PDC | PORTLAND DEVELOPMENT COMMISSION
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DATE: December 12, 2012

TO: Board of Commissioners

FROM: Patrick Quinton, Executive Director

SUBJECT: Report Number 12-47

Authorizing an Intergovernmental Agreement with the Portland Bureau of Transportation for the Construction of the West Burnside and Pearl District Intersection Safety and Access Project in the River District Urban Renewal Area; Providing Funding in an Amount Not to Exceed $1,879,465

BOARD ACTION REQUESTED

Adopt Resolution No. 6985

ACTION DESCRIPTION

This action will authorize the Executive Director to enter into an Intergovernmental Agreement (IGA) between the Portland Development Commission (PDC) and the Portland Bureau of Transportation (PBOT) providing funding in an amount not to exceed $1,879,465 for the construction of the West Burnside and Pearl District Intersection Safety and Access Project (Project). The Project is almost entirely located in the River District Urban Renewal Area (RDURA) and will include the following:

New traffic signals at:

- NW Glisan Street and NW 13th Avenue;
- NW Everett Street and NW 13th Avenue;
- NW Couch Street and NW 12th Avenue;
- NW Couch Street and NW 11th Avenue; and
- NW Couch Street and NW Broadway.

New left-turn lanes and signals at:

- W Burnside Street and 12th Avenue;
- W Burnside Street and 4th Avenue; and
- W Burnside Street and 3rd Avenue.

New curb extensions at:

- W Burnside Street and 10th Avenue;
- W Burnside Street and 4th Avenue; and
- W Burnside Street and 3rd Avenue.

PBOT will leverage the PDC contribution by funding the construction for those portions of the Project that are located outside of the RDURA, including the signalization of the NW Couch Street/NW Broadway intersection. The total construction cost is estimated at just under $2.1 million. Following a construction bid and award phase in early 2013, construction is anticipated to begin in May 2013 and be completed by December 2013.

BACKGROUND AND CONTEXT

Over the past fifteen years, the area known as the Pearl District neighborhood has dramatically transformed from an industrial warehouse district to a high-density, mixed-use community. The City of Portland (City) has undertaken a series of efforts to address the land use, economic development, transportation, access, and safety needs in the vicinity of West Burnside Street and the Pearl District, including the Pearl District Development Plan (adopted by City Council in October 2001), the Burnside Transportation and Urban Design Plan (adopted by City Council on December 11, 2002, by Resolution No. 36114), the West Burnside/Couch Alternatives Analysis (adopted by City Council on April 11, 2007, by Resolution No. 36499), and the North Pearl District Plan (adopted by City Council on December 5, 2008, by Resolution No. 36642). On June 13, 2012, the City Council adopted the Pearl District Access and Circulation Plan (Plan) by Resolution No. 36932 (Attachment B). The Plan was developed in cooperation with other City bureaus and with participation from property owners, residents, representatives of businesses and institutions, and other interested citizens.

Implementation of the Plan will contribute to the goals of prior planning efforts in advancing the Pearl District as a compact, high-density, urban neighborhood characterized by reduced reliance on the automobile. The Plan also supports access for automobiles and truck traffic by maintaining access to regional transportation and freight facilities, increasing access into the Central Business District and Pearl District from West Burnside Street, and by reducing conflicts between trucks, automobiles, bicycles, and pedestrians at interchanges with regional facilities and streets.

The Plan is being used to guide investment and support future growth and new development. Stakeholders prioritized the installation of new traffic signals to improve access and safety. At the time of adoption, City Council directed PBOT to collaborate with stakeholders to implement the projects and, as the first implementing action of the Plan, to install or modify traffic signals at seven key priority intersections (Attachment B).

PBOT and PDC entered into an IGA for the design and engineering of the Project on September 10, 2012, for a total cost of $469,599, of which PDC contributed $465,535 and PBOT contributed $4,064. The schedule for the Project anticipates the Project will be bid in March/April 2013, construction will begin in May/June 2013, and be completed by December 2013.

Prior planning efforts have investigated and planned for the implementation of the Westside Burnside-Couch (WBC) Couplet, which involves converting West Burnside Street and NW Couch Street to one-way vehicular traffic operations between NW 2nd Avenue and NW 24th Place. The Project does not include implementation of the WBC Couplet as the City does not currently have the financial resources available to implement the WBC Couplet. Implementation of the Project does not preclude the future implementation of the WBC Couplet.

COMMUNITY AND PUBLIC BENEFIT

Benefits of the Project include:

- Enhance economic development opportunities by improving access from West Burnside Street into the Pearl District and Central Business District. This has been a key objective of planning efforts to date as left turns are currently prohibited from West Burnside Street, which is the highest volume city street in the Central City; and
- Enhance safety and relieve congestion at priority intersections within the Pearl District, including several that that been identified as high priorities since adoption of the Pearl District Development Plan in 2001. Constructing the Project will include signalizing the NW Broadway/NW Couch Street intersection which has been identified as the intersection with the highest crash rate in the City.

PBOT has completed a traffic operations analysis based upon the 30 percent complete design (Attachment C). Although the Project as a whole will improve access and circulation and relieve congestion at key intersections, the addition of protected left-turn movements will reduce the available green signal time for the remaining signal phases. This is projected to result in increased vehicle queues and delays for some traffic movements. The greatest impact is projected to be the eastbound and westbound through movement on West Burnside Street at 12th Avenue and the eastbound through and westbound left movements on West Burnside Street at 3rd Avenue during the PM peak hour. As the Project advances from design to construction, PBOT will evaluate adjustments to minimize these impacts which may include changes to the signal phasing and timing, restrictions on peak hour left-turning movements at the West Burnside Street/12th Avenue intersection, and the potential removal of the east pedestrian crosswalk at the West Burnside Street/3rd Avenue intersection.

The Project is also projected to result in the need to remove the eastbound Tri-Met bus stop located on the southeast corner of West Burnside Street and 4th Avenue. The potential removal of this bus stop has been coordinated with Tri-Met and will result in the need for transit riders to walk to nearby bus stops at either SW 2nd or SW 6th Avenues.

PDC's Business and Workforce Equity (BWE) Policy will apply to the construction of the project, ensuring fair and equitable opportunities for Portland's diverse populations, promoting prosperity in all segments of Portland's diverse communities, and expanding competition in the market.

