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Porltand to Lake Oswego Transit and Trail Alternatives

Background Report

January 2006

PORTLAND TO LAKE OSWEGO TRANSIT AND TRAIL ALTERNATIVES ANALYSIS DRAFT BACKGROUND REPORT

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LAKE OSWEGO TO PORTLAND TRANSIT AND TRAIL ALTERNATIVES ANALYSIS DRAFT BACKGROUND REPORT

Executive Summary

Introduction

The Lake Oswego to Portland Transit and Trail Corridor currently provides three modes of travel: Highway 43, portions of the Willamette Greenway, and the Willamette Shoreline railway.

Highway 43 serves as the primary north/south route for motor vehicles, transit and freight between the City of Portland and Lake Oswego. Portions of the Willamette River Greenway exist between Portland and the Multnomah County Line. The Willamette Greenway Plan identifies a continuous trail to extend the full length along the Willamette River. The Willamette Shoreline railway is located between Highway 43 and the Willamette River and is owned by a consortium of local government agencies that include the Oregon Department of Transportation, Metro, the cities of Portland and Lake Oswego, Clackamas and Multnomah counties and TriMet. The Consortium manages and maintains the rail right-of-way and the Oregon Electric Railroad Society operates an excursion trolley service between Lake Oswego and Portland.

The existing traffic volumes on Highway 43 within the corridor create substantial congestion in the peak hours of travel. Highway 43 serves the growing centers of Lake Oswego and Portland. Forecasts of future volumes in the corridor suggest greater congestion on Highway 43. Substantial roadway improvement and tolling for Highway 43 have been ruled out in earlier studies completed in 1996 and 1999. However, multiple studies have recommended consideration of transit along the existing Willamette Shoreline right-of-way. Given the public ownership the railroad right-of-way within the corridor, transit alternatives, including, but not limited to streetcar service, are being studied to assess how current and future transportation needs might be met in the Lake Oswego to Portland corridor.

Significant roadway improvements along Highway 43 have been ruled out due to the physical constraints of the corridor. Current and previous studies have concluded that transportation system management, transportation demand management, transit, and bicycle and pedestrian improvements are more suitable for this corridor as a means of addressing the existing and future travel needs

Throughout this Alternatives Analysis process, the Background Report will be used to assist with the development and the narrowing of potential alternatives. It will assist in pinpointing issues that have been put to rest and identify issues that need further development. The Alternatives Analysis will be able to build upon the previous work done and avoid “re-inventing the wheel.”

In addition, this report will provide policy context and assist in identifying documented opportunities and constraints within the project study area. This information will also support the land use analysis for the project.

Previous Transportation and Land Use Studies

The Background Report summarizes previous transportation and land use studies within the Portland to Lake Oswego Corridor. It also provides context and history for the development of potential alternatives within the corridor.

The previous planning work conducted in the corridor concluded that extensive widening is not recommended along Highway 43 due to physical constraints along the roadway. Instead it was recommended that bicycle and pedestrian improvements, high capacity transit options be studied further. Based on extensive analysis, tolling on Highway 43 was considered but ultimately rejected. Metro Council ultimately created policy based on public opinion, that tolling should only be considered on new roadway capacity projects and not existing roadway capacity. River Transit along this corridor was evaluated but ultimately did not move forward. Light rail service was adopted by the City of Portland at one time to connect Portland and Milwaukie. This alignment was ultimately dropped for the preferred alignment along McLoughlin Boulevard on the east side of the Willamette River.

The previous work in the North Macadam/South Waterfront area focused on addressing the needs associated with the proposed South Waterfront development. As the development plans for this area grew, the forecasts of new and residential units ranged between 7,500 to 10,000 and 1,500 and 5,000, respectively. The recommendations from these plans included street and intersection improvements that would meet the future traffic needs of the development. Also other studies concluded that a high capacity transit connection such as streetcar or light rail on the Willamette Shore Line railway, as well as, the Willamette Greenway extension, would support the proposed development of the area.

Since the creation of the Urban Renewal District in Lake Oswego, there has been substantial development and redevelopment to create an urban village mixed-use environment throughout the downtown. In addition, Lake Oswego has studied relocating their existing on-street transit center to the east side of State Street. The relocated transit center would serve potential transit use on the Willamette Shore Line right-of-way.

Ongoing or Recently Completed Projects

Over the past year and continuing on into next year, Metro, Multnomah County, Lake Oswego and the City of Portland are continuing to improve the transportation system within the corridor to meet the existing and future demand of the communities and the region.

Beginning in 2006, Metro is continuing to evaluate and design a potential light rail extension from Portland to Milwaukie. This project will build upon the work conducted in the South Corridor Alternatives Study and the South Corridor Draft and Final Environmental Impact Statement.

Multnomah County's Environmental Assessment for replacing the Sellwood Bridge began in late 2005. The current bridge is nearing the end of its lifespan and is a barrier for the movement people and goods and services. Some of the issues to be addressed during this study include number of lanes, bicycle and pedestrian improvements, bridge alignments, intersection with Highway 43, funding, right of way, bridge type, construction closures, and transit options.

As the South Waterfront continues to grow and develop, the city of Portland is continuing to evaluate potential street and intersection improvements to support the development and meet the future traffic demands. As part of this work, both the Willamette Greenway and the rail transit along the Willamette Shore Trolley Line have been identified as recommended transportation improvements to meet the future traffic needs.

The City of Lake Oswego is currently working on a Transportation Management Plan for the Downtown neighborhoods to promote and maintain safe and efficient movement of pedestrians, bicycles and autos through the downtown neighborhoods. The City is also studying the development potential of the Foothills District for a mix of residential, commercial, office and recreational issues and how to incorporate Foothills District into the downtown. In addition, the City is to evaluating and identifying ways to enhance the development of the downtown, including the Foothills District. This includes developing a vision for multimodal transportation improvements in the downtown town center and how to integrate the Willamette Shore Line rail alignment into that vision.

Adopted Transportation and Land Use Plans and Policies

On both the regional and local level, the adopted plans and policies support the need to study a high capacity transit alternative along this corridor. In addition, the adopted plans and policies recognize the need for an interconnected trail system for commuting and recreational opportunities.

Regional transportation policies, as identified in Metro's Regional Transportation Plan (RTP) and Regional Framework Plan, recognize the need for a high capacity transit between the centers, including Lake Oswego Town Center and the Central City. In addition, the 2004 RTP included the Lake Oswego to Portland Transit and Trail Alternatives Analysis in the 2004 Financially Constrained RTP Project List.

The City of Portland identified future use of the Willamette Shore Line right-of-way for streetcar or light rail in their Comprehensive Plan. The Portland TSP recommended that refinement plans be completed for the Willamette Shore Line Alternatives Analysis, the Macadam/Highway 43 Corridor Plan, and the Willamette River Greenway Plan.

The Lake Oswego Comprehensive Plan also identified use of the Willamette Shore Line right-of-way for high capacity transit, and bicycle and pedestrian use, where feasible. The Lake Oswego TSP identified that the Willamette Shore Line railway operate as a recreational excursion basis protecting the right-of-way for future light rail or commuter rail.

Multnomah County's TSP does not identify a specific project on Highway 43 but instead recommends six projects in the unincorporated area of Dunthorpe neighborhood that includes the following elements: pedestrian improvements, traffic calming, bike lanes, extension of the Willamette Greenway Trail, and multimodal improvements.

There are several adopted neighborhood plans and special purpose plans developed for the corridor and communities in the corridor. These plans provide context for the physical environment and plans for future uses or developments. The City of Portland has developed a vision for the River and its boundaries as well as documenting protection and conservation zones along the river. Neighborhood plans identify a vision for their community and guide future transportation and land use actions.

Trail Studies and Plans

Metro, Lake Oswego, and the City of Portland have all identified the need for established network of trails and greenways. Both regional and local plans identify the need for a complete system of trails and greenways will provide and enhance commuting and recreational opportunities. The trail and greenway system should connect communities and community activity centers.

Metro identified the Willamette River Greenway as an important regional trail. A system of natural areas, trails, greenways, natural corridors and river trails are major components of the proposed greenspaces systems. The natural areas included a large portion of the Willamette River watershed. Metro's Regional Trails and Greenways plan identified the Willamette Shore Line right-of-way as a future rail transit project and where feasible should include both rail and trail. Metro has also provided a handbook that guides the design and development of environmental friendly (or "green") trails.

Both Southwest Portland and Lake Oswego have identified the need for an interconnected system of trails and pathways. Lake Oswego identified the Willamette Greenway and the Willamette Shore Trolley as Tier I (short-term - five to 10 years) Regional Trail projects.

Willamette Shore Line Right-of-Way

The Willamette Shore Line right-of-way was purchased in 1988 by a consortium of 7 government agencies (ODOT, Metro, TriMet, Cities of Portland and Lake Oswego, and Multnomah and Clackamas Counties). The Consortium purchased this right-of-way with the intent to preserve it for future passenger rail service.

Since 1990, Lake Oswego has lease the right of way to operate a trolley service on the rail line. Lake Oswego maintains the operations and maintenance rail right of way and TriMet manages the capital improvements and acts as right of way agent.

Conclusion

The following table summarizes the lessons learned through the Background Report.

Mode	Lessons Learned
Automobile	
	▪ Capacity Constraints are recognized ▪ Increase demand and congestion is anticipated on Highway 43 ▪ Widening of Highway 43 is not recommended because of physical and environmental constraints ▪ Tolling of Highway 43 is not recommended. Regional policy states that tolling should be evaluated for new capacity or new roadways projects
Transit	
	▪ River Transit was not carried forward in the South Corridor Alternatives Analysis due to low ridership, high out of vehicle travel time, and high capital cost ▪ John's Landing Master Plan identified a light rail alignment ▪ Need for rail transit backed by South Waterfront development and North Macadam plans, John's Landing, Lake Oswego, and adopted regional and local plans ▪ History of the Willamette Shore Line right way anticipated rail use ▪ Park and ride and transit center in Lake Oswego have been studied
Bicycle and Pedestrian	
	▪ Need for a established network of trails and greenways was identified in regional and local plans ▪ Adopted plans and policies recognize the need for an interconnected trail system for commuting and recreational opportunities

Portland to Lake Oswego Transit and Trail Alternatives Analysis Draft Background Report

I. Introduction

The purpose of this report is to summarize background information that will provide context for the Portland to Lake Oswego Transit and Trail Alternatives Analysis. It provides a compilation and analysis of the transportation and land use of the corridor to achieve a common understanding of previous planning efforts in the corridor, as well as the planned or proposed studies. It also explains how the Willamette Shore Line right- of-way relates to the study. And finally, it provides context for the pedestrian and bicycle trail component of the Alternatives Analysis.

Throughout this Alternatives Analysis process, the Background Report will be used to assist with the development and the narrowing of potential alternatives. It will assist in pinpointing issues that have been put to rest and identify issues that need further development. The Alternatives Analysis will be able to build upon the previous work done and avoid "re-inventing the wheel."

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The Lake Oswego to Portland Transit and Trail Corridor currently provides three modes of travel: Highway 43, portions of the Willamette Greenway, and the Willamette Shoreline railway.

Highway 43 serves as the primary north/south route for motor vehicles, transit and freight between the City of Portland and Lake Oswego. Existing traffic volumes on Highway 43 creates substantial congestion during the peak hour of travel. Future congestion along the corridor is expected to continue to increase.

Portions of the Willamette River Greenway exist between Portland and the Multnomah County Line. The Willamette Greenway Plan identifies a continuous trail to extend the full length along the Willamette River.

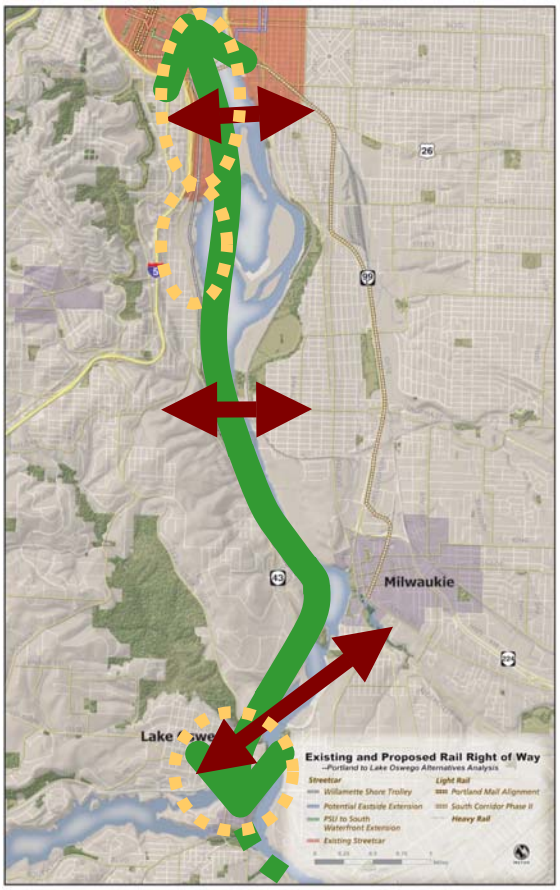
The Willamette Shoreline railway is located owned by a consortium of local government agencies that include the Oregon Department of Transportation, Metro, the cities of Portland and Lake Oswego, Clackamas and Multnomah counties and TriMet. The Consortium manages and maintains the rail right-of-way and the Oregon Electric Railroad Society operates an excursion trolley service between Lake Oswego and Portland.

The Background Report contains six sections:

I. Introduction,
II. Previous Transportation and Land Use Studies,
III. Concurrent or Planned Transportation and Land Use Projects,
IV. Adopted Transportation and Land Use Plans/Policies,
V. Trail Studies and Plans, and
VI. The Willamette Shoreline Right-of-Way.
VII. Summary/Conclusion

II. Previous Transportation and Land Use Studies

This section summarizes previous transportation and land use studies within the Portland to Lake Oswego Corridor. It also provides context and history for the development of potential alternatives within the corridor.



The previous studies are grouped into three different categories: corridor-wide studies, river crossing studies, and studies located with the various geographic areas. The corridor studies focused on transportation improvements along the entire corridor. For example, the *Draft Corridor Plan OR 43 Portland – West Linn* looked at travel between Portland and West Linn and the *South Corridor Evaluation Report* looked at a variety of transportation alternatives, including river transit, between Portland and Oregon City. Other studies, such as the *Sellwood Bridge Conceptual Engineering Analysis for Light Rail Service* and the *South Willamette River Crossing Study Findings and Recommendations Report* focused on alternatives for crossing the Willamette River. Other studies focused more on geographic areas, including the South Waterfront, North Macadam, John's Landing, and Lake Oswego.

Corridor-Wide Studies

The following studies, the *Draft Corridor Plan for OR 43 Portland – West Linn* and the *South Corridor Evaluation Report*, evaluated transportation improvements between Portland and Oregon City/West Linn.

Draft Corridor Plan OR 43 Portland – West Linn

Prepared for the Oregon Department of Transportation, Prepared by Parsons Brinkerhoff Quade & Douglas, Inc., April 1996

The purpose of this study was to document existing and future conditions within the corridor and identify potential strategies to address issues within the corridor. The Corridor Plan is intended to provide a framework for future planning and development of a system for all modes of transportation, such as auto, transit (buses), bicycle and pedestrian.

Highway 43 is a multimodal facility that serves both commute and local travel. The corridor includes portions of Portland, Dunthorpe, Lake Oswego, West Linn, Multnomah County and Clackamas County. Highway 43 provides different functions through each of the neighborhoods and

jurisdictions. Highway 43 provides a connection to I-5 at the northern end and to I-205 on the southern end of the corridor. The Sellwood Bridge provides a connection between Highway 43 and Southeast Portland.

The corridor is a vital link between downtown Portland and Lake Oswego and serves as the primary north/south route for through traffic, transit service, and freight movement (mainly for local deliveries). Along Highway 43 there is a mix of commercial and residential land uses.

The corridor plan identified specific issues, opportunities and constraints, and preliminary strategies and objectives by mode of transportation. Some of the issues discussed were the increase in traffic volumes, in conjunction with, the inadequate bicycle and pedestrian facilities and the lack of alternative travel options. This has created an unsafe and congested corridor.

The study was conducted in 1996 and during that time, the following segments of roadway were at-capacity during the PM peak hour: Ross Island Bridge to Gibbs Street northbound; Gibbs Street to Bancroft Street southbound, Palatine Hill to Terwilliger southbound; and I-205 to 99E southbound. The worst levels of service were found in the following segments: Ross Island Bridge to Gibbs Street northbound; Gibbs Street to Bancroft Street southbound, and Palatine Hill to Terwilliger southbound. The study concluded that congestion along the corridor would increase with an additional 25 to 35 percent increase in traffic volumes by the year 2015. The future congested 2015 PM peak hour segments include: Ross Island Bridge to Lane Street northbound and southbound; Lane Street to Bancroft Street southbound; Richardson Street to the Sellwood Bridge southbound; Palatine Hill Road to Hidden Springs southbound; and I-205 to Highway 99E northbound and southbound.

The study also conducted analysis of accident data within the corridor. The study found that there were 1,193 accidents reported over the 11.66 miles during a five-year period between January 1990 and December 1994. The overall accident rate was determined to be 2.27 accidents per million vehicle miles traveled, which is below the statewide average of 3.45 accidents per million vehicles miles traveled for urban areas and 0.81 accidents per million vehicles miles traveled for rural areas. The most common accident type was rear end accidents.

The plan identified strategies to mitigate the constraints along the corridor. Some of the strategies included Transportation System Management (TSM) strategies such as dedicated turn lanes and changes to signal timing, priority for safety improvements, development of access management plans, improvement of bicycle and pedestrian facilities, development of park and ride facilities where appropriate, and improvement of freight movement. The report mentions preserving the Willamette Shore Trolley rail right-of-way for future rail/transit use.

The following bullets summarize the key themes outlined in this report:

- Substantial expansion of highway capacity from Portland to Oregon City is not feasible. Instead capacity improvements should be addressed through transportation system management improvements, such as turning lanes and signal improvement; and safety improvements. The study further recommended promoting alternate modes to reduce the reliance of the single occupancy vehicle.

- The study identified the need to develop and apply access management plans and standards within the corridor.

- The study recommended transportation efficient land use patterns as identified in the Region's 2040 Growth Concept and local comprehensive plans.

- The study recommended realignment and intersection improvements to sections with above average accident rates and to sections with high congestion rates.

- The study suggested prioritization of projects and strategies that reduce automobile travel in urban areas through promotion of alternative transportation modes.

- The study proposed implementing the levels of bus transit service as identified in TriMet's Strategic Plan and Primary Transit Network Report.

- The study recommended that priority be given to increasing bicycle and pedestrian uses and provide safe and convenient pedestrian crossings.

This study ended with only the strategy being completed. The final corridor plan was not completed and the strategy was never adopted.

South Corridor Evaluation Report

Metro, October 16, 2000

In November 1998, the Metro Council initiated the South Corridor Transportation Alternatives Study to evaluate potential transit alternatives in the South Corridor. The study evaluated a wide range of non-light rail alternatives. The *South Corridor Evaluation Report* provided a summary of the evaluation of each of those alternatives.

