

FINAL



Right of Way Technical Report

I-5 Rose Quarter Improvement Project

Oregon Department of Transportation

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I-5 ROSE QUARTER
IMPROVEMENT PROJECT



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¹ Appendix C includes written descriptions of all figures referenced in this Technical Report. If needed, additional figure interpretation is available from the ODOT Senior Environmental Project Manager at (503) 731-4804.

Acronyms and Abbreviations

ADA	Americans with Disabilities Act
API	Area of Potential Impact
CFR	Code of Federal Regulations
DSL	Department of State Lands
EB	eastbound
GIS	geographic information system
HBU	highest and best use
I-405	Interstate 405
I-5	Interstate 5
I-84	Interstate 84
mvmt	million vehicle miles travelled
NB	northbound
NEPA	National Environmental Policy Act
NNN	triple net lease
ODOT	Oregon Department of Transportation
ORS	Oregon Revised Statutes
ROW	right of way
RTP	<i>Regional Transportation Plan</i>
SAC	Stakeholder Advisory Committee
SB	southbound
SPIS	Safety Priority Index System
UPRR	Union Pacific Railroad Company
URA	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
WB	westbound

Executive Summary

The *Right of Way Technical Report* was prepared to support the National Environmental Policy Act (NEPA) review of the I-5 Rose Quarter Improvement Project (Project) located in Portland, Oregon, along the segment of Interstate 5 (I-5) between Interstate 405 (I-405) to the north and Interstate 84 (I-84) to the south. The Project also includes the interchange of I-5 and NE Broadway and NE Weidler Street (the Broadway/Weidler interchange) and the surrounding transportation network, from approximately NE Hancock Street to the north, N Benton Avenue to the west, N/NE Multnomah Street to the south, and NE 2nd Avenue to the east.

Methodology

Right of way (ROW) data related to the Build and No-Build Alternatives were used to describe and analyze potential ROW impacts and develop estimated ROW costs associated with the Build and No-Build Alternatives. The Build Alternative is only at an approximate 5 percent design level; as such, the proposed impacts and associated costs may change or vary post-NEPA based on the final design but are a good representation of the amount and type of expected ROW impacts and costs associated with the Build Alternative. The approximate location and estimated square footage of impacts was developed based on Oregon Department of Transportation (ODOT) preliminary design for the purposes of this report.

Actual ROW impacts, just compensation, and benefits due the affected property owners and/or tenants would be determined during the ROW acquisition phase of the Project. All ROW property acquisitions and relocation for any displacements would be performed in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 United States Code 4601 et seq.) (URA); Title 49 Code of Federal Regulations (CFR) Part 24, which was established to promulgate rules to implement the URA; Oregon Revised Statutes (ORS) Volume 1 Chapter 35; and the ODOT *Right of Way Manual* (November 2016 or subsequent edition), which was developed to ensure the fair and equitable treatment of all parties.

Parcel data were compiled for the geographic extent of the Project Area and Area of Potential Impact (API) to evaluate property information for the proposed Build Alternative. These data were based on the Multnomah County tax assessor geographic information system (GIS) layer and PortlandMaps.com.

Baseline parcel unit values based on a price per square foot were estimated using information from the county tax assessor, Multiple Listing Service, CoStar, open web searches, and sales and listings from local commercial brokerage offices (including Cushman & Wakefield and Newmark Knight Frank) based on property type, size, and assumed highest and best use. Property market value appraisals were not obtained.

Values for improvements, costs to cure/damages, demolition, relocation benefits, and ROW services were estimated by the Project team based on prior project ROW experience.

Data indicate there are no residential displacements; therefore, Housing of Last Resort would not be utilized. Businesses, outdoor advertising signs, and personal property displacements are anticipated. Displaced business types are not “sole source” type businesses or unique to the surrounding community. Personal property-only and landlord-only business displacements should have little to no impact on the community as a whole.

The data gathered were used to provide context and to describe and analyze the ROW impacts and associated costs as they relate to the Build and No-Build Alternatives.

Affected Environment

Existing land uses in the API include both developed and undeveloped commercial, industrial, residential, public/semi-public, and park property. Single-family residential structures appear converted to office or non-residential uses. Several occupied multi-family residential properties exist within the API.

Most properties within the API would not be affected. Of the affected properties within the API, all are currently zoned as and/or used for commercial or industrial purposes or are slated within the comprehensive plan for some type of mixed-use development allowing greater densities and more intensive uses.

Close to the Rose Quarter and along commercial arterials, such as the NE Broadway/Weidler couplet running east-west, low-intensity highway commercial activities, including car lots, are being displaced by more intensive mixed-use structures. Typical building composition includes street-level retail topped with multiple stories of residential units. Commercial and mixed-use land values were found to be comparable to high-density multi-family land values, in the \$100 to \$200 per square foot range for buildable entitled sites.

The API is experiencing a dynamic transition as it evolves to more of an urban location with increased investment in commercial, multi-family, and public uses. Residential properties are being replaced with developments in correlation with the City’s comprehensive plan.

Environmental Consequences

No-Build Alternative

Under the No-Build Alternative, the proposed I-5 mainline and Broadway/Weidler interchange area improvements would not be constructed, and the current road system would remain in place. The No-Build Alternative would not require property acquisitions; therefore, there would be no cost or other ROW impacts from the Project. Possible indirect impacts from the No-Build Alternative could include adverse effects on property values and the real estate market due to increasing

congestion near the Broadway/Weidler interchanges and continuing safety concerns along the corridor. Due to pedestrian, vehicular, and bicycle safety concerns, potential business or residential occupants might locate elsewhere, resulting in lower demand that would affect real estate development or sales with an unintended negative economic impact.

Build Alternative

The Build Alternative would require the acquisition of approximately 3.5–4.0 acres of ROW area in fee simple (permanent acquisition), of which approximately 15 percent is owned by the City of Portland, which is a Project partner. In addition, approximately 0.5–1.5 acres of surface and/or subsurface permanent easements and 1.5–2.5 acres of temporary easements are estimated to accommodate supporting structures for the highway improvements and staging/work area needs. The estimated ROW impacts are considered minor in the context of the overall API acreage of approximately 127 total acres. The majority of the proposed Build Alternative would be located on existing ROW and public-owned property, including I-5, City of Portland streets, and lots used for municipal or public parking purposes and greenspace.

The Build Alternative would require the acquisition of ROW from predominantly commercial and mixed-use zones. Based on the current design level of 5 percent, it is estimated that there would be 7 full site acquisitions and 24 partial acquisitions of permanent and/or temporary ROW, for a total estimated 31 ROW Files (collection of adjacent parcels). The acquisitions would result in the displacement and relocation of an estimated four commercial businesses, potentially three landlord-only businesses (property owned solely for leasing), four outdoor advertising signs, and an estimated eight personal property-only relocations. These are considered to be direct impacts.

The Project would be delivered as a Construction Manager/General Contractor project. Actual ROW impacts may change as design progresses post-NEPA; however, the impacted properties are chiefly located where highway covers would be constructed, existing highway crossings demolished, and streets and pedestrian and bicycle bridges or paths constructed.

In addition, properties may be indirectly impacted by adjacency to the Project Area where some type of impact during construction might be experienced by the property owners and/or tenants.

Temporary impacts during construction would be offset by the various beneficial multi-modal improvements of the Project, including a safer, less congested highway corridor for commuters on I-5 and freight carrying local goods; improved connections for all users within the community with improved streets, access to transit, and improved bike and pedestrian facilities; seismic upgrades; and the potential for increased redevelopment opportunities within the area. These beneficial improvements may eventually lead to increased property values.

Based on the current design stage and layout of the Build Alternative, the types of businesses that could be displaced include a day care center, a gas station/convenience store, a retail paint store, and a real estate/mortgage office. A search of the immediate area indicated that there are several alternative providers offering the same or similar services as those that could potentially be impacted, so even if the businesses chose to relocate outside the immediate Project Area, there should not be a detrimental impact to the users of those services. Efforts would be made to locate suitable replacement properties within the immediate area. In addition, the current market and increasing redevelopment of the area is an indicator that businesses should be able to relocate within or near the Project Area, if desired.

The estimated cost for ROW is approximately \$50 to \$55 million in 2018 dollars. This estimate includes costs associated with the acquisition of ROW required for construction of the Project. The ROW cost estimate excludes the cost of utility relocation and hazardous material remediation. It is recommended that any future ROW phase have a minimum duration of 24 months to allow adequate time for acquisition and relocation of businesses.

Avoidance, Minimization, and Mitigation Measures

ROW impact research for this report was conducted and summarized in 2017 and 2018. During this time, there have been multiple workshops, community outreach efforts, and avoidance and minimization measures implemented to avoid or minimize impacts. These avoidance and minimization measures have reduced the number of initially projected property impacts required for the Project, and to the extent possible, have been included within the Project design. Additional measures that would be considered to further minimize or mitigate impacts include the following:

- Perform all ROW acquisition and relocation activities in accordance with the URA (49 CFR Part 24), ORS 35; and the ODOT *Right of Way Manual* (2016) to ensure fair and equitable treatment of all persons affected by the Project.
- Conduct relocation interviews early in ROW acquisition process to identify and address any special needs.
- Provide interpreter and translation services for owners and tenants, as needed.
- Work with design and construction to identify ways to minimize or mitigate impacts to individual properties through design and/or construction staging, such as through best management practices, temporary traffic control plans, and temporary access plans.
- Explore the use of alternative acquisition methods such as early or advance acquisition for full site acquisitions where design cannot change, such as the highway cover location at Broadway/Weidler.



- Phase any work adjacent to schools, such as retaining wall and column work, to occur during summer months to avoid potential disruptions during the school year.
- Determine whether Project activities would have an effect on adjacent properties and businesses with sensitive patients, medical equipment, or machinery that could trigger additional ROW Files; these could include facilities such as hospitals, elderly or psychiatric patient care services, emergency response units, and businesses utilizing equipment such as X-ray, MRI, CT scan, or CNC machines.
- Conduct early discussions with Oregon Department of State Lands and Union Pacific Railroad Company regarding ROW needs and processes for work near their lands, including new and existing structures over or adjacent to the Portland Harbor Superfund Site and the Union Pacific Rail Corridor.

1 Introduction

1.1 Project Location

The I-5 Rose Quarter Improvement Project (Project) is located in Portland, Oregon, along the 1.7-mile segment of Interstate 5 (I-5) between Interstate 405 (I-405) to the north (milepost 303.2) and Interstate 84 (I-84) to the south (milepost 301.5). The Project also includes the interchange of I-5 and N Broadway and NE Weidler Street (Broadway/Weidler interchange) and the surrounding transportation network, from approximately N/NE Hancock Street to the north, N Benton Avenue to the west, N/NE Multnomah Street to the south, and NE 2nd Avenue to the east.

Figure 1 illustrates the Project Area in which the proposed improvements are located. The Project Area represents the estimated area within which improvements are proposed, including where permanent modifications to adjacent parcels may occur and where potential temporary impacts from construction activities could result.

1.2 Project Purpose

The purpose of the Project is to improve the safety and operations on I-5 between I-405 and I-84, of the Broadway/Weidler interchange, and on adjacent surface streets in the vicinity of the Broadway/Weidler interchange and to enhance multimodal facilities in the Project Area.

