



U.S. Department
of Transportation
**Federal Aviation
Administration**

Northwest Mountain Region
Seattle Airports District Office
1601 Lind Avenue S.W., Suite 250
Renton, Washington 98057-3356

December 5, 2012

Heather Wills
Environmental Manager
Columbia River Crossing Project
700 Washington St
Suite 300
Vancouver, WA 98660

RECEIVED
DEC 11 2012
Columbia River Crossing

Dear Ms. Wills:

Portland, Oregon - Vancouver, Washington
Airspace Analysis Results for Feasibility Studies
Columbia River Crossing Project

The Federal Aviation Administration (FAA) has completed its review, per FAA Order 7400.2J Paragraph 6-1-6, of your request for feasibility studies on 116 individual cases for a conceptual new bridge design near Pearson Field (VUO), Vancouver, Washington.

The cases were evaluated based on what was submitted electronically to us on November 5, 2012 through the Obstruction Evaluation / Airport Airspace Analysis (OE/AAA) system. This was a feasibility study only and a final 7460 submittal needs to be submitted in order to receive a final determination on the proposed construction. Each case was evaluated at the submitted locations and heights. If any information should change, a new study will need to be submitted to evaluate those changes.

The applicable comments from all responding lines of business for all 116 airspace studies have been consolidated into one spreadsheet for clarity, which is attached.

Should you have questions or comments, please contact me at (425) 227-2655.