PUBLIC PARTICIPATION AND FEEDBACK

The Plan was developed in cooperation with a Stakeholder Advisory Committee (SAC) which included representatives of other City bureaus, business and institutions, property owners, residents, and other interested citizens. In addition, two public open houses were held in the neighborhood. The SAC was involved in prioritizing the Plan's Action Items and Project List, which identified the four new traffic signals at NW Couch Street/NW 11th Avenue, NW Couch Street/NW 12th Avenue, NW Everett Street/NW 13th Avenue, and NW Glisan Street/13th Avenue as "Near term, 1-5 year" projects.

Although increasing vehicular access from West Burnside Street into both the Pearl District and Central Business District was a high priority throughout the planning process, the Plan did not specifically address the installation of turn lanes and associated signals at the West Burnside Street intersections with 3rd Avenue, 4th Avenue, and 12th Avenue.

Between September 2012 and November 2012, PBOT conducted public participation information and outreach to discuss the proposed design and construction of the Project. This outreach included five meetings with neighborhood associations, stakeholders, and affected property owners including Old Town/Chinatown Neighborhood Association, Pearl District Neighborhood Association, and the Portland Business Alliance.

Overall feedback has been positive towards the design and construction of the Project. However, stakeholders have expressed the following concerns (Attachment D):

- That the Project does not address all of the issues identified during the planning process for the Westside Burnside-Couch Couplet planning process and how any outstanding issues will be addressed in the future;
- Projected queuing impacts as a result of installing left-turn lanes and signals; and
- Potential loss of on-street parking proximate to businesses.

At this time, PBOT has the following responses to these issues:

- As directed by City Council, the Project is anticipated to be the first step toward implementation of the Plan since the City does not have the financial resources to implement the WBC Couplet at this time. The long-term plan is to implement the WBC Couplet;
- The Project is projected to result in some increased delays and vehicle queuing as a result of implementing left turn lanes and signals with reduced available green time for other vehicular movements. As the Project progresses, PBOT will evaluate ways to minimize these impacts; and
- Based upon the current 30 percent construction documents, the Project is anticipated to result in losing a total of 22 on-street parking spaces on lower West Burnside Street between 2nd and 4th Avenues. However, PBOT has identified replacement parking opportunities within two blocks of West Burnside Street along NW 2nd and SW 3rd Avenues. With the inclusion of these replacement parking spaces, the total on-street parking loss has been reduced to seven spaces. As the design progresses through final design and construction documents, PBOT will evaluate how to further minimize the loss of on-street parking, with the goal of having a net loss of zero for the adjacent neighborhood.

Stakeholders will have another opportunity to publicly comment on the Project at the PDC Board meeting itself, in addition to the City Council meeting scheduled for December 13, 2012, to consider the Project IGA.

BUDGET AND FINANCIAL INFORMATION

The FY 2012-13 PDC Revised Budget includes $2,595,000 for both design and construction of the Project (Attachment E). The Executive Director previously authorized expenditure of $465,535 of these funds for the design and engineering of the Project. This action will authorize the expenditure of $1,879,465 of these funds, which will bring the total PDC project contribution to $2,345,000. This represents 92 percent of total project costs as follows:

Uses	PDC	PBOT	Total
Design and Engineering IGA	$465,535	$4,064	$469,599
Construction IGA	$1,879,465	$210,000	$2,089,465
Total	**$2,345,000**	**$214,064**	**$2,559,064**
Percentage Contribution	92%	8%	100%

The $2,089,465 budget to construct the Project has been based upon 30 percent construction documents. The cost estimate for the Project will be further refined during the design and engineering phase, which is expected to be completed by May 2013. The budget includes a contingency of $168,406, representing eight percent of the IGA budget. This is a relatively small contingency to be available for a project at the 30 percent design completion stage.

PDC has notified PBOT that PDC does not have any additional financial resources to contribute to the Project. Therefore, PBOT will need to complete the scope of the project based on the available financial resources. To the extent project costs increase beyond available financial resources during final design, PBOT will either need to pay for the increased costs or scale back the scope of the project.

This action will result in increased workload for PDC staff. However, this has already been taken into account in establishing staff work plans to assist PBOT with the Project, and will not require additional staff.

The Project and IGA budget includes $33,540 for the Regional Arts & Culture Council (RACC) Percent for Art Program, which represents two percent of the applicable construction costs.

RISK ASSESSMENT

Implementation of the Project will include certain elements, such as left-turn lanes and signals for two-way operations on West Burnside Street, which will need to be removed with the future implementation of the WBC Couplet. Nevertheless, PBOT, with direction from City Council, has determined that the Project is a logical first implementing phase of the Plan since funding and timing for the implementation of the WBC Couplet is unclear at this time.

There is potential that implementation of the Project will not result in the anticipated benefits and/or may result in increases in vehicular queuing and delays at some locations. PBOT has the ability to construct the Project, observe the real-world response by users, and adjust signal timing, restrict peak hour turning movements, or make other adjustments as necessary in order to minimize negative impacts to the extent possible.

There is a risk the project costs will exceed available financial resources. PBOT has only completed 30 percent design to date and, based on the currently available financial resources, and as noted above, the Project includes only an eight percent contingency. PDC has notified PBOT that PDC does not have any additional financial resources to contribute to the Project. Therefore, PBOT will need to complete the scope of the project within the available financial resources. To the extent project costs increase beyond available financial resources during final design, PBOT will either need to pay for the increased costs or scale back the scope of the project.

ALTERNATIVE ACTIONS

The Board can elect to not authorize the IGA. Since PDC is currently the primary funding source for the Project, this would result in a shortfall of funding to construct the Project. Consequently, this would likely delay construction of the Project pending identification of alternative funding sources by PBOT.

The Board could also request changes to the IGA to address specific concerns, with the authorization to execute the IGA conditioned upon addressing the identified issues or with the IGA brought to the Board for approval at a subsequent meeting.

ATTACHMENTS

A. Project Summary
B. City Council Resolution No. 36932
C. W Burnside and NW Couch Street Traffic Analysis, DKS Associates, September 27, 2012
D. Portland Business Alliance letter to Mayor Sam Adams dated October 9, 2012
E. URA Financial Summary

PROJECT SUMMARY

Project Name:	Construction of the West Burnside and Pearl District Intersection Safety and Access Project
Description:	Support PBOT's efforts to install or modify intersections and traffic signals and related pedestrian and channelization improvements along West Burnside Street and in the Pearl District.
URA:	River District
Current Phase:	Bid, Award, Construction
Next Milestone:	Construction
Completion Target:	December 2013
Outcome:	Construction of eight new or modified traffic signals.

