4 FORECAST CONDITIONS

Chapter 4 builds on the analysis of existing conditions presented in Chapter 3. It provides forecasts of traffic volumes and speeds on the same network of City streets. The analysis of future traffic conditions uses 2035 conditions as the forecast horizon, making it compatible with existing national, state and regional planning and forecasting efforts. Future public investment decisions will be made by participating agencies during the 20-year time horizon.

Future conditions are reported to address the same performance measures as existing conditions, including an evaluation of Mobility, Safety, and Connectivity.

The forecast conditions, presented below, are based on assumptions of future employment, population, economic growth, and future demand for the movement of freight generated by growth that are consistent with those of related planning efforts. In addition, the analysis also accounts for projected changes in transportation infrastructure and the way that infrastructure will be operated.

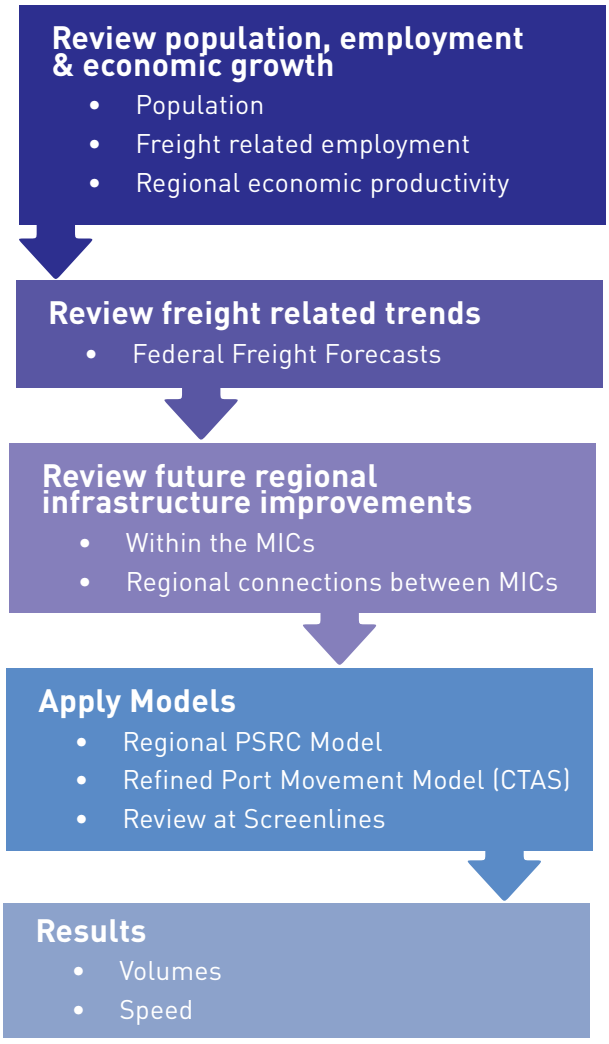
PERFORMANCE MEASURES

Mobility
- General traffic
- Truck volumes
- Speeds & congestion
- Reliability

Safety
- Truck collision history

Connectivity
- Access constraints (including over-legal limitations)
- Railroad crossings and bridge openings that cause delays
- Ease of movement (roadway geometric design to support trucks)

The forecasting process followed these general steps:



4.1 Population, Employment and Economic Growth

To develop traffic forecasts for this project, our team reviewed the available data from the regional Metropolitan Planning Organization (MPO), Puget Sound Regional Council (PSRC) including:

1. Overall growth including estimates of population and employment data;
2. Estimates of employment growth specifically in the goods movement (freight related) sectors; and
3. Overall economic trends.

To further refine and ground-truth estimates of growth, the analysis also looked at national trends in freight movement (Section 4.2).

4.1.1 Population Growth

PSRC estimates 5 million people will live in the region by 2040. The strategy for accommodating the nearly 1.5 million new residents is contained in PSRC's VISION 2040, a long-range plan for maintaining a healthy region and promoting the well-being of people and communities. The population forecasts projected by PSRC are a key input for the PSRC Travel Demand Forecast Model[1] that estimates travel patterns throughout the region. Outputs from that model were used to estimate the number of passenger vehicles on roadways introduced in Chapter 3 (described in section 4.4.1). Truck travel patterns contained in the model were also used to distribute non-port and port truck trips onto the roadway system (described in sections 4.4.2 and 4.4.3).

1 www.psrc.org/data/forecasts/travel-demand-forecast/

PHOTO CREDIT: WSDOT

Consistent with regional planning goals and geographical designations such as the MICs, jobs in the goods movement (freight related) sectors in Seattle's MICs are anticipated to grow by 70%, compared to 57% for other jobs. Jobs in goods movement in the MICs are also projected to grow at a greater rate than those same sectors in non-MIC areas of the City and the region. Figure 4.1 shows the growth anticipated for the City's MICs as compared to the City of Seattle and PSRC region.

4.1.2 Employment

As shown in Figure 4.1, the share of total employment of goods movement dependent industries in the BINMIC and Greater Duwamish MIC is larger than that in the City and the PSRC region. Further, employment in these industries is expected to grow in the MICs as well as the City and the PSRC region, but the share of total employment of goods movement dependent industries is increasing in the MICs where as it is decreasing in the region.

2 Transportation 2040; Toward a Sustainable Transportation System. Appendix J Regional Freight Strategy, PSRC, Updated 2014

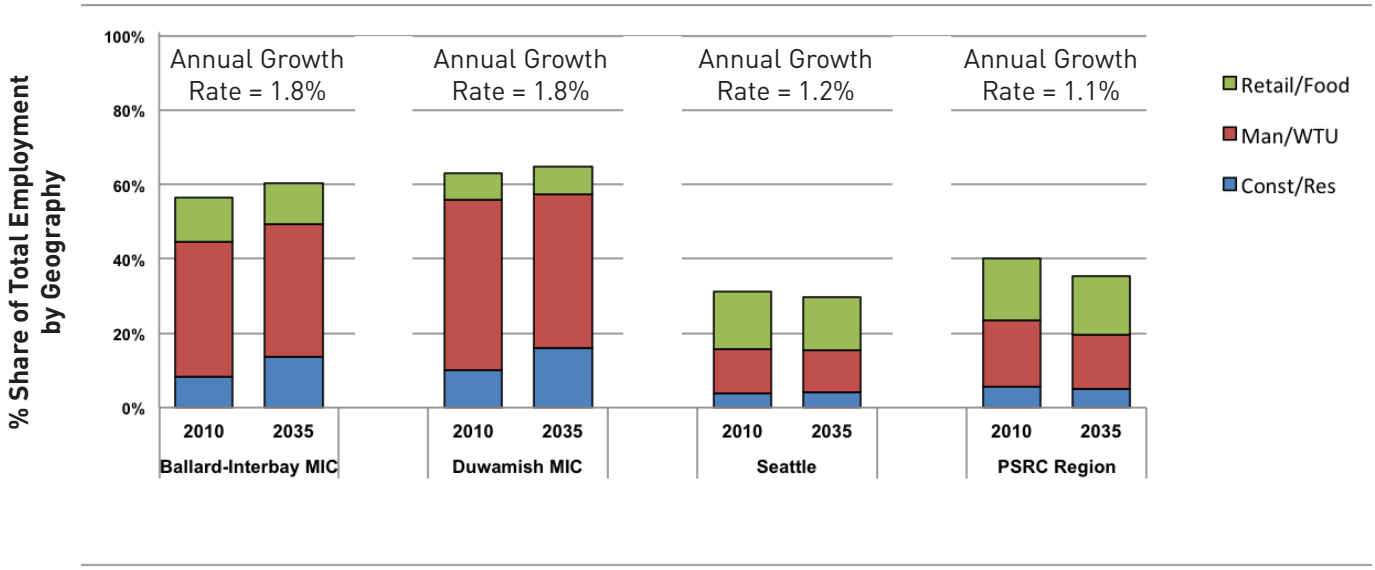


Figure 4.1 Goods movement dependent industry growth[3]

Goods movement industry jobs are expected to grow at a rate of 1.8% per year in each of the MICs as compared to 1.2% in the remainder of Seattle and 1.1% per year in the remainder of the Puget Sound region. As a result, of all growth in goods movement related jobs in the City, almost half (44%) is expected to be located in the MICs.

4.1.3 Regional Productivity

Productivity, or economic output of the region, is anticipated to increase along with forecast growth in population and employment. Population and employment will continue to grow at a steady pace, or about 25% by 2035, which is the study's horizon year. By 2040, the region will grow to 5 million in population and 3.1 million jobs. More manufacturing of goods will require transport to get these goods to market and employees to jobs to support new industries, offer opportunities, and attract new workers. To support domestic and international growth, regional (four county) truck tonnage is expected to increase from 213 million tons to 366 million tons, representing a 72% growth, between 2010 and 2035[4]. This rate of growth far exceeds both population and employment growth for the region but supports aggressive estimates of freight activity. This is consistent with national forecasts, which project a 27% increase in tons for every resident of the U.S., from 55 tons per capita in 2005 to 70 tons in 2040[5].

