

APPENDIX IV: TRANSPORTATION PLANS AND STUDIES

This Appendix assembles the following Transportation Plans and Studies that provide an important basis for the City's Comprehensive Plan. These documents (and as amended) are adopted by reference into the Comprehensive Plan:

2025-2030 6-Year Transportation Improvement Program (TIP). [Adopted June 26, 2024 via Resolution No. 2024-13]

Non-Motorized Transportation Plan. June 2017. Parametrix.

Orting 2040 Transportation Plan. September 2019. Parametrix. [Adopted October 30, 2019 via Ordinance No. 2019-1040]

Pavement Management System (PMS). June 2024. SCJ Alliance.

Self-Evaluation and ADA Transition Plan. September 2024. SCJ Alliance.

Project #	Fund	Appendix A 2025-2030 Trantsportation Plan (TIP)								Project Costs
Arterial Streets			2024	2025	2026	2027	2028	2029	2030	
1	101/401/408/410	Whitehawk Boulevard Extension (WBE) Design								\$ 11,910,000
1	101/401/408/410	WBE Right of Way		\$ 910,000						
1	101/401/408/410	WBE Construction Phase 1			\$ 5,500,000					
1	101/401/408/410	WBE Construction Phase 2				\$ 5,500,000				
1	101/401/408/410	WBE Construction Phase 3								
2	101/401/408/410	Kansas Street SW Reconstruction (KSR) Design								\$ 5,475,000
2	101/401/408/410	KSR Final Design		\$ 75,000						
2	101/401/408/410	KSR Reconstruction Design			\$ 1,400,000	\$ 4,000,000				
3	State Grant	SR 162 Emergency Evacuation Bridge (EEB) Design								\$ 9,000,000
3	State Grant	EEB Construction	\$ 5,000,000	\$ 4,000,000						
Street Preservation & Maintenance Program			2024	2025	2026	2027	2028	2029	2030	
4	101	Annual Pavement Preservation Program	\$ 175,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,108,376 *Figure above omits Annual Pavement Preservation Program cost, from which individual projects will draw.
4	101	Chip Seal - Stone St (Headley Ave to Mellinger Ave)	\$ 14,747							
4	101	Chip Seal - Eldredge Ave (Calistoga St to Kansas St)	\$ 49,913							
4	101	Chip Seal - Tacoma Ave	\$ 25,200							
4	101	Chief Emmons Ln NW Overlay	\$ 30,000							
4	101	Chip Seal - Olive Street	\$ 10,219							
4	101	Chip Seal - Whitehawk Blvd (Washington Ave to Orting Ave)		\$ 75,619						
4	101	Chip Seal - Calistoga St (Kansas St to Corrin Ave)		\$ 56,203						
4	101	Overlay - Eldredge Ave (Whitesell St to Calistoga St)			\$ 63,000					
4	101	Overlay - Corrin Ave (Whitesell St to Bridge St)			\$ 179,000					
4	101	Reconstruction - Skinner Way (Calistoga St to Belfair Ave)				\$ 273,000				
4	101	Overlay - Anderson St (Williams St to Boatman Ave)				\$ 71,156				
4	101	Overlay - Deeded Lane (Calistoga St to Eldredge St)					\$ 145,000			
4	101	Orting Ave (Callendar St to Whitehawk Blvd)					\$ 44,988			
4	101	Overlay (Corrin Ave, S of Harman Way)					\$ 70,331			
4	101	Reconstruction - Train St. (Eldredge to Ammons)						\$ 154,400		
4	101	Reconstruction - Bowlin (Parker to Leber)							\$ 99,000	
Non-Motorized Projects			2024	2025	2026	2027	2028	2029	2030	
5	101	ADA Complainece Annual Program	\$ 50,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 440,000
5	101	Implement Programming								

PREPARED FOR:

JUNE 2017



NON-MOTORIZED TRANSPORTATION PLAN



Parametrix

ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES

Non-Motorized Transportation Plan

Prepared for

City of Orting

110 Train St SE
Orting, WA 98360

Prepared by

Parametrix

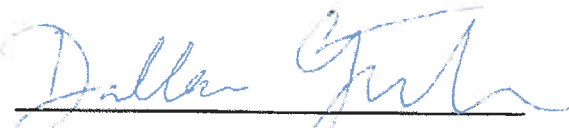
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CITATION

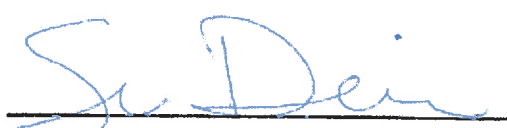
Parametrix. 2017. Non-Motorized Transportation Plan.
Prepared by Parametrix, Puyallup, WA. June 2017.

CERTIFICATION

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.


Prepared by Dallas Graham

and


Susan Devine


Checked by Erin Ellig



Approved by John Carl Hungerford, P.E.

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KEY TERMS

ADA	Americans with Disabilities Act
BLOS	Bicycle-Level-of-Stress
CBDG	Community Block Development Grant
EMPG	Emergency Management Performance Grant
EMS	Emergency Medical Services
FRC	Functional Road Class
GIS	Geographic Information System
GMA	Washington State Growth Management Act
LTS	Level of Traffic Stress
mph	miles per hour
NACTO	National Association of City Transportation Officials
ONMTP	Non-Motorized Transportation Plan
Orting	City of Orting
PLOS	Pedestrian-Level-of-Stress
Pol.	policy
PSRC	Puget Sound Regional Council
PUD	Public Utility District
RCW	Revised Code of Washington
SR	State Route
SRTS	Safe Routes to Schools
TAP	Transportation Alternatives Program
TIP	Transportation Improvement Program
WSDOT	Washington State Department of Transportation

1. PLANNING CONTEXT

1.1 Background and Compliance

The City of Orting (Orting) Non-Motorized Transportation Plan (ONMTP) is being created in response to conditional certification given by Puget Sound Regional Council (PSRC). This document is intended to fulfill the remaining requirements requested by PSRC and advance into a full certification. The ONMTP will address the PSRC “Areas for Further Work,” as it relates to non-motorized transportation.

Comments from PSRC are shown below in italics – the methods for meeting these criteria follow each Area of Work, as denoted by a check mark:

PSRC COMMENT

In addition to plan for future pedestrian and bicycle networks referenced in the condition for certification, the City should add additional detail to the pedestrian and bicycle component including:

- *A map of existing pedestrian facilities (e.g. sidewalks, crosswalks, multiuse paths) and bicycle facilities (e.g. bike lanes, shared use paths, paved road shoulders, bicycle crossings)*
- *Identification of priority needs for improvements (e.g. gaps, locations with safety concerns or high travel demand)*
- *A project list of priority bicycle and pedestrian improvements and programs, including stand-alone projects that address identified gaps, including a finance plan.*

- ✓ These items are addressed in Chapter 2, Existing Conditions ; Chapter 5, Planned Improvements; and Section 6.2, Recommended Improvements and Financial Strategy; of the ONMTP.

PSRC COMMENT

VISION 2040 calls for level-of-service standards to be focused on the movement of people and goods instead of only the movement of vehicles (MPP-DP-54), and for concurrency programs to address multimodal transportation options – both in assessment and mitigation (MMP-DP-55).

- ✓ The ONMTP includes both pedestrian and bicycle “Level of Stress” in order to assess the functionality of the City’s non-motorized system.

PSRC COMMENT

The city should work to develop policies and provisions that will ensure mobility choices for people with special transportation needs, including persons with disabilities, the elderly. Youth, and low-income populations. For more information, see WSDOT’s Americans with Disabilities Act resource page and PSRC’s Special Needs Transportation website.

- ✓ The ONMTP will address non-motorized options for all groups, including special transportation needs and other Americans with Disabilities Act (ADA) concerns. See Section 6.1.4.

1.2 Promoting Safety: Towards Target Zero

The primary objectives of the ONMTP are to complete the requests of PSRC, and to improve non-motorized transportation planning in Orting. In addition to enhancing mobility, providing travel choice, and reducing emissions that can exacerbate greenhouse gas emissions and climate change, improving non-motorized modes also has the added benefit of improving safety for pedestrians and bicyclists. Therefore, this plan will also consider safety elements identified within the Washington State Department of Transportation (WSDOT) Strategic Highway Safety Plan (2016), also referred to as Target Zero. The primary goal of Target Zero is zero deaths and zero serious injuries by the year 2030. Target Zero addresses everything associated with highway safety: risk behaviors, crash types, road users, decision-making, and performance improvement. The ONMTP will draw upon aspects of Target Zero in terms of planned improvements, because a successful non-motorized plan is also a safe one.

The methods to approach achieving the daunting goal of Target Zero are based around the following categories:

Education

Give road-users the information to make good choices, such as driving unimpaired, wearing a seatbelt, and avoiding distractions.

Enforcement

Use data-driven analysis to help law enforcement officers pinpoint and address locations with a high number of behavior-driven fatal and serious injury crashes, such as speeding and impairment.

Engineering

Design roads and roadsides using practical solutions to reduce crashes, or to reduce the severity of crashes if they do occur.

Emergency Medical Services (EMS)

Provide high-quality and rapid medical response to injury crashes.

Leadership/Policy

Change laws, agency rules, or policies to support safer roads and driving.

Key Facts from Target Zero: Bicyclists

Speed is a critical factor in motor vehicle-bicycle crashes. Seventy percent of bicyclist fatalities where the posted speed of the roadway was 30 mph or more.

Men accounted for a disproportionate share of bicyclist fatalities and serious injuries, at 93% and 88% respectively.

Target Zero partners are working to gather more accurate information about the total number of people bicycling. Without this information, it is difficult to know if rates of bicycling – and therefore exposure – are changing.

1.3 Consistency with 2015 Comprehensive Plan

The 2015 Comprehensive Plan includes numerous overarching goals. Several of those goals are applicable to the ONMTP:

- Preserve open space and the character of the rural landscape.
- Preserve critical environmental resources.

- Preserve important agricultural lands.
- Foster a financially sound development pattern.
- Reduce reliance on the automobile and encourage establishment of pedestrian and bicycle-oriented development.
- Provide a place where citizens can both live and work.

The Comprehensive Plan also included future street improvement goals, one of which fits well with the intentions of the ONMTP:

- Increase safe, attractive pedestrian ways linked to the Foothills Trail and parks.

1.3.1 Transportation Goals

The ONMTP will be consistent with the following specific Comprehensive Plan Goals for the Transportation Element:

- Goal T 1:** Maintain a transportation system that accommodates the separation of through and local traffic, provides adequate internal circulation, and interconnects effectively to the regional highway, non-motorized, and public transportation systems, is responsive to the mobility needs of City businesses and neighborhoods, and guides future developments.
- Goal T 3:** Establish a safe and convenient pedestrian and bicycle circulation system linking residential communities with key destinations.
- Goal T 4:** Fund transportation facility improvements with federal, state, and local public and private sources.
- Goal T 5:** Realize the vision for Washington Avenue as Orting's main street, providing high quality aesthetic design in conjunction with multimodal mobility, pedestrian safety, and infill economic development.
- Goal T 6:** Meet federal and state air quality requirements and work with state, regional and other local agencies to develop transportation control measures and/or mobile source emission reduction programs that may be warranted to attain or maintain air quality requirements.

Key Facts from Target Zero: Pedestrians

The data showed that 14% of fatalities occurred on roads with a posted speed of 25 mph or less, 42% occurred on roads with a speed of 30-35 mph, 17% when the speed limit was 40-45 mph and 23% on roads with a speed limit of 50 mph or more.

Most of the pedestrian fatalities and serious injuries happened within cities, at 69% and 67% respectively.

Sixty percent of pedestrian fatalities and 62% of serious injury occurred while pedestrians were crossing the road.

These percentages echo how vehicle impact speed directly affects the severity of the injury and that crashes are more frequent when there are more areas of conflict.

The two major behavioral factors most commonly cited for pedestrian fatalities are driver distraction at 32% and pedestrian impairment at 43%.

1.3.2 Transportation Policies

The ONMTP will be consistent with the following specific Comprehensive Plan Vehicular Transportation Policies (Pol.) for the Transportation Element:

Street Design Standards

- Pol. T 10:** Maintain a comprehensive street improvement plan for city streets that implements the desired streetscape for each functional classification. Arterial street standards shall provide guidance on the width of lanes, driveway access, right-of-way width, sidewalks median treatments, setbacks, lighting, pedestrian facilities, landscaping, or other improvements.
- Pol. T 11:** Design street improvements to fit the character of areas they serve.
- Pol. T 14:** Use street design standards to minimize pavement widths while accommodating on-street parking, and allowing cars to pass, thereby slowing the speed of vehicles on local streets, improving pedestrian safety and allowing for landscaping.
- Pol. T 15:** Require safe, attractive sidewalks on all streets.
- Pol. T 16:** Provide comprehensive street lighting, including lights for pedestrians on sidewalks and trails, using such factors as adjacent land uses, hazardous street crossings, transit routes, schools, and parks.

Traffic Safety

- Pol. T 18:** Consider the use of devices that increase safety of pedestrian crossings such as flags, in-pavement lights, raised crosswalks, colored and textured pavements.

Pedestrian and Bicycle Policies

- Pol. T 32:** Promote pedestrian and bicycle networks that safely access commercial areas, schools, transit routes, parks, and other destinations within Orting and connect to adjacent communities, regional destinations and routes.
- Pol. T 33:** Require new development to ensure safety, comfort and convenience of pedestrians and bicyclists.
- Pol. T 34:** Designate and construct segregated internal pedestrian circulation systems in new or redeveloping commercial-retail districts. Provide connectivity to nearby transit stops using sidewalks, landscaping, covered walkways, or other treatments.
- Pol. T 35:** Promote a comprehensive and interconnected network of pedestrian and bike routes within and between neighborhoods.
- Pol. T 36:** Require trail routes and/or sidewalks where appropriate in Public Utility District (PUD), plat and short plat approvals.
- Pol. T 37:** Work progressively to provide and maintain sidewalks in established neighborhoods. Priority shall be given to all public facilities such as transit routes, schools and parks, and multi-family housing, commercial areas, and gaps in the existing sidewalk system.
- Pol. T 38:** Provide striped, on-street bicycle facilities on arterial streets on paved shoulders or within wide curb lanes to ensure safety for bicyclists.
- Pol. T 39:** Ensure that sidewalks meet requirements of the Americans with Disabilities Act.

- Pol. T 40:** Identify non-motorized facility improvements on school walk routes to increase pedestrian safety.
- Pol. T 41:** Require secure (racks and lighting) bicycle parking at commercial and institutional facilities along with automobile parking.



2. EXISTING CONDITIONS

This Chapter describes the existing conditions of the non-motorized network within the City of Orting, including roadways, trails, sidewalks and other facilities.

2.1 Motorized Facilities

Table 2-1 summarizes the City's primary roadways, including functional classification, the presence and type of shoulders, parking, sidewalks, and bike lanes, as well as the posted speed limit. Many of these roadways serve as shared facilities between motorized and non-motorized users.

Table 2-1. City of Orting Primary Road Network

Roadway	Functional Classification	Shoulder	Parking	Sidewalks	Bicycle Lane	Speed Limit (miles per hour [mph])
SR-162/Pioneer Way	Principal arterial	Paved	No	Interrupted	No	50/35/25
Washington Avenue	Major arterial	Paved	Yes	Both	No	25
Orting- Kapowsin Highway	Major arterial	Gravel	No	No	No	35
Varner Avenue NE	Collector	Gravel/grass	Yes	Both	No	Not posted
Calistoga Street	Principal arterial	Paved/gravel	Yes	Both	No	25
Whitehawk Blvd	Proposed Minor Arterial	Paved	Yes	Both	No	25
Eldredge Avenue	Collector	Gravel/grass	Yes	Whitesell north—both sides; Safeway south — one side	No	Not posted
Whitesell Street	Collector	None	No	One side	No	Not posted
Corrin Avenue	Minor arterial	Paved	Yes (angle parking downtown)	Both	No	Not posted
Bridge Street	Collector	Gravel/grass	Yes	Both	No	Not posted
Kansas Street SW	Principal arterial	Paved	Yes	Both	No	Not posted
Harman Way	Principal arterial	Paved	Yes	Yes	No	Not posted

According to Target Zero, in Washington State, 15% of all serious roadway related injuries are inflicted upon pedestrians, and 5% were to bicyclists.

2.2 Non-Motorized Facilities

This section describes the facilities that are solely intended for pedestrian and bicycle use, including official trails as well as widely used pathways located along the City's extensive levee system.

2.2.1 Foothills Trail

A completed paved section of the Foothills Trail runs parallel to State Route (SR) 162 through Orting, this is the reason for the characterization of road/trail, etc. This is a 12-foot wide non-motorized asphalt trail suitable for bicycles, walking, skating, and wheel chairs. It also has a soft shoulder path for horses. Once completed, the Foothills Trail will extend 26 miles from McMillin through Orting to Buckley. The trail continues to Sumner and Puyallup. From Sumner, the trail connects with the Interurban Trail that now extends through Kent and Auburn. The Puyallup connection will extend west through Puyallup and into Tacoma.

2.2.2 Levees

Orting is bordered by two rivers, the Puyallup River and the Carbon River. Although not official non-motorized facilities, the levees along these two rivers are commonly used as paths to cycle, run, walk, or ride horseback and because of their popularity are included in the ONMTP.



2.3 Evacuation Routes

This plan also specifically identifies the City's evacuation routes, as the chance of a volcanic eruption and subsequent lahar, although rare, is a real possibility in Orting. The City has prepared for an emergency through several evacuation routes (Figure 2-1). These routes are often used in everyday life for other daily activities and should be assessed for both emergency and daily use.

The existing primary evacuation route for the schools is through the levee system.

Lahar Evacuation Routes Planning

Lahar Hazards

-  Lahar Evacuation Routes
-  School Lahar Evacuation Route
-  Cities in Pierce County
-  Case 1 – 500-1000 yr frequency
-  Case 2 – Average 100 yr frequency
-  Case 3 – 1-100 yr frequency

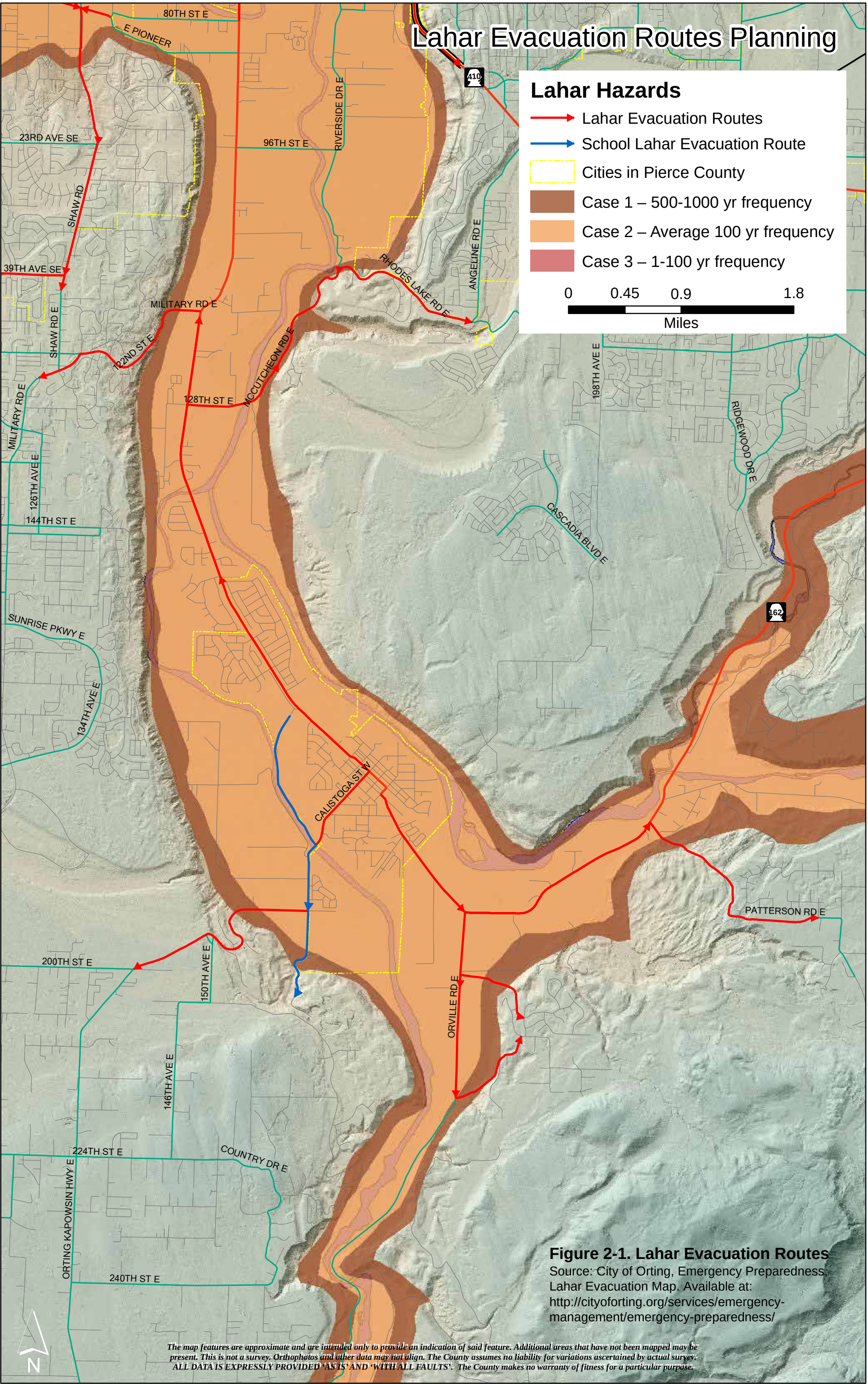
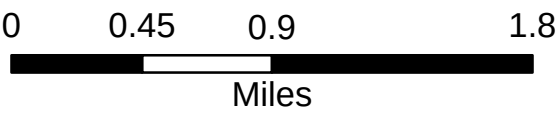


Figure 2-1. Lahar Evacuation Routes

Source: City of Orting, Emergency Preparedness, Lahar Evacuation Map. Available at: <http://cityoforting.org/services/emergency-management/emergency-preparedness/>

The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose.

2.4 Data Collection and Analysis

In order to assess the existing conditions of non-motorized facilities, two types of data was utilized: pedestrian and bicycle user counts, and Geographic Information System (GIS) data for roadway, trail, and sidewalk conditions. The count data indicates how the existing facilities are currently being utilized, while the GIS data reflects the actual existence of non-motorized facilities, as well as the extent to which the transportation network creates a “level of stress” on pedestrians and bicycles. Ideally a transportation system will be highly connected, low-stress, and create an environment of safety and ease. This is particularly important when referring to a non-motorized network as pedestrians and bicyclists are at a much higher risk for serious injury or fatality.

GIS data is used to both illustrate the motorized AND non-motorized network, as well as assess the *level of stress* the network creates for pedestrians and bicycles. The *level of stress* is different from the *level of service* that is associated with vehicular traffic conditions. Pedestrian and bicycle level of stress is a calculation based upon the comfort and safety felt by the non-motorized traveler, based upon the experience being created by the presence or absence of certain key factors.

2.5 Level of Stress and Level of Service Standards

The level of stress methodology is based upon research conducted by Mineta Transportation Institute which ultimately resulted in a way to measure traffic stress levels:

The Level of Traffic Stress (LTS) method measures low-stress connectivity, defined as ‘the ability of a network to connect travelers’ origins to their destinations without subjecting them to unacceptably stressful links.

Both Pedestrian-Level-of-Stress (PLOS) and Bicycle-Level-of-Stress (BLOS) have aims similar to LTS, acknowledging that one “weak link” (high stress in one area) in the non-motorized transportation system is a serious issue for the entire system. An interconnected system cannot be low stress overall, which it strives to be, if there is any area of high stress.

Level-of-stress is rated on a scale of 1-5. For the purposes of this document, it was determined that an acceptable and/or reasonable LOS was anything which scored between 1-3; and anything rated 4 or 5 is generally considered unacceptable. The facilities with 4 or 5 ratings are the areas that need to be addressed when planning non-motorized improvements.

Level 1 – Very low level of stress, due to presence of sidewalks, low traffic volumes, and low posted speed limits. This condition is considered highly desirable, and therefore acceptable.

Level 2 – Low level of stress. This condition is considered acceptable.

Level 3 – Moderate level of stress. This condition is considered acceptable, although it could be improved.

Level 4 – High level of stress. This condition is not considered acceptable and should be addressed.

Level 5 – Very high level of stress, due to lack of bike lanes, insufficient lane width, on street parking, high speeds, or high functional classification. This condition is not considered acceptable and should be addressed when possible.

Within the ONMTP, sidewalk and trail are combined to sidewalk/trail because of the layout (interconnectivity) in the City. This refers to sidewalks which border trails, and the levees which are used as trails. The same is done for pedestrian road/trail and for bicycle road/trail.

For instance, there are 262,882 feet of sidewalk/trail in the entire city of Orting. Almost 97 percent of the sidewalk/trail lengths in Orting were given a score of 1-3. This means that the vast majority of the sidewalk/trail length in the City meets satisfactory LOS and just 3 percent is below acceptable standards.

2.6 Scoring Methodology

Figure 2-2 describes the scoring methodology and Figure 2-3 shows several examples of this method in practice. Level of Stress scoring was completed for all the roads, trails and sidewalks in the City of Orting. Each Level of Stress score is calculated based on a number of contributing factors. Each factor is given a slightly different weight based on Level of Stress caused. It is important to acknowledge that the pedestrian separation is being weighted slightly higher than the other factors.



Methodology Summary

The Level of Stress score is created in GIS using street attributes that are tied spatially to street and sidewalk centerlines. Different attributes are assigned point values based on the relevant effect on pedestrian and/or biker stress. Scores are aggregated from each attribute along each street segment to create a combined LOS score. The LOS Scores are broken out into classes based on Jenks Natural Breaks Classification Method - which is a data clustering method for best arrangement of values into classes.

What Factors into the Bike and Pedestrian LOS Scores

Sidewalk Width (Pedestrian Only): Width of sidewalk pavement. Wider sidewalks result in a lower level of stress (higher score) for pedestrians.

Sidewalk Buffer Width (Pedestrian Only): Distance from the edge of the sidewalk to the curb. A greater distance results in a gap between pedestrians and moving vehicles.

Curb Presence (Pedestrian Only): Presence of Curb. Creates an additional barrier between pedestrians and vehicles.

Street Width: Distance between outside striping or width of pavement where striping is not used. Wider streets result in more space between cars and bikes and pedestrians.

Number of Lanes: Total number of lanes in either direction. Three or more lanes is indicative of a busier, more stressful, street for bikes and pedestrians

Vehicle Speed: Typical speed of travelling vehicles (not posted speed limit). Lower vehicle speeds results in a safer environment for adjacent pedestrians and bikers.

Outside Lane Width: Width of lane closest to sidewalk on each side of the street. Width of outside lane affects amount of space for bikers and pedestrians

On Street Parking: Whether on street parking is permitted with signs, not allowed, or unsigned. Designated on-street parking spaces create an additional buffer between the street and bikes and pedestrians.

Street Buffer: The space between the outer street striping or pavement and the curb. Creates additional space for bikes and pedestrians.

FRC: Functional Road Class defines the type of roadway (arterial, collector, or local) and is indicative of vehicle volumes.

**Scoring for each attribute is highlighted on page 2. Each score from the individual attributes is summed to create the combined Bike and Pedestrian Scores determining Level of Stress*

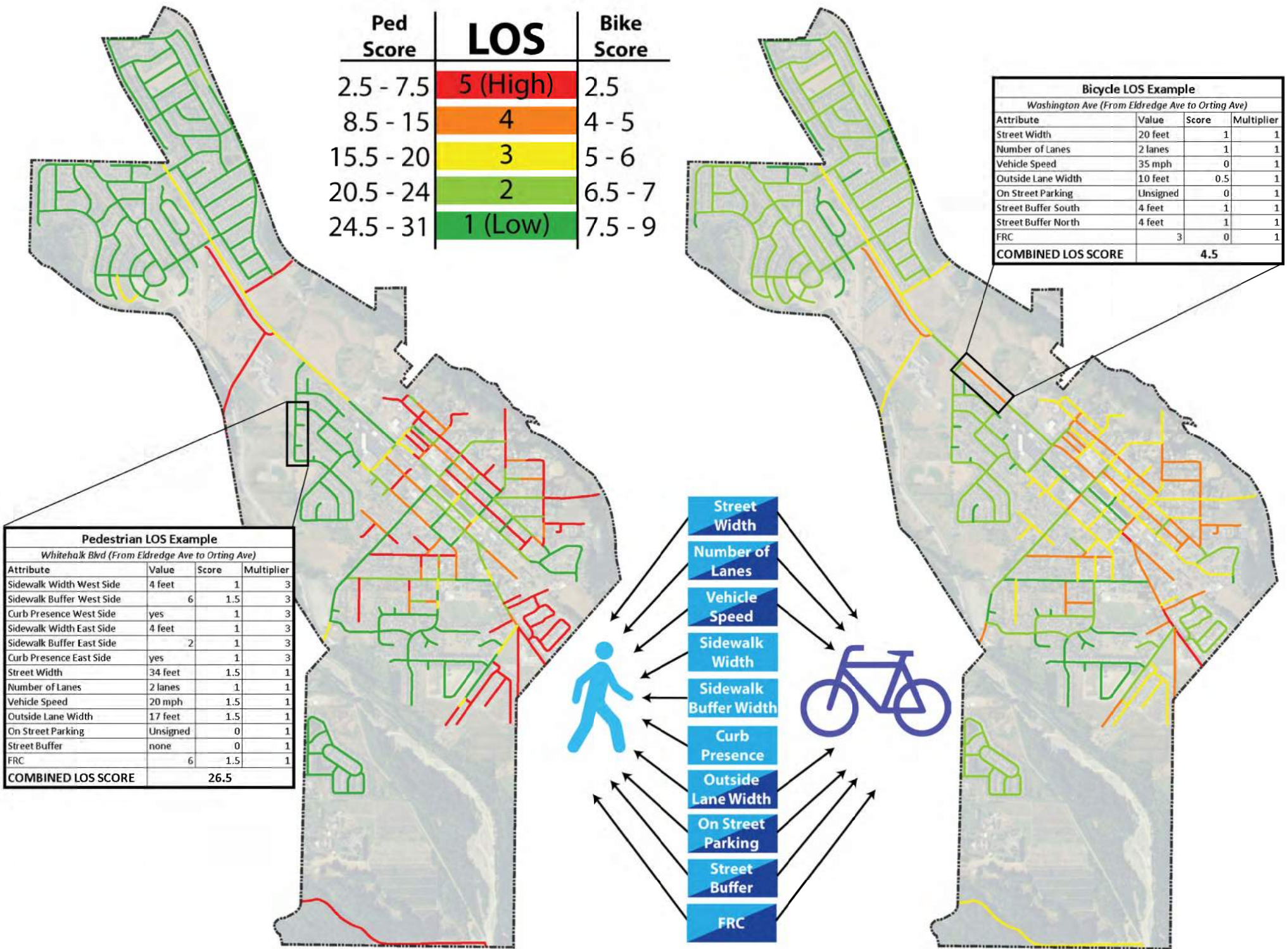


Figure 2-2

Methodology Summary

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Street Width: Distance between outside striping or width of pavement where striping is not used. Wider streets result in more space between cars and bikes and pedestrians.

Number of Lanes: Total number of lanes in either direction. Three or more lanes is indicative of a busier, more stressful, street for bikes and pedestrians

Vehicle Speed: Typical speed of travelling vehicles (not posted speed limit). Lower vehicle speeds results in a safer environment for adjacent pedestrians and bikers.

Outside Lane Width: Width of lane closest to sidewalk on each side of the street. Width of outside lane affects amount of space for bikers and pedestrians

On Street Parking: Whether on street parking is permitted with signs, not allowed, or unsigned. Designated on-street parking spaces create an additional buffer between the street and bikes and pedestrians.

Street Buffer: The space between the outer street striping or pavement and the curb. Creates additional space for bikes and pedestrians.