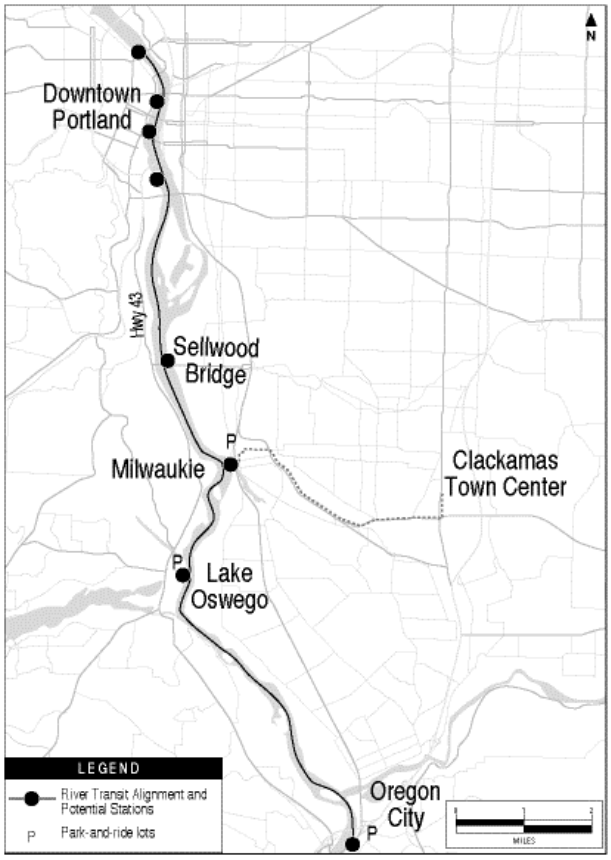
The Study's Policy Group, comprised of elected officials from all participating jurisdictions, was charged with narrowing down the wide range of alternatives to move forward to a Draft Environmental Impacts Statement or Draft Environmental Assessment. The Policy Group used the evaluation report, in conjunction with public comments to narrow the alternative to move forward for further analysis.

The South Corridor Transportation Alternatives Study looked at a variety of non-light rail alternatives including No-Build, High Occupancy Vehicle (HOV) Lanes, High Occupancy Toll (HOT) Lane, Bus Rapid Transit (BRT), Busway, River Transit, Radial Commuter Rail, and Circumferential Commuter Rail alternatives.

Of each of the alternatives studied, only the River Transit Alternative would serve the Portland to/from Lake Oswego corridor. The river transit alternative included 149 passenger kevlar-hulled catamaran vessels that operate at high speeds with a low wake. The River Transit Alternative was developed to provide high capacity transit service to/from downtown Portland to Oregon City with stops at River District, Burnside Street, Salmon Street, North Macadam, Salmon Street; Milwaukie, Lake Oswego, and Oregon City. Transit service would operate at 10-minute peak headways and would include 500 space-structured park and ride lots in Oregon City, Lake Oswego, and

Milwaukie. The Lake Oswego and Milwaukie transit centers would be relocated next to the river to allow for bus transfers.

A set of qualitative and quantitative evaluation criteria was developed to provide a comparative analysis that would illustrate the differences between alternatives. The evaluation criteria for each alternative focused on transportation, cost effectiveness, design, land use, environmental, social, neighborhood and community, and working group criteria.



Source: *South Corridor Evaluation Report*, Metro, October 2000

Transportation: River transit would have the fastest in-vehicle travel time in comparison to the other alternatives. However, out of vehicle travel times, including time spent transferring to a bus/light rail or walking to final destination was the highest of each the alternatives analyzed. During certain times of the year, operating conflicts from floating debris, recreational boaters and fishermen, and commercial barge traffic could have some impact on schedule reliability. Traffic impacts associated with the River Transit Alternative were identified for the park and ride facilities.

Design: River Transit would include new docks at Oregon City, Milwaukie, North Macadam and the River district and reconstruction of the docks at Sellwood and Lake Oswego. In addition, River Transit would include relocating the transit centers in Milwaukie and Lake Oswego.

Capital and Operating Costs: The River Transit Alternative would have the highest cost per additional rider due to the relatively high capital cost and high operating and maintenance costs.

Land Use: River Transit would have difficultly serving the Central City, regional and town centers directly and efficiently. River Transit stations/docks are located on the Willamette River, which is the edge of these centers.

Environmental: River Transit would have wetland impacts at the James River Site in Lake Oswego, the mouths of Johnson and Kellogg Creeks in Milwaukie, and impacts to the Willamette River (non-wetlands water) at each of the dock locations. The construction of new docks, transit centers and park and rides would cause changes to the riparian areas. The design of these facilities should consider potential impacts to existing habitats as well as new habitats that may be created. River transit would have a direct impact on water quality with the operation of diesel-powered vessels on the Willamette River, as well as through the construction and reconstruction of the docks at designated locations.

Social Neighborhood and Community Impacts: River Transit would create a new visual element in the aesthetics of the riverfront.

After publication of the South Corridor Evaluation Report, a series of public open houses were held to solicit public comment. After further consideration of the technical issues, public comments, and the technical advisory group's recommendations the projects Policy Committee narrowed the range of transportations to move forward to the DEIS to include the No-Build, Bus Rapid Transit, and Busway alternatives. The River Transit Alternative was not advanced.

Traffic Relief Options Study (Working Paper 9: Evaluation of Eight Pricing Options)

Metro, May 1999

Metro evaluated potential peak period pricing in the Portland Metropolitan Area. The study began with a comprehensive list of possible pricing types and locations. The list was eventually narrowed from 40 option to eight pricing options with the region. The eight pricing options included:

A. I-5 South: I-405 to 99W
B. I-5 South: I-405 to I-205
C. I-5 North: I-405 to Delta Park
D. I-84: Grand Ave to 238th Ave
E. Highway 26: Vista Tunnel to 185th
F. Highway 217: Highway 26 to I-5
G. SE McLoughlin: Ross Island Bridge to Highway 224
H. Highway 43: near the Sellwood Bridge

Option H Highway 43 near the Sellwood Bridge was described as all lanes priced at spots on SW Macadam Ave (Highway 43) north and south of the Sellwood Bridge. Under this option, pricing would occur on all lanes at a single point at two locations. All travelers in both directions would be priced if they passed through either location. This option did not include widening of the highway.

A detailed evaluation was conducted for each of the eight pricing options. The evaluation criteria included:

- Financing and Public Cost,
- Traveler Benefits,
- Social Benefits,
- Income Group Impacts,
- Consistency with Local Land Use and Transportation Plans,
- Environmental Impacts,
- Diverted Traffic, and
- Public Acceptance.

Based on the detailed evaluation conducted on the eight alternatives, Option H did not perform as well as others and was ultimately dropped from consideration. Option H was the least expensive because it did not include any capital projects associated with the pricing option. Travel time worsen due to diversion onto congested routes. Option H had negative travel benefits due to diversion from the Sellwood Bridge to other bridges and routes that are out of directions and already congested.

The detailed evaluation of the eight pricing options resulted in two to three options for final review and possible selection of a single pilot. The projects Task Force ultimately recommended a regional peak period pricing strategy be implemented. The Task Force recommended that that all major new

highway capacity projects be considered for pricing options. New highway capacity projects include new lanes, new highways and major reconstruction projects that add additional capacity. This recommendation was ultimately incorporated into the 1999 Regional Transportation Plan (RTP).

River Crossing

The following studies focused on transit and pedestrian and bicycle alternatives crossing the Willamette River between the Marquam and I-205 bridges.

Sellwood Bridge Conceptual Engineering Analysis for Light Rail Service

Prepared for Multnomah County, Prepared by CH2M Hill, Kittelson and Associates, Inc., Real Property Consultants, and ICF Kaiser Engineers, November 1990

In response to the growth in population and employment in the region, this study examined the feasibility of using the Sellwood Bridge for light rail between downtown Portland, Milwaukie and Clackamas Town Center. This study was followed by the South/North Transit Corridor Study.

The study investigated several factors that could impact the cost and feasibility of replacing the Sellwood Bridge. These factors included topography, land movement, existing developments, existing parkland, environmental impacts, connection to Tacoma Street, connection to the vintage trolley line, connections to the Willamette Greenway, bridge design, traffic diversion during construction and cost.

The purpose of this study was to determine the cost of replacing the existing Sellwood Bridge, with a new bridge that would accommodate light rail. Three cost estimates were developed for this study:

1. A four-lane bridge with sidewalks and bicycle lane (without LRT);
2. An independent LRT bridge with two tracks; and
3. A four-lane bridge with sidewalks, bicycle lanes, and two LRT tracks.

Sub options were developed for reducing the number of travel lanes from four lanes to two lanes and moving the pedestrian and bicycle facilities to the LRT only bridge. This study did not provide recommendations, rather, identified which options were feasible and developed preliminary cost estimates for each option.

The study also included preliminary environmental reconnaissance that focused on wetland and vegetation, fisheries and water quality, cultural resources, land use, noise, and potential right-of-way impacts.

This study assumed that the trolley line from Portland to Lake Oswego would continue to operate on the Willamette Shore Line right-of-way. The study also referred to future plans for the vintage service to connect Lake Oswego and Oaks Park over the Sellwood Bridge. The study proposed ramps to the proposed structure to accommodate the trolley connection to Oaks Park.

The study concluded that there were no “fatal flaws” associated with the proposed options. The following table summarizes the cost estimates prepared for this study.

Summary of Cost Estimates for Sellwood Bridge Replacement

Options	Cost Estimate (1990$)
One Bridge	
All modes on one bridge: 4-lanes of general traffic, 2-LRT tracks, and pedestrian and bicycle facilities	$52.4 million
All modes: 2-lanes of general traffic, 2-LRT tracks, and pedestrian and bicycle facilities	$42.9 million
No LRT: 4-lanes of general traffic and pedestrian and bicycle facilities	$41.5 million
LRT only bridge	$15.6 million
Two Bridges	
4-lane general traffic bridge (with pedestrian and bicycle facilities) and a 2-track LRT bridge	$57 million
2-lane general traffic bridge (with pedestrian and bicycle facilities) and a 2-track LRT bridge	$50 million

Source: *Sellwood Bridge Conceptual Engineering Analysis for Light Rail Service*, CH2M Hill, Kittelson and Associates, Inc., Real Property Consultants, and ICF Kaiser Engineers, November 1990

South Willamette River Crossing Study Findings and Recommendations Report

Prepared by Metro Transportation Department, May 1999

The *South Willamette River Crossing Study* examined travel constraints and capacity demands across the Willamette River and identified multi-modal crossing improvements between the Marquam Bridge in Portland and the I-205 Bridge in Oregon City. Options that addressed multimodal crossing concerns and avoided environmentally sensitive lands were moved forward.

The Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council screened the remaining options to select a set of options for evaluation in the study. The screening process analyzed travel sheds, connections to regional roadways, and avoidance of parkland or environmentally sensitive areas. The options approved by JPACT and the Metro Council for further study included modifications to the Ross Island Bridge, replacement and rehabilitation of the existing Sellwood Bridge, and new crossings in Clackamas County. Options included reducing vehicular crossing demand; adding vehicular, bicycle and pedestrian capacity to existing facilities; and adding new crossings over the Willamette River.

During this study Metro worked with the public and elected officials from jurisdictions most impacted by existing crossing conditions. Through a series of public meetings and workshops, more than 20 possible options were proposed for consideration in the study. The following recommendations were adopted by JPACT and Metro Council (Resolution No. 89-1108) on August 5, 1999. The recommendations include:

- Preserve the existing Sellwood Bridge in its current condition or replace it as a two-lane bridge. The bridge should be improved to better meet the needs of pedestrians and bicycles. Assessment of costs for replacement versus rehabilitation should be considered in the environmental impact statement phase.
- Instead of adding capacity in the Sellwood or Milwaukie/Lake Oswego area, actions to reduce traffic needs should focus on:
  - Mitigate traffic growth on Tacoma Street, Highway 99E, Highway 43, and A Avenue;

  - Increase transit services and improving transit, bicycle, and pedestrian facilities on either side of the Willamette River, as well as, across the Willamette River;
  - Increase motor vehicle capacity on regional roadways such as McLoughlin Boulevard, Highway 224, and I-205.
- Focus on bringing more employment to East Clackamas County to reduce the need to travel across the river for employment opportunities.
- Consider improvement to the Ross Island Bridge and the I-205 corridor/Oregon City Bridge.
- Direct staff to incorporate the recommendations into the next update of the Regional Transportation Plan, and support revisions of the functional street classifications of Tacoma Street from a major arterial to a minor arterial and the street design classification from a regional street design to a community boulevard design to better support the 2040 Growth Concept's Main Street designation for the street.

Geographic Areas – South Waterfront/North Macadam

With the future expansion of OHSU and the rapid growth in employment and residential units in the South Waterfront District, the City of Portland has recommended transportation improvements to the South Waterfront area including modifications to the existing street network and the Portland Aerial Tram.

Each of these plans or studies support the need for high capacity transit to meet the expected travel demand and to support the level of proposed development in this study area.

The following section summarizes studies completed evaluation these transportation improvements.

A Framework Development Plan for the North Area Properties of the North Macadam District

Prepared by the North Macadam Steering Committee, July 9, 1997

In 1996, a steering committee that included citizens, city representatives, and property owners was formed to guide a plan for future development in the North Macadam District. The steering committee was charged with developing the Framework Development Plan for the Schnitzer and Zidell properties specifically, while taking a holistic view of the entire North Macadam District.

The Steering Committee developed four objectives: attract and accommodate desirable opportunities for employment, build exceptional neighborhoods, expand and connect the regional open space network and provide good access – internal and external.

The Plan provided a foundation and blueprint for growth and activity in the neighborhoods of North Macadam by resolving issues related to open space, street improvements, transit and potential development. The plan also provided policies and perspective on the Development Plan. The Steering Committee identified five goals for the North Macadam District and within each goal identified specific objectives to support estimated growth in employment and housing (7,500 new jobs and 2,000 new dwelling units) and provide adequate access in and out of the area.

The plan recognized the extension of the Portland Central City Streetcar and the proposed South/North light rail as access opportunities to support a mixed-use neighborhood of urban

character. The Plan identified the need for open spaces as well as the need for urban form through mixed-use developments and the connection to the riverfront.

North Macadam Parking and Transit Strategy

Prepared by City of Portland Office of Transportation, June 30, 2000

The North Macadam Framework Plan called for the development of 2,000 new housing units and 7,500 new jobs in the North Macadam District. The North Macadam Parking and Transit Strategy provided a strategy to manage parking and transit improvements to manage and maximize the use of transit, walking, bicycling, and ridesharing to support the high density development and livability goals.

The transit strategy developed builds on the regional travel demand and reinforces Metro's Regional Transportation Plan. The plan included the following recommendations:

- Implement Macadam Avenue Regional Rapid Bus service (currently the #35 bus route) linking the north Macadam and Lake Oswego and West Linn and the 5th and 6th Transit Mall in downtown Portland as soon as the SW Bond is improved;
- Reroute the #40-Tacoma to link north Macadam with Milwaukie and Clackamas County;
- Pursue South/North Light Rail to Clackamas County as part of the 20 year strategy;
- Implement the Central City Streetcar to link North Macadam with Portland State University, the West End area, River District, and Northwest Portland;
- Add future bus connection between Southeast Portland/North Macadam to the Lloyd District;
- Preserve future high capacity rail options for the Jefferson Street Line;
- Add Southwest bus connections be provided to North Macadam; and
- Implement the Transit Hub in the North Macadam area and transit preferential improvements at key intersections.

To maximize the potential for implementation of these strategies the plan recommended that TriMet, and the North Macadam business and property owners to develop a Transportation Management Association (TMA) and develop a partnership plan for supporting the use of alternative transportation modes including an adopted service plan, transit pass programs and parking management plan.

Recommended North Macadam Plan

Prepared by City of Portland, Oregon, Bureau of Planning, September 10, 2002

The North Macadam Plan built upon the vision outlined in the North Macadam District Framework Plan. The recommended plan sought to complete the Waterfront Development by infusing the district with a mix of offices, hotels, residential units, parks and retail uses. The plan updated the vision, policies, objectives and action charts of the Central City Plan as they relate to North Macadam. The Portland City Council adopted the recommendations and actions from the North Macadam plan on November 13, 2002.

Key elements of the plan included land use and urban form, greenway and parks, transportation, environmental design, and district development. The recommended plan was developed to encourage a mix of land uses within the district, encourage a highly urban character for the developments, and reinforce the districts' relation to the riverfront. The greenway and parks element focused on developing a multifunctional riverfront greenway that would provide a variety of

experiences for people living and working in the neighborhoods through plazas, parks, and recreation opportunities. The environmental design element recommended providing incentives for innovative stormwater management. The district development element recommended public funding to stimulate private investment, aggressively seeking funding from federal, state, local and other mechanisms to assist with public infrastructure and amenities, invest in infrastructure and urban amenities consistent with the overall plan goals as private development occurs; and use a public-private partnership to finance some improvements and long term maintenance of public facilities.

The transportation element recommends the following alternative modes of transportation: 1) improved bus service, 2) streetcar connections to Portland State University and potential future connections to Lake Oswego, and 3) pedestrian and bicycle connections to the adjacent neighborhoods, downtown, other transit routes and the along the greenway trail. The plan also recommended providing a strong connection to the Willamette River and the greenway through street design, sidewalks and landscaping that visually and physically connect the development to the riverfront. The transportation element was intended to provide flexibility to serve the existing and the future development.

North Macadam District Street Design Standards and Criteria Plan Transportation Report

Prepared for the City of Portland, Prepared by David Evans and Associates, Inc., Lloyd Lindley, ASLA, and City of Portland Department of Transportation, November 1998

This report is comprised of three technical memorandums that identify travel conditions in the North Macadam District and proposed mitigation strategies. Technical Memorandum #1 analyzed travel condition for the years 2003 and 2015. Technical Memorandum #2 identified short-term mitigation strategies for deficiencies outlined in Memorandum #1. Technical Memorandum #3 provided further analysis of the operations, advantages and disadvantages of the potential mitigation strategies. This report provided street design standards to accommodate the expected growth in the North Macadam District.

To reach the development expectations of 10,000 jobs and over 1,500 residential units[1] in the North Macadam District (residential unit and job projections changed over time), the technical transportation analysis in this study identified street and intersections improvements that would be necessary at Bancroft and Curry on Macadam Avenue in conjunction with some version of the planned Harrison Connector.

Technical Memorandum #1: This memorandum found:

- There is significant amount of traffic that will travel to the Study Area on Macadam Ave and the Ross Island Bridge.
- Almost 60% of all trips to and from the study area come from within the City of Portland.
- The intersection of Bancroft Street, Macadam Avenue and Hood Avenue would experience significant delay during both the future AM and PM peak hours. During the PM peak hour, the southbound movement from Bancroft Street to Macadam Avenue would be the most problematic.
- Weaving (vehicles changing lanes) on Macadam Avenue was identified as a safety concern.

