Downtown Portland to the Eastside

TRANSIT ALTERNATIVES ANALYSIS

Oregon MOS
•First construction segment

Morrison MOS

OMSI MOS
•Interim Terminus

Full Loop MOS
•Locally Preferred Alternative

NOTE: Caruthers Bridge to be built as part of Milwaukie LRT Project and is not included in the Capital Costs

MLK/Grand Alignment

Eastside Transit Alternatives Analysis

Locally Preferred Alternative — Figure 1

METRO

Minimum Operable Segment (MOS)

- Oregon
- Morrison
- OMSI
- Full loop

- Proposed Transit on Existing Alignment
- MOS transition

Light Rail

- Light Rail Alignments

Streetcar

- Existing Streetcar

0 0.1 0.2 Miles

December 2005

Executive Summary

Overview

This Evaluation Report contains the analysis of transit alternatives for a loop circulator in Portland's Central City. This Executive Summary section presents the results of the evaluation in an abbreviated summary form. The Summary section that follows provides more detail regarding the definition of the alternatives, goals and objectives, design considerations and evaluation measures. The individual report chapters that follow provide full detail and documentation regarding this alternatives analysis. This analysis was conducted in a manner intended to be consistent with the Federal Transit Administration's (FTA) newly created Small Starts program, current guidance for Alternatives Analysis and the National Environmental Policy Act.

Definition of Alternatives

All alternatives were based on the Regional Transportation Plan's 2025 Financially Constrained network and include:

The **No-Build Alternative** fulfills the role of a **Small Starts Baseline** as it includes incremental service increases in the corridor and serves the same downtown circulation travel market as the Streetcar Alternative.

The **Streetcar Alternative** is defined as the **Full Loop** alignment, and has three **Minimum Operable Segments (MOS); Oregon Street, Morrison Street,** and at the Oregon Museum of Science and Industry **,** referred to as **OMSI.** These are shown in Figure ES-1

The **Streetcar Alternative** was analyzed using the MLK/Grand couplet alignment through the Central Eastside. The **Two-way Grand Design Option** could also be used for the Central Eastside segment of the loop, and is presented as an alternative to the MLK/Grand couplet alignment. The alternatives are presented schematically in Figures ES-2 through ES-5, showing the operating plan for each alternative. For the MOS alternatives, a connecting bus completes the full loop.

The results of key evaluation measures is presented below. A more detailed accounting of all evaluation measures is presented in the Summary, and in Chapter 3 of this report.

Transit Ridership Results

Each alternative results in an increase in Streetcar and total transit ridership compared to the 2025 No-Build Alternative, with the Full Loop resulting in the largest increase. Figure ES-5 shows this breakdown.

All of the build alternatives have over 50 percent of their ridership and at least some portion of the trip occurring in the Central Eastside. The OMSI MOS and Full Loop alternatives would exhibit the highest percentage of streetcar ridership on the eastside at approximately 75 percent.

Compared to the No-Build alternative, the Full Loop and OMSI MOS alternatives would improve transit connectivity through the Central Eastside by providing a limited stop, one-seat ride through the eastside. Streetcar alternatives would provide greater transit capacity and would result in more riders per mile of operation.

Figure ES-1
Streetcar Alternative and the Minimum Operable Segments (MOS)