West Burnside / Pearl District Operational Improvements

New traffic signal

Signal modification to accommodate left turns and pedestrian improvements

Pedestrian improvements

N

RESOLUTION No. 36932 As Amended

Adopt the recommendations in the Pearl District Access and Circulation Plan (Resolution)

WHEREAS, on December 5, 2008, by Ordinance No. 182319 and Resolution No. 36642, the City Council adopted the North Pearl District Plan, building upon previously adopted plans including the 1998 River District Urban Renewal Plan and the 2001 Pearl District Development Plan; and

WHEREAS, the 2001 Pearl District Development Plan anticipates 11,000 additional residents and 12,000 additional jobs in the Pearl District; and

WHEREAS, the Pearl District Access and Circulation Plan will contribute to the goals of the North Pearl District Plan and the Portland Plan in advancing sustainable communities and the increased use of walking, cycling, carpooling and using transit to access and travel within the district; and

WHEREAS, the Pearl District Access and Circulation Plan was developed by the City of Portland Bureau of Transportation in cooperation with other City bureaus and with participation from property owners, business persons and other interested citizens; and

WHEREAS, extensive public involvement has included fourteen Stakeholder Advisory Committee meetings, two open houses, and involvement of neighborhood and community associations; and

WHEREAS, the Pearl District Access and Circulation Plan supports access for pedestrians by enhancing pedestrian crossings and bicyclists by developing and completing bicycle facilities on designated bikeways within and to activity centers, consistent with the Portland Bicycle Plan for 2030; and

WHEREAS, the Pearl District Access and Circulation Plan supports access for automobiles and truck traffic by maintaining access to regional transportation and freight facilities, and by reducing potential conflicts between trucks, autos, bicycles, and pedestrians at interchanges with regional facilities and city streets; and

WHEREAS, the Pearl District Access and Circulation Plan outlines a list of long-term and short-term transportation projects to support the continued development of the Pearl District neighborhood; and

WHEREAS, the Pearl District Access and Circulation Plan prioritizes the projects to help city staff and stakeholders focus their efforts effectively; and

WHEREAS, continued development of the Pearl District is a high priority for the City of Portland;

NOW, THEREFORE, BE IT RESOLVED, that the City of Portland adopts the recommendations of the Pearl District Access and Circulation Plan as Non-Binding City Policy attached as Exhibit A; and

36932

BE IT FURTHER RESOLVED, that the Pearl District Access and Circulation Plan will guide the development of transportation infrastructure in the Pearl District neighborhood; and

BE IT FURTHER RESOLVED, that the City Council directs city staff to continue to work with district stakeholders to guide the funding of projects in the Plan; and

BE IT FURTHER RESOLVED, that the City Council directs city staff to update the Transportation System Plan and the River District Right-of-Way Standards to include the projects and priorities of the Pearl District Access and Circulation Plan; and

BE IT FURTHER RESOLVED, that the City Council directs city staff to make implementation of the projects a high priority and to collaborate with district stakeholders to implement the projects; and

BE IT FURTHER RESOLVED, that as the first implementing action City Council directs the Portland Bureau of Transportation to install seven traffic signals in priority locations identified in Figure 10, Recommended Traffic Circulation and Control, to improve access and safety in the plan area; and

BE IT FURTHER RESOLVED, that the City Council gratefully acknowledges both the excellent work and dedication of the Stakeholder Advisory Committee, the Pearl District Neighborhood Association, the Pearl District Neighborhood Association, and participating community members.

Adopted by the Council, JUN 13 2012

Mayor Sam Adams
Prepared by: Mauricio Leclerc: JF
Date Prepared: May 31, 2012

LaVonne Griffin-Valade
AUDITOR OF THE CITY OF PORTLAND
By

Deputy

677

Agenda No.
RESOLUTION NO. 36932 As Amended
Title

Adopt the recommendations in the Pearl District Access and Circulation Plan (Resolution)

INTRODUCED BY Commissioner/Auditor: **MAYOR SAM ADAMS** K. Gillmann on behalf of mayor Adams	CLERK USE: DATE FILED JUN 08 2012 LaVonne Griffin-Valade Auditor of the City of Portland By: _____ Deputy
COMMISSIONER APPROVAL Mayor—Finance and Administration - Adams Position 1/Utilities - Fritz Position 2/Works - Fish Position 3/Affairs - Saltzman Position 4/Safety - Leonard	**ACTION TAKEN:**
BUREAU APPROVAL Bureau: Bureau of Transportation Division Manager: Paul Smith P.S. Other:	
Prepared by: Mauricio Leclerc:JF Date Prepared: June 1, 2012 ML	
Financial Impact & Public Involvement Statement Completed ☒ Amends Budget ☐ Not Required ☐	
Portland Policy Document If "Yes" requires City Policyparagraph stated in document. Yes ☒ No ☐	
Council Meeting Date **June 13, 2012**	
City Attorney Approval	

AGENDA
TIME CERTAIN ☒ **Start time: 10:30** **Total amount of time needed: 45 minutes** **(for presentation, testimony and discussion)**
CONSENT ☐
REGULAR ☒ **Total amount of time needed:** **(for presentation, testimony and discussion)**

FOUR-FIFTHS AGENDA	COMMISSIONERS VOTED AS FOLLOWS:	YEAS	NAYS
1. Fritz	1. Fritz	✓	
2. Fish	2. Fish	✓	
3. Saltzman	3. Saltzman	✓	
4. Leonard	4. Leonard	✓	
Adams	Adams	✓	

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MEMORANDUM

TO:	Chris Armes, Portland Bureau of Transportation Ross Swanson, Portland Bureau of Transportation	
FROM:	Dana Beckwith, DKS Reah Flisakowski, DKS	
DATE:	September 27, 2012	
SUBJECT:	W Burnside Street and NW Couch Street Traffic Analysis	P12117-000

This memorandum presents a focused traffic analysis of the West Burnside/Pearl District Operational Improvements Project in Portland, Oregon. The project proposes to construct multi-modal circulation improvements on W Burnside Street and in the Pearl District to the north. The analysis identified potential operational benefits, impacts and provided recommendations on the design and implementation of the improvements. The proposed improvements evaluated include new left turn movements on W Burnside Street, new pedestrian crossing at W Burnside Street/4th Avenue, pedestrian crossing options at W Burnside Street/3rd Avenue and two-way conversion of 12th Avenue. The study area background, traffic analysis and findings are summarized in the following sections.

Study Area Background

W Burnside Street and the Pearl District are located in the urban setting of downtown Portland. W Burnside Street serves as a major east-west corridor in the Portland Metro Area. Key study area roadway characteristics are summarized in Table 1. All roadways in the study area are posted 25 miles per hour and have continuous sidewalks on both sides of the roadway.