[1] Throughout the Background Report the job and residential unit projections changes depending on the study. As the South Waterfront development plans grew, the number of jobs and residential units ranged between 7,500 to 10,000 and 1,500 and 5,000, respectively.

- The intersections of Natio Parkway with Clay and Market Streets would experience significant delays.

Technical Memorandum #2 provided potential short-term mitigation strategy for two problems: congestion at the intersection of Bancroft Street, Macadam Avenue, and Hood Avenue and unsafe conditions on Macadam Avenue due to weaving movements north of the I-5 off-ramp. The mitigation strategies included improvements to the intersection of Bancroft Street, Macadam Avenue, and Hood Avenue and the intersection of Macadam Avenue and Curry Street.

At the intersection of Bancroft Street, Macadam Avenue and Hood Avenue, the plan recommended reducing the free right-turn movement along southbound Hood Avenue from two lanes to one lane. In addition, a raised median would be installed along Hood Avenue to channelize drivers either to the eastbound approach at Macadam Avenue/Bancroft Street or along Hood Avenue to make the free right turn southbound Macadam Avenue.

At the intersection of Macadam Avenue and Curry Street, the plan recommended channelizing traffic traveling on the I-5 off-ramp and installing a three phased signal to control and separate traffic movements at this intersection. Under this scenario, the northbound trips on Macadam Avenue, trips from the I-5 off-ramp would each have their own signal phase to separate from other movements at the intersection. Widening for an additional lane would be constructed between the I-5 off-ramp to a point north of Curry Street. A raised median would be constructed to channelize ramp traffic to the signal at Macadam Avenue and Curry Street.

Technical memorandum #3 provided additional technical analysis of existing and future traffic operations for the two projects identified in Technical Memorandum #2. The technical analysis focused on signal warrant analysis at the Macadam Avenue and Curry Street intersection; advantages and disadvantages of two or three phased signal operations at the Macadam Avenue and Curry Street intersection; weaving issues on Macadam; weaving on Hood Avenue under the new configuration; and evaluation of the Macadam Avenue and Bancroft Street intersection.

South Waterfront District Transportation Improvements Evaluation

Prepared for the City of Portland Office of Transportation, prepared by Kittelson & Associates, Inc., May 2004

A technical advisory committee (TAC) was created in March 2003 to identify improvements to Macadam Avenue between Bancroft Street intersection and the I-5 on-ramp needed to help facilitate build-out of the South Waterfront District. The TAC was comprised of key technical representatives from the Oregon Department of Transportation (ODOT), the Portland Office of Transportation (PDOT), the Portland Development Commission (PDC), and Kittelson & Associates, Inc.

Through this process, the TAC analyzed ten improvement alternatives and identified a preferred alternative to move forward to preliminary engineering. The Preferred Alternative included the shifting of Macadam Avenue to the west of its existing alignment with “braiding” of the I-5 northbound off-ramp. The I-5 northbound off-ramp would touch down on the east side of Macadam Avenue. Both of the facilities would be separated by structural ramps and median barriers up to Curry Street, where they would merge at a traffic signal. Access into the South Waterfront District from I-5 northbound would be provided via Curry Street. All access into the South Waterfront District from Macadam Avenue and Hood Street and access out of the district to I-5 northbound

would be provided via the Bancroft Street intersection. This alternative included improvements to the Macadam Avenue and Bancroft Street intersection.

The preliminary cost estimate for this alternative was approximately $23 million, which did not include the cost of the improvements to the Macadam Avenue and Bancroft Street intersection. Given funding constraints, a phasing plan was developed to ensure that safe and efficient access is provided for the district and safe and efficient operations along Macadam Avenue and I-5 ramps during construction and opening of the initial Central District buildings.

As part of the South Waterfront Central District Project Development Agreement, funding has been committed for improvements on Bond and Moody between Bancroft Street and Curry Street. Improvements to these two streets were recommended to accommodate the traffic on these facilities during construction on I-5 and Macadam Avenue. These improvements included reconstruction and continuous travel ways between Gibbs and Bancroft street in the short-term. The long term recommendation was to establish a couplet between Moody and Bond Avenues.

The interim safety and capacity improvements included the construction of a temporary median running between the existing I-5 off-ramp and Macadam Avenue to the Curry Street intersection; a new traffic signal at the Curry Street and Gaines Street intersections; the conversion of Curry Street to one-way westbound between Macadam Avenue and Moody; and widening on the west side of Macadam to accommodate two lanes on the I-5 off-ramp and two lanes on Macadam Avenue up to Curry Street intersection. These improvements are scheduled for completion by the end of 2005.

Other interim improvements needed at the Bancroft and Macadam intersection included the expansion of northbound Macadam Avenue to three lanes by removing the existing land landscaped median. The third northbound travel lane would carry through to the Bancroft Street intersection before tapering back to two northbound travel lanes. The interim improvements also included striping modifications and over-head signage to guide travelers into the appropriate lanes prior to Bancroft Street and Macadam Avenue intersection.

Portland Aerial Tram Final Recommendations and Report

Prepared by Portland Aerial Tram Citizens Advisory Committee, Portland Aerial Transportation Inc, and Portland Office of Transportation, June 10, 2004

The Portland Aerial Tram project is an aerial tram connecting OHSU with the South Waterfront District. The proposed Tram design encompasses four primary elements: the upper terminus, the lower terminus, the intermediate tower, and the tram cabins. The upper terminus/station would be located at OHSU connecting directly to the patient care facility. An intermediate tower would be located within the Macadam right-of-way and would begin the descent towards the South Waterfront. The lower terminus/station would be located at grade in the center of Gibbs Street in South Waterfront, acting as a focal point for new development in the district an provide for seamless connectivity with public transit and adjacent development. Opening day is scheduled for 2006.

The South Waterfront District is expected to generate approximately 10,000 new jobs and 3,000 to 5,000 new residential units[2] over the next 20 years. The Portland Aerial Tram has played a key role in the revitalization of the South Waterfront District as well as the continued growth and success of the Oregon Health and Sciences University (OHSU).

As part of this project, more than $14 million in neighborhood improvements have been funded or are proposed for funding, west of Interstate 5 in South Portland. Some of improvements include a pedestrian bridge on Gibbs Street linking the neighborhood across I-5 to the south terminus of the aerial tram. The project has also recommended approximately $750,000 for improvements to Gibbs Street. The Tram is designed to terminate within steps of the Streetcar terminus at Gibbs Street. The Streetcar construction to Gibbs Street began in January 2005 and scheduled to be completed in late 2005. Service will likely begin in 2006. The Streetcar utilizes the existing Willamette Shore Line railway along Moody Avenue.

The Aerial Tram Concept Plan identified local improvements include street connections and improvements, traffic calming, intersection improvements, pedestrian improvements, trail connections, open spaces, gateway treatments, view enhancements/protections, and access improvements.

The Aerial Tram Concept Plan also identified regional recommendations that identify areas of interest or areas of concern by the Citizen Advisory Committee (CAC). These recommendations are intended to inform ongoing efforts or to spark new efforts and are not part of the Portland Aerial Tram project.

Specific projects identified include:

- 6th Avenue/I-405 Ramp Improvements
- I-405 Frontage Access Improvements - Broadway to Naito
- South Corridor Light Rail
- Ross Island Bridge Transit Connections
- South Portland Circulation Study Regional Connections
- Willamette Shore Commuter Streetcar – Portland to Lake Oswego
- Macadam Avenue ITS (Intelligent Transportation Systems)
- Barbur Boulevard Transit Connections

The CAC worked with the City and TriMet to identify future transit improvements to the South Waterfront District. The CAC concluded that the Willamette Shore Streetcar connections would provide an important transit link to the South Waterfront, to PSU and to the City of Lake Oswego.

[2] Throughout the Background Report the job and residential unit projections changes depending on the study. As the South Waterfront development plans grew, the number of jobs and residential units ranged between 7,500 to 10,000 and 1,500 and 5,000, respectively.

Geographic Areas –John's Landing

The following study evaluated potential light rail alignments in the John's Landing neighborhood.

South/North Transit Corridor Study Draft Findings Report, John's Landing Design Options

Prepared by TriMet [Parsons Brinkerhoff, Quade & Douglas, and Fletcher Farr Ayotte], July 1994, For Metro's South/North Transit Corridor Project

A Master Plan for the John's Landing was originally developed in the 1970s. During this time, use of the Southern Pacific (SP) rail alignment through the John's Landing neighborhood was proposed as a modern LRT alignment. The Master Plan designated a transit alignment that used a portion of the SP rail alignment and included a detour from the existing alignment to allow better development use of the river frontage.

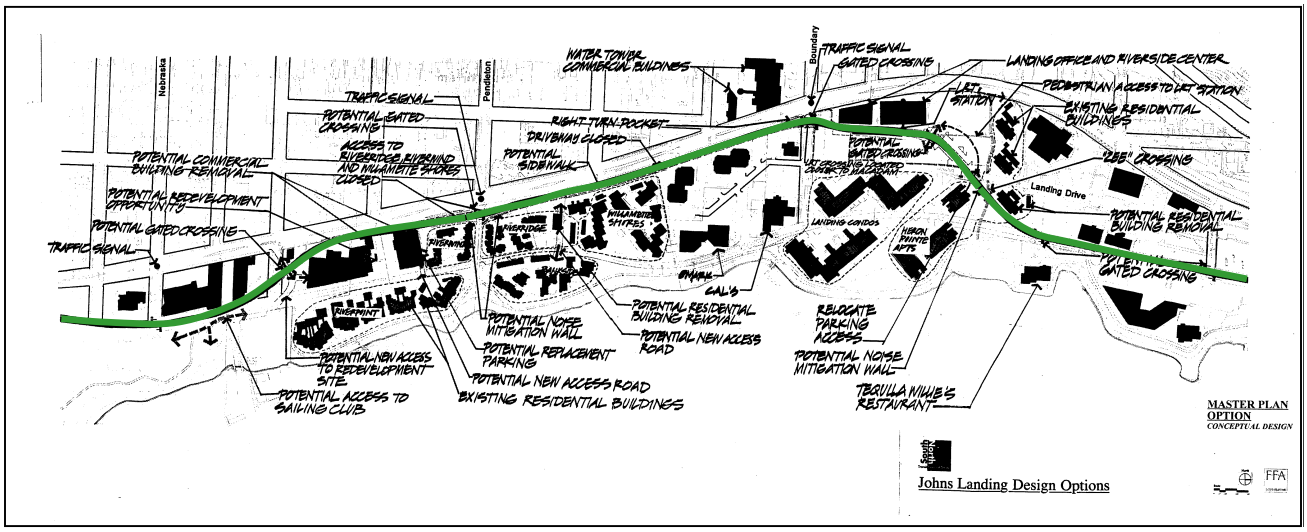
Throughout Metro's South/North Project, there were two light rail options proposed for transit service between Portland and Milwaukie. One of the light rail alignments was located on the west side of the river and one on the east side. Both alternatives had significant impacts. On the west side of the Willamette River, one of the most significant impacts was the location of the alignment through the John's Landing neighborhood.

This report described and compared conceptual design options for light rail alignments through the John's Landing segment as part of Metro's South/North Transit Corridor Project Major Investment Study (MIS). A number of options were evaluated for a potential light rail alignment to connect downtown Portland to Milwaukie over the Sellwood Bridge. The three most promising options were developed in more detail and evaluated in this report: the Master Plan Option, the Modified Master Plan Option, and the Southern Pacific Tunnel Option.

The **Master Plan Option** conformed as closely as possible to the 1970's John's Landing Master Plan design while resolving the potential major flaws and minimizing impacts. This option included strategies to improve upon the overall design provided in the Master Plan, such as:

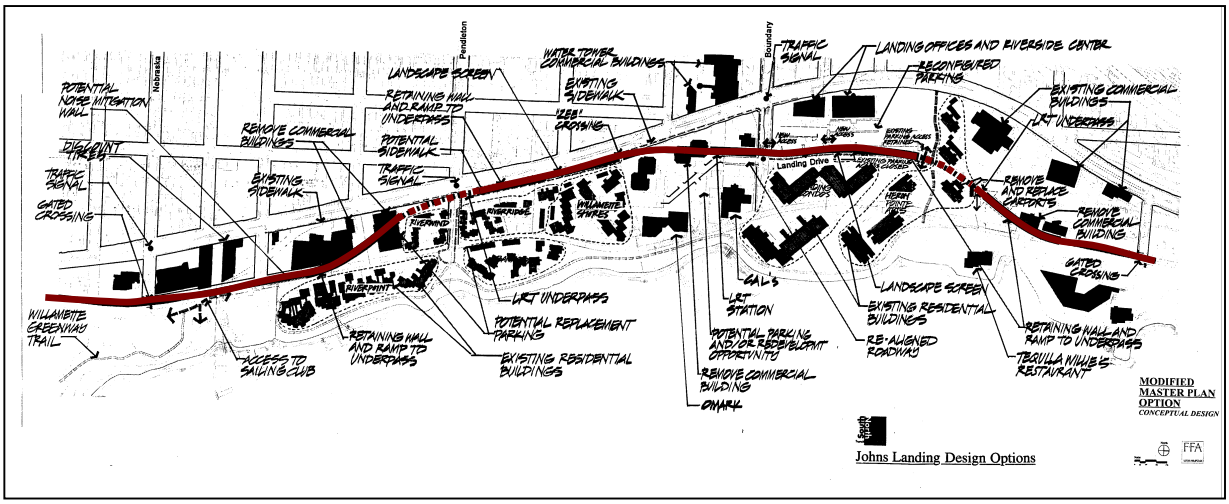
- gated crossing to provide safe vehicular and pedestrian access across the LRT tracks;
- potential mitigation for due to noise and vibration issues;
- pedestrian access to stations, as well as the business and residential areas;
- roadway improvements to Macadam due to LRT crossing on side streets; and
- alternative access locations to commercial and residential properties.

This option most resembled the design from the 1970 Master Plan and had the least cost. It also provided a base case against which to measure other options.



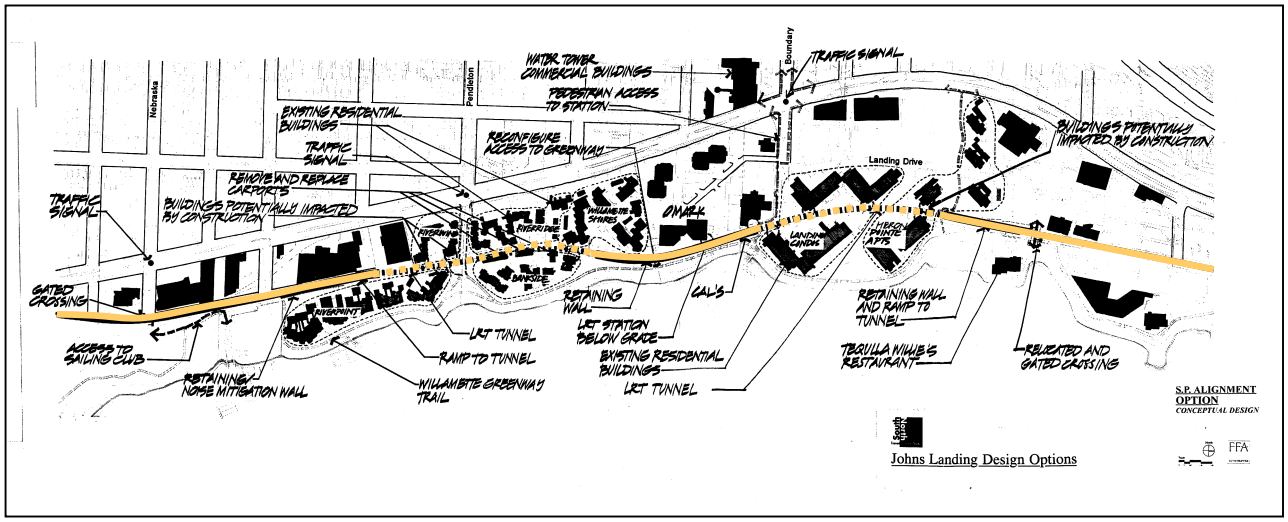
The Master Plan Option
Source: *South/North Transit Corridor Study Draft Findings Report, John's Landing Design Options,* July 1994, For Metro's South/North Transit Corridor Project

The **Modified Master Plan Option** was developed as an attempt to mitigate the most serious of impacts identified in the Master plan alignment. This option proposed four major changes from the Master Plan. The first change included an underpass in the vicinity of Landing Drive/Heron Pointe. The second relocated the station and Boundary Street crossing. The third proposed and extended the underpass to the Pendleton Street intersection. The fourth proposed a return to the rail alignment as far north as possible in order to maximize the redevelopment potential of the existing commercial site south of Riverwind.



The Modified Master Plan Option
Source: *South/North Transit Corridor Study Draft Findings Report, John's Landing Design Options,* July 1994, For Metro's South/North Transit Corridor Project

Southern Pacific (SP) Tunnel Option was proposed during the 1993 workshops and has been developed to provide a context against which to compare the Master Plan and Modified Master Plan options. This option constructed a cut and cover style tunnel along the existing rail alignment between Heron Pointe and Cal's Restaurant. South of Cal's the LRT alignment would be shallower than the existing terrain and constructed in an open cut segment with retaining walls on each side between Cal's and the south end of the existing trestle. From there, the alignment would be constructed in a cut and cover style tunnel to a point south of Riverwind and an approach ramp would be constructed in the existing right-of-way returning the alignment to existing grade towards the south end of the Riverpoint complex.



The Southern Pacific (SP) Option
Source: *South/North Transit Corridor Study Draft Findings Report, John's Landing Design Options,* July 1994, For Metro's South/North Transit Corridor Project

The report provided preliminary analysis of each of the design options. Options were evaluated based on capital costs, urban design and station location, traffic, parking, access, noise, vibration, visual impacts, travel time, and right way displacements. The following table summarizes the measures that were quantifiable.

Summary of Comparable Measures

	Master Plan Option	Modified Master Plan Option	SP Tunnel Option
Capital Costs (Millions $)	$41	$49	$70
Urban Design	Fair	Fair	Poor
Traffic/Access Impacts	Major	Minor	None
Number of Grade Crossings	7	2	1
Parking Spaces Removed			
Residential	67	52	0
Commercial	120	51	0
Travel Time	2 min., 47 sec.	2 min., 23 sec.	2 min., 8 sec.
Displacements			
Residential	16	0	0
Commercial	5	20	0

Source: *South/North Transit Corridor Study Draft Findings Report, John's Landing Design Options*, prepared by TriMet, Parsons Brinkerhoff, Quade & Douglas, and Fletcher Farr Ayotte, July 1994

Geographic Areas – Lake Oswego

The following studies summarize the planned development/redevelopment and transit options for downtown Lake Oswego.