Sincerely,

Jason Ritchie
Seattle ADO

Airspace Study No.	POINT NAME	LATITUDE	LONGITUDE	*CRB FINISHED GRADE ELEV.	**ADD'L HT ABOVE FG	OVERALL HEIGHT	OBSTACLE TYPE	AIRPORTS		40:1 Departure Surface Penetration (ft)	No Effect Height (MSL)
								Part 77 Penetration (ft)	Part 77 Surface Penetrated		
2012-ANM- 1244 -NRA	001	45°36' 51.46" N	122°40' 45.13" W	97.59	35	139	SIGNS AND ILLUMINATION				
2012-ANM- 1245 -NRA	002	45°36' 50.33" N	122°40' 41.89" W	98.97	35	134	SIGNS AND ILLUMINATION				
2012-ANM- 1246 -NRA	003	45°36' 49.95" N	122°40' 40.78" W	96.25	35	131	SIGNS AND ILLUMINATION				
2012-ANM- 1247 -NRA	004	45°36' 56.27" N	122°40' 43.51" W	120.94	35	156	SIGNS AND ILLUMINATION				
2012-ANM- 1248 -NRA	005	45°36' 54.88" N	122°40' 40.31" W	115.79	35	151	SIGNS AND ILLUMINATION				
2012-ANM- 1249 -NRA	006	45°37' 01.02" N	122°40' 41.65" W	139.33	35	174	SIGNS AND ILLUMINATION				
2012-ANM- 1356 -NRA	007	45°36' 59.75" N	122°40' 39.20" W	134.44	35	169	SIGNS AND ILLUMINATION				
2012-ANM- 1250 -NRA	008	45°37' 05.69" N	122°40' 39.95" W	152.53	35	188	SIGNS AND ILLUMINATION	10.00	Horizontal		
2012-ANM- 1251 -NRA	009	45°37' 04.44" N	122°40' 37.07" W	148.20	35	183	SIGNS AND ILLUMINATION	5.00	Horizontal		
2012-ANM- 1252 -NRA	010	45°37' 10.14" N	122°40' 36.32" W	156.93	35	192	SIGNS AND ILLUMINATION	14.00	Horizontal	77.27	114
2012-ANM- 1253 -NRA	011	45°37' 08.99" N	122°40' 34.16" W	152.85	35	188	SIGNS AND ILLUMINATION	10.00	Horizontal	77.51	110
2012-ANM- 1254 -NRA	012	45°37' 11.17" N	122°40' 35.55" W	156.82	35	192	SIGNS AND ILLUMINATION	14.00	Horizontal	78.25	113
2012-ANM- 1255 -NRA	013	45°37' 09.87" N	122°40' 33.42" W	152.64	35	188	SIGNS AND ILLUMINATION	10.00	Horizontal	78.47	109
2012-ANM- 1256 -NRA	014	45°37' 14.40" N	122°40' 32.78" W	153.06	35	188	SIGNS AND ILLUMINATION	10.00	Horizontal	77.96	110
2012-ANM- 1257 -NRA	015	45°37' 13.09" N	122°40' 30.39" W	148.01	35	183	SIGNS AND ILLUMINATION	5.00	Horizontal	77.64	105
2012-ANM- 1258 -NRA	016	45°37' 18.32" N	122°40' 28.51" W	140.24	35	175	SIGNS AND ILLUMINATION	6.00	Approach		
2012-ANM- 1259 -NRA	017	45°37' 16.84" N	122°40' 25.89" W	133.58	35	169	SIGNS AND ILLUMINATION	11.00	Approach	70.33	
2012-ANM- 1260 -NRA	018	45°37' 19.07" N	122°40' 27.60" W	136.65	35	172	SIGNS AND ILLUMINATION	6.00	Approach		
2012-ANM- 1261 -NRA	019	45°37' 17.54" N	122°40' 24.84" W	129.59	35	165	SIGNS AND ILLUMINATION	10.00	Approach	67.82	
2012-ANM- 1262 -NRA	020	45°37' 19.80" N	122°40' 26.65" W	132.85	35	168	SIGNS AND ILLUMINATION	5.00	Approach	66.83	
2012-ANM- 1263 -NRA	021	45°37' 18.29" N	122°40' 23.83" W	125.37	35	160	SIGNS AND ILLUMINATION	8.00	Approach	64.35	
2012-ANM- 1264 -NRA	022	45°37' 20.54" N	122°40' 25.72" W	129.17	35	164	SIGNS AND ILLUMINATION	4.00	Approach	64.19	
2012-ANM- 1265 -NRA	023	45°37' 19.22" N	122°40' 23.25" W	122.95	35	158	SIGNS AND ILLUMINATION	7.00	Approach	63.01	
2012-ANM- 1266 -NRA	024	45°37' 21.25" N	122°40' 24.74" W	125.41	35	160	SIGNS AND ILLUMINATION	2.00	Approach	61.66	
2012-ANM- 1267 -NRA	025	45°37' 19.92" N	122°40' 22.23" W	118.92	35	154	SIGNS AND ILLUMINATION	6.00	Approach	60.55	
2012-ANM- 1268 -NRA	026	45°37' 21.99" N	122°40' 23.79" W	121.44	35	156	SIGNS AND ILLUMINATION	2.00	Approach		
2012-ANM- 1269 -NRA	027	45°37' 20.56" N	122°40' 21.17" W	115.00	35	150	SIGNS AND ILLUMINATION	6.00	Approach	58.19	
2012-ANM- 1270 -NRA	028	45°37' 22.61" N	122°40' 22.70" W	116.86	35	152	SIGNS AND ILLUMINATION	1.00	Approach	56.76	
2012-ANM- 1271 -NRA	029	45°37' 21.17" N	122°40' 20.05" W	111.12	35	146	SIGNS AND ILLUMINATION	5.00	Approach	55.94	
2012-ANM- 1272 -NRA	030	45°37' 23.27" N	122°40' 21.66" W	111.97	35	147	SIGNS AND ILLUMINATION			53.35	
2012-ANM- 1355 -NRA	031	45°37' 21.77" N	122°40' 18.93" W	107.79	35	143	SIGNS AND ILLUMINATION			54.69	
2012-ANM- 1273 -NRA	032	45°37' 23.94" N	122°40' 20.62" W	107.16	35	142	SIGNS AND ILLUMINATION			49.93	
2012-ANM- 1274 -NRA	033	45°37' 23.59" N	122°40' 20.19" W	106.99	35	142	SIGNS AND ILLUMINATION			50.82	
2012-ANM- 1275 -NRA	034	45°37' 22.37" N	122°40' 17.82" W	104.38	35	139	SIGNS AND ILLUMINATION	5.00	Approach	52.42	