Table 1: Study Roadways

STUDY FACILITY	PBOT CLASS[1]	NUMBER OF LANES	TRAVEL	BIKE FACILITIES	ON STREET PARKING
W Burnside St	Major City Traffic Street	4 to 6	East-west	No	Partial
NW Couch St	Local Service Traffic Street	2	East-west	No	Yes
3rd Ave	Traffic Access Street	3	One-way SB	No	Yes
4th Ave	Traffic Access Street	2 to 3	One-way NB	No	Yes
Broadway	Traffic Access Street	3 to 4	North-south	Bike lane SB	Yes
12th Ave	Local Service Traffic Street	2	One-way NB	No	Yes

[1] Portland Transportation System Plan, Transportation Element: Central City District – Map 2.1, Portland Bureau of Transportation, 2004.

Proposed West Burnside/Pearl District Improvements

A traffic analysis was conducted for select elements of the proposed improvement project. The analysis focused on the improvements and options listed below.

- New left turn movements would be added at select intersections on W Burnside Street. Currently, left turn movements from W Burnside Street are prohibited in the downtown area. The proposed left turn movements on W Burnside Street are shown in Figure 1.
- A new pedestrian crossing would be added on the east leg of W Burnside Street/4th Avenue.
- Pedestrian crossing options were considered for the east leg of W Burnside Street/3rd Avenue.
- The two-way conversion of 12th Avenue between NW Couch Street and NW Davis Street was considered.

Figure 1 – Proposed W Burnside Street Left Turn Movements

The new left turn lanes at 3rd, 4th and Broadway would be created by restriping W Burnside Street to provide a separate left turn lane within the existing roadway curb to curb width. All left turn movements would operate with a protected signal phase. The shared left turn lane at 12th Avenue would require the left turn movement to be made from the eastbound inside through lane and operate with a lagging protected signal phase. For the analysis at 12th Avenue, the new protected left turn signal phase was evaluated with both an 8 second and 10 second split to determine a range of potential impact.

A new pedestrian crosswalk would be provided on the east leg of the W Burnside Street/4th Avenue intersection. Pedestrian crosswalks are currently provided on the other three legs of the intersection. The signal phase for the new pedestrian crossing would operate concurrently with the existing crossing on the west leg.

Traffic Volume Development

The study area included all intersections on W Burnside Street between 2nd Avenue and 14th Avenue and select intersections on NW Couch Street. Traffic volumes were developed for the study area for two scenarios: 2012 current conditions and 2012 conditions with the proposed improvements in place. Study area traffic volumes were developed for the morning (8 to 9 AM) and evening (5 to 6 PM) peak hours. The traffic volumes are shown in Figures 2 and 3.

