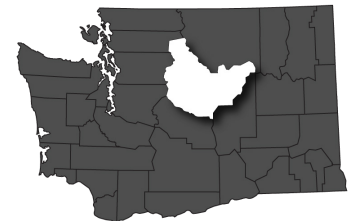




TRANSPORTATION2040

The Regional Transportation Plan for Chelan and Douglas Counties



Prepared by Chelan-Douglas Transportation Council

Additional copies of this document may be obtained by contacting:

Chelan Douglas Transportation Council
1350 McKittrick St, Suite B
Wenatchee, WA 98001
P: 509.663.9059
www.chelan-douglas.org

The Chelan-Douglas Transportation Council (CDTC) hereby gives notice that it is the policy of the agency to assure full compliance with Title VI of the Civil Rights Act of 1964 and the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America shall, on the grounds of race, color, sex, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which CDTC receives federal financial assistance.

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Title VI Discrimination Complaint Forms may be obtained from the CDTC at no cost by calling 509-663-9059



**Chelan-Douglas
TRANSPORTATION
COUNCIL**



2015 Chairman: Mike Mackey, Port of Chelan County
Jeff Wilkens, Executive Director
1350 McKittrick Street, Suite B, Wenatchee, WA 98801
(509) 663-9059 | chelan-douglas.org

RESOLUTION No. 5-2015 OF THE CHELAN-DOUGLAS TRANSPORTATION COUNCIL
ADOPTING “TRANSPORTATION 2040,” THE REGIONAL TRANSPORTATION PLAN.

WHEREAS, the Chelan-Douglas Transportation Council (CDTC) is the lead agency for the Metropolitan Planning Organization and the Regional Transportation Planning Organization with responsibility for transportation planning and programming in the *Wenatchee Metropolitan Statistical Area* encompassing Chelan County and Douglas County;

WHEREAS, “Transportation 2040” addresses the federal metropolitan planning requirements in 23 U.S.C 134 and 49 U.S.C 5303; and

WHEREAS, “Transportation 2040” addresses the Washington state regional transportation planning requirements in 47.80 RCW; and

WHEREAS, the “Regional Transportation Plan” addresses all urban, rural and small city areas in Chelan and Douglas counties; and

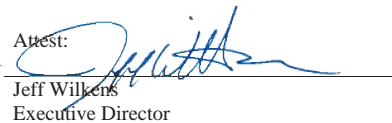
WHEREAS, the “Transportation 2040” addresses regionally-significant transportation deficiencies, opportunities and recommends transportation system improvements in urban, rural and small city areas throughout Chelan and Douglas counties; and

WHEREAS, “Transportation 2040” hereby replaces the previous metropolitan transportation plan “Confluence 2030” as well as the previous NCRTPO 2009 Regional Transportation Plan;

NOW, THEREFORE, BE IT RESOLVED that the CDTC governing board adopts the “Transportation 2040” as the Metropolitan/Regional Transportation Plan for the region.

Adopted by the Governing Board of the CDTC at a regular meeting thereof held on the 10th day of September, 2015.


Mike Mackey
2015 Board Chairman

Attest: 
Jeff Wilkens
Executive Director

CHELAN-DOUGLAS TRANSPORTATION COUNCIL

2015 Chairman:

Commissioner Mike Mackey
Port of Chelan County

Dan Sarles
WSDOT North Central Region
Administrator

2015 Vice Chairman:

Mayor Steve Lacy
City of East Wenatchee

Commissioner Jerry Litt
Washington State Transportation
Commission (non-voting)

Mayor Jeff Gomes
City of Cashmere

Mayors (or designee) of all remaining
incorporated small cities and towns
(non-voting)

Mayor Russell Clark
City of Rock Island

Mayor Frank Kuntz
City of Wenatchee

Commissioner Keith Goehner
Chelan County

Commissioner Ken Stanton
Douglas County

Commissioner Mark Spurgeon
Port of Douglas County

Richard DeRock
General Manager, LINK Transit



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Executive Director

Kathy Bruno,
Executive Assistant

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Senior Transportation Planner

David Fletcher,
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Director

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Douglas County:
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(vacant), Community Development

Chelan County:

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(vacant), Community Development
Director

Port of Douglas County:

Lisa Parks, Executive Director

Port of Chelan County:

Erik Howe, RH2 Engineering, Inc.

City of Cashmere:

Mark Botello, Community Development
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City of Chelan:

Dwayne VanEpps, Public Works Director

City of Entiat:

Susan Driver, City Administrator

City of Leavenworth:

Nathan Pate, Community Development
Director

City of Rock Island:

(vacant)

City of Waterville:

Martin Ramin, Public Works Director

City of Bridgeport:

Stewart Dezelle, Public Works Director

Town of Mansfield:

(vacant)

WSDOT:

Dave Bierschbach, Assistant Administrator
Terry Mattson, Planning Manager
Cindy McGlothern, Transportation Planner
Terry Berends, Maintenance Engineer
Paul Mahre, Local Programs Manager

Link Transit:

Bruce Phillips, Service & Facilities Planner

TRANSPORTATION 2040

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Section 3. Transportation System Improvements

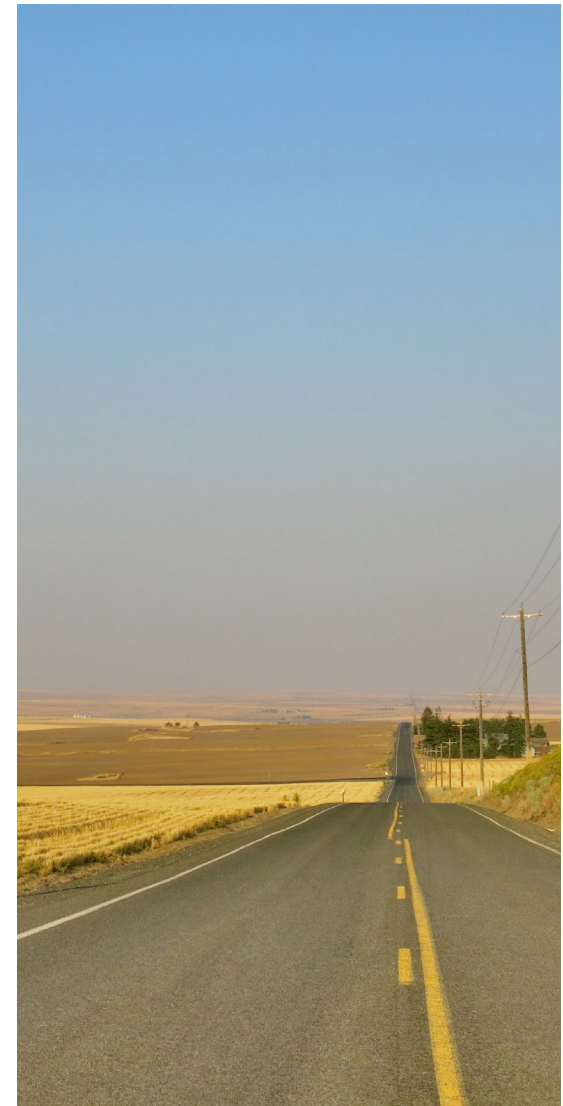
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Appendix A. Financial Assumptions and Revenue Forecast

Appendix B. Performance-Based Planning Process

Appendix C. Public Involvement

Appendix D. Environmental Impacts and Benefits



SUPPORTING DOCUMENTS

2014 Chelan-Douglas Public Opinion Survey

Regional Complete Streets Policy and Guidelines

2015 Chelan-Douglas Demographic Profile

Greater Wenatchee Bicycle Master Plan

Wenatchee Valley Urbanized Area Freight Plan

North Wenatchee Transportation Master Plan

SR 28 Wenatchee Eastside Corridor Study

2015–2018 Regional Transportation Improvement Program

All documents available at www.chelan-douglas.org



THE CHELAN- DOUGLAS REGION





Regional Setting

The Chelan-Douglas Metropolitan Planning Area (MPA) is located near the geographic center of Washington state (see Figure 1-1). It is made up of Chelan and Douglas Counties, which combine to form the Wenatchee-East Wenatchee Metropolitan Statistical Area (MSA). According to the Office of Financial Management (OFM), it has a population of approximately 115,000 and covers nearly 4,850 square miles.

The Wenatchee urbanized area is the region’s economic, cultural and transportation hub. It is situated in a narrow corridor, surrounded by steep terrain and bisected by the Columbia and Wenatchee Rivers. These geographic constraints present the area with many challenges that limit its options for addressing local and regional transportation issues.

The region’s geographic constraints are not limited to the Wenatchee Valley. Throughout Chelan County, and in parts

of Douglas County, steep terrain and water features create physical barriers that restrict transportation and development options. These restrictions create the need for efficient and well-planned land use patterns in the region’s Urban Growth Areas (UGA). Because transportation often shapes land use, it is important that the region’s transportation infrastructure supports development by creating a well-connected, multi-modal network in urban areas while preserving mobility throughout the region.



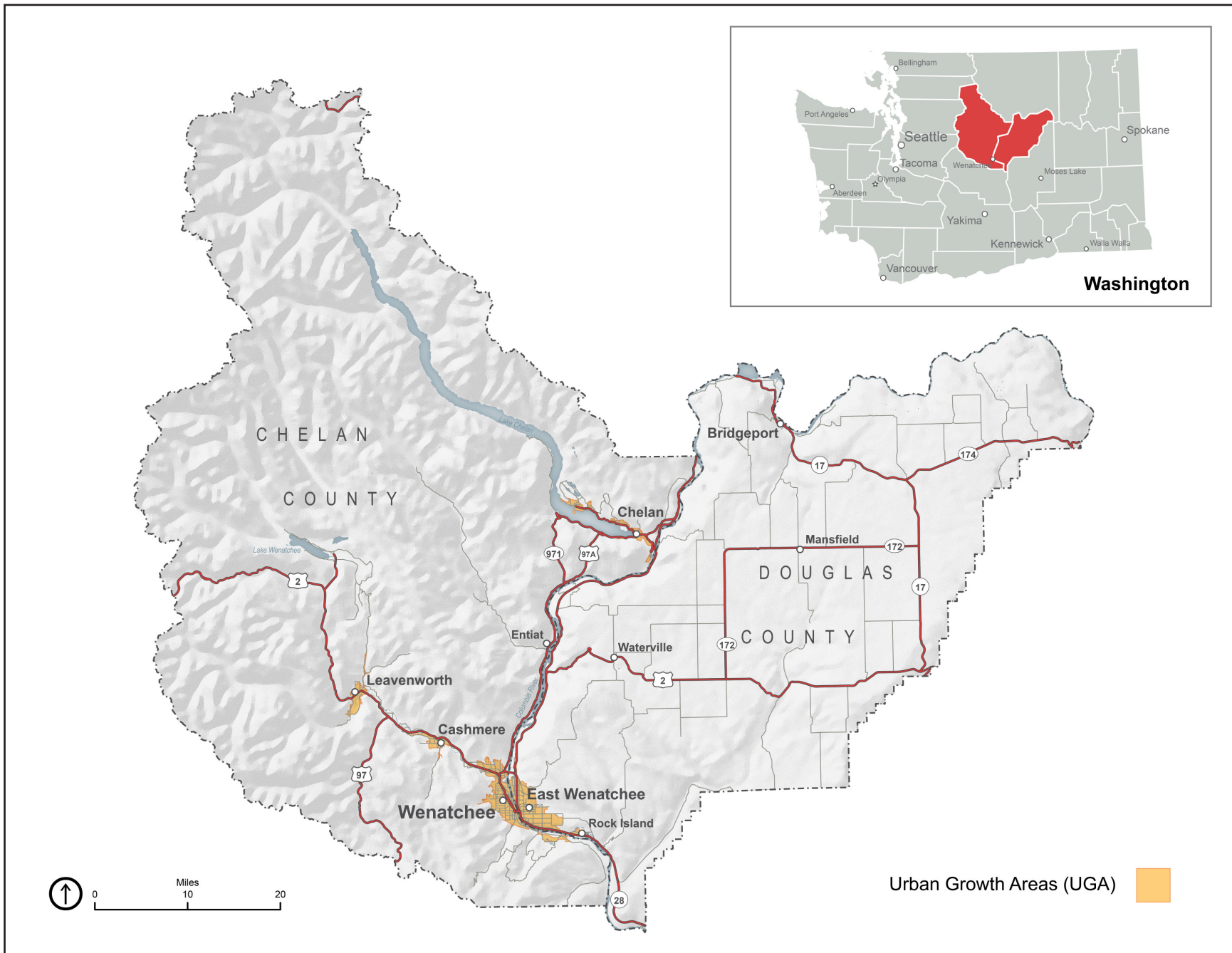


Figure 1-1: The Chelan-Douglas Region



Regional Transportation System

Because this plan is designed to provide a regional vision for future transportation investments that improve transportation for the region as a whole, it focuses on highways, county roads and city streets that are deemed regionally significant. It also addresses other regionally significant transportation infrastructure and services, which includes the following:

- Classified federal-aid arterial and collector highways and roads
- LINK Transit facilities and services, including roadways serving bus routes
- Railroads and rail freight intermodal facilities
- Public airports
- Regional multi-use pathways
- Bikeways designated in the Regional Bicycle Master Plan

Figure 1-2 shows highways, local roadways, airports, railroads and regional multi-use pathways included in the designated regional transportation system. Due to the plan's regional focus, the discussion of public transit and on-road bikeways is



approached at the system level, as opposed to identifying specific routes and the issues they may have.