Highway 43 Transit Center Alternatives Evaluation and Refinement Final Evaluation Report

Prepared for Lake Oswego and prepared by OTAK in association with DKS Associates, June 6, 2003

The purpose of this study was to evaluate the potential expansion and relocation of the existing Lake Oswego transit from the existing location at 4th and 5th Streets to a location east of Highway 43. The study analyzed and evaluated alternatives from the Foothills Design District Plan as well as additional alternatives that integrate the transit center and the town center. Through further analysis and evaluation, Alternatives C and E from the draft Foothills Design District Plan were carried forward in this study.

Alternatives were analyzed based on bus operations, circulation and parking for transit users, and traffic operations on Highway 43. Each of the alternatives assumed that Streetcar would be extended to Lake Oswego. The study resulted in three alternatives described below.

The **No-Build Alternative** assumed that streetcar would extend to Lake Oswego, but an additional transit center would not be developed. The existing TriMet bus transit center on 4th Street between A and B Avenues would remain without a park and ride to serve the future streetcar extension. A new bus stop on Highway 43 would be developed to provide passenger transfer to the streetcar.

Alternative #1, located between B and C Avenues on the west side of Highway 43, came about as a refinement of Alternative E from the Foothills Design District Plan. This alternative included a structured parking, a street level bus transit center, and a Highway 43 pedestrian overcrossing to connect the park and ride and bus riders to the streetcar or commuter rail on the east side of Highway 43.

Alternative #2, located on the east side of Highway 43, was a refinement of Alternative C from the Foothills Design District Plan. This alternative included a two and a half-story combined structured parking and bus facilities. The bus transit center would be located on the top level. Bus, streetcar, and commuter rail platforms would be located on the same level. Parking access would be provided at the lower level, which is accessible via a relocated Foothills Road realignment. This alternative would require the relocation of a PGE substation.

Alternative #3, also located on the east side of Highway 43, was a new alternative developed through this planning process. Bus platforms would be located outside of the parking structure on a one-way bus lane. A park and ride would be provided in an adjacent structure. This would allow for other uses above or below the parking levels. Similar to Alternative #2, this alternative would require the relocation of a PGE substation and portion of the Foothills Road.

This project evaluated potential transit center location alternatives against the design criteria. The TAC and CAC agreed that no preferred alternatives had emerged. The study recommended further design study should be conducted to identify a transit center design and location. A primary concern with the alternatives was the large scale of the transit center and parking facilities at a single site and a perceived lack of "urban village" qualities. The project also recommended re-evaluating the design concepts and the traffic impacts associated with the FDDP.

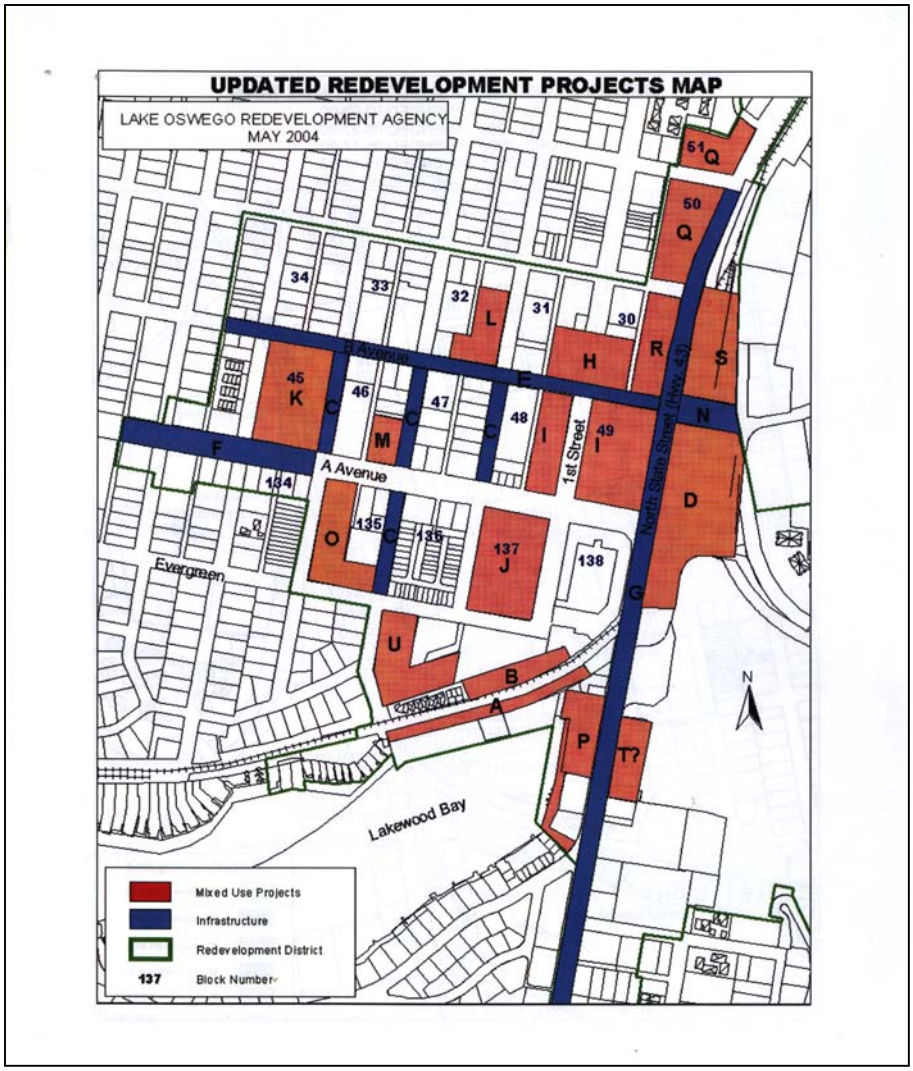
Lake Oswego Redevelopment Agency East End Redevelopment Plan Update

Prepared by Lake Oswego, Adopted May 18, 2004

In 1979, the Lake Oswego City Council formed the Lake Oswego Redevelopment Agency (LORA) and created an urban renewal district. In 1986, LORA approved its urban renewal plan called the Redevelopment Plan and Report. The 1986 plan listed projects to be completed. Since the adoption of the original plan in 1986, LORA has implemented nearly all of the project authorized by the original plan. This plan (the 2004 *Lake Oswego East End Redevelopment Plan Update*) was adopted by City Council on May 18, 2004 and superceded the original 1986 redevelopment plan.

The Lake Oswego-Portland Trolley Extension was completed as part of the 1986 plan. The trolley extension project included the purchasing of required properties and extending the trolley line to downtown Lake Oswego. A trolley barn used for storage and maintenance was constructed on a property purchased between the east side of State Street and the railroad tracks.

The 2004 Redevelopment Plan Update provided an updated project list. Key projects that may influence the development of the Portland to Lake Oswego Alternatives Analysis include:



Source: *Lake Oswego Redevelopment Agency East End Redevelopment Plan Update,* Adopted May 18, 2004

- **Project D: Transit Center/Streetcar Service** would consist of the development of a multimodal transit center adjacent to the existing trolley line and support future streetcar service, bus transfers and include a park and ride facility. The transit center should include or support mixed-use development, provide parking opportunities for other downtown activities and minimize pedestrian and vehicle conflicts.
- **Project G: Sate Street Pedestrian/Bikeway Improvements** project would create a "Park Avenue" pedestrian and bike-friendly street. This project should also consider increased setbacks, restriping, or right-of-way acquisition, to allow separate bicycle lanes and enhanced separation of pedestrians from the noise an activity of street traffic.
- **Project I: First Street Retail Revitalization** project would encourage continuous retail uses of the ground floor on the east and west sides of First Street in the between A and B Avenues and extending to State Street at B Avenue.
- **Project N: Willamette Steps** project would enhance the pedestrian crossing of State Street at B Avenue by providing a wide stairway entry, as well as bicycle and ADA accessible elements, linking the Foothills District and the Willamette River waterfront with the downtown. This

project would also include mixed-use building and possibly a multimodal transit center. This project would require an easement across the railroad right-of-way to allow pedestrian passage.

- **Project Q: North Entry Mixed Use Development** project would involve redevelopment of the parcels on the west side of State Street between C and E Avenues encouraging limited retail uses on the ground floor with office or housing uses the primary feature.
- **Project R: State Street Mixed Use Development** project would encourage redevelopment of parcels on the west side of State Street between B and C Avenues. The development should include parking reservoir for the compact retail core and a possible transit center. The parking structure may be public or a shared public/private project.
- **Project S: East of State Street Mixed-Use Development** project would be a mixed-use development located in the area between A and B Avenues and possibly including the area between A Avenue and the Foothills Road intersection. This project should be coordinated with Project N – Willamette Steps. The possibility of incorporating a transit center us into this project should be encouraged.

Summary

ODOT's OR Highway 43 corridor study concluded that the highway is highly congested and is expecting increased volumes over the next ten years, however, extensive capacity improvements were not feasible due to physical constraints along the corridor. Instead the study recommended that TSM, TDM, access management, bicycle and pedestrian, and transit improvements are more suitable for the corridor.

During the South Corridor project, river transit was identified as a potential high capacity transit alternative between Oregon City and Portland. This alternatives was not recommended to move forward into the DEIS due to cost, environmental factors and it's difficultly in serving the Central City, and regional and town centers.

Multnomah County examined the feasibility of light rail transit serve from Portland to Milwaukie over the Sellwood Bridge. This study evaluated a range of bridge options and concluded that there were no fatal flaws associated with the options studied.

The purpose of Metro's South Willamette River Crossing Study was to identify if a new river crossing across the Willamette River was needed and where would the best location be. The study concluded that no new river crossings were recommended at this time. Instead, the recommendations adopted by Metro Council included replacement/rehabilitation of the Sellwood Bridge, further study of capacity improvements to the Ross Island and the I-205 bridges, and reduce traffic needs by mitigating traffic growth on local/minor arterials, increase capacity on regional roadways and increase transit service. Subsequently, the Milwaukie to Portland Light Rail study includes recommendations for a new Caruthers Bridge across the Willamette River to connect Southeast Portland the South Waterfront District.

The previous work in the North Macadam/South Waterfront area focused on addressing the needs associated with the proposed South Waterfront development. As the development plans for this area grew, the number of jobs and residential units ranged between 7,500 to 10,000 and 1,500 and 5,000, respectively. The recommendations from these plans included street and intersection improvements that would meet the future traffic needs of the development. Also other studies concluded that a high

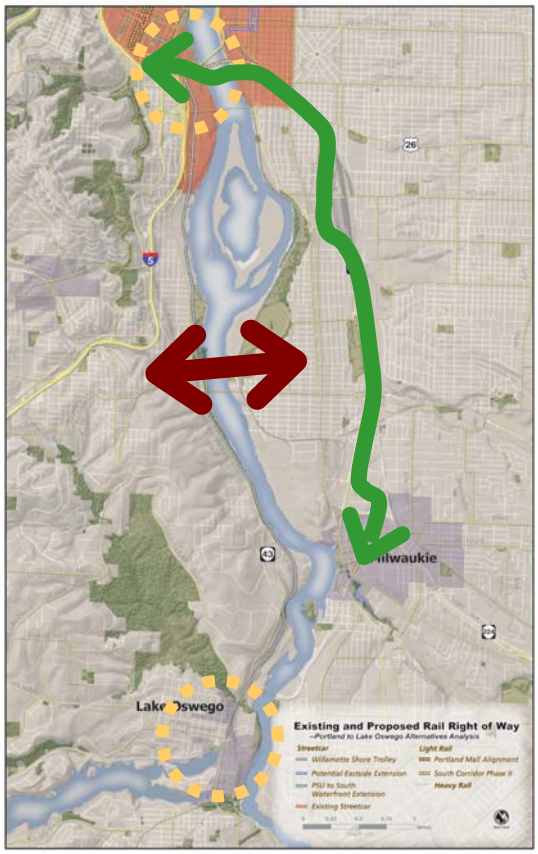
capacity transit connection such as streetcar or light rail on the Willamette Shore Line railway, as well as, the Willamette Greenway extension, would support the proposed development of the area.

As part of the South/North Transit Corridor Study, a light rail alignment was proposed in this corridor. The light rail would connect Portland and Milwaukie with an extension through the North Macadam and John's Landing neighborhoods and over the Sellwood Bridge to Milwaukie. In the John's Landing area, previous studies have identified a light rail alignment in the corridor that partially uses the Willamette Shore Line right-of-way and partially located adjacent to Macadam Avenue.

Since the creation of the Urban Renewal District in Lake Oswego, there has been substantial development and redevelopment to create an urban village mixed-use environment throughout the downtown. In addition, Lake Oswego has studied relocating their existing on-street transit center to the east side of State Street. The relocated transit center would serve potential transit use on the Willamette Shore Line right-of-way.

III. Ongoing or Recently Completed Transportation and Land Use Studies

This section summarizes concurrent or planned transportation and land use studies within the Portland to Lake Oswego Transit Center and Trail Alternatives Study Area. The projects identified in this section are, directly or indirectly, related to the proposed Portland to Lake Oswego Transit and Trail Alternatives Analysis. It is important to understand and coordinate with current and ongoing transportation land use projects to maximize public investment and provide the best possible alternative.



The following section is divided into three categories: corridor plans, river crossing, and geographic regions for South Waterfront and Lake Oswego.

Corridor Studies

Starting at the beginning of 2006, Metro will begin the Milwaukie Light Rail Transit Study for the Supplemental Draft Environmental Impact Statement (SDEIS).

Milwaukie Light Rail Transit (South Corridor Phase 2)

Metro, 2006

Starting in 2006, Metro will initiate the Milwaukie Light Rail Transit SDEIS (South Corridor Phase II) to look at potential light rail between Portland and Milwaukie. This would include a new bridge across the river and a south waterfront interface with Streetcar. Metro will be completing a Supplemental Draft Environmental Impact Statement for the light rail transit service between Portland and Milwaukie. This effort will support the previous worked conducted during the South Corridor Environmental Impact Statement completed in early 2005.

Willamette River Crossing

The Sellwood Bridge is in need for repair or rehabilitation. The current structure is wearing out and showing signs of stress including factures on the west end piers.

Sellwood Bridge Study and Environmental Assessment

Multnomah County, Late 2005

The Sellwood Bridge was constructed in 1925 and is nearing the end of its lifespan. For safety and service, the Sellwood Bridge needs to be either replaced or rehabilitated to serve the needs of the region. Improvements to the bridge should eliminate barriers to the movement of freight, improve

safety, and enhance traffic flow. The design work on the Sellwood Bridge began in late 2005 and include extensive public involvement.

Multnomah County's Capital Improvement Plan calls for replacement of the bridge, however, due to the high cost of a new bridge, rehabilitation of the existing bridge is a possibility. Some issues to address during design include:

- Two lanes, four lanes, or some combination;
- Improved bicycle and pedestrian facilities;
- Coordination with SE Tacoma Street Plan (Sellwood Bridge improvements need to coordinate with the land use and streetscape guidelines in the SE Tacoma Main Street Plan);
- Alignment of the new bridge (north, south, or same location);
- An intersection or interchange with Highway 43;
- Right-of-way issues;
- Funding;
- Bridge type and cost; and
- Construction closure: short, long or none.

South Waterfront

The following summarizes the continuing planning work being conducted in the South Waterfront area.

South Waterfront South Portal Project

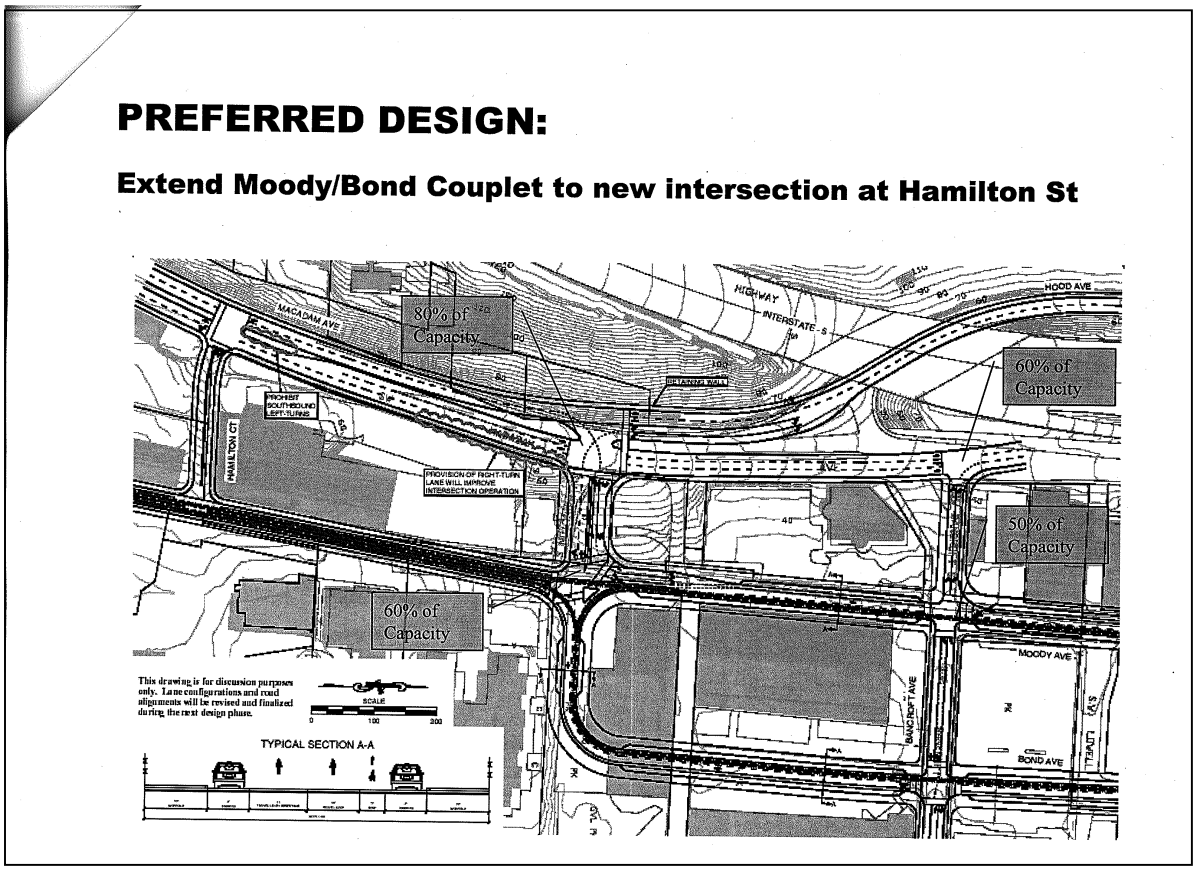
City of Portland, ongoing 2005

Portland Office of Transportation (PDOT) was asked by the Portland Development Commission (PDC) and district property owners to study alternative street and intersection (SW Bancroft at Macadam Ave) improvement in the South Portal Study area. The project should develop a design to meet future traffic demand and support future redevelopment of the southern end of the district. This project is currently in the planning stages and the next phase would be to seek funding for engineering and construction.

The intersection of SW Bancroft and Macadam Avenue currently does not provide adequate traffic capacity to accommodate growth in the district and regional traffic. The current design of Hood Avenue creates an unsafe intersection with Macadam Avenue.

