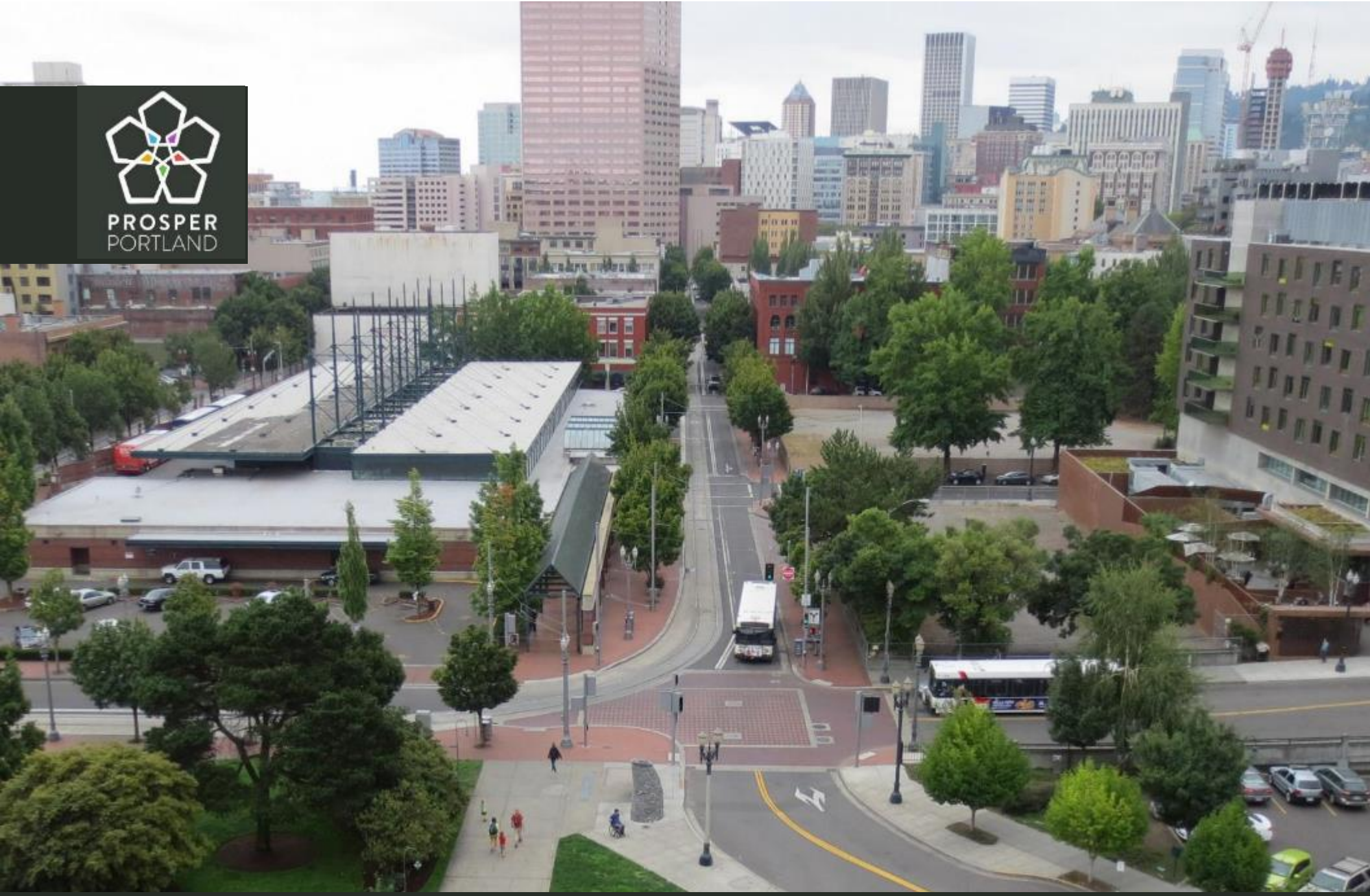


PROSPER PORTLAND

Portland Union Station – Phase III(B)

Union Station Multi-Modal Transportation Assessment

FINAL REPORT

September 2017

IBI

Contents

1. Introduction

Introduction

This document provides an overview of multi-modal transportation services, facilities, and issues in the vicinity of Portland Union Station.

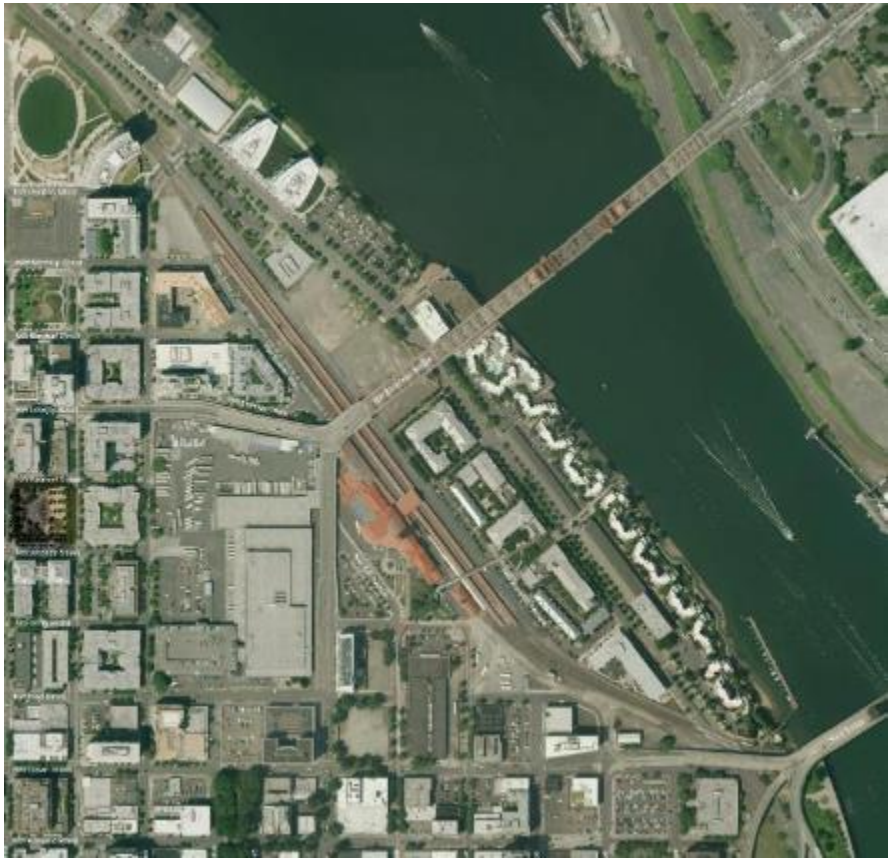
This study was commissioned by Prosper Portland (formerly the Portland Development Commission) as part of its ongoing efforts related to the redevelopment of Portland Union Station and planning for the Broadway Corridor.

Union Station and its immediate vicinity serve as the primary intercity passenger rail and bus terminal in the Portland metropolitan area, and also provides connections to local transit including light rail, bus, streetcar, taxi, rideshare, and bike share.

The Union Station vicinity is undergoing rapid growth and change as the result of several major initiatives including:

- The **Broadway Corridor Framework Plan** (2015), outlining a concept for the Post Office Site and other redevelopment parcels around Union Station.
- The **Union Station Phase III PE/NEPA** project, focused on critical repairs and revitalization of the historic station.
- Potential relocation and downsizing of the Greyhound Terminal in response to changing service levels.
- Planning and design for **TriMet's Division Bus Rapid Transit (BRT)** project, which would terminate and construct layover facilities near Union Station.

The objective of this report is to familiarize the reader with existing and proposed transportation conditions of the area, and how transportation needs may impact future corridor decisions related to facilities, infrastructure, and urban development in the vicinity.



Union Station and Vicinity

Stakeholders Consulted

The following project stakeholders were consulted by Prosper Portland and IBI Group through meetings and interviews during the course of this study.

- **Portland Bureau of Transportation** (multi-modal transportation, pedestrian/bicycle infrastructure, Green Loop)
- **TriMet Capital Projects Division** (Division BRT)
- **Oregon Department of Transportation – Public Transportation Division** (intercity bus services)
- **Greyhound Lines** (intercity bus operator)
- **NW Agency Management LLC** (Greyhound Terminal agent)
- **Multnomah County Health Department** (new headquarters under construction near Union Station at SW 6th Avenue and NW Hoyt Street)
- **Transition Projects, Inc.** (Bud Clark Commons)
- **Pacific Northwest College of Art** (local institution/property owner)
- **Falcon Art Community** (neighborhood stakeholder/property owner)

These consultations provide perspectives and insight on transportation design and socioeconomic issues impacting, and impacted by, transportation in the Union Station vicinity.

Prosper Portland also facilitated coordination and information exchange between this work and two related Prosper Portland initiatives: the Broadway Corridor Framework Plan, and the Portland Union Station PE/NEPA project.

