



LOCALLY PREFERRED ALTERNATIVE

-WITH ALIGNMENT OPTIONS FOR FURTHER ANALYSIS-

STEERING COMMITTEE RECOMMENDATION

PROJECT PARTNERS:

City of Lake Oswego

City of Portland

Clackamas County

Multnomah County

Metro

TriMet

ODOT

Adopted February 28, 2011

EXECUTIVE SUMMARY

This document comprises the Lake Oswego to Portland Transit Project Steering Committee recommendation for a Locally Preferred Alternative (LPA) for the Lake Oswego to Portland Transit Project. In sum, the following is recommended:

MODE

The **Streetcar Alternative** is the recommended, preferred transit mode for the Lake Oswego to Portland Transit Corridor. This alternative best meets the project's *Purpose and Need* and the goals and objectives as outlined in Chapters 1 and 6 of the Draft Environmental Impact Statement (DEIS). The Streetcar Alternative has garnered community support as shown by the public comments received and the strong endorsement of the Community Advisory Committee (CAC).

ALIGNMENT OPTIONS

This document recommends how the design and phasing options analyzed in the DEIS should be addressed in subsequent study phases of the project. Specifically, it is recommended that:

- Both the Willamette Shore Line and the Moody/Bond (South Portal) phasing options in the City of Portland be carried forward for additional study;
- The Macadam In-Street option be selected as the LPA alignment within the Johns Landing neighborhood;
- Both the Willamette Shore Line and Sellwood Bridge phasing options be carried forward for additional study;
- Both the Willamette Shore Line and Riverwood Road design options in Dunthorpe/Riverdale be carried forward for additional study; and
- Both the UPRR and Foothills Road design options in Lake Oswego be carried forward for additional study.

OTHER ISSUES

This document prioritizes a series of additional, critical design and program considerations that require further study and resolution. The issues that are identified as unresolved in this document will be addressed and resolved in either a "Pre-Preliminary Engineering" phase or during the Preliminary Engineering phase. All issues will be resolved prior to completion of the Final Environmental Impact Statement (FEIS).

DECISION-MAKING PROCESS GOING FORWARD

It is recommended that, after completion of additional studies, the unresolved issues identified herein should be brought back to the Steering Committee for review, or, as appropriate, resolution.

LOCALLY PREFERRED ALTERNATIVE RECOMMENDATION

I) OVERVIEW

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

- Historic and projected increases in traffic congestion in the Lake Oswego to Portland Corridor due to increases in regional and corridor population and employment;
- Lengthy and increasing transit travel times and deteriorating public transportation reliability in the corridor due to growing traffic congestion;
- Increasing operating expenses, combined with increasingly scarce operating resources, while demanding more efficient public transportation operations;
- Local and regional land use and development plans, goals and objectives that target the corridor for residential, commercial, retail and mixed-use development to help accommodate forecast regional population and employment growth and previous corridor transit studies, analyses and conclusions;
- The region's growing reliance on public transportation to meet future growth in travel demand in the corridor;
- 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
- 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.

This document presents the Steering Committee recommendation for a Locally Preferred Alternative (LPA) for the Lake Oswego to Portland Transit Corridor. These recommendations are based on information documented in the *Lake Oswego to Portland Transit Project Draft Environmental Impact Statement* (DEIS) [Metro, December 2010]; from public input received from Community Advisory Committee (CAC) deliberations during 2009-2011; and comments received during the public comment period and in the public hearing held on January 24, 2010 before the Lake Oswego to Portland Transit Project Steering Committee.

The LPA decision consists of several distinct decisions and recommendations. First and foremost is the alternative decision that chooses between the "No Build", "Enhanced Bus" and "Streetcar" alternatives. Secondly, because the DEIS analyzes a series of **design and phasing options** for the Streetcar Alternative, this document provides recommendations regarding the advancement of these design and phasing options into follow-on studies. And lastly, this document provides recommendations concerning a series of additional, critical **design and programmatic issues** that have emerged during the course of the DEIS process.