Chelan-Douglas Regional Transportation System

Functional Class Roadways

- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local Roads
- Multi-Use Pathway
- ✈ Airport
- ⋯ Rail

* Public transportation not shown
 Map date: 25 Jun 2015

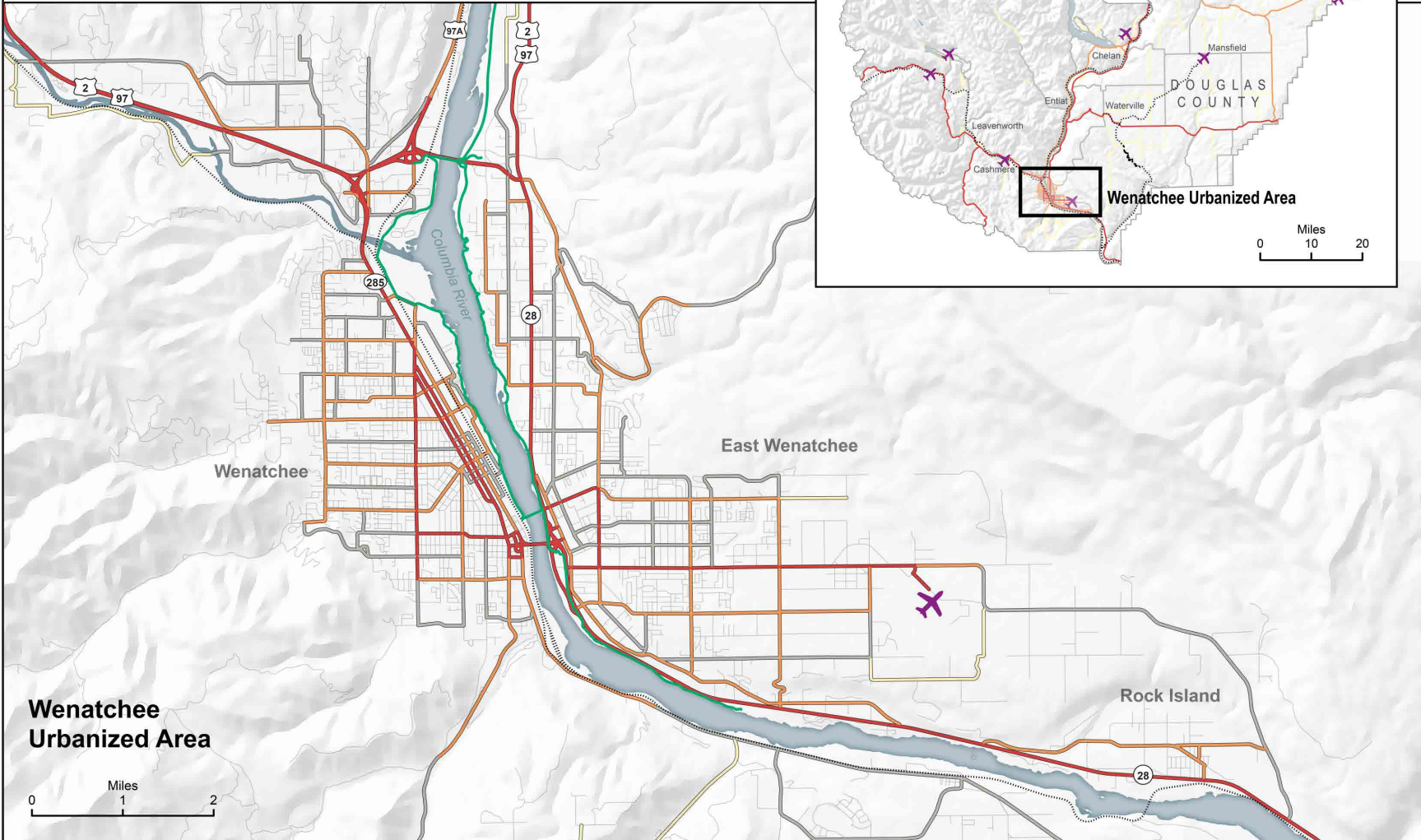
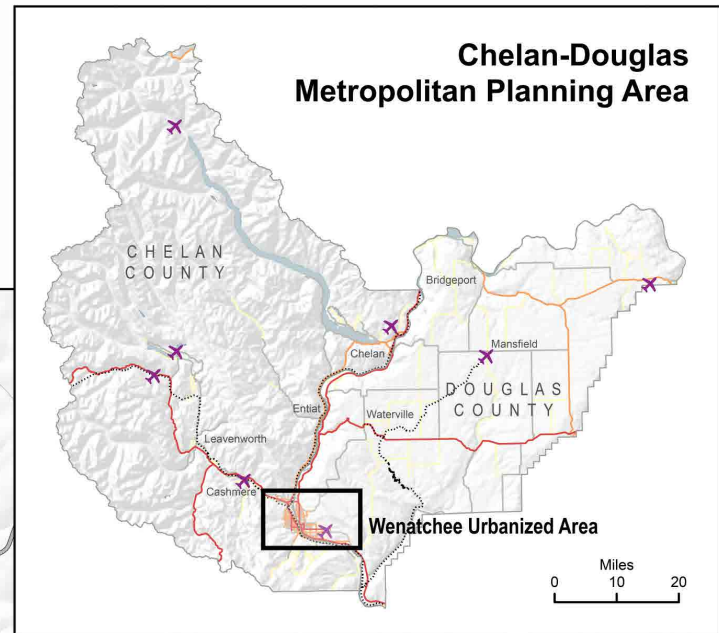


Figure 1-2: The Chelan-Douglas Regional Transportation System



Regional Demographic and Economic Trends

The Chelan-Douglas region has grown steadily over the past 65 years. As Figure 1-3 shows, its population has more than doubled since 1950. This trend is expected to continue. By 2040, the region’s population is projected to reach approximately 145,000.

Regional employment is expected to grow with population. As of 2012, the Chelan-Douglas region had more than 50,000 employees, with nearly 40,000 in Chelan County and 10,000 in Douglas County. When viewed in conjunction

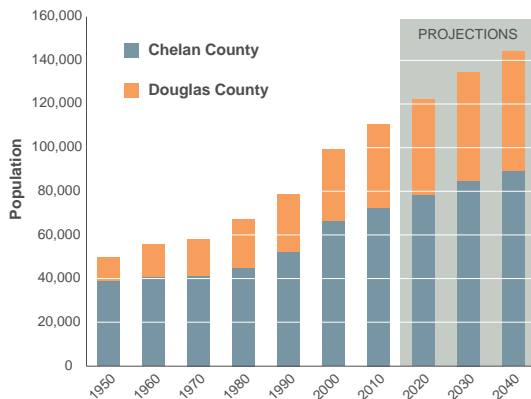


Figure 1-3: Regional population growth

Source: U.S. Census Bureau and OFM

with 2009–2013 American Community Survey (ACS) household data, these figures indicates a moderate jobs-housing imbalance exists in the region. This is problematic because it can result in greater commute times and put a strain on existing transportation infrastructure.

With less than 11,000 households, Douglas County contains approximately 0.8 jobs per household. The ratio is much higher in Chelan County, which has roughly 27,000 households and nearly 1.5 jobs per household. Figure 1-5 shows regional commuting patterns, which confirm this imbalance—only 3,078 individuals live in and work in Douglas County, while over 16,000 live in and work in Chelan County. If this trend continues, it will increase the strain on the regional transportation system, with more trips generated across the Columbia and Wenatchee Rivers. This is especially problematic because Chel-

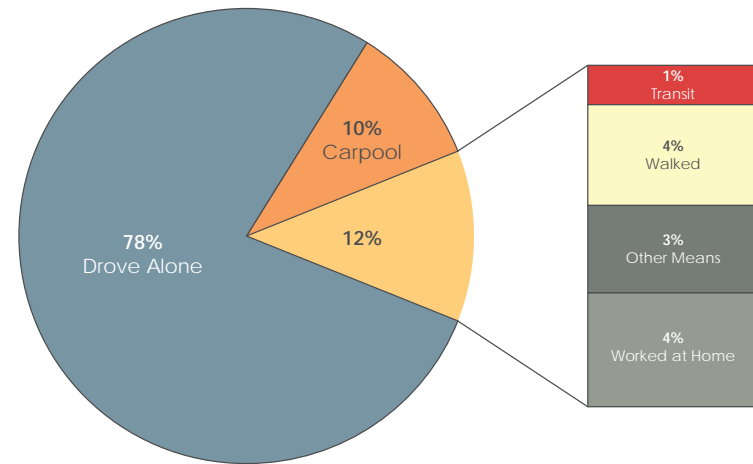


Figure 1-4: Primary means of getting to work in Chelan and Douglas Counties

Source: U.S. Census Bureau, 2009–2013 American Community Survey 5-year estimates

an County is only connected to Douglas County by two Bridges in the Wenatchee urban area.

The primary mode of commuting for the region’s 50,000 employees is to drive alone, as Figure 1-4 shows. Only 5 percent walked or took public transportation, while 10 percent carpooled to work. The mean commute time in the region was just over 18 minutes in 2012, according to the U.S. Census Bureau. Nearly one in four



Regional Commute Flow in the Chelan-Douglas Metropolitan Planning Area

| | Jobs | Households | Jobs per Household |
|----------------|--------|------------|--------------------|
| Chelan County | 39,583 | 27,220 | 1.5 |
| Douglas County | 10,776 | 13,976 | 0.8 |

Sources: On The Map, U.S. Census Bureau; 2009–2013 ACS 5-year estimates; Washington State Data Book, WA Office of Financial Management