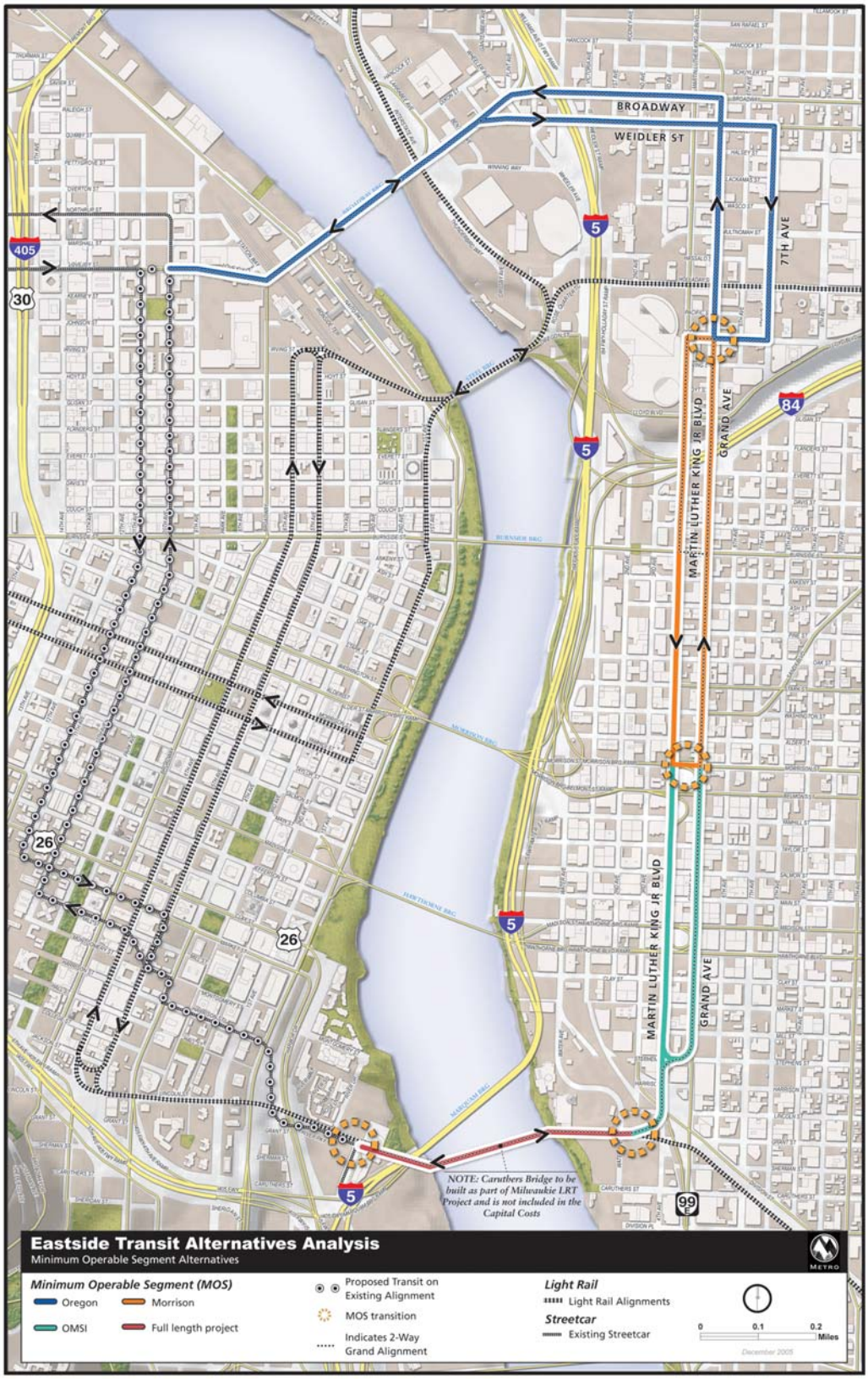


Figure ES-2
Streetcar Alternative Service Concept

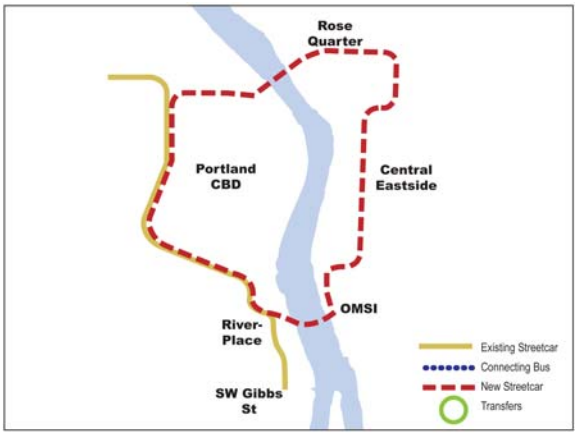


Figure ES-3
OMSI MOS Service Concept

Figure ES-4
Morrison MOS Service Concept

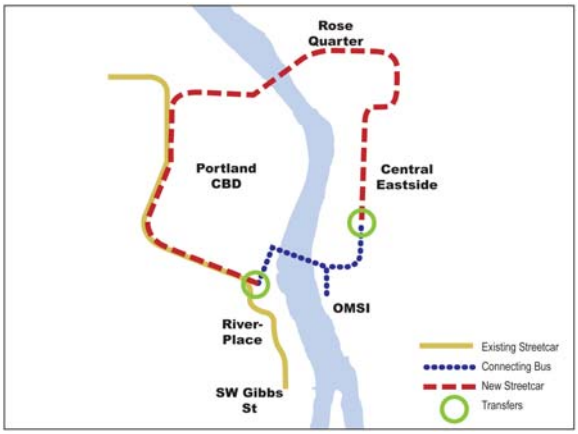
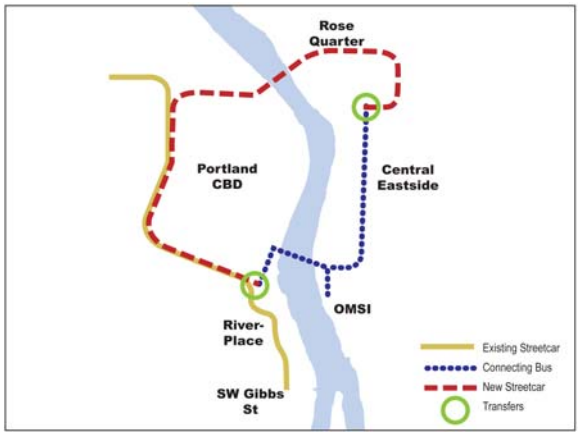
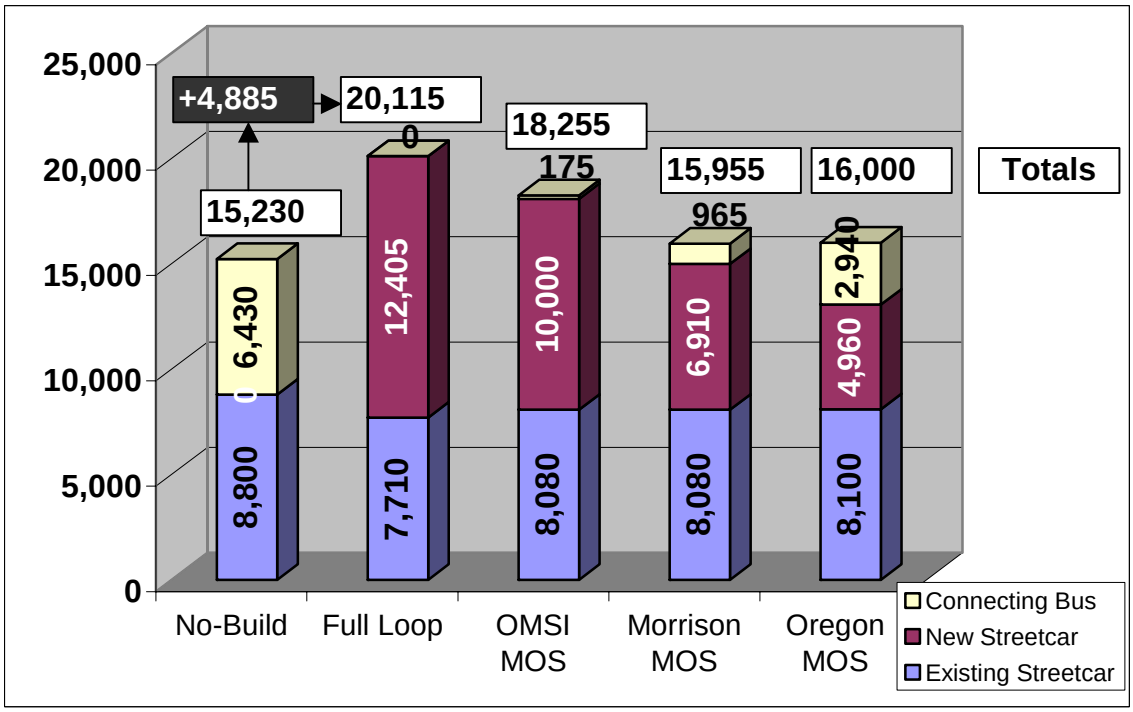


Figure ES-5
Oregon MOS Service Concept



The introduction of Streetcar service on the eastside would further complement the eastside grid system by dispersing trips across an array of destinations. The Full Loop alternative would have the best overall improvement in total transit travel times to/from and within the corridor compared to the No-Build alternative.

Figure ES-6
Streetcar and Bus Ridership Average Weekday – Year 2025



The full loop Streetcar Alternative, and to a lesser degree the MOSs, meet the project's goal of creating a Central City circulator transit project that distributes trips throughout the districts it serves.

All of the build alternatives provide improved connections between key visitor destinations in the Central City. The presence of streetcar stops, rails and catenary would make streetcar relatively more easily identifiable than standard fixed route bus service, which lacks permanent guideway improvements.

All of the build alternatives would result in reduced parking demand compared to the No-Build, because more internal transit trips within the corridor are accommodated on transit.

Land Use and Development Policy Results

All of the alternatives would be consistent with state, local and regional land use plans and policies in effect in the Central City. The Full Loop would go the farthest toward implementing specific policies regarding a Central City transit circulator and fostering transit supportive development.