Union Station Clock Tower from the Steel Bridge

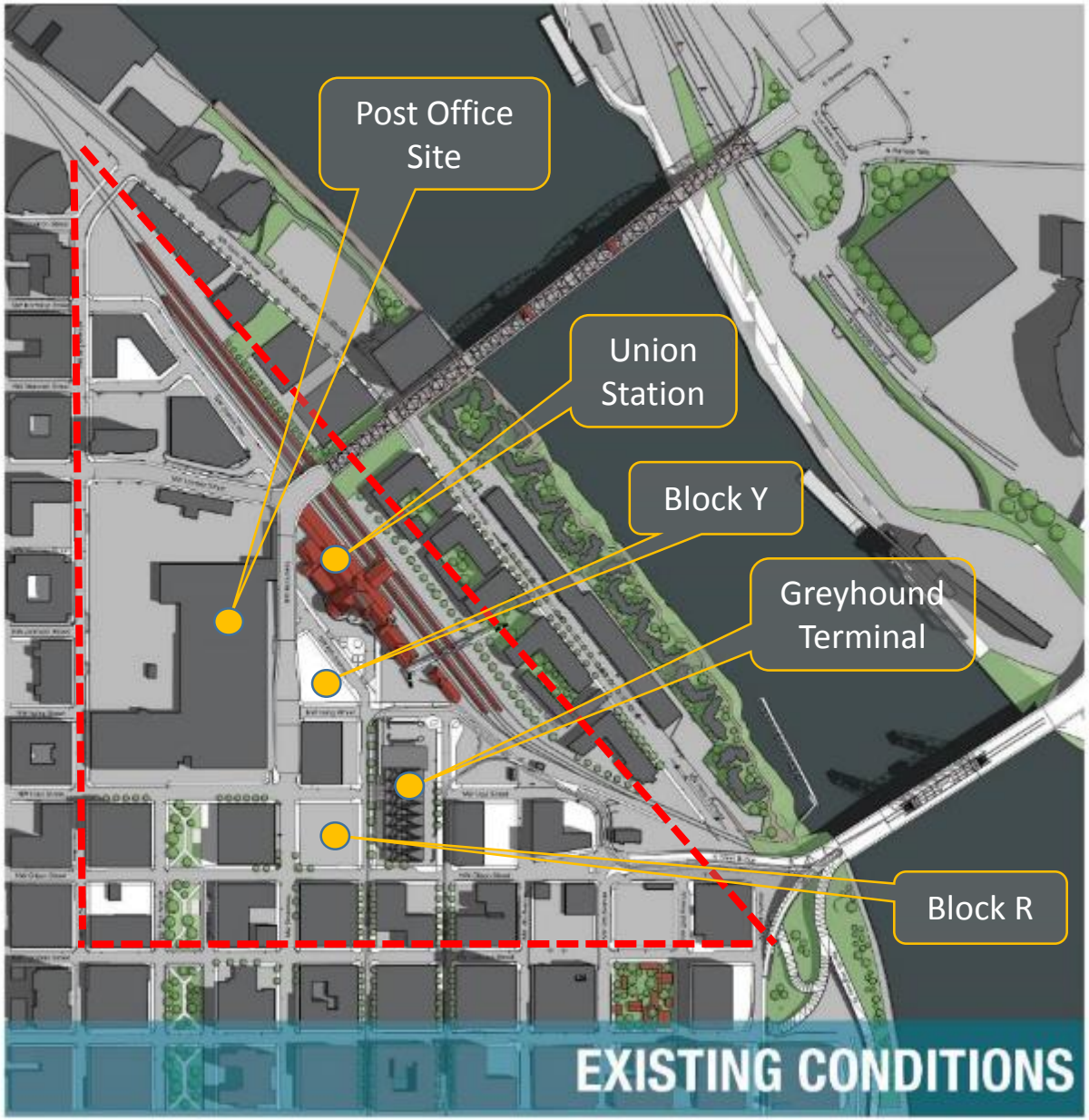
Union Station Vicinity

The study encompasses an area roughly bounded by NW 9th Avenue on the west, NW Glisan Street on the south, SW Naito Parkway on the east, and the Union Pacific/BNSF railroad tracks on the east.

This study area includes several key transportation assets and development parcels, including:

- Portland Union Station
- Greyhound Terminal
- Post Office Site
- Block Y (owned by Prosper Portland)
- Block R (owned by Prosper Portland)
- Other public and privately owned redevelopment sites in the Broadway Corridor

Given the porous nature of the multi-modal transportation system, certain key transportation facilities and assets outside of the immediate study area were considered in this assessment – for example, the Portland Streetcar alignment and stations along NW 10th and 11th Avenues.



2. Key Findings

Key Findings

Union Station is a Multimodal Transportation Hub of Regional Significance. Union Station and environs are a gateway to Portland connecting the city with the state through passenger rail and intercity bus connections, as well as local transit, taxi, rideshare, bikeshare, pedestrian, and bicycle infrastructure. These mutually-supportive modes provide mobility to, from, and within the region**.** Over 590,000 passengers use Amtrak rail and Thruway bus services alone, with additional passengers using the wide range of private and public inter-city and local transportation services.

The Union Station Vicinity Continues to Evolve from its Railroad/Industrial Origins to High Density Mixed Use. Through much of the 20th century, Union Station and vicinity was a primarily industrial area, dominated by rail yards, factories, and warehouses. Changes in the past 25 years have transformed the area into a mixed use urban neighborhood. Further changes are anticipated in the next 10-20 years with the redevelopment of the Post Office Site, Greyhound site, and other key parcels in the Broadway Corridor.

Balancing Urban Development and Placemaking with Critical Transportation Functions is Increasingly Important as the Neighborhood Intensifies. Union Station is a potential focal point for the emerging neighborhoods in the Broadway Corridor, with significant increases in density and new street connections and public spaces surrounding the station. This represents a once-in-a-lifetime placemaking opportunity for the Broadway Corridor, but it is critical to also maintain access to Union Station and other critical transportation support functions, like TriMet Transit Mall operations, as the neighborhood evolves and pressure increases on local roadways, parking, and transit systems.

Multiple Intercity Bus Services Serve the Area, but are Dispersed Among Several Terminals. While Amtrak and Greyhound are the dominant intercity carriers operating in the area, a number of other regional and interstate bus lines provide key connections across Oregon and the Northwest. Together, these services provide feeder services to rail and bus lines, and form a de facto hub of intercity bus lines for travel across the state. Today, however, there is no single terminus, as services divided between Union Station, the Greyhound Terminal, and the BoltBus stop on NW Everett Street. Passenger amenities vary widely among the facilities. These carriers create a “hidden network” that should be considered in future decisions about multimodal facilities.

The Union Station Driveway Accommodates Diverse Functions, but has Deficiencies in its Current Configuration. The driveway accommodates pick-up/drop-off activity, taxis, rideshare, intercity bus, deliveries, and emergency access. The growth in Transportation Network Companies and changing travel behavior to and from the station suggest that curb utilization and roadway configuration could be re-optimized. Design improvements could also enhance the connection to the Station Place parking garage, a key facility for rail travelers and building users. These changes must be addressed in a way that is mindful of both the historic building as well future visions for public spaces in front of Union Station.

Improvements to Bicycle/ Pedestrian Access and Wayfinding would better connect Union Station to Surrounding Neighborhoods and Transit. Travelers, employees, and visitors to Union Station will benefit from pedestrian and bicycle connections in the vicinity, such as the proposed Green Loop and the proposed extension of SW Johnson Street through the Post Office Site. Such connections will help to integrate Union Station with this emerging neighborhood, and will greatly improve access to the Portland Streetcar. Connections to and along NW Glisan Street and/or NW Flanders street would increase connectivity to Old Town/Chinatown, waterfront trails, and key east-west connections through the Central City. Existing connections to the Portland Transit Mall and other transit services are generally good, though improved wayfinding would benefit arriving passengers and those unfamiliar with the area.

Peer Cities offer Varied Examples for Replacing the Greyhound Terminal in Portland. The currently Portland Greyhound Terminal, built in the 1980s, has excess capacity based on future requirements provided by Greyhound. Like rail passengers, Greyhound passengers benefit from co-location with other transportation modes in and around Union Station. Facilities in other cities provide diverse examples of how a redesigned, downscaled, or relocated Greyhound Terminal could be designed. These include: multi-modal transportation centers; Greyhound terminals co-located with Amtrak stations, and stand-alone facilities. In Seattle and Sacramento, the Greyhound terminal was relocated to the edge of the central business district, where land prices and highway access are more favorable to a low-cost. There are also examples of facilities incorporated into structured parking and mixed-use developments, which may be relevant models for a new terminal located on a key redevelopment parcel within the Broadway Corridor.

Future Transportation and Design Decisions in the Broadway Corridor Should Consider the Combined Impacts on Mobility, Placemaking, Equity, and Economic Development. Transportation and urban development decisions are highly intertwined in the Broadway Corridor. Development of transportation facilities, whether for the Division BRT or Union Station driveway, or district parking facilities, are inextricably linked to other design decisions and desired community outcomes. The area immediately in front of Union Station, including the driveway, NW Station Way, and Block Y merits particular attention. NW Glisan Street and underside of the Broadway Viaduct are examples of other areas where transportation facilities decisions could have a highly positive or detrimental effect on the look and feel of the neighborhood for many years to come.

3. Transportation at Union Station

Transportation at Union Station

Portland Union Station and environs is one of two multi-modal transportation hubs in the City of Portland – the other being Portland International Airport. Hundreds of thousands of Portlanders and visitors pass to and from this area each year as a gateway to the city.

Located in the Portland Central City, Union Station connects intercity rail and bus services, TriMet MAX light rail and bus services, and Portland Streetcar. The vicinity is also served by key existing and proposed pedestrian and bicycle connections, including on-street bicycle paths, connections to the riverfront, and the proposed Green Loop project.

Convenient and efficient transportation connections, including among the modes described above, is vital for regional connectivity as well as the prosperity and development of the Broadway Corridor and surround neighborhoods.

Union Station, Greyhound Terminal, and TriMet facilities, looking north

Transportation Connectivity - Union Station Vicinity

- Intercity Passenger Rail (Amtrak)
- Intercity Bus
- Taxi Stand
- TriMet MAX Light Rail (Transit Mall)
- TriMet Local Bus Stop
- Portland Streetcar
- BikeTown Bike Share
- Public Off-Street Parking

Impacts of Future Development on Transportation

The area around Union Station is undergoing rapid change from an industrial, railroad focused neighborhood of 100 years ago, to a dense, mixed-use urban community. The Broadway Corridor includes a number of brownfield and underutilized parcels envisioned for higher density development in the immediate vicinity of the station.

Redevelopment of the 13.4-acre Post Office Site adjacent to Union Station will have the largest potential impact. A new Multnomah County Health Department headquarters (on Block U) will bring 350 employees to the site. Other key redevelopment opportunities include Prosper Portland owned Block R and Block Y. Redevelopment of the Greyhound site (with or without a downsized Greyhound Terminal on site) would create additional density in the area.

Implications to transportation include increased travel demand and increased pressure on parking. Higher densities will create challenges and potential conflicts with transportation operations and support functions, such as transit layover and intercity bus terminal functions, that have been traditionally located in the area. Public plaza concepts for Union Station are exciting opportunities for urban place making, but must be balanced with access needs for those traveling to and from the Union Station.

Additional discussion of future development and urban design considerations is provided in Section 5.

Union Station and future connections and developments in the Broadway Corridor (source: Broadway Corridor Framework Plan)

New Multnomah County Heath Department headquarters at SW 6th Avenue and NW Hoyt Street (Source: Multnomah Co.)

Portland Union Station

Built in 1896, Portland Union Station is a national historic landmark and a recognizable icon in the City of Portland. It has been in continuous service as a passenger rail station for over 120 years, and is the oldest continuously operating passenger station on the West Coast. Union Station has been owned by Prosper Portland since 1987.

Union Station is the hub for Amtrak intercity rail services to and from Portland, including Amtrak *Cascades* service (Eugene, OR to Seattle, WA and Vancouver, BC) sponsored by the Oregon and Washington Departments of Transportation. In 2016, 590,076 Amtrak passengers passed through Portland Union station, making it the 19th busiest Amtrak station (Source: Amtrak).

