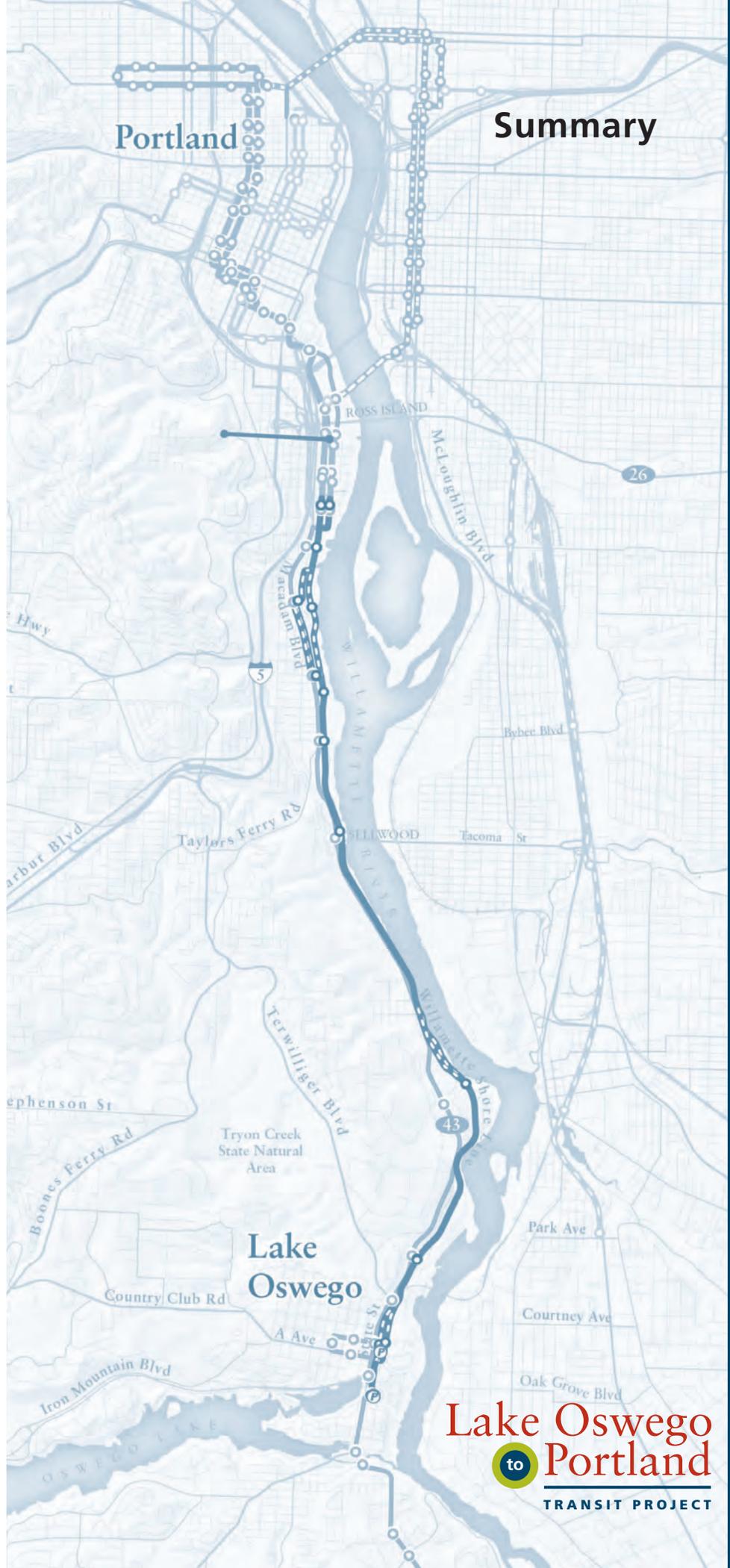


Portland

Summary



Lake Oswego

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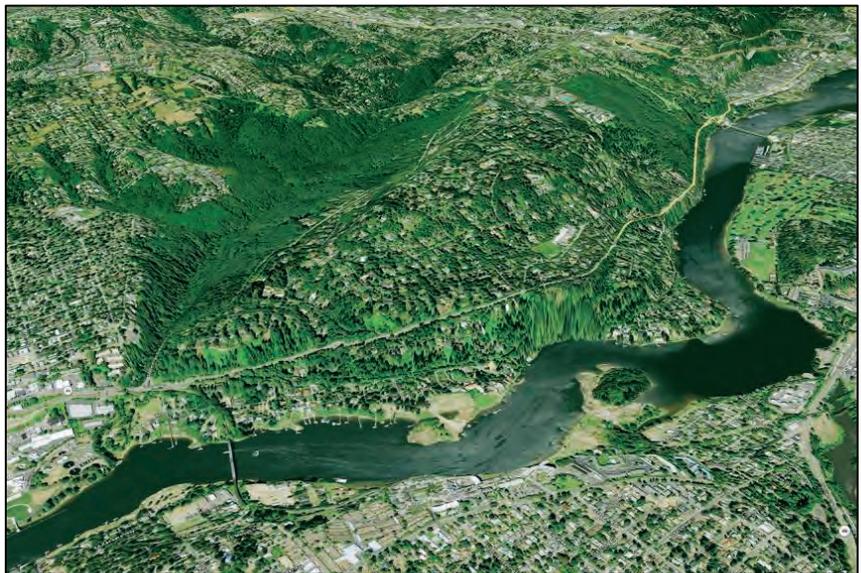
Summary