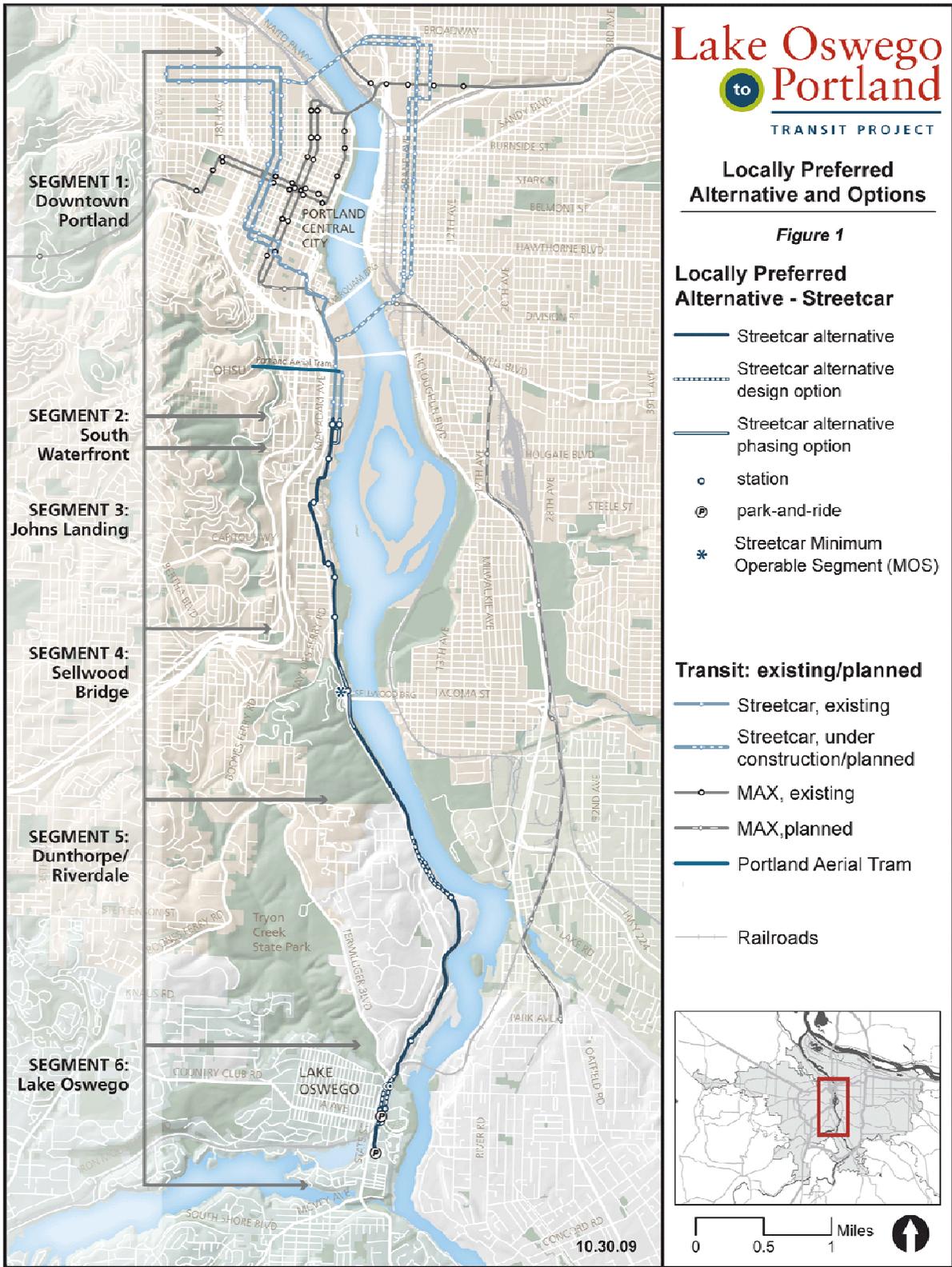
II) LAKE OSWEGO TO PORTLAND TRANSIT PROJECT - LOCALLY PREFERRED ALTERNATIVE

A) Transit Alternative – Streetcar

The **Streetcar Alternative** is the recommended, preferred transit mode for the Lake Oswego to Portland Transit Corridor. This alternative best meets the project's *Purpose and Need* and the goals and objectives as outlined in Chapters 1 and 6 of the DEIS. The proposed streetcar alignment is shown in Figure 1. The Streetcar Alternative has garnered community support as shown by the public comments received and the strong endorsement of the Community Advisory Committee (CAC).

The **Streetcar Alternative** is preferred because:

1. The Streetcar Alternative would best address the *Purpose and Need* for the Lake Oswego to Portland Transit Project as defined in the DEIS. In particular, the Streetcar Alternative would meet the following need for the project:
 - Provide an effective alternative to the traffic congestion in the Highway 43 corridor;
 - Decrease transit travel times and provide increased transit reliability as traffic congestion increases in the Highway 43 corridor;
 - Significantly increase the overall capacity for transportation in the corridor;
 - Result in reduced transit operating expenses and will help preserve scarce transit operating resources;
 - Provide the greatest support for local and regional land use and development plans, goals and objectives and encourage development to accommodate expected regional population and employment growth;
 - Help to decrease the region's dependency on the automobile and meet the region's growing reliance on public transportation to meet future growth in travel demand;
 - Address the topographic, geographic and built environment constraints in the corridor while recognizing the very limited options for expansion of the existing Highway 43 corridor; and
 - Provide a viable transportation option in a constrained corridor that has limited options for transportation improvements resulting from the need to protect natural, built, socioeconomic and environmental resources.