The region's compact urban form, land use mix, short average trip lengths and the presence of viable alternatives to the single occupant vehicle are directly attributable to the region's land use

and transportation plans and policies. These have resulted in transit trips, including bus, streetcar and light rail, that have grown substantially more than vehicle miles traveled, a trend that is unusual compared to the rest of the country. Residents of the Central City, with it's high level of transit service and density and mix of uses, make fewer auto trips, own fewer cars, and use transit more than their counterparts in other parts of the region. Figure ES-6 summarizes this trend historically.

Economic Development Policy Results

The existing Portland Streetcar line demonstrates the impact of transit on development. This can be illustrated by the response of the private sector development community to announced plans to build a streetcar line in downtown Portland. In 1997, the City of Portland gave final approval to Portland Streetcar Inc., to proceed with construction and operation of streetcar service in downtown Portland. July 2001, streetcar operation commenced. Based on the experience of the Portland Streetcar, the private sector is willing to develop at a higher density along a streetcar line as evidenced by signed developer agreements to build to higher floor area ratios contingent on the presence of the streetcar. After 1997, those areas within one block of the streetcar experienced much greater development than areas two, three or more blocks from the alignment. Specifically, since the commitment to streetcar service was made, lands within one block of the streetcar were built to within 90 percent of allowed density (FAR), while lands within two blocks only built to a little over 70 percent and areas three blocks distant built to a little over 60 percent of allowed density.

