N/NE Quadrant and I-5 Broadway/Weidler Plans

Facility Plan

I-5 Broadway/Weidler Interchange Improvements

October 2012

Recommended Draft

CENTRAL CITY 2035

N/NE QUADRANT

CITY OF PORTLAND, OREGON 1851

Oregon Department of Transportation

Facility Plan:
I-5 Broadway/Weidler Interchange Improvements

The overall project purpose is to...
Improve safety and operations on I-5 in the vicinity of the Broadway/Weidler interchange.

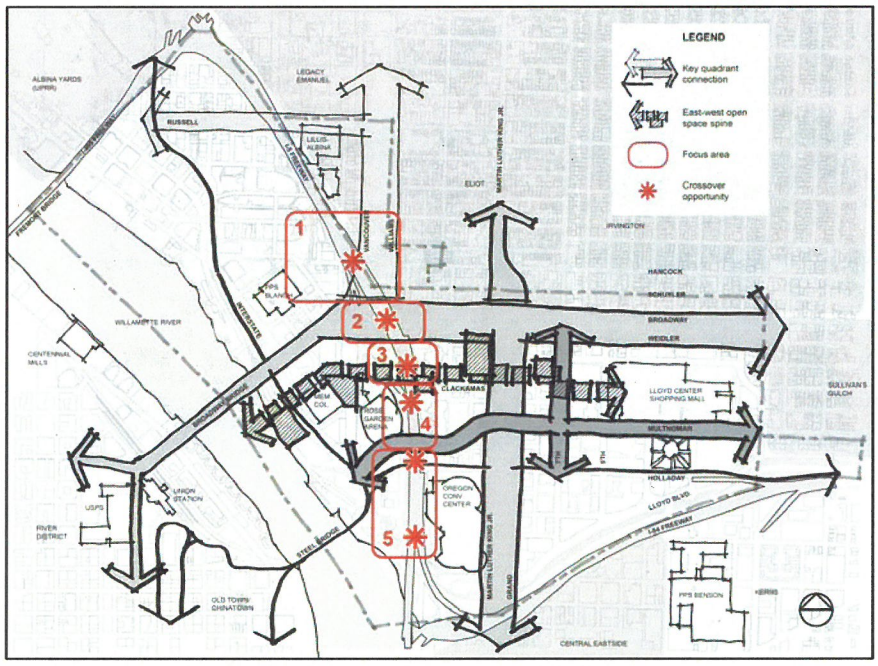
OBJECTIVES:

ODOT and the City of Portland, through the Stakeholder Advisory Community (SAC) and extensive public outreach, explored and found solutions to meet the following objectives:

EASE CONGESTION LEVELS AND IMPROVE SAFETY

ENHANCE PEDESTRIAN AND BICYCLE ROUTES

IMPROVE FREIGHT MOVEMENT



Integration of Transportation and Land Use Concepts in the N/NE Quadrant Plan

Acknowledgments

Oregon Transportation Commission (OTC)

Pat Egan, Chair
Tammy Baney, Commissioner
Mark Frohnmayer, Commissioner
David Lohman, Commissioner
Mary Olson, Commissioner

Oregon Department of Transportation (ODOT)

Matt Garrett, ODOT Director
Jason Tell, ODOT Region 1 Manager

ODOT Project Staff

Rian Windsheimer, ODOT Region 1 Program & Policy Manager
Andy Johnson, Major Projects Manager
Todd Juhasz, Senior Planner Major Projects, Project Manager
Tim Wilson, Region 1 Project Manager
Fred Eberle, Project Oversight
Chi Mai, Traffic Data and Analysis
Mark Johnson, Region 1 Preliminary Design
Lindsay Higa, Region 1 Preliminary Design
Canh Lam, Region 1 Preliminary Design
Sarah Abbott, Major Projects Planner
Mark Barrett, Engineer in Training
Alex Steinberger, Major Projects Intern

City of Portland, City Council

Sam Adams, Mayor, Commissioner-in-Charge
Nick Fish, Commissioner
Amanda Fritz, Commissioner
Randy Leonard, Commissioner
Dan Saltzman, Commissioner

City of Portland, Bureau of Planning and Sustainability (BPS)

Susan Anderson, Director
Joe Zehnder, Chief Planner

BPS Project Staff

Central City Team
Steve Iwata, Planning Manager
Karl Lisle, Project Manager
Stephanie Beckman, Senior Planner
Diane Hale, Associate City Planner
Mark Raggett, Senior Planner
Nicholas Starin, City Planner II
Spencer Williams, Associate Planner

City of Portland, Bureau of Transportation (PBOT)

Tom Miller, Director
Paul Smith, Planning Manager
John Gillam, Manager

PBOT Project Staff

Mauricio Leclerc, Senior Transportation Planner
Grant Morehead, Associate Transportation Planner
Ning Zhou, Transportation Modeling & Analysis

Project Consultant Team

URS Corporation

John Cullerton, Project Manager
David Zagel, Transportation Planning Lead
Ted Rutledge, Freeway Design
Mark Unger, Freeway Design
Stephanie Maltby, Roadway Design & Structures
Seth Gallant, Transportation Planner, GIS Analyst
Terry Kearns, Environmental Lead
Emily Whiteman, Environmental Planner
Martha Richards, Environmental Planner
Jon Campbell, GIS Analyst & Graphics

HNTB

Bill James, Freeway Operations/Design Lead
Terry Song, Infrastructure and Design

ZGF Architects, LLP

Charles Kelly, Project Manager, Urban Design Lead
Bob Wood, Senior Urban Designer
Kate Walker, Project Urban Designer
Paddy Tillett, Planning Lead
Nolan Lienhart, Project Planner