Map date: 17 April 2015

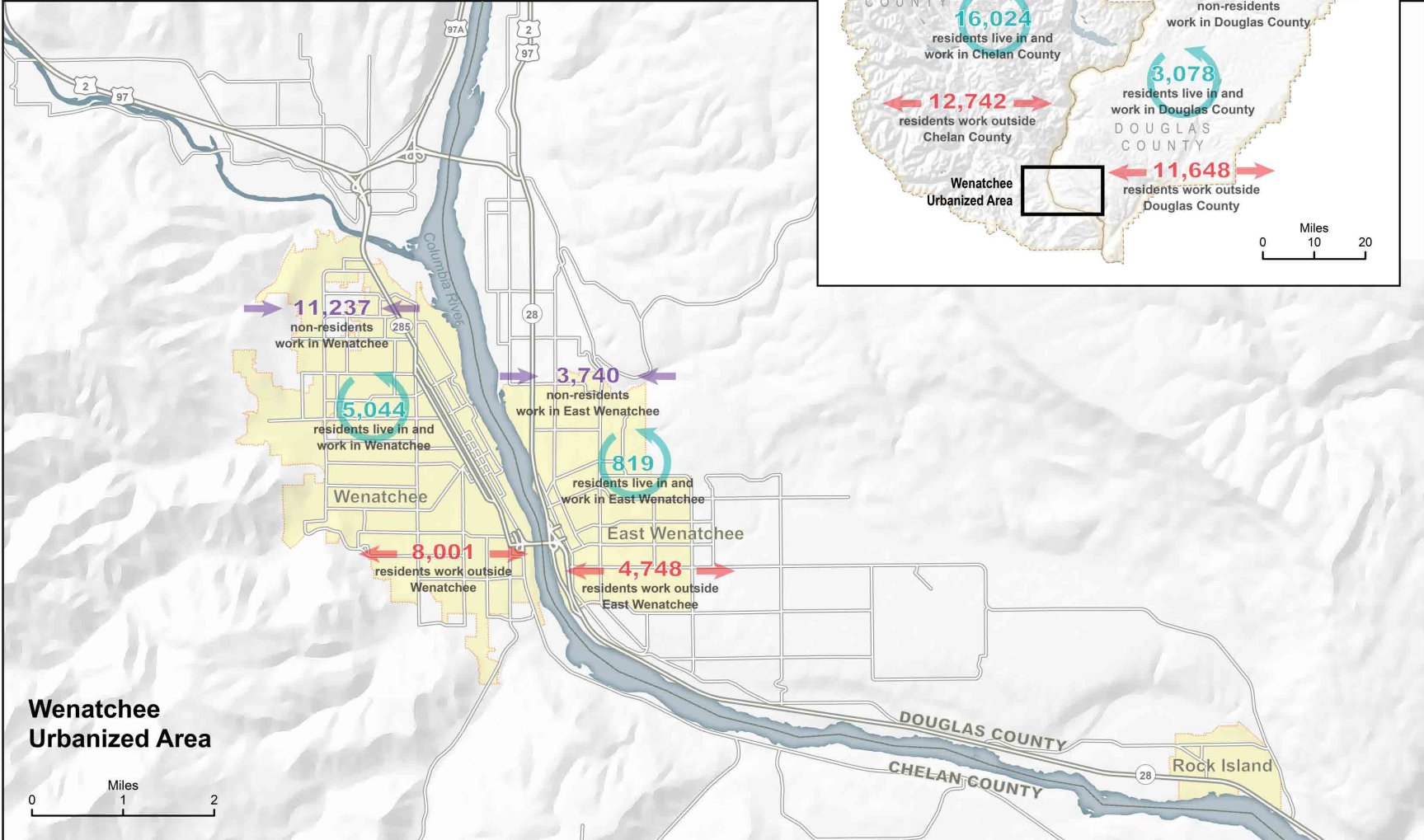
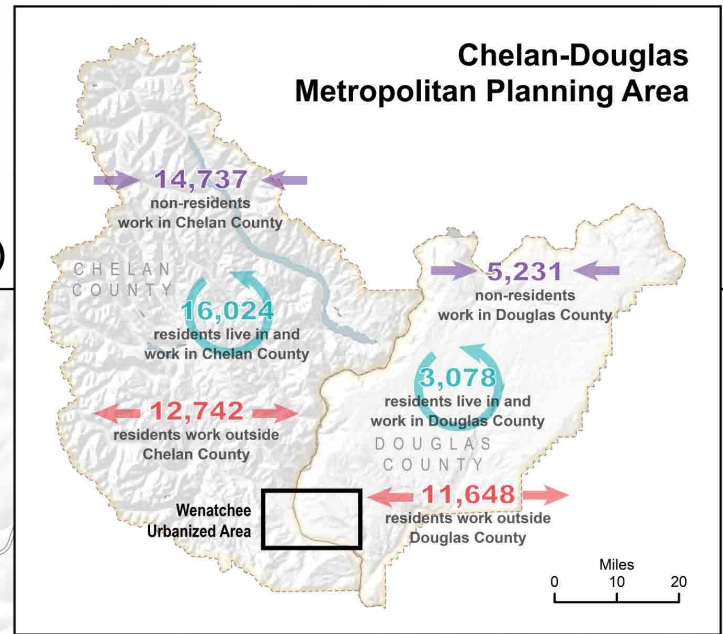


Figure 1-5: Chelan-Douglas Regional Commuting Patterns



workers had a commute time of less than 10 minutes. Commute times are substantially less than the national average of over 25 minutes, as well as the Washington state average of nearly 26 minutes. However, if the current jobs-housing imbalance and the preference for driving alone as a primary mode of commuting remain, the region's short commute times are likely to increase due to the limited options available for increasing the existing road network's capacity. Solving this issue will require strategies such as increasing the share of walking, bicycling, transit and carpooling. These mitigation measures, combined with implementing planned mixed use development and increasing job growth in Douglas County, have the potential to reduce the strain growth will put on the region's road network. This, in turn, would help keep com-

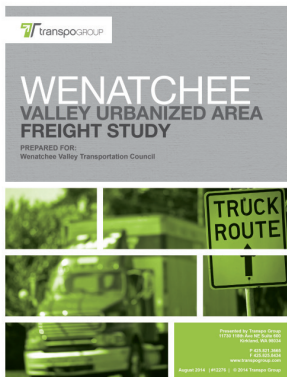
mute times low and quality of life high.

In addition to providing for efficient commuting, it is important that the regional



transportation system provide access and mobility for freight. As the hub of a larger economic region with significant commercial, agricultural and industrial activities, it is essential that freight be able to circulate through the Wenatchee urban area and the rest of the region. Due to population and employment growth in the region, freight mobility, like commuter

mobility, is likely to decrease over time without proactive planning. Because of this, it is important that the region consider the freight benefits of future transportation investments. The Wenatchee Valley Urbanized Area Freight Study provides cohesive freight plan for the region's urban area and identifies specific freight routes.



TRANSPORTATION POLICY FRAMEWORK





Federal, State and Regional Policy Context

The Chelan-Douglas Transportation Council (CDTC) is an intergovernmental forum for long-range planning to improve regionally significant transportation infrastructure and public transportation that will meet the needs of a growing region. Regional transportation planning and decision making takes place in a context that blends local, state and federal requirements and policy goals.

Federal Policy

National transportation policy is defined in the Moving Ahead for Progress in the 21st Century Act, referred to as MAP-21. It carries forward the requirement that metropolitan transportation plans address the following factors:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency
2. Increase the safety of the trans-

3. Increase the security of the transportation system for motorized and non-motorized users.
4. Increase the accessibility and mobility of people and for freight
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and planned growth and economic development patterns



6. Enhance the integration and connectivity of the transportation system, across and between modes, people and freight
7. Promote efficient system management and operations
8. Emphasize the preservation of the existing transportation system

MAP-21 expands the metropolitan planning process with a new requirement for performance-based planning by creating the following new responsibilities:

- MPOs will establish performance targets that address the MAP-21 surface transportation performance measures for the categories of safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability and reduce project delivery delays
- The performance targets selected by an MPO will be coordinated with the State and transit providers to ensure consistency to the maximum extent practicable
- The long-range transportation

plan will include a description of the performance measures and performance targets used in assessing the performance of the transportation system

- The transportation improvement program will include a description of the anticipated effect of the TIP toward achieving the performance targets established in the plan, linking investment priorities to those performance targets

State Policy

The Washington Transportation Plan (WTP 2035) identifies strategies for achieving the following six transportation policy goals articulated in statute:

1. Economic vitality: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy
2. Preservation: To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services
3. Safety: To provide for and improve

the safety and security of transportation customers and the transportation system

4. Mobility: To improve the predictable movement of goods and people throughout Washington state
5. Environment: To enhance Washington’s quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment
6. Stewardship: To continuously improve the quality, effectiveness, and efficiency of the transportation system

State policy for regional transportation planning is further shaped by the Growth Management Act, which contains provisions for a Regional Transportation Planning Organization (RTPO) program that extends regional planning out to rural areas that surround and are interconnected with metropolitan areas.



Regional Policy

CDTC carries out federal and state transportation planning provisions jointly through a unified planning area boundary covering Chelan and Douglas Counties.

Mission Statement: The Chelan-Douglas Transportation Council is to enhance the livability and prosperity of the region by working together to advance the transportation needs of its people, places and industries.

The CDTC Mission Statement serves as the primary policy foundation for Transportation 2040, further articulated by the six transportation goals show in Table 2-1.

The six regional policy goals are applied in all regional and corridor planning efforts. For Transportation 2040 they are the basis for evaluating the performance and effectiveness of the transportation system. However, not all of the goals translate into easily-measured performance indicators, particularly those related to community and economic development.

Table 2-1: Transportation 2040 Goals

| | |
|---|--|
| Goal 1: Public Involvement | Develop awareness of community preferences and stakeholder concerns and provide information to citizens, businesses, interest groups and other interested parties including the low-income, elderly, minorities and non-English speakers |
| | Build community support for Council plans and proposals |
| Goal 2: Intergovernmental Coordination | Align policy objectives relating to land use, economic development & transportation |
| | Foster member jurisdiction support for Council decisions |
| | Support regional economic and community development plans |
| | Promote regional strategies to increase transportation funding |
| Goal 3: Transportation Safety | Develop actionable plans to address urban, rural and small city transportation needs |
| | Improve safety for vehicle drivers, transit riders, bicyclists and pedestrians |
| Goal 4: Access and Mobility | Develop actionable plans for maintaining adopted performance standards for vehicle drivers, transit riders, bicyclists and pedestrians |
| | Improve freight access and mobility |
| Goal 5: Financial Stewardship | Whenever possible, integrate bicycle, pedestrian and transit improvements with roadway maintenance, preservation and improvements |
| | Apply technology to increase roadway capacity and safety |
| | Encourage "access management" to maximize the capacity of major roadways |
| | Maximize the use of public transportation, bicycling, walking and carpooling in order to expand the capacity of the existing roadway system |
| | Ensure that financial resources allocated to transportation improvements maximize community benefits |
| Goal 6: Environmental Stewardship | Balance future investments in roadways, public transportation and non-motorized infrastructure |
| | Avoid and minimize negative environmental and societal impacts from transportation improvements |
| | Enhance the natural and social environment when possible |



Transportation 2040 envisions transportation investment decisions as not only addressing transportation-specific challenges and opportunities, but also as a way to achieve other important non-transportation goals that communities are pursuing through community and economic development efforts.

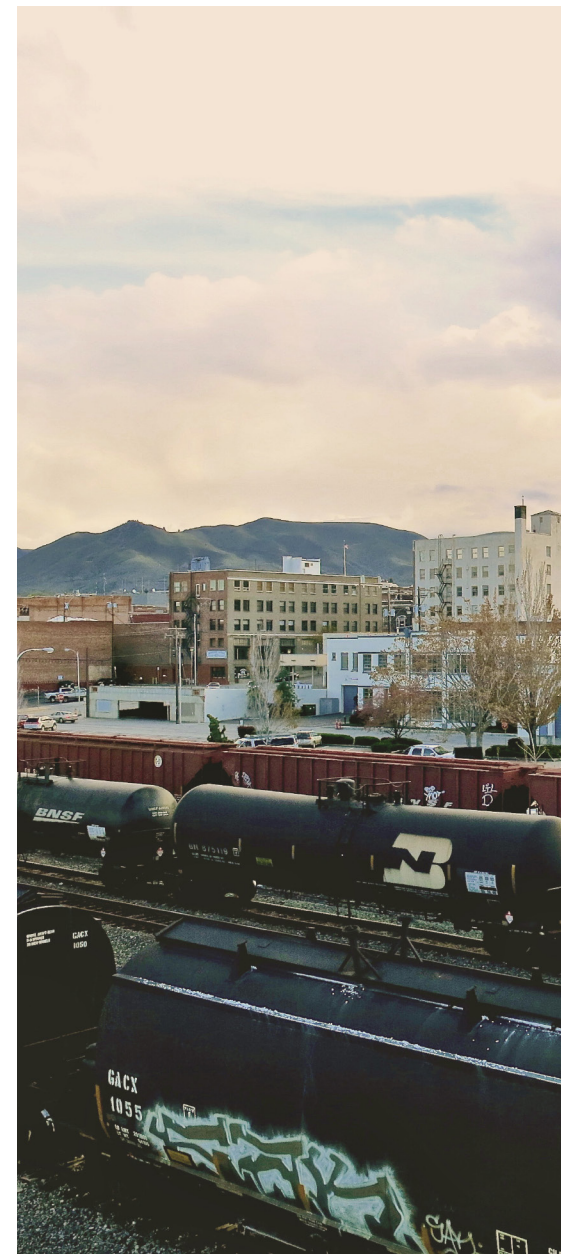
CDTC recognizes that economic development provides increases in the local tax base that, in turn, have a substantially positive impact on funding for stewardship of the transportation system, in particular maintenance and preservation. However, given the difficulties of applying objective scoring measures that capture the wide range of potential economic development opportunities that can be leveraged with transportation investment, this plan does not measure economic impact or benefit on a project-by-project basis. Economic development is often tied to emerging opportunities, making them even more difficult to anticipate and quantify years in advance.