In achieving the purpose, the Project would also support improved local connectivity and multimodal access in the vicinity of the Broadway/Weidler interchange and improve multimodal connections between neighborhoods located east and west of I-5.

1.3 Project Need

The Project would address the following primary needs:

- **I-5 Safety:** I-5 between I-405 and I-84 has the highest crash rate on urban interstates in Oregon. Crash data from 2011 to 2015 indicate that I-5 between I-84 and the merge point from the N Broadway ramp on to I-5 had a crash rate (for all types of crashes²) that was approximately 3.5 times higher than the statewide average for comparable urban interstate facilities (ODOT 2015a).

² Motor vehicle crashes are reported and classified by whether they involve property damage, injury, or death.

- Seventy-five percent of crashes occurred on southbound (SB) I-5, and 79 percent of all the crashes were rear-end collisions. Crashes during this 5-year period included one fatality, which was a pedestrian fatality. A total of seven crashes resulted in serious injury.
- The Safety Priority Index System (SPIS) is the systematic scoring method used by the Oregon Department of Transportation (ODOT) for identifying potential safety problems on state highways based on the frequency, rate, and severity of crashes (ODOT 2015b). The 2015 SPIS shows two SB sites in the top 5 percent and two northbound (NB) sites in the top 10 percent of the SPIS list.
- The 2015 crash rate on the I-5 segment between I-84 and the Broadway ramp on to I-5 is 2.70 crashes per million vehicle miles. The statewide average for comparable urban highway facilities is 0.77 crashes per million vehicle miles travelled (mvmt).
- The existing short weaving distances and lack of shoulders for accident/incident recovery in this segment of I-5 are physical factors that may contribute to the high number of crashes and safety problems.
- **I-5 Operations:** The Project Area is at the crossroads of three regionally significant freight and commuter routes: I-5, I-84, and I-405. As a result, I-5 in the vicinity of the Broadway/Weidler interchange experiences some of the highest traffic volumes in the State of Oregon, carrying approximately 121,400 vehicles each day (ODOT 2017), and experiences 12 hours of congestion each day (ODOT 2012a). The following factors affect I-5 operations:
 - Close spacing of multiple interchange ramps results in short weaving segments where traffic merging on and off I-5 has limited space to complete movements, thus becoming congested. There are five on-ramps (two NB and three SB) and six off-ramps (three NB and three SB) in this short stretch of highway. Weaving segments on I-5 NB between the I-84 westbound (WB) on-ramp and the NE Weidler off-ramp, and on I-5 SB between the N Wheeler Avenue on-ramp and I-84 eastbound (EB) off-ramp, currently perform at a failing level-of-service during the morning and afternoon peak periods.
 - The high crash rate within the Project Area can periodically contribute to congestion on this segment of the highway. As noted with respect to safety, the absence of shoulders on I-5 contributes to congestion because vehicles involved in crashes cannot get out of the travel lanes.
 - Future (2045) traffic estimates indicate that the I-5 SB section between the N Wheeler on-ramp and EB I-84 off-ramp is projected to have the most critical congestion in the Project Area, with capacity and geometric constraints that result in severe queuing.
- **Broadway/Weidler Interchange Operations:** The complexity and congestion at the I-5 Broadway/Weidler interchange configuration is difficult to navigate for vehicles (including transit vehicles), bicyclists, and pedestrians, which impacts

access to and from I-5 as well as to and from local streets. The high volumes of traffic on I-5 and Broadway/Weidler in this area contribute to congestion and safety issues (for all modes) at the interchange ramps, the Broadway and Weidler overcrossings of I-5, and on local streets in the vicinity of the interchange.

- The Broadway/Weidler couplet provides east-west connectivity for multiple modes throughout the Project Area, including automobiles, freight, people walking and biking, and Portland Streetcar and TriMet buses. The highest volumes of vehicle traffic on the local street network in the Project Area occur on NE Broadway and NE Weidler in the vicinity of I-5. The N Vancouver Avenue/N Williams couplet, which forms a critical north-south link and is a Major City Bikeway within the Project Area with over 5,000 bicycle users during the peak season, crosses Broadway/Weidler in the immediate vicinity of the I-5 interchange.
- The entire length of N/NE Broadway is included in the Portland High Crash Network—streets designated by the City of Portland for the high number of deadly crashes involving pedestrians, bicyclists, and vehicles.³
- The SB on-ramp from N Wheeler and SB off-ramp to N Broadway experienced a relatively high number of crashes per mile (50-70 crashes per mile) compared to other ramps in the Project Area during years 2011-2015. Most collisions on these ramps were rear-end collisions.
- Of all I-5 highway segments in the corridor, those that included weaving maneuvers to/from the Broadway/Weidler ramps tend to experience the highest crash rates:
 - SB I-5 between the on-ramp from N Wheeler and the off-ramp to I-84 (SB-S5) has the highest crash rate (15.71 crashes/mvmt).
 - NB I-5 between the I-84 on-ramp and off-ramp to NE Weidler (NB-S5) has the second highest crash rate (5.66 crashes/mvmt).
 - SB I-5 between the on-ramp from I-405 and the off-ramp to NE Broadway (SB-S3) has the third highest crash rate (4.94 crashes/mvmt).
- **Travel Reliability on the Transportation Network:** Travel reliability on the transportation network decreases as congestion increases and safety issues expand. The most unreliable travel times tend to occur at the end of congested areas and on the shoulders of the peak periods. Due to these problems, reliability has decreased on I-5 between I-84 and I-405 for most of the day. Periods of congested conditions on I-5 in the Project Area have grown over time from morning and afternoon peak periods to longer periods throughout the day.

³ Information on the City of Portland's High Crash Network is available at <https://www.portlandoregon.gov/transportation/54892>.

1.4 Project Goals and Objectives

In addition to the purpose and need, which focus on the state's transportation system, the Project includes related goals and objectives developed through the joint ODOT and City of Portland N/NE Quadrant and I-5 Broadway/Weidler Interchange Plan process, which included extensive coordination with other public agencies and citizen outreach. The following goals and objectives may be carried forward beyond the National Environmental Policy Act (NEPA) process to help guide final design and construction of the Project:

- Enhance pedestrian and bicycle safety and mobility in the vicinity of the Broadway/Weidler interchange.
- Address congestion and improve safety for all modes on the transportation network connected to the Broadway/Weidler interchange and I-5 crossings.
- Support and integrate the land use and urban design elements of the Adopted N/NE Quadrant Plan (City of Portland et al. 2012) related to I-5 and the Broadway/Weidler interchange, which include the following:
 - Diverse mix of commercial, cultural, entertainment, industrial, recreational, and residential uses, including affordable housing
 - Infrastructure that supports economic development
 - Infrastructure for healthy, safe, and vibrant communities that respects and complements adjacent neighborhoods
 - A multimodal transportation system that addresses present and future needs, both locally and on the highway system
 - An improved local circulation system for safe access for all modes
 - Equitable access to community amenities and economic opportunities
 - Protected and enhanced cultural heritage of the area
 - Improved urban design conditions
- Improve freight reliability.
- Provide multimodal transportation facilities to support planned development in the Rose Quarter, Lower Albina, and Lloyd.
- Improve connectivity across I-5 for all modes.

2 Project Alternatives

This technical report describes the potential effects of no action (No-Build Alternative) and the proposed action (Build Alternative).

2.1 No-Build Alternative

NEPA regulations require an evaluation of the No-Build Alternative to provide a baseline for comparison with the potential impacts of the proposed action. The No-Build Alternative consists of existing conditions and any planned actions with committed funding in the Project Area.

I-5 is the primary north-south highway serving the West Coast of the United States from Mexico to Canada. At the northern portion of the Project Area, I-5 connects with I-405 and the Fremont Bridge; I-405 provides the downtown highway loop on the western edge of downtown Portland. At the southern end of the Project Area, I-5 connects with the western terminus of I-84, which is the east-west highway for the State of Oregon. Because the Project Area includes the crossroads of three regionally significant freight and commuter routes, the highway interchanges within the Project Area experience some of the highest traffic volumes found in the state (approximately 121,400 average annual daily trips). The existing lane configurations consist primarily of two through lanes (NB and SB), with one auxiliary lane between interchanges. I-5 SB between I-405 and Broadway includes two auxiliary lanes.

I-5 is part of the National Truck Network, which designates highways (including most of the Interstate Highway System) for use by large trucks. In the Portland-Vancouver area, I-5 is the most critical component of this national network because it provides access to the transcontinental rail system, deep-water shipping and barge traffic on the Columbia River, and connections to the ports of Vancouver and Portland, as well as to most of the area's freight consolidation facilities and distribution terminals. Congestion on I-5 throughout the Project Area delays the movement of freight both within the Portland metropolitan area and on the I-5 corridor. I-5 through the Rose Quarter is ranked as one of the 50 worst freight bottlenecks in the United States (ATRI 2017).

Within the approximately 1.5 miles that I-5 runs through the Project Area, I-5 NB connects with five on- and off-ramps, and I-5 SB connects with six on- and off-ramps. Drivers entering and exiting I-5 at these closely spaced intervals, coupled with high traffic volumes, slow traffic and increase the potential for crashes. Table 1 presents the I-5 on- and off-ramps in the Project Area. Table 2 shows distances of the weaving areas between the on- and off-ramps on I-5 in the Project Area. Each of the distances noted for these weave transitions is less than adequate per current highway design standards (ODOT 2012b). In the shortest weave section, only 1,075 feet is available for drivers to merge onto I-5 from NE Broadway NB in the same area where drivers are exiting from I-5 onto I-405 and the Fremont Bridge.



Table 1. I-5 Ramps in the Project Area

I-5 Travel Direction	On-Ramps From	Off-Ramps To
Northbound	<ul style="list-style-type: none"> I-84 N Broadway/N Williams Avenue 	<ul style="list-style-type: none"> NE Weidler Street/NE Victoria Avenue I-405 N Greeley Avenue
Southbound	<ul style="list-style-type: none"> N Greeley Avenue I-405 N Wheeler Avenue/N Ramsay Way 	<ul style="list-style-type: none"> N Broadway/N Vancouver Avenue I-84 Morrison Bridge/Highway 99E

Notes: I = Interstate

Table 2. Weave Distances within the Project Area

I-5 Travel Direction	Weave Section	Weave Distance
Northbound	I-84 to NE Weidler Street/NE Victoria Avenue	1,360 feet
Northbound	N Broadway/N Williams Avenue to I-405	1,075 feet
Southbound	I-405 to N Broadway	2,060 feet
Southbound	N Wheeler Avenue/N Ramsay Way to I-84	1,300 feet

Notes: I = Interstate

As described in Section 1.3, the high volumes, closely spaced interchanges, and weaving movements result in operational and safety issues, which are compounded by the lack of standard highway shoulders on I-5 throughout much of the Project Area.

