's step 3 and 4 parameters and not otherwise, and when cars, gas consumption, gas prices also evolve as forecasted. But that the current analysis does not cover any other scenario. Thus it does not support the conclusion that the benefits for transportation will continue to exist if the circumstances of the future become different from what was assumed in 2009.

C-040-153 Appendix O: References used in Section III, Traffic Assumptions

References,(incorporated here by reference)

Dargay, J. M. and P. B. Goodwin (1995), "Evaluation of Consumer Surplus with Dynamic Demand Changes." Journal of Transport Economics and Policy, Vol. XXIX, No. 2, pp. 179-93.

Appendix M: Flaws in Model Methodology and Use in the TDR.

Appendix N: Flaws in Simulation Methodology in TDR

Appendix O: -Tilghman Group Analysis of SDEIS

Appendix P: Review of Studies on Generated Traffic and Induced Travel

Lawton, K. (2001), The Urban Structure and Personal Travel: an Analysis of Portland, or Data and Some National and International Data, E-Vision 2000 Conference (www.rand.org/scitech/stpi/Evision/Supplement/lawton.pdf).

Levinson, D. and A. Kumar (1997), Density and the Journey to Work, Growth and Changes,
Vol. 28, No. 2 1997, pp. 147-72

Litman, T (2010) Generated Traffic and Induced Travel Implications for Transport Planning http:www.vtpi.org

Marshall, N.(2000), Evidence of Induced Demand in the Texas Transportation Institutes Urban Roadway Congestion Study Data Set, TRB Annual Meeting (www.trb.org).

Open Space Seattle (2010) http://www.seattlepi.com/local/271365_ncenter24.html

STPP (1998), Do New Roads Cause Congestion?, Surface Transportation Policy Project (www.transact.org); at www.transact.org/congestion/analysis.htm.

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Generated Traffic and Induced Travel

Implications for Transport Planning

19 March 2010

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Abstract

Traffic congestion tends to maintain equilibrium. Congestion reaches a point at which it constrains further growth in peak-period trips. If road capacity increases, the number of peak-period trips also increases until congestion again limits further traffic growth. The additional travel is called "generated traffic." Generated traffic consists of diverted traffic (trips shifted in time, route and destination), and induced vehicle travel (shifts from other modes, longer trips and new vehicle trips). Research indicates that generated traffic often fills a significant portion of capacity added to congested urban road.

Generated traffic has three implications for transport planning. First, it reduces the congestion reduction benefits of road capacity expansion. Second, it increases many external costs. Third, it provides relatively small user benefits because it consists of vehicle travel that consumers are most willing to forego when their costs increase. It is important to account for these factors in analysis. This paper defines types of generated traffic, discusses generated traffic impacts, recommends ways to incorporate generated traffic into evaluation, and describes alternatives to roadway capacity expansion.

A version of this paper was published in the *ITE Journal*, Vol. 71, No. 4, Institute of Transportation Engineers (www.ite.org), April 2001, pp. 38-47.

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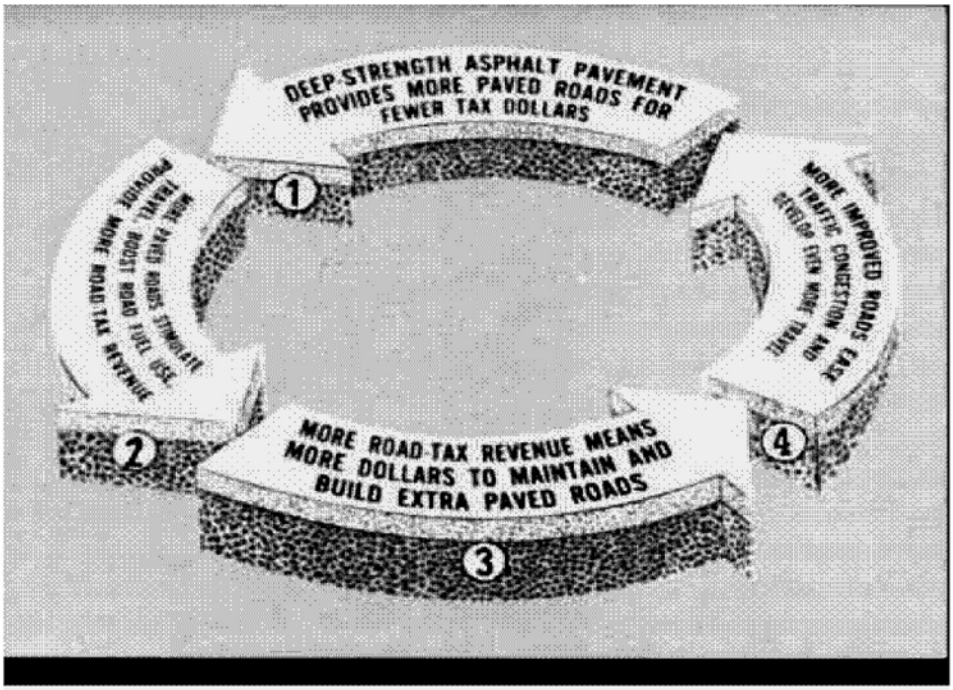
Contents

Introduction 2
Defining Generated Traffic 3
Measuring Generated Traffic 6
Modeling Generated Traffic 11
Land Use Impacts 13
Costs of Induced Travel 14
Calculating Consumer Benefits 16
Example 18
Counter Arguments 22
Alternative Strategies for Improving Transport 24
Legal Issues 25
Conclusions 26
Resources 27



Roads beget roads: From the cover of *Asphalt Bulletin*, April 1966.

This illustration from a highway builders' magazine shows how expanding roadway capacity tends to stimulate automobile travel and the need for more roads.

Introduction

Traffic engineers often compare traffic to a fluid, assuming that a certain volume must flow through the road system. But urban traffic may be more comparable to a gas that expands to fill available space (Jacobsen 1997). Road improvements that reduce travel costs attract trips from other routes, times and modes, and encourage longer and more frequent travel. This is called *generated traffic*, referring to additional vehicle traffic on a particular road. This consists in part of *induced travel*, which refers to increased total vehicle miles travel (VMT) compared with what would otherwise occur (Hills 1996).

Generated traffic reflects the economic "law of demand," which states that consumption of a good increases as its price declines. Roadway improvements that alleviate congestion reduce the generalized cost of driving (i.e., the price), which encourages more vehicle use. Put another way, most urban roads have *latent travel demand*, additional peak-period vehicle trips that will occur if congestion is relieved. In the short-run generated traffic represents a shift along the demand curve; reduced congestion makes driving cheaper per mile or kilometer in terms of travel time and vehicle operating costs. Over the long run induced travel represents an outward shift in the demand curve as transport systems and land use patterns become more automobile dependent, so people must drive more to maintain a given level of accessibility to goods, services and activities (Lee 1999).

This is not to suggest that increasing road capacity provides no benefits, but generated traffic affects the nature of these benefits. It means that road capacity expansion benefits consist more of increased peak-period mobility and less of reduced traffic congestion. Accurate transport planning and project appraisal must consider these three impacts:

1. Generated traffic reduces the predicted congestion reduction benefits of road capacity expansion.
2. Induced travel imposes costs, including downstream congestion, accidents, parking costs, pollution, and other environmental impacts.
3. The additional travel that is generated provides relatively modest user benefits, since it consists of marginal value trips (travel that consumers are most willing to forego).

Ignoring these factors distorts planning decisions. Experts conclude, "*…the economic value of a scheme can be overestimated by the omission of even a small amount of induced traffic. We consider this matter of profound importance to the value-for-money assessment of the road programme*" (SACTRA 1994). "*...quite small absolute changes in traffic volumes have a significant impact on the benefit measures. Of course, the proportional effect on scheme Net Present Value will be greater still*" (Mackie, 1996) and "*The induced travel effects of changes in land use and trip distribution may be critical to accurate evaluation of transit and highway alternatives*" (Johnston, et al. 2001)

This paper describes how generated traffic can be incorporated into transport planning. It defines different types of generated traffic, discusses their impacts, and describes ways to incorporate generated traffic into transport modeling and planning, and provides information on strategies for using existing roadway capacity more efficiently.

Defining Generated Traffic

Generated traffic is the additional vehicle travel that results from a road improvement. Congested roads cause people to defer trips that are not urgent, choose alternative destinations and modes, and forego avoidable trips. Generated traffic consists of *diverted travel* (shifts in time and route) and *induced travel* (increased total motor vehicle travel). In some situations, highway expansion stimulates sprawl (automobile-dependent, urban fringe land use patterns), further increasing per capita vehicle travel. If some residents would otherwise choose less sprawled housing locations, their additional per capita vehicle travel can be considered to be induced by the roadway capacity expansion.

Below are examples of decisions that generate traffic:

- Consumers choose closer destinations when roads are congested and further destinations when traffic flows more freely. "*I want to try the new downtown restaurant but traffic is a mess now. Let's just pick up something at the local deli.*" This also affects long-term decisions. "*We're looking for a house within 40-minute commute time of downtown. With the new highway open, we'll considering anything as far as Midvalley.*"
- Travelers shift modes to avoid driving in congestion. "*The post office is only five blocks away and with congestion so bad this time of day, I may as well walk there.*"
- Longer trips may seem cost effective when congestion is light but not when congestion is heavy. "*We'd save $5 on that purchase at the Wal-Mart across town, but it's not worth fighting traffic so let's shop nearby.*"

Travel time budget research indicates that increased travel speeds often results in more mobility rather than saving time. People tend to average about 75 minutes of daily travel time regardless of transport conditions (Levinson and Kumar 1995; Lawton 2001). National data indicate that as freeway travel increases, average commute trip distances and speeds increase, but trip time stays about constant (Levinson and Kumar 1997). As a result, traffic congestion tends to maintain a self-limiting equilibrium: once congestion becomes a problem it discourages further growth in peak-period travel. Road expansion that reduces congestion in the short term attracts additional peak-period trips until congestion once again reaches a level that limits further growth. It may therefore be incorrect to claim that congestion reductions save travel time.

Definitions

Generated Traffic: Additional peak-period vehicle trips on a particular roadway that occur when capacity is increased. This may consist of shifts in travel time, route, mode, destination and frequency.

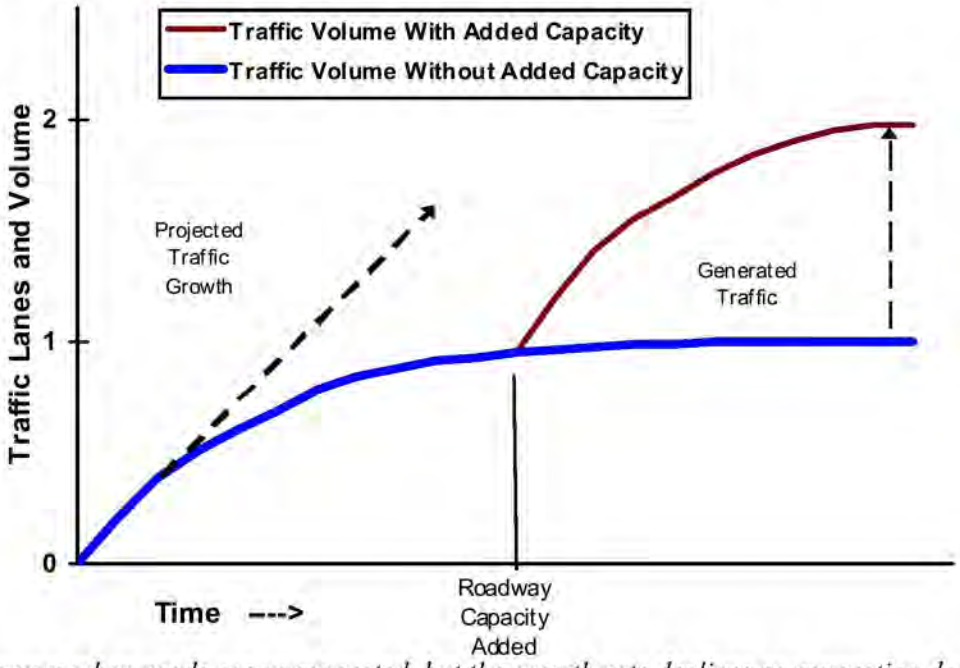
Induced travel: An increase in total vehicle mileage due to roadway improvements that increase vehicle trip frequency and distance, but exclude travel shifted from other times and routes.

Latent demand: Additional trips that would be made if travel conditions improved (less congested, higher design speeds, lower vehicle costs or tolls).

Triple Convergence: Increased peak-period vehicle traffic volumes that result when roadway capacity increases, due to shifts from other routes, times and modes.

Figure 1 illustrates this pattern. Traffic volumes grow until congestion develops, then the growth rate declines and achieves equilibrium, indicated by the curve becoming horizontal. A demand projection made during this growth period will indicate that more capacity is needed, ignoring the tendency of traffic volumes to eventually level off. If additional lanes are added there will be another period of traffic growth as predicted.

Figure 1 **How Road Capacity Expansion Generates Traffic**



Traffic grows when roads are uncongested, but the growth rate declines as congestion develops, reaching a self-limiting equilibrium (indicated by the curve becoming horizontal). If capacity is added, traffic growth continues until it reaches a new equilibrium. The additional peak-period vehicle travel that results is called "generated traffic." The portion that consists of absolute increases in vehicle travel (as opposed to shifts in time and route) is called "induced travel."

In some situations, adding capacity to a network in which all the moving entities rationally seek the most efficient route can reduce the network's overall efficiency, a phenomena called *Braess's Paradox*. In such situations, closing certain roadways can increase average traffic speeds (Youn, Jeong and Gastner 2008).

Generated traffic can be considered from two perspectives. Project planners are primarily concerned with the traffic generated *on the expanded road segment*, since this affects the project's congestion reduction benefits. Others may be concerned with changes in *total vehicle travel* (induced travel) which affects overall benefits and costs. Table 1 describes various types of generated traffic. In the short term, most generated traffic consists of trips diverted from other routes, times and modes, called *Triple Convergence* (Downs 1992). Over the long term an increasing portion consists of induced travel.

Table 1 **Types of Generated Traffic**

Type of Generated Traffic	Category	Time Frame	Travel Impacts	Cost Impacts
Shorter Route Improved road allows drivers to use more direct route.	Diverted trip	Short term	Small reduction	Reduction
Longer Route Improved road attracts traffic from more direct routes.	Diverted trip	Short term	Small increase	Slight increase
Time Change Reduced peak period congestion reduces the need to defer trips to off-peak periods.	Diverted trip.	Short term	None	Slight increase
Mode Shift; Existing Travel Choices Improved traffic flow makes driving relatively more attractive than other modes.	Induced vehicle trip	Short term	Increased driving	Moderate to large increase
Mode Shift; Changes in Travel Choice Less demand leads to reduced rail and bus service, less suitable conditions for walking and cycling, and more automobile ownership.	Induced vehicle trip	Long term	Increased driving, reduced alternatives	Large increase, reduced equity
Destination Change; Existing Land Use Reduced travel costs allow drivers to choose farther destinations. No change in land use patterns.	Longer trip	Short term	Increase	Moderate to large increase
Destination Change; Land Use Changes Improved access allows land use changes, especially urban fringe development.	Longer trip	Long term	More driving and auto dependency	Moderate to large increase, equity costs
New Trip; No Land Use Changes Improved travel time allows driving to substitute for non-travel activities.	Induced trip	Short term	Increase	Large increase
Automobile Dependency Synergetic effects of increased automobile oriented land use and transportation system.	Induced trip	Long term	Increased driving, fewer alternatives	Large increase, reduced equity

Some types of generated traffic represent diverted trips (trips shifted from other times or routes) while others increase total vehicle travel, reduce travel choices, and affect land use patterns.

What constitutes *short-* and *long-term* impacts can vary. Some short term effects, such as mode shifts, may accumulate over several years, and some long term effects, such as changes in development patterns, can begin almost immediately after a project is announced if market conditions are suitable. Generated traffic can also work in reverse; when urban roadway capacity is reduced a significant portion of previous vehicle traffic may disappear altogether (Cairns, Hass-Klau and Goodwin 1998).

Highway capacity expansion can induce additional vehicle travel on adjacent roads (Hansen, et al. 1993) because such projects leverage automobile dependent land use patterns. For example, urban-fringe highway expansion often stimulates more dispersed development. Although these indirect impacts are difficult to quantify they are potentially large and should be considered in transport planning (Louis Berger & Assoc. 1998).

Measuring Generated Traffic

Several studies using various analysis techniques have examined the amount of traffic generated by specific projects (Goodwin 1996). Their findings are summarized below:

- Cervero (2003a & b) used data on freeway capacity expansion, traffic volumes, demographic and geographic factors from California between 1980 and 1994. He estimated the long-term elasticity of VMT with respect to traffic speed to be 0.64, meaning that a 10% increase in speed results in a 6.4% increase in VMT, and that about a quarter of this results from changes in land use (e.g., additional urban fringe development). He estimated that about 80% of additional roadway capacity is filled with additional peak-period travel, about half of which (39%) can be considered the direct result of the added capacity.

- Duranton and Turner (2008) investigate the relationship between interstate highway lane-kilometers and highway vehicle-kilometers travelled (VKT) in US cities. They found that VKT increases proportionately to highways and identify three important sources for this extra vehicle travel: increased driving by current residents, an inflow of new residents, and more transport intensive production activity. They find aggregate city-level VKT demand to be elastic and so conclude that, without congestion pricing, increasing road or public transit supply is unlikely to relieve congestion, and current roadway supply exceeds the optimum.

- Time-series travel data for various roadway types indicates an elasticity of vehicle travel with respect to lane miles of 0.5 in the short run, and 0.8 in the long run (Noland 2001). This means that half of increased roadway capacity is filled with added travel within about 5 years, and that 80% of the increased roadway capacity will be filled eventually. Urban roads, which tend to be most congested, had higher elasticity values than rural roads, as would be expected due to the greater congestion and latent demand in urban areas.

- The medium-term elasticity of highway traffic with respect to California state highway capacity was measured to be 0.6-0.7 at the county level and 0.9 at the municipal level (Hansen and Huang 1997). This means that 60-90% of increased road capacity is filled with new traffic within five years. Total vehicle travel increased 1% for every 2-3% increase in highway lane miles. The researcher concludes, "it appears that adding road capacity does little to decrease congestion because of the substantial induced traffic" (Hansen 1995). Mokhtarian, et al (2002) applied a different statistical technique (matched-pairs) to the same data and found no significant induced travel effect, but that technique does not account for additional traffic on other roads or control for other factors that may affect vehicle travel.

- A study by leading U.K. transportation economists concludes that the elasticity of travel volume with respect to travel time is -0.5 in the short term and -1.0 over the long term (SACTRA 1994). This means that reducing travel time on a roadway by 20% typically increases traffic volumes by 10% in the short term and 20% over the long term.

- The following are elasticity values for vehicle travel with respect to travel time: urban roads, short-term -0.27, long term –0.57; rural roads, short term –0.67, long term –1.33 (Goodwin 1996). These values are used in the FHWA's SMITE software program described below.

- A Transportation Research Board report based finds consistent evidence of generated traffic, particularly with respect to travel time savings (Cohen 1995).

- National Highway Institute concludes that the elasticity of highway travel with respect to users' generalized cost (travel time and financial expenses) is typically -0.5 (NHI 1995).

- Analysis of traffic conditions in 70 metropolitan areas finds that regions which invested heavily in road capacity expansion fared no better in reducing congestion than those that spent far less (STPP 1998). The researchers estimate that road capacity investments of thousands of dollars annually per household would be needed achieve congestion reductions.

- Noland and Mohammed A. Quddus (2006) found that increases in road space or traffic signal control systems that smooth traffic flow tend to induce additional vehicle traffic which quickly diminish any initial emission reduction benefits.

- Cross-sectional time-series analysis of traffic growth in the U.S. Mid-Atlantic region found an average elasticities of VMT with respect to lane miles to be 0.2 to 0.6 (Noland and Lem 2002).

- Small (1992) concludes that 50-80% of increased highway capacity is soon filled with generated traffic, based on a detailed review of previous studies.

- The USDOT Highway Economic Requirements System (HERS) investment analysis model uses a travel demand elasticity factor of –0.8 for the short term, and –1.0 for the long term, meaning that if users' generalized costs (travel time and vehicle expenses) decrease by 10%, travel is predicted to increase 8% within 5 years, and an additional 2% within 20 years (Lee, Klein and Camus 1998; FHWA 2000).

- Cervero and Hanson (2000) found the elasticity of VMT with respect to lane-miles to be 0.56, and an elasticity of lane-miles with respect to VMT of 0.33, indicating that roadway capacity expansion results in part from anticipated traffic growth.

- A comprehensive study of the impacts of urban design factors on U.S. vehicle travel found that a 10% increase in urban road density (lane-miles per square mile) increases per capita annual VMT by 0.7% (Barr 2000).

- In a study of eight new urban highways in Texas over several years, Holder and Stover (1972) found evidence of induced travel at six locations, estimated to represent 5-12% of total corridor volume, representing from a quarter to two-thirds of traffic on the facility. Henk (1989) performed similar analysis at 34 sites and found similar results.

- Modeling analysis indicates that adding an urban beltway can increase regional VMT by 0.8-1.1% for each 1.0% increase in lane capacity (Rodier, et al. 2001).

Table 2 Portion of New Capacity Absorbed by Induced Traffic

Author	Short-term	Long-term (3+ years)
SACTRA		50 - 100%
Goodwin	28%	57%
Johnson and Ceerla		60 - 90%
Hansen and Huang		90%
Fulton, et al.	10 - 40%	50 - 80%
Marshall		76 - 85%
Noland	20 - 50%	70 - 100%

- Yao and Morikawa (2005) develop a model of induced demand resulting from high speed rail service improvements between major Japanese cities. They calculate elasticities of induced travel (trips and VMT) with respect to fares, travel time, access time and service frequency for business and nonbusiness travel.

- Odgers (2009) found that traffic speeds on Melbourne, Australia freeways did not decline as predicted following new urban highway construction, apparently due to induced traffic. He concludes that, "major road infrastructure initiatives and the consequent economic investments have not yet delivered a net economic benefit to either Melbourne's motorists or the Victorian community."

- Burt and Hoover (2006) found that each 1% increase in road lane-kilometres per driving-age person increases per capita light truck travel 0.49% and car travel 0.27%, although they report that these relationships are not statistically significant, falling just outside the 80% confidence interval for cars and the 90% confidence interval for light trucks.

- Schiffer, Steinvorth and Milam (2005) perform a meta-analysis of induced travel studies to identify short- and long-term elasticities of VMT with respect to changes in traffic lane-miles and other variables, as summarized in Figure 2. They predicted the amount of VMT induced by regional highway expansion in the Wasatch Front (Salt Lake City region). They reached the following general conclusions concerning induced travel:

    - *Induced travel effects exist* – The elasticity of VMT with respect to added lane-miles or reductions in travel time is generally greater than zero and the effects increase over time.

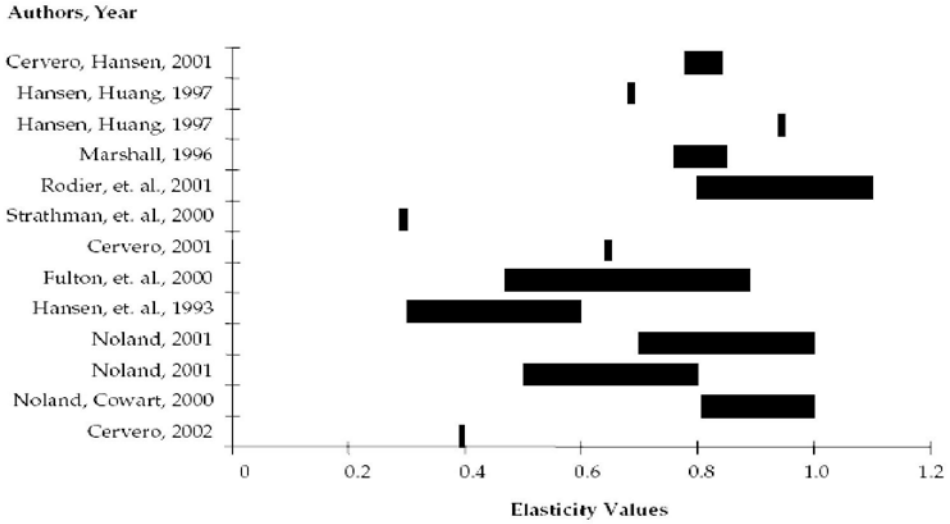
    - *Short-term induced travel effects are smaller than long-term effects* – As measured by the increase in VMT with respect to an increase in lane-miles, short-term effects have an elasticity range from near zero to about 0.40, while long-term elasticities range from about 0.50 to 1.00. This means that a 10% increase in lane-miles can cause up to a 4% increase in VMT in the short term and a 10% increase in the long term.

    - *Induced travel effects for constructing new roadways versus widening existing roadways were not definitive* – The research did not include any examples that isolated the effects of constructing new roadways versus widening existing roadways. However, somewhat higher elasticities where found when "new roadways and widenings" were considered together compared to "widenings only." This finding is based on a limited number of studies and indicates that more research is necessary to isolate these differences.

    - *Induced travel effects generally decrease with the size of the unit of study* – Larger effects are measured for single facilities while smaller effects are measured for regions and subareas. This is mainly due to diverted trips (drivers changing routes) causing more of the change on a single facility, whereas, at the regional level, diverted trips between routes within the region are not considered induced travel unless the trips become longer as a result.

    - *Traditional four-step travel demand models do not fully address induced travel or induced growth* – Land use allocation methods overlook accessibility effects, trip generation often fails to account for latent trips (potential trips constrained by congestion), many models overlook time-of-day shifts, and static traffic assignment algorithms may not account for queuing impacts on route shifts. Errors tend to be greatest when there is more or users are more responsive to travel costs. These weaknesses are due to the static nature of four-step models that carry base-year behavior parameters into future year scenarios when congestion may be much greater. For example, the percent of daily trips that occur during a peak hour is typically hard-coded in most traditional four-step models, and so does not change from the base year to future years. In reality, the percent of daily trips that occur during peak hours reduces as congestion increases. Failing to capture this effect ignores the potential trip suppression effects of congestion.

Figure 2 **VMT With Respect to Road Capacity** (Schiffer, Steinvorth and Milam 2005)



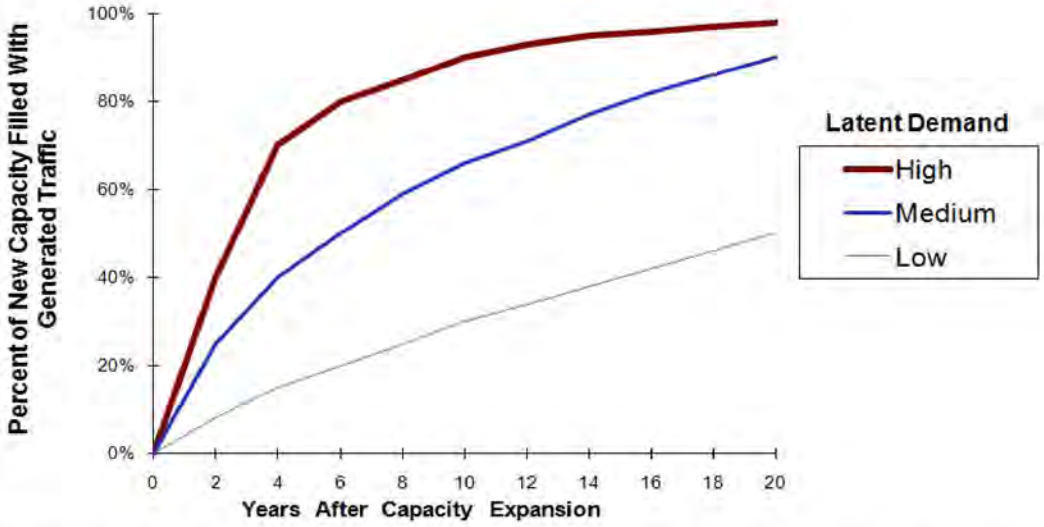
This figure summarizes long term vehicle travel elasticities with respect to roadway capacity.

The amount of traffic generated by a road project varies depending on conditions. It is not capacity expansion itself that generates travel, it is the reduction in congestion delays and therefore per-mile travel costs. Expanding uncongested roads will generate no traffic, although paving a dirt road or significantly raising roadway design speeds may induce more vehicle travel. In general, the more congested a road, the more traffic is generated by capacity expansion. Increased capacity on highly congested roads often generates considerable traffic (Marshall 2000). Older studies of the elasticity of VMT growth with respect to increased roadway lane-miles performed during the early years of highway building (during the 1950s through 1970s) have little relevance for evaluating current urban highway capacity expansion. In developed countries, where most highway expansion now occurs on congested links, such projects are likely to generate considerable amounts of traffic, providing only temporary congestion reduction benefits.

Gridlock?
Highway expansion advocates sometimes predict that roads will reach *gridlock* unless capacity increases. Such claims are usually exaggerated because they ignore the equilibrium tendency of traffic congestion. Gridlock is a specific condition that occurs when backups block intersections, stopping street network traffic flow as vehicles on each street wait for other vehicles to move. Gridlock can be avoided with proper intersection design that prevents such backups. Increasing regional highway capacity can *increase* rather than reduce this risk by adding more traffic to surface streets where gridlock occurs.

Generated traffic usually accumulates over several years (Goodwin 1998). Under typical urban conditions, more than half of added capacity is filled within five years of project completion by additional vehicle trips that would not otherwise occur, with continued but slower growth in later years. Figure 3 shows typical generated traffic growth indicated by various studies. Techniques for modeling these impacts into account are described in the next section (Dargay and Goodwin 1995).

Figure 3 **Elasticity of Traffic Volume With Respect to Road Capacity**



This illustrates traffic growth on a road after its capacity increases. About half of added capacity is typically filled with new traffic within a decade of construction. (Based on cited studies)

Modeling Generated Traffic

To predict generated traffic, transport models must incorporate "feedback," which reflects the impacts congestion has on travel behavior, and long-term transport and land use systems. This recognizes that congestion diverts traffic to other routes, times and modes, and reduces trip length and frequency, while reduced congestion has the opposite effects. Because of non-linear speed flow relationships, and typically small net differences between large costs and large benefits, a small amount of induced traffic can have a disproportionately large effect on the cost effectiveness of a roadway project.

Most current traffic models can predict route and mode shifts, and some can predict changes in scheduling and destination, but few adjust trip frequency, and most ignore the effects transportation decisions have on land use (Beimborn, Kennedy and Schaefer 1996; Ramsey 2005). For example, they do not recognize that highway capacity expansion encourages more automobile-dependent urban fringe development. As a result, current models recognize diverted traffic but do not account for most forms of long term induced vehicle travel, and thus underestimate the amount of traffic likely to be generated when congested roads are expanded. In one exercise, Ramsey (2005) found that the net benefits of a suburban highway capacity expansion project declined by 50% if the project caused 60,000 residents (about 2% of the regional population) to move from urban to suburban locations, thereby increasing traffic congestion on that roadway link. Analysis of urban highway expansion impacts on total emissions by Williams-Derry (2007) indicates that emissions from construction and additional vehicle traffic quickly exceed any emission reductions from reduced congestion delays.

Transportation modelers have developed techniques for incorporating full feedback (Harvey and Deakin 1993; SACTRA 1994; Loudon, Parameswaran and Gardner 1997; Schiffer, Steinvorth and Milam 2005). This recognizes that expanding the capacity of congested roads increases the number and length of trips in a corridor (DeCorla-Souza and Cohen 1999). Henk (1989) used analysis of vehicle traffic growth rates at 34 urban highways in Texas to develop a model which predicts the amount of latent demand, and therefore future traffic volumes from highway capacity expansion, taking into account the type of facility, the Volume/Capacity ratio, and local population densities. Even more accurate are integrated models that incorporate interrelationships between transport and land use patterns (Rodier, et al. 2001). Federal clean air rules require that these techniques be used in metropolitan transportation models to evaluate the effects transport system changes have on vehicle emissions, but many metropolitan planning organizations have yet to comply, and few models used in medium and small cities have full feedback.

Full feedback is necessary to accurately predict future traffic congestion and traffic speeds, and the incremental costs and benefits of alternative projects and policy options. Models without full feedback tend to overestimate future congestion problems and overestimate the benefits of roadway capacity expansion. In one example, modeling a congested road network without feedback underestimated traffic speeds by more than 20% and overestimated total vehicle travel by more than 10% compared with modeling with feedback (Comsis 1996). Models that fail to consider generated traffic were found to overvalue roadway capacity expansion benefits by 50% or more (Williams and

Yamashita 1992). Another study found that the ranking of preferred projects changed significantly when feedback is incorporated into project assessment (Johnston and Ceerla 1996). Ignoring generated traffic tends to skew planning decisions toward highway projects and away from No Build and mobility management alternatives such as road pricing, transit improvements and commute trip reduction programs (Boarnet 1995).

The FHWA *Spreadsheet Model for Induced Travel Estimation* (SMITE) was developed to predict the amount of traffic induced by road improvements and the effects on consumer welfare and vehicle emissions (DeCorla-Souza 2000). It is a relatively easy way to incorporate generated traffic impacts into road project assessments. Another approach involves integrated transport/ land use models (such as TRANUS and MEPLAN) that track transport benefits through their land value impacts (Abraham 1998).

Short Cut Methods of Incorporating Induced Demand
Based on comments in the *Transportation Model Improvement Program* listserve (TMIP-L@listserv.tamu.edu) by Phil Goodwin, 2001.

The easiest way to incorporate induced demand into conventional traffic models is to apply an overall demand elasticity to forecasted changes in travel speed, calculated either:

- Elasticities applied to generalized costs (travel time and financial costs) using a price elasticity (about -0.3 for equilibrium, less for short term), with monetized travel time costs. The time elasticity is generally about -0.5 to -0.8 or so, though this is highly dependent on context. Where to apply it depends on the model used. With a fixed trip matrix altered only by reassignment, apply elasticities to each separate cell, or the row and column totals, or the overall control total - depending on how short the short cut has to be. Or add a separate test at the end.

or

- Direct application of a 'capacity elasticity,' i.e. percent change in vehicle miles resulting from a 1% change in highway capacity, for which lane miles is sometimes used as a proxy, the elasticity in that case usually coming out at about -0.1. This will tend to underestimate the effect if the capacity increase is concentrating on bottlenecks.

Care is needed if the basic model has cost-sensitive distribution and mode split, as this will already make allowance for some induced traffic. Induced traffic consists of several types of travel changes that make vehicle miles "with" a scheme different from "without," including re-assignment to longer routes and some increased trip generation. Allowance for time-shifting, which is not induced traffic at all, is equally important because it has similar effects on calculation of benefits of reducing congestion, and is often a large response. Ideally you iterate on speed and allow for the effect from retiming of journeys, and separate the various behavioural responses which make up induced traffic. These short cuts are subject to bias, but less than the bias introduced by assuming zero induced traffic.

Land Use Impacts

An important issue related to generated and induced travel is the degree to which roadway improvements affect land use patterns, and in particular, whether highway capacity expansion stimulates lower-density, urban fringe development (i.e., urban sprawl), and the costs to society that result (Louis Berger & Assoc. 1998; USEPA 2001; ICF Consulting 2005). Land use changes are one category of induced travel. Such changes take a relatively long time to occur, and are influenced by additional factors, but they are durable effects with a variety of economic, social and environmental impacts.

Urban economists have long realized that transportation can have a major impact on land use development patterns, and in many situations improved accessibility can stimulate development location and type. Different types of transportation improvements tend to cause different types of land use development patters: highway improvements tend to encourage lower-density, automobile-oriented development at the urban fringe, while transit improvements tend to encourage higher-density, multi-modal, urban redevelopment, although the exact types of impacts vary depending on specific conditions and the type of transportation improvements implemented (Rodier, Abraham, Johnston and Hunt 2001; Boarnet and Chalermpong 2002; Litman 2002).

Some researchers claim that investing in road construction does not lead to the sprawl (Sen, et al. 1999; Hartgen 2003a and 2003b), although the evidence indicates otherwise. Even in relatively slow-growth regions with modest congestion problems, highway capacity expansion increases suburban development by 15-25%. These effects are likely to be much greater in large cities with significant congestion problems, where peak-period traffic congestion limits commute trip distances, and increased roadway capacity would significantly improve automobile access to urban fringe locations. This is particularly true if the alternative is to implement Smart Growth development policies and improved walking, cycling and transit transportation ("Smart Growth, VTPI 2006).

There has been considerable debate over the benefits and costs of sprawl and Smart Growth (Burchell, et al. 1998; Litman 2002). Table 2 summarizes some benefits that tend to result from reduced sprawl.

Table 2 **Smart Growth Benefits** ("Smart Growth, VTPI 2006)

Economic	Social	Environmental
Reduced development and public service costs. Consumer transportation cost savings. Economies of agglomeration. More efficient transportation.	Improved transportation choice, particularly for nondrivers. Improved housing choices. Community cohesion.	Greenspace and wildlife habitat preservation. Reduced air pollution. Reduce resource consumption. Reduced water pollution. Reduced "heat island" effect.

Costs of Induced Travel

Driving imposes a variety of costs, including many that are external, that is, not borne directly by users (Murphy and Delucchi 1998). Table 3 illustrates one estimate of the magnitude of these costs. Other studies show similar costs, with average values of 10-30¢ per vehicle-kilometer, and more under urban-peak conditions (Litman 2003).

Table 3 **Motor Vehicle Indirect and External Costs** (Delucchi 1996)

Cost Item	Examples	Vehicle-Year	Vehicle-Mile
Bundled private sector costs	Parking funded by businesses	$337-1,181	2.7-9.4 cents
Public infrastructure and services	Public roads, parking funded by local governments	$662-1,099	5.3-8.8 cents
Monetary externalities	External crash damages to vehicles, medical expenses, congestion.	$423-780	3.4-6.2 cents
Nonmonetary externalities	Environmental damages, crash pain.	$1,305-3,145	10.4-25.2 cents
Totals		*$2,727-6,205*	*22-50 cents*

This table summarizes an estimate of motor vehicle indirect and external costs. (US 1991 Dollars)

Any incremental external costs of generated traffic should be included in project evaluations, "incremental" meaning the difference between the external costs of the generated travel and the external costs of alternative activities (NHI 1995). For diverted traffic this is the difference in external costs between the two trips. For induced travel this is the difference in external costs between the trip and any non-travel activity it replaces, which tends to be large since driving has greater external costs than most other common activities. Most generated traffic occurs under urban-peak travel conditions, when motor vehicle external costs are greatest, so incremental external costs tend to be high.

Incremental external costs depend on road system conditions and the type of generated traffic. Generated traffic often increases downstream congestion (for example, increasing capacity on a highway can add congestion on surface streets, particularly near on- and off-ramps). In some conditions adding capacity actually increases congestion by concentrating traffic on a few links in the network and by reducing travel alternatives, such as public transit (Arnott and Small 1994). Air emission and accident rates per vehicle-mile may decline if traffic flows more freely, but these benefits decline over time and are usually offset as generated traffic leads to renewed congestion and increased vehicle travel (TRB 1995; Shefer and Rietvald 1997; Cassady, Dutzik and Figdor 2004).

Table 4 compares how different types of generated traffic affect costs. All types reduce user travel time and vehicle costs. Diverted trips have minimal incremental costs. Longer trips have moderate incremental costs. Shifts from public transit to driving may also have moderate incremental costs, since transit service has significant externalities but also experiences economies of scale and positive land use impacts that are lost if demand declines ("Social Benefits of Public Transit," VTPI 2001). Induced trips have the largest incremental costs, since they increase virtually all external costs. Longer and induced vehicle trips can lead to more automobile dependent transportation and land use over the long term. These costs are difficult to quantify but are probably significant (Newman and Kenworthy 1998; Burchell, et al 1998).

Table 4 **Cost Impacts of Roadway Capacity Expansion**

Costs Reduced	Costs Increased		
	Diverted Trips	*Longer Trips*	*Induced Trips*
Travel Time Vehicle Operating Costs Per-mile crash rates (if implemented in conjunction with roadway design improvements, but these are often offset if traffic speeds increase). Per-mile pollution emissions (if congestion declines, but these may be offset if traffic speeds increase).	Downstream congestion	Downstream congestion Road facilities Traffic services Per-capita crash rates Pollution emissions Noise Resource externalities Land use impacts Barrier effect	Downstream congestion Road facilities Parking facilities Traffic services Per-capita crash rates Pollution emissions Noise Resource externalities Land use impacts Barrier effect Transit efficiency Equity Vehicle ownership costs

Increased roadway capacity tends to reduce two costs, but increases others.

The incremental external costs of road capacity expansion tend to increase over time as the total amount of generated traffic grows and an increasing portion consists of induced motor vehicle travel and trips.

Table 5 proposes default estimates of the incremental external costs of different types of generated traffic. These values can be adjusted to reflect specific conditions and analysis needs.

Table 5 **Estimated Incremental External Costs of Generated Traffic**

Type	Description	Cost Per Mile
Time and route shift	Trips shifted from off-peak to peak, or from another route.	5 cents
Transit-to-Auto mode shift, and longer trips	Trips shifted from transit to driving alone, and increased automobile trip lengths.	15 cents
Induced vehicle trip	Additional motor vehicle trip, including travel shifted from walking, cycling and ridesharing.	30 cents.

This table indicates the estimated incremental costs of different types of generated traffic.

There is considerable discussion of the emission impacts of roadway expansion (TRB 1995). Although expanding highly congested roadways may reduce emission rates per vehicle-kilometer, expanding moderately congested roads may increase traffic speeds to levels (more than 80 kms/hr) that increase emission rates, and by inducing total vehicle travel tends to increase total emissions, particularly over the long run. According to a study by the Norwegian Centre for Transport Research (TØI 2009):

> "Road construction, largely speaking, increases greenhouse gas emissions, mainly because an improved quality of the road network will increase the speed level, not the least in the interval where the marginal effect of speed on emissions is large (above 80km/hr). Emissions also rise due to increased volumes of traffic (each person traveling further and more often) and because the modal split changes in favor of the private car, at the expense of public transport and bicycling."

Table 6 summarizes roadway improvement emission impacts, including effects on emission rates per vehicle mile, increases in total vehicle mileage, and emissions from road construction and maintenance activities.

Table 6 **Roadway Expansion Greenhouse Gas Emission Impacts** (TØI 2009)

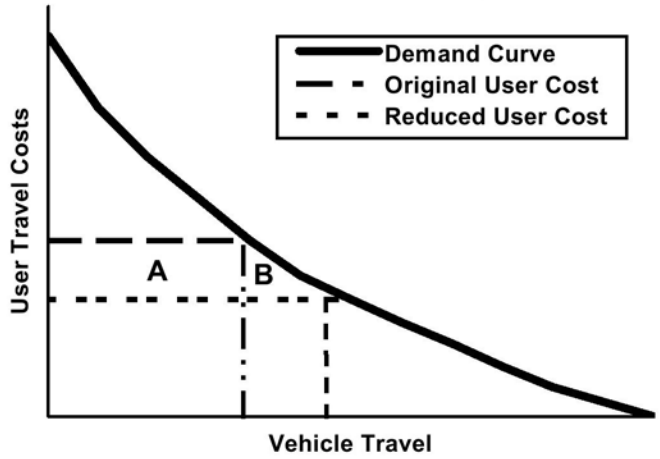
	General Estimates	Large Cities	Small Cities	Intercity Travel
Emission reductions per vehicle-kilometer due to improved and expanded roads.		Short term reductions. Stable or some increase over the long-term.	Depends on situation, ranging from no change to large increases.	Depends on situation. Emissions may decline or increase.
Increased vehicle mileage (induced vehicle travel), short term (under five years)	A 10% reduction in travel time increases traffic 3-5%	Significant emission growth	Moderate emission growth	Moderate emission growth
Increased vehicle mileage (induced travel), long term (more than five years)	A 10% reduction in travel time increases traffic 5-10%	Significant emission growth	Moderate emission growth	Moderate emission growth
Road construction and improvement activity	12 tonnes of CO_2 equivalent for 2-lane roads and 21 tonnes for 4-lane roads.	Road construction emissions are relatively modest compared with traffic emissions.		
Roadway operation and maintenance activity	33 tonnes of CO_2 equivalent for 2-lane roads and 52 tonnes for 4-lane roads.	Road operation and maintenance emissions are relatively modest compared with traffic emissions.		

This table summarizes roadway improvement emission impacts according to research by the Norwegian Centre for Transport Research.

Calculating Consumer Benefits

Generated traffic represents increased mobility, which provides consumer benefits. However, these benefits tend to be modest because generated traffic consists of marginal value trips, the trips that people are most willing to forego (Small 1998). To calculate these benefits economists use the *Rule of Half*, which states that the benefits of additional travel are worth half the per-trip saving to existing travelers, as illustrated in Figure 4 by the fact that B is a triangle rather than a rectangle (AASHTO 1977; Litman 2001a).

Figure 4 **Vehicle Travel Demand Curve Illustrating the Rule-of-Half**



Reduced user costs (downward shift on Y axis) increases vehicle travel (rightward shift on X axis). Rectangle A shows savings to existing trips. Triangle B shows generated travel benefits.

Because induced travel provides relatively small user benefits, and imposes external costs such as downstream congestion, parking costs, accident risk imposed on other road users, pollution emissions, sprawl and other environmental costs, the ratio of benefits to costs, and therefore total net benefits of travel, tend to decline as more travel is induced.

Failing to account for the full impacts of generated and induced travel tends to exaggerate the benefits of highway capacity expansion and undervalue alternatives such as transit improvements and pricing reforms (Romilly 2004). Some newer project evaluation models, such as the FHWA's SMITE and STEAM sketch plan programs, incorporate generated traffic effects including the Rule of Half and some externalities (FHWA 1997; FHWA 1998; DeCorla-Souza and Cohen 1998).

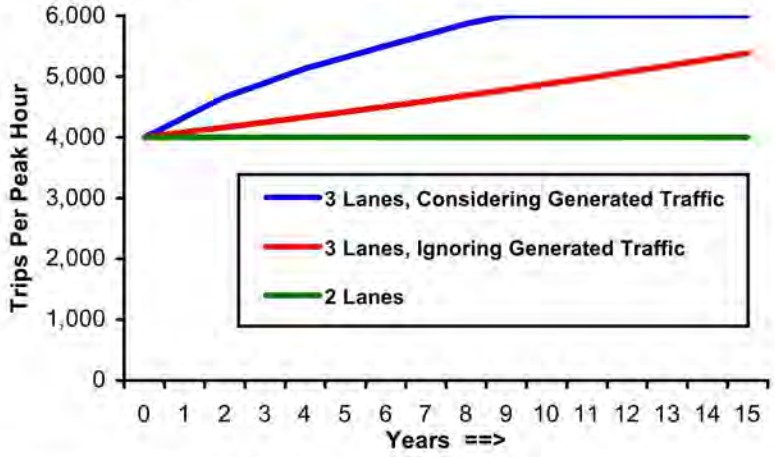
The benefits of increased mobility are often capitalized into land values. For example, a highway improvement can increase urban periphery real estate prices, or a highway offramp can increase nearby commercial land values (Moore and Thorsnes 1994). Because this increase in land values is an economic transfer (land sellers gain at the expense of land buyers), it is inappropriate to add increased real estate values and transport benefits, such as travel time savings (which represent true resource savings). This would double count benefits.

Example

A four-lane, 10-kilometer highway connects a city with nearby suburbs. The highway is congested 1,000 hours per year in each direction. Regional travel demand is predicated to grow at 2% per year. A proposal is made to expand the highway to six lanes, costing $25 million in capital expenses and adding $1 million in annual highway operating expenses.

Figure 5 illustrates predicted traffic volumes. Without the project peak-hour traffic is limited to 4,000 vehicles in each direction, the maximum capacity of the two-lane highway. If generated traffic is ignored the model predicts that traffic volumes will grow at a steady 2% per year if the project is implemented. If generated traffic is considered the model predicts faster growth, including the basic 2% growth plus additional growth due to generated traffic, until volumes levels off at 6,000 vehicles per hour, the maximum capacity of three lanes.

Figure 5 **Projected Traffic**

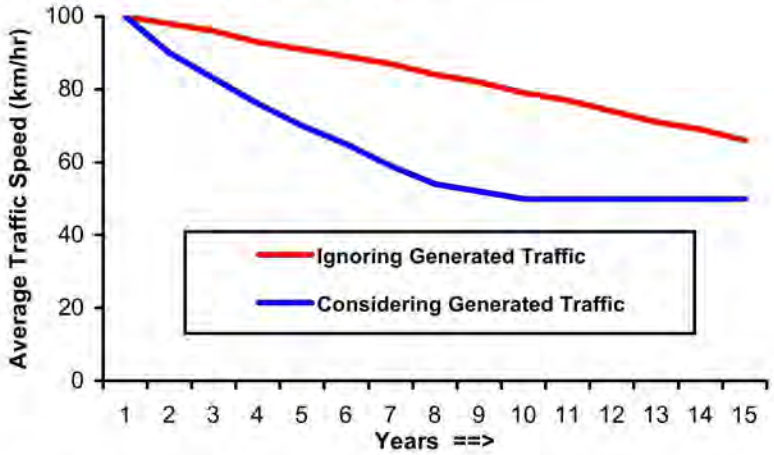


If generated traffic is ignored the model predicts that traffic volumes will grow at a steady 2% per year if the project is implemented. If generated traffic is considered the model predicts a higher initial growth rate, which eventually declines when the road once again reaches capacity and becomes congested. (Based on the "Moderate Latent Demand" curve from Figure 3)

The model divides generated traffic into diverted trips (changes in trip time, route and mode) and induced travel (increased trips and trip length), using the assumption that the first year's generated traffic represents diverted trips and later generated traffic represents induced travel. This simplification appears reasonable since diverted trips tend to occur in the short-term, while induced travel is associated with longer-term changes in consumer behavior and land use patterns.

Roadway volume to capacity ratios are used to calculate peak-period traffic speeds, which are then used to calculate travel time and vehicle operating cost savings. Congestion reduction benefits are predicted to be significantly greater if generated traffic is ignored, as illustrated in Figure 6.

Figure 6 **Projected Average Traffic Speeds**



Ignoring generated traffic exaggerates future traffic speeds and congestion reduction benefits.

Incremental external costs are assumed to average 10¢ per vehicle-km for diverted trips (shifts in time, route and mode) and 30¢ per vehicle-km for induced travel (longer and increased trips). User benefits of generated traffic are calculated using the Rule-of-Half.

Three cases where considered for sensitivity analysis. *Most Favorable* uses assumptions most favorable to the project, *Medium* uses values considered most likely, and *Least Favorable* uses values least favorable to the project. Table 7 summarizes the analysis.

Table 7 **Analysis of Three Cases**

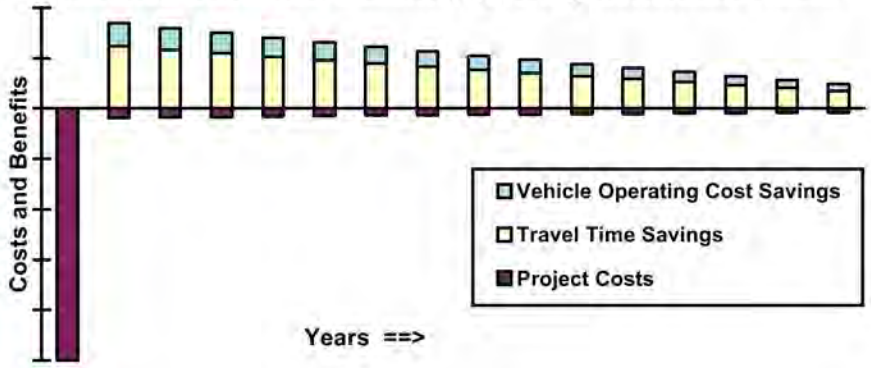
Data Input	Most Favorable	Medium	Least Favorable
Generated Traffic Growth Rate (from Figure 3)	L	M	H
Discount Rate	6%	6%	6%
Maximum Peak Vehicles Per Lane	2,200	2,000	1,800
Before Average Traffic Speed (km/hr)	40	50	60
After Average Traffic Speed (km/hr)	110	100	90
Value of Peak-Period Travel Time (per veh-hr)	$12.00	$8.00	$6.00
Vehicle Operating Costs (per km)	$0.15	$0.12	$0.10
Annual Lane Hours at Capacity Each Direction	1,200	1,000	800
Diverted Trip External Costs (per km)	$0.00	$0.10	$0.15
Induced Travel External Costs (per km)	$0.20	$0.30	$0.50
Net Present Value (millions)			
NPV Without Consideration of Generated Traffic	*$204.8*	*$45.2*	*-$9.8*
NPV With Consideration of Generated Traffic	*$124.5*	*-$32.1*	*-$95.7*
Difference	*-$80.3*	*-$77.3*	*-$85.8*
Benefit/Cost Ratio			
Without Generated Traffic	*6.90*	*2.30*	*0.72*
With Generated Traffic	*3.37*	*0.59*	*0.11*

This table summarizes the assumptions used in this analysis.

The most favorable assumptions result in a positive B/C even when generated traffic is considered. The medium assumptions result in a positive B/C if generated traffic is ignored but a negative NPV if generated traffic is considered. The least favorable assumptions result in a negative B/C even when generated traffic is ignored. In each case, considering generated traffic has significant impacts on the results.

Figure 7 illustrates project benefits and costs based on "Medium" assumptions, ignoring generated traffic. This results in a positive NPV of $45.2 million, implying that the project is economically worthwhile.

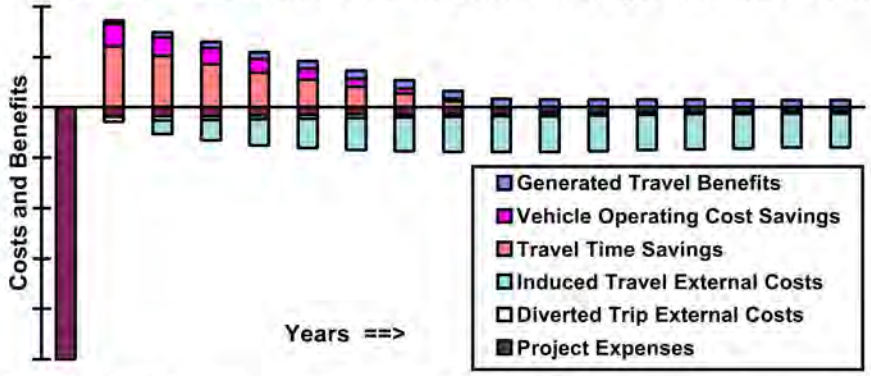
Figure 7 **Estimated Costs and Benefits, Ignoring Generated Traffic**



This figure illustrates annual benefits and costs when generated traffic is ignored, using "Medium" assumptions. Benefits are bars above the baseline, costs are bars below the baseline. Project expenses are the only cost category.

Figure 8 illustrates project evaluation when generated traffic is considered. Congestion reduction benefits decline, and additional external costs and consumer benefits are included. The NPV is –$32.1 million, indicating the project is not worthwhile.

Figure 8 **Estimated Costs and Benefits, Considering Generated Traffic**



This figure illustrates benefits and costs when generated traffic is considered, using medium assumptions. Benefits are bars above the baseline, costs are bars below the baseline. It includes consumer benefits and external costs associated with generated traffic. Travel time and vehicle operating cost savings end after about 10 years, when traffic volumes per lane return to pre-project levels, resulting in no congestion reduction benefits after that time.

This analysis indicates how generated traffic can have significant impacts on project assessment. Ignoring generated traffic exaggerates the benefits of highway capacity expansion by overestimating congestion reduction benefits and ignoring incremental external costs from generated traffic. This tends to undervalue alternatives such as road pricing, TDM programs, other modes, and "do nothing" options.

Counter Arguments

"Widening roads to ease congestion is like trying to cure obesity by loosening your belt" Roy Kienitz, executive director of the Surface Transportation Policy Project

"Increasing highway capacity is equivalent to giving bigger shoes to growing children" Robert Dunphy of the Urban Land Institute

Some highway expansion advocates argue that generated traffic has minor implications for transport planning decisions. They argue that increased highway capacity contributes little to overall growth in vehicle travel compared with other factors such as increased population, employment and income (Heanue 1998; Sen 1998; Burt and Hoover 2006), that although new highways generate traffic, they still provide net economic benefits (ULI 1989), and that increasing roadway capacity does reduce congestion (TRIP 1999; Bayliss 2008).

These arguments ignore critical issues, and are often based on outdated data and inaccurate analysis. Overall travel trends indicate little about the cost effectiveness of particular policies and projects. For example, studies which indicate that, in the past, increased lane-miles caused minimal growth in vehicle travel (Burt and Hoover 2006), provide little guidance for future planning, since, in the past, much of the added highway lane-miles occurred on uncongested rural highways while most future highway expansion occurs on congested urban highways. Strategies that encourage more efficient use of existing capacity, such as commute trip reduction programs and road pricing, may provide greater social benefits, particularly considering all costs (Goodwin 1997).

Highway expansion advocates generally ignore or severely understate generated traffic and induced travel impacts. For example, Cox and Pisarski (2004) use a model that accounts for diverted traffic (trips shifted in time or route) but ignores shifts in mode, destination and trip frequency. Hartgen and Fields (2006) assume that generated traffic would fill just 15% of added roadway capacity, based on generated traffic rates during the 1960s and 1970s, which is unrealistically low when extremely congested roads are expanded. They ignore the incremental costs that result from induced vehicle travel, such as increased downstream traffic congestion, road and parking costs, accidents and pollution emissions. They claim that roadway capacity expansion reduces fuel consumption, pollution emissions and accidents, because they measure impacts per vehicle-mile and ignore increased vehicle miles. As a result they significantly exaggerate roadway expansion benefits and understate total costs.

Debates over generated traffic and its implications often reflect ideological perspectives concerning whether automobile travel (and therefore road capacity expansion) is "good" or "bad". To an economist, such arguments are silly. Some automobile travel provides large net benefits (high user value, poor alternatives, low external costs), and some provides negative net benefits (low user value, good alternatives, and large external costs). The efficient solution to congestion is to use pricing or other incentives to test consumers' willingness to pay for road space and capacity expansion.

If consumers only demand roadway improvements when they are shielded from the true costs, such projects are likely to be economically inefficient. Only if users are willing to pay the full incremental costs their vehicle use imposes can society be sure that increased road capacity and the additional vehicle travel that results provides net benefits. Travel demand predictions based on underpriced roads overestimate the economically optimal level of roadway investments and capacity expansion. Increasing capacity in such cases is more equivalent to loosening a belt than giving a growing child larger shoes (see quotes above), since the additional vehicle travel is a luxury and economically inefficient.

Some highway advocates suggest there are equity reasons to subsidize roadway capacity expansion, to allow lower-income households access to more desirable locations, but most benefits from increased roadway capacity are captured by middle- and upper-income households (Deakin, et al. 1996). Improving travel choices for non-drivers tends to have greater equity benefits than subsidizing additional highway capacity since physically and economically disadvantaged people often rely on alternative modes.

Although highway projects are often justified for the sake of economic development, highway capacity expansion now provides little net economic benefit (Boarnet 1997). An expert review concluded, “The available evidence does not support arguments that new transport investment in general has a major impact on economic growth in a country with an already well-developed infrastructure” (SACTRA 1997).

Alternative Transport Improvement Strategies

Since roadway capacity expansion provides smaller net benefits than is often recognized, due to the effects of generated traffic, other solutions to transportation problems may provide relatively more benefits. A "No Build" option may become more attractive since peak-period traffic volumes will simply level off without additional capacity. This can explain, for example, why urban commute travel times are virtually unchanged despite increases in traffic congestion, and why urban regions that have made major investments in highway capacity expansion have not experienced significant reductions in traffic congestion (Gordon and Richardson 1994; STPP 1998).

Consideration of generated traffic gives more value to transportation systems management and transportation demand management strategies that result in more efficient use of existing roadway capacity. These strategies cannot individually solve all transportation problems, but a package of them can, often with less costs and greater overall benefit than highway capacity expansion. Below are examples (VTPI 2001):

- Congestion pricing can provide travelers with an incentive to reduce their peak period trips and use travel alternatives, such as ridesharing and non-motorized transport.
- Commute trip reduction programs can provide a framework for encouraging commuters to drive less and rely more on travel alternatives.
- Land use management can increase access by bringing closer common destinations.
- Pedestrian and cycle improvements can increase mobility and access, and support other modes such as public transit (since transit users also depend on walking and cycling).
- Public transit service that offers door-to-door travel times and user costs that are competitive with driving can attract travelers from a parallel highway, limiting the magnitude of traffic congestion on that corridor.

Legal Issues

Environmental groups successfully sued the Illinois transportation agencies for failing to consider land use impacts and generated traffic in the Environmental Impact Statement (EIS) for I-355, a proposed highway extension outside the city of Chicago (Sierra Club 1997). The federal court concluded that the EIS was based on the "implausible" assumption that population in the rural areas would grow by the same amount with and without the tollroad, even though project was promoted as a way to stimulate growth. The court concluded that this circular reasoning afflicted the document's core findings. The judge required the agencies to prepare studies identifying the amount of development the tollroad would cause, and compare this with alternatives. The Court's order states:

> Plaintiffs' argument is persuasive. Highways create demand for travel and expansion by their very existence…Environmental laws are not arbitrary hoops through which government agencies must jump. The environmental regulations at issue in this case are designed to ensure that the public and government agencies are well informed about the environmental consequences of proposed actions. The environmental impact statements in this case fail in several significant respects to serve this purpose. (ELCP)

In 2008 the California Attorney General recognized that regional transportation plans must consider induced travel impacts when evaluating the climate change impacts of individual projects to meet California Environmental Quality Act (CEQA) requirements (Brown 2008). CEQA requires that "[e]ach public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so." The state Attorney General recognizes that transportation planning decisions, such as highway expansion projects, can have significant emission impacts due to induced vehicle travel.

Conclusions

Urban traffic congestion tends to maintain equilibrium. Congestion reaches a point at which it discourages additional peak-period trips. Increasing road capacity allows more vehicle travel to occur. In the short term this consists primarily of generated traffic: vehicle travel diverted from other times, modes, routes and destinations. Over the long run an increasing portion consists of induced vehicle travel, resulting in a total increase in regional VMT. This has several implications for transport planning:

- Ignoring generated traffic underestimates the magnitude of future traffic congestion problems, overestimates the congestion reduction benefits of increasing roadway capacity, and underestimates the benefits of alternative solutions to transportation problems.
- Induced travel increases many external costs. Over the long term it helps create more automobile dependent transportation systems and land use patterns.
- The mobility benefits of generated traffic are relatively small since they consist of marginal value trips. Much of the benefits are often capitalized into land values.

Ignoring generated traffic results in self-fulfilling *predict and provide* planning: Planners extrapolate traffic growth rates to predict that congestion will reach *gridlock* unless capacity expands. Adding capacity generates traffic, which leads to renewed congestion with higher traffic volumes, and more automobile oriented transport and land use patterns. This cycle continues until road capacity expansion costs become unacceptable.

The amount of traffic generated depends on specific conditions. Expanding highly congested roads with considerable latent demand tends to generate significant amounts of traffic, providing only temporary congestion reductions.

Generated traffic does not mean that roadway expansion provides no benefits and should never be implemented. However, ignoring generated traffic results in inaccurate forecasts of impacts and benefits. Road projects considered cost effective by conventional analysis may actually provide little long-term benefit to motorists and make society overall worse off due to generated traffic. Other strategies may be better overall. Another implication is that highway capacity expansion projects should incorporate strategies to avoid increasing external costs, such as more stringent vehicle emission regulations to avoid increasing pollution and land use regulations to limit sprawl.

Framing the Congestion Question

If you ask people, *"Do you think that traffic congestion is a serious problem?"* they frequently answer yes. If you ask, *"Would you rather solve congestion problems by improving roads or by using alternatives such as congestion tolls and other TDM strategies?"* a smaller majority would probably choose the road improvement option. This is how transport choices are generally framed.

But if you present the choices more realistically by asking, *"Would you rather spend a lot of money to increase road capacity to achieve moderate and temporary congestion reductions and bear higher future costs from increased motor vehicle traffic, or implement other types of transportation improvements?"* the preference for road building might disappear.

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APPENDIX J Cooper on 520 capacity

Technical notes on 520 4-lane

Capacity Constraints on the Existing SR 520 Bridge

A Technical Memorandum

March 2010

Maurice B. Cooper, P.E.

There are many non-structural capacity-limiting constraints on freeway traffic throughput; these include (i) visibility limits due to precipitation, darkness and driving into direct sunlight (a particular problem on SR-520 because of its east-west alignment, which means that, at rush hour, half the traffic is usually driving directly into the sun), (ii) traffic mix, particularly the auto to truck ratio, and (iii) culturally conditioned driver behavior - for example, drivers in the U.S. are more inclined than those in Europe to be doing other things whilst driving.

There are also certain structural factors which limit traffic capacity, such as the physical condition of the pavement surface.

This memorandum is, however, limited to specific and unique features of the existing SR-520 bridge which cause it to operate at below its possible maximum. These are basically of three types:

1) On and off-ramp design:

Both east and west end approaches to the bridge are severe bottlenecks.

On the east side of the lake, the problems start at the Bellevue Way on-ramp, where drivers have particular trouble with the weave across the HOV lanes to access the mainline, at a location where the roadway is curving and traffic slowing erratically because of the backup from the next on-ramp.

The next on-ramp is the access westbound from Medina at 84th Avenue Northeast. This on-ramp design is the worst in the 3-mile SR-520 bridge segment. In addition to the cross-HOV weave, there is an immediate and severe width constraint because of a solid bridge abutment, coupled with the visibility limitation imposed by the bridge abutment itself. The on-ramp leads to a freeway segment which, at this point, suffers from both unusually severe changes in vertical and horizontal alignment.

On the west end of the bridge the first problem is caused by the proximity of the merge between SOV and HOV traffic from Montlake Boulevard to the merge between this traffic and the freeway mainline.

The second problem is caused by the abruptness of the end of the on-ramp coming from Lake Washington Boulevard, where the at-grade, on-land portion of the roadway transitions instantaneously to the low-level, structural concrete viaduct portion of the bridge.

Off-ramp design for the SR-520 bridge was handled considerably better than on-ramp design. Neither off-ramps on the eastside, namely at 84th Avenue Northeast nor at Bellevue Way Northeast have significant impact on traffic flow. On the Westside, there is driver confusion because of the proximity of the Lake Washington Boulevard and the Montlake Boulevard exits, but a greater limitation is the frequent backup of traffic down from Montlake Boulevard caused by the equally frequent bascule bridge openings on Montlake Boulevard itself.

2) Lane and Shoulder Width:

Lane width is frequently cited as a traffic-capacity limitation in the literature. On the SR-520 bridge, lane width is adequate throughout. Shoulder width is, however, totally inadequate. This causes driver distraction because of fear of either touching the outside curb with a tire - curbs are not generally included in freeway design because of this issue, and certainly not adjacent to traffic lanes as they are on SR-520 or, in the worst case, scraping the side of the car on the inside concrete Jersey barrier.

3) Horizontal and Vertical Curvature

For the majority of the length of the SR-520 bridge, the roadway is totally straight. However the bridge curves both horizontally and vertically on the approach and departure to/from the western high-rise structure over the ship channel off the east shore of Madison Park. These curves are significantly sharper than modern freeway design standards. The fact that the curves are effectively superimposed yields a distinct roadway capacity limitation.

Typical freeway design does not have any of the above limitations.

Freeway capacity is rated by traffic flow in terms of the number of vehicles per lane per hour. Under normal driving conditions, and without any of the above three constraints, capacities can be expected to be in the range of 2,100 to 2,200 vehicles per lane per hour. The three

conditions cited above are each approximately responsible for a reduction in capacity of 200 vehicles per lane per hour, with the bridge as constructed currently and normally operating at about 1,500 to 1,600 vehicles per lane per hour. Hence if any or all of the design constraints are removed the lane capacity may reasonably be expected to rise accordingly.

Bridge Re-Design Recommendations and Associated Traffic Capacity Gains:

The cost of re-building the bridge to remove the traffic-limiting constraints could be seen to be a constraint in itself. Hence the question becomes, in an engineering sense, what modifications are appropriate and sensible.

The horizontal and vertical curvature constaints are absolutely inherent in the bridge design and would require a major cost commitment to remove and hence, from an efficiency perspective, should probably be left alone.

The bridge approaches and on and off-ramp configurations are relatively simple to modify and should therefore be modified, in order to capture the available additional 200 vehicles per lane per hour capacity.

The shoulder width issue is more complex because of the design of the existing bridge pontoons. However a pragmatic re-design is possible, by removing the existing pedestrian walkway and lowering that section to roadway grade, and by removing the outermost roadway walls and attaching a new structural barrier to the outside walls of the pontoon box structure itself. This proposed modification would not yield the full gain in capacity which could be realized through full-width shoulders, but is likely to yield half of that capacity increase, i.e. approximately 100 vehicles per lane per hour.

In conclusion, it is readily possible, at modest expense, to increase the capacity of the existing SR 520 bridge by about 300 vehicles per lane per hour, or by some 20 per cent.

For comparison purposes, a totally new, 4-lane bridge, in a straight alignment, with full shoulders, and re-designed on and off-ramps, can be expected to have an increased capacity of 40 percent.

SR 520 Legislative Workgroup

Recommendations Report

Submitted to
Governor Chris Gregoire
and
Washington State Legislature

December 2009

SR 520 Legislative Workgroup

Westside members

Representative Scott White
46th District
Co-chair – SR 520
Legislative Workgroup

Representative Frank Chopp
43rd District
Speaker of the House

Senator Ken Jacobsen
46th District

Senator Ed Murray
43rd District

Representative Jamie Pedersen
43rd District

Eastside members

Senator Rodney Tom
48th District
Co-chair – SR 520
Legislative Workgroup

Senator Eric Oemig
45th District Representative

Representative Ross Hunter
48th District

Representative Deborah Eddy
48th District

Representative Larry Springer
45th District

Other members

Senator Mary Margaret Haugen
10th District
Chair – Senate Transportation Committee

Representative Judy Clibborn
41st District
Chair – House Transportation Committee

Senator Dan Swecker
20th District
Joint Transportation Committee

Representative Dan Roach
31st District
Joint Transportation Committee

Commissioner Richard Ford
Transportation Commission,
King County

Secretary Paula Hammond
Washington State
Secretary of Transportation

Table of Contents

I. Recommendations 1
A. Background 1
B. Summary of Engrossed Substitute House Bill 2211 Requirements 1
C. SR 520 Legislative Workgroup Recommendations 2
D. Minority Statement 3
E. Why Now? SR 520 Program Schedule and Construction 4
F. Next Steps 6

II. Process 11
A. What did the Workgroup Hear? 11
B. Previous Legislative Direction 19

III. Design Recommendations and Costs 21
A. Developing Options A+ and M 21
B. Independent Cost Expert Review Panel Executive Summary 28

IV. Financial Strategy 33
A. Current Financial Plan and Remaining Gap 33
B. Financing Options Considered 33

V. Public Outreach 39
A. Public Outreach Opportunities 39
B. Draft Recommendations Outreach 39
C. Summary of Public Outreach Comments 39
D. Jurisdictional and Agency Letters Received 42

Appendix

SR 520 Legislative Workgroup Recommendations Report

This document was prepared in response to Engrossed Substitute House Bill (ESHB) 2211. Section 3 of this bill created the SR 520 Legislative Workgroup to develop recommendations related to design options and financing strategy for the SR 520 corridor. Their report was due to the Governor and Legislature by January 1, 2010.

Project Managed by:	Jennifer Ziegler, Transportation Policy Advisor Governor's Executive Policy Office
Workgroup Administrator:	Barbara Gilliland, Administrator Parsons Brinckerhoff
With Staff Support from:	Julie Meredith, SR 520 Program Director and SR 520 Bridge Replacement and HOV Program staff
Document Prepared by:	Parsons Brinckerhoff

I. Recommendations

A. Background

Passed in April 2009, Engrossed Substitute House Bill (ESHB) 2211 created the SR 520 Legislative Workgroup. The Workgroup consisted of all the legislators from the 43rd and 48th districts; two legislators from each of the 46th and 45th districts; the chairs of the legislative transportation committee; two legislators outside the SR 520 corridor on the joint transportation committee representing a legislative district outside the SR 520 corridor; the Secretary of the Washington State Department of Transportation; and the member of the transportation commission representing King County.

In July 2009, the SR 520 Legislative Workgroup (Workgroup) was formed with the following membership:

Westside Members	Eastside Members	Other Members
Representative Scott White 46th District *Workgroup Co-Chair* Westside Subgroup Chair	Senator Rodney Tom, 48th District *Workgroup Co-Chair*	Senator Mary Margaret Haugen, Chair, Senate Transportation Committee
Senator Ed Murray 43rd District	Senator Eric Oemig 45th District	Representative Judy Clibborn, Chair, House Transportation Committee
Senator Ken Jacobsen 46th District	Representative Ross Hunter 48th District	*Senator Dan Swecker Joint Transportation Committee
Representative Frank Chopp Speaker of the House 43rd District	Representative Deborah Eddy 48th District	Representative Dan Roach Joint Transportation Committee
Representative Jamie Pedersen, 43rd District	*Representative Larry Springer 45th District	Commissioner Richard Ford State Transportation Commission
		Secretary Paula Hammond Washington State Secretary of Transportation

*Also served on the Westside Subgroup.

B. Summary of Engrossed Substitute House Bill 2211 Requirements

ESHB 2211 directed the Workgroup to meet the following objectives:

- Review and recommend a financing strategy, in conjunction with the Washington State Department of Transportation, to fund projects in the SR 520 corridor that reflects the design options recommended by the Workgroup. Base the financing strategy on a total cost of all the intended projects in the SR 520 corridor, not to exceed $4.65 billion,
- Recommend design options that provide for a full SR 520 corridor project that meets the needs of the region's transportation system while providing appropriate mitigation for the neighborhood and communities in the area directly impacted by the project;
- Form a Westside subgroup to conduct a detailed review and make recommendations on design options on the west side of the corridor, which extends from the west end of the floating bridge to I-5. The subgroup shall consult with neighborhood and community groups impacted by the potential design options;

- ∑ Consider forming an eastside subgroup to review current design options on the east side of the corridor, which extends from the east side of the floating bridge to SR 202;
- ∑ Consult with the governor and legislators representing the primary users of SR 520; and
- ∑ Present a final report with recommendations on financing and design options to the legislature and the governor by January 1, 2010. The recommendations will include the Supplemental Draft Environmental Impact Statement (SDEIS) process for the SR 520 corridor.

C. SR 520 Legislative Workgroup Recommendations

Draft Westside Design Recommendation

Sponsor: Senator Ken Jacobsen, State Senator, 46th District Seconded: Representative Deborah Eddy, State Representative, 48th District

A motion of the SR 520 Legislative Workgroup recommending a Westside Design solution to inform the selection of a preferred alternative in the Supplemental Draft Environmental Impact Statement for SR 520 Bridge Replacement and HOV Program.

Background

The SR 520 Legislative Workgroup was established in 2009 under ESHB 2211. The legislation directs the Workgroup to recommend design options that provide for a full SR 520 corridor project that meets the needs of the region's transportation system while providing appropriate mitigation for the neighborhood and communities in the area directly impacted by the project.

Further, it recommended that a west side subgroup be formed to conduct a detailed review and make recommendations on design options on the west side of the corridor, which extends from the west end of the floating bridge to I-5. It directed the subgroup to consult with neighborhood and community groups impacted by the potential design options.

Motion

The Legislative Workgroup recommends adoption of the A+ Option (see Section III, Design Recommendations), developed during the consultation with the communities during the Westside Subgroup process as the preferred alternative for the Westside design. This option is preferred for the following reasons:

- ∑ It meets the purpose and need of the project and complies with statutory requirements to implement a six lane (four general purpose and two HOV lanes) bridge replacement project, and
- ∑ It meets the transportation needs of the corridor with the least impact to the surrounding environment, and
- ∑ It can be constructed within the $4.65 billion financial threshold, and
- ∑ The impacts are covered within the current Supplemental Draft Environmental Impact Statement, and
- ∑ It meets the needs of transit providers within the SR 520 corridor and on local surface streets, and

- It has broad based support from local communities including the University District Community Council, Ravenna Bryant, and Friends of Seattle's Olmsted Park and regional organizations including the University of Washington, Seattle Chamber, King County Metro, and the Eastside Transportation Partnership.