3 Employment Forecasts, PSRC 2010.

4 Transportation 2040; Toward a Sustainable Transportation System. Appendix J Regional Freight Strategy, PSRC, Updated 2014

5 Freight Analysis Framework, FHWA 2010.

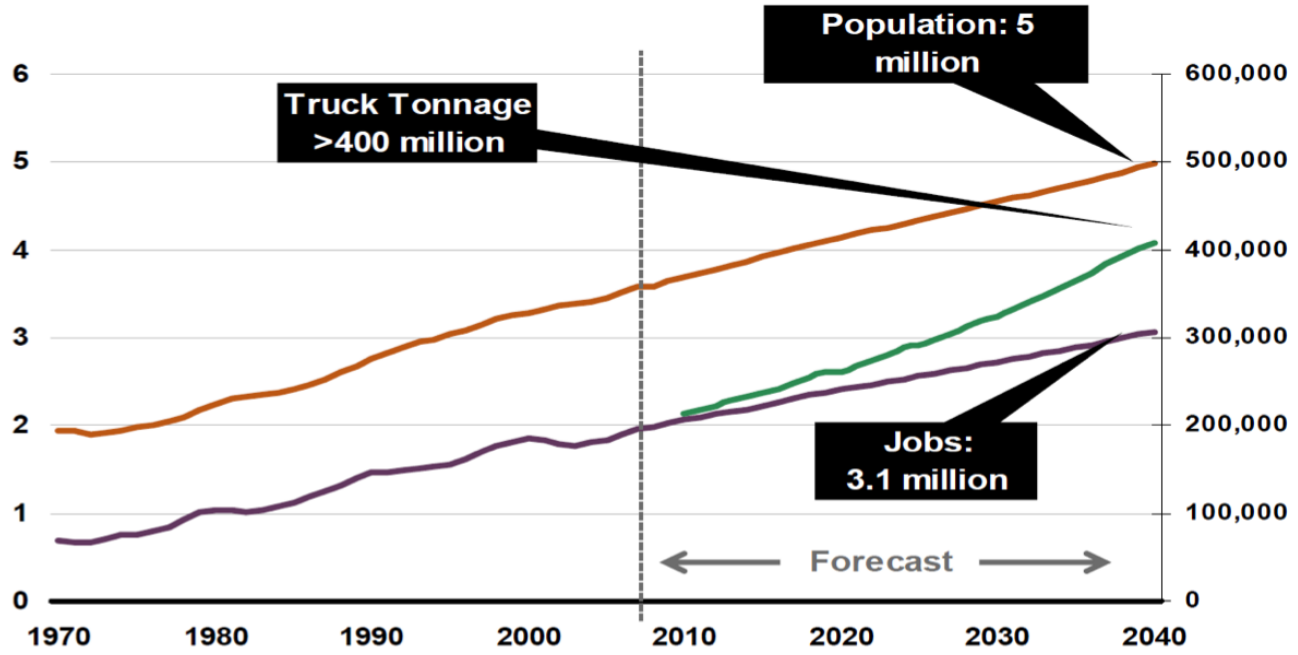


Figure 4.2 Regional Growth Estimates[6]

4.2 Freight Trends

In addition to changes in the region's population, employment, and economy, freight trends are influenced by changes to the national economy, changes to manufacturing and industrial activities within the MICs, Port activity, and related rail activity. This section describes the importance of each of these components and the impact they will have on corridor forecasts for the roadways within and connecting Seattle's MICs.

4.2.1 National Trends in Regional Trucking

General freight trucking (e.g. merchandise, foods, parcels, industrial goods) is expected to grow significantly faster than bulk trucking (e.g. aggregates, cement, fuels) across the nation. This difference is due (in part) to faster growth in the consumer sector and to the increase in on-line shopping (which replaces traditional customer pickup at stores with parcel delivery to homes and offices).

The American Trucking Association (ATA) trucking volume forecasts (2013-2024) are the most recent national data source for tracking national trends in regional trucking available for the US. The key feature of this forecast is the more robust near-term growth (averaging 3.0% per year in 2013-2018) followed by slower mid-term growth (averaging 1.0% in 2019-2024)[7].

This shows that the nationwide estimates of growth between 1.5% and 2% per year are consistent with PSRC forecasts of regional economic growth; however, the nationwide trends might indicate greater growth in the near-term.

4.2.2 Activity in the MICs

The Greater Duwamish and Ballard/Interbay Northend MICs are hubs of industrial activity, generating substantial tax and export revenues[8]. The Greater Duwamish MIC also provides the largest concentration of family-wage and diverse

6 PSRC, Washington State Department of Employment Security.

7 U.S. Freight Transportation Forecast to 2024, ATA 2014.
8 Seattle Industrial Lands Study. City of Seattle. 2012.

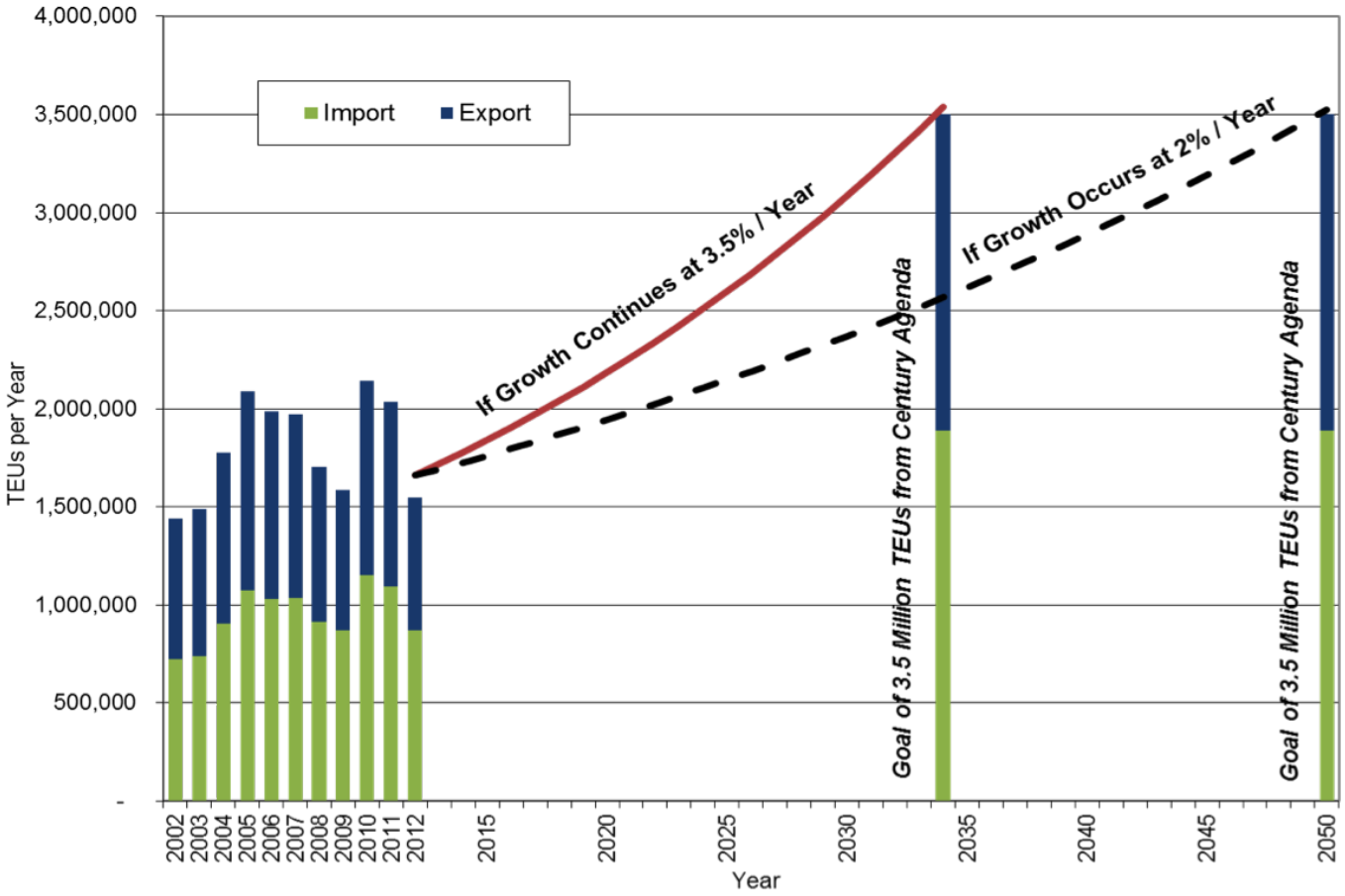


Figure 4.3 Port of Seattle Container Growth (TEU - Twenty-foot Equivalent Unit)

jobs in the Puget Sound region[7]. The region needs to support freight, while the industry also works towards lessening freight's impact on communities adjacent to the MICs including the Georgetown, South Park, and Ballard residential neighborhoods. The designation of MIC seeks to maximize appropriate land uses and complementary infrastructure that support goods-movement industries.

4.2.3 Activity at the Port of Seattle

Port of Seattle sea cargo operations are based around four major international container terminals located within the Greater Duwamish MIC. Future truck forecasts of Port activity are based on a projected growth in cargo throughput to a maximum of 3.5 million twenty-foot equivalent units (TEUs) between 2035 and 2050 as shown in Figure 4.3[9].

In the future, trucks related to Port activities are expected to operate similar to the way they operate today, including operations on 306 days per year and each container generating an average of 1.77 truck trips. Future port activity may be influenced by larger factors that are external to the Port, such as container ships with potentially more intense truck activity per vessel and the expansion of the Panama Canal. Port truck volumes included in the corridor forecasts are consistent with estimates to be included in the update to the Container Terminal Access Study (CTAS) anticipated to be completed in 2015.

9 Century Agenda. Port of Seattle 2012.

4.3 Roadway Freight Infrastructure System and Operations

The Puget Sound's regional roadway network operates at or near capacity for much of the peak morning and evening commuter periods. With limited roadway expansion, future travel demand is anticipated to extend congestion to more hours of the day, infringing on the typical time periods for truck travel. In anticipation of future traffic congestion, a number of infrastructure investments and operational policies have been identified and are in various stages of development.