2012-ANM- 1276 -NRA	035	45°37' 24.25" N	122°40' 19.13" W	102.67	35	138	SIGNS AND ILLUMINATION			48.44	
2012-ANM- 1277 -NRA	036	45°37' 22.97" N	122°40' 16.70" W	101.12	35	136	SIGNS AND ILLUMINATION			51.18	
2012-ANM- 1278 -NRA	037	45°37' 24.90" N	122°40' 18.08" W	98.45	35	133	SIGNS AND ILLUMINATION			45.02	
2012-ANM- 1279 -NRA	038	45°37' 23.57" N	122°40' 15.58" W	97.76	35	133	SIGNS AND ILLUMINATION			49.93	
2012-ANM- 1280 -NRA	039	45°37' 25.58" N	122°40' 17.07" W	94.00	35	129	SIGNS AND ILLUMINATION			42.46	
2012-ANM- 1281 -NRA	040	45°37' 24.50" N	122°40' 14.83" W	93.26	35	128	SIGNS AND ILLUMINATION			45.88	
2012-ANM- 1282 -NRA	041	45°37' 26.27" N	122°40' 16.05" W	89.45	35	124	SIGNS AND ILLUMINATION			38.83	
2012-ANM- 1283 -NRA	042	45°37' 25.12" N	122°40' 13.74" W	89.96	35	125	SIGNS AND ILLUMINATION			44.48	
2012-ANM- 1284 -NRA	043	45°37' 26.93" N	122°40' 15.01" W	84.83	35	120	SIGNS AND ILLUMINATION			36.17	
2012-ANM- 1285 -NRA	044	45°37' 25.76" N	122°40' 12.68" W	86.67	35	122	SIGNS AND ILLUMINATION			42.98	
2012-ANM- 1286 -NRA	045	45°37' 27.60" N	122°40' 13.98" W	80.42	35	115	SIGNS AND ILLUMINATION			32.41	
2012-ANM- 1287 -NRA	046	45°37' 26.42" N	122°40' 11.63" W	83.19	35	118	SIGNS AND ILLUMINATION			40.29	
2012-ANM- 1288 -NRA	047	45°37' 28.31" N	122°40' 12.99" W	76.41	35	111	SIGNS AND ILLUMINATION			29.46	
2012-ANM- 1289 -NRA	048	45°37' 28.39" N	122°40' 12.12" W	79.92	35	115	SIGNS AND ILLUMINATION			34.82	
2012-ANM- 1290 -NRA	049	45°37' 29.04" N	122°40' 12.07" W	72.37	35	107	SIGNS AND ILLUMINATION				
2012-ANM- 1291 -NRA	050	45°37' 29.76" N	122°40' 11.24" W	68.47	35	103	SIGNS AND ILLUMINATION				
2012-ANM- 1292 -NRA	051	45°37' 20.42" N	122°40' 21.03" W	98.55	35	134	SIGNS AND ILLUMINATION			42.48	
2012-ANM- 1293 -NRA	052	45°37' 20.12" N	122°40' 20.13" W	80.20	17	97	EMERGENCY VEHICLE			7.17	
2012-ANM- 1294 -NRA	053	45°37' 19.57" N	122°40' 18.97" W	75.83	17	93	EMERGENCY VEHICLE			4.41	
2012-ANM- 1295 -NRA	054	45°37' 18.68" N	122°40' 18.45" W	73.12	17	90	EMERGENCY VEHICLE			3.65	
2012-ANM- 1296 -NRA	055	45°37' 17.77" N	122°40' 18.91" W	71.24	17	88	EMERGENCY VEHICLE			1.17	
