

Funding Options and Strategies for the Columbia River Crossing Project

Working Paper 7.2

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Table of Contents

1	Introduction	4
1.1	Background	4
1.2	Organization of Report	4
 2	 Background on State Financing Mechanisms	 5
2.1	Introduction	5
2.2	Transportation Bonding/Debt Authority in Washington	5
2.2.1	Statutory and Constitutional Provisions regarding State Debt	5
2.2.2	State Financing of the Tacoma Narrows Toll Bridge Project	7
2.3	Transportation Bonding/Debt Authority in Oregon	8
2.3.1	Constitutional Authority for Transportation-related Bonds in Oregon	8
2.3.2	Statutory Authority for General Obligation Bonds for State Highways	9
2.3.3	Statutory Authority for Highway User Tax Bonds	9
2.3.4	Statutory Authority for Oregon Transportation Infrastructure Fund Bonds	10
2.3.5	Statutory Authority for Short-Term Debt	11
2.3.6	Statutory Authority for Grant Anticipation Revenue Bonds	12
2.3.7	General Statutory Provisions Relating to Issuance of State Debt under ORS 286	13
 3	 Federal Transportation Discretionary Grants	 14
3.1	Overview of Federal Grants	14
3.2	Projects of National Significance	14
3.2.1	Introduction	14
3.2.2	Eligibility Requirements	15
3.2.3	Competitive Criteria for Grants	15
3.3	Borders and Corridors Program	16
3.3.1	Background	16
3.3.2	Future of Program	17
3.3.2.1	TEA-LU Program	17
3.3.2.1	SAFETEA	18
3.4	High Priority Projects	18
3.5	New Starts Funds	19
3.6	Advance Construction of Federal Aid Projects	21
3.6.1	Introduction	21
3.6.2	Eligibility Requirements	21
3.6.3	Conversion to a Regular Federal Aid Project	22

4	Federal Loan and Credit Assistance Program: TIFIA	23
4.1	Introduction to TIFIA	23
4.2	Key Parameters of TIFIA Program	23
4.2.1	Current Program Requirements	23
4.2.2	Reauthorization Issues	24
4.3	Types of TIFIA Assistance	24
4.3.1	Direct Loans	25
4.3.2	Lines of Credit	26
4.3.3	Loan Guarantees	27
4.4	Repayment Sources for TIFIA	28
4.5	Application and Selection Process	28
4.5.1	Application Process	28
4.5.2	Financial Plan	29
4.5.3	Evaluation and Selection Criteria	30
4.6	Examples of TIFIA Projects	32
5	Loan and Credit Assistance Program: Section 129 Loan	34
5.1	Introduction	34
5.2	Requirements	34
5.3	Case Study: George Bush Turnpike, Texas	35
6	Federal Bonding and Debt Instrument Program: GARVEE	36
6.1	Introduction	36
6.2	Statutory Authority for GARVEEs	36
6.3	Federal Share of GARVEEs	37
6.4	Federal Funding Eligibility	37
6.5	Type and Use of GARVEEs	38
6.5.1	Types of GARVEEs	38
6.5.2	Examples of Use	39
6.5.3	Lessons Learned	41
6.6	Example of GARVEE Financing Capacity	41
6.6.1	Introduction	41
6.6.2	Assumptions	41
6.6.3	GARVEE Capacity Analysis Results	43
7	State Highway Funding: Tolls	45
7.1	Overview	45
7.2	Basic Concepts and Principles	45
7.2.1	Funding in Start-Up Periods	46
7.2.2	Maximizing Capital for Projects	47
7.2.3	Improving Credit Quality	47
7.3	Toll Funding Capacity Analysis	48
7.3.1	Introduction	48
7.3.2	Methodology	48
7.3.3	Assumptions	50
7.3.4	Results	51

7.4	Disclosure Requirements	59
7.4.1	Introduction	59
7.4.2	Feasibility Disclosure Items	59
8	Local Transit Funding	65
8.1	Introduction	65
8.2	TriMet	65
8.2.1	TriMet Statutory Authority	65
8.2.2	Financial Challenges	66
8.3	C-TRAN	66
8.3.1	General Responsibilities for HCT Projects under RCW 81.104	66
8.3.2	Required HCT Planning Process	67
8.3.3	Voter Approved HCT System Plans and HCT Finance Plans	68
8.3.4	HCT Funding Authorities	69
8.4	Toll Credits	70
Appendix A	Examples of Project Funding Plans	72

Working Paper 7.2

Funding Options and Strategies for the Columbia River Crossing Project

1. Introduction

1.1 Background

The preparation of a detailed and optimized finance plan for the Columbia River Crossing Project (the “Project”) will occur in the future. At this point in project development there are too many unknowns (for example, cost estimates, project schedule, etc.) to try to draw final conclusions about the project’s finance plan. However, the ability to finance the project in the future will depend on a large array of determinations made during the project development process. Thus, the project team must be aware of the impact that their project development actions may have on the ability to finance the project in the future.

Appendix A summarizes the finance plans for several large-scale projects that have recently been constructed or currently are under construction. As shown in Appendix A, funding plans for most large-scale projects employ a range of funding sources and finance techniques. Even projects that anticipate large amounts of funding from tolls frequently incorporate federal grants, GARVEEs, TIFIA, and other financing sources and measures. At this point in the Columbia River Crossing Project, the Project must be positioned to maximize the array of funding sources that may be available to it when the finance plan is finalized. This report highlights key issues and identifies potential strategic directions to achieve this objective.

1.2 Organization of Report

The remainder of this report is organized as follows:

- Section 2 summarizes the authority of ODOT and WSDOT to issue various types of debt that may be incorporated in the project’s finance plan.
- Section 3 describes the status, eligibility requirements, and processes for obtaining a variety of federal discretionary transportation grants; including Projects of National Significance (i.e. Mega Project funds), Borders and Corridors Funds, High Priority Project Funds, and New Start Funds; and also describes the use of Advance Construction authority.
- Section 4 describes USDOT’s TIFIA program.
- Section 5 describes the use of Section 129 Loans
- Section 6 describes the use of GARVEE bonds, and analyzes the financial capacity of using GARVEEs.
- Section 7 examines a toll revenue bond capacity analysis for the Columbia River Crossing Project; and describes the potential disclosure requirements associated with issuing toll revenue bonds.
- Section 8 describes the authority of TriMet and C-TRAN to help provide local funds for the transit component of the Project.

2. State Financing Mechanisms

2.1 Introduction

The finance plan for the Columbia River Crossing Project may ultimately include numerous debt financings (i.e. short-term borrowing, long-term borrowing, capitalized interest, capital appreciation bonds, GARVEEs, double-barreled bonds, etc). The ability to employ these types of techniques depends, in part, on having the state statutory authority to do so. The subsections that follow describe the authority for WSDOT and ODOT to enter into such borrowings.

2.2 Transportation Bonding/Debt Authority in Washington

2.2.1 Statutory and Constitutional Provisions regarding State Debt

Article VII, Section 1 of the State Constitution provides the basic legal framework for issuing and repaying State debt in Washington. Key constitutional requirements include:

- The legislature must prescribe: (i) the purposes for which debt may be contracted; which must be approved by three-fifths of the members of the House and Senate, and (ii) the amount of debt which may be contracted for any class of such purposes. The legislature may delegate its other powers relating to contracting for and funding of debt, such as determining the type of debt to be issued, but cannot delegate its power to determine the amount and purposes for which debt may be contracted.¹
- All Washington State bonds pledge the full faith, credit, and taxing power of the state, and the legislature must appropriate funds for debt service when due.²
- The cumulative amount of state contracted debt cannot exceed that amount for which payments of principal and interest in any fiscal year would require the state to expend more than nine percent of its average general state revenues for the three immediately preceding fiscal years.³
- The Constitution exempts from the nine percent limit debt issued against certain funds, including:⁴
 - Fees or revenues from the operation of the facility, such as tolls
 - Federal grants
 - Proceeds received from the sale of bonds or other evidences of indebtedness.
- The state may pledge its full faith, credit, and taxing power to guarantee the payment of any obligation payable from (i) motor vehicle license fees collected by the state or (ii) motor vehicle fuel excise taxes collected by the state. Furthermore, the legislature must,

¹ Article VIII, Section 1(i) of Washington Constitution

² Article VIII, Section 1(j) of Washington Constitution

³ Article VIII, Section 1(b) of Washington Constitution

⁴ Article VIII, Section 1(c) of Washington Constitution

at all times, provide sufficient revenues from these sources to pay the principal and interest due on all obligations for which these revenues are pledged.⁵

- Principal and interest on state debt must be repaid within thirty years.⁶

Each state borrowing must be specifically authorized by the legislature. Proceeds from state borrowings must only be used for the purposes specified in the act authorizing the issuance of such borrowings.⁷ RCW 39.42 applies to all state debt instruments that are authorized by the legislature, unless otherwise provided in the authorizing act. These statutes delegate the responsibility for issuing authorized debt to the State Finance Committee.⁸ Unless otherwise set in the authorizing act by the legislature, the Finance Committee is authorized to:⁹

- Determine the terms, structures, and maturities (within constitutional limits) of the bonds/debt.
- Determine whether interest on the bonds should be paid periodically or at maturity of the bonds.
- Obtain bond insurance, letters of credit or other credit support instruments
- Issue “anticipation notes” for moneys to be derived from pending bond sales¹⁰

RCW 39.42.060 establishes a statutory limitation on the aggregate amount of state debt of seven percent of the arithmetic mean of its general state revenues, two percent lower than would otherwise be permitted by the state constitution. Exempt from this statutory limitation is:¹¹

- The issuance of obligations in anticipation of revenues to be received by the state during a period of twelve calendar months following their issuance.
- The issuance of obligations payable solely from revenues of particular public improvements (i.e. toll revenues).
- A pledge of the full faith, credit, and taxing power of the state to guarantee the payment of any obligation payable from any of revenues received from: (i) state license fees for motor vehicles, or (ii) state excise taxes on motor vehicle fuel.

Based on the constitutional and statutory provisions, the Legislature must enact, with a 60% vote, a statute authorizing the sale of bonds for a specific purpose as a precondition to any sale of bonds. Before bond proceeds may be delivered, the Legislature must appropriate expenditure authority and the Transportation Commission must request the sale of bonds from the State Finance Committee comprised of the State Treasurer, Governor, and Lieutenant Governor. The process is shown in the diagram below:

⁵ Article VIII, Section 1(g) of Washington Constitution

⁶ Article VIII, Section 1(a) of Washington Constitution

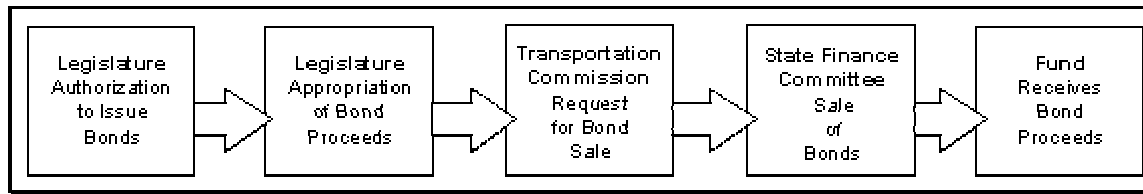
⁷ RCW 39.42.040

⁸ RCW 39.42.020

⁹ RCW 39.42.030

¹⁰ RCW 39.42.050

¹¹ RCW 39.42.080



2.2.2 State Financing of the Tacoma Narrows Toll Bridge Project

RCW 47.60.060, enacted in 1949, authorized WSDOT to issue revenue bonds for toll bridges in the Puget Sound area. These bonds were payable only from the project’s toll revenues, and were not general obligations of the state. The last project to use this funding mechanism was the Hood Canal toll bridge, which was refinanced in 1970 as a full faith and credit bond.

The current Tacoma Narrows Bridge project incorporates tolls, but the construction bonds are not toll-backed revenue bonds. Instead, these bonds are backed by the gas tax and the full faith and credit of the state (although from a budget perspective, the bonds will be paid off from toll proceeds). For this reason the Tacoma Narrows Bridge bonds have been sold at tax-backed bonds interest rates rather than revenue bond interest rates. The following paragraphs explain the history of the funding authority for the Tacoma Narrows Bridge, which, in part, may serve as a prototype for the Columbia River Crossing Project.

In November 1998 Referendum Bill 49 was approved, authorizing \$1.9 billion in state bonds for the “*location, design, right of way, and construction of state and local highway improvements.*”¹² These bonds are a general obligation of the state of Washington that provides an unconditional promise and pledges the full faith and credit of the state to the payment of principal and interest as they become due.¹³ Principal and interest on the bonds is payable from the proceeds of the state excise taxes on motor vehicle and special fuels.¹⁴

RCW 47.10.844 requires the transportation commission to request and the state finance committee to provide for the issuance of Referendum 49 bonds, provided that the legislature first appropriates the net proceeds of the bond sales. The issuance, sale, and retirement of these bonds are to be accomplished in accordance with RCW 39.42.¹⁵

Pursuant to RCW 47.46.140, which is provided below, toll revenues derived from the bridge project will be used to reimburse the motor vehicle fund in the state treasury:

Repayment of motor vehicle fund from toll charges. Toll charges must be used to repay the motor vehicle fund consistent with RCW 47.56.165 for any amounts transferred from the motor vehicle fund to the highway bond retirement fund under RCW 47.10.847 to provide for bond retirement and interest on bonds issued for the Tacoma Narrows public-private initiative project. Toll charges must remain on any facility financed by bonds issued by the state for a length of time necessary to repay the motor vehicle fund for any

¹² RCW 47.10.843

¹³ RCW 47.10.846

¹⁴ Id.

¹⁵ RCW 47.10.844

amounts expended from that fund for the design, development, right-of-way, financing, construction, maintenance, repair, or operation of the toll facility or for amounts transferred from the motor vehicle fund to the highway bond retirement fund under RCW 47.10.847 to provide for bond retirement and interest on bonds issued for the Tacoma Narrows public-private initiative project. Funds specifically appropriated as a non-reimbursable state financial contribution to the project do not require repayment.

RCW 47.56.165, also enacted in 2002, established the Tacoma Narrows Toll Bridge Account in the motor vehicle fund in the state treasury. All proceeds of bonds issued for construction of the Tacoma Narrows project, all toll charges from the operation of the Tacoma Narrows Bridge and any interest earned from these revenues must be deposited in the Account.¹⁶ Toll charges, other revenues, and interest may be used to pay any required costs of financing, operation, maintenance, and management and necessary repairs of the facility; and repay required amounts to the motor vehicle fund.¹⁷

2.3 Transportation Bonding/Debt Authority in Oregon

2.3.1 Constitutional Authority for Transportation-related Bonds in Oregon

The basic Oregon state constitutional provision relating to ODOT's authority to enter into debt is set forth in Article XI, Section 7, which states in relevant part:

The Legislative Assembly shall not lend the credit of the state nor in any manner create any debt or liabilities which shall singly or in the aggregate with previous debts or liabilities exceed the sum of fifty thousand dollars, except ... to build and maintain permanent roads; and the Legislative Assembly shall not lend the credit of the state nor in any manner create any debts or liabilities to build and maintain permanent roads which shall singly or in the aggregate with previous debts or liabilities incurred for that purpose exceed one percent of the true cash value of all the property of the state taxed on an ad valorem basis; and every contract of indebtedness entered into or assumed by or on behalf of the state in violation of the provisions of this section shall be void and of no effect. [emphasis added]

Article IX, Section 3a of the state constitution, which addresses the use of revenues from gas taxes and motor vehicle fees, states in relevant part:

1) Except as provided in subsection (2) of this section, revenue from the following shall be used exclusively for the construction, reconstruction, improvement, repair, maintenance, operation and use of public highways, roads, streets and roadside rest areas in this state: (a) Any tax levied on, with respect to, or measured by the storage, withdrawal, use, sale, distribution, importation or receipt of motor vehicle fuel or any other product used for the propulsion of motor vehicles; and (b) Any tax or excise levied on the ownership, operation or use of motor vehicles.

¹⁶ RCW 47.56.165(1)

¹⁷ RCW 47.56.165(3)

(2) Revenues described in subsection (1) of this section ... (b) May also be used for the retirement of bonds for which such revenues have been pledged.

Taken together, the state constitutional framework for transportation debt can be summarized as:

- The state can, but does not have to, issue full faith and credit (general obligation) bonds to build and maintain permanent roads.
- The cumulative amount of general obligation debt for roads cannot exceed one percent of the true cash value of all the property of the state taxed on an ad valorem basis.
- Revenues from taxes or excises on motor vehicle fuels, or on the ownership, operation, or use of motor vehicles can be pledged for repayment of debt used for highway purposes.

2.3.2 Statutory Authority for General Obligation Bonds for State Highways

ODOT can issue general obligation bonds to provide funds for building and maintaining permanent roads, including the costs of location, relocation, improvement, construction, and reconstruction of state highways and bridges.¹⁸ General obligation bonds are subject to the limits on state bonds set forth in the state constitution and resulting from the procedures set forth in ORS 286.505 to 286.545. ODOT must issue its general obligation bonds in accordance with the procedures set forth in ORS 286.031 to 286.066.¹⁹ Once such bonds are issued, ODOT must each year maintain or hold in the State Highway Fund sufficient moneys to pay annual debt service on the bonds when due.²⁰

2.3.3 Statutory Authority for Highway User Tax Bonds

As a supplement to all other bonding authorities of ODOT, ORS 367.605 through ORS 367.670 authorize ODOT to issue revenue bonds called “Highway User Tax Bonds.” This is the bonding authority utilized by ODOT for the OTIA program.

Highway User Tax Bonds are not a debt or general obligation of the state.²¹ They can only be secured from moneys from taxes, fees, or charges on:²²

- Motor carriers
- Motor vehicle fuel
- Vehicle titling and registration fees
- Drivers license fees
- Other ODOT-related sources (such as tolls)

In addition, Federal-aid high funds may be pledged to repay Highway User Tax Bonds (i.e. GARVEEs).²³

¹⁸ ORS 367.555

¹⁹ ORS 367.565

²⁰ ORS 367.595

²¹ ORS 367.615(1)

²² ORS 367.605(2)

²³ ORS 367.605(4)

Proceeds from Highway User Tax Bonds can only be used for building and maintaining permanent public roads and may:²⁴

- Finance the cost of state highway, county-road and city-street projects in Oregon
- Pay the cost of issuing the bonds.
- Pay the bond debt service of the bonds.
- Pay capitalized interest, principal, or premium, if any, of the bonds.

Highway User Tax Bonds may be issued as capital appreciation bonds, auction rate bonds, variable rate bonds, deep discount bonds or deferred interest bonds.²⁵ ORS 367.620 establishes certain statutory limits on the amount of Highway User Tax Bonds that may be issued.

2.3.4 Statutory Authority for Oregon Transportation Infrastructure Fund Bonds

ORS 367.015 establishes the Oregon Transportation Infrastructure Fund. Among others, the infrastructure fund consists of moneys: (a) appropriated to the infrastructure fund by the Legislative Assembly, (b) transferred to the infrastructure fund by ODOT from the State Highway Fund, (c) from any federal or other grants that are deposited in the infrastructure fund, (d) from infrastructure bonds²⁶, and (e) from Highway User Tax Bonds.²⁷ Moneys in the Infrastructure Fund can be pledged to pay debt service²⁸ on infrastructure bonds and related expenses, provide loan guarantees, provide infrastructure loans and assistance, and pay ODOT's share of project costs.²⁹

To provide moneys for the Oregon Transportation Infrastructure Fund, the State Treasurer may, in cooperation with ODOT, issue revenue bonds (infrastructure bonds) that are payable solely from all or any portion of the moneys deposited in the infrastructure fund.³⁰ The total principal amount of infrastructure bonds that that can be issued and outstanding at any time cannot exceed \$200 million.³¹

These revenue bonds do not constitute a debt of the state or a lending of the credit of the state within the meaning of any constitutional or statutory limitation.³² No funds other than those listed above and deposited in the infrastructure fund may be pledged for repayment of bonds.