This Summary provides a brief description of the Lake Oswego to Portland Transit Project's *Draft Environmental Impact Statement (DEIS)*. More detailed information can be found in the Lake Oswego to Portland Transit DEIS. There are also technical reports and documents that have been prepared to support the DEIS or that are referenced in the DEIS; see Appendix B for a complete listing and for instructions on how to obtain or view copies of the referenced and supporting documents. All data in this summary are for a projected average weekday in 2035, unless noted.

The Lake Oswego to Portland Transit Project

Local and regional transportation and land use plans call for Metro, TriMet and the cities of Portland and Lake Oswego to implement improved transit service connecting activity centers along Highway 43 in the Lake Oswego to Portland Transit Corridor. Those plans recommend using reserved transit right of way to improve transit service in the corridor and to be a catalyst for improved land use and increased economic development and redevelopment. The result is the proposed Lake Oswego to Portland Transit Project.

Figure S-1
Looking West onto the Lake Oswego to Portland Transit Corridor



The Project Purpose

The Purpose of the Lake Oswego to Portland Transit Project is to optimize the regional transit system by improving transit within the Lake Oswego to Portland Transit Corridor, while being fiscally responsive and supporting regional and local land use goals. The project should maximize, to the extent possible, regional resources, economic development and garner broad public support. The project should build on previous corridor transit studies, analyses and conclusions and should be environmentally sensitive.

The Project Need

The Lake Oswego to Portland Transit Project is needed because of: 1) historic and projected increases in traffic congestion in the Lake Oswego to Portland corridor due to increases in regional and corridor population and employment; 2) lengthy and increasing transit travel times and deteriorating public transportation reliability in the corridor due to growing traffic congestion; 3) increasing operating expenses, combined with increasingly scarce operating resources, while demanding more efficient public transportation operations; 4) local and regional land use and development plans, goals and objectives that target the corridor for development to help accommodate regional population and employment growth; 5) previous corridor transit studies, analyses and conclusions; 6) the region's growing reliance on public transportation to meet future

growth in travel demand in the corridor; 7) the topographic, geographic and built environment constraints within the corridor that limit the ability of the region to expand the highway and arterial infrastructure in the corridor; and 8) limited options for transportation improvements in the corridor caused by the identification and protection of important natural, built and socioeconomic environmental resources in the corridor.

Previous processes and conclusions

Three distinct but inter-related steps of alternative and design option development, evaluation and screening were taken by Metro and TriMet, leading to the current range of alternatives and options: 1) *Consortium Formation and Right of Way Purchase* in 1988, when a consortium of seven governments collectively purchased the Willamette Shore Line right of way to be preserved for future transit use; 2) *Alternatives Analysis* from 2004 to 2007, when Metro Council, in cooperation with local jurisdictions and the Oregon Department of Transportation, evaluated a wide range of alternatives, including river transit, light rail transit, bus, streetcar and roadway alternatives, and narrowed the range of alternatives to be studied in the DEIS to the No-Build, Enhanced Bus and Streetcar alternatives, based on various Purpose-and-Need-based screening criteria and measures; and 3) *Scoping and Project Refinement Study* in 2008 to 2009, when Metro Council and its partner jurisdictions and agencies narrowed the range of streetcar design options to be studied in the DEIS based screening criteria and measures, resulting in design options in the Johns Landing, Sellwood Bridge, Dunthorpe/Riverdale and Lake Oswego segments of the corridor (see Figures S-2 and S-3).

Alternatives evaluated in Detail in this DEIS

The DEIS examines three alternatives: the No-Build, Enhanced Bus and Streetcar alternatives. Table S-1 below summarizes key characteristics of the alternatives.