FRC: Functional Road Class defines the type of roadway (arterial, collector, or local) and is indicitave of vehicle volumes.

**Scoring for each attribute is highlighted on page 2. Each score from the individual attributes is summed to create the combined Bike and Pedestrian Scores determining Level of Stress*

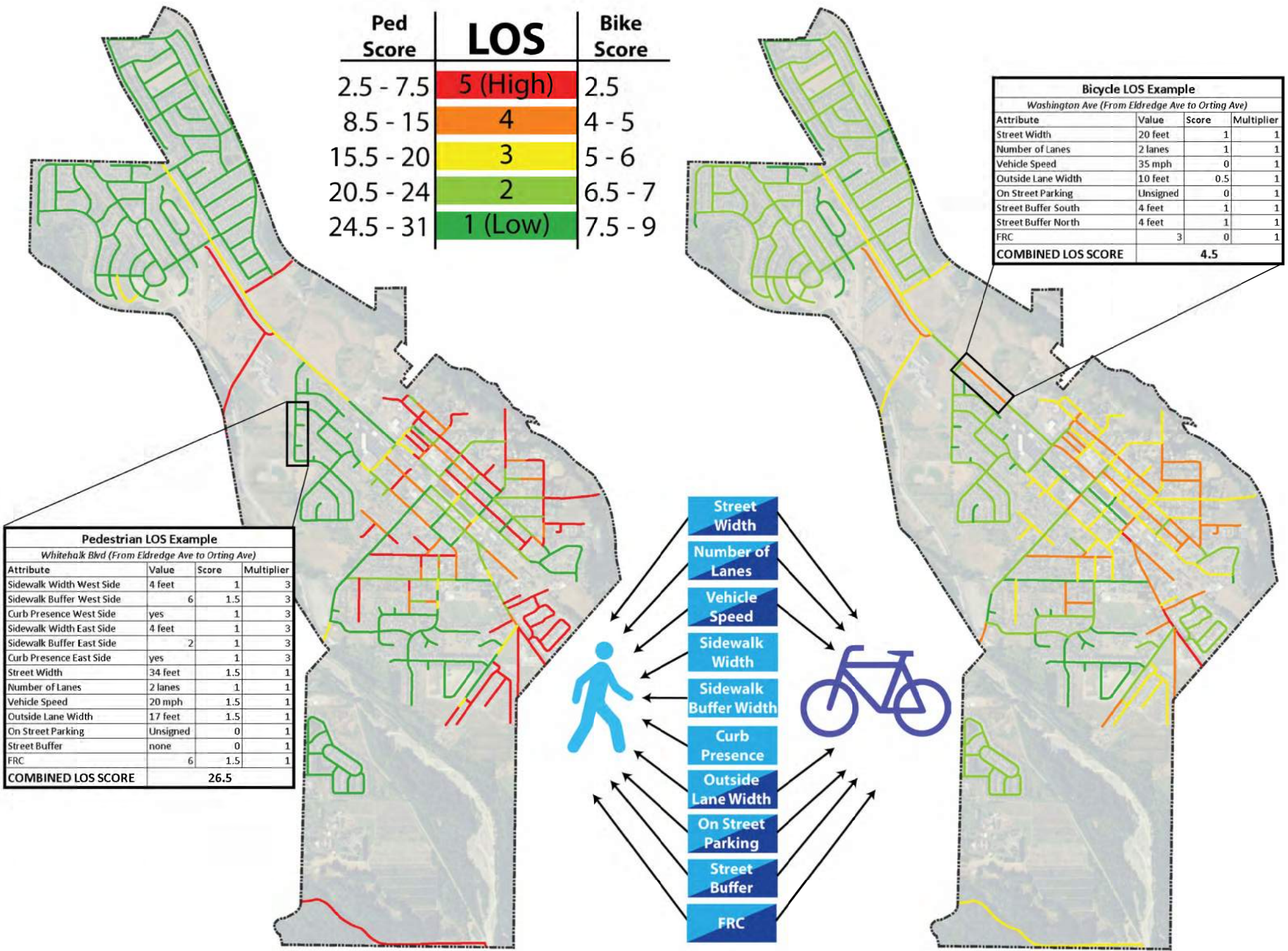


Figure 2-2

2.6.1 Methodology Summary

The Level of Stress score was created in GIS using street attributes that are tied spatially to street and sidewalk centerlines. Different attributes are assigned point values ranging from 1-5 based on the relevant effect on pedestrian and/or cyclists stress. Scores are combined from each attribute along each street segment to create a collective LOS score for individual streets, sidewalks, or trails. This form of classification is based on Jenks Natural Breaks Classification Method (a data clustering method which best arranges values into classes).

2.6.2 Factors in the LOS Score

Factors included in finding the level of stress were as follows, some attributes were only considered when scoring pedestrian level of stress:

- **Sidewalk Width (Pedestrian Only):** Width of sidewalk pavement. Wider sidewalks result in lower level of stress for pedestrians.
- **Sidewalk Buffer Width (Pedestrian Only):** Distance from the edge of the sidewalk to the curb. Greater distance creates an additional barrier between pedestrian and moving vehicles.
- **Curb Presence (Pedestrian Only):** Presence of a curb creates an additional barrier between pedestrians and vehicles.
- **Street Width:** Distance between outside striping or width of pavement where striping is not used. Wider streets result in more space between cars and bikes and pedestrians.
- **Number of Lanes:** Total number of lanes in either direction. Three or more lanes is indicative of a busier, more stressful street for cyclists and pedestrians.
- **Vehicle Speed:** Average speed of traveling vehicles (not posted speed limit). Lower vehicle speeds create a safer environment for non-motorized counterparts.
- **Outside Lane Width:** Width of lane closest to sidewalk on both sides of the street. The width of the lane affects the amount of space for pedestrians and cyclists.
- **On Street Parking:** Whether or not street parking is permitted with signs, not allowed, or unsigned. Designated on-street parking space creates an additional buffer between the street and pedestrians and cyclists.
- **Street Buffer:** The space between the outer edge of the street striping or pavement and the curb. Creates additional space between non-motorized users and traffic.
- **FRC:** Functional Road Class (FRC) defines the type of roadway (includes: arterial, collector or local) and is an indicator of vehicle volumes.

2.7 Pedestrian Level of Stress (PLOS)

Based upon the methodology as previously described, the Pedestrian Level of Stress (PLOS) scores for existing conditions are quite good in Orting, with only a small percentage of facilities creating an “unacceptable” PLOS. These results are illustrated on the map in Figure 2-6. The facilities shown in orange (PLOS 4) and red (PLOS 5) should be addressed and improvements made where possible (see Chapter 5).

The pedestrian level of stress on facilities with road/trail connections is acceptable on 78 percent of the network (Figure 2-4), meaning that 22 percent of the roadway is rated a PLOS of 4 or 5. The pedestrian level of stress on facilities with sidewalks is acceptable on 97 percent of those facilities (Figure 2-5), with only 3 percent rating a PLOS of 4 or 5.

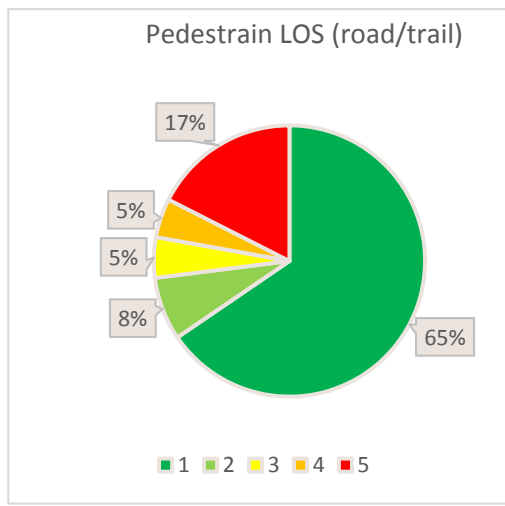


Figure 2-4. PLOS Scoring of Road/Trail

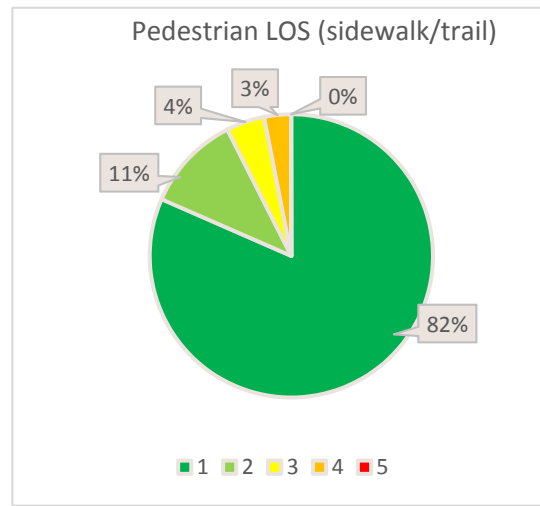
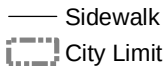


Figure 2-5. PLOS Scoring of Sidewalk/Trail

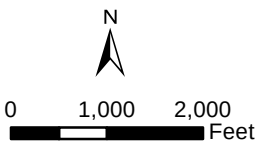




— LOS 1: 24.5 - 31.0 (Low Stress)

Non-Motorized Transportation Plan

Orting, WA



2.8 Bicycle Level of Stress (BLOS)

Variables considered when determining bicycle level of stress include: street width, the number of lanes, posted speed limits, outside lane width, on-street parking, and the functional classification of the roadway. Based upon the GIS data, there are just over 214,500 feet of road/trail in Orting (Figure 2-8). Of this, 87% of the road/trail facilities provide for an acceptable BLOS of 1, 2, or 3 and 13% of the road/trail score an unacceptable BLOS of 4 or 5 (Figure 2-7). The 13 percent of facilities that received a poor BLOS should be improved (see Chapter 5).

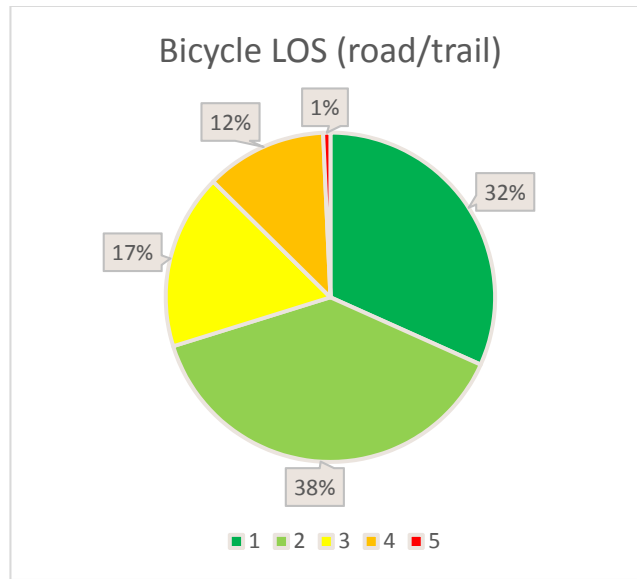


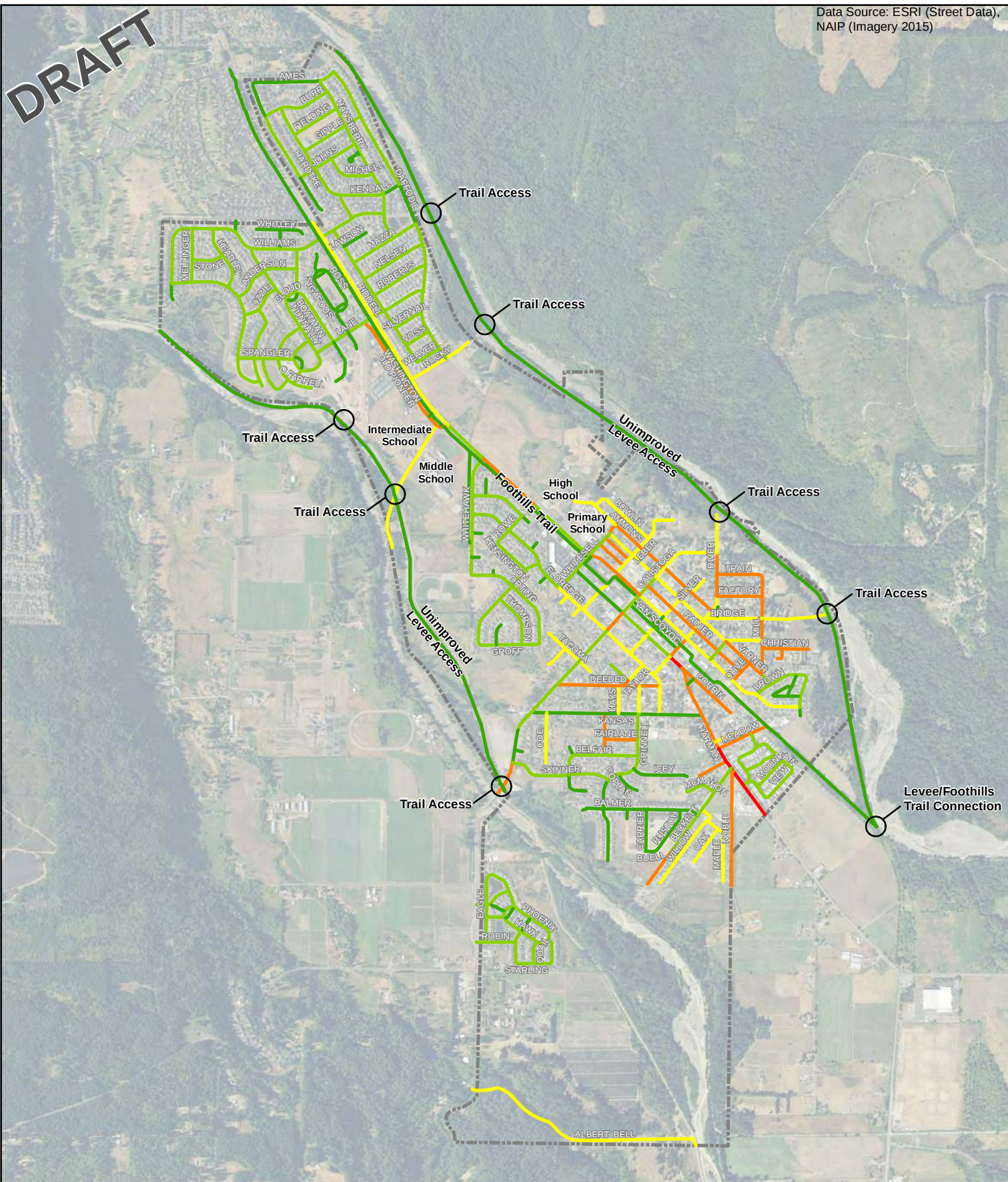
Figure 2-7. BLOS Scoring of Road/Trail



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Data Source: ESRI (Street Data),
NAIP (Imagery 2015)

Date: 11/30/2016 Path: \\parametrix.com\pmx\PSOP\Projects\Clients\1711-CityOfOrting\216-1711-020 On-Call 2014-2017\99Svc\GIS\BikePed Service\mapdocs\Bike Ped\Figures\Orting Bike Ped\OS ExistingConditions.mxd



Parametrix

City Limit

- Bike Level of Stress**
- LOS 5: 2.5 (High Stress)
 - LOS 4: 4.0 - 5.0
 - LOS 3: 5.5 - 6.0
 - LOS 2: 6.5 - 7.0
 - LOS 1: 7.5 - 9.0 (Low Stress)

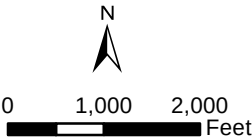


Figure 2-8. Bicycle Level of Stress
Existing Conditions

Non-Motorized Transportation Plan
Orting, WA

2.9 Foothills Trail Data

The foothills trail is the primary non-motorized transportation system in the City of Orting. The trail parallels SR-162 and it is the preferred transportation facility for pedestrians and bicyclists, in place of SR-162. The popularity of this trail is shown in Figure 2-9 and Figure 2-10 listed below. Counts were taken across two separate days (one weekday and one weekend day) at three different locations. Counts were taken in early May; it should be noted that trail usage is typically highest during summer months. Northwest-bound and Southeast-bound directions were also accounted for. The figures below are representative of the total non-motorized users at each location by weekday and weekend day. Trail usage for both pedestrians and bicyclists is higher on weekends compared to weekdays.

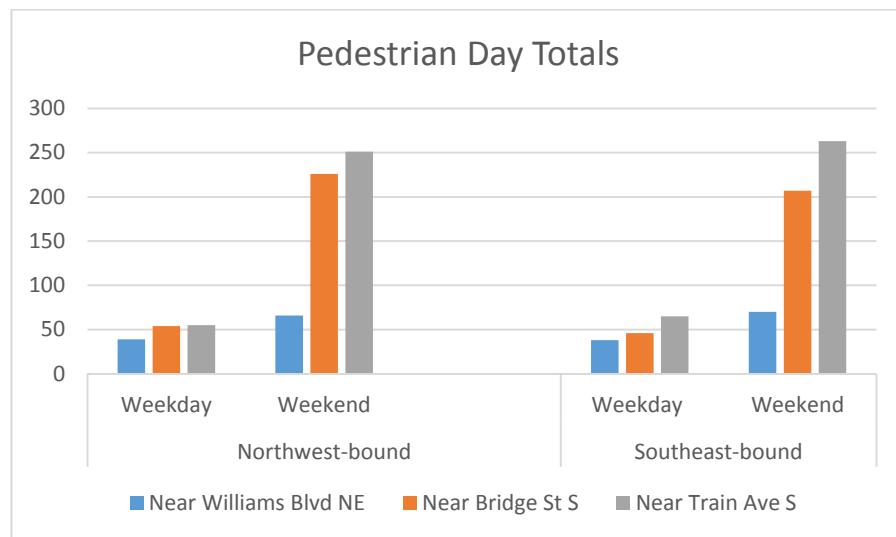


Figure 2-9. Pedestrian Day Totals

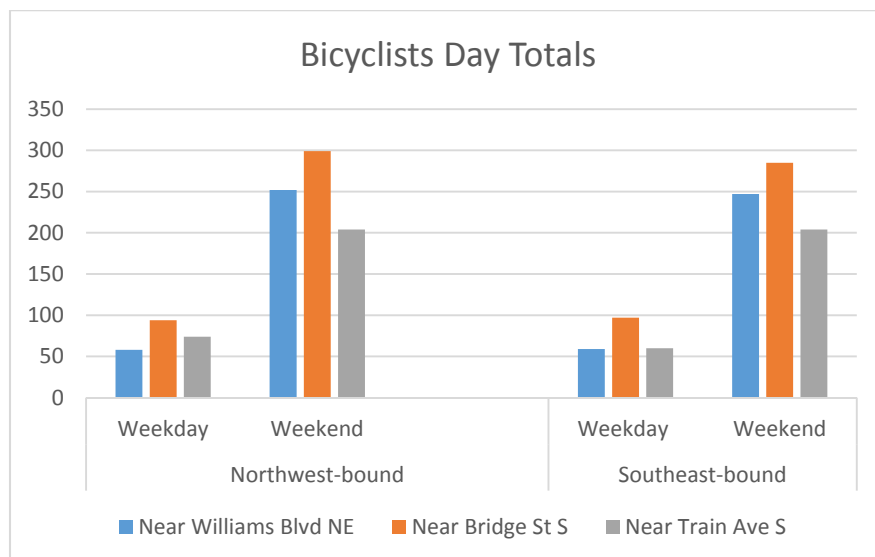


Figure 2-10. Bicyclists Day Totals

3. THE TARGET ZERO CONNECTION

In addition to understanding the Pedestrian and Bicycle levels of stress created by the transportation network of the City, it is also important to consider the broader safety issues for non-motorized users. Such safety issues are clearly outlined in the Washington State Department of Transportation's (WSDOT) 2016 update to *Target Zero*, whose goal is to reach zero deaths and zero serious injuries on Washington roadways by 2030. The City of should consider implementing some of the *Target Zero* improvement strategies to increase pedestrian and bicyclist safety.

3.1 WSDOT Collision Summary

Table 3-1. WSDOT Collision Summary

Collision Date	Collision Location	Pedestrians Involved	Bicyclists Involved	Description
8/15/2012	Hawk Ave SW near Mockingbird St SW	1	None	Vehicle traveling straight collided with pedestrian
5/10/2011	Riddell Ave NE near Johns St NE	5	None	Vehicle backing collided with pedestrian
11/5/2011	SR 162/ Washington Ave N and Williams Blvd NW	None	1	Left turning vehicle collided with bicyclist at intersection
10/24/2013	SR 162/ Washington Ave N and Williams Blvd NW	None	1	Left turning vehicle collided with bicyclist at intersection
9/28/2011	SR 162/ Washington Ave N and Cardinal Ln NE	None	1	Left turning vehicle collided with bicyclist at intersection
10/10/2014	SR 162/ Bridge St NW and Corrin Ave	None	1	Left turning vehicle collided with bicyclist at intersection

WSDOT provided collision data for Orting for the past 5 years (January 2011 through December 2015). During this time period, there were six collisions involving non-motorized users, shown on Figure 3-2; four collisions with bicyclists and two collisions with pedestrians.

All of the collisions with bicyclists occurred at intersections along SR 162, which runs parallel to the Foothills Trail. Left-turning vehicles failed to see bicyclists in all of the collisions and the majority occurred after daylight hours (three out of four collisions). Two of the collisions with bicyclists occurred at same intersection located at SR 162 and Williams Blvd NW.

The two collisions involving pedestrians occurred in residential areas. The collision on Hawk Ave SW occurred near a neighborhood park. The collision on Riddell Ave NE occurred in a cul-de-sac between several pedestrians and a vehicle that was backing out from a driveway. Figure 3-2 shows where these collisions occurred in Orting.

3.2 Pedestrian Facilities

According to the 2016 *Target Zero* plan, 11 percent (93 of 814) of the fatal and serious injury crashes involved pedestrians in Pierce County between 2012-2014. Although this number is not specific to Orting, the City does have areas where pedestrian level of stress – and safety – could be improved, SR 162 is an example of this. Figure 3-1 and Figure 3-3 list several of the most common contributing factors. Vehicles going straight was one of the injuries listed in the WSDOT data, Table 3-1. Four out of six of the injuries recorded by WSDOT happened at intersections. *Target Zero* Figure 3-3 lists intersections as one of the highest contributing factors of fatality or serious injury.

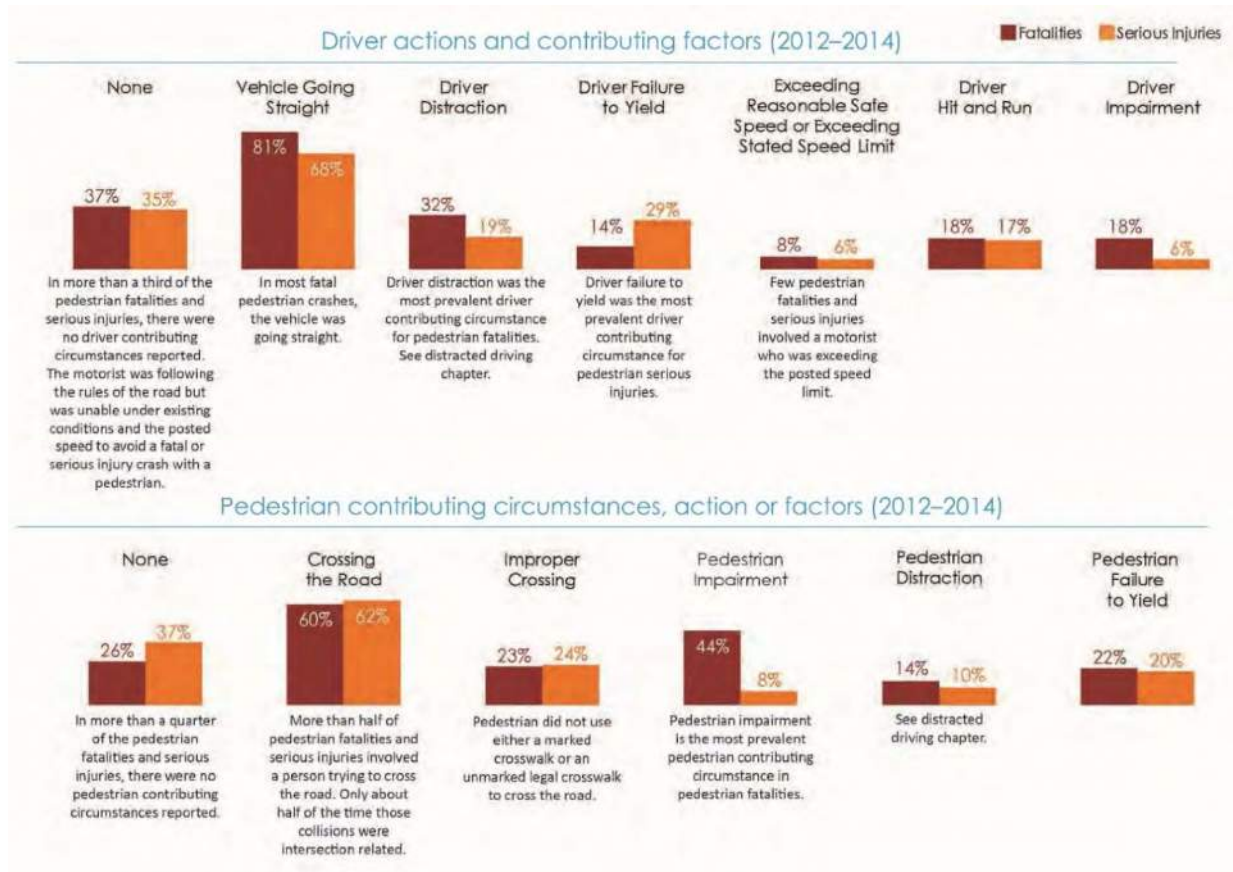


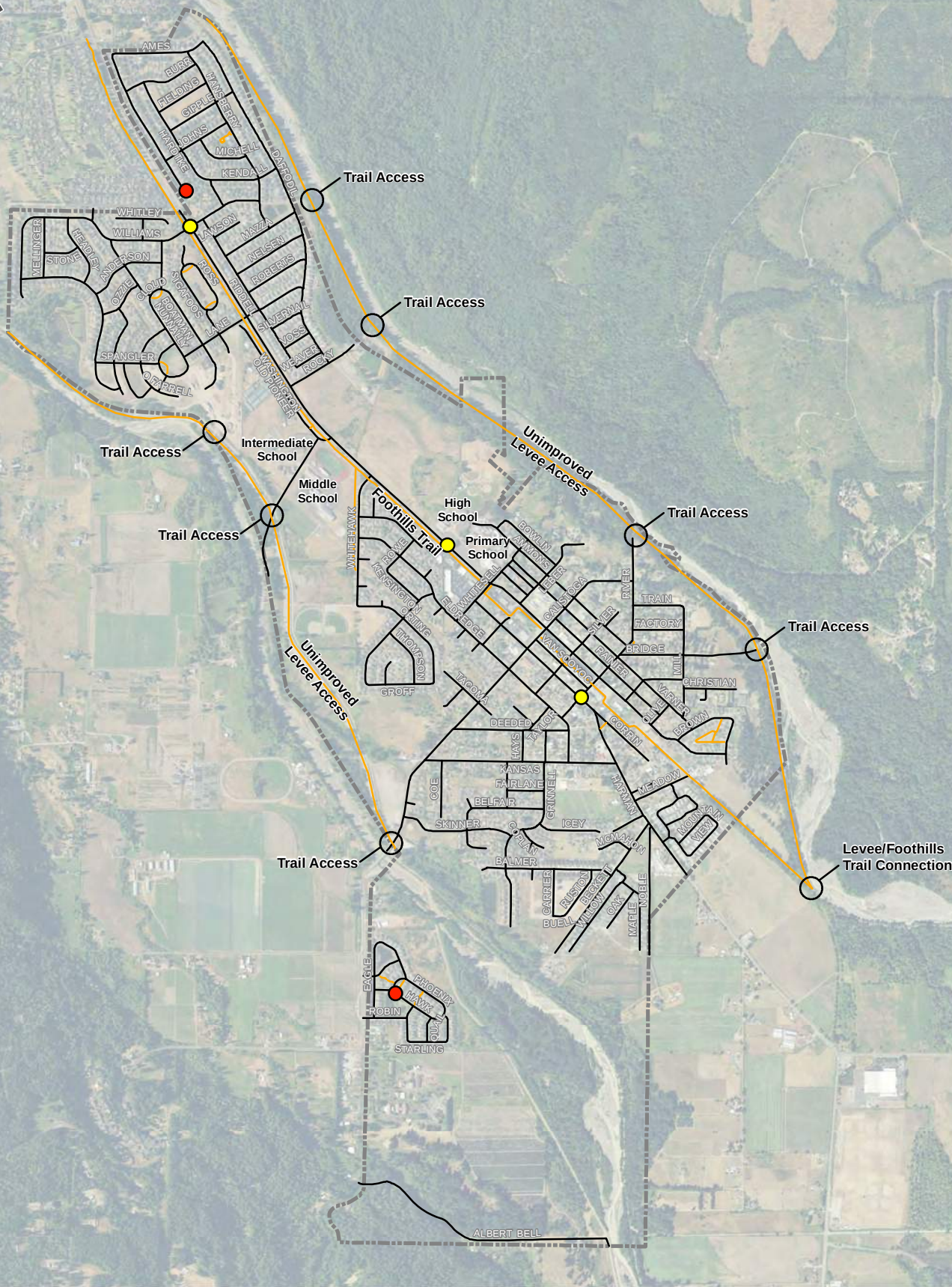
Figure 3-1. Contributing Factors in Pedestrian-Related Fatalities and Injuries

Source: *Washington State Strategic Highway Safety Plan 2016: Target Zero, Zero Deaths & Zero Serious Injuries by 2030*. Washington Traffic Safety Commission.

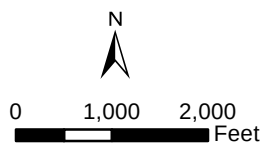
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Data Source: ESRI (Street Data),
NAIP (Imagery 2015)

Date: 12/21/2016 Path: \\parametrix.com\pmx\PSO\Projects\Clients\1711-CityOfOrting\216-1711-020 On-Call 2014-2017\99Svcs\GIS\BikePed Service\mapdocs\Bike Ped\Figures\Orting NonmotorizedCollisions.mxd



Parametrix



- Bicycle Collision
- Pedestrian Collision
- Street
- Trail
- City Limit

Figure 3-2. Non-Motorized Collisions
2011-2015

Non-Motorized Transportation Plan
Orting, WA

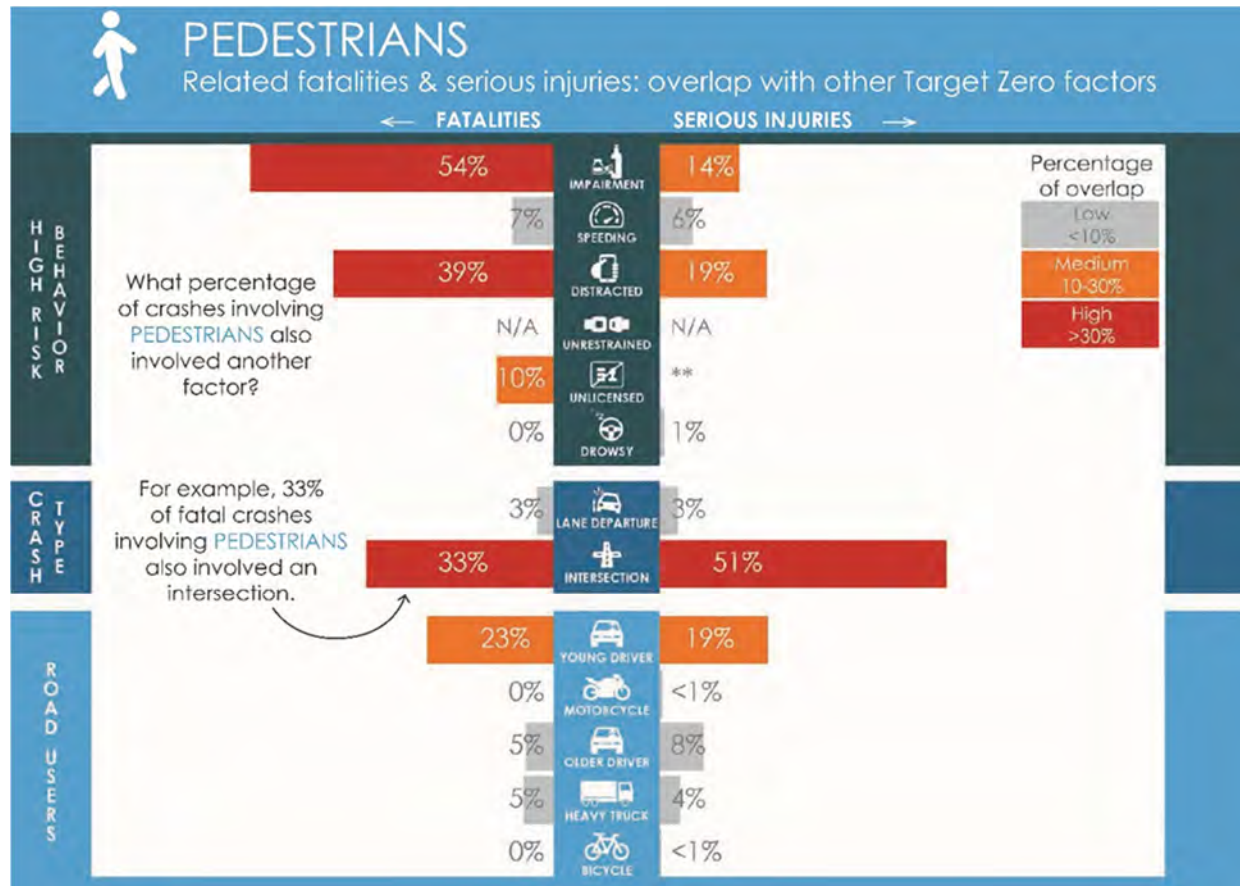


Figure 3-3. Contributing Factors in Pedestrian-Related Fatalities and Injuries
Source: Washington State Strategic Highway Safety Plan 2016: Target Zero, Zero Deaths & Zero Serious Injuries by 2030. Washington Traffic Safety Commission.