Motion Passed: 11-2 Opposed: Representative Frank Chopp; Representative Jamie Pedersen Absent: Senator Ed Murray; Representative Dan Roach Non Voting member: WSDOT Secretary Paula Hammond

Draft Financing Strategy

Sponsor: Representative Ross Hunter, State Representative, 48th District Seconded: Representative Larry Springer, State Representative, 45th District

A motion of the SR 520 Legislative Workgroup recommending a financial strategy for funding the $4.65 Billion SR 520 Bridge Replacement and HOV Program.

Background

The Legislature established the SR 520 Legislative Workgroup in 2009 under ESHB 2211. The workgroup must review and recommend a financing strategy, in conjunction with the department, to fund the projects in the SR 520 corridor that reflect the design options recommended by the workgroup. The financing strategy must be based on a total cost of all the intended projects in the SR 520 corridor of no more than $4.65 billion.

Motion

The Legislative Workgroup recommends to the governor and legislature a financing strategy that includes:

- Use of the base funding previously identified, including early tolling of SR520 per Scenario 7, and
- The creation of, and early tolling of HOT lanes on I-90 as soon as is practicable, and
- The remaining gap to be filled by new FEDERAL or STATE revenue, to be identified in the next year or two, and
- IF THAT DOESN'T HAPPEN, THEN general tolling of I-90 to fill the gap starting no sooner than 2014.

The group also recommends the pursuit of cost savings by further refinement of cost estimates and design.

Motion Passed: 12-0 Absent: Senator Ed Murray; Representative Frank Chopp; Representative Dan Roach Non Voting member: WSDOT Secretary Paula Hammond

D. Minority Statement

Sponsor: Speaker Frank Chopp, State Representative 43rd District Sponsor: Jaime Pedersen, State Representative, 43rd District

We do not support the recommendations on the design nor the financing strategy for SR 520. We feel it is necessary to issue this statement because the recommendations do not accomplish the goal of maximizing the region's transportation and transit systems in a manner that adequately addresses the

concerns of the communities most directly impacted by the project. Further, the deadlines set for the completion of the supplemental draft environmental impact statement and the 2014 bridge opening are artificial and do not encourage resolution of the issue. Absent a commitment to engage in genuine discussion for a more viable option, we recommend that the Washington State Department of Transportation (WSDOT) address the immediate safety concerns on the existing bridge and work with the affected neighborhood communities and the City of Seattle to find a long term solution that better serves the region.

Since 2007 we have been negotiating in good faith to make significant investments for a bridge project that—in addition to addressing safety concerns and increasing capacity—would create effective connections for bus rapid transit to the light rail station at the University of Washington. The design option recommended by the Workgroup does not accomplish this goal. Option A+ depends on a second bascule drawbridge crossing the Montlake Cut to provide transit connection to Montlake Boulevard from the SR 520 corridor. Dependence on a drawbridge that is subject to unpredictable openings for up to 18 hours a day interrupts the flow of traffic and can hardly be considered an "effective connection" as required by RCW 47.01.408. To be effective, a transit solution must minimize delays and maximize connectivity. Option A+ does neither. Rather it compounds the problem by causing additional damage to the neighborhoods of our district.

In addition to our concerns about transit, we will point out that none of the options reviewed by the Workgroup can be completely funded under the Workgroup's recommended financing strategy. This strategy is based on the hope that state and federal funds will materialize and also assumes that the Legislature will vote to authorize high tolls on both SR 520 and Interstate 90. Even with high tolling, financing for option A+ falls short, when the total cost of the project (construction and interest cost on bonds) are taken into account. A complete and realistic financing plan will take time. Therefore, there is no need to rush and move forward on a flawed design option based on artificial deadlines set by WSDOT.

Finally, we are disappointed that the Workgroup missed the opportunity to reach a solution for SR 520 that is right for the region and respectful of those directly impacted by the project. The residents of the communities we represent see the traffic jams every day. They are the ones who will live with years of construction. Option A+ will not alleviate these concerns; rather it will bring adverse traffic, noise, and environmental issues to the area. We can and should do better.

On behalf of the communities in our district we state our strong opposition to Option A+ and recommend that the immediate focus be placed on addressing the safety concerns via retrofit or rebuild of the existing four-lane bridge from Madison Park to I-5. This can be done for less cost and similar timing as the group's recommended option. We will continue to work with the State, the City of Seattle and the Governor to move forward on a final design that best ensures safety, neighborhood protections, and transit integration.

We will provide additional information and materials to support our position.

E. Why Now? SR 520 Program Schedule and Construction

Background

Since WSDOT published the Draft EIS for the SR 520 Bridge Replacement and HOV Project in August 2006, a number of circumstances have changed. One key change is the 2007 legislation that established the Westside mediation process (ESSB 6099) and the mediation group's development of three new 6-lane design options for the Seattle portion of SR 520.

WSDOT decided to prepare an SDEIS to allow the mediation designs, which are substantially different from those studied in the Draft EIS, to be evaluated fully before a decision is made on a preferred alternative. The project limits of the SDEIS are set at I-5 on the west and Evergreen Point Road on the east. The Evergreen Point Floating Bridge is included within these project limits.

In addition to the designs that resulted from mediation, the SDEIS contains additional detail and analysis—including information on construction impacts, mitigation measures, and transit operations—that was requested in public and agency comments on the Draft EIS. Including this information in the SDEIS allows agencies, tribes, and the public to review and comment on it prior to a final decision.

Legislative Workgroup

The Workgroup was established to develop recommendations to the legislature and governor on the Westside design options and to develop a program financing strategy. The design option recommendations will be considered as input into the SDEIS process.

The Workgroup has received extensive input from mediation participants, permitting agencies, transit agencies, local jurisdictions and other local stakeholders about ideas for modifying the mediation design options. These ideas were intended to reduce costs and/or to better achieve local interests, goals and other project objectives. WSDOT has assisted with layout of the new concepts, but has done only minimal engineering design on them. These revisions are more fully described in Chapter III, Design Recommendations. These revisions generally included:

- Modifying Option A to increase mobility by adding an eastbound HOV direct-access on-ramp from Montlake Boulevard, adding a Lake Washington Boulevard eastbound on-ramp and westbound off-ramp, and using the Option L roadway profile for improved stormwater management.
- Revising Option K to develop a new Option M, which would keep a modified single-point urban interchange (SPUI), add ramps, and replace the sequential excavation method tunnel with an immersed tube tunnel that would be built by excavating across the Montlake Cut rather than tunneling below it.

Another key change that has taken place since publication of the Draft EIS is the development of a new project that would build pontoons to be ready to more quickly replace the Evergreen Point Bridge should catastrophic failure occur. The SR 520 Pontoon Construction Project would construct new pontoons that would be used to restore the existing traffic capacity of the Evergreen Point Bridge in the event of a catastrophic failure. WSDOT is preparing an EIS to evaluate the effects of building these pontoons and storing them until they are needed. These pontoons cannot be transported and assembled on the lake until either 1) a catastrophic failure occurs or 2) a decision is reached as part of the I-5 to Medina: Bridge Replacement and HOV Project. Having pontoons ready for such a catastrophic failure would allow the bridge to be restored several years faster than if the pontoons were constructed in response to a disaster. This would, in turn, reduce adverse effects on traffic and the regional economy. Two possible pontoon construction sites in Grays Harbor are being analyzed in the EIS.

Maintaining the schedule of the SDEIS is critical to maintaining the schedule to replace the floating bridge portion of the corridor. In January 2008, Governor Gregoire directed WSDOT staff to develop an accelerated plan and schedule to replace the vulnerable SR 520 structures. That resulted in a letter to the legislature from the governor in March 2008 indicating the need to move forward more quickly and outlining how that would be achieved by opening the new bridge to drivers in 2014. That letter supported legislative action that occurred in 2008 to move the project forward. Move forward with

construction of the bridge replacement is tied to the completion of the SDEIS process on the I-5 to Medina segment of the corridor. As a result, in order to meet the 2014 schedule a preferred alternative must be selected by spring 2010 to complete the environmental process and begin construction by 2012.

The graphic on page 11 outlines the schedule for the various projects that make up the SR 520 Bridge Replacement and HOV Program. The critical path for work continuing across Lake Washington is the I-5 to Medina: Bridge Replacement and HOV Project.

F. Next Steps

The National Environmental Policy Act (NEPA) allows lead agencies to identify a preferred alternative at the Draft EIS stage or to wait until the Final EIS is published. WSDOT has designated the 6-Lane Alternative as the agency's preferred alternative. However, a preferred design option for the Westside interchange has not yet been identified. The preferred option will not be identified until the Final EIS, after agencies and the public have had an opportunity to comment on the choices and the legislative work group has released its findings.

After publication of the SDEIS, a Final EIS and Record of Decision (ROD) will be prepared to:

- ∑ Respond to comments received on both the Draft EIS and SDEIS
- ∑ Identify a preferred alternative
- ∑ Provide additional detail on mitigation measures and commitments that would be incorporated into project construction and operation

Preferred Alternative

Based on the current schedule, the co-lead agencies expect to identify a preferred design option for the SR 520 project in early 2010.

The preferred design option may be one of those evaluated in the SDEIS, or it may be a minor variation on, or combination of, the existing options. Should any new design variations with significantly greater environmental effects be proposed, they would likely need to be evaluated in another supplemental environmental document. This would change and extend the project schedule.

When the Workgroup's deliberations began, WSDOT was already well underway in its NEPA evaluation of Options A, K, and L. Since designs for the modified options have not been fully developed, it is difficult to say exactly how their environmental effects would compare with those of the original design options. If a new or "hybrid" design option were chosen as an outcome of the Workgroup process, WSDOT would reevaluate the SDEIS environmental analysis after publication to determine whether its impacts are within the range already identified. If the changes are within the range of the impacts already disclosed they would simply be described in the Final EIS. However, if the changes resulted in new, substantive impacts that had not been previously evaluated, additional supplemental analysis would be required.

Preliminary analysis of Option M suggests more time would be necessary to address the environmental impacts of this option. The Independent Cost Expert Review Panel's report states that, "Nonetheless, because the Montlake Cut is an environmentally sensitive area, we believe the permitting of Option M's wetlands impacts will be very risky and very costly to mitigate. We also note that Option M's construction impacts do not seem to have been studied in any of the existing SEPA or NEPA documents, so adopting Option M would require an immediate six-month delay to revise the

environmental documents. And we believe there would be a high likelihood of a much longer delay (12 to 24 months) in order to negotiate the permitting issue with the US Army Corps of Engineers."

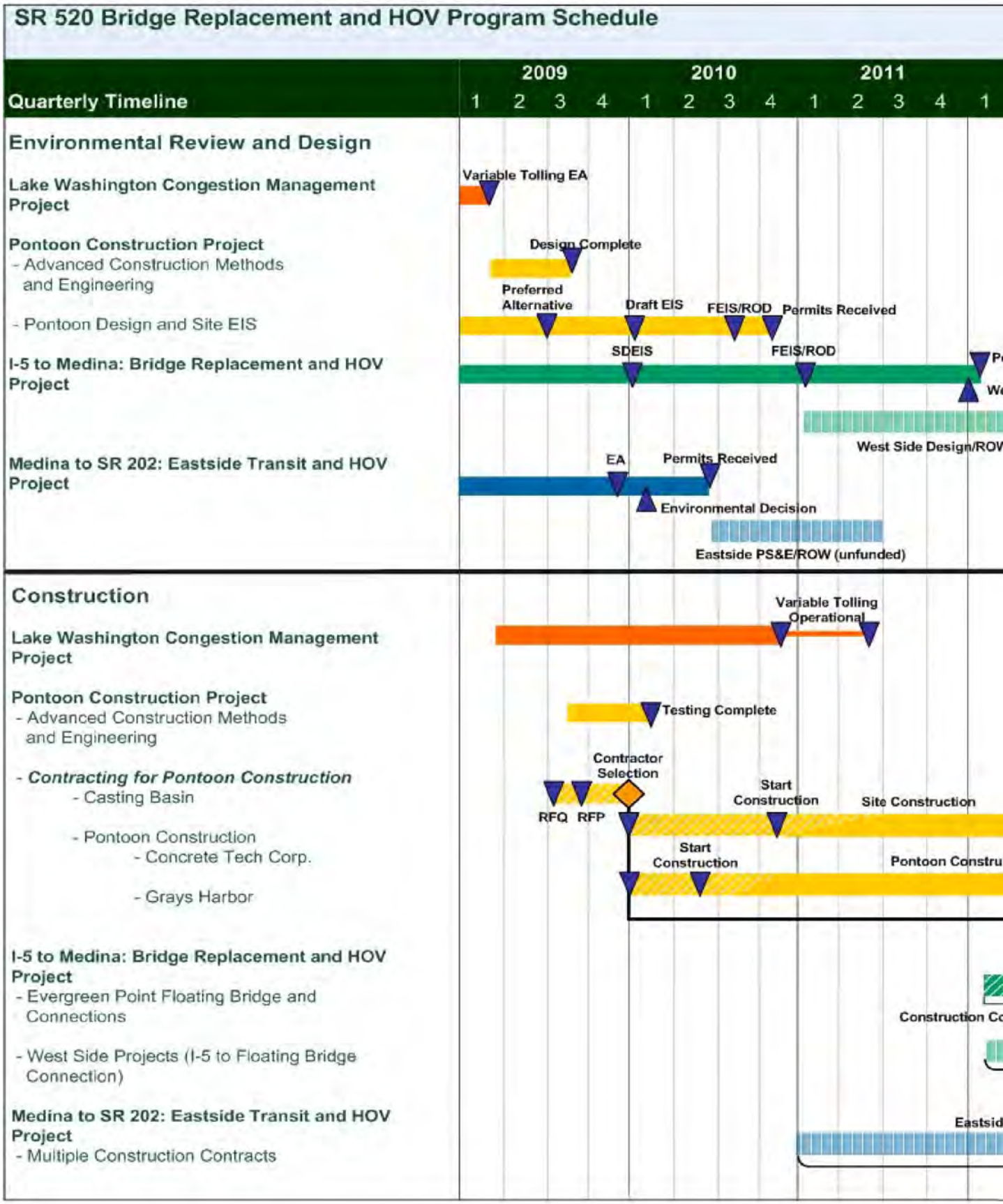
Final EIS and ROD

When the Final EIS has been issued, FHWA will prepare a Record of Decision, which documents the course of action it has decided upon as the federal lead agency. It will identify the selected alternative, explain the alternatives considered, and specify an "environmentally preferable alternative." It will also explain how the lead agencies plan to implement mitigation measures and conservation actions in compliance with NEPA and other laws.

The ROD is the conclusion of the NEPA process and signals the beginning of project implementation. WSDOT will further develop the engineering design for the project, including additional detail on project phasing, construction staging, and construction techniques. Having a preferred design option will allow WSDOT to develop more specific designs for mitigation measures, which will be documented in project permit applications. These designs will be prepared by WSDOT and FHWA, in cooperation with the affected jurisdictions and resource agencies.

Financing

With the completion of the environmental documents the project will be ready to move ahead. Some funding is currently available to begin that work. However, in order to continue progress towards construction on the current timeline, additional funding will be necessary. As the schedule on page 9 notes, the ROD is expected in early 2011 on the I-5 to Medina segment. Full funding of this section is needed at that time to move forward with the floating bridge replacement and final design and phased construction of the 6 lane corridor.


SR 520 Bridge Replacement and HOV Program Schedule
Quarterly Timeline
2009
2010
2011
1 2 3 4 1 2 3 4 1 2 3 4 1
Environmental Review and Design
Lake Washington Congestion Management Project
Variable Tolling EA
Pontoon Construction Project
- Advanced Construction Methods and Engineering
Design Complete
- Pontoon Design and Site EIS
Preferred Alternative
Draft EIS
FEIS/ROD
Permits Received
I-5 to Medina: Bridge Replacement and HOV Project
SDEIS
FEIS/ROD
West Side Design/ROW
Medina to SR 202: Eastside Transit and HOV Project
EA
Permits Received
Environmental Decision
Eastside PS&E/ROW (unfunded)
Construction
Lake Washington Congestion Management Project
Variable Tolling Operational
Pontoon Construction Project
- Advanced Construction Methods and Engineering
Testing Complete
- Contracting for Pontoon Construction
- Casting Basin
- Pontoon Construction
- Concrete Tech Corp.
- Grays Harbor
Contractor Selection
RFQ
RFP
Start Construction
Site Construction
Start Construction
Pontoon Construction
I-5 to Medina: Bridge Replacement and HOV Project
- Evergreen Point Floating Bridge and Connections
- West Side Projects (I-5 to Floating Bridge Connection)
Construction Co
Medina to SR 202: Eastside Transit and HOV Project
- Multiple Construction Contracts
Eastsid

II. Process

The Workgroup held nine meetings – six meetings with the full Workgroup, including two working sessions; and three meetings with the Westside Subgroup. In addition, two public meetings were held. A community forum was held in Bellevue, sponsored by Representative Eddy, at the mid-point in the process, and a Town Hall public meeting held in the University District to solicit public comments on the draft recommendations. The Workgroup held their initial meeting in July 2009 to elect co-chairs for the Workgroup, review a work plan, and set operating rules.

A copy of the approved Rules and Operating Procedures is included in the Appendix. The graphic on page 17 summarizes Workgroup's work plan and the public outreach that was conducted as part of the process.

A. What did the Workgroup Hear?

The co-chairs recognized that there were multiple stakeholder perspectives and interests held by interest groups and the neighborhoods related to improving the SR 520 corridor. They believed it was critical to have a balanced and open process to allow all comments and opinions to be heard and that it was time to make the decisions necessary to move the project forward. "Doing nothing is not an option," and a commitment to meeting the goals of the legislation was paramount.

As a result, the work plan was designed to bring forward the different perspectives and interests throughout the corridor. Below is a summary of the groups that provided input to the Workgroup.

Neighborhoods

The Workgroup engaged the community and neighborhood advocates involved in the development of solutions for the Westside design. This included neighborhoods immediately adjacent to the SR 520 corridor as well as communities to the north and south that rely on access to and from SR 520. The advocates were afforded opportunities to present their priorities and goals to the Westside Subgroup and the full Workgroup. All the advocates emphasized the importance of meeting the local and regional transportation needs of the area by providing transit accessibility and reliability. Each Westside design option contained different elements to meet the various constituent and community concerns, but all recognized the need for increased mobility in the corridor and surrounding areas. These conversations led the Workgroup to direct WSDOT staff to work with the proponent groups to refine their options to address the goals of the Workgroup in identifying a design that fit within the $4.65 billion cap.

WSDOT met with the Option K proponents five times and these discussions resulted in Option M and met with the A and L proponents twice to refine Option A and L to the Option A+. These options are more fully described in Chapter III, Design Recommendations.

Resource and Permitting Agencies

On September 22, 2009, the full Workgroup heard from nine agencies with jurisdiction in the SR 520 corridor. These included:

- Federal Highway Administration
- US Environmental Protection Agency
- US Army Corps of Engineers
- National Marine Fisheries Service
- US Fish and Wildlife Service

SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only
Page 973
For Internal Use Only -- 05/26/2011 14:11 PM

- Washington Department of Ecology
- Washington State Recreation and Conservation Office
- Washington Department of Fish and Wildlife
- Washington Department of Archaeology and Historic Preservation

Each agency director or manager provided an overview of their agency's responsibility for the resources the project would affect. The area surrounding the SR 520 corridor is rich in natural resources, many of which are protected through federal and state law. The laws and policies of all the resource agencies require a project design to first avoid, then to minimize, and lastly to mitigate impacts on environmental resources. Of particular note are the numbers of regulations over the aquatic environment involving fish, fish habitat, and wetlands. The agencies with built environment responsibilities described their historic, cultural, and park regulations.

Many of the agencies stated that, based on their current understanding of the design options, Option A appeared to have the least impact on the resources within their jurisdiction. The US Corps of Engineers highlighted that the in-water filling of aquatic resources associated with Option K would render that option highly unlikely to be permitted, given that other available options would avoid impacts.

Representatives from the federal agencies (US EPA, US Corps of Engineers, and the Services) explained the connection between their permit processes and Tribal Government input. Tribal interests in the project area include treaty rights to harvest fish in usual and accustomed fishing areas; in addition, portions of the project have cultural significance, particularly Foster Island.

Transit

Many references are built into the legislation regarding transit accommodation throughout the corridor. There is an interest to build an effective connection with the new Sound Transit light rail station at the University of Washington and in the future to not preclude the addition of high capacity transit or light rail in the corridor. These elements have been covered in the following legislation and documentation.

RCW 47.01.408

> "(1) The state route number 520 bridge replacement and HOV project shall be designed to provide six total lanes, with two lanes that are for transit and high-occupancy vehicle travel, and four general purpose lanes. (2) The state route number 520 bridge replacement and HOV project shall be designed to accommodate effective connections for transit, including high capacity transit, to the light rail station at the University of Washington."

RCW 47.01.405

> ". . . The state must take the necessary steps to move forward with a state route number 520 bridge replacement project design that provides six total lanes, with four general purpose lanes and two lanes that are for high occupancy vehicle travel that could also accommodate high capacity transportation, and the bridge shall also be designed to accommodate light rail in the future. High occupancy vehicle lanes in the state route 520 corridor must also be able to support a bus rapid transit system."

RCW 47.01.410

> "As part of the state route number 520 bridge replacement and HOV project, the governor's office shall work with the department, sound transit, King county metro, and the University of Washington, to plan for high capacity transportation in the state route number 520 corridor. The

parties shall jointly develop a multimodal transportation plan that ensures the effective and efficient coordination of bus services and light rail services throughout the state route number 520 corridor. The plan shall include alternatives for a multimodal transit station that serves the state route number 520-Montlake interchange vicinity, and mitigation of impacts on affected parties. The high capacity transportation planning work must be closely coordinated with the state route number 520 bridge replacement and HOV project's environmental planning process, and must be completed within the current funding for the project. A draft plan must be submitted to the governor and the joint transportation committee by October 1, 2007. A final plan must be submitted to the governor and the joint transportation committee by December 2008."

In a letter from Secretary Paula Hammond to Governor Chris Gregoire in February 2008, WSDOT confirmed that the design of lids and tunnels east of Montlake Boulevard will accommodate efficient and effective bus rapid transit in the SR 520 corridor and will not preclude opportunities for transit in the future.

Sound Transit and King County Metro Transit presented several times to voice their needs and concerns. It was noted that approximately 60% of the transit riders in the area use local service provided by King County on surface streets. This means that congestion on Montlake Boulevard is a concern for providing effective transit service. In addition, funding for on-going operations will also be needed to address the added service required from the removal of the Montlake Flyer stop.

Other Stakeholders

The Workgroup also heard from other stakeholders in the area including:

- Mayor of Bellevue, Grant Degginger
- Seattle City Council President, Richard Conlin
- US Coast Guard – regarding bridge opening restrictions
- University of Washington School of Forest Resources and Seattle Parks Department – regarding management of the Arboretum collection
- University of Washington

Finance

The Workgroup identified and researched various funding options for the program. They also reviewed the current state revenues and tolling funding already authorized and how it was being used, including looking at the timing of when funding would be necessary to continue moving the project forward. Starting on October 20, 2009, the Workgroup heard about:

- Federal reauthorization including TIGER Grant requests
- State Legislature's Joint Transportation Committee funding study
- Tolling options
- Local and regional funding options including Transportation Benefit District and Regional Transportation Improvement District options

Independent Cost Expert Review Panel

The Workgroup heard from an independent cost expert review panel (Cost ERP) led by Don Forbes, former Secretary of the Oregon State Department of Transportation, and made up of geotechnical, environmental mitigation, cost estimating, tunnel construction and mega project management

SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only
Page 975
For Internal Use Only -- 05/26/2011 14:11 PM

experts. The Workgroup directed the panel to review the methodology used to produce the cost estimates released by WSDOT in November 2008.

A summary of the review is included in Chapter 3, Design Recommendations. The panel stated that the WSDOT cost estimation process is "well managed, with a good rationale" for the development of costs. They identified areas for further investigation to reduce costs in all alternatives and noted there were areas where costs may need to be increased.

In the Phase I review there were several risks identified with Options K and L. As a result the proponent groups identified suggested changes that led to the creation of Options A+ and M. The Workgroup requested that the panel review the preliminary cost estimate for these options as well. A summary of the Cost ERP findings is contained in Chapter III, Design Recommendations.

WSDOT Support

WSDOT staff supported the Workgroup throughout the process in the following ways:

- ∑ Met with and provided technical assistance to the proponent groups.
- ∑ Provided data for and supported the independent cost expert review panel.
- ∑ Presented the Workgroup with information and answered questions regarding the program schedule, environmental and operations analysis, and design elements of the Options A, K, L, A+ and M, tolling and funding.
- ∑ Participated in the mid-process Eastside Town Hall meeting, Seattle City Council Committee of the Whole briefing and Workgroup Town Hall meeting.
- ∑ Responded to questions and data requests submitted to the Workgroup e-mail.

The technical information related to the design and the impacts for each option is summarized in the Comparison of SR 520 Westside Options tables on pages 18–21. These were provided to the Workgroup in order to compare information between options more easily.

COMPARISON OF SR 520 WESTSIDE OPTIONS: Cost and Desig

	OPTION A	OPTION K	O
COS			
Total Program cost	**$4.526B - $4.802B**	**$6.574B - $6.672B**	**$5.0**
West side	$2.022B – $2.298B	$4.070B – $4.168B	$2.5
I-5	$322M	$322M	
Portage Bay Bridge	$482M	$414M	
Montlake	$442M	$2.346B	
West approach	$776M	$988M	
DESI			
Common to all Options	• Lids at I-5 and 10th Avenue and Delmar Drive. • A direct access HOV ramp to and from I-5. • The SR 520 and I-5 interchange ramps would be reconstructed with generally the same ra • Removal of the Montlake Freeway Transit Station and relocated function. • Six-lane corridor with a 4+2 configuration (one HOV and two general-purpose lanes in each • Lid in the Montlake area.		
Portage Bay Bridge	• Replace with a seven-lane bridge (110 feet wide).	• Replace with a six-lane bridge (100 feet wide).	• Replace w (100 feet w
Montlake Interchange	• The interchange would remain in the same location as today. • A new bascule bridge would be constructed over the Montlake Cut. • Westbound transit off-ramp to Montlake Boulevard.	• A new depressed interchange would be constructed to the east of Montlake Boulevard. • Ramps would be constructed to the north through a sequential excavation method tunnel under the Montlake Cut and to the south near the Arboretum. • Direct HOV access ramps to and from the east on SR 520.	• A new elev would be c of Montlake • Ramps wou the north a bridge over to the south • Direct HOV from the ea
West Approach	• The bridge structure would be wider and higher over Foster Island than today. • Between Foster Island and the floating bridge, the roadway is low and flat resulting in less than desirable stormwater treatment.	• The bridge structure would be wider and the highway would be under a lid at Foster Island. • The tunnel approach ramps would require fill into Union Bay (boat section).	• The bridge wider and h Island than • The slope have a grad slope to all to land.

NOT

COMPARISON OF SR 520 WESTSIDE OPTIONS: Traffic Operati

	OPTION A	OPTION K	
			TRAFFIC O
Common to all options	• Six-lane alternative provides a travel time benefit for transit and HOV. • Added shoulder width improves corridor safety and reliability. • Removal of the Montlake Freeway Transit Station and relocated function.		
Local	• Improves overall local traffic operations compared to No Build. • Lowest volumes in the Arboretum. • Highest diversion to other neighborhoods.	• Improves overall local traffic operations compared to No Build. • Traffic volumes increase through the Arboretum compared to No Build. • Provides full access to SR 520 from the north and south of Montlake Cut.	• Impro opera
Transit	• Drawbridge openings affect SR 520 buses and the local transit service during off-peak hours. • Improved local transit times over No Build.	• SR 520 buses bypass the drawbridge openings during the off-peak hours. • Local bus service adversely affected by increased local congestion.	• SR 52 thus s during • Local by inc
Construction	• Requires capacity improvements on Montlake Boulevard to the south. • Lowest number of construction truck trips.	• Requires capacity improvements on Montlake Boulevard to the south. • Highest number of truck trips compared to all options. • Closes NE Pacific Street during construction. • Redirects traffic to Pacific Place. • High level of construction delay. • Removes bus layover space during construction.	• Requi Montla • Highes compa • Closes during • Redire • High l • Remo constr

NO

COMPARISON OF SR 520 WESTSIDE OPTIONS: Environmental

	OPTION A	OPTION K	
			ENVIRON
Impacts covered in SDEIS?	Yes	Yes	
Construction Impacts	• In-water construction and work bridges would affect aquatic resources and wetlands. • Access disruptions to parks and trails. • Noise impacts on neighborhoods adjacent to the alignment (including pile driving). • Increased traffic congestion from haul and detour routes.	• In-water construction and work bridges would affect aquatic resources and wetlands. • Access disruptions to parks and trails. • Noise impacts on neighborhoods adjacent to the alignment (including pile driving). • Increased traffic congestion from haul and detour routes. • Additional disruption and noise in East Montlake/McCurdy Parks and along west shore of Union Bay due to construction of boat section and depressed interchange.	• In w w • A • N ac dr • In a • W d
Permanent Impacts	• Would displace three residences and the Museum of History and Industry in Seattle. • Would displace part of National Oceanic and Atmospheric Administration facilities. • Fill 0.1 acres of wetlands. • Shade 3.2 acres of wetlands. • Fill 0.5 acres of open water. • 5.6 acres of park land converted to right-of-way.	• Would displace one residence and the Museum of History and Industry. • Fill 1.8 acres of wetlands. • Shade 2.8 acres of wetlands. • Fill 2.7 acres of open water. • 7.6 acres of park land converted to right-of-way.	• W M S • Fi • Sh • Fi • 7. rig • E st

NOT

Washington State Department of Transportation

SR 520 Bridge Replacement and HOV Program

I-5 to Medina: Bridge Replacement and HOV Project

COMPARISON OF SR 520 WESTSIDE OPTIONS: Data S

	No Build	Option A	
		base[1]	subopti
Cost			
Year of Expenditure (billions)		2.022	2.298
Traffic Operations (Year 2030)			
Local Traffic (AM/PM Peak, bi-directional)			
Crossing the Montlake Cut (vehicles per hour)	4500/6200	4300/6000	4300/62
In the Arboretum (vehicles per hour)	1800/1800	900/1200	1900/18
Average local travel time (minutes)	25	10	8
Freeway Traffic (AM/PM Peak, bi-directional)			
Floating Bridge (vehicles per hour)	8700/8700	8700/8700	9100/89
Portage Bay Bridge (vehicles per hour)	7500/7600	8000/7900	7600/74
Transit (minutes)			
Local peak travel times (Madison-Mntlk Tri/Mntlk Tri-McGraw)	45/9	18/5	10/5
Peak travel time to/from SR 520/Montlake Triangle	5/10	5/6	4/4
Non-vehicular			Region
Environmental Resources-Construction Effects[5]			
Park Effect (Acres)		5.10	5.4
Section 6(f) Resource Effect (Acres)		2.99	2.99
Wetland Fill Effect (Acres)[6]		0.6	0.5
Wetland Shade Effect (Acres)		6.4	6.93
Wetland Buffer Fill Effect (Acres)[6]		2.80	3.00
Wetland Buffer Shade Effect (Acres)		0.20	0.30
Open Water Fill Effect (Acres)[7]		0.20	0.20
Open Water Shade Effect (Acres)[7]		13.40	13.40
Environmental Resources-Permanent Effects[5]			
Park Effect (Acres)		5.6	5.6
Section 6(f) Resource Effect (Acres)		3.04	3.04
Section 6(f) Resource- Subterranean Easement (Acres)[8]		0.02	0.02
Wetland Fill Effect (Acres)		0.1	0.6
Wetland Shade Effect (Acres)		3.2	3.4
Wetland Buffer Fill Effect (Acres)		0.7	2.98
Wetland Buffer Shade Effect (Acres)		4.3	3.7
Open Water Fill Effect (Acres)[9]		0.5	0.6
Open Water Shade Effect (Acres)[9]		14.5	16.1
Full Property Acquisitions (number of parcels)[10]		7	7
Design			
Number of lanes on Portage Bay Bridge		7	7
Number of lanes at Marsh Island		9	10
Method to cross the Montlake Cut		Bascule Bridge	Bascule Br

B. Previous Legislative Direction

The Washington State Legislature has passed several pieces of legislation pertaining to the SR 520 Bridge Replacement and HOV Program. The Appendix contains a summary of all legislation related to the SR 520 Bridge Replacement and HOV Program. The Workgroup discussed the specific references to the six lane configuration, transit connections, and tolling. Below is a summary of the references that were discussed with the Workgroup.

Requirements Regarding Six Lanes and Transit Connections

ESHB 2211—Section 3(3)

> "All design options considered or recommended by the state route number 520 work group must adhere to RCW 47.01.408."

RCW 47.01.408

> "(1) The state route number 520 bridge replacement and HOV project shall be designed to provide six total lanes, with two lanes that are for transit and high-occupancy vehicle travel, and four general purpose lanes. (2) The state route number 520 bridge replacement and HOV project shall be designed to accommodate effective connections for transit, including high capacity transit, to the light rail station at the University of Washington."

Other Requirements Regarding Six Lanes

RCW 47.01.405

> "The legislature finds that the replacement of the vulnerable state route number 520 corridor is a matter of urgency for the safety of Washington's traveling public and the needs of the transportation system in central Puget Sound. The state route number 520 floating bridge is susceptible to damage, closure, or even catastrophic failure from earthquakes, windstorms, and waves. Additionally, the bridge serves as a vital route for vehicles to cross Lake Washington, carrying over three times its design capacity in traffic, resulting in more than seven hours of congestion per day. Therefore, it is the conclusion of the legislature that time is of the essence, and that Washington state cannot wait for a disaster to make it fully appreciate the urgency of the need to replace this vulnerable structure. The state must take the necessary steps to move forward with a state route number 520 bridge replacement project design that provides six total lanes, with four general purpose lanes and two lanes that are for high occupancy vehicle travel that could also accommodate high capacity transportation, and the bridge shall also be designed to accommodate light rail in the future. High occupancy vehicle lanes in the state route 520 corridor must also be able to support a bus rapid transit system."

Other Requirements Regarding Transit Connections

RCW 47.01.410

> "As part of the state route number 520 bridge replacement and HOV project, the governor's office shall work with the department, sound transit, King county metro, and the University of Washington, to plan for high capacity transportation in the state route number 520 corridor. The parties shall jointly develop a multimodal transportation plan that ensures the effective and efficient coordination of bus services and light rail services throughout the state route number 520 corridor. The plan shall include alternatives for a multimodal transit station that serves the state route number 520–Montlake interchange vicinity, and mitigation of impacts on affected parties. The high capacity transportation planning work must be closely coordinated with the state route number 520 bridge replacement and HOV project's environmental planning process, and must be completed within the current funding for the project. A draft plan must be submitted to the governor and the joint transportation committee by October 1, 2007. A final plan must be submitted to the governor and the joint transportation committee by December 2008."

SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only
Page 981
For Internal Use Only -- 05/26/2011 14:11 PM

Requirements for New Tolling Authority

RCW 47.56.820

"(1) Unless otherwise delegated, only the legislature may authorize the imposition of tolls on eligible toll facilities. (2) All revenue from an eligible toll facility must be used only to construct, improve, preserve, maintain, manage, or operate the eligible toll facility on or in which the revenue is collected. Expenditures of toll revenues are subject to appropriation and must be made only: (a) To cover the operating costs of the eligible toll facility, including necessary maintenance, preservation, administration, and toll enforcement by public law enforcement within the boundaries of the facility; (b) To meet obligations for the repayment of debt and interest on the eligible toll facilities, and any other associated financing costs including, but not limited to, required reserves and insurance; (c) To meet any other obligations to provide funding contributions for any projects or operations on the eligible toll facilities; (d) To provide for the operations of conveyances of people or goods; or (e) For any other improvements to the eligible toll facilities."

Requirements for Use of Bonds

ESHB 2211 – Section 2 (3) (i)

"(i) The issuance of general obligation bonds first payable from toll revenue and then excise taxes on motor vehicle and special fuels pledged for the payment of those bonds in the amount necessary to fund the replacement state route number 520 floating bridge and necessary landings , subject to subsection (4) of this section."

III. Design Recommendations and Costs

A. Developing Options A+ and M

In 2008, under the direction of ESSB 6099, WSDOT supported a mediation process to determine interchange options for the Montlake area. Through this process, community representatives developed three west side interchange options known as Options A, K, and L. All of these options, each with sub-options, are currently under analysis in the I-5 to Medina Bridge Replacement and HOV project's SDEIS.

The Workgroup and WSDOT staff worked with the proponents of Options A, K, and L from July through November 2009 to develop the interchange option that best met the goals of the communities and the goals set forth by ESHB 2211. Proponents of Options A and L combined the various design elements to develop Option A+. The proponents of Option K refined design elements that resulted in the development of Option M. Below is a summary of how the Workgroup and WSDOT worked with the proponent groups to develop and refine these options.

Option A+

The Option A and L proponents developed Option A+ to meet the goals set forth by ESHB 2211. At the September 22, 2009 meeting, the Workgroup invited the environmental resource and permitting agencies to present feedback on the SDEIS Options A, K, and L. The proponents incorporated the agency feedback that stated a constant rise profile is more desirable and more likely to receive permits than the other profiles under consideration. The US Army Corps of Engineers noted that of the three options analyzed in the SDEIS, Option A would most likely be the least environmentally damaging practicable alternative.

The estimated cost of Option A, released in November 2008, ranged from $4.526 billion to $4.802 billion. To meet the $4.65 billion cost cap set by the legislature in 2009, proponents reduced costs by refining the design of the Portage Bay Bridge, the Lake Washington Boulevard ramp configuration, and the west approach bridge and Foster Island connections to the Arboretum. The cost estimate was not derived using the full cost estimation validation process (CEVP).

Option A+ differs from Option A in the following ways:

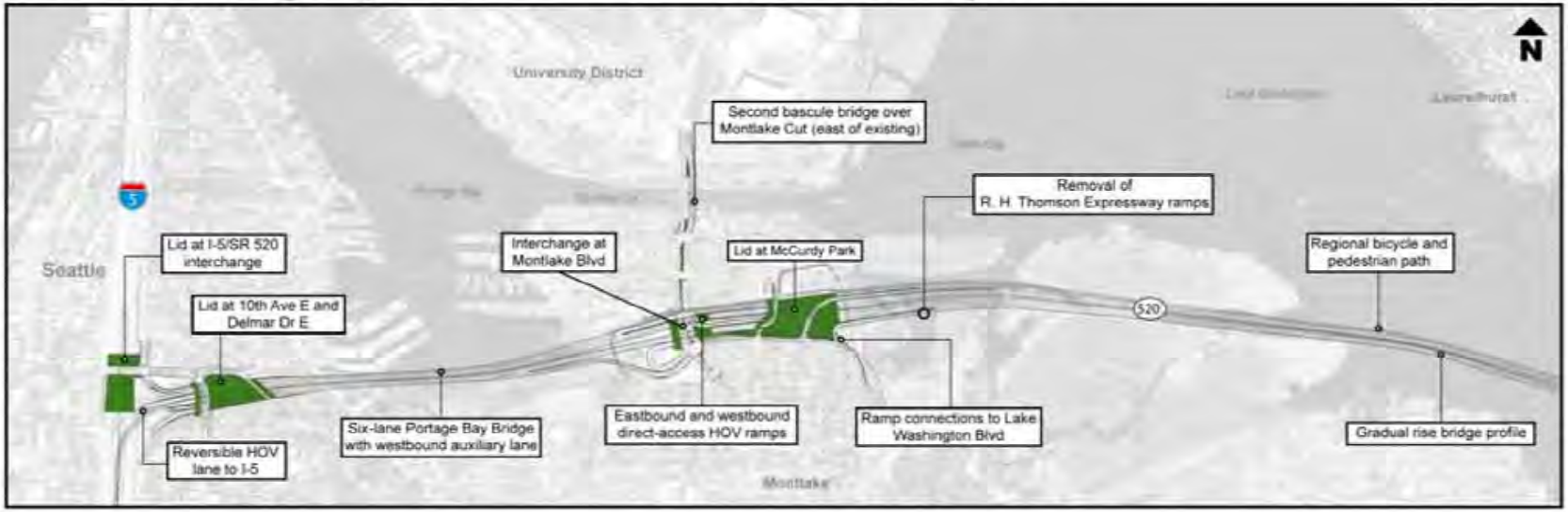
- The specific false arch bridge type is removed and shorter span lengths are proposed for the Portage Bay Bridge while maintaining aesthetic treatments to be defined in a design competition.
- Addition of a pedestrian connection under SR 520 at Foster Island.
- Inclusion of ramp connections to Lake Washington Boulevard to and from the Eastside only (this was a sub-option in Option A)
- Includes enhanced transit connectivity by providing an eastbound HOV direct-access ramp from the Montlake Boulevard interchange and removes the flyover ramp in the Arboretum vicinity.
- Provides for gravity flow stormwater treatment by using a constant slope profile to the west high rise from the Montlake shoreline, which is the same profile as the SDEIS Option L.

Summary of Meetings with Option A+ Coalition

Date	Meeting	Location	Discussion
September 15, 2009	Westside Subgroup	Seattle	Proponents of Option A presented Option A to the Westside Subgroup highlighting it as a transit friendly, environmentally sensitive, and affordable option.
September 22, 2009	Workgroup	Seattle	Proponents of Option A presented Option A to the Workgroup highlighting it as a transit friendly, environmentally sensitive, and affordable option.
September 30, 2009	Technical Coordination with WSDOT staff #1	Seattle	Proponents of Option A and L met with WSDOT staff to discuss design and cost modifications to Option A.
October 8, 2009	Westside Subgroup	Seattle	Proponents of Option A and Option L jointly presented Option A+ to the Westside Subgroup.
November 5, 2009	Working Session	Seattle	WSDOT presented a preliminary cost analysis provided by the independent cost review panel. Chair of independent Cost ERP reviewed cost analysis of the A+ and M options.
November 10, 2009	Westside Subgroup	Seattle	Subgroup members provided preliminary observations of Option A+.
November 12, 2009	Technical Coordination with WSDOT staff #2	Seattle	Proponents of Option A+ met with WSDOT staff, King County Metro, and Sound Transit representatives to discuss transit operations and cost reductions. Outstanding design issues included the removal of the Lake Washington Boulevard ramps.
November 17, 2009	Workgroup	Seattle	The Workgroup recommended Option A+ as a draft recommendation for public comment.
December 8, 2009	Workgroup	Seattle	The Workgroup recommends Option A+ as a final recommendation to be submitted to Gov. Gregoire and Washington State Legislature.

C-040
05/26/2011 13:28 PM
SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only

Westside design option draft recommendation: Option A+



Total project cost, I-5 to floating bridge: $2.027B to $2.127B. Total program cost: $4.531B to $4.631B.

The upcoming SR 520, I-5 to Medina: Bridge Replacement and HOV Project Supplemental Draft Environmental Impact Statement (SDEIS) analyzes three westside design options, A, K and L, each with sub-options. The Option A+ recommendation is comprised of Option A with specific sub-options and is covered in the SDEIS.

Design features include:
(from west to east)

- A six-lane corridor in a 4 + 2 configuration with two general-purpose lanes and one HOV lane in each direction.
- A reversible HOV and transit lane at the I-5 and SR 520 interchange.
- Lids over I-5 at E. Roanoke Street, over SR 520 between 10th Avenue E. and Delmar Drive E. and over SR 520 at McCurdy Park.
- A six-lane Portage Bay Bridge and westbound auxiliary lane connecting Montlake Boulevard E. with northbound I-5.
- An interchange at Montlake Boulevard E. similar to today's configuration that includes.
  - HOV and transit direct-access ramp at Montlake Boulevard E. to and from the Eastside.
  - Removal of the existing Montlake Freeway Station.
- A new second bascule bridge over the Montlake Cut east of the existing bascule bridge.
  - Provides for three northbound and three southbound lanes on Montlake Boulevard between SR 520 and NE Pacific Street.
- Ramp connections to Lake Washington Boulevard to the northwest of the existing ramps that replace the function of today's Lake Washington Boulevard ramps.
- Removal of the R.H. Thomson expressway ramps near the Arboretum.
- A gradual rise bridge profile from the Montlake shoreline to the west highrise of the floating bridge.
- A navigation passage at the west highrise of 40 feet.
- Regional bicycle and pedestrian path.

Note: Above are preliminary cost estimates. This option has not been reviewed through a CEVP process.

November 19, 2009

For Internal Use Only -- 05/26/2011 14:11 PM
Page 985

Option M

Option K supporters developed Option M to better meet the requirements of the resource and permitting agencies and to reduce costs. At the September 22, 2009 meeting, the US Army Corps of Engineers stated that permitting Option K was unlikely. This is due to the large amount of in-water fill required for the permanent interchange configuration when there is a reasonable and feasible alternative with significantly less in-water fill.

In addition to the permitting concerns, cost estimates released in November 2008 estimated the cost for Option K from $6.574 billion to $6.672 billion nearly $2 billion over the $4.65 billion cost cap set by the legislature. In an effort to reduce costs, proponents focused on the tunnel construction method, the width of the freeway interchange as it extended into the Arboretum, and the Foster Island land bridge/pedestrian connection.

Option M provides a savings of approximately $700 million based on a conceptual layout of the option compared with Option K. This includes the new tunnel construction method ($350 million in savings) and reconfiguration of the interchange ramps and Foster Island pedestrian connection ($350 million in savings). This estimate does not capture the potential mitigation required for the alternate tunnel method. This estimate also was not derived using the full cost estimation validation process (CEVP).

Option M differs from Option K in the following ways:

Tunnel construction method

- Option K included a sequential excavation tunnel as a method to excavate the ground without disturbing the Montlake Cut. Due to geotechnical investigation, the ground would need to be frozen for this method of tunneling.
- In Option M, the proponents proposed an immersed tube tunnel in order to save costs. The immersed tube tunnel would involve cut and cover dredging across the Montlake Cut in order to create a trench in which to place the tube.

Reconfigures interchange ramps

- Option M removes the keyhole connection to the Arboretum and replaces it with ramp connections to Lake Washington Boulevard to allow access to and from the Eastside only, in a similar location to Option A+.
- Replaces the 24th Avenue East connection from Lake Washington Boulevard to the Museum of History and Industry area with a westbound off-ramp to Lake Washington Boulevard.
- The ramp connection to westbound SR 520 from the Arboretum is removed since this movement is not provided for today.
- To reduce cost and the overall environmental impacts, there are no direct-access HOV and transit ramps.
- Raises the SR 520 mainline profile to the same elevation as Lake Washington Boulevard at the new interchange in order to reduce wetland impacts.

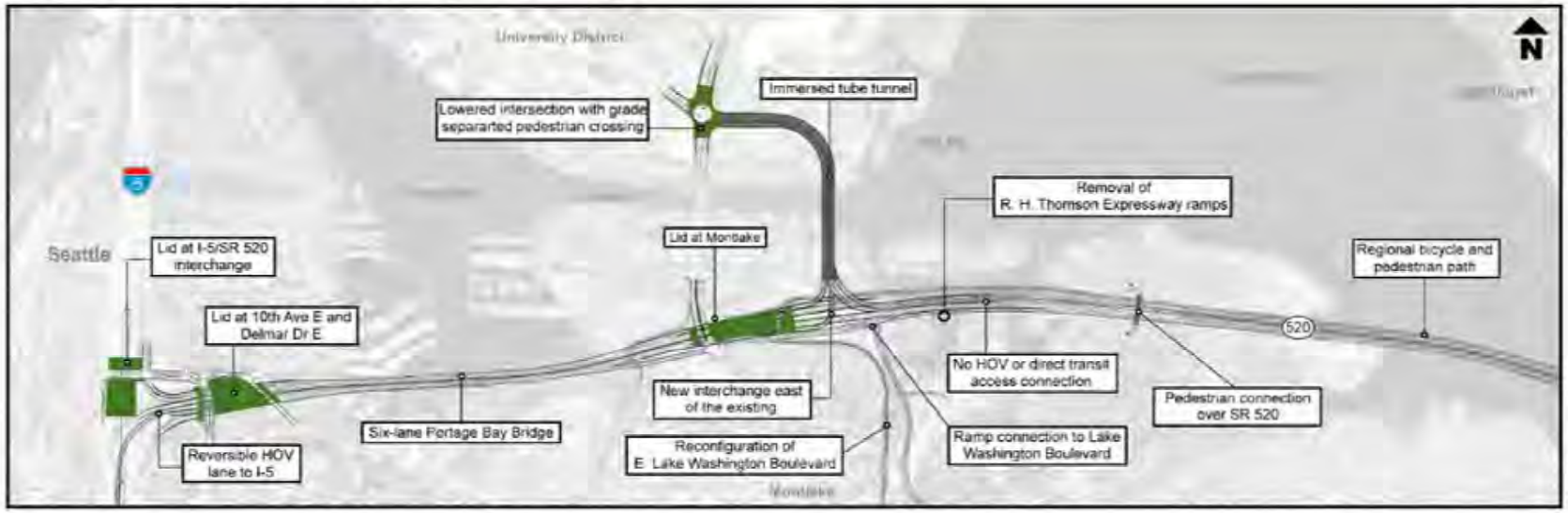
Summary of Meetings with Option M Coalition

Date	Meeting	Location	Discussion
September 15, 2009	Westside Subgroup	Seattle	Coalition for Option K presented a "Hybrid Plan" to the Westside Subgroup in order to reduce costs and environmental impacts, improve mobility to the south, and reduce impacts to the Arboretum.
September 22, 2009	Workgroup	Seattle	Coalition for Alternative K presented a "Hybrid Plan" to the Workgroup with specific cost saving measures identified.
September 25, 2009	Technical Coordination with WSDOT staff #1	Seattle	Coalition for Alternative K met with WSDOT staff to discuss ways to reduce costs, environmental impacts, construction impacts, improve north/south mobility, maintain transit/HOV access, and maintain six-lane Portage Bay Bridge.
October 1, 2009	Technical Coordination with WSDOT staff #2	Seattle	Coalition for Alternative K coordinated with WSDOT staff on plan to be presented at Oct. 8 Westside Subgroup meeting. The Hybrid Plan includes the removal of the boat section, modifications to the single point urban interchange, a ramp connection to Lake Washington Boulevard, no left turn from Lake Washington Boulevard ramps, an eastbound off-ramp to northbound Montlake movement will be routed into the tunnel and not on Montlake Boulevard, shifting a local access road, and a higher mainline profile at Foster Island.
October 8, 2009	Westside Subgroup	Seattle	Coalition for Alternative K presented an updated Hybrid Plan with associated design modifications and cost reductions to the Westside Subgroup.
October 15, 2009	Technical Coordination with WSDOT staff #3	Seattle	Coalition for Alternative K met with WSDOT staff to discuss further design modifications and cost reductions to the Hybrid Plan.
October 22, 2009	Technical Coordination with WSDOT staff #4	Seattle	Coalition for Alternative K met with WSDOT staff, requested to be called Coalition for Option M. Coalition discussed including Option M in the SDEIS, preliminary traffic operations, west navigation passage, west approach profile, and stormwater issues.
October 29, 2009	Technical Coordination with WSDOT staff #5	Seattle	Coalition for Option M met with WSDOT staff to discuss preliminary traffic operations, west navigation passage, west approach profile, and stormwater issues. Outstanding design issues include the number of lanes in the tunnel, the number of lanes on all the SR 520 ramps, the height of the west navigation passage, the height of the west approach bridge, the improvements necessary at the Montlake and Pacific intersection and north of the intersection, and the desired traffic operation goals.

Summary of Meetings with Option M Coalition			
Date	Meeting	Location	Discussion
November 5, 2009	Working Session	Seattle	Per request of Coalition for Option M, WSDOT presented a preliminary cost analysis provided by the independent cost review panel. The chair of independent Cost ERP provided a review of the cost analysis of the A+ and M options.
November 10, 2009	Westside Subgroup	Seattle	The Westside Subgroup provided preliminary observations of Option M.
November 17, 2009	Workgroup	Seattle	The Workgroup discussed Option M in consideration of the draft recommendations report.

C-040
05/26/2011 13:28 PM
SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only

Option M - Preliminary Concept



Total project cost, I-5 to floating bridge: $3.358B
Total program cost: $5.862B.

Features include:

- A six-lane corridor in a 4 + 2 configuration with two general-purpose lanes and one HOV lane in each direction except for the areas between the new Seattle interchange and the floating bridge where the corridor would be six general-purpose lanes (three in each direction) and no HOV lanes.
- A reversible HOV and transit lane at the I-5 and SR 520 interchange.
- Lids over I-5 at E. Roanoke Street, over SR 520 between 10th Avenue E. and Delmar Drive E. and at Montlake Boulevard.
- A six-lane Portage Bay Bridge.
- A modified single point urban interchange east of the existing to and from the new tunnel. Number of lanes on the ramps to be determined.
  - Does not provide for an HOV or transit direct-access connection.
- Removal of the existing Montlake Freeway Station.
- SR 520 mainline profile raised to the level of Lake Washington Boulevard at the interchange area.
- Ramp connection to Lake Washington Boulevard over SR 520.
- Lowered intersection at the Montlake Boulevard NE and NE Pacific Street intersection with grade-separated pedestrian crossings.
- Four or five lane immersed tube tunnel crossing under the Montlake Cut.
- Removal of the R.H. Thomson expressway ramps near the Arboretum.
- Pedestrian connection over SR 520 at Foster Island.
- A navigation passage at the west high rise. Actual height to be determined.
- Modifications to the configuration of E. Lake Washington Boulevard.
- Profile is low and actual heights are to be determined.
- Regional bicycle and pedestrian path.

Note: Above are preliminary cost estimates. This option has not been reviewed through a CEVP process.

November 19, 2009

For Internal Use Only -- 05/26/2011 14:11 PM
Page 989

B. Independent Cost Expert Review Panel Executive Summary

Responsibility/ Purpose of the Cost Review Panel

The responsibility of the Cost Review Panel was to conduct a comprehensive evaluation of the SR 520 project cost estimate process, including review of the procedures used, level of accuracy, application of the CEVP process, risks that were considered, and the level of development of the design options. The Panel conducted its review in two phases. Phase I review included the mediated Options A, K, and L. The Phase II review focused on two modified options A+ and M (formerly K). The summary of findings from both phases follows below.

Phase I Review: SDEIS Options A, K and L from Mediation

Findings

1. The SR 520 team manages a strong, well-managed process with good rationale and easy retrieval of support material
2. While there are opportunities to adjust the estimate of some individual items to reduce their expected costs, these adjustments would not cause major changes in the total for any of the options. (See also item 6 below.)
3. Options A, K, and L are all at a level of development to appropriately apply the CEVP process. That is, the designs are sufficiently developed to evaluate and fairly compare the options.
4. The CEVP process has been fairly applied across options. Although CEVP is a valid way to compare costs and schedules for options, it is not necessarily the only basis for selecting a project alternative.
5. The Westside Cost Review Panel suggested the redistribution of some costs that had been assigned to the (SEM) tunnel. Those redistributed costs resulted in an improved ability to compare tunnel costs to similar tunnel costs elsewhere and also resulted in a modest overall cost reduction of the K option
6. The CCI (Construction Cost Index) may be too optimistic (too low): While WSDOT policy consistently uses the CCI projection of future inflation rates, the Westside Cost Review Panel is concerned that the CCI projection of a nearly level 1.7% to 1.9 % per year construction inflation rate for the next ten years may lower than what the actual inflation will be over the construction period.
7. Impact of modeled (probability & impact) risks is comparable across options but the Panel is concerned about un-modeled risks (which are still real!) e.g.
   - ∑ Impact of locally preferred alternative [selection] by Spring 2009—which did not occur
   - ∑ Availability of funding that matches the cash flow requirements of the project
   - ∑ Permitting
   - ∑ 'Boat section'-construction, permitting, and mitigation
8. Decisions by the state and national resource agencies will have a substantial impact on the schedules and costs as well as viability of the Options
   - ∑ Permitting of Wetland fill and impacts: The Westside Cost Review Panel heard the US Army Corps of Engineers expressed serious concerns about the viability of Option K because it has more impacts on wetlands than Options A or L. The legal basis for the Corps concerns could render Option K unpermittable.

- Permitting of the low road profile: Several agencies — the Corps, the National Marine Fisheries Service, and the Washington State Department of Ecology — expressed concerns about the shading impacts created by lowering the road profile to place it close to the lake surface.
- Stormwater permitting: The Department of Ecology expressed concerns that stormwater collection and treatment will be difficult and perhaps unreliable if the road profile is flat. They would prefer a road profile that slopes from the water back toward the land, allowing stormwater to flow by gravity to a land-based pollution control system.

Phase II Review: Options A+ and M

Introduction

Additional concept refinements by Option A and Option K support groups have changed overall costs and risk profiles for both options.

Option A+ is essentially Option A with the addition of three Option A sub-options as established in the mediation process: an eastbound Lake Washington Boulevard on-ramp; a westbound Lake Washington Boulevard off-ramp; and an eastbound HOV direct access ramp at Montlake Boulevard.

Option K has been significantly modified and has become Option M. The major modifications include: replacing the SEM (Sequential Excavation Method) tunnel with an ITT (Immersed Tube Tunnel), elevating the grades through the tunnel section and the depressed SR 520 interchange sufficiently to eliminate the "boat section", and creating left hand on/off ramps from SR 520 mainline to the Montlake Cut section. Option M still requires substantial lengths of cut-and-cover tunnel each side of the water crossing. Because of the introduction of the new tunnel concept, the ITT, the Cost Review Panel specifically evaluated the constructability, risk, and costs associated with this concept.

Findings

- By changing tunnel concepts and raising roadway grades to eliminate the "boat section", Option M trimmed nearly $700 million from Option K expected costs, but the cost differential between Option A+ and M is still significant (approximately $1.2 billion).
- Option A+ still fits within the cost range for Option A (base costs plus sub-options).
- Options A+ and M have comparable expected costs except for the Montlake Interchange segment. The primary cost difference between A+ and M results from differences in complexity of construction as well as the volume of materials consumed or excavated in the construction of the options. See the enclosed table for highlights of the cost differences.
- By eliminated the "boat section", Option M has significantly reduced one element of risk related to permitting, but there remain significant risks related to construction permits for the ITT in the Montlake Cut.
- Costs for Option M in the Montlake section divide into approximate thirds. One-third of the expected cost is for tunnels, one-third is for the depressed interchange, and one-third includes a variety of cost items such as right-of-way purchase, the construction of miscellaneous components like the Pacific/Montlake Lid, and engineering development costs.
- Although the A+ and M options have only been developed to approximately 10% of final engineering and unknowns remain, the Westside Cost Review Panel is confident that major costs have been appropriately accounted for. Given that Option M represents considerably more

construction volume and complexity than Option A+, we do not see a way to materially reduce the $1.2 billion cost differential between the two options.

- While there are operational differences between Options A+ and M, the overall traffic performance of both options on the mainline is similar.
- Were Option M to be included in the environmental process, it would likely delay the Supplemental Draft EIS (SDEIS) by 6 months. The final Record of Decision (ROD) would likely be delayed by 12–24 months.

Highlights of Cost Differential between Options A+ and M at Montlake

Option Comparisons in the Montlake Cut Segment		
Cost Components	**Option A+ Costs ($M)**	**Option M Costs ($M)**
Construction Cost Components		
Interchange		
Structures (lids, walls, bridges, etc.)	$104	$442
Miscellaneous Highway Construction	$110	$154
Subtotal for Interchange Construction	$214	$596
Montlake Cut Crossing		
Bascule Bridge (244 ft)	$81	
Cut-and-Cover Tunnels (1575 ft)		$452
Immersed Tube Tunnel (350 ft)		$102
Subtotal for Tunnel Construction		$554
Other Highway Construction		
Structures (lids, walls, etc.)		$39
UW Parking Allowance		$126
Misc Highway/Roadway Components	$28	$89
Subtotal for Other Highway Construction	$28	$254
Subtotal Construction for Montlake Crossing	$109	$808
Total Estimated Construction Cost	$323	$1404
Right-of-Way, Mitigation, and Engineering	$125	$396
Total Estimated Segment Cost	**$448**	**$1800**

Key observations from the table include:

- The tunnel across the Montlake Cut is composed of two tunnel types, an ITT with "Cut-and-Cover" tunnels at each end. The combined tunnel cost (including inflation and risk) accounts for slightly less than 1/3 ($554 million) of the $1.8 billion cost of the Montlake segment for Option M.
  - The cut-and-cover tunnel sections account for approximately 80% of the total tunnel costs through the Montlake Cut. While, whereas the ITT only accounts for 20%.
- The Montlake Interchange accounts for approximately 1/3 of the $1.8 billion segment cost for Option M ($596 million).
- Of the remaining $650 million of $1.8 billion cost for Option M, $396 million includes right-of-way purchase and engineering development costs. Approximately $254 million includes roadway work (not already accounted for), a lid at Pacific and Montlake, and work at the University of Washington.

- The Cost Review Panel conducted an independent evaluation of ITT construction costs. Our evaluation yielded base costs (before inflation and composite risk factor) that differed by less than 1% from the base costs prepared by the SR 520 project team. The expected cost of the ITT is comparable with similar installations in the US.
- The Panel also compared expected costs for the cut-and-cover tunnel section of three project segments: Option M, Option K, and the Alaskan Way Viaduct. All three sections were of comparable length and carry comparable expected costs. On that basis, we believe that the cut-and-cover costs are fairly represented.

As noted earlier, the Cost Review Panel does not see a way to further reduce the cost of Option M by a substantial amount. Further, the Panel is concerned that given the range of probable costs for Option M, it is unlikely to fit within the legislatively established budget for the project. As shown in the figure below, the most likely cost projection for Option M carries a price tag of $2.65 billion which exceeds the west side budget ($2.15 billion) by $500 million. This optimistic number only has a 10% probability of occurrence. In other words, it has a 90% probability of being exceeded.

IV. Financial Strategy

The Workgroup spent several meetings discussing the financing options available to meet the $4.65 billion funding target. They first discussed the current financial commitments for the program and the remaining funding gap. The commitments are summarized below:

A. Current Financial Plan and Remaining Gap

SR 520 Bridge Replacement and HOV Program — Program Costs and Existing Funding

	FISCAL YEARS		AMOUNT
PROGRAM NEED			
Overall Program Cost	Thru FY 2031		$4.65 B
Less: Deferred Payment of Sales Tax[1]			($0.30 B)
Program Cost during Construction Period	Thru FY 2017		$4.35 B
CURRENTLY FUNDED: FLOATING BRIDGE & LANDINGS			
Floating Bridge & Landings	Thru FY 2017		$2.11 B
Paid from Toll Bond Proceeds (SR 520 Account)		$0.33 B	
Paid from Federal Bond Proceeds (SR 520 Account)		$0.66 B	
Paid from All Other Funding Sources		$1.23 B	
Less: Deferred Payment of Sales Tax[1]			($0.11 B)
Program Cost during Construction Period			$1.99 B
PROGRAM FUNDING GAP			**$2.36 B**

[1] Paid from toll revenues over fiscal years 2022-2031

B. Financing Options Considered

Tables 1A and 1B were provided to the Workgroup to identify the sources and possible revenue generation that could be achieved using each source. These tables outline the feasible sources that were identified. The Workgroup also reviewed the tolling scenarios considered by the Legislature's Joint Transportation Committee and the ability of each scenario to fill the $2.36 billion gap. Some tolling options could fill the entire gap without additional revenue. However, the Workgroup recommended that tolling beyond early SR 520 tolling and I-90 high occupancy lane tolling only be considered after other revenue sources were pursued.

C-040
05/26/2011 13:28 PM
SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only

TABLE 1A: SR 520 Bridge Replacement and HOV Program — Committed Funding Sources — FB&L

	Funding Sources	Authorizing Entity	Actions Necessary to Implement	Assumptions & Comments	Funding Committed ($ Millions)
State & Federal	State: Motor Vehicle Account	State	Funds already expended	Previously established contribution.	$3 M
State & Federal	State: Nickel & TPA Packages	State	Nickel funding already expended. TPA funding partially expended; no action required for remaining commitment.	Amounts established in 2003 and 2005, remaining funding provided as given in the 2009/11 Transportation Budget.	$551 M
State & Federal	Federal: Bridge & STP Program Funding Bond Proceeds (SR 520 Account)	State & Federal	None required for current commitment	• Bond proceeds portion of the "Risk Pool" Federal funding • Financing Assumptions: - Triple pledge "GO" bonds; Coverage = 1.0x - 6.0% interest rate - Bond proceeds in FY 2013-16; Interest paid thru FY 2023	$658 M
State & Federal	Federal: Bridge Program & Risk Pool Remainder	Federal	None required for current commitment	• Includes $108 M in Federal Bridge Program funding provided by the Legislature in 2007. • Includes $118 M from the "Risk Pool" funding not pledged to bond repayment.	$226 M
State & Federal	Federal: Other Future Funding	Federal	Funds already expended	Previously established contribution.	$10 M
Tolling	SR 520 Account: Scenario 7 Pay-As-You-Go Tolls Scenario 7 Toll Bond Proceeds	State	Established with ESHB 2211; none required for current commitment used for Floating Bridge and Landings	• Combination of toll revenues (pay-as-you-go) and toll bond proceeds • Variable Toll Schedule, Single Point Tolling, HOV 3+/Transit Exempt • Pre-completion tolling FY 2011-16; post-completion Fy 2017 forward • PM Peak Period Tolls (2007 $s): - Pre-completion = $3.25; Post-completion = $3.80 • Financing Assumptions: - 30 year triple pledge "GO" bonds; Coverage = 1.25x - 6.0% interest rate (6.5% on zero coupon bonds) - Bond proceeds in FY 2011-13; Interest paid thru FY 2042	$551 M
Regional & Local	No regional or local funding sources have been committed to the SR 520 Program.	N/A	N/A	N/A	N/A
	Total				**$1,999 M**

NOTE: COMMITTED FUNDS ROUNDED TO THE NEAREST MILLION

For Internal Use Only -- 05/26/2011 14:11 PM
Page 996

C-040
05/26/2011 13:28 PM
SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only

TABLE 1B: SR 520 Bridge Replacement and HOV Program — Potential Funding Sources

	Funding Sources	Authorizing Entity	Actions Necessary to Implement	Assumptions & Comments	Funding Range ($ Millions) Low — High
State & Federal	State: NEW	State	New legislation	JTC study looking at options, report due December 2009	N/A
	Federal: TIGER Grant	Federal	USDOT selection for funding	Grant proposal for $300 million submitted in September 2009. Matching funds required. SR 520 Legislative WG recommends range of $30-50 M.	$30 M to $50 M
	Federal: NEW	Federal	New federal authorization bill and potentially annual appropriation(s) legislation	Viaduct rec'd earmarks totaling $220 million. Average earmark in last authorization was $3.7million. Reauthorization like in 2010 or 2011. Assume high is similar earmark goal as Viaduct	$5 M to $220 M
Tolling	Scenario 7 Tolls: Uncommitted Toll Funding Potential INCREMENT	State	Amend ESHB 2211, section 2, to allow funds for use the Eastside and West Side projects	Unused toll funding from Scenario 7 beyond what has been allocated in the SR 520 Account; same tolling and financing assumption apply as committed Scenario 7 toll funding.	$400 M to $500 M
	Higher SR 520 Tolls INCREMENT	State	Commission to set toll rates; Legislature to appropriate expenditure authority	• Pre-completion tolling FY 2011-16; post-completion FY 2017 forward • PM Peak Period Tolls (2007 $s): - Pre-completion = $3.80; Post-completion = $5.35 • Variable toll schedule; single point tolling at bridge mid-span • HOV 3+ / transit exemption maintained	$0 M to $220 M
	SR 520 Segment Tolling INCREMENT	State	Commission to set toll rates; Legislature to appropriate expenditure authority	• SR 520 tolling begins in FY 2011. • Short trips on either side of bridge tolled beginning in FY 2017. • PM Peak Segment Toll (2007 $s) = $0.80	$0 M to $75 M
	I-90 Express Toll Lanes INCREMENT	State / Federal	New legislation and federal approval	• HOT lanes on I-90 open in FY 2017. • 2 HOT/Express Toll Lanes with dynamic pricing & 2 GP lanes each way • 1 HOT between I-405 & Issaquah • Max I-90 toll (2007 $) = $0.95 per mile • Some toll funding needed for I-90 lane improvements & toll equipment	$0 M to $250 M
	I-90 Bridge Tolling INCREMENT	State / Federal	New legislation and federal approval	• I-90 tolling begins FY 2017. • Post-completion tolling only on I-90 • I-90 PM Peak Period Toll (2007 $s): - Post-completion (FY 2017-46): $3.25 • Variable Toll Schedule; HOV/Transit Exempt; tolling west of Mercer Island	$0 M to $1,570 M
Regional & Local	TBD Vehicle License Fee: NEW	Cities / King County	Up to $20 annual fee jurisdiction-wide does NOT require voter approval: $21-$100 fee requires voter approval (jurisdiction-wide or subset)	• Cities: Seattle, Bellevue, Redmond, Kirkland, Medina, Clyde Hill, Hunts Point and Yarrow Point • $20 VLF = $12.6 M per year; $100 VLF = $63.2 per year • 1:12 Bonding Ratio • Funding available as early as FY 2012	$150 M to $750 M
	TBD Sales & Use Tax: NEW	Cities / King County	Up to 0.2% sales and use tax (currently limited to 10 years); requires voter approval	• Cities: Seattle, Bellevue, Redmond, Kirkland, Medina, Clyde Hill, Hunts Point and Yarrow Point • Sound Transit's sales tax revenue forecast thru 2040 is down 5.3% for 2009 • The recession & projections for recovery = uncertain forecasts	N/A
	TBD Property Tax: NEW	Cities / King County	Property tax as excess levy for capital, or a 1 year excess levy;requires voter approval	• Cities: Seattle, Bellevue, Redmond, Kirkland, Medina, Clyde Hill, Hunts Point and Yarrow Point • $0.05 / $1000 = $8.1M; $0.13 / $1000 = $22.7 M • 1:12 Bonding Ratio • Funding available as early as FY 2012	$100 M to $270 M
	TBD Comm & Industrial Impact Fee: NEW	Cities / King County	Impact fee jurisdiction-wide; voter approval NOT required	This revenue source has not yet been used for a TBD. Calculation would be based on future development; not a very predictable revenue source.	N/A
	Motor Vehicle Excise Tax (MVET): NEW	King County	Voter approval to form a King Count Regional Transportation Investment District (RTID)	• 0.1% annual tax based value of registered vehicles in King County • Assumed to start in FY 2012 • 1:12 Bonding Ratio	$155 M to $185 M

NOTE: SOURCES OF FUNDS ARE NOT NECESSARILY ADDITIVE; FUNDING RANGES BASED ON REVENUE POTENTIAL, NOT FINANCING ASSUMPTIONS

For Internal Use Only -- 05/26/2011 14:11 PM
Page 997

SR 520 Bridge Replacement & HOV

Scenario	Strategy / Description	Tolling Phase/Dates	Varia SR
SR 520 General Purpose Lane Tolling Only			
7	Toll only SR 520 during pre-completion at lower toll rates and during post-completion at medium toll rates.	Pre-Completion: FY 2011-16	$0. $3
		Post-Completion: FY 2017 forward	$0. $3
6*	Toll only SR 520 during pre-completion at medium toll rates and during post-completion at highest toll rates tested.	Pre-Completion: FY 2011-16	$1. $3
		Post-Completion: FY 2017 forward	$0. $5
6.1*	Toll only SR 520 during pre-completion at medium toll rates and during post-completion at highest toll rates tested.	Pre-Completion: FY 2011-16	$1. $3
		Post-Completion: FY 2017 forward	$0. $5
1	Toll only SR 520 during post-completion phase at medium toll rates.		
		Post-Completion: FY 2017 forward	$0. $3
2	Toll only SR 520 during pre- and post-completion phases at lowest toll rates tested.	Pre-Completion: FY 2011-16	$1. $2
		Post-Completion: FY 2017 forward	$1. $2
5	Toll only SR 520 during post-completion at a fixed/flat toll rate.		
		Post-Completion: FY 2017 forward	Fixed/ = $
SR 520 General Purpose Lane Tolling + Dual I-90 Express Toll Lanes (FY 2017 forward			
10*	Toll SR 520 during pre-completion at medium toll rates, post-completion at highest toll rates tested; add post-completion HOT lanes on I-90.	Pre-Completion SR 520 only: FY 2011-16	$1. $3
		Post-Completion on Both Bridges: FY 2017 forward	$0. $5
15**	Toll SR 520 during pre-completion at lower toll rates, post-completion at medium toll rates; add post-completion HOT lanes on I-90.	Pre-Completion SR 520 only: FY 2011-16	$0. $3
		Post-Completion on Both Bridges: FY 2017 forward	$0. $3

NOTES:

1 Assumes variable-rate tolling, where tolls vary by time of day according to a fixed schedule, except as no
2 On SR 520, segment tolls apply to short trips on corridors east and west of the main bridgespan; on I-90
3 Transit vehicles are assumed to exempt except in Scenario 6*.
4 Ability to meet the $4.65 B SR 520 program cost based on existing non-toll funding; note that scenarios
○ = more than $1.5 B short; ◔ = $1.0 to 1.5 B short; ◑ = $0.5 to 1.0 B short; ◕ = less than $0.5 B sho
* Modified to reflect current assumptions regarding start dates, toll collection points and/or exemptions.

SR 520 Bridge Replacement & HOV Pr

Scenario	Strategy / Description	Tolling Phase/Dates	Variable To SR 520
SR 520 + I-90 General Purpose Lane Tolling			
13*	Toll SR 520 and I-90 during pre- and post-completion at lower toll rates; I-90 pre-completion tolling begins FY 2014.	Pre-Completion SR 520: FY 2011-16 & I-90: FY 2014-16[4]	$0.75 to $3.25
		Post-Completion on Both Bridges: FY 2017 forward	$0.75 to $3.25
14**	Toll SR 520 and I-90 during pre-completion at lower toll rates and post-completion at medium toll rates; I-90 pre-completion tolling begins FY 2014.	Pre-Completion SR 520: FY 2011-16 & I-90: FY 2014-16	$0.75 to $3.25
		Post-Completion on Both Bridges: FY 2017 forward	$0.75 to $3.80
11*	Toll SR 520 and I-90 during pre-completion at medium toll rates, and during post-completion at highest toll rates tested.	Pre-Completion on Both Bridges: FY 2011-16	$1.50 to $3.80
		Post-Completion on Both Bridges: FY 2017 forward	$0.95 to $5.35
12	Toll SR 520 during post-completion at lower toll rates and during post-completion at higher tolls; toll I-90 during post-completion at lower toll rates.	Pre-Completion SR 520 only: FY 2011-16	$0.75 to $3.25
		Post-Completion on Both Bridges: FY 2017 forward	$0.75 to $4.20
4*	Toll only SR 520 during pre-completion at lower toll rates; add I-90 tolling during post-completion at lower toll rates.	Pre-Completion SR 520 only: FY 2011-16	$0.75 to $3.25
		Post-Completion on Both Bridges: FY 2017 forward	$0.75 to $3.25
3	Toll SR 520 and I-90 only during post-completion phase at lower toll rates.		
		Post-Completion on Both Bridges: FY 2017 forward	$0.75 to $3.25
8	Toll SR 520 and I-90 only during post-completion, with higher tolls on SR 520 and lower tolls on I-90.		
		Post-Completion on Both Bridges: FY 2017 forward	$0.75 to $4.20
9	Toll SR 520 and I-90 during pre- and post-completion at lowest toll rates tested.	Pre-Completion on Both Bridges: FY 2011-16	$1.00 to $2.95
		Post-Completion on Both Bridges: FY 2017 forward	$1.00 to $2.95

NOTES:

[1] Assumes variable-rate tolling, where tolls vary by time of day according to a fixed schedule, except as noted in

[2] On SR 520, segment tolls apply to short trips on corridors east and west of the main bridgespan; on I-90, half o

[3] Transit vehicles are assumed to exempt except in Scenario 6*.

[4] Ability to meet the $4.65 B SR 520 program cost based on existing non-toll funding; note that scenarios with I-9
○ = more than $1.5 B short; ◔ = $1.0 to 1.5 B short; ◑ = $0.5 to 1.0 B short; ◕ = less than $0.5 B short; ●

* Modified to reflect current assumptions regarding start dates, toll collection points and/or exemptions.

V. Public Outreach

The public was provided many opportunities to provide comment to the Workgroup throughout the process. Below is a summary of the public opportunities as well as a summary of the feedback the Workgroup received on their draft recommendations.