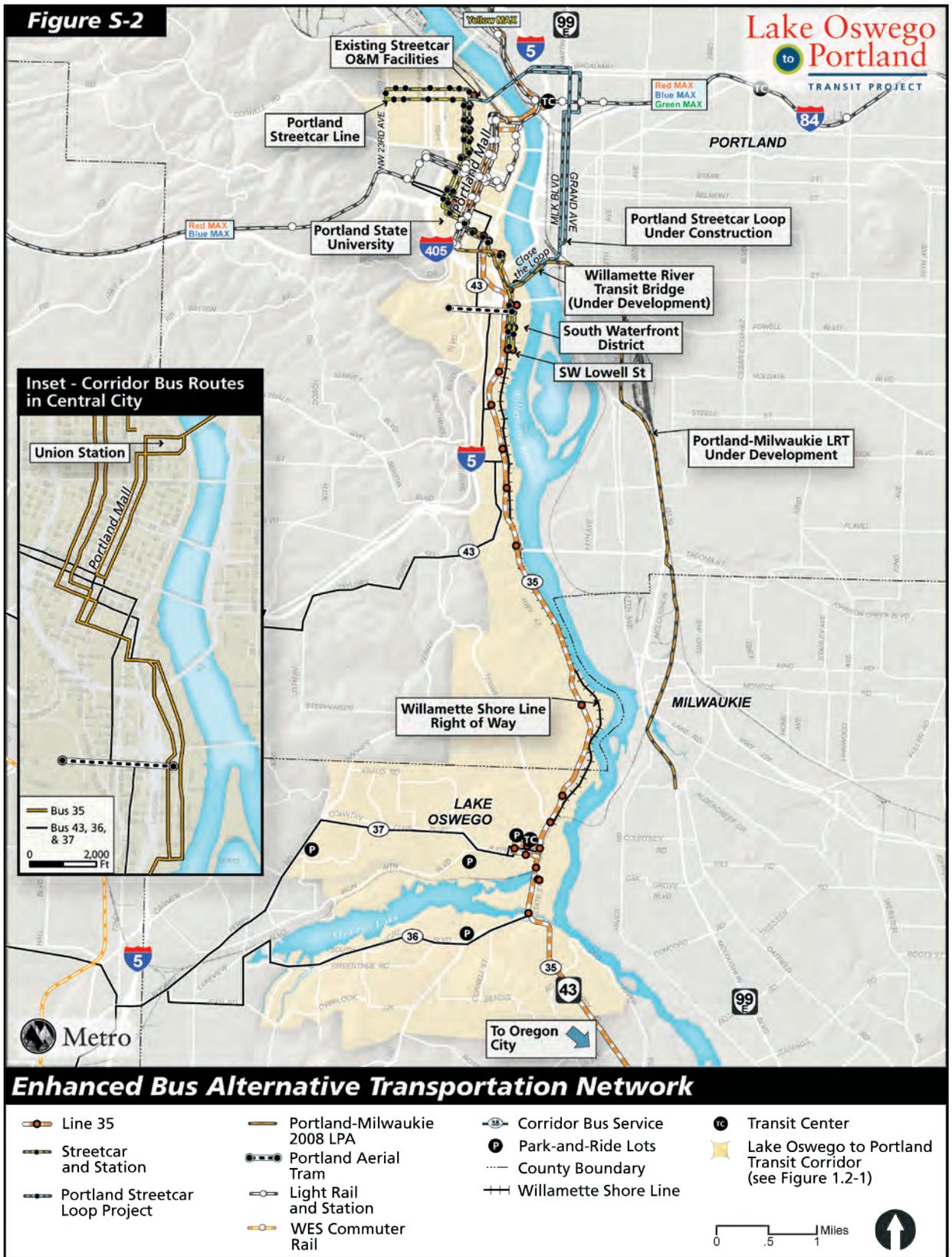
The *No-Build Alternative* includes the roadway capital improvements that are listed in the 20-year financially-constrained road network of the 2008 Regional Transportation Plan. The No-Build Alternative includes bus Line 35, which would operate every 15 minutes between Oregon City and downtown Portland via Lake Oswego, and service on Line 36, which currently operates between downtown Portland and Lake Oswego but would be extended to King City to improve connections to WES commuter rail from western Washington County.

Table S-1 Summary Characteristics of the Alternatives

The <i>Enhanced Bus Alternative</i> (see Figure S-2) would result in modifications to lines 35 and 36, including removal of half of the bus stops between Lake Oswego and downtown Portland, mostly along Highway 43. Line 36 would run between King City and Lake Oswego.	Attribute	No-Build	Enhanced Bus	Streetcar
	Miles of New Streetcar Alignment	0.0	0.0	5.9 to 6.0
	New One-Way Streetcar Track Miles	0.0	0.0	10.5 to 11.1
	New Streetcar Stations	0	0	10
	Line 35 Bus Stops North of Lake Oswego	26	13	0
	Corridor Park-and-Ride Lots / Spaces	3 / 76	4 / 376	5 / 476
	Streetcar Miles Traveled (systemwide)	2,180	2,180	3,200 or 3,230
	Streetcar Revenue Hours (systemwide)	267	267	326 or 332
	Bus Miles Traveled (systemwide)	76,560	77,560	75,520
	Bus Revenue Hours (systemwide)	5,300	5,400	5,210
	Systemwide Streetcars	22	22	33
	Systemwide Buses	712	725	704