Transportation decision making is also informed by public opinion and input. CDTC engaged the public early in the development of Transportation 2040 by

conducting a public opinion survey of over 500 citizens from all corners of the two-county region. The survey methodology provided for a statistically valid representation of minority, low-income, elderly and non-English speaking populations and identified areas where the preferences and opinions of the public at-large differ from the preferences and opinions of underrepresented and minority populations.

As a whole, the public voiced a very clear emphasis on maintaining the existing transportation system in a state of good repair. The survey also indicated strong support, particularly from low-income and minority populations, for public transit and more pedestrian infrastructure (full details on public outreach and the public opinion survey are found in the appendices).

Along with the transportation-specific performance measures explained below, Transportation 2040 encourages decision makers to make project selection decisions that include an assessment of economic opportunity and that respond to the priorities and preferences of the public.



Transportation System Performance Measures

Under the new MAP-21 federal framework, the USDOT defines performance-based decision making as “the practice of setting goals and objectives; an ongoing process of selecting measures, setting targets, using measures in decision-making to achieve desired performance outcomes; and reporting results.” In simple terms, performance-based planning uses data to inform long-term and short-term investment decisions and links transportation performance to goals.

At this point in time the MAP-21 performance reporting targets are under development. CDTC will revisit the Transportation 2040 performance measures and make any modifications necessary to comply with the emerging target setting and reporting system. In the meantime, the assessment of transportation system performance in Transportation 2040 is based on the metrics shown in Table 2-2. Additionally, Figures 2-1 through 2-6 show the results of CDTC analyses examining several of these performance measures. Others, such as air quality, are waiting

Table 2-2: Transportation 2040 Performance Measures

| PERFORMANCE CATEGORY | PERFORMANCE MEASURES | PERFORMANCE TARGETS |
|---|---|---|
| ROADWAY CONDITION Measured on federal-aid roadways | Pavement Structural Condition (PSC) Rating Scale | 100% of regional system in “Good” or “Fair” condition |
| SAFETY Measured on federal-aid roadways for all modes of transportation | Number of crashes resulting in fatalities and serious and disabling injuries | Zero fatalities |
| | Rate of crashes resulting in fatalities and serious and disabling injuries | Continuous decline in rate of serious and disabling injuries |
| DRIVING (Vehicle Mobility) Measured on federal-aid roadways | Intersection Level-of-Service (LOS) | LOS “D” Rural Areas, Small Cities, US 2, US 97 & SR 28 LOS “E” Urban Corridors |
| | Ratio of Peak Hour Vehicles to Roadway Lane Capacity (V/C Ratio) | LOS “E-Averaged” in Wenatchee Central Business District Roadway V/C Ratio < 1.0 |
| WALKING (Pedestrian Mobility & Comfort) Measured on federal-aid roadways inside Urban Growth Areas | Continuous sidewalk on both sides of roadway | Continuous progress toward 100% ADA compliant pedestrian accommodation Exemption for “Limited Access” sections of state highways |
| | Sidewalks buffered minimum 4’ from edge of vehicle travel lane on Principle Arterials | |
| CYCLING (Bicycle Mobility & Comfort) Measured inside UGAs on public roads designated as “Bikeways” in an adopted Bicycle Master Plan | Presence of bikeway facility consistent with adopted Bicycle Master Plan | Continuous progress toward full implementation of planned bicycle accommodation |
| TRANSIT | Number of passenger trips per year | Continuous increase in trips above rate of population growth |
| AIR QUALITY | Estimated metric tons of Greenhouse Gas emissions based on region wide Vehicle Miles Traveled (VMT) | Continuous decrease in per capita Greenhouse Gas emissions |



future MAP-21 reporting and have not yet been evaluated due to a lack of data.

These performance measures are to be used as supporting tools for transportation investment decision making. For example, roadways with high collision, injury and/or fatality rates, identified in Figure 2-2, should be evaluated for potential safety improvements. Likewise, pedestrian infrastructure spending should be prioritized in areas with high demand for those facilities, identified in Figures 2-4 and 2-5.



**Roadway Condition in the
Chelan-Douglas Metropolitan Planning Area**

PSC Category

- Good
- Fair
- Poor
- Unknown

Map date: 21 May 2015

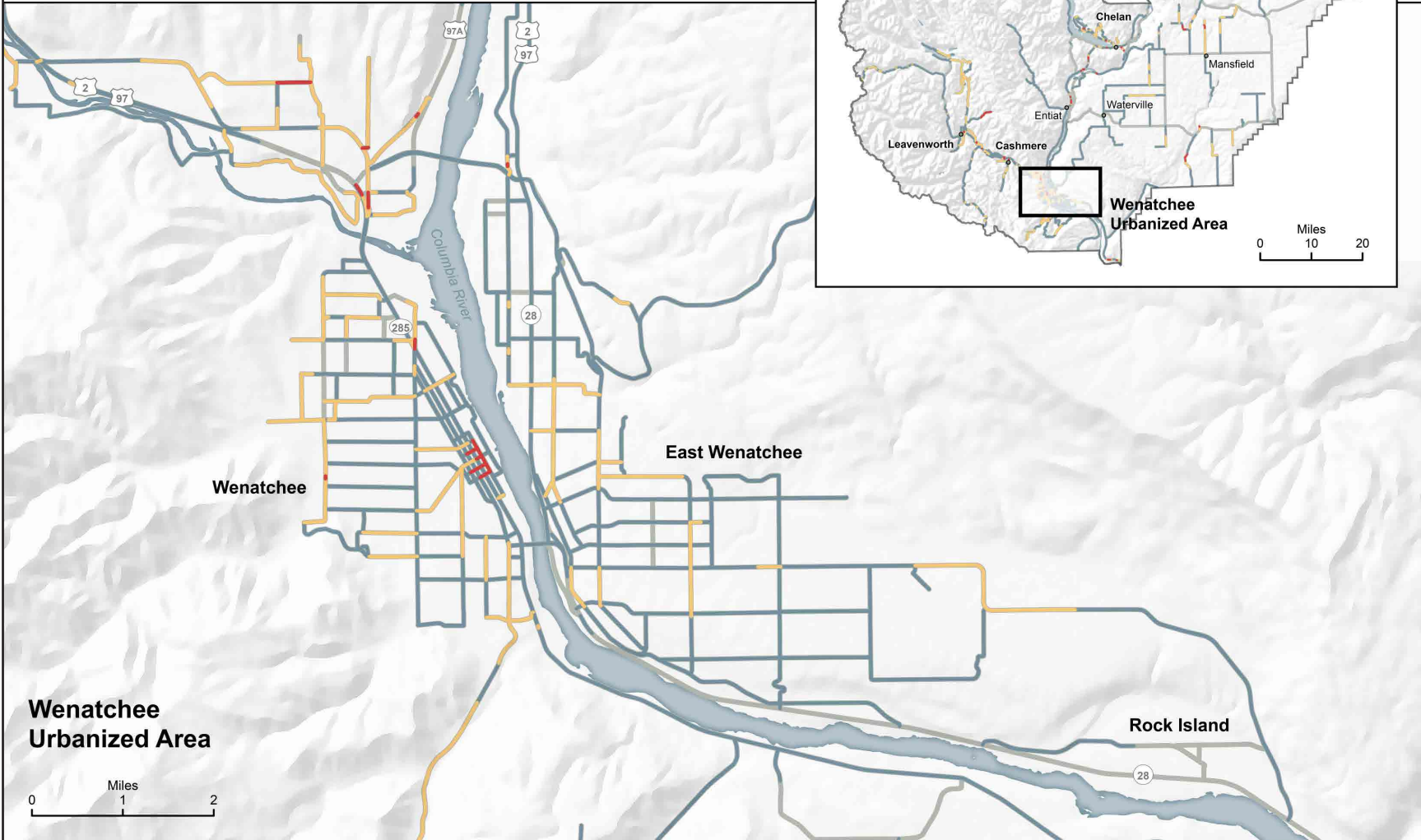
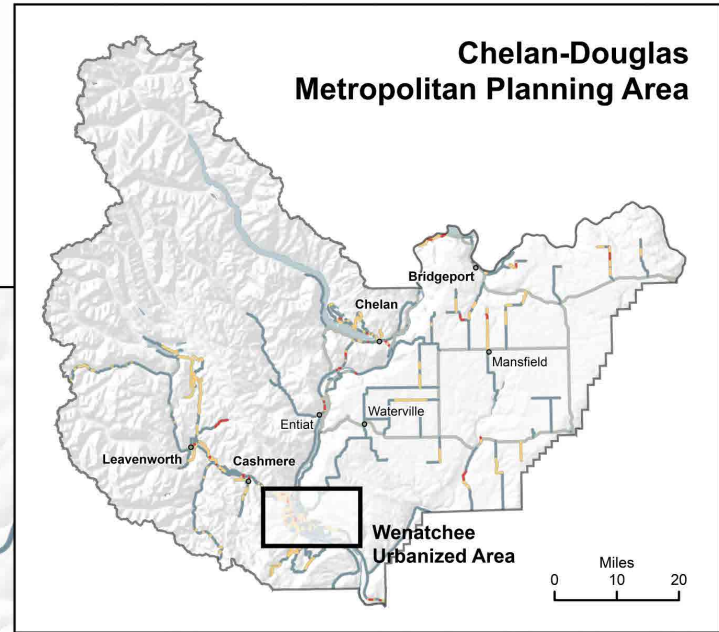
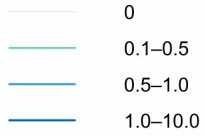


Figure 2-1: Chelan-Douglas Roadway Conditions

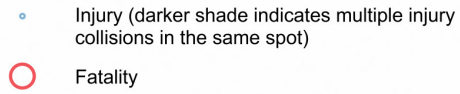


Roadway Collision Severity Index, 2010–2014

Severity Index Score*

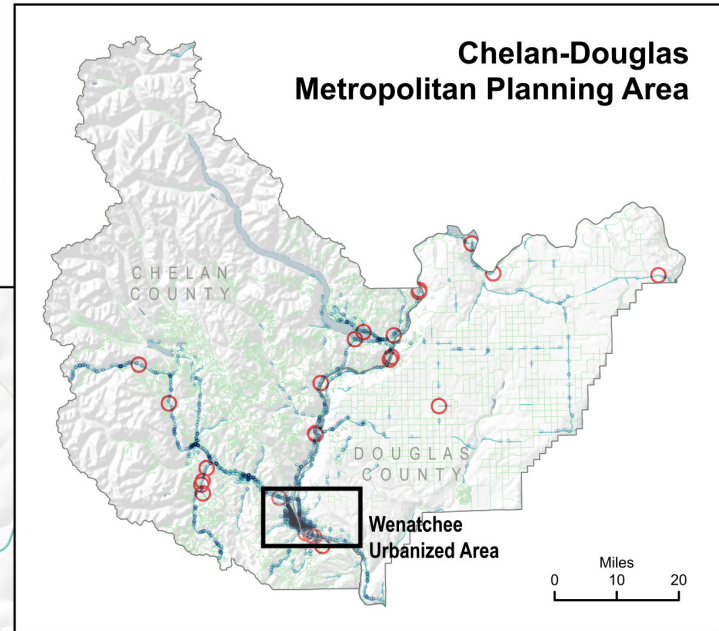


Collisions Resulting in Injury



*Severity Index evaluates frequency and severity of collisions for a given segment of road. It is adjusted to a scale of 0 to 10, with a higher number indicating high frequency and severity of collisions. Its is calculated as the following: $(\text{number of collisions} + (\text{injury} \times 5) + (\text{fatality} \times 10)) / \text{Segment Length}$.

Map date: 24 Apr 2015



Collision Data Source: WSDOT Crash Data and Reporting Branch
Under Section 409 of Title 23 of the United States Code, collision data is prohibited from use in any litigation against state, tribal or local government that involves the location(s) mentioned in the collision data. All collision locations are approximate and for general reference purposes only.