2012-ANM- 1359 -NRA	056	45°37' 17.30" N	122°40' 20.11" W	69.35	17	86	EMERGENCY VEHICLE				
2012-ANM- 1297 -NRA	057	45°37' 17.51" N	122°40' 21.45" W	67.47	17	84	EMERGENCY VEHICLE				
2012-ANM- 1298 -NRA	058	45°37' 20.88" N	122°40' 19.79" W	93.65	35	129	SIGNS AND ILLUMINATION			39.5	
2012-ANM- 1299 -NRA	059	45°37' 21.20" N	122°40' 18.46" W	88.75	35	124	SIGNS AND ILLUMINATION			36.72	
2012-ANM- 1300 -NRA	060	45°37' 21.39" N	122°40' 17.07" W	83.86	35	119	SIGNS AND ILLUMINATION			34.09	
2012-ANM- 1301 -NRA	061	45°37' 21.36" N	122°40' 15.67" W	78.96	35	114	SIGNS AND ILLUMINATION			31.57	
2012-ANM- 1302 -NRA	062	45°37' 21.19" N	122°40' 14.28" W	74.06	35	109	SIGNS AND ILLUMINATION			29.07	
2012-ANM- 1303 -NRA	063	45°37' 20.87" N	122°40' 12.95" W	69.16	35	104	SIGNS AND ILLUMINATION			26.53	
2012-ANM- 1304 -NRA	064	45°37' 20.40" N	122°40' 11.72" W	64.25	35	99	SIGNS AND ILLUMINATION			23.86	
2012-ANM- 1305 -NRA	065	45°37' 19.48" N	122°40' 10.88" W	57.58	35	93	SIGNS AND ILLUMINATION			19.67	
2012-ANM- 1306 -NRA	066	45°37' 18.85" N	122°40' 09.80" W	54.80	35	90	SIGNS AND ILLUMINATION			18.79	
2012-ANM- 1307 -NRA	067	45°37' 18.22" N	122°40' 08.79" W	51.55	35	87	SIGNS AND ILLUMINATION			17.79	
2012-ANM- 1308 -NRA	068	45°37' 17.59" N	122°40' 07.71" W	47.91	35	83	SIGNS AND ILLUMINATION				
2012-ANM- 1309 -NRA	069	45°37' 16.96" N	122°40' 06.63" W	43.97	35	79	SIGNS AND ILLUMINATION			14.05	
2012-ANM- 1310 -NRA	070	45°37' 16.34" N	122°40' 05.53" W	40.61	35	76	SIGNS AND ILLUMINATION			13.2	
2012-ANM- 1311 -NRA	071	45°37' 15.74" N	122°40' 04.41" W	34.63	35	70	SIGNS AND ILLUMINATION			9.93	
2012-ANM- 1312 -NRA	072	45°37' 15.15" N	122°40' 03.28" W	24.23	35	59	SIGNS AND ILLUMINATION			0.59	
2012-ANM- 1313 -NRA	073	45°37' 14.59" N	122°40' 02.12" W	14.21	35	49	SIGNS AND ILLUMINATION				
2012-ANM- 1314 -NRA	074	45°37' 15.67" N	122°40' 00.71" W	29.72	35	65	SIGNS AND ILLUMINATION			10.92	
2012-ANM- 1315 -NRA	075	45°37' 16.95" N	122°40' 02.86" W	30.70	35	66	SIGNS AND ILLUMINATION			7.68	
2012-ANM- 1316 -NRA	076	45°37' 17.87" N	122°40' 05.03" W	34.37	35	69	SIGNS AND ILLUMINATION			6.53	