2. The Streetcar Alternative best addresses *Goals and Objectives* for the Lake Oswego to Portland Transit Project as defined in the DEIS. In particular, the Streetcar Alternative would:

A. Optimize the regional transit system by improving transit within the Lake Oswego corridor.

- The Streetcar Alternative would result in 61-72% higher ridership than the No Build option and 14-22% higher ridership than the Enhanced Bus option. The streetcar would carry approximately 1,500 more trips a day than enhanced bus. This translates to approximately 500,000 more transit trips a year compared to the Enhanced Bus.
- The Streetcar Alternative would result in approximately 1.28 million new transit riders annually in 2035 compared to the No-Build. The Enhanced Bus would result in approximately 730,550 new transit riders annually in 2035.
- For an average weekday in 2035, the Streetcar Alternative would reduce vehicle miles traveled by 65,400 to 68,000 miles; vehicle hours traveled by up to 5,700 hours; and vehicle hours of delay by 400 hours when compared to the No-Build Alternative. The Streetcar Alternative would reduce vehicle miles traveled by up to 24,400 to 27,000 miles; vehicle hours traveled by up to 2,100 to 2,400 hours; and vehicle hours of delay by 200 hours based on an average weekday in 2035, compared to the Enhanced Bus Alternative.
- Streetcar would provide faster and more reliable travel option through the most congested parts of the Highway 43 corridor. Streetcar would optimize the transit system by facilitating improved bus connections to the west of Lake Oswego. Streetcar is the only alternative that would add capacity and continue to operate quickly despite worsening traffic congestion on Highway 43. The Streetcar Alternative would provide small savings in auto delay during rush hour¹. However, the streetcar alternative would provide a high quality transit option that would free up needed roadway capacity for autos.
- The Streetcar Alternative would result in an increase of up to 5.4 miles of additional exclusive transit right-of-way in the corridor. Neither the No-Build nor the Enhanced Bus would increase the miles of exclusive transit right-of-way in the corridor.
- The Streetcar Alternative would provide access to faster more reliable transit to approximately 12,080 households and 24,920 jobs within a half-mile of a new streetcar station.
- The Streetcar Alternative would reduce transit p.m. peak-period peak-direction in-vehicle travel times by up to 13 to 14 minutes from PSU and Lowell Street to Lake Oswego, respectively, compared to the No-Build. The Enhanced Bus would reduce

¹ The Streetcar Alternative would reduce the traffic volume on Highway 43 by approximately 100 vehicles during the p.m. peak hour (see p. 4-26 of DEIS) and would provide a reduction in vehicle hours of delay by 200 hours per day (see p. 4-22, Table 4.3-1 of the DEIS).

travel time by 3 minutes from PSU and Lowell Street to Lake Oswego compared to the No-Build.

- The Streetcar Alternative would have a greater capability for future transit service expansion than the No-Build or Enhanced Bus alternatives, because: a) the Streetcar Alternative would result in a new transit right-of-way between Lake Oswego and the South Waterfront; b) frequencies of transit vehicles could be increased to respond to increasing demand over time; and c) single-track sections could be changed in the future into two-track sections, thereby allowing even more frequent streetcar service. With the no-build and enhanced bus alternatives, the corridor's trunk line bus routes would operate in mixed traffic on the congested Highway 43, thereby limiting alternatives' ability to expand to increasing demand.

B. Be fiscally responsive and maximize regional resources, to the extent possible.

- The DEIS indicates that the capital cost for the Streetcar Alternative would be significantly higher than that for the Enhanced Bus Alternative². However, Streetcar represents lower annual operating costs when compared to the Enhanced Bus Alternative. Initial projections show that the Streetcar Alternative would be \$1.5 million per year less expensive to operate than Enhanced Bus. Over the planning horizon for the project, i.e., to the Year 2035, streetcar would result in over \$37.7 million³ (Year of Expenditure) in operating costs savings over the Enhanced Bus alternative.
- The DEIS indicates that the No Build Alternative would not provide sufficient service to meet projected demand. The Enhanced Bus Alternative, while sufficient to meet demand, would be more expensive to operate than streetcar, and would be subject to the same level of traffic delays as automobiles travelling in the corridor.
- Factoring in capital costs, ridership and long-term operating costs, the Streetcar Alternative would be the most cost-effective option. The Streetcar Alternative would be more effective in its use of local operating revenues in generating new transit ridership than the Enhanced Bus Alternative. The streetcar would cost up to \$1.06 per new system wide transit person trips compared to \$3.82 per new transit trip under the Enhanced Bus Alternative.
- The public already owns the Willamette Shore Line right-of-way which would be utilized for the bulk of the project alignment. Not using it would mean losing a tremendous opportunity to utilize a past investment as local match to significantly leverage federal funding for the project.

C. Support regional and local land use and transportation plans and policies.

- The Streetcar Alternative would provide additional support for activity centers within the corridor, over the Enhanced Bus, by: a) providing additional transit travel time improvements between the activity centers; b) improving the reliability of the

² \$51.1M for Enhanced Bus compared to \$379.6M-\$458.3M for Streetcar (Year of Expenditure \$\$). See p. S-11 of DEIS.

³ See Table 5.1-3, p. 5-5 of DEIS.

connecting transit line through the addition of exclusive transit right-of-way; and c) constructing visible streetcar stations integrated within the various activity centers.