3.3 Bicycle Facilities

Target Zero also addresses bicycle safety, as well as the most common contributing factors in bicycle injuries and fatalities (Figure 3-4). Currently, 87 percent of the City of Orting's transportation network has an acceptable level of stress on bicyclists, but there are areas where improvements can be made. These factors should be considered when determining how to best make those improvements. Vehicles making a left turn is listed as a Target Zero contributing factor to serious injuries or fatalities. All four of the recorded bicycle injuries over the last 5 years in Orting were caused by vehicles making a left turn.

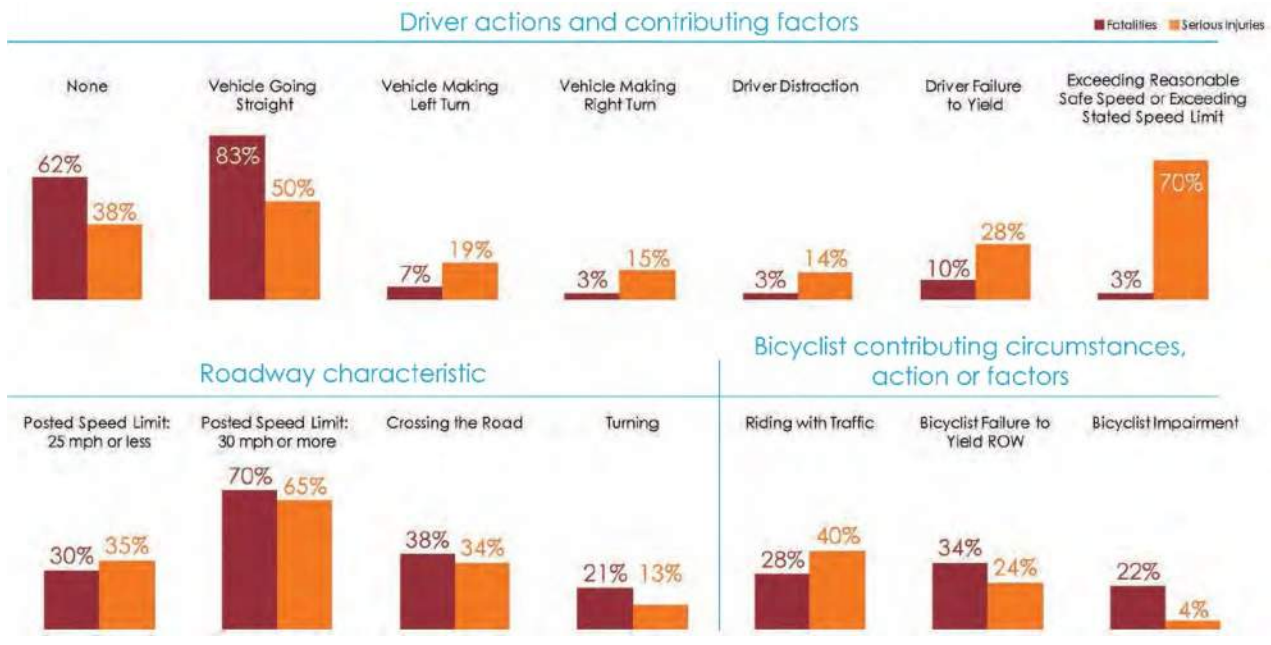


Figure 3-4. Contributing Factors in Bicyclist Fatalities and Injuries
Source: Washington State Strategic Highway Safety Plan 2016: Target Zero, Zero Deaths & Zero Serious Injuries by 2030. Washington Traffic Safety Commission.

In addition, the National Association of City Transportation Officials (NACTO) created an Urban Bikeway Design Guide. The guide has chapters on bike lanes, cycle tracks, intersection treatments, bicycle signals, bikeway signing and marking, and bicycle boulevards. Each of these chapters has examples of successful implementation across the country. There are currently no bicycle lanes within the City of Orting; however, the City as a whole is relatively bicycle friendly. The Urban Bikeway Design Guide could be a useful tool in deciding if there are treatments the City would want to use to further improve the bicycle facilities within Orting.

4. EVACUATION FACILITIES

The City of Orting is located in an open valley, between the Puyallup and Carbon rivers, approximately 30 miles to the northwest of Mt. Rainier. Because Mt. Rainier is an active volcano, and Orting is located within the lahar hazard zone, the City has prepared for the chance of emergency evacuation. The evacuation routes are intended to move the greatest amount of people as fast as possible out of the lahar and flood danger zones. In the event of an emergency, it is entirely possible that people may evacuate by several modes, including walking. Therefore, these routes (see Figure 4-1) are referenced in the ONMTP, to ensure that emergency evacuation planning addresses all potential modes. This is particularly important should an event occur during the school day, when children may need to evacuate by bus or on foot.



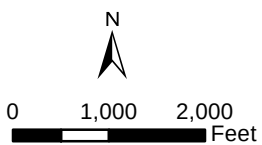


Figure 4-1. Evacuation Route
Existing Conditions

Non-Motorized Transportation Plan Orting, WA

5. PLANNED IMPROVEMENTS

In addition to addressing the existing deficiencies (the facilities creating high areas of pedestrian and bicycle levels of stress) in the non-motorized network, the City should also consider additional growth anticipated by 2030. The 2015 population estimate in Orting was 7,446, an increase of 10.4 percent from April 2010. By 2040, the City of Orting is expected to grow to 8,500 residents.

There are several key factors which present challenges for non-motorized travel in Orting:

Rural character of the City

The City of Orting, while compact along the downtown core, also has several areas that rate poorly for non-motorized travel primarily due to lack of sidewalks and bike lanes. Given that the City is small (less than 3 square miles) and largely rural in nature (as desired by residents), providing such facilities may not always be the best solution. The neighborhood roads have low posted speeds, which are conducive to safe non-motorized travel.

Major transportation facility (Washington Ave/SR 162) is a highway, and a main street

Washington Avenue is a major arterial and also has a paved shoulder, parking space, sidewalks, and a posted speed limit of 25 mph through the city core. The Foothills Trail runs parallel to Washington Avenue, making separate dedicated bike lanes on the roadway unnecessary, but this also affects the BLOS score.

Transit opportunities:

One factor impacting scores is the accessibility to transit facilities. Because of the population size, there are no transit options or opportunities within the City itself, although there are excellent bus and commuter rail options located in both Puyallup and Sumner there is no connectivity between Orting and those cities.

5.1 Pedestrian Facilities

5.1.1 Recommended Improvements

In order to address facilities with high pedestrian levels of stress, the suggested solutions are to complete gaps in the sidewalk and trail systems. The City is currently planning on replacing outdated ADA ramps in Old Town as well as widen sidewalks in Old Town. When these gap improvements and the suggested improvements are made, the resulting conditions should score acceptable PLOS scores of 1-3. Some areas will continue at a PLOS of 4-5 and do not need to be improved, simply due to the fact that these are subdivisions where sidewalks are not appropriate due to the rural character of those areas and the low posted speeds of the roadways. In these areas, a poor PLOS does not translate to a required improvement. It is recommended that some of the programs and policies included in Target Zero be considered (see section 5.1.2, Programs and Policies on page 5-5) for areas that desire an improved PLOS score. Other recommendations for the City are to:

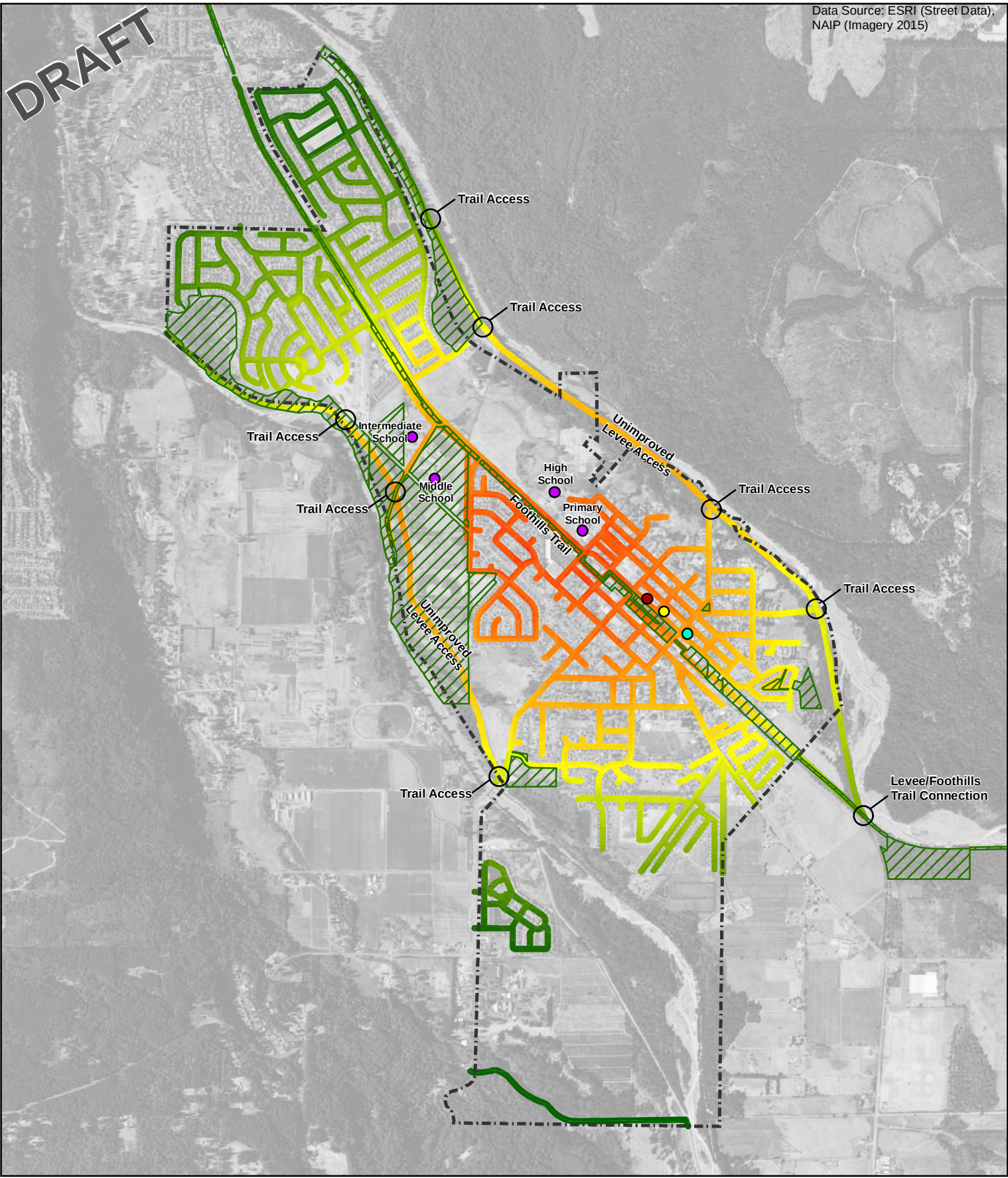
- Widen evacuation route along Calistoga Street West towards Soldiers home.
- Widen the sidewalks on Calistoga Bridge.

- Improve City's crosswalk safety.
- Pursue opportunities to work with Pierce County to provide ADA access to the levee system.

Non-motorized improvements could be prioritized in areas where pedestrian and bicycle activity is likely higher and supported by nearby land uses and destinations. This would include schools, parks, transit stops, downtown and areas with connections to the Foothills trail. These types of land uses and destinations are considered non-motorized generators and generally have a greater potential to encourage non-motorized travel. Figure 5-1 is a heat map which indicates via a color scale, places in Orting where non-motorized travel is likely to be higher. These areas of higher non-motorized travel could be prioritized for investments in non-motorized improvements and are indicated in red and orange. Areas shown in yellow or green are a lower priority for investment.



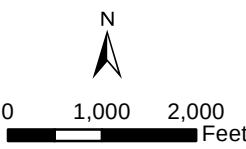
Date: 12/23/2016 Path: \\parametrix.com\pmx\PSO\Projects\Clients\1711-CityOfOrting\216-1711-020 On-Call 2014-2017\99Svc\GIS\BikePed Service\mapdocs\Bike Ped\Figures\Orting NonmotorizedImprovementPriorityAreas_V1.mxd



Data Source: ESRI (Street Data),
NAIP (Imagery 2015)

DRAFT

Parametrix



- Downtown
 - Library
 - Orting Manor
 - School
 - City Limit
 - ▨ Park
- Non-Motorized Improvement Priority**
- High Priority
 - Low Priority

Figure 5-1. Non-Motorized Improvement Area Priority

Non-Motorized Transportation Plan
Orting, WA

5.1.2 Programs and Policies

Target Zero offers several categories of programs, project types, and policies that can be considered when making improvements to pedestrian facilities. Many of these are not capital improvements, but rather, steps that can be taken to increase overall awareness, improve travel behavior, and increase safety. In Target Zero, these strategies are broken out into education, engineering, enforcement, and policy. The City of Orting should determine which of these may be most appropriate in meeting their desired level of stress for pedestrians. Emergency Response is also addressed in Target Zero – due to unique conditions related to lahar and evacuation route planning in Orting, this topic is addressed separately (see Section 5.3 on page 5-8).

Some potential considerations include:

Education

- Promote the use of reflective apparel among pedestrians.
- Educate pedestrians about the dangers of distracted walking.
- Increase public awareness on the significance speed has on the severity of pedestrian injury.
- Improve training on pedestrian laws for law enforcement officials.
- Implement middle school pedestrian and bicycle safety training in school curriculum.
- Encourage campaigns such as Walking School Buses.

Engineering

- Safe Routes to School - the City has four different schools: Orting High School, Orting Middle School, Ptarmigan Ridge Elementary School, and Orting Primary School. Emphasizing safe routes to school would result in safer pedestrian pathways and sidewalks for everyone.
- Implement pedestrian safety zones, targeting geographic locations and audiences with pedestrian crash concerns.
- Improve safety at pedestrian crossings by installing refuge islands and shortening crossing distances with curb extensions where crosswalk enhancements are needed.
- Increase the use of rectangular rapid flashing beacons and pedestrian hybrid beacons where needed to enhance crosswalks.
- Implement programs that improve the built environment such as improving pedestrian connections to public transportation.
- Improve sight distance and visibility at pedestrian crossings by clearing vegetation to improve sight, extending crossing times, adding pedestrian scale illumination, etc.
- Provide more frequent pedestrian crossing options.
- Be sure pedestrian signing is consistent and appropriate for the zone it is in.

Enforcement

- Use enforcement and speed feedback signs to help motorists change speeding behavior.
- Expand targeted crosswalk enforcement and education for both motorists and pedestrians.

Leadership/Policy

- Implement Complete Streets policies to provide for all modes of transportation.
- Collect miles walked data, similar to collecting vehicle miles travelled.

More than half (57%) of pedestrian facilities and 67% of serious injuries occurred while the pedestrian was crossing the road.

In 2012–2014, there were no pedestrian fatalities on roads with a posted speed of 20 mph.

5.2 Bicycle Improvements

Overall, Orting rated well in the low levels of stress placed on bicyclists, with 87 percent of facilities meeting an acceptable level of stress. The single best way to achieve 100 percent acceptable level of stress for bicycles is to add bike lanes to any roadway with a BLOS of 4 or 5. However, bike lanes may not be desirable or reasonable on every local access or neighborhood road, where low traffic volumes and low speeds already provide a safe condition for non-motorized uses. Old Pioneer Way is an example of a street that scored a BLOS of 5 but will not need improvements because it is paralleled by the Foothills Trail, which is used by non-motorized road users in place of Old Pioneer Way. Programs and policies that promote and enhance bicycle travel should be considered, primarily in places where reasons for poor BLOS have a reasonable explanation, such as on Old Pioneer Way.

A focus on connectivity to the Foothills trail is one way to make bicycle improvements. The Foothills trail is a popular route for bicyclists and providing access points with a low Level of Stress would improve the City's overall BLOS. Figure 5-1 shown on page 5-3 under Pedestrian Facilities emphasizes that non-motorized generators, such as the Foothills trail, are generally a higher priority for improvement. In terms of bicycle use, trail access points in orange or red are areas that would benefit from improvement projects.

- Calistoga Street West
- Kansas Street Southwest
- Consider the addition of bike lanes on Calistoga Street and Kansas Street.
- Consider striping the trail with "fast" and "slow" lanes for bicycle and foot traffic.
- Removing mid-block crossings with Foothills trail.

5.2.1 Programs and Policies

Many of the following potential projects are also suggestions from Target Zero.

Education

- Promoting the use of reflective apparel and bicycle lights by bicyclists.
- Including bicycle safety awareness in drivers' education courses.
- Improving training on bicycle laws for law enforcement officers.
- Encouraging local schools to implement Safe Routes to School.

Engineering

In addition to bike lanes, a variety of treatments could be considered, including: narrower travel lanes, medians, chokers or pinch points, horizontal lane shift, vertical traffic calming, traffic diverter islands, roundabouts, two-way streets, trees, and tighter curb radii.

Near intersections and crossings, the engineering treatments could include: intersection crossings, green-colored pavement, bike boxes, two-stage turn boxes, bicycle signals, median refuge islands, active warning beacons and hybrid beacons. Many of these suggestions and successful implementation examples are listed in the *Urban Bikeway Design Guide*, including:

- Implement speed management using target speeds and context sensitive solutions.
- Utilize road diets/reconfigurations to improve safety for all roadway users.
- Follow national guidelines on the use of reflective markings and sign material.
- Construct more bike lanes, separate bicycle lanes, and separated bicycle facilities.
- Create bicycle boulevards on low volume, low speed streets.
- Install colored bicycle boxes at intersections.

Leadership/Policy

- Increase number of people bicycling because there is safety in numbers.
- Encourage bicycle helmet use for both children and adults.
- Implement Complete Streets policies to provide for all modes of transportation.
- Collect Bicycle Miles Traveled similar to collecting Vehicle Miles traveled.

5.3 Evacuation Routes

Evacuation and emergency planning and preparedness are covered by the City's Emergency Management team under a document called Emergency Preparedness. However, it is worth emphasizing in this ONMTP, to ensure that evacuation route planning also meets the needs of anyone traveling on foot or by mode other than car should a lahar occur. The City currently has several evacuation routes (see Figure 4-1, located on page 4-3).

5.3.1 Considerations

The ONMTP is not requiring specific evacuation route improvements, as these are being addressed in other areas of City planning. However, in order to support all modes, particularly during emergencies, it is worth noting a few key projects and areas that should be addressed in the City's hazard mitigation and emergency planning.

Orting Emergency Evacuation Bridge System

The Orting Emergency Evacuation Bridge System is a proposed an evacuation improvement, which was developed from a concerned group of parents. The fear was that in an actual emergency the current evacuation routes would be compact with vehicles slowing the evacuation process for pedestrians and vehicles alike. Out of this concern, a pedestrian only evacuation route, was born. The route is accessible to all four schools in the area and uses Rocky Road to lead pedestrians to higher and safer ground. This project is not currently fully funded, however preliminary design is complete and funding is being actively pursued.

Sidewalk Gaps/System Repairs

Repair/rebuild elements of current evacuation routes that may need to be improved, such as heavily used sidewalks and bridges along the routes.

6. IMPLEMENTATION

As with the city's Transportation Plan, the ONMTP needs to be consistent with several statewide and regional planning objectives. This chapter describes the ONMTP as it pertains to state and regional planning, and provides a proposed list of recommended projects with associated implementation timeline and possible funding sources.

6.1 Consistency with other Planning Efforts

6.1.1 Growth Management Act (GMA)

The Washington State Growth Management Act (GMA) was designed as a way for state and local governments to identify as well as protect natural resources when planning urban areas of growth. GMA, specifically Revised Code of Washington (RCW) 36.70A.070(6) expects several requirements to be met relating to the transportation element of a comprehensive plan. The GMA requires a financial analysis to include:

- An analysis of a jurisdiction's funding capability by comparing needs with likely funding sources.
- A multi-year financing plan based on the needs addressed in the most recent comprehensive plan. Pieces of the multi-year plan serve as the foundation for the development of the Transportation Improvement Program (TIP), a 6-year program covering street, road, or transit programs required by cities and other transit agencies.
- If possible funding does not meet all the needs, there needs to be an element of the financial plan dedicated to addressing how additional funding will be raised or how land use assumptions will be reassessed at a later time to ensure level of service standards are met.

6.1.2 VISION 2040

The objective of VISION 2040 surrounds the idea of active transportation, meaning bicycle and pedestrian planning. VISION 2040 is the Puget Sound region's long range growth management, economic, and transportation strategy. The plan calls for developing a transportation system that both creates a variety of travel choices and preserves open space and the environmental quality. Non-motorized transportation, including pedestrians and bicycles, play a substantial role in attaining these goals. The goals established should implement efficient and effective projects and programs.

6.1.3 Transportation 2040

Transportation 2040 is a 30 year plan intended as a course of action for the transportation quality in the central Puget Sound region. With an anticipated growth rate to 1.5 million people by 2040, this plan is critical to the region. There is also an expected 1.2 million new jobs. Both jobs and people will boost travel demand by an estimated 40 percent. With the increased need, Transportation 2040 outlines a financial plan that works to shift how transportation improvements are funded in the long-term. The plan also acknowledges the reliance on those using the improvements also paying for them as well as strategies to reduce transportation contributions to environmental changes.

6.1.4 Americans with Disabilities Act

Puget Sound Regional Council has a commitment to the Americans with Disabilities Act (ADA) and adopted the Coordinated Transit-Human Services Plan in 2014 to outline how transit agencies, social services, schools, and other transportation providers can work together to improve special needs transportation throughout multiple counties. Pierce, Snohomish, King and Kitsap Counties were all involved in this plan.

6.2 Recommended Improvements and Financial Strategy

Based upon the existing conditions, and the City's desired level of stress standards for pedestrians and bicyclists, several projects have been identified that will allow the City to achieve their goals. Table 6-1 summarizes each recommended improvement project or program, as well as possible funding sources. An explanation of cost range is listed below.

Table 6-1. Non-Motorized Improvement Projects

Project/Program	Description/Timeline	Cost Range	(Potential) Funding Sources
Pedestrian			
Sidewalk Gap Closures and ADA Compliance	Widen sidewalks for ADA acceptable use and replace ADA ramps.	\$2,000 – \$6,000 per ADA ramp \$570 – \$650 per linear foot to construct sidewalks	CBDG (Community Block Development Grant)
Trail Enhancements	Add pavement markings/stripping, such as “fast” and “slow” lanes to separate bicycle traffic and foot traffic.	\$1 – \$2 per linear foot of stripping \$200 – \$600 per each marking symbol	TAP (Transportation Alternatives Program)
Safe Routes to School	Improve sidewalks and routes to school so that children can walk to school safely *based off of sidewalk improvements listed in the TIP ranging from 5-foot sidewalks to 12-foot sidewalks.	\$570 – \$650 per linear foot to construct sidewalks	Safe Routes to School Grant
Bicycle			
Trail Enhancements	Add pavement markings/stripping, such as “fast” and “slow” lanes to separate bicycle traffic and foot traffic.	\$1 – \$2 per linear foot of stripping \$200 – \$600 per each marking symbol	
Evacuation			
Orting Emergency Evacuation Bridge System	<i>**This project is included to highlight the importance of evacuation route planning for all modes. This project will likely be funded through multiple sources.**</i>	Phase 1 – \$7 million Phase 2 – \$40 million	Hazard Mitigation Grant
Evacuation Route Improvements	Widen the sidewalks on the current evacuation route. Widen the west side of Calistoga to 8 – 12 feet. Widen the East side of the bridge sidewalk to 8 – 12 feet.	\$287,400 – \$362,000	Grant (EMPG) Emergency Management Performance

All cost range estimates are derived from the Cost for Pedestrian and Bicyclist Infrastructure Improvements: a Resource for Researchers, Engineers, Planners, and the General Public Manual (2013) and from recently constructed projects in the region.

ADA Ramps: The cost to replace or construct ADA ramps is approximately \$2,000 to \$6,000 per ramp. This cost is estimated from *Cost for Pedestrian and Bicyclist Infrastructure Improvements Manual* (2013) and recently constructed projects in the region.

Sidewalk Gap Closures: Sidewalk gap closures are estimated to cost between \$570 and \$650 per linear foot depending on sidewalk widths, pavement types, and amount constructed. This cost is a high level planning cost that includes the major components of a sidewalk construction project, including clearing and grading, pavement and curb and gutter removal, traffic curb and gutter installation, storm drainage improvements, engineering/construction management fees, and contingencies.

Trails: Trail Enhancements were calculated from several different sources, including the *2015 City of Orting Parks, Trails and Open Space Plan*, the *Manual Cost for Pedestrian and Bicyclist Infrastructure Improvements: a Resource for Researchers, Engineers, Planners, and the General Public* (2013), and recently constructed projects in the region.

Currently, there are no proposals to construct or rebuild new portions of the Foothill's Trail in Orting. However, trail enhancements, such as adding "fast" and "slow" lanes, could be completed. This type of trail enhancement would include adding pavement markings and striping to the existing asphalt trail.

The average cost of striping the trail would be between approximately \$1 and \$2 per linear foot. Pavement marking symbols, which would be placed at intersections and approximately every 500 feet, would be approximately \$200 to \$600 each.

Safe Routes to School: Safe Routes to Schools (SRTS) projects primarily consist of sidewalk and bicycle improvements. Once SRTS routes are identified, typical improvements to make bicycling and walking safer can be completed:

- Stripe bicycle lanes: \$26,000 – \$53,000 per mile
- Construct sidewalk: \$570 – \$650 per linear foot
- Construct pedestrian crossings: \$500 – \$3,000 each
- Construct pedestrian safety island: \$10,000 – \$75,000 each

Other improvements can include general traffic calming measures, such as high visibility crosswalks, raised crosswalks, speed humps/tables, and signage.

Orting Emergency Evacuation Bridge System: The cost to construct the Orting Emergency Evacuation Bridge System is estimated to be \$47 million dollars. This facility could be completed in two phases, with the first estimated to cost \$7 million and the second estimated to cost \$40 million.

Emergency Evacuation Route: The costs to complete improvements to the emergency evacuation route include widening the sidewalks. Between Washington Ave S and the Puyallup River, Calistoga Ave is approximately 3,800 feet in length. It would cost between approximately \$2.3 to \$2.5 million to construct an 8- to 12-foot sidewalk on the west side of the street between Washington Ave S and the Puyallup River. The existing bridge over the Puyallup River is approximately 500 feet in length and the existing sidewalks are 6 feet wide. The sidewalks on the bridge could be widened to between 8 and 10 feet on either side by reducing the widths of the travel lanes to between 13 and 12 feet each (from 15 feet wide). Increasing the sidewalk width on one side of the bridge would cost approximately \$140,000 to \$150,000. Providing sidewalks wider than 10 feet would require expansion of the bridge structure, which would greatly increase construction costs. Expansion of the bridge could require additional girders and foundations to accommodate a wider and heavier structure.

Orting 2040 Transportation Plan

Prepared for



September 2019

Prepared by

Parametrix

Orting 2040 Transportation Plan

Prepared for

City of Orting

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CERTIFICATION

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.

Prepared by Erinn Ellig

Checked by Ryan LeProwse

Approved by JC Hungerford

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ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disabilities Act
BLOS	Bicycle Level of Stress
City	City of Orting
FAST	Fixing America’s Surface Transportation
FGTS	Freight and Goods Transportation System
FHWA	Federal Highway Administration
GMA	Washington State Growth Management Act
LOS	level of service
mph	miles per hour
NMTP	Non-Motorized Transportation Plan
PLOS	Pedestrian Level of Stress
PSRC	Puget Sound Regional Council
RTCC	Rural Town Centers and Corridors
Sound Transit	Central Puget Sound Regional Transit Authority
SR	State Route
STIP	Statewide Transportation Improvement Program
TDM	Transportation Demand Management
TIP	Transportation Improvement Program
WSDOT	Washington State Department of Transportation

1. INTRODUCTION

The Orting 2040 Transportation Plan defines the existing and future transportation vision for Orting and will replace the 2015 Transportation Element and Appendix from the Orting Comprehensive Plan published in June 2015. This transportation plan contains a description of existing transportation conditions, travel forecasts, service standards and analysis, and transportation recommendations. The following analysis and conclusions will inform the City of Orting 2040 Comprehensive Plan.

The City of Orting has a unique configuration with respect to transportation. The community lies in the Orting Valley between the Carbon and Puyallup Rivers. State Route (SR) 162 runs between the two rivers and links Orting with Sumner and Buckley. Orting is a small rural community of just under 8,000 residents—more than twice the population just 20 years ago. Many of the local city streets are quiet, tree lined, with low traffic volumes. The older portion of the City is laid out on a traditional grid system and some recent developments feature a curvilinear circulation pattern.