Based on the experience of the Portland Streetcar and application of that experience to the Eastside project through analysis of existing zoning, floor area ratios, redevelopment potential and other factors, substantially more housing and mixed use development could occur on the eastside with the Full Loop Streetcar or MOSs than with the No-Build, commensurate with the length of the project. The percent of maximum floor area ratio (FAR) was used to assess what might occur on the Eastside. Given the existing zoning, an additional 3,432 housing units could be expected between 2005 and 2025 if a the OMSI MOS or Full Loop projects were built. The shorter MOSs would result in fewer additional housing units.

The Eastside has numerous proposed economic development projects that would benefit from transit and especially a streetcar because of the streetcars' demonstrated higher attraction of riders and greater passenger capacity. This larger public investment in a streetcar would likely result in greater private investments in the Eastside than would occur with the provision of bus service.

Traffic Impact Results

The proposed Eastside Streetcar route would operate in mixed traffic on existing streets within the corridor. During the PM Peak periods traffic congestion is relatively heavy along this corridor, which would in turn impact streetcar operations. The Streetcar operations are dependent on the general traffic flow of the roadway system the streetcar is operating in, and key locations where the streetcar requires signalization changes or other exclusive provisions to integrate with the general traffic flow.

Future 2009 (opening year) and 2025 PM peak hour traffic analyses were conducted at 51 intersections along the SE MLK Jr. Boulevard/SE Grand Avenue couplet and the NE Broadway/NE Weidler couplet. For the year 2009 PM peak hour traffic operations, four intersections along the proposed route are anticipated to operate at an intersection level of service (LOS) E to F, and/or a volume to capacity Ratio (V/C) greater than 1.00. For the year 2025 PM

peak hour traffic operations, 17 intersections along the proposed route are anticipated to operate at a LOS E to F, and/or a V/C greater than 1.00.

Future PM peak hour traffic conditions may have some impact on streetcar operations due to congestion along this corridor. Six of the intersections would be impacted by Streetcar operations, where general traffic is stopped for the streetcar to turn into mixed traffic through either a new traffic signal or the addition of a new phase to the existing traffic signal. These changes would not significantly alter the existing signal timing and progression of traffic along these roadways.

As part of the proposed Streetcar alignment, several signal and roadway changes are proposed to successfully integrate Streetcar into mixed traffic. Changes would include special signal phases, queue jumps, roadway widening, and striping and lane changes. These changes were incorporated into the traffic analysis for Streetcar to OMSI and are summarized in this section. Any of the MOS Alternatives would have the same improvements up to the respective terminus locations.

Design Considerations

Further investigation into potential improvements to move the streetcar through the corridor faster and more reliably as well as ways to improve the pedestrian environment should be conducted during the next phase of this study. Based on community support, engineering judgment, and the 2009 and 2025 traffic analysis, several design issues have been identified and will be evaluated further during the next phase of the project These design issues focus on streetcar operations and the pedestrian environment. Current plans in the corridor will help with the pedestrian environment and additional considerations could be made to improve on the pedestrian access and safety along the Broadway/Weidler and MLK Jr./Grand couplets.

Two Way Grand Design Option

The Two-Way Grand Design Option was developed as an alternative to the MLK Boulevard/Grand Avenue couplet to address transfer connection to radial bus lines and to improve the pedestrian environment. The Two-Way Grand Avenue Design Option has been designed so that it could be applied to any of the MOSs with the exception of the Oregon MOS which doesn't extend to the Central Eastside, and does not preclude either two-way Grand Avenue design option or the MLK/Grand couplet alignment extension to the Central Eastside.

With the Two-way Grand Avenue alignment, Grand Avenue would be converted to a two-way street. Streetcar would operate in both directions in the travel lanes with traffic. The proposed streetcar alignment would remain the same north of E Burnside Street. Southbound streetcar would turn northbound on E Burnside and southbound on SE Grand Avenue. Both northbound and southbound streetcar would operate on SE Grand Avenue. SE 7th Avenue would provide for the northbound general traffic function to replace SE Grand Avenue.

The Two-Way Grand Design Option would require extensive roadway improvements to SE 7th Avenue to carry northbound auto trips diverted from SE Grand Avenue. Transitions to and from SE Grand Avenue would be required at SE Stephens Street on the southern end and NE Couch Street on the northern end of the alignment. Additionally, roadway improvements would be needed to change NE Grand Avenue from one-way traffic operation to two-way traffic operation.

This design option would change both the function and classification of SE Grand Avenue and SE 7th Avenue. This would likely require an amendment to the City of Portland *Transportation System Plan* (TSP) and Metro's *Regional Transportation Plan* (RTP) street classification

designations. This design option would also likely result in traffic impacts, diversion of traffic into the adjacent neighborhoods, impacts to the Industrial Sanctuary, and private property impacts. During the next phase of study, if the Two-Way Grand design option were chosen as the preferred alternative, then further refinement of this design option would be needed. A full discussion of design considerations is included in Chapter 4 of the *Evaluation Report.*

Financial Feasibility

Assessing financial feasibility at the Alternatives Analysis phase of project development is a matter of comparing capital, operating and maintenance costs against proposed revenue sources. Funding sources generally solidify as a project moves through the project development process. In this section, proposed costs and revenues are presented and potential shortages and surpluses identified.

