Chapter 5
Future Conditions

Overview

This chapter of the Regional Transportation Plan (RTP) takes a broad look at the impacts the region's forecasted growth will have on our transportation network. The RTP uses regional travel demand models to quantify the past, current, and future travel choices of Thurston County households. This chapter also examines data on commute choices and organizes information by the mode of choice: active transportation, transit, and vehicle. Thurston Regional Planning Council (TRPC) and local jurisdictions analyze these data to identify potential problem areas for further study or assessment.

The 2050 conditions described in this chapter give us a glimpse into the future of travel within Thurston County. The analysis indicates that:

- Growing population will lead to increased traffic volumes and changing transportation needs. The 79 RTP projects, which are part of this Plan's recommendations, will help mitigate vehicle congestion associated with this growth.
- Our region's planned land use and roadway capacity improvements alone will not be sufficient to meet regionally adopted targets, goals, or level of service standards:

  - The region is engaged in planning for a safe system, but we are not on track to see zero deaths and serious injuries on the region's roads by 2030.
  - Jurisdictions are planning for future housing in areas supportive of transit, but we will fall short of meeting Sustainable Thurston land use targets.
  - The region is reducing its per capita VMT and greenhouse gas emissions and we're on track to meet our mid-term targets eventually. However, the 2050 targets for both are still out of reach. Reductions in VMT and transportation-related emissions — which make up the second-largest source of emissions in the Thurston region — are critical to meeting both targets.
  - We are not on track to see the region increase the share of trips made by bicycling and walking.
  - We are not on track to see the region increase the share of trips made by transit.
  - We expect congestion to exceed accepted level of service for several locations on the regional road network by 2050.
- We can still make good progress on our regionally adopted targets and goals, which will help reduce level of service failures expected in the future.

Background

Modeling the Transportation System

TRPC maintains three travel demand models that estimate current and projected travel patterns on Thurston County's roadways:

- **Current Conditions.** The current conditions model reflects 2022 conditions in terms of existing transportation facilities, travel patterns, and land use.
- **2050 Funded Projects.** The 2050 funded projects model reflects 2050 conditions in terms of projected transportation facilities, travel patterns, and land use. Assumptions built into the 2050 funded projects model include:
  - 22 transportation projects that have already received funding at some level will be constructed by 2050.
  - Intercity Transit and ruralTRANSIT will continue to offer fare-free transit service.

Forecasting the Future

TRPC's models are only as accurate as the assumptions that underlie them. They give us important information about our general direction given what we know today. We recognize many other factors may impact exactly where we end up.

The analysis in this chapter also raises questions that TRPC and the region's transportation partners are studying:

- What steps do we need to take to reduce serious and fatal incidents throughout our transportation system? Regional and local safety action plans will identify specific strategies.
- How can we better evaluate and improve the effectiveness of our transportation system for people using all modes? Planned projects looking into regional multimodal level of service options and bicycle connectivity will help provide answers to this question.
- What actions can we take as a region to ensure we have convenient and sustainable transit options both within local communities and connecting to other areas? The High-Capacity Transportation project is continuing to explore this question.
- What strategies can we identify to address the unique needs and impacts of truck freight movement within our transportation system? A freight mobility strategy will identify actions to support the region's increasing demand for goods and services in a safe and reliable manner.

The assumptions in TRPC's models are available on TRPC's webpages for Population and Employment Forecasting and Travel Demand Modeling.

    - Intercity Transit will fully implement their long-range service plan.
    - The share of workers teleworking will remain the same as in 2022.
- **2050 All RTP Projects.** The 2050 all RTP projects model reflects 2050 conditions in terms of projected transportation facilities, travel patterns, and land use. Assumptions include:
    - All 79 projects listed in Chapter 2, Recommendations, will be constructed by 2050.
    - Intercity Transit and ruralTRANSIT will continue to offer fare-free transit service.
    - Intercity Transit will fully implement their long-range service plan.
    - The share of workers teleworking will remain the same as in 2022.

Inputs to the models include:

- Data on household characteristics and employment across the model region, including:
    - Household size
    - Number of workers
    - Income
    - Number of students
    - Employment in six industry categories
- Land use data, such as parking costs
- Roadway configuration, including:
    - Number of lanes
    - Speed limit
    - Roadway capacity
    - Use restrictions
    - Intersection configuration

These inputs are used to generate:

- Estimated number of trips households make.
- Modes of travel households choose.
- Destinations to which households travel.
- The routes a household will take for each of their trips.
- Estimated traffic volumes on roadways.

The combination of all household trips provides traffic volumes for roadways, or the "travel demand." Modeled vehicle counts for 2022 are compared to observed counts to ensure accuracy. Model accuracy is also validated against data collected in the 2022 Household Travel Survey.

Table 5-1: Projected Population, Housing, and Employment Growth in Thurston County

	2022	2050	Change (2022–2050)	Percent Change (2022–2050)
Population	300,500	407,400	106,900	36%
Housing Units	124,500	182,700	58,200	47%
Single-family	81,300	117,400	36,100	44%
Multifamily	29,900	51,900	22,000	74%
Manufactured Home	13,300	13,400	100	1%
Employment	165,600	218,500	52,900	32%

Source: TRPC; Washington State Office of Financial Management

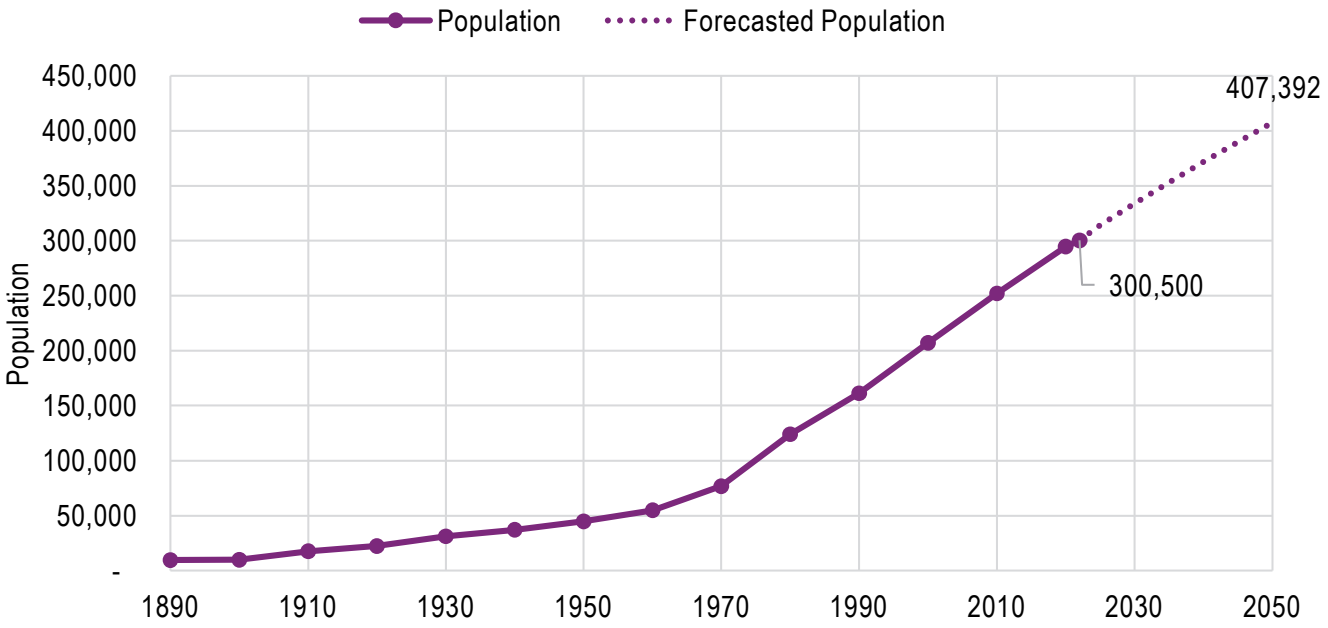
Population, Housing, & Employment Growth

Thurston County is projected to add more than 100,000 new residents; 50,000 new housing units; and 50,000 new jobs over the next 25 years, making it one of the fastest growing counties in Washington state (Table 5-1 and Figure 5-1). This growth will increase the number of trips and system users.

Where people live affects their travel choices. In Thurston County's urban areas, destinations tend to be closer to where people live, making walking and biking more viable options for trips to work, school, shopping, and other destinations. These areas also have access to more frequent transit service. Vehicle trips — while still common — tend to be shorter.

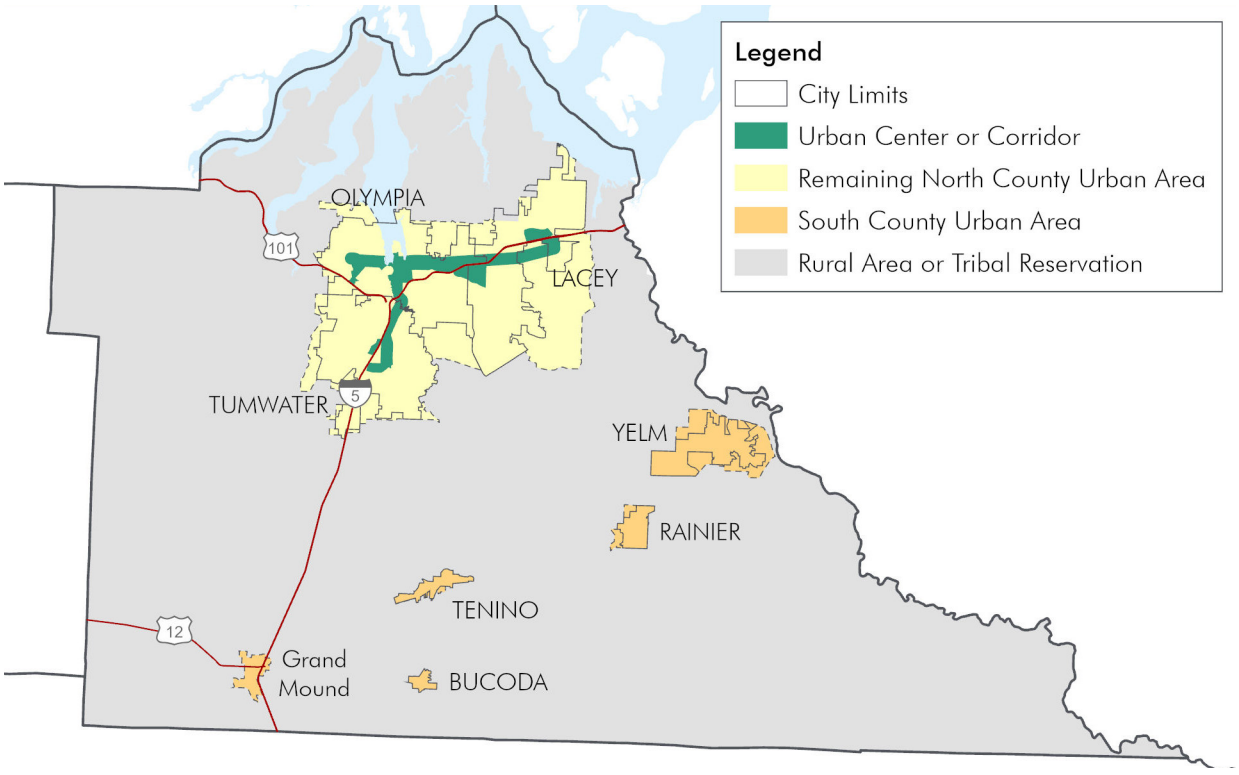
Of the 58,200 housing units anticipated to be constructed between 2022 and 2050, 38 percent (22,000) will be multifamily units. This is a substantial increase from today, and reflects the intensifying urbanization of the Thurston region. TRPC projects that most new housing — around 90 percent — will be built in cities or unincorporated growth areas, and that within urban areas, density is increasing and housing will be increasingly concentrated near centers and corridors (Figure 5-2).

Figure 5-1: Thurston County Population



Source: Washington State Office of Financial Management

Figure 5-2: Urban Centers and Corridors



Commuting & Working from Home

Traveling to work makes up a large portion of household trips. Since 1990, the number of commuters in Thurston County has grown. Due in large part to the COVID-19 pandemic (2020–2023), the region has seen the number of commuters drop in recent years while the number of people who work from home has grown substantially. Since 2014, Thurston County's commuting workforce[1] has dropped by more than 6,000 workers or about five percent (Table 5-2, Figure 5-3).

Table 5-2: Means of Transportation to Work, Thurston County Workers

	1990	2000	2009–2013 Average	2014–2018 Average	2019–2023 Average
Commuters	**72,736**	**97,099**	**111,590**	**121,080**	**114,663**
Drive alone	59,337	77,933	90,238	101,112	95,895
Carpool	9,116	12,808	13,057	12,629	11,339
Public transportation[2]	1,089	2,184	2,490	2,217	2,008
Active Transportation	2,539	3,521	4,291	3,571	3,678
Other means[3]	655	653	1,514	1,551	1,743
Home-Based Workers	**2,628**	**3,887**	**4,848**	**6,741**	**23,916**
Total Workers	**75,364**	**100,986**	**116,438**	**127,821**	**138,579**

Source: U.S. Census Bureau

Figure 5-3: Thurston County Commuting Workforce

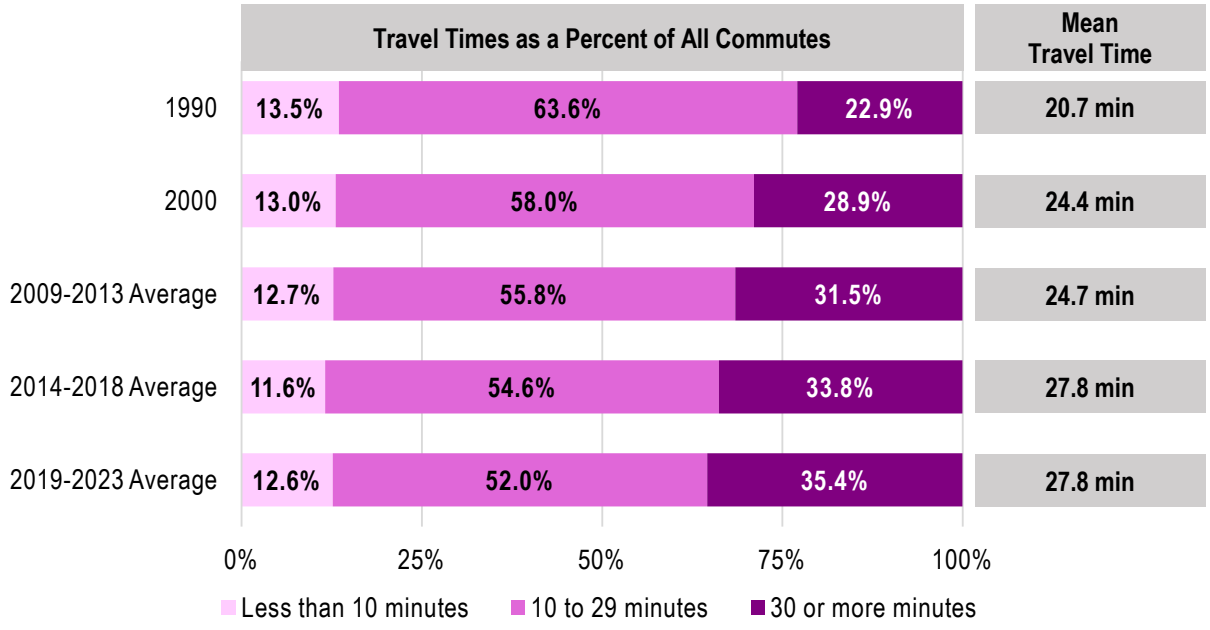
Source: U.S. Census Bureau

[1] Data on commuting trends comes from the U.S. Census Bureau's American Community Survey (ACS). The ACS asks respondents how they usually got to work last week. The commuting workforce is everyone except those who indicated they usually worked from home.
[2] Includes commutes by taxicab.
[3] Includes commutes by motorcycle.

Since 1990, average commute times for Thurston County commuters have increased, and more commuters are experiencing long commute times — 30 minutes or longer (Figure 5-4). At the same time, a higher percentage of workers are beginning their commutes before 5 a.m. (Table 5-3), suggesting commuters are adjusting the time they leave for work to avoid congestion.

The share of Thurston County workers who work from home[4] has increased nearly 14 percent since 1990 (Table 5-4). This has lessened the pressure on the transportation system, especially during peak commuting hours.

Figure 5-4: Travel Time to Work for Thurston County Commuters



Source: U.S. Census Bureau

[4] Data on work from home trends comes from the US Census Bureau's American Community Survey (ACS). The ACS asks respondents how they usually get to work. One of the options is "worked from home." The ACS doesn't ask how often someone worked from home, so it may not capture commuters who work from home for part of the week.

Table 5-3: Time Thurston County Commuters Leave for Work

Time Leaving Home to Go to Work	1990	2000	2009–2013 Average	2014–2018 Average	2019–2023 Average
12:00 a.m. to 4:59 a.m.	2.6%	3.9%	5.7%	6.4%	6.7%
5:00 a.m. to 7:59 a.m.	62.5%	60.7%	58.0%	58.5%	56.2%
8:00 a.m. to 9:59 a.m.	19.3%	19.0%	20.8%	19.4%	20.8%
10:00 a.m. to 11:59 a.m.	3.0%	4.0%	4.2%	3.7%	4.6%
12:00 p.m. to 11:59 p.m.	12.5%	12.4%	11.2%	12.1%	11.7%
Total Commuters	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: U.S. Census Bureau

Table 5-4: Working From Home, Thurston County Workers

	Count	Percent
1990	2,628	3.5%
2000	3,887	3.8%
2009–2013 Average	4,848	4.2%
2014–2018 Average	6,741	5.3%
2019–2023 Average	23,916	17.3%

Source: U.S. Census Bureau

Travel Trends

Vehicles

Household & Commute Trips

Vehicle travel makes up most trips in Thurston County. TRPC's travel demand model estimates that 82.6 percent of household trips are by car, either driving alone or sharing the ride (Table 5-5). Commute trips are also primarily by car: 69 percent of workers drive alone and another nine percent carpool (Tables 5-6 and 5-7).

According to TRPC's travel demand model, these trends are not projected to change substantially between now and 2050, and vehicle travel will continue to account for more than 82 percent of trips countywide.