²⁴ ORS 367.615(5)

²⁵ ORS 367.615(6)

²⁶ ORS 367.010 (7) "Infrastructure bonds" means bonds authorized by ORS 367.030, 367.555 to 367.600 or 367.605 to 367.670 that are issued to fund infrastructure loans and the proceeds of which are deposited in the infrastructure fund.

²⁷ ORS 367.015(2)

²⁸ ORS 367.010(3) "Bond debt service" means payment of: (a) Principal, interest, premium, if any, or purchase price of a bond; (b) Amounts due to a credit enhancement provider authorized by this chapter; (c) Amounts necessary to fund bond debt service reserves; and (d) Amounts due under an agreement for exchange of interest rates if designated by the State Treasurer or the Department of Transportation.

²⁹ ORS 367.015(4)

³⁰ ORS 367.030(1)

³¹ ORS 367.030(3)

³² ORS 367.030(2)

Moneys in the Oregon Transportation Infrastructure Fund may be used:³³

- To make infrastructure loans³⁴ or provide infrastructure assistance³⁵ to any public or private entity.
- For any purpose as long as the use is consistent with any restrictions of the Oregon Constitution that may apply to such moneys (i.e. Article IX, Section 3a)

Any “municipality”³⁶ or state agency³⁷ may obtain an infrastructure loan, including any intergovernmental entity or toll authority established for the Columbia River Crossing Project.³⁸ The infrastructure fund can also provide credit enhancements³⁹ or loan guarantees for municipalities to finance transportation projects, provided they do not cumulatively exceed \$50 million.⁴⁰ Infrastructure loans or credit enhancements can be repaid from several sources, including revenues from the transportation project (i.e. tolls).⁴¹

2.3.5 Statutory Authority for Short-Term Debt

In addition to the authority for short-term borrowing granted in ORS 288.165, ODOT can borrow money by entering into a credit agreement, a line of credit, or a revolving line of credit, or by issuing a note, a warrant, a short-term promissory note, commercial paper, or another similar obligation, for, among others:⁴²

- Providing matching funds as set forth in ORS 366.564.⁴³
- Providing funds for the payment of current expenses in anticipation of revenue, grants or other moneys intended for payment of the current expenses.
- Providing funds for interim financing of a capital asset or project to be undertaken by the department.

³³ ORS 367.020(1)

³⁴ ORS 367.010 (9) “Infrastructure loan” means a loan of moneys in the infrastructure fund to finance a transportation project.

³⁵ ORS 367.010(6) “Infrastructure assistance” means any use of moneys in the Oregon Transportation Infrastructure Fund, other than an infrastructure loan, to provide financial assistance for transportation projects. The term includes, but is not limited to, use of moneys in the infrastructure fund to finance leases, fund reserves, make grants, pay issuance costs or provide credit enhancement or other security for bonds issued by a public entity to finance transportation projects.

³⁶ ORS 367.035(1)

³⁷ ORS 367.040

³⁸ ORS 367.010(10) “Municipality” means a city, county, road district, school district, special district, metropolitan service district, the Port of Portland or an intergovernmental entity organized under ORS 190.010

³⁹ ORS 367.010(4) “Credit enhancement” means a letter of credit, line of credit, bond insurance policy, standby purchase agreement, surety bond or other device or facility used to enhance the creditworthiness, liquidity or marketability of a bond.

⁴⁰ ORS 367.060

⁴¹ ORS 367.035(1)(a)

⁴² ORS 367.105(1)

⁴³ ORS 366.564 Borrowing to match federal moneys. For the purpose of providing funds to match funds made available to the state by the federal government for highway purposes and for the matching of which federal funds there are no highway funds immediately available, the Department of Transportation may borrow money as provided in ORS 367.105 (See Section 2.3.5 of this Working Paper).

ODOT's authority to issue such short-term debt under ORS 367.105 is subject to the following limitations:

- The total outstanding indebtedness created by such short-term borrowing cannot exceed \$100 million in outstanding principal amount.⁴⁴
- All such short-term borrowing must mature within three years from the date of issuance.⁴⁵

ODOT may repay its short-term debt with funds from the State Highway Fund or other ODOT funds, including Federal-aid highway funds.⁴⁶

2.3.6 Statutory Authority for Grant Anticipation Revenue Bonds under ORS 367.161-181

Grant anticipation revenue bonds are revenue bonds secured based on receipt, or anticipation of receipt in the current or a future federal fiscal year, of federal transportation funds.⁴⁷ At the request of ODOT, the State Treasurer may issue grant anticipation revenue bonds for the purposes of:⁴⁸

- Financing highway and other transportation improvement projects
- Financing the restoration, reconstruction or renovation of highway improvements
- Paying the costs of issuance of the revenue bonds
- Paying the costs of credit enhancements

Debt service for grant anticipation revenue bonds must be payable solely from:⁴⁹

- Federal transportation funds (i.e. GARVEEs)
- Motor carriers
- Motor vehicle fuel
- Vehicle titling and registration fees
- Drivers license fees
- Other ODOT-related sources (such as tolls)

The following requirements apply to grant anticipation revenue bonds:

- It cannot pledge the ad valorem taxing power of the state or any political subdivision to the payment of the principal or the interest on the revenue bond.⁵⁰
- It must mature on or before the expected economic life of the projects financed with the proceeds of the revenue bonds.⁵¹

⁴⁴ ORS 367.105(3)

⁴⁵ ORS 367.105(4)

⁴⁶ ORS 367.105(5)

⁴⁷ ORS 367.161(2)

⁴⁸ ORS 367.163

⁴⁹ ORS 367.173(2)

⁵⁰ ORS 367.166(1)(a)

⁵¹ ORS 367.166(1)(d)

2.3.7 General Statutory Provisions Relating to Issuance of State Debt under ORS 286

State agencies (in this case ODOT) must authorize issuance of bonds by resolution of its governing body (i.e. OTC).⁵² The State Treasurer issues all bonds authorized by state agencies.⁵³ The following process applies:

- ODOT determines the interest basis and the maximum interest to be borne by the bonds; the State Treasurer must approve or disapprove.⁵⁴
- ODOT, with the approval of the State Treasurer, determines the period over which interest on bonds may be capitalized; provided the period may not be longer than the estimated period of construction.⁵⁵
- Prior to issuance of any bonds, ODOT must apply for and receive approval of the State Treasurer of the preliminary official statement, the specific amount of the bonds to be issued and the date of issuance.⁵⁶

No state bonds can be issued by the State Treasurer until:⁵⁷

- The agency (ODOT) has prepared and the State Treasurer has approved a cash flow projection detailing program revenues, if any, and their sufficiency to meet debt service requirements. The projections must include a listing of all significant assumptions of the cash flow model and the agency's estimate of the likelihood that such assumptions will materialize.
- If a financial consultant is retained, the consultant has attested that the cash flow projection contains all significant disclosures and all significant underlying assumptions necessary to provide a reasonable basis for that projection.

Each biennium, the Governor must recommend to the Legislative Assembly the total level for all state programs for which general obligation, revenue bonds or other financing agreements are authorized. In making the recommendations, the Governor must seek the advice of the State Treasurer on the total level for each biennium. After reviewing the Treasurer's advice, the Governor must present the total level for each program to the Legislative Assembly as part of the Governor's budget. The Legislative Assembly must then determine the level for each program for each biennium.⁵⁸

⁵² ORS 286.033

⁵³ ORS 286.031

⁵⁴ ORS 286.036(1)

⁵⁵ ORS 286.036(2)

⁵⁶ ORS 286.036(4)

⁵⁷ ORS 286.105

⁵⁸ ORS 286.525(1)

3. Federal Transportation Discretionary Grants

3.1 Overview of Federal Grants

Discretionary federal grants can play a role in funding the highway and transit components of the Columbia River Crossing Project. With regard to the highway component, the current reauthorization bill include three programs that may be pertinent to the Project: (i) Projects of National Significance (Mega Projects), (ii) “Borders and Corridors,” and (iii) High Priority Projects. The New Starts program represents an important opportunity to secure discretionary federal funds for the transit elements of the Project. These highway and transit discretionary programs are discussed in the subsections that follow.

In addition, Section 3.6 describes FHWA’s “Advance Construction” authority, which allows project sponsors to use non-federal funds for construction while preserving eligibility for future federal funding to reimburse the non-federal expenditures.

3.2 Projects of National Significance (Mega Project) Funding Program

3.2.1 Introduction

Transportation Equity Act: A Legacy for Users (TEA-LU), the current (March, 2005) transportation authorization bill in the House of Representatives, creates a new discretionary funding program for high-cost “*Projects of National and Regional Significance*.”⁵⁹ This program is popularly referred to as the “mega-project program,” which is how it is referred to in this report. The current (March 2005) Senate bill (*Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2005 (SAFETEA)*) does not include a mega-project program; so prospects for its enactment are uncertain. Table 1 shows the current proposed funding authorization for the program.

Table 1
Proposed Funding for Projects of National and Regional Significance
(in Billions)

Bill	FY2005	FY2006	FY2007	FY2008	FY2009	Total
TEA-LU	\$1.1	\$1.1	\$1.2	\$1.3	\$1.3	\$6.0
SAFETA	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

If enacted in whole or in part, the mega-project program may provide the Columbia River Crossing Project with a unique opportunity to obtain a significant federal discretionary grant. The following paragraphs explain the program and address related strategic issues.

⁵⁹ See Section 1304 of HR 3; *Transportation Equity Act: A Legacy for Users*

3.2.2 Eligibility Requirements

The mega-project program is a discretionary set-aside for large projects. To be eligible, a project must:

- Be a surface transportation project eligible for federal assistance under Title 23 (the Highway Title) of the U.S. Code. Since Title 23 permits federal assistance for certain railroad and transit projects, the types of projects and project expenses eligible under the mega-project program is quite broad.
- Have an “eligible project cost” equal to or greater than (i) \$500 million, or (ii) 75% of the requesting state’s total amount of Federal highway assistance funds.⁶⁰ Eligible project costs include project development, right-of-way, and construction costs
- Be sponsored by a state (i.e. a State must be the recipient of the grant).

The Columbia River Crossing Project will meet these eligibility requirements.

3.2.3 Competitive Criteria for Grants

The mega-project program is intended to be a competitive, discretionary funding program akin to the Federal Transit Administration’s (FTA) New Starts program; many of its provisions are patterned directly from New Starts statutes. This section describes the evaluation and selection criteria and process proposed in the bill. Whether and to what extent these criteria and processes will be followed is a matter of conjecture. The evolution of the New Starts program may be a good indicator of how the mega-project program may unfold, given the clear parallels between New Starts and the proposed mega-project program. These issues are also addressed below.

As with New Starts, mega-projects are to be evaluated based on several criteria listed in the statutes, which presumably will be further detailed in FHWA regulations should the program be enacted. The evaluation and selection criteria include:

- The extent to which the project leverages Federal investments with non-Federal contributions.
- The extent to which the project uses new technologies.
- The extent to the project which the project maintains or protects the environment.
- A determination that the project is justified, based on the project’s ability
 - To generate national economic benefits
 - To reduce congestion
 - To improve transportation safety
 - To otherwise benefit the national transportation system

⁶⁰ While the Columbia River Crossing Project will exceed the \$500 million threshold, it should be noted that the 75% threshold in Oregon is about \$180 million and in Washington about \$280 million.

- To garner support for non-Federal financial commitments and provide evidence of stable and dependable financing sources to construct, maintain and operate the facility.
- A determination that the project is supported by an acceptable degree of non-Federal financial commitments, including evidence of stable and dependable financing sources to construct, maintain, and operate the facility. In making this determination, FHWA must require that:
 - The project provides reasonable contingency to cover unanticipated costs.
 - Each non-Federal funding source for capital and operations is stable, reliable, and available within the project timetable. In assessing this criterion, the following must be considered:
 - Existing financial commitments
 - The degree to which the financing sources are dedicated to the proposed purposes
 - Any existing or proposed debt obligations for the project
 - The extent of any over-match

Based on the results of preliminary engineering, the project justification criteria outline above, and the degree of non-Federal financial commitment, FHWA will rate candidate projects as “Highly Recommended,” “Recommended,” or “Not Recommended. Projects that do not meet the criteria (i.e. Not Recommended projects) will not be permitted to advance from preliminary engineering to final design. These evaluation criteria and process parallel the statutory provisions of the New Starts program, except that they do not incorporate Alternatives Analysis or cost-effectiveness.

3.3 National Corridor Infrastructure Improvement Program

3.3.1 Background

The National Corridor Planning and Development Program (“Corridor Program”) was established in TEA-21, along with its sister program the Coordinated Border Infrastructure Program (“Border Program”). While these two programs had different objectives and eligibility requirements, they shared the same funding authorization. The Columbia River Crossing Project was eligible for “Corridor” funds, but not “Border” funds. Since these funding programs shared the same authorization, funds appropriated for Border projects reduced the funds available for Corridor projects, and vice versa.

TEA-21 authorized \$700 million of Borders and Corridors Program funds for the reauthorization cycle; however, Congress ultimately appropriated (by adding to the authorized funding levels) over \$1.1 billion. While TEA-21 established the Borders and Corridor Programs as a discretionary, competitive grant program, it quickly became an appropriations earmark program. About 85 percent of these funds were allocated to “Corridor” projects. Over the course of TEA-21, Oregon received about \$14.2 million and Washington, which was one of the states most benefited by the program, received about \$61.5 million.

3.3.2 Future of Program

Both the House (TEA-LU) and Senate (SAFETEA) authorization bills decouple the Corridors and Borders programs; they will no longer share the same authorization. Only the Corridor program will be applicable to the Columbia River Crossing Project. Table 2, below, shows the proposed funding for the Corridor program.

Table 2
Amount of Funding Proposed for Corridor Program in TEA-LU and SAFTEA

Bill	Program	FY2005	FY2006	FY2007	FY2008	FY2009	Total
TEA-LU	Nat'l Corridor Infrastructure Improvement Program	\$600.0	\$600.0	\$600.0	\$600.0	\$600.0	\$3,000.0
SAFETEA	Multi-state Corridor Program	\$120.6	\$140.7	\$160.8	\$180.8	\$200.9	\$803.8

While the Senate bill provides slightly less funding for the Corridor program than actually appropriated under TEA-21, the House Bill proposes a significant increase. Both the House and Senate bills propose a discretionary competitive grant program; although the criteria and priority in the bills differ. The extent to which these funds will be earmarked is a matter of political conjecture. But it is possible that at least some of these funds will be allocated to projects on the basis of merit. Thus, the key program specifications in each bill are outlined below.

3.3.2.1 TEA-LU Corridor Program

Under TEA-LU, the *National Corridor Infrastructure Improvement Program* gives priority to (i) projects that are in corridors that are part of the Interstate Highway system, and (ii) any project that will be completed within five years of receipt of an allocation of Corridor funds.⁶¹ Funds are to be allocated by considering the following factors:⁶²

- The extent to which the corridor provides a link between two existing segments of the Interstate System.
- The extent to which the project will facilitate major multi-state or regional mobility and economic growth and development in areas underserved by existing highway infrastructure.
- The extent to which commercial vehicle traffic in the corridor (i) has increased since the date of enactment of the North American Free Trade Agreement Implementation Act, and (ii) is projected to increase in the future.
- The extent to which international truck-borne commodities move through the corridor.
- The extent to which the project will make improvements to an existing segment of the Interstate System that will result in a decrease in congestion.
- The reduction in commercial and other travel time through a major freight corridor expected as a result of the project.

⁶¹ Section 1301(b)(1), TEA-LU

⁶² Section 1301(b)(2), TEA-LU

- The value of the cargo carried by commercial vehicle traffic in the corridor and the economic costs arising from congestion in the corridor.
- The extent of leveraging of Federal funds provided to carry out this section, including: (i) use of innovative financing; (ii) combination with funding provided under other sections of this Act and title 23, United States Code; and (iii) combination with other sources of Federal, State, local, or private funding.

The federal share of Corridor program funds is 80 percent, as may be adjusted per 23 USC 120(b).⁶³ Corridor funds allocated for a project remain available for obligation until six months from the day on which they are allocated.

3.3.2.2 SAFTEA Corridor Program

Under SAFTEA, the *Multi-state Corridor Program* gives priority to projects that emphasize multimodal planning, including planning for operational improvements that (a) increase: (i) mobility, (ii) freight productivity, (iii) access to marine or inland ports, (iv) safety and security, and (v) reliability; and (b) enhance the environment.⁶⁴ Funds are to be allocated by considering the following factors:⁶⁵

- The existence and significance of signed and binding multi-jurisdictional agreements;
- Endorsement of the study or project by applicable elected State and local representatives;
- Prospects for early completion of the study or project; or
- Whether the projects to be studied or constructed are located on corridors identified by section 1105(c) of the Intermodal Surface Transportation Efficiency Act of 1991.

The federal share of Corridor program funds is 80 percent, as may be adjusted per 23 USC 120(b).⁶⁶

3.4 High Priority Projects

In each reauthorization bill, congressman earmark funding for projects in their districts. Over the past several authorization bills, these earmark projects have been categorized as “High Priority Projects,” although each bill incorporates a variety of earmarks in other named categories. Table 3, below, shows the accelerating amount of earmarks historically occurring during the reauthorization process. While the number of projects being earmarked and the amounts of funds being earmarked have been rapidly increasing, the average amount of funds each project receives has significantly declined. Very few projects receive an amount of funds in excess of \$20 million.

⁶³ Section 1301(d), TEA-LU

⁶⁴ Section 1809(f)(2), SAFETA

⁶⁵ Section 1809(e), SAFETEA

⁶⁶ Section 1809(g), SAFETEA

Table 3
Trends in Earmarking in Transportation Reauthorization Bills

Authorization Year	Number of Earmarked Projects	Amt. Earmarked Funds	Avg. Earmark per Project
1982	10	\$ 385	\$38.5
1987	157	\$ 1,416	\$ 9.0
1991	538	\$ 6,082	\$11.3
1998	1851	\$ 9,359	\$ 5.1
2005	3676	\$11,000	\$ 3.0

Source: D.J Gribbon, 2005 State Federal Transportation Finance Conference, April 2005

Note: 2005 estimates are from March 2005 version of TEA-LU

As a result, while it may be beneficial to position the Columbia River Crossing Project to obtain earmarks from the High Priority Projects and similar earmark programs, the potential earmarks are unlikely to contribute a significant amount toward the total development cost of the Project.

3.5 New Starts Program

A detailed explanation of the requirements and evaluation criteria for FTA’s New Starts program is provided in Working Paper 1.2.2. This report focuses on the amount of funding available through the New Starts Program and how the funding availability may change in the future. Table 4, below, shows the amount of funds authorized for the New Starts program in TEA-21, and the amounts proposed in the current reauthorization bills.

Table 4
Authorized Funding Levels for New Starts/Small Starts Program
(Billions of Dollars)

	TEA-21	TEA-LU (1)	SAFETEA (2)
New Starts	\$6.9	\$8.6	\$8.7
Small Starts		\$0.9	
Total	\$6.9	\$9.5	\$8.7

(1) HR3, March 10, 2005

(2) Passed by Senate, May 18, 2005

While both TEA-LU and SAFETEA increase funding for the New Starts programs, there are important differences in these bills that may significantly affect the prospects for obtaining funds for light rail projects. Table 5, below, provides a side-by-side comparison of the key New Starts funding-related provisions of the two bills.