Alta Planning + Design

Steve Durrant, Project Manager
Mike Tressider, Pedestrian/Bicycle Planning Lead

DKS Associates

Alan Snook, Project Manager, Transportation Planner
Ray Delahanty, Traffic Engineer
John Bosket, Traffic Engineer
Miranda Wells, Traffic Engineer

North/Northeast Quadrant and I-5 Broadway/Weidler Plans
Stakeholder Advisory Committee (SAC)

Sam Imperati, Facilitator, Institute for Conflict Management
Melissa Egan, Institute for Conflict Management

Members

Lloyd Lindley, AIA Portland/ASLA Portland, Co-Chair
Tracy Whalen, ESCO Corporation, Co-Chair
Gary Eichman, Portland Freight Committee, Co-Chair (past)

Matt Arnold, Bicycle Advisory Committee
Wynn Avocette, At-Large
Pauline Bradford, Interstate URAC, Northeast Coalition of Neighborhoods
Daniel Deutsch, Alora Development
Malina Downey, UPS
Debra Dunn, Oregon Trucking Association
Dean Gisvold, Irvington Neighborhood Association
Cynthia Gomez, Latino Network (past)
Carol Gossett, Sullivan's Gulch Neighborhood Association
Heidi Guenin, Upstream Public Health
Damien Hall, At-Large
Sean Hubert, Central City Concern
Wayne Kingsley, Central Eastside Industrial Council
Wade Lange, Langley Investment Properties
Eric Lovell, Lower Albina Council/ Uroboros Glass Studio
Jenny Lyman, TriMet
Gary Marschke, N/NE Business Association
Brock A. Nelson, Union Pacific Railroad
Jodi Parker, Building trades/Columbia Pacific
Midge Purcell, Urban League
Paul Riggs, Building trades (past)
Owen Ronchelli, Lloyd Transportation Management Association
Wanda Rosenbarger, Lloyd Center
William Ruff, Property owners/developers
Bob Sallinger, Audubon Society
Phil Selinger, Willamette Pedestrian Coalition
Gary Warren, Lloyd District Community Association
Mike Warwick, Eliot Neighborhood Association
Justin Zeulner, Trail Blazers/ Portland Arena Management

Alternates/Previous Members

Ed Abrahamson, Irvington Community Association Land Use Committee
Joanna Agee, Alora Development
Mike Bernatz, Ashforth Pacific
Steve Bozzone, Active Right of Way
Brittain Brewer, Sullivan's Gulch Neighborhood
Steve Cole, Irvington Community Association Land Use Committee
Dennis Henderson, Lloyd Center
J. Isaac, Portland Arena Management
Doug Klotz, Portland Pedestrian Advisory Committee
Andrea Marquez-Horna, Latino Network
Heather McCarey, Bicycle Advisory Committee
Cate Millar, GamePlan/EastBank
Chris Oxley, Portland Arena Management
Kelly Rodgers, Coalition for a Livable Future
Bob Russell, Oregon Trucking Association
Laurie Simpson, Eliot Neighborhood Association
Martin Soloway, Central City Concern
Joice Taylor, N/NE Business Association
Lindsay Walker, Lloyd Transportation Management Association
Kurt Widmer, Widmer Brothers Brewing

Non-Voting Members

Lew Bowers, Portland Development Commission
Chris Deffebach, Metro
Teri Dressler, Oregon Convention Center
Jessica Engelmann, TriMet
Peter Englander, Portland Development Commission
Sara King, Portland Development Commission
Susie Lahsene, Port of Portland
Alan Lehto, TriMet
Paul Smith, Portland Bureau of Transportation
John Williams, Metro
Rian Windsheimer, ODOT
Joe Zehnder, Bureau of Planning and Sustainability

Table of Contents

List of Figures

List of Tables

Acronyms and Abbreviations

BPS	Bureau of Planning and Sustainability, City of Portland
CoP	City of Portland
MMA	Multimodal Mixed-use Area
ODOT	Oregon Department of Transportation
PBOT	Portland Bureau of Transportation, City of Portland
SAC	Stakeholder Advisory Committee
TDM	Transportation Demand Management
TMA	Transportation Management Area
TMP	Traffic Management Plan
TSM	Transportation System Management

The Facility Plan

Study Area

The project study area is at the crossroads of the Portland freeway system, as shown in Figure 1. I-5 is the north-south freeway facility and extends through the metropolitan area; in fact, it runs the full length of the west coast of the United States from Canada to Mexico. Within the project area, I-84 intersects I-5 and extends east across the U.S. A mile and a quarter north of I-84, I-405 connects to I-5 at the Fremont Bridge interchange. This interchange is the northerly connection of the I-405 loop around the west side of downtown Portland, with the southerly connection at the west end of the Marquam Bridge. Within the overlap section, I-5 serves through traffic as well as connecting traffic between I-84 and I-405.