Table 5-5: Household Trips Made by Vehicle

	2022	2050	Change
Countywide	82.6%	82.1%	-0.5%
Urban Centers and Corridors	77.8%	76.2%	-1.6%
Remaining North County Urban Areas	79.5%	79.4%	-0.1%
South County Urban Areas	80.6%	81.7%	1.1%
Rural Areas	93.2%	93.2%	0.0%

Source: TRPC Travel Demand Model (2050 land use with all RTP projects)

Table 5-6: Commute Trips Made by Driving Alone[5]

	Count	Percent
1990	59,337	78.7%
2000	77,933	77.2%
2009–2013 Average	90,238	77.5%
2014–2018 Average	101,112	79.1%
2019–2023 Average	95,895	69.2%

Source: U.S. Census Bureau

[5] Does not include trips made driving by motorcycle.

Table 5-7: Commute Trips Made by Carpool & Sharing the Ride[6]

	Count	Percent
1990	9,771	13.0%
2000	13,461	13.3%
2009–2013 Average	14,571	12.5%
2014–2018 Average	14,180	11.1%
2019–2023 Average	13,082	9.4%

Source: U.S. Census Bureau

Truck Traffic

In 2022, 62 percent of freight with destinations or origins in Washington state were moved by truck; by 2050, this is expected to increase to 66 percent. Trucks comprise a significant portion of vehicle travel in Thurston County. In 2023, Washington State Department of Transportation (WSDOT) traffic counters on the I-5 Nisqually River Bridge indicated that on average, over 15,000 vehicles — 12 percent of all vehicles — are buses or heavy-duty trucks (Figure 5-5). Since 2020, Thurston County has added more than six million square feet of distribution and warehousing facilities and more than 2,000 new jobs in transportation and warehousing, both contributing to truck traffic in the region. During that same time, truck traffic at the Nisqually River Bridge grew 19 percent.

Freight Mobility Strategy

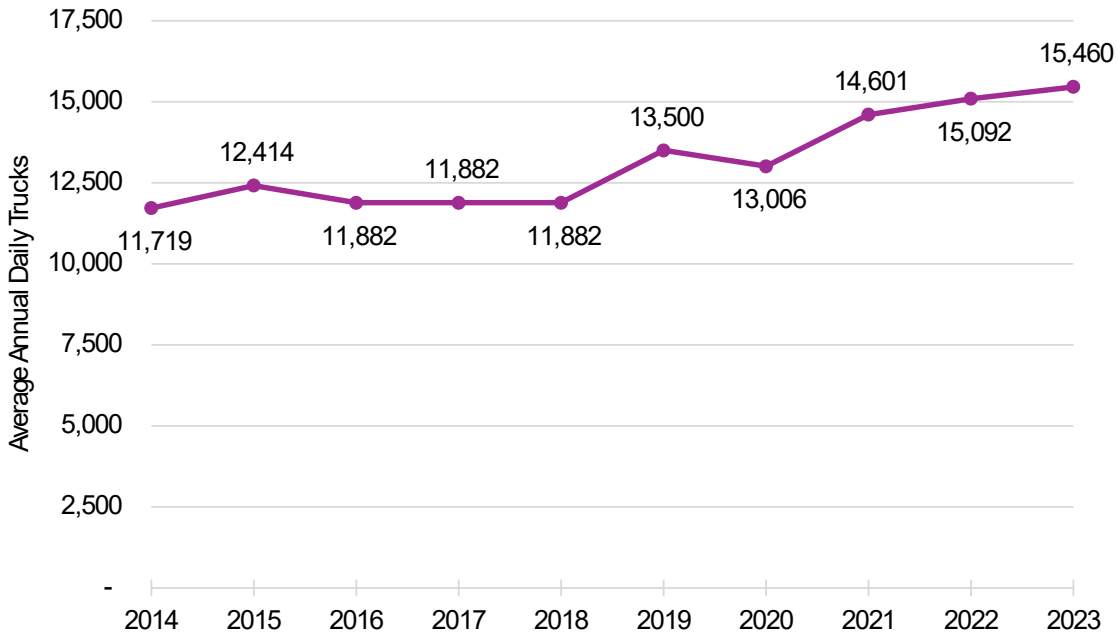
TRPC has begun developing a regional freight strategy to address the various freight challenges facing the region. Challenges include, but are not limited, to:

- Infrastructure bottlenecks
- Adoption of new technologies and best practices
- Supply chain issues
- Safety, security, and resilience
- Conflicts between truck travel and vulnerable users

The strategy is anticipated to be complete by 2028.

[6] Includes trips made by motorcycle.

Figure 5-5: Average Annual Daily Truck Traffic on I-5 at the Nisqually River Bridge



Source: WSDOT

Transportation Demand Management

One of the primary tools used to combat congestion without widening roads is transportation demand management (TDM). TDM is the application of strategies and policies to reduce travel demand or to redistribute this demand in space or in time. TDM primarily focuses on reducing the number of single-occupancy private vehicles using the transportation system — the Thurston region's largest contributor to travel demand. The region employs a broad range of TDM measures including adopting telework and flexible work schedules; promoting ride sharing; providing fare-free transit; building transit-, bicycle-, and pedestrian-friendly environments; and other TDM measures.

Utilizing TDM is an important tool to reduce vehicle miles traveled, reduce greenhouse gas emissions, and combat climate change. For a broader discussion of climate change and greenhouse gas emissions, see Chapter 7, Environmental Considerations.

Level of Service & Congestion

Level of service (LOS) is a qualitative measure used to determine how well a transportation facility operates from a driver's perspective. While there are multiple methods for estimating level of service, the RTP uses the volume-to-capacity (V/C) ratio as a planning-level method to determine the LOS. The higher the V/C ratio, the more congested the road is considered (Table 5-8). For more information on LOS and the V/C ratio, see Appendix I, Level of Service Standard and Measurement.

Table 5-8: RTP Vehicle Level of Service Descriptions

Level of Service	Description	Volume-to-Capacity Ratio
A	Highest driver comfort; free flowing	<.60
B	High degree of driver comfort; little delay	0.60 – 0.70
C	Acceptable level of driver comfort; some delay	0.70 – 0.80
D	Some driver frustration; moderate delay	0.80 – 0.90
E	High level of driver frustration; high levels of delay	0.90-1.00
F	Highest level of driver frustration; excessive delays	>1.00

The RTP calculates the V/C ratio analysis for the 4–6 p.m. peak, the time when the region's roads on average weekday conditions are the busiest and "most full" from people driving. This means roads are assessed for average conditions rather than worst-case conditions, such as during the holiday shopping season or when an accident shuts down a roadway for an extended period.

Maps 5-01 through 5-03A show the current and projected vehicle levels of service for the three travel demand models. Also shown on the maps are the adopted LOS standards that vary by area characteristics:

- LOS E or better in urban centers and corridors.
- LOS D or better in rural or other urban areas.

In strategy corridors, LOS may exceed adopted standards.

Why are some streets shown as having an acceptable LOS when I know there are traffic issues?

The reasons include:

- **The RTP models do not model intersection-level conditions.** If congestion is occurring at a traffic signal, it will not be highlighted on the maps or in the RTP analysis because it is not an output of the regional transportation model. The RTP models serve as a guide to local jurisdictions for long-range planning but are not intended to be a real-time operations tool. TRPC's Dynameq Model or intersection models are much better tools for this purpose.
- **The maps show LOS over a two-hour window.** Typically, the average V/C ratio over the two-hour peak travel period is less than the peak one-hour period. Many of the congestion issues our region currently faces do not last the entire two-hour peak period but are concentrated at times when large employment sites finish their workday.
- **The maps are based on a regional model.** The model is calibrated to actual traffic counts for the year 2022, and while the model is generally accurate across the region, it may be less reliable in some areas. That is why it is used for generalized planning purposes only.

TRPC's model shows that vehicle congestion is projected to increase between now and 2050, but the increase will be less if all the projects included in the RTP are completed compared to a future where only currently funded projects are completed. Currently, 2.0 percent of vehicle miles traveled during the afternoon peak are on roadways with LOS E or LOS F (Table 5-9). This is projected to increase to 5.2 percent in 2050 — or 6.3 percent if only funded projects are completed.

Table 5-9: Percent of Vehicle Miles Traveled by Level of Service, 4–6 p.m. on an average weekday (2-Hour PM Peak)

Level of Service	2022	2050 (Funded Projects)	2050 (All RTP Projects)
LOS A, B, or C	96.2%	84.6%	88.2%
LOS D	1.8%	9.0%	6.6%
LOS E	1.0%	3.6%	3.0%
LOS F	1.0%	2.7%	2.2%

Source: TRPC Travel Demand Model
Note: Only includes arterials, collectors, and state routes; other local roads are excluded.

Vehicle Miles Traveled

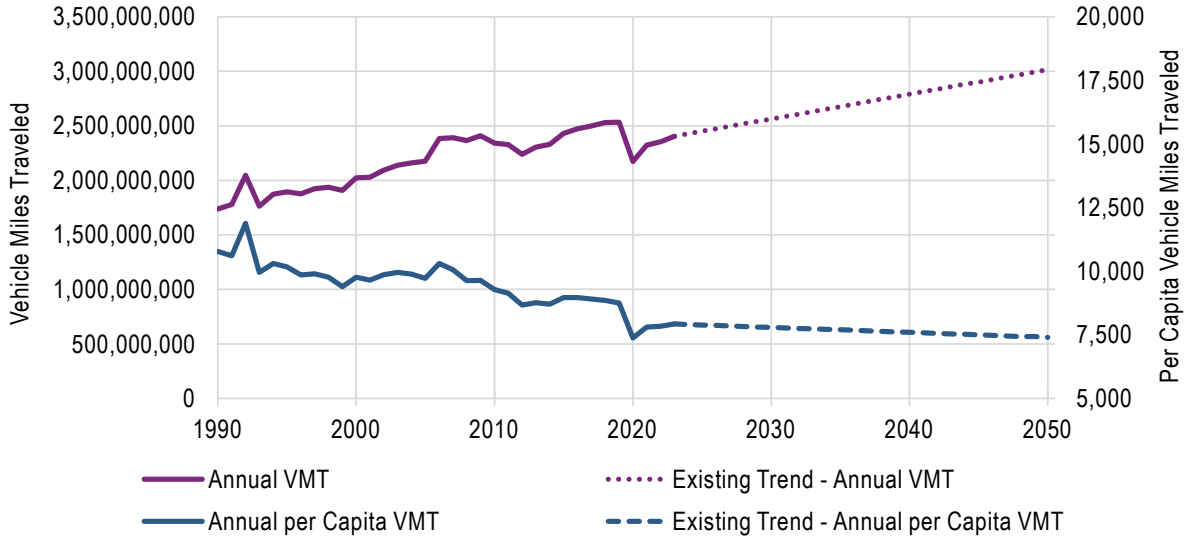
Roadways in Thurston County see over 2.4 billion miles of vehicle travel each year. Vehicle travel patterns have changed dramatically over the past several decades. While population has increased 86 percent since 1990, total vehicle miles traveled (VMT) on Thurston County roadways have only increased by 36 percent and per capita VMT has decreased by 27 percent (Table 5-10). This is partially attributable to growth management policies that have led to a greater share of the population living in urban areas — where trips tend to be shorter and access to transit is greater — and recent shifts towards telework. The COVID-19 pandemic also changed vehicle travel patterns. In 2020, VMT dropped sharply as workers began teleworking in significantly larger numbers. While both VMT and VMT per capita have rebounded since then, they remain below 2019 levels. TRPC's travel demand model indicates that VMT per capita will continue to decrease between now and 2050; however, the total annual VMT will increase (Figure 5-10).

Table 5-10: Annual Vehicle Miles Traveled, Thurston County

	1990	2022	2035	2050
Annual VMT (millions)	1,737	2,355	2,662	3,017
Change from 1990		+36%	+53%	+74%
Population	161,238	300,500	352,953	407,392
Change from 1990		+86%	+119%	+153%
Annual Per Capita VMT	10,775	7,837	7,549	7,404
Change from 1990		-27%	-30%	-31%

Sources: WSDOT Highway Performance Monitoring System, Office of Financial Management, TRPC Travel Demand Model (2050 land use with all RTP projects)

Figure 5-6: Vehicle Miles Traveled



Source: WSDOT Highway Performance Monitoring System

Active Transportation

Active transportation is human-powered mobility, such as biking or walking. Projects included as recommendations in this plan (see Chapter 2, Recommendations, and Appendix J, Regional Project List Detail) are estimated to add over 65 miles of new or rebuilt bicycle and pedestrian facilities and over 29 miles of new multiuse trails.

Household & Commute Trips

In 2022, TRPC's regional travel demand model estimated that countywide, 16.1 percent of household trips were completed by walking or biking (Table 5-11). This figure is higher for urban centers and corridors, other north county urban areas, and south county urban areas where the regional active transportation network is more complete (Figure 5-2). While the number of households and trips are expected to increase between 2022 and 2050, the mode share is not expected to change significantly.

Table 5-11: Household Trips Made by Active Transportation, Thurston County

	2022	2050	Change
Countywide	16.1%	16.5%	+0.4%
Urban Centers and Corridors	20.1%	21.4%	+1.3%
Remaining North County Urban Areas	19.0%	18.9%	-0.1%
South County Urban Areas	18.3%	17.2%	-1.1%
Rural Areas	6.4%	6.3%	0.0%

Source: TRPC Travel Demand Models
Note: 2050 mode share uses the travel demand model network with all RTP projects. Numbers may not add due to rounding.

Data from the U.S. Census Bureau's 2019–2023 American Community Survey (ACS) report that 3,678 people (2.7 percent) walked or biked as their usual commute mode (Table 5-12).

Table 5-12: Commute Trips Made by Active Transportation, Thurston County Workers

	Count	Percent
1990	2,539	3.4%
2000	3,521	3.5%
2009–2013 Average	4,291	3.7%
2014–2018 Average	3,571	2.8%
2019–2023 Average	3,678	2.7%

Source: U.S. Census Bureau
Note: The percent in this table represents the share of all workers, including those that work from home.

Regional Sidewalk Network

Countywide, TRPC estimates the region has over 850 miles of sidewalks, mostly within cities or urban areas (see Appendix B, Map B-6). About 300 miles of sidewalks are on collectors or arterials, helping pedestrians travel more safely along these higher-volume roads. In addition, over 90 neighborhood connections provide additional route options for pedestrians on paths closed to vehicles.

The Thurston region has not identified or adopted a level of service or targets for what a complete regional sidewalk network should look like, however there are significant gaps in the system. A 2021 inventory completed by TRPC identified nearly 90 miles of arterials or collectors in cities or urban areas with no sidewalks; 50 miles had sidewalks on only one side (Table 5-13). Even where sidewalks are present, maintenance or accessibility concerns may limit their use by people using mobility devices.

Related Projects

Regional projects that will expand the sidewalk network include:

- C5 Mottman Road Improvements (Olympia, Tumwater)
- C6 Wiggins Road Reconstruction (Olympia)
- C39 Brewery District Transportation Project (Tumwater)
- C17 Fones Road Improvements (Olympia)

See Appendix J, Regional Project List Detail, for more information.

Table 5-13: Completeness of the Regional Sidewalk Network on Urban Arterials and Collectors

	Miles	Percent
Sidewalks on Both Sides	123.7	46.9%
Sidewalks on One Side	51.0	19.3%
No Sidewalks	89.3	33.8%
Total Miles of Roadways	264.0	100.0%

Source: TRPC State of the System Report (2021)
Note: Includes arterials and collectors in Thurston County cities or unincorporated urban growth areas. Excludes highways, interstates, local roads, and rural roads.

Regional Bicycle Network

The regional bicycle network consists of bike lanes along major collectors, minor arterials, and major arterials as well as shared-use paths. Countywide, TRPC estimates that there are over 100 miles of streets with bike lanes and 58 miles of paved, shared-use trails (see Appendix B, Map B-5). Lacey and Olympia are incorporating bicycle corridors — low-traffic streets with signs and pavement markings to show they are good streets for cycling — into their transportation infrastructure. Other completed investments to improve the bicycle network include enhanced street markings at some intersections and 500 feet of protected bikes lanes adjacent to Intercity Transit's administrative offices at Martin Way and Pattison Street.

The Thurston region has not identified or adopted a level of service or targets for what a complete regional bicycle network should look like.

Related Projects

Regional projects that will expand the bicycle network include:

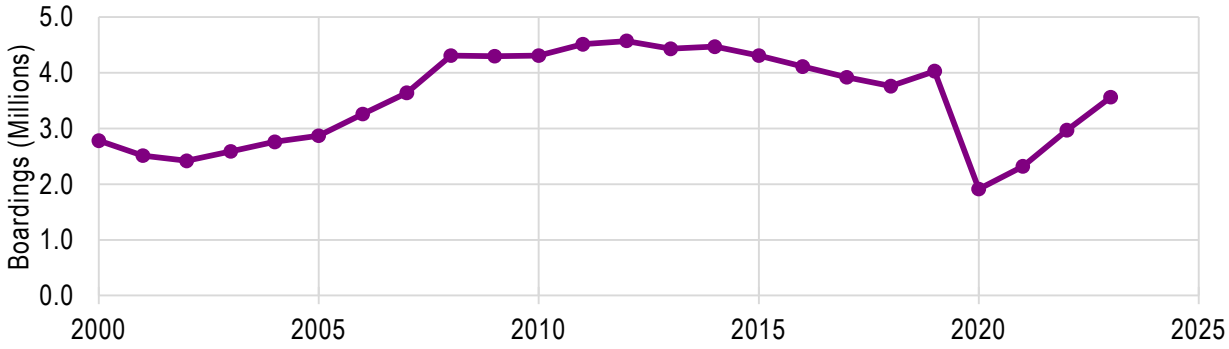
- B2 Yelm-Rainier-Tenino Trail Extension (Thurston County, Bucoda, Tenino)
- B6 Deschutes Valley Trail (Tumwater)
- B7 Gate-Belmore Trail (Thurston County)
- B8 Yelm Prairie Line Trail (Yelm)
- B9 Karen Fraser Woodland Trail Phases 3 and 4 (Olympia)

See Appendix J, Regional Project List Detail, for more information.

Transit

As transit ridership rebounds post-pandemic (Figure 5-7) and the region settles into a long-term remote and hybrid work reality, regional transit options are adapting to the new norms. Ridership trends have shifted away from commute times and demand is now more staggered throughout the day. Transit systems to the south, west, and within Thurston County remain zero-fare, while connecting systems to the north — Pierce Transit and Sound Transit — continue to collect fares.