A review of local and regional capital improvement programs and long-range transportation plans was conducted to determine planned funded and unfunded transportation projects that would impact truck and general traffic within and between the MICs. The review included, but was not limited to, transportation plans from the Washington State Department of Transportation (WSDOT), City of Seattle, King County, Sound Transit, and the Port of Seattle. Table 4.1 provides a summary of key future transportation projects in the study area. Major capital projects, such as the SR 99 tunnel and the rebuilt surface Alaskan Way, will change how vehicles from the north and the south access and travel through downtown. These projects will have significant influence on the travel patterns for trucks and general traffic between the two MICs.

The Center City Streetcar Connector – a streetcar that would utilize an existing lane in each direction on First Avenue exclusively for transit – is not assumed in this analysis and is located largely within the downtown core where trucks do not travel. However, implementation of the streetcar could further reduce lanes available for trips diverting from the SR 99 tunnel due to tolling, increasing pressure on parallel freight corridors and facilities connecting the MICs. This project is funded through final design which is expected to be completed in early 2016. Construction is largely dependent upon the City securing federal and local funds.

Additionally, changes in the way the transportation system is operated may influence travel in the future. These changes include implementation of tolls on SR 99 upon completion of the SR 99 tunnel, other tolling, including express toll lanes on regional freeways, and changing HOV occupancy designation from 2+ to 3+. Current tolling policy excludes use of express toll lanes by large trucks. These operational changes attempt to make better use of the existing transportation system by encouraging use of transit and HOVs, while raising revenue for investments in those corridors.

A regional tolling approach focused on the freeway system is likely to increase general trips on the City's street system, including on corridors analyzed as part of this project. Recommendations by WSDOT for setting toll rates for trucks are based on a per-axle toll consistent with the state's current approach for tolled facilities[10]. Diversion onto parallel routes may increase congestion due to limited alternative freight routes through downtown and on I-5 during the day, thus reducing the speed and reliability of truck movement between the two MICs.

10 Advisory recommendations for tolling the SR 99 tunnel. WSDOT. March 2014.

Table 4.1 Key Study Area Planned Transportation Projects Assumed in the Analysis*

Project Description	Responsible Agency	Expected Completion	Funded?**
Alaskan Way Viaduct Replacement: SR 99 viaduct replaced with a tunnel between S Royal Brougham Way and Mercer Street.	WSDOT	2017	Yes
SR 520 Bridge Replacement: Construction of a new SR 520 floating bridge with two general purpose lanes and one HOV / transit lane per direction. The eastside, floating bridge and west approach bridge north segments are funded and all are currently under construction. The westside connection to I-5 is not funded.	WSDOT	2017	Partial
Mercer Corridor: Convert Mercer Street, Roy Street, and Valley Street to two-way operations and improve non-motorized access	SDOT	2015	Yes
First Hill Streetcar: Two-mile streetcar line serving Capitol Hill, First Hill and International District with connections to Link Light Rail, Sounder commuter rail and bus service.	SDOT	2015	Yes
Link Light Rail: Extension of the regional light rail system. All segments are funded in ST2, but the year of completion may vary depending on revenue available to fund construction. The segments include:	Sound Transit		
North—University District and Capitol Hill (U Link)		2016	Yes
North—Northgate (North Link)		2021	Yes
North—Lynnwood (Lynnwood Link)		2023	Yes
East—Bellevue and Redmond (East Link)		2023	Yes
South—Extension to S 200th Street		2016	Yes
South—Extension to Kent-Des Moines Road (South Link)		2023	Yes
Elliott Bay Seawall Replacement: Replacement of the existing seawall along the Seattle central waterfront from S Washington Street to Broad Street. (Phase 1)	SDOT	2016 (Phase 1)	Yes
Waterfront Seattle: This project creates a continuous public waterfront between S King Street and Bell Street and includes the design and construction of the new surface Alaskan Way and Elliott Way arterial streets.	SDOT	2014 and beyond	Partial
Southwest Transit Pathway: This project creates a new transit corridor on Alaskan Way and Columbia Street with a pair of bus stops near the Stadium District to replace service currently on the Alaskan Way Viaduct	SDOT/ King County Metro Transit	2017	Yes
S Lander Street Grade Separation: This project grade separates S Lander St. roadway and the BNSF mainline railroad tracks between 1st Avenue S and 4th Avenue S	SDOT	Unknown	No

* Please note that transit improvements, combined with regional tolls, are expected to reduce personal vehicle trips on roadways.

** "Yes" means the project is fully funded for construction, "partial" means the project has some, but not complete funding for construction, and "no" means the project does not have any construction funding.

4.4 Methodology for Forecasting Corridor Volumes and Speeds

This section describes the process for applying growth rates and developing non-port and port-related truck forecasts on individual roadways within the MICs. The corridors selected for forecasting are based on important freight roadways defined in Chapter 3, Existing Conditions. Forecast traffic volumes were assigned to roadways within and between the MICs and based on the Major Truck Streets, First/Last Mile Connections, and the Arterial roadway network.

The corridor forecast methodology begins by dividing vehicle traffic on city roadways into three categories based on the individual operating characteristics and reliable data sources available for forecasting travel demand:

- passenger vehicles
- non-port trucks
- port related trucks

4.4.1 Passenger Vehicles

Travel forecasts from the PSRC's Transportation 2040 model were used to develop corridor growth rates of the amount of passenger vehicle traffic anticipated on roadways within and between the MICs. The data from the PSRC model indicates that regional tolling could have a significant impact on passenger vehicle travel patterns. This change to the regional freeway system is anticipated to result in travelers choosing other modes, such as transit, carpools, or cycling—or driving on City streets instead of freeways. The PSRC Travel Demand Model considers many of these changes to future passenger travel. Even though a significant proportion of the growth in passenger trips in our region is estimated to occur on transit and alternative modes, growth in passenger vehicle travel is still anticipated due to population and employment growth. Passenger vehicle forecasts from the PSRC model were also compared to other available planning sources, including the Alaskan Way Viaduct Replacement Study for regional travel routes.

4.4.2 Non-Port Trucks

Truck trip generation forecast for non-port truck trips was mainly based on FHWA Freight Analysis Framework version 3 (FAF3)[11]. FAF3 is a database of origin-to-destination commodity flows in tonnages and dollars, which provides data for 2007, 2011 and projections at five-year intervals up to 2040. While the PSRC model is a good source of information for use in accounting for different rates of growth on specific roadways

11 FAF3 Network Database and Flow Assignment: 2007 and 2040. Federal Highway Administration. Available at: www.ops.fhwa.dot.gov/Freight/freight_analysis/faf/faf3/netwkdbflow/index.htm

(and the forecast methodology for non-port trucks was developed taking this into account), the PSRC model may not adequately account for constraints to truck movements on specific streets. It should be noted that the FAF3 forecasts have been used by WSDOT for statewide forecasts and forecasts of tonnage on freight routes on state highways during the update of the *State Freight Mobility Plan*. The detailed methodology for forecasts is included in Appendix B.

4.4.3 Port Trucks

Port truck forecast volumes were developed based on information contained in the update to the Container Terminal Access Study (CTAS) anticipated to be completed in 2015. Truck trips for that study are based on a number of data sources (including Port RFID readers, Bluetooth origin-destination studies, and existing traffic counts) that estimate the amount of Port specific truck activity on the local arterial system and determine typical daily port truck volumes and travel patterns to and from Port container terminals. Port truck trips were assigned to roadways within the Greater Duwamish MIC from individual terminals.

The total daily future traffic volumes including vehicles, non-port trucks, and port trucks are shown in Figures 4.4 to 4.6. These figures also note links where daily trucks account for a large portion of traffic (over 10%). These figures add to the constraints shown in Figures 3.15 to 3.17 in Chapter 3.

4.5 Forecast Results

Truck activity is anticipated to grow faster than regional traffic, which is not anticipated to grow as significantly due to transit expansion and tolling. The corridors evaluated in this section include the same roadways evaluated under existing conditions in Chapter 3.

Several sources were used to supplement and verify the results of the forecasts described in this section. Forecasts for port trucks were compared to the 2015 *Container Terminal Access Study* (CTAS)[12], while traffic volumes for highways such as I-5, I-90, SR-99, SR-509, SR-519 and SR-518, were estimated to be consistent with the *Alaskan Way Viaduct Replacement Study*[13], the are also consistent with results from the PSRC regional model.

4.5.1 Corridor Travel Speeds

For trucks, travel time and speed are important measures of effectiveness. Delays for freight have not only an impact on drivers' time but add cost because they delay the goods. This section describes the methodology and results for estimating corridor travel speeds based on the forecast total traffic volumes.

Future speeds were calculated by using current travel speeds (existing speed data from one year of INRIX records as noted in Chapter 3) factored by a ratio of future volumes to current volumes. A "profile curve" based on national data from the Bureau of Public Roads (BPR) estimates change in roadway speeds based on a function of traffic volumes and roadway design speed.

The BPR function was applied to existing speeds based on the change in forecast traffic volumes. This analysis assumes that roadway capacity will remain the same in the future except where there are planned projects to increase capacity. As a result, the FAP has not adjusted for capacity changes that may occur with city transit, bike, and pedestrian plan implementation.

The forecast corridor travel speeds generally resulted in lower traffic speeds and increased congestion due to the increase in traffic volumes within and between the MICs. Forecast AM congestion levels are presented in Figure 4.7 to Figure 4.9, and forecast PM congestion levels are shown in Figures 4.10 to 4.12.

12 Container Terminal Access Study, Transpo Group, Est. 2015.
13 Washington State Department of Transportation, January 2010.