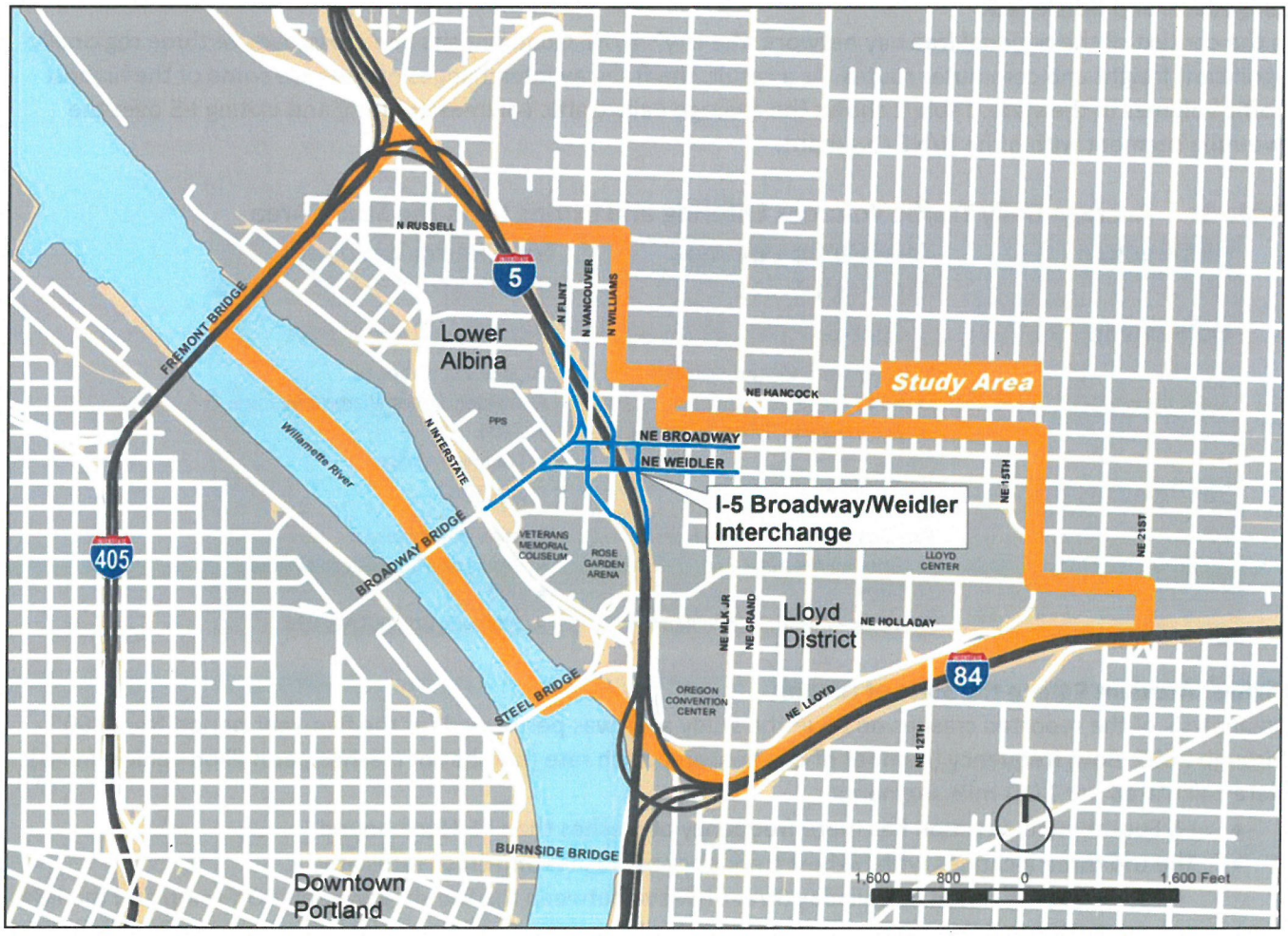


Figure 1: Study Area and Vicinity Map

Facility Function

- I-5 is classified as an Interstate facility and is both a Freight Route and a Truck Route.
- I-84 is classified as an Interstate facility and is both a Freight Route and a Truck Route.
- I-405 is classified as an Interstate facility and is both a Freight Route and a Truck Route.

Interchange Function

The I-5 Broadway/Weidler Interchange is located on I-5, in between I-405 to the north and I-84 to the south. The function of the I-5 Broadway/Weidler Interchange is to serve the Portland central city, which includes the industrial area of Lower Albina and the commercial activity along the Broadway/Weidler corridor, regional attractions such as the Rose Garden Arena and the Lloyd Center mall, and the surrounding community.

Purpose

The purpose of the I-5 Broadway/Weidler Interchange Improvement Plan is to improve the safety and operations on I-5 in the vicinity of the I-5 Broadway/Weidler Interchange.

Project Problem/Issues

Congestion and Bottleneck

In the context of the regional freeway network, the city's N/NE Quadrant sits at a crossroads of three regionally-significant freight and commuter routes. As a result, the freeway interchanges experience some of the highest traffic volumes in the state. Table 1 shows the average daily traffic volumes entering and exiting I-5 over the two-mile segment within the N/NE Quadrant.

Table 1: Average Daily Traffic Volumes Entering and Exiting I-5 in the Study Area

I-5 Direction	Total Ramp Volumes Entering I-5	Total Ramp Volumes Exiting I-5
Northbound	29,970	37,530
	Includes entrance ramps from: • I-84 • Broadway/Williams Avenue	Includes exit ramps to: • Weidler Street/Victoria Avenue • I-405 • Greeley Avenue
Southbound	34,020	47,200
	Includes entrance ramps from: • Greeley Avenue • I-405 • Wheeler/Winning/Williams	Includes exit ramps to: • Broadway/Vancouver Avenue • I-84 • Morrison Bridge/Hwy 99E

Highest Accident Rate in the State of Oregon

An analysis of the reported crashes on I-5 in the study area was performed for the five-year period from 2005 through 2009. Both frequency (number of crashes) and crash rate (number of crashes per million vehicle miles) were calculated per 1/10-mile segments.