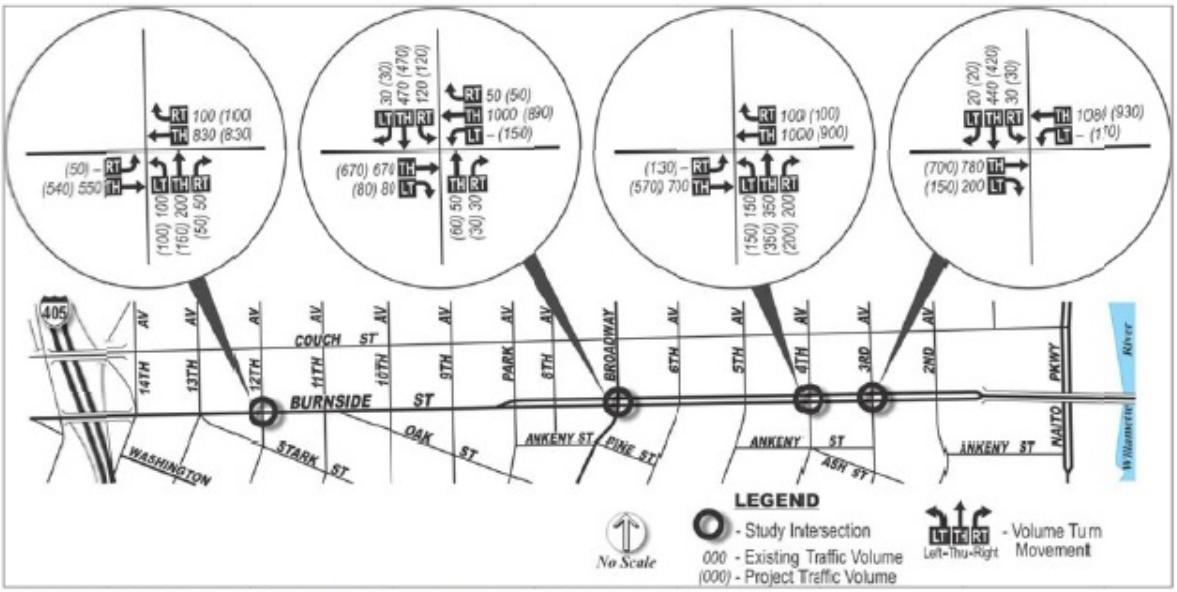


Figure 2 – Existing and Proposed Improvements AM Peak Hour Volumes

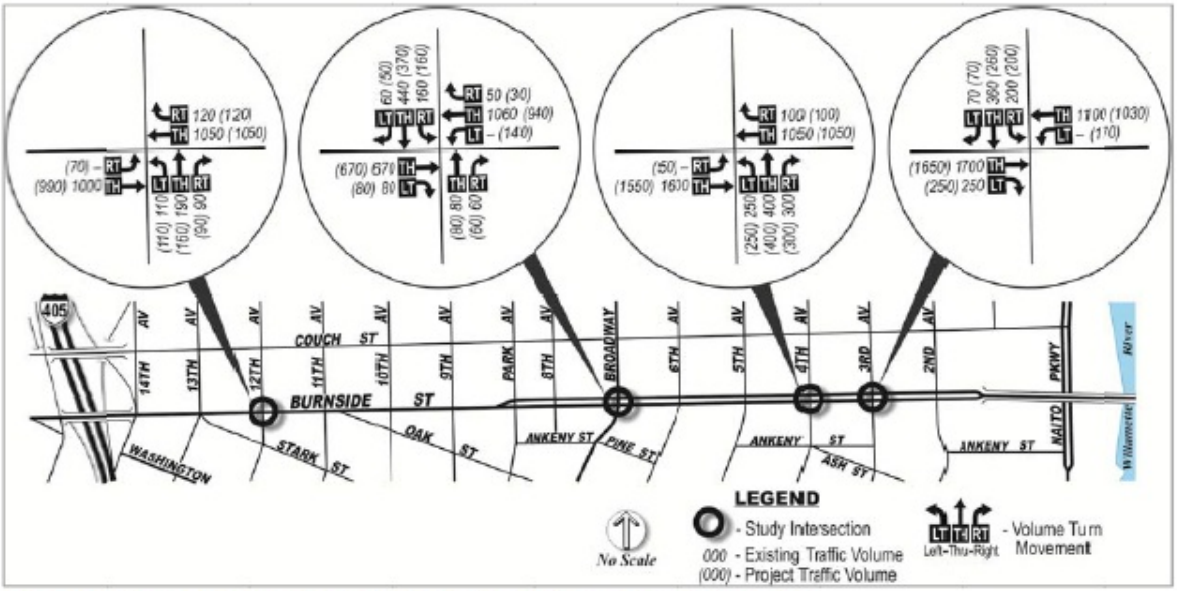


Figure 3 – Existing and Proposed Improvements PM Peak Hour Volumes

The volumes for 2012 current conditions were based on available traffic count data. The City of Portland provided a mix of recent and historic intersection and daily bi-directional count data at several locations on W Burnside Street and NW Couch Street. Current 2012 intersection and balanced corridor volumes were developed from the data. Traffic volumes for the 2012 with proposed left turn improvements were developed using the City's travel demand model, recent count data and field observations. The change in demand at the 3rd Avenue, 4th Avenue and Broadway intersections on W Burnside Street were estimated based on model plots provided by the City. The plots provided an estimate of the difference between model volumes with and without the new left turn movements in place.

The change in demand at the W Burnside Street/12th Avenue intersection was estimated based on recent count data and field observations[2] at the 12th Avenue/Stark Street intersection. Today vehicles traveling from eastbound W Burnside Street to northbound 12th Avenue are required to use the Stark Street connection (Figure 4). It was assumed all of the current eastbound left demand at 12th Avenue/Stark Street would relocate to an eastbound left at W Burnside Street/12th Avenue with the new left turn movement. To account for new eastbound left turn demand attracted to W Burnside Street/12th Avenue intersection, the 12th Avenue/Stark Street eastbound left turn count was doubled. This was based on the reasoning that the demand for an eastbound left at 12th Avenue would increase at W Burnside Street because there would be less delay to complete the movement compared to Stark Street and counts conducted in August 2012 may be low compared to the annual average.

venue

Study Intersection Operating Conditions

A Synchro model was developed for each of the study scenarios for the AM and PM peak hours. The 2012 current conditions model was calibrated based on field observations[3] of vehicle queue lengths, vehicle delays, saturation flow rates, lane imbalance, pedestrian/bicycle/transit service conflicts. The 2012 current conditions model was used to develop the 2012 proposed improvements model, with adjustments to include the new intersection geometries and volumes. The existing traffic signal cycle lengths were not changed in the analysis. Tables 2 and 3 list the volume to capacity ratio for each approach through movement at the study intersections.

Table 2: Study Intersection Operations – 2012 Current Operating Conditions

	APPROACH VOLUME TO CAPACITY RATIO			
W BURNSIDE ST INTERSECTION	**EASTBOUND THRU**	**WESTBOUND THRU**	**NORTHBOUND THRU**	**SOUTHBOUND THRU**
		AM Peak Hour		
3rd Avenue	0.47	0.71	-	0.40
4th Avenue	0.38	0.66	0.61	-
Broadway	0.50	0.66	0.13	0.86
12th Avenue	0.39	0.72	0.65	-
		PM Peak Hour		
3rd Avenue	0.95	0.88	-	0.51
4th Avenue	0.92	0.73	0.72	-
Broadway	0.98	0.80	0.15	0.76
12th Avenue	0.70	0.90	0.82	-

[2] W Burnside Street/12th Avenue/Stark Street traffic counts conducted Monday and Tuesday August 6th and 7th, 2012.
[3] W Burnside Street field observations conducted over several weekdays AM and PM peak hours, late July through early August 2012.

Table 3: Study Intersection Operations – 2012 Proposed Improvement Operating Conditions

W BURNSIDE ST INTERSECTION	APPROACH VOLUME TO CAPACITY RATIO					
	EASTBOUND		WESTBOUND		NORTHBOUND	SOUTHBOUND
	LEFT	THRU	LEFT	THRU	THRU	THRU
AM Peak Hour						
3rd Avenue	-	0.65	0.78	0.61	-	0.37
4th Avenue	0.92	0.35	-	0.81	0.70	-
Broadway	-	0.70	0.85	0.61	0.13	0.89
12th Avenue	-	0.42	-	0.91	0.55	-
PM Peak Hour						
3rd Avenue	-	1.22	1.08	0.78	-	0.49
4th Avenue	0.44	1.15	-	0.97	0.97	-
Broadway	-	1.07	0.94	0.60	0.21	0.96
12th Avenue	-	0.93	-	1.13	0.82	-

As shown in Table 2, the W Burnside Street corridor experiences congested conditions today. During the AM peak hour, all of the study intersections operate with volume to capacity ratios under 0.90 for each intersection approach. The highest approach volume to capacity ratios during the morning peak hour are the westbound approaches on W Burnside Street and the southbound approach on Broadway. During the PM peak hour, several intersection approaches exceed a 0.90 volume to capacity ratio resulting in significant vehicle queues and delays. The highest approach volume to capacity ratios during the evening peak hour are the eastbound approaches from 3rd Avenue to Broadway and the westbound approach at 12th Avenue.

The proposed improvements would add a protected left turn movement at each study intersection which would reduce the available green time for the remaining signal phases. The proposed improvements would also add a pedestrian crossing on the east leg of the W Burnside Street/4th Avenue intersection. This operational analysis assumed the existing traffic signal cycle lengths would remain unchanged with the proposed project. As shown in Table 3, the impact of the proposed improvements would be volume to capacity ratios exceeding 0.90 during the AM peak hour and exceeding 1.0 during the PM peak hour at several intersection approaches. The greatest impact of the proposed improvements would be the eastbound and westbound through movement on W Burnside Street at 12th Avenue and the eastbound through and westbound left movements on W Burnside Street at 3rd Avenue during the PM peak hour. These impacts would result in increased vehicle queues and delays.