Table 5
Comparison of House and Senate Reauthorization Bill Provisions for
Selected New Starts/Small Starts Funding Issues

Issue	SAFETEA/Transit Act as Reported	TEA-LU as Passed
Section 5309 Program Structure	Retain current program structure, but change allocations within section 5309 to 40.4% major capital (new starts), 37.2% to rail modernization and 22.4% to bus and bus facilities	Modifies current program structure through separate small starts program - 38% rail modernization, 38% for new starts, 19% for bus and bus facilities and 5% for small starts
New Starts and Funding Guarantees	Fund new starts from both General Fund and MTA in FY 05 and only from General Fund in FY 06 and beyond	Fund new starts from both General Fund and MTA in FY 05 and only from General Fund in FY 06 and beyond
Structure of Major Capital Projects Program	Fund small starts within the new starts program with a slight percentage increase in funding for newly eligible projects	Retain current section 5309 programs but add a new small starts program.
New Starts/Small Starts Funding Levels	NEW STARTS FY 04 - \$1,315,980,000 FY 05 - \$1,437,830,000 FY 06 - \$1,386,520,000 FY 07 - \$1,465,100,000 FY 08 - \$1,600,930,000 FY 09 - \$1,744,390,000	SMALL STARTS FY 05 - \$135,000,000 FY 06 - \$175,000,000 FY 07 - \$200,000,000 FY 08 - \$200,000,000 FY 09 - \$225,000,000 NEW STARTS FY 05 - \$1,256,170,000 FY 06 - \$1,386,670,000 FY 07 - \$1,473,720,000 FY 08 - \$1,577,785,000 FY 09 - \$1,679,255,000
Requirement for Fixed Guideway	Retain fixed guideway requirement but expands eligibility to corridor improvement capital projects for projects below \$75 million	Retain fixed guideway for projects above \$75 million and majority of project corridor right-of-way dedicated for exclusive use by public transportation vehicles for all or part of day for projects below \$75 million
Project Match	80% unless grant recipient requests a lower grant percentage. Secretary may provide a higher percentage	80% but recipient may provide additional local matching funds.
FFGA Projects Rated "Medium" or Higher	Limit projects receiving FFGAs to those receiving "Medium", "Medium-High" or "High"	No provision
Small Starts Selection and Advancement Criteria	Must be rated "High," "Medium-High" or "Medium." FTA select project: 1) based on planning and AA; 2) justified on review of transit supportive land use policies, cost effectiveness, and impact on economic development; and 3) supported by an acceptable degree of financial commitment.	FTA select project: 1) based on planning and AA; 2) justified on review of transit supportive land use policies, cost effectiveness, and impact on economic development; and 3) supported by an acceptable degree of financial commitment.
Project Authorizations	No provision	Sets forth authorized funds for existing FFGA projects and balance of funding for projects not currently subject to FFGA. Identifies 26 projects with existing FFGAs, 34 in final design and construction, and 211 projects in AA or PE.

As shown above, SAFETEA opens the “New Starts” funds to all transit projects, not just fixed guideway projects, and for all price categories of projects, not just “major” projects over \$75 million.

3.6. Advance Construction of Federal-Aid Projects

3.6.1 Introduction

Advance construction is a technique which allows a State to initiate a project using non- federal funds while preserving eligibility for future Federal-aid funds. Eligibility means that FHWA has determined that the project technically qualifies for Federal-aid; however, no present or future Federal funds are committed to the project. Advance construction projects must be in the approved Statewide Transportation Improvement Program (STIP). After an advance construction project is authorized, the State may convert the project to regular Federal- aid funding provided Federal funds are made available for the project.

3.6.2 Eligibility and Requirements

The following programs are eligible for advance construction:

- National Highway System
- Interstate Construction
- Interstate Maintenance
- Congestion Mitigation and Air Quality Improvement Program
- Surface Transportation Program
- Bridge Replacement and Rehabilitation
- State Planning and Research, and Metropolitan Planning.

Except for projects using National Highway System, Interstate Construction, or Interstate Maintenance funds, one of the following conditions must be met to qualify for advance construction:

- The State has obligated all the funds apportioned or allocated for the specific program,
- The State has used its obligation authority, or
- The State can demonstrate it will use it obligation authority before the end of the fiscal year.

The Federal share of all advance construction projects (amount not converted to Federal-aid) cannot exceed the sum of the State's current unobligated balance of apportionments plus the amount of Federal funds anticipated in the subsequent fiscal years of an approved STIP, i.e., the amount used in developing the approved STIP.

An advance construction project must meet the same requirements and be processed in the same manner as a regular Federal-aid project, except the FHWA authorization does not constitute a commitment of Federal funds on the project.

3.6.3 Conversion to a Regular Federal-aid Project

No Federal obligation is created until the project is converted to a regular Federal-aid project. The State may submit a written request to the FHWA that a project be converted to a regular Federal-aid project at any time provided that sufficient Federal-aid funds and obligation authority are available. The State may request a partial conversion where only a portion of the Federal share of project costs is obligated, and the remainder may be converted at a later time provided funds are available. Only the amount converted is an obligation of the Federal Government. The project should be identified on the STIP each year a conversion occurs.

4. Federal Loan and Credit Assistance Program: TIFIA

4.1 Introduction to TIFIA

The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) established a new federal credit program under which the U.S. Department of Transportation may provide three forms of credit assistance for surface transportation projects of national or regional significance:

- Secured (direct) loans
- Loan guarantees
- Standby lines of credit

The program's fundamental goal is to leverage federal funds by attracting substantial private and other non-federal co-investment in critical improvements to the nation's surface transportation system. USDOT uses a merit based system to award credit assistance to project sponsors, who may include state departments of transportation, transit operators, special authorities, local governments, and private entities.

4.2 Key Parameters of TIFIA Program

4.2.1 Current Program Requirements

The major requirements of the TIFIA program include the following:

- The project must be a surface transportation project with a construction cost equal to or greater than the lesser of (i) \$100 million (\$20 million for ITS projects), or (ii) 50 percent of the sponsoring state's annual federal-aid appropriation.
- The TIFIA contribution to a project is limited to 33% of the eligible project costs.
- The financing plan must provide for borrowings rated as "investment grade" (essentially BBB, Bbb, or better).
- There must be a dedicated revenue stream for repayment of TIFIA supported debt.
- Standard Federal requirements for use of Federal funds apply, such as NEPA, Uniform Relation, etc.
- Projects are intended to be selected through a competitive process; although political earmarking is frequently involved. To seek TIFIA assistance through the application process, project sponsors must submit proposals to FHWA, including finance plans, for evaluation.

These program requirements are described in the subsections that follow.

4.2.2 Reauthorization Issues

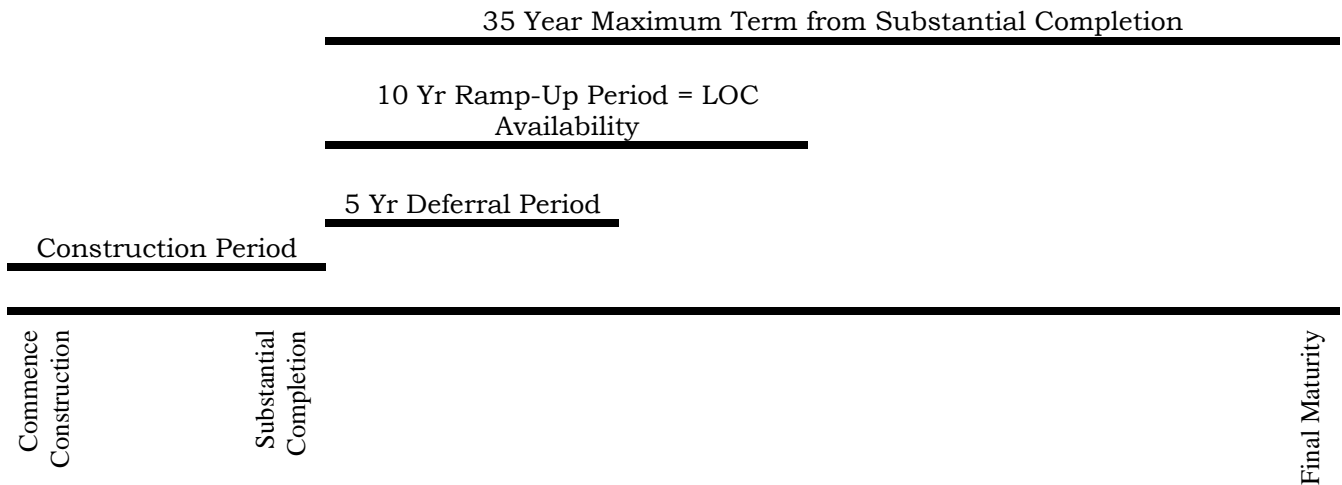
Table 6, below, shows the potential changes to TIFIA requirements that may result from the current reauthorization bills.

**Table 6
Proposed Changes to TIFIA in Reauthorization**

TEA-LU	SAFETEA
<ul style="list-style-type: none"> • During FFY 2005-2009, \$700 million budget authority, and \$13 billion debt limit • Reduce project threshold to \$50 million (\$15 million for ITS). • No change to types of projects eligible for TIFIA 	<ul style="list-style-type: none"> • During FFY 2005-2009, \$581 million budget authority, and no debt limit • Reduce project threshold to \$50 million (\$15 million for ITS). • Expands project eligibility to freight and private intermodal facilities that provide public benefit.

4.3 Types of TIFIA Credit Assistance

As indicated earlier, there are three types of TIFIA credit instruments: Loans, Loan Guarantees and Letters of Credit. While the terms of these types of instruments vary somewhat, certain features are the same regardless of the type of instrument. The diagram below shows the TIFIA payment structure that applies to all three TIFIA credit instruments:



Also, notwithstanding the type of credit instrument, the TIFIA credit instrument can be subordinate to the project's capital markets debt in its priority claim on the project's cash flow,

except that in the event of bankruptcy the TIFIA instrument must have a parity claim with the senior creditors.

4.3.1 Direct Loans

A TIFIA secured (direct) loan is a debt obligation involving the DOT as the lender and a non-federal project sponsor as the borrower. Actual terms and conditions for a secured loan must be negotiated between the DOT and the project sponsor, but in general, the characteristics will include:

- **Use of Proceeds:** The proceeds of a secured loan must be used either to finance eligible project costs or to refinance interim construction financing of eligible project costs. In the latter case, the DOT loan may refinance existing debt no later than one year following substantial completion of the project.
- **Amount:** The principal amount of a secured loan, in combination with any other TIFIA credit assistance, may not exceed 33 percent of the reasonably anticipated eligible project costs.
- **Interest Rate:** The interest rate on a secured loan will be equal to or greater than the yield on marketable U.S. Treasury securities of comparable maturity on the date of execution of the credit agreement.⁶⁷ Interest accrual on TIFIA proceeds begins immediately upon disbursement of funds from the DOT.
- **Timing of Disbursements:** The DOT will disburse funds as often as once monthly, on a reimbursement basis, as costs are incurred for eligible project purposes. The credit agreement will specify an annual draw schedule, which can be amended as necessary.
- **Maturity:** The final maturity date of a secured loan must be no later than 35 years after the date of substantial completion of the project.
- **Repayment Terms:** Scheduled repayments must commence no later than five years after the date of substantial completion of the project. Level debt service is not required for project financings where pledged revenues are projected to increase over time. Debt service payments should be scheduled at least semi-annually.
- **Deferrals:** In the event revenues are insufficient to meet scheduled TIFIA loan payments within 10 years after substantial completion of the project, the DOT, at its sole discretion, may allow payment deferrals. Any such deferrals are contingent on the project's meeting criteria established by the Secretary, including standards for reasonable assurance of repayment.

⁶⁷ The DOT identifies the U.S. Treasury rates through use of the daily rate tables published by the Bureau of the Public Debt for State and Local Government Securities (SLGS). Adding five basis points to the published SLGS rates produces Treasury's average estimated yields on its securities. The SLGS daily rate tables can be found at the Bureau of the Public Debt's website at <http://www.publicdebt.treas.gov/>.

- **Prepayment Conditions:** A secured loan may be prepaid in whole or in part at any time without penalty.

4.3.2 Lines of Credit

A TIFIA line of credit provides a contingent loan that may be drawn upon after substantial completion of the project to supplement project revenues during the first 10 years of the project's operations. Characteristics of a line of credit include:

- **Use of Proceeds:** The proceeds from a draw on a line of credit may be used only to pay debt service on project obligations (other than a TIFIA credit instrument) issued to finance eligible project costs, extraordinary repair and replacement costs, operation and maintenance expenses, and/or costs associated with unexpected federal or state environmental restrictions.
- **Amount:** The total principal amount of a line of credit, in combination with any other TIFIA credit assistance, may not exceed 33 percent of the reasonably anticipated eligible project costs.
- **Annual Limitation on Draws:** A maximum of 20 percent of the total principal amount of a line of credit may be drawn in any year. This 20 percent amount is calculated on the basis of the total principal amount of the line of credit on the date the line of credit is obligated.
- **Condition Precedent for Draws:** A draw may be made only if revenues from the project are insufficient to pay the costs enumerated above in "Use of Proceeds."
- **Availability:** A line of credit may be available for a period of 10 years following substantial completion of the project.
- **Interest Rate:** The interest rate on a secured loan resulting from a draw on a line of credit will be equal to or greater than the yield on a 30-year marketable U.S. Treasury security on the date the line of credit is obligated.
- **Maturity:** The final maturity date of a secured loan resulting from a draw on a line of credit must be no later than 35 years after the date of substantial completion of the project.
- **Repayment Terms:** Scheduled repayments of a draw on a line of credit must commence no later than five years after the end of the 10-year period of availability and be fully repaid no later than 25 years after the end of the 10-year period of availability. Level debt service is not required. Debt service payments should be scheduled semi-annually.
- **Prepayment Conditions:** A secured loan resulting from a draw on a line of credit may be prepaid in whole or in part at any time without penalty.

4.3.3 Loan Guarantees

A TIFIA loan guarantee is any guarantee or other pledge by the DOT to pay to a third-party lender⁶⁸ all or part of the debt service on a loan or other debt obligation of a project sponsor. The DOT will seek recovery from the sponsor of all funds paid to the guaranteed lender. Characteristics of a guaranteed loan include:

- **Use of Proceeds:** The proceeds of a guaranteed loan must be used either to finance eligible project costs or to refinance interim construction financing of eligible project costs. In the latter case, the guaranteed loan may refinance existing debt no later than one year following substantial completion of the project.
- **Amount:** The principal amount of a DOT loan guarantee, in combination with any other TIFIA credit assistance, may not exceed 33 percent of the reasonably anticipated eligible project costs.
- **Interest Rate:** The interest rate on a guaranteed loan will be negotiated between the guaranteed lender and the borrower, subject to consent from the DOT. Interest payments on a guaranteed loan are subject to federal income taxation.
- **Maturity:** The final maturity date of the guaranteed loan must be no later than 35 years after the date of substantial completion of the project.
- **Repayment Terms:** Scheduled repayments to the guaranteed lender must commence no later than five years after the date of substantial completion of the project. Level debt service is not required for project financings where the pledged revenues are projected to increase over time.
- **Deferrals:** In the event that revenues are insufficient to meet scheduled loan payments within the first 10 years after substantial completion of the project, the DOT may consent to payment deferrals and a rescheduling of the guaranteed debt service. Approval of any such payment deferrals are contingent on the project's meeting criteria established by the Secretary, including standards for reasonable assurance of repayment.
- **Prepayment Conditions:** The prepayment features on a guaranteed loan will be negotiated between the guaranteed lender and the borrower, subject to consent from the DOT.
- **Default Feature:** In the event of an uncured borrower payment default, the guaranteed lender will receive payment from the DOT for the guaranteed payment due. The DOT will seek recovery from the borrower of all funds advanced pursuant to a reimbursement agreement executed simultaneously with the loan guarantee agreement.

⁶⁸ The lender must be a "non-federal qualified institutional buyer" as defined in 17 CFR 230.144A(a).

4.4 Repayment Sources for TIFIA

TIFIA debt must be repayable in whole or in part from “*tolls, user fees and other dedicated revenue sources.*” USDOT interprets “*other dedicated revenue sources*” to include any tax or fee that (i) is levied by a state, local government or private entity, and (ii) produces revenue that are at least partly dedicated to retiring the TIFIA debt. Federal funds cannot be pledged to repay TIFIA debt, but can be used to repay other debt issued on behalf of the project.

4.5 Application and Selection Process

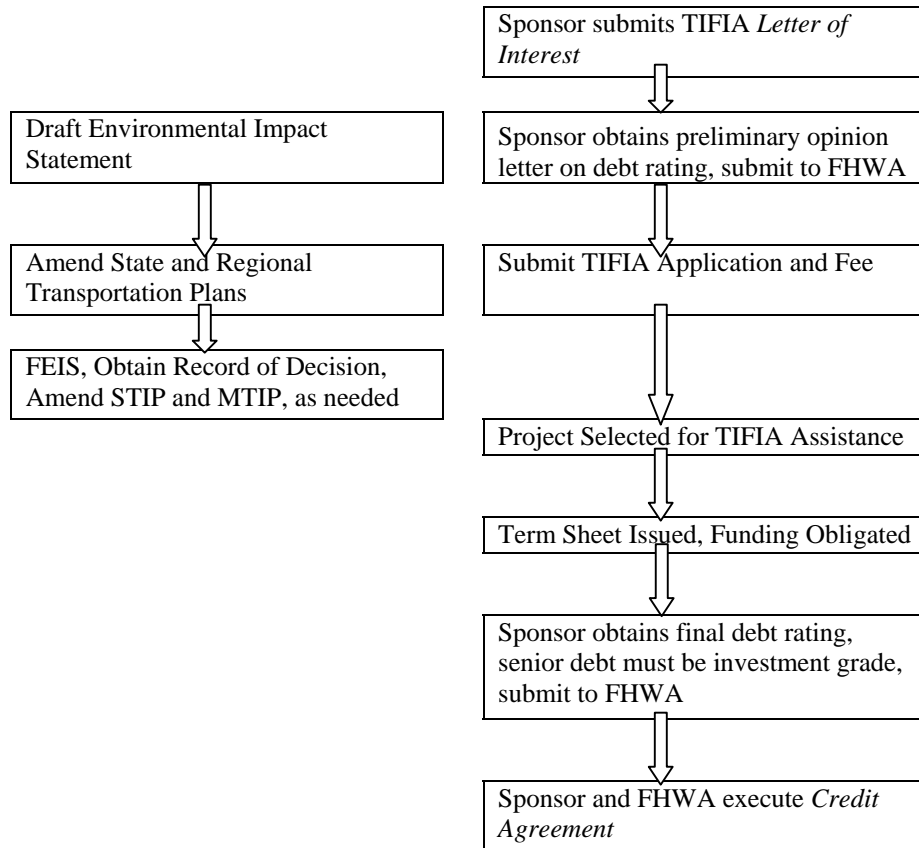
4.5.1 Application Process

TIFIA assistance is intended to be awarded based on a project’s technical merits. The implementation process includes the following:

- **Letter of Interest:** The applicant first submits a “letter of interest” describing the project, the proposed plan of finance, and the requested credit assistance. DOT reviews this submission to determine whether the project meets the threshold requirements for TIFIA participation.
- **Application:** After DOT confirms the project’s basic eligibility, the project sponsor may submit a formal application.
- **Sponsor Presentation:** Each project sponsor whose application passes an initial screening for completeness and compliance is invited to make an oral presentation to the DOT on behalf of the project.
- **Project Evaluation and Selection:** Based upon the written application, the oral presentation, and any supplemental submission of information, DOT staff prepares an evaluation and recommendation for the Credit Council. The required evaluation criteria are described in Section 4.5.3, below. The Credit Council, in turn, provides a recommendation to the Secretary of Transportation, who then makes the determination to select a project to receive TIFIA assistance.
- **Term Sheet Issuance and Funding Obligation:** For each selected project, the DOT issues a term sheet setting forth key business terms and conditions of TIFIA credit assistance. Execution of this document evidences the DOT’s commitment, via obligation of budget authority, to fund the credit assistance.
- **Credit Agreement and Disbursements:** The credit agreement is the definitive agreement between the DOT and the project sponsor, specifying all terms and conditions of the TIFIA credit assistance and authorizing disbursement of funds. Prior to execution of the credit agreement and subsequent funding disbursements, the project sponsor must satisfy all program requirements – including receipt of an investment grade rating on the project’s senior debt obligations. For secured loans, the DOT will disburse funds on a reimbursable basis for eligible project costs.

The diagram below shows how the TIFIA process and normal highway project development process relate to each other.