The station is also served by two long-distance rail routes: the Amtrak *Coast Starlight* between Seattle, WA, and Los Angeles, CA, and the *Empire Builder* between Portland and Chicago, IL.

In addition to rail service, the front driveway of Union Station serves most Amtrak Thruway motor coach connections as well as some other regional intercity bus services. Occasional casino charters also stop at Union Station.

Aside from its transportation functions, Union Station also houses a restaurant, a café, and third party office tenants in its upper floors and Annex.

Prosper Portland, in coordination with the Oregon Department of Transportation and the Federal Railroad Administration, is currently undertaking the Portland Union Station PE/NEPA project to design critical repairs and improvements that will ensure that Union Station meets the needs of its next century of service. Part of this project includes revitalization and reactivation of the historic building as a focal point of the emerging Broadway Corridor.

Portland Union Station

Amtrak Cascades – Daily Round Trips at Portland Union Station	North to Seattle, Vancouver B.C.	South to Eugene
2017 (Current Service)	4	2
End of 2017	6	2
2035 (Long Range)	13	6

Sources: Amtrak Cascades 2017 Schedule;
WSDOT Long-Range Rail for Amtrak Cascades (2006);
Oregon Passenger Rail Study (2016)

Table Notes:
One additional round trip is provided between Seattle, Portland, and Eugene and points south by the Amtrak *Coast Starlight* long-distance train.

Supplemental Amtrak Thruway bus service is provided in the Portland-Eugene corridor (7 weekday round trips).

Portland Union Station – Arrival and Departure Mode

Comprehensive arrival and departure mode data and volumes for all modes at Union Station was not available at the time of this study; however a customer survey of passenger arrivals and departures provides a glimpse into current mode split.

The data show that arrival by automobile (drop-offs/pick-ups and driving to the station) are the predominant arrival and departure mode. This is follows by access to the station via local public transportation.

Approximately 12-13% of passengers stated they were connecting to or from another Amtrak train or bus service, indicating the 'hub' function of Union Station.

Connections to other intercity bus services, such as POINT or Greyhound, are not explicitly reported, though may be reflected under Connecting Amtrak Bus, Local Public Transit and Private Intercity Bus.

Notably, the 2015-2016 arrival/departure survey did not include an explicitly response category for Transportation Network Companies, car share, or bike share. It is possible that respondents using these modes replied using one of the other available categories (e.g., Taxi, Rental Car, or Other).

To support future analysis and design in the Union Station/Broadway Corridor area, a comprehensive, multi-modal passenger survey and data collection effort is recommended. The effort would address shortcomings in existing data, and could also provide insight into changing travel behavior patterns such as the rise of shared mobility services like TNCs and bikeshare. Commuter behavior of other Union Station office tenants, workers, and visitors could also be considered for inclusion in a future data collection effort.

Amtrak Passenger Arrival/Departure Mode at Portland Union Station	Arrival	Departure
Connecting Amtrak train	6%	10%
Connecting Amtrak bus	6%	3%
Drove and parked at station	6%	1%
Carpooled and parked at station	1%	0%
Dropped off/picked up by auto	36%	31%
Local public transit	18%	15%
Private intercity bus	2%	0%
Taxi/limousine	9%	14%
Walk/bicycle	6%	11%
Rental Car	2%	10%
Other	8%	4%

Source: Amtrak eCSI survey, March 2015 to March 2016.
Based on 1,100 survey responses for arrival mode and 1,200 survey responses for egress mode. Survey excludes multi-ride ticket (commuter) passengers.

Existing travel data does not capture the relatively recent rise of alternative shared mobility services such as car share, bike share, and Transportation Network Companies.

Greyhound Terminal

Portland's Greyhound Terminal is located just south of Union Station on a double block between NW Irving and NW Glisan Streets, and NW 5th and 6th Avenues. This is the also the northern terminus of the TriMet Transit Mall, and MAX light rail and bus stops are located to the east and west of the station. The station is operated on a agency model with a local management firm under contract to Greyhound.

The Greyhound terminal houses passenger ticketing and waiting room functions, a Package Express office, maintenance, crew, and administrative facilities, as well as a restaurant/snack bar. A driver dormitory serves bus divers lodging in Portland for short stays.

Approximately 20 weekday arrivals and departures service the Greyhound Terminal each weekday. Routes currently serve Seattle and points north, Boise/Eastern Oregon and points east, and Eugene/Medford, OR and Redding OR and points south. Northwest POINT, Valley Retriever, and Tillamook County Transportation District services also stop at the Greyhound Terminal. Additionally, Job Corps and charter buses occasionally use the Greyhound facility.

The terminal is open daily from 5:30am - 11:30pm, and closes each day between 1:00 - 3:00pm due to a lack of bus activity and to reduce costs.

All maintenance and fueling activities occur on site at the station. A 15,000-gallon buried fuel tank currently exists at the site to serve this function. According to the station manager, up to 18 vehicles can overnight at the station.

The Greyhound facility is also used for bus layover, fueling, and maintenance for BoltBus, which is under the ownership of Greyhound but does not use the terminal for passenger boarding and alighting.

While the Amtrak and Greyhound networks include significant overlap, and therefore can be viewed as competitive, the redundancy and capacity of rail and bus services can be valuable during peak travel periods or events affecting the highway or rail networks (e.g. landslides or floods).

Greyhound Terminal

Greyhound Passenger Concourse

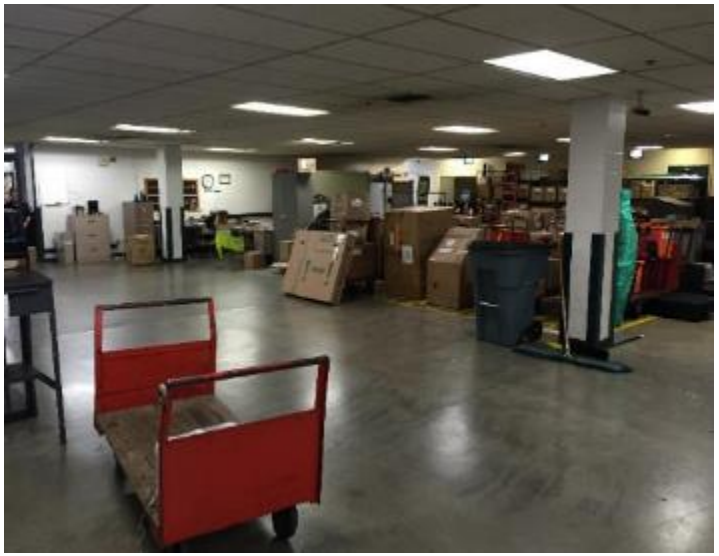
Greyhound Terminal

The existing Greyhound Terminal is considerably larger than required to meet Greyhound's capacity requirements for its current and anticipated future operations. Currently, Greyhound anticipates a future need for 4 bus bays and a 2,500 sf facility for passenger, ticketing, package express, and support functions.

As a result, there have been discussions in recent years about downsizing the facility to align with current and future needs. Other changes to the facility, such as combining passenger ticketing and Package Express into one service counter, would increase the efficiency of operations.

Future facility location and design could involve a re-assessment of whether maintenance, fueling, and cleaning activities are done on site or at a remote facility – a model that is used in Seattle.

Greyhound Terminal



Greyhound baggage and Package Express room

BoltBus layover at Greyhound Terminal

Intercity Bus Services

Together, Union Station and the Greyhound Terminal serve as the hub for Portland's intercity bus network. These services connect the Portland region with other cities in Oregon, Washington, Idaho, California, and beyond.

The intercity bus network is highly fragmented, with multiple public and private operators running independent services (see map, next page). The Oregon Department of Transportation's Public Transportation Division coordinates a number of statewide services and publishes a consolidated timetable for many operators.

Intercity bus services use either Union Station or Greyhound as their central Portland passenger station or terminus location. A few services stop at both terminals.

Amtrak Thruway buses also are split between the two facilities, though most terminate at Union Station to facilitate passenger/baggage transfers and customer service. The Portland-Boise route (via eastern Oregon) is operated by Greyhound and co-marketed with Amtrak as a Thruway route. Unlike other Thruway services, the Boise service departs from the Greyhound Terminal.

Ridership data on many privately-operated services is considered proprietary; data on ODOT POINT services operating to Union Station are shown in the table below.

Intercity Bus Service	Annual Ridership (2015)
Cascades POINT (supplementing Amtrak Cascades rail service)	91,529
NorthWest POINT (between Astoria and Portland)	23,765

Source: ODOT Public Transportation Division

Passenger loading

Union Station bus loading and layover area

Intercity Bus Services

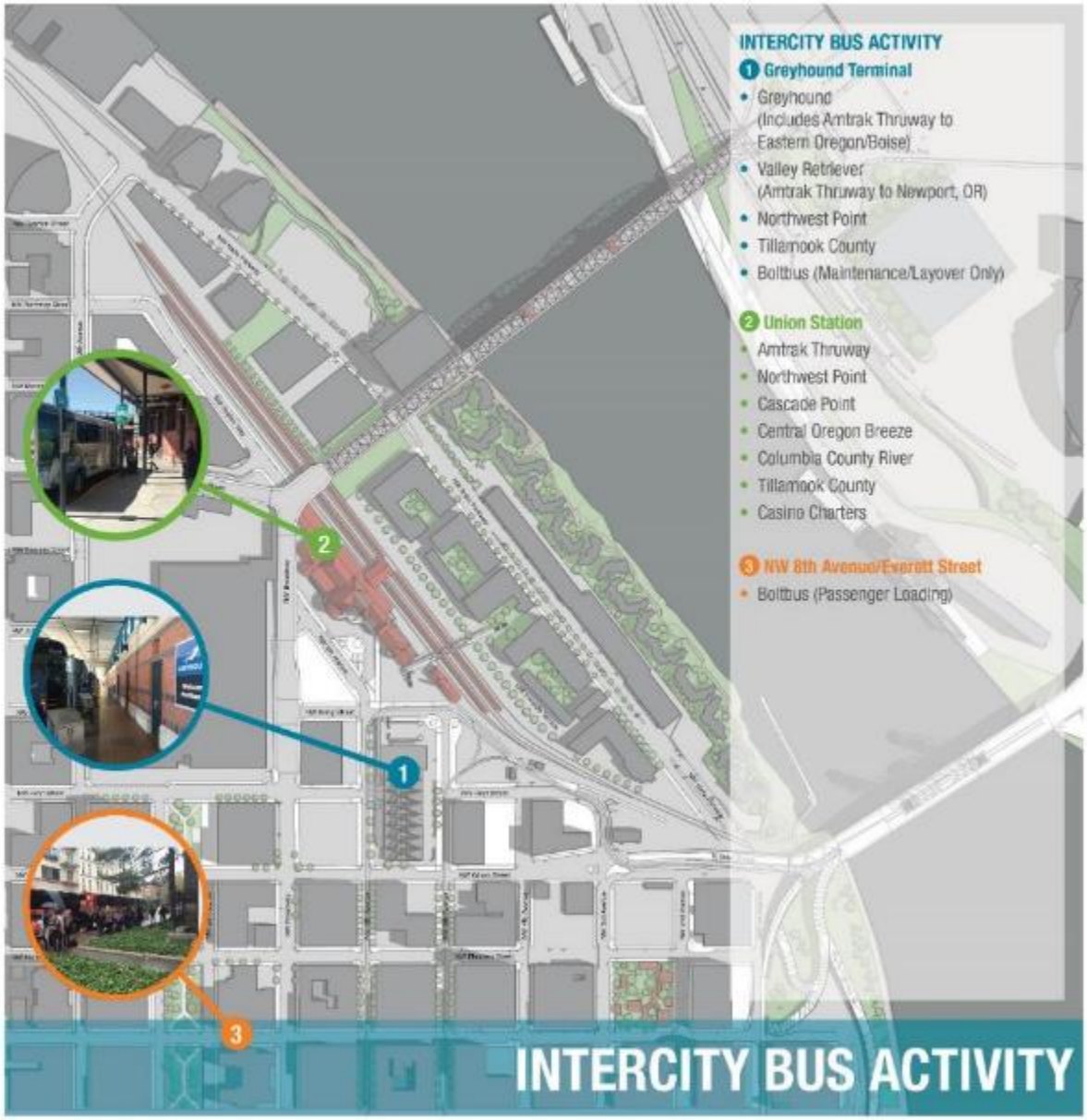
Intercity Bus Terminals – Union Station Vicinity