2. GOALS

- | | |
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| Goal T1 | Maintain a transportation system that accommodates the separation of through and local traffic, provides adequate internal circulation, and interconnects effectively to the regional highway, non-motorized, and public transportation systems is responsive to the mobility needs of City businesses and neighborhoods, and guides future developments. |
| Goal T2 | Coordinate with local, regional, state, and federal agencies in the development and operation of the transportation system. In particular, support City, County, and state implementation of comprehensive solutions to capacity, safety, and circulation problems with SR 162. |
| Goal T3 | Establish a safe and convenient pedestrian and bicycle circulation system linking residential communities with key destinations. |
| Goal T4 | Fund transportation facility improvements with federal, state, and local public and private sources. |
| Goal T5 | Realize the vision for Washington Avenue as Orting’s main street, providing high quality aesthetic design in conjunction with multi-modal mobility, pedestrian safety, and infill economic development. |
| Goal T6 | Meet federal and state air quality requirements and work with state, regional and other local agencies to develop transportation control measures and/or mobile source emission reduction programs that may be warranted to attain or maintain air quality requirements. |

2.1 Vehicular Transportation Policies

2.1.1 Street Network

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| Policy T1 | Periodically update traffic forecasts and levels of service analysis on all arterials in the City. |
| Policy T2 | Provide adequate, system-wide capacity on arterial streets to avoid diversion of excess traffic from congested arterials to neighborhood streets. |
| Policy T3 | Maintain truck routes on Principal Arterials and enforce truck use accordingly. |
| Policy T4 | Develop the local street system to ensure connectivity between adjacent developments and provide connections to arterials from neighborhood collectors. |
| Policy T5 | Existing non-through (dead-end) streets shall be linked together whenever practical. |

- | | |
|-----------|--|
| Policy T6 | Minimize the use of cul-de-sacs, dead-end streets and other designs that reduce connectivity between neighborhoods. |
| Policy T7 | Protect street rights-of-way from encroachment by structures, fences, retaining walls, landscaping, or other obstructions to preserve the public's use of the right-of-way, and to ensure safety and mobility. |

2.1.2 Street Classification

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| Policy T8 | Maintain a consistent classification of streets as Principal-, Minor-, and Collector Arterials, Neighborhood Collector Streets and Local Streets according to function, based on federal, state, and regional guidelines so that needed traffic capacity may be preserved and planned street improvements will be consistent with those functions. |
| Policy T9 | Limit the number of residences that can be served by a dead end/ cul-de-sac street. |

2.1.3 Street Design Standards

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| Policy T10 | Maintain a comprehensive street improvement plan for city streets that implements the desired streetscape for each functional classification. Arterial street standards shall provide guidance on the width of lanes, driveway access, right-of-way width, sidewalks median treatments, setbacks, lighting, pedestrian facilities, landscaping, or other improvements. |
| Policy T11 | Design street improvements to fit the character of areas they serve. |
| Policy T12 | Maximize and maintain the capacity of arterial streets through the provision of turn lanes and other auxiliary lanes rather than street widening solutions. |
| Policy T13 | Encourage shared use of driveways served by arterials. |
| Policy T14 | Use street design standards to minimize pavement widths while accommodating on-street parking, and allowing cars to pass, thereby slowing the speed of vehicles on local streets, improving pedestrian safety and allowing for landscaping. |
| Policy T15 | Require safe, attractive sidewalks on all streets. |
| Policy T16 | Provide comprehensive street lighting, including lights for pedestrians on sidewalks and trails, using such factors as adjacent land uses, hazardous street crossings, transit routes, schools, and parks. |

2.1.4 Traffic Safety

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| Policy T17 | Monitor traffic accidents, citizen input/complaints, traffic violations, and traffic growth to identify and prioritize locations for safety improvements. |
| Policy T18 | Consider the use of devices that increase safety of pedestrian crossings such as flags, in-pavement lights, raised crosswalks, colored and textured pavements. |

2.1.5 Neighborhood Traffic Control

- Policy T19 Consider design options for application of neighborhood traffic calming devices such as median barriers, speed humps, speed tables, raised crosswalks, raised intersections, traffic circles, roundabouts, chicanes, chokers, neckdowns, and textured pavements on local streets where traffic and pedestrian safety is of concern. Neighborhood Collectors shall receive the first priority followed by other local streets. Installation of neighborhood traffic control devices shall be avoided on arterials.

2.1.6 Property Access

- Policy T20 Minimize local property access on Principal and Minor arterials.
- Policy T21 Consolidate existing access driveways on arterials when street improvements are implemented, or redevelopment proposals are made.

2.1.7 Environmental

- Policy T22 Participate in regional efforts to improve air quality by promoting alternatives to the single occupant vehicles; use of cleaner fuels; implementing transportation demand management goals and policies and maintaining or improving the operating efficiency of the transportation system.
- Policy T23 Mitigate noise impacts when designing future roadway improvements.
- Policy T24 Reduce the amount of impervious surfaces (e.g., streets, driveways) to the extent practicable.
- Policy T25 Minimize harmful pollutants generated by transportation-related construction, operations, and maintenance activities from entering surface and groundwater resources.

2.1.8 Level of Service

- Policy T26 Maintain intersection level of service (LOS) according to the following standards:
- LOS E on arterial intersections in the Mixed-Use Town Center
 - LOS D on all other arterial intersections
- Policy T27 Transportation improvement projects, strategies and actions needed to serve new developments shall be in place at the time new development occurs or be financially committed and scheduled for completion within six years of permit approvals.

2.1.9 Land Use/Transportation

- Policy T28 Consider the effect of the City's growth and transportation improvement programs on other adjacent jurisdictions through coordination with county, state, and regional agencies

2.1.10 Development Impact Mitigation

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| Policy T29 | Maintain and apply standardized transportation impact mitigation procedures and strategies, including payment of traffic impact fees. |
| Policy T30 | Require dedication of right-of-way as a condition of development approval when the need for such right-of-way is determined in the permit approval process |
| Policy T31 | Maintain a right-of-way use permit process to minimize environmental and traffic impacts during construction. |

2.2 Pedestrian and Bicycle Policies

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| Policy T32 | Promote pedestrian and bicycle networks that safely access commercial areas, schools, transit routes, parks, and other destinations within Orting and connect to adjacent communities, regional destinations and routes. |
| Policy T33 | Require new development to ensure safety, comfort and convenience of pedestrians and bicyclists. |
| Policy T34 | Designate and construct segregated internal pedestrian circulation systems in new or redeveloping commercial-retail districts. Provide connectivity to nearby transit stops using sidewalks, landscaping, covered walkways, or other treatments. |
| Policy T35 | Promote a comprehensive and interconnected network of pedestrian and bike routes within and between neighborhoods. |
| Policy T36 | Require trail routes and/or sidewalks where appropriate in PUD, plat and short plat approvals. |
| Policy T37 | Work progressively to provide and maintain sidewalks in established neighborhoods. Priority shall be given to all public facilities such as transit routes, schools and parks, and multi-family housing, commercial areas, and gaps in the existing sidewalk system. |
| Policy T38 | Provide striped, on-street bicycle facilities on arterial streets on paved shoulders or within wide curb lanes to ensure safety for bicyclists. |
| Policy T39 | Ensure that sidewalks meet requirements of the Americans with Disabilities Act. |
| Policy T40 | Identify non-motorized facility improvements on school walk routes to increase pedestrian safety. |
| Policy T41 | Require secure (racks and lighting) bicycle parking at commercial and institutional facilities along with automobile parking. |

2.3 Regional and Local Coordination Policies

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| Policy T42 | Ensure coordination and consistency with state, regional and local transportation plans. |
| Policy T43 | Coordinate the Six-Year Transportation Improvement Program with adjacent jurisdictions' where City projects have regional implications. |
| Policy T44 | Participate in regional transportation planning to ensure that the City's interests are reflected appropriately. |

2.4 Funding and Implementation Policies

2.4.1 Funding

- | | |
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| Policy T45 | Maintain a street utility for the purpose of supporting preservation and ongoing maintenance and operations of its transportation systems pursuant to RCW 82.80. |
| Policy T46 | Maximize outside funding from regional, County, State, or Federal sources. |
| Policy T47 | Emphasize multimodal enhancements to the transportation system in funding transportation programs. |
| Policy T48 | Ensure the adopted impact fee rate schedule reflects the current land use and transportation forecasts and needs. |
| Policy T49 | Update the six-year Transportation Improvement Program (TIP) annually to implement the Long-Range Capital Facility Plan. |

2.4.2 Implementation

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| Policy T50 | Maintain and monitor a scheduled street maintenance program including regular street sweeping to ensure that all arterial and neighborhood collector streets shoulders and/or designated bike lanes are clear of sand, glass, and debris. |
|------------|---|

2.5 System Air Quality Policies

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| Policy T51 | The City's transportation system shall conform to federal and state Clean Air Acts by maintaining conformity with the Metropolitan Transportation Plan of the Puget Sound Regional Council and by following the requirements of Chapter 173-420 of the Washington Administrative Code. |
| Policy T52 | Travel in modes other than single-occupant vehicles shall be encouraged. Transportation demand management strategies will be employed to discourage the use of single-occupant vehicles and to encourage non-motorized transportation. |
| Policy T53 | Consider air quality effects of future development when considering annexations, amendments to the Comprehensive Plan and development regulations, and during project review processes. |
| Policy T54 | Establish standards for the control of particulate matter on paved public roads. |

3. EXISTING CONDITIONS

This section summarizes the existing (2017) transportation system for all modes of travel in Orting. This information supports the city's comprehensive planning process, which must, among other things, contain travel forecasts, a level of service standard, be regionally coordinated, and meet concurrency requirements. The transportation element for the City of Orting must meet the requirements of the GMA and will be certified by the Puget Sound Regional Council. The element will contain a description of existing transportation conditions, travel forecasts, service standards and analysis, and transportation recommendations, all of which will be coordinated with the county and the state.

3.1 Transportation Network Overview

The roadway network in Orting consists of corridors serving different travel needs. The main thoroughfare is SR 162, which runs northwest/southeast through the center of Orting. Calistoga Street W is the other significant arterial in the city that provides an east/west link across the Puyallup River and to the Orting-Kapowsin Highway. There are minimal east/west regional connections into and out of Orting.

3.1.1 Roadway Functional Classification

As Orting continues to grow, the internal street network will continue to be developed. City streets are classified into different categories to guide development and define the degree to which they provide through movement and land access functions. Roadway classification is based upon guidelines prepared by the Federal Highway Administration (FHWA) and administered by the Washington State Department of Transportation (WSDOT). City streets in Orting are classified into four functional classifications that are accompanied by different land use policies and street standards. The four classifications are:

- **Principal Arterials**, which are streets and highways that carry the greatest portion of through or long-distance traffic. Such facilities serve the high-volume travel corridors that connect major generators of traffic. The selected routes provide an integrated system for complete circulation of traffic, including ties to the major rural highways entering urban areas.
- **Minor Arterials**, which are streets and highways that connect with remaining arterial and collector roads that extend into the urban area. Minor arterial streets and highways serve less concentrated traffic-generating areas, serve as boundaries to neighborhoods, and collect traffic from collector streets. Although the predominant function of minor streets is the movement of through traffic, they also provide for considerable local traffic that originates or is destined for points along the corridor.
- **Collectors**, which are streets that provide direct services to residential areas, local parks, churches, and areas with similar land uses. To preserve the amenities of neighborhoods, they are usually spaced at about 0.5-mile intervals in order to collect traffic from local access streets and convey it to major and minor arterial streets and highways. Collector streets are typically 1 to 2 miles in length. Direct access to abutting land is essential.
- **Local Access Streets**, which are the remaining streets that allow access to individual homes, shops, and similar destinations. They provide direct access to abutting land and to the higher classification of roadways. Through traffic is discouraged.

Figure 3-1 shows the functional classification of the roadways within the City.

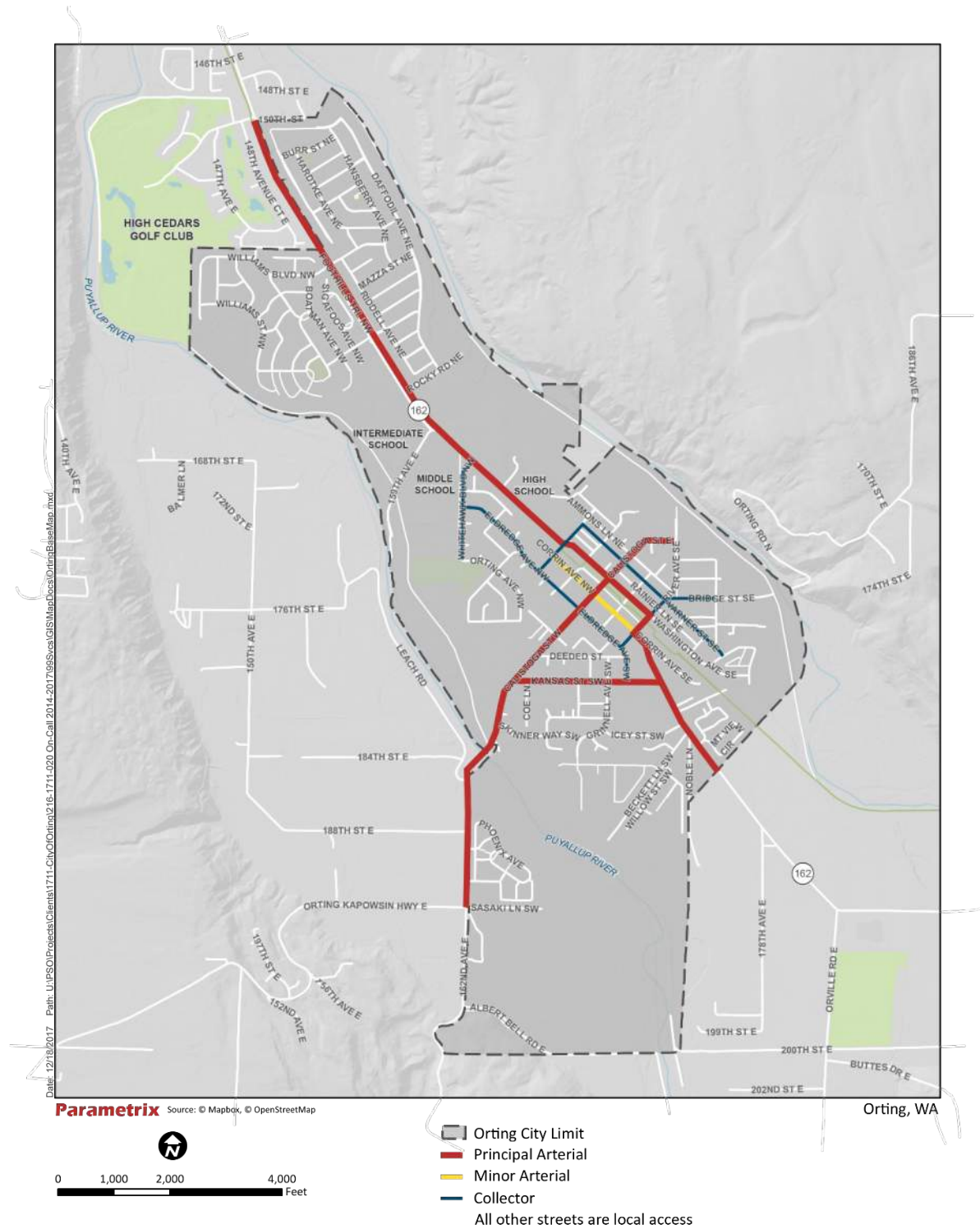


Figure 3-1. Orting Roadway Functional Classification

State-owned Transportation Facilities and Highways of Statewide Significance

In 1998, the Washington State Legislature enacted the “Level of Service Bill” (House Bill 1487) that amended the GMA to include additional detail regarding state-owned transportation facilities in the transportation element of comprehensive plans. PSRC, in 2003, adopted level of service standards for regionally significant state highways. Regionally significant state highways are state transportation facilities that are not designated as highways of statewide significance. Within Orting, no roadways have been designated as a Highway of Statewide Significance in WSDOT’s Highway System Plan. SR 162, which links Orting with Sumner and Buckley, is the only state-owned facility within the planning area and is designated as a Regionally Significant State Highway. WSDOT completed a study of SR 162 in June 2017 to identify strategies to increase mobility and improve safety in the corridor. Although the scope of the study was outside of the Orting City limits, potential improvement options could improve traffic flow and safety for vehicles exiting and entering Orting. Improvement strategies identified in the study will be incorporated in WSDOT’s Corridor Sketch Phase II for SR 162 and prioritized for funding on a statewide basis.

3.1.2 Roadway Network

The primary roadway network in Orting comprises the following:

- **State Routes:** SR 162 runs northwest/southeast through Orting, providing the primary connection to SR 512 and Interstate 5. Outside of the city limits, SR 162 is a two-lane principal arterial with limited shoulders and a posted speed limit of 50 miles per hour (mph). Within the city limits, the roadway is known as Washington Avenue N and is a two-lane principal arterial with a narrow painted median and paved shoulders and has parking on both sides of the road in the downtown core. The posted speed limit is 35 mph and reduces to 25 mph near Orting High School.
- **Pierce County Roadways:** Orting-Kapowsin Highway is a two-lane major arterial, with a posted speed limit of 35 mph along most of its length. Shoulders have a gravel surface, with a walking path along the east side of the road in some areas. It runs adjacent to the city limit line for a short distance south of the Puyallup River before turning into Calistoga Street W.
- **Local Transportation System:** Calistoga Street W is the primary local street that provides east/west travel. Calistoga Street W is a two-lane roadway with intermittently paved or graveled shoulders and sidewalks on the north side. Other local streets in the city provide access to the downtown area of Orting, and commercial and residential areas.

Table 3-1 provides an existing conditions inventory of many of the roadways in the area, including functional classification, shoulder type, parking, sidewalks, bicycle lanes, and posted speed limits.

Table 3-1. Roadway Inventory – Existing Conditions

Roadway	Functional Classification	Shoulder	Parking	Sidewalks	Bicycle Lane	Speed Limit (mph)
SR-162/ Pioneer Way	Principal arterial	Paved	No	Interrupted	No	50/35/25
Washington Avenue N	Principal arterial	Paved	Yes	Both	No	25
Orting-Kapowsin Highway	Principal arterial	Gravel	No	No	No	35
Varner Avenue NE	Collector	Gravel/grass	Yes	Both	No	Not posted

Table 3-1. Roadway Inventory – Existing Conditions (continued)

Roadway	Functional Classification	Shoulder	Parking	Sidewalks	Bicycle Lane	Speed Limit (mph)
Calistoga Street W	Principal arterial	Paved/gravel	Yes	Both	No	25
Whitehawk Boulevard	Collector	Paved	Yes	Both	No	25
Eldredge Avenue	Collector	Gravel/grass	Yes	Whitesell north—both sides; Safeway south—one side	No	Not posted
Whitesell Street	Collector	None	No	One side	No	Not posted
Corrin Avenue	Minor arterial	Paved	Yes (angle parking downtown)	Both	No	Not posted
Bridge Street	Collector	Gravel/grass	Yes	Both	No	Not posted
Kansas Street SW	Principal arterial	Paved	Yes	Both	No	Not posted
Harman Way	Principal arterial	Paved	Yes	Yes	No	Not posted

3.2 General Purpose Traffic

General purpose traffic volumes during the PM peak hour were collected at 19 intersections throughout Orting in April 2017:

- Intersection A: Washington Avenue N and Williams Boulevard NW
- Intersection B: Washington Avenue N and Lane Boulevard NW
- Intersection C: Washington Avenue N and Rocky Road NE
- Intersection D: Washington Avenue N and Old Pioneer Way NW
- Intersection E: Washington Avenue N and Whitehawk Boulevard NW
- Intersection F: Washington Avenue N and Ammons Lane NE
- Intersection G: Washington Avenue N and Cardinal Lane
- Intersection H: Washington Avenue N and Whitesell Street S
- Intersection I: Washington Avenue S and Calistoga Avenue W
- Intersection J: Washington Avenue S and Train Avenue S
- Intersection K: Washington Avenue SE and Bridge Street S
- Intersection L: Bridge Street S and Harman Way S and Corrin Avenue E
- Intersection M: Harman Way S and Kansas Street SW
- Intersection N: Calistoga Avenue W and Corrin Avenue SW
- Intersection O: Calistoga Avenue W and Eldredge Avenue SW

- Intersection P: Calistoga Street W and Kansas Street SW
- Intersection Q: Train Street SW and Van Scoyoc Avenue East
- Intersection R: River Avenue SE and Varner Avenue SE and Bridge Street SE
- Intersection S: Eldredge Avenue NW and Whitesell Street S

Figure 3-2 summarizes the intersection counts. Traffic volumes during the PM peak hour represent the highest hourly volume of vehicles passing through an intersection during the 4:00 to 6:00 PM peak period. Because the PM peak hour volumes represent the highest volumes of the average day, these traffic volumes were used for the base year operations analysis, and as the basis for future year traffic volume projections.

3.2.1 Intersection Level of Service

Intersection level of service (LOS) is a term used to describe the operating conditions and amount of delay a driver will experience while traveling through an intersection or along a roadway. LOS ranges from A (very little delay) to F (long delays and congestion). **Table 3-2** summarizes the amount of delay in seconds associated with each LOS designation. The LOS/delay criteria for stop-sign-controlled intersections are different than for signalized intersections because driver expectation is that a signalized intersection is designed to carry higher traffic volumes and experience greater delay. For signalized intersections, the LOS ranges from A with a delay of less than 10 seconds to F with a delay of more than 80 seconds. For stop-sign-controlled intersections, LOS A also has a delay of less than 10 seconds, while LOS F has a delay of more than 50 seconds.

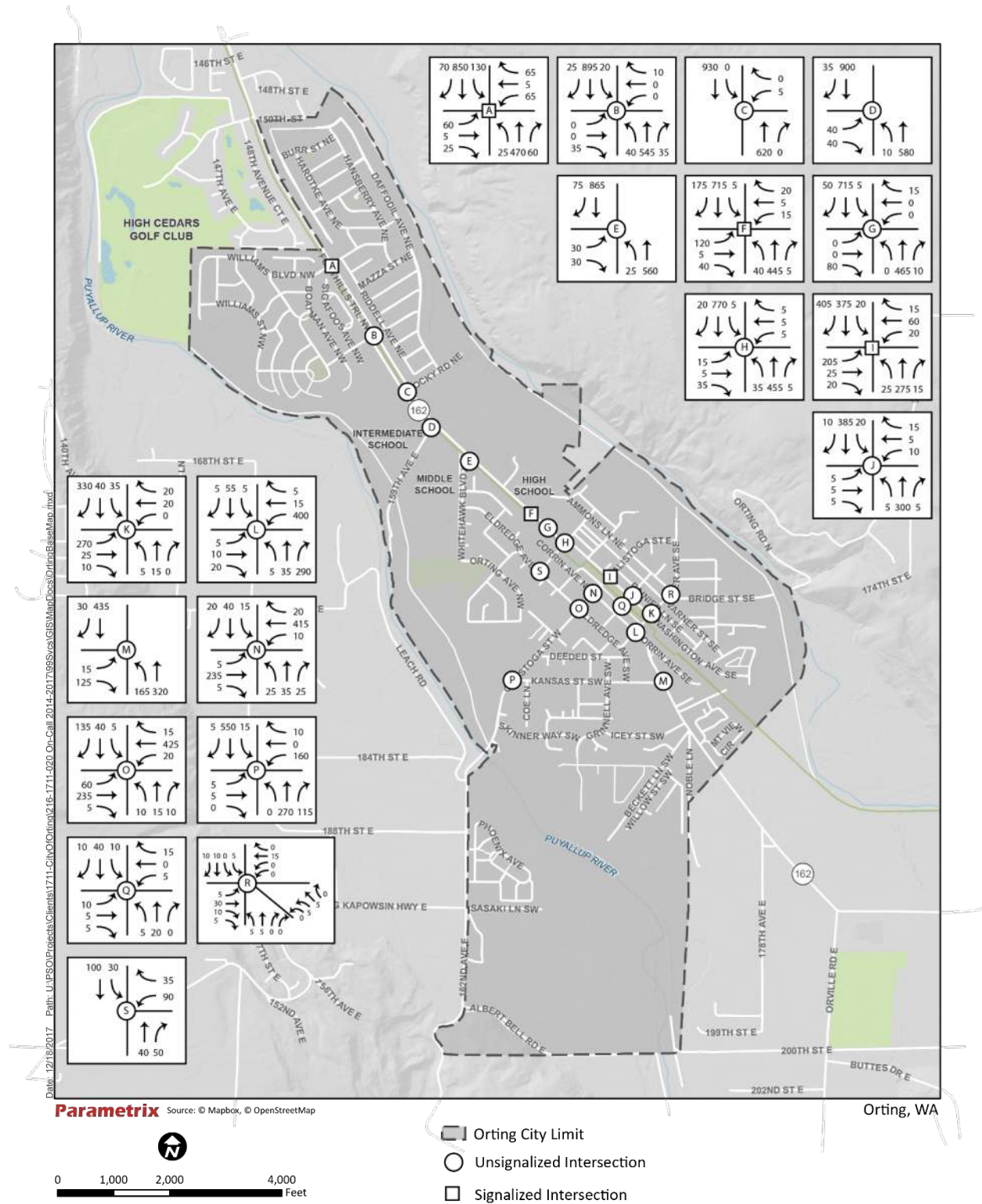


Figure 3-2. Existing (2017) PM Peak Hour Intersection Traffic Counts

Table 3-2. Vehicle Level of Service and Delay

Level of Service	Description	Signalized Intersection Delay (sec/veh)	Unsignalized Intersection Delay (sec/veh)
A	Free flowing	<10	<10
B	Little delay	>10 and ≤20	>10 and ≤15
C	Some delay	>20 and ≤35	>15 and ≤25
D	Some driver frustration; moderate delay	>35 and ≤55	>25 and ≤35
E	High level of frustration; high levels of delay	>55 and ≤80	>35 and ≤50
F	Severe congestion; excessive delays	>80	>50

For unsignalized intersections, delay is reported for the worst-operating approach (typically, the minor street left turn). For signalized intersections, the average delay is reported for all vehicles. LOS D is the concurrency standard adopted by the City of Orting. **Figure 3-3** shows the overall existing intersection LOS at the study intersections in Orting during the PM peak hour. Most of the intersections in the City meet the concurrency standard adopted by the City of Orting. However, Washington Avenue N and Rocky Road NE (intersection C) and Calistoga Street W and Kansas Street SW (intersection P) exceed the threshold and operate at LOS E. At Washington Avenue N and Rocky Road NE (intersection C), the delay is experienced by very few vehicles, approximately five vehicles during the PM peak hour as summarized in **Figure 3-2**. The Washington Avenue N and Whitehawk Boulevard NW intersection (intersection E) operates acceptably but at the City's concurrency threshold of LOS D.

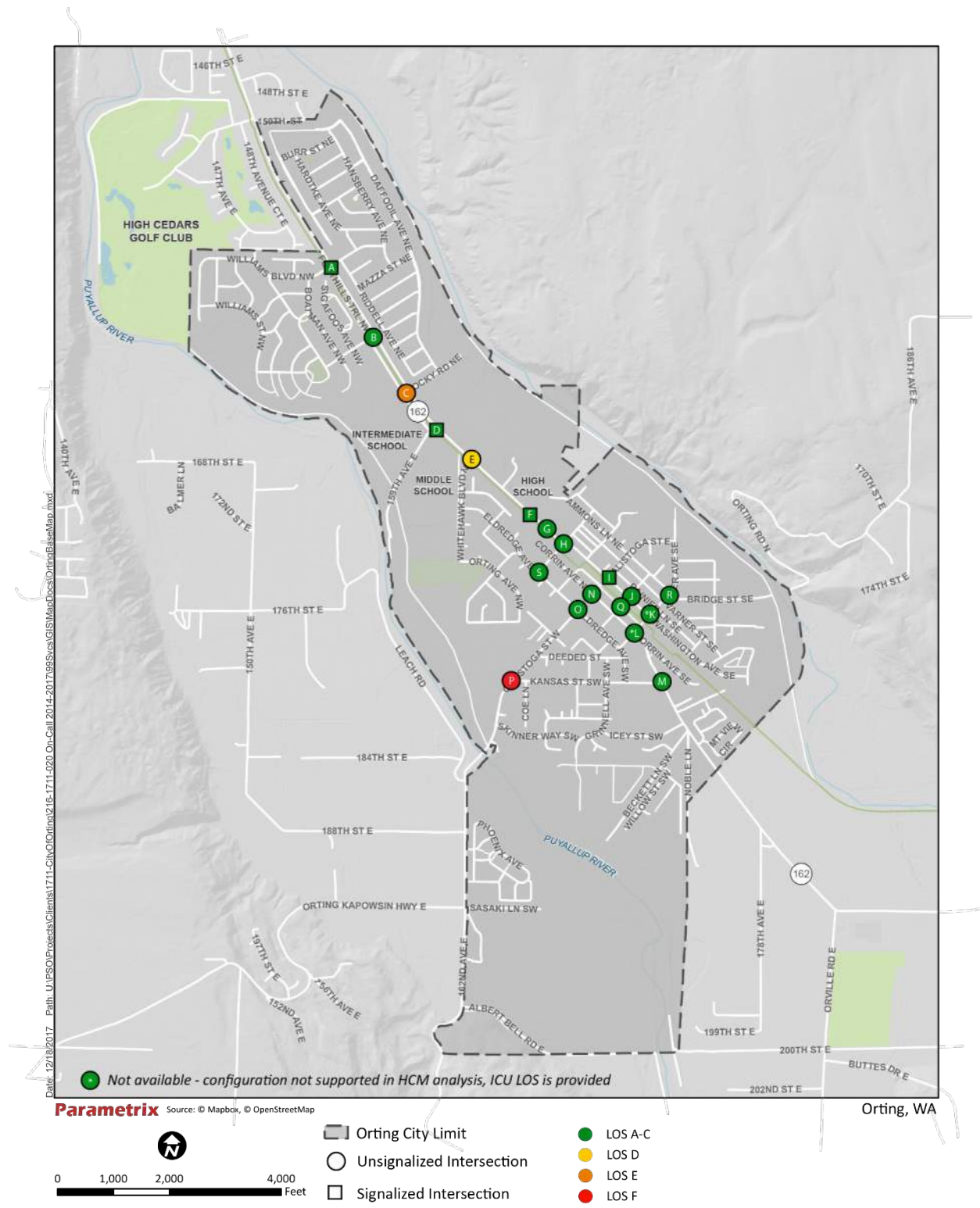


Figure 3-3. Existing (2017) PM Peak Hour Intersection Operations

3.2.2 Collision History

WSDOT provided a history of reported collisions that occurred within the city limits of Orting for the period of January 1, 2012, through December 31, 2016. **Figure 3-4** summarizes the locations where the collisions occurred in Orting. Total accidents averaged approximately 37 per year with a total of 186 over the 5-year collision period. Nearly 70 percent of collisions were property damage only. There were no fatal collisions and only three collisions were serious injury collisions. Five collisions involved non-motorized users. Most accidents (approximately 60 percent) were at intersections or driveways.

Table 3-3 summarizes collisions by severity in the entire street network. As shown, most of the collisions along the roadways resulted in property damage only (135 of 186 total collisions). The remaining 51 collisions resulted in an injury.

**Table 3-3. Summary of Collisions by Severity for Entire Street Network
(January 2012 to December 2016)**

Location	Collision Severity			
	Fatality	Injuries	Property Damage Only	Total
SR 162 (Washington Avenue N)	0	34	58	92
SR 162 (Bridge Street S and Harman Way S)	0	4	17	21
Calistoga Street W	0	5	22	27
Kansas Street SW	0	1	1	2
Other (minor, collector, local access streets)	0	7	37	44
Total	0	51	135	186

Source: WSDOT Transportation Data and GIS Office

Disclaimer: Under 23 U.S. Code § 409, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

In addition to summarizing the collision data by severity, the 51 injury collisions were summarized by type in **Table 3-4**. For the entire roadway network, the majority of the injury collisions were rear end. Rear-end collisions often occur in congested locations. The other collision types along the entire network were entering at angle, fixed object, pedestrian and/or cyclist involvement, sideswipe, and turning (opposite direction) and none of these had more than five collisions over the 5-year period.