Figure 5-7: Intercity Transit Fixed-Route Boardings



Source: Intercity Transit

Household & Commute Trips

TRPC's travel demand model estimates that countywide, only 1.3 percent of household trips were completed by using transit in 2022. This is only marginally higher for urban centers and corridors (Table 5-14), and little is expected to change between now and 2050. The same is true for commuters using transit: little has changed since the 1990s (Table 5-15).

Table 5-14: Household Trips Made by Transit, Thurston County

	2022	2050	Change
Countywide	1.3%	1.5%	0.2%
Urban Centers and Corridors	2.1%	2.4%	0.3%
Remaining North County Urban Areas	1.5%	1.6%	0.2%
South County Urban Areas	1.1%	1.1%	0.0%
Rural Areas	0.4%	0.5%	0.1%

Source: TRPC travel demand model

Table 5-15: Commute Trips Made by Transit[7], Thurston County Workers

	Count	Percent
1990	1,089	1.4%
2000	2,184	2.2%
2009–2013 Average	2,490	2.1%
2014–2018 Average	2,217	1.7%
2019–2023 Average	2,008	1.4%

Source: U.S. Census Bureau
Note: The percent in this table represents the share of all workers, including those that work from home.

Transit Providers

There are nine transit providers in the Thurston region offering local and regional bus and rail service (Map B-3, Appendix B):

- **Intercity Transit (IT)** operates 20 routes, 966 bus stops, and dial-a-lift service in Thurston County. IT also offers express service to Lakewood, providing transit connections to Pierce Transit and Sound Transit to the north. IT is the region's largest transit operator with more than 3.5 million boardings per year.
- **ruralTRANSIT** provides transit service to south Thurston County communities, including Bucoda, Rainier, Tenino, Yelm, Grand Mound, Rochester, and the Confederated Tribes of the Chehalis Reservation. Boardings are over 26,000 per year. The service connects these communities to destinations in Thurston, Lewis, and Grays Harbor counties. ruralTRANSIT is managed by TRPC in partnership with transportation vendors through a grant provided by WSDOT.
- **Lewis County Transit** provides service between Centralia in Lewis County, and Grand Mound, Tumwater, and Olympia in Thurston County.
- **Grays Harbor Transit** provides service to the Olympia Transit Center and Rochester/Grand Mound.

[7] Includes trips made by taxicab.

- **Mason Transit** provides service between Shelton and the Olympia Transit Center.
- **Greyhound and FlixBus** offer regional bus service to Seattle and Portland.
- **Amtrak Cascades** offers regional rail service from the Centennial Station in Lacey to Portland, Seattle, and Vancouver, Canada.
- **Nisqually Transit** operates a free call-request service available to Nisqually Indian Tribe members and community members along with employees within a driving area of the Tribal Administration.
- **Squaxin Island Transit** offers connections to Mason Transit and Grays Harbor Transit, including call-request service to Steamboat Island in Thurston County.

Intercity Transit. Intercity Transit, the primary transit provider in Thurston County, continues to implement Proposition 1 service expansions, including:

- Expanded span of service
- Improved frequency
- Service to new areas
- Better on-time performance
- Enhanced capital facilities
- Bus rapid transit
- Night owl service
- Enhanced commuter service

Notable enhancements from Proposition 1 are the continuation of zero fares, increased frequency on multiple routes, and new options leveraging state grants to serve Joint Base Lewis-McChord and Pierce County.

High-Capacity Transportation. In 2024, TRPC completed an analysis of travelsheds and employment centers between Thurston and Pierce counties to see what future high-capacity options could be attainable for the region. In the next 50 years, population and job densities are not expected to support recommended thresholds for light rail but could be close to the threshold for commuter rail.

TRPC has encouraged WSDOT to consider including HOV lanes and transit- and vanpool-only lanes as part of the planned Nisqually Bridge replacement. Sound Transit commuter rail has planned service to DuPont by 2045 and there are no current plans for a rail connection to Olympia for that service.

With expected growth in the Thurston region, new transit connections, better frequencies, and more travel options will be part of our region's future.

Figure 5-8: Operation and Construction Costs for Different Types of High-Capacity Transportation

CARPOOL/VANPOOL

The sharing of a car or van journey.

Cost per hour to operate: $50-$80

EXPRESS BUS

Bus-based transit system that is fast, comfortable, and cost-effective.

Cost per hour to operate: $175-$225

COMMUTER RAIL

Heavy passenger rail service that connects commuters to a central city from adjacent towns.

Cost per hour to operate: $900-$1,500

Cost per mile to construct: $30M-$50M

LIGHT RAIL

Passenger urban rail transit which operates at a higher capacity and speed, typically above ground.

Cost per hour to operate: $400-$600

Cost per mile to construct: $150M-$250M

Source: High Capacity Transportation Study

Transit Frequency and Reach

The Thurston region has not identified or adopted levels of service or targets for what sufficient transit service should look like, but we do know the system's current frequency and reach.

Transit frequency refers to how often public transit arrives at a given stop or station — in other words, how long until the next bus arrives at your location. While frequent service is desirable everywhere, it is more economical to provide it in urban centers and corridors where employment and residential densities make riding transit easier to choose and more economical to provide. In 2022, about 26.3 miles (17 percent) of Intercity Transit's total route network provided frequent transit service (a bus every 15 minutes).

Transit reach refers to the number of people transit can potentially serve — typically within a 20-minute walk (or a half mile) of a transit stop or route (Map 5-5). In 2022, two thirds of county residents lived within a half mile of an Intercity Transit stop or a ruralTRANSIT route. In 2050, this share is not expected to change (Table 5-16). In 2022, only 19 percent of county residents lived near an Intercity Transit stop with frequent service; this is expected to drop to 18 percent in 2050.

Table 5-16: Thurston County Population Served by Intercity Transit and ruralTRANSIT

	2022	2050	Change (2022–2050)
Total population	300,500	407,400	106,900
Population living within a ½ mile of an Intercity Transit stop or ruralTRANSIT route*	200,700	253,400	52,700
Population living within a ½ mile of an Intercity Transit stop with frequent service†	56,100	73,400	17,300

*Unlike Intercity Transit, ruralTRANSIT allows flag-down stops, meaning a person can flag down a ruralTRANSIT bus anywhere along the route, and the driver will stop for them whenever practicable.
†Frequent service means a bus every 15 minutes.

Other Modes

Air

Less than one percent of freight with destinations or origins in Washington state were moved by air, and this is not expected to change between now and 2050[8]. Olympia Regional Airport is a general aviation public airport offering aircraft service and maintenance operations, flight instruction, hangars and tie down space, and state and corporate aviation facilities. The airport does not offer commercial passenger service and is not expected to between now and 2050 based on the Federal Aviation Administration's forecast (Figure 5-9).

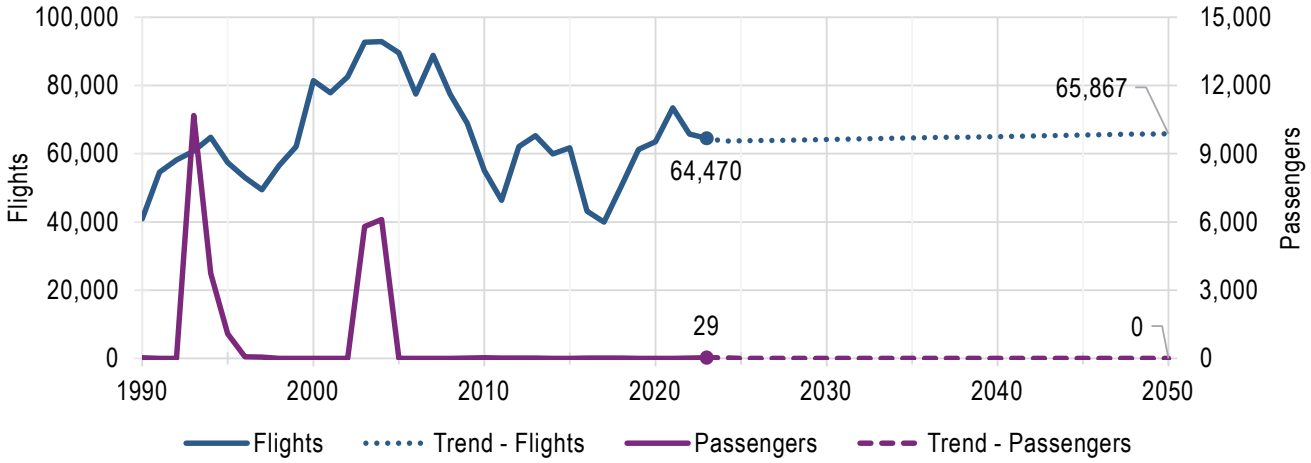
The Commercial Aviation Coordinating Commission (CACC) was formed in 2019 to develop recommendations to meet Washington state's critical aviation system capacity needs. As part of its work, the CACC identified Thurston County as one of two preferred locations for a new commercial airport — comparable in size to SeaTac International Airport — for the state. With broad public concern for both preferred locations the CACC identified, the legislature replaced the CACC with the Commercial Aviation Work Group (CAWG) in 2023. The CAWG is required to comprehensively evaluate the long-range commercial aviation and transportation needs of the state, but it is not tasked with selecting a location for a new airport.

Port of Olympia

The Port of Olympia is a special purpose municipal corporation serving all of Thurston County. The Port operates the Thurston region's airport and seaport and is an important intermodal transportation partner for the region.

[8] Freight Analysis Framework Version 5

Figure 5-9: Olympia Regional Airport Flights and Passengers



Source: Federal Aviation Administration Terminal Area Forecast

Sea

In 2022, 4.7 percent of freight with destinations or origins in Washington state were moved by water; by 2050, this is expected to drop to 3.6 percent[9]. The Port of Olympia's 66-acre marine terminal consists of a cargo yard, log export facility, on-dock rail, on-dock warehouse, and three deep water berths for ocean-going vessels.

The port does not offer ferry services. Dana Passage, which connects Budd Inlet to the greater Puget Sound, is narrow. A W-5 waterway freight economic corridor that sees between 0.9 and 2.5 million tons of freight per year passes through Dana Passage. From there, freight utilizing the seaport can connect to waterways north of the Thurston region. Ships travelling this corridor do so at slow speeds to prevent erosion of the adjacent shorelines. This, combined with likely ridership and market interest, have limited development of ferry service — including passenger-only ferries.

[9] Freight Analysis Framework Version 5

Rail

In 2022, 14 percent of freight with destinations or origins in Washington state were moved by rail, and this isn't expected to change between now and 2050. Four entities own and operate railroads in the Thurston region:

- Puget Sound and Pacific Railroad (PSAP) operates a short line[10] that interchanges with BNSF and Union Pacific. The railroad routes between Centralia, Aberdeen, and Bremerton, passing through Grand Mound and Rochester along the way. The railroad sees less than 100,000 tons of freight per year (an R-5 rail freight economic corridor).
- Rainier Railroad, LLC operates a short line that interchanges with BNSF and Union Pacific. The railroad routes between McKenna in Pierce County and Maytown south of Tumwater, passing through Yelm and Rainier along the way. The railroad sees less than 100,000 tons of freight per year (an R-5 rail freight economic corridor).
- Burlington Northern Santa Fe (BNSF) operates a mainline through the Thurston region. The railroad routes between Tacoma and Centralia, passing through Tenino and Bucoda along the way. The mainline sees more than five million tons of freight per year (an R-1 freight economic corridor). Amtrak Cascades runs on the BNSF mainline, transporting more than 42,000 passengers in 2022 from Centennial Station in Lacey.
  BNSF also owns the track running though Percival Canyon as well as track running from the BNSF mainline near McAllister Creek and industrial land at the north end of Long Lake. These spur lines each see less than 100,000 tons of freight per year (R-5 rail freight economic corridors).
- Union Pacific operates tracks that connects the Port of Olympia's seaport to the BNSF mainline where it has haulage and trackage rights. The railroad routes between the Port of Olympia's seaport and the BNSF mainline where Union Pacific has haulage rights. The railroad sees less than 100,000 tons of freight per year (an R-5 rail freight economic corridor).

Amtrak Cascades, which also serves Thurston County with regional rail service at Centennial Station in Lacey, has planned frequency and track upgrades in its recently completed Amtrak Cascades Service Development Plan. The plan shows that up to 16 daily future roundtrips between Seattle and Portland are viable based on forecasted travel demand.

[10] A short line is a small, independent railroad that connects to a larger railroad network.

Technology

Technology is critical to providing safe and reliable transportation in the Thurston region. In 2018, TRPC completed an update to the Intelligent Transportation Systems (ITS) architecture, an inventory of ITS systems operated by state and local partners. These include:

- Automated traffic signals
- Traffic signals that respond to emergency vehicles
- Freeway cameras to monitor traffic conditions
- Ramp metering systems

Emerging technologies will continue to change how people in Thurston County travel. These include the use of artificial intelligence in transportation, automated driving, and technologies to improve safety in transportation. In 2024, the U.S. Department of Transportation convened the Transforming Transportation Advisory Committee to provide recommendations on emerging technologies. The Committee's recommendations are available here.

Assessment Areas

TRPC considers the information compiled in this Plan to identify assessment areas — areas of concern that may warrant further study. A total of 16 assessment areas based on regionally adopted targets and goals or level of service failures have been identified:

1. Target Zero Safety Target
2. Sustainable Land Use Targets
3. VMT and Greenhouse Gas Emission Reduction Targets
4. Active Transportation & Transit Goals
5. SR 510 from Yelm Highway to the City of Yelm
6. SR 507 from Yelm's west city limits to the Pierce County line
7. Black Lake Boulevard from the U.S. 101 Interchange to Cooper Point Road
8. Rainier Road from Spurgeon Creek Road to Military Road
9. 5th Avenue and 4th Avenue Bridges; Olympic Way between Deschutes Parkway and 4th Avenue

10. Henderson Boulevard from Yelm Highway to 65th Avenue SE
11. Littlerock Road, Capitol Boulevard, Trosper Road, and Tumwater Boulevard Triangle
12. Lilly Road between Ensign Road and Providence Lane
13. Interstate 5 from Tumwater to the Nisqually River
14. Old Pacific Highway and Reservation Road
15. I-5/93rd Avenue Interchange
16. 16. Yelm Highway from Henderson Boulevard to Rich Road

Regionally Adopted Targets & Goals

Five assessment areas are based on regionally adopted targets and goals. TRPC uses regionally adopted targets and goals to identify whether we are on track to meet our shared vision for the Thurston region.

1. Target Zero Safety Targets

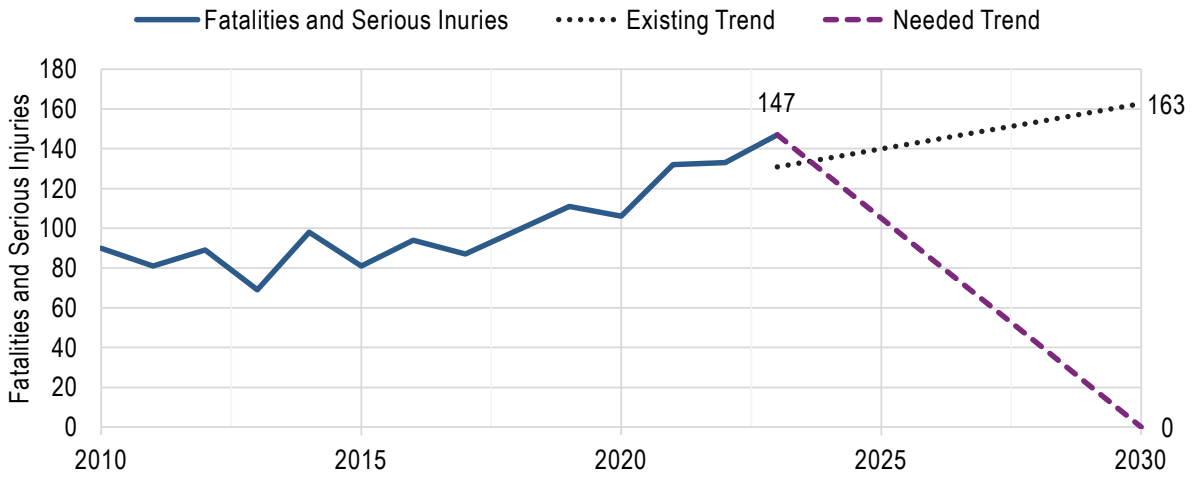
Through TRPC, the Thurston region has adopted the following safety target: Reduce traffic fatalities and serious injuries to zero by 2030 (Target Zero).

In 2023, 34 people lost their lives on the region's roads; another 112 were seriously injured[11]. The people killed or seriously injured were drivers, passengers, pedestrians, and bicyclists. Crashes occurred in urban areas, in rural areas, on the freeway, on local roads, on roads with a lot of traffic, and on roads with little traffic.

In order to meet Target Zero, we need to see 21 fewer fatalities and serious injuries every year, but the existing trend shows we can expect on average nearly three more fatalities and serious injuries each year than what we saw in 2023 (Figure 5-10).

[11] Per WSDOT, a serious injury occurs when a person has one or more of the following: severe laceration resulting in exposure of underlying tissue/muscle/organ or resulting in significant loss of blood; broken or distorted extremity; crush injury; suspected skull, chest, or abdominal injury other than bruises or minor laceration; significant burn; unconsciousness when taken from the scene; or paralysis.

Figure 5-10: Needed Trend to Reduce Fatalities and Serious Injuries to Zero by 2030



Source: WSDOT, TRPC

In 2025, TRPC began developing a comprehensive safety action plan for the Thurston region. As part of this effort, TRPC will conduct a safety analysis and develop a list of priority projects and strategies to improve and prioritize the safety of all users. Several jurisdictions received federal funding in 2023 to update their own safety plans, and the regional plan will build on (and fold in) those efforts.

TRPC anticipates updating the Regional Transportation Plan to incorporate the findings of the safety analysis and relevant strategies and policies from the Regional Safety Action Plan once complete. See Chapter 2, Recommendations, and Appendix G, System Performance Report, for a more in-depth discussion of safety and the region's safety targets.