- I-5 Southbound direction has more frequency of crashes than I-5 Northbound
- The top three locations with highest frequency of crashes and crash rates are:
    1) I-5 Southbound at Holladay Street (weave between the Winning/Wheeler On-ramp and the I-84 Eastbound Off-ramp)
    2) I-5 N at Multnomah (weave between the I-84 W On-ramp and the Weidler Off-ramp)
    3) I-5 S at Thompson Street (weave between the I-405 on-ramp and the Broadway Off-ramp)
- I-5 within the study area has the highest crash rate within the entire state
- Three times the crash rates at the I-5 Terwilliger curves
- The type of crashes in order of ranking from highest are: rear-end, sideswipe, fixed and other.

The attributing factors to the high number of crashes and safety problems in the study area are:

- Heavy congestion
- Short weaving distances
- Lack of shoulders for accident/incident recovery

Operational Friction and Congestion Caused by Heavy Weaving

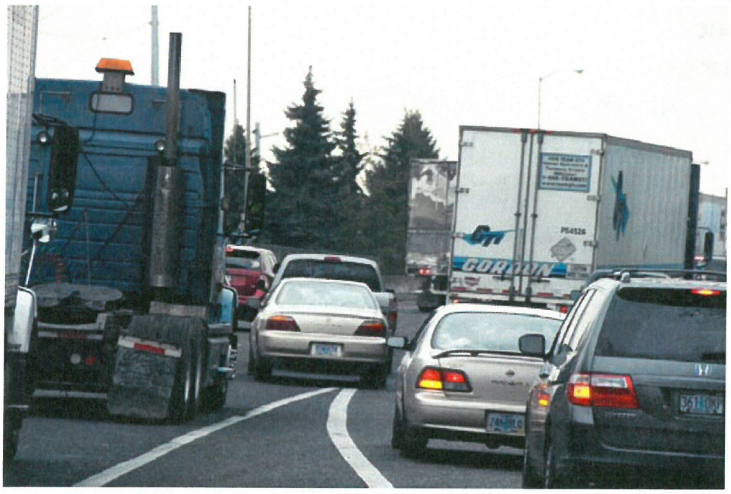
Weaving analysis and field observations were performed for the four weaving sections on I-5 within the study area:

- I-5 Northbound between I-84 Westbound and Weidler Off-ramp
- I-5 Northbound between Broadway On-ramp and I-405 Off-ramp
- I-5 Southbound between I-405 On-ramp and Broadway Off-ramp
- I-5 Southbound between Winning/Wheeler On-ramp and I-84 Eastbound Off-ramp

I-5 Northbound Weaving Section between Broadway On-ramp and I-405 Off-ramp

Two weaving sections currently perform at failing level-of-service during the AM and PM Peak periods:

- I-5 Southbound between Winning/Wheeler On-ramp and I-84 Eastbound Off-ramp
- I-5 Northbound between I-84 Westbound and Weidler Off-ramp



I-5 Southbound Weaving Section between Winning/Wheeler On-ramp and I-84 Eastbound Off-ramp

The failing operations will be exacerbated in the future, with the most critical failure being the weave from I-5 Southbound from the Winning/Wheeler On-ramp to the I-84 Eastbound Off-ramp. This bottleneck will cause queuing that extends beyond the weaving section to the north and onto the Fremont Bridge.

The Land Use-Transportation Connection

The N/NE Quadrant of the central city includes considerable multimodal infrastructure to support all types of travelers on all modes. In addition to the I-5 freeway and the local street network, four light rail transit (LRT) lines run through the area, converging on the Rose Quarter Transit Center next to the Rose Garden Arena. The City of Portland is constructing streetcar lines on Broadway/Weidler to connect with the Pearl District and the central east side of Portland. Eight TriMet bus lines also connect at the transit center.

The I-5 Broadway/Weidler Interchange Improvements Facility Plan proposes many new crosswalks that will improve pedestrian safety and connections to and from these major transit amenities. Two major bicycle commute routes run through the area: 1) the major east-west route along Broadway and Weidler, and 2) the major north-south route along Williams and Vancouver. The plan proposes a new east-west pedestrian and bicycle overcrossing at Clackamas Street to connect the Lloyd District with the Rose Quarter. The plan also includes a new Hancock/Dixon overcrossing structure and freeway lid that will allow for effective construction staging, improve viability of the PPS Blanchard site and provide a supplementary crossing to the north of "the Box" near the I-5 Broadway/Weidler Interchange.

The Lloyd Transportation Management Area (TMA) is one of the most successful TMAs in the Portland metropolitan region. The area is currently predominantly commercial and industrial. However, the proposed changes to land use designations in the N/NE Quadrant Plan will encourage a much greater mix of uses, especially in the central Lloyd District where significant density and mix of uses are anticipated.

The City of Portland and ODOT have jointly developed this freeway and local transportation plan, and have integrated the transportation and land use components. The transportation components were developed assuming existing zoning, except for changes at the Portland Public Schools (PPS) Blanchard site and some changes to allow more diverse uses in the central Lloyd District. The overall trip vehicle trip generation for the district is expected to be the same or lower than under previous zoning entitlements. The changes related to land use and the transportation recommended by this plan have been analyzed, and queues are not anticipated on the I-5 exit ramp deceleration areas (see Table 2).

Table 2: Available Storage and Predicted Queues for Exit Ramps at I-5 Broadway/Weidler Interchange

Direction	Storage Available	Predicted Queue
Southbound	955 feet	500 feet
Northbound	1130 feet	350 feet

Multimodal Mixed-use Area

The I-5 Broadway/Weidler Interchange is within ¼-mile of an existing interchange. ODOT staff concurs that the Multimodal Mixed-use Area (MMA) designation is appropriate for the city's companion N/NE Quadrant Plan and ODOT must be consulted prior to any future plan amendments within the MMA boundary and will remain in effect as long as progress is being made towards the implementation of project elements.