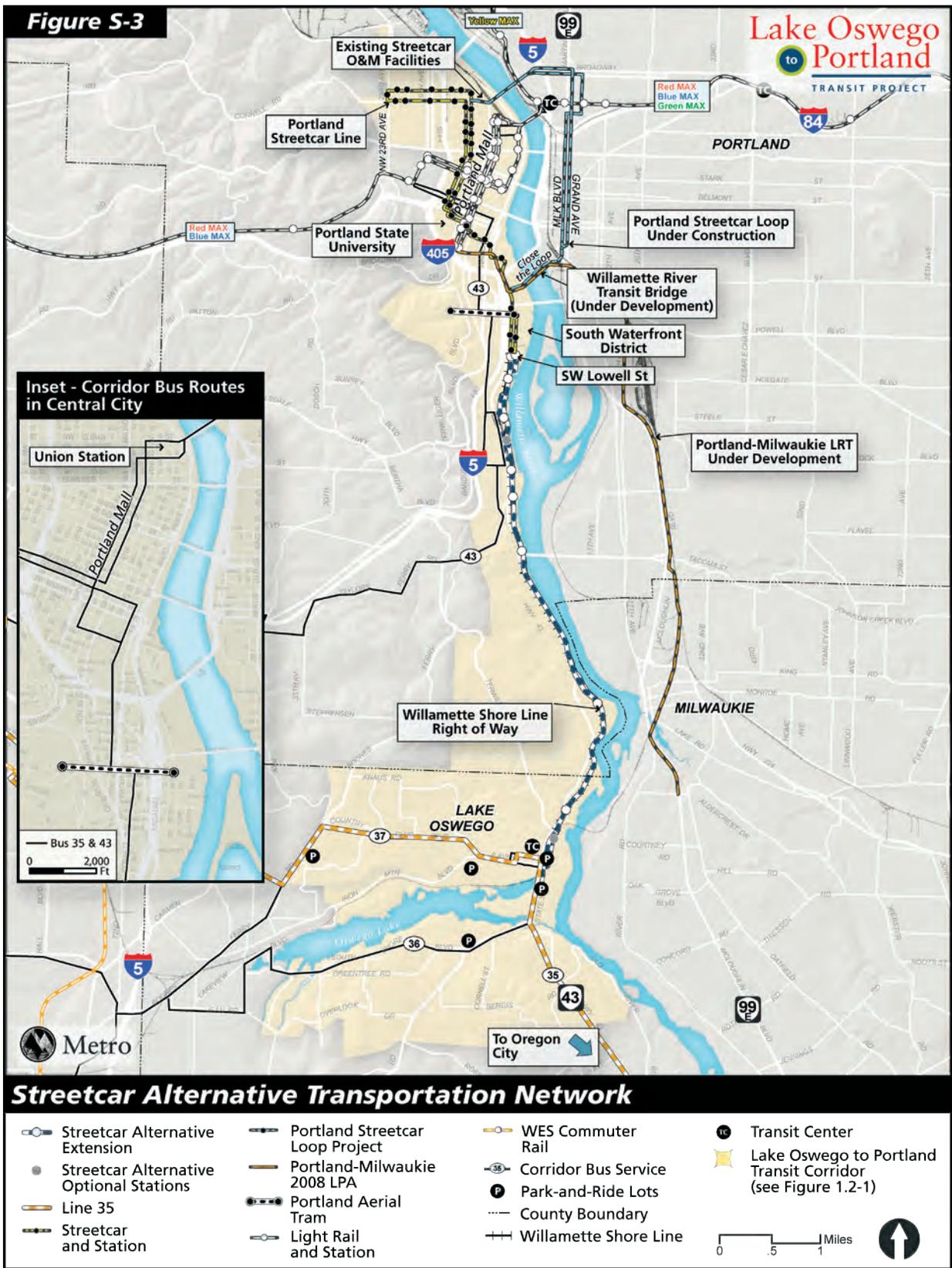
Source: Metro, TriMet; January 2010. Average weekday in 2035.

The alternative would also include a new 300-space park-and-ride lot in downtown Lake Oswego.



12/15/2009

Figure S-3



12/15/2009

The *Streetcar Alternative* (see Figure S-3) would extend existing streetcar tracks and service between Southwest Bancroft Street and downtown Lake Oswego, generally parallel to Highway 43, adding about six miles of new streetcar track, with 10 new streetcar stations and two new park-and-ride lots (100 and 300 spaces), using 11 new streetcars. Line 35 and 36 service and bus stops would both cease operations north of downtown Lake Oswego.