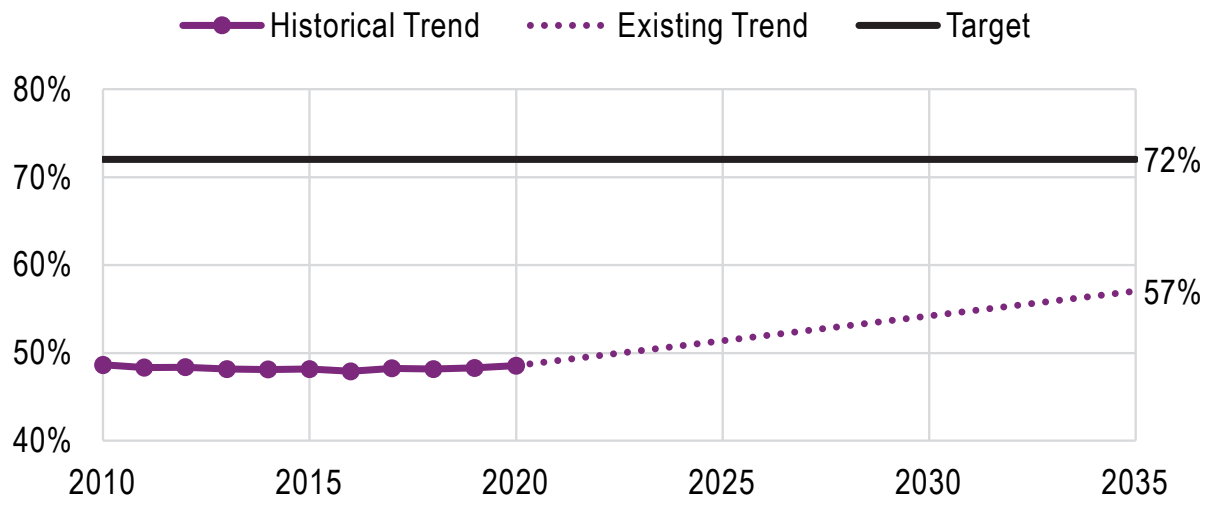
2. Sustainable Thurston Land Use Targets

Through TRPC, the Thurston region has adopted the following Sustainable Thurston land use targets:

- By 2035, 72 percent of all (new and existing) households in our cities, towns, and unincorporated growth areas will be within a half mile (comparable to a 20-minute walk) of an urban center, corridor, or neighborhood center with access to goods and services to meet some of their daily needs.
- Between 2010 and 2035, no more than 5 percent of new housing will locate in the rural areas, and 95 percent will be within cities, towns, unincorporated growth areas, and tribal reservations. Rural areas include land outside of the cities, towns, unincorporated urban growth areas and tribal reservations.

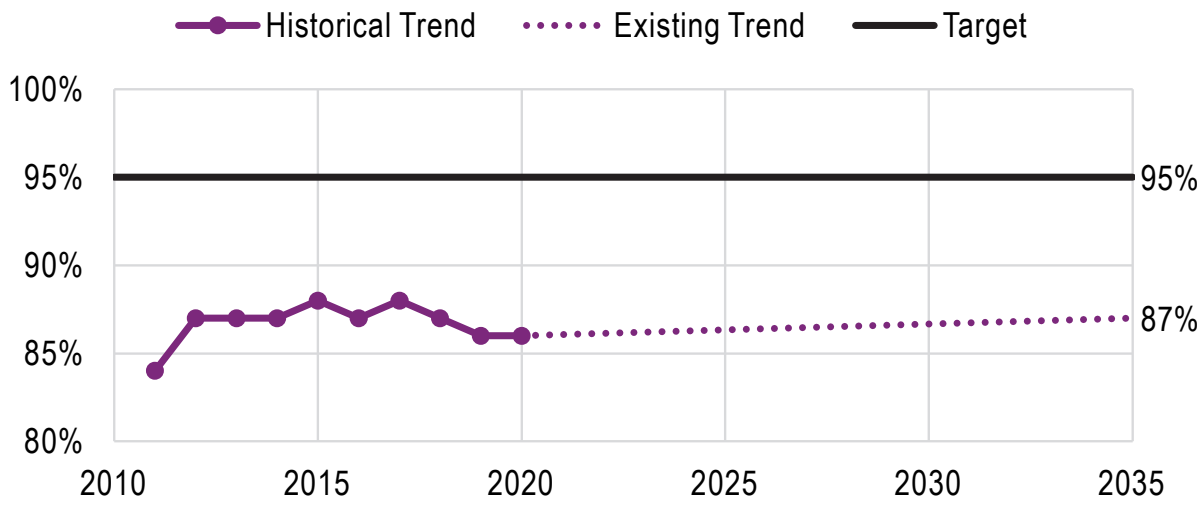
The 2021 Buildable Lands Report for Thurston County found that the region will fall short of the Sustainable Thurston targets without additional changes to policies and practices (Figures 5-11 and 5-12). In particular, the proportion of housing in rural areas (13 percent) is likely to remain the same as it is today.

Figure 5-11: Sustainable Thurston Land Use Targets — Percent of Urban Area Housing Within a Half Mile of an Urban Center, Corridor, or Neighborhood Center



Source: 2021 Buildable Lands Report for Thurston County

Figure 5-12: Sustainable Thurston Land Use Targets — Percent of New Housing Since 2010 in a City, UGA, or Tribal Reservation



Source: 2021 Buildable Lands Report for Thurston County

Land use and zoning policies that encourage more development in urban centers and corridors will make it more likely that the region will meet these two land use targets — and help reduce future congestion on roadways across the region. The Buildable Lands report identified that there is still potential for the region to get closer to the Sustainable Thurston targets. As of 2025, Thurston County jurisdictions are in the process of completing periodic updates to their Comprehensive Plans. The future land use designations and policies included in those plans will help determine patterns of development over the next 20 years.

3. VMT & Greenhouse Gas Emissions Reductions Targets

Through TRPC, the Thurston region has adopted targets to decrease annual per capita VMT:

- 30 percent below 1990 levels by 2035; and
- 50 percent below 1990 levels by 2050.

Due to recent shifts towards telework and higher population growth in urban areas — where trips tend to be shorter and access to alternative modes of transportation is greater — the region will meet the 2035 target — but not until 2045 — and the 2050 target is still out of reach (Figure 5-13). TRPC's travel demand model indicates that VMT per capita will continue to decrease. While we are likely to meet our 2035 target, we will fall short of our 2050 target.

Investing in active transportation and transit facilities is an important element in meeting the region's VMT goals. These investments help to:

- Provide safe modes of travel for all users.
- Provide transportation options for more than 5,000 Thurston County households that don't have access to a vehicle.
- Complete the multimodal transportation network.
- Implement many of the shared community goals outlined through regional planning efforts, including Thurston Thrives, Sustainable Thurston, and the Thurston Climate Mitigation Plan.

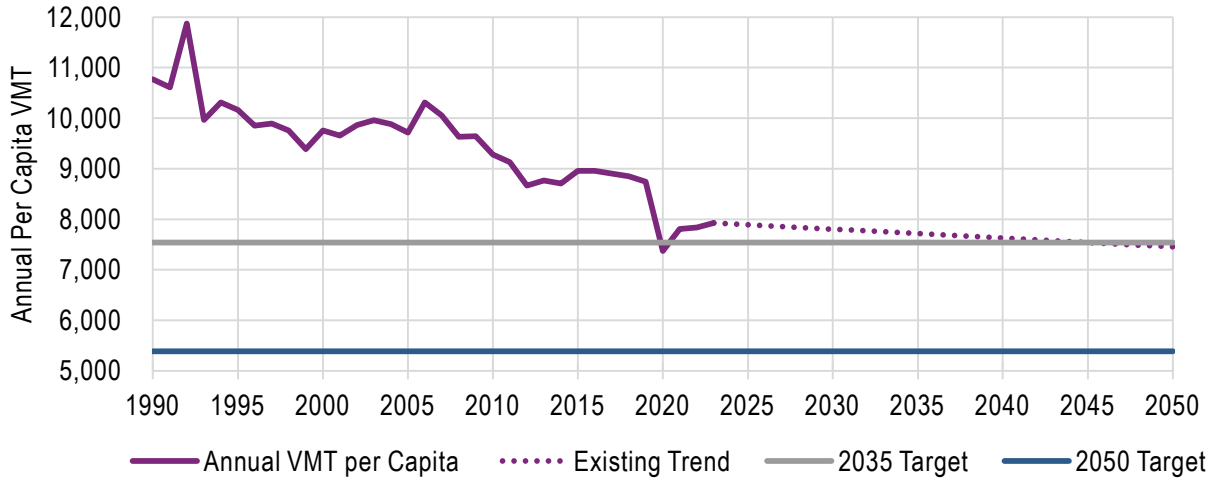
As the region completes the multimodal network and expands transit service and facilities, we may see bigger shifts than currently expected in how people utilize the multimodal network. Modes of travel are all interconnected. For instance, building sidewalks near transit stops will increase safety for both pedestrians and transit users.

Policies that further reduce VMT will help reduce future congestion on the region's roadways. They will have other benefits as well. Because VMT is correlated with traffic-related injuries and fatalities, reducing VMT will make the transportation system safer for all users — drivers, pedestrians, and bicyclists. It will also make it easier to achieve regional goals for reducing greenhouse gas emissions.

Through TRPC, the Thurston region has also adopted targets to decrease greenhouse gas emissions:

- 45 percent below 2015 levels by 2030; and
- 85 percent below 2015 levels by 2050

Figure 5-13: Regional Targets for Per Capita VMT



Source: WSDOT Highway Performance Monitoring System, TRPC

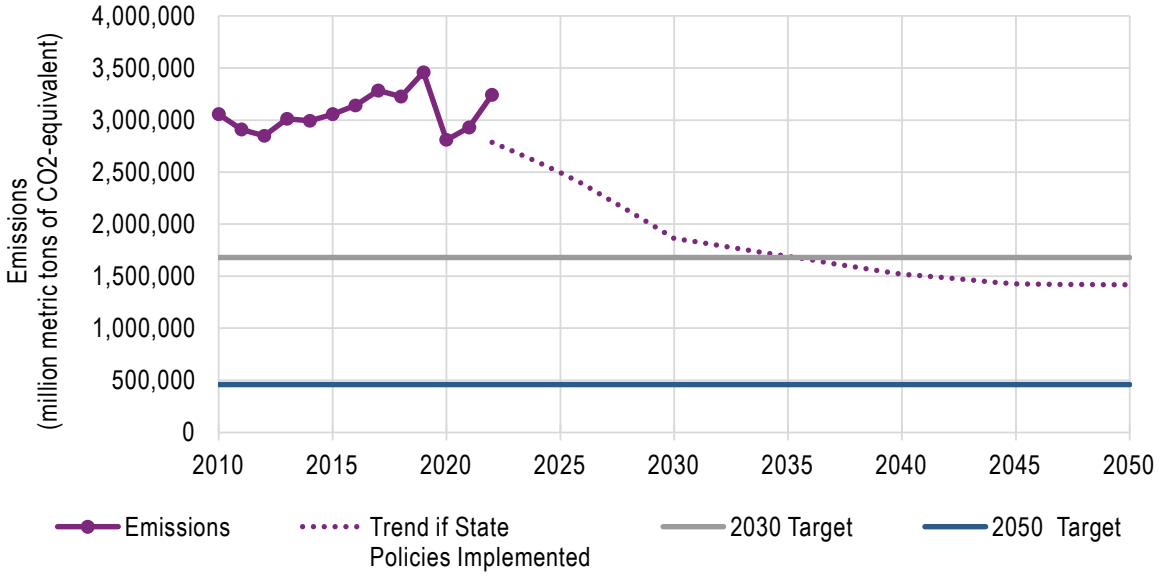
The transportation sector is the second-largest source of greenhouse gas emissions in the Thurston region — responsible for over a third of the region's emissions. Reductions in this sector will be critical to changing the current trend and helping the region achieve its goals.

The Thurston Climate Mitigation Plan (2020) evaluated the potential impact of state policies on reducing emissions, including:

- Updated energy efficiency standards in the state's building code;
- Implementation of the state's Clean Energy Transformation Act (CETA), which aims to remove greenhouse gas emissions from the electricity supply by 2045; and
- Implementation of the state's low-emission and zero-emission vehicle standards, which require vehicles sold or licensed in Washington state to meet the same standards as those set by the California Air Resources Board as well as increase the portion of vehicles sold that have zero-emissions.

Simply implementing state policies will make an enormous difference, but it is not enough to meet our regional greenhouse gas emissions targets (Figure 5-14).

Figure 5-14: Emission Trends Based on State Policy Implementation



Source: TRPC, Hammerschlag LLC[12]

Thurston County and the cities of Lacey, Olympia, and Tumwater have adopted the Climate Mitigation Plan and are actively working on incorporating strategies that will help the region meet our emissions targets. TRPC anticipates developing a Regional Carbon Reduction Strategy (see Appendix J for project details), which will also help identify ways to meet the targets we have set as a region.

[12] See Appendix 10.5 of the Thurston Climate Mitigation Plan.

4. Active Transportation & Transit Goals

While the Thurston region has goals to increase the share of all trips made safely and conveniently by bicycling, walking, and transit (see Chapter 3, Goals 2, 10, 11, and 12), we do not have specific targets that we are aiming to achieve. Our future conditions demonstrate that the share of active transportation and transit trips that will be made in 2050 will largely remain static compared to 2022.

The Thurston region has two planning efforts currently underway that will impact the future of active transportation in the region: the Bicycle Connectivity Strategy and a Regional Multimodal Level of Service.

The Bicycle Connectivity Strategy will identify gaps in the regional network that, if filled, could serve a broader group of users with varying comfort levels for riding in and around traffic. The strategy will also recommend policy and infrastructure improvements that will create a more complete and effective network.

In 2023, Washington state approved a suite of changes to the Growth Management Act (GMA) that updated the state's major planning framework to respond to climate change. Among the changes, under RCW 36.70A.070 (6) local jurisdictions must establish a multimodal level of service standard in the transportation elements of their comprehensive plans.

In 2025, the Thurston region's jurisdictions are in the process of updating their comprehensive plans, including establishing their own multimodal level of service standards. At the same time, TRPC is considering the feasibility of establishing a regional standard that would set performance targets for transit, bicycle, and pedestrian facilities in addition to vehicles. TRPC is also considering how to track whether investments in multimodal transportation facilities are keeping up with planned growth.

Transit patterns across the Thurston region are changing. In 2025, Intercity Transit — the primary transit provider in the Thurston region — is redesigning their system to deliver:

- Extended span of service;
- Improved bus frequency and bus rapid transit;
- Service to new areas; and
- Enhanced commuter service.

These changes are not fully reflected in TRPC's travel demand models, and TRPC will continue to track their impact — as well as other transit and active transportation changes — on the regional transportation system.

Level of Service Failures

Eleven assessment areas are based on vehicle level of service (LOS) failures. TRPC uses a volume-to-capacity (V/C) ratio to identify the physical locations where LOS failures for vehicle congestion are expected in 2050 even if all projects recommended in the RTP are constructed. Why such areas are expected to experience LOS failures may not always be clear, and planners and engineers will monitor these areas. If needed, they will conduct further studies to determine if there truly are mobility issues, or if there are other issues causing a high V/C ratio.

5. SR 510 from Yelm Highway to the City of Yelm

As a primary route between the Nisqually Indian Reservation, south Thurston County, and the Lacey-Olympia-Tumwater urban area, SR 510 is part of the region's congestion management network. The route is also a critical emergency detour route when Interstate 5 shuts down. The highway is primarily a two-lane roadway but widens to five lanes on the Nisqually Indian Reservation. Although this area's population is not expected to grow significantly over the next 25 years, it connects growing regional population and employment centers.

Intercity Transit provides bus service from Lacey to the Nisqually Indian Reservation and Yelm via SR 510. Bike lanes and a separated walking path are only present on the portion of the highway on the reservation.

WSDOT sets the level of service standard for state routes; as a rural route, this portion of SR 510 is expected to function at LOS C or better. In 2022, this part of SR 510 was already experiencing LOS E or worse everywhere except the Nisqually Indian Reservation. In 2050, SR 510 is expected to have an LOS F everywhere except the Nisqually Indian Reservation, which is not consistent with regionally adopted LOS standards.

6. SR 507 from Yelm's west city limits to the Pierce County line

Yelm continues to be one of the fastest growing communities in the Thurston region and attracts people commuting to Lacey, Olympia, Tumwater, Joint Base Lewis-McChord, and employment centers elsewhere in Pierce and King counties. Yelm is also an important urban center in south Thurston County.

Like SR 510, SR 507 is part of the region's congestion management network and serves as a critical emergency detour route when

Interstate 5 shuts down. The portion of SR 507 from SR 510 to Bald Hill Road SE is also designated an urban strategy corridor. Intercity Transit provides bus service from Lacey to Yelm via SR 510 while ruralTRANSIT provides bus service from Rainier to Yelm via SR 507. Neither route provides frequent service (a bus every 15 minutes). Sidewalks are present mostly in the core of Yelm.

Construction of the SR 510 Yelm Loop is expected to provide relief to downtown Yelm from the congestion caused by through-traffic, as well as offer pedestrian and bicycle facilities. The city of Yelm's Prairie Line Trail extension is also well underway and will offer active transportation connections between Pierce County and the Chehalis Western Trail (see Appendix J for details on both projects).

WSDOT sets the level of service standard for state routes. Within the city of Yelm, SR 507 is expected to function at LOS D or better; outside the city of Yelm, the LOS is set at C or better. As an urban strategy corridor, LOS may exceed adopted standards. In 2022, SR 507 from SR 510 to the Pierce County line was already experiencing LOS D or worse. In 2050, all of SR 507 within Yelm city limits is expected to have an LOS D or worse, with most of the highway at LOS F.

7. Black Lake Boulevard from the U.S. 101 Interchange to Cooper Point Road

The U.S. 101 interchange with Black Lake Boulevard provides important access to West Olympia, a regional employment center and one of the fastest growing areas of Olympia. Black Lake Boulevard is also an urban strategy corridor where widening is not the preferred option to address congestion.

Between 2035 and 2050, the city of Olympia anticipates completing the U.S. 101/West Olympia Access project (see Appendix J for project details), which will change the way drivers access different parts of West Olympia.

Currently, Black Lake Boulevard has sidewalks on both sides of the road but no bike lanes. This area also lacks transit service, though adjacent Cooper Point Road is served by transit.