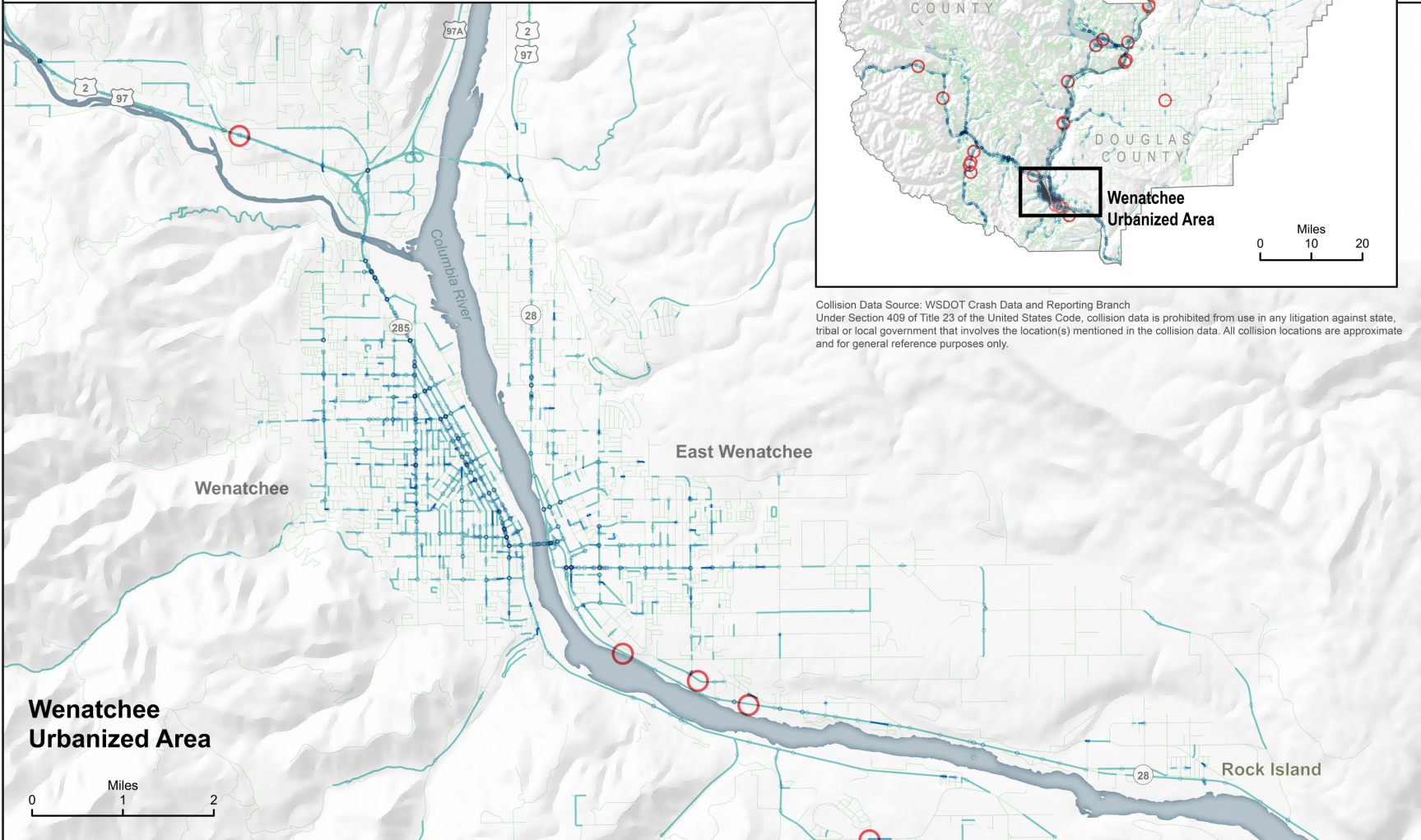


Figure 2-2: Transportation Safety on Roadways in the Chelan-Douglas Region



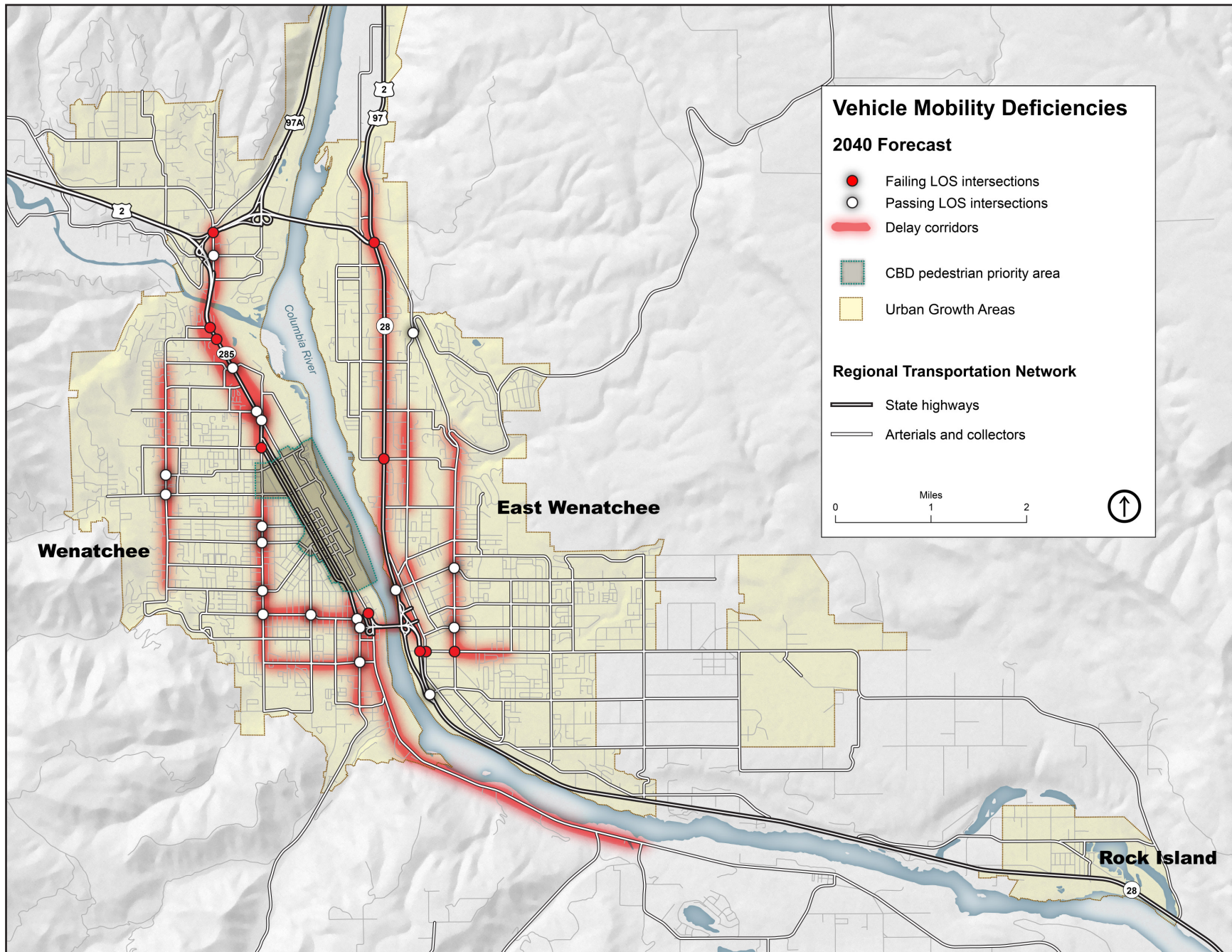


Figure 2-3: 2040 Vehicle Mobility Deficiencies



Pedestrian Demand and Deficiencies: Urban Area Detail

Pedestrian Demand Index

- < 4
- 4-8
- 8-16
- 16-35

Pedestrian Deficiencies

Pedestrian deficiencies include all functionally classified roadways in Urban Growth Areas without continuous sidewalks on both sides of the street. Local agencies are encouraged to use the Pedestrian Demand Index and the Regional Complete Streets Guiding Principles to determine appropriate pedestrian accommodations.

The Pedestrian Demand Index considers a variety of factors to determine the amount of demand for pedestrian facilities on a given street. These factors include: population and employment density, intersection density, distance to schools, distance to transit, and land use character.



Map date: 15 Jun 2015

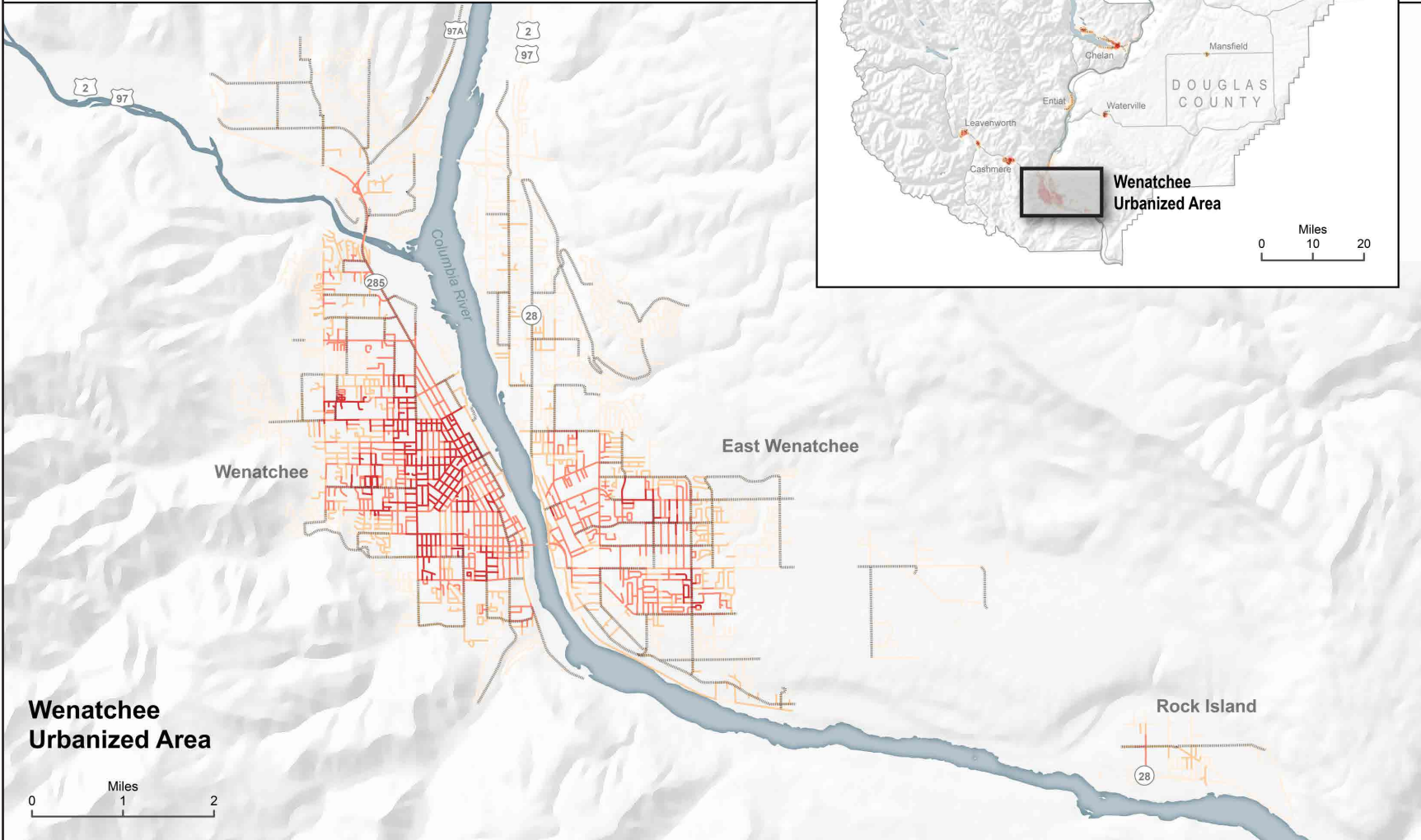
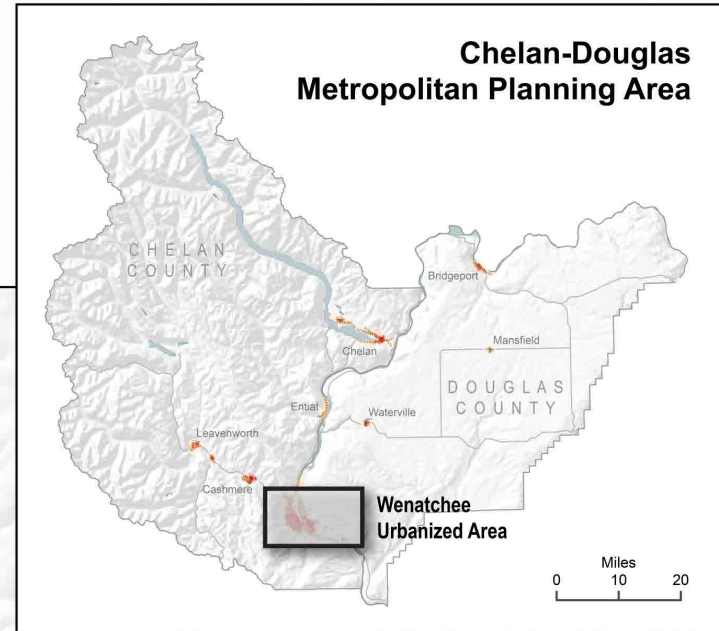


Figure 2-4: Pedestrian Demand and Deficiencies, Urban Area Detail



Pedestrian Demand: Rural Area Detail



Pedestrian Demand Index

- < 4
- 4–8
- 8–16
- 16–35

Pedestrian Deficiencies

Pedestrian deficiencies include all functionally classified roadways in Urban Growth Areas without continuous sidewalks on both sides of the street. Local agencies are encouraged to use the Pedestrian Demand Index and the Regional Complete Streets Guiding Principles to determine appropriate pedestrian accommodations.