Streetcar Alignment and Design Options. For the most part, the streetcar tracks would be extended into exclusive right of way purchased by the Willamette Shore Line Consortium in 1988. In many of the design options, streetcars would operate in current or new traffic lanes, just like the existing Portland streetcar that connects Northwest 23rd Avenue with South Waterfront. Stations would be placed at various intervals (typically at activity centers and primary cross streets), with shelters, information displays and accessible platforms. The stations would be similar to the existing streetcar stations in downtown Portland and the Pearl District. There would also be a variety of changes to the streets that the streetcar would operate on (such as new or changed signals, lane striping changes, new sections of roadway), as well as new bicycle and pedestrian connections; see DEIS Section 2.2 and Appendix D for more detail. There are three design options for the Streetcar Alternative (see Figure S-4): the Willamette Shore Line, Macadam In-Street and Macadam Additional Lane options in Segment 3 – Johns Landing; the Willamette Shore Line and Riverwood options in Segment 5 – Dunthorpe/Riverdale; and the UPRR Right of Way and Foothills options in Segment 6 – Lake Oswego.

Effect of the Alternatives on the Environment

The Table S-2 lists several of the ways in which the alternatives would affect the built, natural and social environment. Some of these effects are expressed as a range for the Streetcar Alternative, which indicates that one or more sets of design options would result in changes to that effect. Chapters 3, 4 and 6 of the DEIS have a full listing and description of the effects of the alternatives and options and it provides a summary of how the effects were determined. Below describes some of the trade-offs, based on the project's evaluation measures (See Chapter 6 for more information), between alternatives and a comparison of design options.

Streetcar Alternative
Design Option Details

Figure S-4

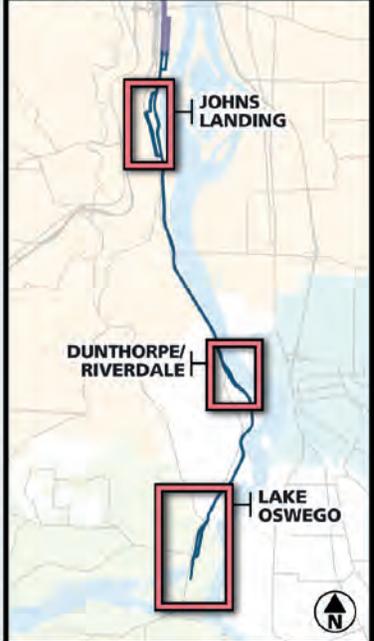
Johns Landing Design Options
 - Willamette Shore Line
 - Macadam In-Street
 - Macadam Additional Lane

Dunthorpe/Riverdale Design Options
 - Willamette Shore Line
 - Riverwood

Lake Oswego Design Options
 - UPRR Right-of-Way
 - Foothills

- Streetcar alignment common for all options
- Streetcar design options
- Streetcar station park and ride
- Optional station
- Transit Center

Map Index



Oct 22, 2010

JOHNS LANDING



DUNTHORPE/RIVERDALE



LAKE OSWEGO



Table S-2 Summary of Environmental Effects by Alternative (average weekday, 2035)

Measure	No-Build	Enhanced Bus	Streetcar
Households/Jobs within New Fixed-Guideway Station Areas	0 / 0	0 / 0	12,080 / 24,920
P.M. In-Vehicle Transit Travel Time Lake Oswego to PSU	42	39	33 or 29
Corridor Transit Place Miles ¹	190,600	222,220	242,000 or 244,760
Miles of New Exclusive Transit Right of Way	0	0	3.9 to 5.4
Annual Systemwide Transit Ridership (compared to No-Build)	N/A	730,550	1.18 to 1.28 million
Regional Vehicle Hours of Delay	49,400	49,200	49,000
New Congested Intersections(compared to No-Build)	N/A	3	2 or 4
Net Parking Spaces Removed	0	0	0 to 175
General Consistency with RTP and Local Plans	Inconsistent	Inconsistent	Consistent
Construction Jobs Created	0	240	1,430 to 1,530
Long-Term Jobs Created (from No-Build)	N/A	28	13
Available Floor Area in New Station Areas (millions of square feet)	0	0	42.825 or 44.492
Potential Displacements	0	0	0 to 7
Severe Noise Impacts (without / with potential mitigation)	0 / 0	0 / 0	1 / 0
Vibration Impacts (without / with potential mitigation)	0 / 0	0 / 0	23 to 28 / 0
Tons of CO ₂ Released by Vehicles (regional from No-Build)	N/A	-25.40	-40.51 or -42.12
Historic Resources Adversely Affected	1	1	0 or 1
Acres of Parkland Used	0	0	0.7 or 1.0
Acres of Wetland Filled	0	0	0.10 to 0.11
Acres of Fill in Floodplain	0	1.3	6.5 to 10.1
Acres of New Impervious Surfaces	0	0.8	7.35 to 18.22

Source: Metro, TriMet: January 2010. Note: PSU = Portland State University; N/A = not applicable. Ranges for the Streetcar would result from different design options – see the DEIS and following four tables for additional detail.