12th Avenue Left Turn Restrictions

The W Burnside Street/12th Avenue intersection was evaluated further to determine if the proposed eastbound left turn movement could be restricted during certain time periods, providing better performance. The operating conditions for the eastbound and westbound W Burnside Street approaches at 12th Avenue were evaluated for each hour from 7:00 AM to 8:00 PM. The AM and PM peak hour volumes and the recent daily count volumes on W Burnside Street at 9th Avenue were used to approximate the intersection volumes and the eastbound left turn demand during other hours of the day. The analysis was conducted for two different eastbound left green time scenarios (8 seconds and

10 seconds) to test the range of impact to operations. Existing signal cycle lengths were assumed for the analysis. Table 4 summarizes the volume to capacity ratio for the eastbound and westbound approaches on W Burnside Street at 12th Avenue for each time of day.

The recommended threshold for prohibiting the proposed eastbound left turn movement at 12th Avenue is when the westbound approach volume to capacity ratio is forecasted to operate over 1.0 (shown in bold). That would result in prohibiting the left turn movement from 4 to 6 PM. The prohibition could be extended to shoulder times before 4 PM and after 6 PM to cover congested conditions that would likely occur outside the peak period. The remaining hours would experience acceptable conditions with the proposed left turn movement.

Table 4: W Burnside Street/12th Avenue – 2012 Proposed Improvement Operating Conditions

TIME OF DAY	PERCENT OF PEAK VOLUME*	ESTIMATED EBLT HOURLY VOLUME	GREEN TIME EBLT 8 SECONDS		GREEN TIME EBLT 10 SECONDS		CYCLE LENGTH
			EB V/C	WB V/C	EB V/C	WB V/C	
7:00 AM	80%	15	0.29	0.70	0.29	0.72	85
8:00 AM Peak Hour	100%	19	0.71	0.58	0.71	0.56	85
9:00 AM	71%	13	0.25	0.62	0.25	0.64	85
10:00 AM	68%	13	0.24	0.59	0.24	0.62	80
11:00 AM	54%	38	0.45	0.64	0.45	0.68	80
12:00 AM	57%	40	0.48	0.68	0.48	0.71	80
1:00 PM	60%	42	0.51	0.72	0.50	0.75	80
2:00 PM	64%	45	0.54	0.76	0.54	0.80	80
3:00 PM	75%	52	0.62	0.81	0.61	0.85	90
4:00 PM	90%	63	0.78	0.98	0.78	**1.02**	90
5:00 PM Peak Hour	100%	70	0.92	**1.09**	0.92	**1.13**	90
6:00 PM	71%	49	0.58	0.77	0.58	0.80	90
7:00 PM	46%	33	0.41	0.60	0.41	0.63	80

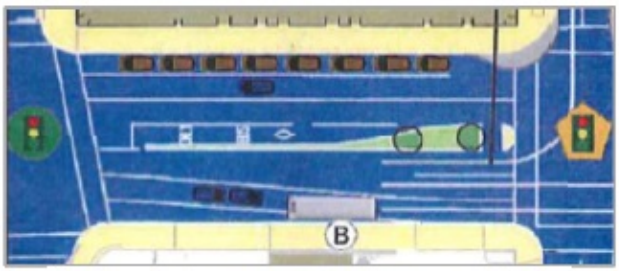
* Percent of peak volume for 7 to 10 AM was based on AM peak hour count data. Percent of peak volume for 11 AM to 8 PM based on PM peak hour count data. Since no midday turn movement count data was available, PM peak hour volumes were determine to be the most representative based on the daily volume profile for W Burnside Street.

Bus Stops on Burnside Street

The proposed improvements to W Burnside Street include a new lane configuration on the west section of the project to accommodate new left turn movements at select locations. The new lane configuration was reviewed to assess if the existing TriMet bus stops could be adequately accommodated. Between the Burnside Bridge and 5th Avenue, W Burnside Street currently provides three eastbound bus stops and no westbound bus stops. The eastbound bus stops are located west of 2nd Avenue, midblock between 4th Avenue and 5th Avenue and west of 6th Avenue.

The new eastbound lane configuration on W Burnside Street at the 4th Avenue approach would provide a separate left turn lane and two through lanes. This new lane configuration would require buses to stop in the outside travel lane. During an active bus stop, the eastbound outside lane would be blocked and

through traffic on W Burnside Street would be limited to one lane. The new lane configuration is shown in Figure 5.



The location of the eastbound bus stop midblock between 4th Avenue and 5th Avenue was identified as an operational issue for traffic flow on W Burnside Street. The eastbound through volume on W Burnside Street at 4th Avenue is approximately 1,700 vehicles during the PM peak hour. The subject bus stop serves three bus routes (#12, 19 and 20) with 15 to 20 minute headways during the evening peak period. This results in approximately 12 active bus stops during the PM peak hour.
Based on the traffic volumes and bus operations, the new lane configuration would increase the W Burnside Street/4th Avenue eastbound through volume to capacity ratio to 1.15 during the PM peak hour (see Table 3).

The eastbound left turn movement vehicle queues on W Burnside Street at 4th Avenue were evaluated to determine the likelihood of a condition where the vehicle queue extended outside the left turn pocket (more than three vehicles) and a bus was serving the adjacent bus stop. This would create a condition with both eastbound lanes blocked until the left turn queue cleared or the bus departed from the stop. The W Burnside Street/4th Avenue eastbound left turn movement was estimated to operate with a 95th percentile queue of 38 feet (or two to three vehicles). Although it is possible that both eastbound lanes on W Burnside Street could be blocked, the queue estimate suggests that it would be a rare occurrence.

The new lane configuration would likely result in significant delays and queues for the W Burnside Street eastbound approach at 4th Avenue during the PM peak hour. There are several options to reduce the potential traffic impacts:

- Relocate or remove the eastbound bus stop on W Burnside Street west of 4th Avenue. This would require coordination with TriMet. This would improve the W Burnside Street/4th Avenue eastbound through volume to capacity ratio from 1.15 to 1.01.
- Shift the lane configuration on W Burnside Street between 4th and 5th Avenue to the north by removing the north curb on-street parking. This would allow for an eastbound left turn movement and three through lanes at W Burnside Street/4th Avenue (existing configuration). During an active bus stop, two eastbound through lanes would be open. This would improve the W Burnside Street/4th Avenue eastbound through volume to capacity ratio from 1.15 to 0.73.
- Do not provide an eastbound left turn movement at W Burnside Street/4th Avenue.

Pedestrian Crossing Analysis on W Burnside Street at 4th Avenue

W Burnside Street at 4th Avenue was evaluated further to determine the operating conditions with and without the proposed pedestrian crosswalk on the east leg. The proposed east leg pedestrian crossing would conflict with the northbound right turn movement which has high volumes (approximately 300

vehicles) during the PM peak hour. The presence of pedestrians in the east leg crosswalk would reduce northbound vehicles turning right during a red signal phase and overall approach capacity.