TIFIA-PROJECT DEVELOPMENT PROCESS



4.5.2 Financial Plan

The Columbia River Crossing Project, given its anticipated costs, will be categorized as a Major (Mega) Project under FHWA statutes. As such, it will be subject to the Mega Project requirements discussed in Working Paper 1.2.3. As a Mega Project, the DOTs will be required to submit an *Initial Financial Plan* for the Columbia River Crossing Project. Normally, the TIFIA application is done about the same time as the *Initial Financial Plan* is normally done for Major Projects. The TIFIA program requires that the project sponsor submit a *Plan of Finance* along with its application. The question is how do these two finance plans relate to each other?

FHWA developed a process for Major Projects using TIFIA that requires preparation and submission of one finance plan that satisfies the requirements of both programs, that being the *TIFIA Plan of Finance*. The requirements of the *TIFIA Plan of Finance* are for the most part the

same as the Mega Project *Initial Financial Plan* Guidance, but are ordered and formatted differently.⁶⁹

TIFIA also requires that updated Financial Plan information be submitted at the signing of the Secured Loan Agreement. The Secretary of Transportation must approve the TIFIA loan prior to FHWA accepting the *Plan of Finance*. FHWA acceptance of the *Plan of Finance* will be required prior to authorization of Federal funding for the project construction. The TIFIA Secured Loan Agreement requires that Annual Updates to the *Plan of Finance* be submitted within ninety days after the beginning of the Borrower's fiscal year.

4.5.3 TIFIA Evaluation and Selection Criteria

49 CFR 80.15 prescribes eight evaluation factors for the evaluation and selection of TIFIA projects, and assigns weights to each. FHWA's guidance on TIFIA evaluation further describe the evaluation criteria by listing 'considerations' for each of the criteria. These 'considerations' are not meant to be exhaustive, but rather indicative of the factors the DOT assesses in the evaluation and selection process. The regulatory criteria are shown below in bold, and the key 'considerations' are shown in the sub-bullets that follow:

- **Significance – 20 percent:** The extent to which the project is nationally or regionally significant, in terms of generating economic benefits, supporting international commerce, or otherwise enhancing the national transportation system.
 - What are the project's economic benefits? Do these benefits extend beyond the project's immediate geographic region?
 - Will the project support international commerce? Will failure to carry out the project hinder or continue to thwart international competitiveness?
 - Is the project a component of a federally recognized transportation system? If not, will it connect to such system?
 - Does the project help achieve safety, mobility or transportation demand goals? Does the project improve connections among the transportation modes?
 - What is the level of community support for the project?

- **Private Participation – 20 percent:** The extent to which TIFIA assistance would foster innovative public-private partnerships and attract private debt or equity investment.
 - How extensive is the private equity, if any, compared to total project costs?
 - How extensive is the combined debt and equity investment from private capital compared to total project costs?
 - How extensively does project debt repayment depend on user fees?
 - Has the project team been structured to allow a non-governmental entity to share its risks and rewards?

- **Environment – 20 percent:** The extent to which the project helps maintain or protect the environment.

⁶⁹ See the TIFIA Financial Plan Guidance issued on May 23, 2000.

- Does the project protect the environment via reductions in pollution (e.g., air, water, noise, etc.) that would not otherwise occur without the project?
- Does the project require major environmental mitigation efforts? Will the project sponsor engage in mitigation efforts beyond those required by law?
- **Project Acceleration – 12.5 percent:** The likelihood that TIFIA assistance would enable the project to proceed at an earlier date than the project would otherwise be able to proceed.
 - To what extent does TIFIA assistance accelerate project implementation? If the project needed to obtain a substitute funding source, to what extent would its schedule be delayed?
 - Can the effect of project acceleration be quantified (e.g., reduced costs or increased benefits)?
 - Without TIFIA assistance, would the scope of the project need to be reduced in order for the project to meet its development timeline?
- **Creditworthiness – 12.5 percent:** The creditworthiness of the project, including a determination by the Secretary that any financing for the project has appropriate security features, such as a rate covenant, to ensure repayment.
 - Has the project obtained an investment-grade rating on the senior debt obligations funding the project?
 - How convincing are the preliminary opinion letters from rating agencies indicating that the overall project and senior debt obligations have the potential to be investment grade? Do the opinion letters contain significant qualifying language?
 - What is the project's market position? If its revenue plan depends on fees for specified services, are these services in high demand? How extensive is the competition?
 - What is the likelihood that the project will repay TIFIA assistance and other debt obligations in accordance with requested financing terms?
 - Does the project have a history of user fee-based repayments for other obligations?
 - How favorable is the economic outlook for related commerce and trade?
 - How qualified is the project team? Is the team experienced and knowledgeable in transportation finance and development? What is the team's track record in carrying out projects of this magnitude?
 - Does the project team possess the necessary financial, staffing, and technical resources to successfully complete the project?
 - Is the proposed schedule for the project reasonable, given the scope and complexity of the project?
 - Does the project include cost containment and risk mitigation measures (e.g., design-build, maximum price contract, guaranteed completion date, developer incentives, project warranties, rate covenants, etc.)?
 - How well substantiated is the financial plan and its revenue and cost assumptions? Are the assumptions on which the plan is based well defined and reasonable?

- **Use of Technology – 5 percent:** The extent to which the project uses new technologies, including intelligent transportation systems, to enhance the efficiency of the project.
 - Does the project principally involve the installation of an intelligent transportation system (ITS)?
 - How extensively does the project use ITS components (e.g., electronic toll collection, automatic vehicle identification, etc.)?
 - How extensively does the project deploy other innovative technologies (e.g., fare card systems, signal prioritization systems, train control systems, weigh-in-motion, and emission control technologies)?

- **Budget Authority – 5 percent:** The amount of budget authority required to fund the TIFIA credit instrument.
 - What is the relative difference in required budget authority between this project and other projects?
 - What is the project’s deviation from the average budget authority consumed by other projects?

- **Reduced Federal Grant Assistance – 5 percent:** The extent to which TIFIA assistance would reduce the contribution of federal grant assistance.
 - Without TIFIA assistance, what is the likelihood that the project would obtain federal (including non-DOT) grants as substitutes?
 - Does the project meet program eligibility requirements and have political support necessary to obtain additional state- and/or locally programmed federal funds to substitute for TIFIA assistance?
 - Can the project sponsor demonstrate that TIFIA credit assistance will free up otherwise-expected grant monies for other investments?

4.6 Examples of TIFIA Projects

Table 7, below, inventories the projects that have received TIFIA assistance, and the type and amount of assistance provided.

**Table 7
TIFIA Projects**

Project	Type	Sponsor	Cost (Billion)	Type of Credit	Credit Amt (Million)	Pledged Revenues
Tren Urbano	Transit	Puerto Rico Hwy & Transp Auth.	\$1.7	Loan	\$300	Fuel Tax, Vehicle Fees, Farebox Receipts
Miami Int'l Ctr.	Intermodal	Florida DOT	\$1.3	2 Loans	\$269 \$163	Gas Tax Rental Car Fees
Farley-Penn Sta.	Pass. Rail	Penn Station Redevelopment Authority	\$0.8	Loan Credit Line	\$140 \$ 20	Lease payment from retail
WMATA	Transit	WMATA	\$2.3	Guarantee	\$600	Local gov't revenues
SR 125 S	Hwy	CA Transp. Ventures	\$0.6	Loan	\$140	Toll
Staten Is. Ferry	Transit	NY City	\$0.5	Loan	\$159	Tobacco Settlement Revs.
Cooper River Bridge	Hwy/Br.	SC Transp. Infrastructure Bank	\$0.7	Loan	\$215	Intergovernmental Payments
Central Texas Turnpike	Hwy	TxDOT, Texas Turnpike Authority	\$3.7	Loan	\$947	Toll
Reno Rail Corr.	Intermodal	City of Reno	\$0.3	Loan	\$74	Sales tax, Lease Payment, Property Assessments
SF-Oakland Br	Hwy/Br.	CALTRANS	\$3.3	Loan	\$450	\$1 Toll Surcharge
Warwick Train Station	Intermodal	R.I. Economic Development Corp	\$0.2	Loan	\$58	Customer facility charge
183-A Turnpike	Hwy	Central Texas Regional Mobility Authority	\$0.3	Loan	\$66	Toll

5. Federal Loan and Credit Assistance Program: Section 129 Loan

5.1 Introduction

Loans under 23 USC 129(a)(7) (“Section 129 Loans”) allow states to leverage additional transportation resources and recycle assistance to other eligible projects. States have the flexibility to negotiate interest rates and other terms of Section 129 loans. When a loan is repaid, the state is required to use the funds for a Title 23 (Highway Title) eligible project; including as a credit enhancement to improve access to credit markets or to lower interest rate costs for a Title 23 eligible project.

5.2 Requirements

Section 129(a)(7)(A) allows the State to make loans to a public or private entity which is constructing a toll project that is eligible for Federal-aid funding or a non-toll highway project with a revenue source specifically dedicated to support the project.⁷⁰ The amount loaned by the State is considered an eligible Federal-aid project cost.

There are no Federal requirements regarding how a State selects a public or private entity to be a recipient of a State loan. This selection process, including creation of public/private partnerships, is governed by State law.

If a project meets the test for eligibility, a loan can be made at any time. The loan may be for any amount, provided the maximum Federal share of the total eligible project cost is not exceeded. The Federal for a Section 129 loan project is 80 percent and may not be adjusted in accordance with a sliding scale under 23 U.S.C. 120.⁷¹ The non-Federal share may be provided by the public or private entity receiving the loan.

Total eligible project cost is limited to the costs of engineering, right-of-way acquisition, and physical construction remaining to be accomplished at the time the FHWA authorizes the loan to be made. A loan can be initiated on an active, eligible project; but the amount cannot include the cost of work done prior to the loan authorization. Loan guarantees are not an eligible activity under the Section 129 loan program.

The project receiving a Section 129 loan is viewed as a Federal-aid project subject to the same basic requirements and FHWA oversight responsibilities as applicable to a non-loan Federal-aid project. The State must ensure that the project is carried out in accordance with Title 23 and other applicable Federal laws, including all applicable Federal environmental and right-of-way statutes and rules.

⁷⁰ A specifically dedicated revenue source is a revenue source which the loan recipient pledges for repayment of the loan. While initially intended to apply only to tolls, eligible dedicated revenue sources can now include, without limitation, excise taxes, sales taxes, real property taxes, motor vehicle taxes, incremental property taxes, or other beneficiary fees.

⁷¹ 23 USC129(a)(5)

Loans must be repaid to the State. The repayment must begin within 5 years after the project is completed and must be completed within 30 years after the date Federal funds are authorized for the loan. Interest on the loan is at or below market rates, as determined by the State, to make the project which is receiving the loan feasible. At a State's option, the amount of any loan eligible for Federal reimbursement under Section 129(a)(7) may be subordinated to any other debt financing for the project.

The State may use repaid amounts for any project eligible under Title 23, or for the purchase of insurance, use as a capital reserve, or use as another form of credit enhancement for projects eligible under Title 23. No Federal requirements attach to activities advanced with funds repaid to the State.

5.3 Case Study: George Bush Turnpike, Texas

The George Bush Turnpike is a 30-mile toll beltway built around Dallas, Texas. The \$700 million facility has toll lanes and toll-free frontage roads that link seven cities. The facility is built and operated by the North Texas Tollway Authority. The project was approved as a toll facility, but the projected revenues could not generate this level of funding, given the 1.2 coverage factor required as a matter of policy by the Authority.

To resolve this problem, part of the funding plan called for the use of a \$135 million Section 129 Loan, which was subordinated to the project's toll revenue bond debt service. The disbursement of the loan was spread over four years and Texas DOT employed "partial conversion of advance construction" to spread the designation of obligation authority over the four years; avoiding an upfront \$135 million impact on its obligation authority. Repayment of the Section 129 Loan was deferred past a start-up period, and was spread over 25 years.

The subordinated Section 129 Loan enhanced the coverage factor on the project's \$446 million toll revenue bonds, thereby enhancing the creditworthiness of these bonds (with a concomitant lower interest rate). It also permitted \$20 million more of the toll revenue bond proceeds to be used for project construction, that otherwise would have had to been held in a debt service reserve.

6. Federal Bonding and Debt Instrument Program: GARVEE

6.1 Introduction

Grant Anticipation Revenue Vehicle (GARVEE) bonds provide an increasingly popular method to finance highway and transit projects. GARVEE is a debt-financing instrument that pledges future federal-aid highway funds to repay investors, although the project sponsor may elect to pledge other sources of revenue in the event that future federal-aid funds are not available. In technical terms, GARVEE refers to any debt financing instrument backed by future federal-aid highway funds, including bonds, notes, certificates, mortgages, leases, or others. FHWA guidelines use the term "bond" generically to mean an eligible debt financing instrument.⁷² This report adopts FHWA's generic terminology. GARVEE bonds are currently well regarded by investors as the bond community has concluded that under the right conditions there is little risk in lending against the Federal-aid program.

6.2 Statutory Authority for GARVEEs

Beginning with ISTEA and continuing through TEA-21, federal policy has encouraged the use of innovative finance techniques, including the use of debt instruments. First, the term "construction," as used in Title 23, was amended to include bond-related costs.⁷³

Next 23 USC 122 was added, which provides the statutory authority for GARVEEs. Under 23 USC 122(a) eligible debt financing instruments include "*bonds or other debt financing instruments, including notes, certificates, mortgages, or lease agreements, issued by a State or political subdivision of a State or a public authority, the proceeds of which are used for an eligible project under this title.*" And, 23 USC 122(b) authorizes USDOT to reimburse states (or other applicable governmental entities) for costs incurred for:

- Interest payments under an eligible debt financing instrument⁷⁴
- The retirement of principal of an eligible debt financing instrument
- The cost of the issuance of an eligible debt financing instrument^{75, 76}
- The cost of insurance for an eligible debt financing instrument⁷⁷

⁷² Sandra L. Weisman; Director, Office of Budget and Finance, Revised GARVEE Bond Guidance, March 25, 2004

⁷³ Under 23 USC 101(a)(3), "construction" means the supervising, inspecting, actual building, and incurrence of all costs incidental to the construction or reconstruction of a highway, including bond costs and other costs relating to the issuance in accordance with [23 USC] 122 of bonds or other debt financing instruments and costs incurred by the State in performing Federal-aid project related audits that directly benefit the Federal-aid highway program

⁷⁴ Including any capitalized interest, per FHWA guidance

⁷⁵ Issuance costs include the following: underwriters discount; rating agency fees, printing, publication, or advertising expenses with respect to the bonds; all fees, expenses, and costs of registrars and paying agents; and all fees, expenses, and costs of attorneys, financial advisors, bond counsel, accountants, feasibility consultants, computer programmers, or other experts employed to aid in the sale and issuance of bonds.

⁷⁶ Including the capitalization of a debt service reserve account or contingency fund, provided that the funds deposited in such an account, along with any interest earnings, must be used for project cost and not disbursed for any other purpose.

⁷⁷ Including credit enhancement fees, such as premiums, and letter or line of credit fees, per FHWA guidance.

- Any other cost incidental to the sale of an eligible debt financing instrument as determined by the Secretary⁷⁸

6.3 Federal Share of GARVEEs

The federal share of such costs permitted to be reimbursed is the same share that would be allowed if the funds were being provided directly for construction.⁷⁹ In situations where 100 percent of project costs are debt financed through one bond issue, the bond-related costs may be measured on a nominal, current-year basis (e.g. 80 percent of each payment will be payable from Federal-aid and 20 percent from State match.) However, the Federal and non-Federal share may also be financed separately. For example, the Federal share may be debt financed, while the State share is funded on a pay-as-you-go basis or satisfied with "in-kind" match such as toll credits. In such cases, the project sponsor must make sure that annual local and federal revenues are expended in proportion to their shares; FHWA does not permit tapered match for GARVEEs.

6.4 Federal Funding Eligibility for GARVEEs

To be eligible for federal funds, the same requirements apply to GARVEE-funded projects as to projects receiving Federal funds directly for construction, such as NEPA, etc.⁸⁰

In issuing GARVEE debt, the state must up-front designate an Advance Construction⁸¹ amount to preserve the project's future eligibility for Federal assistance (recall that Advance Construction authority was described in Section 3.6 of this Working Paper). The amount of the Advance Construction designation must match the Federal share of the debt-related costs. To be authorized as Advance Construction, the project must be eligible for Federal-aid funding under one or more program categories (such as NHS, STP, etc.). Any reimbursements of debt-related costs must be made with obligations of eligible categories of Federal-aid funds. The Advance Construction amount designated at the time of project approval must consist of some combination of eligible funding categories, although the State each year retains the flexibility to decide which categories to obligate for Advance Construction conversion. The State retains the right to use non-Federal funds in lieu of Federal-aid for debt service costs.

Periodic debt service payments (Federal-aid reimbursements) on the bonds represent partial conversions of the designated Advance Construction amount to Federal-aid. In each succeeding year, the State partially converts the designated Advance Construction amount, as FHWA provides funds for the federal share of the debt service. The planned amount of Federal-aid reimbursement for debt service (Advance Construction conversion) must be included in the State Transportation Improvement Program (STIP).

This process is diagrammed in the figure below.

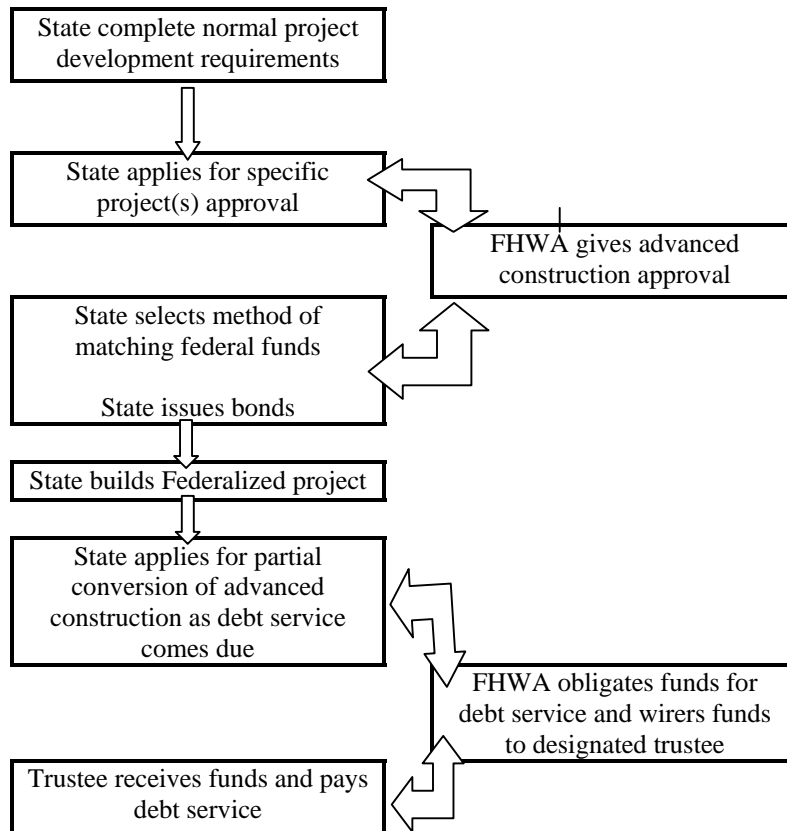
⁷⁸ Such as on-going paying agent/trustee fees and audit costs, per FHWA guidance.

⁷⁹ 23 USC 122(d)

⁸⁰ 23 USC 122(c)

⁸¹ 23 USC 115

GARVEE Implementation Process



6.5 Types and Use of GARVEEs

6.5.1 Types of GARVEEs

From the perspective of the bond investor, there are two basic risks with GARVEEs: (i) appropriations risk and (ii) authorization risk. Appropriations risk comes from the possibility that the annual appropriation of Federal-aid highway funds to a state will not be sufficient to pay the annual debt service on the GARVEE. Appropriations risk is generally considered to be negligible given the RABA and minimum guarantee provisions of TEA-21, and the coverage offered by the GARVEE. For short-term GARVEEs, which mature within an existing Federal transportation authorization cycle, appropriations risk is the only risk to the investor. But when a GARVEE issue extends beyond the existing Federal transportation authorization cycle, ‘authorization risk’ is introduced. Authorization risk is the chance that Congress will not renew the Federal-aid highway program. While this risk appears low, reauthorization is not guaranteed.