A. Public Outreach Opportunities

- All Workgroup, Westside Subgroup and Working Session meetings were open to the public.
- Several meetings were broadcast by TV-W or the Seattle Channel.
- E-mail notifications were sent prior to all meetings using the SR 520 program and Workgroup public e-mail list (3800 e-mail addresses), as well as a list of key jurisdictional, regulatory and legislative individuals.
- Media advisories were sent prior to all meetings.
- Development and maintenance of the Legislative Workgroup Web site, including access to all materials presented during the meetings.
- Set-up and maintenance of a Workgroup phone number and e-mail address to accept comments.
- Open Community Forum was held on the eastside to provide the public with information on the process and information available mid-way through the process.

B. Draft Recommendations Outreach

The Workgroup hosted a Town Hall meeting on November 24, 2009 that provided the public an opportunity to review information developed during the process and specifically comment on the Draft Recommendations. There were 115 people who attended the meeting and 28 individuals gave verbal comments. In addition to the public meeting the Workgroup also gained input from:

- On-line comment form at the Workgorup Web site.
- Seattle City Council's Committee of the Whole meeting held on November 24, 2009.

C. Summary of Public Outreach Comments

The comments were reviewed and categorized into a simple database. All of the verbatim information is available in the Appendix. In summary, a total of 479 individuals provide public comment during the draft recommendations comment period from November 20 – December 4th. These included:

- 71 people provided oral comments at the Workgroup Town Hall and the Seattle City Council's Committee of the Whole meetings.
- 377 individuals completed the online comment form.
- 31 people submitted handwritten or e-mailed comments through the Workgroup e-mail.

The comments received were distributed over a wide area with the largest concentration from the Montlake zip code totaling 217 individual responses.

Comments on Westside A+ Design Recommendation

A total of 427 comments were received related to the design. They fell into three general categories below. Some excerpts from some of the comments are included to give a sampling of the types of comments that were received.

Opposition to Option A+ (291 comments)

Neighborhood impacts – noise, proximity of the new bridge to private properties, visual impacts and aesthetics

> "Our homes, our livelihood, our neighborhood livability must be of the utmost priority in the selection of your final plan."

Traffic and mobility impacts

> "It further splits the Montlake neighborhood, ...Adding a second bridge next to the existing Montlake Bridge will destroy housing and forever change the demeanor of a wonderful family neighborhood."
>
> "reduces values in the Montlake area due to noise and obstruction"

Impacts of a ramp connections to Lake Washington Boulevard

> "Please avoid adding ramps to Lake Washington Boulevard and take out the existing ones . . . return this historical park road back to its original intent"
>
> "Traffic should be put on Montlake Blvd. and 23 Avenue, a city street where it belongs"

Some comments mentioned the preference for other Options. Of the 66 who commented, 45 indicated a preference for Option M.

Support for Option A+ (88 comments)

Cost

> "Option A+ has best design, and gets the job done within reasonable cost."

Transit/mobility

> "This option...coordinates well with the City of Seattle's objectives to encourage more people to use transit and HOV as a mode of travel."

Environmental Impacts

> "It seems to me that all the tunnel options are destructive of the Arboretum."

Support for A+ but prefer no Lake Washington Boulevard Ramps

> "Generally, I we agree with the A+ Option and reject categorically the exorbitant environmental and financial costs of the other options listed. Nonetheless we have reservations about the new Arboretum ramps to replace the Ramps to Nowhere."

No Preference Identified (57 comments)

- Consider eight or more lanes to accommodate future population growth
- Select an option that will accommodate future light rail
- Keep the Montlake Freeway Transit Stop in the new design

Comments on Financing Strategies Recommendation

A total of 257 comments were received related to the Workgroup's financing recommendations. The comments primarily related to tolling with a few other remarks. The majority (143 comments) supported using additional tolling options to finance the new SR 520 corridor. The themes identified that tolling encourages increased transit use and improves mobility; it is a fair method to increase revenues; and it is a realistic and reliable solution. These respondents have different opinions about what to charge and when to enact tolling on additional roads and under what circumstances. However, they agree on the solution of additional tolling to address the funding gap. Those opposed to tolling cite that it is unfair and that taxes should be the primary way to fund transportation improvements.

Tolling (188 comments)

- Consider additional Tolling

  "I think you should go forward with tolling of both routes fully and right away"

  "The only way for the cross-lake transportation system to properly work is to toll both 520 and I-90"

  "Toll 520 and I-90! Those who use these roads should pay for 100% of the funding gap"

  "Tolling on 520 and I-90. Whatever closes the gap fastest so the work can be started"

- Do not consider Tolling (45 comments)

  "Tolling I-90 to pay for 520 is dubious in my mind"

  "I would rather see a gas tax added. This would encourage people to use less fuel and move to mass transit"

Other remarks

- Support for pursuing maximum state and federal funding opportunities
- The vulnerable section of the bridge should be the only segment replaced until future funds become available to pay for the project.

Other Comments for Workgroup consideration

A total of 226 comments were received in this section. Nearly half (106 comments) focused on moving the project forward. Respondents noted the time already invested in the SR 520 program and the need to address the safety issues. Many comments were a summary of remarks already made related to the Design and Financing recommendations. However, while respondents want a decision made to improve the safety and traffic conditions of the corridor, there were varying responses as to what that design decision should be.

"Let's get this project going. Seattle has now been declared to have the worst traffic in the nation"

"I urge you to get this project moving along...We need mobility in this region...We need the project to continue moving forward"

"Please consider better options to mitigate traffic around the exit and entrance ramps of 520 into neighborhoods"

"Build only what you can afford to build with the money available"

"Replacement of 520 is predicated on safety first and foremost. Fund that with presently available money and retrofit the existing bridge"

D. Jurisdictional and Agency Letters Received

The following are individual letters that were received related to the Workgroup recommendations.

Seattle City Council

December 4, 2009

Members of the SR 520 Legislative Work Group:

We understand that in accordance with ESHB 2211, you have arrived at a set of recommendations related to the financing and west side design of the SR 520 Bridge Replacement and HOV Project. On November 24, the City Council was briefed by WSDOT staff on your review process and findings. In conjunction with the briefing, the Council listened to public comment from hundreds of individuals later that morning. After many years of deliberating over the future of the SR 520 corridor, we share your interest in arriving at a preferred design alternative and financing model that will move this project forward expeditiously.

In the coming weeks, the City of Seattle will thoroughly review the Work Group's recommendations and compare them to the Council's preferences as stated in previously passed resolutions. It is our intent to provide the Governor and State Legislature with our perspective on your work as well as the progress made in the last several years by WSDOT and the impacted communities in Seattle. The City has on several previous occasions articulated financing and design guidance to the State with regard to the SR 520 project. We will be reviewing your recommendations in the context of these prior policy positions.

As you are aware, the City is currently in a period of transition. With Mayor-elect Mike McGinn and Councilmembers-elect Sally Bagshaw and Mike O'Brien taking office in early January, we believe it is appropriate and necessary to engage these newly elected officials on the SR 520 project before issuing a statement on the Work Group's recommendations. Assessing the ongoing concerns being voiced by community members from neighborhoods adjacent to the SR 520 corridor will also take us beyond your final Work Group meeting on December 8. We intend to provide comments and recommendations early in the 2010 Legislative Session.

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http://www.cityofseattle.gov/council
An EEO employer. Accommodations for people with disabilities provided upon request.

Thank you for taking time to review the west side design alternatives for the SR 520 project. This is a critical piece of transportation infrastructure not only for our region but the entire state. We look forward to discussing this project with you and your colleagues in the State Legislature in the weeks and months ahead.

Sincerely,

Council President Richard Conlin

Councilmember Jan Drago
Chair, Transportation Committee

Councilmember Tim Burgess

Councilmember Sally J. Clark

Councilmember Jean Godden

Councilmember Bruce Harrell

Councilmember Nick Licata

Councilmember Richard J. McIver

Councilmember Tom Rasmussen

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City of Yarrow Point

Town of Yarrow Point

November 24, 2009

The Honorable Rodney Tom, Co-Chair
The Honorable Scott White, Co-Chair
SR 520 Legislative Work Group
600 Stewart Street, Suite 520
Seattle, WA 98101

Attn: Ms. Barb Gilliland, Work Group Administrator

Re: Support for a west side design option for replacement of the SR 520 Bridge that keeps the project on schedule and within budget, ensures safety, and moves forward on Eastside projects

Dear Senator Tom and Representative White:

We are writing to you as Mayors of Eastside cities that will be significantly impacted by the decisions made by the SR 520 Legislative Work Group and the State of Washington for replacing the bridge and rebuilding the SR 520 corridor. We believe this project must be viable and affordable, and provide for the safety and mobility of the residents, employees, freight-haulers and transit users that depend on a well-functioning SR 520 corridor.

The following key principles reflect our priorities for the SR 520 Bridge Replacement and Corridor Improvement Project:

- SR 520 is a vital corridor not only for our region but for the State of Washington. It has major safety, seismic and mobility deficiencies. The State cannot afford further delay in replacing the bridge and completing the corridor. Loss of the bridge would be devastating to the State's economy.
- The new bridge must be the six-lane configuration (four general purpose and two HOV) previously agreed to by the Legislature.
- The State needs to ensure completion of the SR 520 Bridge and corridor by 2016 – which means moving forward in 2010 with the bridge and the Eastside transit and HOV projects.

- The State needs to make a decision on the west side design that can be constructed within the financial constraints of the project budget; the Legislature set a cap of $4.65 billion for the SR 520 project and financing even that amount will be challenging.

In light of these key principles, we believe Option A+ is the only viable and affordable option for the west side design of the project. With this letter, we underscore our strong support for this option and the November 17 recommendation of the SR 520 Legislative Work Group for Option A+.

Sincerely,

Grant Degginger
Mayor of Bellevue

George Martin
Mayor of Clyde Hill

Fred McConkey
Mayor of Hunts Point

James Lauinger
Mayor of Kirkland

Mark Nelson
Mayor of Medina

John Marchione
Mayor of Redmond

David Cooper
Mayor of Yarrow Point

King County Council Motion

King County

KING COUNTY

Signature Report

November 23, 2009

Motion 13095

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Proposed No. 2009-0610.2 **Sponsors** Hague, Gossett and Lambert

A MOTION expressing King County's support for a preferred design of the State Route 520 bridge replacement and high-occupancy vehicle program.

WHEREAS, the State Route 520 bridge is a vital transportation corridor between job centers and growing communities around Lake Washington, carrying about one hundred fifty-five thousand people per day, and

WHEREAS, the State Route 520 bridge is heavily congested during morning and afternoon commute times, carrying twice as many vehicles as it was originally planned to, and

WHEREAS, the State Route 520 bridge was built in the early 1960s, without the benefit of modern design and safety standards, and the structure's age and condition make it vulnerable to seismic events or windstorms, and

WHEREAS, the state and the region have been studying the potential replacement of the State Route 520 bridge for several years and have identified State Route 520 bridge replacement and high-occupancy vehicle ("HOV") program options to replace the existing floating bridge, enhance safety and provide transit and roadway improvements

throughout the corridor, with a total cost capped at four billion six hundred fifty million dollars, and

WHEREAS, the eastside transit and HOV project design components of the State Route 520 bridge replacement and HOV program have been agreed upon and are ready to move forward, and

WHEREAS, in 2009 the state Legislature created the State Route 520 Legislative Workgroup to recommend a preferred westside design option to the Legislature by December 2009, and

WHEREAS, five westside design options are currently under consideration by the legislative workgroup, and

WHEREAS, the impact on transit operations of the westside design options should be highlighted for the legislative workgroup's consideration, and

WHEREAS, King County Metro transit service will play a key role in accommodating future growth and demand in the State Route 520 corridor, and this service is crucial to making the new bridge and HOV program work for the communities on both sides of the lake both now and in the future, and

WHEREAS, the state Legislature recently provided King County with the authority to levy a property tax that would support expanded transit service in the State Route 520 corridor as envisioned in the federal urban partnership, which will help meet growing demand for transit service in the corridor. The metropolitan King County council, as part of its 2010-2011 biennial transit budget deliberations, has levied this property tax in a tax-neutral manner, and

WHEREAS, all of the westside design options include the removal of the Montlake freeway bus station, which will adversely affect capacity through the corridor unless an estimated three to five million dollars annually is provided to offset this loss, and

WHEREAS, the King County department of transportation stated its preference, at an October 8, 2009, State Route 520 Legislative workgroup meeting, for option A with specific suboptions as the best means of meeting the transit design needs, and

WHEREAS, the cost estimate for westside design option A with suboptions most closely aligns with the total program cost identified by the state in comparison to all the other design options, and

WHEREAS, it is in the county's best interests if the legislative workgroup recommends an option that meets the needs of transit now so that the project can move forward on schedule without further delay and allow for a final decision on westside design options by the state Legislature in 2010, and

WHEREAS, the SR 520 Legislative Workgroup on November 17 recommended that the A+ Hybrid Option be advanced for review in the supplemental draft environmental impact statement, and

WHEREAS, the Eastside Transportation Partnership has expressed support for this proposed motion and the A+ Hybrid Option;

NOW, THEREFORE, BE IT MOVED by the Council of King County:

A. King County supports a State Route 520 bridge replacement and HOV program design that is most affordable and includes the following transit design components for the westside:

1. An eastbound and westbound HOV direct access ramp such as included in the option currently defined as the A+ hybrid;

2. Bus layover space, passenger facilities and transit priority in the Montlake triangle and bridge area in the vicinity of Husky Stadium;

3. Lake Washington Boulevard ramps to the eastbound State Route 520 and from westbound State Route 520;

4. An eastside bus station designed to accommodate buses passing each other; and

5. Compensation to King County Metro in the form of an ongoing operating subsidy for the loss of direct service to the University District with the removal of the Montlake Freeway bus station.

B. King County supports the A+ Hybrid option because of its compliance with

cost and transit connectivity requirements, and ability to improve overall mobility in the region.

Motion 13095 was introduced on 11/9/2009 and passed as amended by the Metropolitan King County Council on 11/23/2009, by the following vote:

Yes: 9 - Mr. Constantine, Mr. Ferguson, Ms. Hague, Ms. Lambert, Mr. von Reichbauer, Mr. Gossett, Mr. Phillips, Ms. Patterson and Mr. Dunn
No: 0
Excused: 0

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

Dow Constantine, Chair

ATTEST:

Anne Noris, Clerk of the Council

Attachments None

City of Kirkland

November 18, 2009

Honorable Senator Rodney Tom, Co-chair
Honorable Representative Scott White, Co-chair
SR 520 Legislative Working Group
600 Stewart Street, Suite 520
Seattle, WA 98101

Dear Senator Tom and Representative White:

Thank you for the work you are doing to determine a solution for the Westside of the SR 520 Bridge Replacement project.

The City of Kirkland supports Option A as the best choice of the options that are currently under consideration. The one important reason for our endorsement is that it is the only option that appears to be within the overall SR 520 project budget. We are concerned that an overly expensive Westside project would reduce the funds available to complete the improvements that have been agreed to for the Eastside. We note that the King County Council, the King County Executive and the Eastside Transportation Partnership also support Option A.

All the options under consideration would remove the heavily used Montlake flyer stop. Therefore, it is critical that service be in place that would tie transfer points at Pacific Avenue and Montlake Boulevard with the Evergreen Point freeway stop regardless of the option that is selected. This service would mitigate the loss of transfer capability that takes place today at the Montlake flyer stop.

Once again, thank you for your hard work on this difficult issue. The prospect of a completed project is exciting and appears to be closer than ever.

Sincerely,
Kirkland City Council

By James L. Lauinger, Mayor

123 Fifth Avenue • Kirkland, Washington 98033-6189 • 425.587.3000 • TTY 425.587.3111 • www.ci.kirkland.wa.us

pscleanair.org
Puget Sound Clean Air Agency

Public Health
Seattle & King County

November 30, 2009

The Honorable Members of the SR520 Legislative Work Group:

We are delighted to present you with a summary of the SR 520 Health Impact Assessment report for your consideration and final report. This Health Impact Assessment was required by Engrossed Substitute Senate Bill 6099. The report's goal is to assist the SR 520 Mediation Group, the Washington State Department of Transportation, and the Washington Legislature in making decisions on the SR 520 project design based upon potential health impacts. Important health issues, from chronic disease and mental well-being to climate change, are closely linked to how our cities are built, including our transportation system.

This report recommends elements that will be important in any alternative selected. These elements include increased and improved options for transit use, bicycling and walking; landscaped roadway lids and green spaces; design features that reflect the communities' resources and aesthetics; and, attention to the health-related impacts from the long construction stage. More specifically, the following recommendations have been made in the SR 520 Health Impact Assessment:

Transit, Bicycling and Walking

More and better transit service, combined with bicycling and walking facilities, will provide multiple health benefits by reducing greenhouse gas emissions and other pollutants and providing opportunities for more physical activity.

1. Increase and improve transit service to meet increased demand, attract more riders, and reduce air pollution
2. Install connected walking and bicycling facilities throughout the corridor
3. Create a common way finding system

Landscaped Lids and Green Spaces

Proposed landscaped freeway lids and green spaces will reconnect neighborhoods, reduce noise, and support vegetation that contributes to better air quality.

1. Include six landscaped freeway lids throughout the full corridor (I-5 to I-405)
2. Use landscaping materials throughout the SR 520 corridor, along adjacent rails and roadways, and at transit stops
3. Improve and preserve the integrity of the Washington Park Arboretum, and the ability of visitors to enjoy it and other green spaces and naturals areas
4. Preserve access to the waterfront for water-related activities

November 30, 2009Design Features

A primary public annoyance with roadways is noise, which can be alleviated with available materials and good design. Art incorporated into transportation corridors can help enhance adjacent neighborhoods' visual character. Storm water management practices are an important strategy to reduce water pollution.

1. Reduce noise throughout the corridor
2. Add to the adjacent communities' visual character with art and design
3. Utilize innovative storm water management practices

Construction Period Management

The SR 520 replacement is expected to require seven or more years to build. The construction period can produce detrimental health effects due to exhaust emissions, congestion, and longer travel times.

1. Reduce construction-related pollution
2. Increase traffic management
3. Provide for construction noise control

Health Impact Assessment Project Guiding Principles

Ensure health elements are integral to the project plan

Support all recommendations even in difficult budget times for optimal health benefits

We recommend the final design should be selected based on which option can most effectively and efficiently incorporate all of the health elements into its specific design. All of these elements are integral to the project and only through incorporating these measures will the air quality and health benefits be fully realized. More specific recommendations are shown in the full report available at http://www.kingcounty.gov/healthservices/health/ehs/hia.aspx. A hard copy of the report is also available.

The Puget Sound region has a unique opportunity to rebuild a SR 520 corridor that helps to create healthy places to live, work and play while moving people throughout the region. We would be happy to answer any questions you have about the report and would welcome an invitation to present this report to you. We hope to be able to work you with on more transportation planning projects in the future.

Sincerely,

David Fleming, MD
Director & Health Officer
Public Health – Seattle & King County

Dennis McLerran
Executive Director
Puget Sound Clean Air Agency

SOUNDTRANSIT

November 13, 2009

Senator Rodney Tom
Co-chair, SR 520 Legislative Workgroup
220 John A. Cherberg Building
PO Box 40448
Olympia, WA 98504-0448

Representative Scott White
Co-chair, SR 520 Legislative Workgroup
321 John L. O'Brien Building
PO Box 40600
Olympia, WA 98504-0600

Dear Senator Tom and Representative White:

This is in regard to your concern about how the SR 520 Westside Options serve transit and light rail riders at the Montlake Multimodal Center.

Sound Transit, King County Metro, WSDOT and the University of Washington worked diligently to develop a high capacity transit plan and a Montlake Multimodal Center Plan that were responsive to each of the three alternatives being developed for the Westside Montlake interchange. Our analysis determined that none of the alternatives denied transit accessibility or the ability to make a direct connection to the Montlake Multimodal Center in the Montlake "triangle" area and the new Sound Transit light rail station. We also recognize that there are different transit markets in question: those traveling across SR 520; those utilizing SR 520 to access the University of Washington or other destinations in the vicinity; and those transit users crossing the corridor on Montlake Boulevard, whether or not they are making a transfer to a SR 520 route. All the Westside options provide access to local and regional bus service and light rail at the same location, at the Montlake Multimodal Center.

Each is a distinct market and each is affected differently under the various interchange alternatives. Additionally, transit operations are only one of many considerations in making a decision on a preferred alterative. To date we have seen developing analysis from WSDOT as the alternatives have evolved and we look forward to reviewing the final analysis once the alternatives have been fully defined and studied. While we remain committed to working with our partners and the community on transit issues, needs and concerns, Sound Transit will defer commenting on interchange preferences until the full analysis has been conducted and the draft supplemental environmental impact statement is released for comment. Once a preferred interchange design is adopted we will work with WSDOT and our

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CHIEF EXECUTIVE OFFICER
Joni Earl

Central Puget Sound Regional Transit Authority • Union Station
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partners to make sure it is optimized for transit operations to the fullest extent possible.

I look forward to obtaining more information about Option M and how it works for transit. It appears to combine transit, HOV and general purpose traffic into single lane on-and off-ramps to the tunnel under the Montlake Cut. If this is the case I would expect the WSDOT analysis to show the resulting detrimental impact to transit as operations are slowed, resulting in decreased speed and reliability.

Thank you for the opportunity to provide input on the SR 520 project.

Sincerely,

Gregory A. Walker, AICP
Planning and Development Director
Sound Transit

UNIVERSITY OF WASHINGTON

OFFICE OF REGIONAL RELATIONS
Theresa Doherty, Assistant Vice President

November 24, 2009

Senator Rodney Tom
Representative Scott White
Co-Chairs, SR 520 Legislative Workgroup

RE: University of Washington prefers Option A+

Dear Senator Tom and Representative White,

The University of Washington has been an active participate in the ongoing discussions regarding the westside design options currently under review by the SR 520 Legislative Workgroup. As recently as December of 2008 President Emmert wrote the attached letter regarding "A, K and L". This letter, along with letters from each of the other 33 mediation members, was included in a report titled "SR 520 Project Impact Plan" and was submitted to the 2009 Legislature.

While the University of Washington can and will work with any one of the westside design options chosen by the Governor and the Legislature, the University's preference is option A+. Option A+ has the least impact on our resources and assets. It is preferred by our transit partner King County Metro because it provides the best transit connectivity on the local roadways and as Metro's largest client; we want an option that works for them. Option A+ causes less environmental damage to the Washington Park Arboretum which is both a City park and a research laboratory for our faculty and students and managed jointly by the University and the City. Lastly, we are very concerned about rebuilding this critical transportation corridor before Mother Nature takes it out in a winter storm. Option A+ is at or under the budget cap for the project and according to the environmental agencies testifying at recent meetings, it is an option that could be permitted and built.

Thank you for taking the time to hear from your constituents on this critical issue.

Sincerely

Theresa Doherty
Assistant Vice President for Regional Relations

225 Gerberding Hall Box 351243 Seattle, Washington 98195-1243 206/221-2603 FAX: 206/685-1201
tdoherty@u.washington.edu
www.washington.edu/community/

UNIVERSITY OF WASHINGTON

OFFICE OF THE PRESIDENT

Mark A. Emmert, President

December 23, 2008

Governor Christine Gregoire
Joint Transportation Committee

RE: SR 520 Project Impact Plan

Dear Governor Gregoire and Legislative Members of the Joint Transportation Committee:

The University of Washington is a world-class institution that is an essential asset to our community and our state. Granting over 12,000 degrees annually, we have numerous highly rated academic programs, including bioengineering, drama, microbiology, computer science and engineering, medicine, and much more. We win more research funding than any other public university in the nation, more than $1 billion annually. Our partnerships with business and industry have spawned more than 200 startups out of the intellectual property that has flowed from our laboratories and our research. Additionally, the University is home to one of the top ten hospitals in the nation, serving all patients regardless of where they come from or their socioeconomic background.

The University is also a national leader in environmental stewardship. Through our aggressive Transportation Management Plan more than 75 percent of the campus population commutes to campus in a greener mode than driving alone. Despite a 24 percent growth in employee and student population since 1990, today's University-related peak hour traffic remains below 1990 levels. Furthermore, we have committed to reducing greenhouse gases by signing the Seattle Climate Partnership Agreement. We are a strong partner in managing the internationally renowned Washington Park Arboretum, which offers recreation and educational opportunities for citizens state-wide.

The State's investment in SR 520 is critical to the region's continued prosperity. SR 520 and its connection to Montlake Boulevard is one of the principal gateways to the campus. But we cannot allow the investment in the SR 520 infrastructure to adversely affect the investment that already exists at the University of Washington. With proper mitigation, we could accept any of the alternatives being considered so long as they:

301 Gerberding Hall Box 351230 Seattle, Washington 98195-1230 206-543-5010 FAX: 206-616-1784

- Allow the University to grow in the future by retaining the building capacity of our property south of Husky Stadium.
- Fund the needed transit service and facility enhancements that result from removal of the Montlake Flyer Stop.
- Maintain the campus parking supply by replacing parking lost due to construction or permanent facilities.
- Do not degrade traffic operations through the Montlake Boulevard corridor.
- Protect the University's assets, including UW Medical Center, Husky Stadium, Washington Park Arboretum, and Waterfront Activities Center.

Attached are the University's comments on the SR 520 Project Impact Plan. These reflect specific elements that we believe need to be included in the various plan options in order to mitigate the project impacts to the University. Any final plan must commit to fully funding mitigation of University concerns. Otherwise, a project meant to solve transportation problems in the region may permanently damage one of the state's greatest assets.

Sincerely yours,

Mark Emmert
President, University of Washington

Enclosures

ATTACHMENT

UNIVERSITY OF WASHINGTON COMMENTS ON THE SR 520 PROJECT IMPACT PLANS

The University of Washington has been an active participant in the SR 520 Mediation process and has considered the questions posed to all 34 members of the SR 520 Mediation Panel.

A. Which west side interchange Option do you prefer and why?
B. Are there changes that could be made to the other Options that would make them more acceptable?

The University has no position regarding a west side interchange option. Any of them could work if properly mitigated to address the UW's concerns. There is no question that Option A has the least impact on University of Washington property. The other two options (K & L) would require extensive mitigation to retain the UW's building capacity and parking in the area south of Husky Stadium. Our mitigation requirements are outlined in these five pages. The final page presents a matrix of our requirements for all three options.

OPTION A REQUIREMENTS:

- **Retain the SR 520 ramps to Lake Washington Boulevard.** WSDOT's analysis shows that eliminating these ramps would increase congestion at the SR 520/Montlake Boulevard Interchange, but would not substantially reduce traffic through the Arboretum.

- **Implement traffic calming through the Arboretum.** The project should provide design treatments in the Arboretum to slow traffic and enhance mobility for non-vehicular modes.

- **Construct the auxiliary westbound lane on SR 520 between the Montlake Boulevard On-ramp and the Roanoke Street/I-5 Off-ramp.** WSDOT's analysis shows that this auxiliary lane would dramatically improve traffic operations of Option A through the Montlake corridor. The lane would require very little additional pavement width on the Portage Bay Viaduct since much of the width would be required for the ramp transitions at each end. The operational benefits of this slight widening warrant including the auxiliary lane in Option A.

- **Construct the second Montlake Bridge.** The second bridge allows transit lanes to be provided across the Ship Canal, which would improve transit reliability to the UW.

OPTION K AND L REQUIREMENTS

- **Retain future building opportunities.** Construction of the new tunnel/depressed roadway south of Husky Stadium must maintain the UW's potential development capacity of that area, which is the largest remaining building area on campus near the Medical Center. Options to maintain development capacity could include relief of development regulations such as increasing the height, reducing set backs and other options. It must also include allowances for future development over and under the tunnel/depressed roadway, and increased cost of building over this tunnel.

1

ATTACHMENT

- **Depress and lid the Montlake Blvd/Pacific Street intersection to accommodate unencumbered, at-grade pedestrian crossings.** Creating a four-leg intersection at the Montlake Boulevard/Pacific Street intersection (the new tunnel connection would be the new east leg) requires that pedestrian crossings be grade-separated. This provides the needed capacity at the intersection and improves pedestrian safety. Unlike other lids in the plan, this lid is required for the system to function and cannot be eliminated as a cost-trimming measure.

- **Replace parking displaced by construction.** Parking that is temporarily eliminated during the multi-year construction period must be replaced prior to construction. There are about 1,600 parking spaces in the stadium area parking lots. Replacement parking could be accomplished with a new parking structure somewhere south of the stadium or elsewhere on the southeast portion of the campus, such as an underground parking facility beneath Rainier Vista, near the Medical Center, or along side the stadium in a tiered garage as initially shown in the stadium renovation drawings completed by HOK Architects.

- **Do not degrade operations on Montlake Boulevard between Pacific Street and Wahkiakum Lane.** The Pacific Street Extension will become the higher-volume route across the Ship Canal. The design should provide a dual-left-turn lane from southbound Montlake Boulevard to eastbound Pacific Street to optimize the capacity and reduce potential queues for this route. This may be accomplished without (or with limited) widening of Montlake Boulevard. Operations with Option K or L should be no worse that expected for the No Build condition.

- **Provide direct access from Pacific Street Extension.** After construction is complete, any vehicular parking facility located south of the stadium must have access to all directions of the Pacific Street Extension. If parking is located in this area during construction, temporary access, including the ability to unload the garage in a timely manner after events, must be retained.

- **Retain pedestrian access to Husky Stadium from new parking facilities.** Replacement parking facilities must retain pedestrian access during construction.

- **Relocate the Waterfront Activities Center, moorage docks and Climbing Rock.**

- **Indemnify UW for potential structural damage to Husky Stadium and historic Canoe House.** Excavation and dewatering in the vicinity of Husky Stadium has the potential to affect the foundation and structural integrity of the stadium. A plan to monitor and remedy potential settling and damage during construction must be developed in association with the UW.

REQUIREMENTS THAT ARE THE SAME FOR ALL OPTIONS

- **Fund improvements recommended by the High Capacity Transit (HCT) Plan.** All three Westside interchange options propose eliminating the Montlake Flyer Stop to decrease the width of I-5 through the Montlake neighborhood. Replacing the function of the Montlake Flyer stop will require significantly increased bus service hours between the Eastside and the University District, as well as improvements to the Montlake Multimodal Center to handle the increase in passengers and transit layover.

- **Implement the Rainier Vista Concept Plan by lowering Pacific Place at Rainier Vista to improve pedestrian movements and accommodate transit layover.** Elimination of the

ATTACHMENT

Montlake Flyer Stop on SR 520 will increase bus transit trips to the UW from the Eastside. Additional bus layover space may be needed to accommodate added bus transit trips. The UW has proposed a plan to lower Pacific Place between Pacific Street and Montlake Boulevard to provide for grade-separated pedestrian crossings as well as to increase the curb space available for transit layover This location would also be a logical transit transfer point due to its proximity to the planned Link Light Rail station.

- **Minimize dust and noise impacts on the UW Medical Center during construction.** WSDOT must develop a plan subject to UW Medical Center (UWMC) requirement to minimize dust and noise impacts on the UWMC. This would be similar to the requirements that UWMC imposes on its own construction, and were also imposed on Sound Transit construction.

- **Retain emergency access to the UWMC from Pacific Street.** The existing driveway to the hospital's emergency unit is located off Pacific Street. Access to and from both directions on Pacific Street must be maintained.

- **Signalize driveway at Montlake Boulevard/Wahkiakum Lane.** Increased capacity across the Ship Canal and increased volumes Montlake Boulevard **would require that the intersection be signalized.**

- **Provide bicycle parking displaced by removal of the Montlake Flyer Stop.** It is expected that removal of the flyer stop will increase bicycle parking in the vicinity of the Sound Transit station.

- **Provide for additional event management staff during construction.** Construction adjacent to Husky Stadium will create confusion for vehicular and pedestrian access. Additional event management and traffic control staff will likely be needed.

3

ATTACHMENT

SR 520 Project – Summary of University of Washington Requirements

Mitigation Element	Alternative		
	A	K	L
Features that Must be Included			
Retain SR 520 ramps to Lake Washington Blvd	✓		
Construct 2nd Montlake Bridge with transit/carpool lanes	✓		
Construct Direct HOV Access Ramps to Montlake Blvd	✓		
Provide two-lane on-ramp with auxiliary lane to westbound SR 520	✓		
Improve transit service and facilities in the vicinity of the Montlake Station	✓	✓	✓
Retain future building opportunities on E-11/E-12 lots		✓	✓
Depress and lid the Montlake Blvd/Pacific Street intersection to accommodate unencumbered, at-grade pedestrian crossings		✓	✓
Replace parking from E-11/E-12 displaced by construction		✓	✓
Provide direct access from Pacific Street Extension to parking replaced in E-11/E-12 lots		✓	✓
Retain pedestrian access to Husky Stadium from new replacement parking facilities in E-11/E-12		✓	✓
Relocate the Waterfront Activities Center, moorage docks and Climbing Rock		✓	
Retain access to Waterfront Activities Center and Climbing Rock			✓
Indemnify UW for potential structural damage to Husky Stadium due to tunnelling and/or trenching		✓	✓
Indemnify UW for potential structural damage to historic Canoe House		✓	
Minimize dust and noise impacts on the UW Medical Center during construction	✓	✓	✓
Retain emergency access to the UWMC from Pacific Street	✓	✓	✓
Do not degrade operations on Montlake Boulevard between Pacific Street and Wahkiakum Lane	✓	✓	✓
Signalize driveway at Montlake Boulevard/Wahkiakum Lane (access to Montlake Parking lot)	✓	✓	✓
Lower Pacific Place at Rainier Vista to improve pedestrian movements and accommodate transit layover	✓	✓	✓
Provide bicycle parking displaced by removal of the Montlake Flyer Stop	✓	✓	✓
Provide for additional event management staff during construction	✓	✓	✓

4

Table of Contents

I. Legislative Workgroup Recommendations Report – December 2009

II. Workgroup Operations

1. Rules & Operating Procedures
2. Workgroup Plan
3. Public Outreach and Engagement Plan
4. Member Roster

III. Workgroup Meetings and Materials

A. Workgroup Meeting #1 - July 29, 2009 11 a.m.-12:30 p.m.
Sound Transit - Union Station
Ruth Fisher Board Room
401 South Jackson Street, Seattle

Agenda Summary
1. Report on ESHB 2211 Requirements
2. SR 520 Program Overview
3. Action Items
   - Election of co-chairs
   - Workgroup operating rules
   - Westside subgroup members
   - Proposed work plan
   - Proposed outreach plan
4. Next Steps

Materials Presented
1. Letter from Governor Christine Gregoire
2. Letter to Governor Christine Gregoire from Paula Hammond
3. Presentation Slides

Meeting Minutes

B. Westside Subgroup #1 - September 15, 2009, 9 a.m.-12 p.m.
Seattle Center Northwest
Fidalgo Room, Seattle

Agenda Summary
1. SR 520 Independent Cost Review
2. Community Presentations on Westside Interchange Options
3. Discussion on Option Refinements
4. Summary of SR 520 Project Environmental Effects
5. Follow-up and Next Steps

Materials Presented
1. Background Materials, I-5 to Medina: Bridge Replacement and HOV Project Transportation and Design Information
2. Option A Community Presentation Materials
3. Option K Community Presentation Materials
4. Presentation Slides

Meeting Minutes

C. Workgroup Meeting #2 - September 22, 2009, 10 a.m. -1 p.m.
Puget Sound Regional Council Board Room
1101 Western Avenue Suite 500, Seattle

Agenda Summary
1. Report on 9/15 Westside Subgroup Meeting
2. Community Presentations on Westside Interchange Options
3. Environmental Regulatory Requirements and Westside Interchange Options
4. SR 520 Independent Cost Review
5. SR 520 Finance Plan Update
6. Process for Developing Recommendations
7. Follow-up and Next Steps

Materials Presented
1. Option A Community Presentation Materials
2. Option K Community Presentation Materials
3. Option L Community Presentation Materials
4. Presentation Slides

Meeting Minutes

D. Westside Subgroup #2 - October 8, 2009, 1 p.m. – 4 p.m.
The Center for Urban Horticulture
3501 NE 41st Street, Seattle

Agenda Summary
1. Transportation Operations for Westside Options
2. Community Design Update
3. Option K Hybrid Conceptual Design
4. 9/15 Subgroup Meeting Follow-up
   - Montlake Bridge Openings
   - Arboretum Overview
   - Transit Operations
5. City of Seattle Update
6. Eastside Update
7. Preliminary Observations and Discussion
8. Follow-up and Next Steps

Materials Presented
1. Option A and L Community Presentation Materials
2. Option K Community Presentation Materials
3. Seattle City Council Update
4. Presentation Slides

Meeting Minutes

E. Working Session #1 - October 20, 2009, 10 a.m. – 2 p.m.
Sound Transit - Union Station
Ruth Fisher Board Room
401 South Jackson Street, Seattle

Agenda Summary
1. Current Funding – SR 520 Delivery Plan
2. Financial Phasing and Timing
3. Federal Reauthorization
4. Local Transportation Benefit District (TBD) Overview
5. Tolling Options
   - SR 520 Only
   - I-90 Options
6. Joint Transportation Committee Funding Study
7. Preliminary Observations and Discussion
8. Follow-up and Next Steps

Materials Presented
1. Supporting Materials – Taxing Authorities & Project Eligibility
2. Presentation Slides

Meeting Minutes

F. Working Session #2 - November 5, 2009 1 p.m. – 4 p.m.
University of Washington Waterfront Activities Center
3900 Montlake Boulevard NE, Seattle

Agenda Summary

1. Finance Follow-up
   - Tolling Policies and Current Practices Related to I-90
   - Arboretum Ramp Tolling
   - Transportation Benefit Districts
2. Funding Options
   - Q&A Follow-up
   - Committed Funds/Financing Overview
   - Future Funding Scenarios
3. Current Options Review
4. University of Washington Update
5. Cost Overview
6. Independent Expert Review Panel Update
7. Preliminary Observations and Discussion
8. Follow-up and Next Steps

Materials Presented

1. Letter to Governor Christine Gregoire from Mark Emmert; President, University of Washington
2. E-mail to Sen. Oemig from constituent
3. Presentation Slides

Meeting Minutes

G. Westside Subgroup #3 - November 10, 2009 9 am-12pm
University of Washington
Waterfront Activities Center
3900 Montlake Boulevard NE, Seattle

Agenda Summary

1. Design Elements Review of Options A, K, L, A+ and M
   Member Observations and Comments
   - Design
   - Operations
   - Environmental Impacts
   - Costs
2. Finance Follow-up
   - Funding Scenario Chart
3. Key Observations Overview

Materials Presented

1. Cost Estimate Comparison Summary
2. Detailed Option A Cost Map
3. Detailed Option K Cost Map
4. Detailed Option L Cost Map
5. Detailed Option A+ Hybrid Cost Map (see updated version presented 11/17)
6. Detailed Option M Estimate Cost Map (see updated version presented 11/17)
7. Comparison of SR 520 Westside Options: Cost and Design
8. Comparison of SR 520 Westside Options: Traffic Operations
9. Comparison of SR 520 Westside Options: Environmental
10. Comparison of SR 520 Westside Options: Data Sheet
11. Comparisons of SR 520 Westside Options: Considerations (in development) (see updated version presented 11/17)

Meeting Minutes

H. Workgroup Meeting #3 - November 17, 2009 10am-2pm

Sound Transit - Union Station
Ruth Fisher Board Room
401 South Jackson Street, Seattle

Agenda Summary

1. Finance Plan Update
   - Funding Decision Timeline
   - Tolling Scenarios
   - Funding Sources Matrix
2. Transit Agency Update
3. Westside Subgroup Observations
   - Statute Review
4. Design Option Update
   - Westside Option A+ Cost Update
   - Retrofit Options
   - West Approach Profile
5. Design Option Recommendations
6. Finance Plan Recommendations
7. Next Steps and Public Involvement

Materials Presented

1. Floating Bridge and Landings Critical Path Elements
2. SR 520 Program Funding Requirements
3. Tolling Scenarios Analysis
4. Potential Funding Scenarios
5. Letter from Sound Transit
6. SR 520 Statutory Provisions
7. 4-Lane Retrofit Options
8. West Approach Profile Options: Draft
9. Detailed Option A+ Hybrid Cost Map
10. Detailed Option A Cost Map

11. Detailed Option K Cost Map
12. Detailed Option L Cost Map
13. Detailed Option M Cost Map
14. Comparison of SR 520 Westside Options: Cost and Design
15. Comparison of SR 520 Westside Options: Traffic Operations
16. Comparison of SR 520 Westside Options: Environmental
17. Comparison of SR 520 Westside Options: Data Sheet
18. Presentation Slides

Meeting Minutes

I. Workgroup Meeting #4 - December 8, 2009 10am-12pm
Sound Transit - Union Station
Ruth Fisher Board Room
401 South Jackson Street, Seattle

Agenda Summary
1. Overview of Public Comments on Draft Recommendations
2. Agreement on Design and Finance Plan Recommendations
3. Review Draft Workgroup Report

Materials Presented
1. Draft Recommendations Report
2. Public Comment Summary
3. Minority Statement
4. Presentation Slides

Meeting Minutes

IV. Other Meetings and Public Outreach

A. SR 520 Rep. Deborah Eddy Community Forum - October 6, 2009 7pm
Bellevue City Hall
450 110th Avenue NE, Bellevue

Materials Presented
1. Presentation Slides

B. Seattle City Council Committee of the Whole - November 24, 2009 9:30am
Seattle City Hall
600 Fourth Avenue, Seattle

Agenda Summary
1. Chair's Report
2. Briefing on the Washington State SR 520 Legislative Workgroup Preliminary Recommendations
3. Public Comment

Materials Presented

1. Presentation Slides

Meeting Minutes

C. Legislative Workgroup Town Hall Public Meeting - November 24, 2009 6-8pm
Center for Urban Horticulture
3501 NE 41st Street, Seattle

Agenda Summary

1. Welcome and Opening Remarks
2. Presentation on Legislative Workgroup's Draft Recommendations
3. Public Comment
4. Closing Remarks

Materials Presented

1. Presentation Slides

Meeting Minutes

D. Public Feedback Period

1. Letters/e-mails received
2. Verbatim comments

V. Additional Resources

1. SR 520 Floating Bridge Strengthening Discussion (Dec. 18, 2007 mediation)
2. SR 520 Approach Bridges Retrofit Discussion (Dec. 18, 2007 mediation)
3. Proposal K – Tunnels at East Montlake and the Arboretum Conceptual Design and Cost Estimate, Part I - Report
4. Proposal K – Tunnels at East Montlake and the Arboretum Conceptual Design and Cost Estimate, Part II - Figures
5. SR 520 Health Impact Assessment
6. Tolling Implementation Committee Final Report
7. SR 520 Medina to SR 202: Eastside Transit and HOV Project TIGER Discretionary Grants Program Application
8. Independent Cost Review Panel Report

Washington State Department of Transportation

SR 520 Bridge Replacement and HOV Program

I-5 to Medina: Bridge Replacement and HOV Project

DRAFT - Reversible transit/HOV ramp to/fro

Looking slightly northwest from 2343 Broadway E.

C-040-158

Appendix S: references on traffic, air, and health

Most Respected Studies of the Relationship between Traffic Associated Air Pollution and Cardiovascular Mortality

Relative Risk is the probability of the outcome for one exposure group divided by the probability of the outcome for another exposure group

American Cancer Society Study (Krewski et al.2000).
Relative risk (RR) for cardiopulmonary mortality of 1.30 (95% confidence interval [CI], 1.18–1.45) for a 24.5-µg/m3 increase in PM2.5

Harvard Six Cities Study
association between an 18.6-µg/m3 increase in PM2.5 exposure and cardiopulmonary mortality (RR,1.31; 95% CI, 1.07–1.61)

NLCS-AIR (Brunekreef et al 2009)
cardiopulmonary mortality associated with black smoke exposure in these three Dutch cities, The Hague, Rotterdam and Utrecht
(RR, 1.17; 95% CI, 1.00–1.36)

Also:

Smith KR, Jerrett M, Anderson HR, Burnett RT, Stone V, Derwent R, Atkinson RW, Cohen A, Shonkoff SB, Krewski D, Pope CA III, Thun MJ, Thurston G. Health and Climate Change 5 Public health benefits of strategies to reduce green house-gas emissions: health implications of short-lived greenhouse pollutants. Lancet (2009) 374:2091-2103

Brugge D, Durant JH, Rioux C. Near-highway pollutants in motor vehicle exhaust: A review of epidemiologic evidence of cardiac and pulmonary health risks. Environmental Health (2007) 6 (URL http://www.ehjournal.net/content/6/1/23), (DOI:10.1186/1476-069X-6-23)

Dockery DW, Pope CA, Xu X, Spengler JD, Ware JH, Fay ME, Ferris BG, Spiezer FE. An Association Between Air Pollution and Mortality in Six U.S. Cities. The New England Journal of Medicine (1993) 329:1753-1759

Krewski D, Jerrett M, Burnett RT, Ma R, Highes E, Shi Y, et al. Extended Analysis of the American Cancer Society study of particular ate pollution and mortality. Boston: Health Effects Institute; 2009

Krewski D, Burnett R, Goldberg MA, Hoover K. Siemiatycki J, Jerrett M, et al Reanalysis of the Harvard Six Cities Study and the American Cancer Society Study of Particulate Air Pollution and Mortality, Part II: Sensitivity Analysis: A Special Report of the Institute's Particle Epidemiology Reanalysis Project. Health Effects Institute, Cambridge, MA, Cambridge, MA: 2000.

Pope CA III, Health Effects of Fine Particular Air Pollution: Lines That Connect. J Air Waste Manag Assoc. 2006 Jun;56(6):709-42.

Brunekreef B, Beelen R, Hoek G, Schouten L, Bausch-Goldbohm S, Fischer P, Armstrong B, Hughes E, Jerrett M, van den Brandt P. Effects of long-term exposure to traffic-related air pollution on respiratory and cardiovascular mortality in the Netherlands: the NLCS-AIR study.Res Rep Health Eff Inst. 2009 Mar;(139):5-71; discussion 73-89.

Appendix T: Analysis of SDEIS assertions on air quality

Supplemental Draft Environmental Impact Statement and Section 4(f)/6(f) Evaluation SR 520 Bridge Replacement and HOV Program - Executive Summary

January 2010

C-040-159

This executive document asserts that all options meet air quality standards and that the modeled concentrations of air pollutants are well below the 1-hour and 8-hour National Ambient Air Quality Standards for all design options. Page 33

RESPONSE: This statement does not specify the pollutants and toxics considered in this assertion. The statement does not specify the locations where the estimates of modeled concentrations of air pollutants were made relative to the center of SR 520. Effects are known to increase with vehicular traffic and fall off exponentially with distance from the road. The statement does specify the vehicular traffic volume at the time of estimates. There are standards for limited air pollutants and none for air toxics. The estimates are not specified with respect to distance from the center of the road.

Estimates of levels of air pollutants are unsatisfactory. Direct measurements are required. Direct measures of health effects are more relevant measures of the effects of traffic associated air pollution than modeled estimates.

C-040-160

"All options would reduce annual energy consumption by between 5 and 10 percent on SR 520 between Seattle and Medina" page 34

RESPONSE: This statement is not backed by factual data. In the HIA report it was asserted that increased capacity would result in a higher average speed. However, that hypothesis assumed that the limit on average speed was solely determined by number of lanes ignoring the limitations imposed by limited capacity for I-5 and I-405 to receive SR 520 traffic. Furthermore the hypothesis was not based upon any estimate of increasing traffic volume over the next 20 years when estimated population growth is 30 percent or 2 million people. Furthermore the assessment does not provide the public with figures comparing the effect upon annual

C-040-160

energy consumption between use of the additional two lanes for HOV versus transit with Rapid Bus Systems or Light Rail.

Current US oil consumption is 21 million barrels of oil per day, 25% of the total world's consumption. We are 4% of the world's population. We import 2/3 of our oil, 14 million barrels of oil per day. Five million barrels come from the Middle East. We produce 7 million barrels. All of the projected new exploration is likely to result in a maximum of 1-2 million barrels per day for a limited time, 10 years. We cannot base our future planning on f assertions not based upon fact and careful projections.

C-040-161

" All options would reduce greenhouse gas emissions by approximately 10 percent in the project area." Page 34

RESPONSE: The report fails to recognize the difference between greenhouse emissions per vehicle and total greenhouse emissions. If the assertion were correct that greater SR 520 vehicle capacity would lower greenhouse emission per vehicle, the total greenhouse emissions would rise with greater vehicle use overwhelming any possible but unlikely benefit of a lower in greenhouse emission per vehicle traveling at a more optimal speed.

C-040-162

"Air Quality – No mitigation proposed or necessary."

RESPONSE: This response is not based factual. It ignors consensus of extensive scientific literature from the US and other parts of the world and it ignores the growing body of literature from highly respected research groups at *the University of Washington.* The response is deaf to appropriate scientific methodology.

***Three highly respected studies linking traffic associated air pollution with cardiopulmonary health are*:**

American Cancer Society Study (Krewski et al.2000)

Harvard Six Cities Study (Dockerya et al, 1993)

NLCS-AIR Study (Brunekreef et al 2009).

The relative risk for cardiopulmonary mortality associated with traffic associated air pollution in areas of high exposure was 1.30, 1.31, and 1.17 respectively. Persons living in area close to busy highways have a 17 to 31 percent high risk of cardiopulmonary mortality higher than those living at a

C-040-162

distance. The conclusions stated in the EIS report are the result of conjecture based upon inadequate investigation.

Until the appropriate pollutants are measured directly in the zones of known high exposure adjacent to the existing SR 520 highway, it must be inferred that "Traffic-related air pollution is associated with cardiovascular morbidity and mortality" (Allen J 2009 in background to study on diesel exhaust) and that people are currently becoming ill and dying from traffic associated air-pollution along side high traffic highways in Seattle. There is no hope that these effects will get anything but worse with a growing population, increasing traffic and the lack of will to plan more appropriate transportation systems.

"Taken as a whole, the health studies show elevated risk for development of asthma and reduced lung function in children who live near major highways.
Studies of particulate matter (PM) that show associations with cardiac and pulmonary mortality also appear to indicate increasing risk as smaller geographic areas are studied, suggesting localized sources that likely include major highways. Although less work has tested the association between lung cancer and highways, the existing studies suggest an association as well. While the evidence is substantial for a link between near-highway exposures and adverse health outcomes, considerable work remains to understand the exact nature and magnitude of the risks." (Brugge D 2007)

Douglas Stewart, M.D.
April 4, 2010

C-040-163

Appendix V: Excerpt from Publicola blog:

Federal Ruling Could Erase $1 Billion in Funding for 520

Posted by Erica C. Barnett on April 13, 2010 at 4:30 PM

A ruling last week by US Transportation Secretary Ray LaHood could put funding for the proposed $4.6 billion 520 bridge replacement in jeopardy, eliminating approximately $1 billion in potential revenue from tolls on I-90 across Lake Washington.

City leaders have repeatedly expressed support for tolling the I-90 bridge across Lake Washington (in addition to tolling the 520 bridge) in part because tolling revenues from both bridges could help close the funding gap for a 520 bridge replacement. The state has been counting on tolling I-90 to pay for about $1 billion of the 520 bridge replacement.

However, last week, LaHood rejected a petition by the state of Philadelphia to allow toll money from Interstate 80, which cuts across the center of the state, to be spent to help offset a transit funding shortfall. In his ruling, LaHood cited a little-known Bush-era federal law that prohibits the use of tolls collected on interstate freeways to pay for anything other than improvements to the freeway itself.

The ruling presents a huge, perhaps insurmountable, impediment to transportation leaders' plans here in Washington State, where I-90 tolls were supposed to help pay for 520, in addition to improvements to I-90 itself. The loss of that revenue would leave 520 with a funding shortfall of about $1 billion.

"If Washington State wanted to toll I-90 it would be unable to do so right now, unless [toll money] went right back into that road," Bill LaBorde, policy director at the pro-transit Transportation Choices Coalition, said at a forum last week. "This is one place where the Obama Administration is less progressive than the Bush Administration." (It's conceivable, LaBorde says, that toll funds could be used to build light rail on I-90, but that remains "a bit speculative.")

Contacted by phone today, LaBorde called the ruling "a huge deal" for the region. "A lot of people are thinking the Obama Administration is out of options for financing transportation in the next six-year [transportation] bill," which was supposed to have been adopted in 2009.

"Maybe they'll revisit that issue in crafting a new bill." However, LaBorde adds, the Administration may fear that drivers will revolt (and vote against Democrats in Congress) if their toll money is used to pay for unrelated projects.

(more)

Appendix W Fish Impacts

By Maurice Cooper PE

C-040-164

The analysis of fish impacts in the SDEIS is charaterized by heuristic arguments, not in the least supported by factual data.

Furthermore there is a glaring and outrageous omission of any connection between fish studies and aquatic plant research, particularly with respect to shading by over-water structures, which will certainly lead to unavoidable harm to salmon.

In particular there has been some excellent and recent research conducted, during the SR-520 study period, by the University of Washington, and herein incorporated by reference, which showed migratory patterns of salmon through the Ship Canal adjacent to the University of Washington and out through Union Bay. The results of this study have essentially been ignored. Instead there is the unsubstantiated argument made that shadowing by any bridge structure negatively impacts salmonid species, and this argument is extended to push in general for higher rather than lower bidge structures. The exact opposite is true.

In the ecosystems discipline report, it is pointed out that shadowing by bridge structures inhibits aquatic plant growth. This is certainly true. However this plant growth is almost exclusively of the invasive species kind. As this plant material grows and spreads, and subsequently decays, in the relatively shallow waters of Union Bay, it lowers the dissolved oxygen content of the water column. Salmonid species are extremely sensitive to two critical environmental factors - temperature and dissolved oxygen. This has been documented for the Lake Washington Ship Canal and its contiguous waterways at least as far back as the exhaustive and detailed RIBCO Studies from 1974 (q.v.). The more recent University of Washington study shows the preferred migratory pattern of the salmon emerging from the Montlake Cut, turning southeast as soon as the fish have cleared the weed-choked waters off the north end of Madison Park, and proceeding east following the north - and shaded - side of the existing bridge, until the fish reach the deeper, and cooler waters of Lake Washington. The salmon follow this path because it is (a) cooler, being in the shade, and (b) higher in dissolved oxygen content, being away from the plant growth and the decaying plant material.

To argue, therefore, for a higher bridge structure to decrease shading is to argue for an increase in invasive aquatic plant species, with the attendant lower dissolved oxygen in the water, and to argue for higher water column temperatures. In turn, therefore, to argue for a higher bridge structure in this location is to argue strongly against the health of salmon and hence against preservation of our dwindling and endangered salmon population - a backbone of Northwest Native culture, and an icon of the northwest.

It is essential that the misinformation and/or implied arguments in the DEIS regarding fish behavior be withdrawn and corrected.

Board of Park Commissioners

Neal Adams, Vice Chair
John Barber
Terry Holme
Jourdan Keith
Diana Kincaid
Donna Kostka
Jackie Ramels, Chair

April 14, 2010

Jenifer Young, Environmental Manager
SR 520 Project Office
600 Stewart Street, Suite 520
Seattle, WA 98101

RE: The Arboretum and Botanical Garden Committee's Comments to the SR520, I-5 to Medina: Bridge Replacement and HOV Project Supplemental Draft Environmental Impact Statement (SDEIS)

Dear Ms. Young,

At its April 8, 2010, meeting the Seattle Board of Park Commissioners unanimously adopted the attached resolution as its official response to the SR520, I-5 to Medina: Bridge Replacement and HOV Project SDEIS. Please add these comments to the official record.

Sincerely,

Jackie Ramels

Jackie Ramels, Chair
Seattle Board of Park Commissioners

Attachment: The Seattle Board of Park Commissioner's Comments to the SR520, I-5 to Medina: Bridge Replacement and HOV Project SDEIS

cc: Mike McGinn, Mayor, City of Seattle
The Honorable Richard Conlin, Chair, Seattle City Council
The Honorable Sally Bagshaw, Seattle City Council
The Honorable Mike O'Brien, Seattle City Council
The Honorable Nick Licata, Seattle City Council
The Honorable Jean Godden, Seattle City Council
The Honorable Tom Rasmussen, Seattle City Council
The Honorable Sally Clark, Seattle City Council
The Honorable Bruce Harrell, Seattle City Council
The Honorable Tim Burgess, Seattle City Council
Mark Emmert, President, University of Washington
Tim Gallagher, Superintendent, Seattle Parks
Peter Hahn, Director, Seattle Department of Transportation
Stephanie Brown, Seattle Department of Transportation

RESOLUTION

A RESOLUTION expressing the position of the Seattle Board of Park Commissioners regarding the SR 520, I-5 to Medina: Bridge Replacement and HOV Project.

WHEREAS, the Seattle Board of Park Commissioners has been in continuous existence since 1887 and acts in an advisory capacity to the Mayor, City Council, Seattle Parks and Recreation and other City departments; and

WHEREAS, State Route 520 has been, since its completion in 1963, and continues to be to this day, a blight on the Washington Park Arboretum; creating noise and visual intrusions into the park; encouraging cut-through traffic along Lake Washington Boulevard in much higher volumes than was originally intended for the boulevard, disturbing the serenity of the Japanese Garden, and affecting the passage of people and wildlife between Marsh and Foster Islands and the remainder of the Arboretum; and

WHEREAS, the Washington Park Arboretum is Washington State's official State Arboretum and contains internationally recognized woody plant collections and North America's largest collection of *Sorbus* and Maple, the second largest collection of species Hollies and significant collections of oaks, conifers and camellias; and

WHEREAS, a new Master Plan for the Arboretum was adopted in 2001 that was the culmination of five years of planning work undertaken by Seattle Parks and Recreation, the University of Washington, the Arboretum Foundation, community groups and members of the general public; and that will guide improvements to the Arboretum for the next 20 years, including many specific projects to enhance the physical and natural characteristics of the Arboretum such as increasing habitat diversity by restoring the natural function of Arboretum Creek and the northern shoreline; and

WHEREAS, the Washington Park Arboretum contains the largest freshwater wetland complex of its type in the Seattle region, and the Master Plan, in conjunction with the existing wetlands, includes the restoration, enhancement, and creation of new wetlands by restoring the ecological and wildlife function of the former garbage dump surrounding existing SR Route 520 ramps, and creating a Pacific Northwest Marshland collection along the shoreline of Union Bay; and

WHEREAS, implementation of the SR 520, I-5 to Medina: Bridge Replacement and HOV Project, as currently proposed, will forever compromise the aesthetic setting, biological diversity, educational opportunities, and physical connections for people and wildlife within the Washington Park Arboretum:

NOW, THERFORE, **BE IT RESOLVED BY THE SEATTLE BOARD OF PARK COMMISSIONERS THAT:**

The Board cannot endorse any of the alternatives identified in the Supplemental Draft Environmental Impact Statement for the SR 520, I-5 to Medina: Bridge Replacement and HOV Project, issued on January 22, 2010, due to the profound negative environmental impacts the project would have on the Washington Park Arboretum and the other City of Seattle Parks along the SR 520 corridor. The Board makes the below recommendations

The preferred alternative chosen must be consistent with the following principles:

- The structure should minimize the impacts on the Washington Park Arboretum, especially the Japanese Garden and Foster and Marsh Islands, and other adjacent and nearby parks such as East Montlake and McCurdy Parks;
- The structure should have the least number of travel lanes possible;
- The structure width should be the minimum necessary for safe passage;
- Any structure should be designed to have the least amount of coverage and shadow impacts on park land below;
- Any structure should be designed to have the least amount of impact to wetlands, aquatic resources and fish, in particular Federally protected salmonids that travel through Portage and Union Bays to and from their spawning grounds and the Pacific Ocean;
- All construction activities must be sited and timed to have the least impact on park users and the natural environment;
- Clear, open, and safe access for people and wildlife under the structure must be provided to reconnect severed components of the Arboretum; and,
- Any required wetland mitigation must occur within the Arboretum first; if the area within the Arboretum is insufficient to accommodate the required mitigation, Park sites within Seattle on or adjacent to Lake Washington must be considered.

Mitigation of the continuing highway and future project impacts must be considered, regardless of the alternative/option chosen, to re-establish the Arboretum experience. As a starting point, the following should be considered in any mitigation package:

- Address the traffic impacts to the Arboretum caused by increased traffic along Lake Washington Boulevard (LWB) including prohibiting access to and from SR 520 to LWB; repaving LWB with "quiet" pavement; incorporating other traffic calming measures in LWB to discourage through traffic movements;

- Completely fund the Arboretum Master Plan, including wetland and shoreline restoration and planting (approximately $60 million);
- Develop the stormwater pond in East Montlake Park for educational use;
- Provide a park-like lid at Montlake (depending on the option, the lid should extend as far as possible given the geography) which will create a strong connection between the neighborhood and the Arboretum;
- Replace (at WSDOT's expense) all of the functions served by the Museum of History and Industry (MOHAI) building; and,
- Design and provide access and parking at East Montlake Park for access to the Arboretum Waterfront Trail and for hand-launched boats.

The Board also respectfully submits the following comments in response to the Supplemental Draft Environmental Impact Statement (SDEIS) for the I-5 to Medina: Bridge Replacement and HOV Project issued on January 22, 2010:

- **Bagley Viewpoint** - Bagley Viewpoint is a well visited viewpoint along Delmar Drive East which provides views to the east of Lake Washington, Montlake Cut, the University of Washington and the Cascade mountain range. No other viewpoint in Seattle provides this unique view to the east. The viewpoint was redeveloped following the construction of the access freeway to the Evergreen Point floating bridge in 1963. The freeway cut the viewpoint off from its previous connection to Interlaken Park.
    - Loss of this unique viewpoint must be mitigated. The SDEIS indicates that a lid is proposed in this area that will provide similar view functions and also serve to reconnect the neighborhood through the triangle between 10th Avenue East, East Roanoke Street and East Delmar Drive. WSDOT must ensure that this lid remains part of the project and does not get removed due to funding concerns. Absent the lid, WSDOT must provide a view opportunity similar to the one now provided by Bagley Viewpoint and work to reconnect this viewpoint to Interlaken Park as it was originally constructed.
- **Montlake Playfield** - While the physical impacts to the playfield associated with the SR 520 project will be minimal, the visual impacts and noise associated with the project, both during construction and after it is completed will be significant. Every effort must be made to limit the potential for noise from the freeway to impact users of the playfields, members of the public who come to the area to take advantage of the newly reconstructed hand-carried boat launch, and the public and fauna that use the newly enhanced wetland areas.
    - During construction, any temporary work bridges and/or barges must not restrict canoe/kayak access between the Montlake Playfield boat launch and Portage Bay.
    - Seattle Parks is just completing a large wetland restoration project along the perimeter of Montlake Playfield. There are additional wetland

enhancement opportunities available. Montlake Playfield should be considered for any required wetland mitigation/enhancement as part of the projects mitigation requirements.

- **Lake Washington Boulevard** - Lake Washington Boulevard is referred to as a city street throughout the SDEIS. The 4f evaluation fails to identify Lake Washington Boulevard as either a historic resource or a park and recreation resource. This officially designated park boulevard is a 204-acre, 9.2-mile-long linear park wholly owned by the City and under the jurisdiction of Seattle Parks and Recreation. It is a crucial element in the 1903 Olmsted Plan for Seattle's boulevard system, sometimes referred to as the "Emerald Necklace." Decisions about the future design of the SR 520 improvements must be made with the understanding that Lake Washington Boulevard was never designed to function as an extension of direct-access ramps to and from SR 520. Where Lake Washington Boulevard serves as a corridor through the Arboretum, vehicles and bicycles must be able to travel on it in a manner consistent with the design and intent of the surrounding Arboretum.
    - There should be no direct access from SR 520 to Lake Washington Boulevard. From the day it opened, SR 520 and the access ramps to and from Lake Washington Boulevard have encouraged and facilitated traffic through the Arboretum which would not otherwise be there. This increased traffic through the heart of the Arboretum limits access to the Japanese Garden from the rest of the Arboretum, reduces the air quality due to vehicle emissions, increases noise from traffic and makes crossing Lake Washington Boulevard unsafe.
- **Lake Washington Boulevard Access** - If direct access to and from Lake Washington Boulevard to SR 520 is a component of the final design of the project then the following must be considered:
    - Lake Washington Boulevard has become an extension of the on/off ramps to SR 520. Had existing environmental laws been in place, mitigation for the impacts on the Arboretum of the original 520 project would have been significant or more likely, the project would have been redesigned. If direct access to and from SR 520 to Lake Washington Boulevard remains a part of the future project, exacerbating the current condition, the Arboretum should be duly compensated for the use of the boulevard in the future.
    - As mitigation for the increased traffic on Lake Washington Boulevard directly attributable to SR 520, traffic calming measures must be implemented on the boulevard.
    - If the SR 520 project includes direct access ramps to and from Lake Washington Boulevard to SR 520, additional tolls should be included on these ramps. Tolls should be included as a way of travel demand management to discourage people from using Lake Washington Boulevard to access SR 520. Also, the revenue from these tolls should be dedicated to the Arboretum to help mitigate the impacts of the increased noise, air emissions and vehicular distraction on the physical

nature, educational value and visitor experience of the Washington Park Arboretum.

- The most recent data from the Seattle Department of Transportation indicates that Lake Washington Boulevard carries 16,100 vehicles.[1] The SDEIS indicates that the ramps to and from Lake Washington Boulevard to SR 520 carry 3,000 vehicles in the AM and PM peak hours. Given 3,000 vehicles during two hours, the total amount of traffic that uses Lake Washington Boulevard exclusively to access SR 520 could be as high as 10,000 vehicles per day. Taken together, these traffic numbers indicate that as much as 62% of the traffic which uses Lake Washington Boulevard is directly related to SR 520. While Lake Washington Boulevard is a park boulevard, it is available for City residents to use as they travel throughout the City. However, this direct use of the boulevard as an access ramp to and from SR 520 is a highway use for which the boulevard was never intended. If WSDOT intends to continue to use Lake Washington Boulevard for a highway on and off ramp, then WSDOT must compensate the City annually in the range of $1 - $2.1 million, based on present value and an 8% rate of return, for the use of the property in a proportional share to the percentage of traffic which uses the boulevard to access SR 520.

- **Washington Park Arboretum** - The Washington Park Arboretum, State Arboretum for the State of Washington, is a stunning gem in Seattle's park system. It provides respite, scenery, recreation and solace to thousands of visitors in every season of the year. It provides educational, recreational, conservation and volunteering opportunities to those who seek it out. The City of Seattle and the University of Washington have been cooperatively managing this park since the original 1934 agreement.
  - Since the SR 520 highway was opened, the Arboretum has been fractured by the highway structure itself and the noise, pollution and visual intrusion of the structure on the physical nature, educational value and visitor experience of the Washington Park Arboretum. A percentage of the tolls collected on the main line of SR 520 should be dedicated to improvements in the Arboretum as mitigation for past current and future impacts of siting a transportation facility in the heart of a natural area and arboretum.
  - The physical nature, educational values and visitor experience within the Washington Park Arboretum should be enhanced by the construction and operation of the SR 520 I-5 to Medina: Bridge Replacement and HOV project if properly designed with sensitivity to the park.
  - All efforts must be made to avoid any adverse impacts to the Arboretum, both during construction and through the long term operation of the SR 520 facility.

[1] Average Annual Daily Traffic (AAWDT) (5-day, 24-hour)

- To the extent that there will be adverse impacts to the Arboretum, every impact must be thoroughly mitigated.
- Unavoidable adverse impacts must be mitigated. Those of shorter duration must be addressed during the construction phase. Long term impacts of facilitating increased traffic through the Arboretum which has a direct impact on the physical nature, educational value and visitor experience in the Washington Park Arboretum need to be avoided through sound design or mitigated appropriately.
- Design of the new structure should address the potential for increased noise through the Arboretum as a result of the increased traffic. The project must be designed such that noise levels decrease from the levels experienced today.
- The project must be designed such that the visual impact of the structure complements and does not detract from the physical nature, educational value and visitor experience of the Washington Park Arboretum. Designing a "signature" bridge does not reduce the visual impact of a concrete and/or steel structure in the heart of a 230-acre arboretum.

- **Washington Park Arboretum Master Plan** - In May 2001, the Seattle City Council approved the long-range master plan for the Washington Park Arboretum, creating a road map for Arboretum improvements over the next 20 years. The master plan ensures the Washington Park Arboretum will effectively fulfill three primary purposes—conservation, recreation and education—for decades to come. Together, University of Washington Botanic Gardens and Seattle Parks and Recreation, with support from the Arboretum Foundation, are working to implement the master plan. Substantial public and private funds have recently been raised and spent to improve the visitors' experience. The newly created Pacific Connection Gardens have been created, the Japanese Garden Gatehouse has been redeveloped and a number of other park improvements have been made. All these contributions will likely be negatively impacted by the proposed SR 520 project.
  - The Master Plan adopted in 2001 made note of the fact that there would be limited new buildings built within the Washington Park Arboretum. Instead, UW, the Arboretum Foundation and Seattle Parks and Recreation would address their long term need for additional educational, maintenance and classroom space by expanding into the building which currently houses the Museum of History and Industry (MOHAI), once MOHAI vacated the building. The City of Seattle owns the building which MOHAI currently occupies. Since all of the options in the SDEIS involve expansion of the roadway such that the MOHAI will be demolished, WSDOT must provide replacement space as envisioned in the Master Plan.
  - There are four significant projects at the north end of the Arboretum which are identified in the Arboretum Master Plan: complete the Waterfront Trail as a loop all the way around Duck Bay; add access,

sitting and viewing areas on the west side of Duck Bay; daylight Arboretum Creek; and, create an entry at the west/north end of the Arboretum with the same grand character as the south entry. The redevelopment of SR 520 has the potential to negate the potential to undertake some or all of these projects to the detriment of the Arboretum and contrary to the goals set out in the Master Plan. To the extent mitigation measures are necessary as a result of unavoidable significant impacts associated with the SR 520 project, these identified Arboretum Master Plan project should be fully funded by WSDOT for implementation by Parks and/or UW.

Adopted by the Seattle Board of Park Commissioners the 8th day of April, 2010 and signed by me in open session in authentication of its adoption this _____ day of _____, 2010.

Jackie Ramels

Chair of the Seattle Board of Park Commissioners

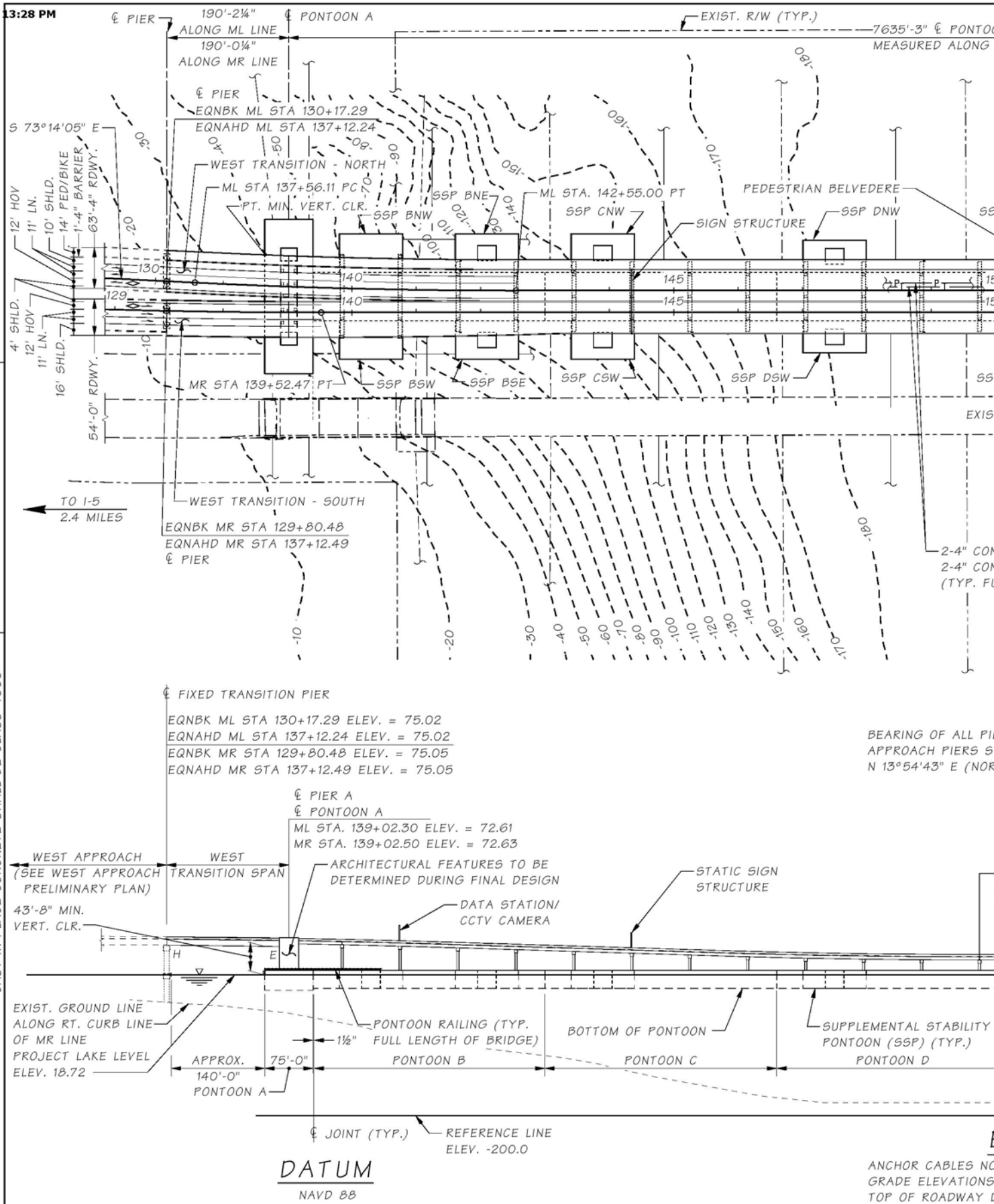
C-040-166

SR 520 Pontoon Construction Design-Build Project

Request for Proposal

September 24, 2009

Appendix M16
Preliminary Bridge Plans



PT. OF MIN. VERT. CLEARANCE (6-LANE)
WEST CHANNEL ML 138+63.22, 47.33' LT (43'-8" CLR.)
EAST CHANNEL ML 215+74.92, 54.62' LT (70'-4" CLR.)