A South Portal Working Group of adjacent property owners was created. This group assisted PDOT with the evaluation of design alternatives and provided feedback on the development implications of the proposed designs.

Six alternatives were evaluated as part of this process. Staff recommendations support a Moody/Bond Couplet design as a preferred alternative. The preferred alternative would improve access in and out of the district, create street plan grid for the south end of district, provide for existing and future capacity needs and provide a plan for future design and construction.



Source: *South Waterfront South Portal Project Summary*, July 21, 2005

Lake Oswego

The following section summarizes the current planning work underway in Lake Oswego.

City of Lake Oswego Downtown Transit Alternatives Advisory Committee (DTAAC) work

City of Lake Oswego, ongoing, 2005

The Regional Transportation Plan (RTP) and the Lake Oswego Transportation System Plan (TSP) predict an increase of 20-25% in person through trips in the Highway 43 Corridor over the next 20 years. Through the Metro's Transportation Improvement Program (MTIP), 2006-2009, regional funding has been allocated to conduct this Alternatives Analysis to examine transit alternatives in the Lake Oswego to Portland Corridor. DTAAC supports this Alternatives Analysis process. As a group, they will focus on potential development alternatives, transit and bicycle and pedestrian improvements within the City of Lake Oswego.

The Alternatives Analysis began in March 2005 is currently underway. The Downtown Transit Alternatives Advisory Committee was established to provide the local community opportunity to suggest, comment, and review the conceptual alternatives particularly the impacts on the local community and the livability. Some of the current community issues and efforts to enhance livability include:

- Enhancing the development potential of the downtown.
- Studying the feasibility of rezoning the Foothills area to encourage a vibrant, attractive mixed-use area that will become a distinctive part of the Downtown Lake Oswego 2040 Town Center.
- Integrating multimodal transportation alternatives in the downtown and Foothills areas to best serve the future growth in jobs and housing and enhance mobility for the Town Center.
- Integrating the existing Willamette Shore Line rail right-of-way into their recommended alternative.

City of Lake Oswego Transportation Management Plan for Downtown Neighborhoods

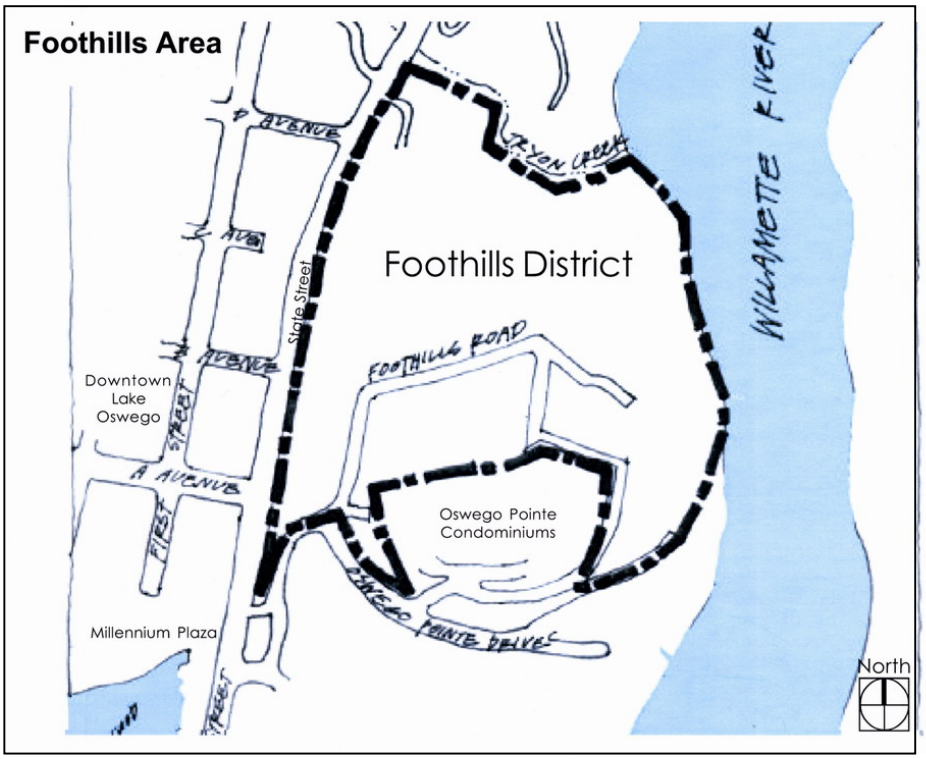
The Transportation Management Plan for Downtown Neighborhoods began in March 2005 and is scheduled for adoption March 2006. The purpose of this plan is to maintain and promote safe and efficient circulation for bicycles, pedestrians, and vehicles. The purpose of the plan is to outline specific strategies for promoting safe circulation patterns in the neighborhoods around downtown Lake Oswego.

The Lake Oswego Foothills Design District Project and the Foothills Refinement Plan

Lake Oswego, 2002, Ongoing

Lake Oswego is currently developing the Foothills District Refinement Plan Report. This report would build upon some of the concepts outlined in the Lake Oswego Foothills Design District Project completed in June 2002. The refinement plan would evaluate what elements of the alternatives should move forward to future planning efforts; what elements should no longer be considered; and what information is still needed.

The 2002 Foothills Design Project evaluated options for the currently zoned –industrial area between Lake Oswego's downtown retail core and its waterfront along the Willamette River. The project proposed both circulation improvements and a mix of land uses that would provide benefits for both the property owners and residents of Lake Oswego. The study provided a framework for the foothills area that includes land use, circulation and the identification of future projects.



Foothills District
Source: http://www.ci.oswego.or.us/plan/Foothills/Foothills_Project_Summary_and_Schedule.htm

The land use element provided a vision for the Foothills District that addressed the neighborhoods desires for a mix of residential, commercial, office and recreational uses. The district is separated into six planning areas, each with their own distinctive characteristics and varying uses.

The circulation element identified new routes and enhancements to existing routes for pedestrians, bicycles, transit and automobiles. The plan also identified potential transit center locations. Six alternatives were evaluated and two alternatives were identified as the preferred alternatives. As part of the 2002 study, the Bus Transfer Facility Alternative E and Alternative D/F were recommended as the preferred alternatives to be evaluated further.

- The current work focused on three conceptual development scenarios that integrate land use and transportation. Each of the scenarios contained a mix of commercial and residential as well as a variety of densities. Each of the scenarios consisted of the following themes:Transit-supportive;
- Accessible and Pedestrian Friendly;
- Preserve Views;
- Unique District;
- Natural Resource Enhancement;
- Open Space Focal Point; and
- Sustainable Design Principles.

The development scenarios outlined are evaluated on how well they support and generate ridership for a potential streetcar along the Willamette Shore Line right-of-way or express bus on Highway 43.

Each of the development scenarios provided are a menu of potential development opportunities. The analysis conducted will be used to provide input in and help form the preferred plan for the Foothills district. The next steps include:

- Identifying a preferred alternative;
- Conducting public workshops;
- Developing a vision based on the preferred alternative;
- Creating an implementation plan; and
- Adopting into the comprehensive plans and zoning amendments for the district.

Summary

Over the past year and continuing on into next year, Metro, Multnomah County, Lake Oswego and the City of Portland are continuing to improve the transportation system within the corridor to meet the existing and future demand of the communities and the region.

Beginning in 2006, Metro will evaluate and design a potential light rail extension from Milwaukie to Portland. This project will build upon the work conducted in the South Corridor Alternatives Study and the South Corridor Draft and Final Environmental Impact Statement. The Milwaukie to Portland Light Rail alignment will most likely provide an additional transit connection within the South Waterfront district.

Multnomah County's Environmental Assessment for replacing the Sellwood Bridge is scheduled to begin in late 2005. The current bridge is nearing the end of its lifespan and is a barrier for the movement people and goods and services. Some of the issues to be addressed during this study include number of lanes, bicycle and pedestrian improvements, bridge alignments, intersection with Highway 43, funding, right-of-way, bridge type, construction closures, and transit options.

As the South Waterfront continues to grow and develop, the city of Portland is continuing to evaluate potential street and intersection improvements to support the development and meet the future traffic demands.

Lake Oswego is currently working on a Transportation Management Plan for the Downtown neighborhoods to promote and maintain safe and efficient movement of pedestrians, bicycles and autos through the downtown neighborhoods. The City is also studying the development potential of the Foothills District for a mix of residential, commercial, office and recreational issues and how to incorporate Foothills District into the downtown. In addition, the City is to evaluating and identifying ways to enhance the development of the downtown, including the Foothills District. This includes developing a vision for multimodal transportation improvements in the downtown town center and how to integrate the Willamette Shore Line rail alignment into that vision.

IV. Adopted Transportation and Land Use Plans/Policies in the Corridor

This section summarizes adopted transportation and land use plans and policies that support improvements within the Lake Oswego to Portland Transit and Trail Alternatives Study Area. This section summarizes applicable plans and policies that guide or influence the development of potential alternatives.

The following section is organized into the following sections: Adopted Regional Plans, Adopted Local Jurisdiction Comprehensive Land Use Plans and Transportation System Plans, and Adopted Neighborhood and Special Purpose Plans.

Adopted State and Regional Plans

The following section summarizes the state regional plans and policies for the corridor.

Oregon's Statewide Planning Goals & Guidelines, Goal 15: Willamette River Greenway (OAR 660-015-0005)

Oregon Department of Land Conservation and Development, 1973

The State of Oregon, through a strong statewide land use planning program, has developed a set of 19 Statewide Planning Goals. Oregon´s statewide goals are implemented through local comprehensive planning and zoning. The local city and county comprehensive plans must be consistent with the Statewide Planning Goals. Oregon state law requires each city and county to adopt a comprehensive plan and the zoning and land-division ordinances needed to put the plan into effect.

The purpose of Goal 15: Willamette River Greenway is: *"to protect, conserve, enhance and maintain the natural scenic, historical, culture agricultural economic, and recreational character of the land along the Willamette River as the Willamette River Greenway."* The Greenway Plan is implemented through cooperative efforts between state and local governments and must be consistent with the adopted ODOT Greenway Plan, as well as city and county comprehensive plans.

Goal 15 outlines specific requirements and considerations for each jurisdiction within the Greenway. Under Goal 15, cities and counties are required to establish ordinances for the review of intensification, changes in use or development to insure their compatibility with the Willamette River Greenway. These communities include the City of Lake Oswego, Clackamas County, Multnomah County, and the City of Portland.

In addition, the goal states that the Willamette Greenway Program will be composed of cooperative local and state plans. Under Goal 15 and OAR 660-015-0005, each city and county in which the Willamette River Greenway is located will incorporate portions of the approved DOT Greenway Plan in its comprehensive plan and implementing ordinances.

The Greenway Plan provides direction in defining the Greenway boundary consideration and requirements, inventory and data collection, management of uses on land within or near the Greenway, incorporation into local and regional plans, and implementation measures.

Regional Framework Plan and Region 2040 Growth Concept Map
Metro, 2000

In 1997 Metro developed the *Region 2040 Growth Concept* and its implementing ordinance, the *Urban Growth Management Functional Plan* to establish the urban growth boundary for the next 20 years and the pattern and densities for development within the region to the year 2040. The plan is designed to absorb an additional 720,000 residents into the Oregon portion of the metropolitan region by the year 2040 with as little expansion of the existing Urban Growth Boundary (UGB) as possible.

The 2040 Growth Concept was developed to serve as the "blueprint" to for future growth and development in the Portland metropolitan region. The plan includes land use and transportation policies that will allow the metropolitan area cities and counties to manage growth, protect natural resources and make improvements to facilities and infrastructure while maintaining the region's quality of life.

Policies in the 2040 Growth Concept encourage:
- Efficient use of land,
- Protection of farmland and natural areas,
- A balanced transportation system,
- A healthy economy, and
- Diverse housing options.

The *Region 2040 Growth Concept* designates the Central City of Portland as the high-density employment hub of the metropolitan region. The plan reinforces the role of downtown Portland as the financial, cultural, tourism, retail and commercial center for the region. The plan designates "Regional Centers" as mixed-use areas consisting of compact employment and residential developments that are served by high-quality transit services, and "Town Centers," which are smaller and slightly less dense than Regional Centers.

Lake Oswego is designated as a "Town Center." The town centers function as local activity areas that provide close access to a full range of local retail and service offering within a few miles of most residents. Town centers offer some specialty attraction of regional interest. They function as strong business and civic communities with excellent multimodal arterial street access and high quality public transportation with strong connection to regional centers and other major destination.

The purpose of the Regional Framework Plan and the 2040 Growth Concept provide an overall land use strategy to protect the livability of our region. In addition to corridors, main streets and centers, the vision outlined in these policies recognize the importance of employment areas and neighborhoods and are better addressed through the local planning process. Neighborhoods are more often becoming more congested and cut through traffic becomes an issue. These plans identify the need for more local connections but they should be planned to minimize the impacts due to congestion and cut through traffic. Neighborhoods will remain largely residential in nature with little change in form.

The Region's 2040 Growth Concept encourages intensification of land uses in Regional and Town Centers and Station Communities and, to a lesser extent, along "Transit Corridors" and "Main Streets." The *Region 2040 Growth Concept* is predicated on the implementation of a high capacity transit that links the opportunity for the Regional Centers, Town Centers and Station Communities with the Central City.

2004 Regional Transportation Plan

Metro, July 8, 2004 (approved by the Federal Highway Administration and the Federal Transit Administration on March 5, 2004)

The 2004 Regional Transportation Plan (RTP) was developed to comply with state and federal planning requirements that also meet the challenges and demands of the region's land use and transportation goals and objectives. The 2004 RTP implements the 2040 Growth concept, the region's long-range plan, while preserving the regions livability. The RTP sets policies, systems and actions to adequately serve walking, bicycling, driving, use of transit and freight movement in this region consistent with federal and state requirements. The RTP provides specific policies and supporting objectives regarding the design, function and performance of the regional transportation system and serves as the 20-year functional plan for transportation in the region.

The RTP recognizes that congestion on Highway 43 is expected to increase and impact access to and from the Lake Oswego town center. Highway 43 is also a barrier between the town center and the Willamette River.

The RTP identifies a Financially Constrained System that identifies a future transportation network assuming existing and proposed funding sources are expected to be available. The financially constrained system is not adequate to meet the region's 20-year transportation infrastructure needs. As a result, the 2020 Priority System was developed and includes the most critical improvements needed to implement the 2040 Growth Concept. The 2020 Preferred System consists of more than 800 projects and programs to meet the regional performance measures and to implement the 2040 Growth Concept.

The RTP identifies improvements to the preferred system that focus on preserving access to the Lake Oswego Town Center by all modes of transportation; improve multimodal design of major streets such as Macadam Avenue, State Street, and A Street; and improve and enhance the bicycle and pedestrian connections and improve pedestrian access to transit. Some of the recommended improvements include:

The RTP identifies that travel demand along Macadam/Highway 43 is and will continue to increase and the physical constraints along the corridor prohibit any major roadway expansion. Therefore, a long-term strategy for high capacity transit is needed in the corridor. The RTP recommends options for study. These options include maintaining the Willamette Shoreline Trolley excursion service; implementing a rapid bus from Portland to Lake Oswego on SW Macadam Avenue; phasing of future streetcar or commuter rail alignments using the Willamette Shoreline right-of-way, the Macadam Corridor Design Guidelines alignment, or other alignments as appropriate; and implementing bicycle improvements where appropriate south of the Sellwood Bridge.

The Lake Oswego Trolley Study and the Willamette Greenway Path projects are listed in the Financially Constrained RTP Project List. Project #5172 Lake Oswego Trolley Study is described as phasing of a future trolley commuter service between Lake Oswego and Portland. Project #5165 Willamette Greenway Path is described as a shared-use path from Roehr Park to George Rogers Park.

Adopted Local Jurisdiction Comprehensive Land Use Plans and Transportation System Plans

The following section summarizes the Comprehensive Plan and Transportation System Plans for the City of Portland, Lake Oswego, Clackamas County and Multnomah County.

City of Portland Comprehensive Plan

The City of Portland Comprehensive Plan is the adopted land use plan for the City. The Comprehensive Plan provides the City with a set of policies, goals and objectives, as well as guidelines for decision making to guide the future growth and development of the City. The comprehensive Plan must be consistent with Sate planning goals and regional plans (the RTP and 2040 Growth Concept). Within the City of Portland Comprehensive Plan are a set of land use and public facilities goals and objectives; a comprehensive plan map; a guide for major public investment; and a process for amendment and review of the plan.

The Comprehensive Plan identifies ten land use goals and policies that provide a framework for future development and funding decisions. The Transportation Element states:

> *"Develop a balanced, equitable, and efficient transportation system that provides a range of transportation choices; reinforces the livability of neighborhoods; supports a strong and diverse economy; reduces air, noise, and water pollution; and lessens reliance on the automobile while maintaining accessibility."*

The Plan identifies specific transportation related policies that include land use coordination, transit, roadway classification and function, pedestrian and bicycle facilities, freight movement, and emergency response vehicles.

The transportation element of the Comprehensive Plan is also divided into districts: North, Northeast, Far Northeast, Southeast, Far Southeast, Northwest, and Southwest Districts. The transportation goal for the Southwest Transportation District is to address outstanding transportation issues through appropriate study and multimodal improvements, and to employ transportation policies outlined in the Southwest Community Plan to identify potential changes in the street system. In addition, the Comprehensive Plan identifies objectives to accomplish this goal and including:

- Use the Willamette Shore Line right-of-way, as identified in the Macadam Corridor Improvement Plan, or other alignment as appropriate to provide future streetcar commuter service or light rail in the Macadam corridor.
- Improve the primary transportation functions of SW Broadway Drive, SW Patton Road, SW Vista, SW Humphrey, and SW Dosch Road as Neighborhood Collectors by supporting pedestrian, bicycle, and transit use; calming traffic; and discouraging heavy volumes of non-local commuter traffic.
- Consider designation of a 'Red Electric Line' alignment for pedestrians and bicyclists, as identified in the Southwest Urban Trails Plan, upon completion of a feasibility study.
- Evaluate the transportation impacts on adjacent neighborhoods when considering increases in development potential of large new or redeveloping areas, and include mitigation measures in development plans.
- Use the Southwest Urban Trail Plan as a guide to dedicating and developing trail segments in Southwest.

City of Portland Transportation System Plan

The Portland Transportation System Plan (TSP) is the city's 20-year plan for transportation improvements and supports the policies set forth in the Transportation Element of the city's Comprehensive Plan.

The TSP provides a list of planned transportation facilities and major transportation improvements over the next 20 years. The following table summarizes the planned improvements within the corridor that are identified in the TSP.