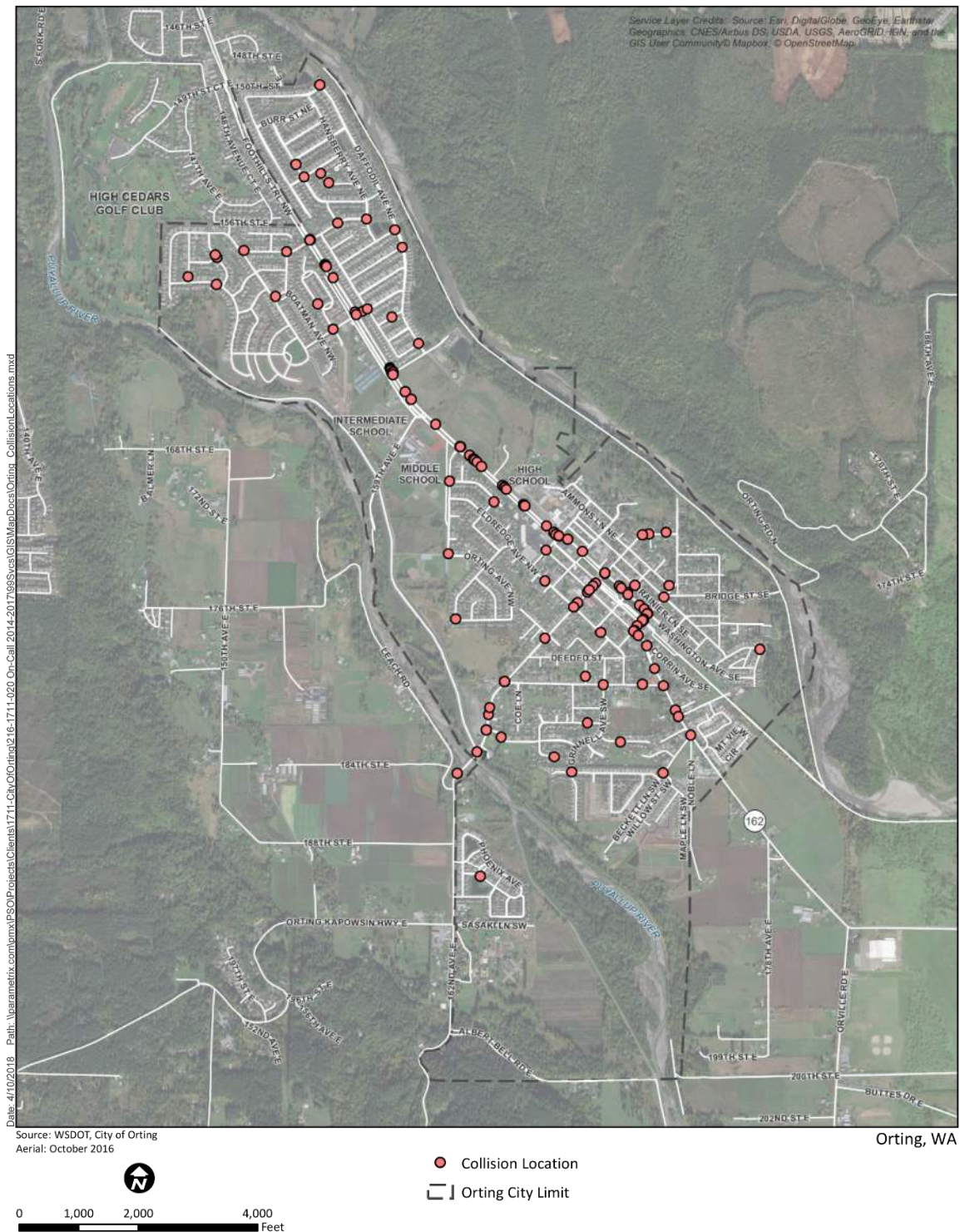


Figure 3-4. All Collisions in the City of Orting (January 2012 to December 2016)

Table 3-4. Summary of Injury Collisions by Type for Entire Street Network (January 2012 to December 2016)

Location	Collision Type									
	Entering at Angle	Fixed Object	Other	Parking	Pedestrian/Cyclist Involved	Rear End	Sideswipe	Turning (Opposite Direction)	Vehicle Overturned	Total
SR 162 (Washington Avenue N)	3	3	2	1	2	20	2	1	0	34
SR 162 (Bridge Street S and Harman Way S)	0	0	1	0	1	2	0	0	0	4
Calistoga Street W	1	0	0	0	1	1	1	1	0	5
Kansas Street SW	0	1	0	0	0	0	0	0	0	1
Other (minor, collector, local access streets)	1	0	0	2	1	1	1	0	1	7
Total	5	4	3	3	5	24	4	2	1	51

Source: WSDOT Transportation Data and GIS Office

Disclaimer: Under 23 U.S. Code § 409, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

Additionally, the collision history was reviewed for the study area intersections by severity and type.

Table 3-5 summarizes the study area intersection collisions by severity. As shown, most of the collisions at the study intersections resulted in property damage only (75 of 107 total collisions). The remaining 32 collisions at study area intersections resulted in an injury.

Table 3-5. Summary of Collisions by Severity at Study Intersections (January 2012 to December 2016)

ID	Location	Collision Severity			
		Fatality	Injuries	Property Damage Only	Total
A	Washington Avenue N and Williams Boulevard NW	0	6	12	18
B	Washington Avenue N and Lane Boulevard NW	0	0	5	5
C	Washington Avenue N and Rocky Road NE	0	3	5	8
D	Washington Avenue N and Old Pioneer Way NW	0	0	0	0
E	Washington Avenue N and Whitehawk Boulevard NW	0	3	5	8
F	Washington Avenue N and Ammons Lane NE/Driveway	0	5	2	7
G	Washington Avenue N and Cardinal Lane	0	0	1	1
H	Washington Avenue N and Whitesell Street S	0	3	7	10
I	Washington Avenue S and Calistoga Avenue W	0	3	10	13
J	Washington Avenue S and Train Avenue S	0	1	2	3
K	Washington Avenue SE and Bridge Street S	0	3	4	7
L	Bridge Street S and Harman Way S and Corrin Avenue E	0	2	4	6
M	Harman Way S and Kansas Street SW	0	0	1	1
N	Calistoga Avenue W and Corrin Avenue SW	0	2	4	6
O	Calistoga Avenue W and Eldredge Avenue SW	0	1	5	6
P	Calistoga Street W and Kansas Street SW	0	0	6	6
Q	Train Street SW/Train Avenue S and Van Scoyoc E	0	0	0	0
R	River Avenue SE/Verner Avenue SE and Bridge Street SE	0	0	2	2
S	Eldredge Avenue NW and Whitesell Street S	0	0	0	0
Total		0	32	75	107

Source: WSDOT Transportation Data and GIS Office

Disclaimer: Under 23 U.S. Code § 409, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

The 32 injury collisions that occurred at study intersections were summarized by type in **Table 3-6**. The majority of the injury collisions were rear end, specifically on the main arterial, Washington Avenue N/Bridge Street/Harman Way (SR 162). Rear-end collisions often occur at congested locations. The other collisions types at study intersections were entering at angle, fixed object, pedestrian and/or cyclist involvement, sideswipe, and turning (opposite direction). Other than rear-end collisions, there were no more than five collisions of any type over the 5-year period.

Table 3-6. Summary of Injury Collisions by Type at Study Intersections (January 2012 to December 2016)

ID	Location	Collision Type									Total
		Entering at Angle	Fixed Object	Other	Parking	Pedestrian/Cyclist Involved	Rear End	Sideswipe	Turning (Opposite Direction)	Vehicle Overturned	
A	Washington Avenue N and Williams Boulevard NW	0	1	1	0	1	2	0	1	0	6
B	Washington Avenue N and Lane Boulevard NW	0	0	0	0	0	0	0	0	0	0
C	Washington Avenue N and Rocky Road NE	0	0	0	0	1	2	0	0	0	3
D	Washington Avenue N and Old Pioneer Way NW	0	0	0	0	0	0	0	0	0	0
E	Washington Avenue N and Whitehawk Boulevard NW	2	0	0	0	0	0	1	0	0	3
F	Washington Avenue N/Ammons Lane NE and Driveway	0	0	0	0	0	5	0	0	0	5
G	Washington Avenue N/ Cardinal Lane	0	0	0	0	0	0	0	0	0	0
H	Washington Avenue N and Whitesell Street S	0	1	0	0	0	2	0	0	0	3
I	Washington Avenue S and Calistoga Avenue W	0	1	0	0	0	2	0	0	0	3
J	Washington Avenue S and Train Avenue S	1	0	0	0	0	0	0	0	0	1
K	Washington Avenue SE and Bridge Street S	0	0	0	0	0	3	0	0	0	3
L	Bridge Street S/Harman Way S and Corrin Avenue E	0	0	1	0	1	0	0	0	0	2
M	Harman Way S and Kansas Street SW	0	0	0	0	0	0	0	0	0	0
N	Calistoga Avenue W and Corrin Avenue SW	0	0	0	0	0	1	1	0	0	2
O	Calistoga Avenue W and Eldredge Avenue SW	0	0	0	0	0	0	0	1	0	1
P	Calistoga Street W and Kansas Street SW	0	0	0	0	0	0	0	0	0	0
Q	Train Street SW/Train Avenue S and Van Scoyoc E	0	0	0	0	0	0	0	0	0	0
R	River Avenue SE/Verner Avenue SE and Bridge Street SE	0	0	0	0	0	0	0	0	0	0
S	Eldredge Avenue NW and Whitesell Street S	0	0	0	0	0	0	0	0	0	0
Total		3	3	2	0	3	17	2	2	0	32

Source: WSDOT Transportation Data and GIS Office

Disclaimer: Under 23 U.S. Code § 409, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

3.3 Freight Traffic and Network

Providing freight access to and through Orting is important in supporting economic activity and providing goods to residents. In Orting, the primary freight routes are along SR 162 and Calistoga Street to the Orting-Kapowsin Highway. WSDOT uses the County Road Freight and Goods Transportation System (FGTS) to classify state highways, county roads, and city streets according to the tons of freight that are carried on them each year. SR 162, between the northern city limits and Calistoga Street, is classified as a T-2 Route, carrying 4 million to 10 million tons per year. To the southeast of Calistoga Street, SR 162 is a T-3 Route, carrying 300,000 to 4 million tons per year. Calistoga Street W and the Orting-Kapowsin Highway are classified as T-3 Routes.

3.4 Non-Motorized Travel

In June 2017, the City of Orting adopted the Non-Motorized Transportation Plan (NMTP), which includes detailed information on non-motorized facilities, volumes, and policies for the City of Orting. For additional information on non-motorized travel in Orting, please see the NMTP.

3.5 Transit

There is no public fixed-route transit service in Orting. Pierce County Transit does provide vanpool services that serve groups traveling to and from work, whose trip origin or destination is within Pierce County.

Sound Transit Sounder commuter rail service is provided nearby in Puyallup and Sumner with service south to Lakewood and north to Seattle and Everett. Fixed-route bus transit is also provided in nearby Sumner and Puyallup to other destinations.

3.6 Air and Rail Service

There are no public or private airports or rail lines within the city of Orting. The Meeker Southern Railroad, which is a Class III, private rail line, travels near Orting between Puyallup and McMillan.

4. PLANNED TRANSPORTATION IMPROVEMENTS

This section summarizes the planned transportation improvements that would affect travel in Orting.

4.1 Pierce County Six-Year Transportation Improvement Program

The prioritization process for transportation projects in unincorporated Pierce County is implemented through the Pierce County Transportation Improvement Program (TIP). The 2017-2022 TIP does not include projects within Orting. However, the following projects are included in the TIP and are located near the city of Orting:

- 176th Street E Extension: Construct a new roadway and roadway improvements between Calistoga Avenue E and Sunrise Boulevard E.
- Orting-Kapowsin Highway E/200th Street E: Construct a traffic signal and provide turn lanes.
- 112th Street S/112th Street E: Widen roadway to provide turn lanes, pedestrian facilities, and illumination.

4.2 Orting Six-Year Transportation Improvement Program

The City of Orting's Six-Year Transportation Improvement Program 2016-2022 includes regrading, paving, parking, curb/gutter, sidewalks, and water, sewer, and storm improvements in the city of Orting. The following projects, listed in order of priority, are included in the Orting 2016-2022 TIP:

- SR 162 (Washington Avenue) Two-Way Left-Turn Lane: Provide a two-way left-turn lane and complete minor widening on SR 162 between Cardinal Lane and Leber Street beginning in 2017.
- Kansas Street SW Regrade: Complete regrading, and storm, sewer, and sidewalk improvements on Kansas Street between Harman Way S and Calistoga Street W beginning in 2019.
- Calistoga Street W: Complete regrading, curb and gutter, parking, and sewer, storm, and water improvements, and provide sidewalks and planter strips between Corrin Avenue NW and the Puyallup River Bridge beginning in 2020.
- Eldredge Avenue NW Regrade: Complete regrading, paving, parking, storm, sewer, and sidewalk improvements between Whitesell Street NW and Calistoga Street W beginning January 2019.
- Whitehawk Boulevard/SR 162 Intersection Improvement: Signalize intersection with existing lane configurations beginning in 2020.
- Bridge Street Regrade: Complete regrading, paving, parking, and curb and gutter improvements; provide sidewalks; and replace water main between Washington Avenue S and the River Avenue SE curve beginning in 2022.
- River Avenue SE Regrade: Complete regrading, paving, parking, sewer, and storm improvements; provide sidewalks; and replace the water main beginning in 2023.
- Orting Emergency Evacuation Bridge System at Gratzner Avenue NW: Construct pedestrian bridge over SR 162/Washington Avenue beginning in 2020.
- Whitehawk Extension: Construct two- to three-lane arterial from Orting Avenue NW to Calistoga Street at Kansas Street SW including water, sewer, storm, curb and gutter, and sidewalks beginning in 2020.

The remaining projects included in the TIP are chip seal projects on various streets in Orting.

4.3 Washington State Department of Transportation Improvement Program

The following projects in or near Orting are included in WSDOT's Statewide Transportation Improvement Program (STIP) during the 2018–2021 planning timeframe:

- **Whitehawk Boulevard Extension:** This project will extend Whitehawk Boulevard NW between Orting Avenue NW to the intersection of Calistoga Street W and Kansas Street SW. The roadway will be one lane in each direction with a median in some locations and turning lanes at each end. A sidewalk or trail will also be provided along the length of the corridor and a signal will be installed at the intersection with SR 162. This project is scheduled to begin preliminary engineering in 2019. This is the same project that is included in the City's TIP.
- **Orting-Kapowsin Highway E:** This project includes resurfacing and restoring approximately 3.4 miles of the Orting-Kapowsin Highway E from Orville Road E to 246th Street E. The project is scheduled to start preliminary engineering in 2018 and construction in 2020.

4.4 Rhodes Lake Road East

The Rhodes Lake Road East project would widen 128th Street East from SR 162, north of Orting, and would construct a new arterial roadway from the Puyallup River to Falling Water Boulevard East. The purpose of the project is to improve east-west mobility in the plateau area of Bonney Lake and east of the Puyallup River. The new roadway will accommodate travel to and from the planned community called the Cascadia Employment-Based Planned Community, which calls for nearly 10,000 jobs and over 6,000 homes. It is possible that some of the traffic traveling to and from the Bonney Lake Plateau will also travel through Orting. It is anticipated that the project will be complete in 2030.

5. CONCURRENCY

The City of Orting requires that the capacity of public facilities and services is equal to or greater than the capacity required to maintain the LOS standards established by the City. The test for concurrency is not passed and a proposed project may be denied if the capacity of the public services or facilities is less than the capacity required to maintain the adopted LOS D standards after the impacts associated with the requested permit are added to the existing capacity utilization. The City will prohibit approval of any development that causes the level of service to fall below adopted standards, unless necessary improvements are made concurrently with the development. This concurrency requirement means that improvements or strategies must be in place at the time of the development or that a financial commitment must be in place to complete the improvements or strategies within 6 years. Methods for the City to monitor these commitments include:

- Annual monitoring of transportation facilities within updates to the Six-Year TIP
- Assessing level of service
- Reviewing the comprehensive transportation plan and other related studies for necessary improvements
- Making appropriate revisions to the Six-Year TIP

6. FUTURE TRANSPORTATION CONDITIONS

This section summarizes the future year (2040) transportation system for all modes of travel in Orting.

6.1 General Purpose Traffic

Traffic forecasting is a means of estimating future traffic volumes based on the expected growth in population and employment within an area. To estimate future traffic volumes resulting from growth, forecasts were prepared using current traffic counts, traffic growth described in the 2015 Orting Comprehensive Plan, and estimates of population and employment developed for the City's Comprehensive Land Use Plan. Future transportation conditions were evaluated for the year 2040.

The projected 2040 PM peak hour traffic volumes are provided on **Figure 6-1**.

6.2 Intersection Level of Service

Most intersections within the city are unsignalized (controlled by a stop sign). As traffic increases in Orting, turning onto the major streets from a side street will become increasingly difficult. As described earlier, the LOS criteria for stop-controlled intersections is typically determined by the minor street left-turn movement.

The LOS results for the study intersections are provided for the year 2040. Similar to existing conditions, LOS is described for the worst approach for unsignalized intersections. For signalized intersections, the average delay for all vehicles is reported.

Figure 6-2 shows the 2040 PM peak hour traffic operations for the study intersections in Orting. The same two study intersections that surpass the threshold under existing conditions are forecast to exceed the threshold in 2040. Washington Avenue N and Rocky Road NE (intersection C) and Calistoga Street W and Kansas Street SW (intersection P) are forecast to operate at LOS F in 2040. Similar to existing conditions, the side street delay at Washington Avenue N and Rocky Road NE (intersection C) would be experienced by very few vehicles as summarized in **Figure 6-1**. Four other study intersections (D, H, M, and O) are expected to operate acceptably but at the LOS threshold in 2040. It should also be noted that traffic operations at Washington Avenue N and Whitehawk Boulevard NW (intersection E) would improve because of the planned signal (see Section 4.3).

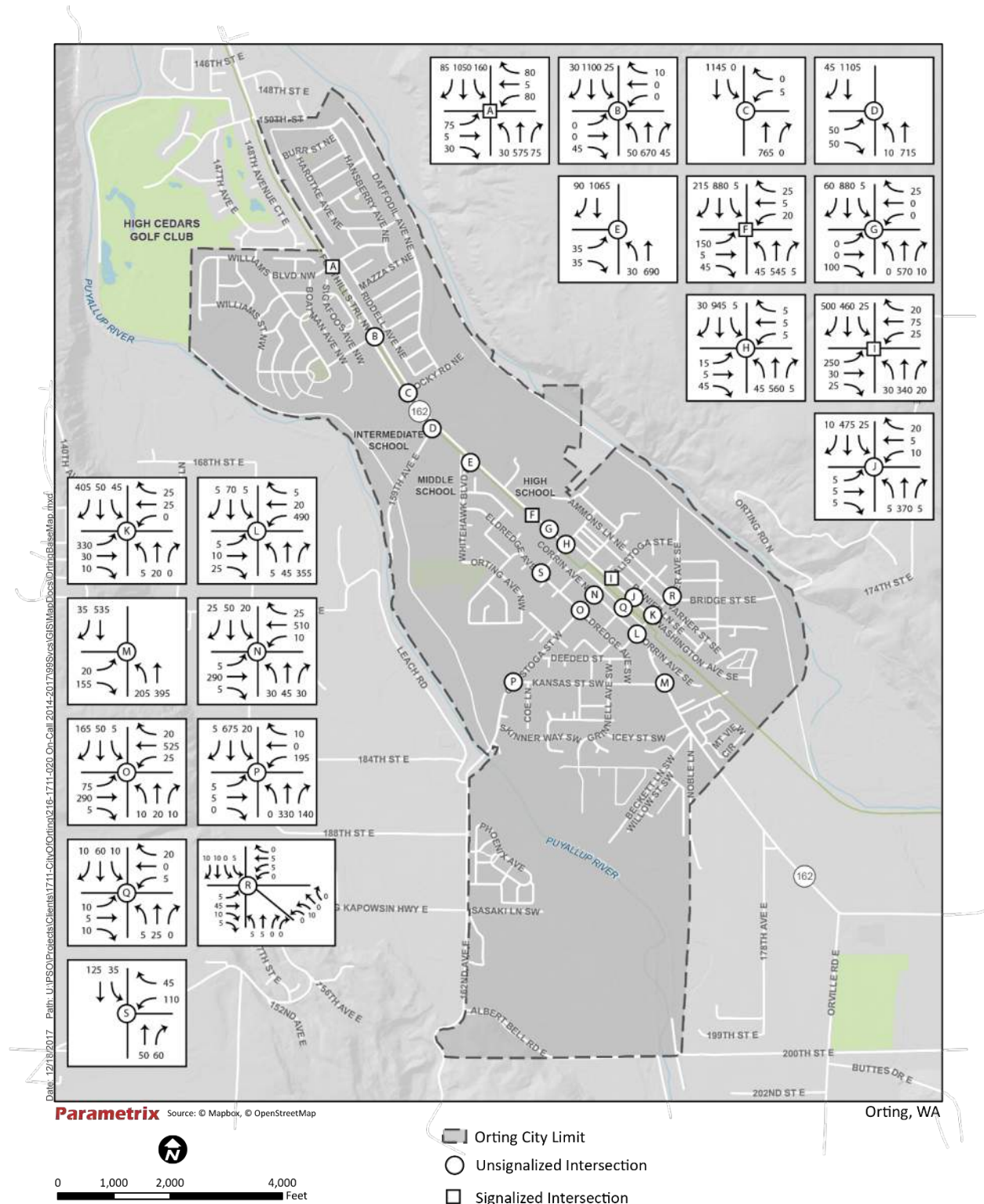


Figure 6-1. 2040 PM Peak Hour Intersection Traffic Volumes

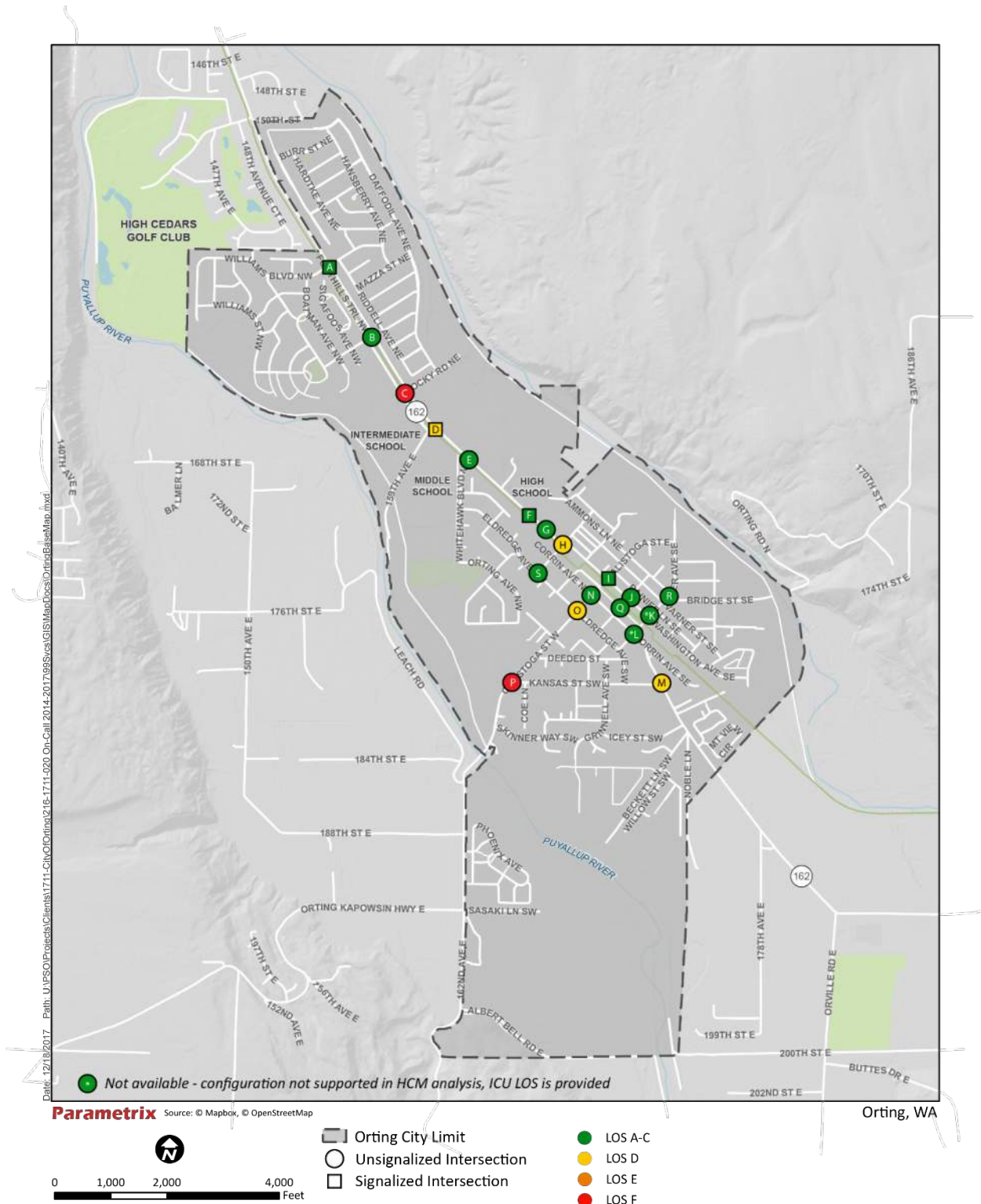


Figure 6-2. 2040 PM Peak Hour Intersection LOS

6.3 Freight

Freight travel corridors would be expected to remain similar in 2040 compared to existing conditions. SR 162 and Calistoga Avenue W would be expected to carry most freight traffic through Orting. Intersection operations in 2040 along both major freight routes would operate at LOS D or better except for Calistoga Street W and Kansas Street SW (intersection P). Although the intersection at Washington Avenue N and Rocky Road (intersection C) is located along a freight corridor and is expected to operate at LOS F, the delay would not be experienced by freight traffic traveling on SR 162/Washington Avenue N.

6.4 Non-Motorized Travel

The future non-motorized transportation network is described in the NMTP. It is anticipated that non-motorized facilities would be similar to existing conditions except in locations where there are planned improvements to the sidewalk system, as identified in Section 4.3 and the NMTP.

6.5 Transit

Transit is expected to be similar in Orting in 2040. No public fixed-route transit service would be provided within Orting. Vanpool services would continue to be provided by Pierce Transit.

Pierce Transit and Sound Transit would continue to provide nearby transit service, including higher frequency transit to Puyallup and Sumner. Both agencies have developed long-range plans that describe future transit growth in Pierce County, which could include additional service for fixed-route bus service as well as commuter rail in nearby communities, such as Sumner and Puyallup.

6.6 Air and Rail Service

There would continue to be no public or private airports or rail lines within the city of Orting. The Meeker Southern Railroad would continue to operate near Orting between Puyallup and McMillan.

Sound Transit is currently examining a potential commuter rail connection between Orting and the Sounder south line service in Sumner. The study is a future investment study and any potential commuter rail connections between Orting and Sumner would not be included in this funding package.

7. FUTURE TRANSPORTATION VISION

To address the identified deficiencies in 2040, a list of potential improvements has been identified. Improvements are summarized by transportation mode.

7.1 General Purpose Traffic

Deficiencies for general purpose traffic were identified at intersections that would fail to meet the City of Orting's level of service goal of LOS D. Constructing a traffic signal is a common method for improving the LOS at a stop-controlled intersection. However, traffic signals should not be constructed unless certain factors are present, such as sufficient traffic volumes over long periods of the day, high levels of pedestrian traffic, or preventable accident history.

As summarized in Section 6.2, Washington Avenue N and Rocky Road NE (intersection C) and Calistoga Street W and Kansas Street SW (intersection P) are forecast to exceed LOS D in 2040. No improvements are recommended for Washington Avenue N and Rocky Road NE (intersection C) because this delay would be experienced by very few vehicles (approximately five) on the stop approach.

At Calistoga Street W and Kansas Street SW (intersection P), a roundabout intersection control is recommended and should be considered during design. The roundabout would improve traffic operations from LOS F to LOS A in 2040 conditions. Calistoga Street W and Kansas Street SW (intersection P) will also become the eastern terminus of the Whitehawk Boulevard Extension. It is estimated that a roundabout at Calistoga Street W and Kansas Street SW (intersection P) would be approximately \$1.7 million to construct.

Although Harman Way S and Kansas Street SW (intersection M) is forecast to operate acceptably at the City's LOS D threshold, it is recommended that an eastbound left-turn lane be constructed on Kansas Street SW to improve intersection operations on the stop-controlled approach. This improvement would improve intersection operations from LOS D to LOS C in 2040 conditions. This improvement would cost approximately \$450 thousand to construct.

The school district has also indicated that Ammons Lane NE and Washington Avenue N (intersection F), the entrance to the Orting High School and Orting Primary School, gets congested during pick up and drop off times. Congestion in the school property can create traffic queues on SR 162/Washington Avenue N for vehicles attempting to turn right and left into the school property. To address this issue, the City could convert Ammons Lane NE (intersection F) to an exit only. Vehicles entering the school property could use Whitesell Street S or other neighborhood streets to then access the schools. This improvement would reduce queuing onto SR 162/Washington Avenue N and potentially improve safety along SR 162/Washington Avenue N. This improvement would cost approximately \$530 thousand to construct and likely would be funded primarily by Orting School District.

Figure 7-1 shows the LOS at study intersections following these proposed improvements to the study intersections.

7.2 Freight Traffic

Deficiencies for freight traffic were identified at intersections along freight corridors that would fail to meet the City of Orting's level of service goal of LOS D. The improvements described in Section 7.1 would improve operations for freight traffic traveling through Orting.

7.3 Non-Motorized Travel

Deficiencies in the non-motorized transportation system have been identified using Pedestrian Level of Stress (PLOS)¹ and Bicycle Level of Stress (BLOS)². Future improvements to the non-motorized network in Orting to address deficiencies are described in more detail in the NMTP.

As described in the NMTP, the City will work to address areas with high PLOS (scores 4 to 5) by completing gaps in the sidewalk and trail system. Pedestrian improvements would be prioritized in areas where pedestrian activity is higher and where pedestrian-oriented land use and destinations are located. Other pedestrian improvements include:

- Widen evacuation route along Calistoga Street W towards Soldiers home
- Widen the sidewalks on Calistoga Bridge
- Improve City's crosswalk safety
- Pursue opportunities to work with Pierce County to provide Americans with Disabilities Act (ADA) access to the levee system
- Complete the Orting Emergency Evacuation Bridge System

Also described in the NMTP, BLOS is low for most facilities in Orting. Improvements to the bicycle network would include the following:

- Improve connectivity to the Foothills Trail at Calistoga Street W
- Improve connectivity to the Foothills Trail at Kansas Street SW
- Construct bicycle lanes on Calistoga Street W and Kansas Street SW
- Restripe trail with 'fast' and 'slow' lanes for bicycle and foot traffic
- Relocate intersection crossings with the Foothills Trail to be in front of the stop bar at intersections

¹ Pedestrian Level of Stress is a measure used to evaluate how well a transportation system accommodates pedestrian travel. Facilities are evaluated based on a number of different criteria, such as sidewalk width, curb presence, and vehicle speed, and assigned a score from 1 to 5 with 1 being low level of stress to 5 being high level of stress.

² Bicycle Level of Stress is a measure used to evaluate how well a transportation system accommodates bicycle travel (also called Level of Traffic Stress, or LTS). Similar to Pedestrian Level of Stress, facilities are evaluated based on different criteria, such as street width, presence of on-street parking, and number of lanes, and assigned a score from 1 to 5 with 1 being low level of stress to 5 being high level of stress.