COAST GUARD LIAISON	
COAST GUARD PERMIT REQ'D.	
PERMIT TARGET DATE	

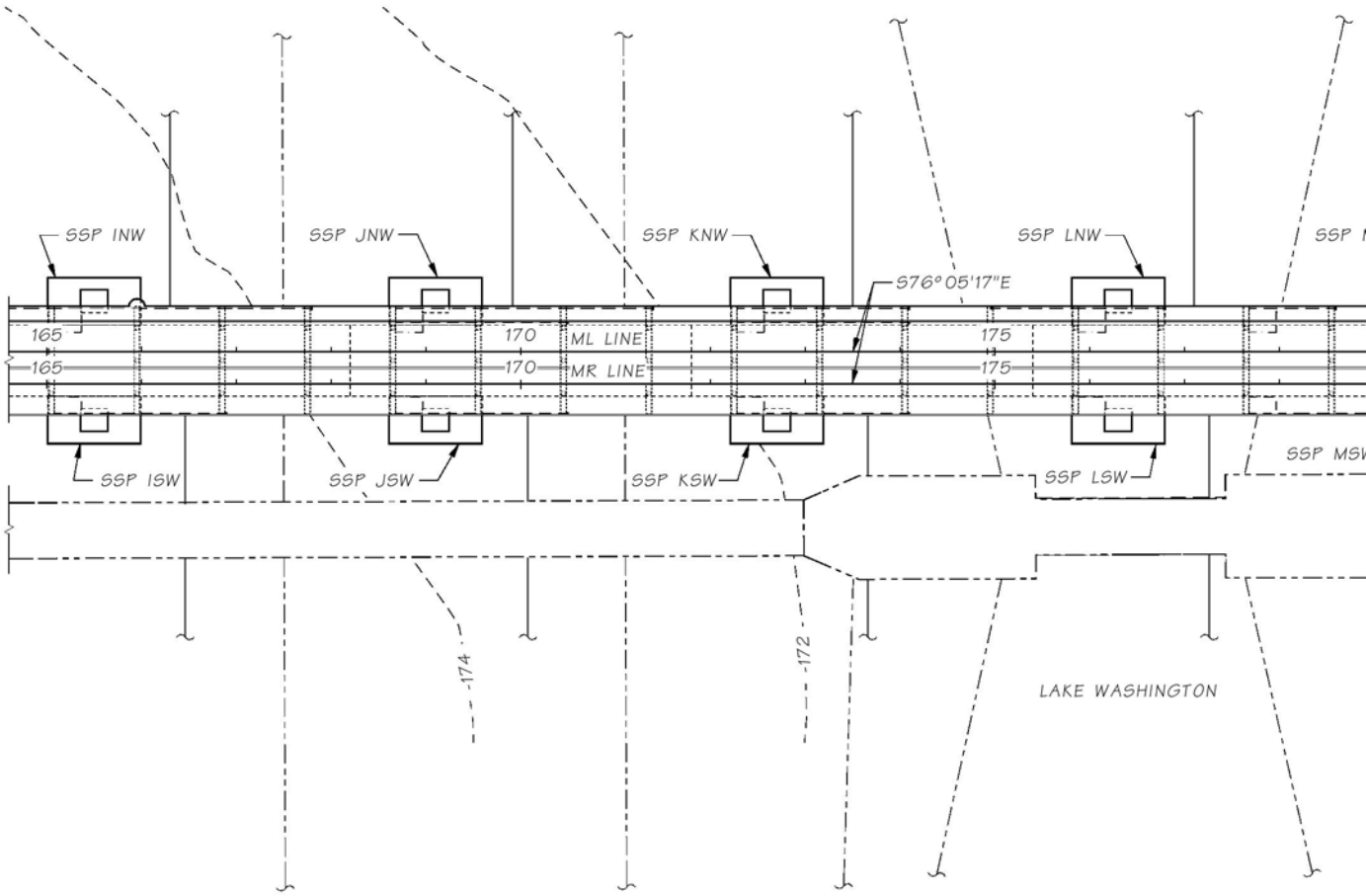
W58G PRESTRESSED CONC. GIRDER
5'-9" SUPERSTRUCTURE DEPTH
DECK PROTECTIVE SYSTEM 1 (EPOXY COATED REBAR)
CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000

S.R. 520	FILE NO.
	SHEET 1 OF 18

Bridge Design Engr.	Khaleghi, B	M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\LAYOUT 6 LANE-1.WND							
Supervisor	Clarke, PT					REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Designed By						10	WASH.			
Checked By	Ferluga, E / Olson, D 03/09					JOB NUMBER				
Detailed By	Puryear, D 03/09									
Bridge Type Plan										
Quantity Plan By	Messmer, AD / Aldrich, B	09/09	NEW SHEET	TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

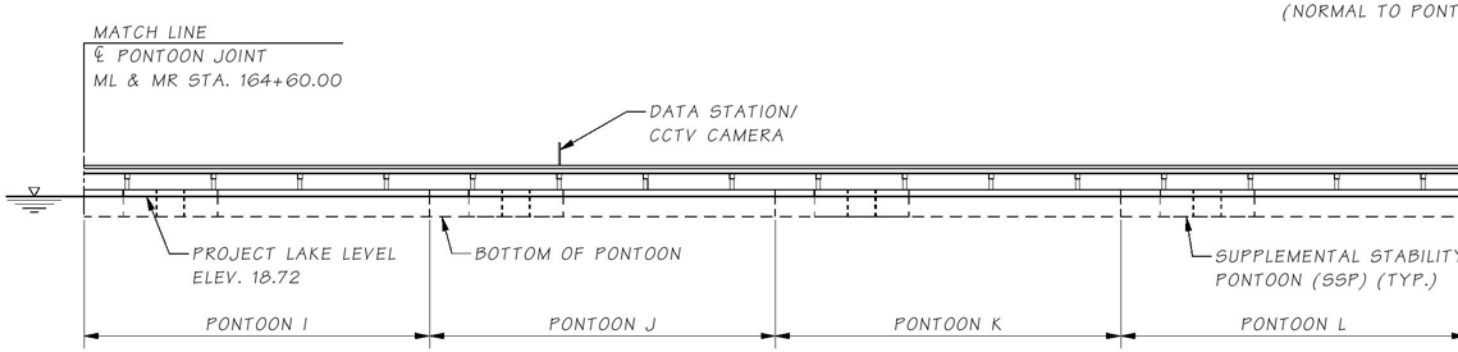
Thu Sep 24 08:23:43 2009

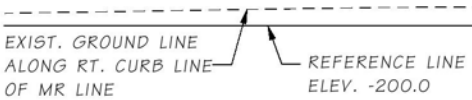
7635'-3" ℄ PONTOO
MEASURED ALONG



PL

BEARING OF ALL PIERS ON FLOA
(NORMAL TO PONT





DATUM
NAVD 88

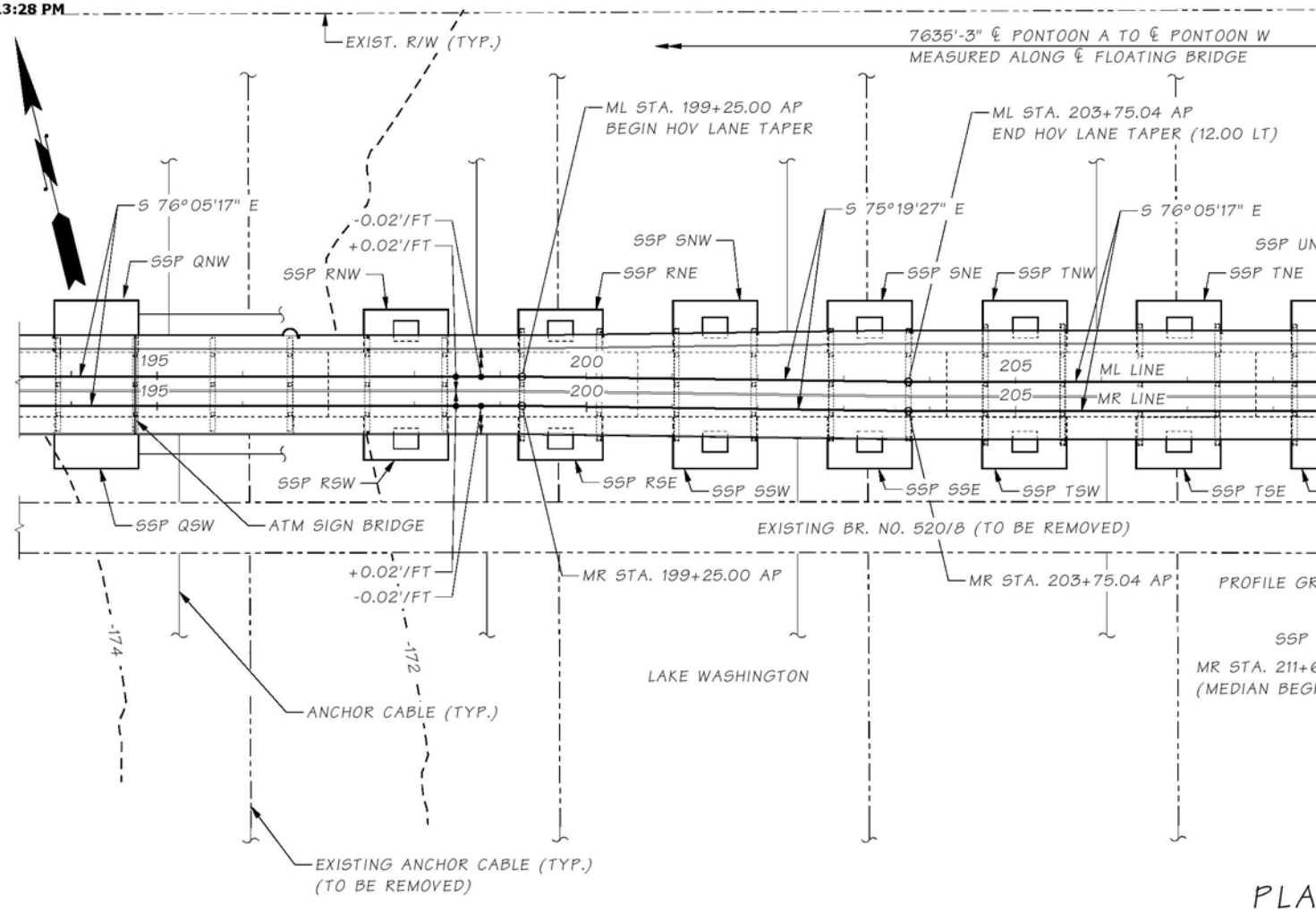
E

ANCHOR CABLES NO
GRADE ELEVATIONS
TOP OF ROADWAY D

Bridge Design Engr.	Khaleghi, B		M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\LAYOUT 6 LANE-2.WND			REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Clarke, PT					10	WASH.			
Designed By										
Checked By	Ferluga, E	03/09								
Detailed By	Puryear, D	03/09				JOB NUMBER				
Bridge Project Engr.										
Prelim. Plan By	MesaMac, AD	09/09	NEW SHEET	TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

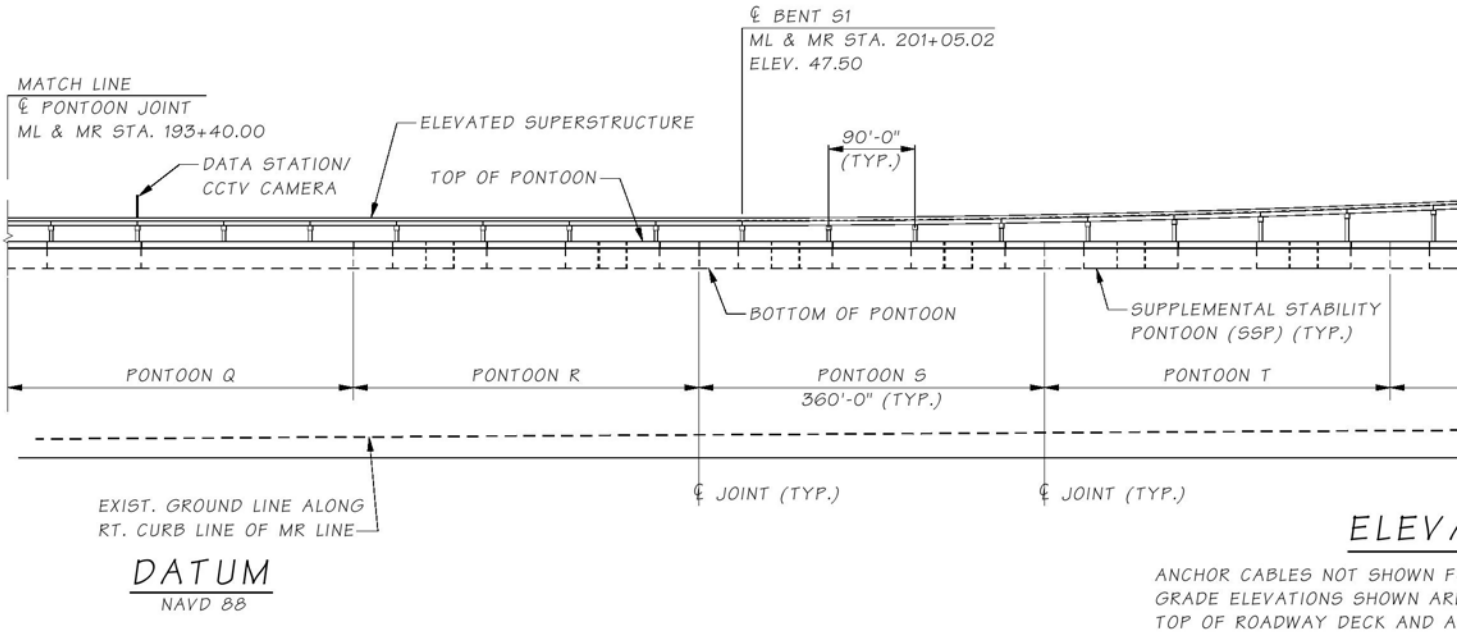
SR 520 FILE NO. ____ SHEET 2 OF 18

Thu Sep 24 08:24:00 2009



PLA

BEARING OF ALL PIERS ON FLOA
APPROACH EXPANSION JOINTS A
ARE N 13°54'43" E (NORMAL TO



DATUM
NAVD 88

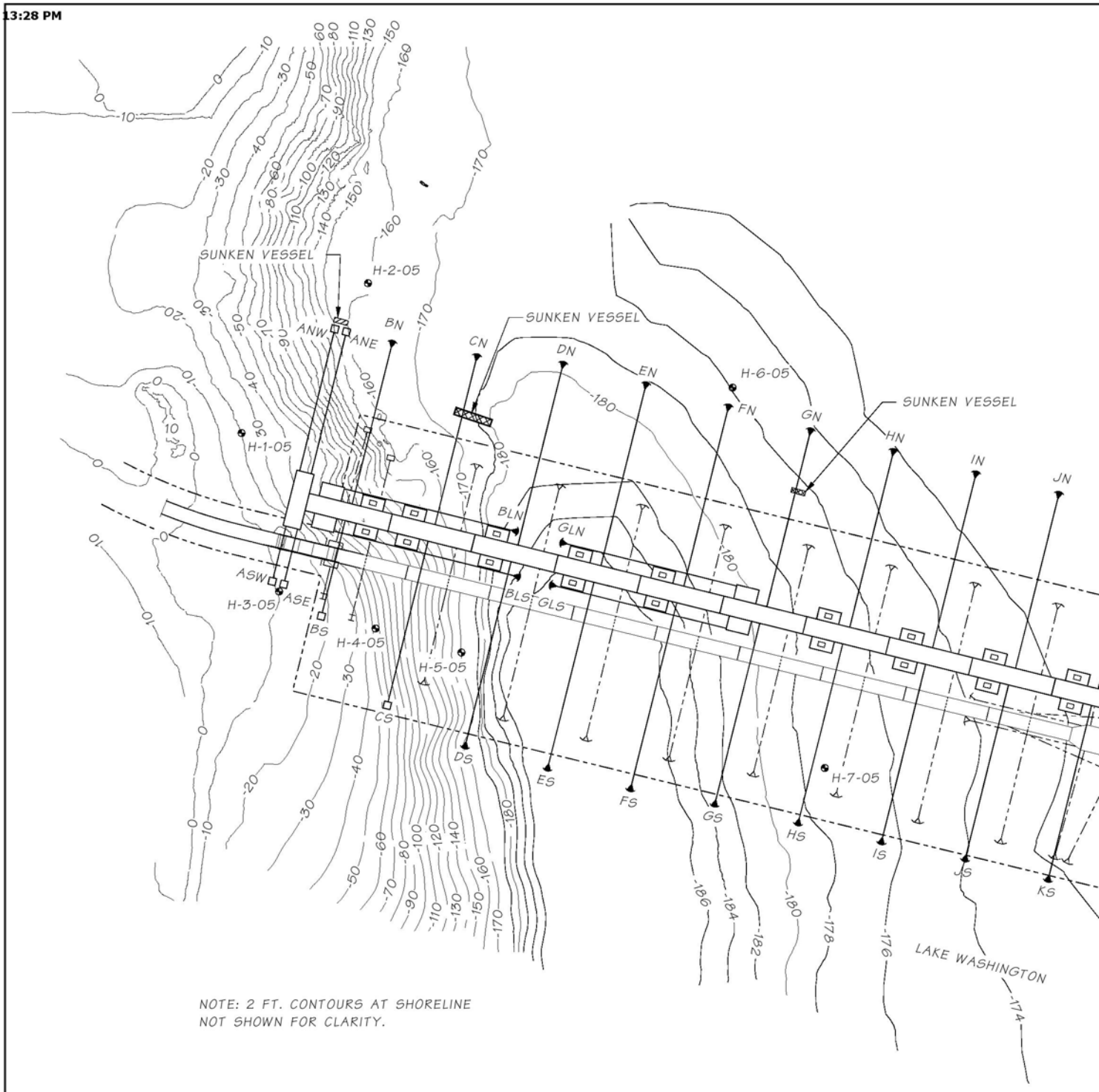
ELEV

ANCHOR CABLES NOT SHOWN F
GRADE ELEVATIONS SHOWN AR
TOP OF ROADWAY DECK AND A

SR 520 FILE NO. ____ SHEET 3 OF 18

Bridge Design Engr.	Khaleghi, B	M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\LAYOUT 6 LANE-3.WND				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Clarke, PT					10	WASH.			
Designed By										
Checked By	Ferluga, E / Olson, D 03/09					JOB NUMBER				
Detailed By	Puryear, D 03/09									
Bridge Type Leg										
Prelim Plan By	Messmer, AD / Aldrich, B 09/09	1	NEW SHEET	TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

Thu Sep 24 08:24:14 2009



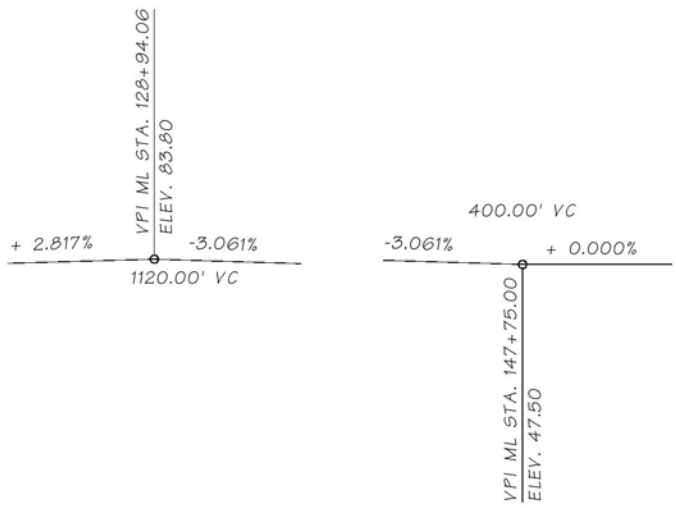
NOTE: 2 FT. CONTOURS AT SHORELINE
NOT SHOWN FOR CLARITY.

ANCHOR

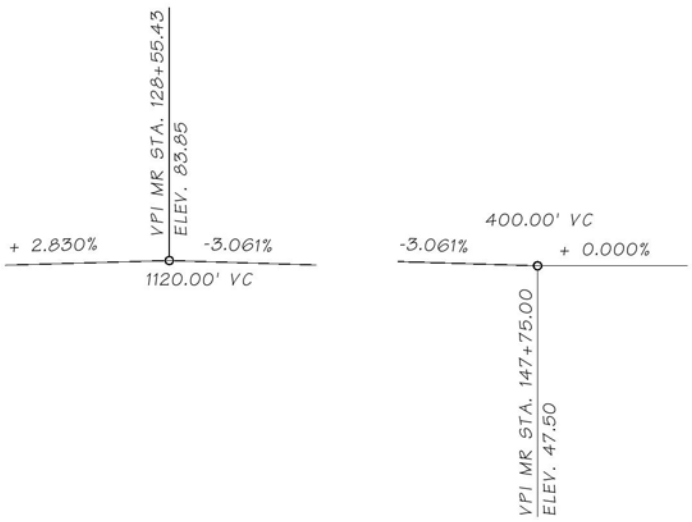
SR 520 FILE NO. ____ SHEET 4 OF 18

Bridge Design Engr.	Khaleghi, B	M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\ANCHOR LAYOUT & BOREHOLE LOC.WND				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Clarke, PT									
Designed By						10	WASH.			
Checked By	Ferluga, E 03/09									
Detailed By	Puryear, D 03/09					JOB NUMBER				
Bridge Type/Length										
Prelim. Plan By	Messmer, AD	09/09	NEW SHEET	TL						
Architect/Specialist		DATE	REVISION	BY	APP'D					

Thu Sep 24 08:21:21 2009



ML LINE PROFILE



MR LINE PROFILE

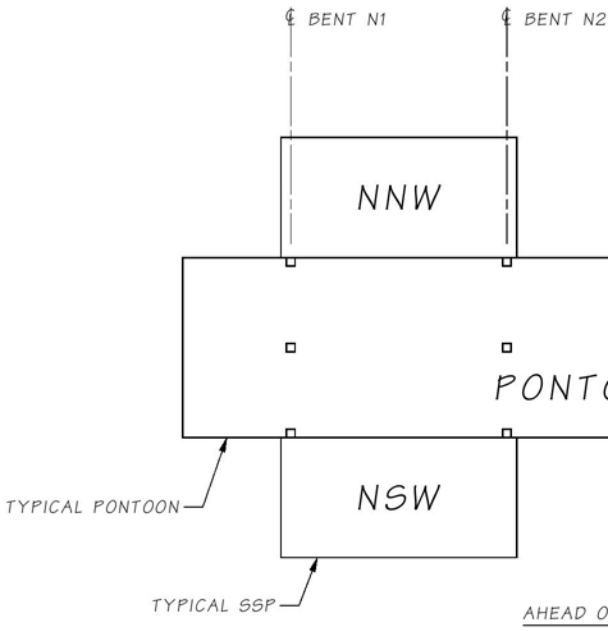
CURVE DATA					
P.I. STATION	Δ	RADIUS	TANGENT	LENGTH	BK. TANGENT BRG.
ML 140+05.61	2°51'11.8" LT	10018.04'	249.50'	498.89'	S73°14'05.0"E
MR 128+45.62	3°40'32.6" LT	11690.00'	375.10'	749.95'	S72°24'44.3"E

SR 520 FILE NO. ____ SHEET 5 OF 18

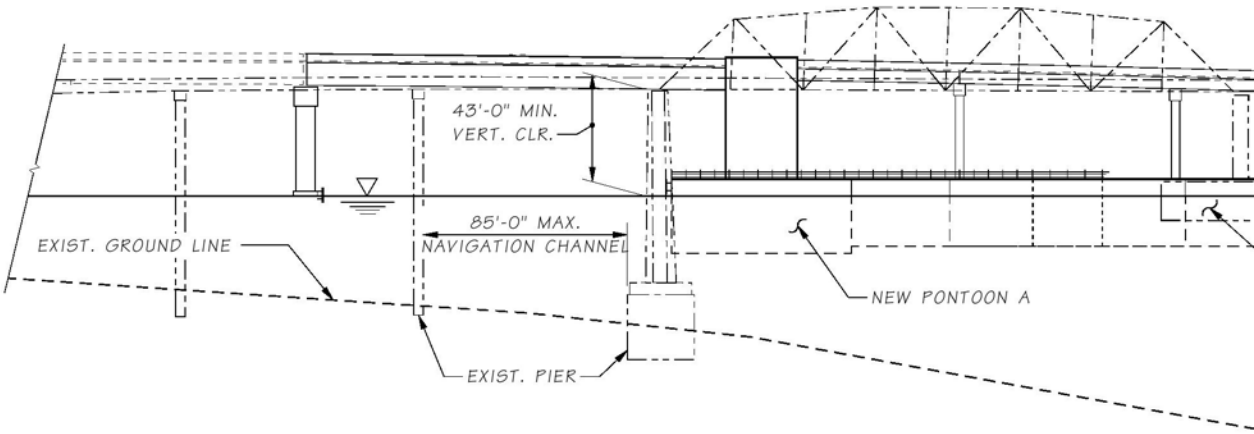
Bridge Design Engr.	Khaleghi, B	M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\CURVE DATA & PROFILES.WND				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Clarke, PT					10	WASH.			
Designed By						JOB NUMBER				
Checked By	Ferluga, E / Olson, D 03/09									
Detailed By	Puryear, D 03/09									
Bridge Engineer										
Prelim. Plan By	Messmer, AD / Aldrich, B	09/09	NEW SHEET	TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

Thu Sep 24 08:22:34 2009

2010 SDEIS Comments and Responses -- Comments Only For Internal Use Only -- 05/26/2011 14:11 PM



PONTOON NAMIN



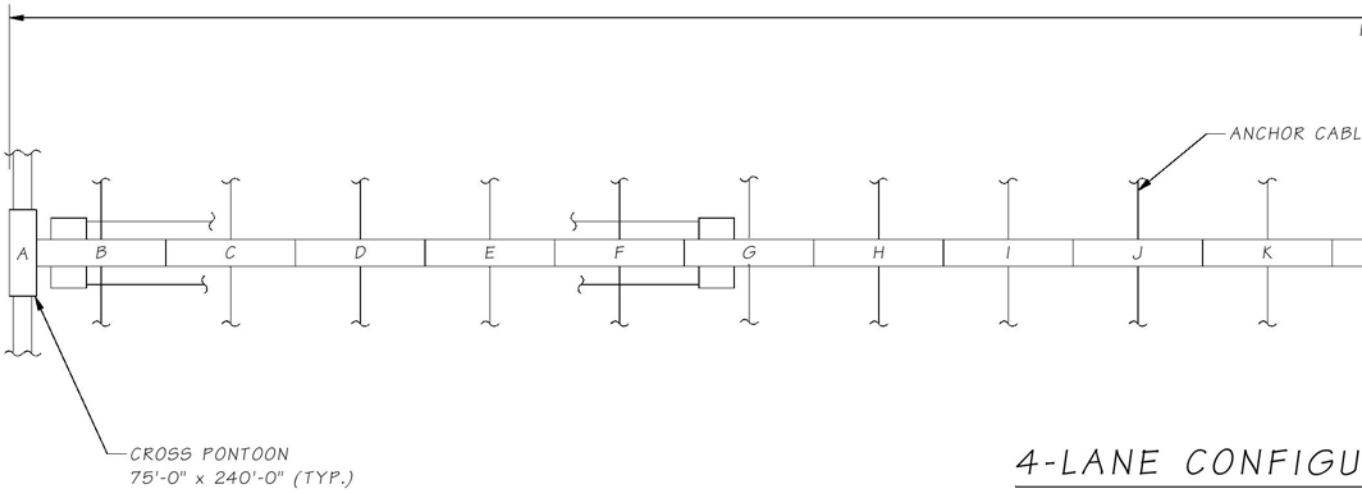
CONSTRUCTION OPENING DIAGRAM

TEMPORARY NAVIGATION CHANNEL UNDER WEST TRANSITION

SR 520 FILE NO. ____ SHEET 6 OF 18

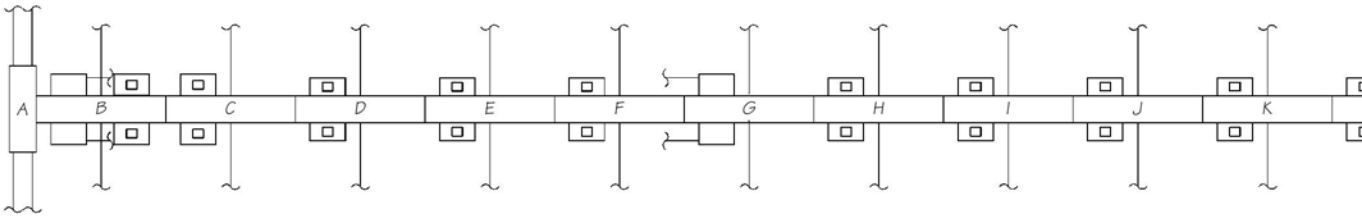
Bridge Design Engr.	Khaleghi, B	M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\CONSTRUCTION OPENING.WND				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Clarke, PT									
Designed By						10	WASH.			
Checked By	Ferluga, E / Olson, D 03/09									
Detailed By	Puryear, D 03/09					JOB NUMBER				
Bridge Type										
Prelim. Plan By	Messmer, AD / Aldrich, B	09/09	NEW SHEET	TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

Thu Sep 24 08:22:11 2009



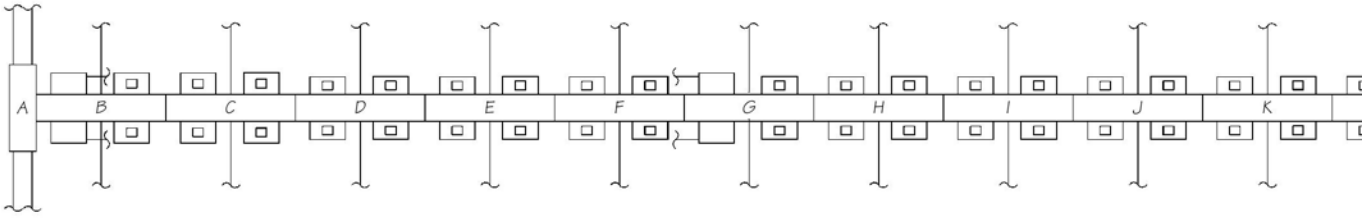
4-LANE CONFIGU

AS SHOWN IN 4-LA



6-LANE

AS SHOW



6-LANE + 2 HCT (8-LAN

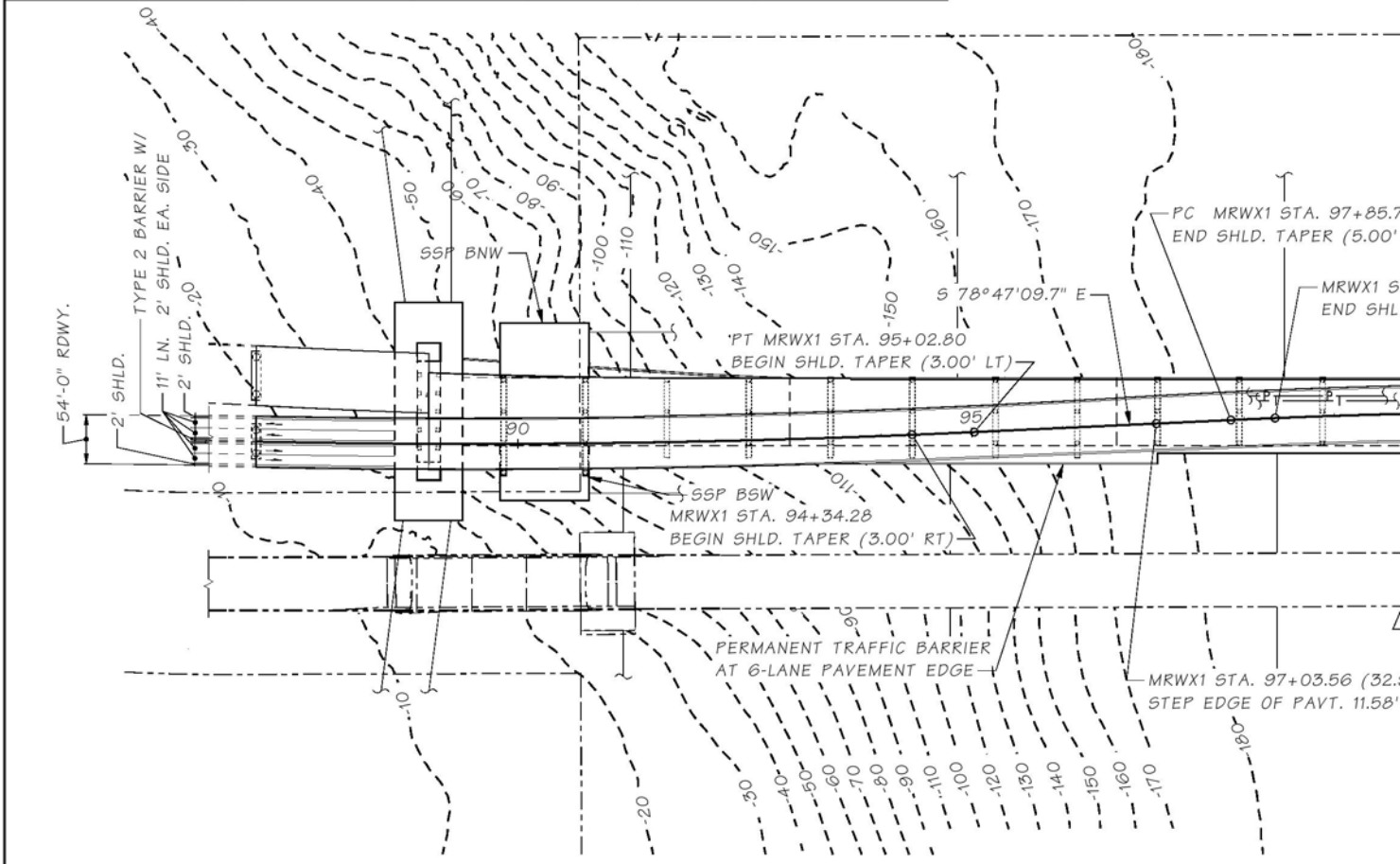
SR 520 FILE NO. _____ SHEET 7

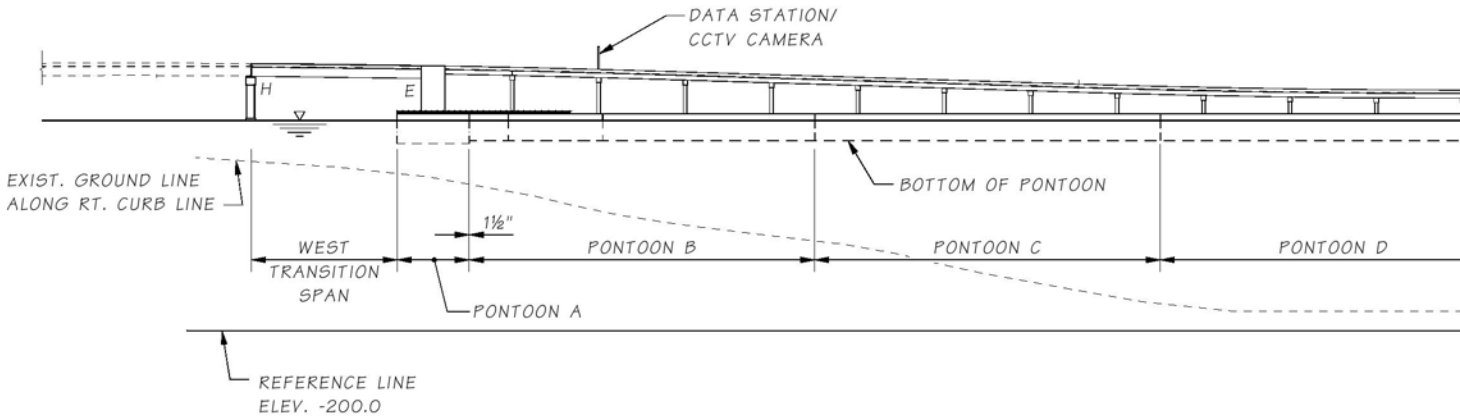
Bridge Design Engr.	Khaleghi, B	M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\CONSTRUCTION PHASES.WND				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Clarke, PT					10	WASH.			
Designed By										
Checked By	Ferluga, E 03/09					JOB NUMBER				
Detailed By	Puryear, D 03/09									
Bridge Project Engr.										
Prelim. Plan By	Messmer, AD	09/09	NEW SHEET	TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

Thu Sep 24 08:22:22 2009

CURVE DATA

P.I. STATION	Δ	RADIUS	TANGENT	LENGTH	BK. TANGENT BRG.
MRWX1 STA. 99+81.42	2°41'52.9" RT	8310.00'	195.69'	391.31'	S 78°47'09.7" E
MRWX1 STA. 88+52.65	6°22'25.4" LT	11701.00'	651.50'	1301.65'	S 72°24'44.3" E





DATUM
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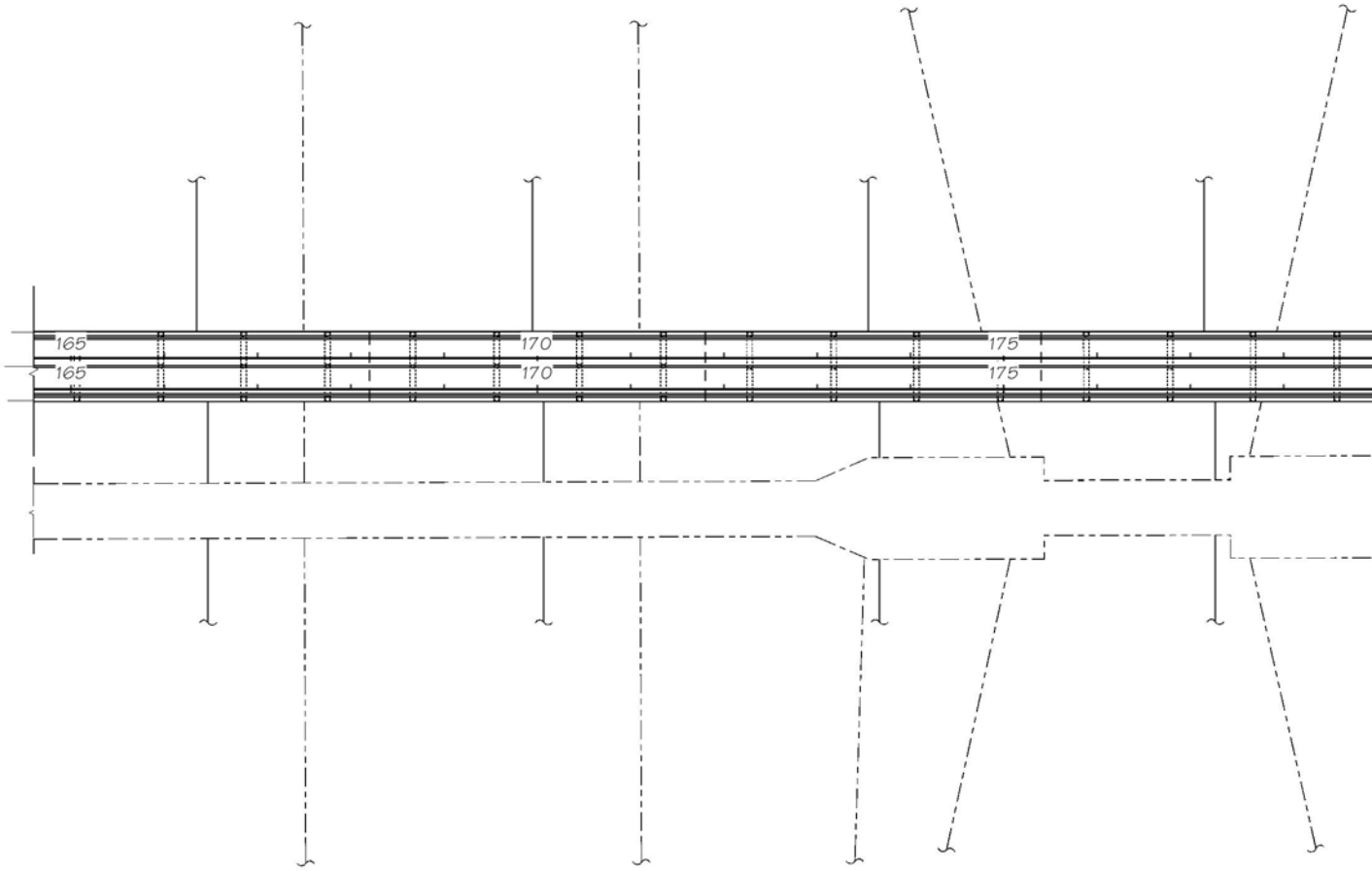
ELE
SEE 6-LANE PLA
ANCHOR CABL

Bridge Design Engr.	Khaleghi, B	M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\LAYOUT 4 LANE-1.WND				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Clarke, PT									
Designed By						10	WASH.			
Checked By	Ferluga, E / Olson, D 03/09									
Detailed By	Puryear, D 03/09					JOB NUMBER				
Bridge Type Lay										
Prelim Plan By	Messmer, A / Aldrich, B 09/09	1	NEW SHEET	TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

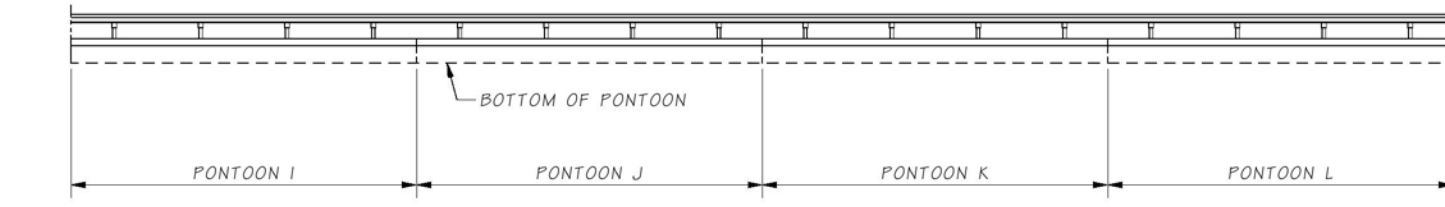
Thu Sep 24 08:22:46 2009

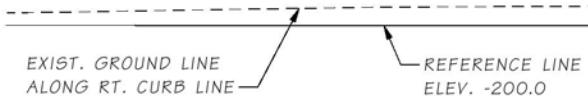
SR 520 FILE NO. ____ SHEET 8 OF 18



P

SEE 6-LANE PLANS FOR





ELEV

SEE 6-LANE PLANS FOR
ANCHOR CABLES NOT

DATUM
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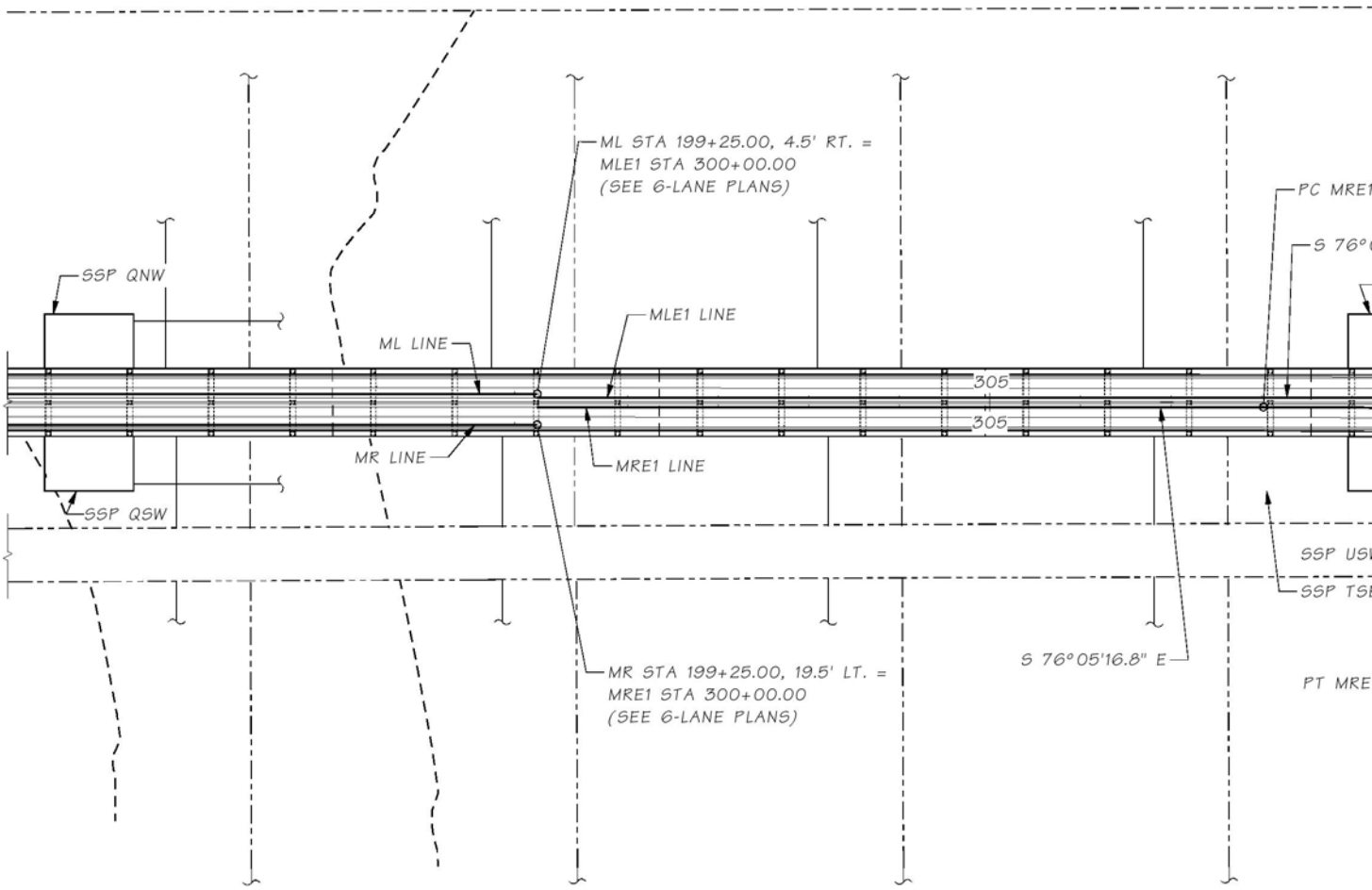
SR 520 FILE NO. ____ SHEET 9 OF 18

Bridge Design Engr.	Khaleghi, B		M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\LAYOUT 4 LANE-2.WND			REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Clarke, PT					10	WASH.			
Designed By						JOB NUMBER				
Checked By	Ferluga, E	03/09								
Detailed By	Puryear, D	03/09								
Bridge Project Engr.										
Prelim. Plan By	MesaMoe, AD	09/09	NEW SHEET	TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

Thu Sep 24 08:23:00 2009

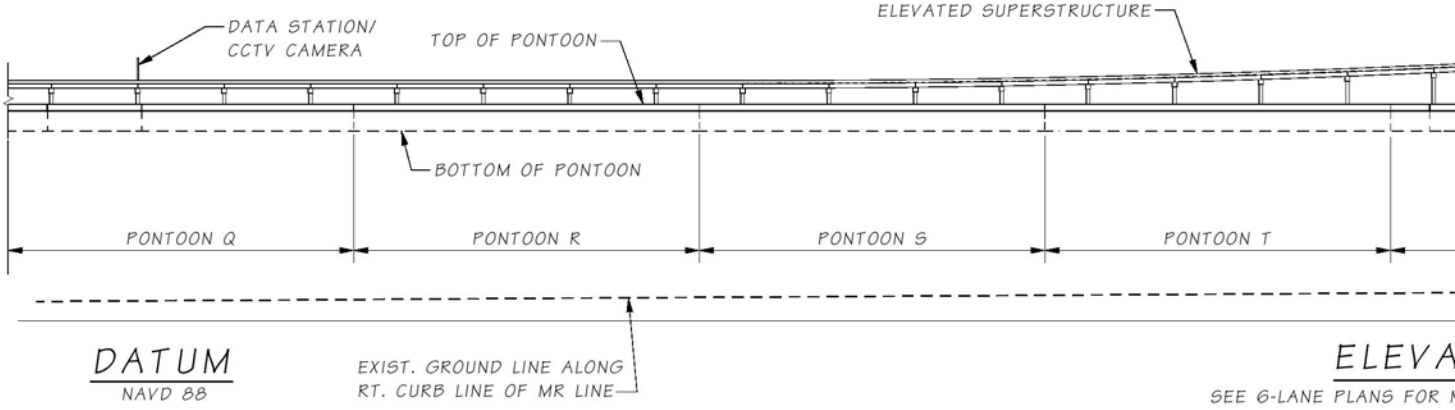
CURVE DATA

P.I. STATION	Δ	RADIUS	TANGENT	LENGTH	BK. TANGENT BRG.
MLE1 STA. 321+73.63	3°52'14.1" RT	11680.00'	394.67'	789.04'	S76°05'16.8"E
MRE1 STA. 309+68.98	1°44'06.5" RT	11026.00'	166.97'	333.91'	S76°05'16.8"E
MRE1 STA. 319+68.42	5°21'31.5" RT	9011.00'	421.70'	842.78'	S74°21'10.3"E



PLAN

MLE1 & MRE1 LINE USED FOR CL
SEE 6-LANE PLANS FOR ML & M



DATUM

NAVD 88

EXIST. GROUND LINE ALONG
RT. CURB LINE OF MR LINE

ELEVA

SEE 6-LANE PLANS FOR M
ANCHOR CABLES NOT

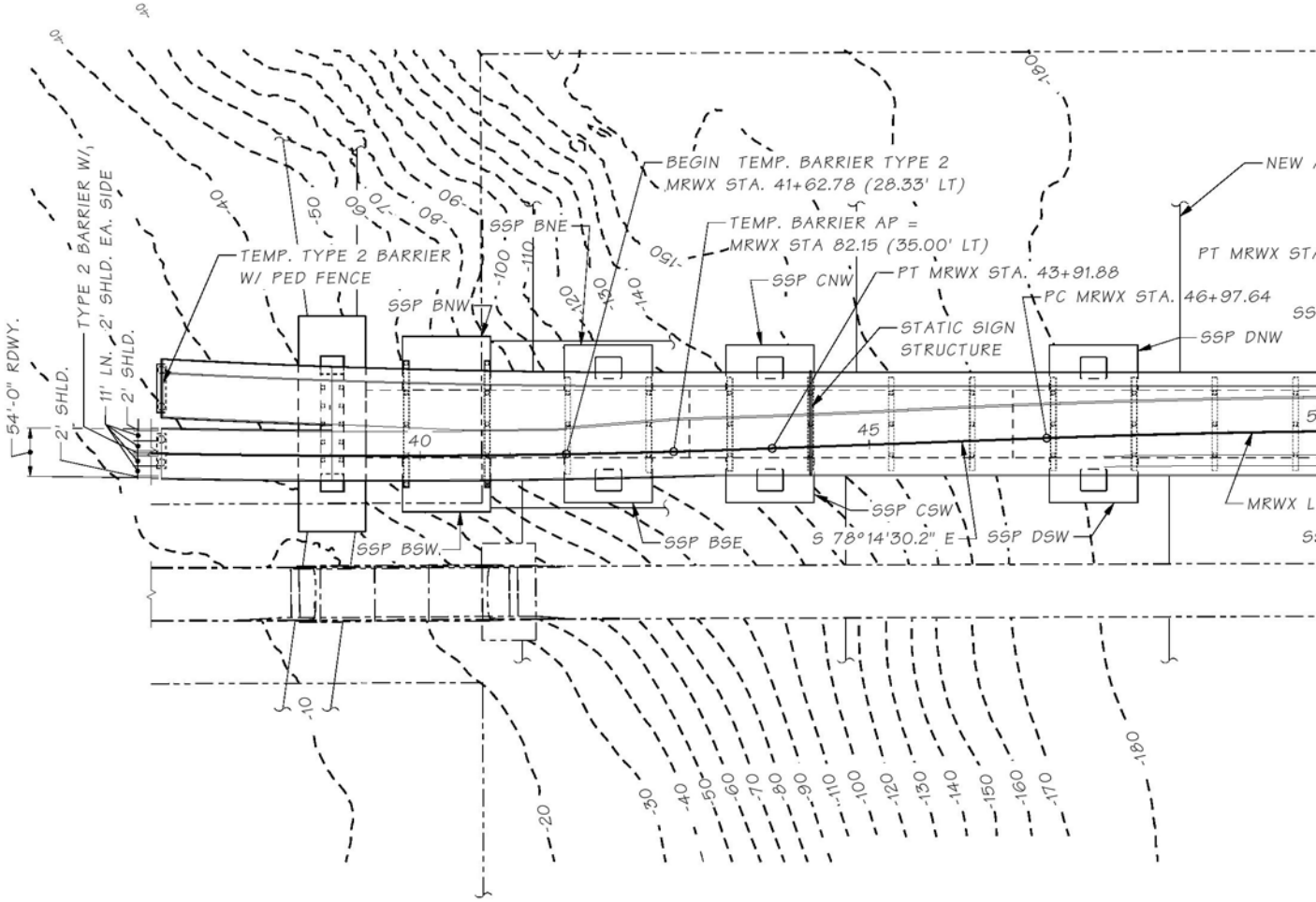
Bridge Design Engr.	Khaleghi, B	M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\LAYOUT 4 LANE-3.WND				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Clarke, PT									
Designed By						10	WASH.			
Checked By	Ferluga, E / Olson, D 03/09									
Detailed By	Puryear, D 03/09					JOB NUMBER				
Bridge Project Eng.										
Prelim. Plan By	Messmer, A / Aldrich, B	09/09	1	NEW SHEET	TL					
Architect/Specialist	Kinderman, P	DATE		REVISION	BY APP'D					

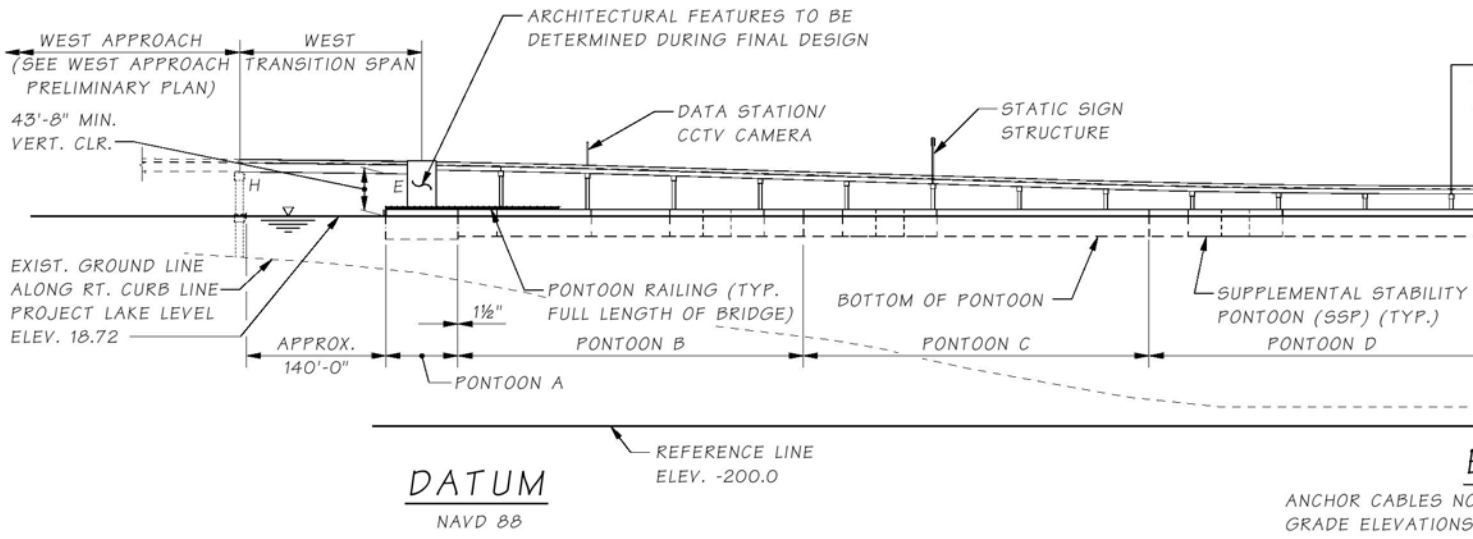
Thu Sep 24 08:23:10 2009

SR 520 FILE NO. ____ SHEET 10 OF 18

CURVE DATA

P.I. STATION	Δ	RADIUS	TANGENT	LENGTH	BK. TANGENT BRG.
MRWX STA. 37+97.15	5°49'46.0" LT	11701.00'	595.76'	1190.49'	S 72°24'44.3" E
MRWX STA. 49+17.00	2°09'13.4" RT	11670.00'	219.36'	438.67'	S 78°14'30.2" E

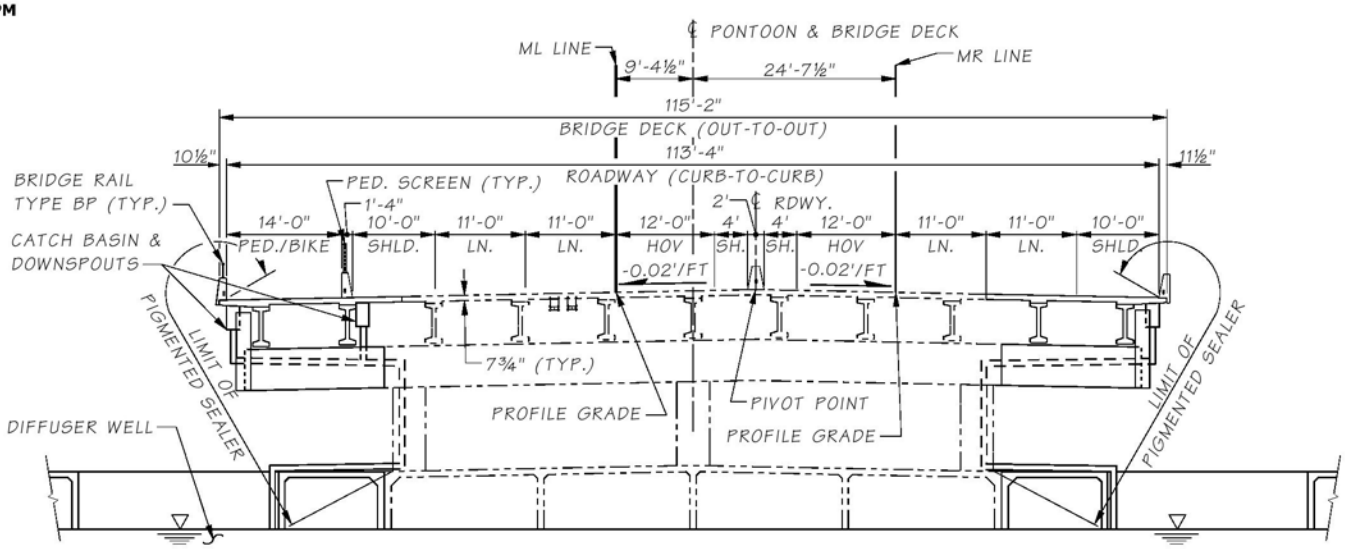




SR 520 FILE NO. ____ SHEET 11

Bridge Design Engr. Khaleghi, B	M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\LAYOUT 6 LANE INTER-1.WND				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor Clarke, PT									
Designed By 05/09					10	WASH.			
Checked By Ferluga, E / Olson, D									
Detailed By Puryear, D 05/09					JOB NUMBER				
Bridge Engineer									
Prelim Plan By Messmer, A / Aldrich, B 09/09	1	NEW SHEET	TL						
Architect/Specialist	DATE	REVISION	BY	APP'D					

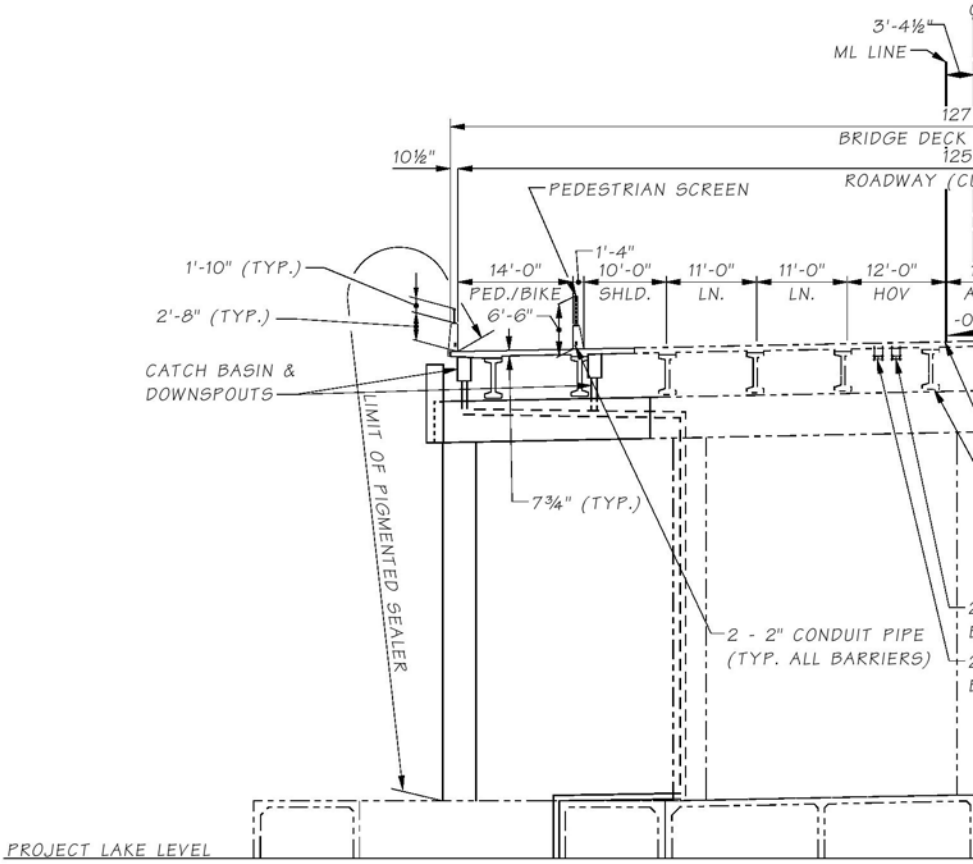
Thu Sep 24 08:23:24 2009



TYPICAL SECTION (6-LANE)

FLOATING BRIDGE NEAR MID-SPAN

SEE TYPICAL SECTION NEAR BENT VI FOR DETAILS NOT SHOWN.



TYPICAL SEC

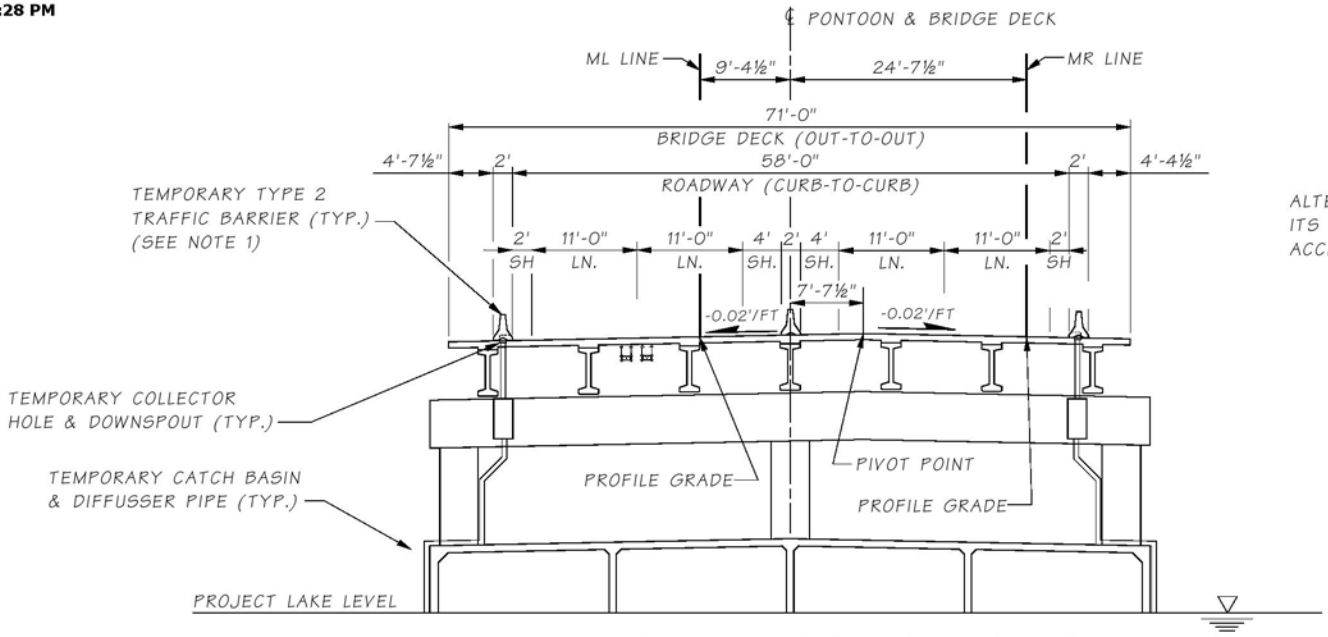
FLOATING BRIDG

SEE TYPICAL SECTION NEAR MI

Bridge Design Engr.	Khaleghi, B		M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\TYP SECTIONS 1.WND				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Clarke, PT						10	WASH.			
Designed By											
Checked By	Ferluga, E	03/09									
Detailed By	Puryear, D	03/09					JOB NUMBER				
Bridge Project Engr.											
Project Plan By	Messmer, AD	09/09	NEW SHEET		TL						
Architect/Specialist	Kinderman, P		DATE	REVISION	BY	APP'D					

Thu Sep 24 08:24:31 2009

SR 520 FILE NO. ____ SHEET 12 OF 18

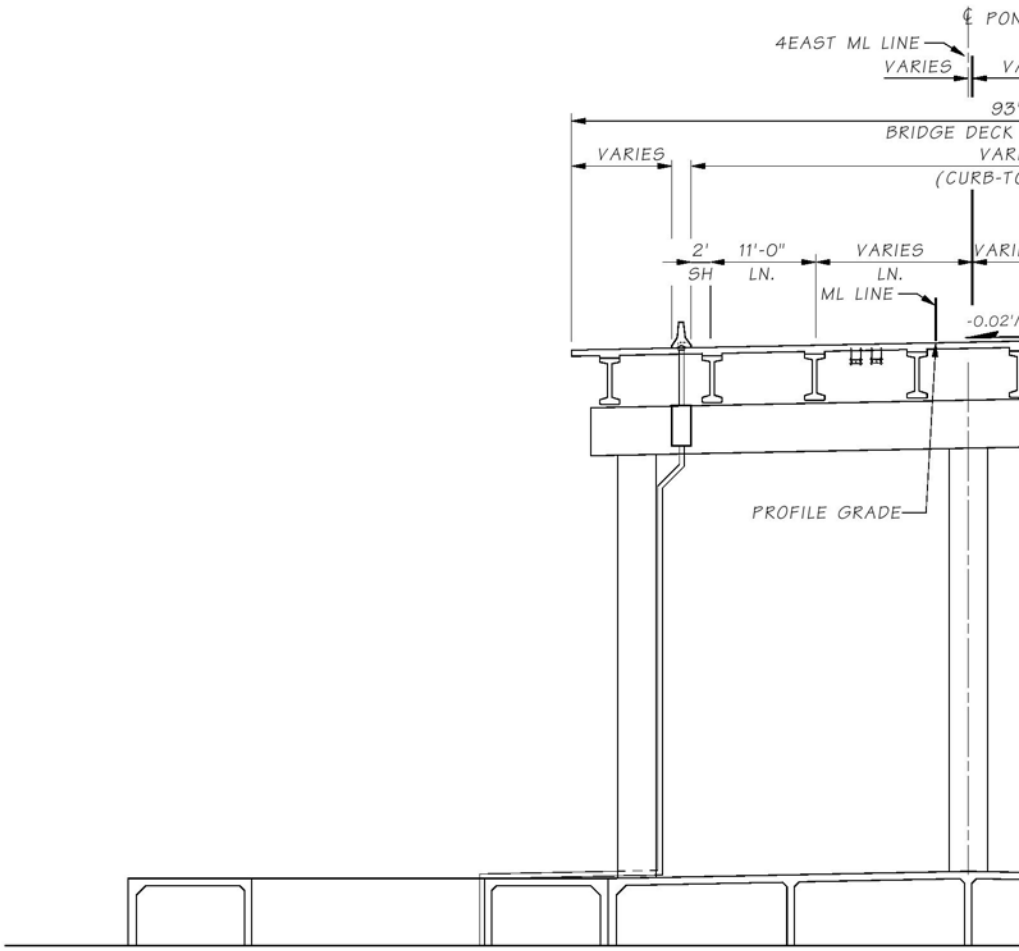


ALTERNATE PLAC
ITS EQUIPMENT C
ACCESS FROM PE

2" C
POW

TYPICAL SECTION (4-LANE)

FLOATING BRIDGE NEAR MID-SPAN
SEE TYPICAL SECTION NEAR BENT VI FOR DETAILS NOT SHOWN.