Summary of the Recommended Concept and Elements

The Recommended Concept, supported by a majority of the Stakeholder Advisory Committee (SAC) via a consensus-driven process, and its elements are based on technical assessments of bicycle and pedestrian operations, urban design/land use potential, traffic operations and safety. Table 3 describes the Facility Plan elements and their outcomes and Figure 2 and Figure 3 illustrate the extent of improvements included in the Recommended Concept. Figure 4 shows aerial perspectives of the existing conditions in the Rose Quarter and how the area would look with the improvements included in the Recommended Concept.

The Facility Plan Element 1, **Transportation System Management (TSM)** and **Transportation Demand Management (TDM) Strategies,** is designed to optimize the overall performance of the transportation system and to reduce vehicle demand, especially for commuter trips in the peak periods.

TSM measures are designed to make maximum use of existing transportation facilities, and include:

- Traffic engineering measures (e.g., such as signal timing changes, provision of turn lanes, turn restrictions and restriction of on-street parking to increase the number of travel lanes without road widening) that improve the operations and efficiency of streets and intersections;
- System monitoring and traveler information systems (e.g., Intelligent Transportation Systems (ITS), variable message signs, etc.);
- Facility management systems (e.g., ramp meters, special use lanes, signal priority for special users such as transit); and
- Incident management systems (e.g., incident response and recovery teams).

TDM strategies are most effective in areas with high concentrations of employment and where a robust transit system exists. Generally, the strategies are easiest to implement where there are large employers or where a TMA has been established to pool the efforts of many smaller employers. TDM measures include strategies that: 1) shift modes like carpooling, vanpooling, transit, bicycling and walking programs; 2) shift trips to non-peak periods, such as flexible work schedules and off-peak shifts; and 3) include telecommuting, which eliminates trips.

Components of these TSM and TDM measures are in use today. The City of Portland and ODOT will continue to monitor, adjust and implement the strategies as needed.

Figure 2: Overall Project Extent of the Recommended Concept

Table 3: I-5 Broadway/Weidler Interchange Recommended Concept Facility Plan Elements

Facility Plan Elements	Outcome
1. Implement Transportation System Management (TSM) and Transportation Demand Management (TDM) Strategies	Improve freeway operations and reduce automobile trips.
2. Construct Mainline Freeway Safety Elements	Improve freeway operations and reduce accidents 30-50 percent.
a. Extend auxiliary lanes in both directions.	
b. Add full-width shoulders in both directions.	
3. Re-construct Three Freeway Structures and Lid The Mainline Freeway Safety Elements require rebuilding the Weidler, Broadway and Williams structures over I-5; the new structures will be designed to meet seismic and clearance standards.	The new structures improve facilities for all modes; the lid allows for more effective construction staging, improves the urban design of the interchange area and improves the area's development potential.
4. Relocate I-5 Southbound On-Ramp to Weidler/Williams (from current location at Wheeler/Winning Way/Williams)	Increases weave distance, removes ramp traffic from local streets, Wheeler and Winning Way. Allows pedestrian/bicycle-only overcrossing at Clackamas.
5. Convert Williams to a Reverse Traffic-Flow Connection between Broadway and Weidler Includes a barrier-separated pedestrian/bicycle path in the middle.	Allows more efficient signal timing, improves bike and pedestrian connections through interchange and simplifies vehicular movements.
6. Construct Clackamas Pedestrian/Bicycle Overcrossing Establishes connection over I-5 from Winning Way to Clackamas.	Increases multimodal connectivity across I-5, links central Lloyd District to the Rose Quarter, provides supplementary crossing south of "the Box."
7. Re-construct the Vancouver Structure; Remove the Flint Structure; Reconfigure streets North of Broadway to include Hancock/Dixon Structure and Lid	The Vancouver structure must be replaced to accommodate mainline freeway improvements. The Hancock/Dixon structure and freeway lid allow for effective construction staging, improve viability of the PPS Blanchard site and provide a supplementary crossing to the north of "the Box."
North of Broadway elements include:	
1. Rebuild Vancouver Avenue structure	
2. Implement traffic calming at Williams/Hancock	
3. Remove Flint between Tillamook and Broadway	
4. Maintain Wheeler in front of the Leftbank as one-way	
5. Connect Flint as a two-way street south of Weidler	
6. Add signals at Broadway/Wheeler and Broadway/Ross	