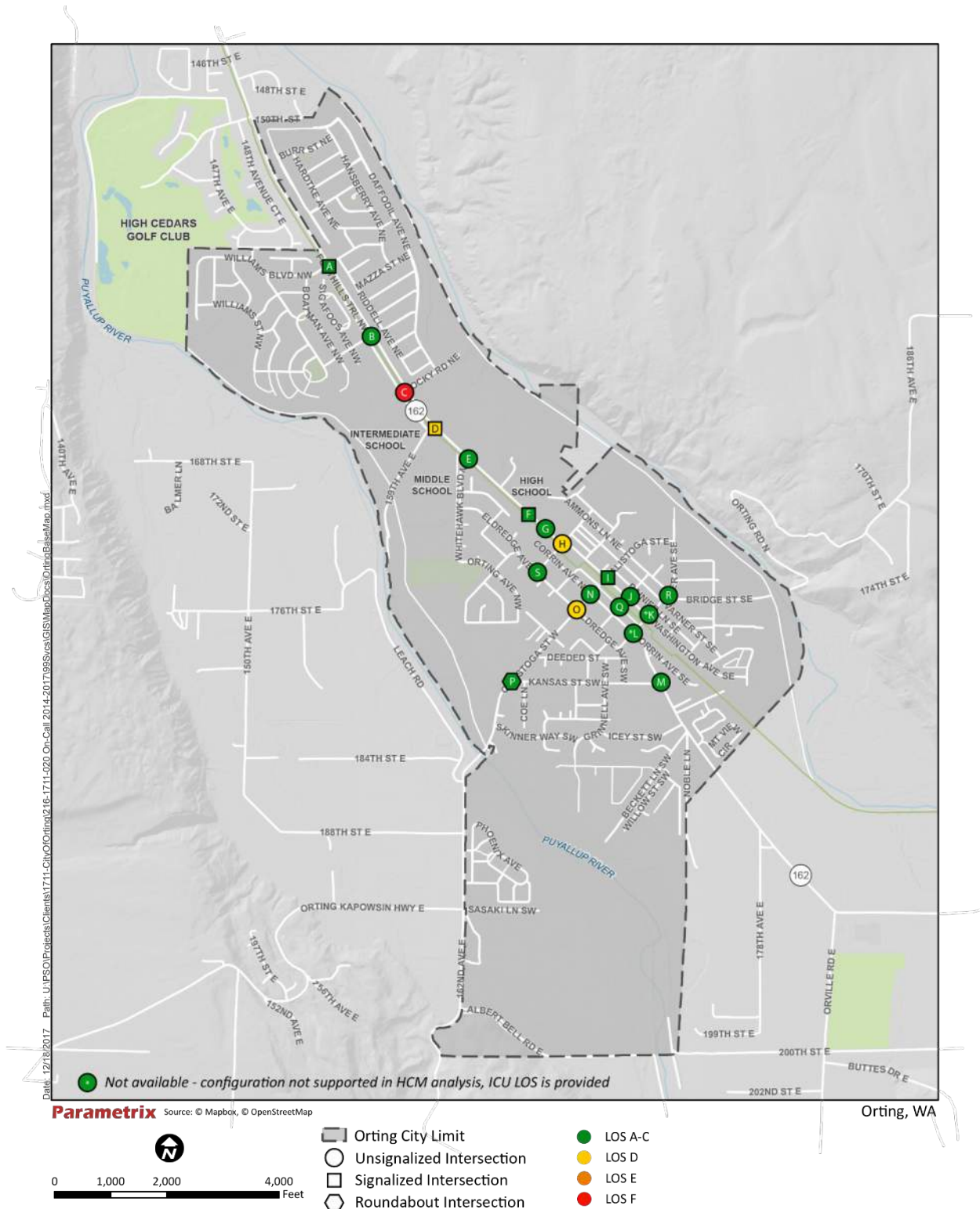


Figure 7-1. 2040 Transportation Vision PM Peak Hour Traffic Operations

7.4 Transit

There are no recommended improvements for transit service.

7.5 Air and Rail Service

There are no recommended improvements for air and rail service.

7.6 Other Strategies and Programs

Other strategies and programs can be used to help improve travel in Orting include Transportation Demand Management.

7.6.1 Transportation Demand Management

Transportation Demand Management (TDM) strategies can be implemented to decrease the amount of drive-alone vehicle trips, which can help to reduce congestion and delay. Viable travel alternatives help to mitigate impacts of growth in vehicular traffic and provide feasible options for more people. TDM strategies include:

- Improving land use accessibility by promoting mixed-use zoning with housing, shopping, schools, and employment within localized areas to encourage short vehicle trips and/or use of other travel modes, such as bicycling and walking.
- Encouraging ridesharing and vanpooling to reduce drive-alone vehicle trips.
- Working with the Orting School District to implement School Trip Management; School Trip Management includes promoting and implementing strategies to encourage non-vehicle travel to and from school.
- Encouraging bicycle and pedestrian travel by providing inviting, safe, convenient, and connected routes; education and incentive programs; and support services such as bicycle racks, showers, and lockers.
- Maintaining and improving a network of highways, streets, and roads that moves people, goods, and services safely and efficiently; minimizes social and environmental impacts; and supports various modes of travel.
- Providing adequate connections and access among all transportation modes, especially non-motorized and transit.
- Limiting the number of access points and driveways on major streets in Orting.

8. FUNDING THE TRANSPORTATION VISION

The GMA requires that a jurisdiction’s transportation plan contain a funding analysis of the transportation projects it recommends. The analysis should cover funding needs and funding resources, and it should include a multi-year financing plan. The purpose of this requirement is to ensure that each jurisdiction’s transportation plan is affordable or achievable. If a funding analysis reveals that a plan is not affordable or achievable, the plan must discuss how additional funds will be raised, or how land use assumptions will be reassessed.

Table 8-1 summarizes the proposed 2040 Improvement Program as was described in Chapter 7 and Chapter 4.

Table 8-1. 2040 Improvement Program

Roadway	Improvement		Cost Estimate (\$1,000)	Funding Source
	Type	Description		
Calistoga Street W/Kansas Street SW Roundabout	Capacity	Construct roundabout	\$2,380	City/Grants
Harman Way S/Kansas Street SW Left-Turn Lane	Safety and Circulation	Construct left-turn lane on Kansas Street SW	\$715	City/Grants
Ammons Lane NE/Washington Avenue N Exit Only	Safety and Circulation	Convert Ammons Lane NE to exit only	\$635	City/WSDOT/OSD
Whitehawk Boulevard Extension	Capacity and Circulation	Extend Whitehawk Boulevard to Calistoga Street W	\$5,400	City/Grants

Other City of Orting transportation improvement projects are adopted on an annual basis in the City of Orting Six-Year Transportation Improvement Program.

8.1 Federal Funding

Federal funding for transportation projects includes FHWA’s Surface Transportation Block Grant Program funded through the Fixing America’s Surface Transportation (FAST) Act. Many types of projects are eligible, including bicycle/pedestrian, safety, traffic monitoring/management, and planning projects along with more traditional road and bridge projects. These funds are distributed by PSRC through a competitive grant application process.

PSRC also distributes Surface Transportation Program funds through the Rural Town Centers and Corridors (RTCC) program. The RTCC program was established to recognize and support the needs of the region’s rural areas. Funds are distributed through a competitive grant process that includes two stages: a Countywide stage and a Regional stage.

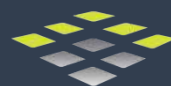
Orting relies heavily on these funding sources to complete transportation projects.

2024 Pavement Management System (PMS)



ORTING
Washington

June 2024



SCJ ALLIANCE
CONSULTING SERVICES

2024 Pavement Management System

Project Information

Project: 2024 Pavement Management System (PMS)

Prepared for: City of Orting
P.O. Box 489
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PROJECT ENGINEER'S CERTIFICATION

I hereby certify that this Pavement Management System for the City of Orting has been prepared by me or under my supervision and meets the minimum standards of the City of Orting and normal standards of engineering practice.



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06-11-2024



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1. EXECUTIVE SUMMARY

The City of Orting believes in the importance of well-maintained public infrastructure and wants to ensure that the public traveling throughout the City continue to have safe and well-maintained roads to navigate. This pavement maintenance program will be developed and adopted to maximize the efficiency and value of maintaining the city's largest and most valuable form of infrastructure, its roadways.

2. INTRODUCTION

2.1 ORTING'S PAVEMENT INFRASTRUCTURE

The City of Orting is in Pierce County, Washington and encompasses an area of approximately 1,730 acres. The City of Orting is responsible for maintaining approximately 62 lane-miles of roadways consisting of asphalt concrete pavement (ACP), Portland cement concrete (PCC) and gravel roadways. This infrastructure was assessed and rated in conjunction with this program in 2022, and this report is shown in Appendix A.



2.2 INTRODUCTION TO PAVEMENT MANAGEMENT SYSTEM

This report summarizes the City of Orting's Pavement Management System (PMS) and identifies a 6-year program of preservation and maintenance activities that will provide cost-effective approaches to maintain pavements in serviceable conditions. The purpose of the PMS is to maintain City, resident, and business operations without impacts resulting from degrading roadways. Early investment in a well-planned PMS has proven to be the most cost-effective solution for management of a system of roadways, especially as opposed to a program that simply waits for failures then repairs or reconstructs pavements to correct issues. Actions that help to slow the rate of deterioration and delay major rehabilitation activities are considered preservation. Preservation impacts performance life, durability, lifecycle costs, construction, and materials use. Identifying and addressing specific deficiencies that contribute to overall deterioration can prolong or extend the life of pavements or structures. It is important to apply the right treatment to the right pavement at the right time.

Pavement networks require significant, recurring investments to maintain pavement integrity. Spending money earlier in a pavement's life cycle allows for a significant extension in the pavement's life at a much cheaper cost than if this maintenance work is delayed (see Figure 1). This shows the importance of timely maintenance, rather than just waiting until roads reach a poor quality. This program's goal is to maintain and preserve the overall condition of their street network in a state of good repair rather than just reacting in a worst first manner. This will allow the roadway network to stay sustainable while using funds in the most effective manner possible.

Applying a pavement preservation treatment at the right time (when), on the right project (where), with quality materials and construction (how) is a critical investment strategy for optimizing infrastructure performance. The "when and where" component supports preservation by managing pavements proactively. Whole-life planning defines expectations for the long term and provides more stability to the cost of operation and maintenance. Identifying preservation strategies at the network level reduces the need for frequent or unplanned reconstruction. The "how" component promotes quality construction and materials practices, including treatment options that apply to flexible and rigid pavements. These practices contribute to improved pavement performance, providing smoother, safer roads and delaying the need for rehabilitation. FHWA, Everyday Counts, EDC-4

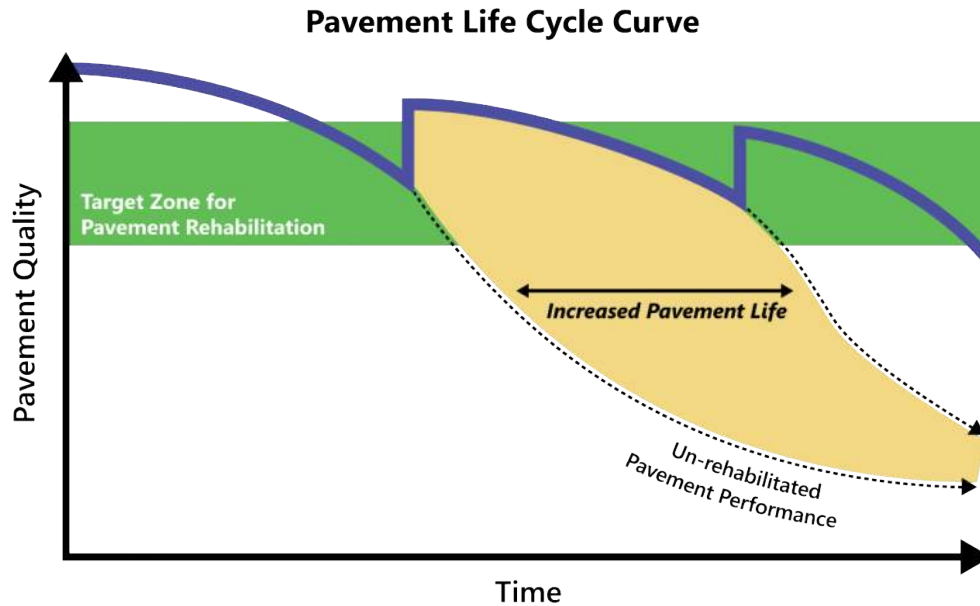


Figure 1. Pavement Rehabilitation Target Zone

2.3 PRINCIPLES OF A PMS

The main priority of this PMS is to maximize the effectiveness of maintenance funds to preserve and maintain the City's pavement infrastructure. Often this will prioritize maintaining higher quality streets rather than reconstructing lower quality streets due to the difference in costs associated with different repair options. Arterials and collectors will generally have a higher importance than local access roads due to a higher volume of traffic loading and the repairs benefiting more people.

This program should coordinate with other street projects when possible. Other street projects provide an ideal time to address necessary maintenance due to the decreased mobilization costs as well as the decreased negative effects on residents (less road closures, less waste, fewer damage claims, etc.).

It is important to prioritize communication to the public with this program. Residents may see a good road being maintained and a poor road being seemingly ignored and feel this is unfair. Communicating that the poor road is waiting on grants or other forms of outside funding, and that it is much cheaper to ensure good roads stay good than to make poor roads good again, may be necessary to ensure the program is not viewed negatively.

2.4 PAVEMENT PRESERVATION

Pavement preservation is defined as "a program employing a network level, long-term strategy that enhances pavement performance by using an integrated, cost-effective set of practices that extend pavement life, improve safety and meet motorist expectations". This PMS accomplishes these goals by assessing the quality of roads and then using the ratings to determine appropriate and timely treatments.

Pavement preservation programs commonly include multiple treatment activities and focus on the preventive maintenance level. Preventive maintenance is defined as "a planned strategy of cost-effective treatments to an existing roadway system and its appurtenances eliminate age-related, top-down surface cracking that develops in flexible pavements due to environmental exposure or to restore



functionality of concrete pavements.” This is generally the most effective use of funds, although some roads necessitate reconstruction or overlays as well (Geiger, 2005).

2.4.1 Distress Types

The following pavement distresses were used in the 2022 evaluation of pavement conditions throughout the City (see Appendix A). The bullets below describe what causes the distresses as well as typical preservation treatments that can address each distress condition.

- **Rutting** and wear is caused by repeated traffic loads along the same path and are characterized by surface depressions in the wheel path. Ruts due to wear just need to be paved in. Ruts due to subgrade failure require rehabilitation that will improve the base materials such as in-place recycling or full depth reconstruction.
- **Alligator cracking** is generally caused by repeated traffic loading. The methods to fix it rely on fixing the support for the pavement through milling and filling (for minor cases) or full depth reconstruction.
- **Longitudinal, transverse, and block cracking** all have several causes but are present similarly on the surface. All can be crack sealed to prevent moisture from infiltrating the pavement. One method to fix the cracks is to mill and fill, although some may need full depth reconstruction.
- **Raveling and aging** occur when the aggregate or binder, respectively, wear away from the pavement. This can be fixed by microsurfacing, crack sealing, chip sealing, or milling and filling.
- **Flushing and bleeding** occur when excessive binder shows on the pavement surface. This can be fixed by applying sand to absorb the excess binder or a mill and fill.
- **Patching**, when in need of fixing, generally requires localized full depth reconstruction to ensure the same distresses do not reoccur.
- **Sags and humps** can occur due to settlement, tree roots, or frost heave, and it is important to determine which before repairing it. They can be repaired by mill and fill or in-place recycling, depending on the root cause of the issue.
- **Edge raveling** happens often near gravel driveways, and it can temporarily be fixed by surface edge patching. Edge potholes and lanes less than 10 feet can be fixed by full depth edge patches.

2.4.2 Pavement Treatment Types

There are many pavement treatments that can be used in a PMS. Common preservation and maintenance treatments are included below (all costs are in 2024 dollars):

Preservation treatments are used to maintain existing pavement assets and extend usable life. These treatments are typically low cost to implement, with \$12 per LF of 11’ wide lane being repaired serving as a rough assumption of construction cost in general.

- Chip or Crack Seal
- Micro-surfacing
- Sand Application



Methods used in large scale maintenance activities or involved where pavement assets require preservation or rehabilitation. These treatments can trigger adjacent ADA improvement requirements depending on the scope of the treatment. Neglecting these potential ADA improvements, treatments in this category can be assumed to cost roughly \$45 per LF of 11' wide lane being replaced.

- Full-depth or Surface Patching
- Mill and Fill
- Overlay without Grinding/Fill

In some cases, the pavement asset is beyond maintenance and will require full depth replacement or repair. Note that full depth reconstruction could be the pavement or the pavement and subgrade. Reconstruction treatments can trigger adjacent ADA improvement requirements as well, and these costs need to be considered when implementing these treatment types. Ignoring ADA improvements, reconstruction may cost \$142 per LF of 11' wide lane being replaced.

- In-Place Recycling
- Full-Depth Reconstruction – Pavement Only
- Full-Depth Reconstruction – Pavement and Subgrade



3. PAVEMENT MANAGEMENT SYSTEM

3.1 INTRODUCTION

This Pavement Management System (PMS) includes all activities involved in maintaining the City's roadway including data, procedures, analysis, and a 6-Year Workplan. This Workplan is shown in Chapter 4 of this Program and shows a six-year list of projects and includes both construction, and non-construction, activities. Updates to the Workplan are necessary bi-annually.

3.2 ELEMENTS OF A PMS

- 6-Year PMS Workplan Development (2024 to 2029)
 - Baseline Pavement Condition Assessment (2022)
 - Construction Activity Planning & Prioritization
 - Pavement Condition Overall Ratings
 - Prioritization of Segments
 - Determining Preservation and Maintenance Treatments Needed
 - Costs to Repair
 - Annual Budget
 - Analysis of the System
 - 6-year Workplan
 - Non-Construction Activities
 - Inspection
 - Overall Rating by Section
 - Prioritization
 - Updating Treatments if Necessary
 - Updating Program Costs
 - Revising TIP (Transportation Improvement Plan) as Needed
- Annual Workplan Implementation
 - Construction
 - Plan Sets and Engineering
 - Bidding
 - Coordination with Other Agencies
 - Construction Management
 - Non-Construction
 - Pavement Condition Assessment Updates
 - TIP Updates
 - PMS Updates
 - Administrative Updates
 - Funding Activities
 - GIS Updates



4. 6-YEAR PMS WORKPLAN

4.1 BASELINE PAVEMENT CONDITION ASSESSMENT (2022)

The pavement condition assessment SCJ Alliance performed in 2022 rated roads based on visual inspection. This inspection led to overall ratings for each roadway, which were then used to develop this 6-year Workplan. Bi-annual updates to this system will be performed and reviewed to make sure there are no substantial condition changes that require reprioritization of which roadways to treat.

4.2 CONSTRUCTION ACTIVITY PLANNING & PRIORITIZATION

Prioritization strategies used in the report develop a targeted list of segments with current distresses and provides a snapshot status of the pavement network. From this, project planning is done to maximize the value of pavement maintenance operations given the condition of the City's infrastructure and to coordinate with nearby or currently planned improvement projects.

4.2.1 Pavement Condition Overall Ratings

Pavement condition ratings were recalculated (relative to the 2022 assessment in Appendix A) for this Pavement Management Program following the Washington State Department of Transportation's (WSDOT's) "Streetwise: A Simplified Local Agency Pavement Management System" (1995). This allows for reasonable treatments to be recommended. The previous rating system led to much more drastic, and expensive, repairs being recommended.

4.2.2 Prioritization of Segments

Projects were prioritized by treatments needed (based on segment conditions), timing of other projects, and with the goal of minimizing the overall cost of the program. Preventative work is prioritized over maintenance in order to maximize the efficiency of dollars spent. Costs are balanced over the years to be more manageable by the City. Finally, projects with the same treatment are grouped into the same year when possible, to allow for the lowest prices based on the economy of scale.

4.2.3 Determining Preservation and Maintenance Treatments Needed

Different distresses are better addressed with different maintenance treatments. While this program uses chip sealing, mill and fill, and full-depth reconstruction as the 3 fundamental reconstruction methods for cost estimating purposes, the repair methods shown in Table 1 are still included so they can be examined once a project has been selected and is in more in-depth planning.

**Table 1. Distresses and Associated Preservation/Repair Methods**

Distress	Chip Seal***	Mill and Fill**,***	Full-Depth Reconstruction ***,****	Crack Seal	Microsurfacing	Sand Application	Surface Patching	Full-Depth Patching**	In-Place Recycle**
Rutting and Wear			●				●	●	●
Alligator Cracking	● *	● *	●	● *	● *			●	●
Cracking	●	●	●	●	●				
Raveling and Aging	●	●		●	●				
Flushing and Bleeding		●				●			
Patching								●	
Sags and Humps		●							●
Edge Raveling							●	●	
Edge Potholes							●	●	

*Low severity alligator cracking

**Triggers ADA requirements (FHWA, 2019)

***Fundamental maintenance method of this PMS

Several of the preservation and repair methods listed in Table 1 trigger a requirement to make adjacent ADA improvements. It is important to understand which will trigger this requirement, as this could alter the cost estimate and perhaps require rescheduling repairs. These repairs include full-depth reconstruction, in-place recycling, milling, and filling, and, sometimes, full-depth patching.

4.2.4 Preservation Costs

One of the goals of this maintenance program is to schedule roadway repairs on a frequent, recurring basis. Scheduling annually will allow yearly funds to be used efficiently and will ensure roads do not slip between the cracks and worsen before treated. Scheduling rehabilitation methods annually ensures there is budget to address the minor issues before they become more significant. Costs were spread out over the 6-year period, and excessively expensive projects were labeled as pending grant funding. Projects are considered excessively expensive when they would overwhelm the city's approximate \$200,000 annual pavement preservation program budget in the city's 2024-2029 TIP. If projects can secure grant funding that needs a city match, as well as when projects are identified in future inspections, the scheduling and budget should be updated and reprioritized.



Costs of different treatment options can vary significantly. The following total costs of treatment were used in this analysis. These costs are shown per lane-foot (per linear-foot in length of 11-foot-wide lane). Appendix C includes the calculations for each treatment:

- Chip Seal Coat – \$12/LF of 11' lane
- Mill and Pavement Overlay – \$45/LF of 11' lane
- Reconstruction – \$142/LF of 11' lane

In addition to the basic construction costs, the total costs include all contingency, engineering, administration, and inflation costs. The following percentages, shown in Table 2, were used to calculate total costs for each treatment.

Table 2. Total Cost Elements

Cost Element	% Construction	Description
Design Contingency	10% of itemized construction costs	Estimates the construction costs of minor design elements that have not yet been identified (e.g., pavement markings, minor ADA improvements)
Inflation/Year	3% of itemized construction costs	Escalates the construction costs from 2024 to the year of construction.
Permitting	3% of total construction cost	Estimates permit costs for the City. Does not include environmental documentation.
Design	15% of total construction cost	Estimates costs to prepare PS&E and environmental documentation.
City PM/Administration	3% of total construction cost	Estimates City costs for administration and oversight of the project.
Construction Management	15% of total construction cost	Estimates construction inspection and management for the project.
Management Reserve	10% of total construction cost	Overall contingency for the project – reduces as the project definition progresses.

4.2.5 Analysis of the System

Roads were analyzed using their PCR rating from the WSDOT Streetwise guide. Kansas Street Reconstruction, a project included in the city's 2024-2029 TIP and currently in design, is a major reconstruction project the city has already taken on. Another strong candidate for reconstruction is the Leber Street and Van Scoyoc Avenue project. This, and other future candidates for reconstruction projects, are shown in Table 3. All projects are assumed to need grant funding to progress, and as such, the projects are not scheduled for a specific year and all costs are given in 2024 dollars.



Table 3. Recommended Reconstruction Projects

Project	Project Cost (in 2024 dollars)	Linear Feet of Lanes	Curb Ramps Needing Repair	Year Scheduled
Ammons Lane Reconstruction (West of Cardinal, East of parking lot)	\$256,000	1,118	0	Pending Grant Funding
Whitesell Street Reconstruction (North of Ammons Lane, South of Bowlin Avenue)	\$79,000	272	2	Pending Grant Funding
Eldredge Avenue Reconstruction (East of Whitesell Street, West of Calistoga Street)*	\$696,000	2,618	12	Pending Grant Funding
Leber Street/Van Scoyoc Avenue Reconstruction (North of Corrin Avenue, West of Calistoga Street)	\$723,000	3,056	3	Pending Grant Funding
Leber Court Reconstruction (South of Eldredge Avenue, cul-de-sac)**	\$209,000	769	4	Pending Grant Funding

*Sections of Eldredge need reconstruction, while some are in better shape. This program recommends holding off on reconstruction for the entire segment to address other projects.

**The Leber Court reconstruction should be aligned with the Eldredge reconstruction to minimize mobilization costs.

Although it is good to keep in mind the poor roads that will need to be reconstructed, due to their high funding needs relative to their length, it is more efficient to spend money on roads that have not yet reached this level of disrepair. Due to this, roads were analyzed next to determine ideal cases for an overlay project. Train Street, as well as other candidates for overlay projects, are shown in Table 4. Some of these projects are expensive enough they would overwhelm the city's pavement maintenance budget. These projects are presumed to need grant funding, and they are not scheduled for a specific year and costs are given in 2024 dollars.



Table 4. Recommended Overlay Projects

Project	Project Cost (in 2024 dollars or year constructed dollars)	Linear Feet of Lanes	Curb Ramps Needing Repair	Year Scheduled
Old Pioneer Way Overlay (West of School Driveway, East of Turn Around)	\$222,000	2,842	2	Pending Grant Funding
Calistoga Street Overlay (South of Van Scoyoc Avenue, North of Eldredge Avenue)	\$317,000	2,942	13	Pending Grant Funding
River Avenue Overlay (South of Factory Street, North of Ammons Lane)	\$44,000	516	0	2028
Bridge Street Overlay (North of Eldredge Avenue, South of Corrin Avenue)	\$139,000	1,300	4	2027
Train Street Overlay (South of Ammons Lane, North of Eldredge Avenue)	\$600,000	4,636	33	Pending Grant Funding
Calistoga Street Overlay (East of Calistoga Lane, West of River Avenue)	\$111,000	1,138	2	2028
Cardinal Lane/Ammons Lane/Whitesell Street Overlay (South of Bowlin Avenue, North of Varner Avenue)	\$205,000	2,306	1	2029
Corrin Avenue Overlay (East of Train Street, West of Bridge Street)	\$243,000	2,473	8	Pending Grant Funding

Finally, the most efficient use of funding is to keep good roads good. Chip sealing is a cheap and effective maintenance method that can help keep good roads good. Chip sealing would be appropriate along Grinnell Avenue, between Kansas Street and Balmer Street. Chip sealing projects are shown in Table 5.



Table 5. Recommended Chip Seal Projects

Project	Project Cost (in Year Scheduled dollars)	Linear Feet of Lanes	Year Scheduled
Grinnell Avenue Chip Seal (South of Kansas Street, North of Balmer Street)	\$132,000	6,670	2024
Skinner Way Chip Seal (East of Belfair Avenue, West of Grinnell Avenue)	\$41,000	1,978	2024
Varner Ave Chip Seal (East of Train Street, West of River Avenue)	\$24,000	1,123	2025
Christian Lane Chip Seal (East of Mill Avenue, West of Christian Court)	\$11,000	488	2025
Van Scoyoc Avenue Chip Seal (East of Corrin Avenue, West of River Avenue)	\$75,000	3,488	2026
Skinner Way/Belfair Avenue Chip Seal (East of Calistoga Street, West of Grinnell Avenue)	\$161,000	7,905	2025
Rocky Road Chip Seal (North of Washington Avenue)	\$39,000	1,743	2026
Hays Avenue Chip Seal (North of Kansas Street, South of Deeded Lane)	\$22,000	933	2026
Varner Avenue Chip Seal (East of Hardefeldt Street, West of Olive Street)	\$23,000	985	2026
Corrin Avenue Chip Seal (West of Leber Street, East of Calistoga Street)	\$48,000	2,273	2026
Washington Avenue Chip Seal (East of Brown Street, West of Brown Way)	\$57,000	2,537	2028
Mill Avenue Chip Seal (North of Christian Lane, South of Train Street)	\$46,000	2,118	2027
Callistoga Court Chip Seal (Cul-de-sac)	\$20,000	827	2027
Rainier Lane Chip Seal (East of Whitesell Street, West of Leber Street)	\$16,000	621	2029



4.2.6 Annual Budget

The annual budget varies depending on several assumptions, including the overall extent of preservation treatments needed (defined by total construction costs), the aggressiveness of making preservation treatments (generally controlled by total years of preservation program/cycle), and availability of funding. The total project costs are approximately constant for a given year. The total years of the preservation cycle is based on the TIB cycle while balancing the number of roads in need of maintenance with a reasonable annual budget. The availability of funding changes based on government programs and the City's budget. The predicted annual budget is shown in Table 6.

Table 6. Annual Budget

Year #	Year	Cost
1	2024	\$173,000
2	2025	\$196,000
3	2026	\$207,000
4	2027	\$205,000
5	2028	\$212,000
6	2029	\$221,000

4.2.7 6-Year Workplan

This workplan needs to account for the roadway projects currently planned. These are the Kansas Street Reconstruction and the Whitehawk Boulevard Road Extension. The Kansas Street Reconstruction is a major reconstruction project that is currently in design while the Whitehawk Boulevard Road Extension is currently in the planning stages. For the purposes of this program, it will be assumed that these two projects will reconstruct all of Kansas Street and remedy any pavement needs in Whitehawk Boulevard and they were not factored into the pavement preservation budget. See Table 7 for a list of all the projects covered in the 6-year Workplan.

Table 7. 6-Year Workplan

Location and Treatment	Year of Construction
2024	
Grinnell Avenue Chip Seal (South of Kansas Street, North of Balmer Street)	2024
Skinner Way Chip Seal (East of Belfair Avenue, West of Grinnell Avenue)	2024
2025	
Varner Ave Chip Seal (East of Train Street, West of River Avenue)	2025
Christian Lane Chip Seal (East of Mill Avenue, West of Christian Court)	2025
Skinner Way/Belfair Avenue Chip Seal (East of Calistoga Street, West of Grinnell Avenue)	2025
2026	
Van Scoyoc Avenue Chip Seal (East of Corrin Avenue, West of River Avenue)	2026
Rocky Road Chip Seal (North of Washington Avenue)	2026
Hays Avenue Chip Seal (North of Kansas Street, South of Deeded Lane)	2026
Varner Avenue Chip Seal (East of Hardefeldt Street, West of Olive Street)	2026
Corrin Avenue Chip Seal (West of Leber Street, East of Calistoga Street)	2026



Location and Treatment	Year of Construction
2027	
Mill Avenue Chip Seal (North of Christian Lane, South of Train Street)	2027
Callistoga Court Chip Seal (Cul-de-sac)	2027
Bridge Street Overlay (North of Eldredge Avenue, South of Corrin Avenue)	2027
2028	
Washington Avenue Chip Seal (East of Brown Street, West of Brown Way)	2028
River Avenue Overlay (South of Factory Street, North of Ammons Lane)	2028
Calistoga Street Overlay (East of Calistoga Lane, West of River Avenue)	2028
2029	
Rainier Lane Chip Seal (East of Whitesell Street, West of Leber Street)	2029
Cardinal Lane/Ammons Lane/Whitesell Street Overlay (South of Bowlin Avenue, North of Varner Avenue)	2029

4.3 NON-CONSTRUCTION ACTIVITIES

4.3.1 Inspection

This PMS is reliant on knowing the distresses present on streets, which is used to determine their overall quality. This knowledge will come from inspecting the pavement on a 6-year basis. All arterial and collector streets should be evaluated once every 2 years, while the local access streets should be split into a 6-year cycle with 1 section being looked at every 2 years. Table 8 shows the recommended split for the local access roads on a 3-section cycle, while Figure 2 shows the groups on a map. These updates should follow the prioritization process included in this report.