- The Streetcar Alternative would comply or would better comply with regional and local land use plans and policies through the construction of a streetcar line, generally using exclusive transit right-of-way, connecting the corridor's key activity centers.
- The Streetcar Alternative would result in up to 1,500 short-term jobs and 13 long term jobs. The Enhanced Bus Alternative would result in 240 short-term jobs and 28 long-term jobs.
- Based on regional and national experience, a streetcar line is likely to leverage higher levels of economic development in the Johns Landing neighborhood and downtown Lake Oswego. Streetcar would provide enhanced opportunities for land use that fosters compact urban form, reduced vehicle miles travelled and higher transit mode split than bus transit alone could provide.
- The Streetcar Alternative is supportive of other planning efforts to develop a multi-use path through the Lake Oswego to Portland corridor. In particular, the in-street Macadam design option (as discussed below) would allow the existing Willamette Shore Line to be considered for a bike/pedestrian path.
- The Streetcar Alternative could help to jump start other critical public transportation projects including the South Portal project in Portland and Foothills Road in Lake Oswego.
- Streetcar would be more likely to facilitate development and redevelopment in the corridor, because of the major capital investment that would be made in the corridor's transportation infrastructure and because of improved transit travel time, reliability and visibility linking the corridor's major activity centers.

D. Be sensitive to the natural, built and social environment.

- In Lake Oswego, the Streetcar Alternative would provide for safe pedestrian connections, including a route under the Union Pacific railroad connecting the Stampher Road neighborhood with downtown Lake Oswego; a pedestrian connection between downtown and the Foothills area with a safe crossing of the Union Pacific Railroad; and improved pedestrian facilities between downtown and the Oswego Village shopping center.
- The Streetcar Alternative would remove about 40,000 tons of CO₂ from the environment on an average weekday. This is a significant amount and is 15,000 tons more than the Enhanced Bus Alternative. By comparison, the No Build option provides no reduction on CO₂. Streetcar would also reduce fuel consumption by about 60,000 gallons per year, compared to the No-Build Alternative.
- Streetcar would create opportunities to improve fish passage in replaced or repaired culverts, add native vegetation, improve habitats and remove invasive vegetation. It

would redevelop up to 7.6 acres of existing impervious surface to current standards, thereby reducing run-off and improving water quality.

- Streetcar would include remediation of up to 31 known hazardous sites in compliance with applicable state and Federal standards.

E. Garner broad public support.

- Within the city limits of Portland, streetcar has considerable community support as evidenced by comments and testimony from community members and organizations.
- Within Lake Oswego, vocal community support is more mixed. However, comments from community members and organizations indicate an understanding of the need and benefits of high capacity transit relative to Lake Oswego achieving its goals under the Metro 2040 Plan and local plans, including redevelopment of the Foothills area.
- Based on public comments and impacts and potential mitigation measures identified in the DEIS, the citizen advisory committee (CAC) developed their recommendation to the Steering Committee. Four-fifths of the CAC members at the final meeting supported carrying the Streetcar Alternative into Preliminary Engineering and the Final Environmental Impact Statement.

III) STREETCAR DESIGN OPTIONS AND CONSIDERATIONS

The DEIS outlines a series of phasing or design options in five locations along the proposed streetcar alignment (See Figures 2 and 3). These design and phasing options include: 1) phasing options in South Waterfront in the location of the proposed South Portal Project; 2) three design options in Johns Landing; 3) phasing options at the Sellwood Bridge where the streetcar alignment would be impacted by the ultimate design and construction timeline for the Sellwood Bridge replacement project; 4) two design options in Dunthorpe/Riverdale were considered in order to assess the impact of the streetcar on existing residential properties; and 5) two design options in Lake Oswego were considered in the Foothills redevelopment area which are dependent on the character and timing of the Foothills redevelopment.

The following is recommended for each of these design or phasing options:

A) South Waterfront (Phasing Option)

The DEIS assumed that the City of Portland's South Portal project is completed in 2035 and streetcar would operate in the extended Moody/Bond couplet. The ultimate design of the streetcar in the South Waterfront will be dependent on the final design and timing for construction of the South Portal Project. Based on the conclusion of the South Portal Study, the City of Portland along with the project team will recommend an alignment in this segment to the Steering Committee for approval. In the interim, it is recommended that both options be carried forward for further study.

Streetcar Alternative
Design Option Details

Figure 2

Johns Landing Design Options

- Willamette Shore Line
- Macadam In-Street
- Macadam Additional Lane

Dunthorpe/Riverdale Design Options

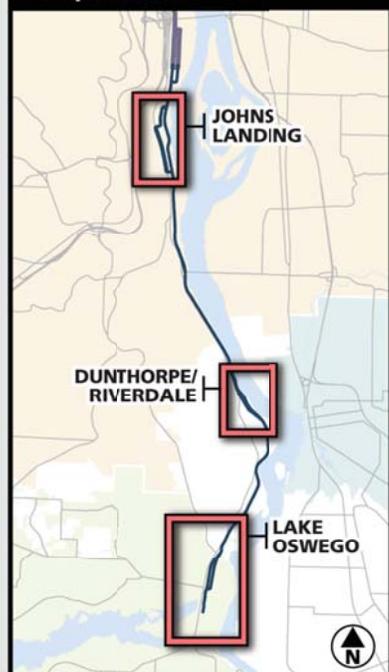
- Willamette Shore Line
- Riverwood

Lake Oswego Design Options

- UPRR Right-of-Way
- Foothills

- Streetcar alignment common for all options
- Streetcar design options
- ⊙ (P) Streetcar station park and ride
- ⊙ (O) Optional station
- ⊙ (TC) Transit Center