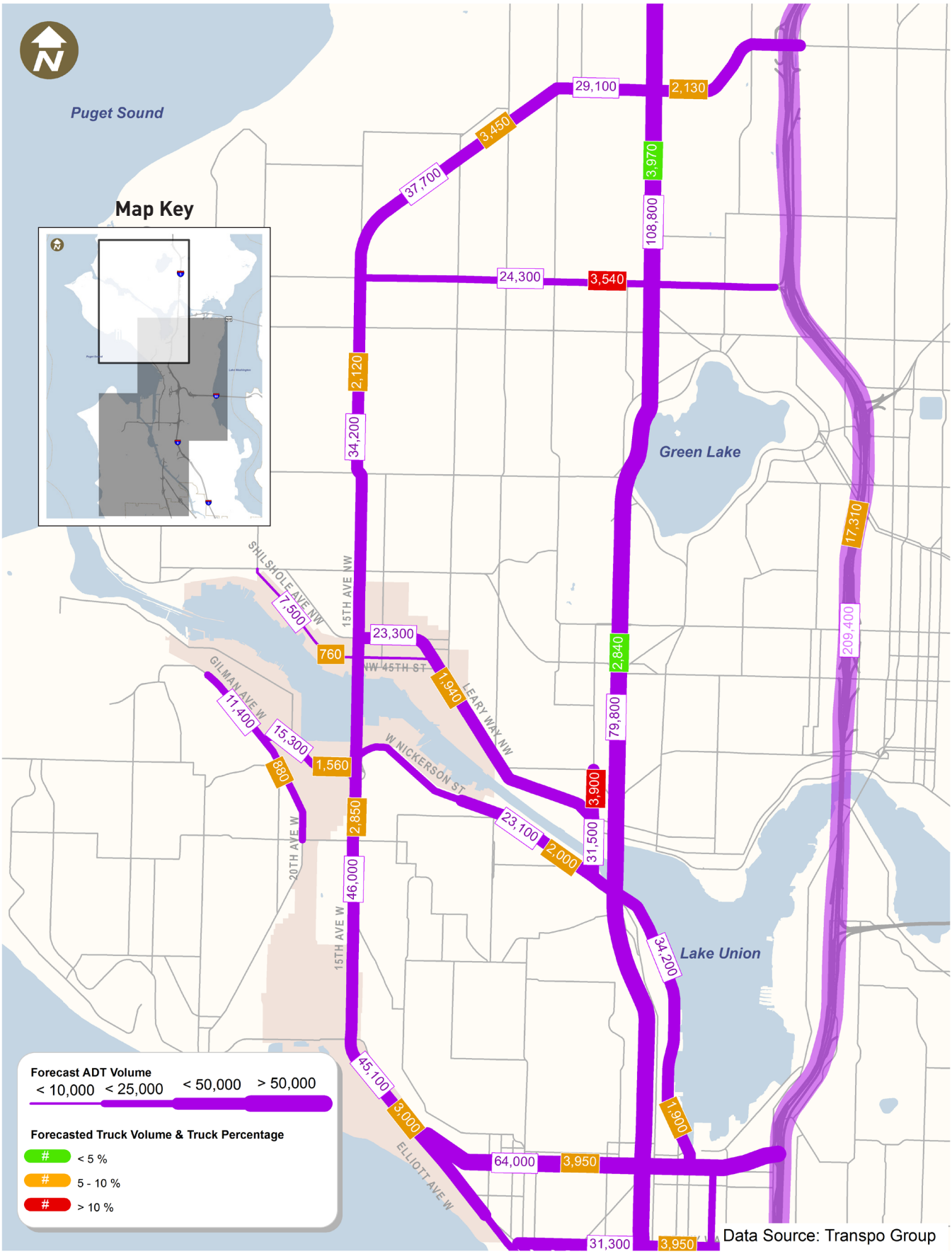


Figure 4.4 2035 Forecast Daily Volumes – North

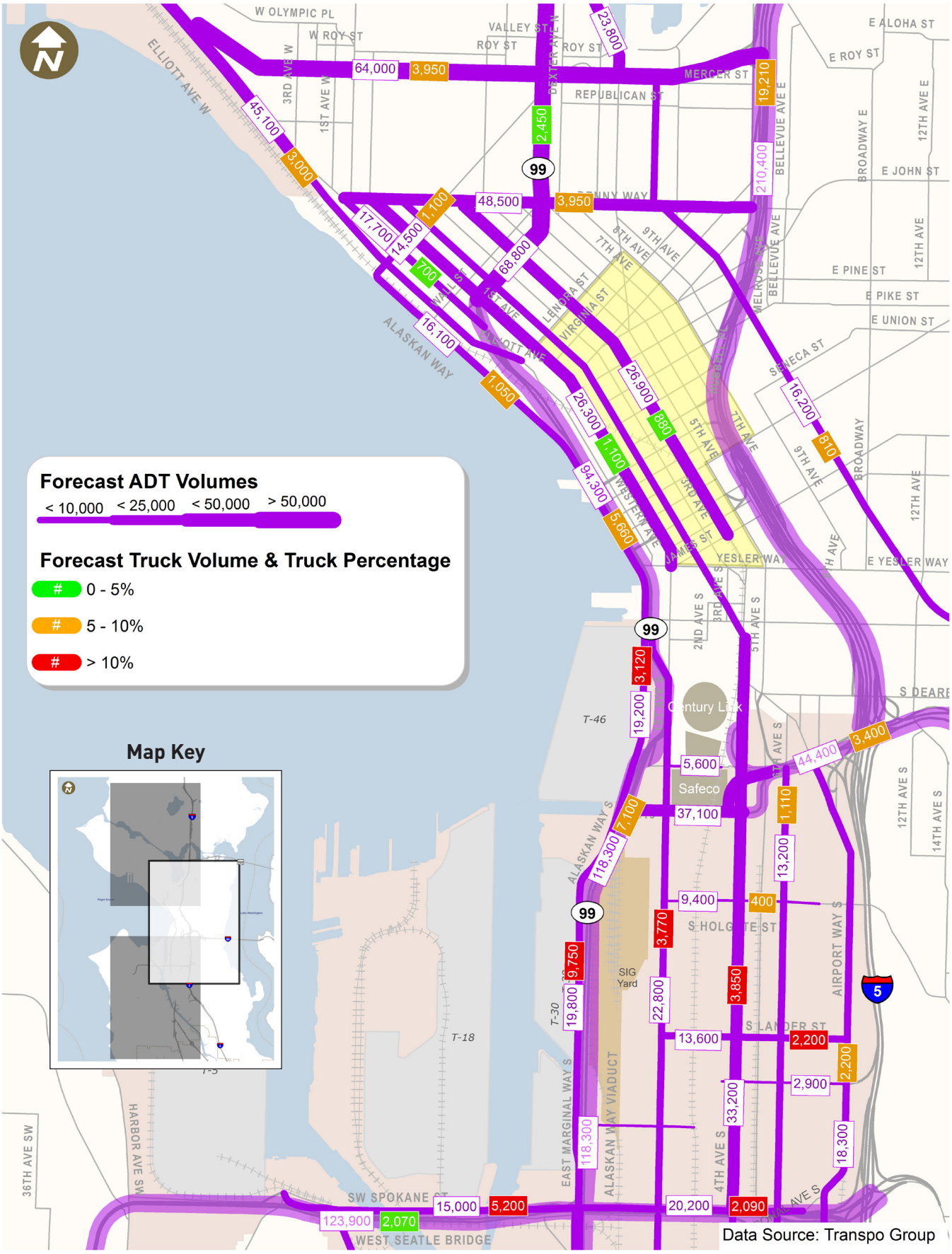


Figure 4.5 2035 Forecast Daily Volumes – Central

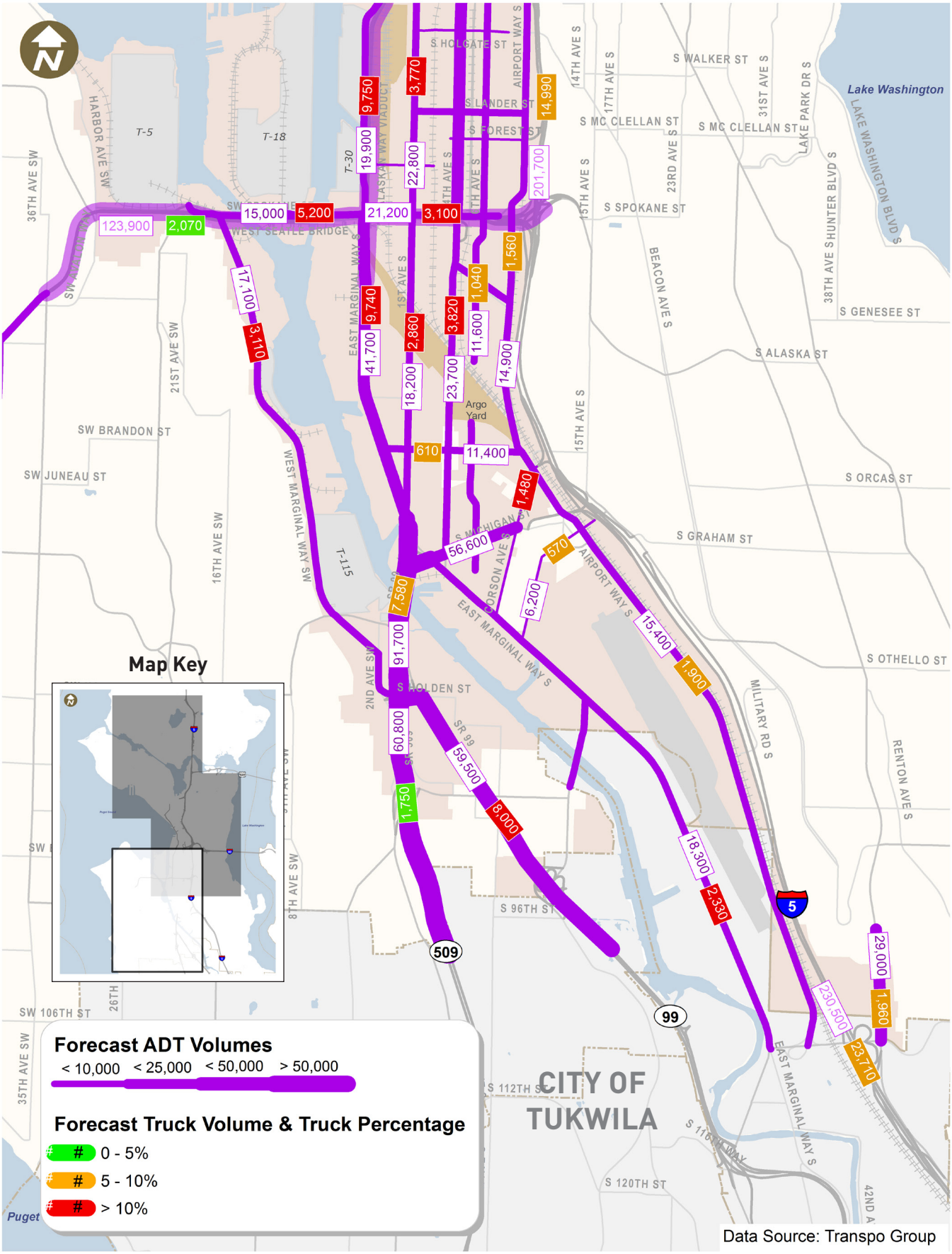


Figure 4.6 2035 Forecast Daily Volumes – South

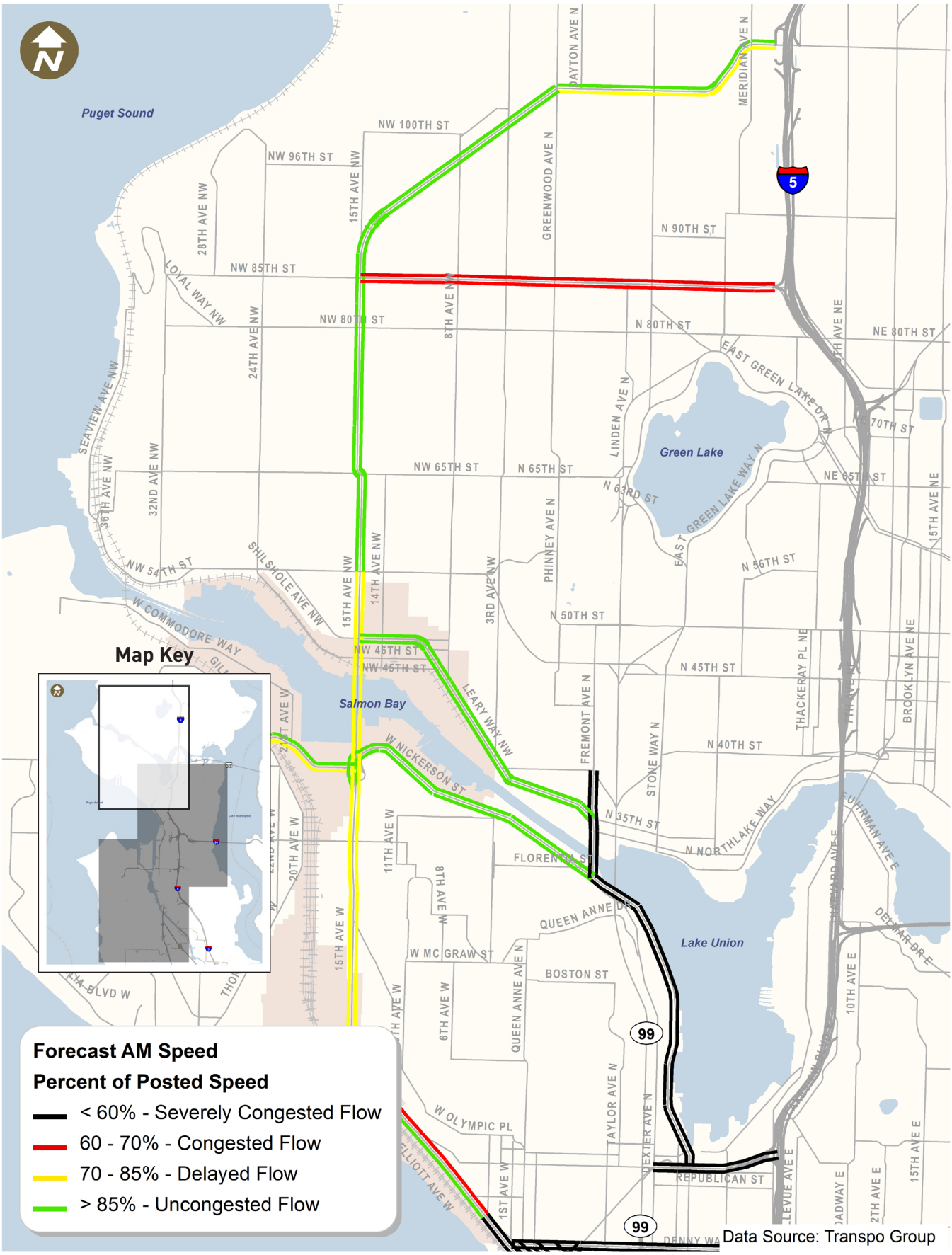


Figure 4.7 2035 Forecast AM Congestion Levels – North

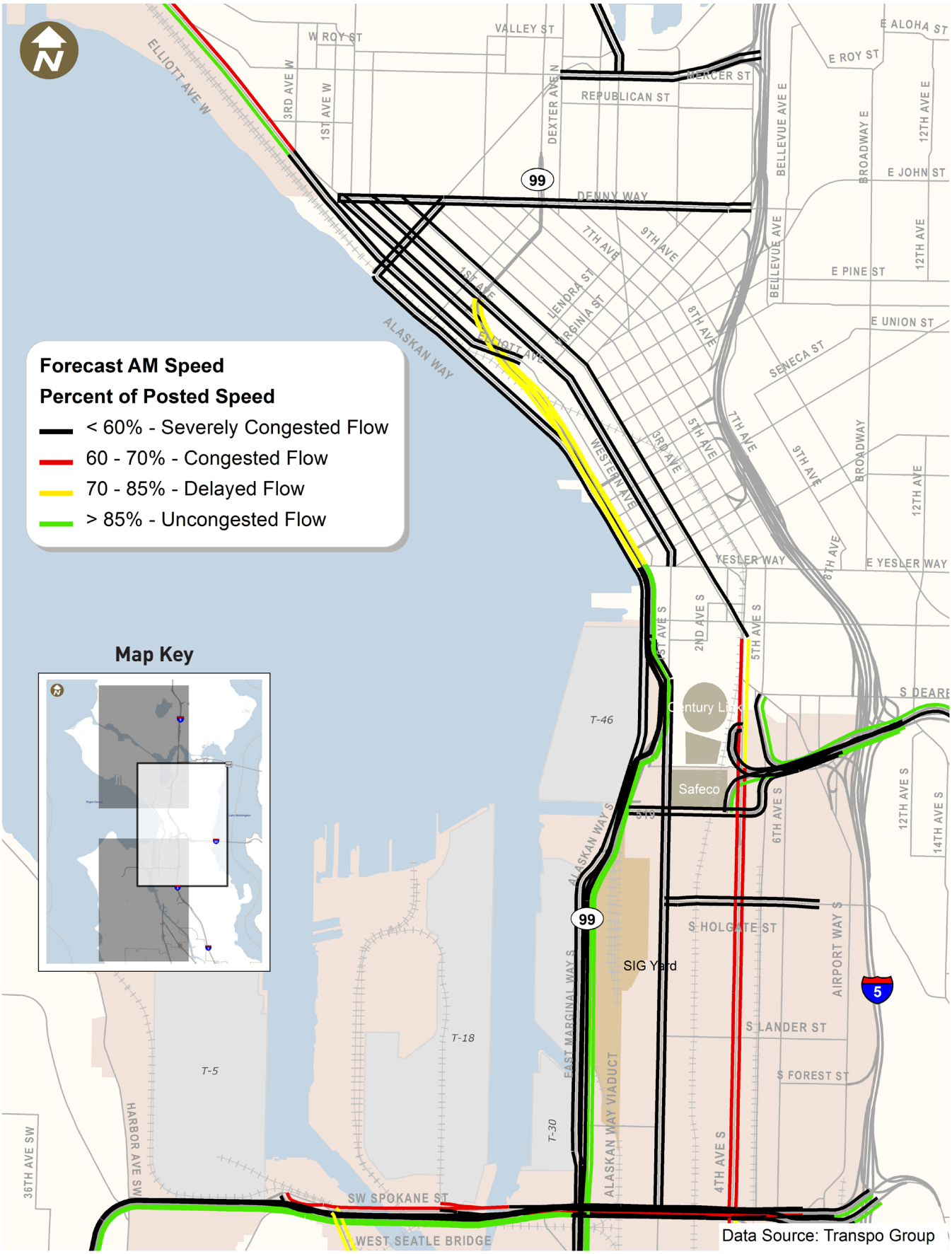


Figure 4.8 2035 Forecast AM Congestion Levels – Central

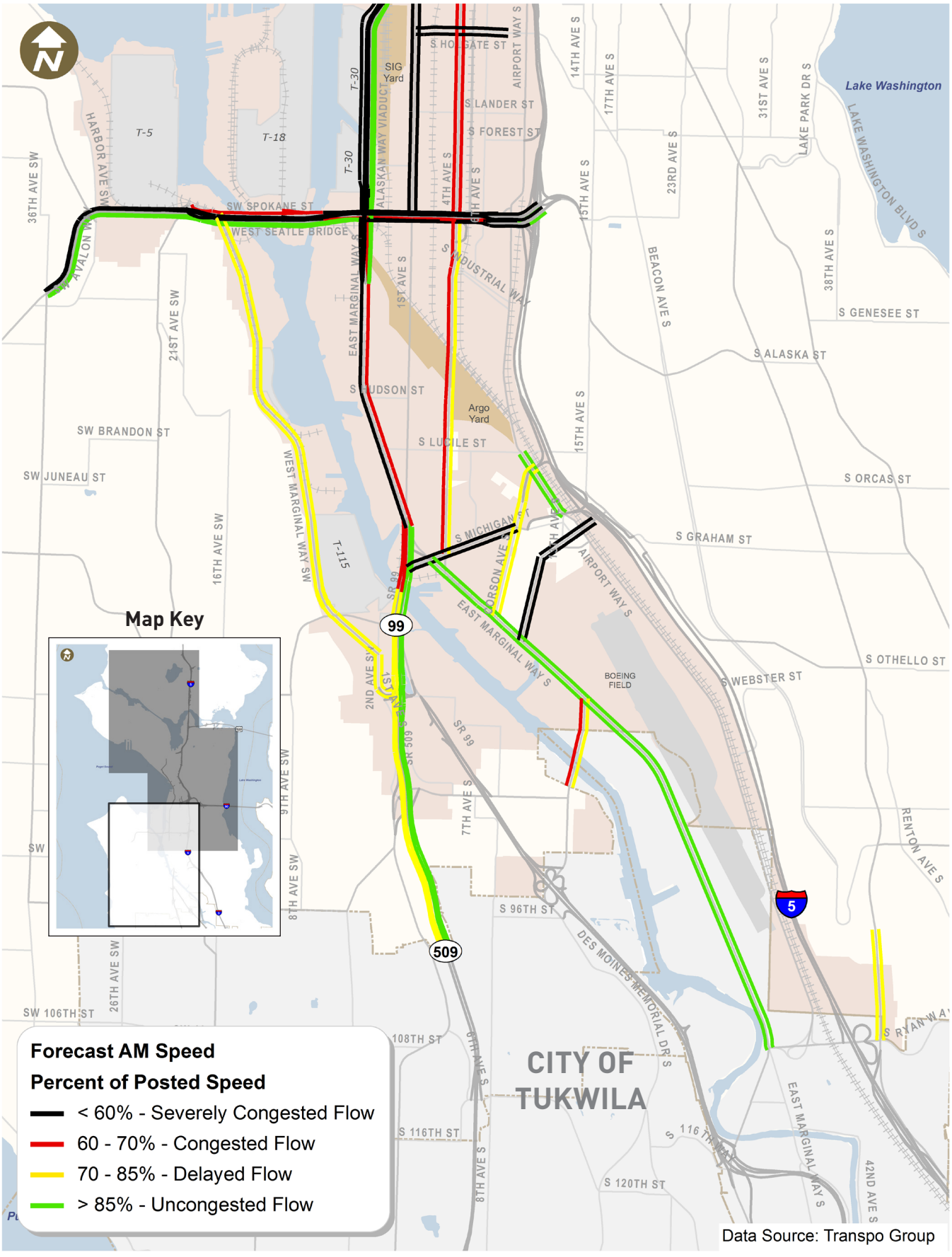


Figure 4.9 2035 Forecast AM Congestion Levels – South

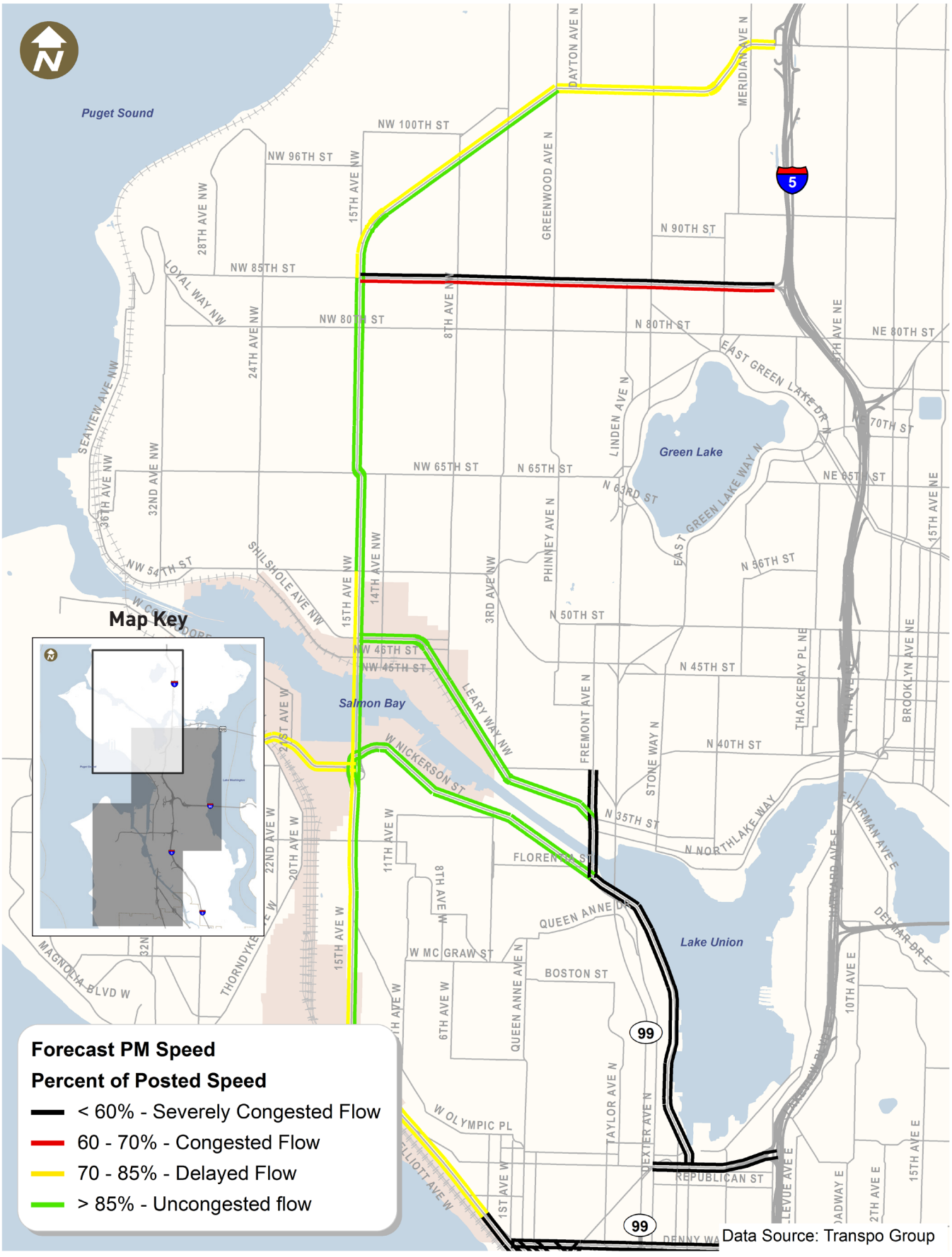


Figure 4.10 PM 2035 Forecast Congestion Levels – North

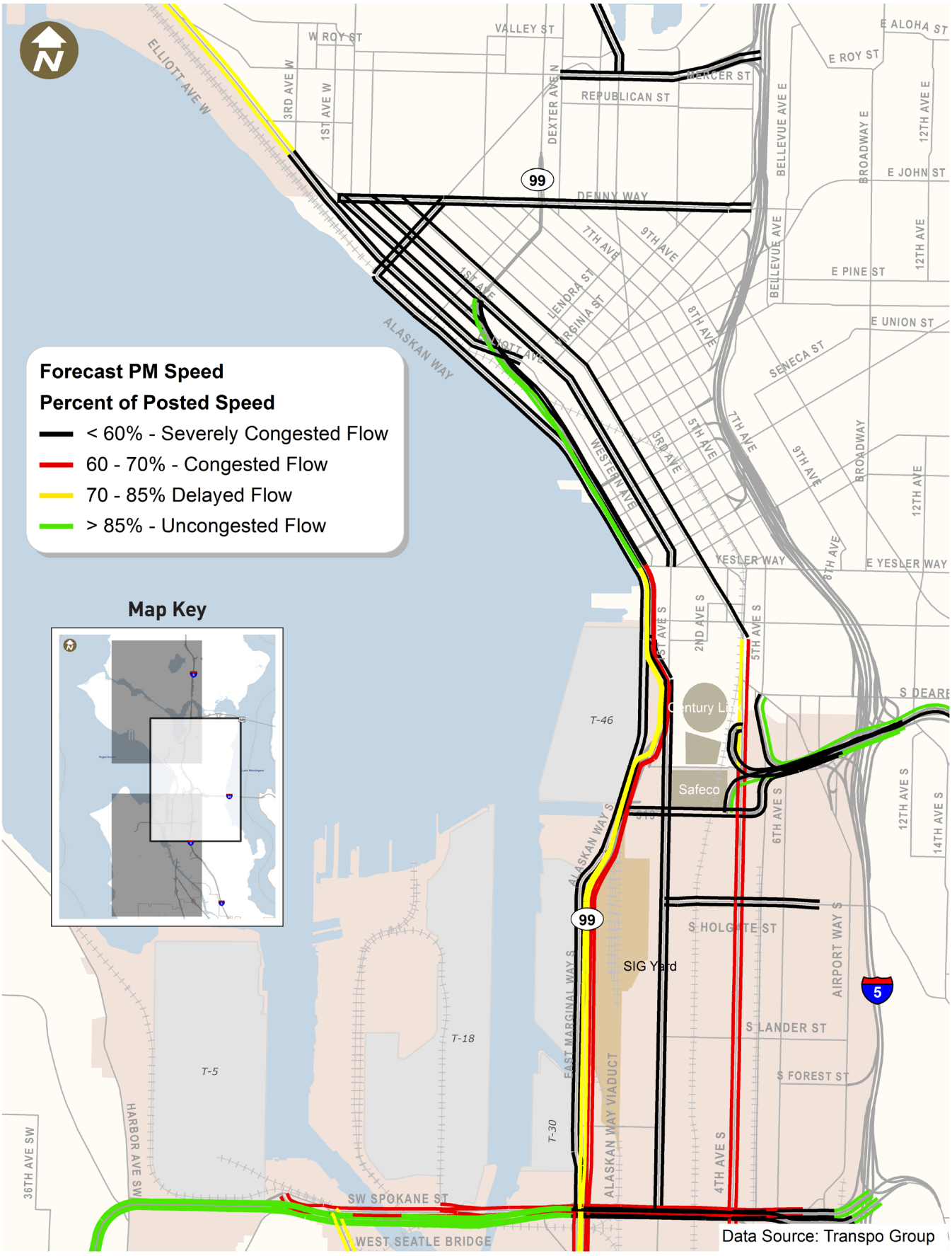


Figure 4.11 2035 Forecast PM Congestion Levels – Central

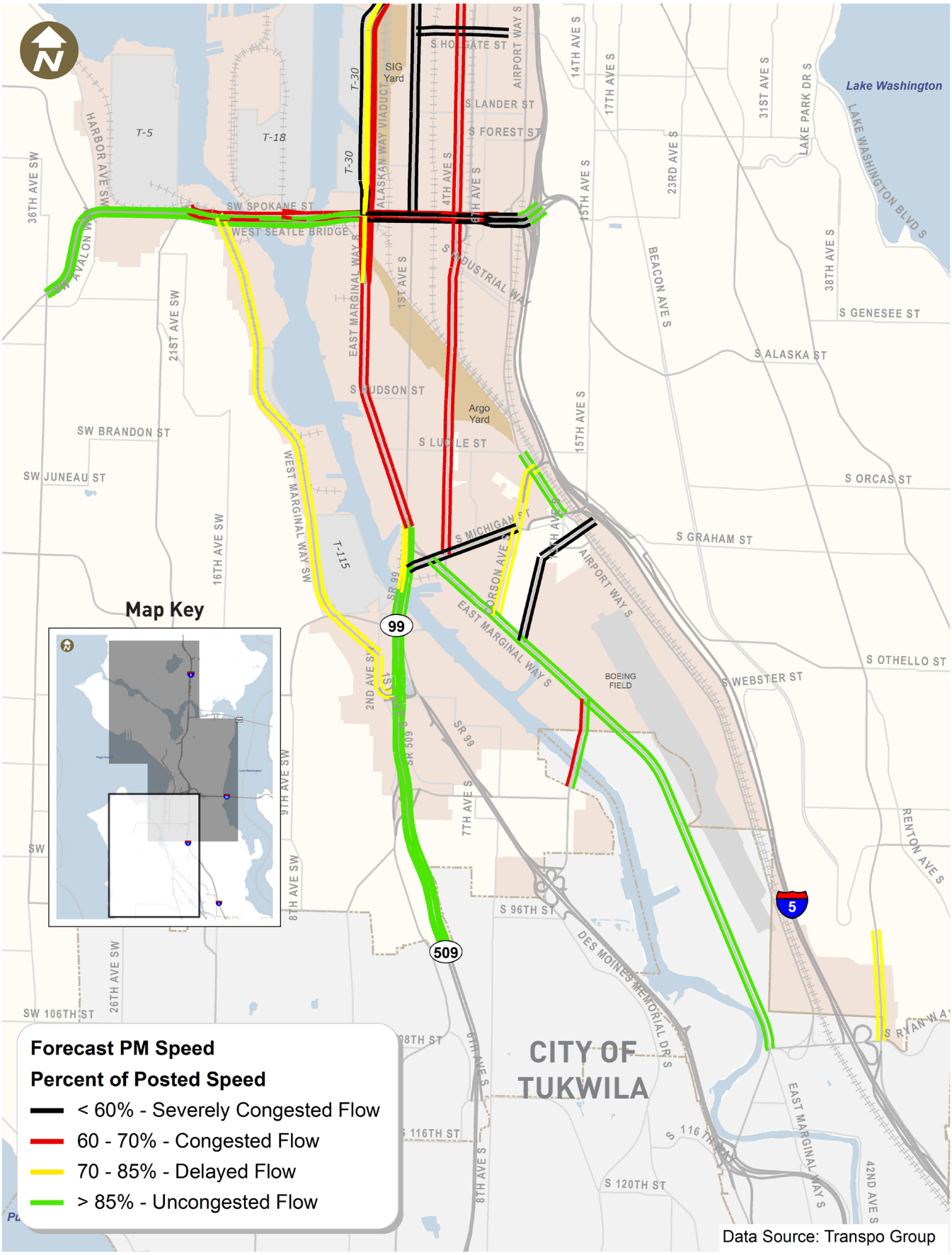


Figure 4.12 2035 Forecast PM Congestion Levels – South

As noted in the previous figures, within the Greater Duwamish MIC, many of the arterial corridors have truck volumes that are expected to grow at faster rates than passenger vehicles, particularly on north-south corridors including E Marginal Way S, 1st Avenue S, and 4th Avenue S.

Westlake Avenue is expected to experience heavy congestion in both directions as shown in Figure 4.7. Mercer Street in the immediate vicinity of the ramps to I-5 is also expected to see higher congestion levels under forecast conditions.