Under the No-Build Alternative, I-5 and the Broadway/Weidler interchange and most of the local transportation network in the Project Area would remain in its current configuration, with the exception of those actions included in the Metro 2014 *Regional Transportation Plan (RTP)* financially constrained project list (Metro 2014).⁴ One of these actions includes improvements to the local street network on the Broadway/Weidler corridor within the Project Area. The proposed improvements include changes to N/NE Broadway and N/NE Weidler from the Broadway Bridge to NE 7th Avenue. The current design concept would remove and reallocate one travel lane on both N/NE Broadway and N/NE Weidler to establish protected bike lanes and reduce pedestrian crossing distances. Proposed improvements also include

⁴ Metro Regional Transportation Plan ID 11646. Available at: https://www.oregonmetro.gov/sites/default/files/Appendix%201.1%20Final%202014%20RTP%20%20Project%20List%208.5x11%20for%20webpage_1.xls

changes to turn lanes and transitions to minimize pedestrian exposure and improve safety. The improvements are expected to enhance safety for people walking, bicycling, and driving through the Project Area. Implementation is expected in 2018-2027.

2.2 Build Alternative

The Project alternatives development process was completed during the ODOT and City of Portland 2010-2012 N/NE Quadrant and I-5 Broadway/Weidler Interchange planning process. A series of concept alternatives were considered following the definition of Project purpose and need and consideration of a range of transportation-related problems and issues that the Project is intended to address.

In conjunction with the Stakeholder Advisory Committee (SAC) and the public during this multi-year process, ODOT and the City of Portland studied more than 70 design concepts, including the Build Alternative, via public design workshops and extensive agency and stakeholder input. Existing conditions, issues, opportunities, and constraints were reviewed for the highway and the local transportation network. A total of 19 full SAC meetings and 13 subcommittee meetings were held; each was open to the public and provided opportunity for public comment. Another 10 public events were held, with over 100 attendees at the Project open houses providing input on the design process. Of the 70 design concepts, 13 concepts advanced for further study based on SAC, agency, and public input, with six concepts passing into final consideration.

One recommended design concept, the Build Alternative, was selected for development as a result of the final screening and evaluation process. The final I-5 Broadway/Weidler Facility Plan (ODOT 2012a) and recommended design concept, herein referred to as the Build Alternative, were supported by the SAC and unanimously adopted in 2012 by the Oregon Transportation Commission and the Portland City Council.⁵ The features of the Build Alternative are described below.

The Build Alternative includes I-5 mainline improvements and multimodal improvements to the surface street network in the vicinity of the Broadway/Weidler interchange. The proposed I-5 mainline improvements include the construction of auxiliary lanes (also referred to as ramp-to-ramp lanes) and full shoulders between I-84 to the south and I-405 to the north, in both the NB and SB directions. See Section 2.2.1 for more detail.

Construction of the I-5 mainline improvements would require the rebuilding of the N/NE Weidler, N/NE Broadway, N Williams, and N Vancouver structures over I-5. With the Build Alternative, the existing N/NE Weidler, N/NE Broadway, and

⁵ Resolution No. 36972, adopted by City Council October 25, 2012. Available at: <https://www.portlandoregon.gov/citycode/article/422365>

N Williams overcrossings would be removed and rebuilt as a single highway cover structure over I-5 (see Section 2.2.2). The existing N Vancouver structure would be removed and rebuilt as a second highway cover, including a new roadway crossing connecting N Hancock and N Dixon Streets. The existing N Flint Avenue structure over I-5 would be removed. The I-5 SB on-ramp at N Wheeler would also be relocated to N/NE Weidler at N Williams, via the new Weidler/Broadway/Williams highway cover. A new bicycle and pedestrian bridge over I-5 would be constructed at NE Clackamas Street, connecting Lloyd with the Rose Quarter (see Section 2.2.4.3).

Surface street improvements are also proposed, including upgrades to existing bicycle and pedestrian facilities and a new center-median bicycle and pedestrian path on N Williams between N/NE Weidler and N/NE Broadway (see Section 2.2.4.4).

2.2.1 I-5 Mainline Improvements

The Build Alternative would modify I-5 between I-84 and I-405 by adding safety and operational improvements. The Build Alternative would extend the existing auxiliary lanes approximately 4,300 feet in both NB and SB directions and add 12-foot shoulders (both inside and outside) in both directions in the areas where the auxiliary lane would be extended. Figure 2 illustrates the location of the proposed auxiliary lanes. Figure 3 illustrates the auxiliary lane configuration, showing the proposed improvements in relation to the existing conditions. Figure 4 provides a cross section comparison of existing and proposed conditions, including the location of through lanes, auxiliary lanes, and highway shoulders.

A new NB auxiliary lane would be added to connect the I-84 WB on-ramp to the N Greeley off-ramp. The existing auxiliary lane on I-5 NB from the I-84 WB on-ramp to the NE Weidler off-ramp and from the N Broadway on-ramp to the I-405 off-ramp would remain.

The new SB auxiliary lane would extend the existing auxiliary lane that enters I-5 SB from the N Greeley on-ramp. The existing SB auxiliary lane currently ends just south of the N Broadway off-ramp, in the vicinity of the Broadway overcrossing structure.

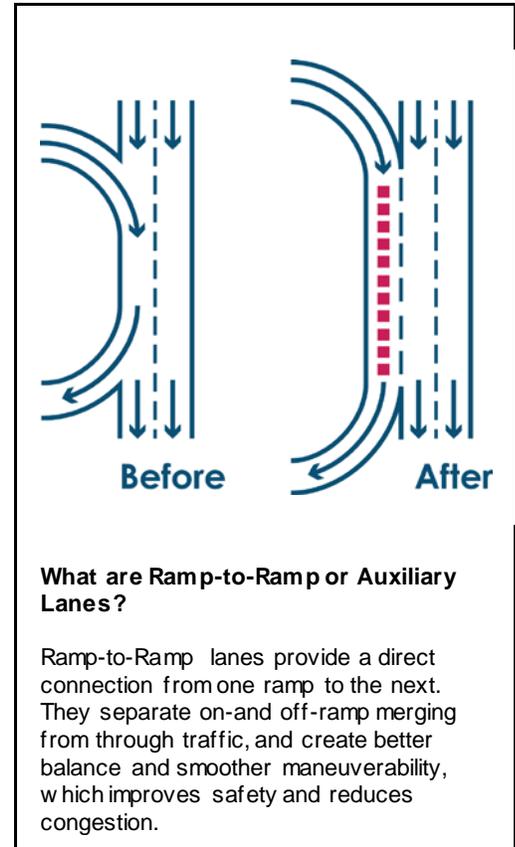


Figure 2. Auxiliary Lane/Shoulder Improvements

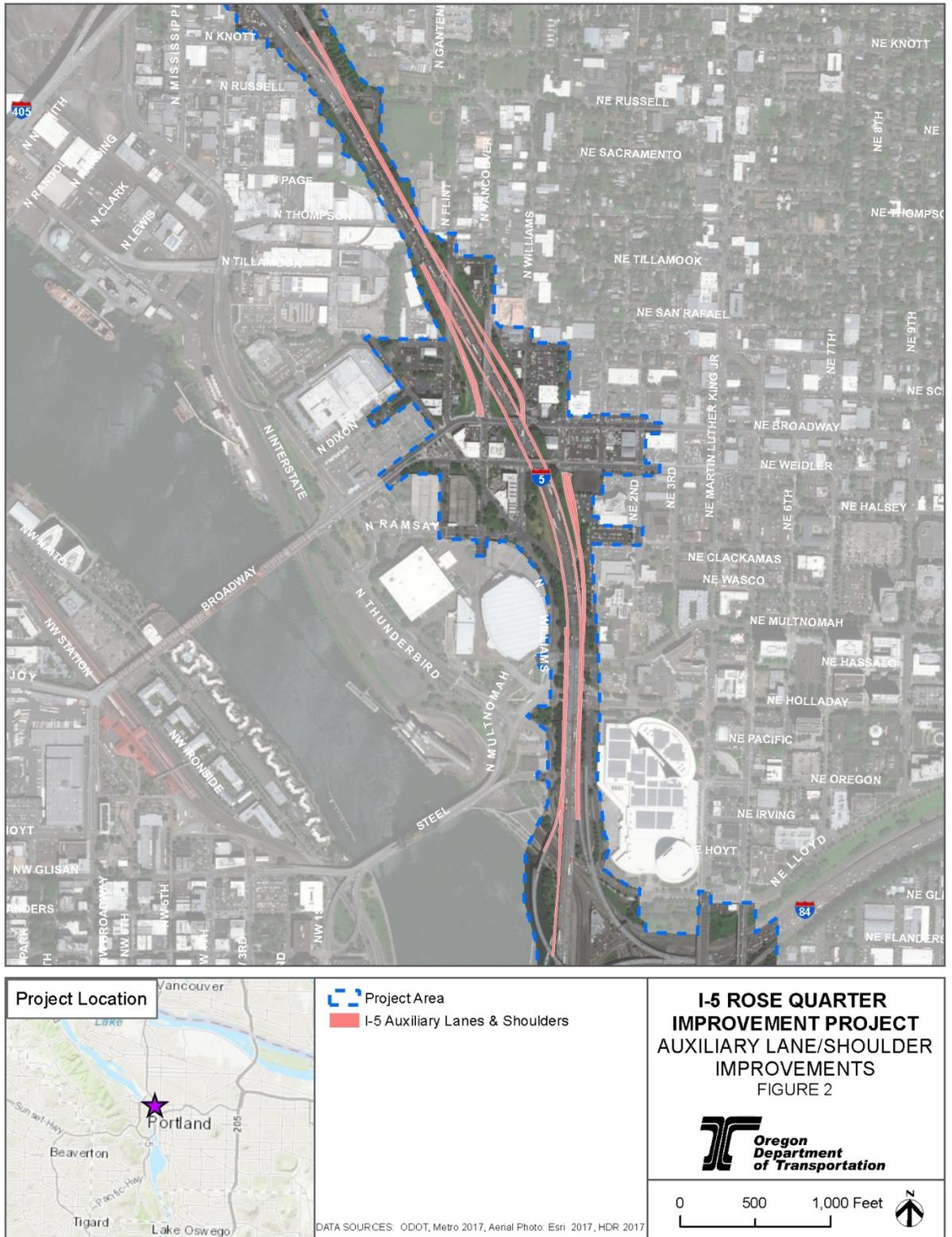


Figure 3. I-5 Auxiliary (Ramp-to-Ramp) Lanes – Existing Conditions and Proposed Improvements