The Pedestrian Demand Index considers a variety of factors to determine the amount of demand for pedestrian facilities on a given street. These factors include: population and employment density, intersection density, distance to schools, distance to transit, and land use character.

Map date: 07 Aug 2015

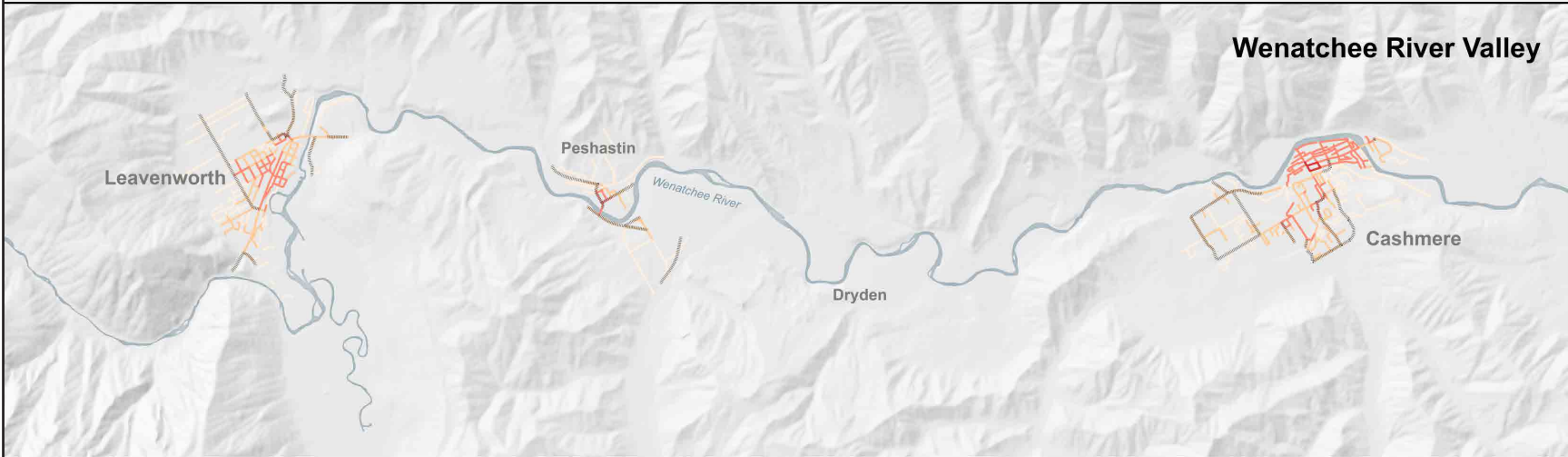


Figure 2-5: Pedestrian Demand and Deficiencies, Rural Area Detail



Pedestrian Demand: Rural Area Detail

Pedestrian Demand Index

- < 4
- 4–8
- 8–16
- 16–35

----- Pedestrian Deficiencies

Pedestrian deficiencies include all functionally classified roadways in Urban Growth Areas without continuous sidewalks on both sides of the street. Local agencies are encouraged to use the Pedestrian Demand Index and the Regional Complete Streets Guiding Principles to determine appropriate pedestrian accommodations.

The Pedestrian Demand Index considers a variety of factors to determine the amount of demand for pedestrian facilities on a given street. These factors include: population and employment density, intersection density, distance to schools, distance to transit, and land use character.

Map date: 17 Aug 2015

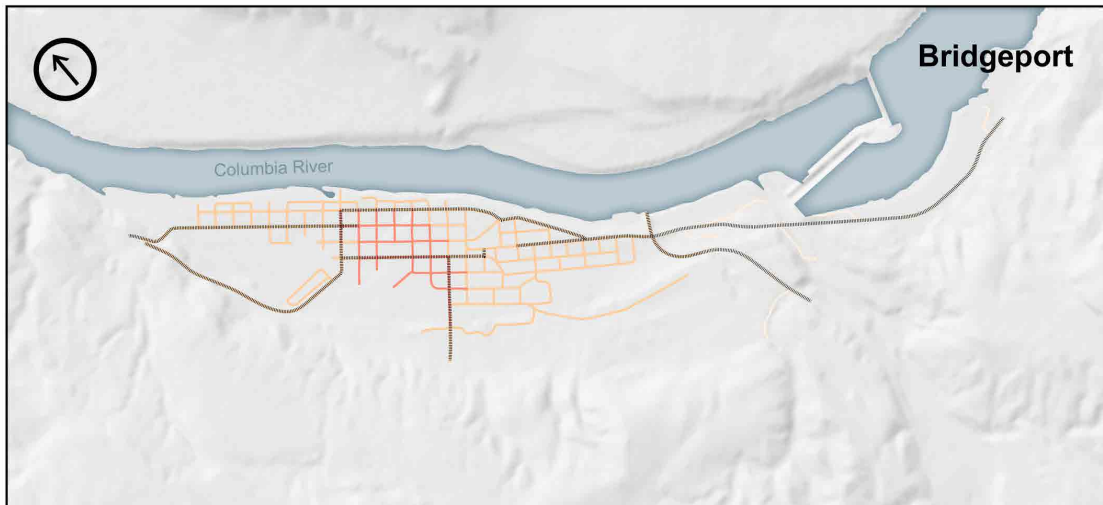
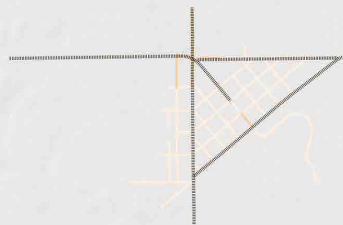


Waterville



Entiat

Mansfield

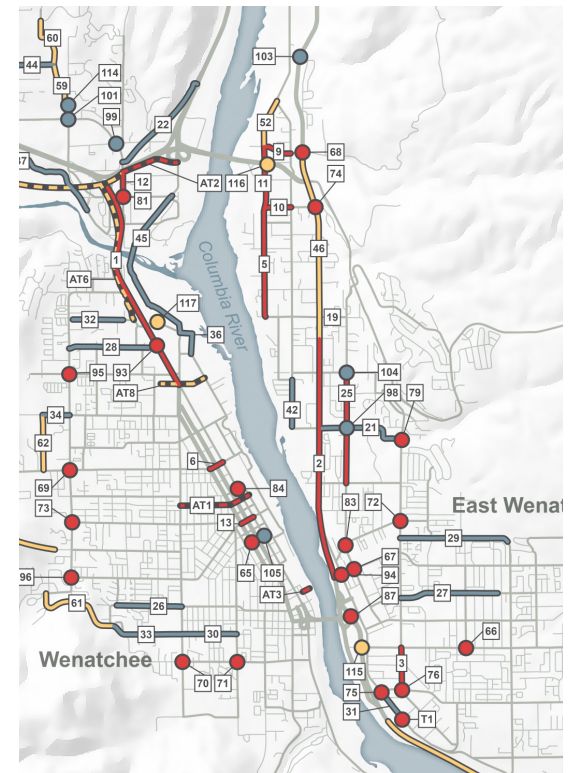


Bridgeport

Figure 2-6: Pedestrian Demand and Deficiencies, Additional Rural Area Detail



TRANSPORTATION SYSTEM IMPROVEMENTS





Transportation 2040 Investment Categories

Transportation 2040 investment expenditures in the Chelan-Douglas region are grouped into three major categories:

1. System Preservation
2. System Improvements
3. System Expansion

System Preservation consists of maintaining and taking care of our existing

transportation network, while System Improvements upgrade and modernize the existing transportation network to make it function better. System Expansion, on the other hand, creates additional capacity by adding lanes to an existing roadway, or creating an entirely new roadway, trail or transit service.

The total investment needed through 2040 in each of these categories was determined by compiling cost estimates for individual transportation investment projects. These were obtained from

local agency plans and Transportation Improvement Programs (TIP), as well as CDTC analyses of the regional transportation system's current deficiencies using the performance measures shown in Table 2-2.

In total, this process identified nearly \$2.8 billion in total need system wide across all three investment categories, through 2040. Based on the plan's funding assumptions, there will be sufficient revenue to pay for approximately 56 percent of this need. This leaves nearly \$1.2 billion



dollars in unfunded need across all categories. Figure 3-1 shows the breakdown of funded and unfunded needs in the region, by investment category. Unfunded

needs are broken down further by those on locally maintained roads and those maintained by the State of Washington.

The transportation improvement projects identified in Figures 3-2, 3-3, and the corresponding table that follows, distinguish between those projects that are cost-feasible within forecasted revenue, and the remaining “vision” projects that would require a new source of funding to bring to fruition.

Transportation 2040 lays out a funding strategy that strikes a careful balance between adequate funding for system preservation versus expenditures on system improvement and expansion. The funding plan only covers 74 percent of needed revenue for system preservation; many existing sources of revenue are limited to system improvements.

Overall the need for additional revenue is significant. The region will need to think carefully about potential strategies for securing additional state and federal funds beyond those assumed in the 2040 revenue forecast (as detailed in the appendices), including the possibility of pursuing a new local or regional mechanism for increasing revenue.