In 2050, Black Lake Boulevard and the on-ramps to U.S. 101 are expected to have an LOS E, which is consistent with regionally adopted LOS standards.

8. Rainier Road from Spurgeon Creek Road to Military Road

As a primary route connecting south Thurston County and the Lacey-Olympia-Tumwater urban area, Rainier Road is part of the region's congestion management network. South Lacey is one of the fastest growing parts of the Thurston region, and modest growth in Rainier is also expected.

This portion of Rainier Road crosses Joint Base Lewis-McChord's undeveloped reservation area, where occasional military exercises are performed but no buildings or other facilities exist. Spurgeon Creek Road is a popular route for people traveling north from Rainier, and Thurston County is constructing a roundabout where the road and Yelm Highway meet.

This roadway is not served by transit as it is outside Intercity Transit's public transportation benefit area. RuralTRANSIT runs a route between north and south Thurston County via Old Highway 99 rather than Rainier Road. As a rural road, no sidewalks or bike lanes exist, but the shoulders are wide along most (if not all) of the roadway. The Chehalis-Western Trail provides an alternate active transportation route but is a more realistic choice for people living west of Rainier Road.

In 2050, Rainier Road is expected to have an LOS D, which is not consistent with regionally adopted LOS standards.

9. 5th Avenue and 4th Avenue Bridges; Olympic Way between Deschutes Parkway and 4th Avenue

This area provides critical access between downtown Olympia, West Olympia, and I-5 via Deschutes Parkway. With the restoration of the Deschutes estuary, the 5th Avenue Bridge Reconstruction project (see Appendix J for project details) will add a third roundabout at Deschutes Parkway and Olympic Street, changing the way people travel in this area.

This area is well served by frequent transit service (buses every 15 minutes). 4th Avenue has sidewalks on both sides of the bridge as well as bike lanes, but 5th Avenue/Olympic Street facilities for both pedestrians and bicyclists are not consistent. With the 5th Avenue Bridge Reconstruction project, improved active transportation facilities are anticipated.

In 2050, some portion of this area is expected to have an LOS F. As urban strategy corridors, the level of service for 4th and 5th avenues may exceed the adopted standard (LOS E or better). The city of Olympia is aware of this and is monitoring the situation; the city will use more detailed models to evaluate this area as the project is fully developed and designed.

10. Henderson Boulevard from Yelm Highway to 65th Avenue SE

Olympia's developing Briggs Village neighborhood sits at one end of this corridor while Tumwater's less densely populated (and slow growing) neighborhoods near the Deschutes River are on the other end; Pioneer Park is centrally located along the corridor.

RuralTRANSIT runs along this corridor while Intercity Transit runs along Yelm Highway between Lacey and this area, going north at Henderson Boulevard. Sidewalks on both sides of the road and bike lanes are present until the Deschutes River Bridge. The bridge is too narrow to include bike lanes/shoulders; south of the bridge, the roadway widens to accommodate wide shoulders. With the Henderson Boulevard Corridor project (see Appendix J for project details), the city of Tumwater will widen the bridge and install pedestrian facilities. Tumwater also anticipates completing the Deschutes Valley Trail, which will connect Tumwater Historical Park to Pioneer Park.

In 2050, Henderson Boulevard is expected to have an LOS D or worse, depending on location along the corridor:

- LOS D: from 65th Avenue SE north to 58th Avenue SE, which is consistent with regionally adopted LOS standards.
- LOS E: from 58th Avenue SE north to 53rd Avenue SE, which is not consistent with regionally adopted LOS standards.
- LOS F: from 53rd Avenue SE north to Yelm Highway, which is not consistent with regionally adopted LOS standards.

11. Littlerock Road, Capitol Boulevard, Trosper Road, and Tumwater Boulevard Triangle

This area is an important employment and population center for the region, and a portion of it is designated an urban center/corridor. Only Capitol Boulevard is designated a strategy corridor where level of service standards may be exceeded.

Capitol Boulevard is served by frequent transit service (buses every 15 minutes or less). Tumwater Boulevard and Littlerock Road also have transit service (buses every 30 minutes or more). Trosper Road does not have transit service.

Littlerock Road has sidewalks on both sides of the road and bike lanes; Capitol Boulevard and Trosper Boulevard have sidewalks on both sides of the road but no bike lanes; and Tumwater Boulevard only has bike lanes and sidewalks east of Interstate 5.

Tumwater's Capitol Boulevard project (see Appendix J for project details) has a number of improvements planned in this area to help keep vehicle traffic moving and improve access to transit and active transportation facilities.

In 2050, the roadways are expected to have the following levels of service:

- Littlerock Road: LOS D or better, which is consistent with regionally adopted LOS standards
- Capitol Boulevard: LOS D or better, which is consistent with regionally adopted LOS standards
- Trosper Road: LOS F at the intersection with the I-5 on/off-ramps, not consistent with regionally adopted LOS standards.
- Tumwater Boulevard: LOS F west of the I-5 interchange to the future Tyee Drive extension (not consistent with regionally adopted LOS standards); LOS C or better everywhere else.

Given the complexity of this area, more detailed modeling is appropriate to better understand what is happening.

12. Lilly Road between Ensign Road and Providence Lane

This corridor is in the heart of the Providence St. Peter's hospital district, an important employment center that is densely developed with hospital and medical facilities. This area is also home to many residents, with one of the faster-growing areas of Olympia just to the north.

Lilly Road is an urban strategy corridor where widening is not the preferred option to address congestion. Intercity Transit provides transit service along the corridor, but it is not frequent (a bus every 15 minutes or less). Sidewalks are present on both sides of the road, but bike lanes are present only north of the hospital entrance at 10th Avenue NE. The corridor's proximity to the Chehalis Western Trail provides a convenient alternative for people who walk and bike.

In 2050, part of Lilly Road is expected to have an LOS F. As an urban strategy corridor, LOS may exceed adopted standards.

13. Interstate 5 from Tumwater to the Nisqually River

Interstate 5 is important to the nation's economy, defense, and mobility, and the interplay between the interstate system and our local roads is complex. It sees the highest traffic and truck volumes in the Thurston region.

WSDOT sets the level of service standard for I-5; this entire stretch of I-5 is expected to function at LOS D or better. In 2022, parts of I-5 functioned at LOS E or worse around the U.S. 101 interchange and the Trosper Road interchange. In 2050, areas functioning at LOS E or worse are expected to expand and include stretches of the interstate around almost every interchange from Tumwater Boulevard to the Nisqually River. Where LOS is bad today, it will likely be even worse in 25 years.

Projects like I-5 Hard Shoulder Running, I-5 Tumwater to Mounts Road Alternatives Analysis, and Intercity Transit's Expansion of Intercounty Express Service (see Appendix J for project details) are expected to help alleviate some of the pressure on I-5 and identify ways to address the level of service failures experienced on this critical transportation facility.

14. Old Pacific Highway and Reservation Road

Old Pacific Highway and Reservation Road act as an alternate route to access or bypass I-5 and SR 510, especially when I-5 is congested. Reservation Road also serves as the only access to and from an important residential and community-gathering area of the Nisqually Indian Reservation. This rural area is not served by transit, nor are there sidewalks or bike lanes. The shoulders vary in width and at times are quite narrow, especially on Old Pacific Highway.

Thurston County anticipates beginning construction on a roundabout at the intersection of Kuhlman Road and Old Pacific Highway in 2030, but no other major improvements are planned between now and 2050. In 2050, Old Pacific Highway is expected to have an LOS D or worse while Reservation Road will have an LOS D, which is not consistent with regionally adopted LOS standards.

15. I-5/93rd Avenue Interchange

The I-5/93rd Avenue Interchange serves a growing distribution and warehousing hub for the I-5 corridor. This area of Tumwater is also growing in population, with more than 1,000 housing units anticipated over the next 25 years.

Although the area around this interchange is within Intercity Transit's public transportation benefit area, it is not currently served by transit other than a ruralTRANSIT route connecting Grand Mound and Tumwater. The bridge over I-5 is narrow with two lanes and no shoulders or sidewalks.

In 2050, this interchange is expected to have an LOS F on the I-5 overpass, which is not consistent with regionally adopted LOS standards. The northbound on-ramp and the southbound off-ramp are also expected

to experience level of service failures. The City of Tumwater's I-5 and 93rd Avenue SE Interchange Improvements Study is currently underway and will identify the needed improvements for this interchange.

16. Yelm Highway from Henderson Boulevard to Rich Road

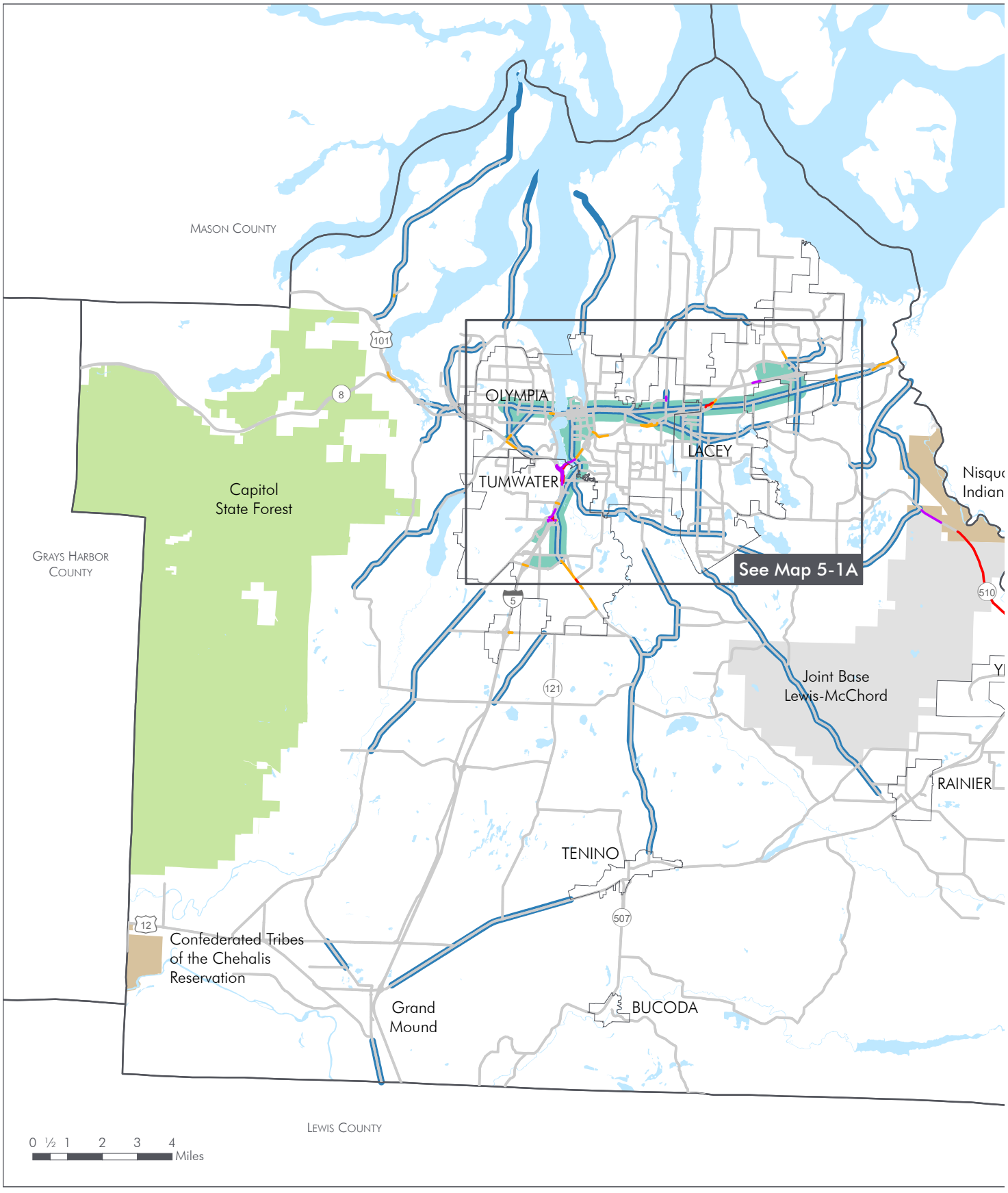
As a primary east-west route in the Lacey-Olympia-Tumwater area, Yelm Highway is part of the region's congestion management network. Yelm Highway is also an urban strategy corridor where widening is not the preferred option to address congestion.

Single-family residential neighborhoods exist along the entirety of the assessment area, with Olympia's developing Briggs Village neighborhood at the west end. A few larger undeveloped parcels remain along the corridor.

Intercity transit runs along Yelm Highway between Lacey and this area, going north at Henderson Boulevard. Sidewalks on both sides of the road and bike lanes are present through the entire assessment area.

In 2050, Yelm Highway is expected to have an LOS D or worse, depending on location along the corridor:

- LOS D: from Henderson Boulevard to Boulevard Road and from approximately Stratford Lane to Rich Road, which is consistent with regionally adopted LOS standards.
- LOS E: from Boulevard Road to approximately Stratford Lane, which is consistent with regionally adopted LOS standards.



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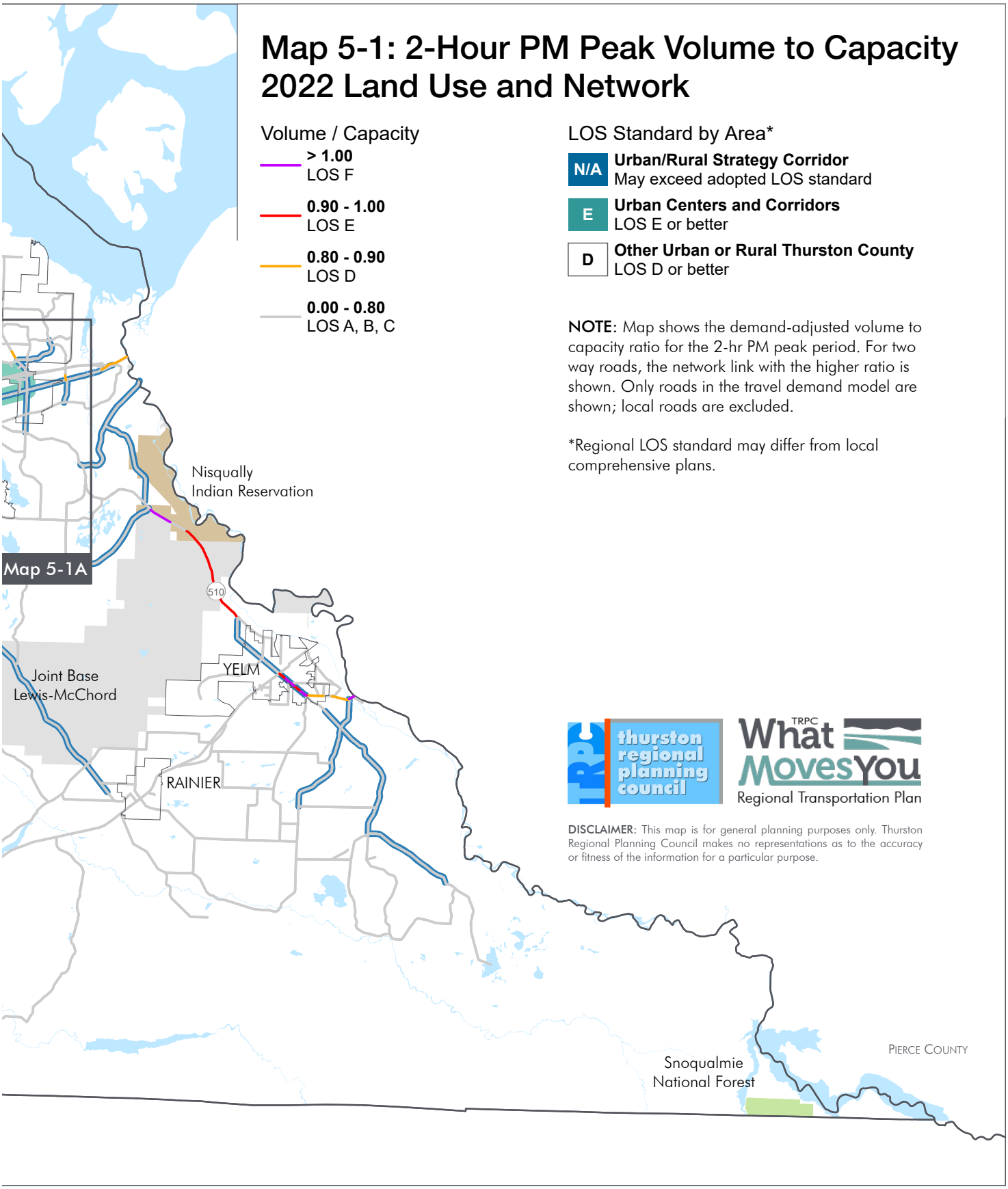
Map 5-1: 2-Hour PM Peak Volume to Capacity 2022 Land Use and Network