The diagram to the right illustrates the three intercity bus terminal locations in the vicinity of Union Station, including the services that operate at each location.

Note that a few services (Northwest POINT and Tillamook County) serve both the Union Station and Greyhound facilities.

Unlike some cities, there is not a consolidated intercity bus terminal for the convenience of arriving, departing, and connecting passengers. This is indicative of the current fragmented nature of public and private intercity bus services operating near Union Station.

Intercity bus signage and schedules at Union Station



BoltBus

BoltBus operates non-stop intercity bus service between Portland and Seattle. BoltBus is owned by the Greyhound Lines, but is operated and marketed independently. The exception is that BoltBus maintenance, fueling, and layover occur at the Greyhound Terminal as described previously.

BoltBus passenger boarding and alighting occurs at an on-street location on NW Everett Street between NW Broadway and NW 8th Avenue, in the Pearl District a few blocks from both the Greyhound Terminal and Union Station. Formerly, the BoltBus stop was located on SW Columbia Street in the heart of the Central Business District.

Three BoltBus vehicles can berth at the NW Everett Street location at a given time, which is also shared with a TriMet bus stop. A designated taxi stand and BIKETOWN bikeshare rack are also located nearby. Ticketing and baggage services are conducted by BoltBus coach operators when the coach is berthed at the stop.

While this non-terminal operation is consistent with Boltbus operation in some other markets, there are drawbacks for customers such as: a lack of amenities, seating, customer service/security personnel, and weather protection. As a result, waiting passengers, luggage, and bicycles are often observed in the landscaped area of the adjacent U.S. Customs House and on the public sidewalk.

In some cities like Boston and Washington D.C., BoltBus ouperates out of a multi-carrier intercity bus terminal alongside Greyhound and other common carriers.

TOP: Passengers, bicycles, and luggage in Customs House landscaped area
BOTTOM: BoltBus loading on NW Everett Street, absent weather protection and passenger amenities

Parking

Parking in the vicinity of Union Station is currently provided through a mix of on-street metered parking, pay surface lots, pay parking garages, and limited on-site employee parking.

Key existing parking facilities include: on-street metered parking along NW Station Way and adjacent streets; the Block Y surface parking lot (includes dedicated Wilf's Restaurant parking); and the Station Place garage, which can accommodate overnight parking for rail passengers.

While a full assessment of parking capacity and utilization is beyond the scope of this study, various facilities cater to the parking needs of overnight bus/rail passengers, commuters/employees, and short-term visitors.

Wayfinding to Station Place garage on NW Station Way

Metered short-term parking on NW Station Way

Station Place garage with hourly, daily, and overnight parking

Parking

In the future, a “district” approach to shared parking supply is envisioned at Union Station and in the Broadway Corridor.

As in other parts of the Central City, buildings are not anticipated to have dedicated parking supply, and the limited existing parking at Union Station will be reduced in the future to only accommodate maintenance and company-owned Amtrak rail support vehicles.

Future development of the surface lot on Block Y as a public space would eliminate this facility from the available parking supply in the immediate vicinity of Union Station for daily/short term visitors, and for those who use the lot for passenger pick-up or drop-off.

Block Y surface parking lot opposite Union Station

Amtrak employee parking near Union Station Annex – proposed for removal to create Annex Plaza

Greyhound Terminal surface parking lot for customers

Portland Streetcar

Access to and from the Portland Streetcar is currently one of the more challenging public transit connections at Union Station. The nearest Streetcar stations for the A Loop, B Loop, and North-South Line are located in the vicinity of NW Lovejoy Street and NW 10th Avenue. The Post Office site, Broadway Viaduct, and Lovejoy Ramp are significant pedestrian barriers that also make locating a station closer to Union Station difficult.

The prospect of reconnecting NW Johnson Street as well as other pedestrian pathways through the Post Office Site could improve the directness and quality of Streetcar connections.

Additionally, wayfinding to/and from Union Station and the Streetcar would be especially beneficial for arriving and departing passengers and those unfamiliar with local streets and station locations.

Potential future connection from Streetcar and Pearl District via NW Johnson Street extension through the Post Office Site

Existing pedestrian connection to Portland Streetcar adjacent to the Lovejoy Ramp – the isolation and lack of visibility may make some pedestrians hesitant to use this route, particularly at night.

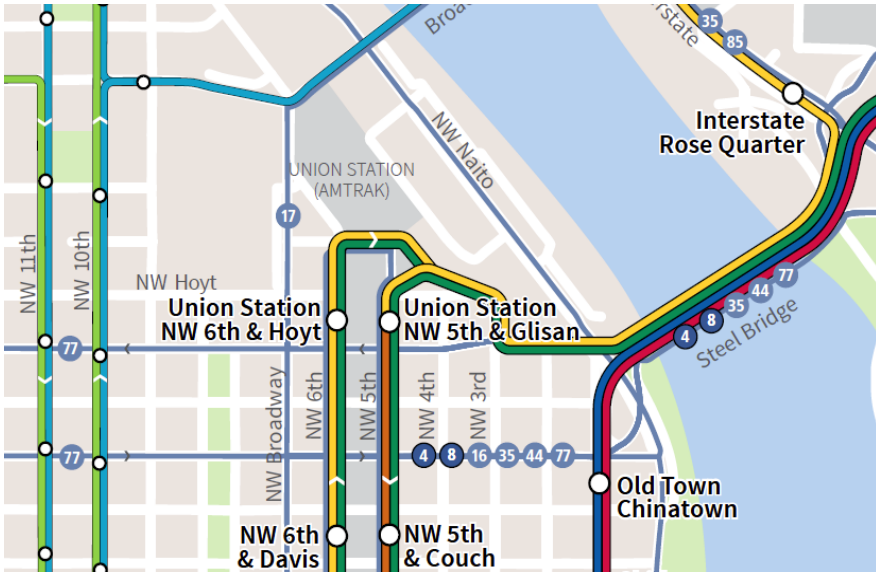
Streetcar at NW Lovejoy Street/NW 9th Avenue – the closest stop to Union Station

TriMet MAX and Bus

Union Station is conveniently located at the north end of the Portland Transit Mall. The nearest Max light rail stations are located adjacent to the Greyhound Terminal, between NW Irving and Glisan Streets, on NW 6th (Southbound) and NW 5th (North/Eastbound) Avenues. These stations are co-branded with "Union Station" in their names. The stops are, however, not currently well marked with wayfinding between the station and the MAX platforms.

Similarly, a large number of TriMet bus routes also operate on the Transit Mall. NW Glisan Street also serves Route 77 (westbound), while Route 77 eastbound and several other routes operate on NW Everett (continuing to the Eastside via the Steel Bridge).

MAX light rail on Transit Mall



Transit service near Union Station (source: TriMet)

Transit Mall and Greyhound Terminal from Union Station, looking south

TriMet Division Bus Rapid Transit (BRT)

TriMet's Division Bus Rapid Transit (BRT) project is a new proposed system connecting East and Southeast Portland communities and Gresham with the Portland Central City, terminating at Union Station. The project is currently in the design phase, let by TriMet in partnership with Metro. The project is estimated to cost $175 million, with construction in late 2018 and service beginning in 2021 (contingent on securing construction funding).

The proposed western terminus station for the Division BRT is a single platform located at SW Irving and SW 5th Avenue, across the street from Union Station itself.

The intensity of bus activity and size of layover/support facilities are expected to increase in the Union Station vicinity with the introduction of the Division BRT.

Based on current TriMet requirements, this will involve storage of 17 TriMet buses, 2 C-TRAN buses, and 1 intercity bus at the north end of the Transit Mall/Greyhound site. Potential MAX track realignment in this area is also being considered.

The increase in service and the fact that the Division BRT terminates at Union Station create a need for new layover and operational support facilities in the vicinity of Union Station, as is discussed in the following section.

Division BRT alignment and stations, showing NW Irving/NW 5th Avenue terminus near Union Station (source: TriMet)

TriMet Operations and Layover

NW Irving Street, adjacent to Union Station, represents the northern end of the Portland Transit Mall. From this location, bus and MAX routes diverge across the city, including Eastside MAX connections via the Steel Bridge.

Additionally, a light rail and bus layover with operator facilities is located in a triangular wedge of land just east of NW 5th Avenue. This provides staging and layover area for buses and trains as they enter and exit service on the mall.

As land use changes and development intensifies in the vicinity of Union Station, a key issue will be balancing TriMet's operational need with the needs and opportunities of the emerging Broadway Corridor community.

New bus/light rail facilities have the potential to impact development decisions at a redeveloped Greyhound Terminal site, Union Station (specifically, the Annex and proposed Annex Plaza), and other key development parcels such as Block R. Therefore the location and design of these essential facilities requires careful consideration of the surrounding urban context and development objectives.