To mitigate these risks, some GARVEEs are “backstopped” by some other source of funds besides the Federal-aid highway funds, such as the state’s highway trust funds, sales tax receipts, moral obligations, etc. These types of GARVEEs are sometimes called Backstopped or Double-Barreled GARVEEs. .

The creditworthiness of GARVEEs issued without any “backstop” depends entirely on the availability of future Federal-aid highway funds. These types of GARVEEs are referred to by several names, including Naked GARVEEs, stand-alone GARVEEs, or non-recourse GARVEEs. It is frequently necessary to purchase bond insurance to enhance the marketability of these bonds. While this adds some cost, there is no further risk that other public funds will be diverted to repay the debt.

Direct GARVEE bonds are bonds in which the Federal-aid funds directly reimburse debt service paid to investors. Direct GARVEES finance specific projects. A GARVEE project is authorized in the same manner as any Federal-aid project, except that the State elects to seek payments for bond costs rather than construction invoice costs. To preserve the project’s eligibility for future federal-aid assistance, the State must obtain FHWA approval for advance construction and submit the debt service schedule for FHWA approval (called “programming”). If approved, the state issues bonds for the specific project(s) that were approved; leaving no spending flexibility.

6.5.2 Examples of Use

About one-half of the states currently have the state statutory authority to issue GARVEEs. As discussed in Section 2 of this Working Paper, ODOT debt authority permits GARVEEs, while WSDOT would need specific legislative authority. As of December 2004, 16 states had issued GARVEEs; almost \$7.5 billion in GARVEEs have been issued. Table 8 summarizes these GARVEE transactions.

Table 8
Examples of GARVEE Transactions

State	Year	Amt (millions)	Project Description	Type	Backstop	Insured?	Term (Years)
Alabama	2002	\$200	Bridge replacement program	Naked-Direct	None	Y	15
Alaska	2003	\$103	9 road/bridge projects	Backstopped Direct	State motor vehicle fees, Full faith & credit	N	10
Arizona	2000	\$39	Freeway construction	Naked-Direct	None	N	4
Arizona	2001	\$143	Freeway construction	Naked-Direct	None	Y	7
Arizona	2003	\$125	Freeway construction	Naked-Direct	None	Y	12
Arizona	2004	\$51	Bridge construction	Naked-Direct	None	Y	10
Arkansas	2000	\$175	Interstate Repaving	Backstopped Direct	State diesel tax, Full faith & credit	N	14
Arkansas	2001	\$185	Interstate Repaving	Backstopped Direct	State diesel tax, Full faith & credit	N	5
Arkansas	2002	\$215	Interstate Repaving	Backstopped Direct	State diesel tax, Full faith & credit	N	5
Calif	2004	\$615	Highway and HOV projects	Naked-Direct	None	Y	10
Colorado	2000	\$537	State highway projects	Backstopped Direct	Highway trust fund, sales tax	Y	15

Colorado	2001	\$506	State highway projects	Backstopped Direct	Highway trust fund, sales tax	Y	15
Colorado	2002	\$208	State highway projects	Backstopped Direct	Highway trust fund, sales tax	Y	15
Colorado	2003	\$100	State highway projects	Backstopped Direct	Highway trust fund, sales tax	Y	15
Colorado	2004	\$134	Reconstruct I-25	Backstopped Direct	Highway trust fund, sales tax	Y	12
Maine	2004	\$50	Bridge replacement program	Naked- Direct	None	Y	11
Mass	1998	\$600	Central Artery Project	Indirect Backstopped	10-cents per gallon from state gas tax	N	15
Mass	1998	\$321	Central Artery Project	Indirect Backstopped	10-cents per gallon from state gas tax	N	15
Michigan	2001	\$400	Highway rehab/maint	Indirect Naked	None	Y	7
Michigan	2002	\$200	Highway rehab/maint	Indirect Naked	None	Y	7
Miss.	1999	\$200	Highway construction	Indirect Backstopped	State transportation revenues	N	10
NJ	1999	\$152	Mass Transit	Naked Transit	None	Y	9
NJ	2000	\$234	Mass Transit	Naked Transit	None	Y	15
NM	2001	\$100	Widen US 550	Naked- Direct	None	Y	18
NM	2001	\$19	Reconstruct US 70	Naked- Direct	None	Y	15
NM	2004	\$700	Variety of projects, some refundings	Naked- Direct	None	Y	20
Ohio	1998	\$70	Spring-Sadusky Hwy-Bridge	Backstopped Direct	Moral obligation, Uses toll credits as match	N	10
Ohio	1999	\$20	Spring-Sadusky Hwy-Bridge	Backstopped Direct	Moral obligation, Uses toll credits as match	N	10
Ohio	2001	\$100	Spring-Sadusky Hwy-Bridge	Backstopped Direct	Moral obligation, Uses toll credits as match	N	10
Ohio	2002	\$135	Bridge project	Backstopped Direct	Moral obligation, Uses toll credits as match	N	9
OK	2004	\$48	Variety of projects	Naked- Direct	None	N	15
P.R.	2004	\$136	Variety of projects	Backstopped Direct	Mix of tax and fee revenues	N	17
RI	2003	\$217	Hwy relocation/bridge project	Naked- Direct	None	Y	12
Virgin Is.	2002	\$21	Two port projects	Naked- Direct	None	Y	8
Virginia	2000	\$400	Variety of projects	Indirect Backstopped	Trust fund and other revenues	N	10

Source: Puentes and Warren, *Today's Roads with Tomorrow's Dollars: Using GARVEE Bonds to Finance Transportation Projects*, Brookings Institute, March 2005

6.5.3 Lessons Learned

Federal statutes do not limit in any way the amount of Federal-aid highway funds that can be pledged to repay debt, this is a political determination made by the states. Some states have chosen to create state statutory limits. For example, the California legislature enacted the following:

*The Treasurer may not authorize the issuance of notes if the annual repayment obligation of all outstanding notes in any fiscal year would exceed 15 percent of the total amount of federal transportation funds deposited in the State Highway Account in the State Transportation Fund for any consecutive 12-month period within the preceding 24 months.*⁸²

While other states have set different limits, and some states have not set any limits, the maximum share of Federal-aid funds pledged have generally been 20 percent or less.

As shown in Table 8, above, Naked GARVEEs tend to be short- to intermediate-term bonds. As a general rule, the creditworthiness of intermediate-term Naked GARVEEs have benefited from bond insurance.

6.6 Example of GARVEE Financing Capacity

6.6.1 Introduction to the Analysis

The analysis that follows requires the use of hypothetical assumptions and a simplified bond structure. It is offered to examine a general strategic concept, and not to provide a highly accurate estimate of anticipated bond proceeds.

This GARVEE capacity analysis provides Base (B) and Sensitivity (S) Scenarios that differ in their assumed True Interest Cost (TIC) (hereinafter referred to as the interest rate). For each Scenario, the analysis provides: (i) two variations based on the assumed term of the bond (i.e. a short-term and intermediate-term), and (ii) two variations based on the amount of Federal-aid funds pledged to the GARVEE bonds by ODOT and WSDOT. Thus, in total, eight gradients of bonding capacity are shown.⁸³

6.6.2 Assumptions

A. Assumed Interest Rates: The Base Scenarios (B.1 through B.4) assume an interest rate for each maturity option equal to the Municipal Market Data (MMD) AA-rated interest rate index for March 1, 2005. The Sensitivity Scenarios (S.1 through S.4) assume an

⁸² California Government Code Section 14553.4. This language revised a previous limit that was set at 25 percent

⁸³ It is critical to continue to note, that each of these bond capacity gradients is based on hypothetical assumptions and simplified finance structures that require significantly more detail and analysis to reach the level of an investment-grade estimate. However, they are based on a methodology and set of assumptions, other than the amount of pledged funds, used by the California State Treasurer in making required annual reports to the California Transportation Commission.

interest rate for each maturity option equal to the MMD AA-rated interest rate index for March 1, 2005 plus 100 basis points.

- B. **Assumed Terms:** Both the Base and Sensitivity Scenarios assume a 6-year and 12-year bond term. The assumed interest rate for each of these bond terms for the two Scenarios is shown below:

Table 9
Assumed True Interest Cost for Base and Sensitivity Scenarios

	6-Year Term	12-Year Term
Base Scenario	3.07%	3.61%
Sensitivity Scenario	4.07%	4.61%

- C. **Pledged Revenues:** The amount of the Federal-aid program that ODOT and WSDOT may be willing to dedicated to the Columbia River Crossing Project, if any, is unknown, as is the total amount of Federal-aid that will be made available to each state under TEA-LU/SAFETEA. As a result, conceptual assumptions must be made.

To start the analysis, assumptions must be made regarding the total amount of Federal-aid highway funds apportioned annually to each state. This assumption must be based only those funding programs for which the Columbia River Crossing Project may be eligible. This means certain programs and portions of other programs (such as STP funds formula allocated to regions, enhancement funds, etc) must be excluded. Table 10, below, shows the assumed total amount of applicable funds flowing to each state in FY 2005.

Table 10
FY 2005 Apportionment of Applicable Federal-Aid Highway Funds
Pursuant to Extension Act of 2004

STATE	Interstate Maintenance	National Highway System	Surface Transportation Program (1)	Bridge	CMAQ	Minimum Guarantee	Total of Pertinent Funding Programs
OREGON	\$48,797,124	\$57,895,039	\$20,690,918	\$39,755,850	(2)	\$17,824,651	\$194,084,622
WASHINGTON	\$69,570,694	\$77,477,952	\$29,750,489	\$82,992,577	\$19,392,773	\$19,619,436	\$298,803,921
TOTAL	\$118,367,818	\$135,372,991	\$50,441,407	\$122,748,427	\$28,513,813	\$37,444,087	\$492,888,543

(1) After deducting 10% for Enhancement, 10% for Safety, and required allocations to urbanized and other areas

(2) CMAQ funds in Oregon committed to metropolitan regions.

The Federal-aid apportionments in Table 10 will escalate from their FY 2005 base to the year in which the GARVEEs would be issued. For this analysis, it is assumed that the GARVEEs would be issued in FY 2010 and that Federal-aid funds would escalate at 3 percent per year between FY 2005 and FY 2010. The total applicable Federal-aid highway funds for each state, as inflated, are shown below:

Table 11
Assumed Total Amounts of Applicable Annual Federal-Aid Highway Funds by State (Inflated to FY 2010)

Oregon	\$ 214,423,483
Washington	\$ 346,395,639
Total	\$ 560,819,122

As shown above, Washington receives over 50 percent more Federal-aid highway funds annually than Oregon. This analysis assumes that Oregon and Washington will pledge equally to the project financing program, but defines that in two different ways: (i) in Scenarios B.1, B.3, S.1 and S.3, it is assumed that both Oregon and Washington each pledge 10 percent of the applicable portion of their annual Federal-aid apportionment (i.e. equal percentage, unequal amounts), and (ii) in Scenarios B.2, B.4, S.2, and S.4, it is assumed that both Oregon and Washington each pledge the same amount measured as 10 percent of the Oregon (the smaller of the two) apportionment (i.e. equal amounts, unequal percentage of state's Federal-aid program).

Table 12
Assumed Annual Pledge of Federal-Aid Highway Funds to Columbia River Crossing Project GARVEEs

Pledge Assumption	Scenarios	Oregon	Washington	Total
10% of OR and 10% of WA Funds	B.1, B.3 S.1, S.3	\$21,442,348	\$34,639,564	\$56,081,912
10% of OR and Equal Amount of WA Funds	B.2, B.4 S.2, S.4	\$21,442,348	\$21,442,348	\$42,884,697

6.6.3 GARVEE Capacity Analysis Results

Table 13, below, shows the resulting GARVEE capacity based on the assumptions described above. Recollect that this is a conceptual analysis, based on hypothetical assumptions, and without benefit of optimizing the bond structure.

Table 13
GARVEE Capacity Analysis Summary

BASE	Interest Rate at MMD AA Bond Scale for March 1, 2005			
Scenario	B.1	B.2	B.3	B.4
Years	6	6	12	12
Interest Rate	0.0307	0.0307	0.0361	0.0361
% of Fed Hwy Funds for Servicing GARVEE Bonds	10% of OR and 10% of WA Funds	10% of OR and Equal Amount for WA	10% of OR and 10% of WA Funds	10% of OR and Equal Amount for WA
Debt Service Amount	\$56,081,912	\$42,884,697	\$56,081,912	\$42,884,697
Bond Capacity	\$303,102,859	\$231,776,586	\$538,446,662	\$411,739,202
SENSITIVITY	MMD Interest Rate + 100 Basis Points			
Scenario	S.1	S.2	S.3	S.4
Years	6	6	12	12
Interest Rate	0.0407	0.0407	0.0461	0.0461
% of Fed Hwy Funds for Servicing GARVEE Bonds	10% of OR and 10% of WA Funds	10% of OR and Equal Amount for WA	10% of OR and 10% of WA Funds	10% of OR and Equal Amount for WA
Debt Service Amount	\$56,081,912	\$42,884,697	\$56,081,912	\$42,884,697
Bond Capacity	\$293,320,284	\$224,296,050	\$508,184,614	\$388,598,430

7. State Highway Funding: Tolls

7.1 Introduction

The purpose of this section is to identify issues that may arise in consideration of using toll revenues to finance all or part of the Columbia River Crossing Project. It should be noted with regard to the information discussed below that at the time of this writing:

- There has been no decision to toll either the I-5 Bridge or the I-205 Bridge, or even to incorporate such options in the DEIS for the project.
- There are many unknowns, for example project cost and schedule, actual financing structure, lead organization, etc, that allow for only a concept-level analysis. The concept-level estimates shown below may significantly differ from final financing numbers, once an optimized financing structure is developed. However, the estimates shown below are sufficiently reliable to use for pre-DEIS strategic planning.

With these caveats in mind, three sub-sections follow:

- Section 7.2 describes key concepts that must be considered in developing a finance plan, as well as when preparing information during the project development process.
- Section 7.3 provides a preliminary financial capacity analysis of the toll revenues estimated for the Columbia River Crossing Project.
- Section 7.4 outlines the information that may be expected to be disclosed when toll bonds are issued. The financial capacity analysis shows that the amount of toll bond proceeds to construct the project is highly sensitive to interest rates and coverage factors. These factors correlate to the level of risk inferred from the disclosure information provided to the underwriters. Therefore, it is incumbent on project managers to consider how their day-to-day project development decisions will be viewed in the context of the information disclosed to bond underwriters.

7.2 Strategic Concepts and Principles to Consider in Toll Financing

This report does not address a specific financing structure for the project. However, it is important to keep in mind that the final financing structure may impact the statutory authority needs of the project, the type of authority created to construct and operate the project, the financial relationship between the project and the DOTs, and other similar strategic issues. For this reason, the subsections that follow describe potential key issues and techniques that may arise or be employed in a toll bond financing. Some of these techniques are employed in the capacity analysis provided in Section 7.3.

7.2.1 Funding in Start-Up Periods

Toll projects require years to become operational and generate sufficient cash flows to cover their construction cost debt. Consequently, debt service cannot be supported by dedicated revenues in the early years of the bond term. There are several methods for addressing this situation:

- Capitalized interest, which is sometimes called “funded interest,” is a common technique to cover debt service in the early years of a project, but it can be quite expensive. With capitalized interest, a portion of bond proceeds is set aside to pay interest on the borrowing for a specified period of time. Interest is commonly capitalized for the construction period, and sometimes for a short period thereafter, so that debt service expense does not begin until the project is operational and producing revenues. State and federal tax laws dictate the extent to which interest can be capitalized. Federal tax law generally permits capitalized interest for a period ending on the date that is the later of three years from the issue date or one year after the date the project is placed in service. There are a variety of exceptions that can extend the period covered by capitalized interest. State laws can limit the period of capitalized interest otherwise permitted by Federal statutes.
- Another technique that is used is to structure the debt service to defer payment of principal. The ability to make such deferments depends on the state statutes granting the bonding authority.
- Capital appreciation bonds (CABs) are another technique to defer debt service. CABs are a municipal security on which the investment return on an initial principal amount is reinvested at a stated compounded rate until maturity, at which time the investor receives a single payment (the “maturity value”) representing both the initial principal amount and the total investment return. CABs are distinct from traditional zero coupon bonds because the investment return is considered to be in the form of compounded interest rather than accreted original issue discount. For this reason only the initial principal amount of a CAB is counted against a municipal issuer’s statutory debt limit, rather than the total par value, as in the case of a traditional zero coupon bond. Most CABs are not callable; however CABs are sometimes convertible into callable current interest bonds.
- Provided that transaction costs are not prohibitive, a long-term financing can be initiated with bond anticipation notes (BANs). The underlying logic is that for debt outstanding for say, 30 years, it may be less costly to issue the entire amount as BANs due in a year or two (and thereby pay short-term rates on the debt for the initial years) that will be taken out by long-term bonds amortized over the remaining portion of the original 30-year term starting from the BANs issuance date. This technique aims to defer paying long-term rates for a few years. Notably, this technique risks that rates in the long-term market may increase while the BAN financing is outstanding, thus locking in higher permanent financing.

7.2.2 Maximizing Capital for Projects

As discussed in Section 7.3, the estimated toll revenues from the Columbia River Crossing Project, should tolling be included in the project, are anticipated to have a substantial financial capacity. But project costs may exceed the financial capacity, making it critical to extract as much financing from the toll revenues as possible. There are several methods for addressing this situation:

- Additional capital may be generated for projects by treating investment earnings from a debt service reserve fund as available construction proceeds. During the construction period for the project, reserve fund earnings will be dedicated to the project fund and applied against project costs.
- If reserve funds are required, a technique to free up capital is to use a surety bond policy in lieu of bond proceeds for deposit into a debt service reserve fund to meet a debt service reserve requirement. This is advantageous when the premium for the policy is less than the cost of the additional bonds needed to fund the debt service reserve fund solely with proceeds, as offset, in part, by investment earnings on a proceeds funded reserve fund.

7.2.3 Improving Credit Quality

The financing capacity of the project can also be increased by improving the credit quality of the toll revenue cash flow; thereby obtaining lower interest rates or coverage factors. There are several methods for addressing this situation:

- One technique to improve the credit quality is to employ a senior-subordinated debt structure. There are a variety of ways in which this approach can optimize the credit quality of bonds; credit strength can be redeployed beneficially from a senior bond to a credit needy subordinate bond. For example, an issuer may apply a moral obligation or general obligation double-barrel security to subordinate revenue bonds, while allowing the senior bonds to retain a first lien against the project revenue.
- Another way to enhance credit quality is to statutorily dedicate the revenue streams. For examples, certain municipal bond issuers have used an approach in which state statutes established a special purpose authority that was granted, by statute, a dedicated tax stream to support bonds issued by the authority on behalf of local governments. In these instances, the special purpose authority's bonds achieved stronger ratings than the associated local government's general obligation bonds.

7.3 Toll Funding Capacity Analysis

7.3.1 Introduction

The option of tolling the I-5 and, potentially, I-205 Bridges may be considered in the Draft Environmental Impact Statement (DEIS) for the Columbia River Crossing Project. In preparation for the decision to include tolling options in the DEIS, Vollmer LLC prepared a series of Technical Memoranda and Working Papers wherein preliminary assumptions regarding toll policy and toll rates were established; and traffic volumes, toll collections, and net (of operating cost) toll collections were estimated for two tolling scenarios: (i) Toll I-5 Bridge Only, and (ii) Toll I-5 and I-205 Bridges.