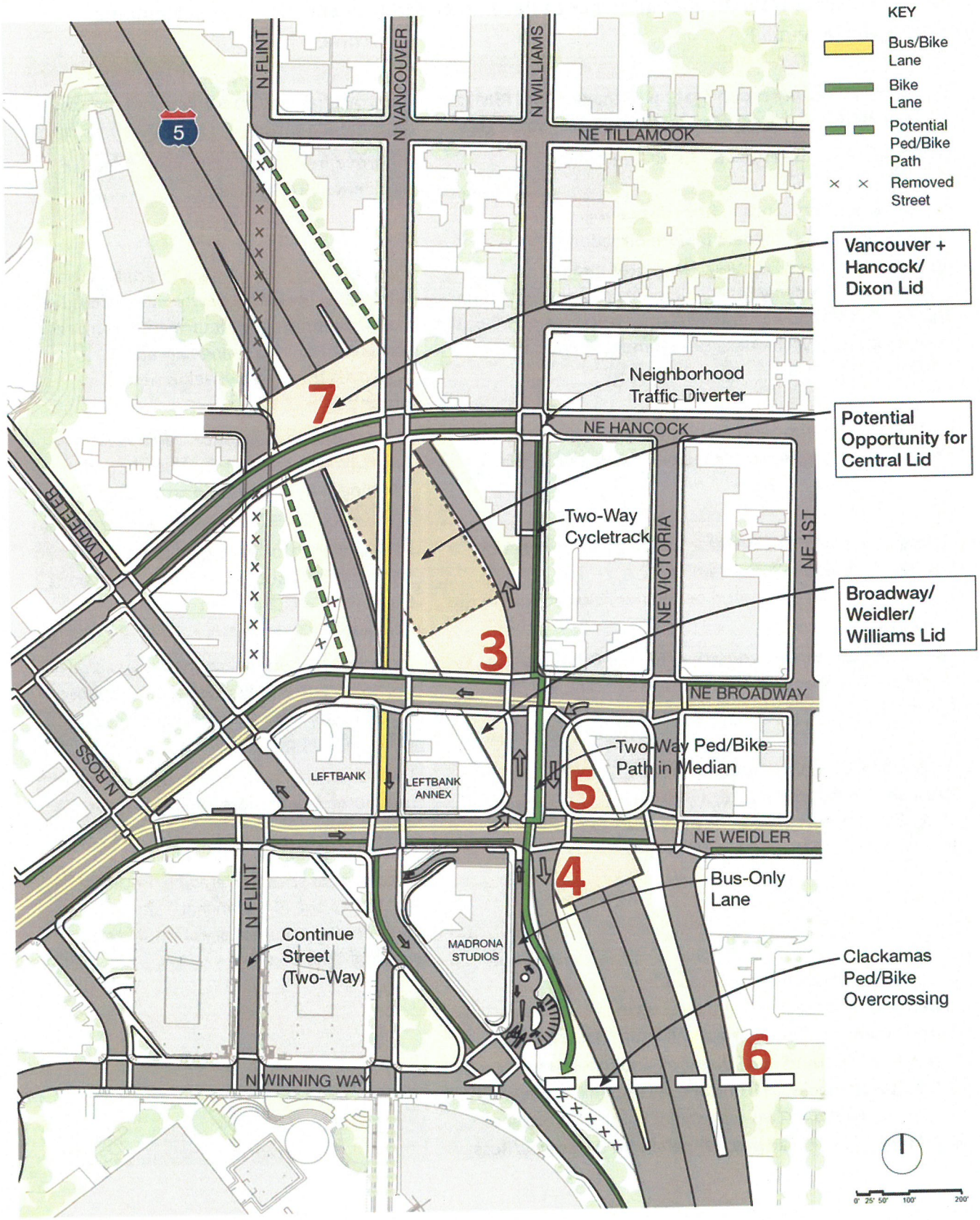
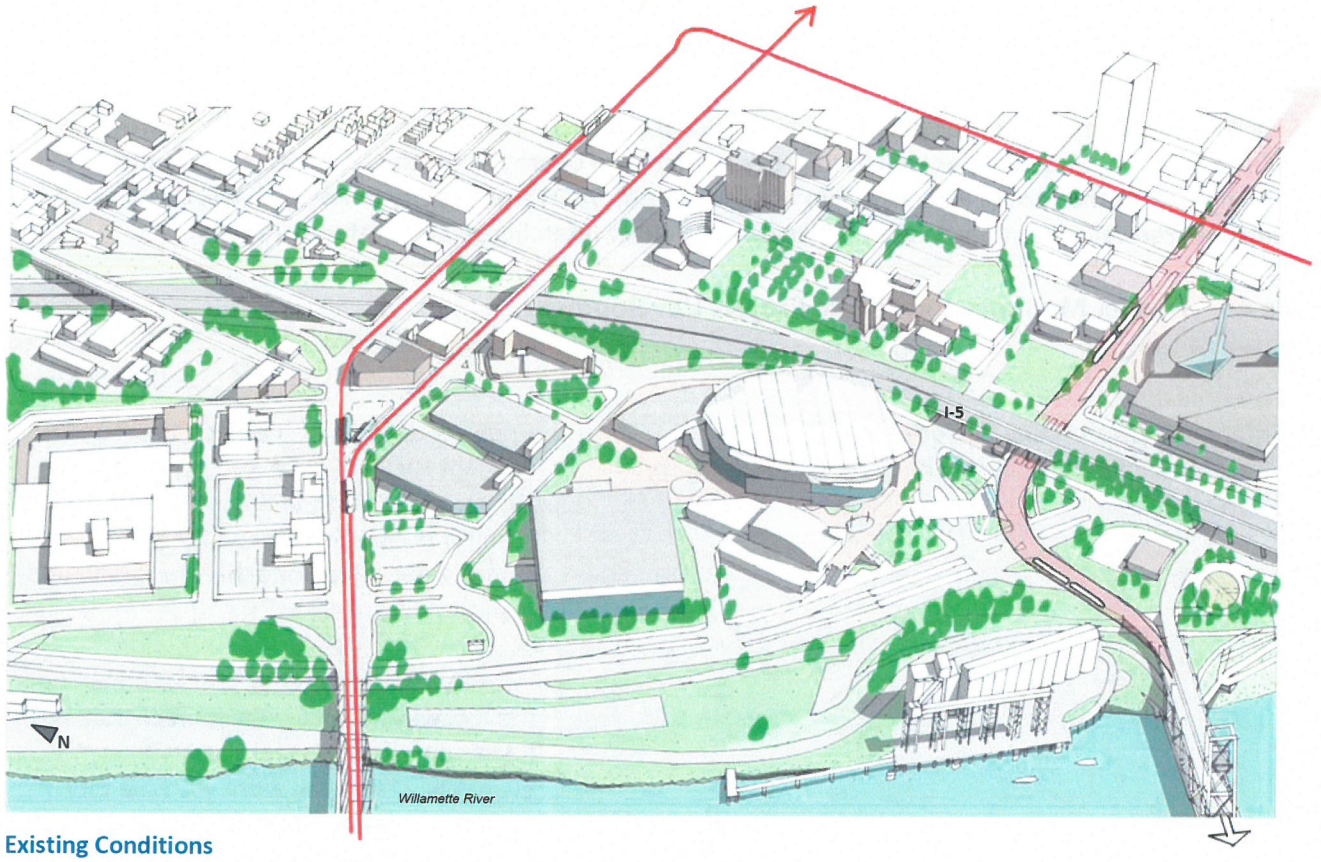