An interim layover facility for the Division BRT has been proposed for NW Station Way. This facility would be location north of NW Lovejoy Street viaduct, adjacent to the Union Station tracks and fence on the east side of the street. Vehicles will enter and exit service from the layover facility via NW Station Way, traveling past the front entrance of Union Station.

Potential impacts of this proposed temporary Division BRT layover on traffic, passenger pickup/drop-off, and pedestrian movement along NW Station Way, Union Station, and future public spaces in front of Union Station should be considered carefully in future design decisions.

TOP: TriMet layover from near Union Station Annex
BOTTOM: Aerial View of TriMet layover facility

Pedestrian Environment and Wayfinding

By virtue of its Central City location, Union Station is in a highly walkable environment. However, the specific location of Union Station, between the Post Office Site, Broadway Bridge, and the railroad tracks, introduce pedestrian barriers that are atypical of most of the Central City.

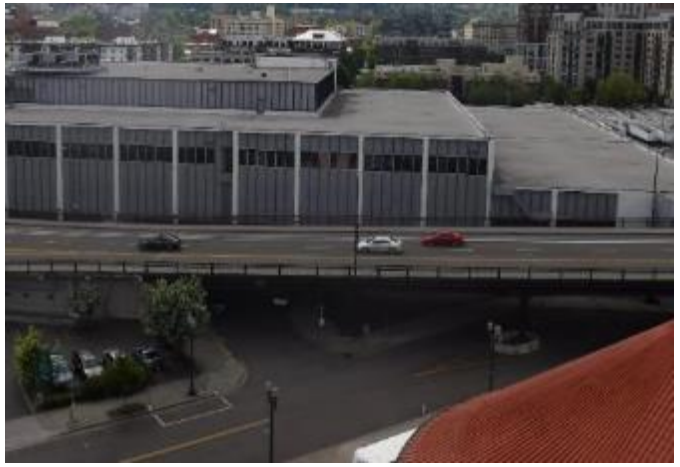
For passengers traveling to and from Union Station, the current lack of wayfinding of and from adjacent neighborhoods and transit stops is a deficiency. This is exacerbated by the current pedestrian barriers (Post Office Site, railroad tracks, Broadway Viaduct, etc.) that impair direct routing and line of sight to key destinations.

The underside of the Broadway Viaduct (NW Station Way) is an important pedestrian connection to the Station Place Garage and the Pearl District. However existing lighting and sidewalk conditions are poor, and this area is prone to vagrancy and camping activity. Additionally, the pedestrian path along the north edge of Union Station through the current bus loading, freight, and maintenance area is not well defined nor ADA accessible.

Community concerns have also been expressed about pedestrian/bicycle crossing safety at the NW 9th Avenue at-grade rail crossing, which experiences a high volume of passenger and freight traffic.

To the south, loitering and camping activity can create an uncomfortable environment for pedestrians walking south towards the Transit Mall and the Central Business District along SW 5th and 6th Avenues.

There are key opportunities to improve pedestrian connectivity through future proposed improvements, most notably the extension of NW Johnson Street through the Post Office Site to the front of Union Station, and the Green Loop project.



TOP: Potential future extension of NW Johnson Street through Post Office Site
BOTTOM: Existing pedestrian environment under Broadway Viaduct between Union Station and Station Place parking garage

Bicycling Network and Facilities

Bicycle connectivity to, and through, the Union Station vicinity is an important aspect of the multi-modal transportation network. Union Station is the front door for cyclists arriving to and from the city via rail and intercity bus services.

The Amtrak Cascades service features a roll-aboard bicycle baggage car that does not require disassembly and boxing of bicycles as required on most other trains and buses. It is therefore possible to roll a bicycle directly from the Cascades train on train platform, through the Main Concourse of Union Station, and into the surrounding city cycling network. Departing passengers can wait with their bicycles inside the Main Concourse.

The overall vision of the future of cycling facilities and policy is provided in the City of Portland's Bicycle Plan for 2035 (currently being developed to the existing 2030 plan). It envisions NW 2nd and 3rd Avenues as key north-south bicycle connections to the area, and NW Flanders and possibly NW Glisan Streets and east-west connections. However, specific connections north of NW Flanders Street and west of NW Broadway into the heart of Union Station are currently not well defined.

There are not currently designated bicycle facilities on NW Station Way immediately adjacent to Union Station. Furthermore the density of transit activity and MAX track work to the south of the station complicate connections.

Bicycle parking at Union Station itself is currently provided through a covered, outdoor bicycle rack near the front entrance of the station. Future enhancements such as secure indoor bicycle storage for tenants are under consideration as part of future improvements to the station.

TOP: Amtrak Cascades roll-aboard bicycle service
BOTTOM: Bicycle rack at Union Station

Bikeshare and the Green Loop

In 2016, a BIKETOWN bikeshare station was installed immediately adjacent to the Union Station forecourt on NW Station Way, in the location of a former on-street parking stall. This provides a convenient bikeshare opportunity for passengers, visitors, and employees arriving and departing the station.

The Green Loop, envisioned in the Central City 2035 Plan, is a linear park and multimodal bicycle and pedestrian connection that connects the Central City on both sides of the Willamette River.

Near Union Station, the Green Loop would cross the Broadway Bridge and descend through a new, sloped bicycle/pedestrian connection into the redeveloped Post Office Site. This would enable a connection directly to Union Station in the vicinity of an extended NW Johnson Street. From here, the Green Loop continues south via the North Park Blocks (NW 8th Avenue and NW Park Avenue).

The construction of the Green Loop has the potential to be a transformative investment for pedestrian and bicycle connectivity to and from Union Station.

BIKETOWN bike sharing on NW Station Way

Green Loop concept (City of Portland)

Recumbent cyclist in Union Station driveway

4. Union Station Driveway

Union Station Driveway Operations

The driveway of Union Station supports a wide variety of transportation activity to provide sufficient passenger, tenant, visitor, and freight access to the station. The driveway is approximately triangular in shape, formed by the outline of former segments of NW 6th Avenue and NW Johnson Street (replaced by NW Station Way).

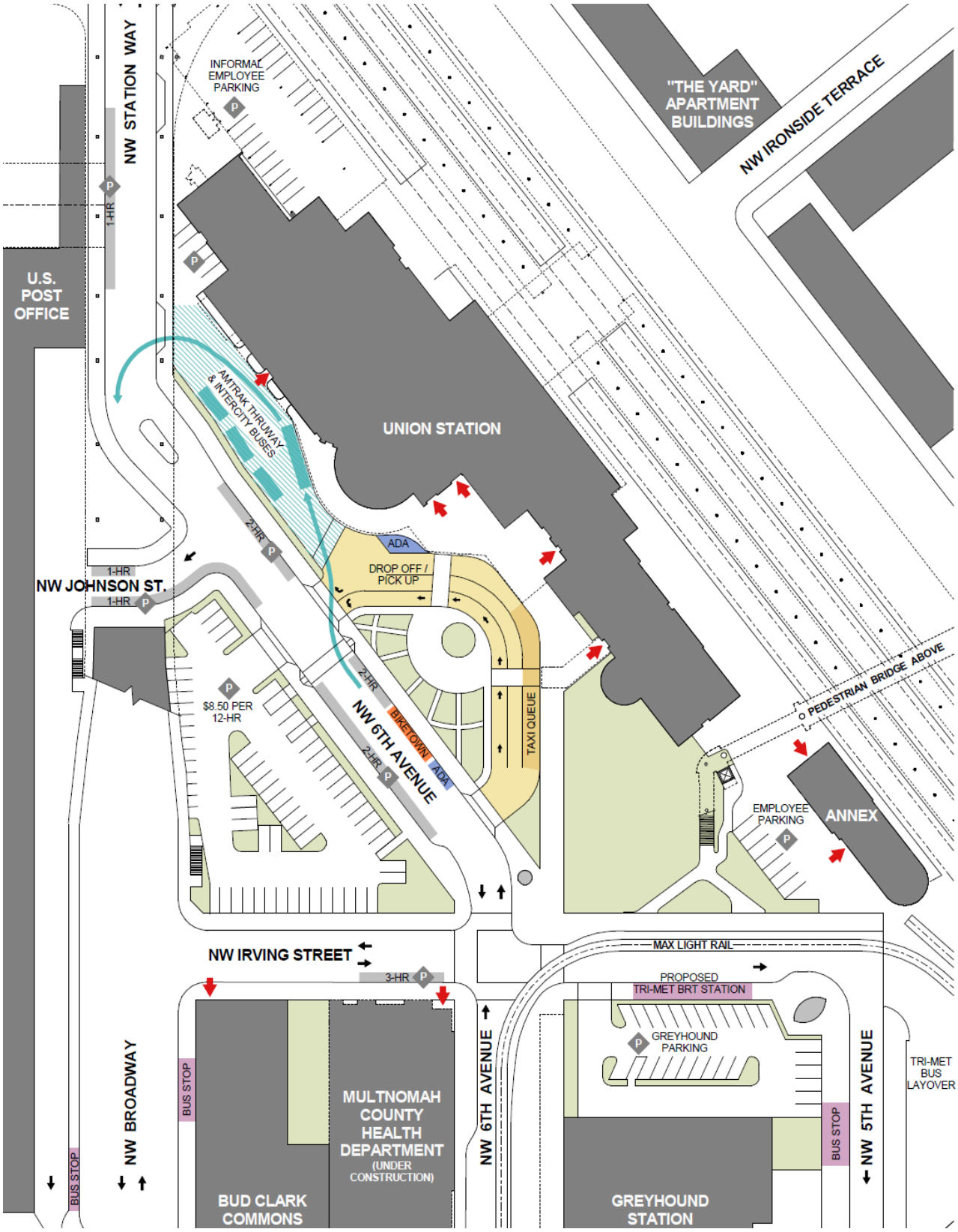
Activity in the Union Station Driveway includes:

- Passenger drop-off/pick up (private auto)
- Taxi drop-off/pickup (including dedicated taxi stand)
- Transportation Network Company/Rideshare drop-off/pickup
- Paratransit drop-off/pickup (including dedicated handicap loading zone)
- Amtrak Thruway/Intercity Bus passenger loading and layover
- Building/tenant freight deliveries
- Amtrak package/freight delivery and pick-up
- Emergency vehicle access

Driveway activity during train arrival

Tillamook County bus loading at Union Station

Union Station Driveway Operations



Driveway Configuration and Curb Allocation

The driveway at Union Station consists of three lanes for vehicle stopping, storage, and circulation. Lane use and restrictions are conveyed through pavement markings and signage. Compliance can be problematic due to congestion and driver unfamiliarity with the facility.