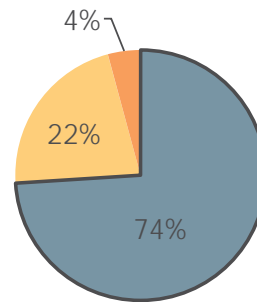
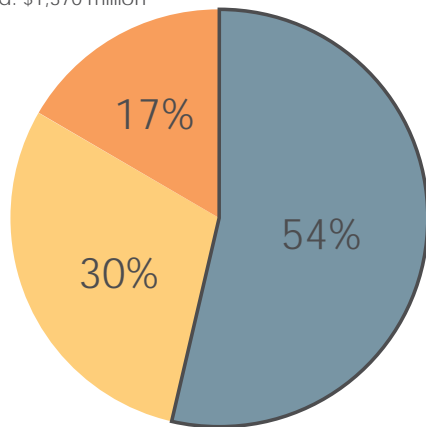
Percent of System Needs Funded by Transportation 2040

- Projects Funded with Available Revenues
Includes both state and local
- State Unfunded Need
- Local Unfunded Need
includes LINK Transit

Figures may not sum to total due to rounding

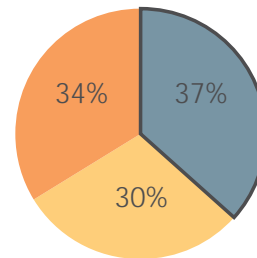
Overall System

Funded: \$1,587 million
Unfunded: \$1,370 million



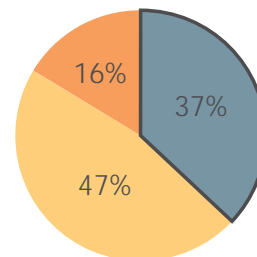
System Preservation

Funded: \$993 million
Unfunded: \$349 million



System Improvements

Funded: \$359 million
Unfunded: \$620 million



System Expansion

Funded: \$235 million
Unfunded: \$401 million

Figure 3-1: Funded and unfunded need by investment category

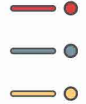


Transportation 2040 System Improvements: Urban Area Detail

Active Transportation Projects



Expansion, Upgrade and Traffic Operations Projects



Phase 1: 2016–2027

Phase 2: 2028–2040

Vision

Map date: 05 Aug 2015

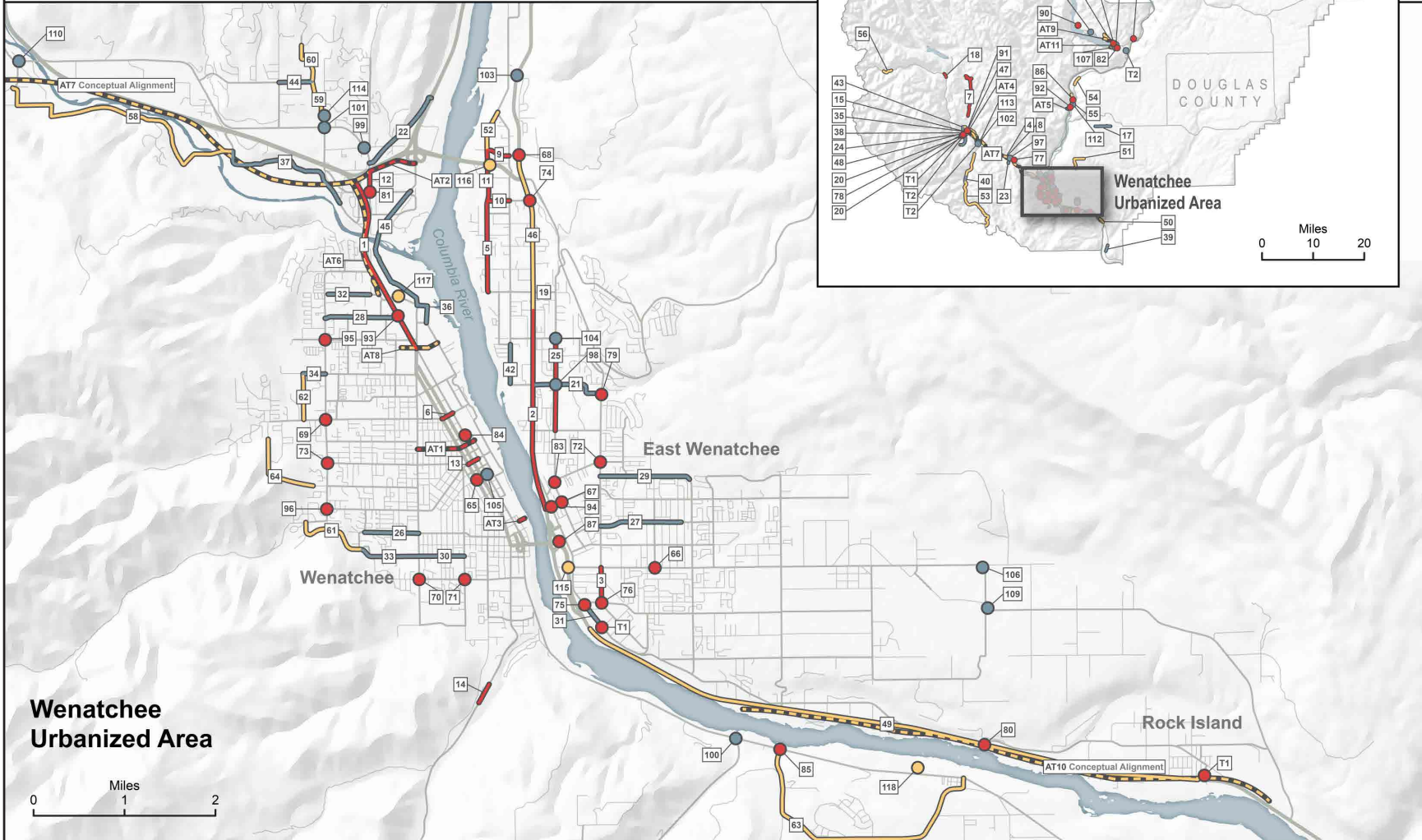
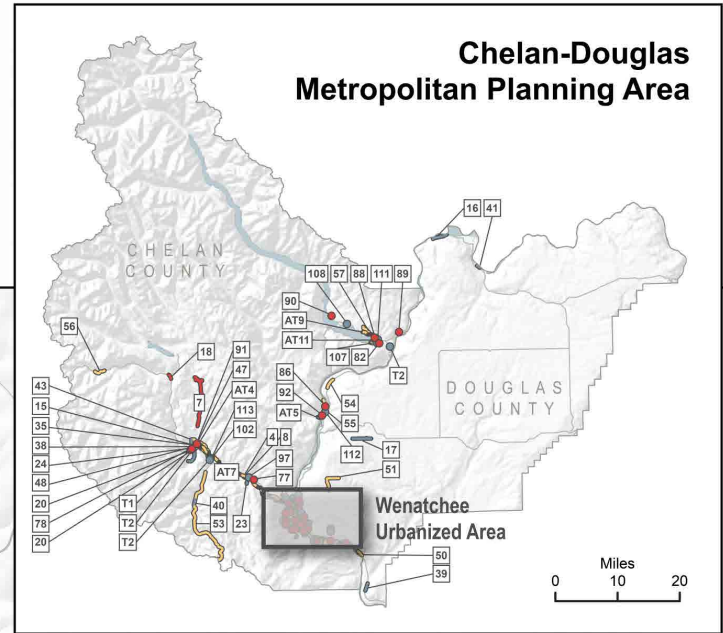


Figure 3-2: Transportation 2040 Projects, Urban Area Detail



Transportation 2040 System Improvements: Rural Area Detail



- | | | |
|--------------------------------|--|--------------------|
| Active Transportation Projects | Expansion, Upgrade and Traffic Operations Projects | Phase 1: 2016–2027 |
| | | Phase 2: 2028–2040 |
| | | Vision |
| | | |

Map date: 07 Aug 2015

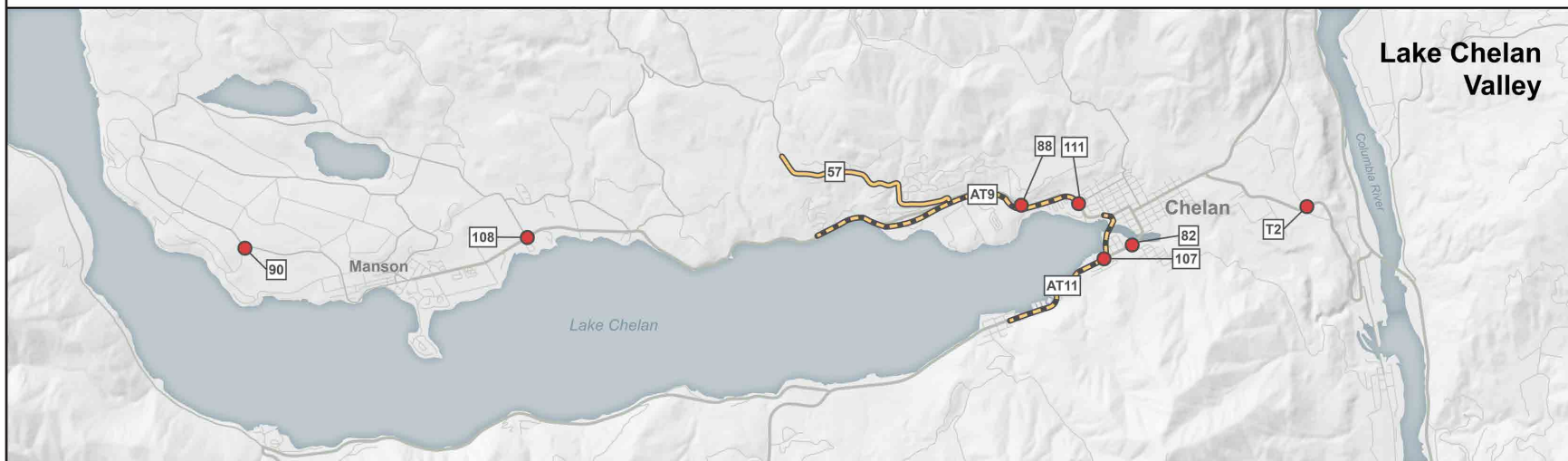
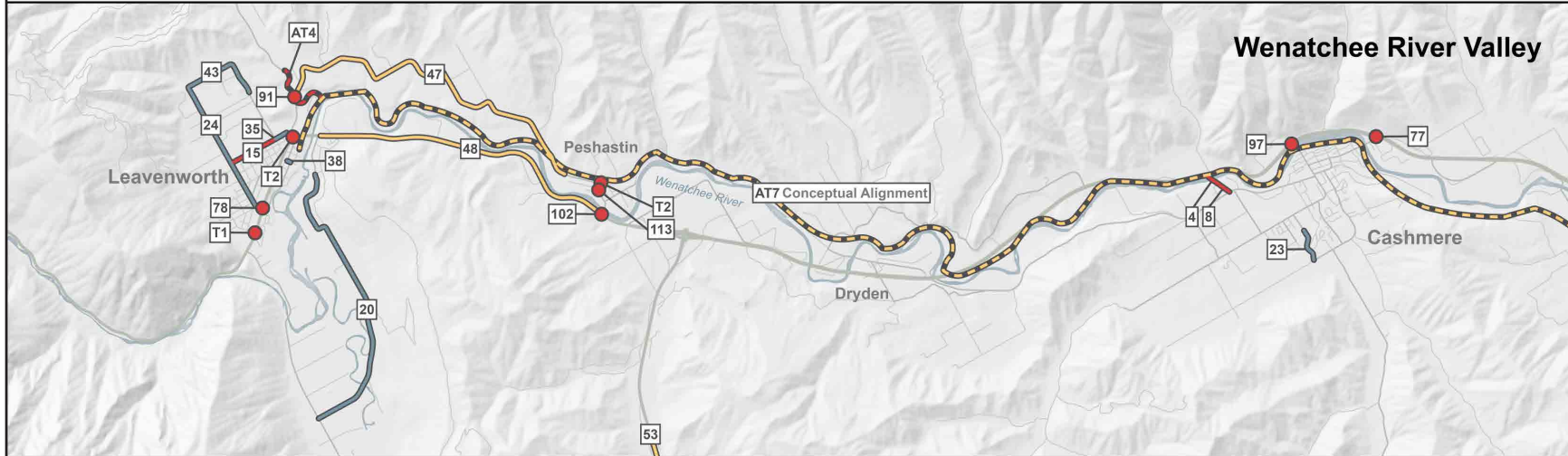
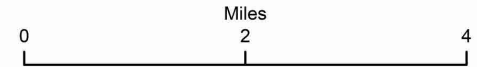