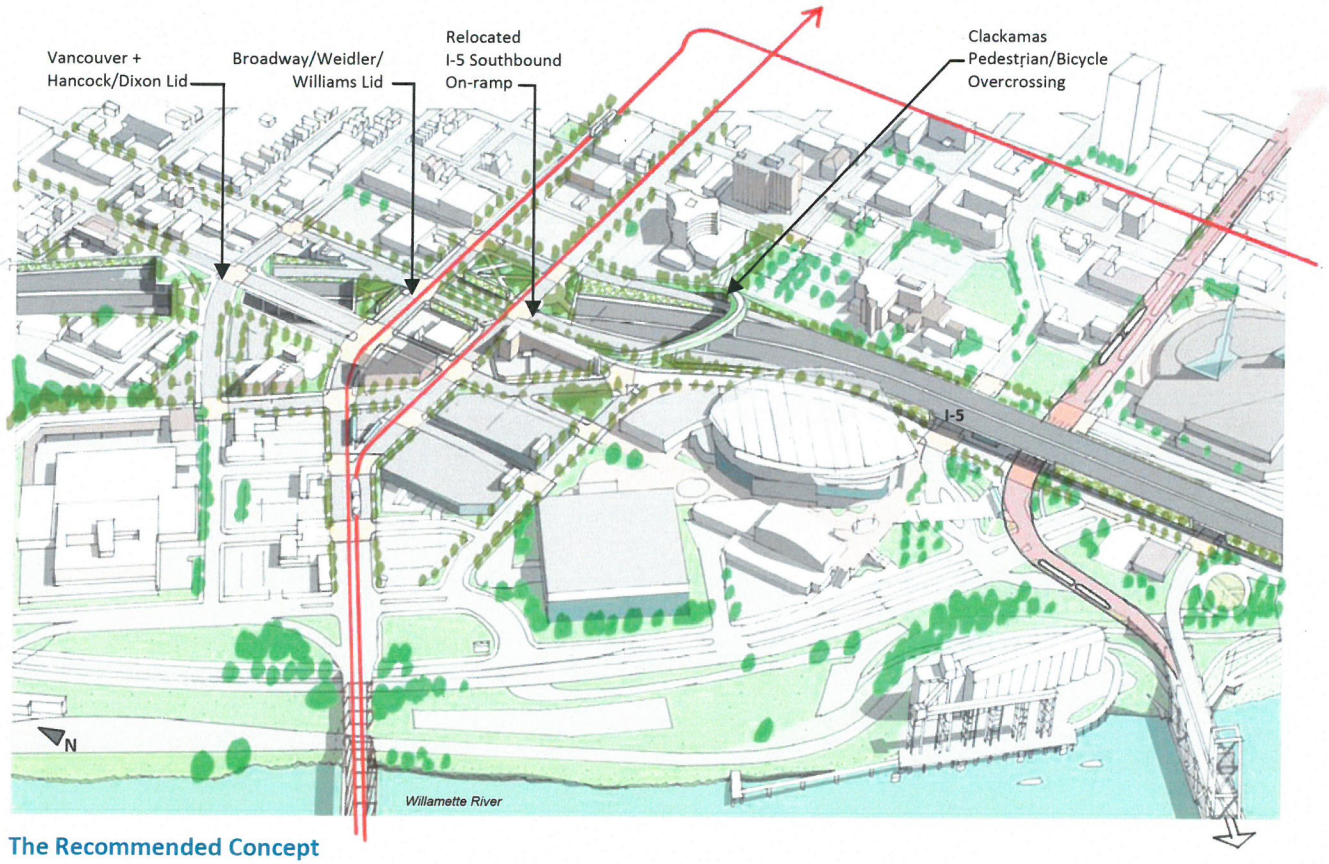