Map Index



JOHNS LANDING



DUNTHORPE/RIVERDALE



LAKE OSWEGO



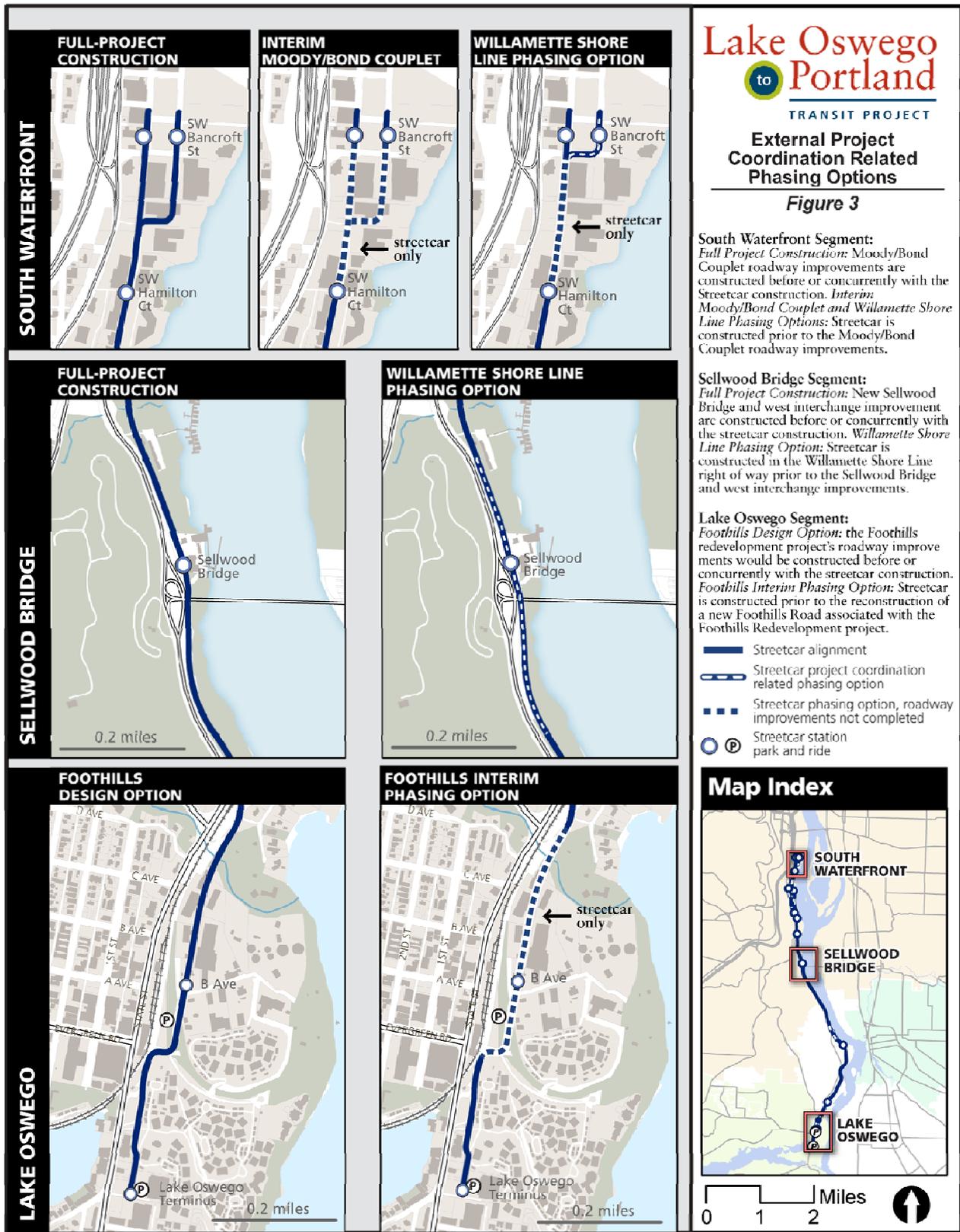
B) Johns Landing (Design Option)

The DEIS considered three (3) design options for the alignment in the central portion of Johns Landing between approximately SW Julia Street extended to SW Carolina Street. The options included:

- Willamette Shore Line. This option would have the streetcar alignment within the existing Willamette Shore Line right-of-way through Johns Landing.
- Macadam In-Street. This option would bring the streetcar alignment out of the Willamette Shore Line at approximately SW Julia Street extended, along SW Landing Drive (currently a private street), on to SW Boundary Street, along SW Macadam in the existing outside travel lanes, and return the alignment to the Willamette Shore Line at SW Carolina Street.
- Macadam Additional Lane. This option would bring the streetcar alignment out of the Willamette Shore Line at approximately SW Julia Street extended, along SW Landing Drive (currently a private street), on to SW Boundary Street, along SW Macadam in the existing outside travel lane southbound and in a new exclusive streetcar/right turn lane northbound, and return the alignment to the Willamette Shore Line at SW Carolina Street.