The north end of the driveway is marked for buses only through a large yellow stripe and wording painted on the asphalt. Some drivers, however, disregard this signage and enter the bus zone for passenger loading or to exit the station.

While the driveway is marked with signs and painted arrows for one-way operations, buses are sometimes observed entering through the one-way exit in order to bypass congestion in the main passenger loading area.

Additionally, buses are required to make a sharp (more than 90-degree) left turn upon exiting the driveway at the north end in order to access NW Irving Street and NW Broadway.

Driveway with signage and lane markings

Buses sometimes enter the driveway exit in the opposite direction to avoid driveway congestion

Pavement stripe designating BUS ONLY zone in north driveway

Passenger Pick-Up and Drop-Off

Passenger pick-up and drop-off is characterized by bursts of vehicle and pedestrian activity prior to train departures and following arrivals. Intermediate periods are relatively quiet.

Private auto pick-up and drop-off occurs in a designated area immediately in front of the main entrance to the station. Relative to the size of the taxi stand and bus/freight areas, this represents a relatively small portion of the available curb space. As a result, significant driveway congestion can occur in the peak minutes of passenger loading and unloading activity.

NW Station Way travel lanes and parking spots sometimes provide a spillover for auto waiting and passenger loading during times of peak congestion in the driveway.

Vehicle loading capacity is also reduced due to crossway delays from pedestrians and cyclists existing the station and crossing the driveway towards the forecourt.

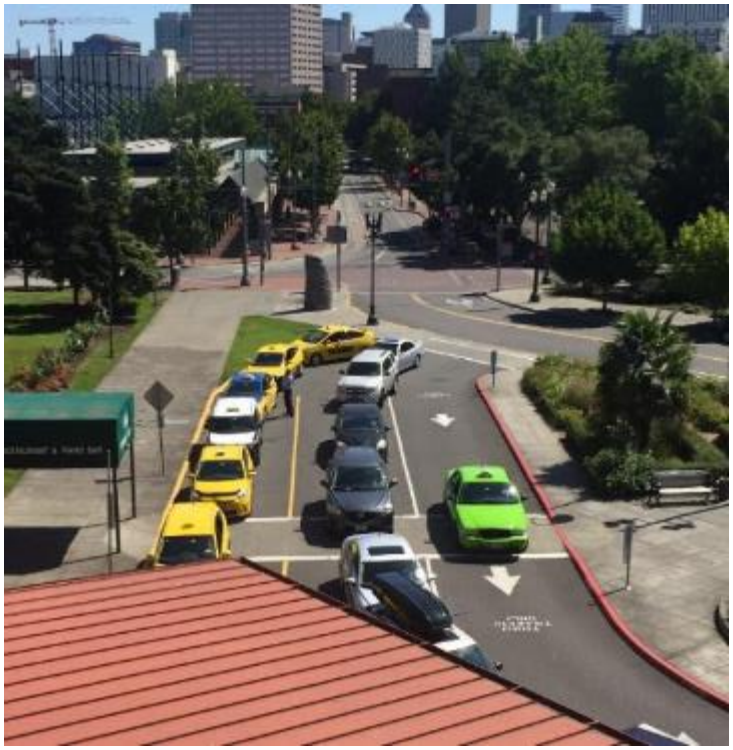
NW Station Way activity during train arrival

BOTTOM ROW: Passenger pick-up and drop-off

Taxi Loading and Queuing

Approximately half of the main driveway at Union Station curb, including two lanes, are dedicated to taxi loading and quieting. This is a relatively large allotment given the relative volumes of taxi loadings/unloadings compared to private and Transportation Network Company departures.

Still, at times, the taxi queue fills to capacity, and the metered parking spaces on NW Station Way southbound serve as an ad hoc taxi queue overflow.



ABOVE: Taxi queue and designated (yellow) curb
TOP RIGHT: Taxi queue spillover into metered parking on SW Station Way
BOTTOM RIGHT: Taxi loading area

Transportation Network Companies (Rideshare)

Mirroring trends across the City of Portland, the emergence of Transportation Network Companies (TNCs) or rideshare such as Lyft and Uber in recent years have had a significant impact on transportation mode share at Union Station.

In spite of this shift in travel behavior, no physical accommodations, signage, or wayfinding has been provided at Union Station to allocate curb space to this function or to notify passengers of TNC pick-up locations. This is in contrast to, for example, Portland International Airport, which has designated a portion of the arrivals curb to TNC services and has incorporated this mode into airport wayfinding.

The current curb allocation, and the competition for curb space between TNCs and private autos, contributes to congestion in the driveway during peak train arrival and departure periods.

TOP RIGHT: Transportation Network Company designated loading zone at Portland International Airport
BOTTOM ROW: Transportation Network Companies pick-up and drop-off at Union Station

Accessibility

Substantial improvements have been made in recent years to enhance accessibility of Union Station and vicinity. Future improvements inside Union Station itself will remove remaining barriers to travel for rail passengers, tenants, employees, and visitors to the building, e.g. through elevator and platform upgrades.

Outside of Union Station, there are designated accessible parking spaces and a handicap loading zone in the driveway, closest to the main entrance of the station. TriMet also provides paratransit pick-up and drop-off at the front curb.

Most area curbs and sidewalks have been upgraded with ADA ramps and accessibility features, through a few barriers remain, notably the northern front curb of Union Station beyond the bus loading area.

TriMet paratransit loading at front curb

Handicapped parking stall

Power-assisted station entrance door

Accessible sidewalks on Transit Mall

Deliveries and Emergency Access

Building deliveries such as USPS mail service, concession supplies, and other delivery services (e.g. FedEx) occur via the Union Station driveway. These deliveries generally share the same small portion of the driveway used for auto passenger pick-up and drop off, but often occur at less congested times of the day.

Deliveries are offloaded at the front curb and are transferred into the building (e.g by handcart) through the main entrance. Delivery vehicles are also observed in the bus loading area and the Amtrak Package Express loading area on the north side of the station at times.

Trash/refuse collection for Amtrak and tenants occurs at other locations on the north and south ends of the building, away from the driveway.

Emergency response vehicles for both building and onboard train emergencies access Union Station primarily through the driveway and the main front entrance of the station.

Delivery vehicle on sidewall at north end of driveway

Emergency response at Union Station

Delivery at front entrance

Intercity Bus Loading and Layover

The northern portion of the Union Station driveway, marked for buses only, is the primarily loading location for Amtrak Thruway and other intercity common carriers serving Union Station. The location is marked with a variety of bus stop signs and schedules form individual carriers, as well as wayfinding signage and information inside the terminal for the benefit of passengers.

One coach can load at the covered Union Station curb at a time. Coaches often lay over on the opposite, outside curb of the driveway.

Intercity bus lines service Union Station through informal agreement, and drivers to not have access to Amtrak offices or facilities. The public Main Concourse, concession, and restrooms however are used by bus drivers during break times as well as by waiting bus passengers.

Amtrak station staff sometimes provide information to bus passengers, but are not responsible for intercity carrier customer service or ticket sales (with the exception of official Amtrak Thruway services).

Amtrak provides baggage transfer and electric cart assist service for passengers transferring between Amtrak Thruway coaches and trains. Electric carts access the bus loading area through the adjacent Amtrak Package Express door that leads to the baggage room and the rail platforms.

Amtrak electric cart assist – Thruway/rail passenger and baggage transfer

Bus layover

Bus loading curb (left) and layover (right)

Amtrak Package Express

North of the bus loading area on the Union Station driveway is the pick up and drop off area for Amtrak Package Express service.

This area is the primary access for commercial freight companies and public customers to deliver and received packages using this service. Packages can be as large as pallet size, and therefore require access by delivery trucks and forklifts.

Shifting the Package Express access and loading area to a more northerly, currently unused door, is under consideration to increase available bus loading area.

A key conflict in the existing arrangement is between freight activity and pedestrian connections between the station main entrance and NW Station Way in the direction of the Station Place garage. This sidewalk is also narrow and is not equipped with ADA ramps. As a result, pedestrians are often observed waking in the driveway among delivery vehicles and buses to access the station.

Amtrak Package Express loading area
(showing freight pallet on sidewalk)

North driveway Amtrak Package Express and
bus loading curb with signage from various service providers

Pedestrian connection through Package Express loading area

Driveway Operations – Future Considerations

The driveway of Union Station is a critical 'front door' to the multimodal transportation facility– both for passengers and operations support activities like freight delivery and emergency access.

At the same time, this area is a focal point of the Broadway Corridor for future evolution into an urban place that creates new connections between the Post Office site, the Waterfront, Old Town/Chinatown, and the Transit Mall.

Balancing the complex, and sometimes conflicting, objectives of station access and urban redevelopment in this area will required careful consideration of both transportation and urban design aspects of this issue. Future considerations should include:

- Reallocation of driveway and curb capacity in alignment with current and future arrival and departure modes and passenger demand.
- Improved separation of bus loading, freight, delivery, pedestrian, and bicycle access in the north driveway area.
- Improved and intuitive pedestrian connections and between Union Station and the Transit Mall, Station Place parking garage, and surrounding urban districts (including the future Post Office redevelopment).
- Balance station access needs with activation of the proposed Union Station public plaza and reactivated edges of adjacent properties.
- Impacts of the proposed TriMet Division BRT interim layover facility located on NW Station Way, and the resultant additional vehicular traffic, on driveway operations and pedestrian movement in the area.

Toronto Union Station is an example of a facility that uses design cues to provide balanced, multimodal access while enhancing the urban environment of this prominent transportation gateway.

Thoughtful design could address operational and safety issues resulting from the informal and conflicting uses of the north driveway area, including bus loading, freight deliveries, pedestrian/bicycle access, and passenger loading activity.

5. Future Design Considerations

Future Design Considerations

For much of the 20th century, Union Station and environs peripheral to the Central City, surrounded by rail yards and industrial land uses. More recent development, as well as the Framework Plan vision for the Broadway Corridor, suggests a future where Union Station is a focal point of an emerging urban, mixed-use, and high density neighborhood.

At the same time, the area retains the essential regional transportation function it has performed for over 120 years.