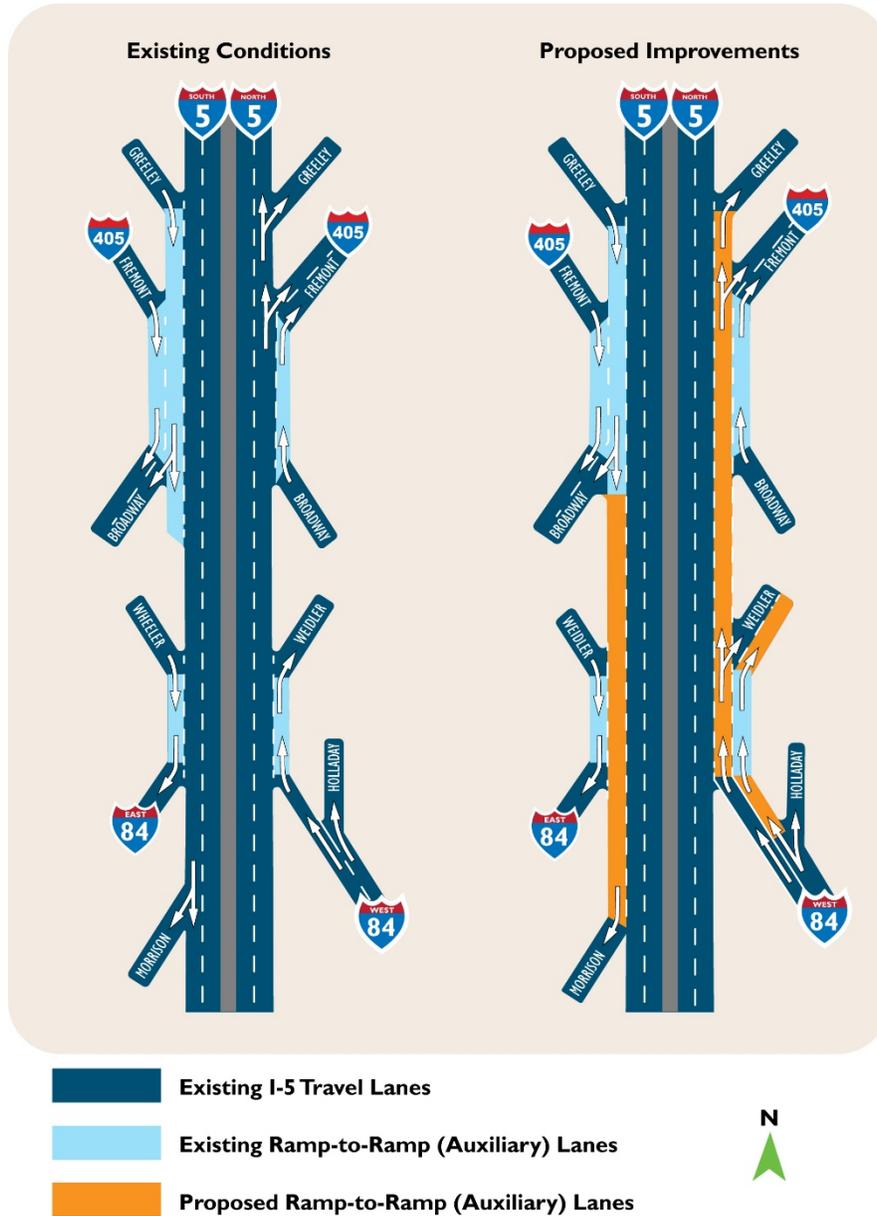
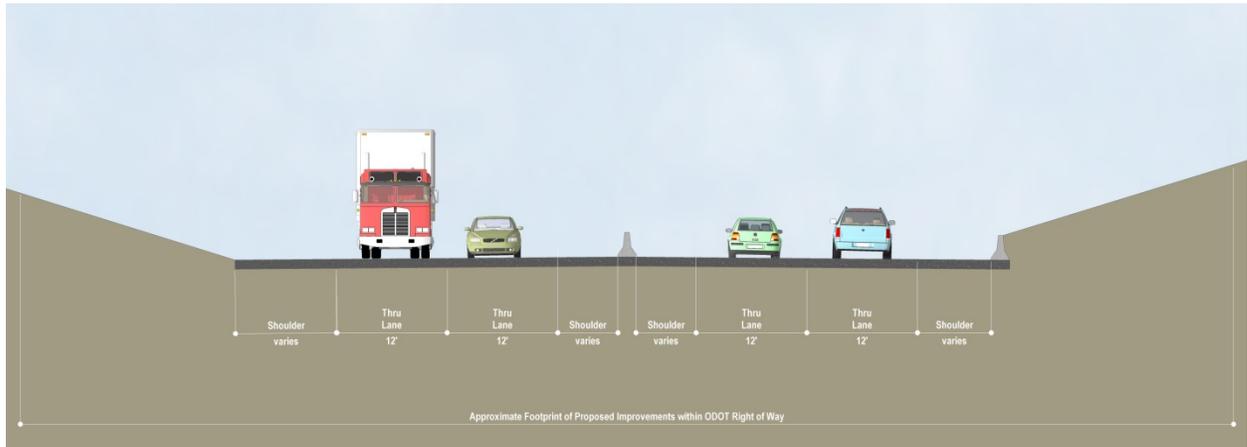
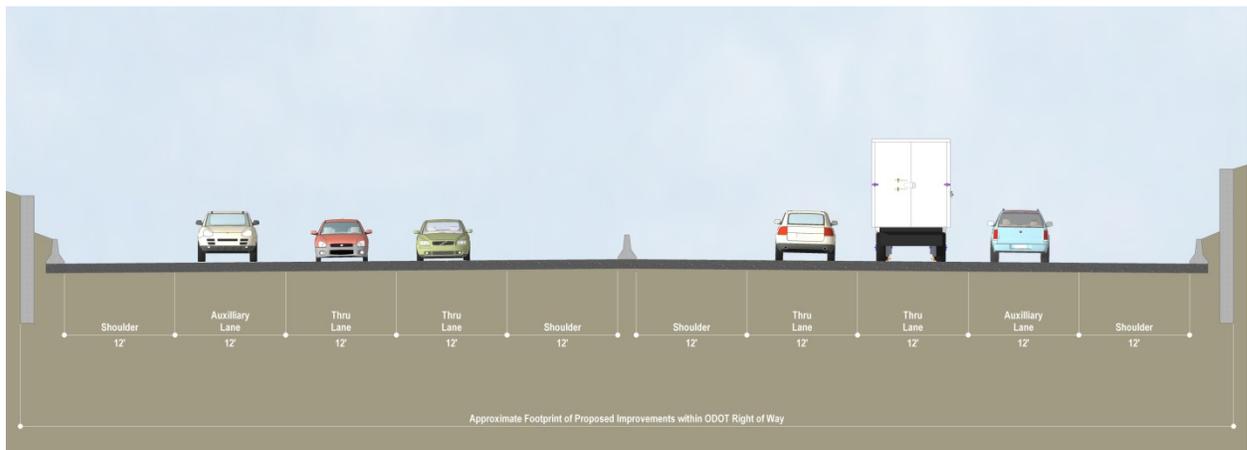


Figure 4. I-5 Cross Section (N/NE Weidler Overcrossing) – Existing Conditions and Proposed Improvements



Existing Lane Configuration



Proposed Lane Configuration

Under the Build Alternative, the SB auxiliary lane would be extended as a continuous auxiliary lane from N Greeley to the Morrison Bridge and the SE Portland/Oregon Museum of Science and Industry off-ramp. Figure 4 presents a representative cross section of I-5 (south of the N/NE Weidler overcrossing within the Broadway/Weidler interchange area), with the proposed auxiliary lanes and shoulder, to provide a comparison with the existing cross section.

The addition of 12-foot shoulders (both inside and outside) in both directions in the areas where the auxiliary lanes would be extended would provide more space to allow vehicles that are stalled or involved in a crash to move out of the travel lanes. New shoulders would also provide space for emergency response vehicles to use to access an incident within or beyond the Project Area.

No new through lanes would be added to I-5 as part of the Build Alternative; I-5 would maintain the existing two through lanes in both the NB and SB directions.

2.2.2 Highway Covers

2.2.2.1 Broadway/Weidler/Williams Highway Cover

To complete the proposed I-5 mainline improvements, the existing structures crossing over I-5 must be removed, including the roads and the columns that support the structures. The Build Alternative would remove the existing N/NE Broadway, N/NE Weidler, and N Williams structures over I-5 to accommodate the auxiliary lane extension and new shoulders described in Section 2.2.1.

The structure replacement would be in the form of the Broadway/Weidler/Williams highway cover (Figure 5). The highway cover would be a wide bridge that spans east-west across I-5, extending from immediately south of N/NE Weidler to immediately north of N/NE Broadway to accommodate passage of the Broadway/Weidler couplet. The highway cover would include design upgrades to make the structure more resilient in the event of an earthquake.

Figure 5. Broadway/Weidler/Williams and Vancouver/Hancock Highway Covers



The highway cover would connect both sides of I-5, reducing the physical barrier of I-5 between neighborhoods to the east and west of the highway while providing additional surface area above I-5. The added surface space would provide an opportunity for new and modern bicycle and pedestrian facilities and public spaces when construction is complete, making the area more connected, walkable, and bike friendly.

2.2.2.2 N Vancouver/N Hancock Highway Cover

The Build Alternative would remove and rebuild the existing N Vancouver structure over I-5 as a highway cover (Figure 5). The Vancouver/Hancock highway cover would be a concrete or steel platform that spans east-west across I-5 and to the north and south of N/NE Hancock. Like the Broadway/Weidler/Williams highway cover, this highway cover would provide additional surface area above I-5. The highway cover would provide an opportunity for public space and a new connection across I-5 for all modes of travel. A new roadway connecting neighborhoods to the east with the Lower Albina area and connecting N/NE Hancock to N Dixon would be added to the Vancouver/Hancock highway cover (see element “A” in Figure 6).

2.2.3 Broadway/Weidler Interchange Improvements

Improvements to the Broadway/Weidler interchange to address connections between I-5, the interchange, and the local street network are described in the following subsections and illustrated in Figure 6.

2.2.3.1 Relocate I-5 Southbound On-Ramp

The I-5 SB on-ramp is currently one block south of N Weidler near where N Wheeler, N Williams, and N Ramsay come together at the north end of the Moda Center. The Build Alternative would remove the N Wheeler on-ramp and relocate the I-5 SB on-ramp north to N Weidler. Figure 6 element “B” illustrates the on-ramp relocation.

2.2.3.2 Modify N Williams between Ramsay and Weidler

The Build Alternative would modify the travel circulation on N Williams between N Ramsay and N Weidler. This one-block segment of N Williams would be closed to through-travel for private motor vehicles and would only be permitted for pedestrians, bicycles, and public transit (buses) (Figures 6 and 7). Private motor vehicle and loading access to the facilities at Madrona Studios would be maintained.

2.2.3.3 Revise Traffic Flow on N Williams between Weidler and Broadway

The Build Alternative would revise the traffic flow on N Williams between N/NE Weidler and N/NE Broadway. For this one-block segment, N Williams would be converted from its current configuration as a two-lane, one-way street in the NB direction with a center NB bike lane to a reverse traffic flow two-way street with a 36-foot-wide median multi-use path for bicycles and pedestrians. These improvements are illustrated in Figures 6 and 7.

Figure 6. Broadway/Weidler Interchange Area Improvements



Figure 7. Conceptual Illustration of Proposed N Williams Multi-Use Path and Revised Traffic Flow



The revised N Williams configuration would be designed as follows:

- Two NB travel lanes along the western side of N Williams to provide access to the I-5 NB on-ramp, through movements NB on N Williams, and left-turn movements onto N Broadway.
- A 36-foot-wide center median with a multi-use path permitted only for bicycles and pedestrians. The median multi-use path would also include landscaping on both the east and west sides of the path.
- Two SB lanes along the eastern side of N Williams to provide access to the I-5 SB on-ramp or left-turn movements onto NE Weidler.

2.2.4 Related Local System Multimodal Improvements

2.2.4.1 New Hancock-Dixon Crossing

A new roadway crossing would be constructed to extend N/NE Hancock west across and over I-5, connecting it to N Dixon (see Figure 6, element “E”). The new crossing would be constructed on the Vancouver/Hancock highway cover and would provide a new east-west crossing over I-5. Traffic calming measures would be incorporated east of the intersection of N/NE Hancock and N Williams to discourage use of NE Hancock by through motor vehicle traffic. Bicycle and pedestrian through travel would be permitted (see Figure 6, element “F”).