Figure 3-3: Transportation 2040 Projects, Rural Area Detail



Phase 1 Projects: Year of Expenditure 2016-2027

| Map Ref. | Project | Description | YOE Cost |
|----------|---|------------------------------|--------------|
| 1 | N Wenatchee Area Improvements | Corridor improvements | \$41,000,000 |
| 2 | SR 28: Phases 3 and 4 | Widen to four lanes | \$58,500,000 |
| 3 | Highline Dr: 3rd St SE to Grant Rd | Reconstruction | \$2,088,000 |
| 4 | Goodwin Bridge Replacement | Replace bridge | \$20,880,000 |
| 5 | NW Empire Ave: 27th St NW to 35th St NW | Reconstruction | \$3,444,040 |
| 6 | 5th St: Wenatchee Ave to Chelan Ave | Freight improvements | \$146,160 |
| 7 | Chumstick Hwy | Reconstruction | \$11,936,400 |
| 8 | Goodwin Rd Reconstruction | Reconstruction | \$3,480,000 |
| 9 | 38th St Extension | Construct a new roadway | \$8,352,000 |
| 10 | 35th St Extention | Construct a new roadway | \$3,480,000 |
| 11 | Empire Ave Extension - Phase 1 | Construct a new roadway | \$4,872,000 |
| 12 | Easy St: Penny Rd to US 2 | Widen roadway | \$11,008,400 |
| 13 | Orondo Ave: Wenatchee Ave to Chelan Ave | Freight improvements | \$203,000 |
| 14 | Squilchuck Rd | Reconstruction | \$3,897,600 |
| 15 | Pine Street - Phase 1 | Reconstruction | \$3,480,000 |
| 18 | US 2 at Coles Corner | Construct Two Left Turn Lane | \$812,000 |
| 19 | 27th St NE Bridge Replacement | Replace bridge | \$116,000 |
| 25 | Baker Ave: 15th St NE to 23rd St NE | Reconstruction | \$5,220,000 |



| Map Ref. | Project | Description | YOE Cost |
|----------|------------------------------------|------------------------------|-------------|
| 65 | Chelan Ave & Kittitas St | Traffic signal | \$333,500 |
| 66 | Grant Rd & James Ave | Intersection control | \$464,000 |
| 67 | Baker Ave & 9th Street NE | Traffic signal or roundabout | \$464,000 |
| 68 | US 2 & 38th St | Traffic signal | \$580,000 |
| 69 | 5th St & Western Ave | Intersection improvements | \$464,000 |
| 70 | Crawford Ave & Miller St | Intersection control | \$464,000 |
| 71 | Crawford Ave & Okanogan Ave | Intersection control | \$464,000 |
| 72 | Eastmont Ave & 11th St | Traffic signal | \$464,000 |
| 73 | Western Ave & Washington St | Intersection control | \$464,000 |
| 74 | SR 28 & 35th St | Traffic signal | \$812,000 |
| 75 | 3rd St SE & Rock Island Rd | Traffic signal | \$464,000 |
| 76 | 3rd St SE & Highline Dr | Traffic signal | \$986,000 |
| 77 | US 2 & Cotleys Way Roundabout | Roundabout | \$4,640,000 |
| 78 | US 2 & Ski Hill Dr | Traffic signal or roundabout | \$580,000 |
| 79 | Eastmont Ave & 19th St | Traffic signal | \$464,000 |
| 80 | SR 28 & Rock Island Ave Roundabout | Roundabout | \$1,392,000 |
| 81 | Easy St & Penny Rd | Intersection improvements | \$661,200 |
| 82 | SR 97A & Farnham St | Intersection improvements | \$580,000 |
| 83 | Baker Ave & 11th St | Intersection control | \$464,000 |
| 84 | Wenatchee Ave & 2nd St | Freight improvements | \$174,000 |



| Map Ref. | Project | Description | YOE Cost |
|----------|--------------------------------|------------------------------|-------------|
| 85 | Malaga Hwy & West Malaga Rd | Intersection control | \$464,000 |
| 86 | US 97A & Stoneridge St | Install Left Turn Lanes | \$348,000 |
| 87 | SR 28 & 5th St | Intersection improvements | \$719,200 |
| 88 | No-See-Um Roundabout | Roundabout | \$6,500,000 |
| 89 | US 97A & Airport Rd | Intersection control | \$110,200 |
| 90 | Manson Blvd & Summit Blvd | Intersection improvements | \$255,200 |
| 91 | Chumstick Hwy & North Rd | Alignment and channelization | \$324,800 |
| 92 | Entiat Park Entry Improvements | Park entry improvements | \$232,000 |
| 93 | McKittrick St & SR 285 | Traffic signal | \$928,000 |
| 94 | 9th St & Valley Mall Pkwy | Traffic signal or roundabout | \$406,000 |
| 95 | Western Ave & Maple St | Traffic signal | \$464,000 |
| 96 | Western Ave & Cherry St | Intersection improvements | \$464,000 |
| AT1 | First St Bikeway | Bike boulevard | \$464,000 |
| AT2 | Easy St Loop Trail Connection | Multi-use trail | \$580,000 |
| AT3 | Bridge St Pedestrian Overpass | Pedestrian overpass | \$4,640,000 |
| AT4 | Chumstick Multi-Use Path | Multi-use trail | \$319,000 |
| T1 | LINK Park and Rides | Various park and rides | \$1,000,000 |



Phase 2 Projects: Year of Expenditure 2028-2040

| Map Ref. | Project | Description | YOE Cost |
|----------|---|-------------------------|--------------|
| 16 | Crane Orchard Rd | Reconstruction | \$4,473,840 |
| 17 | Baseline Rd | Resurface and realign | \$3,334,800 |
| 20 | East Leavenworth Rd: Icicle Rd to Dye Rd | Reconstruction | \$14,448,000 |
| 21 | 19th St NE: Eastmont Ave to SR 28 | Reconstruction | \$5,880,000 |
| 22 | Ohme Garden Rd: Easy St to US 97A | Reconstruction | \$4,074,000 |
| 23 | Binder Rd/Tigner Rd | Reconstruction | \$1,503,600 |
| 24 | Ski Hill Dr: US 2 to Titus Rd | Reconstruction | \$7,711,200 |
| 26 | Millerdale Ave: Lambert St to Miller St | Reconstruction | \$3,084,480 |
| 27 | 5th St NE: Eastmont Ave to Kentucky Ave | Reconstruction | \$3,528,000 |
| 28 | McKittrick St: Western Ave to SR 285 | Reconstruction | \$10,394,160 |
| 29 | 10th St NE: Eastmont Ave to Kentucky Ave | Reconstruction | \$11,088,000 |
| 30 | Red Apple Rd - Phase 1 | Reconstruction | \$1,680,000 |
| 31 | Rock Island Rd: 3rd St SE to Eller St | Widen road | \$2,781,912 |
| 32 | Walnut St: Western Ave to Rogers St | Reconstruction | \$7,896,000 |
| 33 | Red Apple Rd - Phase 2 | Reconstruction | \$1,680,000 |
| 34 | Springwater Ave: Woodward Dr to Western Ave | Reconstruction | \$3,360,000 |
| 35 | Pine Street - Phase 2 | Reconstruction | \$5,040,000 |
| 36 | Walla Walla Ave to Hawley St Connection | Construct a new roadway | \$5,880,000 |



| Map Ref. | Project | Description | YOE Cost |
|----------|--|--------------------------------|---------------|
| 37 | Lower Sunnyslope Rd: Sleepy Hollow Rd to School St | Widen shoulders | \$3,040,800 |
| 38 | Division St: Front St to Commercial St | Reconstruction | \$1,512,000 |
| 39 | SR 28: W of Spanish Castle Rd | Passing Lane | \$2,184,000 |
| 40 | US 97: 8 Miles South of US 2 | Construct Passing Lane | \$2,856,000 |
| 41 | SR 173: 10th St to 17th St | Reconstruction | \$294,000 |
| 42 | NW Cascade Ave: 19th St NW to Wilshire St NW | Widen road | \$5,040,000 |
| 43 | Titus Rd: Ski Hill Dr to Detillion Rd | Upgrade roadway | \$4,552,800 |
| 44 | American Fruit Rd: Knowles Rd to Crestview Rd | Widen and improve alignment | \$1,360,800 |
| 45 | SR 285 Bypass: Confluence Pkwy | Create bypass for SR 285 | \$147,840,000 |
| 97 | US 2 & Aplets Way Roundabout | Install Roundabout | \$5,040,000 |
| 98 | Baker Ave & 19th St | Traffic signal | \$672,000 |
| 99 | Easy St & Peters St | Traffic signal or roundabout | \$1,696,800 |
| 100 | Malaga Hwy & Stemilt Rd | Intersection control | \$672,000 |
| 101 | Easy St & School St | Intersection improvements | \$2,503,200 |
| 102 | US 2 & Main St in Peshastin | Intersection Improvements | \$5,712,000 |
| 103 | US 2 & Cascade Ave at Baker Flats | Traffic signal or roundabout | \$1,680,000 |
| 104 | Baker Ave & 23rd St | Traffic signal | \$672,000 |
| 105 | Wenatchee Ave & Kittitas St | Freight improvements | \$483,000 |
| 106 | Grant Rd & S Van Well Ave | Reconstruction | \$1,024,800 |
| 107 | SR 97A & Woodin Ave | Install turn lanes and signage | \$336,000 |



| Map Ref. | Project | Description | YOE Cost |
|----------|--------------------------------------|---------------------------|-------------|
| 108 | SR 150 & Wapato Lake Rd | Roundabout | \$2,520,000 |
| 109 | S Van Well Ave & 4th St SE | Reconstruction | \$1,108,800 |
| 110 | Main St in Monitor Railroad Crossing | Improve alignment | \$403,200 |
| 111 | SR 150 & Gibson Ave | Intersection control | \$336,000 |
| 112 | Lakeshore Roundabout | Roundabout | \$1,344,000 |
| 113 | Main St & Peshastin Rd | Intersection improvements | \$470,400 |
| 114 | Knowles Rd & School St | Intersection improvements | \$403,200 |
| AT5 | Entiat River Trail | Multi-use trail | \$420,000 |
| T2 | LINK Park and Rides | Various park and rides | \$1,000,000 |



Vision Projects

| Map Ref. | Project | Description | YOE Cost |
|----------|--|---|---------------|
| 46 | SR 28 - Phases 5, 6, and 7 | Widen to four lanes | \$244,272,000 |
| 47 | North Rd: Chumstick Hwy to Main St in Peshastin | Reconstruction | \$32,760,000 |
| 48 | US 2: Leavenworth to Peshastin | Install a two way left turn lane | \$13,104,000 |
| 49 | SR 28: East Wenatchee to Rock Island Intersections | Intersection improvements | \$13,440,000 |
| 50 | SR 28: East Wenatchee to Rock Island Dam | Construct passing lanes | \$15,624,000 |
| 51 | Badger Mountain Rd | Resurface and realign | \$18,719,568 |
| 52 | Empire Ave Extension - Phase 2 | Construct a new roadway | \$5,040,000 |
| 53 | US 97: Blewett Pass Passing Lanes | Construct passing lanes | \$42,000,000 |
| 54 | US 97: Barber Rd to Weimer Rd | Construct passing lanes | \$26,174,400 |
| 55 | US 97A in Entiat | Streetscape enhancements | \$12,264,000 |
| 56 | US 2: Stevens Pass East | Construct truck climbing lane | \$91,560,000 |
| 57 | Boyd Rd | Widen and resurface | \$5,960,640 |
| 58 | Sleepy Hollow Rd/Richard Dr | Upgrade shoulders and resurface | \$14,750,400 |
| 59 | Knowles Road - Phase 2 | Resurface and upgrade | \$1,797,600 |
| 60 | Knowles Road - Phase 1 | Resurface and upgrade | \$2,914,800 |
| 61 | Skyline Dr: Number 2 Canyon to Red Apple Rd | Widen roadway | \$3,612,000 |
| 62 | Woodward Dr: Springwater Ave to 5th St | Reconstruction | \$10,080,000 |
| 63 | West Malaga Rd | Improved shoulders and install turn lanes | \$4,603,200 |



| Map Ref. | Project | Description | YOE Cost |
|----------|---|---|--------------|
| 64 | Castlerock Ave to 5th St Connector | Construct a new roadway | \$3,360,000 |
| 115 | SR 28 & Grant Rd Interchange | Construct a single point urban interchange | \$88,032,000 |
| 116 | Cascade Interchange | Construct interchange | \$52,584,000 |
| 117 | Hawley St Railroad Grade Separation | Grade separation | \$30,240,000 |
| 118 | BNSF Relocation | Relocate BNSF Terminal to Malaga | \$67,200,000 |
| AT6 | Wenatchee River Trail Crossing to Walnut St | Multi-use trail | \$19,320,000 |
| AT7 | Valley Trail | New trail connecting Wenatchee to Leavenworth | TBD |
| AT8 | SR 285 & Maple St Pedestrian Overpass | Pedestrian overpass | \$18,480,000 |
| AT9 | Northshore Trail | Multi-use trail | TBD |
| AT10 | Loop Trail Connection to Rock Island | Multi-use trail | TBD |
| AT11 | Lakeside Trail | Multi-use trail | TBD |
| T3 | US 2 Intercity Express Bus (project not mapped) | Rural BRT line: Wenatchee, Leavenworth and Chelan | \$33,600,000 |
| T4 | Rural Commuter Route (project not mapped) | Expand service: Wenatchee, Leavenworth and Chelan | \$19,668,000 |
| T5 | Expand Weekend Services (project not mapped) | Expand service: Wenatchee, Leavenworth and Chelan | \$4,470,000 |