This analysis builds on Vollmer’s work by estimating the capacity of the net toll collections to produce proceeds for the construction of the Columbia River Crossing Project. It employs some of the techniques discussed in Section 7.2, but does not seek to optimize the financing structure. Instead, this analysis is prepared at a conceptual level, and is based on the present value of the cash flow of net toll collections. This type of analysis is used by several tollway authorities⁸⁴ to develop preliminary capacity analyses of tollway projects. However, it should be noted that “small” differences in the final bond structure can produce significantly different results than those shown in this report.

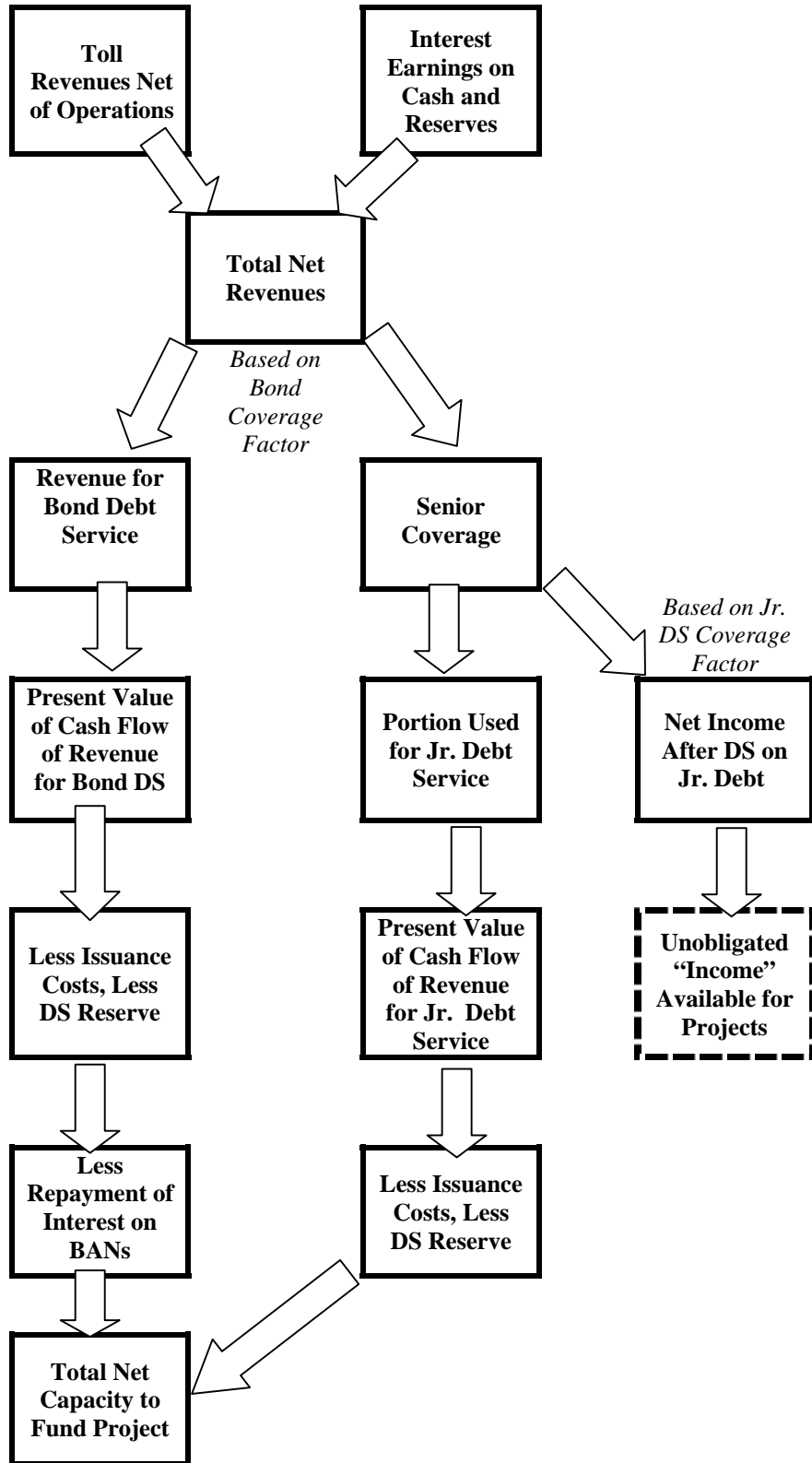
7.3.2 Methodology

The methodology for estimating the project funding capacity of toll revenues is shown on the preceding page

Because toll revenues do not commence until after the Project opens, the methodology assumes that some type of short-term borrowing (for example, bond anticipation notes (BANs)) is used to provide funding during the construction period. There are other ways to address construction period funding, for example through the use of capital appreciation bonds (CABs), capitalized interest, etc., but the BANs approach provides a simple context for this preliminary analysis. The methodology assumes that toll-backed bonds will be issued to “take out” the BANs; converting the short-term debt to long-term debt. In addition to repaying the face value of the BANs, the methodology assumes that the toll-backed bonds would also pay the accrued interest on the BANs; reducing the net value of the toll-backed bonds.

⁸⁴ For example, the Orlando Expressway-Tollway Authority and the Texas Department of Transportation.

Methodology for Toll Funding Capacity Analysis



The methodology assumes that net toll revenues will be used to support two tranches of debt:

- **Senior Bonds:** Under the methodology, the entire 30-year stream of annual net toll revenue would be pledged to repay long-term bonds (the senior debt). A “coverage factor” applicable to senior, long-term bonds determines the amount of net toll revenues that would be applied toward debt repayment (“revenue for bond debt service”), and the amount of net toll revenues that serve as a cushion to mitigate risk to the bondholders (“senior coverage”). A uniform annual “discount rate,” equal to the estimated true interest cost (TIC) on an equivalent 30-year bond, is applied to the “revenue for bond debt service” to determine the present value (PV) of the 30-year stream of annual net toll revenues. From that total is subtracted the estimated costs for debt service reserves, issuance costs, and repayment of BANs; producing the project funding capacity of the senior-level debt.
- **Junior Debt:** Under the methodology, the “coverage” funds for the senior debt are pledged to repay a secondary obligation (“junior debt”), if they are not needed for the senior bonds. To accomplish this it may be necessary to create a debt structure that includes credit enhancements, “double-barrel” security, the use of TIFIA, or other similar mechanisms to optimize the use of this secondary pledge. This analysis does not address the technique used; rather it presumes that the senior coverage can be applied to a secondary borrowing but at a coverage factor and interest rate less favorable than those for the senior bonds. From that point, the financial capacity of the junior debt is computed in a manner similar to the senior bonds. The coverage on the junior debt (not used to repay debt) is considered “income” and is not repledged to a third tranche of debt.

7.3.3 Assumptions

The following assumptions are employed in the capacity analysis:

- **Construction Period and Project Opening Date:** It is assumed that construction starts at the beginning of 2009, construction is completed at the end of 2012, and tolling operations (and collections) begin at the beginning of 2013. These assumptions apply to both tolling scenarios.
- **Construction Period Debt and Accrued Interest:** It is assumed that short-term debt carrying a 4 percent interest rate would be issued to pay for construction. It is further assumed that \$375 million would be borrowed in each of the four years of construction, resulting in a total accrued interest payment at the end of construction of \$156,120,960. As discussed above, it is assumed that the senior bonds “takes-out” this construction period borrowing, including the interest accrued during the construction period. These assumptions apply to both tolling scenarios.
- **Toll Collections:** This analysis assumes the Vollmer net toll revenue estimates documented in Working Paper 11.1. However, Vollmer only estimated toll revenues to the year 2025, significantly short of the assumed maturity date on the senior bonds. This

analysis assumes no growth in net toll revenues after 2025. These assumptions apply to both tolling scenarios.

- **Timing of Senior Bond and Junior Debt Issuance:** It is assumed that both the senior debt and junior debt are concurrently issued at the end of 2012. These assumptions apply to both tolling scenarios.
- **Assumed “Discount Rate” for Present Value Analysis:** For the base case, the analysis assumes a 5 percent discount rate on the net toll revenues pledged to the senior bonds, and a 5.5 percent discount rate on the revenues pledged to the junior debt. A sensitivity analysis is provided that assumes a 5.5 percent discount rate on the senior bond cash flow and 6 percent discount rate on the junior debt cash flow. These assumptions apply to both tolling scenarios.
- **Coverage Factors:** The base coverage factors assumed for the Toll I-5 Scenario is higher than that assumed for the I-205 Scenario because of the higher traffic forecast risk associated with the I-5 Only Scenario. For the senior bonds, the base coverage factor assumed for the I-5 and I-205 Scenario is 1.25; while the I-5 Only Scenario assumes a 1.40 coverage factor for the senior debt. Both scenarios assume a coverage factor for their junior debt that is 0.25 points higher than the coverage factor assumed for the senior bonds (i.e. 1.50 for the I-5 and I-205 Scenario, and 1.65 for the I-5 Only Scenario). The sensitivity analysis provides results with differing coverage factors for both scenarios.
- **Maturity:** Both the senior bonds and junior debt are assumed to mature in 30 years. These assumptions apply to both tolling scenarios.
- **Issuance Costs:** The issuance cost is assumed to be 1.5 percent of the face value of the senior bonds and junior debt in both scenarios.
- **Reserve Requirement:** For both scenarios, it is assumed that a debt service reserve would be required for both the senior bonds and junior debt in an amount equal to the largest year debt service. Since the capacity analysis actually computes present values, not debt service, the reserve requirement is the highest one year present value of the senior bond cash flow and the junior debt cash flow.
- **Interest Earnings:** It is assumed that the debt service reserve will not be spent, and will accrue interest at 4 percent per year. It is further assumed that the one half of the net toll revenues will accrue interest for one-half a year at a 4 percent annual interest rate.
- **Use of Net Income After Debt Service:** It is assumed that the coverage on the junior debt is made available to the DOTs as annual income. While this does not get added into the project funding capacity analysis, this “income” could be applied on a cash basis to improvements in the corridor, based on a phasing plan.

7.3.4 Results

The results of the toll funding capacity analysis are shown in Tables 14 through 20. Table 14 shows the net toll revenue estimates prepared by Vollmer for both the Toll I-5 Only and Toll I-5 and I-205 Scenarios. A detailed description of Vollmer's methodology and assumptions is provided in Working Paper 11.1.

Table 15 shows the "base case" financial capacity (present value) analysis for the senior bond cash flow for the Toll I-5 Only Scenario. This table starts with the net revenues coming from Table 14. The funding capacity of the senior bonds is the cumulative total of the "present value revenue for bond debt service (DS)." The last column of the table shows the coverage funds – which are employed in the following table (Table 16) to fund the junior debt. Table 16 shows the step-by-step calculations used to estimate the "base case" financing capacity of the junior debt cash flow for the Toll I-5 Only Scenario. It concludes by showing the annual income that is not accounted for in the financing capacity analysis, but could be made available to fund improvements on a cash basis. Table 17 and 18 show for the Toll I-5 and I-205 Scenario the same type of calculations as those shown in Tables 15 and 16 for the Toll I-5 Only Scenario. Similar calculations were prepared for both scenarios for several sensitivity cases, in which the interest rates and coverage factors were modified from those used in the "base case" analyses.

The overall conclusions of the "base case" and "sensitivity" analyses for both scenarios are shown in Table 19 and Table 20. As shown in these tables:

- The base case funding capacity of the Toll I-5 Only Scenario (\$1.5 billion) is about \$300 million less than that of the Toll I-5 and I-205 Scenario (\$1.8 billion).
- The junior debt comprises about 15-20 percent of the total funding capacity of the scenarios.
- In rough terms, a 0.5 percent (50 basis points) increase in interest rates equates to about a \$100 million in funding capacity.
- In rough terms, a 0.15 point (i.e. from 1.25 to 1.40) increase in coverage factor equates to about a \$100 million in funding capacity

Table 14
Vollmer Forecasts of Toll Revenues Net of Operations for Tolling Scenarios

Year	Both Scenarios		Toll I-5 Only Scenario		Toll I-5/I-205 Scenario	
	Toll Rates		Total Ann. Revenue	Revenue Net Operations	Tot Ann. Revenue	Revenue Net of Operations
	Pass	Truck				
2006	\$2.00	\$8.00				
2007	\$2.25	\$9.00				
2008	\$2.25	\$9.00				
2009	\$2.25	\$9.00	Construction Starts		Construction Starts	
2010	\$2.50	\$10.00				
2011	\$2.50	\$10.00				
2012	\$2.75	\$11.00				
2013	\$2.75	\$11.00	\$127,407,000	\$101,925,600	\$141,751,000	\$113,400,800
2014	\$2.75	\$11.00	\$127,620,000	\$102,096,000	\$141,853,000	\$113,482,400
2015	\$2.75	\$11.00	\$127,848,000	\$102,278,400	\$142,066,000	\$113,652,800
2016	\$2.75	\$11.00	\$128,093,000	\$102,474,400	\$142,291,000	\$113,832,800
2017	\$3.00	\$12.00	\$138,100,000	\$110,480,000	\$154,610,000	\$123,688,000
2018	\$3.00	\$12.00	\$140,327,000	\$112,261,600	\$155,951,000	\$124,760,800
2019	\$3.00	\$12.00	\$140,650,000	\$112,520,000	\$156,241,000	\$124,992,800
2020	\$3.25	\$13.00	\$150,654,000	\$120,523,200	\$168,435,000	\$134,748,000
2021	\$3.25	\$13.00	\$153,132,000	\$122,505,600	\$169,928,000	\$135,942,400
2022	\$3.50	\$14.00	\$163,106,000	\$130,484,800	\$182,138,000	\$145,710,400
2023	\$3.50	\$14.00	\$165,824,000	\$132,659,200	\$183,780,000	\$147,024,000
2024	\$3.50	\$14.00	\$166,316,000	\$133,052,800	\$184,197,000	\$147,357,600
2025	\$3.75	\$15.00	\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2026			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2027			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2028			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2029			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2030			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2031			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2032			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2033			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2034	Assume No Growth After 2025 Vollmer Forecast		\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2035			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2036			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2037			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2038			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2039			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2040			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2041			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200
2042			\$176,331,000	\$141,064,800	\$196,489,000	\$157,191,200

Table 15
Senior Bond Capacity Analysis: Toll I-5 Only – Base Scenario

Year	Revenue Net of Operations	Interest on Debt Reserve	Interest on Net Income	Total Net Revenues	Revenue for Bond Debt Service	Present Value of Revenue for Bond DS	Senior Coverage
2006							
2007							
2008							
2009							
2010							
2011							
2012							
2013	\$101,925,600	\$4,200,000	\$1,019,256	\$107,144,856	\$76,532,040	\$76,532,040	\$30,612,816
2014	\$102,096,000	\$4,200,000	\$1,020,960	\$107,316,960	\$76,654,971	\$73,004,735	\$30,661,989
2015	\$102,278,400	\$4,200,000	\$1,022,784	\$107,501,184	\$76,786,560	\$69,647,673	\$30,714,624
2016	\$102,474,400	\$4,200,000	\$1,024,744	\$107,699,144	\$76,927,960	\$66,453,264	\$30,771,184
2017	\$110,480,000	\$4,200,000	\$1,104,800	\$115,784,800	\$82,703,429	\$68,040,315	\$33,081,371
2018	\$112,261,600	\$4,200,000	\$1,122,616	\$117,584,216	\$83,988,726	\$65,807,364	\$33,595,490
2019	\$112,520,000	\$4,200,000	\$1,125,200	\$117,845,200	\$84,175,143	\$62,812,788	\$33,670,057
2020	\$120,523,200	\$4,200,000	\$1,205,232	\$125,928,432	\$89,948,880	\$63,924,990	\$35,979,552
2021	\$122,505,600	\$4,200,000	\$1,225,056	\$127,930,656	\$91,379,040	\$61,848,931	\$36,551,616
2022	\$130,484,800	\$4,200,000	\$1,304,848	\$135,989,648	\$97,135,463	\$62,614,385	\$38,854,185
2023	\$132,659,200	\$4,200,000	\$1,326,592	\$138,185,792	\$98,704,137	\$60,595,778	\$39,481,655
2024	\$133,052,800	\$4,200,000	\$1,330,528	\$138,583,328	\$98,988,091	\$57,876,287	\$39,595,237
2025	\$141,064,800	\$4,200,000	\$1,410,648	\$146,675,448	\$104,768,177	\$58,338,841	\$41,907,271
2026				\$146,675,448	\$104,768,177	\$55,560,801	\$41,907,271
2027				\$146,675,448	\$104,768,177	\$52,915,049	\$41,907,271
2028				\$146,675,448	\$104,768,177	\$50,395,285	\$41,907,271
2029				\$146,675,448	\$104,768,177	\$47,995,509	\$41,907,271
2030				\$146,675,448	\$104,768,177	\$45,710,009	\$41,907,271
2031				\$146,675,448	\$104,768,177	\$43,533,342	\$41,907,271
2032				\$146,675,448	\$104,768,177	\$41,460,325	\$41,907,271
2033				\$146,675,448	\$104,768,177	\$39,486,024	\$41,907,271
2034				\$146,675,448	\$104,768,177	\$37,605,737	\$41,907,271
2035				\$146,675,448	\$104,768,177	\$35,814,988	\$41,907,271
2036				\$146,675,448	\$104,768,177	\$34,109,512	\$41,907,271
2037				\$146,675,448	\$104,768,177	\$32,485,250	\$41,907,271
2038				\$146,675,448	\$104,768,177	\$30,938,333	\$41,907,271
2039				\$146,675,448	\$104,768,177	\$29,465,079	\$41,907,271
2040				\$146,675,448	\$104,768,177	\$28,061,980	\$41,907,271
2041				\$146,675,448	\$104,768,177	\$26,725,695	\$41,907,271
2042				\$146,675,448	\$104,768,177	\$25,453,043	\$41,907,271

Table 16
Junior Debt Capacity Analysis: Toll I-5 Only – Base Scenario

Year	Senior Coverage	Portion of Sr. Coverage Used for Jr. Debt Service	PV of Jr. Debt Service	Net Income After Jr. DS (Coverage on Jr. DS)
2006				
2007				
2008				
2009				
2010				
2011				
2012				
2013	\$30,612,816	\$18,553,222	\$18,553,222	\$12,059,594
2014	\$30,661,989	\$18,583,023	\$17,614,240	\$12,078,965
2015	\$30,714,624	\$18,614,924	\$16,724,623	\$12,099,700
2016	\$30,771,184	\$18,649,202	\$15,881,916	\$12,121,982
2017	\$33,081,371	\$20,049,316	\$16,184,144	\$13,032,055
2018	\$33,595,490	\$20,360,903	\$15,578,827	\$13,234,587
2019	\$33,670,057	\$20,406,095	\$14,799,436	\$13,263,962
2020	\$35,979,552	\$21,805,789	\$14,990,102	\$14,173,763
2021	\$36,551,616	\$22,152,495	\$14,434,540	\$14,399,121
2022	\$38,854,185	\$23,547,991	\$14,543,928	\$15,306,194
2023	\$39,481,655	\$23,928,276	\$14,008,344	\$15,553,379
2024	\$39,595,237	\$23,997,113	\$13,316,250	\$15,598,123
2025	\$41,907,271	\$25,398,346	\$13,359,061	\$16,508,925
2026	\$41,907,271	\$25,398,346	\$12,662,617	\$16,508,925
2027	\$41,907,271	\$25,398,346	\$12,002,480	\$16,508,925
2028	\$41,907,271	\$25,398,346	\$11,376,759	\$16,508,925
2029	\$41,907,271	\$25,398,346	\$10,783,657	\$16,508,925
2030	\$41,907,271	\$25,398,346	\$10,221,476	\$16,508,925
2031	\$41,907,271	\$25,398,346	\$9,688,603	\$16,508,925
2032	\$41,907,271	\$25,398,346	\$9,183,510	\$16,508,925
2033	\$41,907,271	\$25,398,346	\$8,704,749	\$16,508,925
2034	\$41,907,271	\$25,398,346	\$8,250,947	\$16,508,925
2035	\$41,907,271	\$25,398,346	\$7,820,803	\$16,508,925
2036	\$41,907,271	\$25,398,346	\$7,413,083	\$16,508,925
2037	\$41,907,271	\$25,398,346	\$7,026,619	\$16,508,925
2038	\$41,907,271	\$25,398,346	\$6,660,302	\$16,508,925
2039	\$41,907,271	\$25,398,346	\$6,313,083	\$16,508,925
2040	\$41,907,271	\$25,398,346	\$5,983,965	\$16,508,925
2041	\$41,907,271	\$25,398,346	\$5,672,004	\$16,508,925
2042	\$41,907,271	\$25,398,346	\$5,376,308	\$16,508,925