With the east leg pedestrian crossing removed from the proposed improvements, the northbound right turn movement volume to capacity ratio would lower from 1.05 to 0.94. However, the northbound left-through movement volume to capacity ratio would increase from 0.97 to 1.00 due to relocating the pedestrian crossings from the east leg to the west leg. The intersection operations are shown in Table 5.

Table 5: W Burnside Street/4th Avenue – Pedestrian Crossing Evaluation (PM Peak Hour)

	APPROACH VOLUME TO CAPACITY RATIO						
W BURNSIDE ST	**EASTBOUND**		**WESTBOUND**		**NORTHBOUND**		**SOUTHBOUND**
INTERSECTION	**LEFT**	**THRU**	**LEFT**	**THRU**	**THRU**	**RIGHT**	**THRU**
Proposed Improvements							
4th Avenue	0.44	0.76	-	0.97	0.97	1.05	-
Proposed Improvements without East Leg Pedestrian Crossing							
4th Avenue	0.44	0.76	-	0.97	1.00	0.94	-

Pedestrian Crossing Analysis on W Burnside Street at 3rd Avenue

W Burnside Street at 3rd Avenue was evaluated further to assess if the signal operations with the new left turn movement could be improved with changes to the pedestrian system. A two-phase pedestrian crossing on the east leg of W Burnside Street/3rd Avenue was considered to provide additional signal green time to other phases. The phased pedestrian crossing would result in a significant improvement to signal performance with no approach volume to capacity ratios greater than 1.0. However, the phased crossing option was found to be undesirable due to safety concerns with pedestrians waiting in the median area and potential on-street parking impacts associated with the construction of a wider median pedestrian refuge. The intersection operations are shown in Table 6.

The removal of the pedestrian crossing on the east leg of W Burnside Street/3rd Avenue was also considered which would provide additional signal green time to other phases. The signal performance with no east leg pedestrian crossing would improve significantly with no approach volume to capacity ratios greater than 1.0. The intersection operations are shown in Table 6.

Table 6: W Burnside Street/3rd Avenue – Pedestrian Crossing Evaluation (PM Peak Hour)

	APPROACH VOLUME TO CAPACITY RATIO					
W BURNSIDE ST	**EASTBOUND**		**WESTBOUND**		**NORTHBOUND**	**SOUTHBOUND**
INTERSECTION	**LEFT**	**THRU**	**LEFT**	**THRU**	**THRU**	**THRU**
Proposed Improvements						
3rd Avenue	-	1.22	1.08	0.78	-	0.49
Proposed Improvements with Two-Phase East Leg Pedestrian Crossing						
3rd Avenue	-	0.96	0.87	0.85	-	0.93
Proposed Improvements without East Leg Pedestrian Crossing						
3rd Avenue	-	0.96	0.87	0.85	-	0.93

Two-way Conversion of 12th Avenue between Couth Street and Davis Street

The proposed improvements include a new traffic signal at the NW Couch Street/12th Avenue intersection. This analysis conducted a preliminary assessment of changing 12th Avenue from its current one-way northbound configuration to two-way operations between NW Couch Street and NW Davis Street. The optional two-way facility would be created by restriping 12th Avenue within the existing roadway curb to curb width to provide one vehicle lane in each direction and retain the existing on-street parking. The 12th Avenue option is shown in Figure 6.

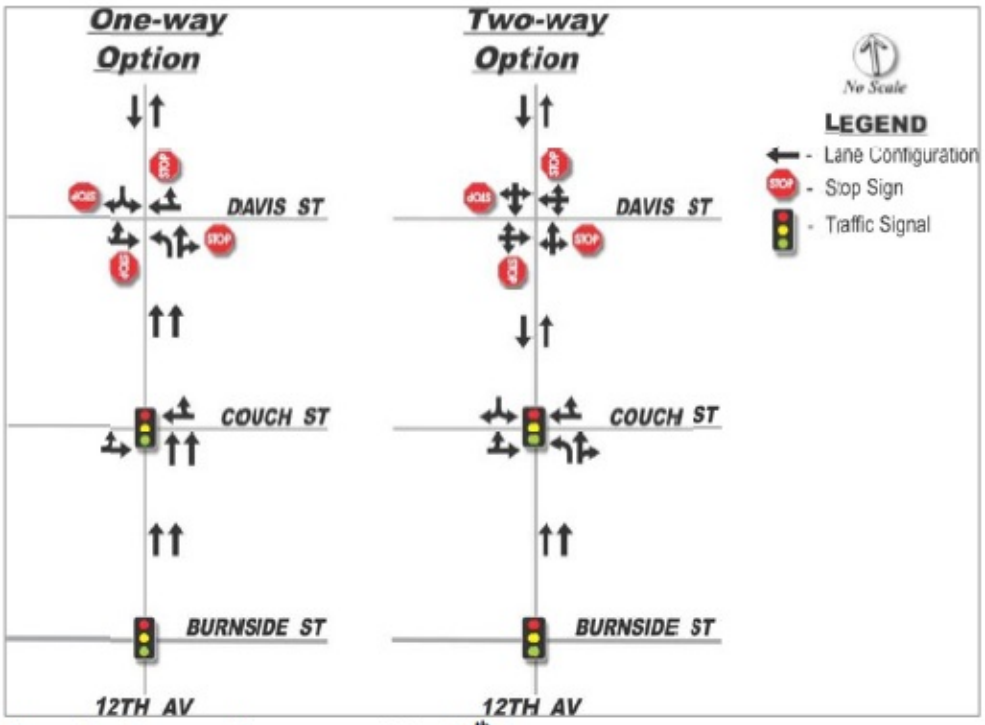


Figure 6 – Proposed Improvements to 12th Avenue

The NW Couch Street/12th Avenue intersection with the proposed traffic signal in place would operate with LOS A during the PM peak hour under both lane configuration options for 12th Avenue. The two-way option would provide several benefits to the local street network. The findings for the12th Avenue two-way option are summarized below.

- Local circulation would be improved for bicycles and vehicles with less out of direction travel.
- Vehicle queues at all NW Couch Street/12th Avenue intersection approaches would be accommodated within available block storage. The 95th percentile queue length estimates were 25 feet for the northbound approach, 50 feet for the eastbound and southbound approaches and 75 feet for the westbound approach.
- On-street parking would be accessible from both directions of travel on 12th Avenue.
- The parking garage driveway located midblock on the east side of 12th Avenue could operate with two-way traffic on 12th Avenue. The delay for vehicles turning left into and out of the driveway would experience a slight increase.