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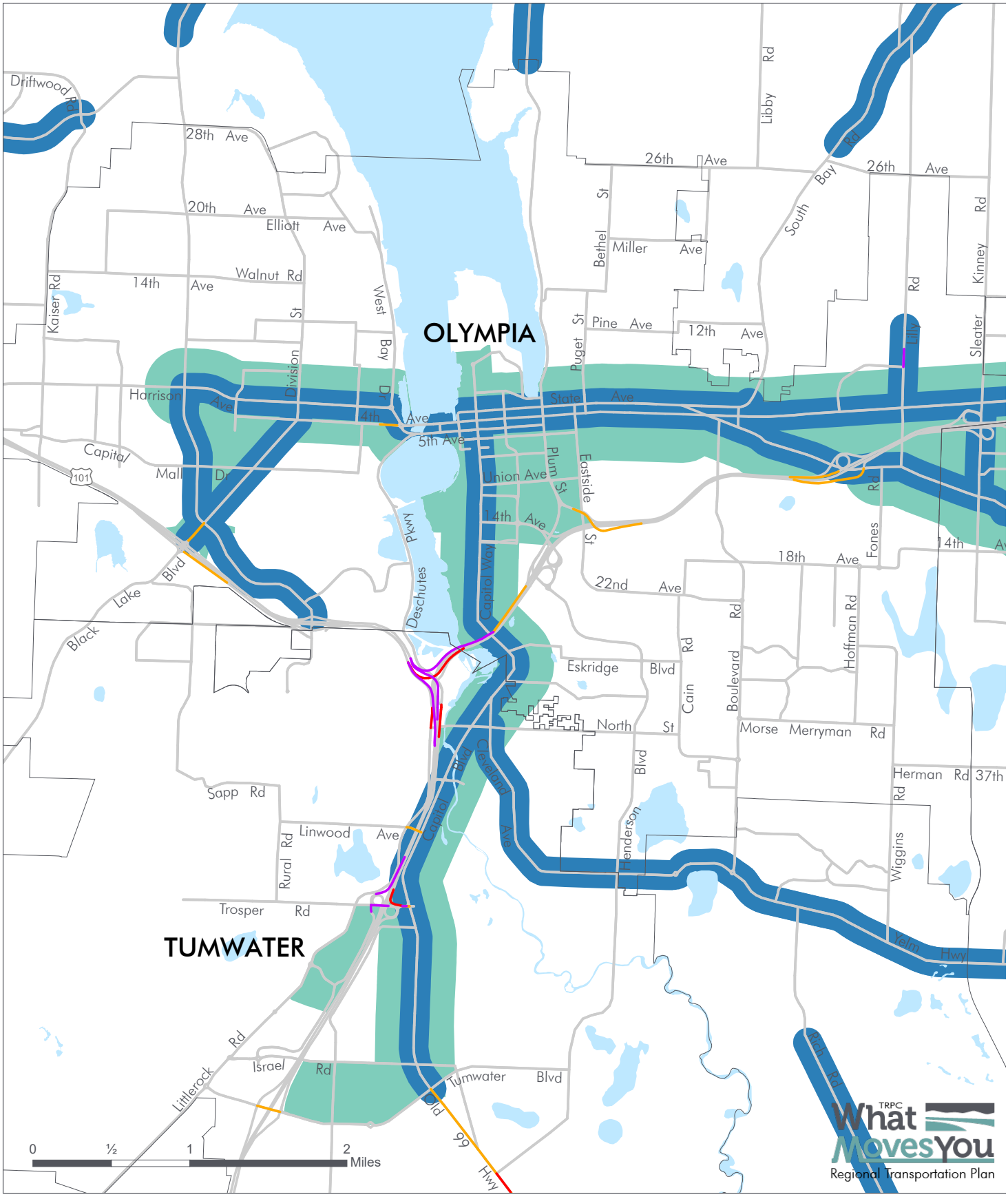

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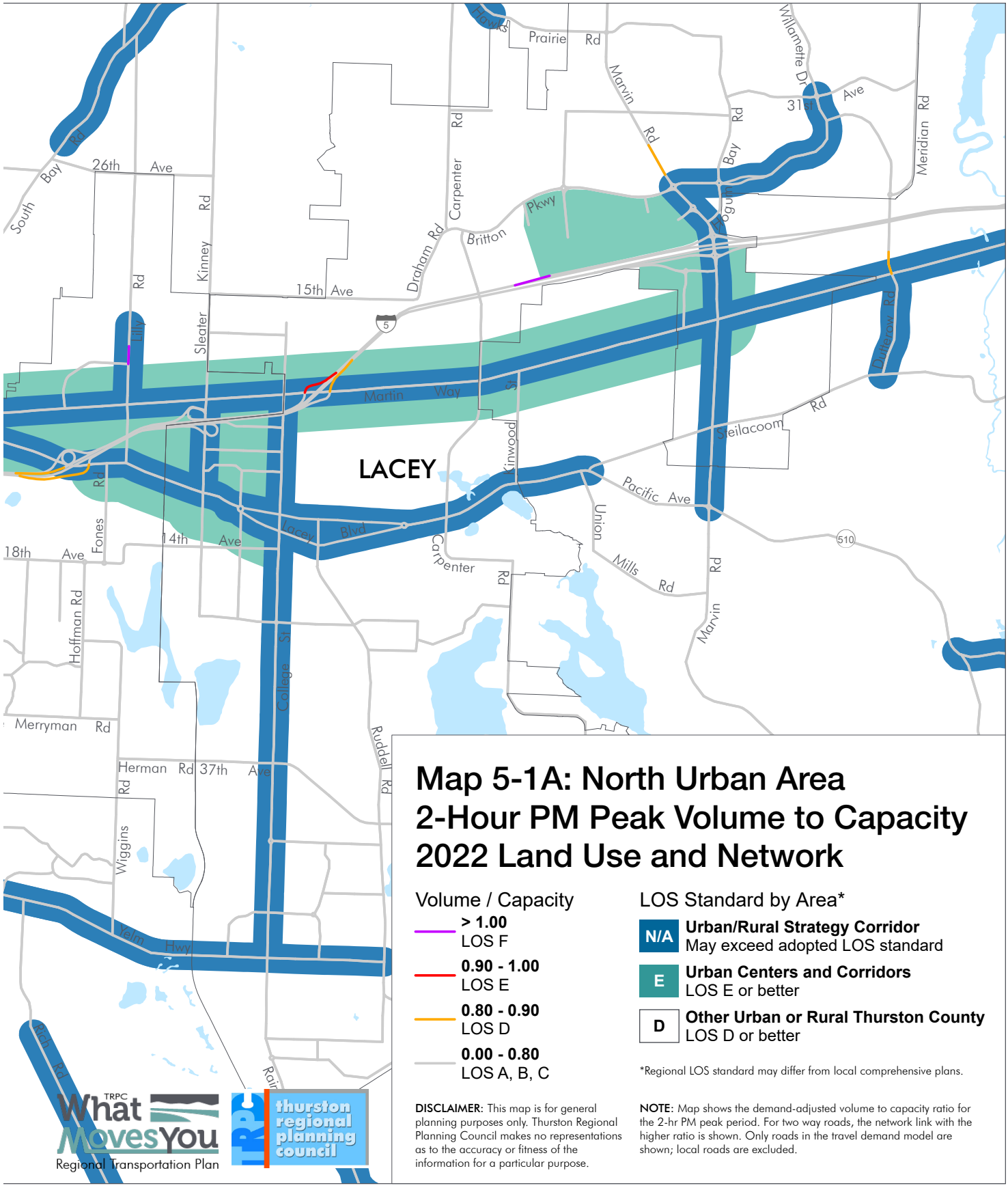

Map 5-1A: North Urban Area 2-Hour PM Peak Volume to Capacity 2022 Land Use and Network

Volume / Capacity

- **> 1.00** LOS F
- **0.90 - 1.00** LOS E
- **0.80 - 0.90** LOS D
- **0.00 - 0.80** LOS A, B, C

LOS Standard by Area*

- **N/A** — **Urban/Rural Strategy Corridor** May exceed adopted LOS standard
- **E** — **Urban Centers and Corridors** LOS E or better
- **D** — **Other Urban or Rural Thurston County** LOS D or better

*Regional LOS standard may differ from local comprehensive plans.

DISCLAIMER: This map is for general planning purposes only. Thurston Regional Planning Council makes no representations as to the accuracy or fitness of the information for a particular purpose.

NOTE: Map shows the demand-adjusted volume to capacity ratio for the 2-hr PM peak period. For two way roads, the network link with the higher ratio is shown. Only roads in the travel demand model are shown; local roads are excluded.

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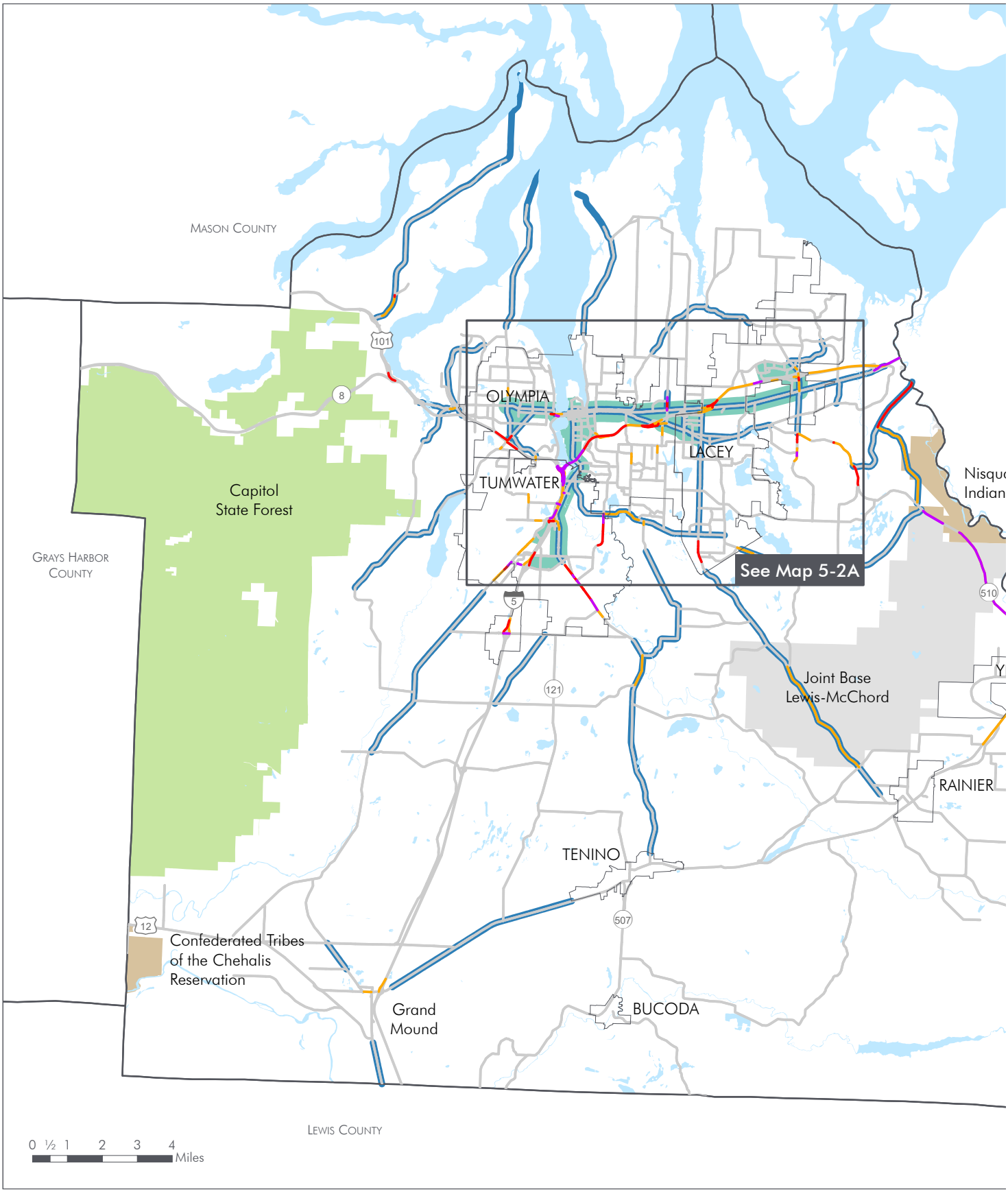

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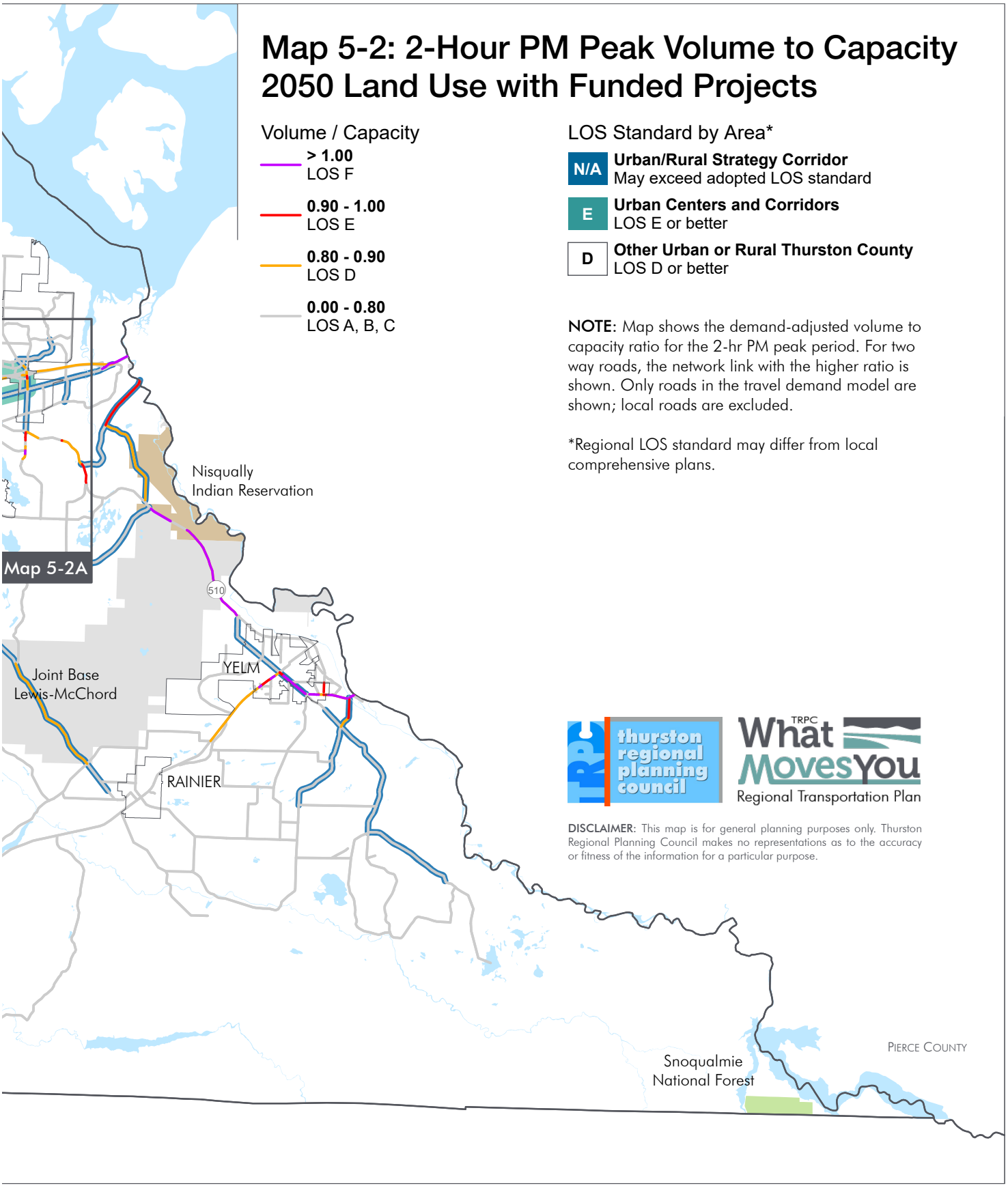
Map 5-2: 2-Hour PM Peak Volume to Capacity 2050 Land Use with Funded Projects



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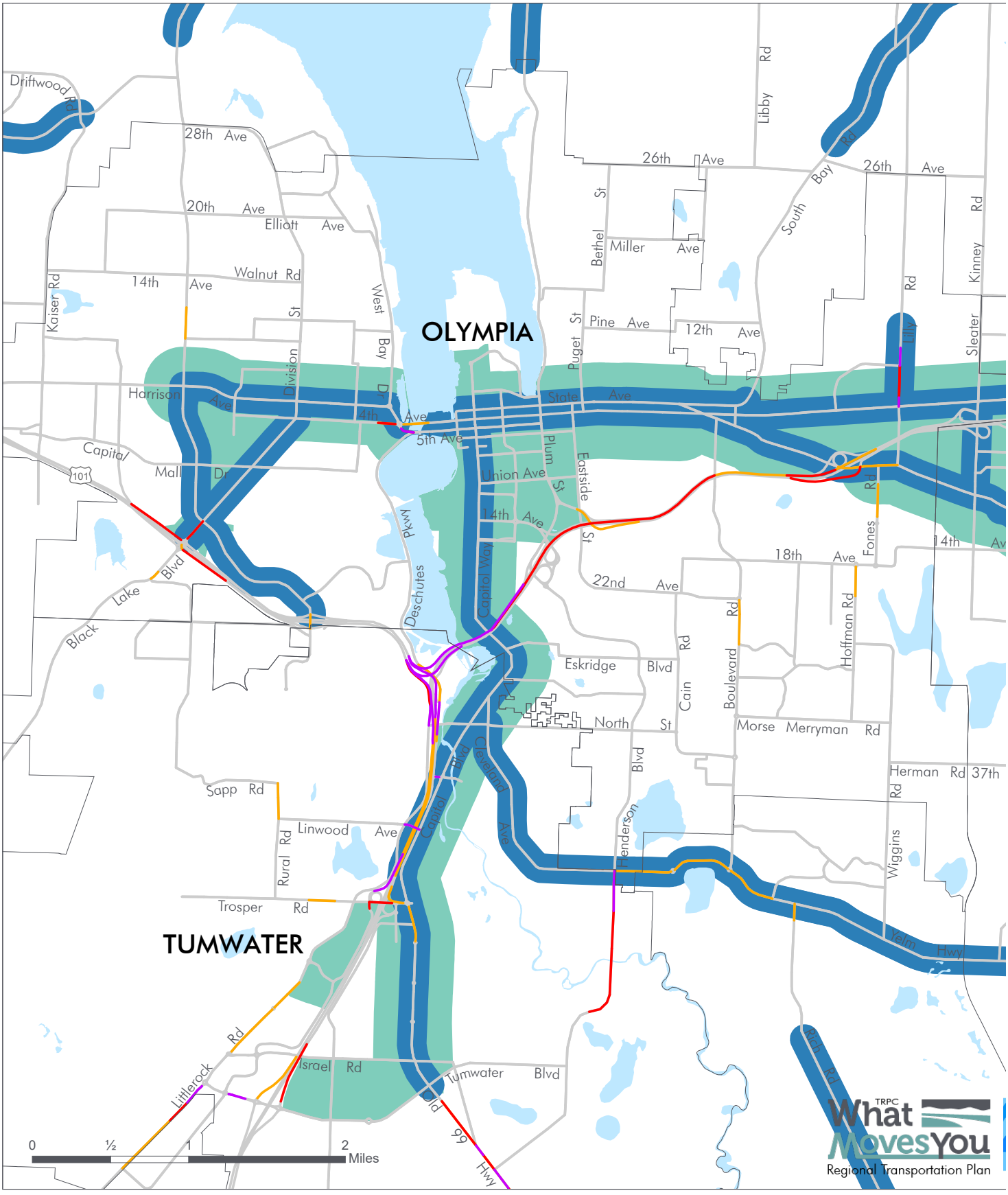