¹ Place-miles refers to the total carrying capacity (seated and standing) of each bus or train type and is calculated by multiplying the vehicle capacity of each bus or light rail vehicle type by the daily VMT for each vehicle type.

A. Enhanced Bus Alternative Compared to the No-Build Alternative

The **Enhanced Bus Alternative** would result in:

- 1,800 more daily transit trips in the corridor;
- 730,550 annual systemwide transit person trips;
- A reduction of three minutes in in-vehicle transit travel time from Portland State University to downtown Lake Oswego during the peak period;
- 240 additional short-term construction jobs and 28 additional long-term jobs;
- 31,620 additional transit place miles;
- 41,000 fewer vehicle miles traveled, 3,300 fewer vehicle hours traveled and 200 fewer vehicle hours of delay;
- An increase of 0.1 corridor transit miles per hour; and
- A reduction of 25.40 tons of CO₂ released by vehicles.

In comparison, the **No-Build Alternative** would avoid:

- \$37.8 million in capital costs (2010 dollars);
- \$2.79 million additional annual operating costs (2010 dollars in 2035);
- Three additional congested intersections; and
- 1.3 acres of fill in the 100-year floodplain and 0.8 acres of new impervious surface.

B. The Streetcar Alternative Compared to the No-Build Alternative

The **Streetcar Alternative** would result in:

- 3,200-3,400 more daily transit riders in the corridor;
- Up to 1.18 or 1.28 million additional annual systemwide transit person trips;
- A reduction of up to 13 or 14 minutes in in-vehicle transit travel time from Portland State University and Southwest Lowell Street to downtown Lake Oswego during the peak period and a reduction of one minute of in-vehicle automobile travel time from PSU to downtown Lake Oswego during the peak period;
- Up to 1,530 additional short-term construction jobs and 13 additional long-term jobs;
- 12,080 households and 24,920 additional jobs within new streetcar station areas;
- The addition of up to 4.8 miles of exclusive transit right of way and up to 39,700 additional passenger miles within exclusive transit right of way;
- 200 fewer vehicles on Highway 43 during the peak hour in the peak direction in Johns Landing and in Lake Oswego;
- Up to 54,160 additional transit place miles per weekday;
- Up to 68,000 fewer vehicle miles traveled, up to 5,700 fewer vehicle hours traveled and 400 fewer vehicle hours of delay;
- An increase of up to 1.7 corridor transit miles per hour;
- Compliance with the RTP and local plans and policies related to the use of high-capacity transit links between major activity centers in the corridor;
- The addition of up to 42,830 square feet of available Floor Area Ratio within new streetcar station areas; and
- A reduction of up to 42.12 tons per day of CO₂ released by vehicles.

In comparison, the **No-Build Alternative** would avoid:

- Up to \$347.4 million in capital costs (2010 dollars);
- \$1.25 million additional annual operating costs (2010 dollars);
- Up to seven potential displacements;
- The net loss of up to 175 parking spaces;
- Two additional congested intersections;
- One severe noise impacts without potential mitigation and up to 28 vibration impacts without mitigation (there would be no severe noise or vibration impacts with the potential mitigation measures);
- Up to 0.11 acres of filled wetland, 10.1 acres of fill in the 100-year floodplain and 18.22 acres of new impervious surface; and
- Up to 1.0 acres of parkland used in one parks.

Comparing the Effect of Streetcar Design Options on the Environment. There are three segments where design options would change the Streetcar Alternative's effects on the environment: Johns Landing, Dunthorpe/Riverdale and Lake Oswego. The following three tables and corresponding text summarize by segment how the Streetcar Alternative's effects on the environment would change by design option. Effects that would be the same under all design options within the same segment are not included in the tables.

A. Segment 3 – Johns Landing. In segment 3, there are three design options considered for the Streetcar Alternative: the Willamette Shore Line, Macadam In-Street and Macadam Additional Lane. The Table S-3 lists several of the ways in which the alternatives would affect the built, natural and social environment for the streetcar design options in segment 3.

The **Willamette Shore Line design option** would result in:

- 420 additional transit riders on Highway 43, Southwest Corbett Avenue and the Willamette Shore Line in the peak period and peak direction;
- 97,250 more annual transit person trips;
- An additional four minutes of transit in-vehicle travel time savings from Portland State University and Southwest Lowell Street to Lake Oswego during the peak period;
- An additional 0.8 miles of exclusive transit right of way and an additional 7,100 passenger miles in exclusive transit right -of way;
- The avoidance of up to \$13.68 million in capital costs;
- \$8.9 million more local match available from the use of the existing Willamette Shore Line right of way;
- Avoiding the potential removal of 148 on-street and 175 off-street parking spaces;
- The reduction of 1.61 tons of CO₂ emitted by vehicles;
- No displacements; and
- Approximately 5.5 to 6.5 fewer acres of new impervious surface.