2.2.4.2 Removal of N Flint South of N Tillamook and Addition of New Multi-Use Path

The existing N Flint structure over I-5 would be removed, and N Flint south of N Russell Street would terminate at and connect directly to N Tillamook (see Figure 6, element “G”). The portion of Flint between the existing I-5 overcrossing and Broadway would be closed as a through street for motor vehicles. Driveway access would be maintained on this portion of N Flint to maintain local access.

A new multi-use path would be added between the new Hancock-Dixon crossing and Broadway at a grade of 5 percent or less to provide an additional travel route option for people walking and biking. The new multi-use path would follow existing N Flint alignment between N Hancock and N Broadway (see Figure 6, element “G”).

2.2.4.3 Clackamas Bicycle and Pedestrian Bridge

South of N/NE Weidler, a new pedestrian- and bicycle-only bridge over I-5 would be constructed to connect NE Clackamas Street near NE 2nd Avenue to the N Williams/ N Ramsay area (see Figure 6, element “H,” and Figure 8). The Clackamas bicycle and pedestrian bridge would offer a new connection over I-5 and would provide an alternative route for people walking or riding a bike through the Broadway/Weidler interchange.

Figure 8. Clackamas Bicycle and Pedestrian Crossing



2.2.4.4 Other Local Street, Bicycle, and Pedestrian Improvements

The Build Alternative would include new widened and well-lit sidewalks, Americans with Disabilities Act (ADA)-accessible ramps, high visibility and marked crosswalks, widened and improved bicycle facilities, and stormwater management on the streets connected to the Broadway/Weidler interchange.⁶

A new two-way cycle track would be implemented on N Williams between N/NE Hancock and N/NE Broadway. A two-way cycle track would allow bicycle movement in both directions and would be physically separated from motor vehicle travel lanes and sidewalks. This two-way cycle track would connect to the median multi-use path on N Williams between N/NE Broadway and N/NE Weidler.

The bicycle lane on N Vancouver would also be upgraded between N Hancock and N Broadway, including a new bicycle jug-handle at the N Vancouver and N Broadway intersection to facilitate right-turn movements for bicycles from N Vancouver to N Broadway.

Existing bicycle facilities on N/NE Broadway and N/NE Weidler within the Project Area would also be upgraded, including replacing the existing bike lanes with wider, separated bicycle lanes. New bicycle and pedestrian connections would also be made between the N Flint/N Tillamook intersection and the new Hancock-Dixon connection.

These improvements would be in addition to the new Clackamas bicycle and pedestrian bridge, upgrades to bicycle and pedestrian facilities on the new Broadway/Weidler/Williams and Vancouver/Hancock highway covers, and new median multi-use path on N Williams between N/NE Broadway and N/NE Weidler described above and illustrated in Figure 6.

⁶ Additional details on which streets are included are available at <http://i5rosequarter.org/local-street-bicycle-and-pedestrian-facilities/>

3 Regulatory Framework

Right of way (ROW) impacts, just compensation, and benefits due affected individual property owners and/or tenants were estimated in accordance with the ODOT *Right of Way Manual* (November 2016 or subsequent edition), Oregon Revised Statutes (ORS) Volume 1, Chapter 35, Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 United States Code 4601 et seq.) (URA), and 49 Code of Federal Regulations (CFR) Part 24.

Actual ROW impacts, property acquisitions, and relocation for any displacements would be performed in compliance with 49 CFR Part 24, URA, ORS 35, and the ODOT *Right of Way Manual* (November 2016 or subsequent edition) to ensure the fair and equitable treatment of all parties.

4 Methodology and Data Sources

This section describes the methods used to collect and analyze ROW data related to the Build and No-Build Alternatives. The data gathered were used to describe and analyze the potential ROW impacts and develop estimated ROW costs associated with the Build and No-Build Alternatives.

Actual ROW impacts, just compensation, and benefits due the affected property owners and/or tenants would be determined during the ROW acquisition phase of final design and in accordance with the Regulatory Framework described in Section 3.

4.1 Area of Potential Impact

The Area of Potential Impact (API) for the ROW analysis is shown on Figure 9 and includes the same geography as the Project Area shown in Figure 1. The API is very similar to and includes the Project's footprint (i.e., area of disturbance), anticipated areas of construction staging and traffic control, and any areas where easements would be needed for temporary or permanent access. The API extends beyond the Project Area in a few small areas based on the need for temporary and permanent easements for access purposes.

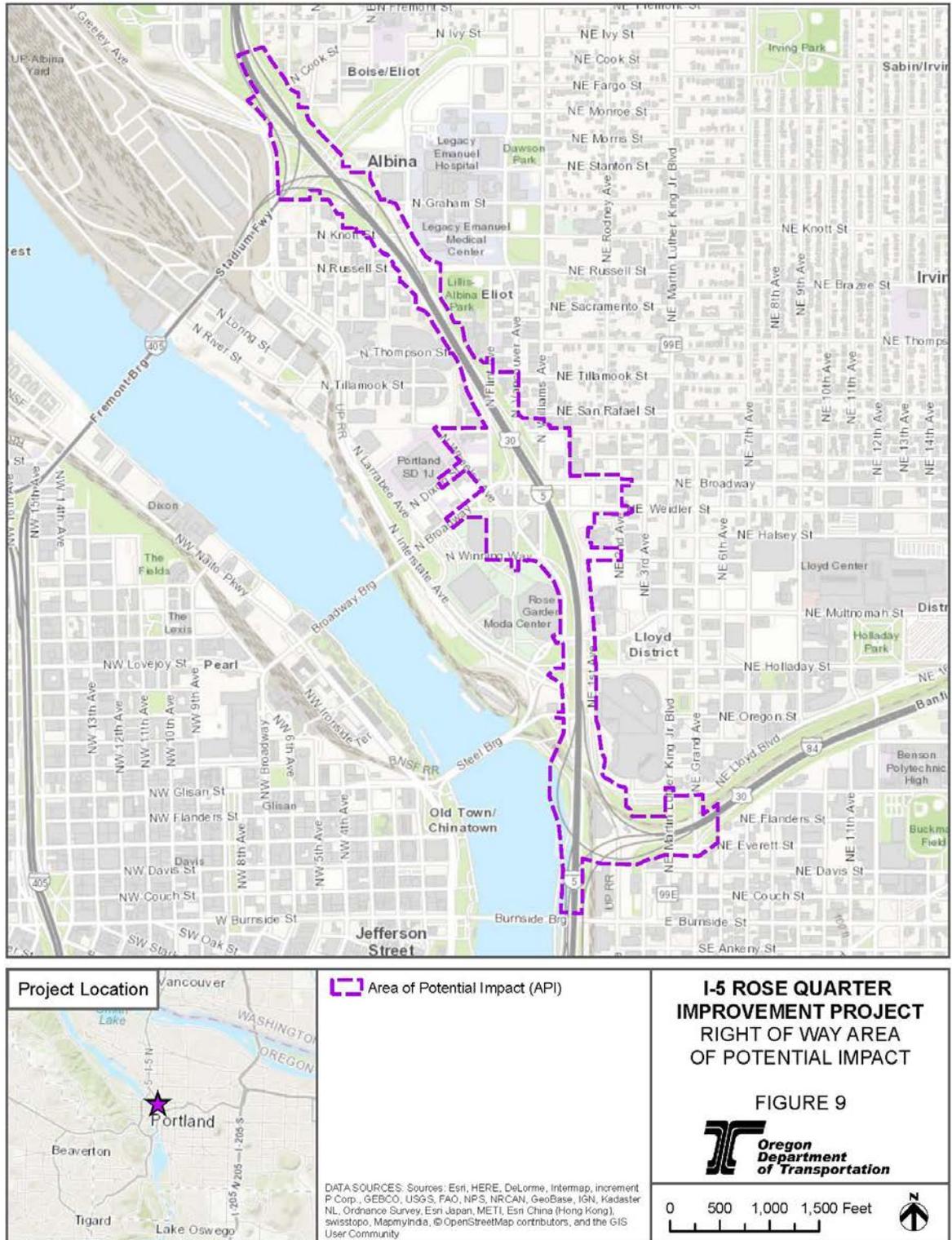
The estimated type and size of ROW impacts utilized for the analysis and ROW cost estimate were based on an approximate 5 percent design level and layout of the Build Alternative described in Section 2.2. The Project team used aerial conceptual design maps, geographic information system (GIS) measurements, and site investigations to identify potentially affected parcels, the impact to property, property improvements, and possible damages to the remainder of partially impacted properties.

4.2 Resource Identification and Evaluation

4.2.1 Parcel Data

Parcel data were compiled from the Multnomah County Assessor's Office and PortlandMaps.com for the geographic extent of the Project Area/API to determine property ownership information, site and mailing addresses, zoning, current use, and existing lot size. Site visits were completed to determine current tenant/business types and confirm current uses within the Project Area/API. No property owners, business owners, or tenants were interviewed.

Figure 9. Right of Way Area of Potential Impact



Parcel data collected from the Multnomah County Assessor's Office and PortlandMaps.com included the following:

- Unique county parcel identification and legal description
- Physical address or site location
- Property ownership
- Apparent tenant and business occupancies
- Site area
- Current use
- Current zoning, including any differentiating comprehensive plan overlays
- Summary of improvements, including building age, size, use, quality, and observed condition
- Known environmental, legal, or other distinguishing attributes
- Access, easements, and availability of municipal utilities
- Prior significant land use events (zone changes, prior ROW actions, etc.)

In addition, existing ODOT ROW Maps, Assessor Maps, ODOT/Agency Agreements and Easements were reviewed on a high-level basis to estimate existing vs. proposed ROW for the Build Alternative.

4.2.2 Valuation

Baseline parcel unit values were estimated based on an analysis of available market data for property type and highest and best use (HBU). Market data collected to support the estimates of baseline values and applicable unit values (or ranges) were developed by reviewing sales, listings, and rental rates reported by Multiple Listing Service, CoStar, open web searches, and local commercial brokerage offices including Cushman & Wakefield and Newmark Knight Frank. Land values were applied on a price per square foot basis using current 2018 values. Property market value appraisals were not completed.

Values for improvements, costs to cure⁷/damages, demolition, relocation benefits, and ROW services were estimated by the Project team based on prior project ROW experience and the proposed layout of the Build Alternative at the 5 percent design level.

⁷ The amount of money necessary to remedy something that is depressing the value of real property.

4.3 Assessment of Impacts

Project ROW impacts were assessed based on the 5 percent design level of the Build Alternative and cross-referenced to GIS data for the API to identify the potential ROW impacts and estimate the type and size of impacts.

At this level of design, the identified business displacements, including landlord-only businesses, were based on the potential full site acquisitions and current property uses. Personal property-only displacements were estimated based on Project Area site visits and the use of aerial maps in Google Earth to determine the nature of property improvements and personal property that may be affected by the potential ROW impacts.