Capital cost estimates are provided in 2005 dollars and inflated to year of expenditure (YOE). The construction is assumed to be conducted from September 2007 to September 2009. Construction inflation has been assumed to be 5% per year through 2008. The cost estimates are based on a build-up of FTA cost categories and appropriate contingencies and are presented below.

Table ES-1
Capital Costs

Project Alternative	($2005 dollars)	($ YOE dollars)
Oregon MOS	$84,000,000	$100,506,000
Morrison MOS (MLK-Grand	$105,000,000	$125,632,000
Morrison MOS (Two Way Grand)	$119,000,000	$142,380,000
OMSI MOS (MLK-Grand)	$142,000,000	$169,905,000
OMSI (Two-Way Grand)	$156,000,000	$186,653,000
Full Loop	$153,000,000	$187,026,000
Full Loop (2-Way Grand)	$167,000,000	$203,774,000

Source: URS, Portland Streetcar Inc, April 2006

A preliminary inventory of funding sources indicate a potential of $100-125 million available for total project costs, which would not be sufficient to fund the entire Full Loop at this time. The Oregon MOS and Morrison MOS have listed sources (not fully committed) that could assure the completion of the project. The OMSI MOS and Full Loop require identification of $35-47 million in additional sources of funding in order to be constructed in a single project phase. Additional revenue would need to be identified if the entire project is to be constructed in one phase. Descriptions of proposed revenue sources are presented below.

- **Federal Small Starts** (60%): up to $75,000,000.
- **Committed Federal funding** (HUD, MTIP): $4,200,000.
- **Local Improvement District**: $6,000,000 to $10,000,000
- **Bridge Funds:** $9,000,000
- **Portland Development Commission Funding**: $25,000,000-$35,000,000.
- **City of Portland Funding**: $4,000,000

The Oregon MOS and Morrison MOS have listed sources (not fully committed) that could assure the completion of the project. The OMSI MOS and Full Loop require identification of $35-47 million in additional sources of funding in order to be constructed in a single project phase.

Operations and maintenance costs are presented in Table ES-2 below. These costs refer to the difference between the alternatives and the No-Build and include connecting bus and streetcar costs.

Table ES-2
Operating and Maintenance Costs ($ 2005)

Project Alternative	Operating Cost
Full Loop	$ 5,262,000
OMSI MOS	$ 5,325,100
Morrison MOS	$ 4,928,200
Oregon MOS	$ 4,642,200

Source: TriMet 2006

Operating revenue commitments have not been made for the Eastside Transit Project. However, funding mechanisms are in place that could potentially generate enough operating revenue to expand the streetcar system. More work will be required between TriMet and the City of Portland to develop a mutually agreeable funding plan, and to identify potential additional funding sources if necessary.

Cost-Effectiveness

Cost effectiveness provides a measure of how effectively the investment in capital, operating and maintenance funds that would be required for each alternative translates into ridership on the new streetcar line. The Full Loop is the most cost-effective alternative in terms of total annualized capital and operating cost per new streetcar rider, annualized federal cost per new streetcar rider and operating cost per streetcar rider. Cost-effectiveness decreases as the length of the project alternative decreases.

The Full Loop alternative, which has the highest cost, would also have the most riders, resulting in the lowest cost per streetcar rider of $4.25. The remaining MOS alternatives, with fewer additional new streetcar miles, and therefore lower cost and ridership, show a cost per rider figure commensurate with the length of the new streetcar line; the OMSI MOS cost per rider is $5.01, Morrison MOS is $5.80, and the Oregon MOS is $6.86.

The Full Loop alternative results in the lowest federal cost per streetcar rider at $1.77 per rider. The remaining MOS alternative's, show an increasing federal cost per streetcar rider commensurate with the length and ridership of the new streetcar line. Specifically, the OMSI MOS federal cost per rider is $2.03, Morrison MOS is $2.17, and the Oregon MOS is $2.39.

The Full Loop alternative would have the lowest operating cost per streetcar rider at $1.30 per rider. The remaining MOS alternatives show increasing operating cost per rider as ridership declines with each successive shorter streetcar alternative.

Project Decision Making

The outcome of the Eastside Transit Alternatives Analysis will be the adoption of a locally preferred alternative. The LPA will specify the mode, alignment, and termini of the transit project and may also set forth a phasing strategy for the project if a minimum operable segment (MOS) is chosen.

Public involvement and comment has taken place since 2005 and will continue through the LPA process. The LPA recommendation will be generated by jurisdiction senior staff that serve on the Project Management Group (PMG). The citizen committee for the project, the Eastside Project Advisory Committee (EPAC) will also generate a recommendation. The Steering Committee,

which is composed of elected officials and executive staff of Metro, TriMet, the Oregon Department of Transportation (ODOT), the Cities of Portland and Lake Oswego, and Multnomah and Clackamas Counties will review the PMG and EPAC recommendations as well as public comment and will issue a LPA recommendation. The Portland City Council, Multnomah County Commission, TriMet Board and Portland Streetcar Board will make recommendations to the Metro Council either supporting or amending the Steering Committee Recommendation. The region's MPO body, the Joint Policy Advisory Committee on Transportation will make a LPA decision recommendation to the Metro Council. The Metro Council will then make the final LPA decision. It should be noted that the Steering Committee oversees both the Eastside Transit Alternatives Analysis and the Portland to Lake Oswego Transit and Trail Alternatives Analysis.