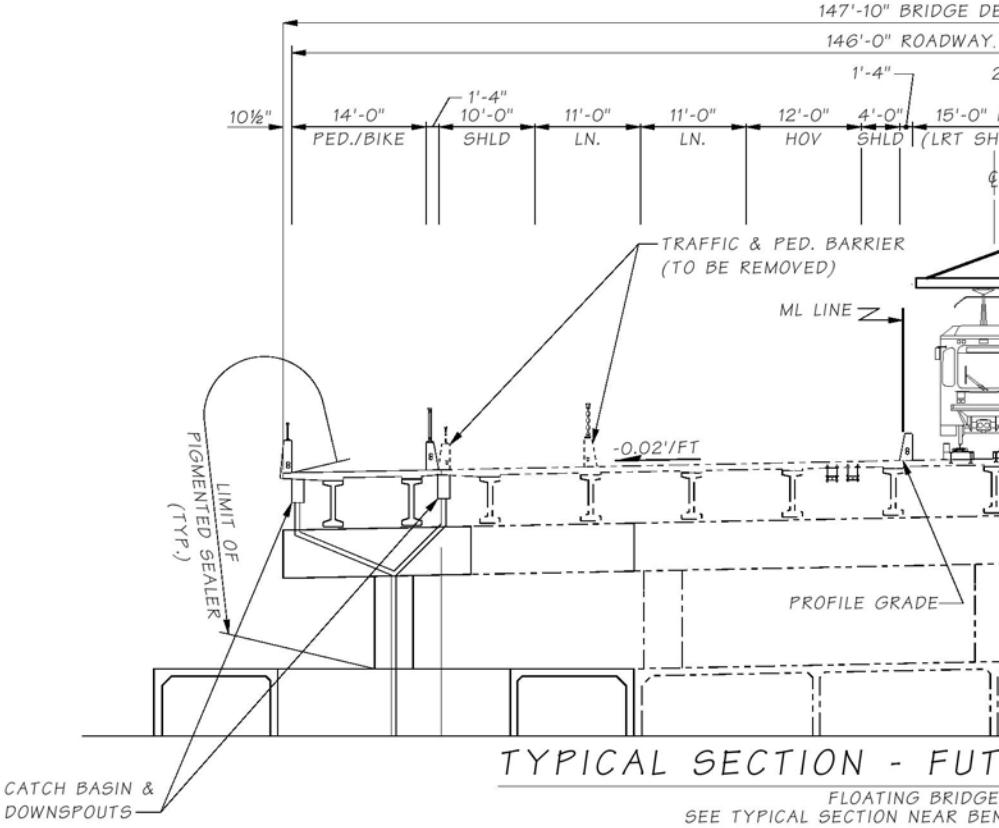
TYPICAL SECTIO

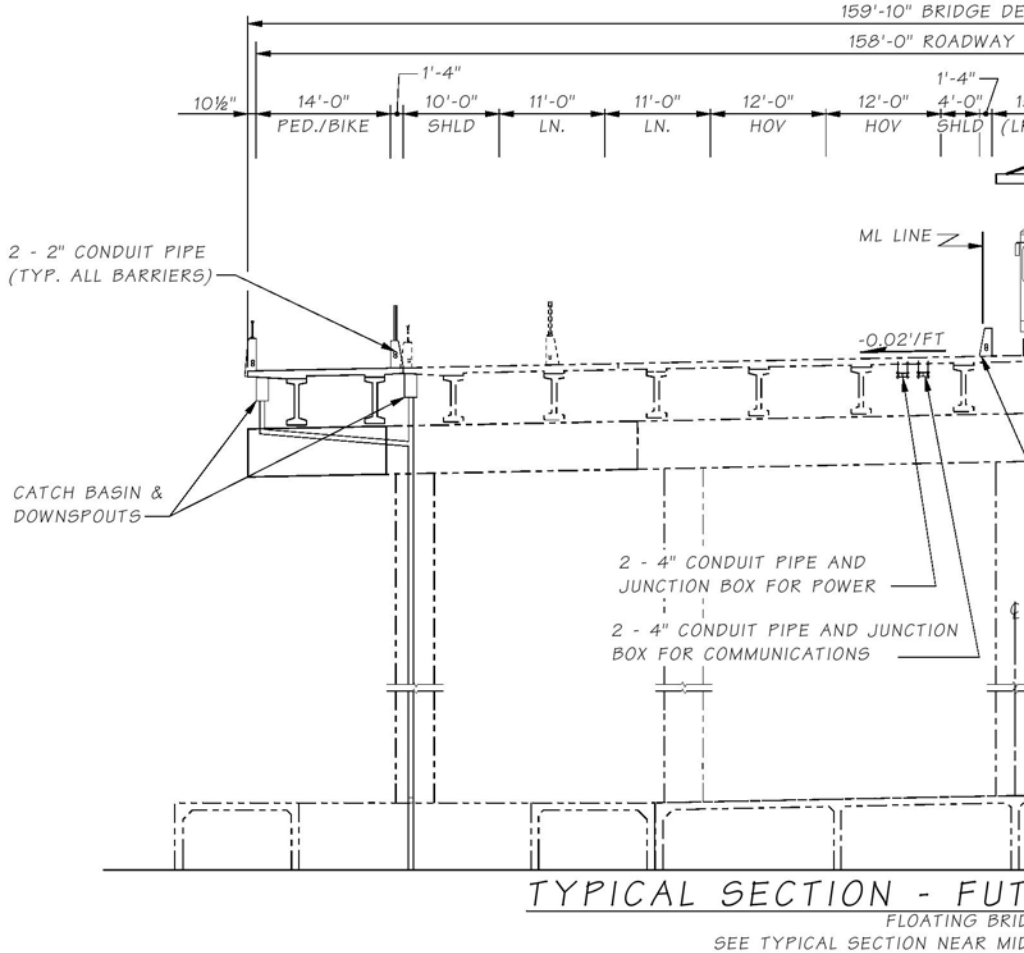
FLOATING BRIDGE NE
SEE TYPICAL SECTION NEAR MID-SPA

Bridge Design Engr.	Khaleghi, B		M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\TYP SECTIONS 2.WND			REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Clarke, PT					10	WASH.			
Designed By										
Checked By	Ferluga, E	03/09								
Detailed By	Puryear, D	03/09				JOB NUMBER				
Bridge Project Engr.										
Prelim. Plan By	MesserE, AD	09/09	NEW SHEET	TL						
Architect/Specialist	Kinderman, P									
		DATE	REVISION	BY	APP'D					

Thu Sep 24 08:24:42 2009

SR 520 FILE NO. ____ SHEET 13 OF 18

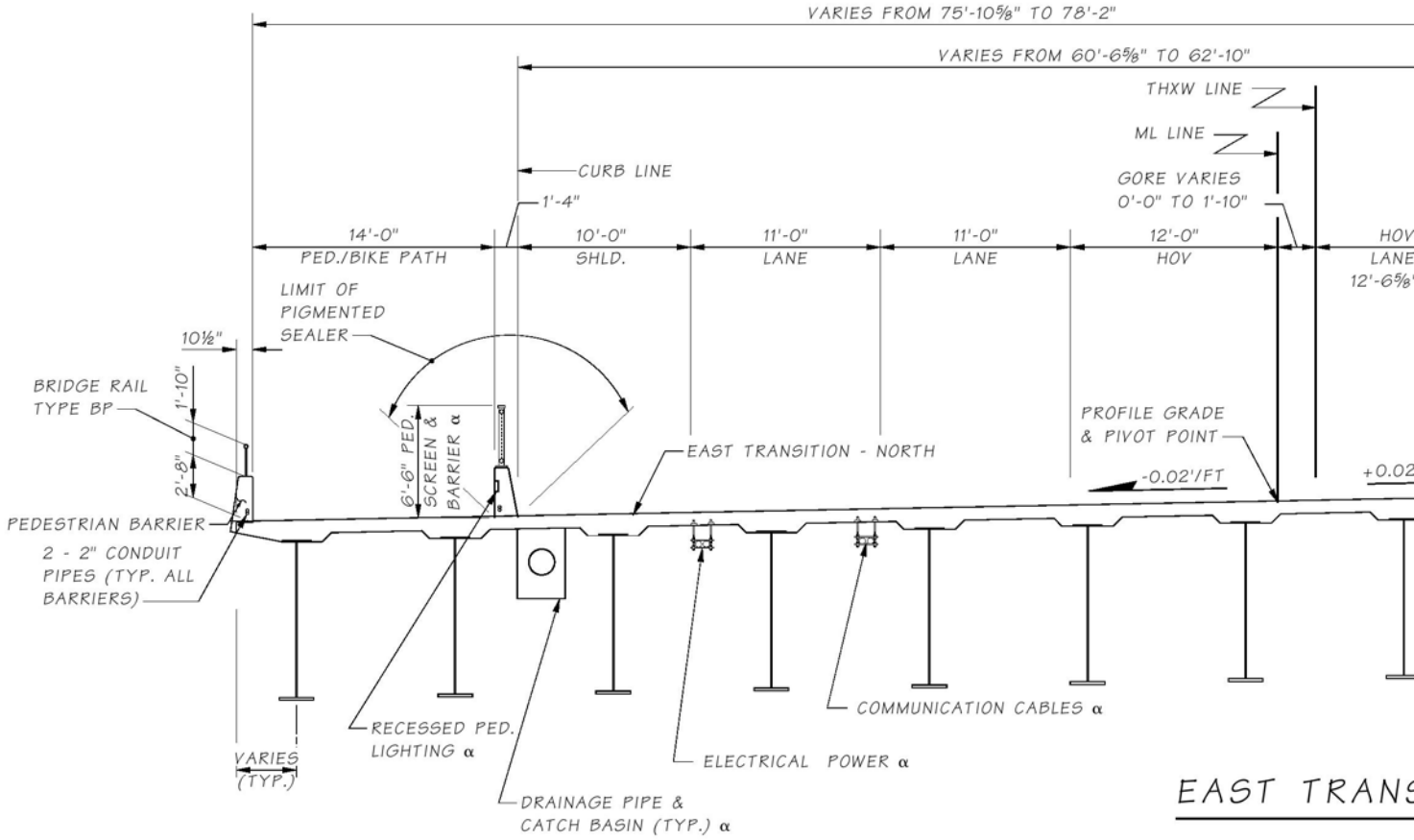


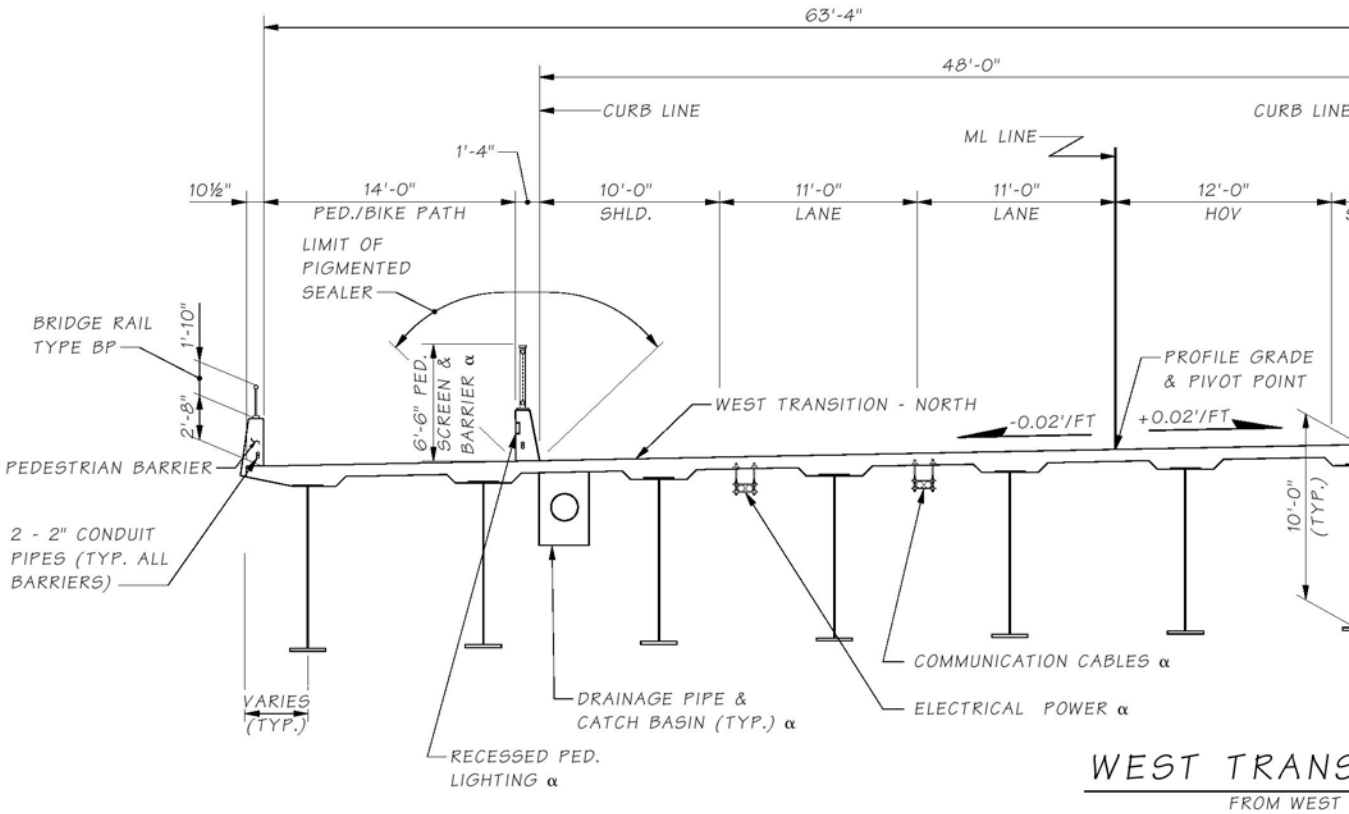


Bridge Design Engr.	Khaleghi, B	M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\window files\TYP SECTIONS 6.WND				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Clarke, PT					10	WASH.			
Designed By						JOB NUMBER				
Checked By	Ferluga, E 03/09									
Detailed By	Puryear, D 03/09									
Bridge Project Engr.										
Prelim. Plan By	Messmer, AD	09/09	NEW SHEET	TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

Thu Sep 24 08:25:25 2009

SR 520 FILE NO. ____ SHEET 14 OF 18





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Supervisor	Clarke, PT					10	WASH.			
Designed By						JOB NUMBER				
Checked By	Aldrich, BS 03/09									
Detailed By	Lemons, T 03/09									
Bridge Type Engr.	Olson, D	09/09	NEW SHEET	TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

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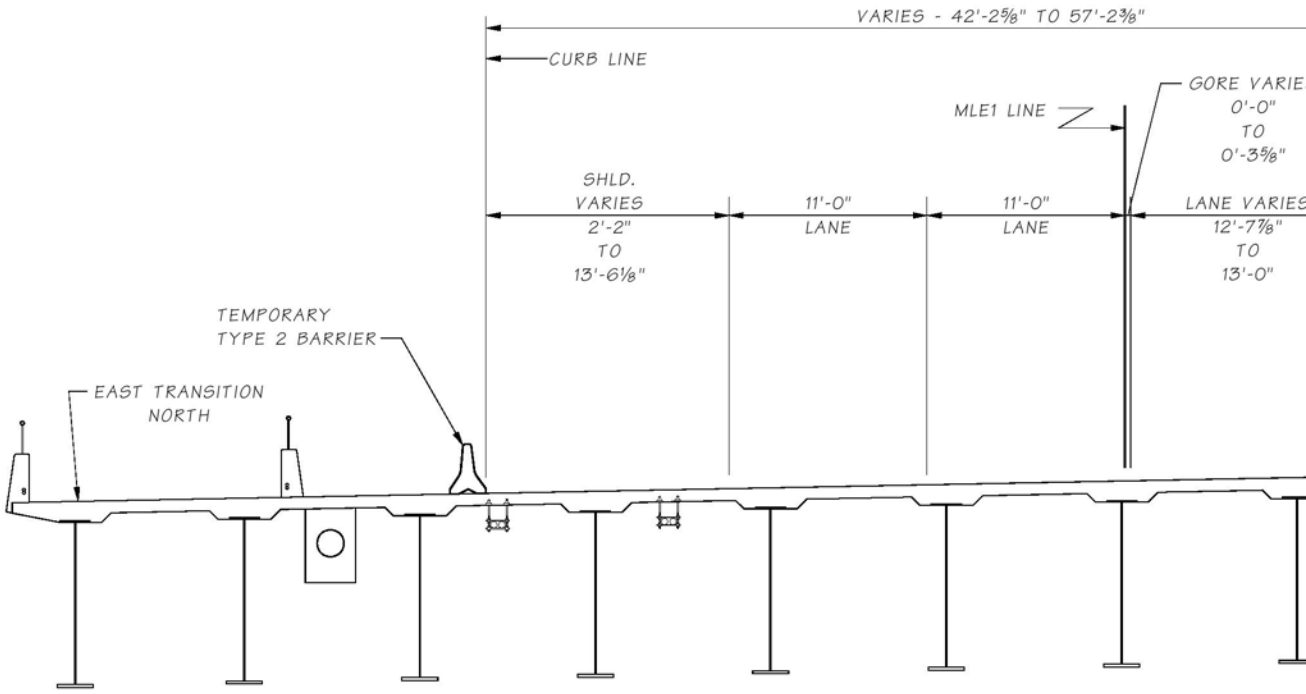
SR 520 FILE NO. ____ SHEET 15 OF 18



EAST TRANSITION

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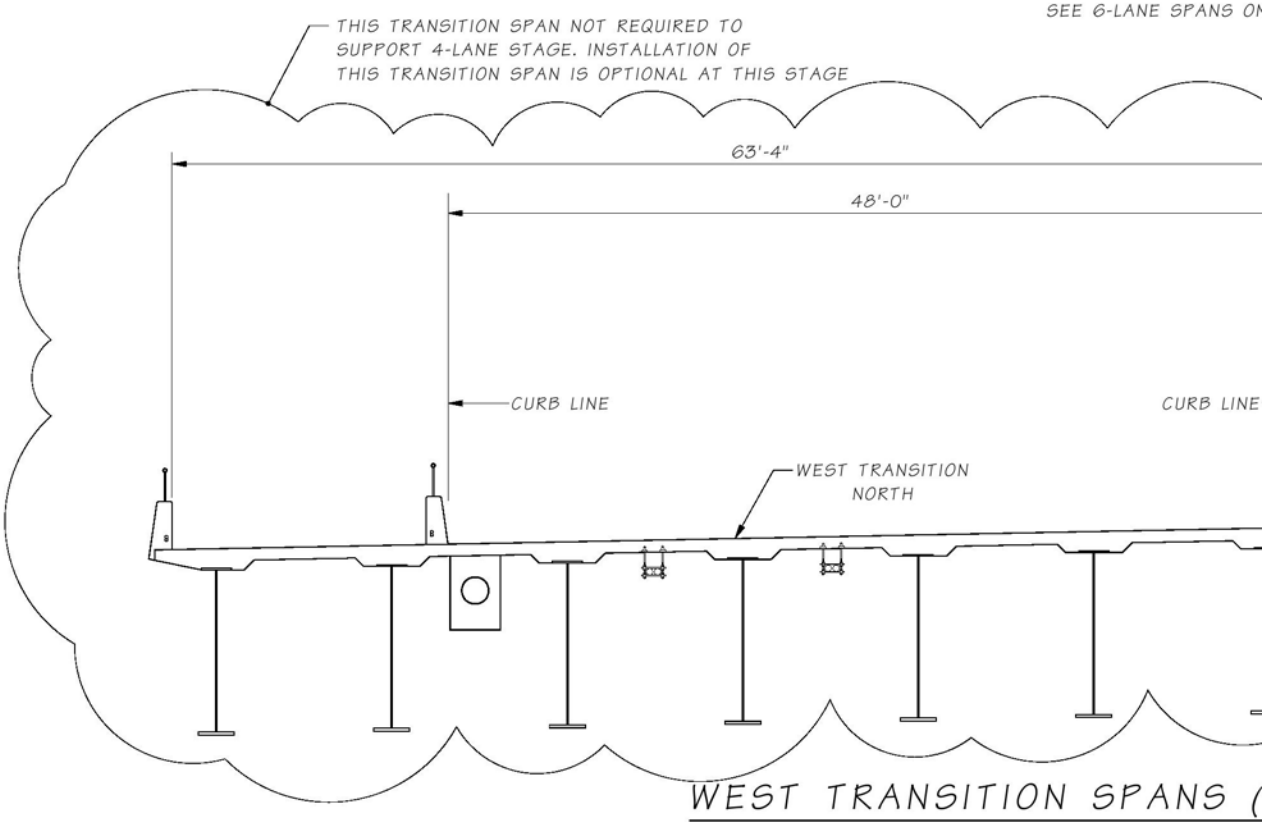
SEE 6-LANE SPANS ON



WEST TRANSITION SPANS (

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Bridge Project Eng.										
Project Eng.	Olson D 09/09	NEW SHEET		TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

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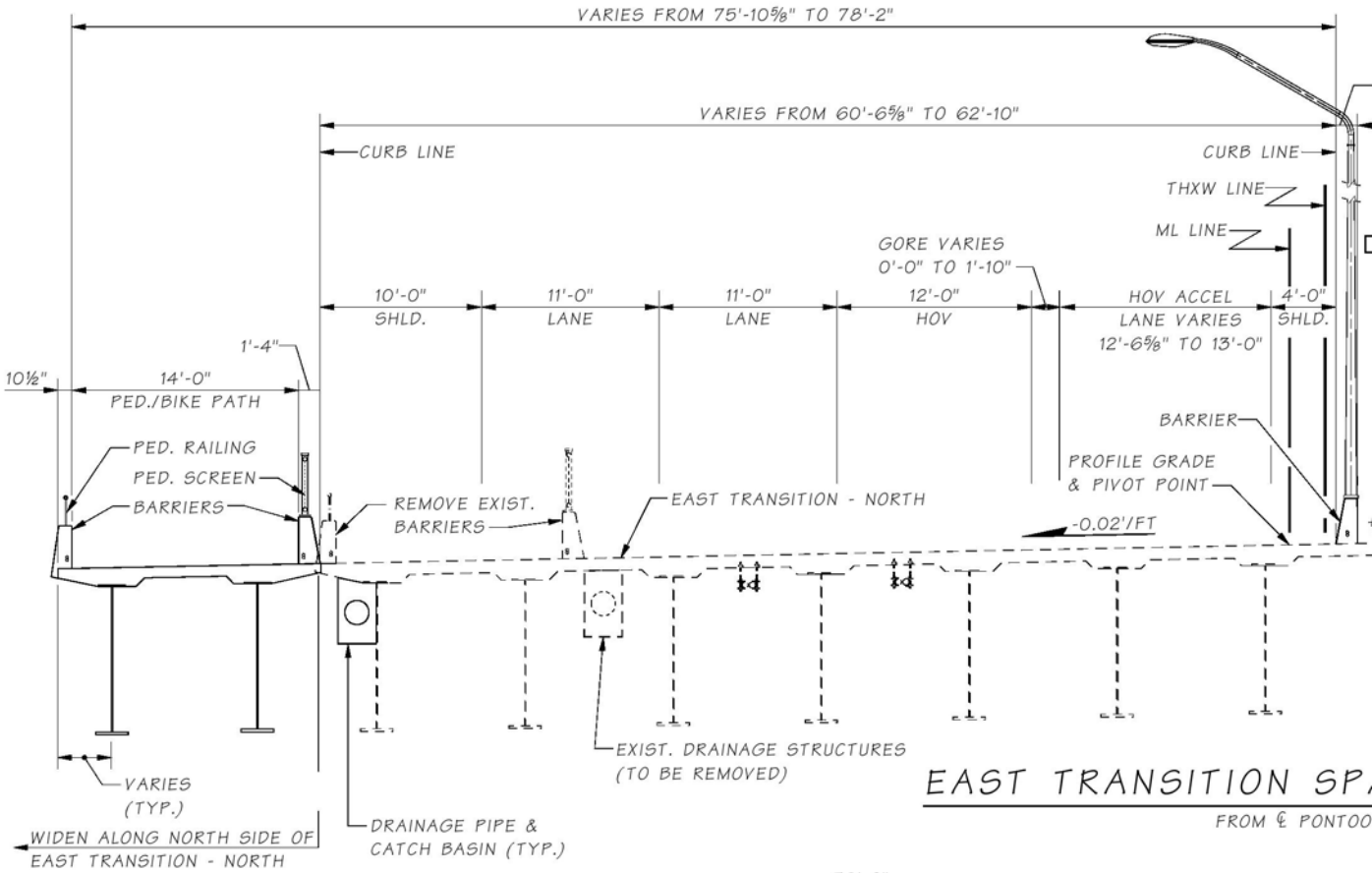
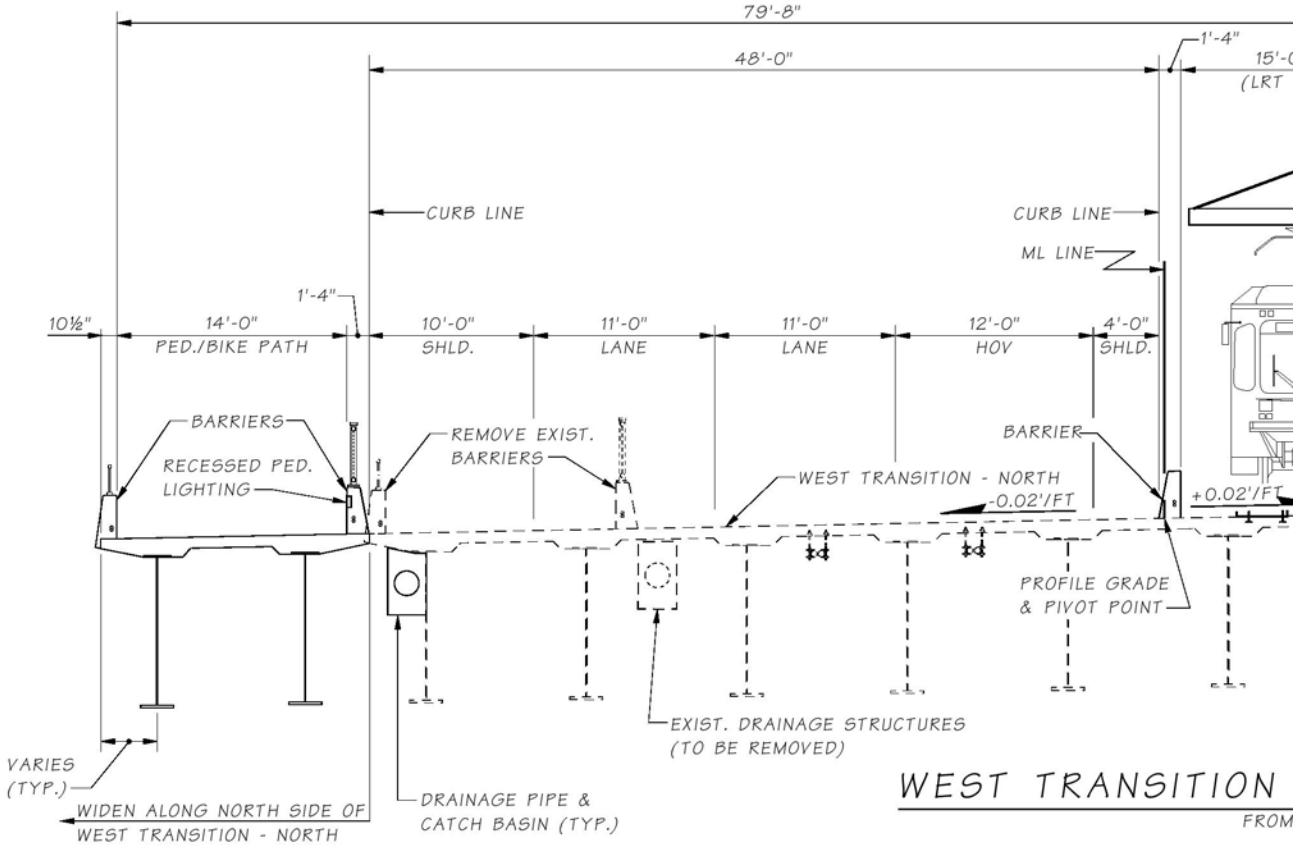
SR 520 FILE NO. ____ SHEET 16 OF 18





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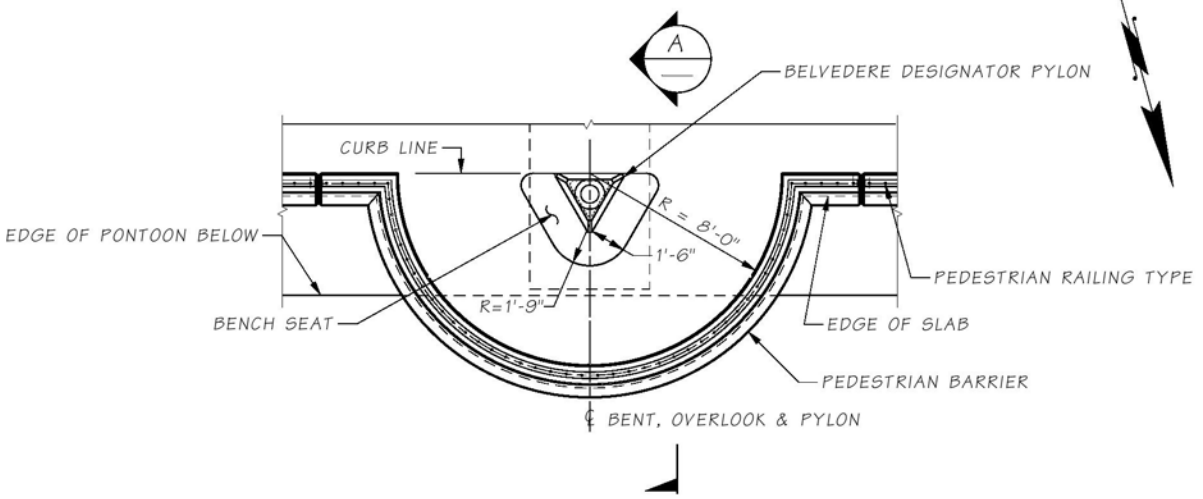
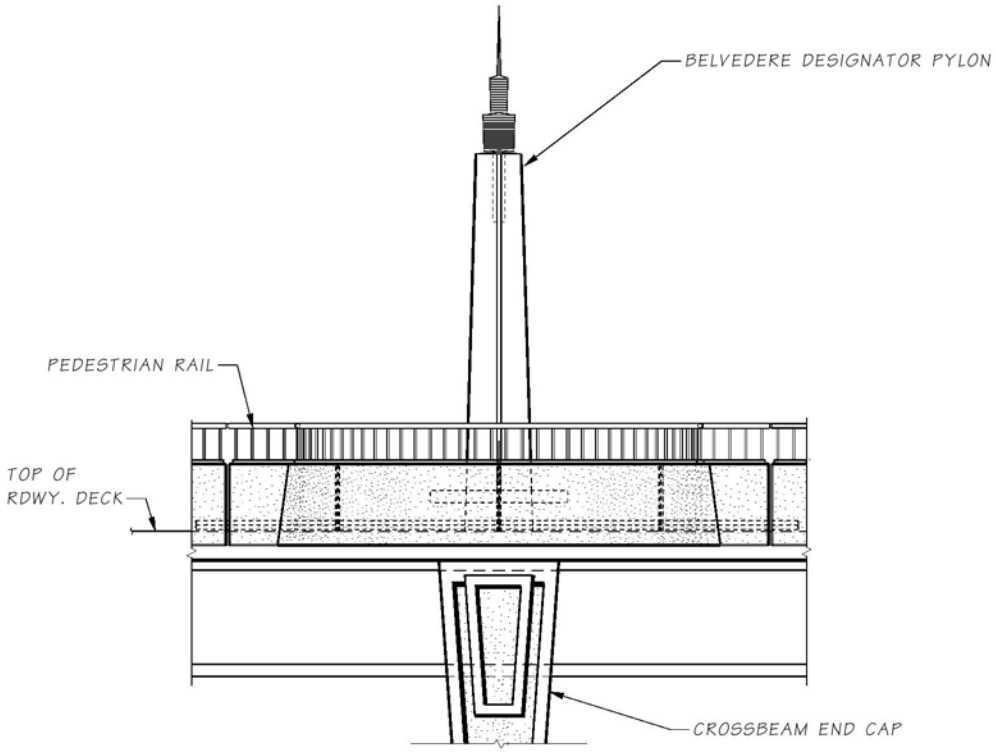
Designed By										
Checked By	Aldrich, BS 03/09									
Detailed By	Lemons, T 03/09					JOB NUMBER				
Bridge Type Engr.										
Project Engr.	Olson, DE	09/09	NEW SHEET	TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

Thu Sep 24 08:25:04 2009

SR 520 FILE NO. ____ SHEET 17 OF 18



PEDESTRIAN BELVEDERE PLAN



CONCEPTUAL ELEVATION

Bridge Design Engr.	Khaleghi, B	M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\ARCH 1.WND				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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Designed By						10	WASH.			
Checked By	Mizumori, A 03/09									
Detailed By	Puryear, D 03/09					JOB NUMBER				
Bridge Detailed By										
Quantities By	Kinderman, P	09/09	NEW SHEET	TL						
Architect/Specialist	Kinderman, P	DATE	REVISION	BY	APP'D					

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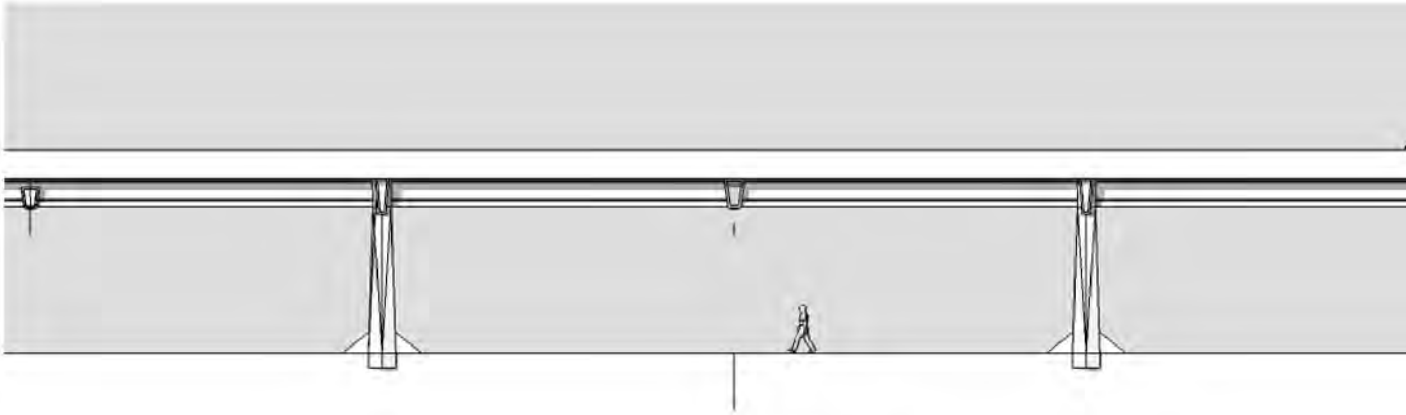
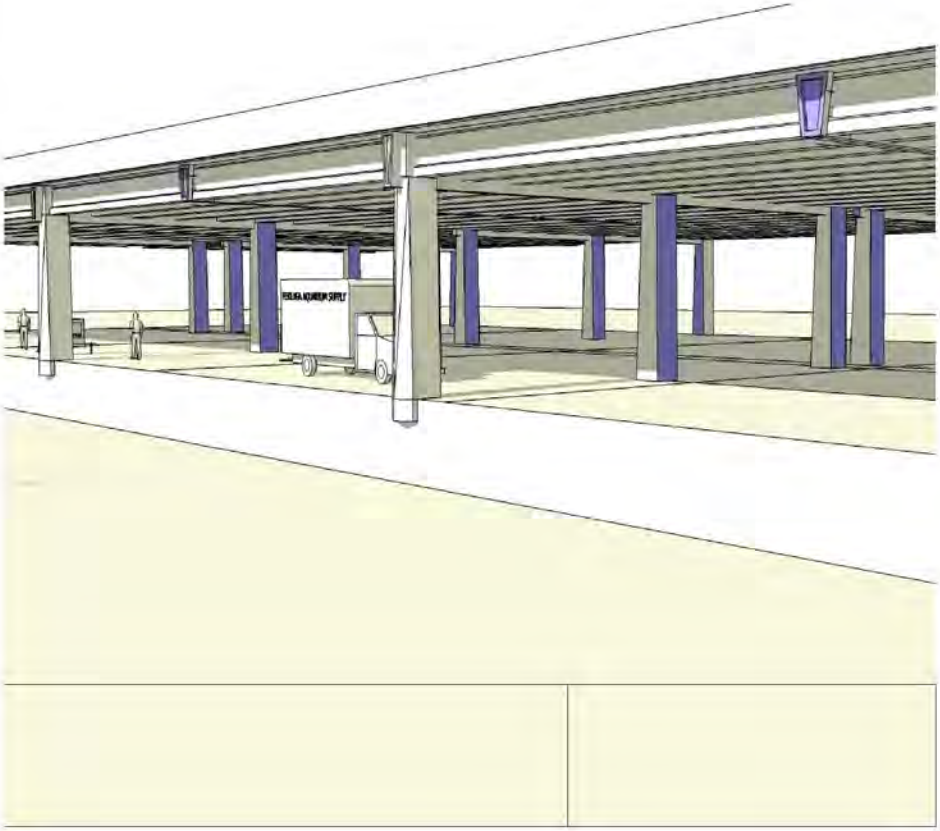


ELEVATION

VIEWED FROM THE WATER



PERSPECTIVE

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SR 520 FILE NO. ____ SHEET 19 OF 18

Bridge Design Engr.	Khaleghi, B		M:\W-Team\SR 520 FLOATING BRIDGE\PRELIMINARY PLAN\Window files\ARCH 2.WND							
Supervisor	Clarke, PT						REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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Bridge Rating											
Estim. Plan By	Kinderman, P	09/09	NEW SHEET		TL						
Architect/Specialist	Kinderman, P	DATE	REVISION		BY	APP'D					

Thu, Sep 24 08:21:59 2009

C-040-167

Erin O'Connor
2612 10th Ave E
Seattle, WA 98102
March 8, 2010

Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart Street, Suite 520
Seattle,WA 98101

Dear Ms. Young:

We expect the attached comments to influence the accuracy and thoroughness of the *Cultural Resources Discipline Report* that goes into the *Final Environmental Impact Statement*. These comments will also serve the growing record of our exchanges, over four drafts, with WSDOT consultants over persistent inaccuracies that have led to flawed findings plus the introduction of new misinformation with respect to the Roanoke Park Historic District and historic resources in the Portage Bay neighborhood in *the Cultural Resources Discipline Report* part of the January 22, 2010, *Supplemental Draft Environmental Impact Statement*.

A pattern of repeated mistakes and omissions and the introduction of new mistakes in the four drafts of the *Cultural Resources Discipline Report* we have seen persists. Our prompt, thoroughgoing, and painstaking reviews and sequential commenting that would have made many of the mistakes easy to correct call into question whether the *Cultural Resources Discipline Report* has been competently prepared.

The extensive *Seattle Times* coverage of the sorry history of the Hood Canal Graving Dock project included Governor Gary Locke's reflection that

> "It is really unfortunate that so much money has been spent on the project, and that the experts didn't detect the magnitude of this historic site at the beginning."

A subsequent external analysis of the project by Foth and Van Dyke and Associates, "an engineering consulting firm specializing in archaeology and cultural resource management on large scale construction projects," found that

> "The permit streamlining process entered the project late and the timeline limited the ability of the permitting agencies to fully consider site alternatives.
>
> "Overly focused on Endangered Species Act concerns, there was inadequate attention given to archaeological, socioeconomic and geological considerations."

The archaeologists contributing to the *Cultural Resources Discipline Report* (or

> its equivalent at that time) for the graving dock project estimated that only 25 burials would be found within the construction site, whereas "335 individuals and their funerary objects, along with some 1,000 of isolates" and 10,000 artifacts had been unearthed by the time the project was halted.

The report also found

> "Considerable weakness in the archaeological assessment" and said that WSDOT "did not follow consistent protocols or gather sufficient information for addressing compliance with the cultural resources assessment and consultation requirements of Section 106 of the National Historic Preservation Act."

The report also noted

> "WSDOT's lack of timely notification and involvement of the Lower Elwha Tribe and the State Historic Preservation Officer and the divergent opinions that increasingly surfaced as the true extent of the village was discovered."[1]

According to a History Link Essay on the project WSDOT paid less than $7,000 for the original survey.

According to a brief wikimapia.org account of the project,

> "This case stands out as a fine case study of what is wrong with low bid contracting of all sorts. If the state had hired contractors who had then undertaken an in-depth and properly conducted study of the location, then they would have identified that there were intact archaeological deposits (thereby warranting further study)."

A March 20, 2003, joint letter from the Army Corps of Engineers and the Washington Department of Ecology responding to WSDOT's application for permits for construction of the graving dock highlights a similar inadequacy in WSDOT's research, this time in WSDOT's Environmental Investigation Results report (October 25, 2002), WSDOT's Geotechnical and Hydrologic Study report (December 3, 2002), and WSDOT's Supplemental Environmental Investigation Results (December 3, 2002). The letter notes that

> "The chemical measurements were incomplete and did not include important contaminants" and that "the sampling was insufficient in number and spatial extent."

The letter also says that the permit's proposal for disposing of excavated materials

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[1] The Foth analysis project, conducted in collaboration with the State of Washington's Joint Legislative Audit Review Committee (JLARC) received the 2007 Impact Audit of the Year Award from the National Legislative Program Evaluation Society (NLPES).

"also threatens historic/cultural resources, a fact not mentioned in the permit application."

House Bill 2624 signed into law by Governor Gregoire March 31, 2008, legislated new standards for the treatment of human remains, including not just tribal remains but also remains found in all pioneer cemeteries.[2]

The parallels with WSDOT's flawed Section 106 process and findings, now with respect to the historic built environment for the SR 520 Bridge Replacement and HOV Project, are striking. We had hoped that analogous higher standards, without the need for lawsuits, audits, and new legislation, would be brought to bear on the representation, assessment, effects findings, and avoidance, minimization, and mitigation strategies for historic resources of the built environment for this project. Instead, we kept receiving apologies and excuses, through four drafts of the *Cultural Resources Discipline Report* for the SDEIS, that there simply was not enough time to do the job properly. The refusal to take that time or to grant that time to its consultants—that is, the refusal to perform accurate and substantiated assessments and findings—reflects poorly on the professionalism and credibility of WSDOT.

We request remedy of the many mistakes in the December 2009 *Cultural Resources Discipline Report* and a Memorandum of Agreement between WSDOT and the Portage Bay/Roanoke Park Community Council that discusses ways of avoiding, minimizing, and mitigating the obvious adverse effects that this project will have on the historic resources of the built environment in the Roanoke Park Historic District and the Portage Bay neighborhood.

In addition, with the prospect of phased implementation looking increasingly more likely and the consequent projection in the *SDEIS* of deferral indefinitely of the construction of the lid at East Roanoke Street over I-5 and the lid between 10th Avenue East and Delmar Drive East over SR 520, we request that projections of noise, air quality, and other effects on the Roanoke Park Historic District and the Portage Bay neighborhood reflect data for both lidded and unlidded construction and operation. (Note that at least one member of the Legislative Workgroup has already proposed not constructing the lid over I-5 at East Roanoke Street as an economizing measure.)

The current *CRDR* bases its findings of no adverse effects on lidded, noise-walled designs. We also request that noise data be developed from measurements and projections of noise levels at bedroom height.

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[2]Although WSDOT was forced to choose a new site and a reburial ceremony was held after the Tribe had brought a lawsuit on treatment of the remains and the site, the some 10,000 artifacts unearthed by WSDOT at the original site reside now in 900 cedar boxes at the Burke Museum. WSDOT refuses to release the artifacts to the Tribe until the Tribe has constructed a cultural center to house them. WSDOT has leased the site to the Tribe but has not taken any steps to help finance a cultural center. Fund-raising to build a center on land that is leased, not owned, is difficult.

And even though WSDOT test results for quieter pavement have been skewed by improper installation, we request that data on the designed use of quieter pavement on the bridges, highway, and local arterials and the effects predicted for bedroom heights be presented in the *FEIS* noise discipline report.[3]

Misinformation and diminutions in the *Cultural Resources Discipline Report* of the extent and significance of historic resources in the Roanoke Park Historic District and of historic resources in the Portage Bay neighborhood that will be affected by this project, repeated now in the December 2009 *Visual Quality and Aesthetics Discipline Report* and other discipline reports in the *SDEIS*, have been put at the service of findings of "no adverse effect" and thus no need for a Memorandum of Agreement to address adverse effects to the historic resources in these neighborhoods.

The diminishing language needs to be corrected, the adverse effects need to be acknowledged, and the mitigation of the adverse effects should be taken up in a Memorandum of Agreement.

WSDOT's refusal, announced in its *Indirect and Cumulative Effects Discipline Report*, to mitigate cumulative effects on the ground that it has no jurisdiction over other agencies is a distortion of the intent of the cumulative effects definition. With the exception of the Sound Transit University Tunnel project, which WSDOT promises to discuss with that agency, the past, present, and reasonably foreseeable effects on historic resources in our communities come from WSDOT projects. WSDOT presumably has jurisdiction over itself. "There is already a bridge there, so a [wider, higher] replacement bridge [moved north in front of more of our homes] would not be an adverse effect," for example, cries out for a cumulative adverse effects finding instead.

Hiding local cumulative effects in region-wide study areas is another evasive tactic that masks real adverse effects—on the salmon in Portage Bay, the Montlake Cut, Union Bay, and Lake Washington, for instance, where huge amounts of money have been spent to make the waters hospitable to salmon after the damage done by the first SR 520 project. WSDOT would undo that work and expenditure and excuse the ruin with a net loss figure that takes in the waters of the whole Puget Sound region.

So much evasiveness and bad faith on the part of WSDOT in the *SDEIS* of January 22, 2010, does not bode well for communities who have earnestly tried to work with this agency and who have been forced by WSDOT's fecklessness to do much of the work of the agency.

Sincerely,

Erin O'Connor

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[3] Consultation with the Arizona Department of Highways on installment and maintenance of quieter pavement would be a good idea. Quiet pavement in Flagstaff has survived chains, studded tires, and freezing and thawing for more than seventeen years.

Historic Resources Chair, Portage Bay/Roanoke Park Community Council
Roanoke Neighborhood Elms Fund
Friends of Roanoke Park

Cc: Dr. Allyson Brooks, State Historic Preservation Officer, DAHP
Michael Houser, State Architectural Historian, DAHP
Governor Christine Gregoire
Sen. Edward Murray
Rep. Frank Chopp
Rep. Jamie Pedersen
Mayor Mike McGinn
Seattle Councilmember Richard Conlin, Chair, Regional and Sustainable Development; Chair, SR 520
Seattle Councilmember Mike O'Brien, Vice-Chair, Regional and Sustainable Development
Seattle Councilmember Tom Rasmussen, Chair, Transportation
Seattle Councilmember Jean Godden, Vice-Chair, Transportation; Member, Regional and Sustainable Development
Seattle Councilmember Tim Burgess, Alternate, Regional and Sustainable Development; Member, Transportation
Seattle Councilmember Nick Licata, Member, Transportation
Seattle Councilmember Sally Clark, Alternate, Transportation
Seattle Councilmember Bruce Harrell, Alternate, Transportation
Seattle Councilmember Sally Bagshaw
Julie Meredith, P. E., SR 520 Program Director, WSDOT
Randolph Everett, Major Projects Oversight Director, FHWA
Scott Williams, Cultural Resources Program Manager, WSDOT
Ken Juell, Cultural Resources Specialist, WSDOT
Karen Gordon, City Historic Preservation Officer, Seattle
Ted Lane, President and Transportation Chair, Portage Bay/Roanoke Park Community Council
Cheryl Thomas, Beautification Chair and Alternate Representative PB/RP CC
Dan Bricklin, Esq.
Wes Larson, Esq.

Formal Comments on December 2009 Iteration of WSDOT's *Cultural Resources Discipline Report* included in the January 22, 2010, release of the *Supplemental Draft Environmental Impact Statement* for the SR 520 Bridge Replacement and HOV Project

The three early parts of these comments take up the Multiple Adverse Effects of the construction and operation of the project on historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood, the Cumulative Adverse Effects of

the project, and the Flawed Section 106 Negotiation Process with WSDOT consultants. **The rest of the comments, in the attached file,** take up in a condensed version specific errors and oversights, page by page, with respect to historic resources in these neighborhoods and the thus flawed effects findings in the December 2009 *Cultural Resources Discipline Report*.

Multiple Adverse Effects

More than a third of the contributing 80 historic resources and almost half of the individually eligible 57 historic resources in the Roanoke Park Historic District and many resources in the Portage Bay neighborhood both surveyed and unsurveyed would suffer multiple adverse effects from the demolition, construction, and operation of the SR 520 Bridge Replacement and HOV Project from all of its options and most extremely from Option A and its suboptions. Additional historic resources on the western side of the Roanoke Park Historic District and unsurveyed properties in the Portage Bay neighborhood would suffer adverse effects from hauling, demolition vibration and dust, reconstruction, and operation, particularly if lids are deferred as they are said to be in descriptions of the Phased Implementation Scenario predicted in the *SDEIS* to be the most likely outcome.

Construction

Properties in the Portage Bay basin are noted for their **views**, which would be adversely affected by construction of the wider Portage Bay Bridge moved farther north, construction just south of the NOAA Fisheries Building, and the construction of an additional connector across or under the Montlake Cut. Barges, work bridges, machinery, and construction activity would introduce high contrast changes over a seven-and-a-half-year to eight-year construction period (*Section 4(f) Evaluation*, p 65) to the views east from more than a third of the Roanoke Park Historic District's contributing historic resources and almost half of the historic district's individually eligible historic resources and would thus significantly affect setting, feeling, and characteristic use of the historic district.

The same **visual blight** would be imposed on the three individually eligible historic resources in the Portage Bay neighborhood that have thus far been surveyed and on many more historic resources in the Portage Bay neighborhood that have not been surveyed—on houses along both sides of Delmar Drive East that enjoy spectacular views of the bay and on historic resources in the houseboat community and on both sides of Fuhrman-Boyer Avenue East.

- We request that the survey of historic resources in the Portage Bay neighborhood be complete and that it include historic resources on both sides of Delmar Driver East, resources along both sides of Fuhrman-Boyer Avenue East including the bungalow resources on East Gwinn Street, and historic resources in the houseboat community.[4]

[4] Note in addition that the survey of historic resources in the North Capitol Hill neighborhood does not even include Carl F. Gould's own residence (unaltered), designed by Gould, on East Lynn Street.

- We request that historic resources in the Portage Bay neighborhood discovered in the course of completing the survey be included in the Area of Potential Effects (APE) for the project—in other words that the APE boundary be redrawn to include these vulnerable historic resources.

- We request that references to views enjoyed by "only a few" of historic resources in the Roanoke Park Historic District and the Portage By neighborhood be amended to reflect the true count and that the adverse effects on views and other aspects of the historic resources from construction of the project be acknowledged.

- We request that a Memorandum of Agreement treat the obvious adverse effects on historic resources of construction with strategies for avoidance, minimization, and mitigation.

The effects of the seven-and-a-half-year to eight-year construction activity described below would be compounded by the current staging, excavation, and hauling of Sound Transit's deep-bore (300-foot deep) twin tunnel construction project under the Montlake Cut. Trucks will haul excavated material from the deep hole across the Montlake Bridge to SR 520. Construction is expected to last until some time in 2016. WSDOT's declining to put the multiple and cumulative effects of these two simultaneous major projects into its effects findings "because it doesn't have jurisdiction over other agencies" (Chapter 7, p 7-1) is disingenuous. And its refusal to consider as **cumulative effects** "the incremental impact of its [SR 520 Project] action when added to other past, present, and reasonably foreseeable future actions" of its own projects is perverse unless the agency hopes thus to avoid, not adverse cumulative effects, but having to negotiate a Memorandum of Agreement on avoiding, minimizing, and mitigating these effects.

- Increases in **noise** from demolition, hauling, staging, and construction at many sites at bedroom height of historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood over the seven-and-a-half-year to eight-year construction period can be expected.

- Nighttime construction **glare** and **noise** from many staging, hauling, and construction sites over the seven-and-a-half-year to eight-year construction period are likely.

- Increased **diesel traffic** during peak construction periods over seven-and-a-half to eight years on local arterials on the west and south borders of the Roanoke Park Historic District and on Fuhrman-Boyer Avenue East and Delmar Drive East in the Portage Bay neighborhood is expected. Diesel traffic is more polluting and noisier than auto traffic.

- Traffic **congestion and air pollution** from idling vehicles detouring along residential streets in both the Roanoke Park Historic District and the Portage Bay neighborhood can be expected.

- Damage to buildings, landscaping, and parked cars (and life and limb) from detouring vehicles speeding along residential streets can be expected as well.

- **Concrete dust** from the demolition of the East Roanoke Street, 10th Avenue East, Delmar Drive East, and Portage Bay bridges and the consequent erosion and soiling of buildings, dusty windows, and damage to landscaping, including the mature shade trees on its south side for which the Roanoke Park Historic District is noted, are expected.

- **Fugitive dust** and **fugitive emissions** from diesel engines and machinery during hauling, staging, and construction with their contribution to the erosion and soiling of buildings, dusty windows, vibration, and damage to landscaping including the mature trees that buffer the district from the present operation of freeways on its west and south borders are to be expected.

- The **removal** in fifty-foot-wide swaths during construction **of vegetation** that helps to buffer the historic resources from the effects of the present operation of SR 520 on the south is to be expected as well.

- The very real threat from demolition and construction **vibration** to historic resources perched on steep, landslide-prone hills all over the area from I-5 to Portage Bay and the accompanying threat to historic resources below these properties will loom over these properties during the seven-and-a-half to eight years of demolition and construction vibration.

- **Lessened use** of the contributing Roanoke Park because of its proximity to detours, haul routes, staging sites, and demolition and construction sites is to be expected.

- Intermittent and shifting **curtailed access** to homes and neighborhood schools during the seven-and-a-half-year to eight-year construction period is expected.

- The no doubt accurate **perceived damage to healthy livability** of historic resources and the consequent **lowering of values** and **changes of population** during an extended seven-and-a-half-year to eight-year construction project is to be expected. Single families with children are likely to move away and to be replaced by lower-income renters. The families served by the Portage Bay/Roanoke Park Community Council have among them 126 children under the age of 20, including 79 children under the age of 14. These figures are likely an undercount because in this age parents don't like to disclose this kind of information. The change to this single-family, owner demographic would be an **adverse secondary, or indirect, effect**.

Operation

- From operation, permanent damage to setting and feeling by **high contrast changes to the views** for which properties in the Portage Bay basin are noted, especially caused by the wider and higher Portage Bay Bridge, with massive noise walls in Options A and L, moved farther north in front of these properties, is expected.

- From operation of Option A, **views** of the delicate span of the Montlake Bridge and its Carl F. Gould towers would suffer permanent damage from the adjacent second bascule bridge.

- From operation, **views** from many historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood, of Portage Bay, the Colonial Revival Seattle Yacht Club and the brick and terra-cotta NOAA Fisheries Building, both designed by John Graham, Sr., would suffer permanent damage from the intrusion of the out-of-scale wider and higher adjacent bridge shifted north and right beside the Fisheries Building.

- From operation, a permanent increase in **noise levels** from bus traffic and more vehicle traffic in the two new lanes would reach the bedrooms of residents of the Roanoke Park Historic District and in the historic resources in the Portage Bay neighborhood.

- From operation, a permanent increase in **air pollution** would cause damage to historic resources from exterior erosion and soiling, dusty windows, and damage to vegetation from more lanes for bus and vehicle traffic.

- From operation, a permanent increase in **vibration** from the increase in bus and vehicle traffic on the replacement bridge moved north closer to historic resources and the consequent risk of landslides under historic resources perched on steep hillsides can be expected. (Houses close to the present four-lane SR 520 experience detectable although tolerable vibration already.)

- An **accurate perceived permanent damage to the healthy livability** of historic resources from the project's operation from I-5 to SR 520 and in the Portage Bay basin and a consequent lowering of values and changes in population are to be expected. Single families with children are likely to move away and to be replaced by lower-income renters. The many families with young children have been growing as has the number of single families with children in the Roanoke Park Historic District and the Portage Bay neighborhood. With the operation of a wider, closer SR 520 bridge and increases in traffic, noise, air pollution, and nighttime glare, that single-family, owner demographic trend is likely to change, and that would be an **adverse, secondary, or indirect**, effect.

Cumulative Adverse Effects

"An effect that results from the **incremental** effect of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions. Cumulative effects can result from **individually minor but collectively noticeable actions taking place over a period of time**."

The collective, multiple foreseeable adverse effects of this WSDOT project described in these condensed comments along with the cumulative nature of these collective, multiple foreseeable adverse effects added to past and present adverse effects of WSDOT projects on these historic resources call for a Memorandum of Agreement between WSDOT and the neighborhoods served by the Portage Bay/Roanoke Park Community Council.

WSDOT's statement of refusal in the *SDEIS* to engage in cumulative effects findings because it doesn't have jurisdiction over other agencies—itself a questionable rationale—does not excuse it from considering the adverse cumulative effects of its own projects, past, present, and future. Such an obligation to consider adverse cumulative effects of its own past projects, present projects, and future projects should forestall in the *CRDR* and other discipline reports the ubiquity in many of the discipline reports of arguments such as "there is already a bridge there, so a replacement bridge would not create an adverse effect." WSDOT's determined efforts throughout the *SDEIS* not to acknowledge the temporal, historical aspect of the cumulative effects definition, which is stated in clear language, should be challenged before more damage, perhaps past a tipping point, is done.

Flawed Section 106 Negotiation Process

- We weren't given sufficient meeting time to take up the specifics of our corrections to the September 2009 version of the *CRDR* , the second draft we had reviewed and offered corrections for, or of the writer's many additions and changes to the September 2009 version in the third, 11/16/2009, iteration of the report and our comments on them. The writer, Lori Durio, who was talking to us via telephone, had to close her participation in the meeting, and Environmental Lead Marsha Tolon stayed a bit longer although she was due at another meeting. Connie Walker Gray, the other architectural historian who had been working with us, did not attend the meeting.

- We appreciated the news that editorial and mechanical suggestions we had made in response to the third review question about how the September 2009 document could be improved were passed on to the editor of the document, and we won't repeat many of those suggestions in this round of comments. We will mention editorial problems with the new, December 2009, version of the *Cultural Resources Discipline Report* that interfere with consistency and sense and therefore with clarity, accuracy, and earned, legitimate, and logical conclusions about effects.

- We are dismayed, after so many efforts on our part—over three drafts—to correct misinformation and omissions, that the fourth draft, the flawed December 2009 version of the *CRDR*, was included in the January 22, 2010, release of the

Supplemental Draft Environmental Impact Statement. Even more dismaying than the continued dissemination of misinformation in the *CRDR* is realizing that misinformation in the *CRDR* has been carried over to other parts of the *SDEIS*, such as the Section 4(f) evaluation, Chapter 4 on the project area's environment, Chapter 7 on indirect and cumulative effects, and most egregious to the Roanoke Park Historic District and the Portage Bay neighborhood, both noted for their panoramic and memorable views of high vividness, the December 2009 *Visual Quality and Aesthetics Discipline Report*. Note that these unaltered views were rated and described more favorably in the 2005 *VQADR* than in the December 2009 version of the *VQADR* and that the effects of even the old four-lane and six-lane alternatives on views were said to be profound, that is, "very noticeable." Has the discipline of aesthetics changed so much? Or is a strategy of denigrating present circumstances in order to find no adverse future effects from the project at work?

- We learned in the Monday, November 30, 2009, meeting that our speedy review of the 11/16/2009 iteration of the 213-page *Cultural Resources Discipline Report*, which we received via e-mail nine days later, on Wednesday, November 25, 2009, which review we accomplished over Thanksgiving in time for the Monday morning meeting discussion November 30, 2009, would nevertheless be unlikely to result in substantive corrections to representations of the Roanoke Park Historic District and other historic resources within the APE and to effects findings with respect to the Roanoke Park Historic District and Portage Bay neighborhood historic resources in the version of the *Cultural Resources Discipline Report* that would go into the *SDEIS*. The revised 11/16/2009 version of the *CRDR* could have been and should have been delivered to us in a timely way. Our comments and corrections should have appeared in the December 2009 *CRDR*.

- We were told in a telephone conversation subsequent to our 11/30/2009 meeting that Lori Durio, the writer of the *Cultural Resources Discipline Report*, had three reports due for the *SDEIS*, and while we are sympathetic, we think that the poor quality and the incompleteness of the previous iterations and now of the *SDEIS* version of the *Cultural Resources Discipline Report* are inexcusable. This report after all purports to describe the effects of the construction and operation of a years-long, massive transportation project on our historic homes and some ways of mitigating those inevitable effects on our historic district and on historic resources in the Portage Bay.

- New mistakes were introduced into the table of **eligible** historic resources, Exhibit 15 (formerly Exhibit 13). We had asked in the interest of balance and completeness that similar column heads and information comparable to the column heads and information in the table on eligible historic resources, Exhibit 15 (formerly Exhibit 13), be introduced into Exhibit 13 (formerly Exhibit 12) of **listed** historic resources. Instead the Roanoke Park Historic District, which is listed in the National Register for Historic Places and the Washington Heritage Register, was moved into Exhibit 15, for properties "eligible" for listing. A

description of the Street Address/Location for the Roanoke Park Historic District in Exhibit 15 sites the historic district on the northeast side of the intersection of SR 520 and I-5. Better for conveying the single-family residential nature of the district would be to describe it specifically, as the eligible Montlake Historic District is described in Exhibit 15 and as the Roanoke Park Historic District is described in its NRHP nomination: the Roanoke Park Historic District is roughly bounded by East Roanoke Street, Harvard Avenue East, East Shelby Street, and 10th Avenue East. See this correction and additional corrections for Exhibits 13 and 15 and other pages in the sequential comments section of this document.

- Per our request, the entire nomination form for the Roanoke Park Historic District is now included in Attachment 4. However, in Part 7 of the *CRDR*, a layout problem that originated with the photo of the Mayor Ole Hanson House on one page and its description on the following page next to a photo of the Storm House leads to misidentification of all of the 50-some photographed properties. The Hanson House photo and its information should be on the same page so that all of the subsequent photos will be correctly identified by their descriptions on the same pages as the house photos they describe.

- We had a chance in the one-hour and a little more meeting Monday morning, November 30, 2009, to discuss specific changes to the six-page Executive Summary of the *Cultural Resources Discipline Report* and to ask further about procedural matters including when we would have an opportunity to consult on Section 4(f) findings with respect to the Roanoke Park Historic District and the other historic resources our Community Council represents. We learned then that the Section 4(f) negotiation process, which we had inquired about many times in the course of our meetings with WSDOT consultants, had bypassed us, that we would have no opportunity to review and comment on the report, and that the report would go directly into the *SDEIS* without our having seen the report.

- We request that our comments here on the December 2009 *Cultural Resources Discipline Report* be considered, that they be discussed with us where the WSDOT consultants agree and differ, and that corrections be entered in the *Cultural Resources Discipline Report* for the *Final Environmental Impact Statement*. We hope that the final version of the *CRDR* will finally be free of repeated and new mistakes in depictions of the historic resources in neighborhoods represented by the Portage Bay/Roanoke Park Community Council. Effects findings (and "no adverse effects" findings) based on faulty information must be corrected.

- We request, too, that misinformation about the Roanoke Park Historic District and the Portage Bay neighborhood that has tainted effects findings in other chapters and discipline reports of the January 22, 2010, *SDEIS* be corrected in those chapters and reports as well.

- We request earlier and more review time for the next iteration—an interim draft before the *Final Environmental Impact Statement*—of the *Cultural Resources Discipline Report* and an opportunity to discuss our comments with the writer and the other WSDOT consultants. No matter how long it takes. The rush to publication is not warranted when shoddy work is published.

- We request opportunities to review, inform, and comment on the next iteration of the Section 4(f) Evaluation report as early as possible.

- We request that WSDOT consultants reach out to the North Capitol Hill Neighborhood Association and the Eastlake Community Council as representatives in Section 106 negotiations over historic resources that lie within those local governments' jurisdictions and within the Area of Potential Effects. We had assumed that this would be done. The owners of those historic resources have not been invited to become consulting parties to Section 106 negotiations.

- WSDOT did not reach out to the Portage Bay/Roanoke Park Community Council and ask us to be a consulting party in Section 106 negotiations and waited many months to meet with us after our request January 18, 2009, to become a consulting party. Much time that could have been devoted to the production of an accurate report was lost. Although we had been told that the Section 106 process would resume in January 2010, we heard only last week, on March 4, 2010, from the WSDOT consultants. We are invited to a training on Section 106 negotiation March 16, 2010, to be conducted by the Department of Archaeology and Historic Preservation (DAHP)—this after our struggling with incorrect and constantly changing instruction and information on Section 106 for over a year.

- If such delays and the poor quality of WSDOT work come from overwork and understaffing, WSDOT needs to staff up. The lack of time and lack of staff that have led to the poor quality of the *Cultural Resources Discipline Report* and to the misinformation disseminated from the report into other chapters and discipline reports of the *SDEIS* are not fair to the communities whose fate depends on WSDOT consultants' doing accurate, logical Section 106 work.

- WSDOT and federal and state government should consider as well the evident conflicts of interest that have dogged the Section 106 process in the State of Washington. The contractors employed by WSDOT to lead us through the process and at the same time negotiate with us have been lax about the conditions—lack of time and staff, misinformation about the process—that have led to the poor research and misinformation on which their findings of "no adverse effects," agreeable to WSDOT, have been based. This has put the communities at a considerable disadvantage. Section 106 law needs to address this conflict of interest. Perhaps DAHP, an agency with its own powers and budget now coming in to instruct us in Section 106 process, should have been introduced into the negotiation process sooner as an advocate for the historic resources we amateurs have been trying to protect. The performance of the consultant professionals in

architectural history and Section 106 negotiation contracted by WSDOT have been so compromised by a lack of staff and time and by loyalty to their employer that they have abandoned concern for the preservation of the historic resources they have been charged to protect.

Comments on the December 2009 *Cultural Resources Discipline Report* in the January 22, 2010, *SDEIS*

As in the past three of our reviews of CRDR *drafts, more than a little repetition, for which we apologize, arises from our effort to keep corrections sequential so that they will be easy to make.*

Executive Summary p. i (covered in Monday, November 30, 2009, meeting with WSDOT consultants)

- i, third para The writer agreed to change "several" in reference to the hundreds of historic properties within the study area—the Area of Potential Effects (APE)—to "many."

- We mentioned at that point that the editorializing addition of much diminishing language ("only," "slightly," "minor," "not substantially," or "not substantial,"—before a finding of "therefore no adverse effect"—and the frequent insertion of the vague words "generally speaking"—again before a finding of "therefore, no adverse effect") in the 11/16/2009 iteration of the *Cultural Resources Discipline Report* was distressing to us as were incomplete and minimizing descriptions of the intensity and the extent of effects that have to do with the Roanoke Park Historic District and the other historic resources with which our community council is concerned. The writer agreed to make changes to this language if we would point out the other instances, which we will do in the course of these comments.

- ii, second para under "Seattle" head The writer declined again to add the 101 properties in the Roanoke Park Historic District and the 80 contributing properties in the Roanoke Park Historic District to the 12 count of historic built environment listed properties in the Seattle study area in this paragraph. That one of the listed 12 properties is a 101-property district containing 80 contributing historic resources and we believe 57 individually eligible historic resources is relevant to conveying the great number of historic listed and eligible properties in the Seattle study area. Representing the district as one property leads to a perception that there aren't many listed historic resources in the Seattle study area. The number is relevant because the large number of listed and eligible historic resources in the APE calls for an especially delicate approach applied widely to design, construction, and operation of a project of such great magnitude in such a small, historic setting.

- iii, second para The writer declined again to include the 101 properties and 80 contributing properties in the count of "surveyed built environmental properties" because the listed properties, unlike the 217 unlisted properties (and 141 eligible properties) mentioned in this paragraph had not been "surveyed," a strict reading in which a change of verb would permit the breadth and number of historic resources in the APE to be truly represented in this report. The net effect is the continued diminution of the number of historic resources in the Seattle study area.

- For the third time, the writer declined to include individually eligible properties in the Roanoke Park Historic District to these counts, this time on the basis that none of them would be individually eligible because they are in an already listed district. State Architectural Historian Michael Houser of the Department of Archeology and Historic Preservation said, "Not true" (e-mail exchange December 3, 2009), that "many individual properties in historic districts have been listed." A follow-up question to Michael Houser to be sure that this was true of properties after district listing produced the same reply, and "some folks just like that individual listing." We are aware of Roanoke Park Historic District residents who want to pursue that individual listing and relieved that we have not misinformed them that they can.

- We formally request again that a count of properties in the Roanoke Park Historic District eligible for individual listing be mentioned in the counts on pp ii and iii as a count of individually eligible properties in the Montlake Historic District has been mentioned in these summaries. If the writer does not have time to determine the individual eligibility of properties among the 80 contributing Roanoke Park Historic District resources, we request that WSDOT have a qualified consultant make these determinations in a fair and complete account.

- In the course of these comments, we will suggest many historic resources within the Roanoke Park Historic District, which lies entirely within the APE, that we think are eligible for individual listing and on what basis. Our initial survey concluded that **28** historic resources of 80 contributing resources in the RPHD would be eligible for listing on the basis of Criterion C alone, as exemplars of the work of notable architects and builders. Our survey among the 80 contributing resources of historic resources that might be individually eligible for listing on the basis of Criterion A alone, for their associations with both events and broad patterns of our history, came up with **8** candidates. In other words, a total of 36 historic resources would be individually eligible for listing on the basis of either Criterion A or Criterion C. We think that another **21** historic resources among the 80 contributing properties would be eligible on the basis of both Criterion A and Criterion C. Realizing that our objectivity might be constrained by our fondness for the history and the architecture of the district, we look forward to a professional evaluation of individual eligibility to corroborate or amend our estimated total number of **57** individually eligible historic resources and would appreciate the forwarding of the result to the State Historic Preservation Officer

for concurrence. And we request that this information inform accounts of the number of historic resources in the Area of Potential Effects.

- We formally request again that properties in the Roanoke Park Historic District both contributing and eligible for individual listing be brought to bear on effects findings for the Roanoke Park Historic District in the *Cultural Resources Discipline Report* as they are in effects findings for the eligible Montlake Historic District. State Architectural Historian Michael Houser, State Historic Preservation Officer Dr. Allyson Brooks, and the National Register have already concurred on identification of contributing properties, easily available in the nomination's table containing addresses, names of houses, and contributing (80) or non-contributing (21) status. Our successful nomination of the Roanoke Park Historic District for listing in the National Register and the Washington Heritage Register, readily available and already accessed by the writer at our suggestion, includes detailed architectural and cultural descriptions as well as high quality black and white photos that along with visits to the district can inform determinations of individual eligibility and whether on the basis of Criterion A or Criterion C or both as well, as has been done for the Montlake Historic District.

- The writer did agree to bring at least consideration of Roanoke Park Historic District contributing properties to bear on effects descriptions and findings in the *Cultural Resources Discipline Report* as has been done for both individual properties identified as contributing and individual properties identified as individually eligible in the report's effects findings for the eligible historic resources in the Montlake Historic District. With respect to effects findings in the Roanoke Park Historic District, this has not been done consistently in the December 2009 *SDEIS* version of the *CRDR*. In the course of these review comments, we will point out places in the *CRDR* in addition to the Executive Summary where both kinds of determinations—contributing and individually eligible—should be mentioned.

- Although not all of the 57 contributing historic resources we think might be eligible for individual listing on the basis of Criterion A or Criterion C or both will suffer direct effects from the construction and operation of the project, the whole district will suffer if a good proportion—well more than half—of those 80 contributing and 57 individually eligible resources experience direct, indirect, multiple and/or cumulative adverse effects. Many of them will.

- iii, first bulleted item The writer also agreed to include in the Executive Summary a total of all historic resources and not count the two historic districts as one property each, so that the Executive Summary can convey the total, a large number, of historic resources in the Seattle study area. As we have indicated, this is relevant because the large number of historic resources within the Seattle study area calls for an especially delicate approach applied widely to design, construction, and operation of a project of such great magnitude in such a small, historic setting. We would like to see the number of individually eligible

resources included in this item describing the Roanoke Park Historic District as the number of individually eligible resources in the Montlake Historic District have been included in the sister bulleted item on page iii.

- iii, paragraph after second bulleted item The 231 count of properties either listed in or eligible for the NRHP seems to be off. The **33** individually eligible properties outside the two historic districts added to the **35** individually eligible properties in the MHD would result in a sum of 68 individual properties either listed or eligible for the NRHP. If the MHD and the RPHD were counted as one property each, 33 plus 2 would be 35. If individually eligible properties in the RPHD, estimated at **57**, were added to the 33 individually eligible properties outside the two historic districts and the 35 individually eligible properties in the MHD, the sum at most would be 125. Not all of the **141** contributing properties in the MHD or of the **80** contributing properties in the RPHD are individually eligible. If just contributing properties in the two districts were added to the **33** individually eligible properties outside the two districts, the sum would be 254. What does the 231 count include?

- We have expressed many times in previous comments and in meetings with WSDOT consultants the importance of accuracy and clarity in the Executive Summary, which might be all that many busy people will read of the *Cultural Resources Discipline Report*. We have noted that these passages have been inadequate and confusing, and they remain inadequate and confusing and under-represent the extent and the significance of historic resources in the Area of Potential Effects.

- iii, last paragraph (continued on iv) The preliminary nature of construction effects findings should be emphasized up front in this discussion, not parenthetically at the end of its second paragraph. Given the large number of contributing properties and we believe individually eligible properties and the foreseeable multiple and cumulative adverse effects of design, construction, and operation of all three of the six- and seven-lane options on historic properties in the Roanoke Park Historic District not discussed in the report, we think that the Roanoke Park Historic District should have been and should be included in this bulleted preliminary list of historic properties that might suffer adverse effects.

  Note that the paragraph refers to both construction and operation effects as preliminary but says that additional adverse effects might be added once construction details are known. Why are “operation” effects, which have also been identified as preliminary, not subject to such emendation?

- iv, bulleted list We request that the Roanoke Park Historic District be included in this preliminary finding of historic resources that might suffer adverse effects from project construction and operation. We also request that the contributing and individually eligible status of historic resources in the Roanoke Park Historic District be brought to bear on effects findings later in the report as such status is

brought to bear on effects findings for the historic resources in the Montlake Historic District.

- We request that historic resources in the Portage Bay neighborhood likely to experience adverse effects from the project be mentioned in this preliminary list, as well.

- vi, "Pontoon Production and Transport" discussion We wondered again why the highly specific closing section on Pontoon Production and Transport had been tacked on to the end of the Executive Summary, which was otherwise general and summarizing. We wondered, too, as we had in our first review comments, why land hauling (and detours and staging) in addition to water hauling had not been considered in this section if hauling routes were going to be discussed so specifically at all in a summary. The writer declined to take up land hauling (and presumably detours and staging) in this section and agreed at Marsha Tolon's suggestion to write something early in the Summary that would provide a rationale for including this specific water hauling information in the Summary. The writer added a sentence to the first paragraph of the Executive Summary saying that pontoon transport effects are discussed at the end of the Executive Summary but does not provide a rationale for this detailed treatment of pontoon transport in a summary.

- For reasons of time, we did not repeat the query in our earlier review comments why the accustomed uses seven days a week of St. Patrick's Church and possible effects on these uses from land hauling had not been taken up in this curiously specific section on the effects of water hauling on the Boating Community's accustomed Opening Day. The writer told us that someone at WSDOT wanted the section on Pontoon Construction and Hauling to be included in the Executive Summary and did not say why our earlier request for discussion of land hauling and specifically of hauling effects on the customary uses of St. Patrick's Church were not included in this section or even in a section of its own in this summary. We request in the interest of balance that this be done if the specific section on water hauling will remain in the Executive Summary.

Introduction p. 1

- 1, first bulleted item Include Laurelhurst and the Boating Community among the Seattle project area communities.

- 4, first para under "Seattle" head Say "as well as the existing local street bridges across **I-5 and** SR 520." Replacement of the East Roanoke Street bridge across I-5 is a part of the project.

- 4, second para under "Seattle" head Mention first the different designs for the Portage Bay Bridge under the three options. The difference between a six-lane and a seven-lane bridge is substantial enough to be mentioned in this paragraph.

- 5, Exhibit 4 showing Options A, K, and L in the Montlake and University of Washington areas should be preceded by a map showing the different configurations of the Portage Bay Bridge in the three options.

- 6, first para "A new seven-lane bridge" (last draft) has been changed to "six-lanes (four general-purpose lanes , two HOV lanes) plus a westbound auxiliary lane"? What is the difference between an auxiliary lane and a lane?

- 6, second para "Suboptions [plural] for Option A" are the subject of the opening sentence. The second sentence of the para speaks of "The suboption [singular]."

- 7, first para Concluding that quieter pavement cannot be considered mitigation ignores its inclusion not as mitigation but as part of the design of Option K. Note, too, that the results of WSDOT tests of quieter pavement have been so far skewed by improper installation. WSDOT might consult with the highway department of Flagstaff, Arizona, where quieter pavement has successfully withstood studded tires, chains, and freezing and thawing over a goodly amount of time, for 17 years back in 2007.

- 8, first para Update this description. The rows of three ten-foot-tall concrete columns are not shown in recent sketches. The pontoons themselves would be taller, rising more than their current 10 feet out of the water, and their visible height above the water should be added to the height of the columns. The "new spans" (span?) are (is?) estimated to be at least 29 feet, not 22 feet, higher than the existing floating bridge. Noise walls variously said to be from 8 to 12 feet or 8 to 14 feet will add to the height of the floating span.

- 8 Do the descriptions on this page refer to all of the options, or is the discussion still about Option L? According to Exhibit 5's title, the discussion refers to all of the options. Page 8 should therefore open with language to help the reader see the transition from description of Option L to description that applies to all of the options.

- 11, bulleted list Would the second and third items in the phased implementation bulleted list be built at the same time? The map on page 12 shows both the Portage Bay Area and the West Approach Area as Priority 2. This would affect the intensity and the extent of construction effects.

- 11, last para Can "structures" be collectively called a "scenario"? Should say "The phased replacements of vulnerable structures are collectively referred to as the Phased Implementation scenario"?

Regulatory Context p. 17

- 17, first para Mention "mitigate" along with "avoid or reduce" as in the last para on this page ("avoid, minimize, or mitigate"), and explain, per our earlier request, the technical meanings of these three terms with examples.

- 18, first para, first full sentence (next to last sentence of first para) Include "view sheds" in the list of kinds of historic resources that can experience adverse effects. (And "visual effects" to any discussion of the kinds of effects that might be experienced by historic resources.) The project will affect view sheds that are historic, particularly from the Roanoke Park Historic District, whose period of greatest development was 1908 through 1912, with its views of the grounds and surrounding water, forests, and mountains in the year leading up to, the year during (1909), and the years immediately after the Alaska-Yukon-Pacific Exposition. The Roanoke Park Historic District and the Portage Bay neighborhood are still known for these views, which contribute a great deal to the setting and feeling and the desirability of the predominately single-family historic homes in these neighborhoods.

- 18, second para, first three sentences The writer said that the fact that the present historic SR 520 bridge is a SEPA-protected Scenic Highway with a significant view shed including Mt. Rainier has nothing to do with Section 106 negotiations. The historic present bridge is already said to experience an adverse effect from its prospective demolition, and the noise walls designed into Option A's new seven-lane bridge and Option L's six-lane bridge would adversely affect this view shed, which includes Mt. Rainier and other snow-topped Cascade Mountains and which has been enjoyed by drivers over the present historic bridge since its opening in 1963. Although bicyclers and walkers have never had access to the viewshed from the bridge, bicyclers and walkers across the new SR 520 bridge would be deprived by massive noise walls of this spectacular view shed as well.

- The number of historic resources in the Roanoke Park Historic District that enjoy such views, described as "expansive" and of "high vividness" (2005 *Visual Quality and Aesthetics Discipline Report*), of the University of Washington campus, Portage Bay, the historic Montlake Cut, the historic Montlake Bridge, the historic Seattle Yacht Club and marina, the historic NOAA Fisheries Building, Lake Washington, the lights of Kirkland and Bellevue, the treed hills beyond, and the Cascade Mountains, is understated in the report. These views have been largely unchanged since well before 1972, the cutoff date for consideration of historic resources.

- As we will enumerate later in these comments, more Roanoke Park Historic District properties than the report indicates (saying "a few") and many Roanoke Park Historic District contributing and individually eligible properties, which status the report doesn't mention in its Roanoke Park Historic District effects findings, enjoy these historic views. These contributing and individually eligible resources would be adversely affected by the seven-and-a-half-year to eight-year construction project's visual blight, disruption, diesel pollution, noise, vibration,

damage to buildings and landscaping from air pollution and vibration, dusty windows, and nighttime glare. Many historic contributing and individually eligible properties on steep hillsides on the east and north sides of the historic district and unsurveyed resources on steep hillsides on both the north and south sides of Delmar Drive East in the Portage Bay neighborhood already experiencing periodic landslides will be vulnerable to the increased vibration from demolition and construction.

- From operation, the increased width and height, also moved north, of both the wider Portage Bay Bridge and the wider floating span in front of views from the district in all options would be an adverse effect. These operation effects on the views so characteristic of the Roanoke Park Historic District and the Portage Bay neighborhood, along with increased traffic noise and traffic emissions, damage to buildings (erosion and soiling from increased air pollution, vibration damage, and landslides), dusty windows, and damage to landscaping from air pollution and vibration, would affect the setting and feeling and therefore the desirability of heretofore single-family historic properties in the Roanoke Park Historic District and would be adverse effects of the project. Historic, architect-designed resources in the Portage Bay neighborhood, some of which have not been surveyed and included in the Area of Potential Effects (on hillsides on both sides of Delmar Drive East, in the houseboat community, and on both sides of Fuhrman-Boyer Avenue East) and the individually eligible Gunby, Alden Mason, and Kelley houses would also be adversely affected by the increased width and height, moved north, of the Portage Bay Bridge.

- Traffic on the current bridge has produced mild tremors in the houses closest to the freeway for years. More traffic, moved closer, will exacerbate this effect. We would not agree with a finding such as "There is already a tremor there, so more would not be an adverse effect." (See "There is already a bridge there . . . ,"(pp 174, 175, 186). The concept of a literal tipping point is more appropriate to this kind of judgment. Note that the Portage Bay neighborhood experienced landslides during construction of the present bridge back in the 1960s and that residences on the north side of Delmar Drive East including houses designed by Arthur Loveless, Paul Thiry, and Roland Terry (unsurveyed and not included in the *CRDR*) have experienced landslides in recent years.

- Demolition, construction, and operation of Option A's seven-lane Portage Bay Bridge would have an especially egregious effect on views from many of the district's contributing and individually eligible properties. So would construction and operation of Option A's second bascule bridge adversely affect watery views of the exquisite Carl F. Gould Montlake bascule bridge from many contributing and individually eligible historic single-family properties of the Roanoke Park Historic District and in the Portage Bay neighborhood. (See the discussion later in these Formal Comments of the under-representation of the number of properties that currently enjoy these views in the Potential Effects of the Project section of the *Cultural Resources Discipline Report*.)

Historic Context p. 21

- 32, last paragraph, third sentence from end of para Should refer to the establishment of "Roanoke Park," not "Interlaken Park," which was established in the 1890s and over many years, although its western terminus, Bagley Viewpoint, might have been established around 1908. Check Don Sherwood's history for Interlaken Park and Bagley Viewpoint, where the two are treated separately. The Roanoke Park land was acquired by the Parks Department in 1908, and the park was established in 1910.

- 44, first para, first sentence WSDOT did not reach out to owners of individually eligible residential properties outside historic districts as potential consulting parties. Unless their local governments initiated representation of these owners (which the Portage Bay/Roanoke Park Community Council did upon a belated realization that these owners had not been contacted by WSDOT), they went without representation in Section 106 negotiations.

- Nor did the WSDOT consultants identify all of the eligible historic resources in the Portage Bay neighborhood that might be adversely affected by the project, including architected residences by Arthur Loveless, Paul Thiry, and Roland Terry along the north side of Delmar Drive East, architected residences along the south hillside of Delmar Drive East, resources in the houseboat community in northwest Portage Bay, and historic residences along the east and west sides of Fuhrman-Boyer Avenue East. In addition, the commercial Anhalt Building still intact at the intersection of Eastlake Avenue East and Fuhrman-Boyer East will be doubly stressed by hauling for the project along both arterials and has not been included in the survey of eligible historic resources.

- 44, first para, reference to Historic Property Inventory Forms (HPIFs) Mention Attachment 3 as the location of revised or added HPIFs and Attachment 4 as the location of nomination forms for already listed historic resources.

- 44, last para These figures for historic resources in the Seattle segment seem low (eight properties listed in the NRHP) unless districts (misleadingly as elsewhere) are counted as one property and thus diminish the reader's impression of the number and breadth of historic resources in the APE. Include language such as "including the 80 contributing properties, of which 57 properties are individually eligible for listing, in the Roanoke Park Historic District." Again, the sheer number of historic resources in the APE, in such a small setting, calls for a delicate touch.

- 49, first para and bulleted list under Built Environmental Resources head Again "eight properties in the Seattle segment listed in the NRHP" minimizes the actual number of Seattle segment historic properties by treating the 101 property district, of which 80 are contributing properties and 57 are individually eligible properties, as one property. We repeat that the large number of historic resources in the

Seattle segment calls for an especially careful approach to design, construction, and operation of such a large project in such a small setting.