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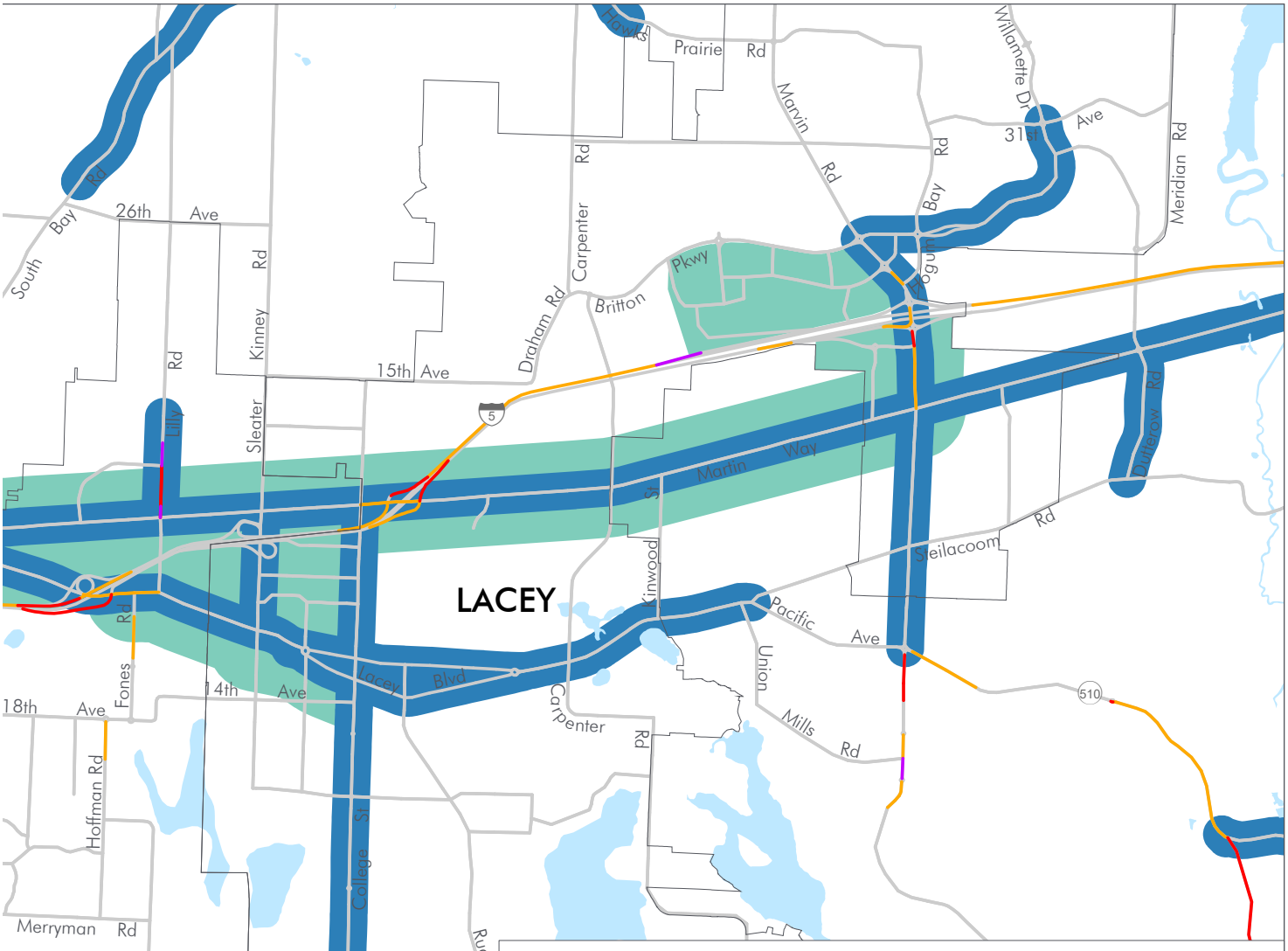

Map 5-2A: North Urban Area 2-Hour PM Peak Volume to Capacity 2050 Land Use with Funded Projects

Volume / Capacity

- **> 1.00** LOS F
- **0.90 - 1.00** LOS E
- **0.80 - 0.90** LOS D
- **0.00 - 0.80** LOS A, B, C

LOS Standard by Area*

- **N/A** — **Urban/Rural Strategy Corridor** May exceed adopted LOS standard
- **E** — **Urban Centers and Corridors** LOS E or better
- **D** — **Other Urban or Rural Thurston County** LOS D or better

*Regional LOS standard may differ from local comprehensive plans.

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NOTE: Map shows the demand-adjusted volume to capacity ratio for the 2-hr PM peak period. For two way roads, the network link with the higher ratio is shown. Only roads in the travel demand model are shown; local roads are excluded.

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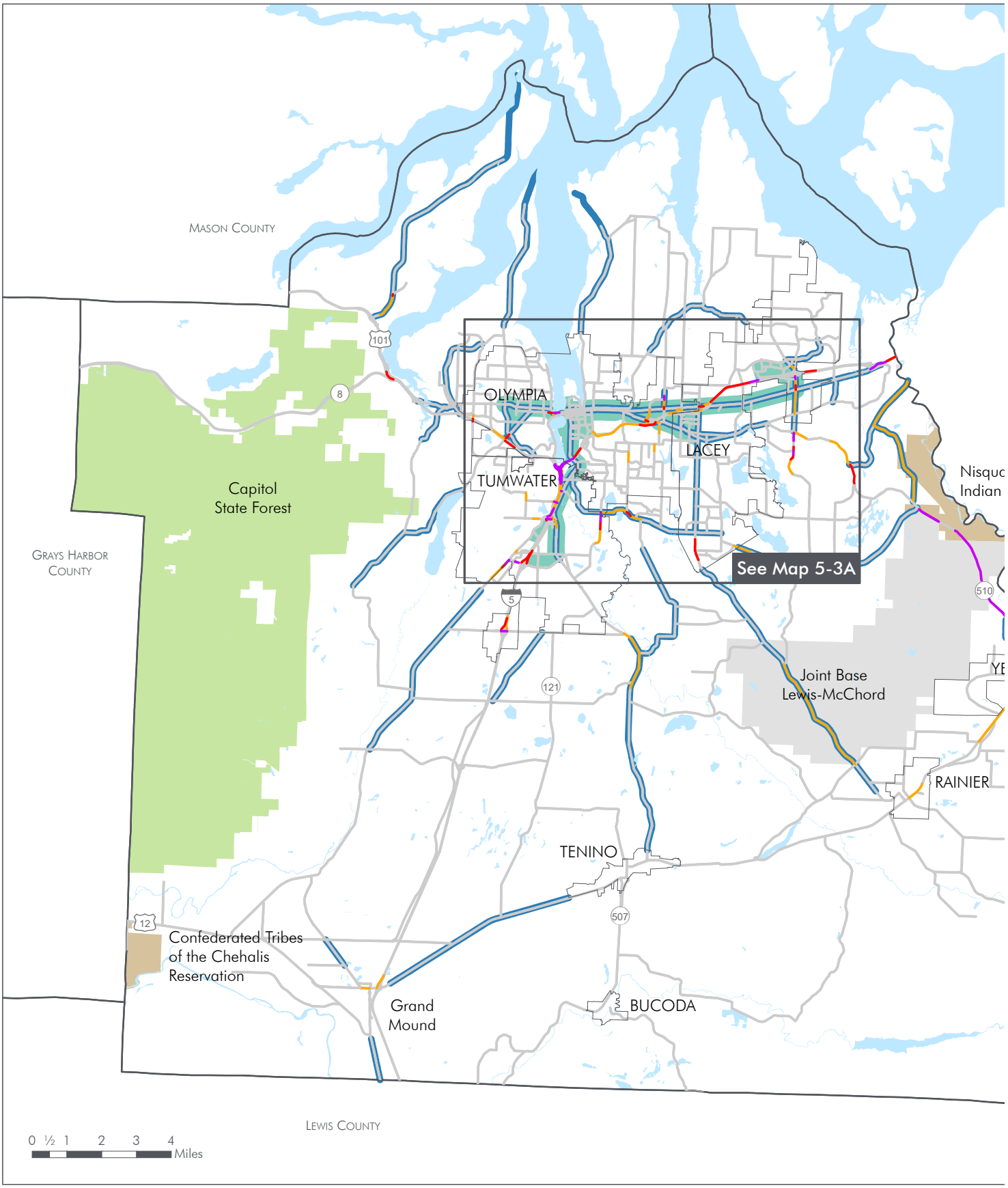

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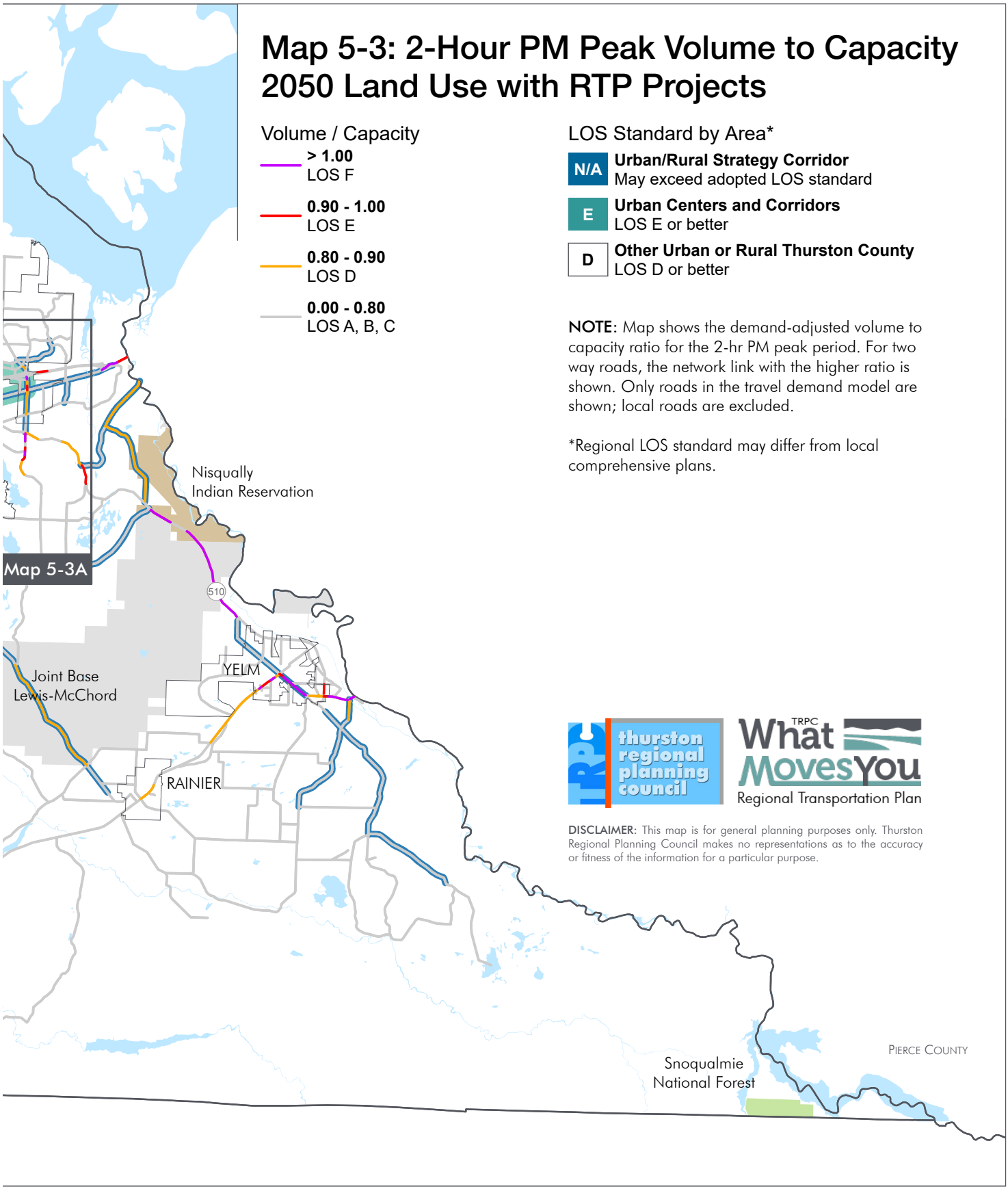
Map 5-3: 2-Hour PM Peak Volume to Capacity 2050 Land Use with RTP Projects



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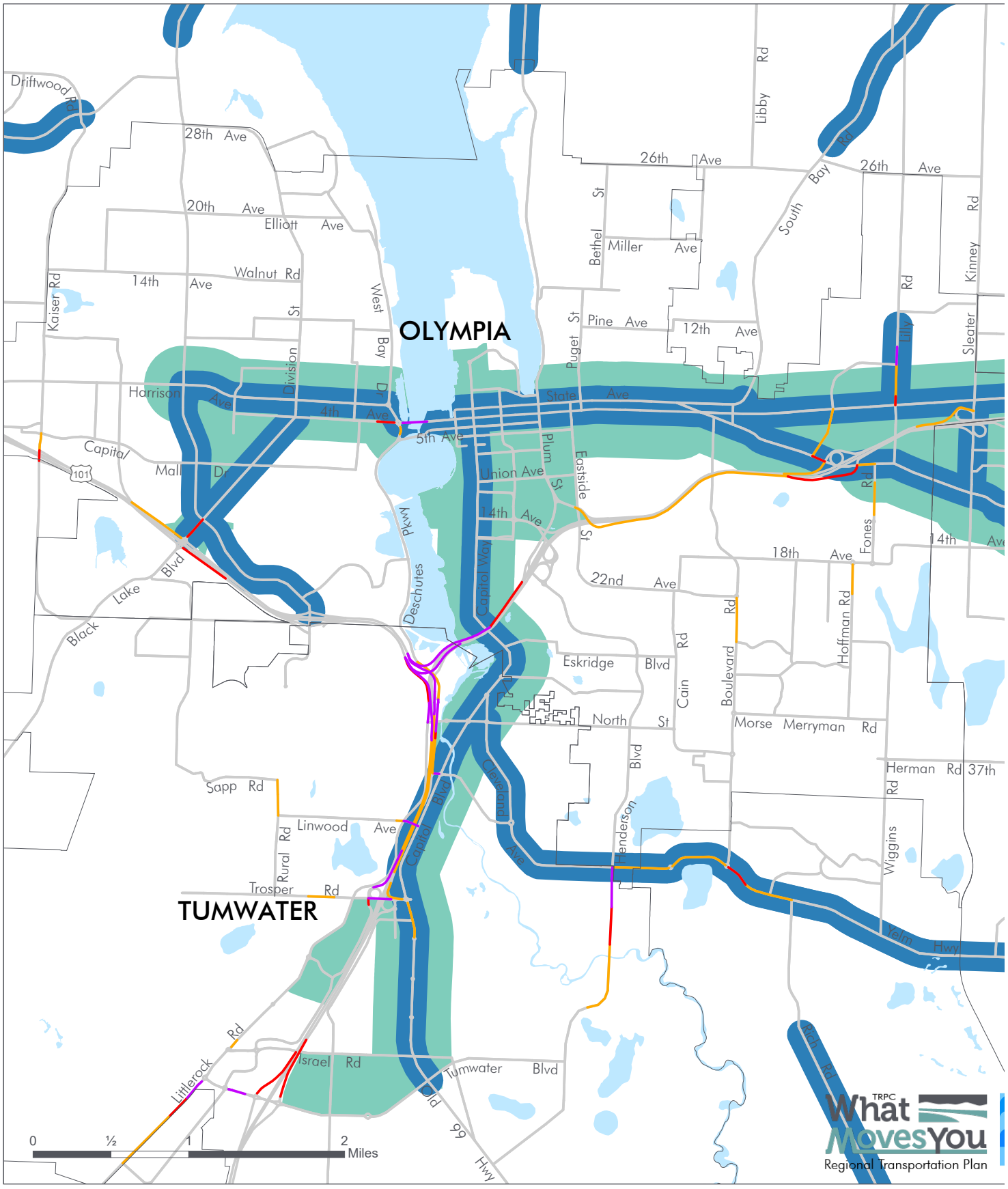

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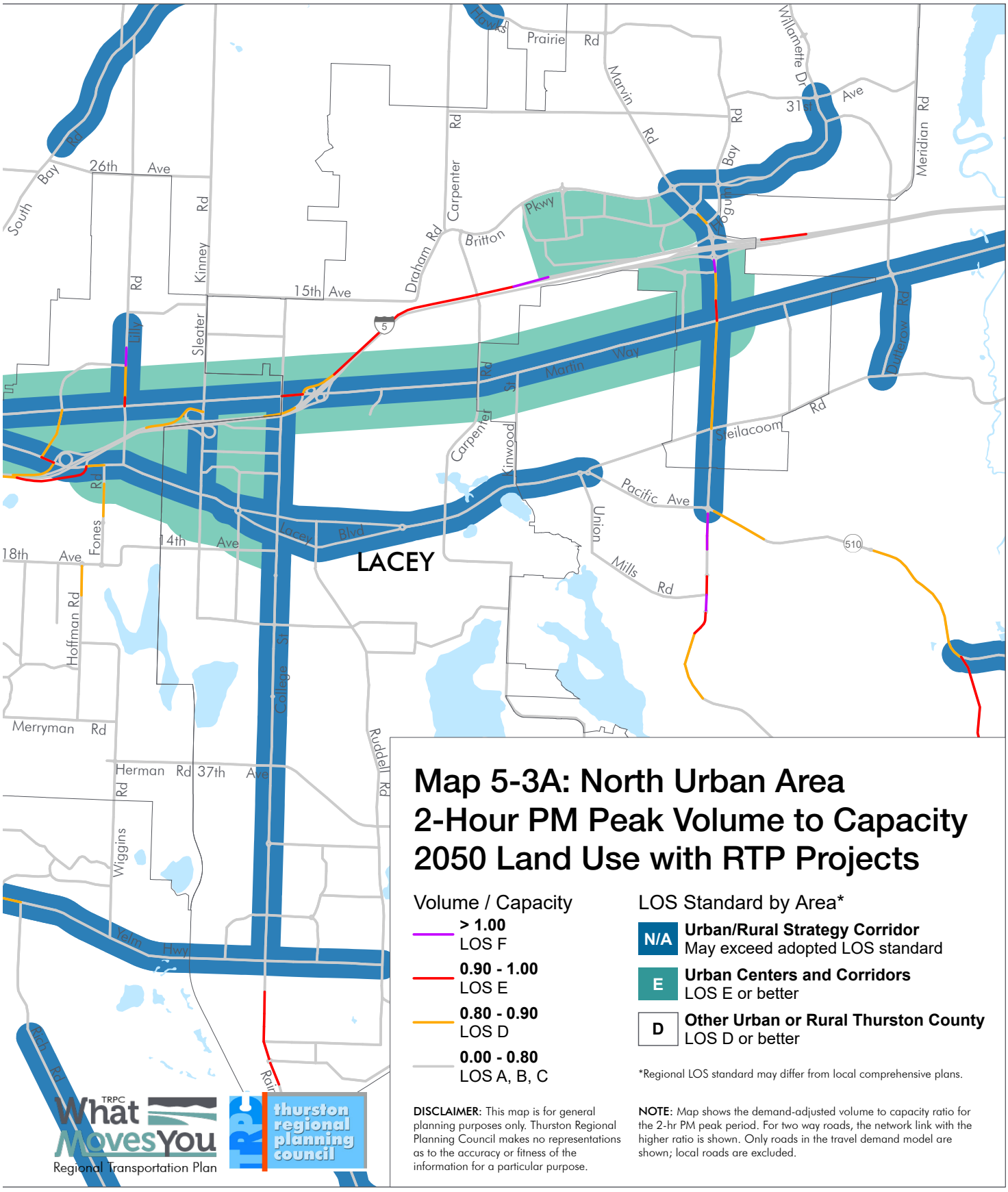