Following review of the design options, including detailed traffic analyses by both Metro and ODOT, and discussions with neighborhood representatives and the CAC, the **Macadam In-Street option** is recommended for the following reasons:

1. The Willamette Shore Line Option, while providing the fastest travel times and highest ridership, would be extremely close to a large number of residential units in several condominium complexes. The proximity of the residential units to the streetcar in this alignment, and the potential creation of additional barriers to river access, makes this the least desirable design option.
2. The differences in traffic impacts between the Macadam In-Street and Macadam Additional Lane are relatively minor. The Additional Lane option would require additional property acquisition and street construction, and is more costly.
3. Compared to the Macadam Additional Lane Option, the Macadam In-Street option would help to preserve the vegetative buffer and visual screen between Macadam and the Willamette Shore condominiums.
4. Streetcar on Macadam could help to improve the pedestrian environment from SW Boundary to SW Carolina Street. The neighborhood has long desired traffic calming amenities such as more frequent crosswalks, wider sidewalks, a lower speed limit and better bicycle/pedestrian accessibility from neighborhoods on both sides of Macadam. The Streetcar Alternative can help address these objectives but will need further analysis, design and engineering to determine what is feasible.
5. Bringing the streetcar alignment into Macadam Avenue for approximately one-half mile would improve the potential for the streetcar to bring about additional development within the neighborhood—a key goal of the neighborhood and the project.



6. Macadam Avenue is currently a state highway administered by ODOT. Implementation of the Macadam In-Street option as discussed above would require a set of discreet approvals from ODOT as described in the DEIS comments provided by the Agency (e.g., approval of new traffic signals, crosswalks and traffic calming measures). If Macadam Avenue remains under state jurisdiction, and the appropriate approvals cannot be obtained, modifications to the alignment through the John's Landing area may become necessary. Discussions are currently underway between ODOT and the project partners regarding a possible jurisdictional transfer of Macadam Avenue and Highway 43 to local governments. Should this occur, approvals necessary to implement the LPA within the Johns Landing area would fall exclusively to the City of Portland.

For the reasons stated above, the Macadam In-Street option is strongly preferred. Contingent with this option: 1) the public use of the Willamette Shore Line (WSL) shall be maintained for pedestrian and bicycle use; and 2) development of a plan to equitably replace the local match value of the unused WSL right of way in this portion of the alignment shall be addressed. These issues should be resolved to the satisfaction of the Steering Committee prior to the commencement of the Final Environmental Impact Statement.

C) Sellwood Bridge (Phasing Option)

The DEIS reviewed two phasing options for streetcar construction in the vicinity of the Sellwood Bridge. The difference between the two options is defined by the ultimate design and timing for construction of the Sellwood Bridge replacement project. It is recommended that both options be carried forward for additional study in coordination with the Sellwood Bridge replacement project.

D) Riverdale/Dunthorpe (Design Option)

The DEIS considered two (2) design options in this portion of the corridor: a) Willamette Shore Line; and b) Riverwood Road. The Riverwood Road option resulted from early discussions with property owners who were interested in understanding the pros and cons of an alignment within an existing public street that would allow the streetcar alignment to move away from several houses that were built in very close proximity to the Willamette Shore Line. Under the Riverwood Road option, the streetcar alignment would shift into Riverwood Road from approximately its intersection with Highway 43 to a point several hundred feet south of SW Military Road. It is recommended that both options be carried forward for further study for the following reasons:

1. While the Riverwood Road option has supporters, the conceptual design defined in the DEIS would result in the proposed closure of the intersection of Highway 43 and Riverwood Rd. in order to accommodate the streetcar alignment. A site specific study should be undertaken to determine whether a practical engineering solution exists that would allow this intersection of Highway 43 and Riverwood Road to remain open, as well as mitigation measures for access, noise and vibration with the Willamette Shore Line right-of-way option and resolution of concerns about the design of Riverwood. Based on further technical work and public outreach, and discussions with ODOT, the project team will make a recommendation to the Steering Committee regarding a preferred alignment to advance for further study.

2. A pre-condition for possible future selection of the Riverwood Road design option is development of a plan to equitably replace the local match value of the unused WSL right of way in this portion of the alignment. This issue should be resolved to the satisfaction of the Steering Committee prior to the commencement of the Final Environmental Impact Statement.