Table 17
Bond Capacity Analysis: Toll I-5 and I-205 – Base Scenario

Year	Revenue Net of Operations	Interest on Debt Reserve	Interest on Net Income	Total Net Revenues	Revenue for Bond Debt Service	Present Value of Revenue for Bond DS	Senior Coverage
2006							
2007							
2008							
2009							
2010							
2011							
2012							
2013	\$113,400,800	\$4,200,000	\$1,134,008	\$118,734,808	\$94,987,846	\$94,987,846	\$23,746,962
2014	\$113,482,400	\$4,200,000	\$1,134,824	\$118,817,224	\$95,053,779	\$90,527,409	\$23,763,445
2015	\$113,652,800	\$4,200,000	\$1,136,528	\$118,989,328	\$95,191,462	\$86,341,462	\$23,797,866
2016	\$113,832,800	\$4,200,000	\$1,138,328	\$119,171,128	\$95,336,902	\$82,355,601	\$23,834,226
2017	\$123,688,000	\$4,200,000	\$1,236,880	\$129,124,880	\$103,299,904	\$84,985,087	\$25,824,976
2018	\$124,760,800	\$4,200,000	\$1,247,608	\$130,208,408	\$104,166,726	\$81,617,356	\$26,041,682
2019	\$124,992,800	\$4,200,000	\$1,249,928	\$130,442,728	\$104,354,182	\$77,870,698	\$26,088,546
2020	\$134,748,000	\$4,200,000	\$1,347,480	\$140,295,480	\$112,236,384	\$79,764,303	\$28,059,096
2021	\$135,942,400	\$4,200,000	\$1,359,424	\$141,501,824	\$113,201,459	\$76,619,203	\$28,300,365
2022	\$145,710,400	\$4,200,000	\$1,457,104	\$151,367,504	\$121,094,003	\$78,058,274	\$30,273,501
2023	\$147,024,000	\$4,200,000	\$1,470,240	\$152,694,240	\$122,155,392	\$74,992,814	\$30,538,848
2024	\$147,357,600	\$4,200,000	\$1,473,576	\$153,031,176	\$122,424,941	\$71,579,327	\$30,606,235
2025	\$157,191,200	\$4,200,000	\$1,571,912	\$162,963,112	\$130,370,490	\$72,595,167	\$32,592,622
2026				\$162,963,112	\$130,370,490	\$69,138,254	\$32,592,622
2027				\$162,963,112	\$130,370,490	\$65,845,956	\$32,592,622
2028				\$162,963,112	\$130,370,490	\$62,710,435	\$32,592,622
2029				\$162,963,112	\$130,370,490	\$59,724,223	\$32,592,622
2030				\$162,963,112	\$130,370,490	\$56,880,213	\$32,592,622
2031				\$162,963,112	\$130,370,490	\$54,171,631	\$32,592,622
2032				\$162,963,112	\$130,370,490	\$51,592,030	\$32,592,622
2033				\$162,963,112	\$130,370,490	\$49,135,266	\$32,592,622
2034				\$162,963,112	\$130,370,490	\$46,795,492	\$32,592,622
2035				\$162,963,112	\$130,370,490	\$44,567,135	\$32,592,622
2036				\$162,963,112	\$130,370,490	\$42,444,891	\$32,592,622
2037				\$162,963,112	\$130,370,490	\$40,423,705	\$32,592,622
2038				\$162,963,112	\$130,370,490	\$38,498,767	\$32,592,622
2039				\$162,963,112	\$130,370,490	\$36,665,492	\$32,592,622
2040				\$162,963,112	\$130,370,490	\$34,919,516	\$32,592,622
2041				\$162,963,112	\$130,370,490	\$33,256,682	\$32,592,622
2042				\$162,963,112	\$130,370,490	\$32,157,532	\$32,592,622

Table 18
Junior Debt Capacity Analysis: Toll I-5 and I-205 – Base Scenario

Year	Senior Coverage	Portion of Sr. Coverage Used for Jr. Debt Service	PV of Jr. Debt Service	Net Income After Jr. DS (Coverage on Jr. DS)
2006				
2007				
2008				
2009				
2010				
2011				
2012				
2013	\$23,746,962	\$15,831,308	\$15,831,308	\$7,915,654
2014	\$23,763,445	\$15,842,297	\$15,016,395	\$7,921,148
2015	\$23,797,866	\$15,865,244	\$14,254,167	\$7,932,622
2016	\$23,834,226	\$15,889,484	\$13,531,701	\$7,944,742
2017	\$25,824,976	\$17,216,651	\$13,897,569	\$8,608,325
2018	\$26,041,682	\$17,361,121	\$13,283,590	\$8,680,561
2019	\$26,088,546	\$17,392,364	\$12,613,739	\$8,696,182
2020	\$28,059,096	\$18,706,064	\$12,859,237	\$9,353,032
2021	\$28,300,365	\$18,866,910	\$12,293,657	\$9,433,455
2022	\$30,273,501	\$20,182,334	\$12,465,200	\$10,091,167
2023	\$30,538,848	\$20,359,232	\$11,918,917	\$10,179,616
2024	\$30,606,235	\$20,404,157	\$11,322,481	\$10,202,078
2025	\$32,592,622	\$21,728,415	\$11,428,745	\$10,864,207
2026	\$32,592,622	\$21,728,415	\$10,832,933	\$10,864,207
2027	\$32,592,622	\$21,728,415	\$10,268,183	\$10,864,207
2028	\$32,592,622	\$21,728,415	\$9,732,875	\$10,864,207
2029	\$32,592,622	\$21,728,415	\$9,225,474	\$10,864,207
2030	\$32,592,622	\$21,728,415	\$8,744,525	\$10,864,207
2031	\$32,592,622	\$21,728,415	\$8,288,649	\$10,864,207
2032	\$32,592,622	\$21,728,415	\$7,856,540	\$10,864,207
2033	\$32,592,622	\$21,728,415	\$7,446,957	\$10,864,207
2034	\$32,592,622	\$21,728,415	\$7,058,727	\$10,864,207
2035	\$32,592,622	\$21,728,415	\$6,690,737	\$10,864,207
2036	\$32,592,622	\$21,728,415	\$6,341,930	\$10,864,207
2037	\$32,592,622	\$21,728,415	\$6,011,308	\$10,864,207
2038	\$32,592,622	\$21,728,415	\$5,697,923	\$10,864,207
2039	\$32,592,622	\$21,728,415	\$5,400,875	\$10,864,207
2040	\$32,592,622	\$21,728,415	\$5,119,312	\$10,864,207
2041	\$32,592,622	\$21,728,415	\$4,852,429	\$10,864,207
2042	\$32,592,622	\$21,728,415	\$4,599,459	\$10,864,207

Table 19
Bond and Junior Debt Capacity Analysis: Toll I-5 Only – Sensitivity Analysis

Toll Scenario	Interest Rate on Bonds	Coverage	Present Value of Cash Flow	Less Issuance Costs	Less Debt Service Reserve	Less Payment of Interest on BANs	Net Capacity to Fund Project
<i>Toll I-5 Only -Base</i>							
Bonds	5.00%	1.40	\$1,505,213,353	(\$22,578,200)	(\$104,768,177)	(\$156,120,960)	\$1,221,746,016
Junior Debt	5.50%	1.65	\$345,129,596	(\$5,176,944)	(\$25,398,346)		\$314,554,306
Total			\$1,850,342,949	(\$27,755,144)	(\$130,166,523)	(\$156,120,960)	\$1,536,300,322
<i>Toll I-5 Only - Lower Coverage</i>							
Bonds	5.00%	1.25	\$1,685,838,956	(\$25,287,584)	(\$117,340,358)	(\$156,120,960)	\$1,387,090,054
Junior Debt	5.50%	1.50	\$265,749,789	(\$3,986,247)	(\$19,556,726)		\$242,206,816
Total			\$1,951,588,745	(\$29,273,831)	(\$136,897,084)	(\$156,120,960)	\$1,629,296,870
<i>Toll I-5 Only - Higher Interest</i>							
Bonds	5.50%	1.40	\$1,423,659,583	(\$21,354,894)	(\$104,768,177)	(\$156,120,960)	\$1,141,415,552
Junior Debt	6.00%	1.65	\$327,001,034	(\$4,905,016)	(\$25,398,346)		\$296,697,672
Total			\$1,750,660,617	(\$26,259,910)	(\$130,166,523)	(\$156,120,960)	\$1,438,113,224

Table 20
Bond and Junior Debt Capacity Analysis: Toll I-5 and I-205 – Sensitivity Analysis

Toll Scenario	Interest Rate on Bonds	Coverage	Present Value of Cash Flow	Less Issuance Costs	Less Debt Service Reserve	Less Payment of Interest on BANs	Net Capacity to Fund Project
<i>Toll I-5 and I-205 -Base</i>							
Bonds	5.00%	1.25	\$1,870,737,267	(\$28,061,059)	(\$130,370,490)	(\$156,120,960)	\$1,556,184,758
Junior Debt	5.50%	1.50	\$294,885,543	(\$4,423,283)	(\$21,728,415)		\$268,733,845
Total			\$2,165,622,810	(\$32,484,342)	(\$152,098,905)	(\$156,120,960)	\$1,824,918,603
<i>Toll I-5 and I-205 Higher Coverage</i>							
Bonds	5.00%	1.40	\$1,670,301,132	(\$25,054,517)	(\$116,402,223)	(\$156,120,960)	\$1,372,723,432
Junior Debt	5.50%	1.65	\$382,968,237	(\$5,744,524)	(\$28,218,721)		\$349,004,992
Total			\$2,053,269,369	(\$30,799,041)	(\$144,620,944)	(\$156,120,960)	\$1,721,728,424
<i>Toll I-5 and I-205 - Higher Interest</i>							
Bonds	5.50%	1.25	\$1,769,313,256	(\$26,539,699)	(\$130,370,490)	(\$156,120,960)	\$1,456,282,107
Junior Debt	6.00%	1.50	\$279,385,880	(\$4,190,788)	(\$21,728,415)		\$253,466,677
Total			\$2,048,699,136	(\$30,730,487)	(\$152,098,905)	(\$156,120,960)	\$1,709,748,784

7.4 Disclosure Requirements

7.4.1 Introduction

The technical default of the State of New York's Urban Development Corporation Notes in 1975 began the modern era of full disclosure in the sale of municipal debt obligations. This and other defaults such as the Orange County, California bankruptcy have caused increased scrutiny of government securities to determine their quality or "safeness" as investments. The municipal bond market now demands complete and continuing financial and economic disclosure by all issuers of municipal bonds, regardless of the apparent financial health of the issuer.

Because of the inherent high risk in stand-alone start-up toll facilities, the disclosure information for these facilities is particularly extensive. The information provided in the disclosures will directly translate into the perceived risk of the financing, the interest rate of the bonds, and the total cost of the project. Given the potential size of revenue bonds, if a tolling scenario is selected, a 0.0025% (25 basis points) difference in interest rate can result in a \$2-\$2.5 million per year over 30 years increase in project costs. So preparing the needed information at a sufficient level of detail with validity to minimize the risk concerns of bond underwriters and rating agencies must be an objective of the project development process.

The National Federation of Municipal Analysts has proposed a recommended set of 'best practices' for information disclosures for toll facility financings.⁸⁵ The proposed disclosure information differs depending on the stage of the project, and can include specific disclosure information: (i) before the sale of bonds, (ii) during construction, and (iii) on a continual basis once the project is complete. The first two stages of information are particularly relevant to the project development process, and are summarized below.

7.4.2 Feasibility Disclosure Items

The feasibility study is the investor's primary consideration when assessing the economic viability of a toll road and its ability to produce adequate and timely toll revenues to meet financial obligations. Many of the feasibility study's projections for toll facilities have overly estimated traffic and revenue performance. As a result, there currently is demand information beyond what is typically provided. The following information should be prepared to help the investor understand the political landscape and technical risks associated with the formation of a project:

⁸⁵ National Federation of Municipal Analysts, *Recommended Best Practices in Disclosure for Toll Road Financings*, Draft of December 6, 2004

- **Explain how the toll project was conceived and what parties were influential in establishing the necessity of the toll facility**

To understand why the toll road is being built, investors must understand the evolution of a toll facility project from conception to financing. The investor benefits by knowing the political landscape of the project, and this in turn may facilitate the project's financing. The following types of information should be provided:

- Project's goals, purpose, and need
- Members of State Transportation Commissions and Metropolitan Planning Organizations, and their role in project
- Public support of or dissent of the project
- MPOs planning integration with the State DOTs
- Role of Federal and State DOTs in project
- Public hearing process/major investment study
- RFP process for selection of final feasibility study/development team

- **Explain the Model and Inputs Utilized to Forecast Future Traffic and Tolls**

Traffic and revenue forecasts provided as part of the feasibility study should allow the prospective investor to satisfactorily assess the following key questions:

- Can current traffic and development support the revenue demands of the project?
- How much traffic or revenue growth will be required to meet the proposed debt service schedule?
- Do the current projections appear reasonable and achievable?

The following types of information should be provided:

- Objective of Forecasting Study
- Analysis/Forecast Period
- Location of Forecasting Study
 - Define Study
 - Define corridor
- Inputs/Assumptions on Economic Development and Land
- Historical and projected population growth for study area and corridor
- Historical and projected employment growth for study area and corridor
- Study Area Employment by Type (office, retail, industrial, other)
- Policy objectives implicit in the land-use and transportation projections
- Distribution of current and future activities and travel behavior within the study area
- Factors Affecting Sub-market and Corridor Employment Growth
- Toll Rate Structure
 - Location of toll barriers (is it a closed barrier system?)
 - Price of tolls for passenger cars and for trucks (cost per axle)
 - Year of toll increases and amount (inflation expectations)

- **Explain the Validity of the Model and How the Model was Tested**

The forecast report should address the sensitivity of the model to land use, transportation network changes, or other changes over the forecast period. The following information should be provided:

- Proposed Modeling Process
 - Approach
 - Previous applications of the model
 - Major algorithmic rules
 - Base Year Model Validation and Traffic Forecast
 - Base Year Traffic Forecast
 - Traffic estimates and Level of Service by facility class at major points on the network
 - Truck traffic estimates
 - Trip productions and attractions in the study area
 - Mode choice breakdowns
 - Description of the Base Year Validation Acceptance Criteria
 - Reasonableness Checks
 - Comparison of estimated traffic to base traffic counts
 - Comparison of trip productions and attractions to base figures
 - Comparisons of level of service and mode choices to base figures
 - Describe any unexpected results
 - Validation Results
 - Correlation or coefficient of determination statistics
 - Peer review comments
 - Justification of Toll Structure
 - Tolls compared to tolls on similar roads
 - Data specification problems
 - Socio-economic, land use or transportation network changes
 - Model adjustments
 - Results of any peer reviews
- **Provide a Range of Possible Traffic Forecast and Revenue Projections Based on Different Scenarios**

The validated forecast model provides a reasonable platform for projecting the feasibility of the project. By applying the base socio-economic, land use, transportation network and toll forecasts, the model produces a most likely traffic and revenue forecast. However, a range of forecasts is needed by investors to determine the revenue impact of key inputs. Thus, the following information should be provided:

- Traffic and Revenue Forecasts Results for Project and Study Area
- No build Traffic Forecast
 - Traffic forecast (including truck estimates and congestion analysis) for the study area with no toll road project

- Sensitivity Analyses with Toll Road Project
 - Baseline traffic and revenue forecast
 - Population growth exceeds or lags baseline by 50% annually
 - Employment growth exceeds or lags baseline by 50% annually
 - Personal income growth exceeds or lags baseline by 50% annually
 - 50% increase in toll elasticity by consumers
 - Acceleration of planned transportation network improvements by 5 years
- Debt Service Analyses with Toll Road Project Sensitivity Analyses
 - Projected funds available for debt service
 - Debt service coverage

In addition to providing the forecasts, investors look for a summary of the project's key success factors to gain an indication of the major factor's influencing the toll road's ability to meet traffic and revenue projections. The following information should be provided:

- Summary of factors affecting the traffic and revenue forecast
- Changes in data or assumptions impacting the forecast results, such as:
 - Critical land use changes
 - Additions or impairments to the transportation network
 - Major socio-economic changes
 - Appropriate criteria or schedule for initiating a re-forecast for the study area

- **Address Considerations for Toll Facility Board composition and operational management**

If it is determined by the DOTs to establish for the Columbia River Crossing Project a special entity overseen by an independent or quasi-independent Board, the nature of the entity and the make-up of the Board will be of prime concern to investors. The following information should be provided:

- History and process of original and future board
 - Formation and selection process
 - Biographies of all members
- Board process for decision-making
 - Division of authority between the governing body and its managers
- Quarterly board meeting agenda and minutes
 - As allowable per state open records laws
- Management's annual budget process and projections
 - Operations, maintenance, and capital improvements
 - Discussion of assumptions and basis

- **Provide Information regarding Construction**

Potential investors require information regarding construction to provide confidence that the facility will be completed on time, on budget and according to specification. In particular, a prospective investor needs satisfactory answers to the following questions:

- Will the road be completed on time?
- Will there be enough money to complete the project? Can additional debt and/or equity be raised if needed?
- Is there enough capitalized interest or other funds to make debt-service payments until toll revenues begin to flow?
- Will the toll road be built according to specifications?

To be able to address these questions, information on the following should be provided:

- Detailed Description of Project
 - If the facility is subdivided into sections for design and construction purposes, identify and describe the project segments.
 - Explain any design complexity (i.e., construction difficulties relating to such things as geology, topography, environment issues etc.)
 - Explain structural complexities
- Summary of Contract and Contractors
 - Fixed Contract Price and how this price can be changed
 - Guaranteed Completion Dates
 - Parties to Contract (experience, financials)
 - Guarantees (who is guaranteeing completion)
 - Contractor payments (withholding provisions, subordination provisions, retention)
 - Adequacy of Reserves (capitalized interest, contingency funds)
 - Liquidated damages and other Payments for delay.
 - Incentives for Early Completion.
 - Change Orders; Amendments Processes
 - Quality Control and Inspection
 - Performance and payment bonds
 - Right of Way Acquisition
 - Governmental Approvals
 - Substantial Completion and Final Acceptance Processes
 - Conditions precedent for closing on the bonds (as it pertains to obtaining permits, approvals and executing contracts, etc.).
 - Insurance and indemnification
- Risk Factors and Litigation Risk
 - Acquisition of Right of Way

- Environmental and other regulatory requirements
- Force Majeur events
- Availability of labor and material
- Technology issues
- Utility relocation

8. Local Transit Funding and Transit Funding Match Opportunities

8.1 Introduction

The following subsections describe the authority of TriMet and C-TRAN to provide funds to construct and operate the transit component of the Columbia River Crossing Project. Take particular note of the procedural requirements affecting high capacity transit options in the State of Washington.