Figure 3: Enlarged "Box" Area of the Recommended Concept



Existing Conditions



The Recommended Concept

Figure 4: Aerial Perspectives of Existing Conditions and the Recommended Concept

Project Monitors and Future Project Development

The Facility Plan elements of the Recommended Concept (Table 3) are expected to significantly improve I-5 mainline operations and safety as well as improve interchange operations at the I-5 Broadway/Weidler Interchange. Once the Facility Plan elements are completed, ODOT and the City of Portland will continue to monitor the freeway operations in the I-5 Broadway/Weidler Interchange area (refer to Table 4).

Table 4: Project Monitors and Future Project Development

Project Monitors	Notes
1. Safety and Operational Performance **- Southbound Braided Ramp or other freeway safety improvements**	Upon completion of the Recommended Concept Facility Plan elements described above, ODOT and the City of Portland will monitor the performance of the completed project for achieving safety and operational goals. If safety and operational issues remain on the freeway after construction of the Recommended Concept Facility Plan elements, ODOT will work with the City of Portland to initiate a public process to consider additional measures such as a southbound braided ramp from Broadway to I-84 or other options developed through a public process. A southbound braided ramp should not be precluded by the construction of the Recommended Concept Facility Plan elements.

Implementation Actions

Project Development and Project Management

1. Proceed with next phase of project development and complete Preliminary Engineering (PE) and environmental phases for federal funding.
2. Continue project management partnership between the City of Portland and ODOT.
   - Develop work scope and schedule.
   - Define environmental process
   - Develop intergovernmental agreement for completion of PE/environmental studies.
3. Develop public involvement process for PE/environmental phase and actions to resolve issues identified in the I-5 Broadway/Weidler Interchange Improvement Plan.
4. Special considerations will be discussed and identified during Preliminary Engineering and recommended as part of the Final Design/Engineering. These include:
   - Construction management strategies that can provide incentives to minimize construction periods, impacts, and costs;
   - Incentives for minority hiring; and
   - Strategies to support local businesses.

Preliminary Engineering

The following are key products at the completion of Preliminary Engineering:

1. Complete PE level of engineering:
   - Develop project cost estimates.
   - Complete environmental documentation.
   - Identify potential construction phasing.
   - If phasing is required, the City of Portland and ODOT will work together to match phases to the funding sources available.

2. Project agreements at the completion of PE:
   - Signals will continue to be timed so as to avoid queues backing up into the deceleration area of the I-5 Southbound exit ramp at Broadway.
   - Crosswalks will be provided at all signalized locations and should be provided at all safe and feasible locations.
   - The Rose Quarter Traffic Management Plan (TMP) should be updated with the participation of ODOT, City of Portland and the Rose Garden Arena prior to construction.
   - A preliminary construction mitigation plan will be developed that would include efforts to minimize impacts, support local businesses and support minority hiring.

Specific Design Coordination

Property impacts are of great concern to the neighborhoods, businesses and agencies working in this area. The following are issues that will require further examination by ODOT and the City of Portland as part of Preliminary Engineering with community involvement:

1. Seek a viable single lid design solution over I-5 between Weidler and Hancock by exploring mitigation measures for freeway noise and vehicle emissions, and by addressing the need for open space and economic development.
2. Develop specific measures to address property and parking impacts to the Paramount Apartments, the Portland Public Schools Blanchard site and other sites related to the proposed Hancock/Dixon connection. The number of parking spaces should be the same or more than existing conditions at the Paramount Apartments, the Leftbank Building, the Leftbank Annex and the Madrona Studios.

3. Develop a network of alternative safe and convenient bicycle/pedestrian connections to include:
   a. Enhanced facilities (including bicycle lanes, two-way cycle track, sidewalks and protected marked crossings) along Broadway, Weidler Street, Vancouver Avenue and Williams Avenue to include a wide, grade-separated multi-use path for Williams Avenue between Broadway and Weidler.
   b. The development of a new pedestrian/bicycle connection between the Flint Avenue/Tillamook Street intersection to the proposed Hancock/Dixon overcrossing.
   c. The development of a new pedestrian/bicycle connection from Hancock Street to Broadway while providing for potential parking mitigation, open space and redevelopment opportunities.
4. Define appropriate Eliot neighborhood traffic mitigation measures for the recommended Hancock/Dixon connection between Vancouver Avenue and Dixon Street to discourage cut-through traffic.
5. Refine a street design and circulation plan for the area in the vicinity of the I-5 Broadway/Weidler Interchange. The refined street design and circulation plan should address the following issues:
   a. Develop design elements that provide for safe and convenient access to the Leftbank Building and the Leftbank Annex.
   b. Develop and evaluate circulation alternatives and design elements for the area north of Broadway, south of North Wheeler Place and west of I-5 to:
      1. Address the changes to access and circulation around the Paramount Apartments by Investigating treatments for Wheeler Avenue, between Broadway and Hancock Street, in order to minimize cut through traffic at the west side of the Paramount but maintain access to the Lower Albina industrial district.
      2. Enhance bicycle access and safety to the proposed Hancock/Dixon connection over I-5 to the Broadway Bridge.
      3. Determine appropriate multimodal access and circulation to this area and Lower Albina.
   c. Develop and evaluate circulation alternatives for Wheeler Avenue, Winning Way, Center Court, Flint Avenue and Williams Avenue to:
      1. Enhance circulation in the area for all modes.
      2. Provide flexibility to manage event ingress and egress.
      3. Open up opportunities for redevelopment and placemaking.
   d. Develop design elements that address the changes to access and circulation to the Madrona Studios:
      1. Refine street design for Williams Avenue between Weidler Street and Wheeler Avenue to address access and circulation and on-street parking needs for the Madrona while also providing for bus, bike and pedestrian circulation.
      2. Provide for sufficient pedestrian and vehicle access to the Williams Avenue entrance to the Madrona Studios.
      3. Prepare an appropriate design treatment for the Weidler Street/Williams Avenue intersection for safe pedestrian and bicycle crossing.
      4. Visual or acoustic screening will be examined, designed and implemented between the Madrona Studios and the relocated on-ramp to I-5 at Weidler/Williams.
6. Develop design plans with TriMet for safe transit operation through the I-5 Broadway/Weidler Interchange.
7. Refine and finalize design for the Clackamas Overcrossing structure.
   a. Coordinate design with future access connections east of I-5.
   b. Coordinate design with future changes to traffic circulation west of I-5 and the relocation of the I-5 southbound on-ramp to Weidler/Williams.
   c. Study and implement an event parking management plan for the Rose Quarter area, including the area adjacent to the future Clackamas Pedestrian/Bicycle Overcrossing on the east side of I-5. The exact boundaries and scope of the study will be determined at a later date.
8. Evaluate visual and environmental impacts of the proposed widening of the elevated segment of the I-5 freeway, including over the Rose Quarter Transit Center and near Peace Park, and identify mitigation measures as needed.