E) Lake Oswego (Design Option)

The DEIS considers two (2) design options within the Foothills Redevelopment area: a) the Foothills Road; and b) the UPRR Right-of-Way option. The Foothills Road option would construct the streetcar tracks as part of a new extension of Foothills Road that would serve future redevelopment in the area. The UPRR option would utilize existing Union Pacific right-of-way. It is recommended that both design options be carried forward for further study for the following reasons:

1. Detailed planning and preparation of a development plan for the Foothills area is currently underway and is expected to be ready for detailed public review over the next 6-12 months. As such, the timing for redevelopment, including construction of new roads and infrastructure is uncertain. Until more is known about the redevelopment plans, it is not possible to ascertain the best option for this area. Moreover, should the Foothills redevelopment not move forward within the planning horizon for streetcar, or not move forward at all, determination of the best alignment may be delayed. More detailed, joint planning with the City of Lake Oswego should be undertaken to establish the viability of the Foothills Road alignment.
2. While the UPRR alignment exists today and benefits from closer proximity to State Street, its availability and ultimate cost for use as a streetcar alignment has not been determined with certainty. During follow-on studies it will be possible to enter into detailed discussions with the Union Pacific regarding the potential use of the right-of-way and the costs associated with such use will be ascertained with greater accuracy.

Based on the conclusion of the Foothills planning process and discussion with the Union Pacific Railroad, the Steering Committee should select an alignment to advance for further analysis in the FEIS.

IV) OTHER CRITICAL DESIGN/PROGRAM CONSIDERATIONS

The analysis in the DEIS and community discussions have resulted in the identification of a series of additional design and programmatic issues that need to be addressed in future study phases of the project. Issues that change the scope of the project or add additional costs to the project should be reviewed by the Steering Committee prior to advancement in the FEIS. The following summarizes these considerations:

A) Streetcar Stop/Station Locations

In addition to the streetcar stop/station locations identified in the DEIS, it is recommended the following additional stations be studied:

1. *SW Pendleton St.* A station location along the Willamette Shore Line at SW Pendleton Street was deemed infeasible due to private property impacts. At the same time, the lack of a station between SW Boundary Street and SW Carolina Street in the Macadam In-Street

option creates a gap between stations in this critical stretch of Macadam Avenue. Siting of a station at SW Pendleton St. will require specific approval by ODOT unless a jurisdictional transfer of Macadam Avenue from ODOT to the City of Portland is approved (see III.B.6. above).

2. *SW Radcliff Rd.* There appears to be support in the community for adding a station on the streetcar alignment at/near SW Radcliff Rd. A station at this location should be evaluated during the next phase of study, along with safe pedestrian and bike access and trail connections to and from the station and to Lewis & Clark College.

Prior to, or as part of, Preliminary Engineering, possible stations at SW Pendleton Street and SW Radcliff Road should be reviewed and station locations in the John's Landing area optimized in consultation with appropriate jurisdictions. Results from a station area analysis and the study of potential stations at SW Pendleton and SW Radcliffe stations will be shared with the Steering Committee to confirm the final number and location of stations for inclusion in the FEIS.

B) Lake Oswego Park and Ride Facilities

The Lake Oswego community has raised a number of issues concerning the two (2) proposed park and ride facilities in Lake Oswego. During the next phase of the project the following issues, among potential others, should be addressed:

1. Confirm the need for and size of the proposed park and ride facilities.
2. Undertake additional urban design studies of the proposed park and ride facilities to address the impact of the proposed park and ride facilities on adjacent properties and development potential.
3. Follow-on studies should assess in more detail mitigation measures to address traffic impacts of the park and ride facilities. In addition, mitigation measures for traffic impacts should address community concerns regarding potential impacts to North Shore Rd. Of particular concern is the potential increase in "cut through" traffic coming from the west side of Lake Oswego and impacting this narrow residential street.

C) Other Critical Issues

It is recommended that the following additional critical issues be addressed during the next study phases of the project:

1. *Funding Considerations.* Project costs should be further analyzed and a conceptual finance plan for the project brought forward for review by the Steering Committee and partner jurisdictions.
2. *Alternatives to Boundary Street for entry/exit point for Macadam In-Street option.* The traffic analysis in the DEIS shows that the intersection of SW Boundary Street at Macadam Avenue represents a potential area requiring significant modification to address future traffic congestion issues. One possible approach to reduce traffic congestion at this intersection would be to move the streetcar access point to Macadam Avenue approximately two blocks north to the vicinity of an extension of SW Richardson St. Consideration should also be given to minimizing the number of 90 degree turns with this option to save travel time. This and other options should be discussed with impacted