8.2 TriMet

8.2.1 TriMet Statutory Authority

From a statutory authority perspective, TriMet is authorized to provide funding toward the construction and operation of the portion of the transit component of the Columbia River Crossing Project within its district. TriMet is also permitted to enter into contracts or intergovernmental agreements with the State of Washington (i.e. WSDOT) or with public agencies of the State of Washington (i.e. C-TRAN) to provide mass transit services to areas under their jurisdictions, provided that *“the party contracting to receive the services shall pay to the mass transit district not less than the proportionate share of the cost of the services that the benefits to the contracting party bear to the total benefits from the service.”*⁸⁶

TriMet may use any and all of the following revenue generation techniques, among others, to finance the construction and operations of its system:⁸⁷

- Levy of ad valorem taxes, subject to voter approval
- Service charges and user fees
- Sale of revenue bonds
- Sale of property-tax based general obligation bonds, subject to voter approval
- Levy of business license fees, subject to payroll tax offset
- Levy an income tax
- Levy of a tax measured by employer payrolls (“payroll tax”)
- Levy of a tax measured by net earnings from self-employment (self employment equivalent to payroll tax)

TriMet’s primary funding source is the employer payroll tax (and the related self-employment tax), comprising over 60 percent of its total revenues. The statutory limit on the payroll tax rate was recently increased from 0.6 percent to 0.7 percent (subject to certain technical adjustments); the increased tax rate must be phased-in over a ten year period. The TriMet Board has approved the tax increase, and all of TriMet’s financial planning is based on its full implementation. At this time, TriMet does not levy property

⁸⁶ ORS 267.200(8)

⁸⁷ ORS 267.300(1)

taxes, income taxes, or business license fees; and there is not a practical likelihood that it will levy these taxes for the foreseeable future.

8.2.2 Financial Challenges

TriMet has constructed and operates the Interstate MAX light rail line, which serves most of the transit trunk-line in the Oregon portion of the I-5 corridor. If the Columbia River Crossing Project includes extending Interstate MAX to Clark County, there are two elements of the extension that would occur in the TriMet district: (i) the construction of a second light rail alignment in downtown Portland to meet the capacity requirements of the extension into Clark County, and (ii) the segment between Expo Center and Jantzen Beach.

At this time, the second light rail alignment in downtown Portland is part of the I-205/Mall LRT Project. If that project proceeds to construction, there will be no need to include the second downtown alignment in the Columbia River Crossing Project. However, should the I-205/Mall LRT project fail to proceed and light rail be included in the Columbia River Crossing Project, funding for the mall alignment will have to be addressed during the Columbia River Crossing Project. Assuming the I-205/Mall LRT project does proceed, the incremental costs of the Columbia River Crossing Project within the TriMet district are limited to the segment between Expo Center and Jantzen Beach. The remaining costs cannot be borne by TriMet.

While TriMet may have the statutory authority to pay for a portion of the extension of light rail (or high capacity transit) to Clark County, it may be financially difficult to actually provide funding. TriMet policy calls for maintaining a 3-month working capital reserve. In an analysis prepared recently for the I-205/Mall LRT Project, TriMet did not reach that level until the year 2015. This implies, absent major growth in payroll tax receipts, that TriMet will have little capacity to fund construction or early operations of an I-5 high capacity transit extension.

8.3 C-TRAN High Capacity Transit Funding

With its recent loss of operating funds, C-TRAN currently has little ability to contribute funding towards an I-5 high capacity transit project. The paragraphs that follow describe state statutory requirements regarding high capacity transit funding in Washington. RCW 81.104 addresses the planning, development and financing of high-capacity transportation systems (HCT)⁸⁸ by state, regional, and local agencies within the State of Washington. The provisions that follow are applicable to the Columbia River Crossing Project.

⁸⁸ Under RCW 81.104.015(1), "high-capacity transportation system" means a system of public transportation services within an urbanized region operating principally on exclusive rights of way, and the supporting services and facilities necessary to implement such a system, including interim express services and high occupancy vehicle lanes, which taken as a whole, provides a substantially higher level of passenger capacity, speed, and service frequency than traditional public transportation systems operating principally in general purpose roadways.

8.3.1 General Responsibilities under RCW 81.104

RCW 81.104 sets forth the responsibilities of local and state agencies in planning, constructing, financing, and operating a HCT system. Under RCW 81.104.070(2) the transit agencies⁸⁹ providing high capacity transportation service are responsible for planning, construction, operations, and funding including station area design and development, and parking facilities. The agencies providing high capacity transportation service and other transit agencies must also develop a cooperative process for the planning, development, operations, and funding of feeder transportation systems.⁹⁰

The state is not permitted to be an operating agent for HCT systems⁹¹ WSDOT must assist local jurisdictions and regional transportation planning organizations with high capacity transportation planning efforts.⁹² WSDOT may serve as a contractor for high capacity transportation system and project design, administer construction, and assist agencies authorized to provide service in the acquisition, preservation, and joint use of rights of way.⁹³

8.3.2 Required HCT Planning Process

RCW 81.104.100 prescribes a 3-step planning process that must be followed for HCT projects:

- The “regional, multimodal transportation planning” process conducted by regional transportation planning organizations (i.e. RTC) must identify regional transportation goals, project future land use and travel, and identify priority corridors for further study of high capacity transportation facilities, but does not select specified modes to serve those needs.⁹⁴ For the Columbia River Crossing Project, this step has been completed.
- HCT “system planning” is the detailed evaluation of a range of high capacity transportation system options, including: Do nothing, low capital, and ranges of higher capital facilities.⁹⁵ HCT “system planning” must proceed as follows:
 - The responsible local transit agency or agencies must define roles for various local agencies, review background information, provide for public involvement, and develop a detailed work plan for the system planning process.

⁸⁹ Under RCW 81.104.015(4), "Transit agency" means city-owned transit systems, county transportation authorities, metropolitan municipal corporations, and public transportation benefit areas.

⁹⁰ RCW 81.104.080(4)

⁹¹ RCW 81.104.070(1)

⁹² RCW 81.104.020(2)

⁹³ RCW 81.104.060(2)

⁹⁴ RCW 81.104.100(1)

⁹⁵ RCW 81.104.100(2)

- Options to be studied must be developed to ensure an appropriate range of technologies and service policies can be evaluated, including (i) a do-nothing option, (ii) a low capital option that maximizes the current system must be developed, and (iii) several higher capital options that consider a range of capital expenditures for several candidate technologies.
- The local transit agency (i.e. C-TRAN) must develop reports describing the analysis and assumptions for the estimation of capital costs, operating and maintenance costs, methods for travel forecasting, a financial plan, and an evaluation methodology. The transit agency can contract with WSDOT to perform the work.
- HCT “project planning” is the detailed identification of alignments, station locations, equipment and systems, construction schedules, environmental effects, and costs.⁹⁶ HCT project planning must proceed as follows:
 - The local transit agency must analyze and produce information needed for the preparation of environmental impact statements. The impact statements address the impact that development of such a system will have on abutting or nearby property owners.
 - The process of identification of alignments and station locations must include notification of affected property owners in accordance with certain statutory requirements.
 - The process must follow FTA’s procedures.

RCW 81.104.110 requires that an “expert review panel” be appointed to provide independent technical review for development of “*any system plan which is to be funded in whole or in part by the imposition of any voter-approved local option funding sources enumerated in RCW 81.104.140.*” The expert review panel must consist of five to ten members who are recognized experts in relevant fields, who are selected cooperatively by, in this case, Washington and Oregon. In Washington, the selection is a combined effort of the chair of the Legislative Transportation Committee, the Secretary of WDOT, and the Washington governor.⁹⁷ The expert panel is mandated to review all required reports and to concentrate on service modes and concepts, costs, patronage and financing evaluations.⁹⁸

8.3.3 Voter Approved HCT System and HCT Financing Plans

Should C-TRAN elect to establish high capacity transportation service, it must either (a) form a regional policy committee with proportional representation based upon population

⁹⁶ RCW 81.104.100(3)

⁹⁷ RCW 81.104.110(1) and (2)

⁹⁸ RCW 81.104.110(6)

distribution within the designated service area and a representative of WSDOT, or (b) use the RTC as the regional policy committee.⁹⁹

The policy committee would work to develop a (i) High Capacity Transit System Plan and a related (ii) Finance Plan.

The System Plan must address, but is not limited to, the following issues:¹⁰⁰

- Identification of level and types of high capacity transportation services to be provided
- A plan of high occupancy vehicle lanes to be constructed
- Identification of route alignments and station locations with sufficient specificity to permit calculation of costs, ridership, and system impacts
- Performance characteristics of technologies in the system plan
- Patronage forecasts
- A financing plan
- Description of the relationship between the high capacity transportation system plan and adopted land use plans
- An assessment of social, economic, and environmental impacts
- Mobility characteristics of the system presented, including but not limited to:
 - Qualitative description of system/service philosophy and impacts
 - Qualitative system reliability
 - Travel time and number of transfers between selected residential, employment, and activity centers
 - System and activity center mode splits

The Finance Plan must describe:¹⁰¹

- Phasing of investments
- Capital and operating costs and expected revenues
- Cost-effectiveness represented by a total cost per system rider and new rider estimate
- Estimated ridership and the cost of service for each individual high capacity line
- Identification of the operating revenue to operating expense ratio

The Finance Plan must also specifically differentiate the proposed use of funds between high capacity transportation facilities and services, and high occupancy vehicle facilities.

C-TRAN would have to seek voter approval of the System Plan and the Finance Plan.¹⁰² While the Finance Plan can seek authorization for the HCT funding sources described below, in Section 8.3.4 of this report, the System Plan-Finance Plan must be approved

⁹⁹ RCW 81.104.030(1)

¹⁰⁰ RCW 81.104.100(2)(d)

¹⁰¹ RCW 81.104.100(2)(d)

¹⁰² RCW 81.104.030(1)

whether or not such funding sources are being sought. The required vote would cover only those voters residing within the service area in the state of Washington.¹⁰³

8.3.4 HCT Funding Authorities

Washington statutes provide certain dedicated funding sources for HCT systems that can only be levied, subject to voter approval, by transit agencies, such as C-TRAN.¹⁰⁴ If approved by the voters, these dedicated HCT funding sources can include:

- **Employer tax:** An excise tax of up to two dollars per month per employee can be imposed on all employers located within the agency's jurisdiction, measured by the number of full-time equivalent employees, solely for the purpose of providing high capacity transportation service. The rate of tax must be approved by the voters.¹⁰⁵
- **Special motor vehicle excise tax:** A maximum 2.172 percent sales and use tax upon retail car rentals within the agency's jurisdiction that are taxable by the state under chapters 82.08 and 82.12 RCW.¹⁰⁶ The base of the tax is the selling price in the case of a sales tax or the rental value of the vehicle used in the case of a use tax.
- **Sales and use tax:** A maximum of a 1 percent sales and use tax can be collected from those persons who are taxable by the state pursuant to RCW 82.08 and 82.12 upon the occurrence of any taxable event within the taxing district.¹⁰⁷

Each of these funding sources can only be imposed if before the date of the required election the transit agency complies with the planning process described in Section 7.2 of this report.¹⁰⁸ No construction on exclusive right of way may occur before the “project planning” requirements of RCW 81.104.100(3) are met.¹⁰⁹

Only a simple majority is required to pass the System Plan and Finance Plan.¹¹⁰ A single ballot proposition may seek approval for one or more of the authorized taxing sources as part of the Finance Plan. At least twenty days prior to the election, the voters must be provided a document describing the systems plan and the financing plan.¹¹¹ The document must also describe the relationship of the system to regional issues such as development density at station locations and activity centers, and the interrelationship of the system to adopted land use and transportation demand management goals within the region.

¹⁰³ RCW 81.104.030(1)

¹⁰⁴ RCW 81.104.140(4)

¹⁰⁵ RCW 81.104.150

¹⁰⁶ RCW 81.104.160

¹⁰⁷ RCW 81.104.170

¹⁰⁸ Id.

¹⁰⁹ Id.

¹¹⁰ RCW 81.104.140(7)

¹¹¹ RCW 81.104.140(8)

8.4 Toll Credits

Technical Memorandum 8.4 addressed the potential use of toll credits as part of the Columbia River Crossing Project.¹¹² As detailed in the Technical Memorandum, 23 USC 120(j) allows certain toll revenue expenditures to count as a credit toward the local matching share (“toll credit”) of highway and transit projects. Such toll credits operate as ‘soft match;’ they do not provide additional money for the project. But if there are sufficient federal funds and toll credits, the toll credits may permit eligible projects to be constructed with up to 100 percent federal funds. If applicable conditions are met and high capacity transit (HCT) is incorporated in the Project, the amount of toll-backed revenue bonds used to pay for highway bridge construction can serve as ‘soft match’ towards a federal HCT grant. Additional detail can be found in Technical Memorandum 8.4.

¹¹² Some of the potential issues identified in this Working Paper regarding the use of toll credits were raised in a letter to FHWA from ODOT and WSDOT, which has not be responded to at the time of this writing

**APPENDIX A
EXAMPLES OF PROJECT FINANCING**

San Joaquin Hills Corridor (SJC)

Description New 15-mile limited access toll road from I-5 to I-405 to relieve congestion on these Interstates in Orange County

Cost \$831 million

Contract Design-Build

Owner Orange County Transportation Corridor Agency

Financing

- \$120 million federal line of credit
- \$1.1 billion Senior-lien Revenue Bonds
- \$91 million Junior-lien Revenue Bonds
- \$38 million Project Revenue Certificates
- \$31 million Advance-funded Development Impact Fees
- \$40 million California Transportation Commission Grant
- \$71 million State and Local Transportation Partnership Program
- \$106 million Interest Earnings

Revenue

- Tolls
- Development Impact Fees
- Interest Earnings

Status Opened in 1996, severe financial issues

Foothills/Eastern Corridor (F/E)

Description New 24 mile limited access toll road connecting Riverside County's residential areas and Orange County's southeastern suburbs and northern San Diego County

Cost \$1.03 billion

Contract Design-Build

Owner Orange County Transportation Corridor Agency

Financing

- \$25 million TE-045 standby construction contingency line of credit
- \$120 million standby federal line of credit
- \$1.3 billion fixed rate revenue bonds \$246 million variable rate revenue bonds
- \$41 million California State and Local Transportation Partnership Program

Revenue

- Tolls
- Development Impact Fees
- Interest Earnings

Status Opened in 1993

SR 91 (Riverside Freeway) Express Lanes

Description Four-lane toll highway in the median of a 10-mile section of the Riverside Freeway connecting Orange and Riverside Counties

Cost \$130 million

Contract Franchise: Design-Build-Operate-Maintain- Finance

Owner Orange County Transportation Corridor Agency (OCTCA)

Financing

- \$65 million in 14-year variable rate bank loans
- \$35 million in longer term loans (24 years)
- \$20 million private equity
- \$ 9 million subordinated debt to OCTCA to purchase previously completed engineering and environmental work

Revenue

- Variable Rate Tolls

Status Opened in 1995 Purchased by OCTCA December, 2002

I-15 Express Lanes

Description The I-15 Express Lanes are an existing eight-mile, two-lane, reversible high occupancy toll (HOT) facility in the median of Interstate 15 in San Diego

Cost \$10.2 million

Contract Design-Build-Operate-Maintain

Owner San Diego Association of Governments

Financing

- \$8 million FHWA grant under Congestion Pricing Pilot Program
- \$2 million SANDAG in-kind match
- \$230,000 FTA grant

Revenue

- Variable-rate tolls

Status Opened in 1996 proposed 12-mile extension

E-470 PHA Toll Road

Description New 47-mile toll road along the eastern edge of the Denver metro area linking major arterials and new Denver International Airport

Cost \$1.2 billion

Contract Design-Build-Finance Owner E-470 Public Highway Authority

Financing

- Revenue Bonds

Revenue

- Tolls
- Vehicle Registration Fees
- Highway expansion impact fees on adjacent properties
- Lease revenues from cellular towers
- Easement permit fees

Status Segment I opened in 1991 Segment IV completed in January 2003.

Northwest Parkway PHA

Description New 11-mile toll road connecting E-470 and the Boulder Highway around the northwest section of the metro area

Cost \$243 million

Contract Design-Build-Finance

Owner Northwest Parkway Public Highway Authority

Financing

- \$417 million Tax-exempt revenue bonds
- \$.7 million CDOT

Revenue

- Tolls

Status Completion in late 2003

Transportation Expansion Project (T-REX)

Description Widen 17 miles of I-25/I-225 and construct a 19 mile Light Rail Transit (LRT) line extension along the west side of I-25 and median of I-225 linking the Denver Central Business District with the Southeast Business District, the two largest employment centers in the region

Cost \$1.7 billion

Contract Design-Build

Owner DOT/RTD

Financing

Transit

- \$525 million FTA grant
- \$30 million local funds
- \$324 million bonds backed by future local sales tax revenues

Highway

- \$680 million GARVEE bonds of future federal allocations
- \$115 million state sales and use tax revenue

Status Completion of all phases in 2006

Route 3 North

Description Improvements to existing 21-mile corridor from Boston to the New Hampshire border

Cost \$385 million

Contract Design-Build-Maintain-Finance

Owner DOT

Financing

- \$385 million tax-exempt revenue bonds through 63-20 Not For Profit Corporation

Revenue

- Surface, Sub-surface, and fiber optic rights
- Annual appropriation from Legislature
- Construction and lease of service plaza
- Development of adjacent land

Status Completion Spring 2004

Atlantic City/Brigantine Connector

Description 2.2-mile highway with a 2,200-foot tunnel connecting Atlantic City Expressway to the north end of Atlantic City and resort city of Brigantine

Cost \$330 million

Contract Design-Build

Owner DOT

Financing

- \$125 million South Jersey Transportation Authority bond sales
- \$95 million State Transportation Trust Fund

- \$110 million Mirage Resorts

Revenue

- Casino Parking Fees
- Atlantic City Expressway Tolls

Status Completed 2001

South Caroline 27 in 7 Program

Description: Construction of ‘27 years’ of road and highway projects in ‘7 years.’

Cost \$5.3 billion

Contract Design-Build

Owner DOT

Financing

- \$2.6 billion SIB bonds
- \$620 million MPO bonds
- \$620 million Council of Governments bonds
- \$310 million Interstate Improvement Program bonds
- \$450 million System/Intermodal Connectivity
- \$700 million Anticipated Additional TEA-21 Funding
- \$215 million TIFIA loan

Revenue

- Tolls
- \$66 million State General Fund one-time source of capitalization
- \$22 million annually share state gasoline tax
- \$53 million annually truck registration fees
- Local hospitality fees
- Federal Capitalization funds

Status To be completed in 2006

South Carolina Southern Connector

Description 16-mile toll road bypass of Greenville between I-895 and I-385

Cost \$191 million

Contract Design-Build-Finance Joint Development Agreement

Owner Connector 2000 Association

Financing

- \$200 million tax-exempt bonds sold by 63-20 corporation
- \$66 million in senior current interest bonds
- \$87 million in rated senior capital appreciation bonds
- \$47 million in unrated subordinate capital appreciation bonds
- \$ 5 million TIFIA support
- \$18 million state funding

Revenue

- Tolls

Status Opened 2001

Central Texas Turnpike

Description New 122-mile turnpike in four distinct, but interconnected phases from Austin to San Antonio

Cost \$480 million SH45
 \$125 million Loop 1
 \$190 million US 183A
 \$917 million SH 130

Contract Design-Build for Loop 1 and SH45
 Exclusive Development Agreement for SH130 and US 183A

Owner DOT/Texas Turnpike Authority

Financing

- \$917 million TIFIA direct loan
- \$700 million Texas Transportation Commission
- \$1.7 billion Texas Turnpike Authority Bonds

Revenue

- Tolls

Status Construction to start later this year 1st Phase schedule to open in 2007

President George Bush Turnpike

Description New 26-mile turnpike connecting Dallas to northern suburbs

Cost \$531 million

Contract Design-Bid-Build

Owner DOT/North Texas Turnpike Authority

Financing

- \$308 million TTA Revenue Bonds
- \$67 million Interest Earnings
- \$20 million NTTA Capital Improvement Fund
- \$135 million Section 129 Loans
- \$39 million local right-of-way donations

Revenue

- Tolls

Status Twenty-one miles are open. The remaining five miles to open in 2006.

Pocahontas Parkway/I-895 Connector

Description New 8.8-mile toll road connecting I-95 and I-29 near Richmond International Airport, including a high-level bridge over the James River

Cost \$324 million

Contract Design-Build-Finance Owner DOT

Financing

- \$297 million in tax exempt revenue bonds sold by 63-20 corporation
- \$9 million in federal funds for design costs
- \$18 million in SIB loans

Revenue

- Tolls

Status Completed 2002