As compared to the existing AM congestion levels, there are locations with reduced travel speeds on several central roadways connecting the two MICs in downtown, as shown in Figure 4.8.

There are also significant increases to forecast AM congestion levels on E Marginal Way and S Michigan Street as shown in Figure 4.9.

Forecast PM congestion levels are high in some of the same locations as shown in the previous maps depicting forecast AM congestion levels. Westlake Avenue and Mercer Street are examples of where drivers will experience heavy congestion in both directions in the future, as shown in Figure 4.10. PM congestion levels are also expected to be higher on 85th Street in the future as also shown in the figure.

As compared to existing PM congestion levels, there are locations with reduced travel speeds on several central roadways connecting the two MICs in downtown as shown in Figure 4.11.

East-west corridors in the Greater Duwamish MIC are expected to experience higher congestion levels as traffic on these corridors increases. S Holgate, S Spokane, and S Michigan Streets are anticipated to have severely congested flow as shown in Figure 4.12.

4.5.2 Other Impacts to Future Truck Mobility

In addition to general trends in congestion, future constraints for trucks including future "bottlenecks" or hot-spots for freight traffic were identified based on current bottlenecks and future intersection operations. Future mobility constraints were identified using data from the Seattle Arena EIS, which studied future intersection LOS in the vicinity of the Greater Duwamish MIC. (Detailed intersection LOS for the BINMIC was not available.) Intersection operations that are anticipated to degrade to LOS E or LOS F are considered a freight mobility constraint because that impacts the number of heavy vehicles that are able to travel through an intersection. Congested signals can create bottlenecks or safety at intersections and along corridors for all roadway users, including freight.

The mobility constraints identified were added to the existing mobility constraint maps presented in Chapter 3 (figures 3.14 to 3.16 and Table 3.4). The central section was the only map with future changes and is shown in Figure 4.13. It shows increased congestion at intersections that provide access to the freeway system and local warehousing and distribution facilities in the Greater Duwamish MIC on or north of S Spokane St.—system components critical to the movement of Port cargo.

The locations with mobility constraints in the future are added to existing mobility constraints listed in Table 3.4. In the future the added mobility constraints were due to worsening intersection operations and were confined to the central section of the study area. The intersections with additional mobility constraint are shown in Table 4.2.

Table 4.2 Future Mobility Constraints

Mobility Constraint	Location
Intersection Operations	4th Avenue / Madison Street
	1st Avenue S / Yesler Way
	1st Avenue S / S Main Street
	1st Avenue S / S Jackson Street
	2nd Avenue S / S Jackson Street
	2nd Avenue S Ext / S Jackson Street
	4th Avenue S / Airport Way S
	5th Avenue S / Airport Way / S Dearborn Street
	Royal Brougham Way / Occidental Avenue S
	4th Avenue S / S Royal Brougham Way
	1st Avenue S / S Atlantic Street
	Holgate Street / Occidental Avenue S
	Lander Street / Occidental Avenue S
	Hanford Street / E Marginal Way

4.5.3 Modal Overlays

In response to population and employment growth, Seattle has in recent years begun to reallocate limited space within existing rights-of-way, allocating more space to transit and non-motorized modes in a number of corridors important to the movement of freight. Competition for scarce transportation resources for all modes, including freight, transit, bicycles, and pedestrians has been and will continue to grow. Major expansion, specifically arterial roadway widening, is not planned and unlikely due other modal needs and overall City policy which limits purely vehicle capacity improvements.