Map 5-3A: North Urban Area 2-Hour PM Peak Volume to Capacity 2050 Land Use with RTP Projects

Volume / Capacity

- **> 1.00** LOS F
- **0.90 - 1.00** LOS E
- **0.80 - 0.90** LOS D
- **0.00 - 0.80** LOS A, B, C

LOS Standard by Area*

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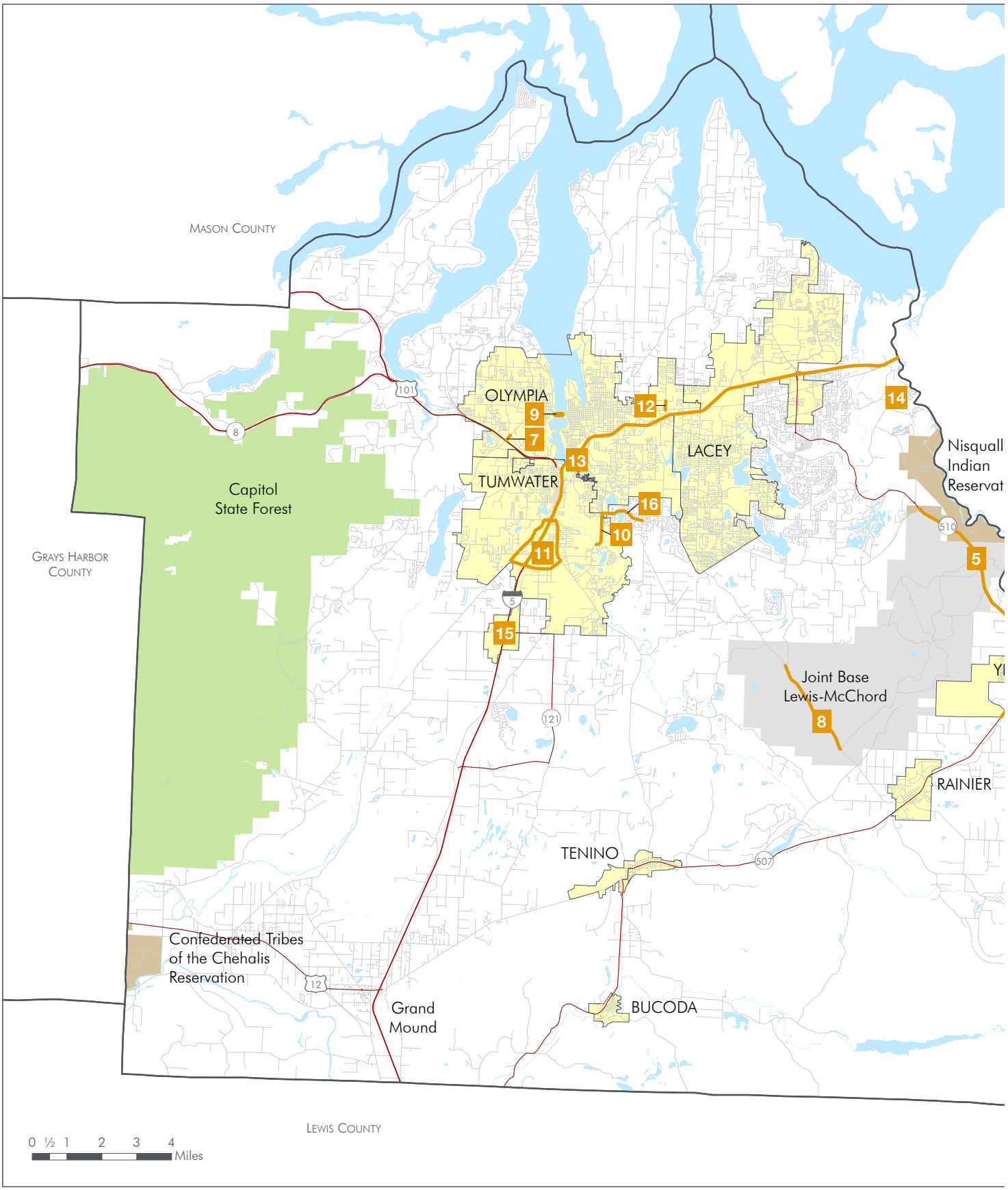

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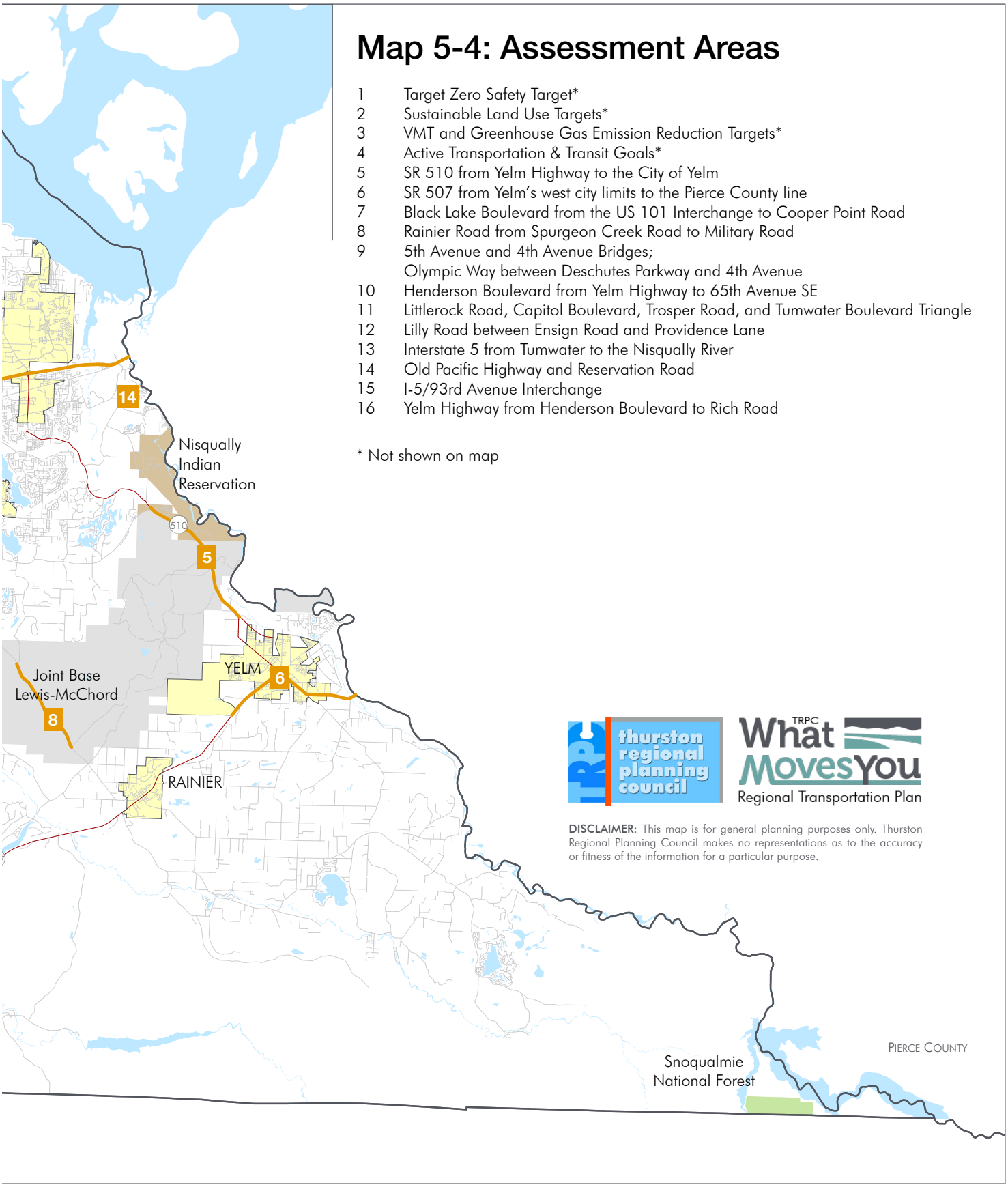
Map 5-4: Assessment Areas

1 Target Zero Safety Target*
2 Sustainable Land Use Targets*
3 VMT and Greenhouse Gas Emission Reduction Targets*
4 Active Transportation & Transit Goals*
5 SR 510 from Yelm Highway to the City of Yelm
6 SR 507 from Yelm's west city limits to the Pierce County line
7 Black Lake Boulevard from the US 101 Interchange to Cooper Point Road
8 Rainier Road from Spurgeon Creek Road to Military Road
9 5th Avenue and 4th Avenue Bridges;
Olympic Way between Deschutes Parkway and 4th Avenue
10 Henderson Boulevard from Yelm Highway to 65th Avenue SE
11 Littlerock Road, Capitol Boulevard, Trosper Road, and Tumwater Boulevard Triangle
12 Lilly Road between Ensign Road and Providence Lane
13 Interstate 5 from Tumwater to the Nisqually River
14 Old Pacific Highway and Reservation Road
15 I-5/93rd Avenue Interchange
16 Yelm Highway from Henderson Boulevard to Rich Road

* Not shown on map



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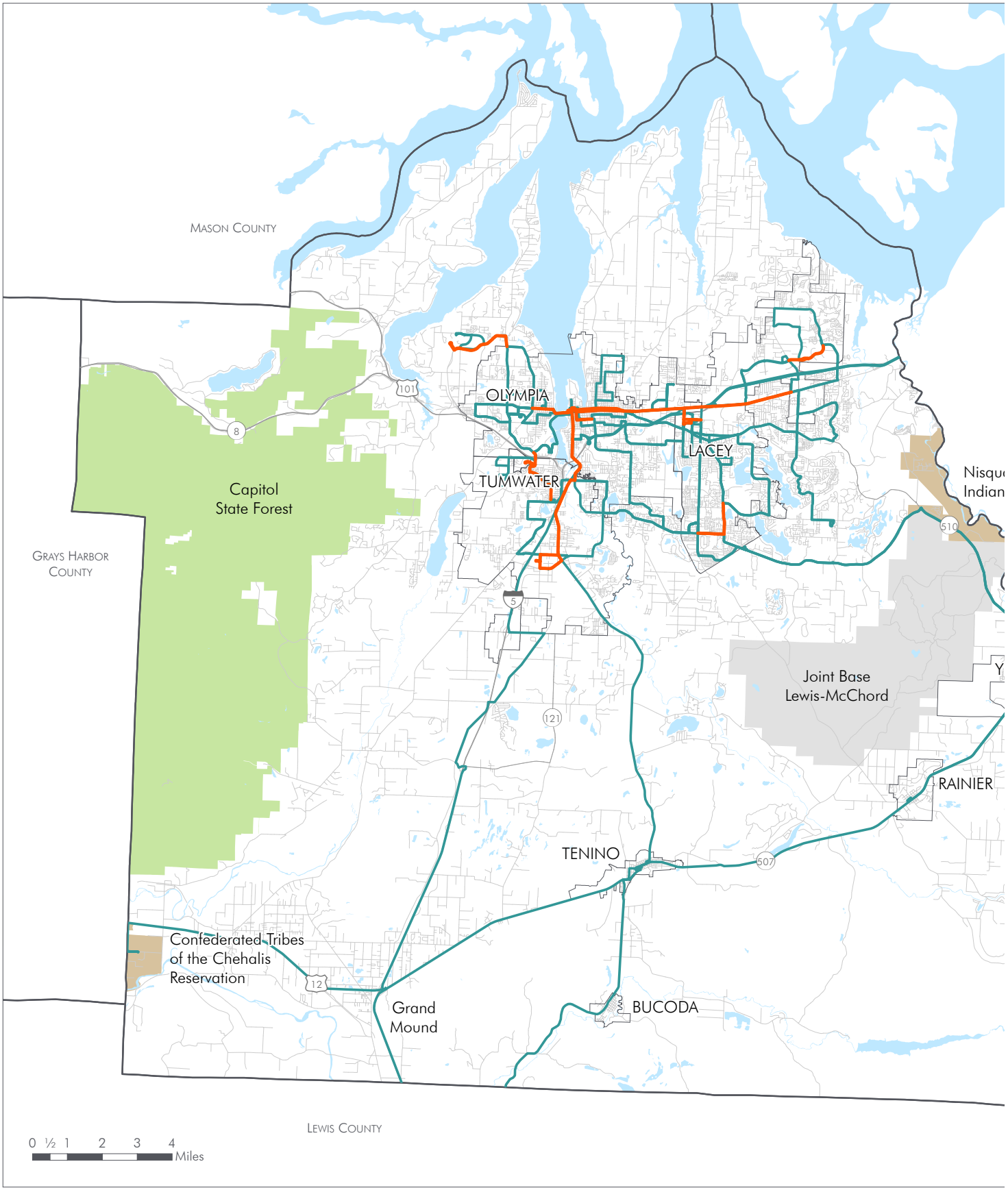

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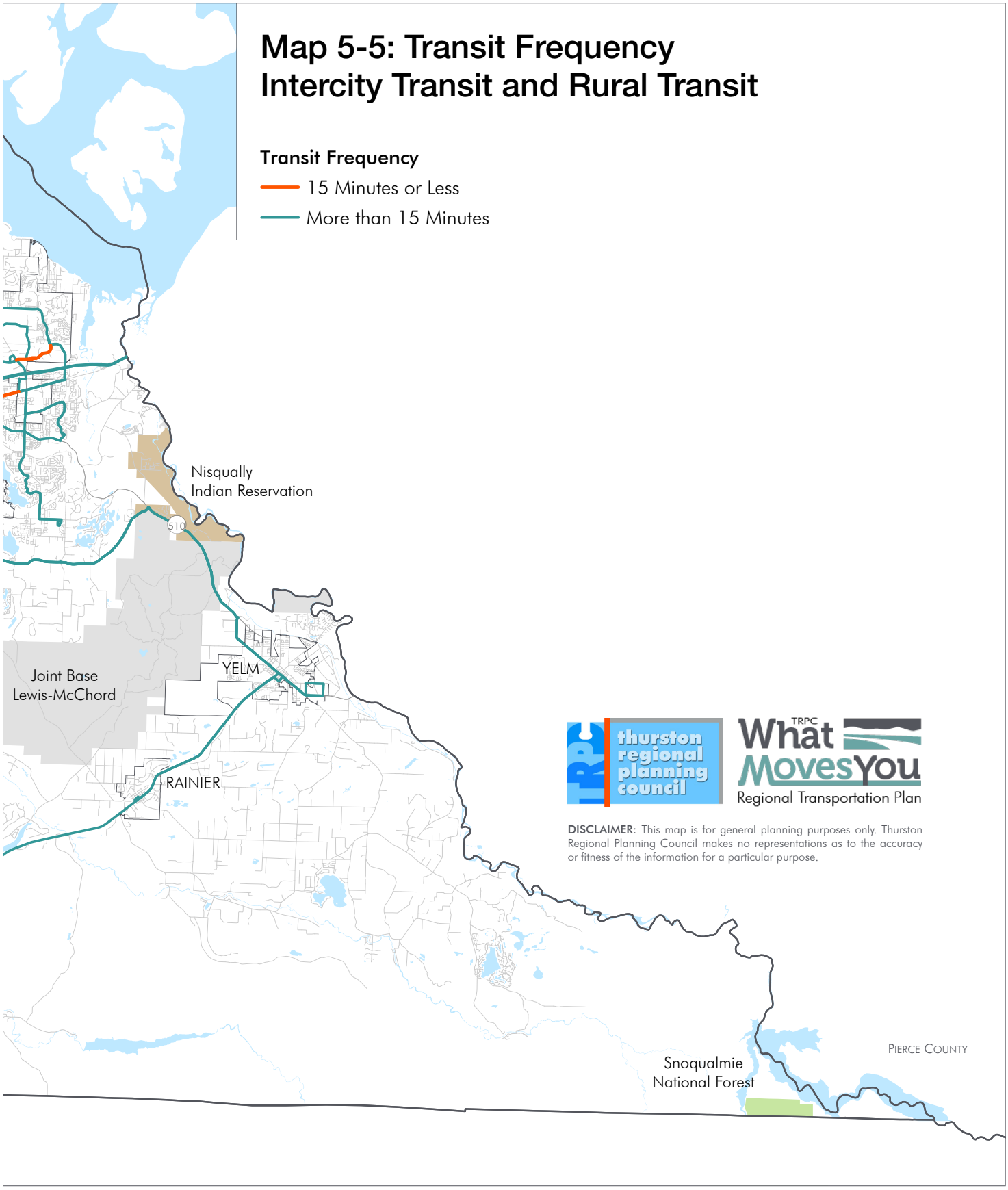
Map 5-5: Transit Frequency Intercity Transit and Rural Transit



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