Exhibit C
Capital Funding and Operating Cost Estimates

ESTIMATED CAPITAL FUNDING

	Oregon MOS	Morrison MOS	OMSI MOS	FULL LOOP
Preliminary Construction Costs				
Streetcar to NE Oregon	$100,506,000	$100,506,000	$100,506,000	$100,506,000
Oregon to Morrison		$25,126,000	$25,126,000	$25,126,000
Morrison to OMSI			$44,273,000	$44,273,000
Full Loop				$17,121,000
TOTAL (Year of Expenditure)	$100,506,000	$125,632,000	$169,905,000	$187,026,000
Potential Funding Sources				
FTA*	$60,303,600 60%	$75,000,000 60%	$75,000,000 44%	$75,000,000 40%
LID	$6,000,000	$8,000,000	$10,000,000	$10,000,000
TIF - multiple districts	$20,000,000	$25,000,000	$30,000,000	$35,000,000
Bridge Funds	$9,000,000	$9,000,000	$9,000,000	$9,000,000
HUD (committed)	$613,590	$613,590	$613,590	$613,590
MTIP (committed)	$1,000,000	$1,000,000	$1,000,000	$1,000,000
SAFETEA-LU (committed)	$1,650,000	$1,650,000	$1,650,000	$1,650,000
MTIP (City request)	$1,000,000	$1,000,000	$1,000,000	$1,000,000
City Funding (TBD)	$938,810	$2,000,000	$3,000,000	$4,000,000
TOTAL	$100,506,000	$123,263,590	$131,263,590	$137,263,590
(Deficit)	*$0*	*($2,368,410)*	*($38,641,410)*	*($49,762,410)*

* 60% grant with a $75,000,000 maximum

ESTIMATED OPERATING COSTS

TOTAL O&M COSTS (First Year of Operations)	$4,885,000	$5,457,000	$6,219,000	$6,917,000

Eastside Transit Alternatives Analysis

Locally Preferred Alternative Recommendation

Adopted by the Steering Committee
June 5, 2006

METRO

Printed on 30% recycled post-consumer paper.

I. Overview

This document presents the Locally Preferred Alternative (LPA) recommendation for transit improvements for the Eastside transit project in Portland's Central City. These recommendations are based on information documented in the *Eastside Transit Alternatives Analysis Evaluation Report* (Metro, May 2006) and from public input received during the public comment period and in the hearing held May 10, 2006 before the Eastside Project Advisory Committee (EPAC).

The LPA decision consists of three distinct decisions on project implementation and phasing. The **mode decision** chooses between streetcar, and the no-build bus network. The **terminus decision** addresses whether the project can be completed in one phase or in construction segments defined by three minimum operable segments (MOS). The streetcar alternative includes two potential alignments through the Central Eastside, the MLK/Grand Couplet and the two-way Grand design option and the **alignment decision** will choose between them.

II. Eastside Transit Project Locally Preferred Alternative

A. Transit Mode - Streetcar

Streetcar is the preferred transit mode for the Eastside project as defined by the **Full Loop Streetcar Alternative.** This alternative best meets the project's purpose and need and goals and objectives as outlined in the *Eastside Transit Alternatives Analysis Evaluation Report (Evaluation Report).* The project also garners significant public support as shown by the public comments received.

The **streetcar mode** is preferred because:

- The streetcar mode results in approximately 30% higher ridership than an equivalent level of bus service operating in the same Central City mixed-traffic environment, indicating an inherent preference, or modal bias for streetcar
- A streetcar line would leverage higher levels of economic development and would provide better opportunities for land use that fosters compact urban form, reduced vehicle miles traveled and higher transit mode split than bus transit alone could provide, as shown by the experience of the existing Portland Streetcar
- A streetcar line has garnered strong community support, and the support of adjacent property owners, as evidenced by support for the current streetcar line through participation in local improvement districts, and through the stated intent of property owners along the Eastside line to participate in such a district.

The **Full Loop Streetcar Alternative** performs better than the no-build or MOS options in several key areas:

- Highest streetcar ridership and highest ridership per mile of operation
- Most cost-effective project by all three measures evaluated – annualized capital and operating cost and capital cost per new streetcar rider, federal capital cost per new streetcar rider and operating cost per new streetcar rider

- Best implements land use and economic plans and policies for the Central City
- Provides best potential for economic development given the geographic extent of the line
- Provides the greatest travel time improvements due to a new Willamette River crossing
- Provides potential for the highest level of local funding through a local improvement district and possible amendment of urban renewal areas
- Best meets the transit circulator function outlined in the Purpose and Need for the project.