- jurisdictions and studied prior to or during Preliminary Engineering. The results of the analysis should be presented to the Steering Committee which will determine the final configuration for study in the FEIS.
3. *Sidewalk Widths on Macadam Avenue.* The Johns Landing neighborhood is keenly interested in increasing the width of sidewalks along Macadam, particularly along the east side of Macadam between Boundary and Carolina. The scope of work for Preliminary Engineering should include a study of opportunities to increase sidewalks widths and discussion with impacted jurisdictions (also see III.B.6 above).
 4. *Pedestrian improvements in the Carolina to Nevada area of Macadam Avenue.* The Johns Landing neighborhood initially expressed some interest in seeing the streetcar alignment continue south along Macadam from SW Carolina to approximately SW Nevada. Given right-of-way and traffic issues in this stretch of Macadam, this approach is not a viable option. Alternatively, the neighborhood would be interested in pursuing a concerted set of pedestrian improvements in this area, including, but not limited to: a) slower traffic speeds; b) improved pedestrian crossings; c) significant pedestrian improvements between Macadam and the station locations at SW Nebraska and SW Nevada Streets; and d) pedestrian improvements on Macadam, including improved sidewalks, street lighting, benches and other pedestrian-scale amenities. The scope of work for Preliminary Engineering should include a study of opportunities for an improved pedestrian environment in this area and discussion with impacted jurisdictions regarding how to implement such improvements (also see III.B.6 above).
 5. *Potential for Local Improvement Districts in Johns Landing and Foothills.* Further studies should be undertaken to assess the potential for Local Improvement District (LID) or other mechanism to provide local match for the federal funding of the project. In Johns Landing, in particular, an LID could mitigate the loss of local match associated with not using the WSL in portions of the John's landing neighborhood. In Foothills, certain industrial property owners have already agreed to support an LID for the project.
 6. *Use of the Existing Willamette Shore Line Right-of-Way for bicycle/pedestrian improvements.* The Johns Landing neighborhood is open to considering the use of the existing Willamette Shore Line right-of-way for improvements to the bicycle and pedestrian facilities should the streetcar move forward under the Macadam In-Street alignment as recommended herein. The legal steps necessary to evaluate this idea should be addressed during the next phase of study.
 7. *Resolution of Environmental Issues Identified in the DEIS.* As detailed in Chapter 3 of the DEIS, certain environmental issues have been identified. These issues will be further analyzed and mitigation measures identified and developed in the course of undertaking the Preliminary Engineering and preparation of the Final Environmental Impact Statement.
 8. *Property Impacts Due to Acquisition.* Work with affected property owners along the alignment to minimize the impact due to property acquisition. In Lake Oswego, property acquisition in the Foothills area needs to be coordinated with the Foothills planning work to maximize the benefit of the project to property owners and to facilitate quality redevelopment opportunities as they become known.

Issues that change the scope of the project or add additional costs to the project will be reviewed by the Steering Committee as part of its determination of what should be advanced in the FEIS.

V) OTHER FUTURE WORK PLAN CONSIDERATIONS

Exhibit "A" to this recommendation provides a list of secondary issues/concerns that should be considered during the follow-on study phases of the project.

-- END OF LPA RECOMMENDATION --

APPENDIX A

OTHER FUTURE WORK PLAN CONSIDERATIONS

GENERAL

1. Further define responsibilities for operation, ownership and maintenance of the extension.

JOHNS LANDING

1. Consider ways to calm traffic, including reducing the speed limit on Macadam, additional enforcement and other traffic calming measures.
2. While there is community support for SW Landing Drive becoming a public street, the community is interested in keeping the reconstructed street as narrow as possible (i.e., the community is looking for street design flexibility beyond the normal City of Portland standards).
3. Property owners want transparency with regard to a potential local improvement district. They want to know up front what their share of the project will be and the geographic boundaries of the projects costs that will be borne by property owners.
4. The Preliminary Engineering studies should include development of specific noise and vibration mitigation and visual screening options and recommendations. Particular attention should be given to the OPB facility and appropriate vibration mitigation to ensure compatible operations.

RIVERDALE/DUNTHORPE

1. The Riverdale/Dunthorpe community is interested in what happens to WSL right-of-way if Riverwood Rd. is selected, i.e., will it be abandoned or sold? Future disposition of the right-of-way should be resolved in the next phase of the project.
2. The community is concerned about the visual impact of the catenary wire and support system. Options for reducing the visual impact of the catenary wire system should be addressed in the next phase of the project.
3. Further development of the Riverwood Road option should consider shifting the right-of-way to the west at the south end of Riverwood in order to further buffer houses from the alignment.
4. The community is concerned about commuters parking in the neighborhood, particularly near the Riverwood station, and it is felt that strong measures would be needed to prevent such parking. More specific options in this regard should be considered in the next phase of the project.
5. With regard to the Riverwood Road option, community concerns about pedestrian and bike safety and diminishment of the neighborhood character need to be addressed in the next phase of the project.
6. The Preliminary Engineering studies should include development of specific noise and vibration mitigation and visual screening options and recommendations.
7. Improvements to the intersection of Highway 43 and SW Military Rd. could be considered as part of the project.

8. Community concern about the potential for additional traffic on Military Rd. near Riverdale School should be addressed in the next phase of the project.

LAKE OSWEGO

1. In considering the two alignment options for the Foothills area, consideration should be given to the benefits of the Foothills Road option to provide development opportunities on both sides of the streetcar alignment as compared to the UP option, which would provide for new development on only one side of the alignment.
2. Additional details are needed as to how to create a “special” and inviting access to the streetcar option from State St. and B Ave., potentially through an overpass over the UP tracks, including stairs and elevator.
3. The studies undertaken in the next phase of the project should address the relationship between the Foothills development plan and streetcar, e.g., does an alignment decision need to be tied to the Foothills development? Is it possible to undertake phased development of the alignment?
4. The studies undertaken in the next phase of the project should address the question: what would be the cost to increase the width of the UP right-of-way for future double tracking?