- 49, first bulleted item Note that of the 101 properties in the Roanoke Park Historic district, 80 are contributing properties and that of these, 57 are individually eligible. Again, treating an entire district as one property does not convey the large number of historic resources in the Seattle segment.

- 49, second bulleted item The name of the house in the National Register and the Washington Heritage Register is the William **H.** Parsons House. As a Seattle City Landmark, it is the Harvard Mansion. Note, too, that this thrice-time individually listed historic resource is in the listed Roanoke Park Historic District—that is, does not stand alone as the following items do.

Methodology, p. 53

- 55, bulleted list The examples should indicate which of the three kinds of adverse effect each is as this is where text is explaining at least what an indirect effect is. The other two kinds, direct and cumulative, should have been explained on the preceding and/or on this page, too, with helpful examples.

- 55, first para after bulleted list, second sentence Say "and the two six-lane alternatives and one seven-lane alternative." (WSDOT used to describe Option A as "the seven-lane alternative." If WSDOT no longer describes Option A as the seven-lane alternative, use the clunky "and one six lane alternative with an auxiliary lane on the Portage Bay Bridge," which is WSDOT's most recent description of Option A.

- 55, first para after bulleted list Delete the third and fourth sentences. For clarity because the passage might be understood in this sense, and if this passage were meant to justify describing the features of the three options in these two areas only once, the sentence might say, "Although the different options may have different effects on historic resources in the areas near the I-5 and SR 520 interchange and between I-5 and the Portage Bay Bridge, the features of the project in these areas are the same in each of the options." Saying "so the analysis of effects in these areas is discussed only once" cannot be justified. And this section of the Methodology chapter is entitled "Effects Analysis," not "Feature Description." That the features of the three options within these areas are the same does not mean that the three options would not have differing potential effects on these areas. This blanket dismissal via faulty reasoning of the differing effects of the three options on the area between I-5 and Portage Bay has led to a deceptive minimization of adverse effects.

    - The construction and operation effects of the different options—say, view impediment or noise, erosion and soiling from air pollution—on the historic resources in the area between I-5 and the Portage Bay Bridge, on the Roanoke Park Historic District, for instance, or on the historic

resources in the Portage Bay neighborhood, are quite different and will require at least three discussions, of each option's effects on each area.

- The construction and operation of the seven-lane Portage Bay Bridge in Option A would have a different effect on views, noise, and air quality in the Roanoke Park Historic District and on views, noise, and air quality in the Portage Bay neighborhood than construction and operation of the six-lane Portage Bay Bridge of Options K and L would.

- The operation of Option A's second bascule bridge would have a different effect on views of the historic Carl F. Gould Montlake Bridge from the Roanoke Park Historic District and from historic resources in the Portage Bay neighborhood than the invisible tunnel of Option K or the bascule bridge farther east and out of sight of Option L would.

- Option K's depressed profile would affect views from these areas differently than Option L's elevated profile would affect views from the areas.

- Delete this recently added text that fails to justify not treating the differing effects of the three options on the areas of the project between I-5 and Portage Bay, and treat the differing effects of all three options on the Roanoke Park Historic District and historic properties in the other areas between I-5 and Portage Bay under the "Option A," "Option K," and "Option L" heads as is done for the areas in the APE east of Portage Bay in the "Potential Effects of the Project" section and in other sections of the text where construction and operation effects on these areas are discussed or summarized under the individual option heads.

- 55, last para "Examples of mitigation" Having seen the term in the *Cultural Resources Discipline Report*, we inquired in an earlier meeting with WSDOT consultants whether there was such a thing as "compensatory mitigation." The writer said, "No." Include "compensatory mitigation," and provide an example in the list here of possible mitigations since it is offered as a kind of mitigation by that name later in the text (p 192).

Historic Resources in the Study Area p. 57

- 62, first para under "Historic Built Environment Properties in the Seattle Study Area" head Say "In the Seattle study area, there are eight properties listed in the NRHP**, including the 101 properties of the Roanoke Park Historic District, of which 80 are contributing resources and 57 are individually eligible for listing.** This will convey a more accurate impression of the number of listed properties in the Seattle study area.

- 64-68 "Exhibit 13. Previously Identified Historic Properties in the Seattle Segment" (Exhibit 12 in the 11/16/2009 draft) and "Exhibit 15. Summary of NRHP-Eligible Properties Identified in the Seattle Segment" (Exhibit 13 in the

11/16/2009 draft) should have comparable column heads and contain comparably full treatments of the historic properties.

- The full description of the Montlake Historic District location in Exhibit 15 under the column head "Street Address/Location" should be balanced by an equally full description of the Roanoke Park Historic District location under that column head ("Roughly bounded by . . .") in Exhibit 13.

- A "Property Name" column should be included in Exhibit 13 as in Exhibit 15.

- The "Period of Significance 1905 to 1952" for the Montlake Historic District in Exhibit 153 under the column head "Date of Construction" should be matched by an equally informative "Period of Significance 1899 to 1939" for the Roanoke Park Historic District under the column of that name in Exhibit 13.

- The discussion of the Montlake Historic District under "NRHP Eligibility" that discloses the criterion (C) under which the Montlake Historic District is NRHP eligible and includes a second paragraph describing the total number of properties in the Montlake Historic District, the total number of contributing properties in the Montlake Historic District, the number of individually eligible properties in the Montlake Historic District, and the number of non-contributing properties in the Montlake Historic District should be matched by an equally informative two paragraphs covering those two kinds of information (Criteria A and C; 101 properties, 80 contributing properties, 57 individually eligible properties, 21 non-contributing properties) under the column head "Listed Status" for the Roanoke Park Historic District.

- Note that the NRHP- and WHR-listed and City Landmark-designated William **H.** Parsons House (called the Harvard Mansion as a City Landmark) in Exhibit 13 is **in** the Roanoke Park Historic District.

In response to our request that these changes be made to Exhibit 13 (then Exhibit 12), the writer instead mistakenly inserted the **listed** Roanoke Park Historic District entry into Exhibit 15's table of **eligible** historic resources. This mistake needs to be undone, and Exhibit 13 needs to be as informative along the lines mentioned above as Exhibit 15 is. Note, too, that the location of the Roanoke Park Historic District as described in the table "on the northeast side of the intersection of I-5 and SR 520" is inaccurate. That intersection is in the North Capitol Hill neighborhood. The "roughly bounded by" description we recommended in our earlier comment, along the lines of the "roughly bounded by" description of the Montlake Historic District in Exhibit 15's Street Address/Location column would be accurate: "Roughly bounded by East Roanoke Street, Harvard Avenue East, East Shelby Street, and 10th Avenue East" would be accurate

geographically and also do a better job of conveying the single-family residential character of the district than describing it as "on the northeast side of the intersection of I-5 and SR 520" does.

Such treatment seems to be in accord with a widespread depiction in the *CRDR* of the Roanoke Park Historic District as so afflicted, so damaged already, that "no adverse effects" findings can arise out of reasoning such as the notorious "there is already a bridge there, so a replacement bridge would not be an adverse effect." By means of a lot of work on the part of its residents in cooperation with the City's Department of Parks and Recreation, Department of Neighborhoods, SDOT, and other agencies, the Roanoke Park Historic District is a remarkably cohesive single-family residential historic district. Its setting and feeling and its characteristic use are intact. A lessening of these characteristics would result in secondary (indirect), multiple (collective), and cumulative adverse effects.

- 81, subhead under "Roanoke Park Historic District" The subhead should say "**Listed** under Criteria A and C," not "Eligible under Criteria A and C."

- 81, first sentence The subject of the sentence is "**The** Roanoke Park Historic District . . ." Again, delete the unattractive new description of the Roanoke Park Historic District as "located on the northeast side of the intersection of SR 520 and I-5." The original, now second sentence, of the paragraph describes the location of the Roanoke Park Historic District accurately and as it is described in its nomination: "Roughly bounded by East Roanoke Street, Harvard Avenue East, East Shelby Street, and 10th Avenue East . . ." This description conveys the single-family residential integrity of the Roanoke Park Historic District. Say "**the William H.** Parsons House **(the Harvard Mansion as a City Landmark)**."

- 81, first para, third sentence Say "The National Register nomination form **for the Roanoke Park Historic District**" to prevent confusion that the nomination form for the immediately preceding referent, the William H. Parsons House, is meant. Make it easy for the reader to find the nomination by means of a finer description of its location: Vol 4, Attachment 4, Parts 6 and 7.

  We have verified that the entire nomination form for the Roanoke Park Historic District is now included in Vol 4, Attachment 4, Parts 6 and 7. However, a layout problem with the nomination photos and their descriptions in Part 7 ripples through the entire sequence of photos so that, for instance, the photo of the Storm house is identified on its page as the Mayor Ole Hanson House, the photo of the Neterer House is identified on its page as the Storm House, the photo of the William H. Parsons House (the Harvard Mansion) is identified on its page as the King-Friedman House, and so on through the entire sequence of black and white photos. Please fix this series of mistakes.

- 81, third full para Although introduced by "According to the nomination," the beginning of the following text repeats the mistake that the RPHD is "eligible for

listing" rather than up-to-date information from the NRHP nomination. This statement does not come from the nomination, as we pointed out in several reviews of the *CRDR*. The Roanoke Park Historic District is no longer "eligible for listing" but is listed.

- 87, Exhibit 16. We had asked for greater contrast between contributing and non-contributing properties on the map so that the difference will show up better in black and white printouts. We look forward to seeing this revision of the exhibit, which was not accomplished in time for the *SDEIS* release.

- 88, fifth full paragraph The Roanoke Park Historic District is not "**eligible** for listing under Criterion A." The Roanoke Park Historic District has been **listed** in the National Register and the Washington Heritage Register on the basis of Criterion A **as well as Criterion C**.

Such misleading mistakes have dogged descriptions of and effects findings with respect to the Roanoke Park Historic District in the successive drafts of the *CRDR*. We would like to trust that careless mistakes of this nature and more significant misrepresentations will be corrected in the version of the *CRDR* that goes into the *FEIS*.

- 89–90 bulleted list of architects. The list takes up a whole line for each name—a lot of space used up for no good reason—and could be run-in as a short paragraph. We appreciate the writer's additional research on Harry W. Kent and the Kenworth trucking company, but the description in the *CRDR* of the Roanoke Park Historic District scants important events and patterns associated with the district—early Seattle history writing, early significant judicial decisions, early and distinguished journalism. With the extra space, a much better account of the district's significance could be provided first.

    - The end of the sentence about Louisa Boren Denny, midway through the last para on p 88, would be a good place for a new paragraph about the many other prominent Dennys who lived in the district and to mention that many of these Dennys wrote the early histories of Seattle.

    - Louisa Boren and David T. Denny's eldest child, Emily Inez Denny, who wrote *Blazing the Way* (1909), lived in the district with her mother and the family of her youngest brother, Victor W. S. Denny, a miner and assayer of gold and silver. Arthur and Mary Ann Boren Denny's granddaughters Sophie Frye Bass, who wrote *Pig-Tail Days in Old Seattle* (1937) and *When Seattle was a Village* (1947), also an archivist of note after whom the library at MOHAI was named, and Roberta Frye Watt, who wrote *Four Wagons West* (1931), daughters of Arthur and Mary Ann's eldest child, Louisa Denny Frye, lived in the district, too. (See the Elmer E. Green–designed Gates-Bass Mansion, A and C, 1909, in Exhibit 16.) Their younger sister Elizabeth Frye Bogue and her husband, Virgil Bogue, author during the City Beautiful movement of the *Seattle Comprehensive*

Plan of 1911 and longtime collaborator of the Olmsted brothers, also lived in the district. (Interestingly, engineer Virgil Bogue proposed a tunnel under Lake Washington to connect the west side and the east side.) Their cousin Mabel Denny Thompson, daughter of Arthur and Mary Ann Boren Denny's oldest son, Orion Orville ("Double O" to the nieces and nephews), also lived in the neighborhood.

- The account of the Dennys could be followed by a new paragraph in which the Bernice Stern, Alice Franklin Bryant, and Jean Ross material could be used.

- This account of other notable women from the district could be followed by a paragraph on the distinguished superior court judge Jeremiah Neterer, who lived in a contributing and individually eligible house (A and C, Andrew Willatsen, 1915) in the district and presided over many landmark cases of the day, including the bootlegger Roy Olmstead's [this the correct spelling] trial that involved an early decision on the admissibility of evidence gained by wiretapping and the long-running legal disputes between private power owners Stone & Webster vs. public power advocate J. D. Ross. Many of the neighborhood's attorneys took part in these cases, on both sides. Neterer also presided over early union disputes that involved his neighbor across the alley in a contributing and individually eligible house (A and C, Frederick A. Sexton, 1908), U. S. Attorney Robert C. Saunders.

- [New paragraph] Mayor Ole Hanson and his elected successor, Hugh M. Caldwell, both lived in the district, in contributing historic houses, and were both caught up in the Stone & Webster disputes and court cases.

- The Harry W. Kent paragraph could follow then. If it had to be shorter, that would be all right. The information on the Dennys, the women, and the Honorable Jeremiah Neterer is of greater significance.

- Also of great interest is that Samuel L. Crawford, who founded the *Intelligencer* newspaper and stayed on as editor after its merger with the *Post* to create the *Post-Intelligencer*, at the time of its demise last year the oldest newspaper in the city, also lived in the district, along with William A. Prosser, news editor of the *Post-Intelligencer*. Ed Guthman, the Pulitzer-Prize winning journalist whose investigative reporting led to the exoneration of Melvin Rader and other members of the University of Washington faculty accused of Communist conspiracy by the Cantwell Committee, grew up in the district.

- 89, third para Should say "Also **listed** on the basis of Criterion C," not "Also eligible under Criterion C."

- 89–90 Run the names of the architects into the paragraph, after the colon, with their names simply separated by commas. That will leave more space for the suggested material above that points to the significance of the Roanoke Park Historic District on the basis of both Criterion A and Criterion C.

- 91, para beginning "In addition to the elms in the park," add "in its southern curb beds" to the end of the last sentence. This is important because a haul route along the southern curb beds, with possible adverse effects from fugitive dust and emissions and from vibration to the mature trees that characterize the district, has been identified. These trees in the south of the district also buffer the historic resources in the district from some of the effects of SR 520. They do not, as alleged later in this report, interfere with the panoramic, memorable views of high vividness east from many, not "a few," historic resources (34 houses in all, 31 of 80 contributing resources, and 26 of 57 individually eligible resources) in the Roanoke Park Historic District.

- 92, first para After the first sentence, observe that the contributing Elmer E. Green–designed Gates-Bass Mansion (1909) shown in Exhibit 17 is also eligible for individual listing on the basis of Criterion A and Criterion C. It was designed by Elmer E. Green (1909) and was the home of Denny history writers Sophie Frye Bass and Roberta Frye Watt. (As is done p 94, under the two photos, for Exhibits 20 and 21, which show historic properties in the Montlake Historic District eligible for listing under Criterion C.) It is one of the more ornate . . ." "The Betterton-Hillman House at 2601 Broadway Avenue East and its twin next door, the Mayor Ole Hanson House at 2609 Broadway Avenue East, both designed by Elmer E. Green, are substantial residences with . . ." What a shame that only Elmer E. Green houses are shown. One of the two Huntington and Gould houses or one of the two Frederick A. Sexton houses, or one of the two Edwin J. Ivey houses could have conveyed what an architecturally important collection of houses is contained in the roughly 9 blocks of the Roanoke Park Historic District. The account of the Roanoke Park Historic District in even this fourth iteration, released for the SDEIS, has not been done with care.

Potential Effects of the Project, Construction p 135

- What would be the effects on congestion of variable tolling in the No-Build Alternative—that is, effectively what will happen if the variable tolling project does go into operation in spring 2011 before construction, and what would be the effects on congestion of tolling of SR-520 alone and tolling of both SR 520 and I-90?

- 135, Delete the out of date "6-Lane Alternative" head, and treat the area between I-5 and Portage Bay under the three "Option A" (141) "Option K" (149), and "Option L" (160) heads.

    - Use a bulleted list similar to the one on p 147 for multiple construction effects of Option A on the Montlake Historic District to itemize the

multiple construction effects on the Roanoke Park Historic District and the historic resources in the Portage Bay neighborhood of Option A. (See our summary of effects pp 5–6.)

- Use a bulleted list similar to the one on p 157 for multiple construction effects of Option K on the Montlake Historic District to itemize the multiple construction effects on the Roanoke Park Historic District and the historic resources in the Portage Bay neighborhood of Option K.

- Use a bulleted list similar to the one on p 166 for multiple construction effects of Option L on the Montlake Historic District to itemize the multiple construction effects on the Roanoke Park Historic District and the historic resources in the Portage Bay neighborhood of Option K.

- 135, para under "6-Lane Alternative" head (which should be deleted) The first sentence of the paragraph says, "This section discusses potential construction effects and notes all known effects from the project on historic properties." The paragraph goes on to qualify its construction effects judgments and to indicate as before that they are preliminary. This pattern of making a statement and then qualifying it is confusing. Let the reader know immediately of the preliminary nature of construction effects findings in this iteration of the *Cultural Resources Discipline Report*. Something such as, "This section discusses preliminary identifications of potential adverse construction effects from the project on historic properties. Effects findings here will be finalized only with the concurrence of the State Historic Preservation Officer (SHPO)."

- 135, para under "6-Lane Alternative" head, second sentence Says the effects will be thoroughly analyzed before publication of the *FEIS*. Having not had enough review time and meeting time to discuss with WSDOT consultants their analyses of effects before publication of the *SDEIS*, we ask that explicit provision for post analysis discussion with consulting parties and proposals for avoidance, minimization, and mitigation be discussed with consulting parties and entered into a Memorandum of Agreement before publication of the *FEIS*.

- 135, para under "6-Lane Alternative" head (which should be deleted) The faulty reasoning in earlier statements in the Methodology section about effects analysis (p 55) is repeated: "As noted in the Methodology Section [no initial cap on "section"], for the area near the I-5 and SR 520 interchange, and between I-5 and the Portage Bay bridge [the earlier version of this rationale said "between I-5 and Portage Bay"], the project is [features are] the same under each option, so the analysis of effects is discussed here only once." This faulty reasoning cannot justify the absence of discussion of effects and the different effects of each of the three options on the area between I-5 and the Portage Bay Bridge. The three options will have differing effects on views, noise, vibration, nighttime glare, and air quality in this area, for instance, during demolition and construction. Delete the two sentences.

- Because the report says that less is known of demolition and construction details in the area near the I-5 and SR 520 interchange, treat the two areas, the area near the I-5 and SR 520 interchange and the area between I-5 and Portage Bay, separately. If more is known about the design and construction plans of the I-5 and SR 520 interchange before the publication of the *FEIS* (and more should be known by then) and if WSDOT is still treating the three options by then (let's hope not!), include that information in the three sections devoted to Option A (147), Option K (157), and Option L (166).

I-5 and SR 520 Interchange, Construction, Options A, K, and L

- 135, under the "Historic Built Environment" head Of the area near the I-5 and SR 520 interchange, say something to the effect of "The redesign, demolition, and construction of the SR 520 and I-5 HOV ramp and interchange is likely to have an adverse effect on the eligible Chung House at 1980 Harvard Avenue East (C, 1932) and possibly on the eligible Talder House (C, 1909) at 2352 Broadway Avenue East. When demolition and construction details are known, possible effects of demolition and construction (and effects of operation in the operation section of this chapter) of this part of the project on historic resources will be more fully evaluated. If the SHPO concurs, avoidance, minimization, and mitigation measures will be proposed in a Memorandum of Agreement."

- 135, Move the material from pp 135 last para to 141 first para into appropriate sections: the discussion of the I-5 and SR 520 interchange (above) and the sections devoted to Option A, Option K, and Option L.

Area Between I-5 and Portage Bay, Construction, Options A, K, and L

Construction—Staging, Options A, K, and L

- 142, under "Historic Built Environment" head, talk about the taking of the Bagley Viewpoint and construction staging effects there on the Roanoke Park Historic District under Option A. The Bagley Viewpoint is very close, across the street from, the contributing and individually eligible (both Criterion A and Criterion C, Elmer E. Green, 1909) Gates-Bass Mansion at 1018 East Roanoke Street and the contributing and individually eligible (A, 1907) Booth House at 1004 East Roanoke Street and is close to the contributing and individually eligible Dalley House (C, Huntington & Gould, 1910) at 2608 10th Avenue East. Staging there would also detract from enjoyment of and access to the contributing Roanoke Park itself; and the contributing houses at 2612, 2616, and 2622, 2632, and 2636 10th Avenue East in the Roanoke Park Historic District would experience adverse effects. This staging, with diesel noise and pollution, vibration, nighttime glare, and fugitive dust, would have an adverse effect on at least these 9 contributing historic resources and on the 3 of these 9 contributing resources closest to the staging area that are eligible for individual listing. These staging effects and ways

of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

- Speak also to the effects of the taking of land along the front of the individually eligible Fire Station #22.

Construction—Vegetation Removal, Options A, K, and L

- 136, last para, first, second, and third sentences The argument that getting rid of vegetation (50-foot-wide swath along the WSDOT right of way north and south) that has buffered contributing and individually eligible houses in the Roanoke Park Historic District including the contributing and individually eligible Gates-Bass Mansion at 1018 East Roanoke Street, the contributing and individually eligible Booth House at 1004 East Roanoke Street, the contributing and individually eligible Dalley House at 2808 10th Avenue East, and the contributing houses at 2612, 2616, 2622, 2632, and 2636 10th Avenue East along with the contributing Roanoke Park itself, the contributing Betterton-Hillman House at 2601 Broadway Avenue East, the contributing and individually eligible Mayor Ole Hansan House at 2609 Broadway Avenue East, the contributing and individually eligible Storm House at 2611 Broadway Avenue East, the possibly individually eligible Winter house at 2617 Broadway Avenue East (C, 1942) and use of the possibly individually eligible St. Patrick Church (A and C, Krontz & Wrede, 1961) at 815 East Edgar Street, along with the individually eligible Boyd House at 2422 Federal Avenue East, the individually eligible Gunby House (C, John T. Jacobsen, 1940) at 1118 East Roanoke Street on the north and the individually eligible Alden Mason House (A and C, Victor Steinbrueck, 1949) on the south, the individually eligible Fire Station #22 at 901 East Roanoke Street, the individually eligible Keuss Building at 2351 10th Avenue East, the individually eligible Glover Homes Building at 914 East Miller Street, the individually eligible Wicklund-Jarr House at 910 East Miller Street, the individually eligible East Miller Condominium at 904 East Miller Street, and the individually eligible Sagamura House at 2408 Broadway Avenue East from SR 520 provides a good opportunity to get rid of the invasive species that have been smothering splendid stands of mature trees (because WSDOT has failed to deal with the invasives in those areas over many years) is unacceptable, along the lines of "we've already blighted it, so it's OK to get rid of it." It's one thing to acknowledge the need to remove buffering vegetation for the sake of the project, another to pretend that this is a good thing.

- Removing mature trees that buffer these **12** contributing resources and St. Patrick Church in the Roanoke Park Historic District including **7** possibly individually eligible resources plus **9 more individually eligible resources outside the district** that would be exposed to more of the **present** SR 520's noise, visual, and air pollution for an unspecified amount of time would be an adverse effect. A Memorandum of Agreement should specify that vegetation removal be delayed as long as possible and remedied as soon as possible after removal.

- The vegetation removal will expose these contributing and individually eligible historic resources in the Roanoke Park Historic District (those identified above and in the Portage Bay and North Capitol Hill neighborhoods) to construction effects of the widening of the SR 520 roadway, the demolition and rebuilding of replacement bridges at East Roanoke Street and 10th Avenue East and Delmar Drive East, the building of the lids at East Roanoke and 10th and Delmar, and the demolition and reconstruction of the Bagley Viewpoint and the Portage Bay Bridge. These effects of vegetation removal and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

- 137, top of page Replanting with native plant materials near a freeway, where conditions are most unlike the conditions in which native plant materials thrived 160 years ago, seems like a misguided idea. Hardier choices are appropriate, and the communities would like language in the Memorandum of Agreement to say that they will be consulted on choices of species for both replacement buffering vegetation and lid landscaping.

Construction—Detours, Options A, K, and L

- 137, first full para The last iteration of the *Cultural Resources Discipline Report* proposed a **detour** to and from Fuhrman-Boyer Avenue East up and down 11th Avenue East. This iteration proposes a detour through the Roanoke Park Historic District. Both are objectionable for any length of time, let alone nine months. The 11th Avenue East detour around a steep blind curve would be dangerous for both residents and motorists. A detour through the Roanoke Park Historic District (presently DO NOT ENTER going north on 10th Avenue East and with a traffic diverter in Broadway Avenue East at East Edgar Street—both hard won by the community in order to discourage through traffic—would be dangerous for residents, bicyclists, walkers, and the district's many young children accustomed to slow moving residential traffic. This would be a substantial change to the setting, feeling, and characteristic use of the historic district. In addition, historic resources in the district would be subject to increased fugitive dust and emissions from idling vehicles and speeding through traffic, noise, vibration, congestion, and erosion and soiling of buildings along with damage to landscaping from air pollution and vibration. Note that in the 2600, 2700, and 2800 blocks of 10th Avenue East and Broadway Avenue East in the district, many residents and visitors to Roanoke Park park their cars on both sides of the relatively narrow streets of the district. These cars would be subject to fugitive dust and emissions and possible damage from traffic traveling at speed through the district. These effects of detours and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

- 137, second full paragraph At Rob Berman's request a sketch for a more appropriate design for the intersection of 10th Avenue East and East Roanoke Street, the chief gateway to the Roanoke Park Historic District, has been furnished, has met with WSDOT's approval, and has been passed to the city's

SDOT for evaluation. We would like the Memorandum of Agreement to discuss adopting this plan.

Construction—Temporary Closures and Haul Routes, Options A, K, and L

- 137, second full para **Temporary closures** over a 15-month period that would "restrict access to the four contributing [good to see "contributing" mentioned with respect to the Roanoke Park Historic District in the report, although two of them are individually eligible as well] properties along East Roanoke Street" (1018 and 1004 East Roanoke Street, Roanoke Park and 2601 Broadway Avenue East), would also restrict access to its garage of the contributing house at 2612 10th Avenue East and to their garages of the contributing and individually eligible houses at 2609 and 2611 Broadway Avenue East and of the possibly individually eligible Winter house at 2617 Broadway Avenue East (C, 1942) and to the parking lot of the possibly individually eligible St. Patrick Church (A and C, Krontz & Wrede, 1961) at 815 East Edgar Street. (**10** contributing resources among which **8** are possibly individually eligible.)

- 137, last para, Say, "This potential **haul route** along two borders of the Roanoke Park Historic District would adversely affect the setting and feeling of the historic district with increased fugitive dust and diesel emissions, noise, vibration, traffic, congestion, dusty windows, and damage to buildings from erosion and soiling and to landscaping from dust and vibration that would make many contributing and individually eligible historic properties in this part of the Roanoke Park Historic District less desirable as single-family residences."

    - Along Harvard Avenue East, 8 contributing, 1 thrice individually listed, 6 individually eligible and 2 possibly individually eligible historic resources would be adversely affected by this haul route: the contributing and individually eligible Brady-Alexander House (C, 1900—the second oldest house in the historic district) on the northeast corner of Harvard Avenue East and East Shelby Street, the contributing and individually eligible Dawson House (A and C, 1907) on the southeast corner of Harvard Avenue East and East Shelby Street, the contributing Barter-Devers House (C, 1908) at 2832 Harvard Avenue East, the contributing and individually eligible Stephens House (C, 1913) at the northeast corner of Harvard Avenue East and East Hamlin Street, the contributing and individually eligible Gleason House (C, 1909) on the southeast corner of Harvard Avenue East and East Hamlin Street, the contributing Stokes House (1906) at 2722 Harvard Avenue East, the individually listed William H. Parsons House (A and C, Edward J. Duhamel, 1903; the Harvard Mansion as a City Landmark) on the northeast corner of Harvard Avenue East and East Edgar Street, the accustomed parking (in its lot) and characteristic uses of the possibly eligible St. Patrick's Church (A and C, Krontz & Wrede, 1961), the contributing and individually eligible King-Friedman House (A and C, 1910), and the contributing and individually eligible

Clemmer House (A and C, 1910). (**8** contributing, **1** thrice listed, and **8** possibly individually eligible resources)

- This haul route would also adversely affect in the Roanoke Park Historic District 2 contributing and individually eligible resources along East Roanoke Street, including its contributing and individually eligible Gates-Bass Mansion (A and C, Elmer E. Green, 1909), and its contributing and individually eligible Booth House (A, 1907). On 10th Avenue East, the contributing and individually eligible Dalley House (C, Huntington & Gould, 1910), and the contributing Gifford, Fish, Bogue, Bloxom, and Horner houses would be adversely affected by this haul route. On Broadway Avenue East, the contributing Betterton-Hillman House (Elmer E. Green, 1912), the contributing and individually eligible Mayor Ole Hanson House (A and C, Elmer E. Green, 1911), the contributing and individually eligible Storm House (A and C, McClelland & Pinneh, 1924), the possibly eligible Winter House (C, 1942), and the possibly eligible St. Patrick Church (A and C, Krontz & Wrede, 1961) would be adversely affected by the haul route. (**9** contributing and **7** possibly individually eligible resources)

- Discuss effects of the **haul route** along Fuhrman-Boyer Avenue East on historic resources in the Portage Bay neighborhood, including the as yet unsurveyed historic resources on the north and south Delmar Drive East hillsides, historic resources in the houseboat community, and historic resources along both sides of Fuhrman-Boyer Avenue East: "This potential haul route would adversely affect the setting and feeling of residential historic resources with increased fugitive dust and diesel emissions, noise, vibration, traffic, congestion, dusty windows, and damage to buildings from erosion and soiling and to landscaping from pollution and vibration that would make individually eligible historic properties less desirable as single-family residences."

- 137, last para, 140 Says "with average construction activity, truck trips would range from one to two trips per hour." Add in their appropriate sections the information that there would be **one to two trips per hour under Option A and Option L, and 1-5 trips per hour under Option K. During peak construction periods truck trips would range from 2-8 trips per hour under Option A, 2-20 trips under Option K, and 2-12 trips per hour under Option L.** The omission of the rest of the information from Marsha Tolon's 7/17/2009 letter would deceive the reader into thinking that truck trips would be confined to one to two trips per hour. We object to this misrepresentation of information relevant to effects findings. Provide an indication of how many and how often historic resources along this haul route would experience peak construction periods, and provide a comparison of the peak period volume of truck trips with normal arterial truck trip volumes. Note that diesel emissions are more polluting than auto emissions and that construction trucks are much noisier than autos.

- These effects of temporary closures and haul routes and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

Construction—Demolition, and (Re)Construction of the three arterial bridges and construction of the two lid sover I-5 at East Roanoke Street and over SR520 between 10th Avenue East and Delmar Drive East , Option A

- 140–141 Move the discussion of effects on the properties mentioned in these paragraphs to the appropriate Option A, Option K, and Option L sections of the chapter's consideration of potential construction effects.

- 140 Say, ". . . the entire Roanoke Park Historic District **including its individually listed** William **H.** Parsons House (Edward J. Duhamel, 1903)," to prevent mistaken impression that the Parsons House is outside the Roanoke Park Historic District as the other individual houses mentioned in the rest of the list are.

- 142 The same. Say, "The Roanoke Park Historic District **including its individually listed** William **H.** Parsons House,"

- **East Roanoke Street, 10th Avenue East, and Delmar Drive East Bridges, Demolition and Construction, Option A** The demolition and reconstruction of the East Roanoke Street bridge over I-5, the 10th Avenue East Bridge over SR 520, and the Delmar Drive East bridge over SR 520—of all three bridges—is likely to adversely affect contributing and individually eligible houses and use of the contributing Roanoke Park (1910) in the Roanoke Park Historic District along the 2600 block of Broadway Avenue East including the contributing Betterton-Hillman House at 2601 Broadway Avenue East (Elmer E. Green, 1912), the contributing and individually eligible Mayor Ole Hanson House at 2609 Broadway Avenue East (A and C, Elmer E. Green, 1911), the contributing and individually eligible Storm House (A and C, McClelland & Pinneh, 1924). All of these historic resources and the possibly eligible Winter house at 2617 Broadway Avenue East (C, 1942) and the possibly eligible St. Patrick Church (A and C, Wrede & Krontz, 1961) will suffer extreme concrete dust and ensuing building exterior erosion and soiling, dusty windows, damage to landscaping from dust and vibration, noise, vibration, and nighttime construction glare from the demolition and reconstruction of the East Roanoke Street, 10th Avenue East, and Delmar Drive East bridges. (**4** contributing and **5** possibly individually eligible resources would suffer adverse effects from all three bridge and lid projects.

    - **East Roanoke Bridge** The demolition and reconstruction of the East Roanoke Street bridge alone are likely to produce extreme effects of concrete dust and ensuing building exterior erosion and soiling, dusty windows, damage to landscaping from dust and vibration, noise, vibration, and nighttime construction glare in the areas of the Roanoke Park Historic District adjacent to I-5 near East Roanoke Street and along Harvard Avenue East, including the contributing and individually eligible Clemmer House (Criteria A and C,

1910) at 2612 Harvard Avenue East, the contributing and individually eligible King-Friedman House (A and C, 1910) at 2616 Harvard Avenue East, and the individually listed William H. Parsons House (the Harvard Mansion as a city-designated landmark, A and C, Edward J. Duhamel, 1903) at 2706 Harvard Avenue East. In addition to the aforementioned **4** contributing and **5** possibly individually eligible historic resources in the 2600 block of Broadway Avenue East, **2** contributing and individually eligible and **1** thrice-listed historic resources would be adversely affected by demolition and construction of the lid over I-5 at East Roanoke Street construction.

- **10th Avenue East and Delmar Drive East Bridges** Demolition and reconstruction of the two bridges in the area of the Roanoke Park Historic District across from the 10th Avenue East and Delmar Drive East bridges are likely to cause adverse effects from demolition concrete dust and ensuing building exterior erosion and soiling, dusty windows, damage to landscaping from air pollution and vibration, noise, vibration, and nighttime construction glare on historic resources including buffering mature trees and other vegetation along the south border of the district, and to **8** contributing and possibly **3** individually eligible historic resources: the contributing and individually eligible Booth House (A, 1907) at 1004 East Roanoke Street, the contributing and individually eligible Gates-Bass Mansion (A and C, Elmer E. Green, 1909) at 1018 East Roanoke Street, the contributing and individually eligible Dalley House (C, Huntington & Gould, 1910) at 2608 10th Avenue East, the contributing Gifford House at 2612 10th Avenue East (1924), the contributing Fish House at 2616 10th Avenue East (1922), the contributing Jenner-Bogue House at 2622 10th Avenue East (1923), the contributing Bloxom House (C, 1917) at 2632 10th Avenue East, and the contributing Horner House (C, 1925) at 2636 10th Avenue East, as well as the aforementioned **4** contributing and possibly **5** individually eligible historic resources in the 2600 block of Broadway Avenue East.

- **Delmar Drive East Bridge** Demolition concrete dust and vibration, ensuing building exterior erosion and soiling, dusty windows, damage to landscaping from dust and vibration, noise, and nighttime construction glare from the Delmar Drive East part of the project is highly likely to have an adverse effect on the individually eligible Gunby House at 1118 East Roanoke Street (C, John T. Jacobsen, 1940), the individually eligible Alden Mason House at 2545 Fuhrman-Boyer Avenue East (A and C, Victor Steinbrueck, 1949), and the individually eligible Kelley House at 2518 Fuhrman-Boyer Avenue East (C, 1909). Portage Bay itself along with its marinas and boats will be vulnerable to heavy concrete dust and to possible soil deposits if the demolition activity produces vibration sufficient to start landslides. All of the contributing and individually eligible houses along the 2600 and 2700 blocks of 10th Avenue East, including **11** contributing houses, **4** of which are possibly individually eligible as well, will be vulnerable to landslides produced by bridge demolition vibration. As recently as May 2005, the Seattle Department of

Planning and Development identified the east side of 10th Avenue East as a "Landslide Prone Hazard Area."

- Along the north side of Delmar Drive East, where houses sit on the edges of precipitous, landslide-prone hillsides that already experience periodic landslides, Arthur Loveless–, Paul Thiry–, and Roland Terry–designed houses as yet unsurveyed and outside the Area of Potential Effects[1] will be exposed to heavy demolition dust and vibration, ensuing building exterior erosion and soiling, dusty windows, damage to landscaping from air pollution and vibration, noise, and nighttime glare from the demolition and construction of the Delmar Drive East bridge. Access to these houses will be blocked by the closure of Delmar Drive East. Note that the properties on which these houses sit already suffer periodic landslides. These properties need to be included in the CRDR's survey, and measures to prevent construction landslides need to be included in a Memorandum of Agreement with the Portage Bay/Roanoke Park Community Council.

- Architect-designed houses on the steep, landslide-prone hillside on the south side of Delmar Drive East have not been surveyed yet, either, and are likely to suffer the heavy demolition dust and vibration, building erosion and soiling, damage to landscaping from air pollution and vibration, dusty windows, noise, and nighttime glare from the Delmar Drive East Bridge demolition and construction activity, as well.

- Adverse effects to both historic buildings and vegetation from all three arterial bridge and lid projects should be anticipated, and ways of avoiding, minimizing, and/or mitigating the multiple effects of this extremely dusty, clogging, building eroding and soiling, noisy, and earth-shaking demolition and construction activity should be discussed in a Memorandum of Agreement.

- The reconstruction plan for the bridge over I-5 at East Roanoke Street and the 10th Avenue East bridge over SR 520 is to build half lids to serve traffic as temporary bridges north of the present East Roanoke Street Bridge and either east or west of the present 10th Avenue East Bridge over SR 520. The closure of Delmar Drive East, as we understand it, means that a temporary bridge (half lid) will not be constructed adjacent to the present Delmar Drive East bridge over SR 520 at Delmar Drive East, although building one there to avoid the closure of Delmar Drive East could be considered.

- Finishing and landscaping the lids over I-5 and SR 520 immediately after the replacement bridges have been constructed and put into operation would spare historic resources from many of the further adverse effects of the project's total seven-and-a-half-year to eight-year construction phase and provide an opportunity

[1] It's difficult to determine, looking at the maps, whether these properties on Delmar Drive East lie within the Area of Potential Effects. Please advise. If they are not, we suggest that both they and the historic resources on the south hillside of Delmar Drive East should be included in the Area of Potential Effects.

for monitoring and fine-tuning to perfect measures to avoid, minimize, and mitigate operation effects on historic resources. Here it is relevant to mention that the features in this area are the same for all three options and that building the lids could therefore take place early and even before the rest of the project is undertaken.

- Note that in the Phased Implementation scenario, said in the SDEIS to be the most likely scenario, lid construction would be deferred indefinitely. We request discussion of the adverse effects of this damaging prospect and treatment of the lid timing issue and construction mitigation in a Memorandum of Agreement.

- The effects of demolition and (re)construction of the three arterial bridges and two lids and ways of avoiding, minimizing, or mitigating the multiple effects should be discussed in the Memorandum of Agreement.

Construction—Demolition and (Re)construction of the ***Seven-Lane Portage Bay Bridge, Option A***

- 140 third para, third sentence Saying "The temporary work bridges, barges, and heavy equipment used for demolition and construction of the Portage Bay Bridge **might** also introduce visual effects to the area" is unduly tentative. They will introduce adverse **visual effects** to the area.

- 141 The discussion treats the effects of the 6 years of demolition and construction of the Portage Bay Bridge without mentioning the adverse effects of this six-year period, with **views** of temporary work structures and barges, demolition noise and vibration, concrete dust and ensuing building erosion and soiling, dusty windows, damage to landscaping from dust and vibration, construction noise, and nighttime construction glare to historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood. Adverse effects of the construction of the Portage Bay Bridge, which in addition to being more than twice as wide or wider, depending on the option chosen, and higher, will be moved to the north in front of more homes in the Roanoke Park Historic District and in the Portage Bay neighborhood, are not discussed. These adverse construction effect on the Roanoke Park Historic District and the Portage Bay neighborhood should be discussed and avoidance, minimization and mitigation taken up in a Memorandum of Agreement.

- Again, we request that identification of the contributing and individually eligible historic resources in the Roanoke Park Historic District be brought to bear on effects findings as the contributing and individually eligible status of historic resources in the Montlake Historic District is routinely brought to bear on effects findings for that historic district.

- 141 Moving from west to east, discuss the effects of Option A construction on the area between I-5 and Portage Bay, presently omitted. Discuss historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood including

historic resources on the north and south hillsides of Delmar Drive East that would be adversely affected by demolition and the construction of Option A's seven-lane Portage Bay Bridge, which include **visual blight**, noise, vibration, air pollution and consequent building exterior erosion and soiling, dusty windows, nighttime glare, and vegetation removal and damage.

- Historic properties on East Roanoke Street that would experience adverse effects from the demolition and construction of the seven-lane Portage Bay Bridge of Option A include the contributing and individually eligible Gates-Bass Mansion (A and C, Elmer E. Green, 1909) at 1018 East Roanoke Street, the contributing and individually eligible Booth House (A, 1907) at 1004 East Roanoke Street, and the contributing Roanoke Park (1910). Along the 2600 block of the district's 10th Avenue East, the contributing and individually eligible Dalley House (C, Huntington & Gould, 1910) at 2608 10th Avenue East, the contributing Gifford House at 2612 (1924), the contributing Fish House at 2616 (1922), the contributing Jenner-Bogue House at 2622 (1923) the contributing Bloxom House (1917) at 2632, and the contributing Horner House (1925) at 2636 10th Avenue East would experience these adverse effects. (**9** contributing, **3** of which are also individually eligible)

- In the 2700 block of the Roanoke Park Historic District's 10th Avenue East, historic properties adversely affected by the demolition and construction of the seven-lane Portage Bay Bridge of Option A would include the contributing and individually eligible Beckwith-Thompson House (A, 1910) at 2700, the contributing and individually eligible Saunders House (A and C, Frederick A. Sexton, 1908) at 2701, the contributing and individually eligible Parshall House (C, Thomas L. West, 1911) at 2706, the contributing and individually eligible Siegley House (C, E. H. Sanders, 1909) at 2712, the contributing and individually eligible Cavanaugh House (C, 1909) at 2722, the contributing and individually eligible Conly House (A, 1916) at 2726, and the contributing and individually eligible Finley House (A and C, 1909) at 2731 10th Avenue East. (**7** contributing, of which all **7** are also individually eligible)

- Historic resources in the Portage Bay neighborhood that would be adversely affected by the demolition and construction of the seven-lane Portage Bay Bridge of Option A include the individually eligible Gunby House (C, John T. Jacobsen, 1940), the individually eligible Alden Mason House (A and C, Victor Steinbrueck, 1949), and the individually eligible Kelley House (C, 1909), which will be adjacent to the wider, higher bridge moved farther north of Option A.

- Other potentially eligible resources in the Portage Bay neighborhood have not been surveyed, including the Arthur Loveless, Paul Thiry, and Roland Terry houses on the north side of Delmar Drive East and the architect-

designed houses at the top of the Delmar Drive East south hillside, which might or might not lie within the APE, and the houseboat community in the west end of Portage Bay, the potential historic bungalow district along East Gwinn Street between Harvard Avenue East and Fuhrman-Boyer Avenue East, and historic resources along many of the other streets that make up the point, and many of the other historic resources along both sides of Fuhrman-Boyer Avenue East, which have been left out of the APE. Most of these properties would be affected by hauling and construction, and some of them would be affected by demolition as well.

- Without the lids that have been designed into the project, that are an integral part of the project, and because the "temporary" construction effects would go on for seven-and-a-half to eight years, these construction effects on historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood would be tantamount to permanent effects and ultimately lead to "demolition by neglect" as property values plummeted, and even then **visual blight**, noise, dust, vibration, and diesel emissions would mean that people would not be able to sell their homes for amounts approaching their present worth. Many of the houses would be rented out to lower income renters, those not in a position to avoid living so close to a mammoth, many-years-long freeway construction project. Many of the houses would become rooming houses. A general deterioration would ensue in the absence of owner-residents who work steadily to improve their historic houses and their communities. Repairs would tend to be done on the cheap, with little regard for the historic integrity that owner-residents have prized and maintained over 100 years. With the deterioration of the social fabric of the communities would come a deterioration of the setting and feeling and characteristic single-family use of the Roanoke Park Historic District and of the historic resources in the Portage Bay neighborhood.

- An accurate **perception that the neighborhoods had become unhealthy** would mean that many families with young children would move away. A recent snapshot, block-to-block survey of the number of children under the age of 20 conducted by the Portage Bay/Roanoke Park Community Council revealed that the predominantly single-family homes in the Roanoke Park Historic District and the Portage Bay neighborhood shelter 126 young children under the age of 20, of which 79 are under the age of 14. Note that the reluctance of many parents in this day and age to release such information means that these numbers of children are probably higher.

- Finishing and landscaping the lids over I-5 and SR 520 immediately after the replacement bridges have been constructed and put into operation would spare historic resources from many of the further adverse effects of Option A's seven-lane Portage Bay Bridge project's six-year construction phase and provide an opportunity for monitoring and fine-tuning to perfect measures to avoid, minimize, and mitigate subsequent permanent operation effects on historic resources.

- Scheduling lid construction for an early part of the Phased Implementation scenario rather than deferring lid construction indefinitely would address some of these adverse construction effects. This question and other means of avoiding, minimizing, and mitigating effects of the construction of the Portage Bay Bridge need to be addressed in a Memorandum of Agreement..

Construction—Portage Bay Bridge and Second Bascule Bridge, Option A, Views

- **Views** to the east, of Portage Bay, the historic NOAA Fisheries Building, the historic Seattle Yacht Club and marinas, the historic Montlake Cut, the historic Montlake Bridge, Lake Washington, the lights of Bellevue and Kirkland, trees in the foothills, and the Cascade Mountains from many of the contributing and individually eligible houses in the Roanoke Park Historic District and historic resources in the Portage Bay neighborhood both surveyed and unsurveyed would be adversely affected by the construction of Option A's seven-lane Portage Bay Bridge and second bascule bridge. Construction of the Portage Bay Bridge expected to last 6 years and of the second bascule bridge expected to last 27 months would be **both visible and audible**. These construction effects would be compounded by Sound Transit's deep-bore 300-foot-deep twin tunnel project, which is not even mentioned in the *Cultural Resources Discipline Report*. That project is underway now and is expected to go on until some time in 2016.

- Note that the statement that "only a few" historic resources in the Roanoke Park Historic District enjoy this panoramic **view shed** of high vividness is a diminution of the number of houses that enjoy this viewshed and of the extent and the quality of the views enjoyed by these historic resources. This misinformation, repeated in the December 2009 *Visual Quality and Aesthetics Discipline Report*, a reversal of the description in the 2005 *VQADR*, has contributed to a finding of "no adverse effect" and a consequent refusal to engage in a Memorandum of Agreement. The diminishing language needs to be corrected, the adverse effects need to be acknowledged, and the adverse effects should be taken up in a Memorandum of Agreement.

- The East Edgar Street, East Hamlin Street, and East Shelby Street hills continue to slope at the top of the Roanoke Park Historic District plateau from the east side of 10th Avenue East to the plateau's high point along Broadway Avenue East. Residents in the large houses at the intersections of the Roanoke Park Historic District as far west as the west side of Broadway Avenue East at some intersections enjoy views east variously including Portage Bay, the historic Fisheries Building, the historic Seattle Yacht Club and marinas, the historic Montlake Cut, the historic Montlake Bridge, Lake Washington, the lights of Bellevue and Kirkland, trees in the foothills, and the Cascade Mountains. Many more historic resources in the Roanoke Park Histoirc District than "a few" enjoy these memorable "expansive" views of "high vividness."

- Houses from which these expansive views of high vividness may be enjoyed include most obviously the contributing and individually eligible Gates-Bass Mansion at 1018 East Roanoke Street (A and C, Elmer E. Green, 1909) and most of the houses along the east side of 10th Avenue East: the contributing Gifford House (1924) at 2612, the contributing Fish House (1922) at 2616, the contributing and individually eligible Bogue House (A, 1923) at 2622, the contributing Bloxom House (1917) at 2632, the contributing Horner House (1925) at 2636, the contributing and individually eligible Beckwick-Thompson House (A, 1910) at 2700, the contributing and individually eligible Parshall House (C, Thomas L. West, 1911) at 2706, the contributing and individually eligible Siegley House (C, 1909) at 2712, the contributing and individually eligible Cavanaugh House (C, E. H. Sanders, 1909) at 2722, the contributing and individually eligible Conly House (A, 1916) at 2726, the contributing and individually eligible Mayer House (C, Hunt & Wheatley, 1924) at 2802, the contributing and individually eligible Spencer House (C, Ed Merritt, 1909) at 2808, the contributing Turner House (1903) at 2812, the contributing and individually eligible Richardson House (C, Julian G. Everett, 1912) at 2816, the contributing and individually eligible Phillips-Hyde House (C, Huntington & Gould,1909) at 2822, the contributing and individually eligible Higgins House (A, 1909) at 2832, and the contributing and individually eligible Patten House (A and C, 1909) at 2836. (The contributing and individually eligible Booth House at 1004 East Roanoke Street [A, 1907] and the contributing and individually eligible Dalley House at 2608 10th Avenue East [C, Huntington & Gould, 1909] have their views impeded by trees and other houses.) (**20** contributing, **13** of which are also individually eligible)

- The four houses on the north side of East Shelby Street at its east end that enjoy these views are the contributing and individually eligible Prosser-Dowling House (A and C, Hunt & Jones, 1909) at 912, the contributing and individually eligible Slater House (C, 1910) at 920, the contributing and individually eligible Ross House (A, 1912) at 926, and the contributing Dart House (C, 1909) at 1000. On the south side of East Shelby Street, the contributing and individually eligible Twelves House (A and C, Edwin J. Ivey, 1923) at 817, the contributing and individually eligible Denny House (A and C, 1910) at 2838 Broadway Avenue East, and the contributing Sutherland House (1908) at 2837 10th Avenue East also enjoy these views. (**7** contributing, of which **5** are also individually eligible)

- On the north and south sides of East Hamlin Street, the contributing and individually eligible Sullivan-Walker House (A and C, 1899—the oldest house in the district) at 2736 Broadway Avenue East, the contributing and individually eligible Finley House (A and C, 1909) at 2731 10th Avenue East, the contributing and individually eligible Hunter House (A and C,

Frederick A. Sexton, 1909) at 2801 Broadway Avenue East, the contributing and individually eligible Johanson House (A, and C, attributed to Cutter & Malmgren, 1909) at 2800 Broadway Avenue East, and the contributing and individually eligible Wentworth-Elliott House (A and C, Merritt, Hall & Merritt, 1910) at 918 East Hamlin Street enjoy these views east as well. (**5** contributing, all **5** of which are individually eligible)

- As do, before leafing out, the contributing and individually eligible Neterer House (A and C, Andrew Willatsen, 1915) at 2702 Broadway Avenue East and the contributing and individually eligible Saunders House (A and C, Frederick A. Sexton, 1908) at 2701 10th Avenue East. (Other houses along the west side of 10th Avenue East have partial views of Lake Washington and the Cascades from their high vantage points.) (**2** contributing, **both** of which are individually eligible)

- All of these 34 contributing resources—more than a third of the Roanoke Park Historic District's 80 contributing resources and almost half of the district's 57 individually eligible historic resources—would suffer damage from the adverse effects to the setting and feeling of the Roanoke Park Historic District from the visual blight alone, and from pollution, noise, and nighttime glare at the various sites during the seven-and-a-half-year to eight-year construction project. (The State Historic Preservation Officer will decide finally whether the adversely affected contributing resources identified here include properties also individually eligible for National Register and Washington Heritage Register listing.)

In addition, as has been noted, some of these 34 resources both contributing and contributing and individually eligible—and one listed resource along Harvard Avenue East, more contributing and individually eligible resources along the west side of 10th Avenue East, the as yet unmentioned contributing and individually eligible resources along the east and west sides of Broadway Avenue East, and the four historic contributing and individually eligible resources along East Roanoke Street including the contributing Roanoke Park itself—would experience adverse effects from staging, vegetation removal, detours, temporary closures and haul routes, demolition and (re)construction of the three arterial bridges and two lids, demolition and (re)construction of the seven-lane Portage Bay Bridge, and construction of the second bascule bridge of Option A.

- These multiple adverse effects of demolition and (re)construction to so many contributing and individually eligible resources and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

Construction— Demolition and Construction, Option K

- 149, Discuss the construction effects of the six-lane Option K on the historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood.

    - The construction effects on historic resources would come from staging, vegetation removal, detours, temporary closures and haul routes, demolition and construction of three bridges and two lids, and demolition and construction of the six-lane Portage Bay Bridge.

    - Construction effects of the six-lane Portage Bay Bridge would be almost as damaging in its effects as construction of Option A's seven-lane Portage Bay Bridge. See the earlier discussion of these effects with respect to Option A, and include them here.

    - Construction of Option K's tunnels under the Montlake Cut, with freezing, boring, and excavation, would be visible and audible for almost four years. Coincident with this part of the SR 520 project in Option K would be Sound Transit's project to excavate, haul, and construct a 300-foot-deep twin tunnel across the Montlake Cut. This project is underway and is expected to go on until 2016.

    - Option K's lower profile at various sites in the project as a whole might mean that visual blight from construction might be a less adverse effect over the seven-and-a-half-year construction phase.

- Without the lids that have been designed into the project, that are an integral part of the project, and because the "temporary" construction effects would go on for seven-and-a-half to eight years, these effects on historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood would be tantamount to permanent effects and lead to ultimate "demolition by neglect" as property values plummeted, and even then visual blight, noise, dust, vibration, and diesel emissions would mean that people would not be able to sell their homes for any amount approaching their present worth. Many of the houses would be rented out to lower income renters, those not in a position to avoid living so close to a mammoth, many-years-long freeway construction project. Many of the houses would become rentals and rooming houses. A general deterioration would ensue in the absence of owner-residents who work steadily to improve their historic houses and their communities. Repairs would tend to be done on the cheap, with little regard for the historic integrity that owner-residents have prized and maintained over 100 years. With the deterioration of the social fabric of the neighborhoods, would come a deterioration of the setting and feeling and characteristic single-family use of the Roanoke Park Historic District and of the historic resources in the Portage Bay neighborhood.

- An accurate **perception that the neighborhoods had become unhealthy** would mean that many families with young children would move away. A recent

snapshot, block-to-block survey of the number of young children under the age of 20 conducted by the Portage Bay/Roanoke Park Community Council revealed that the predominantly single-family homes in the Roanoke Park Historic District and the Portage Bay neighborhood shelter 126 children, 79 of which are under 14. Note that the reluctance of many parents in this day and age to release such information means that these numbers of children are probably higher. A Memorandum of Agreement should treat avoiding, minimizing, and mitigating these adverse secondary, or indirect, effects.

- Finishing and landscaping the lids over I-5 and SR 520 immediately after the replacement bridges have been constructed and put into operation would spare historic resources from many of the further adverse effects of Option K's six-lane Portage Bay Bridge project's six-year construction phase and provide an opportunity for monitoring and fine-tuning to perfect measures to avoid, minimize, and mitigate subsequent permanent operation effects on historic resources.

- The multiple effects of demolition and (re)construction in Option K and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

Construction—Demolition and Construction, Option L

- 160, Discuss the construction effects of the six-lane Option L on the historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood.

    - The construction effects on historic resources would come from staging, vegetation removal, detours, temporary closures and haul routes, demolition and construction of bridges and lids, and construction of the six-lane Portage Bay Bridge.

    - Construction of Option L's six-lane Portage Bay Bridge over a six-year period would be almost as damaging in its effects as construction of Option A's seven-lane Portage Bay Bridge. See the earlier discussion of these effects with respect to Option A, and include them here.

    - Construction of Option L's second bascule bridge farther to the east and out of sight of these neighborhoods might have little effect on the neighborhoods that surround the Portage Bay basin. Note that any noise from the second bascule bridge construction project that reached the Roanoke Park Historic District or historic resources in the Portage Bay neighborhood would be compounded by noise from Sound Transit's project to construct a 300-foot-deep twin tunnel across the Montlake Cut. This project is underway and is expected to last until some time in 2016.

- Option L's elevated profile at various sites in the project as a whole would mean that visual blight from construction might be a more adverse effect over the seven-and-a-half-year construction phase.

- Without the lids that have been designed into the project, that are an integral part of the project, and because the "temporary" construction effects would go on for seven-and-a-half years, these effects on historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood would be tantamount to permanent and lead to ultimate "demolition by neglect" as property values plummeted, and even then visual blight, noise, dust, vibration, and diesel emissions would mean that people would not be able to sell their homes for any amount approaching their present worth. Many of the houses would be rented out to lower income renters, those not in a position to avoid living so close to a mammoth, many-years-long freeway construction project. Many of the houses would become rooming houses. A general deterioration would ensue in the absence of owner-residents who work steadily to improve their historic houses and their communities. Repairs would tend to be done on the cheap, with little regard for the historic integrity that owner-residents have prized and maintained over 100 years. With the deterioration of the social fabric of the neighborhoods would come a deterioration of the setting and feeling and the characteristic single-family use of the historic district and of the historic resources in the Portage Bay neighborhood.

- An accurate **perception that the neighborhoods had become unhealthy** would mean that many families with young children would move away. A recent snapshot, block-to-block survey of the number of young children under the age of 20 conducted by the Portage Bay/Roanoke Park Community Council revealed that the predominantly single-family homes in the Roanoke Park Historic District and the Portage Bay neighborhood shelter 126 young children including 79 under the age of 14. Note that the reluctance of many parents in this day and age to release such information means that these numbers of children are probably higher.

- Finishing and landscaping the lids over I-5 and SR 520 immediately after the replacement bridges have been constructed and put into operation would spare contributing and potentially individually eligible historic resources from many of the further adverse effects of Option L's six-lane Portage Bay Bridge project's six-year construction phase and provide an opportunity for monitoring and fine-tuning to perfect measures to avoid, minimize, and mitigate subsequent permanent operation effects on historic resources.

- The effects of demolition and (re)construction in Option L and ways of avoiding, minimizing, or mitigating them should be discussed in a Memorandum of Agreement.

- Note that the decline in livability described in many of the *SDEIS* discipline reports and in the *Health Impact Assessment* (regretfully, not included in the

SDEIS) would lead to "demolition by neglect" of historic resources in these areas adjacent to the SR-520 Bridge Replacement and HOV Project. The lids designed into the project are integral, not mitigation, but early **timing** of their completion could be regarded as a construction mitigation of this secondary, indirect, adverse effect in a Memorandum of Agreement.

Potential Effects of the Project, Operation section p 170

- Because the report says that less is known of details in the area near the I-5 and SR 520 interchange, treat the two areas, the area near the I-5 and SR 520 interchange and the area between I-5 and Portage Bay, separately.

I-5 and SR 520 Interchange, Operation, Options A, K, and L

- Of the I-5 and SR 520 interchange, say something to the effect of "The operation of the SR 520 and I-5 interchange is likely to have an adverse effect on the eligible Chung House at 1980 Harvard Avenue East (1932) and possibly on the eligible Talder House (1909) at 2352 Broadway Avenue East. When design and operation details are known, possible effects of operation of this part of the project on historic resources will be more fully evaluated."

Area Between I-5 and Portage Bay, Operation, Options A, K, and L

Operation—I-5 and 10th & Delmar Lids, Options A, K, and L

- Without the lids that have been designed into the project, that are an integral part of the project, the operation effects on historic resources in the Roanoke Park Historic District and Portage Bay neighborhood would lead to ultimate "demolition by neglect" as property values plummeted, and even then noise, air pollution, and visual blight would mean that people would not be able to sell their homes for any amount approaching their present worth. Many of the houses would be rented out to lower income renters, those not in a position to avoid living so close to a mammoth freeway. Many of the houses would become rooming houses. A general deterioration would ensue in the absence of owner-residents who work steadily to improve their historic houses and their communities. Repairs would tend to be done on the cheap, with little regard for the historic integrity that owner-residents have prized and maintained over 100 years. With the deterioration of the social fabric of the neighborhoods, would come **a deterioration of the setting and feeling and characteristic single-family use** of the historic district and the historic resources in the Portage Bay neighborhood.

- An accurate **perception that the neighborhoods had become unhealthy** would mean that many families with young children would move away. A recent block-to-block, snapshot survey of the number of young children under the age of 20 conducted by the Portage Bay/Roanoke Park Community Council revealed that the predominantly single-family homes in the Roanoke Park Historic District and the Portage Bay neighborhood shelter 126 children including 79 under the age of 14. Note that the reluctance of many parents in this day and age to release such information means that these numbers of children are probably higher. This

demographic would undergo a drastic alteration. A Memorandum of Agreement should treat these adverse secondary, or indirect, effects and ways of avoiding, minimizing, and mitigating them.

Operation, Portage Bay Bridge, Options A, K, and L

- Because the **view shed** is so important to the setting and feeling of the neighborhoods on the steep western and southern hillsides of the Portage Bay basin, we urge the writer to make use of the comments that follow here in discussions of the operation effects of Options A, K, and L on historic residences in the Roanoke Park Historic District and the Portage Bay neighborhood including historic residences that should be in the APE along both sides of Fuhrman-Boyer Avenue East, many as yet unsurveyed, an unsurveyed historic bungalow district along East Gwinn Street between Harvard Avenue East and Fuhrman-Boyer Avenue East, and unsurveyed historic resources along the other streets that make up the point, the unsurveyed houseboat community in west Portage Bay, and the as yet unsurveyed historic resources on the north and south hillsides of Delmar Drive East that might or might not be and should be included in the APE.

- We urge consideration of the 2005 *VQADR* because it is more candid with respect to adverse effects findings than the December 2009 *SDEIS* version of the *VQADR*, because the aesthetic principles the earlier report employed in its effects findings have not gone out of date, and because the earlier report's representations of these neighborhoods and its effects findings have not been tainted by the numerous misrepresentations and omissions in the 2009 *CRDR*, which obviously informed both the later *VQADR*'s account of historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood and the later *VQADR*'s much more sanguine effects findings.

- The *Visual Quality and Aesthetics Discipline Report* of 2005 for the SR 520 Bridge Replacement and HOV project observes of the present Portage Bay Bridge that **"the Portage Bay Bridge is a dominant part of many views from the hills around the bay and from the bay itself" (p 19).** The report also notes that **the present SR 520 structures "are not visually compatible with the natural-appearing landscapes or the smaller scale of the neighborhoods" (p 24) and that "the columns and highway break up the visual composition of natural-appearing areas and neighborhoods" (p 24).** The wider, higher prospective bridge, shifted north, and with massive concrete noise walls will be even less compatible with the natural-appearing landscapes and the smaller scale of the neighborhoods. And the higher, wider prospective six- or seven-lane bridge with massive noise walls in Options A and L, moved north in front of these historic resources, will break up **the visual composition of natural-appearing areas and small-scale neighborhoods and bays to an extremely damaging degree**. This is a cumulative adverse effect.

- A section of the 2005 *Visual Quality and Aesthetics Discipline Report* on viewer sensitivity to prospective changes to these views says, **"residents around Portage Bay and along the western shore of Lake Washington form the largest viewer group, with views of the roadway in Seattle. This includes East Roanoke Park . . ."** The report goes on, **"Residents and park and trail users in this [Seattle] area have high sensitivity to landscape aesthetics because they either are in their home community or expect a pleasant, natural-appearing landscape for recreation."** The Portage Bay Bridge demolition and construction over six years and the permanent operation of the higher, wider bridge, shifted north and with noise walls, will degrade views to an extreme extent.

- Under "Potential Effects of the Project," the 2005 *Visual Quality and Aesthetics Discipline Report* says that effects of the proposed alternatives on the visual quality and aesthetics of a landscape would differ according to changes in width, elevation, addition or removal of structures and vegetation, and the degree to which new structures would contrast or blend with the existing landscape. It rates visual quality changes on the basis of low, moderate, or high contrast. **High contrast is described as "easily noticeable contrast between scale or character of proposed facilities and existing environment in which viewers are sensitive to visual change and expect attractive views or surroundings and substantial changes in shadow levels of light and glare that would be easily noticeable."**

- Of the most modest alterations to the Portage Bay Bridge, in the old Four-Lane Alternative, the 2005 *Visual Quality and Aesthetics Discipline Report* says that the new bridge would shift to the north and be 10 to 20 feet higher and about 50 feet wider than the current 54-foot-wide bridge and that the change in scale would be **very noticeable** to motorists and to viewers looking at the bridge anywhere in the Portage Bay basin. The 2005 *Visual Quality and Aesthetics Discipline Report* also observes that the northward placement of the bridge would **noticeably change** the view eastward from Roanoke Park homes north of the bridge by encroaching on their views to the south. It goes on, "Sound walls in the Portage Bay/Roanoke Park area would result in **very high changes to the visual character of SR 520 and to the quality of views from and toward the roadway.** At 18 to 22 feet along North Capitol Hill, the walls would drastically and negatively alter the motorist's experience and could block views from residences adjacent to the wall. A 10-foot-high sound wall could encroach on Bagley Viewpoint and obstruct views to the south."

- Of the view from outside the roadway of the Four-Lane Portage Bay Bridge, the 2005 *Visual Quality and Aesthetics Discipline Report* said, "the addition of 8- to 10-foot-high sound walls on the south side of the Portage Bay Bridge would create **a profile that is very different from**

[that of] the existing bridge. The walls, in combination with the taller girders and the greater bridge width, would make the bridge structure more massive and box-like, and would greatly increase the visual presence of the bridge. Moreover, the sound walls would not be consistent with the Scenic Route classification of SR 520 from the driver's viewpoint because the high sound walls would block lateral views outward from the roadway and would partially obstruct long-distance views of the Cascades." (Note that according to a February 1, 2010, letter from Julie Meredith, P. E., SR 520 Program Director, WSDOT, and Randolph Everett, Major Projects Oversight Director, FHWA, the designs for Options A and L now include noise walls on both the north and the south sides of the Portage Bay Bridge.)

- Of the Six-Lane Alternative (before Options A, K, and L had been developed and before Roanoke Park had become the Roanoke Park Historic District), the 2005 *Visual Quality and Aesthetics Discipline Report* said that "sound walls in [the] Roanoke Park [Historic District] would be 12 to 14 feet high on the south side of the highway." It's not clear whether sound walls will also be on the north side of the highway.

- Of a new Bagley Viewpoint to be designed into the 10th & Delmar lid in the Six-Lane Alternative [before Options A, K. and L had been developed], the 2005 *Visual Quality and Aesthetics Discipline Report* said that **the placement of 10-foot-high sound walls near the viewpoint could affect the view.**

- The 2005 *Visual Quality and Aesthetics Discipline Report* also said that in the Six-Lane Alternative [Options A. K. and L had not yet been developed] "vegetation below Bagley Viewpoint and in 50-foot-wide swaths on the north and south sides of the roadway would be removed."

- The 2005 *Visual Quality and Aesthetics Discipline Report* observed that in the Six-Lane Alternative [before Options A, K. and L had been developed], **"the Portage Bay Bridge would be more than twice the width [even wider in the seven-lane Option A] but similar in style" and that the northward alignment and added width would have a moderate to high visual quality effect on views toward and from the roadway.** The report also observed **that "the roadway would be within 70 to 100 feet of a few homes just below the Bagley Viewpoint**" and that **"the view eastward from Roanoke Park homes would noticeably change because of proximity of the Portage Bay Bridge."** The 2005 *Visual Quality and Aesthetics Discipline Report* of course does not say how much closer the then unplanned seven-lane Portage Bay Bridge of Option A would be to the homes below the Bagley Viewpoint or how **much more noticeably** the view eastward from Roanoke homes would change under the seven-lane Option A.

- The 2005 *Visual Quality and Aesthetics Discipline Report* added, **"sound walls on the south [and now north?] side[s] of the Portage Bay Bridge would compound the visual effects of the taller girders and make the highway structure appear more massive when seen from viewpoints outside of the roadway."**[2]

- 170, first para What would be the effect of **variable tolling** in the No Build Alternative, considering both tolling SR-520 alone and tolling I-90 as well as SR-520? Tolling is expected to begin in spring 2011, which means it will initially take place on the four-lane bridge.

- 172 The "6-Lane Alternative" head is out of date. Option A has seven lanes on the Portage Bay Bridge with noise walls. Option K has six lanes on the Portage Bay Bridge with quieter pavement. Option L has six lanes on the Portage Bay Bridge with noise walls.

- 172 Note that the 10th Avenue East & Delmar Drive East lid would visually shield the Roanoke Park Historic District from the wider roadway beneath the lid but that it would not visually shield the Roanoke Park Historic District from the wider and higher Portage Bay Bridge moved north in front of the Roanoke Park Historic District.

- 172, third para, second and third sentences The Andrew Gunby House would not be shielded from noise by the 10th & Delmar lid, nor would it be visually shielded by the lid.

- 172, end of third para Include quieter pavement data here, too.

- 172, ff Were noise levels measured at bedroom height?

- 173 Note that the width of the Portage Bay Bridge would be greater in Option A and that whether sound walls are used would affect the profile of the Portage Bay Bridge.

- 173, next to last para Many more contributing (and individually eligible) houses than those mentioned have views of the Portage Bay Bridge, and those views would be adversely affected by the wider, higher Portage Bay Bridge moved north: houses on the east side of East Shelby Street, for instance, and houses at the intersections of East Hamlin Street and East Edgar Street with the east side of Broadway Avenue East and the west side of 10th Avenue East. See the earlier

[2] In a letter dated February 1, 2010, Julie Meredith, P. E., SR 520 Program Director, and Randolph Everett, FHWA Major Projects Oversight Manager, say that "If noise walls are included on the Portage Bay Bridge under any option, they would run the entire length of the bridge on both sides." Still to be examined as an alternative to the visual blight of noise walls is the use of quieter pavement, not as mitigation, which the FHWA does not endorse, but as an integral part of any design adopted.

discussion of contributing and individually houses that enjoy these views in the Construction Effects part of these comments, pp 28–31.

- 173, last para An out-of-scale six- or seven-lane higher bridge running beside notable buildings such as the John Graham, Sr.–designed terra-cotta and brick NOAA Fisheries Building and the diminutive John Graham, Sr., Seattle Yacht Club would have an adverse effect on views of those historic buildings, and the scale of the project would visually intrude on views of Portage Bay from many contributing and individually eligible properties in both the Roanoke Park Historic District and theas yet not fully surveyed Portage Bay neighborhood. These historic resources are noted for their views. **The foreseeable effects of the new project added to past and present effects would be a cumulative adverse effect.**

- Once again, note that the operation effects, like the demolition and construction effects, vary in the three options. And note again that Option A is according to WSDOT "the seven-lane option." The report should treat historic resources in the area between I-5 and Portage Bay as it does the historic resources in the neighborhoods east of Portage Bay with respect to effects from operation of the three different options.

- Discuss operation effects on historic resources in the Roanoke Park Historic District and historic resources in the Portage Bay neighborhood from all three options in the sections devoted to Option A, Option K, and Option L as is done for other historic resources and the other historic district in the APE in this section on the effects of operation of the three different options.

- 174, first para, last three sentences: "Only a small portion of the district has a view of [**34** of 80—more than one-third of contributing—and **26** of 57—almost half of individually eligible houses] and would be adversely affected by, the replacement bridge. In addition , there is already a bridge there, so its [higher and wider] replacement [moved farther north in front of historic residences] would not be a substantial change from existing conditions. Therefore, the visual effect from the new bridge would not be an adverse effect." The "therefore" based on false representation of the number of contributing and individually eligible historic resources in the district that have views of the Portage Bay Bridge and on the imprecise words "would not be a substantial change" is not earned. **The new bridge's greater height and width moved farther north in front of more homes added to past and present effects would be a cumulative adverse effect.**

- 174, bulleted list of effects on the Roanoke Park Historic District needs to consider the effects separately of the seven-lane Option A and the six-lane Options K and L and the effects if the building of the lids is deferred in the Phased Implementation scenario, said in the *SDEIS* to be the most likely scenario.

- 174, last para, third sentence The seven-lane Portage Bay Bridge of Option A is said to be 35 feet wider than the existing bridge. On p 181, second para, first sentence, the six-lane Portage Bay Bridge of Option K is said to be "approximately 35 feet wider than the existing bridge." Which one will be 35 feet wider—the six-lane or the seven-lane?

- 175, second para, third to last sentence "Only a small portion of the district has a view of, and would be visually affected by, the replacement [Portage Bay] bridge" is simply not true. See the itemized discussion of the number and the status (contributing and individually eligible) of resources from which views east are enjoyed above, pp 30–31, in the Construction section of these comments.

- 175, second para The last three sentences repeat the specious reasoning re the wider and higher new Portage Bay Bridge from p 174: the infamous "there is already a bridge there, so its [wider and higher] replacement [moved north] would not be a substantial change from existing conditions" denies the definition of cumulative effects and denies the effects finding of the 2005 *Visual Quality and Aesthetics Discipline Report*. ("Would not be substantial" is not substantiated here or elsewhere.)

- 175, last para and 176, first para Changes from the second bascule bridge of Option A to the watery setting and feeling of the delicate span of the Montlake Bridge would also be an adverse effect on views of the historic Carl F. Gould Montlake Bridge from the Roanoke Park Historic District and the Portage Bay neighborhood, including unsurveyed historic resources in the Portage Bay neighborhood. Note that residents of these neighborhoods walk down to East Shelby Street to enjoy the most spectacular view of the Montlake Bridge and Montlake Cut that they have partial views of from their own homes.

- 175, third para The Montlake Bridge is a part of the view from more houses than "on 10th Avenue East between East Hamlin and East Shelby Street." Large, tall houses along the east and west sides of East Shelby Street and at intersections on Broadway Avenue East and the west side of 10th Avenue East enjoy views of the Montlake Bridge as well. Again a diminution of the number and a disregard for the contributing and individually eligible status of historic resources leads to a finding of no adverse effect in a district known for its spectacular views, where spectacular views contribute "substantially" to setting and feeling.

- 175, third para "Although it would affect the setting and feeling of **this edge of the district** and of these contributing [!] properties, this effect would not be adverse" under-represents the number of affected properties and those that are both contributing and individually eligible. More resources than those at this "edge" of the district would be affected by the adverse effects on views. The finding that "this effect would not be adverse" is not substantiated in any way.

- 177, third para "primarily visible from the rear of houses on 10th Avenue East" condescends to the decks, terraces. living rooms, and upstairs rooms from which the view is enjoyed along the east side of 10th Avenue East and under-represents the number of contributing and individually eligible historic resources from which the view is enjoyed, including many views from the fronts and sides of houses at intersections.

- 177, third para "The width of Portage Bay geographically separates the Montlake Bridge from the Roanoke Park Historic District" seems like an obvious observation. And of course the views across the beautiful waters of the bay and the cut to the delicate span are prized. Is the remark about the geographic separation meant to suggest that the viewer must be on top of the bridge or underneath it or beside it in order to enjoy views of it? The watery expanse before the view of the bridge is part of the charm of the view from one of the neighborhood's beloved viewpoints.

- 179, bulleted list The following items similar to the bulleted list of operation effects on the Montlake Historic District describe operation effects on the Roanoke Park Historic District and on historic resources, both surveyed and unsurveyed in the Portage Bay neighborhood:

    - "Change to setting caused by wider Portage Bay Bridge"

    - "Change to setting caused by new bascule bridge"

    - "Change to setting caused by widened roadway" on East Roanoke Street

    - "Change to setting" by diminution of Bagley Viewpoint and vegetation removal for widening of the SR 520 roadway "resulting in some loss of landscaped buffer" for the Gates-Bass Mansion and historic houses along at least the 2600 block of 10th Avenue East and Broadway Avenue East and possibly more contributing and individually eligible historic residences in the south part of the district

    - Beneficial change to setting from introducing lid over I-5 at East Roanoke Street and over SR 520 between 10th Avenue East and Delmar Drive East—if the lids are constructed. The statement in the *SDEIS* that the Phased Implementation scenario, with its indefinite deferral of lids, is the most likely scenario throws the prospect of timely lid construction into doubt.

    - To be added: Adverse multiple and cumulative effects on setting from increased noise, air pollution, vibration, and nighttime traffic glare from a wider highway with more vehicle traffic, particularly from operation of the seven-lane Portage Bay Bridge.

- To be added: Adverse secondary, indirect, effects from perceptions of desirability and healthy livability from the direct effects and a consequent change to setting and feeling and characteristic use of the historic district and the historic resources in the Portage Bay neighborhood.