2012-ANM- 1317 -NRA	077	45°37' 18.31" N	122°40' 04.89" W	34.44	35	69	SIGNS AND ILLUMINATION			6.62	
2012-ANM- 1318 -NRA	078	45°37' 19.26" N	122°40' 07.03" W	38.77	35	74	SIGNS AND ILLUMINATION			7.51	
2012-ANM- 1319 -NRA	079	45°37' 19.69" N	122°40' 06.91" W	37.42	35	72	SIGNS AND ILLUMINATION			5.57	
2012-ANM- 1320 -NRA	080	45°37' 20.78" N	122°40' 08.81" W	47.50	35	83	SIGNS AND ILLUMINATION			12.84	
2012-ANM- 1321 -NRA	081	45°37' 21.30" N	122°40' 08.59" W	45.84	35	81	SIGNS AND ILLUMINATION			11.14	
2012-ANM- 1322 -NRA	082	45°37' 22.57" N	122°40' 09.96" W	57.72	35	93	SIGNS AND ILLUMINATION			20.17	
2012-ANM- 1323 -NRA	083	45°37' 23.14" N	122°40' 09.52" W	56.73	35	92	SIGNS AND ILLUMINATION			19.74	
2012-ANM- 1324 -NRA	084	45°37' 24.52" N	122°40' 10.30" W	67.35	35	102	SIGNS AND ILLUMINATION			27.77	
2012-ANM- 1357 -NRA	085	45°37' 25.10" N	122°40' 09.66" W	66.32	35	101	SIGNS AND ILLUMINATION			27.55	
2012-ANM- 1325 -NRA	086	45°37' 26.47" N	122°40' 09.86" W	72.89	35	108	SIGNS AND ILLUMINATION			33.26	
2012-ANM- 1326 -NRA	087	45°37' 27.00" N	122°40' 09.02" W	70.63	35	106	SIGNS AND ILLUMINATION			32.22	
2012-ANM- 1327 -NRA	088	45°37' 28.26" N	122°40' 08.68" W	72.70	35	108	SIGNS AND ILLUMINATION				
2012-ANM- 1358 -NRA	089	45°37' 28.78" N	122°40' 07.79" W	70.67	35	106	SIGNS AND ILLUMINATION				
2012-ANM- 1328 -NRA	090	45°37' 25.58" N	122°40' 12.46" W	93.42	35	128	SIGNS AND ILLUMINATION			49.44	
2012-ANM- 1329 -NRA	091	45°37' 26.09" N	122°40' 11.26" W	96.46	35	131	SIGNS AND ILLUMINATION			54.16	
2012-ANM- 1330 -NRA	092	45°37' 26.18" N	122°40' 09.87" W	99.40	35	134	SIGNS AND ILLUMINATION			59.46	
2012-ANM- 1331 -NRA	093	45°37' 25.82" N	122°40' 08.57" W	101.81	35	137	SIGNS AND ILLUMINATION			64.94	
2012-ANM- 1332 -NRA	094	45°37' 25.09" N	122°40' 07.64" W	101.84	35	137	SIGNS AND ILLUMINATION			67.03	
2012-ANM- 1336 -NRA	095	45°37' 24.15" N	122°40' 07.28" W	99.33	35	134	SIGNS AND ILLUMINATION			65.22	
2012-ANM- 1337 -NRA	096	45°37' 23.19" N	122°40' 07.58" W	94.73	35	130	SIGNS AND ILLUMINATION			61.66	
2012-ANM- 1338 -NRA	097	45°37' 22.43" N	122°40' 08.43" W	89.92	35	125	SIGNS AND ILLUMINATION	2.00	Transitional	54.91	
2012-ANM- 1339 -NRA	098	45°37' 22.02" N	122°40' 09.70" W	85.11	35	120	SIGNS AND ILLUMINATION	2.00	Transitional	47.82	
2012-ANM- 1340 -NRA	099	45°37' 22.05" N	122°40' 11.09" W	80.31	35	115	SIGNS AND ILLUMINATION			40.37	
2012-ANM- 1341 -NRA	100	45°37' 22.52" N	122°40' 12.31" W	75.50	35	111	SIGNS AND ILLUMINATION			34.06	
2012-ANM- 1342 -NRA	101	45°37' 21.40" N	122°40' 24.95" W	94.53	25	120	TRANSIT ENVELOPE			21.24	
2012-ANM- 1343 -NRA	102	45°37' 22.36" N	122°40' 24.60" W	90.07	25	115	TRANSIT ENVELOPE			16.51	
2012-ANM- 1344 -NRA	103	45°37' 23.32" N	122°40' 24.27" W	84.28	25	109	TRANSIT ENVELOPE			10.74	
2012-ANM- 1345 -NRA	104	45°37' 24.23" N	122°40' 23.95" W	78.57	25	104	TRANSIT ENVELOPE			5.98	
2012-ANM- 1346 -NRA	105	45°37' 25.19" N	122°40' 23.61" W	72.57	25	98	TRANSIT ENVELOPE			0.22	
2012-ANM- 1347 -NRA	106	45°37' 26.15" N	122°40' 23.28" W	66.57	25	92	TRANSIT ENVELOPE				
2012-ANM- 1348 -NRA	107	45°37' 27.10" N	122°40' 22.94" W	60.57	25	86	TRANSIT ENVELOPE				
2012-ANM- 1349 -NRA	108	45°37' 26.98" N	122°40' 21.74" W	62.26	35	97	SIGNS AND ILLUMINATION			1.58	
2012-ANM- 1350 -NRA	109	45°37' 27.96" N	122°40' 21.81" W	63.73	35	99	SIGNS AND ILLUMINATION			2.84	
2012-ANM- 1351 -NRA	110	45°37' 28.84" N	122°40' 21.22" W	65.20	35	100	SIGNS AND ILLUMINATION			4.21	
2012-ANM- 1352 -NRA	111	45°37' 29.43" N	122°40' 20.10" W	66.67	35	102	SIGNS AND ILLUMINATION			7.62	
2012-ANM- 1353 -NRA	112	45°37' 29.58" N	122°40' 18.72" W	68.14	35	103	SIGNS AND ILLUMINATION			10.8	
2012-ANM- 1354 -NRA	113	45°37' 29.25" N	122°40' 17.41" W	70.32	35	105	SIGNS AND ILLUMINATION			15.27	
2012-ANM- 1333 -NRA	114	45°37' 28.53" N	122°40' 16.47" W	75.34	35	110	SIGNS AND ILLUMINATION			22.46	
2012-ANM- 1334 -NRA	115	45°37' 27.59" N	122°40' 16.12" W	81.47	35	116	SIGNS AND ILLUMINATION			29.8	
2012-ANM- 1335 -NRA	116	45°37' 26.64" N	122°40' 16.45" W	87.59	35	123	SIGNS AND ILLUMINATION			36.9	