City of Portland Transportation System Plan (TSP)
Planned Transportation Projects in the Corridor

Project Number - Project Name	Description	Timeframe
20015 – Central City Streetcar II (PSU to North Macadam)	Extend the Central City Streetcar from SW Harrison Street to the North Macadam district	1 – 5 years
20042 – South Waterfront Transit Improvements	Transit improvement identified in the North Macadam Framework Plan	6 – 10 years
20057 – Willamette Greenway: Trail Extension	Develop the Willamette Greenway Trail through the North Macadam district	6 – 10 years
90047 – Macadam: bicycle & pedestrian improvements	Complete bikeway connection in the North Macadam corridor and improve pedestrian crossings	6 – 10 years
90042 – South Portland Pedestrian District: Future Pedestrian Improvements	Plan and develop improvements to the pedestrian environments to make walking a viable mode of transportation	11 – 20 years
90045 – Macadam Ave: Frequent Bus	Construct improvement that enhance Frequent Bus service	1 – 5 years
90046 – Macadam: (Bancroft – Sellwood Br) ITS	Implement communications infrastructure to monitor and control traffic flow	6 – 10 years

Source: Chapter 3, *City of Portland Transportation System Plan*

In addition to transportation improvement projects, the TSP identified refinement plans that may become amendments to the TSP and additional studies. Refinement plans allow for further study of specific transportation needs that were not addressed during the TSP process because of insufficient time or information. In addition, the TPS identified studies may not necessarily address an identified need but will respond to specific issues identified during the TSP process.

The TSP identified three minor refinement plans. The minor refinement plans are identified when the RTP identifies both the need and mode, but a specific project has not been identified. The three plans are Macadam/Highway 43 corridor plan; the Willamette River Greenway; and the Willamette Shore Line Alternative Analysis.

The purpose of the Macadam/Highway 43 study would be to develop a long-term strategy for high capacity transit options along the corridor. This study would include future trolley commuter service, frequent bus, and pedestrian and bicycle improvements. Physical and environmental constraints preclude major roadway improvements.

The purpose of the Willamette River Greenway study would be to identify the feasibility of constructing the Willamette River Greenway Trail between Portland and Lake Oswego. This study

would evaluate the option of a combined rail and trail corridor between the Sellwood Bridge and Lake Oswego.

The purpose of the Willamette Shore Line Alternative Analysis would be to evaluate transit improvement options within the Willamette Shore Line right-of-way. The alternative analysis should also include a trail option between Portland and Lake Oswego.

The Public Transportation Modal Plan supports a multimodal transit system where light rail connects the central city and regional centers and major destinations. Streetcar serves the Portland neighborhoods, employment and shopping centers, educational institutions, and recreation destinations. Buses provide the primary mode of transit to meet the regions access and mobility needs.

The City of Portland TSP also promotes walking as a safe, efficient, desirable, accessible mode of transportation. Walking is considered the preferred mode of transportation for short trips. The Pedestrian Modal Plan identifies pedestrian project to improve the pedestrian environment to make walking a viable transportation choice.

The goal of the Bicycle Modal Plan is to develop an interconnected network of bicycle routes, bikeways, and multiuse paths to promote bicycling as an attractive mode of travel. The city focuses on filling in gaps in the bicycle network, proving signage, and bicycle amenities such as short-term and long-term bicycle parking.

City of Lake Oswego Comprehensive Plan

City of Lake Oswego, December 1994

Goal 12 Transportation of the City of Lake Oswego Comprehensive Plan outlines specific transportation goals, policies and recommended action measures for land use and transportation relationships, transportation demand management, walking, biking, transit, commercial rail and water transport, citizen involvement, and parking. The Lake Oswego Comprehensive Plan provides guidance to develop strategies and implement programs that reduce the number of automobiles traveling through Lake Oswego particularly during a.m. and p.m. peak hours. Policies set forth in the Comprehensive Plan state that the City shall work with ODOT, Metro, TriMet, and Clackamas County to implement such programs and reduce current vehicle miles traveled by 10% between the years 1994 and 2015. The Comprehensive Plan provides guidance for providing bicycle and pedestrian facilities to provide a network that promotes bicycling and walking as a safe and convenient mode of transportation. The Comprehensive Plan provides policy and recommended actions for each mode.

Within City Goal 12: Transportation, the Transit System goal is to develop a transit system that is efficient, accessible, and economical. The success of the transit system is developed through appropriate land use patterns, efficient street design, and multi-modal connections that support transit. Transit should be designed to be a viable transportation alternative to the single-occupancy automobile and should support the city's highest density employment and residential areas, such the Lake Oswego Town Center. Transit should connect main streets, town centers, employment centers, downtown Portland, and major transit and transfer stations. Park and rides should be provided in areas that are not directly served by transit. Transit should meet the needs of the transportation disadvantaged by making alternative modes more accessible. Transit amenities should be provided

to enhance transit usage, public safety and ensure efficient traffic flow. Transit improvements should be consistent with the Transportation Planning Rule. The existing railroad right-of-ways and other easements shall be preserved to for future mass transit, bicycle or pedestrian facilities.

Under the Recommended Action Measures of the Comprehensive Plan, the City identifies the Willamette Shore Rail line for high capacity transportation opportunities or opportunities to share the right-of-way, if feasible, with high capacity transit and other modes of travel such as pedestrian and bicycle. In addition, the Comprehensive Plan recommends coordination between the local and regional transportation partners with the planning and design of a high capacity transit on the Willamette Shore Rail line. This will ensure: adequate access to the regional transportation system, adequate termini, and adequate access to the line for all modes of travel.

City of Lake Oswego Transportation System Plan

The Lake Oswego Transportation System Plan (TSP) addresses improvements to existing roadways, new pedestrian and bicycle facilities, improvements to public transit service, and transportation demand management (TDM) strategies and includes a transportation improvement programs, as well as changes to the Lake Oswego codes and standards to implement the TSP recommendations.

The TSP outlines specific goals for the City in respect to the transportation system. Specifically, the TSP provides guidance to reduce general automotive travel, encourage transit ridership, and implement bicycle and pedestrian facilities. The TSP recommends specific improvements to all modes of transportation, as well as functional classification of corridors, access management and design standards, funding strategies, and implementation schedule (short-term, mid-range, and long-term).

The Roadway Plan in the TSP recommends intersection improvements along Highway 43 such as turn lanes and new traffic signals between B Avenue and Terwilliger Boulevard. These improvements are needed to relieve capacity constraints.

The pedestrian and bicycle plans identify recommendations based on system deficiencies rather than capacity constraints. The intent of these two plans is to provide safe and efficient pedestrian connections to major activities centers (such as downtown Lake Oswego and Lake Oswego Transit Center). Both plans identify the construction of the Willamette Greenway between Roehr Park to George Rogers Park. In addition to the Willamette Greenway, the TSP recommends bike lanes/bikways on Highway 43 north of downtown. The TSP also identifies that additional bike facilities would be needed to create a system that will support bicycling as a safe and efficient mode of transportation and a desirable alternative to the automobile.

The TSP mentions that the Willamette Shores Trolley operates on a recreational excursion basis protecting the right-of-way for future transportation needs. In the long-term, the TSP calls for this alignment to be used for light rail or commuter rail service to Lake Oswego.

Short-term and mid-range bicycle and pedestrian improvements include sidewalk and pathway improvements. Short-term transit improvements include a local circulator bus in the South Shore area and Willamette Shores Trolley track/trestle rehabilitation. Mid-range transit improvements include two local circulator routes and two new transit centers. The long-term bicycle and pedestrian improvements include a long list of sidewalk, bike lane, and pathway improvements including the Willamette River Greenway from Roehr Park south to George Rogers Park to complete the

Willamette Greenway Path. The long-term transit improvements include an additional TriMet bus route #42 McVey (Lake Oswego-Stafford-Tualatin) as well as additional local circulators routes and a new Kruse Woods park and ride and a relocated transit center and new park and ride in downtown Lake Oswego, east of State Street.

Transportation System Plan for the Urban Pockets of Unincorporated Multnomah County

Multnomah County, City of Portland Office of Transportation, June 30, 2005

In January 2002, the Multnomah County Board of Commissioners adopted the City of Portland's comprehensive plan, zoning code, and zoning maps as the official land use policy for the urban unincorporated areas in Multnomah County. Responsibility for development review for land use in these areas was also transferred to the City of Portland. While the city has responsibility regarding land use, Multnomah County still retains jurisdiction and development review responsibilities for the transportation system. Upon adoption, the Transportation System Plan (TSP) for the Urban Pockets of Unincorporated Multnomah County will resolve the differences in policy definitions provide transitions and eliminate gaps in the street classifications between Multnomah County and the City of Portland. Within the urban pocket areas, the TSP includes:

- Updated transportation policies;
- Updated functional street classifications;
- Master street plans for future streets and pathways; and
- List needed transportation improvements.

The Dunthorpe Area is one of three unincorporated urban areas within Multnomah County and is located between the City of Portland and Clackamas County. This area is generally characterized as low-density, single family development, with large, older single-family homes on large lots. The zoning is generally Single Dwelling Residential 20,000 (R20) with a few areas that are Residential Farming and Single Family Residential 10,000 (R10). No commercial or industrial zoned lands exist in this area.

The area has experienced problems with cut-through traffic destined to Tryon Creek Park, Lewis & Clark College as well as significant bicycle and pedestrian activity. The area lacks traditional pedestrian and bicycle facilities because of the cost and the desire of the neighborhoods to have nontraditional solutions. The area has a number of local access roads that are in disrepair, and much of the system is in poor condition.

Highway 43 is a 3-lane facility with two lanes serving northbound traffic and one lane serving southbound traffic and has been identified as a congested commuting route. The highway is a major corridor connecting the Dunthorpe area with Downtown Portland. Major roadway improvements are limited by the topography and environmental concerns in the corridor.

The TSP provides a set of street classification maps that define applicable conversions of Multnomah County street classifications to City policy designations. Macadam Ave/Riverside Dr/Highway 43 is designated as Major City Traffic Street, Major Transit Priority Street, Local Service Bikeway, City Walkway, Major Truck Street, Major Emergency Response, and a Regional Corridor and Greenscape Street. The Willamette Shoreline Railroad right-of-way is also identified in the TSP and classified as Regional Transitway and Major Transit Priority Street, and Off-Street Path.

The TSP for the Unincorporated Urban Pockets of Multnomah County guides major public investments in the transportation network over the next 20 years through policy and recommended improvements. The TSP identifies six projects for the Dunthorpe area.

- Add a pedestrian off-street path with stairs adjacent to SW Summerville Ave., (SW Riverdale Rd. to SW Palatine Hill Rd.
- Traffic calming treatments including speed bumps on SW Breyman Ave between SW Palatine Hill Rd and Highway 43.
- Retrofit bike lanes into the existing street right-of-way on SW Palatine Hill Rd between Highway 43 and the Portland City limits.
- Extend the Willamette Greenway Trail from the Sellwood Bridge to the Multnomah County boundary (extension of a project outlined in the City of Portland TSP).
- Multimodal improvements (including bike, pedestrian and automobile) to Macadam Ave/Riverside Dr/Highway 43 from the Portland City limits to the Multnomah County boundary (extension of a project outlined in the City of Portland TSP).
- Pedestrian improvements on SW Terwilliger Blvd between Portland City limits and Multnomah County boundary (extension of a project outlined in the City of Portland TSP).

Clackamas County Comprehensive Plan

Clackamas County, 2005

The Clackamas County Comprehensive Plan provides guidance and support for future development and redevelopment for the county. The goals and policies outlined in the plan direct the future decisions on land use actions, ordinance amendments, zone changes, capital expenditures, procedures and programs within the county.
The overall goals of the Comprehensive Plan are:

- Balance public and private interests.
- Identify the most appropriate land uses for individual sites.
- Encourage economic growth.
- Create compatible and economic development opportunities.
- Implement the policies of this Plan to guide public investments to support anticipated growth.
- Establish a process for review and amendment of those policies that is in the best interest of the community.

In recent years, a combination of rapid population growth and a strong economy have made it difficult to balance the community's transportation needs while minimizing environmental impacts to air, water and noise. Funding levels for roadway improvements have not kept pace with the increase in motor vehicles, housing and businesses.

The Transportation section of the comprehensive plan identifies issues within the existing transportation network and provides goals and policies to create a safe and efficient transportation network, provide responsible funding scenarios for transportation projects, and ensure coordination with new developments and other jurisdictions.

The comprehensive plan does not identify any capital improvements along Highway 43 or the Willamette Shoreline during the next 20 years. The plan does recognize Highway 43 as a planned bikeway and planned frequent bus route.

Adopted Neighborhood and Special Purpose Plans

The following plans provide policy or guidelines for future development and redevelopment within the corridor.

Willamette Greenway Plan

City of Portland, Bureau of Planning, Adopted by City Council November 5, 1987 and effective January 1, 1988

The Willamette Greenway Plan was developed to protect, conserve, maintain, and enhance the scenic, natural, historical, economic, and recreational qualities of lands along the Willamette River and meet State Goal 15. The plan addressed the quality of the natural and human environment along the river. The Willamette River and the land adjacent to it are a unique and valuable natural resource, which require special protection. The plan provided direction for future uses of the land within the Willamette Greenway. This plan has been incorporated into the City of Portland Comprehensive Plan.

The Willamette Greenway plan boundaries include all properties adjacent to the river, all land necessary for the conservation of the significant riparian habitat, public lands adjacent or near the river, and to a minor extent, views to and from the river. All new development, changes in use or intensification of uses, including public or private, within this boundary must conform the design standards and guidelines provided in Appendix C of this plan.

The Greenway Concept is divided into four specific concepts: a concept map, public access, greenway setbacks, and acquisition areas. The concept map provided general guidance on land uses and land use changes within the boundary area. Some of the land use categories included conservation, mixed-use development, industrial lands, and river dependent uses.

The public access concept identified a continuous trail along both sides of the Willamette River, as well as access points to the trail and viewpoints or view corridors. An interim trail is identified in this concept.

The greenway setback concept was developed to keep uses back from the river's edge for both conservation and public uses. The greenway setback is a minimum of 25 feet from the top of the bank for all buildings, structures, parking lots, or fills, unless that use is river dependent or river-related.

The acquisition areas concept identified property acquisitions, which have significant value to the public in terms of scenic quality, wildlife habitat, or recreational uses. Appendix A is this plan identified specific properties that have been designated for public ownership. Appendix A also identified the right-of-way owned by the Southern Pacific Railroad in south Portland for a transportation corridor.

The plan identified land use controls to support the goals and objectives of this plan. The plan included overlay zones, design guidelines, landscaping, fills and structures, and bridge guidelines. Overlay zones are designed to implement the land use pattern identified in the concept map. The overlay zones included river industrial, river development, river recreational, and river natural. Design guidelines are provided to direct landowners when developing in the Willamette Greenway

to protect, compliment, and enhance the environment along the Willamette River. The plan was developed to encourage the use of native plants and require landscape review within the Willamette Greenway. Fills and structures are discouraged to enhance and maintain the natural habitat and scenic qualities of Willamette River. Any new bridge construction or reconstruction would require review by the Design Commission.

River Renaissance Strategy

River Renaissance, City of Portland, December 2004

The River Renaissance program is managed by the Bureau of Planning and is collaborative effort among all city bureaus. The River Renaissance Vision was developed through a series of interactive workshops held around the city in the fall of 2000. The result of the community dialogue was a document that articulated the goals and aspirations for a revitalized river and serves as a call to action for the city and other public agencies, community groups, business owners and individuals. The Portland City Council endorsed this in March 2001.

The *River Renaissance Vision* included five mutually supportive and interrelated themes:

- **Ensure a clean and healthy river system for fish, wildlife, and people.** The strategy recommends transforming redevelopment and infrastructure projects into opportunities to improve watershed conditions, promote low impact development principles, stormwater management through landscape design, downspout disconnection and other techniques. It also established ecologically viable corridors through habitat protection and restoration, to protect and restore a healthy and diverse tree canopy and enhance neighborhood livability and wildlife habitat, and improve air quality.
- **Maintain and enhance the city's prosperous working harbor.** The strategy recommends supporting Portland's growth as a major West Coast marine port and distribution and industrial center, invest in necessary infrastructure, protect and enhance industrial lands and access for river related and river dependant industries, facilitate industrial redevelopment, encourage innovation, and promote environmentally beneficial industrial operations.
- **Embrace the Willamette River and its banks as Portland's front yard.** The strategies recommend expanding, preserving and enhancing an interconnected system of parks trails and open spaces, providing safe and efficient pedestrian and bicycle connections between neighborhoods and the river, expanding water recreational opportunities, incorporating public art, and developing a continuous trail on both sides of the Willamette River.
- **Create vibrant waterfront districts and neighborhoods**. This strategy encourages enhancing the Willamette River as Portland's centerpiece, while maintaining the history and unique qualities through design, and enhancing the River as a community gathering places within parks, residential areas and retail districts.
- **Promote partnerships, leadership, and education.** The strategy recommends providing and supporting leadership for River Renaissance philosophy, foster partnerships, expanding public awareness, and actively seeking public and private funding.

Each of the five themes mentioned above are addressed in their own chapter. Each chapter included an overview, policy guidance, defining success, and actions. All of these themes are applicable to the Willamette Shoreline study area (within the City of Portland) by providing a "toolbox" for implementing the guiding principles and a way to measure each of the strategies. The strategy provided a new decision making approach and operational practices for the City of Portland. As each

theme identified cannot be realistically achieved on every stretch of the river, this strategy recommends attempting to address each theme at every opportunity.