The **Macadam In-Street design option**¹ would result in:

- Greater visibility within the Johns Landing activity center, thus providing better support to the desired land use and economic development objectives for the activity centers;
- 1.67 million more square feet of Available Floor Area within new station areas;
- 2,760 more transit place miles;
- Avoidance of one vibration impact (all vibration impacts in this segment would be eliminated with identified potential mitigation measures);
- Approximately 5.5 more acres of new impervious surface²;
- No displacements; and
- 0.9 fewer acres of floodplain filled.

The **Macadam Additional design option**¹ would result in:

- Greater visibility within the Johns Landing activity center, thus providing better support to the desired land use and economic development objectives for the activity centers;
- 1.670 million more square feet of Available Floor Area within new station areas, thus providing for more development/ redevelopment opportunities;
- 2,760 more transit place miles;
- Avoidance of one vibration impact (all vibration impacts in this segment would be eliminated with the identified potential mitigation measures);
- One potential business displacement; and

¹ Than the Willamette Shore Line design option.

² Compared to the Willamette Shore Line design option. It would result in approximately one less acre of new impervious surface compared to the Macadam Additional Lane design option.

- Approximately 6.5 more acres of new impervious surface and 0.9 fewer acres of floodplain filled¹.

Table S-3 Environmental Effects and Capital Cost of Streetcar Design Options in Segment 3 – Johns Landing

Measure	Willamette Shore Line	Macadam In-Street	Macadam Additional Lane
Households/Jobs within New Fixed-Guideway Station Areas	4,190 / 11,950	4,600 / 12,490	4,600 / 12,490
P.M. In-Vehicle Transit Travel Time Lake Oswego to PSU	29	33	33
Passenger Miles in New Exclusive Transit Right of Way	39,700	32,500	32,500
Station Visibility within Segment Activity Center	Low	High	High
Annual New Transit Ridership (compared to No-Build)	1,277,900	1,180,650	1,180,650
New Congested Intersections (compared to No-Build)	0	2	2
Net Parking Spaces Removed	0	148	175
Change in tons of CO ₂ Released by Vehicles (regional from No-Build)	-42.12	-40.51	-40.51
Available Floor Area in New Segment Station Areas (millions of SF)	4.450	6.120	6.120
Potential Displacements	0	0	1
Vibration Impacts (without / with potential mitigation)	3 / 0	5 / 0	5 / 0
Acres of Fill in Floodplain	2.5	1.6	1.6
Acres of New Impervious Surfaces	0.69	6.15	7.20
Segment Capital Cost (2010 dollars)	\$19.0	\$27.9	\$32.7

Source: Metro, TriMet: January 2010. Note: PSU = Portland State University. Average weekday, 2035. SF = square feet.

B. Segment 5 – Dunthorpe/Riverdale. In segment 5, there are two design options considered for the Streetcar Alternative: the Willamette Shore Line and Riverwood Road. The Table S-4 lists several of the ways in which the alternatives would affect the built, natural and social environment for the streetcar design options in segment 5.

The **Willamette Shore Line design option** would result in:

- \$10.2 million more local match available from the use of the existing Willamette Shore Line right of way;
- An additional 0.3 miles of exclusive transit right of way;
- No displacements; and
- Approximately two fewer acres of new impervious surface.

In comparison, the **Riverwood Road design option** would result in:

- A savings of \$500,000 in capital costs
- Three fewer vibration impacts (there would be no vibration impacts with potential mitigation under either option)
- One potential residential displacement
- Approximately two acres more of new impervious surface
- 2.7 fewer acres of floodplain filled

Table S-4 Environmental Effects and Capital Cost of Streetcar Design Options in Segment 5 – Dunthorpe/Riverdale

Measure	Willamette Shore Line	Riverwood
Potential Displacements	0	1
Vibration Impacts (without / with potential mitigation)	19 / 0	16 / 0
Acres of Fill in Floodplain	2.7	0.0
Acres of New Impervious Surfaces	0.37	2.46
Segment Capital Cost (2010 dollars)	\$52.6	\$52.1

Source: Metro, TriMet: January 2010. Average weekday, 2035.

C. Segment 6 – Lake Oswego. In segment 6, there are two design options being considered for the Streetcar Alternative: the UPRR right of way and Foothills. The Table S-5 lists several of the ways in which the alternatives would affect the built, natural and social environment for the streetcar design options in segment 6.

The **UPRR Right of Way design option** would result in:

- A savings of \$21.3 million in capital costs;
- An additional 0.5 miles of exclusive transit right of way;
- 2.3 fewer acres of new impervious surface; and
- 0.3 fewer acres of parkland used.