- These effects and others mentioned on pages 4 through 7 of these comments should be mitigated through stipulations outlined in a Memorandum of Agreement.

- 173–174 See the discussion of the 2005 *Visual Quality and Aesthetics Discipline Report* above for its perspective on the **high contrast changes** that even a four-lane or a six-lane alternative would lead to. The minimizing discussion and conclusions here are at the very least debatable, out of touch with the very real adverse effects of Option A's seven-lane-wide and higher Portage Bay Bridge with noise walls, moved farther north, on **views** from more of the historic resources than those along the east side of 10th Avenue East. Similar adverse effects would result from the wider and higher six-lane Portage Bay Bridge of Options K and L moved north. Correct the information in the passage here, and move the discussion into the following Option A, Option K, and Option L sections.

- The East Edgar Street, East Hamlin Street, and East Shelby Street hills continue to slope at the top of the Roanoke Park Historic District plateau from the east side of 10th Avenue East to the plateau's high point along Broadway Avenue East. Residents in the large houses at intersections of the Roanoke Park Historic District as far west as the west side of Broadway Avenue East enjoy views east variously including Portage Bay, the historic Fisheries Building, the historic Seattle Yacht Club and marinas, the historic Montlake Cut, the historic Montlake Bridge, Lake Washington, the lights of Bellevue and Kirkland, trees in the foothills, and the Cascade Mountains.

    - Houses from which these views may be enjoyed include most obviously the contributing and individually eligible Gates-Bass Mansion at 1018 East Roanoke Street (A and C, Elmer E. Green, 1909) and most of the houses along the east side of 10th Avenue East: the contributing Gifford House (1924) at 2612, the contributing Fish House (1922) at 2616, the contributing Bogue House (1923) at 2622, the contributing Bloxom House (1917) at 2632, the contributing Horner House (1925) at 2636, the contributing and individually eligible Beckwick-Thompson House (A and C,1910) at 2700, the contributing and individually eligible Parshall House (C, Thomas L. West, 1911) at 2706, the contributing and individually eligible Siegley House (C, 1909) at 2712, the contributing and individually eligible Cavanaugh House (C, E. H. Sanders, 1909) at 2722, the contributing Conly House (1916) at 2726, the contributing and individually eligible Mayer House (C, Hunt & Wheatley, 1924) at 2802, the contributing and individually eligible Spencer House (C, Ed Merritt,

1909) at 2808, the contributing Turner House (C, 1903) at 2812, the contributing and individually eligible Richardson House (A and C, Julian G. Everett, 1912) at 2816, the contributing and individually eligible Phillips-Hyde House (C, Huntington & Gould,1909) at 2822, the contributing and individually eligible Higgins House (A, 1909) at 2832, and the contributing and individually eligible Patten House (A and C, 1909) at 2836. All of these contributing and individually eligible resources would suffer degradation of their views and increased noise from the operation of Option A's seven-lane Portage Bay Bridge and second bascule bridge, not only from the sight of the massive Portage Bay Bridge, with its increased height and view-blocking noise walls, but also from the impairment by the second bascule bridge of views of the delicate span of the Carl F. Gould Montlake Bridge. (Note that the views east of the Booth and Dalley houses at the south end of the historic district are impeded by trees and other houses.)

- The four houses on the north side of East Shelby Street at its east end that enjoy these views are the contributing and individually eligible Prosser-Dowling House (A and C, Hunt & Jones, 1909) at 912, the contributing and individually eligible Slater House (C, 1910) at 920, the contributing and individually eligible Ross House (A and C, 1912) at 926, and the contributing Dart House (1909) at 1000. On the south side of East Shelby Street, the contributing and individually eligible Twelves House (A and C, Edwin J. Ivey, 1923) at 817, the contributing and individually eligible Denny House (A and C, 1910) at 2838 Broadway Avenue East, and the contributing Sutherland House (1908) at 2837 10th Avenue East also enjoy these views.

- On the north and south sides of East Hamlin Street, the contributing and individually eligible Sullivan-Walker House (A and C, 1899—the oldest house in the district) at 2736 Broadway Avenue East, the contributing and individually eligible Finley House (A and C, 1909) at 2731 10th Avenue East, the contributing and individually eligible Hunter House (A and C, Frederick A. Sexton, 1909) at 2801 Broadway Avenue East, the contributing and individually eligible Johanson House (A, and C, attributed to Cutter & Malmgren, 1909) at 2800 Broadway Avenue East, and the contributing and individually eligible Wentworth-Elliott House (A and C, Merritt, Hall & Merritt, 1910) at 918 East Hamlin Street enjoy these views east as well.

- As do the contributing and individually eligible Neterer House (A and C, Andrew Willatsen, 1915) at 2702 Broadway Avenue East and the contributing and individually eligible Saunders House (A and C, Frederick A. Sexton, 1908) at 2701 10th Avenue East. (Other houses along the west side of 10th Avenue East have partial views of Lake Washington and the Cascades from their high vantage points.)

- All of these historic resources in the Roanoke Park Historic District would suffer permanent damage to setting and feeling and characteristic single-family use from the visual blight, pollution, noise, and nighttime glare at various sites during operation of the project.

Operation, Option A

- 174 Option A, Historic Built Environment head Moving from west to east, discuss the permanent effects of Option A operation on the area between I-5 and Portage Bay, presently omitted. Discuss historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood including the unsurveyed historic resources on the north and south hillsides of Delmar Drive East that would be adversely affected by the permanent operation of Option A's seven-lane Portage Bay Bridge, higher and moved north, with sound walls, which adverse effects would include visual blight, noise, vibration, air pollution and consequent building exterior erosion and soiling, dusty windows, damage to landscaping from air pollution and vibration, nighttime glare, and the loss and damage of vegetation.

- Note that the east end of the Roanoke Park Historic District, including the contributing and individually eligible Gates-Bass Mansion and the contributing and individually eligible houses along 10th Avenue East would suffer permanent blocking of views south from noise walls on the north and south sides of the Portage Bay Bridge. (See the 2005 *Visual Quality and Aesthetics Discipline Report*.)

- Visitors to the new, much diminished Bagley Viewpoint would have their views permanently impeded by a ten-foot-high noise wall on the south side of the Viewpoint. (See the 2005 *Visual Quality and Aesthetics Discipline Report*.)

- Note that the 10th & Delmar lid will end at the current Bagley Viewpoint and that the historic resources in the Portage Bay neighborhood north of the new Portage Bay Bridge, including many as yet unsurveyed houses, would have no buffering from the visual blight, noise, air pollution and consequent building exterior erosion and soiling, damage to landscaping from air pollution and vibration, dusty windows, vibration, nighttime traffic glare, and the loss and damage of vegetation in operation of the seven-lane Portage Bay Bridge of Option A.

- In operation, degradation in Option A of the views for which the Roanoke Park Historic District is noted would have a permanent adverse effect on the Roanoke Park Historic District. Historic resources in the Portage Bay neighborhood, including unsurveyed historic resources on the hills along the north and south sides of Delmar Drive East, in the houseboat community, and along both sides of Fuhrman-Boyer Avenue East would suffer permanent adverse effects on views as well.

- 174, last para second and third sentences Says "The new Option A Portage Bay bridge would be seven lanes wide, with an overall width of at least 108 feet, which is 35 feet wider than the existing bridge." Check the present width of the Portage Bay Bridge (54 feet?) and check the projected width in Option A of the Portage Bay Bridge. The 2005 *Visual Quality and Aesthetics Discipline Report* says that the Portage Bay Bridge would be 50 feet wider than the present bridge in the Four-Lane Alternative. The new width of a seven-lane bridge would be much wider than the new width of the Four-Lane Alternative, and the seven-lane bridge would be more than the 35 feet wider than the existing bridge that the *Cultural Resources Discipline Report* claims here.

- The eventual operation of a massive seven-lane bridge with sound walls, a bridge that will be higher than the present bridge, shifted farther north, and more air polluting causing erosion and soiling of historic resources, would be a permanent adverse effect on contributing and individually eligible historic resources in the Roanoke Park Historic District and on individually eligible resources in the Portage Bay neighborhood.

- None of the contributing and individually eligible properties in the Roanoke Park Historic District are noted in Option A operation effects findings even though they will be adversely affected by the operation of the new Portage Bay Bridge, which in addition to being higher and more than twice as wide with noise walls will be moved to the north in front of more homes in the Roanoke Park Historic District—even though contributing historic resource status and individually eligible property status in the Montlake Historic District are routinely brought to bear on operation effects findings.

- In operation, the second bascule bridge would permanently detract from the delicate span of the Carl F. Gould Montlake Bridge visible from many contributing and individually eligible historic houses in the Roanoke Park Historic District. This view is prized by walkers through the district as well.

- Considering in toto these multiple operation effects and the multiple long-term demolition and construction effects of Option A on contributing and individually eligible resources discussed earlier in these comments one would conclude that the Roanoke Park Historic District would be adversely affected by changes to the setting and feeling of the district and its single-family characteristic use.

- Considering in toto the multiple effects from the operation and construction of Option A on individually eligible historic resources in the Portage Bay neighborhood, one would conclude that these eligible historic resources would be adversely affected by changes to their setting and feeling and changes from their characteristic single-family use. Note that individually eligible historic resources along both sides of Fuhrman-Boyer Avenue East including those in the houseboat community, among the bungalows along East Gwinn Street and historic resources and historic resources along the steep hillsides on the north and south sides of

Delmar Drive East have not been identified in the *Cultural Resources Discipline Report*'s survey of historic resources in the Portage Bay neighborhood.

Operation, Option K

- 181, second para Moving from west to east, discuss the effects of Option K operation on the area between I-5 and Portage Bay, presently omitted. Discuss historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood including the unsurveyed historic resources on the north and south hillsides of Delmar Drive East that would be adversely affected by the permanent operation of Option K's six-lane Portage Bay Bridge, which include visual blight, noise, vibration, air pollution and consequent building exterior erosion and soiling, damage to landscaping from air pollution and vibration, dusty windows, nighttime traffic glare, and vegetation removal and damage. Refer to the discussion above of the 2005 *Visual Quality and Aesthetics Discipline Report*'s findings with respect to adverse effects on views from even the old Four-Lane Alternative and from the wider old Six-Lane Alternative.

- At six-lanes, Option K's Portage Bay Bridge with no noise walls would not be as damaging in its operation effects on views as Option A's seven-lane Portage Bay Bridge with noise walls. See the earlier discussion of effects on views from Option A. Six lanes, higher and wider and moved farther north would still have a noticeable effect on views, however. Speak also to the noise reduction effects of the quieter pavement designed into Option K.

- 181, second para Note that the 10th & Delmar lid ends at the current Bagley Viewpoint and that with Option K's quieter pavement and lack of noise walls the historic resources in the Portage Bay neighborhood north and south of the new Portage Bay Bridge, including many as yet unsurveyed historic houses, might have only modest buffering from the noise and no buffering from the vibration, air pollution, eroding and soiling of buildings, dusty windows, and vegetation removal and damage of the six-lane Option K moved closer to these historic resources. The conclusion that the Portage Bay neighborhood historic resources mentioned in this passage would not suffer an adverse effect from the operation of the Portage Bay Bridge moved closer to these resources seems dubious.

- Option K's quieter pavement might mean that operation of the six-lane project would have the adverse effect of increased noise from buses and autos—moreso than in the operation of Option A, which includes sound walls. The effects of the two kinds of noise deterrents at bedroom levels need to be studied and included in the *Cultural Resources Discipline Report*. Unlivable historic resources would quickly deteriorate.

- The absence of noise walls and the narrower width of the Portage Bay Bridge would mean that the historic viewshed would be less damaged in Option K than in Option A (or Option L), but viewers of the roadway in the Roanoke Park Historic District and Portage Bay neighborhood would still experience a high contrast

between the new views and the present views and thus a cumulative adverse effect from the movement of a wider and higher Portage Bay Bridge farther to the north in Option K (and in Option A and Option L).

- Option K's double tunnel under the Montlake Cut would not have a permanent visual effect on historic resources in the Portage Bay basin. Note that construction of Sound Transit's deep-bore twin tunnel under the Montlake Cut is underway and that staging, excavation, hauling, and construction effects of this project will last until some time in 2016. Understanding that WSDOT will not mitigate this cumulative effect of the construction of the two projects "because it doesn't have jurisdiction over another agency," we do expect WSDOT to coordinate with Sound Transit over the effects of the two projects on historic resources in the Portage Bay basin.

- Option K's lower profile at most sites along the roadway with the exception of the six-lane Portage Bay Bridge, which even then would have a lower profile thanks to the absence of noise walls, would make it the least damaging option as far as views are concerned.

- The absence of noise walls and the use of quieter pavement, however, might have an adverse effect in the form of noise, vibration, air pollution, and nighttime traffic glare in operation of Option K.

- Taking the multiple construction and operation effects in toto, one concludes that even the least damaging Option K would have an adverse effect on these historic resources and require a Memorandum of Agreement.

Operation, Option L

- 185, second para Moving from west to east, discuss the permanent effects of Option L operation on the area between I-5 and Portage Bay, presently omitted. Discuss historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood including the individually eligible historic resources on the north and south hillsides of Delmar Drive East that would be adversely affected by the permanent operation of Option L's wider and higher Portage Bay Bridge with noise walls, moved farther north, which include visual blight, noise, vibration, air pollution and consequent building exterior erosion and soiling, dusty windows, damage to landscaping from air pollution and vibration, nighttime traffic glare, and vegetation removal and damage. Refer to the discussion above of the 2005 *Visual Quality and Aesthetics Discipline Report* for its perspective on the high contrast with present views that would be a result of even the Four-Lane Alternative and of Option L's Six-Lane Alternative moved farther north and with noise walls.

- Option L's six-lane Portage Bay Bridge with its noise walls would be almost as massive and almost as damaging in its operation effects as Option A's seven-lane

Portage Bay Bridge. See the earlier discussion of these effects with respect to Option A, and include them here.

- Note that the east end of the Roanoke Park Historic District, including the Gates-Bass Mansion, the contributing and individually eligible houses along 10th Avenue East, and contributing and individually eligible houses at some of the Roanoke Park Historic District's intersections would suffer view blocking 8-to-10-foot noise walls along the north and south sides of the Portage Bay Bridge.

- Option L's noise walls would have a permanent adverse effect on views from historic resources in the Portage Bay neighborhood as well.

- 186, first para See discussions of the views and which of many contributing and individually eligible resources in the Roanoke Park Historic District enjoy these views east earlier in these comments (pp 26–29), and change this statement that "only a small portion of the district has a view of, and would be visually affected by, the replacement bridge [the replacement Portage Bay Bridge]. In addition there is already a bridge there, so its replacement would not be a substantial change from existing conditions. Therefore the visual effect from the new bridge would not be an adverse effect on the Roanoke Park **H**istoric **D**istrict or its contributing elements." The movement north of the wider, higher bridge with noise walls would affect views from a substantial number of contributing (34 contributing resources, more than a third) and possibly individually eligible (a preliminary count of 26—almost half) resources in the Roanoke Park Historic District that currently enjoy the "expansive" views of "high vividness" that contribute to the setting and feeling as well as the single-family use of resources in the district.

- We object to the minimization of the number of contributing (and individually eligible) historic resources in the district whose desirability would be affected by permanent degradation of these views.

- We object again to the cavalier and oft-repeated conclusion that "there is already a bridge there, so its [wider, higher, with noise walls, moved farther north] replacement would not be a substantial change from existing conditions." See the 2005 *Visual Quality and Aesthetic Discipline Report*, which concluded that even a new four-lane or six-lane Portage Bay Bridge with noise walls would appear massive and produce a great alteration to the extent and the nature of views from all sites in the Portage Bay basin.

- Operation of Option L's second bascule bridge some distance east of the Montlake Bridge would be unlikely to have permanent adverse effects on views of the Montlake Bridge from the historic resources on the west side of the Portage Bay basin. Note, however, that construction of Sound Transit's deep-bore twin tunnel under the Montlake Cut is underway and that visible and audible staging,

excavation, hauling, and construction effects of this project would last until some time in 2016.

- Option L's elevated profile at most sites along the roadway would have permanent adverse effects on views from the Roanoke Park Historic District and historic resources in the Portage Bay neighborhood.

- 190, third para, last sentence The new floating portion of the floating bridge is said to be "slightly higher than the existing floating portion." With a maintenance deck resting on pontoons that rise ten feet out of the water topped by tall columns that are topped by the road deck which in turn is topped by noise walls, the floating bridge would be considerable higher than the current 8 to 10 feet above the water.

- 190, last para on Phased Implementation Scenario "As noted earlier, none of these effects [noise and visual effects] would differ substantially from the existing conditions, and none would be considered adverse" is a flawed a conclusion in this context—even moreso now because of lid construction deferral.

Mitigation, p 191

- 191, first para Refresh the reader's understanding of direct, indirect, collective or multiple, and cumulative effects here, and refresh the reader's understanding of the technical meanings of avoid, minimize, and mitigate.

- 191, second para Why the change from "must" to "may" in the second sentence of the passage "Agency officials must provide the public with information about the project and its effects on historic properties, and seek public comment and input. Agency officials **may** [used to say "must"] involve the public in accordance with the agency's published NEPA procedures for public involvement in order to comply with this aspect of Section 106." Which of these obligations and possible inclinations as described is purely discretionary, so much so that "may" rather than "must" is appropriate?

- 191, third para Is data recovery a minimization or a mitigation? Called a minimization here but a mitigation on p 192.

- 192, last para Data recovery called a "mitigation" here. These terms remain fuzzy and should have clear definitions with helpful examples and clear, precise use throughout the *Cultural Resources Discipline Report*.

- 192, third para "Compensatory mitigation" is used and seems to mean any measure that is not conventional data recovery, at least as far as archeological mitigation is concerned. Is compensatory mitigation open as a mitigation measure for cultural resources and historic resources of the built environment as well? (As on p 193, second bulleted item, in a section on avoiding or minimizing adverse effects on historic properties of the built environment: "Install landscaping or

landscaped buffers to compensate in those areas where buffer zones are being removed or reduced, and where new or relocated traffic lanes intrude on the character of a historic district or the settings of individual historic properties.") Early installation, during early parts of construction, of landscaped buffering needs to be negotiated in a Memorandum of Agreement.

- 193 second bulleted item Removing buffering vegetation should be delayed as long as possible. Replacing removed buffering vegetation should be an early priority, during construction.

- 194, first bulleted item Clean buildings (and vegetation) **periodically and as needed**, not just at the conclusion of the long, seven-and-a-half to eight-year project. Also note that operation of more vehicles on the SR 520 highway, on ramps, and exits closer to historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood and on arterials will permanently increase erosion and soiling from air pollution. What can WSDOT do about this adverse effect on historic buildings?

- 194 last bulleted item Say ". . . and avoid obscuring views of **and from** historic properties."

- 195, first para, first bulleted item See replacement this iteration of "positive change" for "beneficial effect" in "These measures have a positive change on the adjacent historic properties by reducing anticipated noise." Reducing anticipated noise is not a positive change. Reducing present noise would be a positive change. Given the increased size and number of lanes in all alternatives of the project and the lack of good data on noise walls collected at bedroom height and the lack of any information on the ability of quieter pavement to reduce noise coming from this expanded highway project, the statement doesn't have a sound (no pun) basis.

- 195 In the order established in the document of moving from west to east, speak first of mitigation in the area from I-5 to Portage Bay including North Capitol Hill, the Roanoke Park Historic District, and the Portage Bay neighborhood including the unsurveyed historic resources on the north and south hillsides of Delmar Drive East, in the houseboat community, and along both sides of Fuhrman-Boyer Avenue East. Then speak of mitigation for the Seattle Yacht Club, mitigation for the Montlake Historic District, etc., moving east. Note again that historic resources in the Portage Bay neighborhood's houseboat community, the potential historic bungalow district along East Gwinn Street from Harvard Avenue East to Fuhrman-Boyer Avenue East, and other historic resources on both sides of Fuhrman-Boyer Avenue East have not been surveyed and included in the APE. And note again that historic resources on the north and south hillsides of Delmar Drive East, which might or might not have been included in the APE, have not been surveyed.

- 195 first para, fourth bulleted item Lids are designed into the project and are not mitigation. Be sure that lids are described in the Introduction, which seems to be the only place where description of the project is taken up. Not much information on the options is provided there. A construction mitigation measure might include early completion and landscaping of lids to protect historic resources from the long seven-and-a-half-year to eight-year construction project.

A separate letter will follow, containing recommendations for measures to offset the multiple direct, indirect, and cumulative adverse effects that would be visited on historic resources in the Roanoke Park Historic District and the Portage Bay neighborhood by the construction and operation of the SR 520 Bridge Replacement and HOV project.

C-040-168

From: Fran Conley [mailto:fran@roanokecap.com]
Sent: Friday, April 16, 2010 4:01 PM
To: SR 520 Bridge SDEIS
Subject: Additional comment on SDEIS

I would like to add this to the comments of the Coalition for a Sustainable SR 520 on the SDEIS.

I understand that the deadline was yesterday, but this only became available today. Thank you.

Gov. Gregoire's statement on City of Seattle's comments on SR 520 replacement

For Immediate Release: April 15, 2010

OLYMPIA - Gov. Chris Gregoire issued the following statement today on the City of Seattle's recommendations on the State Route 520 bridge replacement project:

"Delaying 520 is not an option. The forty year old bridge is in danger of sinking in the next earthquake or windstorm and must be replaced. The new bridge will have four lanes plus two carpool and transit lanes to accommodate our region's current and future transportation needs. When a plan to bring light rail to both ends of the bridge is developed and funded, the new bridge, as designed, will be ready to accommodate it.

"I will not delay the selection of the preferred alternative. We will take all comments into consideration as long as they don't delay the project—doing so will cost millions of dollars.

"I thank the Mayor and all nine Seattle City Councilmembers for being engaged in the process. I particularly thank the council for their commitment to opening a new bridge on time in 2014."

C-040-169

Comments Upon the Health Impact Assessment for SR 520, dated September, 2008

Introduction:

"The Puget Sound region has a unique opportunity to build a transportation project that moves people throughout the region while helping to create healthy places to live, work, and play. State Route 520 (SR 520) was constructed in 1963 with little attention to the health problems associated with car emissions, neighborhood disruption, and degradation of the natural environment. Now the region has a chance to correct past oversights and approach the SR 520 Bridge Replacement and HOV Project in a way that embraces the region's commitment to providing a healthy community for all people."

***Response*: This HIA does not reflect these principles. Three general areas of health problems are described; car emissions, neighborhood disruption, and degradation of the natural environment. Of the three, car emissions are the most direct threat to the physical health of the community. The health effects of car emissions are ignored in this HIA.**

Who is the community of people affected by traffic control air pollution? A large section of the Puget Sound Community is adversely affected by traffic associated air pollution. While this discussion is currently focused on SR 520, the issues are relevant to all those who live, work, or attend school close to a high traffic volume road. Any road carrying more than 35, 000 vehicles per day should be considered high volume. The area, at risk for the adverse health effects of traffic associated air pollution extends out 300 meters from the center of each of those roads. Potentially 30% of the population of Puget Sound is at risk for adverse health effects. The exposure and risk of traffic associated air pollution is potentially greatest near the junction of two or more high volume roadways. SR 520 currently carries approximately 100,000 vehicles daily, I- 5 and I- 405, 200,000 vehicles per day.

This SR 520 HIA provides no specific evidence for a net reduction in traffic controlled air pollution over current levels. The SR 520 HIA provides no evidence that the vehicle volume will not continue to grow, particularly if added width is used to widen present single occupant vehicle capacity.

The SR 520 offers no plan to measure traffic associated air pollution in the areas most likely to be affected.

There are proven public policy measures that do reduce traffic associated air pollution. These measures are in general disincentives for the use of the single occupant, gasoline fueled vehicle. Measures which are of proven effectiveness include reduction in available lanes for the single occupant, gasoline fueled vehicle, high gasoline taxes, road and bridge tolls, and high urban parking rates.

There is no evidence that traffic associated air pollution is good for the health of the population or that the risk is insignificant. An increasing body of evidence suggests that traffic associated air pollution results in increased health problems and death. So what is the argument?

The argument is that the economic plight of this community is such that people must have access to their cars to travel to work even though the resultant air pollution will adversely affect the health of citizens in ways which include premature death. Is there no other way that people can reach their jobs?

Further, the argument is that the economic plight of Puget Sound is so great that we can ignore the effects of increasing CO_2 emissions upon global warming and the adverse effects upon the rest of the world.

Furthermore the argument is that opponents of the proposal are the sole cause of "analysis paralysis" in asking that the citizens of Puget Sound be provided with answers to relevant issues such as the impact of traffic associated air pollution on Puget Sound citizens.

And still further the argument is that there is a real threat the SR 520 bridge will fail.

The planners need to remain aware that the Coalition for a Sustainable SR 520 is not opposed to the construction of a new bridge using funds already allotted to that project for the replacement of the existing span. The Coalition favors the replacement of the central span with existing funds.

DEFINING HEALTH HAS CHANGED.

***Response*: While true that the definition of health has changed according to the WHO criteria cited (1946), at its core, health remains focused on the opportunity to develop physically and mentally to our full potential. Health is furthermore the right to live in an environment in which hazards of air and water pollution are recognized, acknowledged, measured and kept within safe limits through responsible public policy. In the case at hand this responsibility begins with the recognition of the risk of air pollution associated with the uncontrolled reliance upon the automobile to move goods and people throughout Puget Sound.**

" Seen in this broader context, the SR 520 Project can be designed to support alternatives to the automobile, to reduce emissions that cause pollution, to create community connections, to provide amenities that improve mental well-being, and to contribute to a visually stimulating environment. All these actions help enhance individual health and contribute to health communities."

Response: **The general goals outlined above give rise to the following questions:**

1. **What avenues were explored to find alternatives to the use of the automobile?**
    a. **What funding was requested for this purpose? What funding was provided? For what grants were applications made?**
    b. **What instructions were WSDOT planners given to explore alternatives to the automobile by senior managers or outside supervision?**

c. **Was Rapid Bus Transportation (RBT) along the lines of the Bogota', Colombia system considered? If so, who participated in the discussion and what were the conclusions?**
d. **Was light rail considered? If so who participated in the discussion and what were the conclusions?**
e. **More specifically what were the guidelines given to WSDOT regarding the balance between automobile and high occupancy public transportation and by whom?**
f. **Were health considerations of vehicle travelers and surrounding citizens considered in weighing the balance between single occupant vehicles and other forms of transportation? What data was considered regarding the potential adverse effects of traffic associated air pollution, on chronic respiratory illnesses, the development of asthma particularly in children, the development of heart disease, the development of cancer, the effects upon the development of children, the particular vulnerability of older people, and the risk to pregnancy. Who presented that data? Who sat in judgment of the data within WSDOT? Who evaluated that data in the preparation of this document SR 520 HIA? The SR HIA contains the names of highly respected experts in the field of Public Health. What is not clear is the role they played in the preparation or the approval of the SR 520 HIA document. It is not clear that the final document is a representation of the advice that they provided. Who ultimately is responsible for the content of this document?**
g. **In consideration of alternatives to the automobile what opinions were sought outside of WSDOT, from other State of Washington, King County, Bellevue or other Eastside Agencies? What national and international consultation was obtained to consider solutions to the SR 520 project that have been tried elsewhere?**

2. **What is the evidence that any of the SR 520 proposals will reduce traffic associated air pollution?**

a. **The document reflects a lack of understanding of the concept of "**to reduce emissions that cause pollution." **The only conjecture offered is that elimination of standing, idling traffic will reduce the emissions of a single vehicle. There is no consideration of the effect of SR 520 upon the emissions per person transported or per unit of goods transported or of the total effect upon emissions of building a highway with greater capacity and leaving the volume of traffic unregulated. Why does not the effect of SR 520 decisions upon climate change enter into the equation?**
b. **How can WSDOT and the authors of the HIA SR 520 provide assurances that the plan will reduce traffic associated air pollution without making provision for measurement of such emissions at intervals within the 300 meter zone expected to be affected (the HIA seems to prefer "emissions that cause pollution over traffic associated air pollution" for some reason)?**
c. **Please describe the location of instruments used to measure traffic associated air pollution to include distance from the center of the highway, the traffic volumes currently associated with those highways. Include the measurements taken, the frequency of those measurements, and the method of arriving at the levels reported (i.e. method of determining the mean or other value used.) Include the measurements taken?**
d. **Please describe how emissions will be monitored going forward.**
e. **Describe whether or not emissions are being measured at the junction of two or more high use roads (greater than 35,000 vehicles per day) . If not describe the reasons for not doing so.**
f. **Current evidence suggests that the health effects of traffic associated air-pollution are a function of the age and underlying state of health of citizens, of the vehicular volume on a given road, of the composition of vehicles (i.e. how many diesel propelled vehicles), HOV use, RPT use, and light rail use), distance from the center of the road, height of a person relative to the road, and local climate and geography relative to the road. Furthermore the**

duration of exposure through the day and over time may be important. Please describe whether the authors of the HIA have taken these factors into consideration and the conclusions reached.

g. What emission standards of traffic associated air pollution does WSDOT adhere to and did the authors of the SR 520 use as benchmarks?
h. Does SR 520 meet current EPA standards for traffic associated air pollution? Please cite the measurement levels and locations in responding to this question.
i. Does EPA specify where measurement of those standards should take place relative to the center of the roadway, what traffic volume roadway must be measured, and the conditions of measurement relative to peak volume etc?
j. Which roadways have required measurement of traffic associated air pollution in the Puget Sound area?
k. Who does the measurements required by the EPA?
l. Are there any specific types of epidemiologic data relative to the relationship between highway associated air pollution and illness with possible death that WSDOT or the preparers of the SR 520 reject from consideration as invalid? If so, please explain why?
m. Current published traffic associated air pollution data appears to be lacking in the SR 520 area, particularly gradients within the zone lying within 300 meters of the highway and at the confluence of two or more high volume highways. Is such data available? If not, describe the thinking on this matter? Is the apparent lack of data due to economic or other constraints? Please specify.
n. The authors of the SR 520 HIA did not include analysis of the various design proposals for the project at the time of publication. At this time those proposals are available and such an analysis seems mandatory? Are there plans to provide the public with such an analysis particularly in regard to the relative traffic associated air pollution that might be expected from each of the original three

proposals. Please include an analysis of any additional proposal that has been sent out to bid.

3. **What is the evidence that the SR 520 proposal will create community connections? The responses on this document are focused upon the direct, measureable effects upon physical and mental health. WSDOT and those responsible for the SR 520 HIA are referred to the responses of others for those comments. The concern here is that "community connections" may be offered here as substitutes for acknowledgement of direct health effects which are negotiable desirables and not mandatory features of the plan.**
4. **What is the evidence that the SR 520 proposals provide amenities that improve mental well-being? The response here is the same as to question 3 with the additional comment that noise is likely to have a direct adverse effect upon mental health which through physiologic responses may cause long term adverse affects upon physical health, particularly hypertension, cardiomyopathy, and coronary artery disease. Did the authors of the HIA proposal consider this data and if so what were their conclusions? What standards of noise measure does WSDOT and the author's of this SR 520 adhere to?**
5. **What is the evidence that the SR 520 proposals contribute to a visually stimulating environment? This area while important is not the focus of this document.**

Defining Transportation Has Changed:

"The four-county Puget Sound region will gain two million people in the next 50 years, and while roads cannot accommodate all of these people, a transportation system that moves people and not just cars will be better equipped to meet their needs. In addition, a shift in how people travel is already occurring because of the rising cost of gasoline, concerns about global climate change, and the increasing use of non-motorized transportation. These changes are occurring at the same time that 76 million baby boomers reach retirement age and telecommuting and other work alternatives become more common. National reports indicate that

American are driving fewer miles, consuming less oil and using transit more. This supports the need to redefine how to plan transportation systems."

Response: Here is a missed opportunity to consider the options for adopting transportation policies that effect climate change. Here is a missed opportunity to describe and consider the merits of various options.

It is stated that Puget Sound will grow by 2 million in the next 50 years. Other estimates have stated that the population of Puget Sound will grow by 30% by 2020.

What is the goal envisioned by planners: reducing the emissions associated with movement of individuals or goods per unit? From the global perspective a higher, more appropriate goal is to reduce the region's emissions absolutely. Current thought suggests that with the will, such a goal is attainable. Switching to non $C0_2$ producing energy sources requires that will in terms of acceptance of change and the necessary capital expenditures. Many jobs should arise from this change.

The SR 520 HIA refers generally to national data that people are driving fewer miles. While this is hopeful it is unclear whether this reflects the downturn of the economy or a willful switch to alternative travel and transportation. More interesting is the SR 520 data from 2006 through 2008 suggesting a small downturn in vehicular traffic. What does this represent: loss of jobs in the area, policies of large corporations such as Microsoft to encourage travel to and from work with alternative means of transportation instead of the single occupant vehicle, individual decisions resulting from SR 520 gridlock, or fear of SR 520 collapse? What has happened to bus ridership over the same period? What is known about the trends in people working by computer from home?

The authors note that current trends support the need to redefine how to plan a transportation system. Please describe how the information provided altered the current SR 520 Project planning process which is similar in concepts to the planning for the 1963 bridge designed primarily to meet the perceived needs of private vehicular traffic.

Please describe how the SR 520 HIA was used in the decision making process to choose the A+ option. Describe calculations estimating the medical morbidity and mortality associated with the A+ option as compared to other options. Describe the calculations used in estimating the effect of the A+ option upon traffic associated air pollution and particularly upon C02 emissions.

Reduction in C02 production and other traffic associated air pollution is brought about by educational processes and by applying disincentives to travel and transportation by gas powered vehicles. Please describe efforts by the State of Washington to educate the population about these issues. Please describe any efforts to measure the effects of such educational efforts. Please clarify the issue of how federal dollars are supplied for highway construction. Is the number of vehicular miles traveled within Washington (VMT) used in issuing federal dollars? If so does not source of funding represent a conflict of interest for WSDOT in planning for alternatives to automobile transportation? Please comment.

"In the August 2006 SR 520 Bridge Replacement and HOV Project – Draft Environmental Impact Statement, the Washington State Department of Transportation (WSDOT) proposed many excellent infrastructure elements (e.g. landscaped lids, pedestrian and bicycling connections, visual design elements, and transit facilities) that would reduced vehicle emissions, create opportunities for physical activity and reconnect communities. The SR 520 mediation process and alternatives being considered continue to include these elements. To embrace the opportunity for creating healthy places to live, work and play, it is critical that these elements be made integral to the project and not viewed solely as mitigation or expendable amenities. This report presents the findings of the health impact assessment report and recommendations that can be incorporated into the mediation process and impact plan. These elements along with other discussed in this report would contribute to creating healthy communities for generations to come."

Response: The above statement is deaf to the health consequences of traffic associated air pollution. As the financing of the SR 520 project is currently

inadequate it is unlikely that all of the above amenities will survive the budget process. In such a situation what are the plans to weigh the merits of each proposal? Please describe the economic analysis used in making the necessary choices. Is there economic consideration being made for traffic associated morbidity and mortality? What is the cost to State to care for additional cases of asthma, chronic lung disease, hypertension, heart attacks, additional cancers, and complications of pregnancy? What is the economic consideration of years of lost productivity to a family or the premature loss of life? What is the economic cost of paying for the consequences of continued dependence upon oil productions to move services and goods in the present manner?

THE REPORT: "The report explains how a transportation project can affect health and what measures can be taken to avoid unfavorable community health consequences."

RESPONSE: The report does not describe who is affected, how many are affected, nor discuss the data in such a way so as to allow Puget Sound citizens to know if they themselves are potentially affected or the affects of their driving habits on the health of others.

The measures that might mitigate community health consequences are not listed in such a way as to permit informed choices. The necessary background information is lacking.

"The goal for this report is to help the SR 520 Mediation Group, WSDOT, and the Washington Legislature evaluate the alternatives based upon their potential health impacts."

RESPONSE: How will this goal be reached? The extent of health impacts is not quantified in terms of pollutant level or of adverse health effects at present. There are no projections of traffic and pollution by adopting any of the alternatives. The SR 520 Group has been painted as obstructionist. Examples of responsiveness of WSDOT to SR 520 Mediation Group concerns are lacking. Where are health impacts discussed in quantitative terms?

"WSDOT, Sound Transit, and King County Depart of Transportation are the primary agencies responsible for implementing the recommendations, but other agencies and municipalities, such as the University of Washington and the City of Seattle are necessary partners."

RESPONSE: Please describe how these entities function together, in what forum and how decisions are made. How are differences in opinion resolved?

"Community participation in the SR 520 Project has been part of its long planning history and continues today with the mediation process."

RESPONSE: If there is a mediation process who is the mediator and what are his/her powers? Have the affected jurisdictions considered bringing in an outside mediator with national experience in planning such effects?

EXECUTIVE SUMMARY:

RESPONSE: The authors mention the impact of chronic disease on health in the 21st century. They would better serve the public interest in this document by restricting their comments to the impact of traffic associated air pollution upon citizens of Puget Sound.

"It is clear from research that public projects impact health."

RESPONSE: How are drivers and persons located near highways, (specifically SR 520) affected by present roads and the impact of the roads planned? Tell us the likely effects of mitigation outlined in the proposal. Tell us the relative benefits of mitigation relative to the encouragement and development of alternative means of travel. Tell us why proven measures to mitigate adverse health effects are not discussed.

WASHINGTON GOVERNOR AND LEGISLATRUE MANDATE HEALTH IMPACT ASSESSMENT:

In 2007, Governor Gregoire signed Senate Bill 6099, a legislative directive to develop a SR 520 interchange design and plan for the Westside of Lake Washington through mediation for a more reliable replacement of the existing SR 520 Bridge. The directive also asked Public Health – Seattle and King County and the Puget Sound Clean Air Agency to conduct a health impact assessment (HIA) of the SR 520 Bridge Replacement and HOV Project, focusing on air quality, greenhouse gas (GHG) emissions, and other public health issues, with final recommendation to be in corporate into the Mediation Group's Project Impact Plan. The HIA research and the following report indicate that choosing the right set of features for the SR 520 Project – regardless of which of the three plans under consideration is adopted – can contribute significantly to improving the health of people in communities adjacent to the corridor and the livability of their neighbors."

RESPONSE: The literature of health effects associated with traffic-associated air pollution raises issues not addressed in the HIA report. Goals are not set for limiting air pollution and greenhouse emissions. There is money available for the necessary replacement of the central SR 520 span. That should happen while discussion of the issues of connecting to East and West side highways in a manner that will protect the health and well-being of East and West side citizens continues.

WHAT IS A HEALTH IMPACT STATEMENT?

"A HIA is a tool to help decision-makers recognize the health consequences of the decisions they make and provide a healthier living environment. HIAs use a combination of procedures and methods by which a policy or project may be evaluated regarding its potential effects on the health of the population and the distribution of those effects within the population. A HIA is much like an Environmental Impact Statement, but it focuses on population health."

RESPONSE: Please describe the combination of procedures and methods by which the potential effects on the health of the population are described.

1. **What measurements were made of traffic-associated health pollution and the state of health of persons living, working, or going to school in the zone of potential effects on the East and West side.?**
2. **Describe the projected change in total greenhouse gases and traffic associated air-pollution over the projected live span of the SR 520 bridge.**

Historically it is unlikely that high occupancy vehicle lanes are converted to more dense, efficient traffic conduits. For example if an HOV lane is designated for 2 person occupancy and buses, it is unlikely that it will be converted to 3 person occupancy, bus only or light rail systems.

3. **Please compare the relative effect upon Greenhouse emissions and traffic associated air-pollution if added capacity were make available only to rapid bus transport or light rail from the beginning.**
4. **Please compare the relative effect upon Greenhouse emissions and traffic associated air-pollution if additional capacity were used for rapid bus transport or light rail versus used for 2 occupant HOV with mitigation by trees and some liding.**

"In the early steps of the SR 520 HIA, analysis identified nine health focus areas for research, including air quality, a water quality, green space, physical activity, noise, mental well-being, safety, social connections, and emergency medical services."

RESPONSE: This response focuses on air quality and related health effects. Where is the research to which reference is made in the above paragraph? Of the nine elements what are the most important areas to the HIA response committee?

RECOMMENDATIONS:

"The SR 520 bridge Replacement and HOV Project Draft Environmental Impact Statement published in August 2006 proposes many excellent elements that would contribute to a healthy community. These elements include pedestrian

and bicycling amenities, transit improvements, design improvements, landscaped lids and green spaces, and noise reduction strategies."

RESPONSE: Is reduction of traffic-associated air pollution on equal footing with bicycling amenities?

"No single action will solve our chronic disease challenges. Multiple actions are needed to create healthy communities. For this reason, it is critical that these elements are integral to the project and that they are supported, despite challenging budget times, for optimal health effects."

RESPONSE: Optimal health effects within the communities within the zone of influence of traffic associated air pollution are the result of recognition of the health effects of traffic-associated air pollution, good planning for the use of transportation corridors, individual health habits within the zone, and adequate health care delivery services. All are important. The factor most readily affected by the SR 520 project is the control of traffic associated air pollution. That should be the primary focus of this document. Sadly it is not.

TRANSIT, BICYCLING AND WALKING:

"1) Increase and improve transit service to meet increased demand, attract more riders, and reduce air pollution."

RESPONSE: The ideas presented in this HIA do nothing to curtail the inevitable increase in traffic-associated air pollution. Six landscaped lids are of unproven ability to control the traffic associated air pollution already existing along SR 520 and other high occupancies highways in Seattle. What chance to these lids have against the anticipated population rise in Puget Sound uncontrolled by policies designed to limit use of automobiles and provide rapid bus transport and light rail options?

The communities surrounding SR 520 should require four elements:

1. **measurement of current levels of air pollution in appropriate places using appropriate methods**
2. **Data proving the effectiveness of the lid designs proposed.**
3. **Assurances that traffic planning will limit traffic associated air pollution to the design limits of those lids.**
4. **Treatment of mitigation strategies as manditory**

Project Guiding Principles:

- Ensure health elements are integral to the project plan.

- Support all recommendation in difficult budget times for optimal health benefits.

RESPONSE: Lacking the four points above the Guiding Principles lack the reassurances necessary for support of the project by surrounding communities.

Health Impact Assessment Background:

"The SR 520 Replacement and HOV Project have the potential to affect the health of individuals and communities from the beginning of construction through its entire existence.

The SR 520 Health Impact Assessment (HIA) examines these effects from a human health perspective. An example is the effect that environmental pollutants have on human health, such as toxic air emissions' link with cancer. This is a different focus than examining and mitigating environmental impacts."

RESPONSE: The SR 520 HIA here acknowledges potential effects of toxic air emissions (referred to in this response as traffic associated air pollution). However the HIA never examines this potential.

GOAL OF SR 520 HEALTH IMPACT ASSESSMENT:

"The goal of the SR 520 HIA is to protect public health by raising the awareness of the Mediation Group and other decision makers about the relationship between health and transportation systems. This will help ensure health consequences are considered in their decision-making process for the development of an environment that supports health people and communities.

RESPONSE: As stated in other responses

1. **The SR 520 HIA fails to present data relating health and transportation systems.**
2. **Adequate measurements of traffic associated air pollution are not presented and raise questions as to whether they are available.**
3. **No data is presented regarding the health of communities likely to be affected by SR 520 or any heavily used highway in the region.**
4. **There is no significant review and criticism of the literature pertaining to health and transportation raising the question as to whether authors are familiar with the data available accumulating over a number of years.**

"This section of the report outlines the HIA procedures and health focus areas investigated, then moves on to the recommendations that A Puget Sound Clear Air Agency and Public Health – Seattle & King County put forth to the Medication Group for Review."

RESPONSE: Restricting the focus to health and transportations systems please respond to the following questions:

For Puget Sound Clean Air Agency:

1. **Describe current practices for measurements of particle air pollution within 300 meters of highways carrying more than 35,000 vehicles daily. Specifically describe the methods of measurement within that zone as to distance from the center of the highway, what particles are measured, and in what form the data is summarized over periods of time.**
2. **Describe current practices for measurements of volatile compounds within 300 meters of highways carrying more than 35, 000 vehicles daily.**
3. **Please describe the results of these measurements of a period of time when the traffic volume has been growing.**
4. **Please make special note of population areas at the confluence of large traffic systems such as SR 520 and I 405 and SR 520 and I 5.**
5. **Please describe who is making such measurements and where such data is available for public inspection.**

For Public Health – Seattle and King County

1. **Describe any data available on the health of individuals living, working, or attending school within 300 meters of any highway carrying greater than 35,000 vehicles per day within the Puget Sound region.**
2. **Is any such data available for the SR 520 corridor on the East or Westside of the bridge?**
3. **Specifically describe data or plans to acquire data at the confluence of highways carrying more than 35,000 vehicles daily.**
4. **Please provide references to literature covering the questions cited above.**
5. **Is the data requested provided in unpublished data and available for review?**
6. **If no data is available on the health of individuals living, working, or attending school within 300 meters of any highway carrying greater than 35, 000 vehicles per day, what literature from other cities was used to evaluate the health effects of traffic associated air pollution in developing the HIA statement?**
7. **Specifically please relate the opinions reached as to the relevance and quality of the literature suggesting an association between traffic associated air-pollution and asthma, retarded lung development of lung capacity in young children, complications of pregnancy, higher incidence of hypertension, higher incidence of Cardiomyopathy, higher incidence of myocardial infarction, and an increased risk of developing various kinds of cancer.**

DEFINING HEALTH:

"The long-term goal of Public Health – Seattle and King County and Puget Sound Clean Air Agency is for the SR 520 corridor design to support health people and health, sustainable communities. "

RESPONSE: This section is so general as to be meaningless. The highest priority of the SR 520 plan must be to protect the health of citizens who live, work, and go to school within the range of 300 meters. The population of all those who live within 300 meters of all highways with large vehicle volumes (>35,000) need to be reassured that environmental conditions resulting from traffic associated air pollution are not going to give put them at risk for a serious health condition affecting the heart, lungs, their pregnancies, nor put them at risk for a variety of cancers. No amount of walking, bicycling, or other individual lifestyle choices can be expected to overcome the effects of traffic associated air pollution.

THE HEALTH IMPACT ASSESSMENT MANDATE:

"Senate Bill 6099, passed by the Legislature and signed by Governor Gregoire in 2007, directed the Office of Financial Management to hire a mediator to work with interested parties directly affected by the SR 520 Bridge Replacement and HOV Project (SR 520) to develop a SR 520 interchange design and plan for the Westside of Lake Washington. This plan (due December 2008) is to address the effects of the project on Seattle neighborhoods and parks, including the Washington Park Arboretum, and institutions of higher education. The bill also directed Public Health – Seattle & King County and the Puget Sound Clean Air Agency to conduct a HIA of the SR 520's effects on air quality, green-house gases (GHG), and other public health issues, with recommendations to be incorporated into the mediation project impact plan. "

RESPONSE: The HIA of SR 520 does not describe the effect of present or future traffic effects upon air quality. The HIA of SR 520 does not address the health hazards of the existing SR 520 bridge nor does it outline a method by which future impacts may be measured. Mitigation of traffic associated air pollution is not quantified nor guaranteed in the present Westside proposal for the Westside of Lake Washington.

WHAT IS A HEALTH IMPACT ASSESSMENT?

"HIA is a combination of procedures and methods by which a policy or project may be judged as to its potential effects on the health of the population, and the distribution of those effects within the population. It is a tool to help decision-makers recognize the health consequences of the decisions they make so they can contribute to a healthier living environment. HIAs have been used widely internationally , in places such as Europe, Canada, and Australia. HIA methodology is still evolving in the United States. Because the nature of the action being

analyzed influences the HIA, detail in these assessments can vary from a simple checklist to a more extensive review of research and other relevant information. HIA strives to anticipate potential consequences for decision –makers and to deliver a set of recommendations intended to minimize and maximize health benefits. "

RESPONSE: The issue is not what an HIA ought to be but rather the data showing the present state of health of those affected by the present SR 520 and how plans for a new HR 520 are likely to affect green house admissions and the health of the surrounding communities. "A simple checklist" is not an adequate response under circumstances where the health and lives of citizens are at stake.

HEALTH IMPACT ASSESSMENT PROJECT AREA DESCRIPTION:

"The HIA focused on the project design mandated by the Legislature in which the SR 520 will be a 4 + 2 configuration – six lanes, with two general-purpose lanes and one carpool lane in each direction. The bridge will be designed to withstand major earthquakes and windstorms up to 95 mph. The new SR 520 will have increased transit serviced that will make bus trips more frequent and reliable. It is also planned to have a bridge pathway for walking or bicycling across the lake, shoulder lanes to keep traffic flowing in the event of stalled vehicles, and new interchanges to reduce traffic impact on communities near the corridor. "

RESPONSE: Simply stated, the health of the surrounding communities is not taken into consideration. Effects on global warming are not considered.

THE WORK OF THE SR 520 MEDIATION GROUP

"The 33-member Mediation Group representing parties interested in the SR 520 Project began meeting in September 2007. Since that time, it has developed three design alternatives specific to the Westside – known as A, K, and L – for further evaluation in the SDEIS"

"The three alternatives are similar in many ways, except for how the Westside interchange is designed and the consequent cost of construction. The health impact differences are difficult to estimate until the specific designs are developed. For these reasons SR 520 review focused on a broad view of the SR 520 Project's design features (including the alternatives' common elements" as indicated in the Senate Bill 6099. The specific design decisions have have important implications for individual and community health."

RESPONSE: A broad view of the SR 520 HIA Project's design features does not meet the need of citizens to be informed about the health risk of present and future SR 520 traffic-associated air pollution. The HIA is its present form is not responsive to the needs of citizens and those making decisions about the project.

THE RESEARCH STEPS

1) "SCOPING: to identify health focus areas to be researched in the analysis: Through a review of previous HIA reports, the SR 520 DE"IS", and public and Mediation Group comments, the SR 520 HIA team selected the following nine health focus areas to review air quality, water quality, green space, physical activity, noise, mental well-being, safety, social connections, and emergency medical services. "
2) "ASSESSMENT of how population health could be affected by the transportation project: As the HIA progressed, literature and report reviews and discussions with stakeholders were summarized in background papers for the nine health focus areas. A greenhouse gas analysis was also completed. These reports demonstrated that the initial focus areas were highly interrelated and connected. "
   RESPONSE: the literature reviews are superficial, failing to summarize what is known about the health of those located near SR 520, failing to point out the deficiencies in that data assessing both the health and the traffic associated air pollution, failing to document the effect of increased single vehicle traffic in the SR 520 corridor, and failing to provide best estimates of the possible positive effects of utilizing extra lane capacity for Rapid Bus Transport or Light Rail.
3) "RECOMMENDATIONS: Development to identify project features that benefit population health: The recommendations were organized into the following critical health elements: Construction Period; Transit, Bicycling and Walking: Landscaped lids and Green Spaces; and Design Features: Specific recommendation were then developed within each of these categories. "
   RESPONSE: Project features benefiting project health are submitted with no data indicating effectiveness. Features which might effectively benefit health such as rapid bus transport or light rail or features designed to curtail single occupant vehicle transport are ignored.
4) "REPORTING: of the assessment findings and recommendations to the Mediation Group and other decision makers through this report

"The general premises used when review the areas were:

AIR QUALITY – Clean, health air is important for public health, quality of life, and climate protection.

RESPONSE: Why is this comment made when so much useful data for the public is lacking?

Health Impact Assessment Recommendations

Transit, Bicycling, and Walking

Introduction

"Increasing and improving transit service and providing bicycling and walking facilities in the corridor will provide multiple health benefits by reducing greenhouse emissions and other air pollutants through the use of alternative to single-occupant vehicles, increase opportunities for physical activity, and improved social connections."

RESPONSE: Please respond to the following questions?

1. **Project the total green house admissions 5 years after completion of the SR 520 project using the plan proposed as compared to the present greenhouse admissions, and as compared to the greenhouse admission of SR 520 using the HOV lanes for Rapid Bus Transport or Light Rail.**
2. **Describe an example from anywhere in the United States where a similar project with four lanes of uncontrolled traffic and 2 lanes for HOV occupancy was later converted changed from HOV occupancy to Rapid Bus Transport or Light rail.**
3. **Compare the effect upon total traffic associated air pollution and greenhouse gas admission between building biking and walking facilities and using addition bridge capacity exclusively for Rapid Bus Transport or Light Rail.**

AUTOMOBILES, TRANSIT, BICYCLING AND WALKING AND AIR QUALITY

The concepts introduced in this HIA make no effort to estimate the net effect on pollution and carbon dioxide production in each of the alternative plans and furthermore in some of the even larger solutions sent out to bid. It is fine to assert that Americans are driving less but there is no connection between that assertion and current A+ version of SR 520. It is disingenuous to assert that there is a connection.

The authors pride themselves on the ". . . proposed many excellent infrastructure elements (e.g. landscaped lids, pedestrian and bicycling connections, visual design

elements, and transit facilities, that would reduce vehicle emissions, create opportunities for physical activity and reconnect communities." There is no reality to these statements. There are no measures to control use of gas consuming vehicles, no priority to alternatives to gas-powered vehicles and in particular no priority to the development of light-rail. Many of the so-called infrastructure elements are already under siege by cost cutting initiatives which will to downgrade the importance of protection the health of the surround affected population. The report states that "… it is critical that these elements be made integral to the project and not be viewed solely as mitigation or expendable amenities." This is a promise already reneged upon.

The Report: "The report does not recommend one alternative over another since it is difficult to differentiate among the alternatives until the specific designs are developed." Specific designs have now been developed and even larger proposals put out to bid. No comparison between alternatives in terms of health protection for those living near SR520. That analysis is past due.

"The goal for this report is to help the SR 520 Mediation Group, WSDOT, and the Washington Legislature." The role of the SR Mediation Group has been undermined by the recent statements of the governor pressing for cessation of the mediation process and negating the stated goal of the report. Please cite any available examples where WSDOT has responded with proposals incorporating concepts introduced by the legislature or the SR 520 Mediation Group in their planning process.

How is it that when "This HIA is the latest in a series of coordination, collaboration, and partnership efforts to successfully complete the SR 520 Project. The measures recommended will require continued coordination, collaboration, and partnerships." If there is in fact such coordination why is there no effective connection between the University Washington light rail station and mass transportation systems across SR 520? Community participation in the SR 520 project has been effectively proscribed by the recent statements of the governor.

"It is clear from research that public projects impact health." Yes, it is clear that the current form of SR 520, an open invitation to more traffic and air pollution will affect health, negatively.

What is a Health Impact Assessment?

"A HIA is a tool to help decision-makers recognize the health consequences of the decisions they make and provide a healthier living environment." How is this HIA which fails to compare alternatives, fails to make mitigation a requirement, and fails to prioritize mass transit is carrying out its mission.

EXECUTIVE SUMMARY:

Paragraph one is redundant

Washington Governor and Legislature Mandate Health Impact Assessment: Senate Bill 6099 mandated the preparation of an HIA. It did not mandate that its spirit would be carried through to the end of the process. At this point it is an empty promise.

How can the HIA focus on air quality and greenhouse emissions without presenting any data regarding present air quality and green house emissions or projections about the effects of each of the three alternatives upon future changes? No relevant measurements have been presented from the impacted areas particularly in areas affected by the junction of two large highway systems on both sides of Lake Washington.

What is a Health Impact Assessment? Between 10 and 30% of the population of greater Puget Sound areas are potentially impacted in terms of their health by traffic associated air pollution. These citizens have a right to expect that an HIA will help them to make an intelligent choice between alternative proposals and between choosing to ride in their automobile or on one of several mass transportation systems. This report does not provide this information.

Recommendations: "The SR 520 Bridge Replacement and HOV Project Draft Environment Impact Statement published in August 2006 propose many excellent elements that would contribute to a healthy community. These elements include

pedestrian and bicycling amenities, transit improvements, design improvements, landscaped lids and green spaces, and noise reduction strategies." I doubt that anyone living within the shadow of any highway in Puget Sound would trade a significant reduction of air-traffic associated pollutants for the uncertain benefits of the amenities mentioned above. There is no reason why all the mentioned elements should not be included in the proposal as necessities.

Health Impact Assessment for HR 520, written in September, 2008 acknowledged a broad list of potential impacts on the health of the affected communities.

While acknowledging the potential impact of highways about the quality of life in a city, the reports fails to consider specific health issues:

1. The direct effects of highway traffic associated air pollution upon the health of citizens who live, work, and attend school in the vicinity of highways. Specific entities for investigation include chronic diseases such as asthma, chronic lung disease, heart disease, pregnancy complications and cancer.
2. The potential reduction of exposure to traffic pollutants possible by substituting non-automobile means of transportation the transport of goods.
3. The potential difference in traffic associated air pollution associated with each of the proposed design solutions to SR 520, for example 6 lanes of automotive traffic as opposed to 4 lanes of traffic with two lanes of high occupancy vehicles as opposed to two lanes of traffic and 4 lanes of high occupancy vehicles as utilized in Bogota, Colombia.
4. The potential effects of processes such as lid ding upon the exposure of citizens to air traffic pollutants.

The report does not acknowledge that the health risks of highways in an urban environment are related to distance of an individual from that highway, local weather and geographical patterns, and the length of time exposure.

The report does not acknowledge recent research that implicates traffic associated air pollution in a higher incidence of asthma, a higher incidence of coronary artery disease, and a higher incidence of cancer.

The report does not acknowledge that there are specific age-groups that are likely more vulnerable to the effects of traffic associated air-pollution.

Specific Recommendations Regarding the Assessment of the Health Impact of SR 520 at this time.

1. Place a specific cap on the number of car - miles that will be accommodated upon Seattle highways, roads and bridges.
2. Plan for alternative means of transportation for the anticipated growth in population.
3. Assign a dollar value for the morbidity and death of individuals so that the mortality and morbidity associated with automobile accidents and air pollution might be more rationally weighed against the initial costs of highway and SR 520 design features which mitigate accidents and traffic associated air-pollution.
4. Ask a group of Public Health scientists to evaluate the current state of research regards the effects of traffic associated air pollution upon lung development, asthma, hypertension, coronary artery disease, childhood and adult cancers.

5. Ask a group of Public Health scientists to recommend future research and public policy initiatives needed to reduce the effects of air traffic pollution.

6. Ask a group of Public Health scientists to define acceptable levels of traffic associated air pollution?

The concern for the health impact of highways and bridges runs into the desire for preserve personal freedom and choice, the desire to relieve the economic stresses upon the community, the influence of various lobbying groups upon the

decision of public officials, and a variety of opinions regarding how to deal with transportation problems. For exactly these realities, placement of an economic value for traffic associated mortality and morbidity would allow more rational consideration of the various choices. For example how much of the health care costs of traffic accidents and traffic associated medical illness is paid for out of public funds? Use of public funds for the construction of car-based transportation systems results in a public subsidy to the individual who insists upon traveling alone or with a small group of people often for long distances while producing pollutants that adversely affect the health of all of us.

APPENDIX A: Project Area Demographic and Health Information

Demographics: "The SR 520 study area tends to have less diversity in race/ethnicity, a high proportion of whites, and a higher income as compared to King County. Fewer children and more young adults reside in this area. This can influence the health conditions in the area." The reality of this characterization is acknowledged. The disregard of health implications of the SR 520 project take on greater importance when one considers how many people live within 300 meters of traffic with even larger numbers of and greater percentages of diesel powered vehicles. The concerns of these comments are for the estimated 30 percent of metropolitan Seattle residents who live within 300 meters of high volume polluting roads. The issues listed here are advanced on behalf of all of these effected citizens.

HEALTH INDICATORS: While the statements listed in this section are true, they are advanced in place of the more cogent discussion of the effects of traffic induced air-pollution upon those citizens who live and work and attend school within 300 meters of busy highways and roads. Whether citizens have sedentary jobs or not the point of concern is whether they are being showered by particles and volatile chemicals being showered upon them 24 hours per day for purposes and values which have not been justified.

I do not feel that questions as to whether neighbors are trustworthy are relevant to the issues under discussion.

That life expectancy of the SR 520 area is slightly higher than the rest of King County is not reassuring unless such a statement is adjusted for traffic volume, distance from that traffic, degree of pollution, exposure and duration of exposure. The authors have not taken advantage of much more sophisticated types of analysis that are available. Such states reflect the lack of active participation by serious scientists interested in the study of traffic associated air-pollution and consideration of their findings.

The statements that "Heart disease, diabetes, and asthma are health conditions in which changes in the built environment can impact through encouraging increase physical activity. Residents of the study area are less likely to be hospitalized or to die from heart disease or diabetes as compared to King County." The first state is true but unrelated to the discussion of the dangers of traffic associated air pollution. The second statement displays ignorance of the epidemiologic methods required to understand the dangers of traffic associated air pollution and the need to control for the many of factors that affect heart disease and diabetes.

The fact that rates of childhood asthma hospitalization in higher in the study are than in King County is particularly disturbing since other factors of the SR 520 would lead one to expect a lower rate.

I am curious as to who the authors of this particular section of the HIA SR 520 are who would associate themselves with the quality of data and argument submitted in this section.

APPENDIX B: Air Quality Issue Paper

Comments on page 45 of Appendix B summarize known effects of Traffic-associated air pollution. Will the authors of the HIA please discussion in detail how they have incorporated these concern in assurances to the population of Seattle as to have these risks are to be measured, reduced, and mitigated in a guaranteed manner by offering alternatives to increased vehicle volume and the development of alternative means of transportation.

On page 46, the authors allude to the effects of mitigation on traffic-induced air pollution through construction of lids and the planting of urban trees. Will the authors please discuss the relative benefits of planting trees versus the reduction of vehicular traffic and the track records of trees and lids in such endeavors and the means by which the State intends to monitor pollution effects in areas most likely to be effected, that is near to the high volume highways, specifically at the junctions between several busy highways.

"Design alternatives that create walk able environments and locate the light rail station and the transfer centers near each other are likely to produce more transit ridership, less single-occupancy vehicle use, and fewer mobile-source air pollutants. " Will the authors please describe how the location of the Montlake transfer centers and the light-rail station at the University of Washington Stadium are examples of the planning principles outlined in the above statement.

TYPICAL EMISSIONS DURING CONSTRUCTION INCLUDE:

All of the potential mediating steps listed in this section are strongly negated by announced plans to drive large diesel trucks up the steep hills of the Roanoke neighborhood day and night during the planned closure of Del Mar Way. What are the plans to measure noise and pollutants along this intended route during the periods of construction." "Covering dirt, debris, and gravel piles to reduce dust" is not reassuring and is testimony to the superficiality of the HIA assessment.

The public affected by the construction of SR 520 is more likely to be reassured by good planning for alternative transportation, measurement of pollution based upon sound scientific principals than by promises to make best efforts to reduce pollution during construction. These most effective reassurances are lacking. If economic considerations are threatening to deprive us of light-rail, highway lids and other effective mitigation, how is the public to be assured that money will be available to use ". . .all new diesel equipment and vehicles or installing emission reduction equipment on existing diesel vehicles and equipment."

The land side haul routes will occur on approximately a dozen streets in both commercial and residential areas and average 2-5 trips per hour with increase to 3-12 trips per hour during periods of peak activity. As written this sounds like a particularly heavy impact on those areas affected particularly the residential areas. What times of day are anticipated? What relief from the noise, disruptions, and exposure to air-pollutants is offered to those affected? – compensation to obtain alternate housing to those who reside with 300 meters of the affected areas?

The first paragraph of page 48 is typical of the document in the acknowledgment of known facts without related them to the proposed project or specifying data which assures to population effected that these effects are being adequately mitigated.

"The project will reduce emissions compared to not building it because it will reduced future travel times for buses, carpools, and single-occupant vehicles" This italicized stated is my favorite of the entire document. It is totally devoid of supporting facts or projections of likely traffic and emissions data likely to result in pouring 3 or more lanes of traffic each way east and west into traffic corridors already jammed beyond capacity and moving at well below planned traffic speeds. The statement does not enter into consideration of the effect of providing more single vehicle capacity on the subsequent growth of single vessel travel. WSDOT is requested to provide data supporting the above statement.

"The project will be able to reduce emissions compared to not building it because more people will be traveling in buses and carpools." WSDOT is requested to provide support for this statement. This statement is likely to be true only if the number of travelers stays the same and shift from cars to buses and carpools. Present plans for SR 520 do not guarantee better access to buses and carpools and are likely to encourage more traffic as a whole. Logically a net benefit would accrue is capacity for single person vehicle traffic remained constant, and plans for increase travel were limited to carpools, buses and light rail. Again where is the data analyzing the relative effect upon air pollution and global warming associated with each of these modes of traffic.

If tolls and congestion are the tools to encourage migration for single vehicle travel, why are not those steps being taken at the present time?

SUMMARY: "Because air pollution produces some of the most significant adverse health effects associated with major transportation projects, it is essential that air quality be a central focus of the SR 520 Project"

This highly principled phrase is without meaning in the context of the plans presented. Even the plans presented for mitigation of air pollution are already considered negotiable to reduce costs. The assertions that new construction will reduce pollution are without support. There is no recognition that the dangers to the health of metropolitan citizens are already adversely affected both in the SR 520 corridor but likely to an even greater degree in other neighborhoods lying beside high occupancy highways. There are no plans to measure pollutants in areas likely affected at the present time with existing roads. There is no balance of the proven morbidity and mortality of traffic associated pollution and effects upon global warming against the reputed economic value of greater vehicle traffic density in the Puget Sound Region.

The references provided with the SR HIA statement are grossly lacking in their lack of references relative to the health consequences of air traffic pollution.

Appendix A Cut from Defining Health Has Changed.

THE END

The authors of the HIA are invited to cite examples where they have ". . . supported and prioritized alternatives to the automobile." Light rail is not a priority for the latest plan. Where have plans been instituted such that ". . .

emissions that cause pollution" will be reduced. When subsequently citing that more rapid movement of traffic will reduce pollution, please cite evidence that widening of SR520 will speed entry into I-5 at the terminus of 520 or that widening of SR 520 will not simply entice more private vehicles onto SR 520. There is less traffic on SR 520 over the last three years from 2006 to 2008. Where is the courage to introduce further measures that will reduce emissions and improve health: a higher tax on gasoline, immediate introduction of bridge tolls, and higher parking fees in our metropolitan areas? Where is the will to use added capacity on SR 520 to allot lanes to the most efficient and least polluting means of transportation with the following priorities: Light rail> rapid bus transportation> multi-occupant vehicles of other kinds, electric and hybrid cars, and lastly gasoline combustion vehicles?

Bellevue CHAMBER OF COMMERCE THE VOICE OF BUSINESS

April 15, 2010

Paula Hammond
Secretary
Washington State Department of Transportation
SR 520 Bridge Replacement and HOV Program
Plaza 600 Building
600 Stewart Street, Suite 520
Seattle, WA 98101

Dear Secretary Hammond:

C-041-001

As the Voice of Business in Bellevue, the Bellevue Chamber of Commerce represents a diverse collection of business interests. Its membership ranges from sole proprietors to large corporations. The Chamber endeavors to promote economic growth through an integrated transportation network that can efficiently move people throughout the Puget Sound Region.

The State Route 520 corridor is vital to connecting people and jobs. However, the current capacity and safety of the bridge are no longer acceptable. It is critical for the entire region that this corridor be replaced as quickly as possible to allow for the continued economic growth and safety of the people who drive this route. This letter builds on the comments previously submitted by the Bellevue Chamber of Commerce to the Washington State Department of Transportation (WSDOT) to highlight our priorities with this project.

The Chamber appreciates the work completed by the Legislature during the recent session to begin Eastside implementation of SR 520. By allowing work to start on the Eastside now, the project stands a greater chance of finishing on time and on budget. This will ultimately allow people and commerce to more quickly move along this route that currently accommodates more than 115,000 trips daily.

We continue to support a new six-lane replacement bridge built with the structural support to accommodate future lane additions and are encouraged by the progress made towards this. The Chamber urges WSDOT to continue to move forward with the current design option to accomplish this goal.

C-041-002 Bus Rapid Transit (BRT) is an important component to congestion relief and we believe it is important to begin a BRT system as soon as possible after the project has been completed. A BRT system operating on HOV lanes on SR 520 would serve and connect the two biggest job centers in Washington State while providing commuters with a reliable transit option.

C-041-003 The Chamber believes the new structure must contain a continuous bike and pedestrian path. The current gap at 108th Ave NE is a critical missing link for both commuting and recreational users. We urge WSDOT to look for the most efficient ways to address this situation now rather than waiting to address this in the future when costs are likely to be higher.

C-041-004 Thank you for your consideration of these comments. We know what a long and contentious process this has been. However, we greatly appreciate the recent action to move forward. It is important to get this project right and the recent steps taken by the Legislature to begin early Eastside implementation as well as authorizing variable tolling are encouraging. We urge you to continue to advance on this project and complete it on the current timeline. Doing so will have significant benefits for our state's continued economic vitality.

Sincerely,

Betty Nokes
President & CEO

Greg Krape
Chairman

Erin O'Connor
2612 10th Ave E
Seattle, WA 98102
March 18, 2009

Ms. Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart Street, Suite 520
Seattle, WA 98101

Comments on Chapter 7: Indirect and Cumulative Effects

C-042-001 "Chapter 7: Indirect and Cumulative Effects," ranges far and wide to put effects of the SR 520 project in a regional, and statewide context and thus ignores indirect and cumulative effects on communities and resources in the local SR 520 bridge area.

Its suggested indirect and cumulative effects mitigation strategies involve other agencies and regional governments down to the community level, but not WSDOT.

Ch 7, p 7-2 "A cumulative effect is the project's direct and indirect effects on a particular resource combined with the past, present, and future effects of other human activities on that same resource. The result is the expected future condition of the resource when all of the external factors known or likely to affect it are taken into account." This does not suggest that the resource must be assessed on a region-wide basis, on p 7-5 said to be "the central Puget Sound Region, which includes portions of King, Kitsap, Pierce, and Snohomish counties."

C-042-002 Similarly, the time frame for most resources is said on p. 7-8 to be the mid-nineteenth century to the present or, elsewhere, some time in the future as distant as 2040. Acceleration of effects in recent years is noted so that additional effects of the project can be portrayed as just part of a trend.

C-042-003 Ch 7, p 7-2 Considering unintended indirect and cumulative consequences of the proposed action "in context with other development and transportation improvement projects planned throughout a region" does not mean that the context must be a geographically large region. All effects in the immediate region of a project would be dwarfed if they were placed in the context of a large region, and there would be no findings of adverse effects from the project. I would be very surprised to find that this deceptive refusal to address local and shorter-term, although otherwise long-term, effects was intended in the definitions of indirect and cumulative effects, and this interpretation of the definitions needs to be either adjusted or challenged.

C-042-004 p 14 "Because of these funding limitations, there is a strong possibility that WSDOT would construct the project in phases over time . . . lids would be deferred until a subsequent phase."

C-042-004

No other projection of timing for lid construction is offered, and effects findings throughout the report depend on lidded circumstances. The indirect and cumulative effects on these resources with lids indefinitely deferred need to be addressed.

p. 77, second para Refers to effects of a seven-and-a-half to eight-year construction projects as “short-term effects.” Surely such a long-term construction project would result in direct, indirect, and cumulative effects on the communities adjacent to the construction project. Such a long-term, “temporary” construction period would result in effects tantamount to permanent.

p 77, third para Landscaped lids at Roanoke Street, 10th Avenue East, and Montlake Boulevard are said to have a positive effect. Deferred construction of the lids, projected in the Phased Implementation Scenario said in this and other discipline reports as the most likely scenario and surely a source of direct, indirect, and cumulative effects, is not considered in the examination of effects.

Please include the indirect and cumulative local and shorter-term effects on the various kinds of resources in the project area. Do not hide such effects in large geographic areas and century-long timeframes so that claims of “no net loss” can falsely deny the very real likelihood of effects on resources in the communities adjacent to the project. This kind of sleight of hand destroys good faith relations between representatives of the affected local areas and WSDOT. Acknowledge the likelihood of adverse effects, direct, indirect, and cumulative, and address them in Memoranda of Agreement with the representatives of the affected resources.

C-042-005

What about local effects?

Indirect effects of the project are rarely acknowledged in this chapter, and most cumulative effects are measured on a region-wide, no-net-loss basis and in that huge context thus found to be either minor or beneficial. Indirect and cumulative effects on the local context are not considered except where an effect (if it were acknowledged) would be undeniably local (effects on visual quality, for instance, or on cultural resources).

Where local effects are considered, denigrating, minimizing, and distorting descriptions of present circumstances (most drawbacks a result of earlier WSDOT projects) or diminutions of the effects of the project itself serve as the bases from which to draw the conclusion that there would be no adverse effects—the infamous “there is already a bridge there, so a replacement bridge would not have an adverse effect” distorts the effects of the earlier bridge (nowhere near so adverse as that of the new bridge) and ignores the mitigating work of communities and the City in the years since the 1960s while minimizing the direct, indirect, and cumulative effects of the new, more than twice as wide, higher bridge moved north in front of more homes.

Despite the few findings of either kind of adverse effect—indirect or cumulative—each resource section contains a mitigation discussion in which WSDOT predicts that future trends in transportation alternatives, community and regional planning, and **lids** (which will be indefinitely deferred in the most likely Phased Implementation Scenario) will mitigate effects. WSDOT also suggests ways in which other agencies and organizations—not WSDOT—can mitigate the unacknowledged effects after WSDOT has had its way.

C-042-006

What about indirect and cumulative effects of construction?

Indirect or cumulative effects of construction are rarely considered—with respect to only the Transportation discipline and, briefly, the Air Quality discipline. Note that a construction period of 7-and-a-half to 8 years is tantamount in its effects to permanent for many flora and fauna including humans. At the very least, prolonged construction conditions will lead to indirect and cumulative local

C-042-006

effects in all of these disciplines and to the perception that the local area bounded by the construction footprint, limits of construction, area of potential effects, etc., in a widening circle—300 meters out, according to the *Health Impact Assessment*—is blighted in many ways that affect health and therefore the desirability of single-family residential communities adjacent to the construction and operation of this project. This accurate perception would result in indirect effects of demographic, physical, and economic changes to the prosperous residential communities adjacent to the new bridge and the widened roadway on the west side.

p. 7-5 "WSDOT considered construction-related effects to be **short-term** and temporary in relation to the **long-term trends** affecting the resources. Second, WSDOT considered operational effects of the project to be long-term and permanent **through the project design year, 2030**. On the basis of these two assumptions, WSDOT considered only direct or indirect effects of **operating** the completed facility as potential project contributions to cumulative effects. This was because in most cases, only these permanent effects would have the potential to influence **long-term trends** in the condition of the resources." **[Emphases added.]**

C-042-007

When and where did influencing long-term trends, as opposed, say, to pushing conditions to a tipping point, become the sole criterion by which cumulative effects are judged? Consider, for instance, the case in which project demolition and construction vibration produces a landslide on a property already experiencing tremors and intermittent landslides, and this time the landslide carries the house down a precipitous hill. The cumulative effect has been to bring about a catastrophic event, not a long-term trend, but the effect has been cumulative, from the "incremental impact" of the action.

"WSDOT did recognize, however, that in the case of a resource already under severe environmental stress, **short-term** construction effects added to the effects of other past, present, and reasonably foreseeable future actions **could tip the balance** and adversely affect the resource. **No such case** was found in the cumulative effects assessments conducted for this SDEIS."
[Emphases added]

Other such cases are possible. Reconsider the "No such case" finding." It taxes credulity.

C-042-008

The following notes permit a quick survey of conclusions reached in Chapter 7: Indirect and Cumulative Effects. The study area (local or regional), time span, and conclusion with respect to the indirect and cumulative effects of the project on each resource are noted.

Transportation

Indirect Effects, **Operation**

Study area Regional Travel Patterns Seattle and Eastside including I-5, I-405, and SR 520.
Time? Default 2030.
Outcome of operation similar to No Build, especially for north-south trips. Slight increase in east-west trips from use of HOV.

Cumulative Effects, **Construction**

Study area University of Washington Medical Center, Sound Transit University Link, Bellevue, Mercer Island, Redmond, Kirkland.
Construction period 7 and a half to 8 years
Outcomes truck traffic, lane closures and detours, slowdowns and cut-throughs, short-term **(7-and-a-half to 8 years!)** and **permanent (?)** access limits, temporary transit changes.

C-042-008

Cumulative Effects, **Operation**
Study area University of Washington Medical Center, Sound Transit University Link, Bellevue, Mercer Island, Redmond, Kirkland.
Time through 2030
Outcomes with completion of SR 520 Redmond to Seattle, increase in carpool and transit (14 %, 51 % w/No Build) reduced demand, reduced travel times and reduced congestion choke points. Light rail demand on I-90 to increase, tolling to reduce demand for SOV.