Portland's Willamette River Atlas

City of Portland Bureau of Planning, August 2001

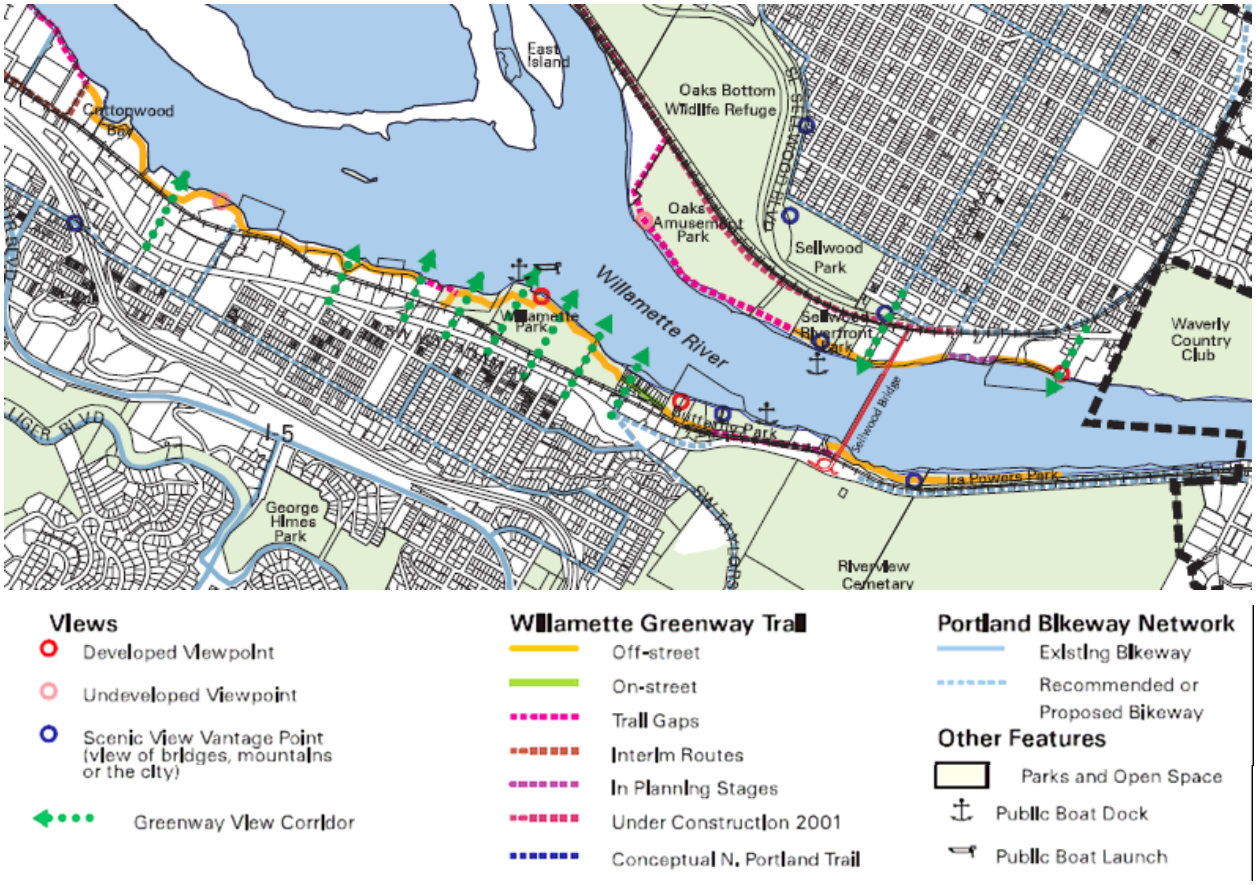
The River Renaissance outlined a vision for a clean and healthy river, a prosperous working harbor, vibrant new waterfront districts and neighborhoods, enhanced access to the river, new recreational opportunities, partnerships for implementation, and community education. The purpose of the Portland Willamette River Atlas is to support that plan by providing the geographic information of the Willamette River corridor within the City of Portland boundaries.

The following eight maps are presented in this atlas:

Map 1 – Aerial Photo
Map 2 – Natural Resources
Map 3 – Willamette Riverbanks
Map 4 – Recreational, Scenic, and Trail Resources
Map 5 – Base Zones and Plan Districts
Map 6 – Overlay Zones and Urban Renewal Districts
Map 7 – Current Land Ownership
Map 8 – Existing Land River Uses

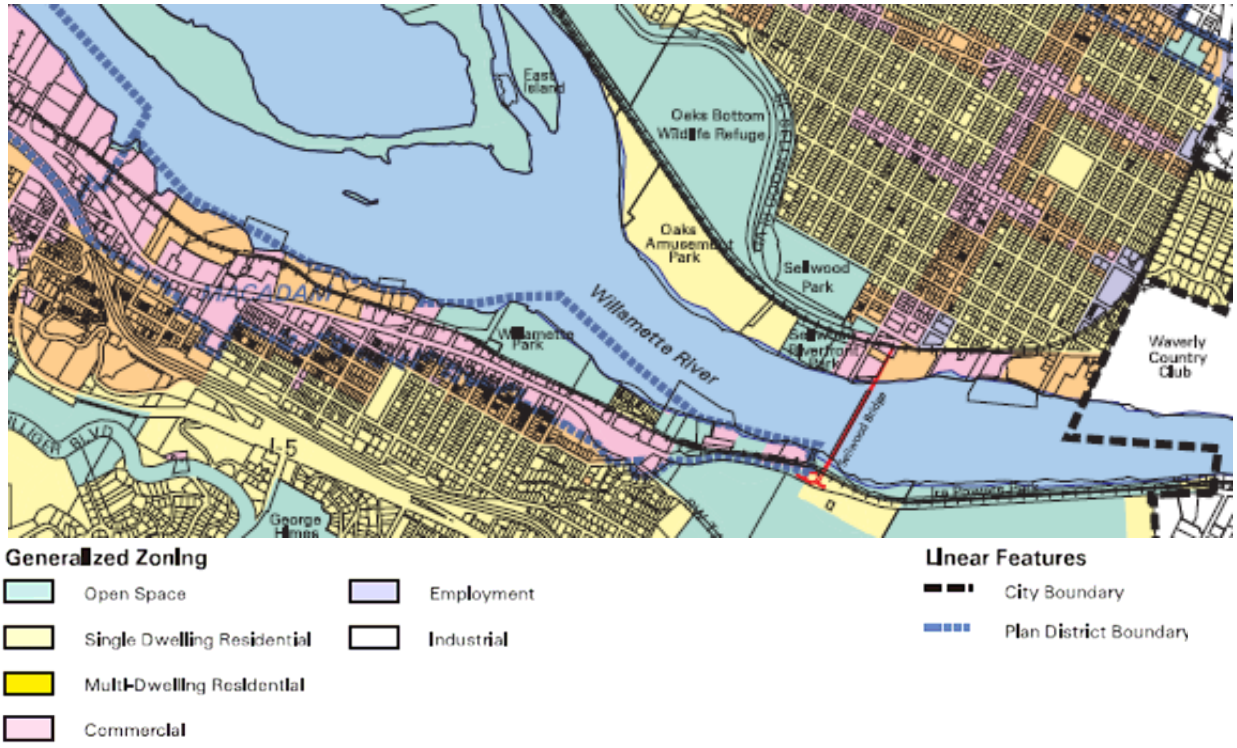
Below are snapshots of four of the maps presented in the Willamette River Atlas.

Map 4 – Recreational, Scenic and Trail Resources identifies the recreational and trail resources located within the Willamette River corridor. The map also identifies gaps in trail system and proposed or recommended bikeways. The figure below is a snapshot that focuses on the area that is applicable to the Willamette Shoreline study area. As shown in the figure, there are gaps within the existing trail system and there is a proposed or recommended bike way south of the Sellwood Bridge.



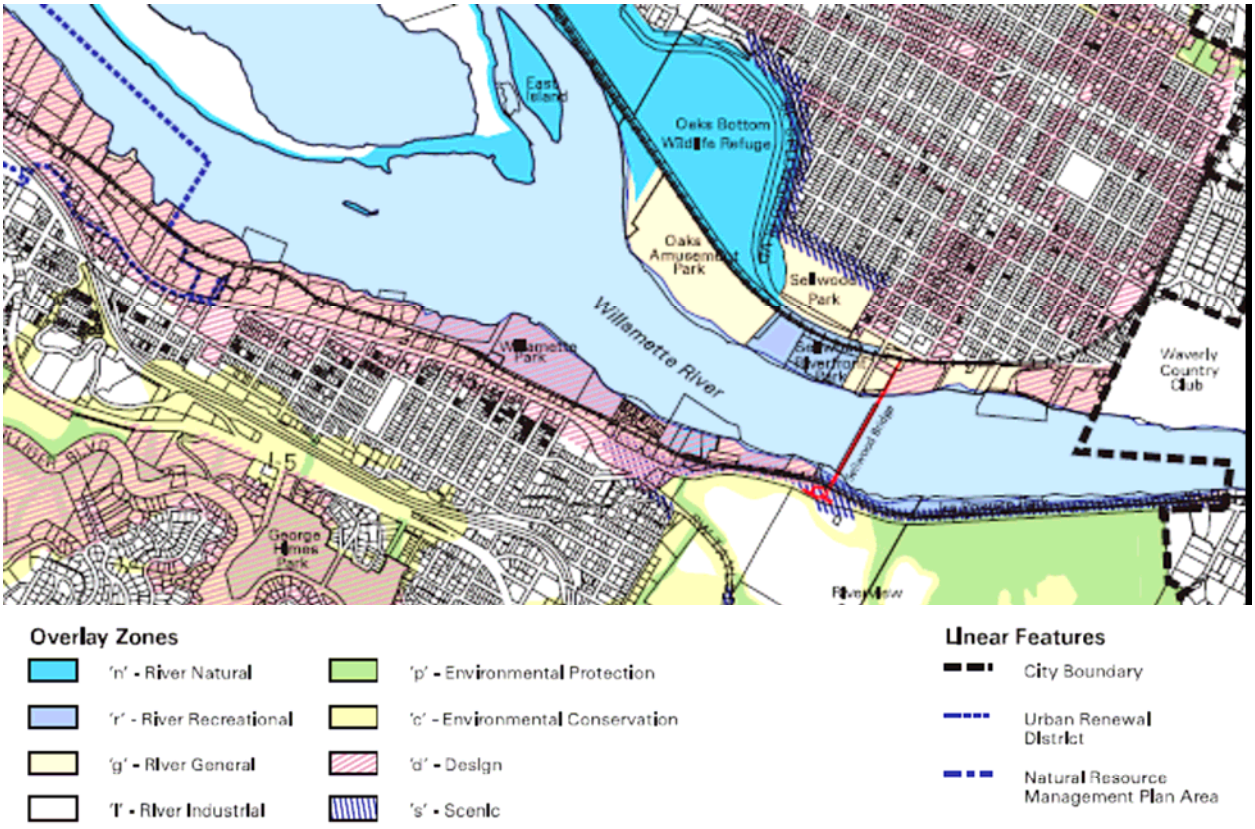
Source: *Willamette River Atlas*, Map 4 – Recreational, Scenic and Trail Resources

Map 5 –Base Zones and Plan Districts identifies a combination of open spaces, single dwelling residential, multi dwelling residential, and commercial within the Willamette Shoreline study area.



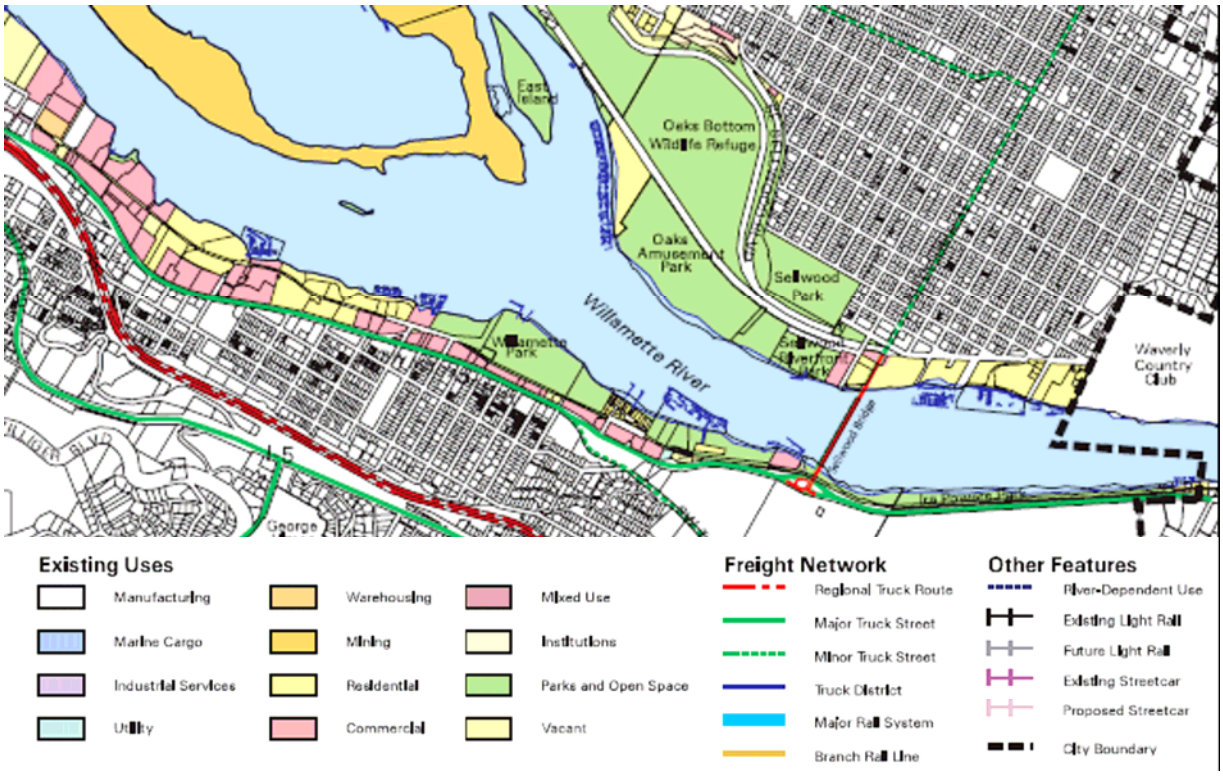
Source: *Willamette River Atlas*, Map 5 – Base Zones and Plan Districts

Map 6 – Overlay Zones and Urban Renewal District map shows several designations within the Willamette Shoreline study area. The purpose of the River Natural designations is to protect, conserve and enhance land scenic quality or of significant importance as wildlife habitat. The River Recreational designation is intended to encourage river-dependent and river-related recreational uses and include public access opportunities to and along the river. The River General designation allows for uses and development, which are consistent with the zoning and allow for public use and enjoyment of the waterfront.



Source: *Willamette River Atlas*, Map 6 – Overlay Zones and Urban Renewal Districts

Map 8 – Existing Land River Uses shows the existing land uses within the Willamette Shoreline study area. The map shows a variety of residential, commercial, and parks open spaces.



Source: *Willamette River Atlas*, Map 8 – Existing Land River Uses

South Portland Circulation Study Report and Recommendations

City of Portland Office of Transportation, June 2001

City Council accepted the South Portland Circulation Study on August 1, 2001 (Resolution No. 34014). The study recommended a long-term vision to guide transportation improvements to reconnect the Lair Hill neighborhood and the surround study area. The study area centers on the west end of the Ross Island Bridge and Naito Parkway between I-405 and Barbur Boulevard.

The primary objective was to evaluate the possibility of separating the regional and the local trips that currently use the local street system in the Corbett-Terwilliger-Lair Hill neighborhood and to reunite the west and east portions of the neighborhood with a complete grid of streets. The study recommends a number of changes to the street system, including:

- Rebuild the western Ross Island bridge ramps.
- Change Naito Parkway from a four-lane to a two-lane cross section, with cross street intersections, pedestrian and transit improvements, bike lanes, and street trees.
- Reconfigure the Naito Parkway /Kelly Way intersection from a grade-separated to an at-grade intersection.

Macadam Corridor Design Guidelines

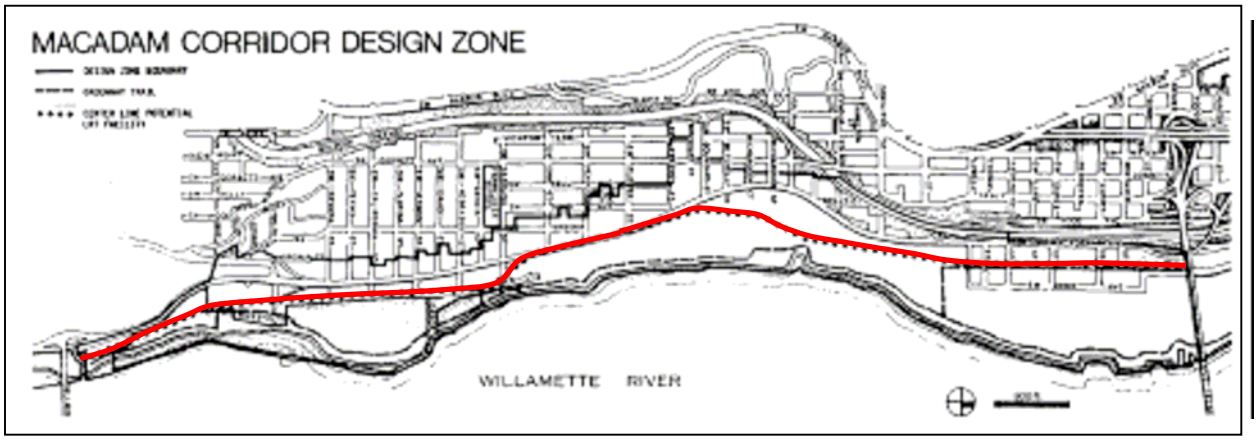
City of Portland, Bureau of Planning, October 1985

Within the Macadam corridor between the Ross Island Bridge and the Sellwood Bridge, all new development or redevelopment that requires a building permit must comply with the design standards outlined in the *Macadam Corridor Design Guidelines* as identified in City of Portland Title 33 Planning and Zoning.

The policies provided in this document provide focus on:

- Visual connections to the Willamette River;
- Physical connections across Macadam Avenue and to the Willamette Park, the Freeway Trail and the Willamette River;
- Scenic qualities of the River and the Greenway Trail;
- Boulevard treatments on Macadam Avenue;
- Consistent and clear signage to destinations;
- Comply with the John Landing Master Plan; and
- Potential future light rail.

The guidelines include a light rail corridor through the John's Landing area. The light rail corridor would be partially located in the Willamette Shoreline right-of-way and partially located adjacent to Macadam Avenue. The following figure presents the proposed light rail alignment. In addition to preserving the right-of-way, the guidelines provided set back requirements and temporary land use options.



Source: *Macadam Corridor Design Guidelines*, City of Portland, Bureau of Planning, October 1985

Southwest Hills Resource Protection Plan

City Portland, Bureau of Planning, Adopted by City Council on January 23, 1992 and effective January 23, 1992

The *Southwest Hills Resource Protection Plan* provided analysis of the economic, social, environmental and energy consequences of resource protection and development near natural resource areas. The plan recognized the need to maintain and enhance neighborhood livability and balance the preservation of natural resources with existing and potential development.

The *Southwest Hills Resource Protection* Plan is intended to serve as a policy document for planning staff in evaluating development proposals through environmental review and as a reference for property owners, developers, citizens and neighborhood groups.

The project study area included 7,000 acres south of the Balch Creek basin and downtown Portland and areas that drain directly into the Willamette River. The plan divided this large area into several smaller sites and provided an inventory, analysis and recommendations for protection of significant resource areas for each site. Through this analysis and inventory, a range of policies and recommendations were developed to provide guidance for environmental protection and environmental review. Some of the recommendations included environmental conservation (EC) and environmental protection (EP) overlay zones, promote alternative modes of transportation, and clustering of development. In addition, the plan made specific recommendations such as a visual impact analysis for the River View Cemetery Master Plan.

The plan included policies, objectives and regulations necessary to protect the natural resource areas and measure to implement these policies. The plan included the following measures:

- Amended to Portland's Comprehensive Plan to refer to the Southwest Hills Resource Protection Plan;
- Adoption of the Southwest Hills Resource Protection Plan as the official policy document for the natural resource lands in the area;
- Amended Title 33, Planning and Zoning to implement the Southwest Hills Resource Protection Plan;
- Amended the Official Zoning Maps to apply the environmental overlay zones;
- Adopted a resolution to establish a land bank for parks and natural resource areas for acquisition; and
- Repealed the interim Resource Protection Zone.