B. Terminus

1. Interim Project Terminus – OMSI MOS

The **Full Loop Streetcar Alternative** is the project's ultimate objective. However construction of the project will need to occur in shorter segments to respond to the anticipated availability of federal and local funds and the timing of the Milwaukie Light Rail Project and construction of the new Caruthers Bridge across the Willamette River. The **OMSI MOS** is the logical interim terminus for the full project until such time that the proposed Caruthers Bridge or other Willamette River streetcar crossing is viable. Current estimates for completion of the Milwaukie Light Rail Project put completion at 2014. The OMSI MOS would have a capital funding gap between project costs and anticipated revenues of $37 million. It is recommended that major component costs and funding be reviewed seeking to reduce the overall cost and to identify additional revenue sources for the construction to OMSI as soon as possible.

2. First Construction Segment – Oregon Street MOS

The **Oregon Street MOS** is recommended as the first construction segment for the project for the following reasons:

- The Oregon Street MOS would require $60 million in FTA Small Starts funding, less than the statutory maximum of $75 million for a single project. All other MOS options and the Full Loop Alternative would require the maximum level of FTA participation.

- The City of Portland needs to complete key analyses regarding the alignment south of Oregon Street. The Oregon Street MOS is the only MOS that could be advanced expeditiously independent of additional analyses for the MLK/Grand couplet in the Central Eastside.

C. Alignment – MLK/Grand Couplet

The preferred alignment through the Central Eastside is the **MLK/Grand couplet,** contingent on the conditions set forth in section D below, for the following reasons:

- The MLK/Grand couplet alignment enjoys a higher level of community and business support than the two-way Grand Alignment.
- The MLK/Grand couplet alignment better supports existing city policy in the Portland Comprehensive Plan, Transportation System Plan and Central City Transportation Management Plan
- The two-way Grand alignment would result in greater local and neighborhood traffic impacts, would require major improvements on SE 7th Avenue including transitions to and from Grand Avenue, and would add $17 million to the cost of the Morrison or OMSI MOS options or the Full Loop Alternative.
- The added cost of the two-way Grand alignment would strain finite local and federal funding sources and could delay the ultimate completion of the project.
- The MLK/Grand couplet would allow for a wider Local Improvement District and could enhance the ability to acquire local funding for the project.

Although MLK/Grand is the preferred alignment, the Steering Committee has raised some concerns regarding the MLK/Grand Couplet alignment and construction of the project through the Central Eastside including:

- Quality of the pedestrian environment, particularly on MLK Blvd, and its effect on the ultimate success of the project
- Connectivity with east-west bus routes at the bridgeheads, particularly from MLK Blvd
- Commitment of urban renewal funding, parking meter revenue and other sources to solidify local funding to construct the alignment south of Oregon Street.

D. Conditions for Extending the Project to OMSI

Extension of the project south of Oregon Street is therefore contingent on the City of Portland addressing the following Steering Committee concerns regarding the Central Eastside alignment:

- Progress towards a signed development agreement between the Portland Development Commission and the developer of the Burnside Bridgehead project
- Development of an MLK/Grand Transportation Management Plan that will:
    - Improve pedestrian access to the streetcar
    - Improve pedestrian safety and increase pedestrian crossing opportunities at streetcar stops, with special attention paid to the needs of the elderly and handicapped and connections to the bridgeheads
    - Provide for efficient streetcar operations through evaluation of transit priority measures that could include capital improvements such as curb extensions and operational improvements such as signal timing and spacing, or other measures

    - Provide for efficient vehicle and freight movements though coordinated signalization, or any other operational improvements that will address the issues
- Identification of additional private and public redevelopment opportunities and projects along the corridor in addition to the proposed Burnside Bridgehead project
- Amending the Central Eastside Urban Renewal District to facilitate development objectives within the District
- Development of a parking management plan that includes a plan for raising revenues to help fund streetcar operations

When the project Steering Committee determines that the conditions have been met, project sponsors will seek to immediately extend the project to the OMSI MOS. If that is not possible for financial reasons, the shorter Morrison Street MOS should be considered as an interim terminus. The overall short-term goal is to proceed with the project to the OMSI MOS until such time that the Caruthers Bridge or other Willamette River streetcar crossing is available.

If the preceding conditions are not met or are not met satisfactorily, the Steering Committee will evaluate other alignments and measures, which will meet these conditions.

Eastside Transit Project

Work Program Considerations

Adopted by the Steering Committee
June 5, 2006

METRO

Overview

These future work program elements and the issues they address are defined here because the Steering Committee wants to ensure continuity as the project moves beyond the Alternatives Analysis and Conceptual Design phases of project development. The following outlines issues and work program elements that have emerged from the Eastside Transit Alternatives Analysis process. Specific requirements to report back to the Steering Committee are noted below. The Steering Committee anticipates that this issues list will change as current issues are addressed and as new issues are identified.

1. Coordination with Ongoing Planning Efforts

Project staff will need to coordinate with other planning efforts that may be taking place along the project alignment and in the surrounding area. The City of Portland will be undertaking an update to the Central City Plan and Central City Transportation Management Plan. As part of this planning, the City may re-examine the land use and zoning along the Streetcar alignment to increase development potential and employment density.

Proposed Action**:** City of Portland staff should brief the Steering Committee if and when changes are proposed that could affect the streetcar project.