C-042-009

Land Use

Indirect Effects
Construction effects not mentioned
Study area is City Of Seattle, no substantial change to overall land use pattern and no indirect effects.
Cumulative Effects
Study area central Puget Sound region
Time Vision 2040 and WA Growth Management Act **[date?]**
Outcome some conversion of existing land uses to transportation right-of-way, "only a small portion of the total land in the central Puget Sound region."

C-042-010

Economic Activity

Indirect Effects
Construction effects not mentioned.
Cumulative Effects
Study area the regional economy, no direct or indirect effect, except beneficial effects of improved transportation efficiency. No contribution to lasting trends in economic activity.

C-042-011

Social Elements

Indirect Effects
No construction change of demographics or land use patterns as project would not induce growth. **[What about reducing growth or changing demographics as single-family owners with children accurately perceive the effects on themselves and their children of a prolonged, 7-and-a-half to 8-year construction period and the eventual permanent operational effects, especially on their health? See the *Health Impact Assessment*.]** No indirect effects on social elements including public service and utilities.
Cumulative Effects, Operation
Only temporary negative effects, typical disruption from construction.
Benefits to community cohesion **(lids?),** no long-term effects on public service providers, no cumulative effects.

C-042-012

Environmental Justice

Indirect Effects
"Disproportionately high and adverse effect on low-income populations" because of tolling only. No adverse effect minority populations. Other effects on the two groups positive. None of the effects indirect.
Cumulative Effects
Tolling could increase traffic on other roadways through low-income neighborhoods **[the study area?].** Cumulative effects of heavy traffic including noise, air emissions, and lowered transportation efficiency from idling or slow-moving vehicles could worsen as drivers avoid tolling on SR 520.
Also increased transportation costs for low-income households and social service agencies that serve them.
But safer, more reliable transit and other projects would help to promote affordable mobility by increasing efficiency of regional transportation levels.

C-042-012

Slight benefit to water quality and fisheries, long-term trends not measurable.
Area watersheds overall, only an extremely small fraction and only a small portion of that fraction used by salmon and related species, so no effects on Native Americans fishing, and "the project is not likely to add to the cumulative effect on Native American traditional cultural properties, or the presumed Foster Island TCP."

Mitigation

Let them eat, er, take transit, improve mobility in their (not-tolled) corridors, and let them live where they work, in urban centers.

C-042-013

Recreation

Indirect Effects

Construction effects not discussed.
Changes in access, surrounding land use, noise levels or visual intrusion would be indirect effects, but most indirect effects **[of construction?]** on park and recreational resources would be positive by encouraging greater use, improving connectivity and linkages, and improving noise levels and visual quality "in certain locations."
Bike and pedestrian path and **lids** would encourage pedestrian and bike use over the long term. Noise walls would produce long-term benefits for park users. **[Noise walls will also impede views in many recreation areas.]**
Moving MOHAI would directly and indirectly benefit MOHAI over time.

Cumulative Effects

No permanent loss in total park area. **[That's all that counts?]**

Mitigation

In the form of replacement parkland "in the vicinity," according to City of Seattle Ordinance 118477.

C-042-014

Visual Quality and Aesthetics

Indirect Effects

Construction effects not discussed. No indirect effects, only direct effects on structures, landforms, and vegetation changes.

Cumulative Effects, Operation

Long-term presence of new Evergreen Point Bridge "would not make much difference" because it would "replace a similar bridge that exists in approximately the same location today. On the other hand, the wider roadway, retaining walls, noise walls, and other features . . . would create a more urban visual character . . . would add to the cumulative effect of other present and planned development projects contributing to the increasingly urban visual quality of the study area." **[What is the study area?]** Direct effects would be a mixture of beneficial and detrimental changes—increase in paved surfaces and concrete structures but introduction of vegetated roadway **lids** for visual continuity and softening. "On balance, the cumulative effect on visual quality and aesthetics **within the SR 520 study area and surrounding central Puget Sound region** would be an increasingly urban visual character, to which the proposed project would make a small contribution with both beneficial and detrimental visual elements." **[No discussion of local viewsheds.]**

Mitigation

"Community planning efforts that establish context-sensitive architectural and design standards, preserve visually significant stands of vegetation, and preserve important views and community gathering places." **[This will come too late for a good bridge design, and the bridge will be the dominant feature of the area. Let's begin with a beautiful, sensitive bridge design.]** "Comprehensive planning by the Puget Sound Regional Council . . . contributing to the quality of life throughout the region." "Regional and community planning in the design of individual development projects." **[How about viewshed-based mitigation? See watershed-based mitigation in Ecosystems, wetlands discussion.]**

C-042-015

Cultural Resources

Indirect Effects

None identified because all project-related effects on cultural resources would be within or close to the project construction footprint and occur at the time of **construction**." **[Odd and certainly questionable reasoning. What about**

C-042-015

effects within the "limits of construction" (larger than the construction footprint) and within the Area of Potential Effects (even larger than the limits of construction)?

Both construction and operation would have indirect effects, in which air quality, noise, visual blight, and traffic vibration from more and larger vehicles would contribute to a perception that the neighborhood was unhealthy and less desirable. The single-family owner with children demographic would change, the now undesirable properties would be likely to become rentals and rooming houses, maintenance of resources already compromised by more air pollution contributing to building soiling and erosion would decline further as absentee owners cut corners and ignored preserving historic integrity. One need look only at the predominance of historic non-contributing resources along Harvard Avenue East, adjacent to I-5, to see the indirect and cumulative effects of a major construction period and the operation of a large highway on cultural resources in an adjacent community. Subsequent community efforts over the last twelve years to change the ambience of Harvard Avenue East via tree and other vegetative plantings plus traffic calming efforts came too late for the architectural integrity of these largely now-rental historic properties. Happily, the neo-classical revival Edward J. Duhamel William H. Parsons House (1903, the Harvard Mansion as a City Landmark) has after a great deal of expense after it had been carved up as a rooming house, has been restored to its former single-family splendor. Most of the other historic resources along the I-5 corridor have suffered much worse fates after the construction of I-5 and are not contributing resources.

Cumulative Effects

Minor contribution to the cumulative effect on cultural resources of **the central Puget Sound region**. Time range the past 150 years. "The project is not likely to add to the cumulative effect on built environment properties, archaeological resources, traditional cultural properties, or the presumed Foster Island TCP." Project would not affect historic built environment to extent that it would no longer be eligible for listing in the NRHP. **[No mention of changes to setting and feeling and characteristic use, local economic impacts, perceived health effects on local demographics. See above.]**

Mitigation

Section 106 speaks to only direct and indirect effects, according to this section. **[According to Dr. Allyson Brooks, Director/State Historic Preservation Officer, Department of Archaeology and Historic Preservation, in response to a query generated by this statement March 16, 2010, Section 106 does speak to cumulative effects as well. And "demolition by neglect" is recognized as an adverse effect.]**

C-042-016

Noise

Indirect Effects

None. All noise effects would be direct because detected by people close to the project. **[What about perceived health effects from noise and the indirect economic effects of a noisy residential district? Demographic effects?]**

Cumulative Effects

Time 2030. Project to produce equal to or slightly less than current noise levels and future noise levels without the project. No new projects close to SR 520. But project would contribute to noise effects of other projects continuing to operate. Project compared with No Build would substantially decrease number of residences exceeding NAC noise levels.

Mitigation

Lids, noise walls, electric motor vehicles, quieter vehicles, transit, HOV, bike and walking, and by Vision 2040, increasing urban density within central Puget Sound region with transit-oriented multi-modal transportation system. **[It's long past time to consult with the Arizona Department of Transportation and learn how to install quieter pavement properly. These long-term evaluations, clear out to Vision 2040, mask the very real noise effects of both construction and operation. WSDOT should agree to mitigate effects of noise from the highway in multiple ways and to mitigate noise on the arterials from both construction and the increases in local traffic from approaches to and exits from the new six- or seven-lane Portage Bay Bridge.**

C-042-017

Air Quality

Indirect Effects

Construction trucks hauling, excavation at borrow sites distant. Tolling potentially will create higher volumes on alternative routes, creating an indirect effect on air quality there from exhaust emissions and increased idling from congestion. **[No mention of local effects from construction activity over 7-and-a-half to 8 years and of the indirect effects of the correct perceived increase in air pollution and consequent changes in owner-occupied, single-family communities, especially the migration out of the communities of families with children.]**

Cumulative Effects

Project "not expected to create any new violations." **[No mention of correctly perceived cumulative effects on air quality of the addition of two lanes for buses and HOVs, both gas-powered.]**

Mitigation

Advances in auto technology, fuel content regulations, increased availability of alternative fuels. Reduction in vehicle miles traveled, overall improvements in transportation system efficiency. Employee parking management, incentives for commuting. **[All of these mitigation projections, into the future, are good reason to reconsider the mammoth project in the first place. The projections into the future of these ameliorating circumstances suggest that they will come far too late to protect the adjacent areas from the consequences of more gas-powered traffic on SR 520 and adjacent arterials.]**

C-042-018

Energy Consumption and Greenhouse Gas Emissions

Indirect Effects

Study area **the whole state**. Indirect effects only "if **construction or operation** of the project were to cause measurable effects on other sectors of the economy, such as utilities, or affect the ability of Washington State to meet the energy demands for this project, requiring the expansion of existing resources." But wouldn't happen because we rely heavily on hydropower for electricity. [**Does this seem like an over-simplification? Don't we sell some of our power to other states, too?])** Project's **operational** contribution to energy consumption too small (1 percent of **state**'s total annual energy consumption) to have a consequential indirect effect.

No undue demands from **construction and operation** of the project on petroleum sources, and no effect on other sectors of the economy.

"In general," **operation** of the project would improve energy consumption and GHG emissions with addition of HOV lanes and regional bike path. **[Only in the very long term and too late to salvage communities after the damage done.]** With or without the project, cumulative vehicle emissions from vehicles using SR 520 would increase, but slightly less with the 6-Lane Alternative than with the No Build alternative. **[Again, only in the very long term. Immediate effects of a protracted construction period and the increase in gas-powered traffic from two more lanes would have a great effect on GHG emissions and energy consumption in the immediate region.]**

Cumulative Effects

Construction and operation would make a very small contribution to **statewide** GHG emissions.

Long-term operation would reduce Vehicle Miles Traveled below present and future conditions more than No Build.

Long-term operation in the whole corridor, I-5 to SR 202 plus East Link and North Link light rail and other foreseeable projects would consume energy and emit GHGs, but projects together would generate a smaller contribution to the cumulative effect on energy consumption and GHG emissions than their No Build alternatives because projects would reduce VMT and improve **regional** transportation efficiency. **[Under the current plan, only a long time after operation has begun.]**

Mitigation

Addressing global climate change at **regional, national, and international** levels. **State** policies to address GHG between now and **2050**. Car pooling, vanpooling, transit. HOV, bike, and pedestrian. Land use planning—concentrating growth in urban growth areas. Variable speeds and **tolling**. Better autos, fuel content regulation, lower-carbon fuels, public transit, bike trail networks, to reduce SOV trips. **[How wonderful! Then why are we devoting $4.65 billion and two new lanes to more gas-powered traffic on the highway and on local arterials?]**

C-042-019

Water Resources

Indirect Effects

Stormwater treatment facilities mean **long-term trend of gradual improvement** in surface water quality. Project along with rest of corridor projects and Eastside transit and East and North light rail to contribute to positive trend of improved surface water quality.
Construction runoff to be mitigated in accordance with NPDES requirements and WSDOT BMPs.
Long-term operation improvement relative to present and No Build in **study area [which is?]** between **now and 2030**.

Mitigation

Add stormwater treatment facilities as projects are built and operated. Retrofit local streets and parking lots**. [Address these suggestions in a Memorandum of Agreement.]**

C-042-020

Ecosystems

Wetlands, Fish and Aquatic Habitat, Wildlife.
Direct effects would be mitigated as part of project. **[Which see in Ch 5 Ecosystems section and Attachment 7: Ecosystems Discipline Report.]**

Indirect Effects

None in **wetlands**, just **direct** effects **[which see].**
On **aquatic resources**, effects limited to lake and estuarine environments in study area not farther removed in distance **[local]**, consistent with present. WSDOT says no effect later in time than project activity **[7 ½ to 8 years of construction!]**. So no measurable effect. **[Seems doubtful with a protracted construction period.]**
On **wildlife and wildlife habitat** (see Chapter 4 and Ecosystems Discipline Report) **permanent** removal or shading of vegetation, but improving stormwater treatment and decreasing noise disturbance **[all from noise walls?] Direct** effect would arise from animals moving to other areas because of habitat loss and displacing or competing with animals in their new habitats. **[Would this not result in indirect and cumulative effects as well?]**

Cumulative Effects

Wetlands Cumulative effect would be neutral because all projects would follow federal, state, and local wetland regulations, including mitigation. **Aquatic resources**, minor effects because **the study area is so large**, individual fish range as far as the Pacific Ocean up to 2,000 miles from study area. **[What about local direct, indirect, and cumulative effects on fish population in Lake Washington, where much money has been spent to increase salmon activity?]** Increase in overwater structures related to west approach and Montlake area could change juvenile salmon movements and provide more habitat for predator species. Could affect later generations but **expected to be minor**. **[Why? Explain—don't just assert.]** Larger replacement bridge but could be offset by greater height near the west highrise, a primary migration corridor for juvenile salmonids passing through the study area **[which is?]. Temporary construction** effects **[7 and a half to 8 years!]**. Stormwater treatment, reduction of in-water columns, aforementioned increased height. So negligible effect on **long-term** fishery trends ands stressors. Will affect only a portion of all the fish occurring in the area watersheds. Habitat in the study area is only a small fraction of the total fish habitat used by these fish during their life cycles. Summary: Project would not measurably affect the overall cumulative effect on these resources. **[Cumulative effects may be local as well as on the absurdly widespread areas considered here in order to claim no adverse effects.]**
Wildlife and Wildlife Habitat Suitable habitat continuing to decline. Crows, sparrows, and raccoons flourishing. **[Don't forget the Gray Squirrel, which has replaced the native squirrel. Also beaver in restored wetlands in southwest Portage Bay, Great Blue Heron, Double-crowned Cormorant, Bald Eagle, and Hawk habitat, as well as Flicker, Black-capped Chickadee, and Wood Duck.]** "A permanent loss of habitat used by urban-adapted wildlife." But "the project's long-term contribution to urban-adapted wildlife populations and habitats in the study area **[which is?]** would be negligible." **[What about local indirect and cumulative effects?]**

Mitigation

Wetlands Use federal regulatory goal of No Net Loss and state and local regulation to decrease and slow the cumulative decline of wetlands. More stringent regulation, regulation consistency **[yes!],** and coordinating among jurisdictions **[should include WSDOT**]. Improved planning both regional **and local**, increased participation of "non-governmental

C-042-020

organizations and other stakeholders" in restoration efforts. Watershed-based mitigation and mitigation banking—"compensatory wetland mitigation." City of Seattle comprehensive plans and critical areas ordinances.
Aquatic Resources Region-wide cooperative interagency approach or public-private partnerships "with a focus on improving habitat condtitions and water quality **within the Lake Washington watershed and Puget Sound** would aid in the recovery of fish stocks." More stringent land use regulations could reduce future negative effects on fish associated with stormwater runoff an human development." **[What can WSDOT do before, during and after its project?]**
Wildlife and Wildlife Habitat "Because there are many potential contributors to cumulative effects outside of WSDOT's jurisdiction, the agency will not attempt to mitigate adverse cumulative effects" "However, a variety of measures could mitigate the overall (non-project-related) cumulative effects on wildlife, such as the following: **[What about the project-related cumulative effects?]**

C-042-021

This whitewashing of indirect and cumulative effects of a protracted construction period and the operation of a considerably widened highway with no immediate plans to replace the operation of two more lanes of gas-powered vehicles and with a likelihood of lid deferral, on all of these resources in the areas adjacent to the project, is reprehensible. A pattern of deceptive conclusions in all of the chapters and discipline reports in the January 22, 2010 *Supplemental Draft Environmental Impact Statement* is all too apparent and especially so in this chapter and the discipline report paired with it.

And even though it has no jurisdiction over other agencies, why does WSDOT get a free ride and mitigation fall on other jurisdictions and agencies as WSDOT recommends in this report? Is it trying to save money on mitigation that would cost a trivial amount when measured against the total $4.65 billion for the project?

The arrogance of this assumption and of many other of WSDOT's assumptions and unsupported or arbitrarily limited or expanded criteria makes a reader of the U. S. Department of Transportation manual for project guidance, especially of its section on "Community Involvement to the Final Product: Marketing Mega Projects [those involving more than $1 billion] and Public Trust" blanch.

This bullying, evasive, and deceitful agency has earned an F. It obviously has not profited from lessons learned in preceding projects. The agency has needlessly aroused public opposition where it had initial trust and good faith negotiation underway. By its deceptions and maneuverings in order as far as we can tell merely to avoid acknowledging adverse effects any layman can perceive in order to avoid having to enter into memoranda of understanding for mitigation—just to save a little money, a miniscule amount when measured against $4.65 billion—WSDOT has created a resistance it never needed to. Instead of working with the communities to create a handsome design, a better setting, and community improvements to get the public to embrace and advance its project, WSDOT has raised hackles and the likelihood of lawsuits and other delays. Public trust and cooperation (see "Construction – Public Trust and Truthfulness") have been the most significant casualties of the agency's tactics. It didn't have to happen.

It's not the 1960s anymore, and we had hoped that WSDOT realized this, too.

Sincerely,

Erin O'Connor
Historic Resources Chair, Portage Bay/Roanoke Park Community Council
Roanoke Neighborhood Elms Fund
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April 15, 2010

Jenifer Young
Environmental Manager
SR 520 Program Office
600 Stewart Street, Ste 520
Seattle, WA 98101

Re: Comment on Supplemental Draft EIS for SR 520

Dear Ms Young:

C-043-001

On behalf of SWAMP – Save the Wetlands of the Arboretum from Multitudes of People – we write to comment on the Supplemental Draft EIS for SR 520. This comment supplements SWAMP's earlier comments of September 22, 2006 and October 30, 2006 on the Draft EIS. As stated in our prior correspondence, SWAMP is an organization of residents within the Madison Park and Montlake communities dedicated to protecting the Arboretum and its wetlands from further desecration, and in particular from further impacts from a widened SR 520.

We have reviewed the Supplemental Draft EIS for the SR 520 Bridge Replacement, and in particular, Chapter 7, related to non-motorized facilities, and the provisions related to recreation trail connectivity. We are pleased to see that the Supplemental Draft does not include an additional pedestrian/bicycle connection to Madison Park through the wetlands of the Arboretum, as once proposed in a separate technical memorandum.

Rather, the Future Trail Connectivity Options at Figure 29 within the Recreation Discipline Report shows three other bicycle/pedestrian path connections: at McCurdy Park (Option A); at Foster Island and Montlake (Option K); and at Montlake (Option L). From the perspective of protecting the resources of the Arboretum, Options A and L would be preferable. Option K would be acceptable if the access to Foster Island were limited to pedestrians. Foster Island currently is limited to pedestrian access and the current trails on Foster Island provide access to the marsh trail. SWAMP would be concerned that the addition of bicycle ramps at Foster Island would encourage bicycle use through this sensitive area, including use of the marsh trail.

C-043-001

We also have had an opportunity to review the City Council's Draft SR 520 Project Enhancement Report of March 2010. While the report itself is not part of the Supplemental Draft EIS and exists only in draft form, SWAMP would observe that these comments and its prior positions are fully consistent with the City Council's desired outcomes, including the improvement of the pedestrian and bicycling environments and the Arboretum. We would encourage the State Department of Transportation to embrace these outcomes.

Thank you for your consideration of these additional comments. As before, SWAMP requests to be listed as a party of record. Further correspondence may be directed to this office.

Sincerely yours,

ARAMBURU & EUSTIS, LLP

Jeffrey M. Eustis
Cc: SWAMP

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April 1, 2010

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APR 12 REC'D
WSDOT - SR 520
PROJECT OFFICE

Jenifer Young
SR520, I-5 to Medina: Bridge Replacement and HOV Project
Environmental Manager
SR520 Project Office
600 Stewart Street, Suite 520
Seattle, WA., 98101

Dear Ms. Young:

C-044-001 The following are comments from the Canterbury Shores Condominium regarding the SR520 Supplemental Draft Environmental Impact Statement (SDEIS), January 2010. Canterbury Shores is a 92 unit condominium located on the Northern Shore of North Madison Park. The comments that follow have been reviewed and approved by the Canterbury Shores Board of Directors.

Attachment 7, Discipline Reports

Air Quality

Dust. Particulate Matter (PM). There is NO analysis of PM during construction and operation on a seasonal basis. During summer months wind from the north significantly increases PM along North Madison Park (NMP) and at Canterbury Shores (CS). Your averages MISSTATE the seasonal effects.

Wetland

C-044-002 The amount of wetland that will be afftected by construction is significantly underestimated. Material in the DSEIS excludes the impacts of the temporary bridge which will be built to the south of the existing bridge and the boat and barge traffic in this very shallow wetland area. There is NO indication of the type and extent of mitigation.

Wildlife

C-044-003 Great Blue Heron.

The Great Blue Heron (Heron) is a state listed priority species. The DSEIS states there are no species of special interest. The Blue Heron is NOT mentioned. Page 4-43 states "No large trees would be removed therefore potential rockery habitat for the Great Blue

C-044-003

Heron would not be affected." Large trees are NOT a determinant. Heron roost in mid-sized to small trees, especially in Arboretum Area 712 where there habitat will be destroyed by construction activity. This is an OMISSION.

C-044-004

Beaver.

Page 4-44 mentions and includes a photograph of one beaver lodge. Due to the nature of the graphics it is NOT possible to determine the location of the cited beaver lodge. However, in this vicinity there are three NOT one beaver lodge. The DSEIS text states the beaver lodge would be destroyed and they would have to construct a new one. It is highly likely that all three lodges would be destroyed as all three are in close proximity to the existing SR520 right of way. Beavers are very protective of their environment. The text states only their reproductive process would be affected.

- How will their reproductive process be affected?
- Where could they build a new beaver lodge?
- How long will it take to construct replacement beaver lodges?
- Where and how will beaver exist as they are replacing the lodges?
- How will the destruction of the lodges affect the beaver population?

There is NO discussion of these issues. There is NO discussion of mitigation.

Hazardous Material

C-044-005

Miller Street Landfill

The only site studies is the Arboretum Playfield. There is NO precise delineation of the Miller Street Landfill. Historical and anecdotal reports indicate a large area between the Arboretum and NMP was used as a landfill. The DSEIS cites a study (Ouet and Kiers, 2007) indicating methane gas was found. The precise location of their study is NOT cited or shown. When canoeing and kayaking through this area (south of the bridge) "air" bubbles rise to the surface suggesting there evidence of methane gas below the surface.

Sediments (page 36). Cited are two studies, 1992 and 2004, in Lake Washington and Portage Bay. The text states these studies indicate there are relatively low concentrations of PCB's, PAH's, and phthalates. There is NO indication of where these sites are. These two studies are NOT consistent with a study carried out by Canterbury Shores.

The water sample was collected in a container provided by AMTEST Laboratories following their directions. It was delivered to AMTEST on October 4, 2002. The sample was analyzed by AMTEST and the results reported to us on October 24, 2002.

Diesel and Heavy Oil were found in significant quantities, as follows:

Diesel	*1,500 parts per billion (ppb)*
Heavy Oil	*5,700 ppb*

C-044-005

In both cases the EPA minimums, or clean up standards, according to AMTEST, are 1,000 ppb. Therefore, both diesel and heavy oil exceed the EPA minimums, the latter by a considerable amount.

The SDEIS does NOT state how the extent and type of hazardous material will be dealt with in the area extending between the western edge of the Arboretum to the eastern edge of NMP.

C-044-006

Land Use, Economics and Relocation

Estimated Construction Time. The DSEIS states construction time in the NMP vicinity will be 54 months (4.5 years). In numerous meetings with WSDOT personnel they have stated construction time will be between five to seven years.

C-044-007

Value Impacts. There is NO discussion in the SDEIS about the affect construction or the permanent operation will have on the value of property in the SR520 corridor.

C-044-008

Noise

With tolling the amount of traffic on 520 will be less than without tolling in any of the four cases (No Build, etc). Consequently vehicle speeds will be greater. Therefore the noise level will be greater. This relationship is NOT stated in the SDEIS.

C-044-009

Mitigation is <u>required</u> for residential area if exterior noise levels are greater than 67dBA. The following are the forecast noise levels (page 32):

Canterbury Shores, Monitoring Location 35, 65 dBA
Edgewater, Monitoring Location 36, 66 dBA.

Statistically there is no significant difference between 65, 65 & 67 dBA. This is especially true given the variability in measurements [time of day, weather, height of receiving location such as building story (Canterbury Shores is a four story building), person doing the measuring, the objectivity with which the measurements were taken (for example, the noise experts were not retained by an impartial entity but rather by WSDOT), etc.].

Throughout the DSEIS when dealing with noise mitigation and in particular noise walls, which are the only feasible type of noise mitigation strategy for NMP, it does NOT state noise walls will be constructed, rather it states they are "recommended." History shows that at the end of a construction project when funds are minimal or lacking the "recommended" items are frequently NOT provided.

C-044-010

There is a significant INCONSISTANCY between WSDOT maximum noise levels and those of the City of Seattle and Washington State Labor and Industries.

- For Seattle:
  - Maximum sound level between 7:00am and 10:00pm is 55 dBA;
  - The maximum exceedence during construction for heavy equipment is 25 dBA;

C-044-010

- Therefore, the total maximum noise level for the 54 month construction period during any day would be 80 dBA (80 dBA is "moderately loud" and equivalent to standing within two feet of an operating garbage truck).

- For WA. Labor and Industries:
  - Noise cannot exceed 85 dBA over an 8 hour period. (WAC 296-817-300).

There is NO mention of pile driving noise in Exhibit 23, page 64. This is a serious OMISSION because in Exhibit 22 it shows that pile driving results in the most serious noise levels of all equipment and ranges between 99 to 105 dBA.

Exhibit 26, page 67 and 68, shows pile driving noise level profiles. This exhibit is INCORRECT. The exhibit DOES NOT include the area where the temporary bridge is to be built. Even with this ERROR WSDOT's noise profile exceeds City of Seattle and WA L&I maximum noise limits. This is a serious OMISSION. Your documents show that 2042 piles will be driven (Table 6.7.1) over the 54 month period. Exhibit 8, page 26 is a table showing relative loudness. The reference point is 80 dBA, the noise a garbage truck makes when one is standing within two feet of it and this is not with an idling engine. 100 dBA is 4 times louder, the equivalent to a jet taking off. 100 dBA is classified as "very loud." Interestingly, the noise effects on fish and mammals are discussed, they are NOT discussed regarding humans.

Exhibit 31 (approximately page 85). Noise Levels. The following are the noise levels listed for NMP without sound walls: MP1-66, MP2-67, MP3-67, MP4-67. All of these are right at NAC maximums and exceed City of Seattle maximums of 55 dBA. Given that, Exhibit 33 is MISLEADING for it is based on the assumption of sound walls. This is a "best case" scenario and extremely unlikely as sound walls are optional, not required. Due to a lack of funds and WSDOT prior statements, it is more likely than not that sound walls will NOT be constructed in the NMP segment. The SDEIS states regarding mitigation:

- "measures must be considered;"
- "mitigation measures … must be recommended (page 107).

This is NOT the same as requiring mitigation measures to reduce noise levels to an acceptable level.

OMMITTED from the noise section is how the "beep beep beep" of construction vehicles and equipment, when they back up, is quantified. According to a person I interviewed who lived on Mercer Island, in close proximity to the I-90 project, the "beep beep beep" was so annoying that they had to move. And, it was something that went on for 24 hours per day, often 7 days per week. If one has to listen to this for 54 months from 7:00am to 10:00pm it would, indeed, be annoying. It would be more than annoying for 24 hours per day, seven days per week.

Vibration

Reference page 69, Vibration Effects. "Unlikely that vibration levels would exceed 0.5 inches per second at a distance greater than 100 feet from the construction site." This is INCORRECT.

C-044-010

- First, there is NO quantitative data provided showing what the vibrations levels were based on the tests WSDOT did;
- We know WSDOT did tests for two reasons:
  1. We gave WSDOT permission to place a "vibration meter" on our property and we accompanied the person who placed it there;
  2. We witnessed and experienced the tests, both putting in the piles and taking them out (both which will occur as a part of the WSDOT construction activity.

Page 61 contains a table that shows the effects of various vibration levels and it states: the "threshold at which there is risk of architectural damage to normal dwellings – houses with plaster ceiling and walls." This is at a vibration level of 1.27 or greater. Management and residents at Canterbury Shores experienced the pile driving noise and vibration level tests.

- Regarding pile driving: it is highly likely that the levels for pile driving exceeded 1.27. During the tests there were many complaints about the noise levels to CS management.
- For pile removal there is no doubt they exceeded 1.27. Homeowners stated that objects on counters and shelves "jumped around." In fact, vibration was so bad numerous governmental agencies were contacted, including WSDOT. Exhibit 1 shows the e-mails that resulted.

Vibration Mitigation (page 172).

This discussed how noise might be mitigated. There is NOTHING on vibration mitigation. This is an OMISSION.
The SDEIS states there is "no effective method to reduce vibration." (page 174). If it can't be reduced how can "it be kept to a minimum."?

If noise and vibration levels are above legal limits what can be done? "Vibration monitoring" (page 61) will NOT cure the problem.

C-044-011

Recreation

OMITTED from the SDEIS is an analysis and discussion of the effect of the temporary construction bridge to the south of the existing alignment and bridge on boat access to NMP water frontage property. The temporary bridge, barges and working boats will severely and/or completely make ingress and egress impossible.

C-044-012

Transportation

OMITTED. An analysis of the effect on traffic at the Lake Washington Blvd and Madison Street intersection.

C-044-013

View

Volume I.

C-044-013 Regarding the West Approach Landscape Unit. This OMITS the view affect on NMP homes (page 57). It MISSTATES how NMP views would be permanently affected: "possibly blocking views of Laurelhurst Hills but revealing more open water in Union Bay." (page 70). See the following comments under Volume II.

Volume II.

Exhibit 2-17 and 2-18 show existing and Option A (and the 2 other options also) views. Both exhibits are MISLEADING due to the INCORRECT way the photographs were taken (using an incorrect camera lens that does NOT show what the eye actually sees). Exhibit 2 shows what the view will actually be like from the north shore of NMP on a before and after basis. Exhibit 3 shows what the views will look like from the Madison Park street end pier. These two exhibits were prepared by a professional photographer, Mr. Aaron Weholt, Legal Media, Seattle, WA.

C-044-014 Water Resources

Referencing Page 69. OMISSION. There is no discussion of how the south one-half of the bridge, the east-bound lanes, would be constructed. Also OMITTED is a discussion of the temporary construction bridge that will be located south of the east-bound lanes.

C-044-015 Construction Activities, Chapter 3, 1/5/2010.

The are NO graphics shown and there are NO specifics on the construction bridge to be located south of the current and new east-bound lanes. The purpose of this "construction bridge" is to demolish the existing bridge and build the new east-bound lanes. The construction time period, according to the SDEIS, is 4.75 years. This time period may be IN ERROR as WSDOT staff have indicated it will be between five to seven years. This is a very significant OMISSION for the construction affects from noise, vibration, view blockage and water access will be huge.

C-044-016 Project Operation and Permanent Affects (Chapter 5).

Noise.

The SDEIS states "WSDOT's practice is to work with the owners of these properties (those where "noise abatement measures must be considered") during detailed project design to determine the mitigation measures that will be used." (page 5-104). No one from WSDOT, or any other public agency, has discussed this matter with CS management or owners. This is an OMISSION.
As was stated earlier, there is NO assurance of mitigation. Noise walls are the only mitigation proposed for NMP. All options state: "If noise walls are included …" (page 5-107).
North Madison Park is NOT mentioned for noise mitigation. (page 5-109 and 5-110).

C-044-017 Wildlife and Habitat.

Referencing the sentence "Remove a large beaver lodge …" (page 5-140). There are at least three (3) beaver lodges in or in very close proximity to the 520 right-of-way in the arboretum. The SDEIS graphics DO NOT identify where any are located. There is NO scientific analysis or discussion of the effect construction will have on the beaver population

There are NO mitigation measures for wildlife. (page 5-146).

C-044-018 Navigation.

There is NO discussion on how navigation would be affected north of NMP ans south of 520 during construction or permanently. (page 5-151).

C-044-019 Effects During Construction (Chapter 6).

There is either NO or ONLY superficial discussions of construction affects on NMP regarding boat access, noise, vibration and wildlife. (page 6-46 to 6-49). Also, see the above comments relating to the Discipline Reports.

C-044-020 View Impact.

In Chapter 6 it states: "*Under all design options, the greatest temporary change to visual character and quality would result from demolition of the Lake Washington ramps to and from the Arboretum and construction and presence of construction and detour bridges because of their size and complexity. Vegetation would be removed in 30- to 60-foot-wide swaths for the work bridges. Subsequent construction of the permanent new west approach bridges would compound the effects. The combination of the construction bridges, detour bridges, finger piers, and the existing and new bridges would result in substantial degradation of visual character and quality of the south part of Union Bay. The structures would block water- and ground-level view for viewers near the structures. The viewers most affected by this change would be commuters crossing the bridges, park users and boaters, and residents in north Madison Park (underline mine). Views from the Broadmoor Golf Course would be screened most of the year by tall trees along the shoreline*." (page 6-54 and 6-55). This statement:

- Is inconsistent (an ERROR) with your statement regarding views (Views, Volume I, page 70) where it states: "*possibly blocking views of Laurelhurst Hills but revealing more open water in Union Bay.*"
- Does NOT discuss mitigation, an OMISSION.

C-044-021 Noise. (re: page 6-65+)

The following is relevant information and comments from several tables in this section: Table 6.7.1: Equipment – Pile Drivers, Noise Level – 99-105 dBA, Number of piles to be driven: 1987 = 55 for Lake Washington Blvd or 2042 piles total.

C-044-021

Table 6.7.2: Maximum City of Seattle sound level, residential – 55 dBA.
Table 6.7.3: Maximum Exceedence:

Minutes/hour	Exceedence
15	+5 dBA
5	+10 dBA
1.5	+15 dBA

For driving in and pulling out the 2042 pilings (that is 4084 operations) the maximum noise criteria for the City, State, and federal government (NAC) will be exceeded. What is the effective mitigation? The answer to this has been OMITTED.
Table 6.7.4.:Noise Levels that "should NEVER be exceeded."

dBA	Time Duration Exceedence Prohibited
90	Continuously*
93	20 minutes
96	15 minutes
99	7.5 minutes

*I believe this is an error, for it means at 90 dBA or greater the noise level cannot be exceeded.
Therefore, if any piles are driven the noise levels will be exceeded. But, this must NEVER happen. What is the answer to this dilemma? It has been OMITTED.
In addition, just so we are on the "same page," don't suggest these noise levels will not reach NMP. First, your noise profiles do not take into account the construction bridge. Second, they do not take into account pile removal. Third, they do not take into account the vibration index.

Vibration (reference page 6-69).

Data and analysis on vibration testing has been OMITTED.
Reference "Construction Vibration Effects" page 6-69. In the middle of the paragraph it states "*It is unlikely that vibration levels would exceed 0.5 inches per second at distances greater than 100 feet from the construction sites.*" In that regard:

- Distances from the construction bridge have been OMITTED;
- Data and analysis has been OMITTED regarding vibration tests and levels;
- Based on the experiences at Canterbury Shores regarding driving and pulling piles the vibration level exceeded 1.27 inches per second. This data and the effects have been OMITTED.
- Due to the poor quality of graphics in Exhibit 6.7-3 (at least on my CD), it is not possible to tell where the noise contours are in relation to the land (i.e. shoreline, land improvements, etc.). This must be an ERROR.

Respectfully submitted,

Bill Mundy

Bill Mundy.

Attachments: Exhibits 1, 2 & 3.

EXHIBIT 1 a

From: "McCaffree, Justin (Consultant)" <McCaffJ@consultant.wsdot.wa.gov>
Date: November 9, 2009 2:59:42 PM PST
To: "Bill Mundy" <bill@mundyfarms.com>, "Warner, Dave (Consultant)" <WarneDa@consultant.wsdot.wa.gov>
Cc: <donwand@comcast.net>, "French Bruce" <brucef@bca-online.com>, "John Miller" <johnm@cdcmanagement.com>, "Samuel Jim" <sgllc1@nwlink.com>
Subject: RE: SR 520 In-Water Test Pile and Noise Study: Noise Monitoring

Mr. Mundy,

Thank you very much for bringing this concern to our attention. I will make sure that the appropriate project staff are made aware of this issue.

Justin McCaffree
Communications, SR 520 Bridge Replacement and HOV Program
Washington State Department of Transportation
206-269-5041
101 Stewart Street, Suite 1200 I Seattle, WA 98101
<http://www.wsdot.wa.gov/projects/sr520bridge/>

From: Bill Mundy [mailto:bill@mundyfarms.com]
Sent: Mon 11/9/2009 2:47 PM
To: McCaffree, Justin (Consultant); Warner, Dave (Consultant)
Cc: donwand@comcast.net; French Bruce; John Miller; Samuel Jim
Subject: SR 520 In-Water Test Pile and Noise Study: Noise Monitoring

Justin. A very short while ago, probably within the last 1/2 hour, your noise study folks (big barge on north side of bridge, possibly General Construction) did some vibration testing. This was VERY noticeable here at Canterbury Shores (floors shook, our lights and china clattered). This is very disconcerting for several reasons: (1) the foundation of CS is supported by pilings and much of this area was an old landfill therefore the vibrations could cause settling (2) settling will cause cracks in wallboard, brick mortar, etc. (3) the vibration is so great that we will need to take things of value off open shelves and counter tops (I know there are several residents here that have significant collections of blown glass). I can understand your desire to do these tests, but it would be prudent to "tone them down" significantly. Thank you.

Bill Mundy Ph.D., MAI
2500 Canterbury Lane E. #301
Seattle, WA., 98112.

EXHIBIT 1 b

From: "McCaffree, Justin (Consultant)" <McCaffJ@consultant.wsdot.wa.gov>
Date: November 9, 2009 3:19:52 PM PST
To: "Bill Mundy" <bill@mundyfarms.com>
Cc: "Brandt, Sarah (Consultant)" <BrandtS@consultant.wsdot.wa.gov>
Subject: RE: SR 520 In-Water Test Pile and Noise Study: Noise Monitoring

Mr. Mundy,

I spoke with the on-site construction inspector who informed me that the vibration you felt occurred as crews were attempting to remove the final test pile using a vibratory hammer. Crews were unable to remove the pile using this method, and will instead have divers on-site tomorrow to cut the pile off below the mud line.

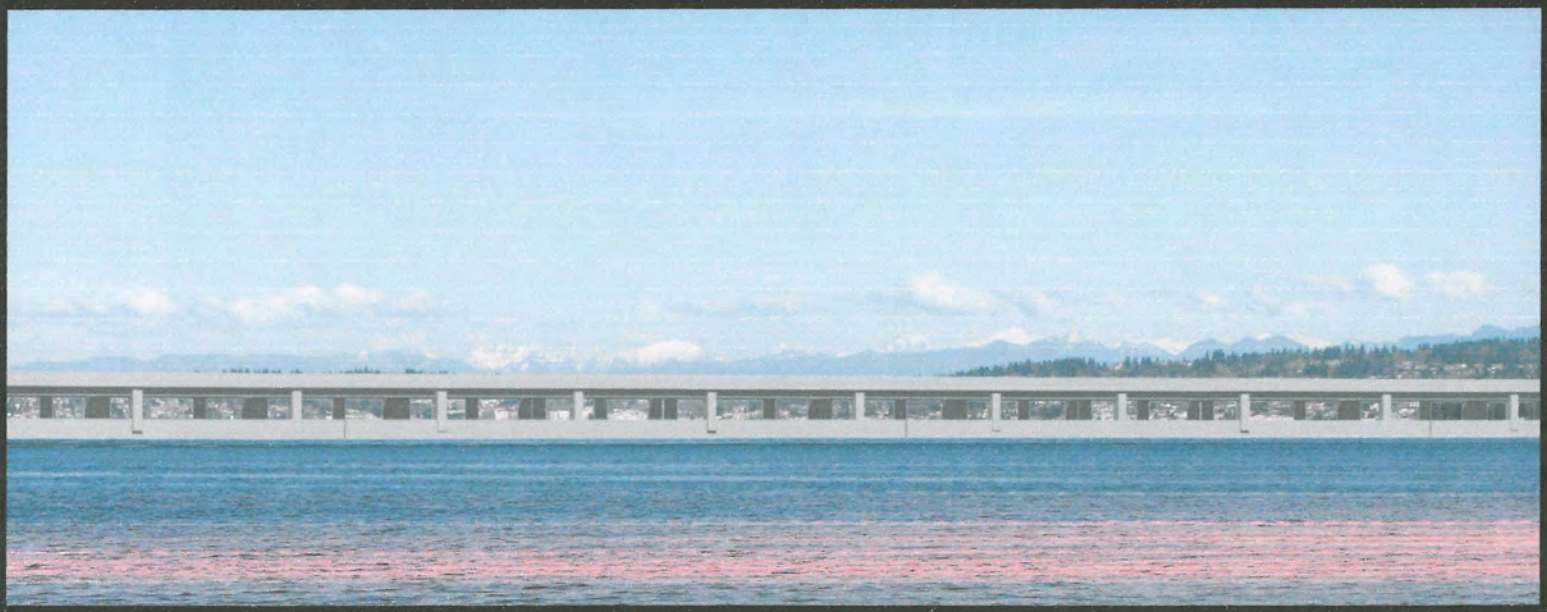
I have to leave the office today at 3:30 and will be out for the remainder of the afternoon, but should you have any other questions or concerns, please feel free to contact Sarah Brandt, SR 520 Environmental Communications, at brandts@consultant.wsdot.wa.gov.

I apologize for the inconvenience and thank you again for bringing this to our attention.

Justin McCaffree
Communications, SR 520 Bridge Replacement and HOV Program
Washington State Department of Transportation
206-269-5041
101 Stewart Street, Suite 1200 I Seattle, WA 98101
<http://www.wsdot.wa.gov/projects/sr520bridge/>

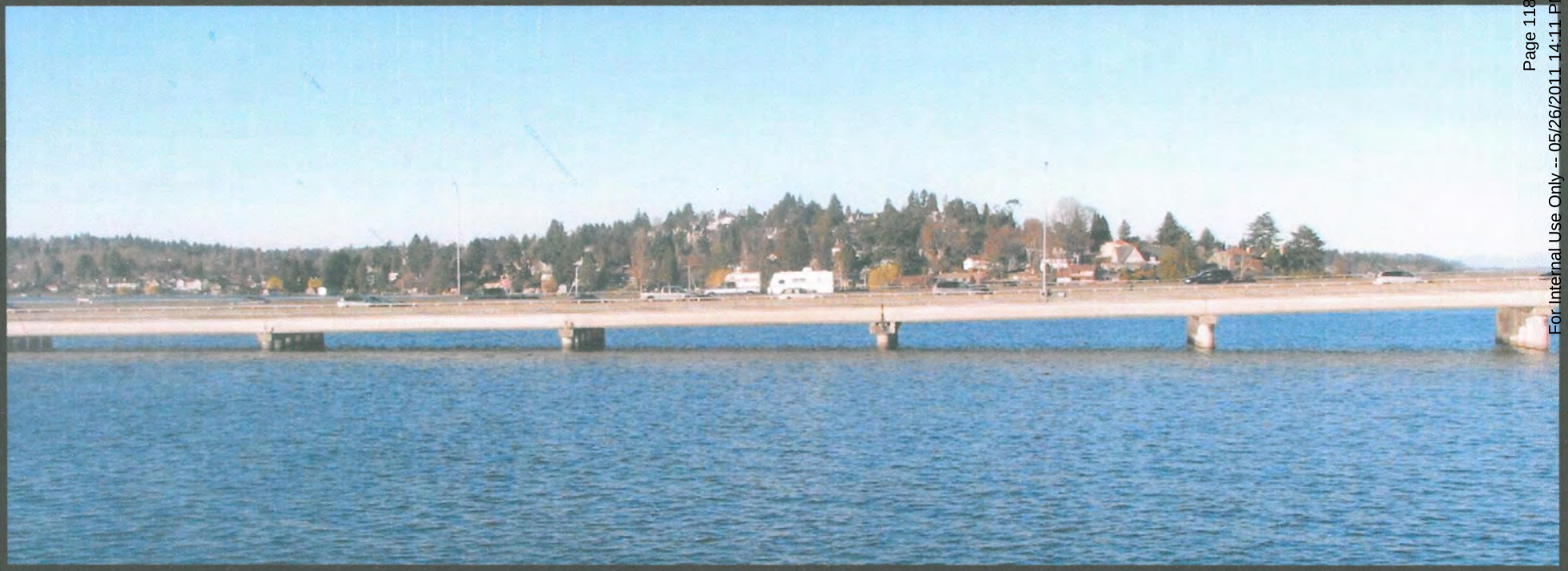
EXHIBIT 2

Looking Northeast from Madison Street Pier - Current Bridge

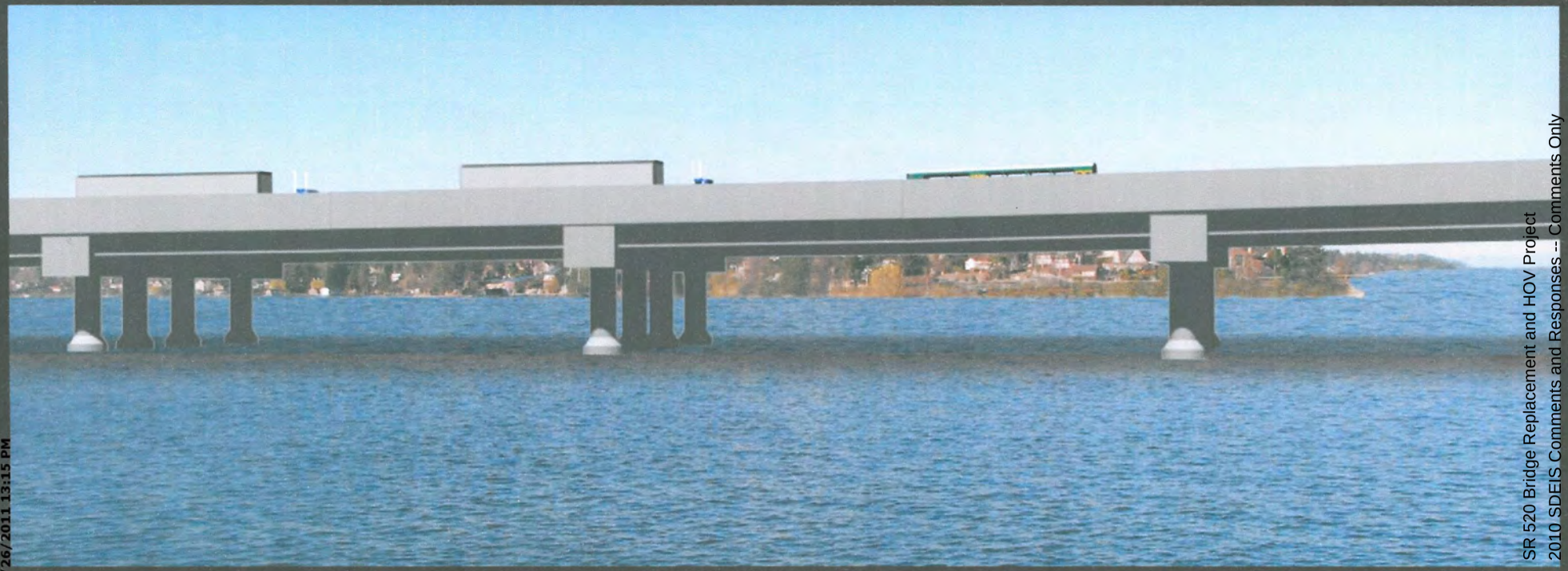


Looking Northeast from Madison Street Pier - Proposed Bridge

EXHIBIT 3



Current Bridge



Proposed New Bridge

C-044
05/26/2011 13:15 PM
SR 520 Bridge Replacement and HOV Project
2010 SDEIS Comments and Responses -- Comments Only
Page 1189
For Internal Use Only -- 05/26/2011 14:11 PM

-----Original Message-----
From: Bill Mundy [mailto:bill@mundyfarms.com]
Sent: Tuesday, April 13, 2010 7:49 AM
To: SR 520 Bridge SDEIS
Cc: Mundy Mary
Subject: SDEIS Comments

Attached are our comments. We would appreciate your acknowledging receipt of this document. Thank you.

*** eSafe2 scanned this email for malicious content ***
*** IMPORTANT: Do not open attachments from unrecognized senders ***

Bill and Mary Ann Mundy
2500 Canterbury Lane E., #301
Seattle, WA. 98112
bill@mundyfarms.com
mamundy@comcast.net
April 13, 2010

Jenifer Young
SR520, I-5 to Medina: Bridge Replacement and HOV Project
Environmental Manager
SR520 Project Office
600 Stewart Street, Suite 520
Seattle, WA., 98101

Dear Ms. Young:

C-045-001 The following are comments that we have regarding WSDOT's Supplemental Draft Environmental Impact Statement (SDEIS). Bill Mundy, as Chairman of the Canterbury Shores SR520 Committee, has also reviewed and commented on the SDEIS under a separate document. Our concerns parallel those found in the separate document in most instances. There are some exceptions, especially regarding health matters.

Attachment 7, Discipline Reports

Air Quality

Dust. Particulate Matter (PM). There is NO analysis of PM during construction and operation on a seasonal basis. During summer months wind from the north significantly increases PM along North Madison Park (NMP) and at Canterbury Shores (CS). Your averages MISSTATE the seasonal effects.

Health

C-045-002 It is our understanding there has been a health impact assessment that has been made regarding the SR520 project. There is no evidence of that in the Discipline Reports. The air quality report simply assumes that since air quality will not deteriorate there are no adverse human health affects. There is no quantitative data regarding the broad range of health affects (air, noise, vibration, etc.) on specific types of health problems. For example, what is the relationship between increased SR520 noise and mental illness?

Wetland

C-045-003 The amount of wetland that will be affected by construction is significantly underestimated. Material in the DSEIS excludes the impacts of the temporary bridge

C-045-003 which will be built to the south of the existing bridge and the boat and barge traffic in this very shallow wetland area. There is NO indication of the type and extent of mitigation.

Wildlife

C-045-004 Great Blue Heron.

The Great Blue Heron (Heron) is a state listed priority species. The DSEIS states there are no species of special interest. The Blue Heron is NOT mentioned. Page 4-43 states "No large trees would be removed therefore potential rockery habitat for the Great Blue Heron would not be affected." Large trees are NOT a determinant. Heron roost in mid-sized to small trees, especially in Arboretum Area 712 where their habitat will be destroyed by construction activity. This is an OMISSION.

C-045-005 Beaver.

Page 4-44 mentions and includes a photograph of one beaver lodge. Due to the nature of the graphics it is NOT possible to determine the location of the cited beaver lodge. However, in this vicinity there are three NOT one beaver lodge. The DSEIS text states the beaver lodge would be destroyed and they would have to construct a new one. It is highly likely that all three lodges would be destroyed as all three are in close proximity to the existing SR520 right of way. Beavers are very protective of their environment. The text states only their reproductive process would be affected.
A distinction between beavers in general and the three beaver lodges, particularly the one at the 37th Ave. E. street end needs to be made. In the case of all three lodges these are unique animals living in close proximity to an urban area. The lodge at the 37th E. street end is one of three that we know of, in the entire Metropolitan Seattle Area that can be easily observed from the land at a distance of about 50 feet.
The EIS fails to analyze the impact of the 520 construction on these particular animals. There is no plan as to how to minimize the impact on them during and after construction. The beavers give birth to their young between Feb. and April. The kits, usually 4-6 in number, are nurtured by their mother from April 1 to October 1. The disturbance of construction during the nurturing period is particularly detrimental to the animals occupying these lodges. The lodge at the 37th E. street end has at least 5 active adult beavers in addition to any new kits that may have been conceived this winter. The evidence of current beaver activity is very observable at the lake side by their wood chewing activity. The beavers at the 37th E. lodge are seen by children and adults on a regular basis. This particular lodge is an essential connection between the Madison Park Community's and native wildlife. Even though beavers in general are not classified as protected species under the Environmental Protection Act, these beavers are unique in an urban setting and should NOT be considered in the general class of beavers in other parts of the State of Washington. By giving consideration to the uniqueness of these particular beavers and the purposes of the Environmental Protection Act, the beavers at the 37th E. street end should be dealt with as if they are protected species.
The 520 EIS should analyze the impact of construction on these unique beaver lodges

C-045-005

and contain a plan to protect the beavers during the construction period.
The following questions need to be answered:

- How will their reproductive process be affected?
- Where could they build a new beaver lodge?
- How long will it take to construct replacement beaver lodges?
- Where and how will beaver exist as they are replacing the lodges?
- How will the destruction of the lodges affect the beaver population? For example their reproductive process, behavioral habits, susceptibility to disease?

There is NO discussion of these issues. There is NO discussion of mitigation.

C-045-006

Hazardous Material

Miller Street Landfill

The only site studied is the Arboretum Playfield. There is NO precise delineation of the Miller Street Landfill. Historical and anecdotal reports indicate a large area between the Arboretum and NMP was used as a landfill. The DSEIS cites a study (Ouet and Kiers, 2007) indicating methane gas was found. The precise location of their study is NOT cited or shown. When canoeing and kayaking through this area (south of the bridge) "air" bubbles rise to the surface therefore there is evidence of methane gas below the surface.

Sediments (page 36). Cited are two studies, 1992 and 2004, in Lake Washington and Portage Bay. The text states these studies indicate there are relatively low concentrations of PCB's, PAH's, and phthalates. There is NO indication of where these sites are. These two studies are NOT consistent with a study carried out by Canterbury Shores. The following indicates the CS study results:

The water sample was collected in a container provided by AMTEST Laboratories following their directions. It was delivered to AMTEST on October 4, 2002. The sample was analyzed by AMTEST and the results reported to us on October 24, 2002.

Diesel and Heavy Oil were found in significant quantities, as follows:

Diesel	*1,500 parts per billion (ppb)*
Heavy Oil	*5,700 ppb*

In both cases the EPA minimums, or clean up standards, according to AMTEST, are 1,000 ppb. Therefore, both diesel and heavy oil exceed the EPA minimums, the latter by a considerable amount.

The SDEIS does NOT state how the extent and type of hazardous material will be dealt with in the area extending between the western edge of the Arboretum to the eastern edge of NMP.

C-045-007

Land Use, Economics and Relocation

C-045-007

Estimated Construction Time. The DSEIS states construction time in the NMP vicinity will be 54 months (4.5 years). In numerous meetings with WSDOT personnel they have stated construction time will be between five to seven years. Therefore the SDEIS appears to be in ERROR.

C-045-008

Value Impacts. There is NO discussion in the SDEIS about the affect construction or the permanent operation will have on the value of property in the SR520 corridor.

C-045-009

Noise

With tolling the amount of traffic on 520 will be less than without tolling in any of the four cases (No Build, etc). Consequently vehicle speeds will be greater. Therefore the noise level will be greater. This relationship is NOT stated in the SDEIS.

C-045-010

Mitigation is required for residential areas if exterior noise levels are greater than 67dBA based on federal Noise Abatement Criteria (NAC). The following are the forecast noise levels (page 32):

Canterbury Shores, Monitoring Location 35, 65 dBA
Edgewater, Monitoring Location 36, 66 dBA.

Statistically there is no significant difference between 65, 66 & 67 dBA. This is especially true given the variability in measurements [time of day, weather, height of receiving location such as building story (Canterbury Shores is a four story building), person doing the measuring, the objectivity with which the measurements were taken (for example, the noise experts were not retained by an impartial entity but rather by WSDOT), etc.].

Throughout the DSEIS when dealing with noise mitigation and in particular noise walls, which are the only feasible type of noise mitigation strategy for NMP, it does NOT state noise walls will be constructed, rather it states they are "recommended." History shows that at the end of a construction project when funds are minimal or lacking the "recommended" items are frequently NOT provided.

C-045-011

There is a significant INCONSISTANCY between WSDOT maximum noise levels and those of the City of Seattle and Washington State Labor and Industries.

- For Seattle:
  - Maximum sound level between 7:00am and 10:00pm is 55 dBA. This would be for the permanent operation;
  - The maximum exceedence during construction for heavy equipment is 25 dBA;
  - Therefore, the total maximum noise level for the 54 month construction period during any day would be 80 dBA (80 dBA is "moderately loud" and equivalent to standing within two feet of an operating garbage truck).
- For WA. Labor and Industries:
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Vibration

Reference page 69, Vibration Effects. The DSEIS states it is: "Unlikely that vibration levels would exceed 0.5 inches per second at a distance greater than 100 feet from the construction site." This is INCORRECT.

- First, there is NO quantitative data provided showing vibration levels were based on the tests WSDOT did;
- We know WSDOT did tests for two reasons:

C-045-011

1. We gave WSDOT permission to place a "vibration meter" on our property and we accompanied the person who placed it there;
2. We witnessed and experienced the tests, both putting in the piles and taking them out (both which will occur as a part of the WSDOT construction activity).

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- For pile removal there is no doubt they exceeded 1.27. Homeowners stated that objects on counters and shelves "jumped around." In fact, vibration was so bad numerous governmental agencies were contacted, including WSDOT. Exhibit 1 shows the e-mails that resulted.

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The SDEIS states there is "no effective method to reduce vibration." (page 174). If it can't be reduced how can "it be kept to a minimum."?

If noise and vibration levels are above legal limits what can be done? "Vibration monitoring" (page 61) will NOT cure the problem.

C-045-012

Noise and Vibration, Pile Removal.

The noise and vibration material deals with the 2042 piles that will be driven over the 54 month construction period. It does NOT deal with the process of removing the piles and the noise and vibration that will result from the removal process. This is a serious OMISSION for the experience at CS indicates that the noise and vibration resulting from the removal of the piles is much greater than driving them. We have also discovered that if piles cannot be removed through extraction (pulling them) they are cut off at the lake bottom. The DSEIS does not deal with the debris that remains, for example the creosote laden piles. This is a serious OMISSION, especially due to the remaining hazardous material.

C-045-013

Recreation

OMITTED from the SDEIS is an analysis and discussion of the effect of the temporary construction bridge to the south of the existing alignment and bridge on boat access to NMP water frontage property. The temporary bridge, barges and working boats will severely and/or completely make ingress and egress impossible.

C-045-014

Transportation

OMITTED. An analysis of the effect on traffic at the Lake Washington Blvd and Madison Street intersection.

C-045-015

View

Volume I.

Regarding the West Approach Landscape Unit. This OMITS the view affect on NMP homes (page 57). It MISSTATES how NMP views would be permanently affected:
"possibly blocking views of Laurelhurst Hills but revealing more open water in Union Bay." (page 70). See the following comments under Volume II.

Volume II.

Exhibit 2-17 and 2-18 show existing and Option A (and the 2 other options also) views. Both exhibits are MISLEADING due to the INCORRECT way the photographs were taken (using an incorrect camera lens that does NOT show what the eye actually sees). Exhibit 2 shows what the view will actually be like from the north shore of NMP on a before and after basis. Exhibit 3 shows what the views will look like from the Madison Street pier, at the east end of Madison Street. These two exhibits were prepared by a professional photographer, Mr. Aaron Weholt, Legal Media, Seattle, WA.

C-045-016

Water Resources

Referencing Page 69. OMISSION. There is no discussion of how the south one-half of the bridge, the east-bound lanes, would be constructed. Also OMITTED is a discussion of the temporary construction bridge that will be located south of the east-bound lanes.

C-045-017

Construction Activities, Chapter 3, 1/5/2010.

The are NO graphics shown and there are NO specifics on the construction bridge to be located south of the current and new east-bound lanes. The purpose of this "construction bridge" is to demolish the existing bridge and build the new east-bound lanes. The construction time period, according to the SDEIS, is 4.75 years. This time period may be IN ERROR as WSDOT staff have indicated it will be between five to seven years. This is a very significant OMISSION for the construction affects from noise, vibration, view blockage and water access will be huge.

Project Operation and Permanent Affects (Chapter 5).

C-045-018

Noise.

C-045-018 The SDEIS states "WSDOT's practice is to work with the owners of these properties (those where "noise abatement measures must be considered") during detailed project design to determine the mitigation measures that will be used." (page 5-104). No one from WSDOT, or any other public agency, has discussed this matter with CS management or owners. This is an OMISSION.
As was stated earlier, there is NO assurance of mitigation. Noise walls are the only mitigation proposed for NMP. All options state: "If noise walls are included …" (page 5-107). This is NOT as assurance that noise will be mitigated.
North Madison Park is NOT mentioned for noise mitigation. (page 5-109 and 5-110).

C-045-019 Wildlife and Habitat.

Referencing the sentence "Remove a large beaver lodge …" (page 5-140). There are at least three (3) beaver lodges in or in very close proximity to the 520 right-of-way in the arboretum. The SDEIS graphics DO NOT identify where any are located. There is NO scientific analysis or discussion of the effect construction will have on the beaver population

There are NO mitigation measures for wildlife. (page 5-146).

C-045-020 Navigation.

There is NO discussion on how navigation would be affected north of NMP and south of 520 during construction or permanently. (page 5-151).

C-045-021 Effects During Construction (Chapter 6).

There is either NO or ONLY superficial discussions of construction affects on NMP regarding boat access, noise, vibration and wildlife. (page 6-46 to 6-49). Also, see the above comments relating to the Discipline Reports.

C-045-022 View Impact.

In Chapter 6 it states: "*Under all design options, the greatest temporary change to visual character and quality would result from demolition of the Lake Washington ramps to and from the Arboretum and construction and presence of construction and detour bridges because of their size and complexity. Vegetation would be removed in 30- to 60-foot-wide swaths for the work bridges. Subsequent construction of the permanent new west approach bridges would compound the effects. The combination of the construction bridges, detour bridges, finger piers, and the existing and new bridges would result in substantial degradation of visual character and quality of the south part of Union Bay. The structures would block water- and ground-level view for viewers near the structures. The viewers most affected by this change would be commuters crossing the bridges, park users and boaters, and residents in north Madison Park (underline mine). Views from the Broadmoor Golf Course would be screened most of the year by tall trees along the shoreline.*" (page 6-54 and 6-55). This statement:

C-045-022

- Is inconsistent (an ERROR) with your statement regarding views (Views, Volume I, page 70) where it states: "*possibly blocking views of Laurelhurst Hills but revealing more open water in Union Bay.*"
- Does NOT discuss mitigation, an OMISSION.

C-045-023

Noise. (re: page 6-65+)

The following is relevant information and comments from several tables in this section:
Table 6.7.1: Equipment – Pile Drivers, Noise Level – 99-105 dBA, Number of piles to be driven: 1987 + 55 for Lake Washington Blvd or 2042 piles total.
Table 6.7.2: Maximum City of Seattle sound level, residential – 55 dBA.
Table 6.7.3: Maximum Exceedence:

Minutes/hour	Exceedence
15	+5 dBA
5	+10 dBA
1.5	+15 dBA

For driving in and pulling out the 2042 pilings (that is 4084 operations) the maximum noise criteria for the City, State, and federal government (NAC) will be exceeded. What is the effective mitigation? The answer to this has been OMITTED.
Table 6.7.4.:Noise Levels that "should NEVER be exceeded."

dBA	Time Duration Exceedence Prohibited
90	Continuously*
93	20 minutes
96	15 minutes
99	7.5 minutes

*I believe this is an error, for it means at 90 dBA or greater the noise level cannot be exceeded.
Therefore, if any piles are driven the noise levels will be exceeded. But, this must NEVER happen. What is the answer to this dilemma? It has been OMITTED.
In addition, just so we are on the "same page," don't suggest these noise levels will not reach NMP. First, your noise profiles do not take into account the construction bridge. Second, they do not take into account pile removal. Third, they do not take into account the vibration index.

Vibration (reference page 6-69).

Data and analysis on vibration testing has been OMITTED.
Reference "Construction Vibration Effects" page 6-69. In the middle of the paragraph it states "*It is unlikely that vibration levels would exceed 0.5 inches per second at distances greater than 100 feet from the construction sites.*" In that regard:

- Distances from the construction bridge have been OMITTED;
- Data and analysis has been OMITTED regarding vibration tests and levels;
- Based on the experiences at Canterbury Shores regarding driving and pulling piles the vibration level exceeded 1.27 inches per second. This data and the effects have been OMITTED.

C-045-023

- Due to the poor quality of graphics in Exhibit 6.7-3 (at least on my CD), it is not possible to tell where the noise contours are in relation to the land (i.e. shoreline, land improvements, etc.). This must be an ERROR.

Respectfully submitted,

Bill Mundy. Mary Ann Mundy

Attachments: Exhibits 1, 2 & 3.

EXHIBIT 1 a

From: "McCaffree, Justin (Consultant)" <McCaffJ@consultant.wsdot.wa.gov>
Date: November 9, 2009 2:59:42 PM PST
To: "Bill Mundy" <bill@mundyfarms.com>, "Warner, Dave (Consultant)" <WarneDa@consultant.wsdot.wa.gov>
Cc: <donwand@comcast.net>, "French Bruce" <brucef@bca-online.com>, "John Miller" <johnm@cdcmanagement.com>, "Samuel Jim" <sgllc1@nwlink.com>
Subject: RE: SR 520 In-Water Test Pile and Noise Study: Noise Monitoring

Mr. Mundy,

Thank you very much for bringing this concern to our attention. I will make sure that the appropriate project staff are made aware of this issue.

Justin McCaffree
Communications, SR 520 Bridge Replacement and HOV Program
Washington State Department of Transportation
206-269-5041
101 Stewart Street, Suite 1200 | Seattle, WA 98101
<http://www.wsdot.wa.gov/projects/sr520bridge/>

From: Bill Mundy [mailto:bill@mundyfarms.com]
Sent: Mon 11/9/2009 2:47 PM
To: McCaffree, Justin (Consultant); Warner, Dave (Consultant)
Cc: donwand@comcast.net; French Bruce; John Miller; Samuel Jim
Subject: SR 520 In-Water Test Pile and Noise Study: Noise Monitoring

Justin. A very short while ago, probably within the last 1/2 hour, your noise study folks (big barge on north side of bridge, possibly General Construction) did some vibration testing. This was VERY noticeable here at Canterbury Shores (floors shook, our lights and china clattered). This is very disconcerting for several reasons: (1) the foundation of CS is supported by pilings and much of this area was an old landfill therefore the vibrations could cause settling (2) settling will cause cracks in wallboard, brick mortar, etc. (3) the vibration is so great that we will need to take things of value off open shelves and counter tops (I know there are several residents here that have significant collections of blown glass). I can understand your desire to do these tests, but it would be prudent to "tone them down" significantly. Thank you.

Bill Mundy Ph.D., MAI
2500 Canterbury Lane E. #301
Seattle, WA., 98112.

EXHIBIT 1 b

From: "McCaffree, Justin (Consultant)" <McCaffJ@consultant.wsdot.wa.gov>
Date: November 9, 2009 3:19:52 PM PST
To: "Bill Mundy" <bill@mundyfarms.com>
Cc: "Brandt, Sarah (Consultant)" <BrandtS@consultant.wsdot.wa.gov>
Subject: RE: SR 520 In-Water Test Pile and Noise Study: Noise Monitoring

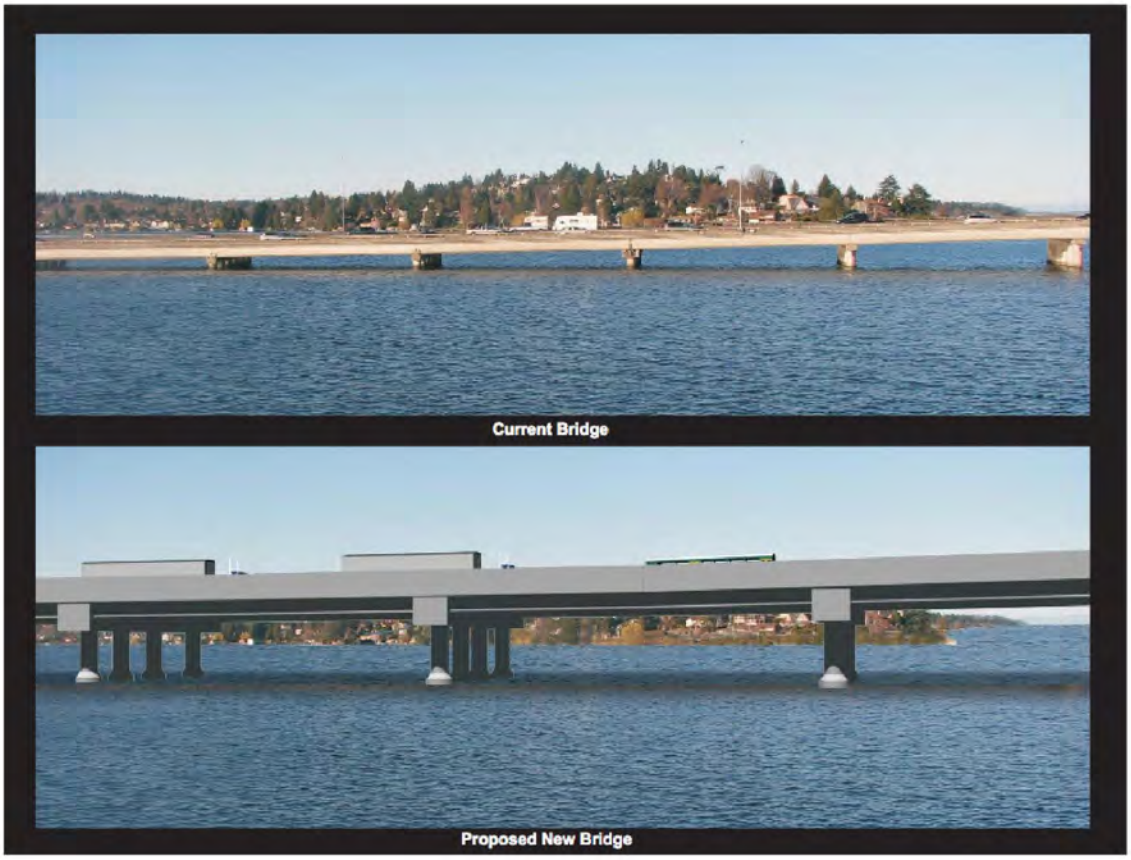
Mr. Mundy,

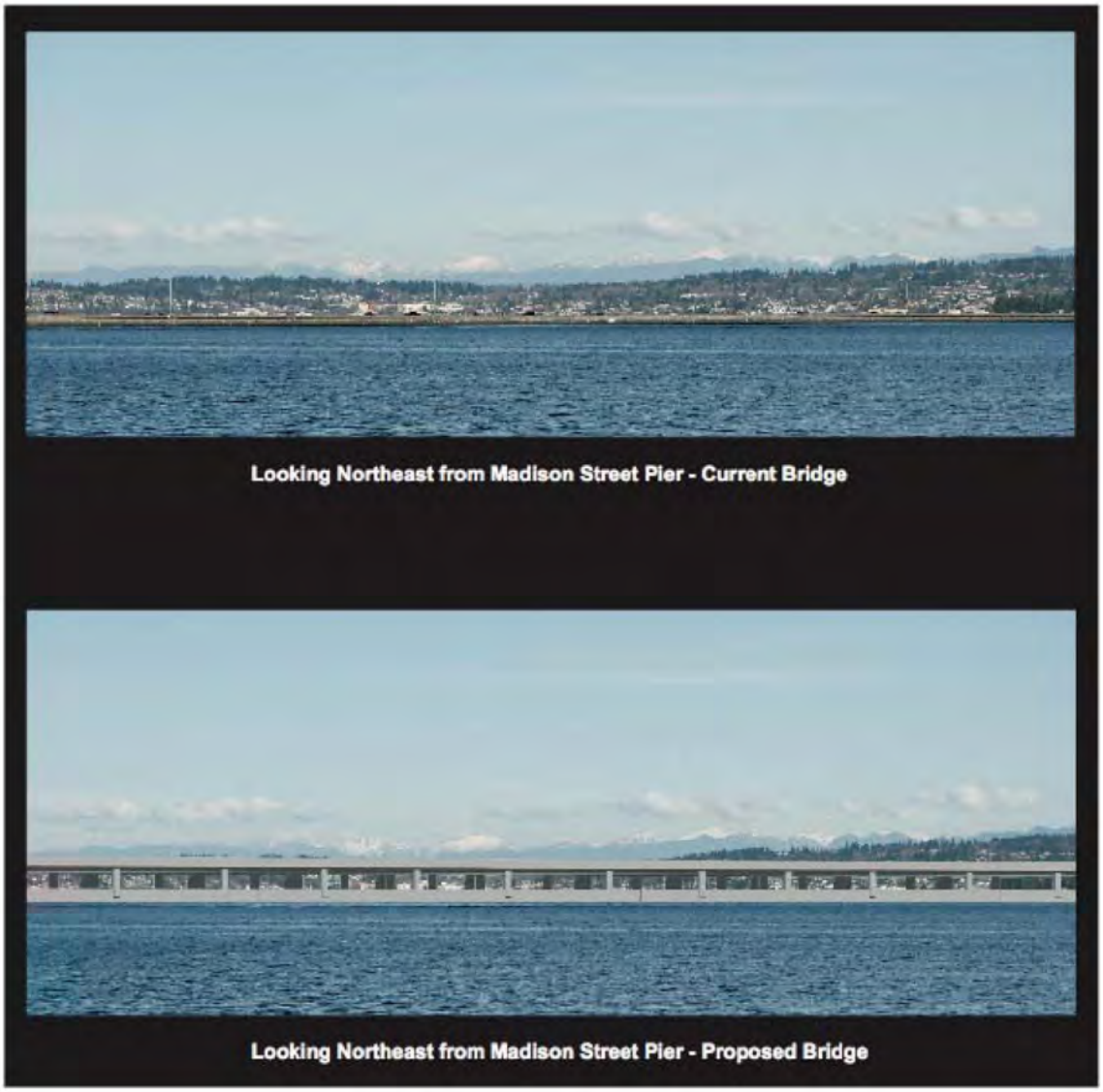
I spoke with the on-site construction inspector who informed me that the vibration you felt occurred as crews were attempting to remove the final test pile using a vibratory hammer. Crews were unable to remove the pile using this method, and will instead have divers on-site tomorrow to cut the pile off below the mud line.

I have to leave the office today at 3:30 and will be out for the remainder of the afternoon, but should you have any other questions or concerns, please feel free to contact Sarah Brandt, SR 520 Environmental Communications, at brandts@consultant.wsdot.wa.gov.

I apologize for the inconvenience and thank you again for bringing this to our attention.

Justin McCaffree
Communications, SR 520 Bridge Replacement and HOV Program
Washington State Department of Transportation
206-269-5041
101 Stewart Street, Suite 1200 | Seattle, WA 98101
<http://www.wsdot.wa.gov/projects/sr520bridge/>


Current Bridge
Proposed New Bridge



Looking Northeast from Madison Street Pier - Current Bridge

Looking Northeast from Madison Street Pier - Proposed Bridge

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Seattle, WA 98124-4749

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Seattle, WA 98124-4025

Governor Christine Gregoire
Office of the Governor
PO Box 40002
Olympia, WA 98504-0002

Paula Hammond, Secretary
Washington State Dept of Transportation
PO Box 47300
Olympia, WA 98504-7300

Jennifer Young
SDEIS Manager
600 Stewart St., Suite 520
Seattle, WA 98101

RE: SR 520 Bridge Replacement Project

Dear Mayor, Councilmembers, Governor, Secretary and Ms. Young,

C-046-001

As business owners and members of the community here in the Fremont neighborhood of Seattle, we are greatly dependent on the ongoing viability of the SR 520 route for transportation of ourselves, customers and products to and from the east side of the lake.

While we encourage planning and design for bridge approaches that would allow for future installation of light rail, after 13 years of planning, we strongly urge you to proceed with the current WSDOT plan for the bridge replacement without further delay.

Sincerely,

Marko Tubic, President
Fremont Chamber of Commerce

RECEIVE
MAY 11 2010
Office of the Secretary
Department of Transportation

The Fremont Chamber of Commerce strengthens the business climate and improves the quality of life in the Fremont area.