In comparison, the **Foothills design option** would result in:

- Avoidance of four noise impacts without potential mitigation measures (there would be no noise impacts in this segment with any design option with the identified potential mitigation measures);
- Five potential business displacements; and
- Avoidance of any temporary impacts to culverted waters,

Table S-5 Environmental Effects and Capital Cost of Streetcar Design Options in Segment 6 – Lake Oswego

Measure	UPRR ROW	Foothills
Households/Jobs within New Fixed-Guideway Station Areas	3,630 / 4,970	3,590 / 4,920
Potential Displacements	0	5
Acres of Parkland Used	0.7	1.0
Acres of Temporary Jurisdictional Culverted Water Impacts	0.0	0.1
Acres of New Impervious Surfaces	2.75	5.02
Segment Capital Cost (2010 dollars)	\$48.6	\$69.9

Source: Metro, TriMet: January 2010. Average weekday, 2035. UPRR = Union Pacific Railroad; ROW = right of way.

Investment and Operations Cost and Funding

Table S-6 to the right summarizes the capital and operating costs for the Enhanced Bus and Streetcar alternatives. The year-of-expenditure costs, which account for future inflation and finance costs, correspond to the capital revenue needs for each alternative.

Under the current finance plan, the Enhance Bus Alternative

would need approximately \$31 million in Federal Small Starts funds and \$20 million in local funds that have yet to be allocated (year-of-expenditure, 2017 dollars), pending selection of a Locally Preferred Alternative. The Streetcar Alternative would need between \$380 and \$458 million (year-

Table S-6 Summary Finance Plan for the Enhanced Bus and Streetcar Alternatives

Measure	Enhanced Bus	Streetcar	
		Low	High
Costs (millions)			
Capital Costs (2010\$)	\$37.8	\$288.9	\$347.4
Capital Costs (year-of-expenditure \$)	\$51.1	\$379.6	\$458.3
Increased Operating Costs (2010\$)	\$2.79	\$1.25	\$1.25
Capital Revenue (millions)			
Federal Small Starts Grant	\$30.7	\$0.00	\$0.00
Federal New Starts Grant	\$0.00	\$227.7	\$275.0
Local Match – ROW	\$0.00	\$94.5	\$97.0
Local Match – Other	\$20.4	\$57.3	\$86.3
Total	\$51.1	\$379.6	\$458.3

Source: City of Portland and TriMet; January 2010. Average weekday, 2035, in millions. Year-of-expenditure costs account for inflation from 2010 and finance costs. Low and high costs for the Streetcar Alternative are the result of variations in design options (see tables on the previous page). Operating costs are change from the No-Build Alternative.

of-expenditure, 2017 dollars), depending on design options under study. The Streetcar Alternative would be funded through approximately \$228 to \$275 million in Federal New Starts funds and a mix of local sources. Of those local sources, \$95 to \$97 million is currently available from the value of the existing Willamette Shore Line right of way where it would be used by the project, which would vary by design option. In segments 3 through 5, the Willamette Shore Line design options would result in greater amounts of this type of local match than the other design options. Approximately \$57 to \$86 million in other local revenue would be needed to fund the Streetcar Alternative (also affected by design options) and would be secured following selection of the Locally Preferred Alternative.

Evaluation Process

A summary of how the alternatives perform relative to the project's evaluation criteria and measures can be found in Chapter 6 of the DEIS, reflecting the data in the tables included in this summary. The evaluation criteria and measures used in Chapter 6 are derived from the project's Purpose and Need Statement and Goal and Objectives.

Social Equity

Detail behind the project's finding that there are no social equity impacts (i.e., environmental justice) associated with any of the alternatives or options are available in Section 3.2 and Chapter 6 of the DEIS. Specifically, there would be no disproportionate high and adverse impacts from the project to low-income or minority populations.

Public Involvement in the Project

Project partners (i.e., Metro, TriMet, the cities of Portland and Lake Oswego, Multnomah and Clackamas counties, ODOT and Portland Streetcar Inc.) developed and implemented a multifaceted public involvement program for the Lake Oswego to Portland Transit Project. The project's public outreach efforts included: public workshops; mailing of flyers to several thousand recipients located along the alignment; advertisements; presentations to neighborhood, business, the community advisory committee and special interest groups; public comment opportunities, both at meetings and via mail, e-mail and telephone; distribution of fact sheets and newsletters, by mail and e-mail; and informational open houses. Additional public involvement activities will continue as the project conducts the DEIS public comment period and hearing, selects a Locally Preferred Alternative, completes the Final EIS and advances into Final Design and construction.

Receive More Information or Comment on the DEIS

The DEIS is the best source of additional information; detailed supporting documents are listed in Appendix B of the DEIS. The DEIS is available on Metro's project web site at: www.oregonmetro.gov/lakeoswego or upon request; e-mail trans@oregonmetro.gov or call 503-813-7535. A comment period of 60 days starts on Friday, December 3, 2010. Comments on the DEIS must be received at Metro no later than 5:00 p.m. PST, January 31, 2011. Comments can be made at the project's public hearing, in writing by mail, by e-mail or through the project website or by telephone.

Metro

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