Table 8. Annual Roadway Inspection Schedule

Inspection Group	Year of Roadway Inspection							
	2022 (Baseline)	2024	2026	2028	2030	2032	2034	2036
Group 1 (northern neighborhoods)	●	●			●			●
Group 2 (north of Eldredge)	●		●			●		
Group 3 (south of Eldredge)	●			●			●	
Group 4 (non-local access)	●	●	●	●	●	●	●	●

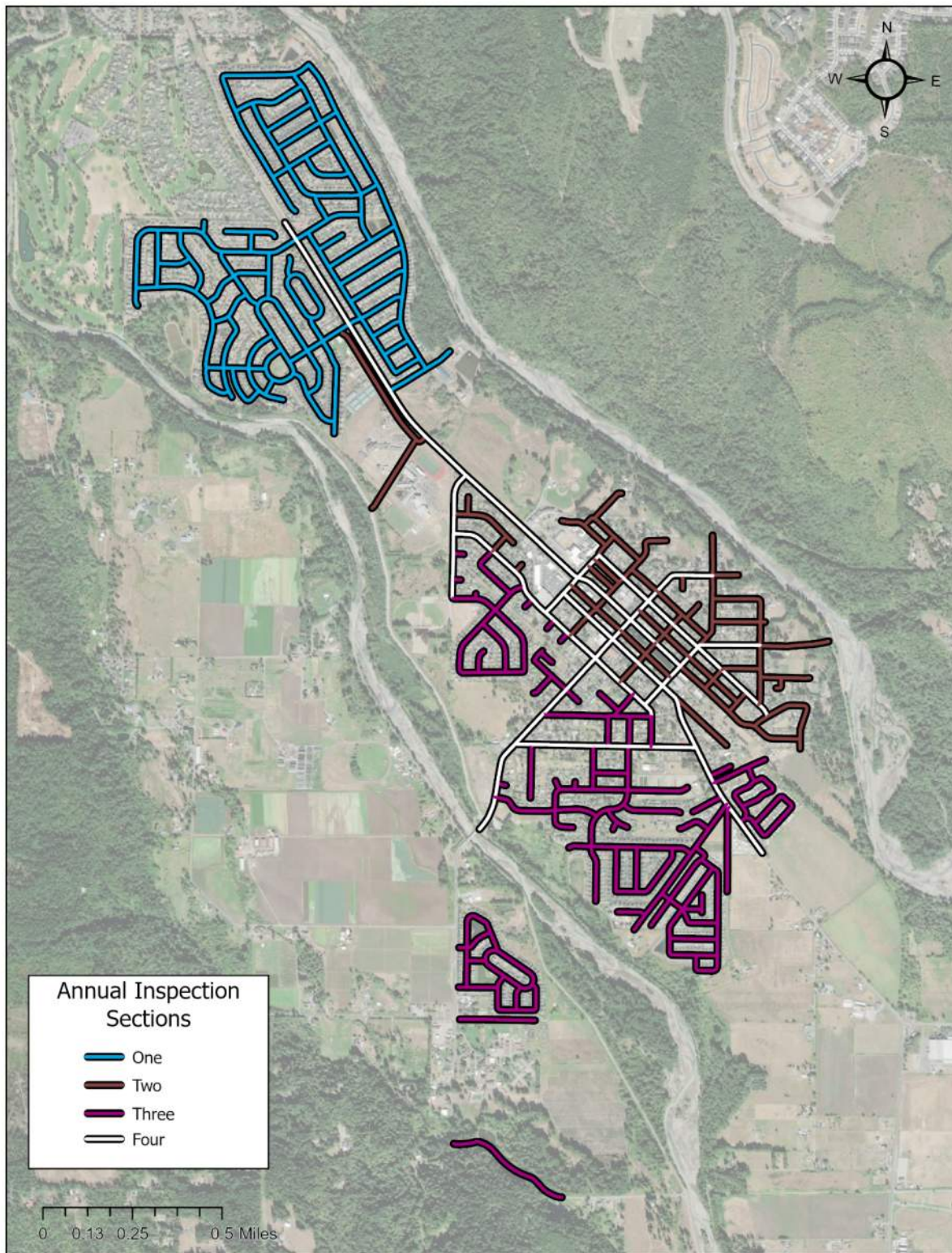


Figure 2. Annual Roadway Inspection Sections



4.3.2 Overall Rating by Section

For all newly reviewed segments, compare the ratings given during the recent inspection cycle to the previous inspection cycle. This report serves as the implementation point. The map of current distressed pavements will help in re-prioritization of segments not previously considered as high traffic or in high rate of distress.

4.3.3 Prioritization

Segments found to be in major distress or potentially hazardous that require emergency repair efforts will be communicated to the city engineer directly. Segments that have a poor rating and are in requirement of full reconstruction are prioritized for outside funding, while segments that need rehabilitative maintenance are also outside funding candidates. Segments in low need of repair have the benefit of low-cost maintenance options and should be addressed earlier rather than later. These are a target for funds and maintenance activity as these road segments are still within service life and this life can be extended cheaply.

4.3.4 Updating Treatments if Necessary

This section will be updated ongoing to incorporate new policy making activity relevant to the pavement treatment activities to be implemented with local guidance from FHWA or WSDOT. This section includes treatment types that may have not been previously implemented by the city or are new maintenance technologies that, with local guidance, are being implemented.

4.3.5 Updating Program Costs

Costs in the baseline 6-year Workplan are based on 2024 construction costs escalated to the year of construction. Costs will need to be updated to reflect inflation, or else the cost estimates shown in this report will quickly become dated. A standard 3% inflation factor may be used for future cost estimating, although the National Highway Construction Cost Index (NHCCI) provides a more roadway specific inflation factor that could be interpolated to find a more accurate factor (Federal Highway Administration).

4.3.6 Revising TIP as Needed

The City's transportation improvement plan, or TIP, will need to be updated using this program as a resource. These updates should take place after the roadway assessments have taken place and the roadways that could use funding the most efficiently have been identified.

4.4 SUMMARY

The PMS begins with inspections of the roads. A Workplan was then assembled or revised (in future) by including new inspection data and re-prioritizing the roads that can be most cost-effectively addressed per the new inspection, which leads to an expected project list. This project list allows funding to be chased and projects to be addressed. Finally, the PMS must be updated with new costs, treatments, and inspections as necessary.



5. ANNUAL WORKPLAN IMPLEMENTATION

5.1 INTRODUCTION

From the data collected, activities to implement the maintenance strategies can then be conducted. First is the project list, or annual pavement preservation workplan, which lays out a list of projects for the city to consider over the next six years. The project list will be evaluated at the start of every other year, and this engineering analysis will lead to an annual project list with bid documents attached. These projects will go to bidding, be awarded, and then after construction the project will be inspected and tested. Finally, a post-construction report will be written about each maintenance project.

5.2 CONSTRUCTION

A project list covering the next six years has been established. The original version covers 2024-2029, and it will be updated after the roadways are reinspected. This list will prioritize projects based on the elements listed out in this program, while also considering the annual budget. Construction season is generally from April through September or mid-October, and these projects may need to plan around this timeline.

5.2.1 Plan Sets and Engineering

Plans, specifications, and estimate (PS&E) need to be prepared annually for the program of projects and should be finalized as early in the year as possible, but no later than the end of March to allow the projects to be advertised for construction in the same calendar year.

5.2.2 Bidding

Projects with a schedule of less than 3 months will typically be advertised for bid by the end of March, and the bid should be finalized by the end of April. Projects scheduled for more than 3 months may need to begin during the next construction season or may take more than one construction season (esp. reconstruction projects).

5.2.3 Coordination with Other Agencies

Some projects in this program, especially those abutting State Route 162, may require coordination with WSDOT. Orting is in the WSDOT Olympic Region and could also contact the WSDOT Local Programs Headquarters for help with coordination.

Coordination with other agencies, especially Pierce County Roads, may be beneficial. This coordination could allow the price of projects to decrease through increasing the size of a project and the economy of scale.

5.2.4 Construction Management

All of the work scheduled for one year can typically be completed under one PS&E and one construction management contract that can be included with the design of the project or contracted separately.



5.3 NON-CONSTRUCTION

5.3.1 Pavement Condition Assessment Updates

As an ongoing part of the pavement condition assessment program, this section is to include updates to policy and procedures around the Pavement Condition assessment. This should also include any additions and updates to the pavement network and updates on previous construction activities completed or referenced in the previous inspection cycle.

This section should include updates and revisions to the data collection process and app or assessment methodology. The first of these is that roads should be rated following the WSDOT Streetwise guide, rather than the methodology in Appendix A.

5.3.2 TIP Updates

This section should include any anticipated or upcoming and planned construction projects that address nearby pavement deficiencies. By taking inventory of upcoming projects, the city can dedicate resources to projects not incorporated as part of larger capital improvement or frontage development project.

5.3.3 PMS Updates

This section will incorporate future and ongoing updates and revisions to the pavement management system.

5.3.4 Administrative Updates

Section to be updated as annual reporting strategy is implemented. This includes personnel and policy updates related to the Pavement Maintenance program and assessment.

5.3.5 Funding Activities

As this program is implemented, this section will include funding that has been obtained or is being sought at the time of assessment for current and future projects. A major source of this funding is expected to be the Washington State Transportation Improvement Board, TIB, which distributes maintenance grants throughout the state. Another potential source of funding is the Safe Routes to School Program through WSDOT.

5.3.6 GIS Updates

Segments produced from the pavement management program inception are updated with new segment photos at time of inspection. These segments are also intended to be updated post construction or maintenance activity along a given segment, the compliance of this is up to the maintenance program administrator.



5.4 SUMMARY

This report is intended to serve as a starting point and as guidance for ongoing and future pavement maintenance activities and procedures. As the city grows and the needs change, the City and program administrator will need to make ongoing updates to this report to reflect the present and ongoing needs of the pavement system.

6. CONCLUSION

The pavement maintenance recommended and included in this report are intended to be used as a planning tool. Further engineering judgment and field verification is necessary before preparing final maintenance plans for each year.



APPENDIX A

2022 PAVEMENT CONDITION ASSESSMENT REPORT (ATTACHED WITHOUT APPENDICES)

2022 Pavement Condition Assessment



ORTING
Washington

February 2023



SCJ ALLIANCE
CONSULTING SERVICES

2022 Pavement Condition Assessment

Project Information

Project: 2022 Pavement Condition Assessment

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Project Reference SCJ #21-000838, Phase 05, Task 01

Path: [N:\Projects\4270 City of Orting\21-000838 Orting 2021-24 On-Call PE Services\Phase 05 - Pavement Management\05.01 2022 Street Condition Assessment\Reports\Assessment Final Draft](#)

PROJECT ENGINEER'S CERTIFICATION

I hereby certify that this Pavement Condition Assessment for the City of Orting has been prepared by me or under my supervision and meets the minimum standards of the City of Orting and normal standards of engineering practice.



2-12-23

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Appendix C: Table of Assessment by Roadway Segments

Appendix D: Pavement Surface Condition Field Rating Manual for Asphalt Pavements



1. EXECUTIVE SUMMARY

SCJ Alliance performed this pavement condition assessment from September to October, 2022, to assess the City of Orting’s roadway network according to WSDOT’s recommended methods per the Northwest Pavement Management Association’s (NWPMA) Pavement Surface Condition Field Rating Manual for Asphalt Pavements (PSCFRM). This manual is included in Appendix D. The assessments were made by a two-person team to visually qualify and physically quantify various pavement distresses that are discussed further in Chapter 4.3 and include:

- | | |
|---|---|
| 1. Rutting | 8. Patching |
| 2. Alligator Cracking | 9. Corrugation and Waves (not observed) |
| 3. Longitudinal Wheel Path Cracking | 10. Sags and Humps |
| 4. Longitudinal Non-wheel Path Cracking | 11. Block Cracking (not observed) |
| 5. Transverse Cracking | 12. Pavement Edge Condition |
| 6. Raveling and Aging | 13. Crack Seal Condition |
| 7. Flushing and Bleeding | |

Based on the cumulative presence or lack of these distresses, each roadway segment was given an overall rating of poor, average, good, or new. A summary of the overall quality of the City of Orting’s roadway network is shown in Figure 1 below. Roadway segments were primarily in good or like new quality, as seen in Figure 2 on page 8. Kansas Street and Old Pioneer Way were found to have multiple, consecutive, notably low-quality segments along their limits.

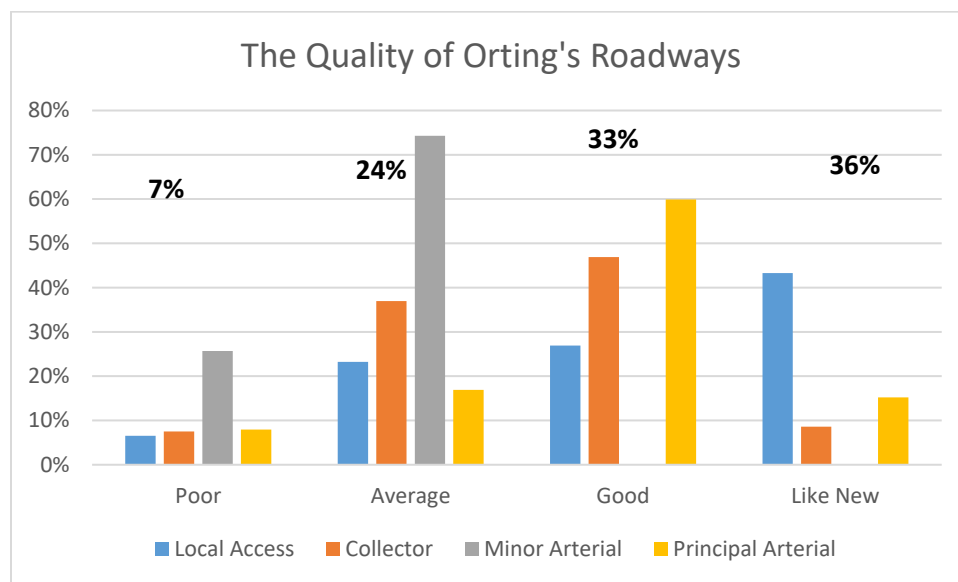


Figure 1. Overall Pavement Condition Ratings Summarized by Functional Class

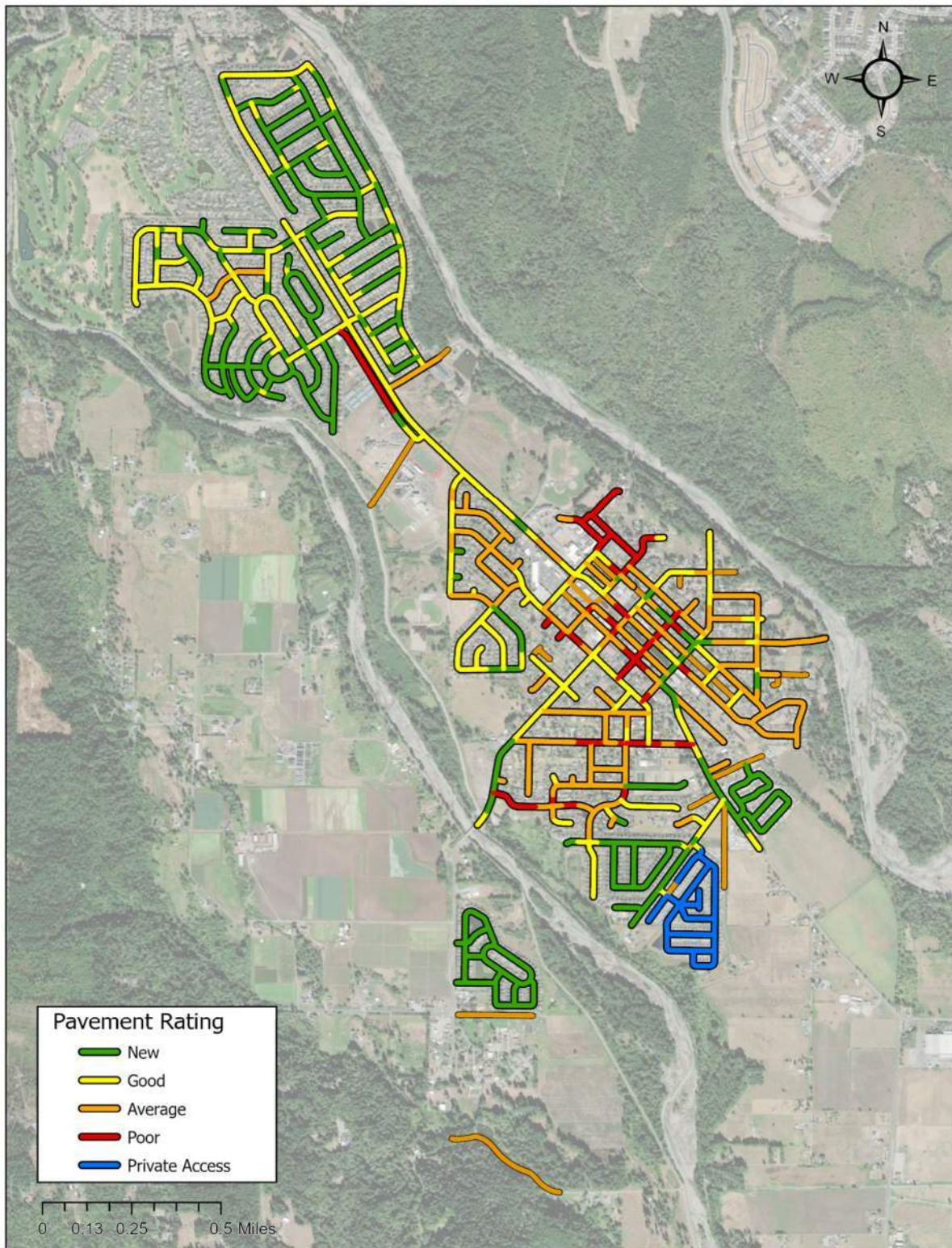


Figure 2. Roadways by Overall Rating



The most significant of the poor segments were along Kansas Street, which is a principal arterial south of downtown. This roadway was observed being used by commercial trucks to bypass downtown and the frequent high loads have deteriorated the pavement to a poor condition. At the time of assessment, a planned reconstruction of Kansas Street is scheduled to begin in 2024.

The other, notably poor roadway is Old Pioneer Way, which is a local access road that starts at State Route 162 (SR 162) and runs parallel for several blocks and dead-ends before reaching Lane Blvd. NW. There were both commercial and residential developments along this roadway and it is a much lower traffic roadway than Kansas Street. These two roads, combined with a few other sporadic segments, make up the roughly 7% of roads in Orting with a poor condition.

In addition, approximately 24% of the roadways were rated average and would also benefit from a variety of pavement and maintenance activities.

2. INTRODUCTION

This report summarizes the methods and results of the pavement condition assessment that were conducted within the City of Orting limits. The report should be used to understand the condition evaluation process for future pavement condition assessments, to understand the current pavement condition ratings, and to understand the data contained in the city's GIS database. This pavement condition assessment was necessary to establish a baseline of the existing condition of the roads within the city. This report will serve as a basis for future projects and on-going pavement maintenance and preservation planning and programming.

This report contains a description of the roads in Orting and a description of the distresses assigned to roads. The roads of Orting are broken down by pavement type and functional classification. The distresses are broken down individually with photographs from the field and maps showing where these distresses were observed. For each segment, the cumulative frequency and severity of distresses were considered and an overall rating was assigned to provide a qualitative and comparative ranking as seen on Figure 1, page 7, and Figure 2, page 8.

3. CITY OF ORTING ROADWAY SYSTEM

3.1 CITY OF ORTING ROADWAY SYSTEM

The City of Orting roadway network includes 62.7 lane-miles of asphalt concrete pavement (ACP), 2.5 lane-miles of gravel, and 0.1 lane-miles of Portland concrete pavement (PCC). This corresponds to the network being 96% ACP, 3.9% gravel, and 0.1% PCC. PCC is found primarily on older, local access roads in the downtown core. Gravel roads were recorded on alleys through downtown as well as some side streets, especially those near the edge of town. The pavement material of each roadway segment is shown in Figure 3 on page 10.

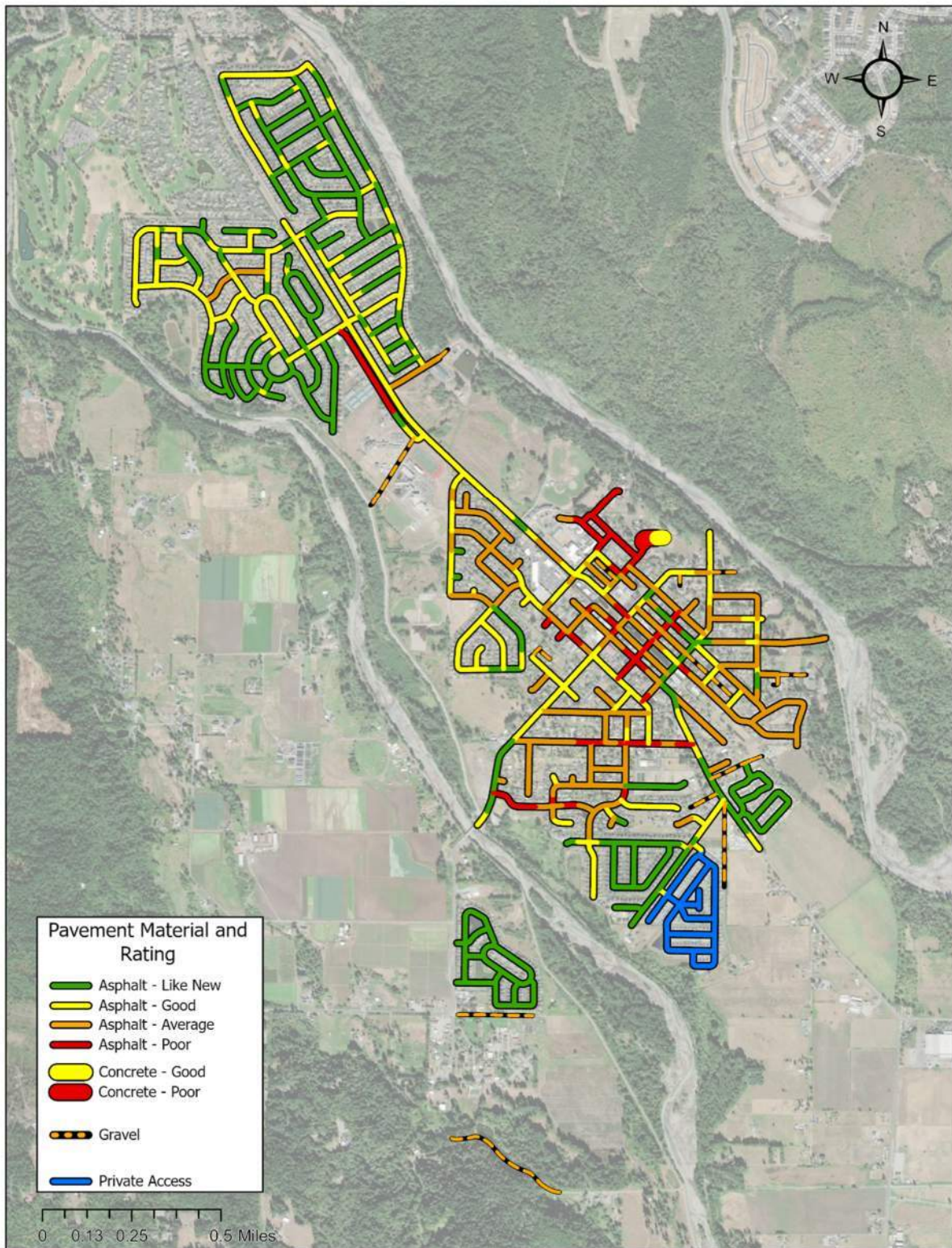


Figure 3. Roadways by Material and Overall Rating



Orting's roads are assigned a functional classification based on the volume of traffic using each roadway and the purpose of the roadway. Orting has 49.7 lane-miles of local access roads (76%), 5.2 lane-miles of collector roads (8%), 0.8 lane-miles of minor arterial roads (1%), and 9.7 lane miles of principal arterial roads (15%). Functional classifications are shown in Figure 4 on page 12.

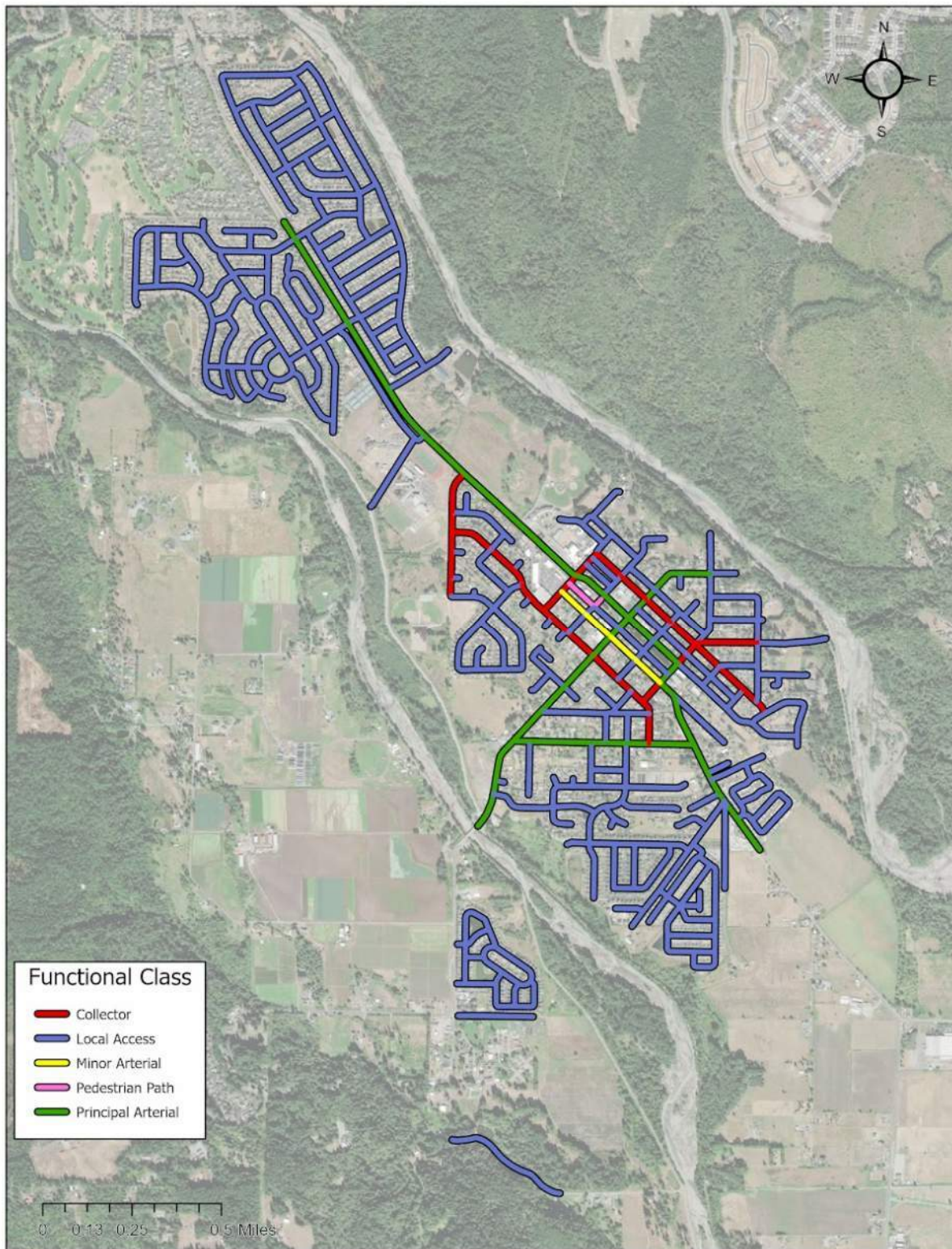


Figure 4. Roadways by Functional Classifications



3.2 GIS DATABASE

One of the priorities of the pavement evaluation was to establish a GIS database for the City of Orting so that a variety of infrastructure data could be better managed within GIS. To begin this effort, available data was pulled from Pierce County's GIS database and trimmed to Orting's city limits. This data was based on GIS nodes at intersections with links (roadways) connecting the appropriate nodes. For the purposes of the pavement condition assessment, these roadway links were further divided into segments that were approximately 250 feet in length to define manageable segments of roadway for the observation of the pavement condition. In general, these segments were recombined to be consistent with the GIS segments pulled from the Pierce County database. Exceptions were made based on significant differences in distresses present.

4. PAVEMENT CONDITION FIELD ASSESSMENT

4.1 INTRODUCTION

The first step in the development of a pavement management system is to inventory the existing roadway system to establish a baseline of the condition in time. From this assessment, a PMS can be developed based on field-collected data. It also sets a precedent by which the PMS can be updated and expanded as future pavement condition assessments are conducted.

This section covers the methods, distresses, segment evaluation, and overall rating process used in the pavement condition assessment. This section of the report includes excerpts from the PSCFRM that were expanded to describe each observable distress, along with photographs from the field and maps of where each of the distresses were present in Orting. This is intended to facilitate an understanding of the pavement condition assessment and provide consistent review data for future pavement condition assessments.

4.2 PAVEMENT CONDITION ASSESSMENT METHODOLOGY

4.2.1 Asphalt Concrete Paved Roadways

This pavement condition assessment followed NWPMA's PSCFRM (Manual) methodology as recommended by WSDOT. The Manual describes potential asphalt concrete pavement distresses, listed in Chapter 4.3, and recommends methods of qualitative and quantitative assessment based on both severity and extent. The PSCFRM lays out two options to qualify these severities and extents. Option A used the worst assigned severity and the total extent of the distress while Option B assigned the extent of each severity individually. For the purposes of this assessment, Option A was always used.

The Manual also discusses best practices for evaluating the roadways. These evaluations were done on foot, or in Phase 2, confirmed while on foot, and they were conducted by a 2-person team over a 2-month period. The observation team recorded the pavement condition for each segment defined in the GIS. Pavement condition overall ratings covered the whole traveled surface of the roadway, not an individual lane or direction of travel. Observed distresses and data that captured the severity and frequency of each distress were entered electronically in a proprietary SCJ software that was developed based on this manual and the use of GIS (see Appendix B).



Due to variability in site conditions or assessors, it is critical to have continuity between both the time of the assessment and assessors, and to collect the data within the same range of time and using the same methodology. The Orting Pavement Condition Assessment covered roadways within Orting's city limits and took place in September and October 2022, in three independent phases conducted by the same 2-person team of engineers. Summer weather conditions were observed in all field visits.

The first phase of three covered principal arterials, minor arterials, and collector streets, as well as some central local access roads with the exception of SR 162, which is maintained by the WSDOT. The second phase covered the remaining local access roads and the third phase covered SR 162 through city limits. The segments observed in each phase are shown in Figure 5 on page 15.

Data collection varied from phase to phase as it was recognized that fewer pictures could cover the entire segment because the pavement condition of segments was nearly always consistent. Therefore, pictures were taken at 125' intervals in Phase 1, but then at 250' intervals in Phase 2. In Phase 3, a video was also taken to assist in the pavement condition observation because the roadway is under significant amounts of vehicular traffic.

4.2.2 Portland Cement Concrete Paved Roadways

WSDOT doesn't make a recommendation for how to assess the condition of PCC roadways, and no equivalent manual exists. Therefore, PCC roadways were evaluated using the PSCFRM distresses and the same methodology because rigid pavement surfaces such as PCC will exhibit similar failure characteristics as flexible, ACP.

4.2.3 Gravel Roadways

Gravel roadways were qualitatively field rated without PSCFRM distress observations or evaluation. Access, maintenance, and service all factor into roadway surface construction materials, gravel while not excluded from the report, is not included in the PSCFRM.

4.2.4 Private Access Roadways

Private access roadways were encountered in gated communities where vehicular access is restricted to property owners only. Each segment of private access roadway was evaluated where possible without disturbing private occupants and photographs only taken on the public portion of these segments.

Majestic View Estates is a private access, gated community located on the southern part of town. With the restricted access, no field assessment was made, and no GIS data collected. If these roadways are maintained by the City, future pavement condition assessments should be performed with coordinated access to these communities.

4.2.5 Pedestrian Paths

Three segments consisting solely of pedestrian path were included as part of the assessment and given qualitative ratings using PSCFRM as a basis of assessment.