Although this ROW technical report is considered to be a reasonable assessment of the size and type of ROW impacts anticipated and associated cost for a future ROW phase in 2018 dollars, significant work would be needed for survey, ROW retracement, design, and engineering/construction input to determine actual ROW impacts. The ROW footprint is typically determined between a 30 percent and 50 percent design level on public projects. As such, it is possible that as the design is further refined in the final design phase, additional partial acquisitions may be needed for strips of area in fee simple (permanent acquisition), permanent easements, and/or temporary easements. These additional acquisitions could result from the relationship of design features, elements, and materials to the soil types and grades in the Project Area.

In summary, the data gathered were used to describe and analyze the potential ROW impacts and associated costs as they relate to the Build and No-Build Alternatives to provide context and determine the intensity of impacts analysis.

4.4 Cumulative Impacts

The cumulative impacts analysis considered the Project's impacts combined with other past, present, and reasonably foreseeable future actions that would have environmental impacts in the Project Area. A list of reasonably foreseeable future actions was developed through consultation with City of Portland and Metro staff; see Appendix A. This list includes any permitted public and private construction projects within the Project Area and projects that are in the permit application process. The cumulative impact assessment qualitatively assessed the magnitude of impacts expected from reasonably foreseeable future actions in combination with anticipated Project impacts. This assessment also identified the contribution of the Project to overall cumulative impacts.

5 Affected Environment

Existing land uses in the API include commercial, industrial, residential, public/semi-public, park, and undeveloped property. Detailed land use and zoning maps are found in Figure 10 of the *Land Use Technical Report* (ODOT 2019a).

The majority of the API is occupied by highway and other public ROW. Accordingly, much of the proposed Build Alternative would be located on public-owned property and ROW, including the highway itself and public-owned lots under and/or adjacent to the highway corridor, the majority of which are utilized by public agency maintenance departments for access and parking due to the overhead highway structures.

There are 185 tax lots in the API. There are only a few properties within the API designated as “single-family residential” on City of Portland land use maps. Single-family residential structures appear converted to office or non-residential uses, with one exception that has mixed residential and commercial use. The City of Portland’s comprehensive plan designations, depicted on Figure 11 of the *Land Use Technical Report* (ODOT 2019a), indicate that residential properties would be redeveloped as Multi-Dwelling when vacant and deemed ready for transition.

Multi-family residential properties in the API are the Paramount Apartments and Rose Quarter Housing Condos (Madrona Studios). These properties are apartment or condominium complexes. Both include resident parking. The City of Portland’s comprehensive plan designations, depicted on Figure 11 of the *Land Use Technical Report* (ODOT 2019a), indicate that these properties would be redeveloped as Central Commercial. The *Socioeconomics Technical Report* (ODOT 2019b) describes the population and demographics in the vicinity of the API.

In the northern portion of the API (north of N Russell Street), the I-5 corridor is well established. From NE Fremont Street on the north to the overpass of the NE Greeley Avenue interchange with N Interstate Avenue, the API hugs the boundary of the highway and existing ODOT ROW; occupied multi-family residential zoning and land use flanks the API on the east side, following the north-south alignment of N Missouri and Michigan Avenues. On the west side, industrial uses characterize land use just outside the API and west of N Interstate. The last disruption of the landscape in this area was the construction of the Fremont Bridge ramps in the 1970s.

Land use south of N Graham Street is predominantly older light industrial, accessed off N Interstate. Most of these properties within the API are already public-owned parking lots created when ROW was last acquired in the 1950s and 60s. The industrial area lying in the triangle between the I-405 ramps to the Fremont Bridge is in transition from heavy industrial fabrication to self-storage and mixed office and commercial lofts in some of the older building stock with early twentieth-century facades. One early twentieth-century occupied single-family residence survives along the west side of N Kerby Avenue, adjacent to the eastside embankment within

the API; this property is currently used for residential and commercial purposes. This residence is in an area zoned as industrial.

The southern portion of the API (south of NE Multnomah Street) is characterized by the I-5 corridor and public/semi-public properties. Commercial, industrial, and public/semi-public uses in this area include operations of the Moda Center and Rose Quarter/Portland Arena Management, LLC; Oregon Convention Center; and Union Pacific Railroad Company (UPRR). In this area of the Project, ODOT, the City of Portland, Metro, UPRR, and TriMet own parcels in or adjacent to the API.

Most properties within the API would not be affected. Nearly all the affected properties within the API are currently zoned commercial or industrial and are slated for some type of mixed-use development allowing greater densities and more intensive uses. The remaining few affected parcels that are zoned residential are currently used for either institutional or commercial purposes. Redevelopment and gentrification has been occurring throughout the neighborhoods flanking the API since the turn of the century.

Residential use and zoning for the area now mandates multi-unit housing where land values are now falling within the range of \$25,000 to \$35,000 per allowable dwelling unit on a vacant site. This translates into land values of \$100 to \$150 per square foot of site. Mid-rise apartments or condominiums are being constructed up to five- and six-story heights along major arterials such as the N Williams/N Vancouver north-south couplet outside the API.

Closer to the Rose Quarter, commercial arterials, such as the Broadway/Weidler couplet running east-west, and low-intensity highway commercial activities, including car lots, are being displaced by more intensive mixed-use structures. Typical building composition includes street-level retail topped with multiple stories of office or residential units. Commercial and mixed-use land values were found to be comparable to high-density multi-family land values in the \$100 to \$200 per square foot range for buildable entitled sites.

It should be noted that the neighborhoods surrounding the API lost their residential character beginning in the late 1950s when so much of Portland's close-in Eastside neighborhoods were demolished and displaced due to a number of development and urban renewal efforts, including development of Lloyd, then I-5, then what is now the Rose Quarter. Today, the few single-family residential structures (many dating to the 1890s) have been relegated to commercial use including office and retail. Residential uses in the area are now in the form of multiple-story apartments, some condominiums, and transient housing in hotels.

The API is experiencing a dynamic transition as it evolves to more of an urban location with increased investment in commercial, multi-family, and public uses.

Rental rates for multi-family in the Portland metro area rose in the first quarter of 2018, reaching an average of \$1.56 per square foot, with downtown Portland reporting the highest rents at \$2.43 per square foot. The overall vacancy rate rose to 4.85 percent for the Portland Metro area, with downtown having the highest vacancy rate at 6.9 percent. Market forecast trends show an increase in vacancy, increase in

rental rates, and increase in new construction, with a decrease in unemployment and decrease in sales for the future, according to Kidder Mathews First Quarter 2018 Multi-Family Market Report.

The Portland office market rental rates averaged \$28.86 per square foot for Lloyd, with a total vacancy rate of 3.4 percent and total available rate of 7.4 percent compared to an average rental rate of \$25.69 per square foot for the greater Portland metropolitan area, with a total vacancy rate of 7.6 percent and total available rate of 9.9 percent for the first quarter of 2018. Market forecast trends show an increase in absorption and rental rates, no change in construction delivery, and decrease in vacancy for the future, according to Kidder Mathews First Quarter 2018 Office Market Report.

The Portland retail market rental rates averaged \$24.44 per square foot for Lloyd, with a total vacancy rate of 3.0 percent and total available rate of 5.3 percent compared to an average rental rate of \$19.37 per square foot for the greater Portland metropolitan area, with a total vacancy rate of 3.7 percent and total available rate of 4.4 percent for the first quarter of 2018. Market forecast trends show an increase in absorption, rental rates, and construction deliveries and a decrease in vacancy for the future, according to Kidder Mathews First Quarter 2018 Retail Market Report.

The Portland industrial market average rental rate for triple net (NNN) leases (in which the tenant pays property taxes, insurance, and maintenance as well as rent) was \$1.04 per square foot for Lloyd, with a total vacancy rate of 0.5 percent. This rate is compared to an average NNN rental rate of \$0.66 per square foot for the greater Portland metropolitan area, with a total vacancy rate of 4.2 percent for the first quarter of 2018. Market forecast trends show an increase in vacancy and construction deliveries, no change in rental rates, and decrease in absorption for the future, according to Kidder Mathews First Quarter 2018 Industrial Market Report.

6 Environmental Consequences

This section discusses the anticipated beneficial and adverse impacts of the Project with regard to ROW for the No-Build and Build Alternatives.

6.1 No-Build Alternative

As described in Section 2.1, the No-Build Alternative consists of existing conditions and other planned and funded transportation improvement projects that would be completed in and around the Project Area by 2045.

6.1.1 Direct Impacts

Under the No-Build Alternative, the proposed I-5 mainline and Broadway/Weidler interchange area improvements would not be constructed, and the current road system would remain in place. The No-Build Alternative would not require property acquisitions; therefore, there would be no associated ROW impacts or cost. Potential ROW impacts resulting from non-ODOT actions considered under the No-Build Alternative (i.e., those associated with the City of Portland's list of financially constrained projects under the current RTP) are considered negligible.

6.1.2 Indirect Impacts

Possible indirect impacts from the No-Build Alternative could include adverse effects on property values and the real estate market due to increasing congestion near the Broadway/Weidler interchanges and continuing safety concerns within the Project Area. Due to pedestrian, vehicular, and bicycle safety concerns, potential business or residential occupants might locate elsewhere, resulting in lower demand that would affect real estate development or sales with an unintended negative economic impact.

6.2 Build Alternative

This section describes the direct and indirect impacts of the Build Alternative described in Section 2.2, including an estimate of the ROW impacts, relocations, and costs.

As stated earlier in the report, this assessment is based on an approximate 5 percent conceptual design level that would not be finalized until after the NEPA analysis is complete and final design, ROW, and construction phases funded.

Although actual impacts may change as design progresses, the conceptual layout for the Build Alternative as described in Section 2.2 is sufficient to appropriately assess the type and nature of ROW impacts.

6.2.1 Short-Term (Construction) Impacts

In addition to temporary construction-related actions occurring in easements described above, it is anticipated that the Build Alternative could result in temporary impacts within the API related to the staging of construction activities, diversion of traffic, and restricted access to local businesses. Construction activities, including construction best management practices, would minimize ROW impacts and would comply with 2018 *Oregon Standard Specifications for Construction* (ODOT 2018) as standard operating procedures (or current standards at the time of construction, if different).

Temporary traffic control and access plans to minimize construction-related impacts on businesses, residents, community facilities, and services would be prepared and implemented by the construction contractor, and they would be compliant with applicable special provisions of ODOT standard specifications.

6.2.2 Long-Term and Direct Operational Impacts

Privately and publicly owned tax lots are considered to have a direct ROW impact if property and/or property rights need to be acquired. A displacement occurs if relocation of persons or property results from an acquisition of ROW.

Based on the current Project conceptual design for the Build Alternative, it is estimated that the Project would have the following approximate impacts: 3.5–4.0 acres in fee simple (permanent acquisition); 0.5–1.5 acres of permanent easement for surface and/or subsurface uses, primarily related to retaining walls and maintenance access; and approximately 1.5–2.5 acres of temporary easement for construction work areas, driveway reconnections, and staging (Table 3). Ranges have been used in lieu of area calculations to accommodate minor changes as design progresses.

Table 3. Estimated Right of Way Needs

Impact Type	Area Impacted
Fee Simple	3.5 to 4.0 acres
Permanent Easement	0.5 to 1.5 acres
Temporary Easement	1.5 to 2.5 acres

The estimated ROW impacts would consist of approximately 31 ROW Files (collection of adjacent parcels), each of which may consist of one or more individual tax lots (Figure 10). Estimated ROW Files are shown in Table 4; the actual number of ROW Files would be determined during the ROW phase based on final design impacts and larger parcel appraisal considerations.