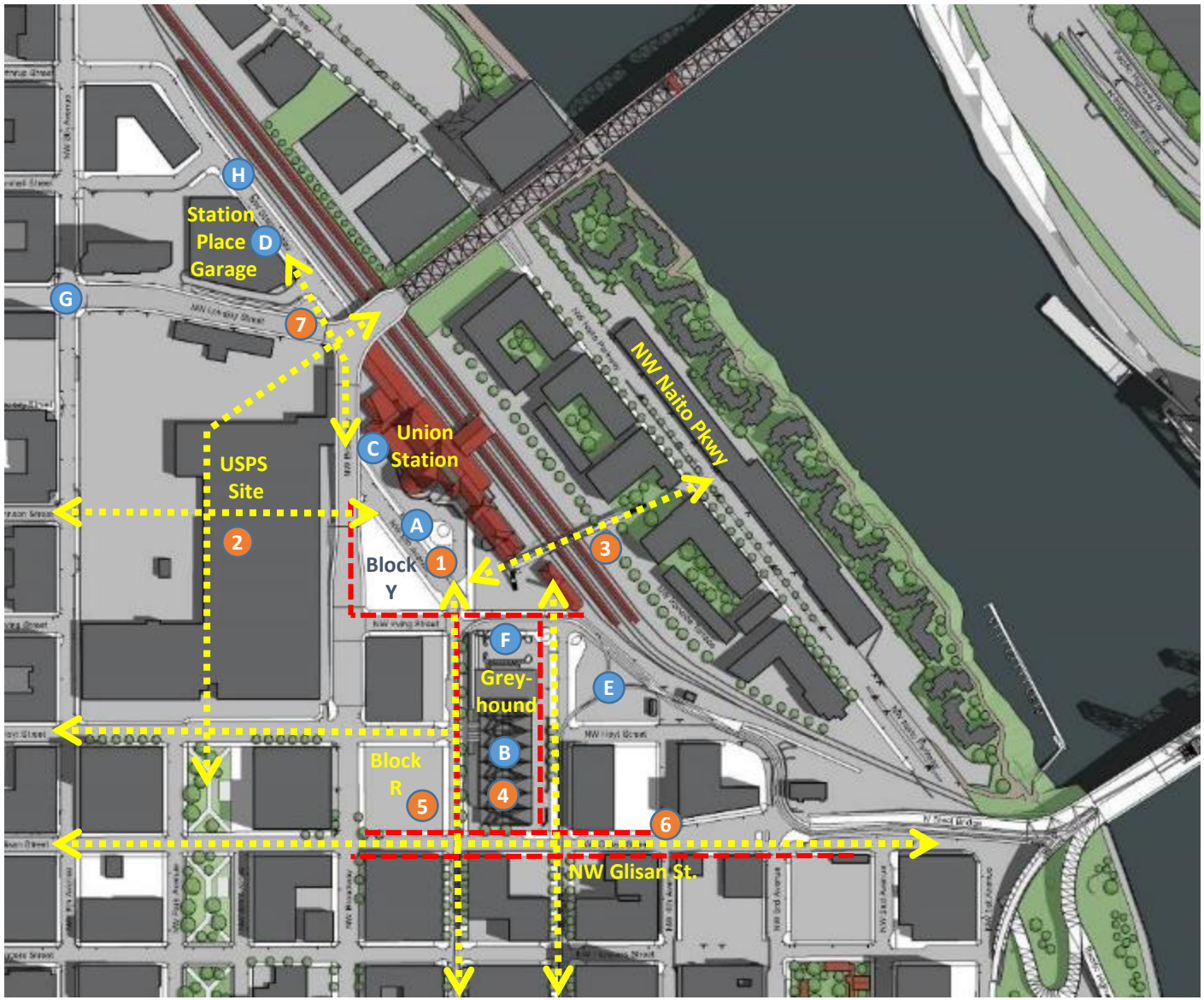
While a comprehensive urban design analysis is beyond the scope of this study, this section introduces some of the key urban design issues and opportunities that may emerge as the neighborhood balances these transportation and urban development objectives.

New high-density development, such as the Bud Clark Commons (left) and Multnomah County Health Department facility (under construction), are altering the once utilitarian transportation land uses in the vicinity of Union Station.

Balancing essential transportation infrastructure and neighborhood redevelopment is creating new opportunities and challenges in the Broadway Corridor.

Curb cuts provide access to off-street bus facilities at Union Station, the TriMet layover facility, and the Greyhound Terminal (shown); however these driveways also interrupt the street wall and create mid-block pedestrian conflicts.

Future Design Considerations



Key Street Edge Key Ped/Bike Connection

Transportation Issues

- A: Union Station – Multimodal Access/ Driveway Reconfiguration
- B: Greyhound Terminal Relocation
- C: Thruway/Intercity Bus Accommodations
- D: Rail Passenger/District Parking Strategy
- E: Support TriMet Layover/Operations
- F: Transit Mall Access; Proposed Division BRT Station/Layover
- G: Access to Portland Streetcar
- H: Interim Proposed Division BRT Layover – NW Station Way

Design Considerations

1. Union Station Plaza and Edge Activation
2. USPS Site Connections; NW Johnson St. Extension; Green Loop
3. Waterfront Pedestrian Connection
4. Greyhound Site – Mixed-Use Redevelopment
5. Mixed-Use Infill, Including Block R
6. NW Glisan St. – Edge Activation/Pedestrian Corridor
7. NW Station Way – Pedestrian Corridor Improvements under Viaduct

Union Station Plaza

Both the Broadway Corridor Framework Plan and the Union Station PE/NEPA study propose a future public plaza/open space at Union Station straddling NW Station Way, encompassing both Block Y and the landscaped area south of Union Station near the Annex building. This plaza would form a community focal point, reactivating and integrating urban redevelopment between the Post Office Site, Old Town/Chinatown, and Union Station.

New high density developments, including the Post Office Site, Bud Clark Commons, Multnomah County Health Department, and potential Greyhound Terminal Redevelopment, would frame this plaza, dramatically altering the appearance and urban context seen today.

There are many precedents for train station plazas in North America and Europe that create successful urban spaces. Creating a vibrant and functional Union Station Plaza will require balancing multimodal access, pedestrian character and accessibility, activated edges of adjacent land development, quality design elements, and curated programming to draw nearby residents and visitors.

Rendering of a future public plaza at Union Station (source: Broadway Corridor Framework Plan)

NW Station Way - North of Union Station

The portion of NW Station Way north of the Union Station terminal follows the edge of the tracks and platforms towards a junction with NW 9th Ave. For a portion of this length, NW Station Way is located under the Broadway Viaduct, between the maintenance area of Union Station and the Post Office Site. While this is a key pedestrian connection to the Station Place Garage (which allows overnight parking for rail passengers) and the Pearl District beyond, it can be an intimidating and unpleasant environment, particularly at night.

In the future, this area will continue to serve an important rail operations/maintenance function for Union Station (e.g. train fueling, refuse removal). However with the redevelopment of the station and the Post Office facilities flanking each side of the viaduct, there is a unique opportunity to reimagine and improve this corridor for pedestrians.

Another consideration for future design is the proposed location of an interim TriMet Division Bus Rapid Transit layover facility along the east side of NW Station Way north of the station. This facility could have pedestrian and traffic impacts both the viaduct corridor as well as the Union Station driveway/plaza area to the south.

NW Station Way under the Broadway Viaduct is a key pedestrian connection to the Station Place Garage (left) and the Pearl District, though it can be an intimidating environment for pedestrians

Proposed TriMet Division BRT layover area, NW Station Way

NW Glisan Street Corridor

NW Glisan Street is a key connection in the Broadway Corridor, as one of the few contiguous east-west connections between the Pearl District and the waterfront/NW Naito Parkway. It defines the southern edge of the triangle of redevelopment in the Broadway Corridor encompassing Union Station and the Post Office Site.

The NW Glisan Street corridor provides an opportunity for a multimodal connection between Old Town/Chinatown with the emerging redevelopment surrounding Union Station to the north.

Today, a number of pedestrian barriers and inactive uses pose challenges for reactivating the NW Glisan corridor. Surface parking, vacant or underutilized parcels, and lack of street-level activation degrade the vitality of this street. The southern edge of the Greyhound terminal along Glisan Street, with a wide curb cut for bus egress from the loading/maintenance area, contributes to challenge.

Sensitive streetscape design and street-level activation of key redevelopment parcels, including Block R, can help to re-activate NW Glisan St. Additionally, redevelopment of the Greyhound Terminal, particularly if it continues to house off-street transportation terminal facilities, should consider the potential positive and negative impacts on the NW Glisan St. edge, as well as the other strategic block faces on each side of the Greyhound facility.

Surface parking lots and underutilized parcels contribute to an austere pedestrian environment along NW Glisan St. between NW Broadway and the Steel Bridge

Strengthening the street frontage along SW Glisan Street and other streets impacted by large curb cuts, surface parking, and transportation terminals will support redevelopment of adjacent properties

Greyhound Terminal vehicle egress (along NW Glisan St. between NW 5th and 6th Avenues) provides an inactive edge and pedestrian-vehicle conflicts at the curb cut.

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6. Greyhound Precedents

Greyhound Terminal - Precedents

As discussed earlier in this document, the existing Greyhound Terminal has significant surplus capacity over current and projected future service requirements. There is also an opportunity to redevelop the existing Greyhound facility to support mixed use development, potentially in combination with a reduced-scale Greyhound facility and/or layover and support facilities for the proposed Division BRT.

This section presents design precedents from other Greyhound facilities around the U.S. to help inform the decision about Greyhound redesign and relocation design decisions.

There is a strong desire by the City to maintain Greyhound terminal in the vicinity of Union Station to preserve multi-modal connectivity and access to the transit services within the Central City. Given the densification of the Union Station vicinity and the available land parcels, there is a potential that a future Greyhound terminal could be co-located with other uses in a multi-story structure.

Another future consideration for the programing, location, and design of the future Greyhound terminal is the accommodation of other intercity bus services, such as POINT or BoltBus, in the new facility, at Union Station, or in another location. Currently these services are divided between the Greyhound Terminal and Union Station, and involve a number of independent operators. In the interest of statewide intercity bus connectivity, which relies on Union Station area as a de facto hub, inter-line connectivity should be maintained or enhanced in the future through the planning, design, and location of future facilities.

The table on the following page illustrates common configurations of intercity bus and rail facilities in major cities.

Existing Greyhound Terminal

In Portland, the Amtrak and Greyhound facilities are currently adjacent within the Center City. In some other cities, these facilities are combined (e.g. Anaheim) or are even in entirely separate areas (e.g. Denver).

Some cities, such as Seattle and Sacramento, have relocated Greyhound facilities to CBD fringe locations where land costs and densities are lower. These locations are still transit accessible (by nearly LRT stations in both cases), but are in locations where single story, stand alone facilities are more economical to construct. The tradeoff is less convenience for arriving and separating passengers, and lower direct multi-modal connectivity. Note that Sacramento is studying the possibility to relocate Greyhound to a new multimodal facility at the Sacramento Valley Station (Amtrak station) if funding permits.