PORTLAND BUSINESS ALLIANCE
Leading the way

October 9, 2012

The Honorable Sam Adams
1221 SW 4th Avenue
Portland Oregon 97204

Dear Mayor Adams:

The Portland Business Alliance has met with city staff regarding the West Burnside and Pearl District Intersection Safety and Access Project. We appreciate that the project's intent is to improve safety and circulation in the areas of West Burnside, Old Town China Town and the Pearl District. As you know, the Alliance has been an advocate for safety and access improvements in this area, specifically as they are proposed in the twice-council-adopted Burnside Couch Couplet Project.

While we understand that the current project is guided by the Pearl District Access and Circulation Plan and makes some strides toward improving safety and access in this area, we would like to note some considerations as the city engages in the design phase of the this project:

1) We would like further explanation regarding the relationship between this project and the Burnside Couch Couplet Project. As you recall, the Burnside Couch Couplet Project aimed to address safety issues, poor pedestrian environment, traffic congestion, lack of on-street parking and barriers between neighborhoods. We are interested in knowing more about how the current project begins to address the problems identified during the Burnside Couch Couplet Project process, and how the city plans to address the remaining issues moving forward.

Greater Portland's Chamber of Commerce
200 SW Market St., Suite 150 • Portland, OR 97201
Phone 503.224.8684 Fax 503.323.9186
www.portlandalliance.com

2) We are concerned about potential queuing impacts related to the project's proposed left turn signals on West Burnside. We would like to understand from design engineering analyses about these impacts, if any, on vehicular access through West Burnside.

3) We are concerned about the potential for reduction of parking spaces and lanes related to the project's proposed left turn signals. Businesses and their customers rely on an ample and proximate supply of on-street parking spaces. We urge the city to do everything possible to reduce and mitigate for any loss of on-street parking spaces. Additionally, we are concerned with the potential for reduced through-traffic lanes. Maintaining access to, from and within downtown and its districts is important to the economic well-being of the central city, and we urge the city to maintain, if not improve, this access through any transportation project.

We look forward to discussing this project further when design is complete and its impacts are more definitively known. We also urge you and council to keep the Burnside Couch Couplet and its intended goals in mind with any transportation improvement project in this area. Thank you for your consideration.

Sincerely,

Sandra McDonough
President & CEO
Portland Business Alliance

URA Financial Summary

Five-Year Forecast Project Requirements Detail

			FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
River District URA								
Resources								
Beginning Fund Balance			9,943,486	8,641,256	6,161,997	947,054	355,616	305,000
Interest on Investments			30,000	0	0	0	0	0
Loan Collections			450,000	600,000	600,000	600,000	600,000	600,000
Long Term Debt			19,760,955	0	38,081,104	25,800,000	33,535,673	27,500,000
Property Income			582,348	582,348	582,348	582,348	582,348	582,348
Reimbursements			200,000	452,822	100,000	100,000	100,000	100,000
Short Term Debt			24,975,000	21,264,027	21,124,245	17,400,567	18,792,098	17,592,961
Total Fund Resources			**55,941,789**	**31,540,453**	**66,649,694**	**45,429,969**	**53,965,735**	**46,680,309**
Requirements								
Program Expenditures								
Administration								
Financial Administration								
A45101330	Debt Management-RVD		50,000	50,000	50,000	50,000	50,000	50,000
A45997330	Portland Harbor-RVD		85,000	0	0	0	0	0
	Administration	**Total**	**135,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**
Business Dev								
Cluster Industry Development								
B15100330	Cluster Development-RVD		200,000	100,000	100,000	100,000	100,000	100,000
B15102330	Site Recruitment-RVD		71,250	82,500	75,000	75,000	75,000	75,000
B15401330	Design Forum/PDX-RVD		0	5,000	0	0	0	0
Business Lending								
L02100330	BIF-General-RVD		2,000,000	2,000,000	2,500,000	0	0	3,000,000
	Business Dev	**Total**	**2,271,250**	**2,187,500**	**2,675,000**	**175,000**	**175,000**	**3,175,000**
Infrastructure								
Parks								
N33011915	Nbrhd Prk(The Fields)-RVD-Adm		1,550,000	4,130,000	0	0	0	0
Public Facilities								
N33022015	Union Station-RVD-Adm		1,706,500	1,182,520	506,500	506,500	3,506,500	106,500
Transportation								
N33033417	Burnside Oper Improv-RVD-Pred		0	2,595,000	0	0	0	0
N33033715	Streetcar Loop Project-RVD		0	500,000	0	0	0	0
N34630015	Dtwn Retail Infra-SPB-Adm		240,924	0	0	0	0	0
	Infrastructure	**Total**	**3,497,424**	**8,407,520**	**506,500**	**506,500**	**3,506,500**	**106,500**
Portland Hsg Bureau								
PHB Housing								
H15138330	Pearl Family Housing-RVD		547,748	0	0	0	0	0
H15430330	Affordable Rental Hsg-RVD		1,227,314	2,172,333	5,026,118	8,003,673	11,496,038	8,008,406
H15900330	PHB Staff & Admin-RVD		492,919	0	0	0	0	0
H15930330	Fairfield Apartments-RVD		5,000	0	0	0	0	0
H15938330	Blanchet House Redev-RVD		4,022,950	0	0	0	0	0
H15940330	RAC - Access Center-RVD		17,363,209	0	0	0	0	0
H15951330	Yards at Union Station-RVD		4,965,000	0	0	0	0	0
	Portland Hsg Bureau	**Total**	**28,624,140**	**2,172,333**	**5,026,118**	**8,003,673**	**11,496,038**	**8,008,406**
Property Redev								
Commercial Property Redevelopm								
A35401330	Central City 2035-RVD		27,840	0	0	0	0	0
A45997330	Portland Harbor-RVD		0	32,000	0	0	0	0
N33024015	Multnomah County-RVD-Adm		0	0	26,948,460	0	0	0
P33013715	Grove Hotel-RVD-Adm		2,707,850	0	0	0	0	0
P33050015	Post Office-RVD-Adm		100,000	500,000	8,000,000	16,000,002	15,086,222	22,313,779
P33050115	Dtwn Retail Strat-RVD-Adm		200,000	500,000	250,000	250,000	250,000	250,000
P33050415	Centennial Mills Rdv-RVD-Adm		472,000	365,000	7,836,000	7,076,000	0	0