Figure 10. Estimated Right of Way Impacts

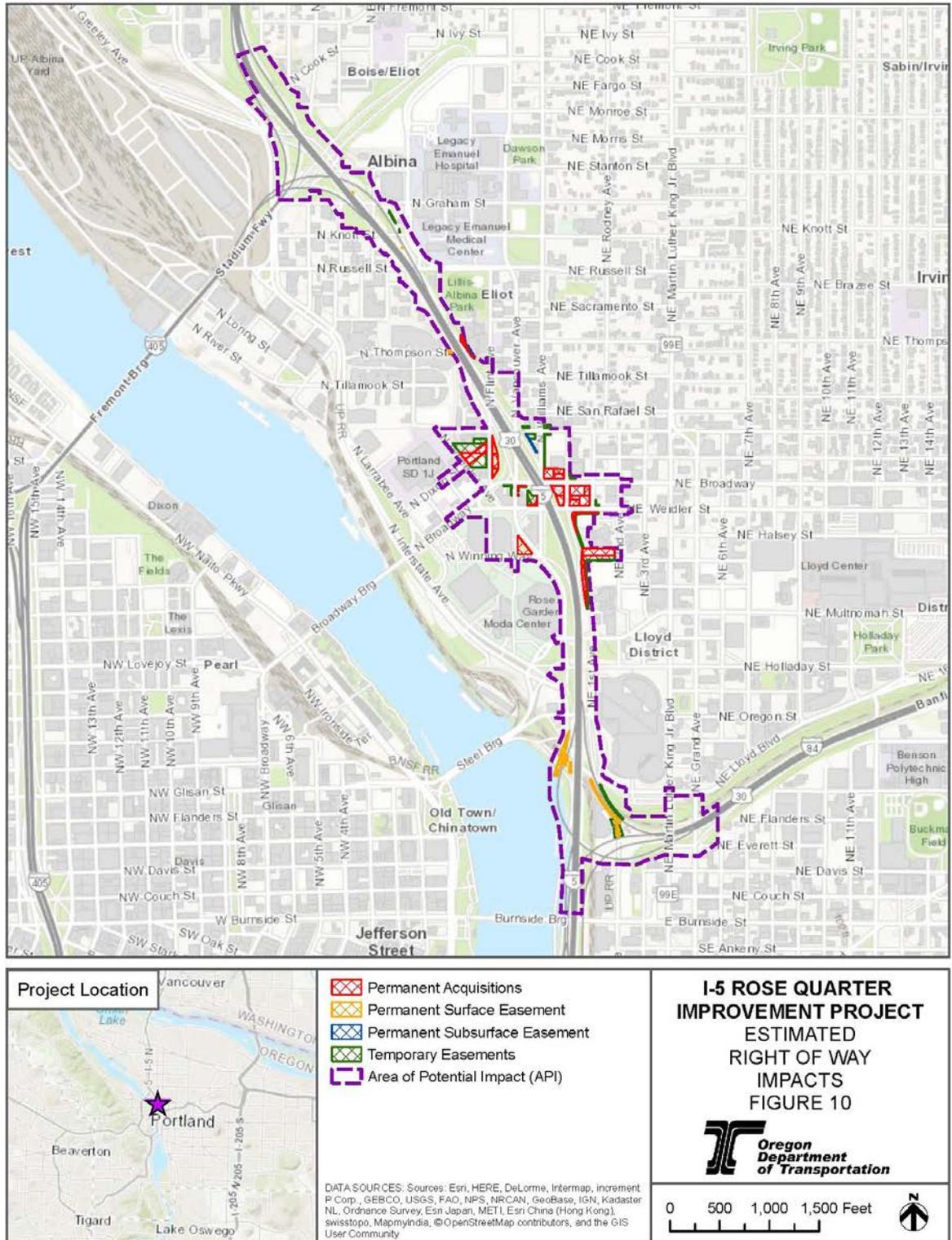


Table 4. Estimated Right of Way Files

ROW File Types	Quantity
ROW Files	31
Privately Owned	21
Publicly Owned	10
Full Site Acquisitions	7
Partial Acquisitions (Fee, PE, and/or TE)	24

Notes: PE = permanent easement; ROW = right of way; TE = temporary easement

Of the estimated 31 ROW Files, 21 are privately owned and are utilized for commercial or mixed commercial/residential use. Ten are publicly owned by a state or city agency or may be privately owned but have a transportation use (i.e., railroad).

Of the 31 ROW Files, it is estimated that 7 may potentially be full site acquisitions and the other 24 would be considered partial acquisitions, which may consist of one or more of the following acquisition types: partial fee (partial acquisition), permanent easement(s), and/or temporary easement(s).

Two of the 10 “public” properties involve Rail and Oregon Department of State Lands (DSL) property. There are some complexities with each that would likely require extended time to negotiate any agreements required and to acquire the necessary permits and/or easements for the Project.

The existing elevated highway structures for I-5 mainline and NB entrance ramps and SB exit ramps at the I-5/I-84 interchange would require widening over heavily used, active rail lines. An initial review of ODOT ROW Maps and ROW Files indicates that a thorough review may be time-consuming. However, this would be necessary for several reasons: to identify and sort through the various real estate transactions (purchases, sales, revisions, and agreements) that have occurred over the years, to identify all stakeholders involved, to determine what rights exist and what rights may be needed for the Project, and to identify an appropriate timeline to complete the necessary permitting and ROW for the Project. While the physical use of the property itself is not overly complex, negotiating the coordination and then getting the necessary paperwork in place may be a time-consuming process and should begin as early as possible in the final design phase.

There are also I-5 SB exit ramps for I-84 and City Center/Morrison Bridge/99E that may require in-water work and/or work below the high water mark for the Willamette River, controlled by the DSL. In addition, these structures are within the Portland Harbor Superfund site area and do not have existing permanent easements in place with DSL even though they were constructed in the 1960s. As such, it may be a



lengthy process with heavy involvement by the U.S. Department of Justice to work through liability issues and memorialize the rights for these structures.

In addition to the ROW Files described above, intergovernmental agreements or permits may also be required to provide the necessary rights or permissions for work to occur in existing public ROW that is not under the jurisdiction and control of ODOT, such as city streets.

The acquisitions described above may result in the displacement and relocation of an estimated four commercial retail or service-related businesses, potentially three landlord-only businesses, four outdoor advertising signs, and eight personal property-only relocations. No residential displacements are anticipated. Table 5 summarizes the estimated displacements of persons and property as a result of the Build Alternative.

Table 5. Estimated Displacements of Persons and Property

Type of Displacement	Quantity
Businesses	4
Landlord-Only Business	3
Outdoor Advertising Signs	4
Personal Property-Only	8
Residential	0

Displaced business types are not “sole source” type businesses or unique to the surrounding community. Business relocations based on the conceptual layout would include a day care center, a gas station/convenience store, a retail paint store, and a real estate/mortgage office. Properties owned for the sole purpose of leasing to others are considered a landlord-only business; relocations for displaced properties of this type may be triggered depending on the purpose of the property ownership.

As noted in Section 5, office/retail type properties are anticipated to be in high demand within the central commercial corridor. This demand may be offset by expectation of increased development in the future. A minimum of 24 months should be allowed for the ROW phase to ensure there is adequate time to identify and relocate any displaced businesses.

Personal property-only and landlord-only business displacements should have little to no impact on the community as a whole. Personal property-only relocations anticipated are minor in nature but may require identification of offset storage depending on actual impacts and staging of work.

For those displaced by the Project, ODOT provides a relocation assistance program. The URA ensures the fair and equitable relocation and re-establishment of persons, businesses, farms, and nonprofit organizations displaced as a result of federal or

federally assisted programs. ODOT policy on relocations can be found in Chapter 6 of its *Right of Way Manual*.⁸

ODOT's *Acquiring Land for Highways & Public Projects and Moving Because of a Highway or Public Project* brochures is provided in Appendix B. ODOT currently has translated relocation brochures in English and Spanish. ODOT's policy is that all acquisition and relocation communications, written and verbal, would be translated or interpreted, if needed, to the native language of the owners/tenants impacted by the Project to ensure their understanding of the process.

When the final design/construction phase is funded and the design progresses toward a 30 percent completion level, ROW impacts would be further clarified. It will be important to identify the components of design and construction that may affect the ROW footprint and ensure they are vetted early in the final design process to avoid potential delays during the ROW acquisition phase. If the ROW footprint is not locked in prior to ROW acquisition phase funding and authorization, delays are likely to occur.

Individual property owners and tenants may be contacted throughout the final design phase once NEPA analysis has been completed to gather information for a collaborative design process, conduct initial interviews, explain the acquisition and relocation process, and explain the rights and benefits to which they may be entitled.

Right of Way Costs

Acquisition and relocation ROW costs include the following: land acquired in fee and temporary construction easements (i.e., estimated value to acquire bare land); improvements within the acquisition area (i.e., estimated contributory value of any improvements to the bare land—buildings, structures, landscaping, fences, signs, retaining walls, asphalt, concrete, etc.); damages to the remainder property; relocation benefits; demolition; personnel and related costs (i.e., Project management staff, acquisition and relocation agents, appraisals, appraisal reviews, and title costs, etc.); legal; and contingency. These estimated costs are summarized in Table 6.

Improvements, such as fencing or landscaping located within existing ROW areas, are not eligible for compensation or relocation benefits. Improvements within temporary easement areas are eligible for temporary relocation or acquisition, if necessary.

⁸ http://www.oregon.gov/ODOT/HWY/ROW/docs/right_of_way_manual_03_2016.pdf



Table 6. Estimated Right of Way Costs

Line Item	Value
Estimated Land	\$27,692,483
Estimated Improvements	\$5,449,800
Estimated Damages	\$565,000
Estimated Relocation	\$851,000
Estimated Demolition	\$465,000
Total Estimated Acquisition Cost	\$35,023,283
Estimated ROW Services (Personnel & Expenses)	\$507,700
Contingency (50%)	\$17,765,491
Grand Total Estimated ROW Cost	\$53,300,000

The cost for these ROW impacts is estimated as at least **\$50 to \$55 million** in 2018 dollars. This estimate includes preliminary costs associated with the acquisition of ROW required for construction of the Project as described in this document. The ROW cost estimate excludes the cost of utility relocations, environmental investigations, and remediation that might be required for acquired properties. Utility relocation costs are provided in the *Utilities Technical Report* (ODOT 2019c). Properties that may warrant environmental investigations and possible remediation are identified in the *Hazardous Materials Technical Report* (ODOT 2019d).

Access Modifications

Access (driveway) modifications are anticipated within the API to facilitate safer egress and ingress. Excluding the full acquisitions, five parcels have been identified that are likely to require access modifications.

There are several parcels along streets where the proposed highway covers would be constructed in the Hancock/Dixon and Broadway/Weidler areas that currently have street frontage. Construction of the highway covers would alter the existing frontage of some of these parcels. Parcels with frontage may be channelized and replaced by at least one clearly defined approach, pending the specific needs of each property. No relocations or full acquisitions are anticipated as a direct result of changes to existing street frontages in these areas. Assessment of the effect on value, if any, to the remainder property would be addressed in the appraisal, obtained as part of the ROW acquisition phase.