The traffic modeling forecasts above show that congestion is likely to increase for all travelers—including freight—throughout the transportation system, and in particular on major truck streets and arterials critical to the movement of freight in Seattle. The results of this project highlight

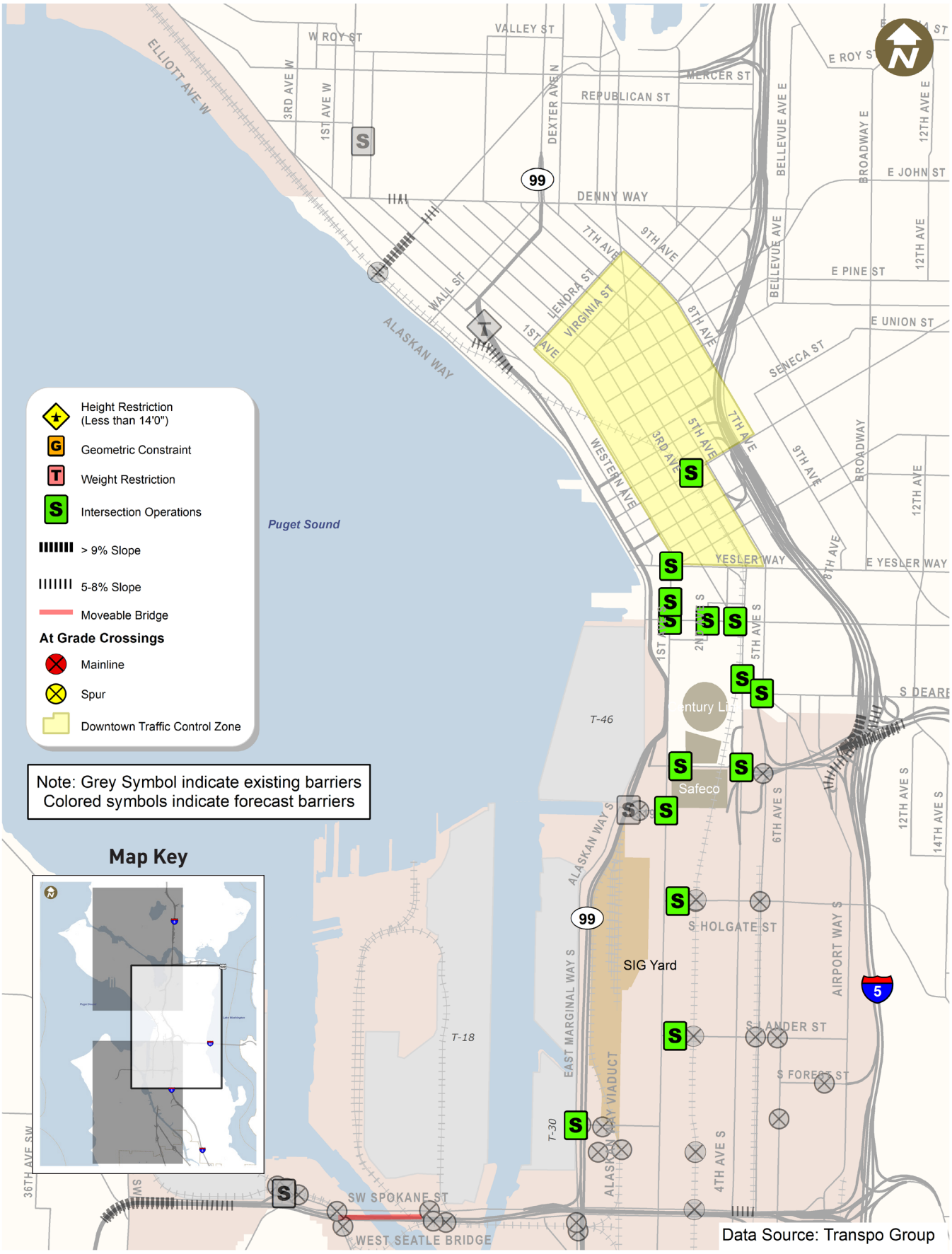
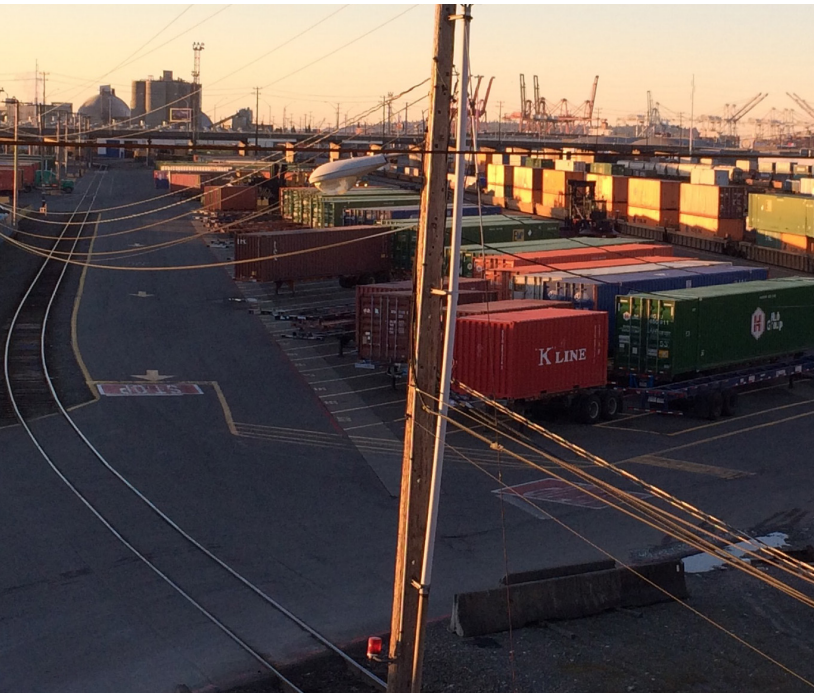


Figure 4.13 Forecast Mobility Constraints

the need for the City to develop an approach that leads to a multi-modal transportation system that balances the needs of all modes, people, and businesses including freight.

This project highlights both existing and future challenges on routes connecting to, between and within the MICs, and shows that there is a need to balance competing demands. The City's Freight Master Plan will take up evaluation of the overlay between modes and continue work towards an approach for developing a multimodal transportation system that addresses freight mobility needs throughout the City of Seattle, especially on Major Truck Streets.



4.6 Rail

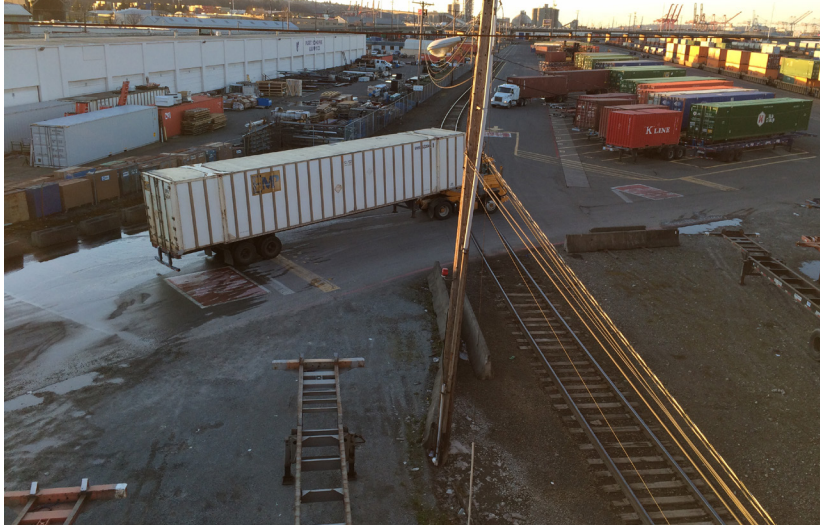
National trends indicate growth in both freight and passenger service in the study area. While the north-south BNSF Mainline currently operates below capacity, there are congested areas and choke points that will worsen in the future as passenger and freight rail demands increase. Freight trains are also periodically held up by scheduling conflicts with passenger service, such as the Amtrak Cascades and Sounder commuter service that share railways. Forecast rail volumes and operations will be influenced by the following factors:

- Continued growth in freight intensive industries
- Continued growth in export/import trade
- Shifts in fuel prices and oil trade
- Continued growth in regional consumption

By 2035 freight trains are expected to increase to 104 trains daily along the I-5 corridor, a 94% increase over 2010 volumes[14]. This includes volumes for BNSF trains on the mainline that are expected to grow to 77 trains daily, and volumes for UP trains that are expected to grow to 27 trains daily. Despite these increases in freight train volumes, capacity is expected to stay the same.

In addition to freight, these rail lines also carry substantial passenger volumes. Passenger Rail for Amtrak Cascades, Coast Starlight, and Empire Builder all serve Seattle's King Street station and use the BNSF tracks, as does the Sounder Commuter Rail, operated by Sound

14 Washington State Rail Plan. Washington State Department of Transportation. March 2014.



Transit. Ridership on the Amtrak Cascades with passenger rail service between Vancouver, CN and Eugene, Oregon is expected to increase from 836,000 passengers currently to over 1.2 million in the year 2035. The Coast Starlight with service from Seattle to Los Angeles currently has an annual ridership over 400,000 and is projected to increase to 1.2 million by 2035. The Empire Builder connecting Seattle to Chicago has a current ridership just under 500,000 and is projected to increase to 2.3 million by the year 2035. The Sounder commuter rail, operated by Sound Transit currently carries a combined 2.8 million passengers on both the north and south routes (between Everett and Tacoma). By 2035 the combined ridership is anticipated to be 5.8 million.

Given these projections, BNSF's I-5 corridor route through Seattle (including the RH Thompson tunnel) can be expected to have sufficient capacity to handle traffic for some time, though other locations along the Seattle-Portland route are projected to be near 100 percent utilization by 2035. WSDOT and Sound Transit have undertaken a variety of capacity and other improvements along the route to better accommodate passenger service, which is often also beneficial for freight capacity as well.

The forecasts utilized in this analysis are based on general macroeconomic trends in the region, and thus does not take specific potential developments into account. Trends that will affect future freight volumes in the region include potential new bulk exports – including potential coal and crude oil traffic that was anticipated by the forecasters, volatility in global sourcing, competition with other North American ports, adoption of larger container ships and expanded capacity of the Panama Canal, and shifting modal economics between rail and truck. All of these factors can impact rail volumes in unexpected ways.

Increased rail traffic will also increase closures of arterial streets at-grade rail crossings. Within the Greater Duwamish MIC, there are many at-grade rail crossings that are heavily used by trucks. Increased rail traffic at BNSF mainline crossings (at S Holgate Street, S Lander Street, S Horton Street, and S Spokane Street) will directly impact trucks that use east-west arterials.