Corbett Terwilliger Lair Hill Policy Plan

City of Portland, September 1977

A Memorandum accompanied this report from Susan Feldman dated March 24, 1999. The Memorandum identified the specific portions of the plan that were adopted by the City. The Corbett Terwilliger Lair Hill Policy Plan planning process began in 1972. The purpose of this plan was to respond to three major factors:

- the potential impact of the South Auditorium urban renewal area on the future development of Lair Hill and Corbett neighborhoods;
- the impacts of the John's Landing development on the surrounding Terwilliger residential neighborhood; and
- the impacts of the potential Macadam Avenue improvement on the businesses in the corridor.

Only a portion of the plan was formally adopted by City Council. The adopted policies from this plan are maintained and enforced under the Comprehensive Plan Policy 3.6, Neighborhood Plans. The plan addressed issues including preserving the existing residential neighborhoods of Corbett, Terwilliger and Lair Hill and reducing traffic through the residential neighborhoods.

Scenic Resources Protection Plan

City of Portland, Bureau of Planning, Adopted by City Council March 13, 1991 and effective April 12, 1991

The Scenic Resource Protection Plan created policy language, zoning regulations and maps with the intention of preserving open space; protecting scenic, historic, and natural resource area for future generations; and promoting a healthy and visually attractive environment. The plan resulted in amending the City of Portland Comprehensive Plan and Title 33 of the City Code by adding a scenic resource zone, as well as amending the official City of Portland Zoning Maps.

Southwest Community Plan

City of Portland Bureau of Planning, July 2000

On July 13, 2000, the Portland City Council adopted the *Southwest Community Plan* (SWCP). This plan was developed to provide a vision for the southwest community. The SWCP study area is bounded by Sunset Highway/I-405 to the north, the Willamette River to the east, and Multnomah/Clackamas County line to the south and west.

The SWCP 2020 vision outlined in this plan includes:

- Thriving commercial nodes become focal points for community activities and commercial and retail services while retaining elements of the valued historical community character;
- The Willamette Greenway Trail will provide recreational, environmental, aesthetic, walking and bicycling opportunities;
- A system of interconnected pathways and trails that include public streets and off-street links and provides miles and miles of walking opportunities throughout Southwest Portland;
- Diversity in housing;
- Diversity in transportation choices;
- Preservation and enhancement of open spaces, natural areas, views and vistas, parks and plazas, walkway and parkway, and luxuriant greenery.

The adopted policies in this plan guide and direct community planning decisions regarding land use, public services, and community based improvements. This plan identified objectives for each policy to measure or achieve the adopted policies.

The Land Use and Urban Form policy is listed first in this document and is an umbrella under which all the policies fit. The second policy is the Public Facilities policies; all other policies are organized in alphabetical order and include: Citizen Involvement; Economic development; Housing; Parks, Recreation and Open Spaces; Public Safety; Transportation; and Watershed policies.

The purpose of the **Land Use and Urban Form Policy** is to enhance the sense of place for the community and the diversity of the neighborhoods, and encourage compact transit and pedestrian friendly mixed use centers while responding to the needs of the community.

The **Public Facilities Policy** was intended to ensure adequate public facilities for both existing and development through equable funding mechanisms.

The purpose of the **Citizen Involvement Policy** is to ensure that implementation, evaluation and revision of the SWCP involves the City of Portland and the Southwest Citizens.

The purpose of the **Economic Development Policy** is to maintain and enhance Southwest Portland's ability to support and attract economically viable neighborhood and regional employment centers and foster businesses and commercial developments that fit in scale and character of each center.

The purpose of the **Housing Policy** is to provide a variety of affordable house choices to meet the needs of the community, and encourage development of housing types that will increase home ownership opportunities.

The purpose of the **Parks, Recreation and Open Spaces Policy** is to provide ample, accessible, and well maintained parks and open spaces; preserve and enhance the natural habitat features; and ensure a wide range of recreational opportunities. This policy outlines goals to create parks and open spaces to meet the needs for parks and recreation users. The policy also encourages the development of well designated and well maintained trails and bicycle paths in Southwest Portland as recreational opportunities. In addition, the policy promotes and safe and convenient trails and bicycle paths from Southwest neighborhoods to the Willamette River.

The purpose of the **Public Safety Policy** is to enhance and maintain a safe and secure living environment through shared efforts of residents, public agencies, institutions, and businesses.

The purpose of the **Transportation Policy** provide a balanced multimodal transportation system that encourages increase and transit use and pedestrian accessibility and connectivity, discourage non-local traffic in residential areas, manages congestion and focuses on improving and maintaining arterial and local streets. The Transportation Policy encourages improved circulation for autos, trucks and transit by improving the accessibility and connectivity between activity centers. In addition, the Transportation Policy includes goals for promoting and encourage pedestrian and bicycle facilities and plans as well as improving transit service along main streets and between activity centers, particularly in Southwest Portland.

The purpose of the **Watershed Policy** protects and enhances the environmental and natural resources; integrate stormwater management in to land use planning and development.

Summary

On both the regional and local level, the adopted plans and policies support the need to study a high capacity transit alternative along this corridor. In addition, the adopted plans and policies recognize the need for an interconnected trail system for commuting and recreational opportunities.

Regional transportation policies, as identified in Metro's Regional Framework Plan and 2040 Growth Concept, recognize the need for a high capacity transit between the centers, including Lake Oswego Town Center and the Central City. In addition, the 2004 RTP included the Lake Oswego to Portland Transit and Trail Alternatives Analysis in the 2004 Financially Constrained RTP Project List.

The City of Portland identified future use of the Willamette Shore Line right-of-way for streetcar or light rail in their Comprehensive Plan. The Portland TSP recommended that refinement plans be completed for the Willamette Shore Line Alternatives Analysis, the Macadam/Highway 43 Corridor Plan, and the Willamette River Greenway Plan.

The Lake Oswego Comprehensive Plan also identified use of the Willamette Shore Line right-of-way for high capacity transit, and bicycle and pedestrian use where feasible. The Lake Oswego TSP identified that the Willamette Shore Line railway operate as a recreational excursion basis protecting the right-of-way for future light rail or commuter rail.

Multnomah County's TSP does not identify a specific project on Highway 43 but instead recommends six projects in the unincorporated area of Dunthorpe neighborhood that includes the following elements: pedestrian improvements, traffic calming, bike lanes, extension of the Willamette Greenway Trail, and multimodal improvements.

There are several adopted neighborhood plans and special purpose plans developed for the corridor and communities in the corridor. These plans provide context for the physical environment and plans for future uses or developments. The City of Portland has developed a vision for the River and its boundaries as well as documenting protection and conservation zones along the river. Neighborhood plans identify a vision for their community and guide future transportation and land use actions.

V. Trails Studies and Plans

The following section summarizes the existing trail and greenway plans within the corridor. They include plans conducted by Metro, the City of Portland, and Lake Oswego.

Metropolitan Greenspaces Master Plan

Metro, 1992

The Metropolitan Greenspaces Master Plan program was developed through a collaborative process involving many groups including business, residents, non-profits, and local and regional jurisdictions. The master plan consisted of a vision for a regional system of natural areas, open spaces, trails, and greenways. The master plan was developed in response to the rapid growth in population and development in the region.

The master plan's vision reflect the importance of greenspaces for the future and the need to reposition our planning and funding priorities to protect the existing natural areas and greenspaces. The following goals are outlined in the document:

- Create a cooperative regional system;
- Protect and manage significant natural areas;
- Preserve the diversity of plan and animal life;
- Establish a system of trails;
- Restore green and open spaces;
- Coordinate management and operations;
- Encourage environmental awareness; and
- Educate citizens about the regional system.

The master plan identified natural areas, trails, greenways, natural corridors and river trails that are major components of the proposed greenspaces systems. The natural areas included a large portion of the Willamette River watershed. The Willamette River Greenway is identified as regional trail.

Regional Trails & Greenways

Prepared by Metro, 2003

The Regional Trails and Greenways Connecting Neighborhoods to Nature outlined a vision to establish a network of regional trails and greenways that connect the cities, centers, parks, natural areas and neighborhoods of the region.

This document provided a complete system of regional trails and greenways and identified existing and proposed trails in the region. The Willamette Shoreline Trolley Rail with Trail was identified as a proposed trail. The proposed trail would run along a former streetcar line corridor from the Willamette Park in Portland to downtown Lake Oswego between Highway 43 and the Willamette River. The planned use of this right-of-way is a future rail transit project, where there is room for both; the trail is purposed as a "rails with trail" project.

Green Trails: Guidelines for Environmentally Friendly Trails

Prepared by Metro, 2004

The Green Trails Handbook is intended to provide guidelines for environmentally friendly (or green) trails that support Metro's Greenspaces Master Plan. The guidelines presented support the planning, designing, construction and maintenance of trails to minimize the impacts on the region's natural resources.

Trails have many different purposes, such as commuting or recreation or sometimes both uses. This handbook addresses two kinds of trails: trails in urban corridors that serve different uses as high levels, and trails in natural areas that serve a limited variety and level of use.

Southwest Urban Trails Plan

City of Portland, 2000

The Southwest Urban Trails Plan was developed to increase pedestrian access through Southwest Portland for both recreation and transportation uses. The plan identified a network of urban trails connecting schools, parks, transit, shopping and recreation, as well as a providing a connection to the regional trail system. The proposed urban trail improvements consisted of trails, sidewalks, safe crossings, stairs, pedestrian bridges, signage and walkways.

There were seven trails proposed in this plan:

- North Macadam to Hamilton/Schools Ferry;
- Red Electric Line;
- Willamette Park to Multnomah/Garden Home;
- Stephens Creek;
- Lewis & Clark College to Metzger Park;
- Goose Hollow to Tyron Creek State Park; and
- Washington Park to Lesser Park.

Lake Oswego Trails and Pathways Master Plan

Lake Oswego, 2003

The Lake Oswego Trails and Pathways Master Plan was adopted on June 17, 2003 and outlined a vision of a network of trails and pathways that would enhance the community's connections to the Willamette and Tualatin Rivers, provide education and cultural opportunities, provide healthy recreational and transportation options, promote economic growth, and improves community safety. The Master plan was adopted by Lake Oswego City Council on June 17, 2003.

The master plan identified a set of goals that would create a comprehensive trail system, provide future pathway opportunities, connect communities and community activity centers, serve a variety of users, provide user amenities, connect to private and public developments, provide connections to transit, and enable a large percentage to population to access and use the system.

The master plan presented design guidelines for trails and pathways based on purpose and function including Regional Trails, Community Connector Trails, and Local Access Trails and Accessways.

The design guidelines included a description of trail types and the best application for each type. The design guidelines also addressed the standards for amenities, signing and striping for the trails and pathways.

The master plan inventoried the existing trails and pathway system and recommended projects and improvements based on existing conditions and the goals of the project. Projects identified in the plan are categorized under three tiers based on priority and phasing. Tier I projects included short-term, top priority projects recommended for implementation within five to 10 years. Tier II projects were mid-term projects to be implemented in 10-25 years. Finally, Tier III projects were long-term projects to be implemented in the next 25-50 years.

The master plan identified the Willamette Greenway and the Willamette Shore Trolley as Tier I Regional Trail projects.

Summary

Metro, Lake Oswego, and the City of Portland have all identified the need for established network of trails and greenways. Both regional and local plans identify the need for a complete system of trails and greenways will provide and enhance commuting and recreational opportunities. The trail and greenway system should connect communities and community activity centers.

Metro identified the Willamette River Greenway as an important regional trail. A system of natural areas, trails, greenways, natural corridors and river trails are major components of the proposed greenspaces systems. The natural areas included a large portion of the Willamette River watershed. Metro's Regional Trails and Greenways plan identified the Willamette Shore Line right-of-way as a future rail transit project and where feasible should include both rail and trail. Metro has also provided a handbook that guides the design and development of environmental friendly (or "green") trails.

Both Southwest Portland and Lake Oswego have identified the need for an interconnected system of trails and pathways. Lake Oswego identified the Willamette Greenway and the Willamette Shore Trolley as Tier I (short-term - five to 10 years) Regional Trail projects.

VI. The Willamette Shore Line Right-of-Way

History and Purchase of the Right-of-way

The Willamette Shoreline Consortium purchased the Willamette Shoreline Right-of-Way from the Southern Pacific Railroad in 1988. The Consortium, comprised of the Oregon Department of Transportation, Metro, the cities of Portland and Lake Oswego, Clackamas and Multnomah counties and TriMet, manages the seven-mile right-of-way between RiverPlace and Lake Oswego. The Oregon Electric Railroad Society operates an excursion trolley service on the rail line. The Willamette Shoreline Consortium maintains and manages the right-of-way. The right-of-way was purchased to prevent the abandonment of the line and to preserve it for future passenger rail service.

The line is approximately seven miles long with a southern terminus in Lake Oswego and northern terminus in Portland at RiverPlace. Approximately 4.6 miles of the right-of-way is owned through fee title and the remainder is through a railroad easement. For the portions of the right-of-way that is owned through an easement, the easement is for rail purposes only.

There are some significant challenges in the corridor. There are several trestles (some of which are in need of repair) and a long tunnel. The right-of-way is narrow ranging from about 17 feet in some locations to as wide as 60 feet in others.

Since 1990, the City of Lake Oswego has leased from Portland the right-of-way for the purpose operating a trolley service on the line, Lake Oswego has contracted with a private operator to run the trolley service. Continuing the trolley operation is a viable means of preserving the corridor, especially the portions owned through easements.

The future presents a variety of long-term options for the use of the rail line. Some option that have been informally identified include light rail, commuter rail and streetcar operations. Many factors will determine the outcome. The type and timing of future passenger rail service in the corridor will likely be most significantly driven by the availability of funding.

History of Agreements on the Willamette Shore Line Right-of-Way

February 24, 2004

December 1986 – Intergovernmental Agreement for an option to purchase and one year lease of the Jefferson Street Rail Line from Southern Pacific Transportation Company.(MSD Resolution No. 86-715, December 1986).

November 1987 – Intergovernmental Operations Agreement. (MSD Resolution No. 87-834, December 1987)

1. Authorized Portland to enter into agreement with Oregon Electric Historical Society for 7/87 to 12/87.
2. Provided for revenue to be used for right-of-way maintenance.
3. Authorized Portland to take actions necessary to operate the rail service.
4. Required Portland to accept liability up to $300,000.
5. Required the Oregon Electric Railway Historical Society to provide insurance coverage.

July 1988 - Intergovernmental Agreement for the Purchase of the Jefferson Street Rail Line. (MSD Resolution No. 88-954, July 1988)

1. Repealed previous IGA for option and lease.
2. Defined the local jurisdiction contributions towards purchase.
3. Defined mechanism for purchase.
4. Authorized Portland to execute the purchase.
5. Defined that Portland would hold the title.
6. Defined mechanism for Portland to request assistance if cost of holding title was too high.
7. Provided for jurisdictions to access the right-of-way and prohibits charging permit fees. Conditioned Lake Oswego's access to:
   - Interim trolley would be secondary to future mass transit use
   - Provide insurance coverage
   - Provide capital improvements and routine maintenance
   - Provide opportunity to address concerns of adjacent property owners
   - Conform trolley service with laws
   - Pay taxes resulting from trolley operations
   - Allowed for construction of the Lake Oswego extension
8. Provided some funding to Lake Oswego for expenses related to the extension.
9. Limited obligations of parties.

June 1990 – Lease Agreement for the Jefferson Street Branch Rail Line Corridor (between Portland and Lake Oswego)

1. Provided for lease to Lake Oswego.
2. Term was for 5 years.
3. Provided that rent was $1 for 5 years.
4. Provided that Lake Oswego pay taxes and assessments.
5. Provided that use was for an interim trolley only.
6. Defined that Lake Oswego would provide capital improvements and maintenance.
7. Lake Oswego accepted the corridor as is.
8. Provided for future use for mass transit.
9. Provided for right of entry by Portland.

10. Recognized existing crossing agreements.
11. Defined that Lake Oswego would provide a process for complaint resolution.
12. Provided that Lake Oswego would get licenses and permits.
13. – 30. other misc. provisions

Summer 1994 – Intergovernmental Agreement for the Management of the Willamette Shore Line Right-of-Way. (Metro Resolution No. 94-1868, Jan. 1994)

1. Established the Consortium.
2. Defined structure of the Consortium.
3. Called for annual meetings of the Consortium.
4. Provided for protection of the Right-of-way.
5. Specified that the City of Portland would continue to hold title to the right-of-way.
6. Provided that Lake Oswego would continue to provide operations and maintenance.
7. Defined provisions for defense of claims.
8. Stipulated that changes of use would be subject to approval by the Consortium.
9. Called for an interim plan for improvement to the right-of-way.
10. Called for coordination of land uses adjacent to the right-of-way.

Winter 2003 – Intergovernmental Agreement allowing the City of Portland (BES) to use a portion of the Right-of-way for the Southwest Sewer Interceptor Line (Metro Resolution No. 03-3375)

1. Authorized BES to construct a portion of the Southwest Sewer Interceptor Project within the Right-of-way between SW Bancroft Street and the Heron Point Condominiums.
2. Required BES to compensate the Consortium for the easement.

Winter/Spring 2004 – Intergovernmental Agreement regarding maintenance and funding (Metro Resolution No. 04-3433)

1. Authorizes the Consortium to adopt an annual work program and budget.
2. Lake Oswego manages Operations and Maintenance of the Right-of-Way
3. TriMet manages Capital Improvements
4. TriMet acts as right-of-way agent
5. Ten year agreement

VII. Summary/Conclusion

Throughout the years, Highway 43 has been recognized as a congested corridor. Extensive widening of the corridor has been deemed unfeasible due to physical constraints and instead, recommendations to mitigate congestion and improve mobility consisted of providing transportation choices to the single occupancy vehicles including bicycle, pedestrian, and high capacity transit improvements.

The Background Report provides context for the Alternatives Analysis and helps define the potential transit and trail alternatives. The previous and ongoing work in the corridor will pinpoint issues that have been put to rest and those that need further development. The project team will be able to build upon previous work and coordinate with ongoing projects.

In addition to the previous and ongoing projects, adopted plans and policies support the Willamette Shore Line Transit and Trail Alternatives Analysis.

The following table summarizes the lessons learned through the Background Report.

Lessons Learned

Mode	Lessons Learned
Automobile	
	▪ Capacity Constraints are recognized ▪ Widening and tolling of Highway 43 is not recommended
Transit	
	▪ River Transit was not carried forward in the South Corridor Alternatives Analysis ▪ John's Landing Master Plan identified a light rail alignment ▪ Need for rail transit backed by South Waterfront development and North Macadam plans, John's Landing, Lake Oswego, and adopted regional and local plans ▪ History of the Willamette Shore Line right way anticipated rail use ▪ Park and ride and transit center in Lake Oswego have been studied
Bicycle and Pedestrian	
	▪ Need for a established network of trails and greenways was identified in regional and local plans ▪ Adopted plans and policies recognize the need for an interconnected trail system for commuting and recreational opportunities

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