2. Preparation of Alternative User Benefit Measures

Project staff should develop a rationale related to streetcar's effect on redevelopment and the "trip not taken" for consideration by the FTA. This work needs to strengthen the project's justification and should be focused on affecting the Transportation System User Benefit (TSUB) number.

Proposed Action: The Steering Committee should be briefed on the progress of developing this measure prior to submittal of an application to enter the Project Development phase of FTA's Small Starts program.

3. Refinement of Capital Costs and Funding Plan

The City of Portland should finalize the capital funding plan with a focused review of the capital cost estimate related to a likely schedule for FTA approvals (risk assessment.) This capital cost should include costs inherent in the fleet management plan and finance plan. The capital funding plan should also identify the funding sources for the "by others" pedestrian and transportation improvements included in the Conceptual Design for the Alternatives Analysis.

Proposed Action: A capital cost review and draft funding plan should be submitted to the Steering Committee for review prior to submittal of an application to enter the Project Development phase of FTA's Small Starts program, and should be completed prior to the end of Project Development.

4. Definition of Operating and Maintenance Revenue Sources

The Steering Committee acknowledges TriMet's constrained operating revenue situation for the first years of project operation, given the demands of opening both the Portland Mall/I-205 Light Rail Project and the Wilsonville to Beaverton Commuter Rail line.

These are in addition to increasing service for fixed route bus lines, the LIFT and other dial-a-ride services as well as other fixed-guideway projects under consideration by the region such as Milwaukie Light Rail, Columbia River Crossing and Lake Oswego streetcar. Prior to applying for construction approval and funding, both the full capital costs and a 20-year operating plan will need to be finalized. This plan may need to identify new funding sources that reflect that the project is as much about development as it is about transportation. The goal of the funding plan should be to provide for streetcar operations in a manner that allows TriMet to implement its adopted five year service plan, fund operations of the South Corridor Phase II Milwaukie Light Rail Project, and meet other regional transit needs.

Proposed Action: The Steering Committee requests that it be briefed by Portland Streetcar, Inc and the City of Portland prior to submittal of an application to enter Small Starts Project Development, regarding the status of the capital, operations and maintenance funding plan. Prior to applying for construction funding, the Steering Committee also requests that it be briefed by the City of Portland on capital, operating and maintenance funding plans and briefed by TriMet regarding any potential service cuts or reallocations that might be required to share in the operating costs of the Eastside Project. The operations funding plan should be finalized prior to the end of Project Development. Any concerns raised at the Steering Committee would need to be resolved prior to applying for Small Starts funding.

5. Traffic and Streetcar Operations

The Alternatives Analysis identified a number of key intersections that may need additional operational improvements to maintain streetcar reliability. The City of Portland will analyze the traffic and transit operational considerations described in Chapter 4 of the *Eastside Transit Alternatives Analysis Evaluation Report* including cost, potential impacts and speed improvements and their effect on streetcar reliability. In particular, northbound Grand Ave. is already congested between NE Oregon and NE Broadway. At a minimum, such congestion requires a detailed plan for mitigation if streetcar is expected to operate northbound on Grand Ave. without further deteriorating auto movement or compromising streetcar's ability to maintain its schedule.

Proposed Action: A proposed plan for capital and operational improvements to maintain the reliability of streetcar operations should be prepared prior to submittal of an application to enter the Project Development phase of FTA's Small Starts program and should be completed prior to the end of Project Development.

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6. Refinement of Streetcar Alignment and Capital Cost Reduction

Recognizing that capital cost reductions may be necessary in order to advance the project to the OMSI interim terminus, the City of Portland should investigate modifying the proposed Streetcar Conceptual Design (*URS, April 2006*). Specifically, streetcar operations on the left side of Grand Avenue and on the right side of NE Broadway and Weidler streets should be evaluated for their potential to save construction costs associated with utility relocation. Traffic impacts of this alignment modification should

also be assessed. In addition, cost reductions should be pursued for proposed modifications to the Broadway Bridge.

Proposed Action: An evaluation of potential alignment modifications and a proposed plan to evaluate and implement capital cost reductions should be prepared prior to submittal of an application to enter the Project Development phase of FTA's Small Starts program. This information will be critical to inform any Steering Group action to advance the project to the OMSI interim terminus.

7. Evaluate Emergency Shared Light Rail and Streetcar Operations Between Rose Quarter and the Caruthers Bridge

The Steering Committee requests that TriMet and the City of Portland evaluate the potential for shared light rail and streetcar operations between the Caruthers Bridge and Rose Quarter in the event of an emergency that closes the Steel Bridge. The ability to use a new Willamette River streetcar crossing and the Central Eastside streetcar alignment for all light rail lines builds an important safeguard in the event of an emergency situation. The Steering Committee requests that this evaluation be conducted prior to applying for FTA Small Starts funding.

Proposed Action: Prior to entering Small Starts Project Development, the Steering Committee will review the feasibility of including provisions for joint emergency operations with light rail in the project scope. TriMet and the City of Portland should evaluate the feasibility of shared light rail operations. This evaluation should inform the design standards to be used in Project Development and identify any special design and operational considerations for joint operation of streetcar and light rail.