Greyhound Precedents: Location and Relationship of Modes

Multi-Modal Center

Everett, WA; Anaheim, CA
Springfield, MA

Intercity rail, bus, and transit combined in one facility

Center City, Adjacent

Pittsburgh, PA; Portland, OR

Intercity rail and bus located nearby in separate facilities

+

Center City, Independent

Denver, CO; Chicago IL

Intercity rail and bus located in separate facilities and locations

+

Center City Edge

Seattle, WA; Sacramento, CA

Intercity bus facilities located on the edge of the Central Business District in a transit-accessible location

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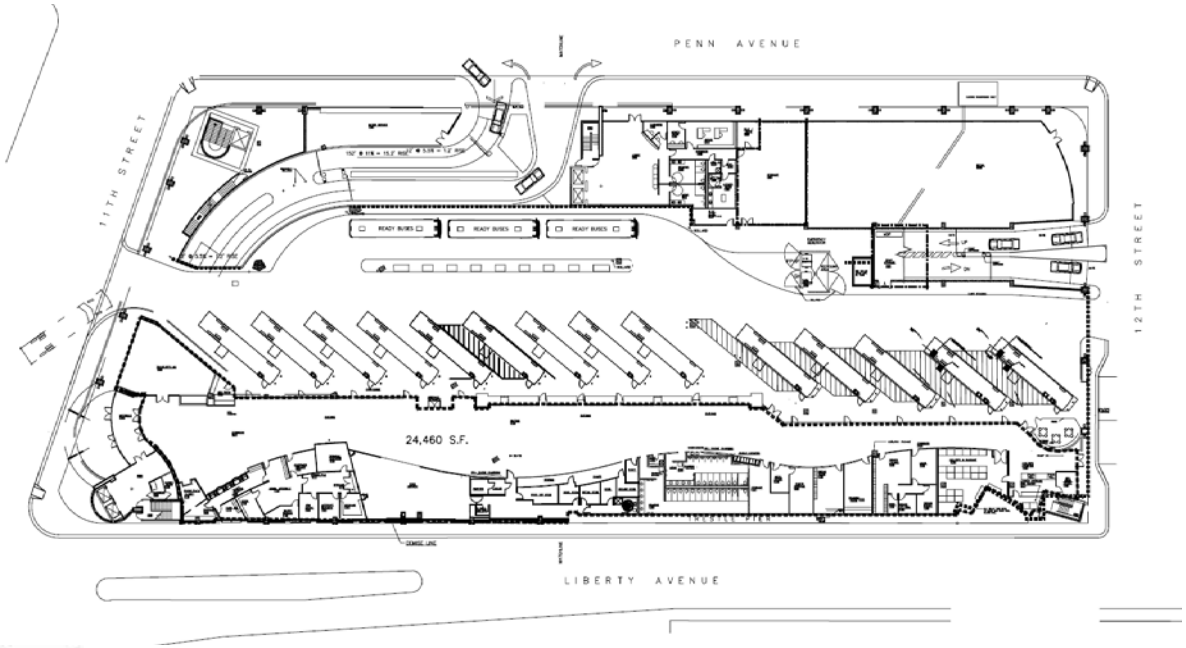
Greyhound Precedents: Co-Located with Structured Parking

Greyhound terminal with structured public parking located above Pittsburgh, PA.



RELEVANCE TO PORTLAND

- An intercity bus facility integrated with structured above ground parking
- Co-located next to an Amtrak station, but operates as an independent facility

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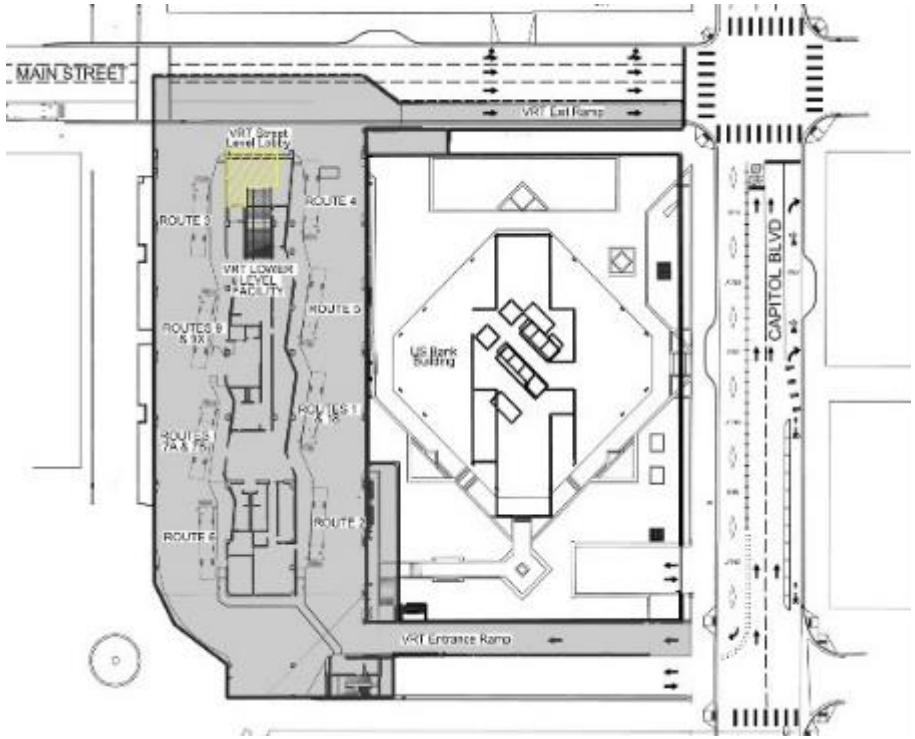
Greyhound Precedents:
Co-Located with Mixed-Use Development



Valley Regional Transit – Main Street Station underground local bus transit terminal with office tower above.
Boise, ID

RELEVANCE TO PORTLAND

- Bus transit facility compatible with high- and mid-rise mixed use development as envisioned in the Broadway Corridor
- Solution for off-street transit bus layover and boarding

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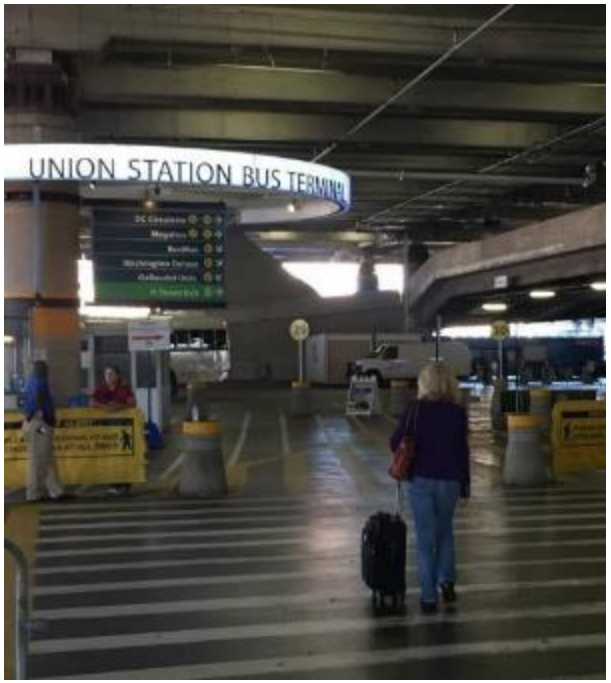
Greyhound Precedents: Multi-Line Terminals (Union Station, Washington, DC)



Union Station Bus Terminal
Washington, D.C.

RELEVANCE TO PORTLAND

- Illustrates a combined solution for co-location of multiple inter-city bus lines in one facility
- Precedent for an off-street BoltBus terminal integrated with other carriers
- Co-located with Amtrak rail station
- Bus terminal integrated into a structured parking facility (and proposed future mixed-use development)

Greyhound Precedents: Multi-Line Terminals

South Station
Bus Terminal
Boston, MA

RELEVANCE TO PORTLAND

- Illustrates a combined solution for co-location of multiple inter-city bus lines in one facility
- Precedent for an off-street BoltBus terminal integrated with other carriers
- Co-located with Amtrak rail station (separate facility)
- Bus terminal integrated into a structured parking facility

Greyhound Precedents: Off-Street Local Bus Transit Terminals

RTD Transit Tunnel (local bus), Union Station Denver, CO

RTD local bus terminal with structured parking Boulder, CO

Regional Transit Service (RTS) Downtown Transit Center Rochester, NY

RELEVANCE TO PORTLAND

- Examples of off-street local transit terminals with indoor waiting facilities
- Potential solution for Division BRT and/or other intercity carriers

Greyhound Precedents: Multimodal Transportation Center

Airways Transportation Center (Greyhound and MATA local transit)
Memphis, TN

Everett Station
(Greyhound, Amtrak, and local transit)
Everett, WA

RELEVANCE TO PORTLAND

- Demonstrates the combination of Greyhound operations with other transportation services in a highly integrated facility with shared amenities such as passenger waiting areas.

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Greyhound Precedents: Multimodal Transportation Facilities

Greyhound/Amtrak Station
(Integrated Greyhound/Amtrak waiting area)
St. Louis, MO

Salt Lake Intermodal Hub
(Amtrak, Greyhound, UTA local transit)
Salt Lake City, UT

Anaheim Transportation Center
(Amtrak, Greyhound, other intercity bus, local transit)
Anaheim CA

RELEVANCE TO PORTLAND

- Demonstrates the combination of Greyhound operations with other transportation services in a highly integrated facility with shared amenities, such as passenger waiting areas.

Greyhound Precedents:
Bus Terminals Co-Located at Rail Stations

Union Station Bus Terminal (GO Transit)
Toronto, ON

Worcester Union Station
Worcester, MA
(Peter Pan intercity bus,
WRTA local transit,
adjacent Amtrak/MBTA
rail station)

Union Station
(Amtrak, Greyhound, PVTA local transit)
Springfield, MA

RELEVANCE TO PORTLAND

- Demonstrates co-located, but operationally separated, intercity bus and rail facilities.

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Greyhound Precedents: Center City Edge Stations

Seattle Greyhound Terminal –
SODO neighborhood along the LINK light rail south of downtown.
Seattle, WA

Nashville Greyhound Terminal – Relocated to a former car dealership site to accommodate the Music City Center redevelopment project.
Nashville, TN

Greyhound Terminal, located near light rail north of downtown Sacramento.
Sacramento, CA

RELEVANCE TO PORTLAND

- Illustrates a solution where a lower-cost, low-density Greyhound facility is located on a site outside of the central city on a site with quality transit service and convenient freeway access.
- The Nashville terminal is that city's solution to allow for redevelopment of the former downtown site.

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