Encroachment into ODOT Right of Way and Parking

Unauthorized parking occurs within ODOT's ROW in several locations within the Project Area. Eliminating vehicle access to these areas may result in the non-compensable loss of parking or overflow parking used by customers or employees of nearby businesses that currently encroach onto existing ODOT ROW.

If the removal of a parking space impacts a business and that parking space is not in existing ROW, any cost to cure or damage to the remainder of the property would be determined during the ROW appraisal phase. Potential cost to cure and potential mitigation measures that would be considered during the appraisal phase may include re-configuring the parking lot to add new spaces or re-striping the parking lot. Circulation and parking impacts could also be improved with access modifications.

Other Beneficial and Adverse Impacts

Beneficial impacts to real estate from construction of the Project include improved sidewalks, safer bicycle lanes, additional ADA-compliant street crossings, and safer ingress and egress to parcels. Such impacts would not require acquisition from most parcels within the API. These types of improvements can eventually lead to increased property values.

The beneficial impacts to private properties, described above, are anticipated along the following streets:

- N Tillamook and N Hancock, where the N Flint crossing of I-5 would be removed
- The intersection of N Williams and N Hancock
- The block bounded by the NE Broadway/NE Weidler couplet between NE Victoria and NE 1st
- Intersections from N Dixon south on N Wheeler and N Williams (formerly NE Wheeler) through the Rose Quarter

Although not displaced by the Project, businesses could suffer the effects of operating within a construction zone, which could include temporary restrictions on access to businesses. There is also the potential for increased sales for some businesses because of construction workers' spending during construction.

6.2.3 Long-Term and Indirect Operational Impacts

The Build Alternative would not have adverse long-term and operational indirect impacts to ROW associated with I-5 or City of Portland streets. Once the Project is completed, an important transportation improvement envisioned in the Central City 2035 Plan, the N/NE Quadrant Plan, and ODOT's I-5: Broadway/Weidler Interchange Facility Plan would be realized. By formulating a plan that integrated transportation improvements, including the Project, with land use, the process considered the impacts of the Project on land use, including ROW needs. The inclusion of the Project in the Central City 2035 Plan means the ROW needs associated with the Project would not affect land use in ways that are contrary to planned land use and therefore would not have adverse long-term and operational indirect impacts.

6.3 Cumulative Effects

Cumulative impacts are the environmental effects that result from the incremental effect of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes the other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR Part 1508.7).

The analysis of cumulative impacts involves a series of steps conducted in the following order:

- Identify the resource topics that could potentially experience direct or indirect impacts from construction and operation of the proposed action.
- Define the geographic area (spatial boundary) within which cumulative impacts will be assessed, as well as the timeframe (temporal boundary) over which other past, present, and reasonably foreseeable future actions will be considered.
- Describe the current status or condition of the resource being analyzed, as well as its historical condition (prior to any notable change) and indicate whether the status or condition of the resource is improving, stable, or in decline.
- Identify other actions or projects that are reasonably likely to occur within the area of potential impact during the established timeframe and assess whether they could positively or negatively affect the resource being analyzed.
- Describe the combined effect on the resource being analyzed when the direct and indirect impacts of the project are combined with the impacts of other actions or projects assumed to occur within the same geographic area during the established time frame.

6.3.1 Spatial and Temporal Boundaries

The geographic area used for the cumulative impact analysis is the same as the API described in Section 4.1 and shown on Figure 9. The time frame for the cumulative impact analysis extends from the beginning of large-scale urban development in and around the Project Area to 2045, the horizon year for the analysis of transportation system changes.

6.3.2 Past, Present, and Reasonably Foreseeable Future Actions

The past, present, and reasonably foreseeable future actions that were considered in assessing cumulative effects are provided in the following subsections.

6.3.2.1 Past Actions

Past actions include the following:

- Neighborhood and community development
 - Historical development of the Portland area and accompanying changes in land use

- Development of the local transportation system (including roads, bicycle and pedestrian facilities, and bus transit)
- Utilities (water, sewer, electric, and telecommunications)
- Parks, trails, bikeways
- Commercial and residential development in and around the Project Area
 - Veterans Memorial Coliseum (1960)
 - Lloyd Center (1960)
 - Legacy Emanuel Medical Center (1970)
 - Oregon Convention Center (1990)
 - Rose Garden (1995)
- Regional transportation system development
 - Marine terminal facilities on the Willamette River
 - Port of Portland (1892)
 - Commission of Public Docks (1910)
 - Port of Portland (1970; consolidation of Port of Portland and Commission of Public Docks)
 - Freight rail lines (late 1800s and early 1900s)
 - Highways
 - I-84 (1963)
 - I-5 (1966)
 - I-405 (1973)
 - Rail transit system
 - MAX light rail (1986)
 - Portland Streetcar (2001)

6.3.2.2 Present Actions

Present actions include ongoing operation and maintenance of existing infrastructure and land uses, including the following:

- Ongoing safety improvements for bicycles and pedestrians
- Local and regional transportation system maintenance
- Utility maintenance

6.3.2.3 Reasonably Foreseeable Future Actions

Reasonably foreseeable future actions were identified collaboratively with the City of Portland and consist of the following:

- Redevelopment of existing urban areas in the Project Area and vicinity
- Ongoing maintenance and development of existing urban infrastructure in the Project Area and vicinity

These actions include private redevelopment, public development and infrastructure projects, as well as combined public/private redevelopments. Specific projects and the plans identifying them are described in detail in the memorandum presented in Appendix A. Given the highly developed nature of the Project Area and vicinity, the reasonably foreseeable future actions are not expected to substantially change the types or intensities of existing land uses.

6.3.3 Results of Cumulative Impact Analysis

Past and present actions have resulted in the current land use designations, parcel boundaries, and ROW designations in the API. Reasonably foreseeable future actions would not change the existing ROW conditions in the API. The Build Alternative would result in notable changes in ROW in the Rose Quarter area of the API but would not substantially alter the cumulative effects of other past, present, and reasonably foreseeable future actions on ROW.

6.4 Conclusion

6.4.1 No-Build Alternative

The No-Build Alternative would not require property acquisition; as a result, there would be no associated ROW impacts or cost. ROW impacts under the No-Build Alternative would be addressed under each of the proposed actions that make up this alternative. These actions would be implemented by others. Property values and the real estate market could be affected as a direct result of safety concerns along the corridor. Due to pedestrian, vehicular, and bicycle safety concerns, potential business or potential residential occupants might locate elsewhere, resulting in lower demand that would affect real estate development or sales with an unintended negative economic impact. The No-Build Alternative would not allow the City of Portland to implement some aspects of the Central City 2035 Plan, such as re-zonings and planned development; as a result, the Plan would need to be modified to accommodate the reduced development potential.

6.4.2 Build Alternative

The Build Alternative would require the acquisition of 3.5–4.0 acres of ROW area in fee simple (permanent acquisition), of which approximately 15 percent is owned by the City of Portland, which is a Project partner. In addition, approximately 0.5–1.5 acres of surface and/or subsurface permanent easements and 1.5–2.5 acres of temporary easements are estimated to accommodate supporting structures for the highway improvements and staging/work area needs. The estimated ROW impacts are considered minor in the context of the overall API acreage of approximately 127 total acres. Much of the proposed Build Alternative would be located on public-

owned property and ROW, including the highway itself and public-owned parking lots. Most of the impacted properties consist of public-owned land that lies in ODOT and other public ROW or is controlled by Portland Public Schools. Most of the API is occupied by highway.

Impacted properties are chiefly located where highway covers would be constructed, existing highway crossings demolished, and streets and the pedestrian and bicycle bridge constructed.

Privately and publicly owned tax lots would be directly impacted by partial or full acquisitions, temporary construction easements, or permanent surface or subsurface easements, or indirectly impacted by adjacency to the Project Area where some type of impact might be experienced.

The Build Alternative would require the acquisition of ROW from predominantly commercial and mixed-use zones. Although some areas zoned as residential may be acquired, no residential structures or inhabitants would be displaced. Based on the current design level of 5 percent, it is estimated that there would be 7 full site acquisitions and 24 partial acquisitions of permanent and/or temporary ROW, for a total estimated 31 ROW Files. Of these estimated ROW Files, 21 are privately owned and 10 are publicly owned or have a transportation use (i.e., railroad). Some of the parcels subject to full or partial acquisition may be aggregated as a single property under the ROW Files because of adjacency and unity of ownership and use.

No residential structures or their tenants would be impacted or require relocation. Four commercial retail or service-related businesses may require relocation: a day care center, a gas station/convenience store, a retail paint store, and a real estate/mortgage office. Three landlord-only businesses may require relocation, and eight portions of personal property may require relocation. Additional property, including four billboards, may also require relocation.

Temporary impacts during construction would be offset by beneficial improvements including improved sidewalks, safer bicycle lanes, additional ADA-compliant street crossings, and safer ingress and egress to parcels. These types of beneficial improvements may eventually lead to increased property values.

The estimated cost for ROW is approximately \$50 to \$55 million in 2018 dollars. This estimate includes costs associated with the acquisition of ROW required for construction of the Project. The ROW cost estimate excludes the cost of utility relocation and hazardous material remediation.

Although ROW impacts would result from the Project, the magnitude or severity of these impacts would not be considered significant.

7 Avoidance, Minimization, and Mitigation Measures

ROW impact research for this report was conducted and summarized in 2017 and 2018. During this time, there have been multiple workshops, community outreach efforts, and avoidance and minimization measures implemented to avoid or reduce impacts. These avoidance and minimization measures have reduced the number of initially projected property impacts required for the Project, and to the extent possible, have been included within the Project design. Additional measures that would be considered to further minimize or mitigate impacts include the following:

- Perform all ROW acquisition and relocation activities in accordance with the URA (49 CFR Part 24), ORS 35; and the ODOT *Right of Way Manual* (2016) to ensure fair and equitable treatment of all persons affected by the Project. Appendix B includes ODOT's acquisition and relocation brochures.
- Conduct relocation interviews early in ROW acquisition process to identify and address any special needs.
- Provide interpreter and translation services for owners and tenants, as needed.
- Work with design and construction to identify ways to minimize or mitigate impacts to individual properties through design and/or construction staging, such as through best management practices, temporary traffic control plans, and temporary access plans.
- Explore the use of alternative acquisition methods such as early or advanced acquisition for full site acquisitions where design cannot change, such as the highway cover location at Broadway/Weidler.
- Phase any work adjacent to schools, such as retaining wall and column work, to occur during summer months to avoid potential disruptions during the school year.
- Determine whether Project activities would have an effect on adjacent properties and businesses with sensitive patients, medical equipment, or machinery that could trigger additional ROW Files; these could include facilities such as hospitals, elderly or psychiatric patient care services, emergency response units, and businesses utilizing equipment such as X-ray, MRI, CT scan, or CNC machines. Based on the current 5 percent design level, these impacts are not anticipated; however, this should be reviewed again during the ROW phase once design has progressed with more certainty.
- Conduct early discussions with Oregon DSL and UPRR regarding ROW needs and processes for work near their lands, including new and existing structures over or adjacent to the Portland Harbor Superfund Site and the Union Pacific Rail Corridor.

8 Contacts and Coordination

During preparation of this report, the preparers consulted with Shannon Fish, ODOT ROW Agent, as well as with members of the ODOT Project and consultant teams.



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