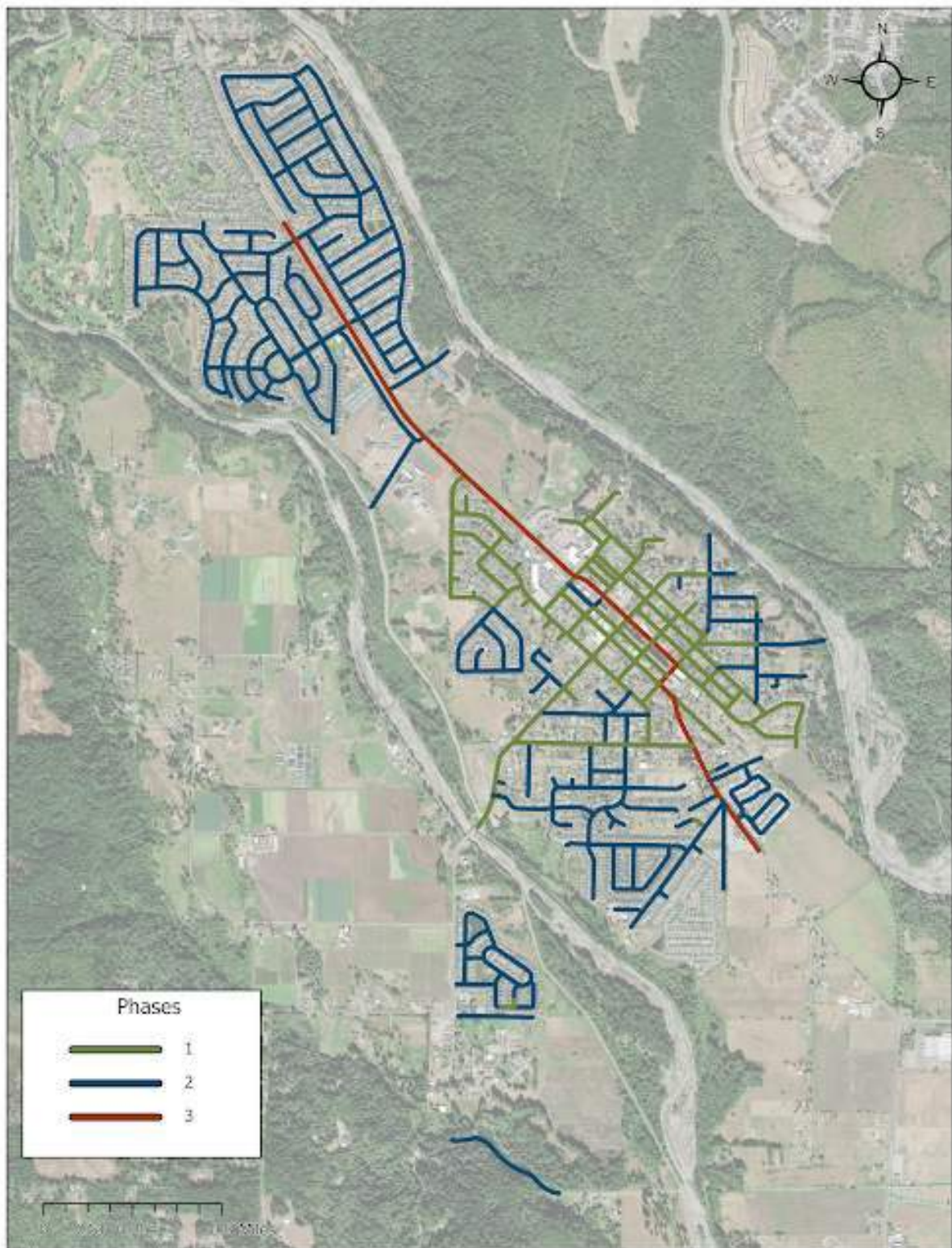


Figure 5. Roadways Assessed in Each Phase of Evaluation



4.3 PAVEMENT CONDITION ASSESSMENT

The distresses that were evaluated in this pavement condition assessment come direction from the PSCFRM. Two distress types were included in the assessment but were not observed as noted below.

1. Rutting
2. Alligator Cracking
3. Longitudinal Wheel Path Cracking
4. Longitudinal Non-wheel Path Cracking
5. Transverse Cracking
6. Raveling and Aging
7. Flushing and Bleeding
8. Patching
9. Corrugation and Waves (not observed)
10. Sags and Humps
11. Block Cracking (not observed)
12. Pavement Edge Condition
13. Crack Seal Condition



Each subsection below describes the distresses evaluated in this pavement condition assessment, information on how the severity and frequency was evaluated for each distress, potential causes for this type of failure, and in some cases, specific methods typically used to address these failures. Much of this information is borrow directly from the NWPMA's PSCFRM and is included here to support the baseline pavement condition assessment and subsequent pavement management planning and programming efforts. An example photo specific to the City of Orting and from this baseline pavement condition assessment has been included to indicate the potential worst case of each distress type assessed.

4.3.1 Rutting

Rutting occurs when vehicle's wheels have forced the wheel path lower than the rest of the road (seen on Kansas Street, Figure 6 on page 2). Although, it can be due to the pavement being worn off, it is generally attributed to base material being displaced. Pavement being worn off can be fixed with a repave, but if the root cause was the base material, a full reconstruction is likely needed. Figure 7 on page 3 shows the locations where rutting was observed during this pavement condition assessment.

Severity

- Low – ¼ inch to ½ inch
- Medium – ½ inch to ¾ inch
- High – over ¾ inch

Frequency

- Not measured for rutting, applied to entire segment, or defined in a comment.



Figure 6. Rutting on Kansas Street

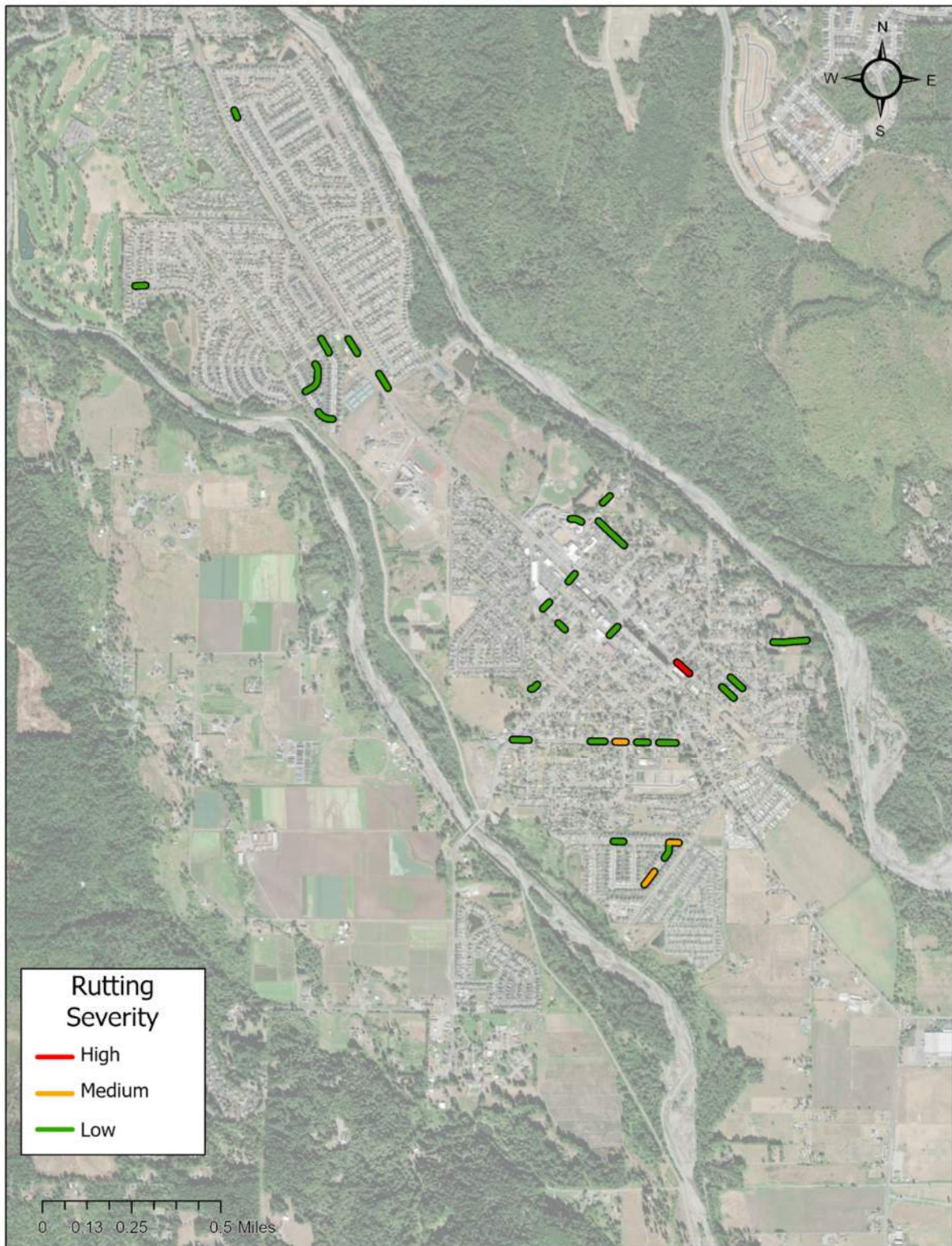


Figure 7. Rutting in Orting



4.3.2 Alligator Cracking

Alligator cracking is a distress due to wear where cracks connect extensively (see Figure 9 below). These interconnected cracks point to material beneath the pavement having settled and show the pavement is not receiving adequate support. This distress requires fixing the base materials as well as the pavement itself. Alligator cracking was mainly observed in the southern section of Orting, as seen in Figure 10 on page 6.

Severity

- Low – Branched, longitudinal, discontinuous thin cracks beginning to interconnect.
- Medium – Cracking is completely interconnected, and some spalling may appear at edge of cracks. Pavement pieces are still in place.
- High – Well developed pattern of cracking, spalling is very apparent, and pieces may be missing.



Figure 8. Alligator Cracking Severities

Frequency

- Percentage of each wheelpath affected per segment evaluated.



Figure 9. Alligator Cracking on Varner Avenue

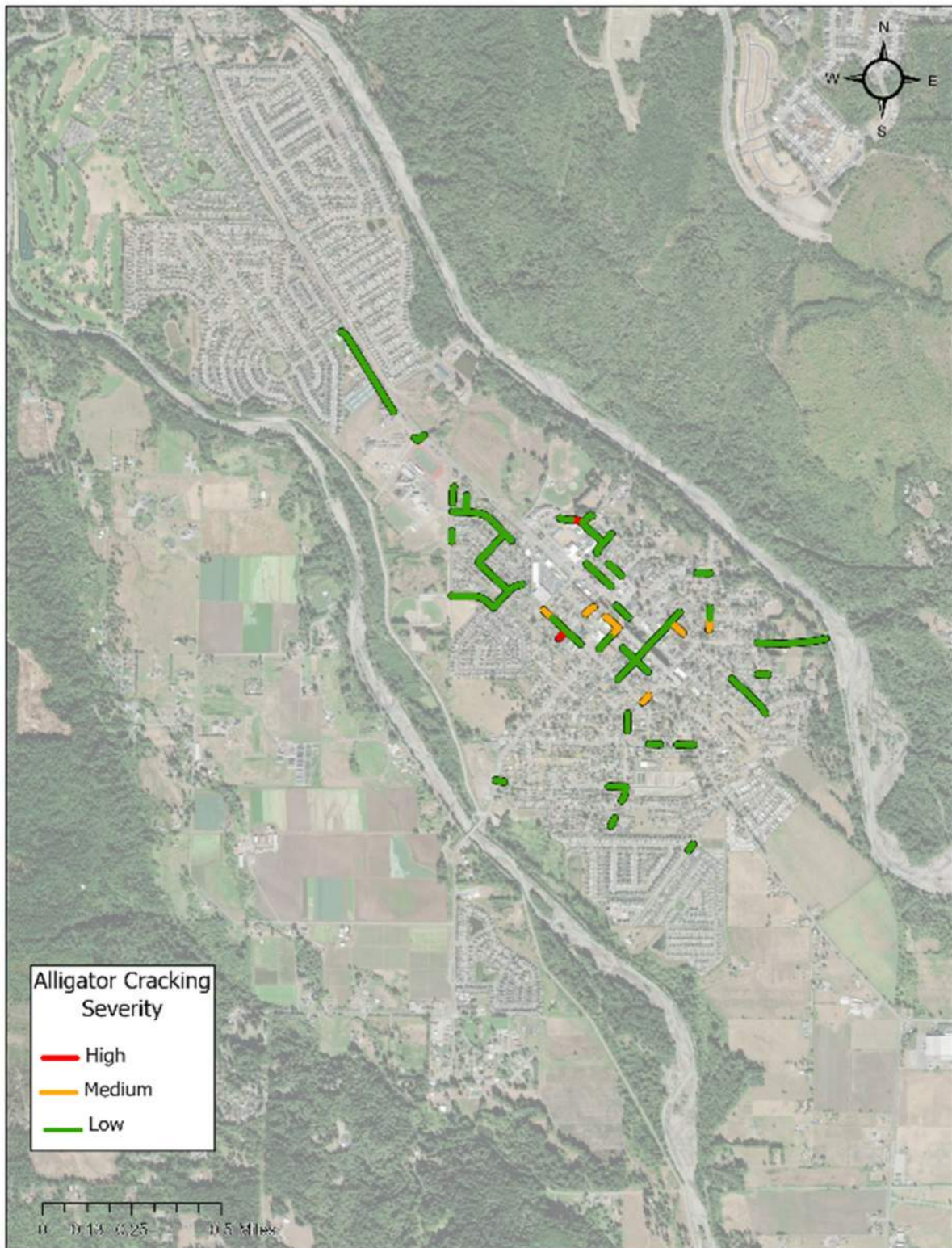


Figure 10. Alligator Cracking in Orting



4.3.3 Longitudinal Wheelpath Cracking

Longitudinal wheelpath cracks run parallel to the roadway centerline and are in the wheel path of traffic (Figure 12 below). Although it is possible that these cracks are from poor joint construction, they may also be the beginning of alligator cracks forming. Depending on the cause, the repair methods vary from crack sealing to repaving. Longitudinal wheel path cracking was only observed in Orting at low severity, as seen in Figure 13 on 9.

Severity

- Low – Cracks have very little or no spalling and are less than $\frac{1}{4}$ " in width
- Medium – Cracks have little or no spalling but are greater than $\frac{1}{4}$ " in width
- High – Cracks are spalled, and pieces are visibly missing



Figure 11. Longitudinal Wheelpath Cracking Severities

Frequency

- Percentage of the length of each segment evaluated.



Figure 12. Longitudinal Wheelpath Crack along Calistoga Street

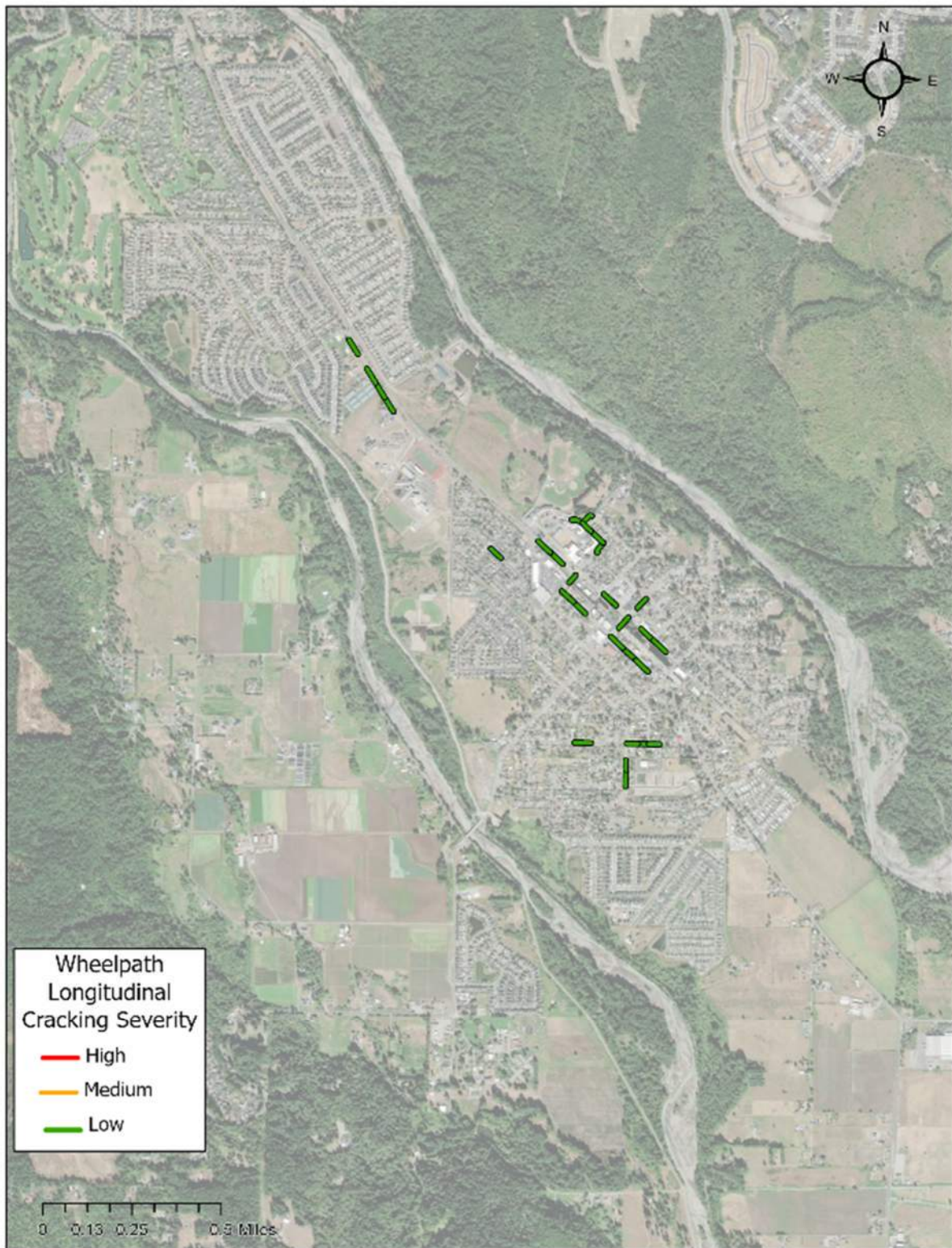


Figure 13. Longitudinal Wheelpath Cracking in Orting



4.3.4 Longitudinal Non-Wheelpath Cracking

Longitudinal non-wheelpath cracks were seen on the centerline of many of Orting's roadways (Figure 15 below). These longitudinal cracks run parallel to the roadway centerline and are not in the wheel path of traffic. They are generally caused by poor joint construction. Crack sealing may be all the maintenance required, however, a repave is needed to truly fix the crack. Figure 16 on page 12 shows this distress was often seen on long stretches of the same road, indicating it was likely due to paving methods.

Severity

- Low – Cracks have very little or no spalling and are less than ¼" in width
- Medium – Cracks have little or no spalling but are greater than ¼" in width
- High – Cracks are spalled and pieces are visibly missing



Figure 14. Longitudinal Non-Wheelpath Cracking Severities

Frequency

- Percentage of the length of each segment evaluated.



Figure 15. Longitudinal Non-Wheelpath Cracking along Bridge Street

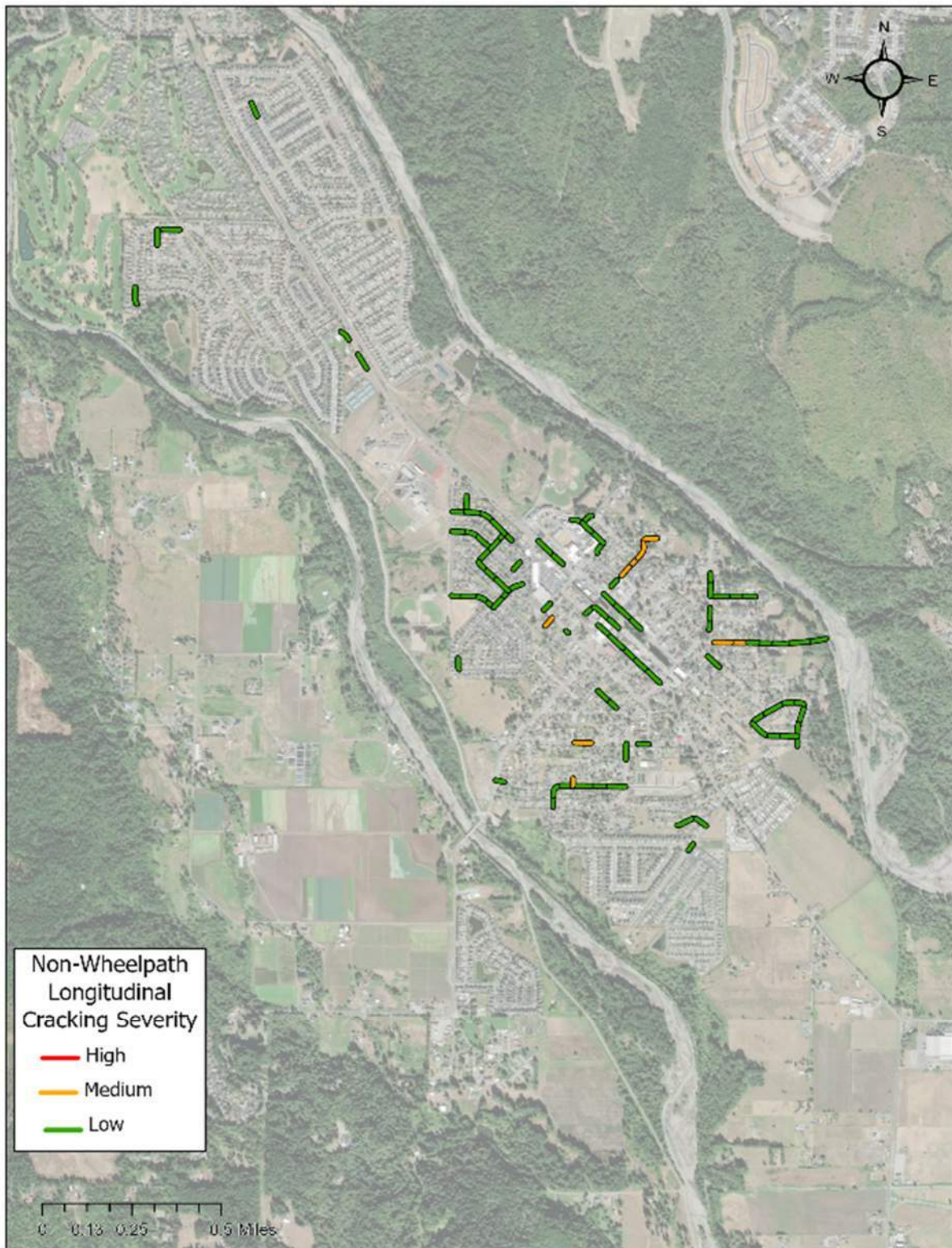


Figure 16. Longitudinal Non-Wheelpath Cracking in Orting



4.3.5 Transverse Cracking

Transverse cracks run perpendicular to the roadway centerline (Figure 18 below). These can be caused by pavement shrinkage at low temperatures, by binder hardening, or by the joints between concrete slabs when pavement is placed on top of concrete. Crack sealing will prevent water infiltration, but to fix the cracks, a repave may be required. Figure 19 on page 15 shows prominent transverse cracking along Washington Ave.

Severity

- Low – Cracks have very little or no spalling and are less than ¼" in width
- Medium – Cracks have little or no spalling but are greater than ¼" in width
- High – Cracks are spalled and pieces are visibly missing



Figure 17. Transverse Cracking Severities

Frequency

- Count of cracks observed per 100-foot section.



Figure 18. Transverse Cracks on Belfair Avenue

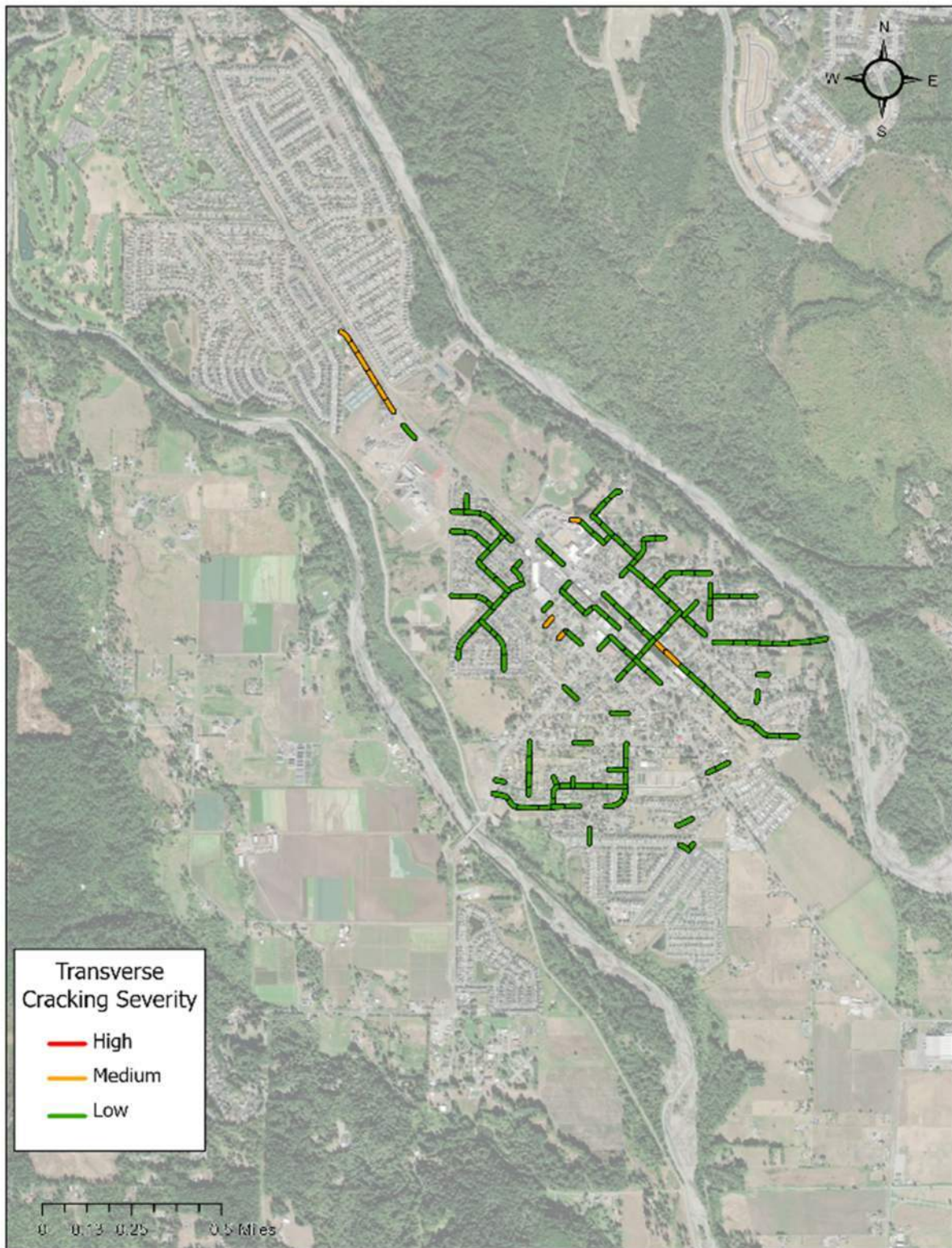


Figure 19. Transverse Cracking in Orting



4.3.6 Raveling and Aging

Raveling and aging can be seen when the roadway looks rough and worn (Figure 21 below). Aging specifically presents itself in the discoloration of a pavement surface and can be present without raveling. Aging is the indication of the beginnings of roadway failure. Raveling happens as aging pavement begins to see the aggregate separating, or the aggregate is no longer present in the pavement. Aging and Raveling are not indicative of any subbase failure. Pavement life can be extended by chipseal or other maintenance activities prior to failure. Raveling and aging is the most common distress found during the assessment, as shown in Figure 22 on page 18.

Severity

- Low – Aggregate and/or binder has started to wear away.
- Medium – Aggregate and/or binder has worn away and the surface texture is rough and pitted.
- High – Aggregate and/or binder has worn away significantly and the surface texture is deeply pitted and very rough.



Figure 20. Raveling and Aging Severities

Frequency

- Extent of raveling observed is either localized, confined to the wheelpath, or across the entire lane.



Figure 21. Raveling and Aging along Corrin Avenue

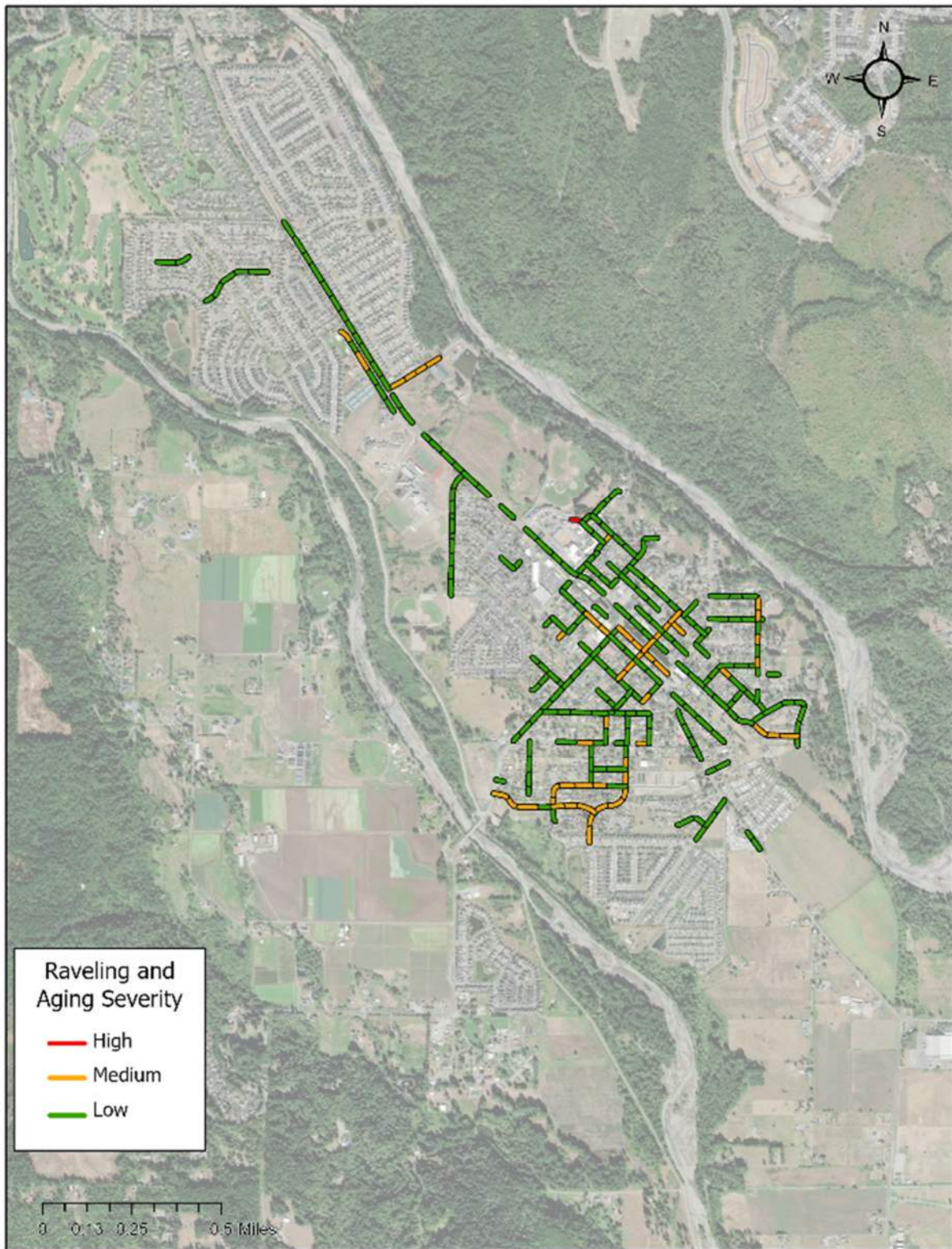


Figure 22. Raveling and Aging in Orting



4.3.7 Flushing and Bleeding

Flushing and bleeding look shiny on colder days and can approach a gooey look on hot days (cold day, ~60 degrees, shown in Figure 24 below). It occurs when there is excess binder in the pavement, causing it to bleed to the surface. Chip seals often lead to this condition as they get older. This distress can be halted by applying sand to soak up excess binder, but it likely needs a repave or slurry seal to permanently fix. Flushing and bleeding in Orting were assessed on limited segments of long of roads and are particularly indicative of a poor binder mix during asphalt roadway construction or asphalt roadway construction during weather elements that negatively impact curing of these binders. (Figure 25 on page 21).

Severity

- Low – Minor amounts of aggregate covered by excess asphalt
- Medium – Significant amount of the aggregate covered by excessive asphalt
- High – Most of the aggregate is covered by excessive asphalt

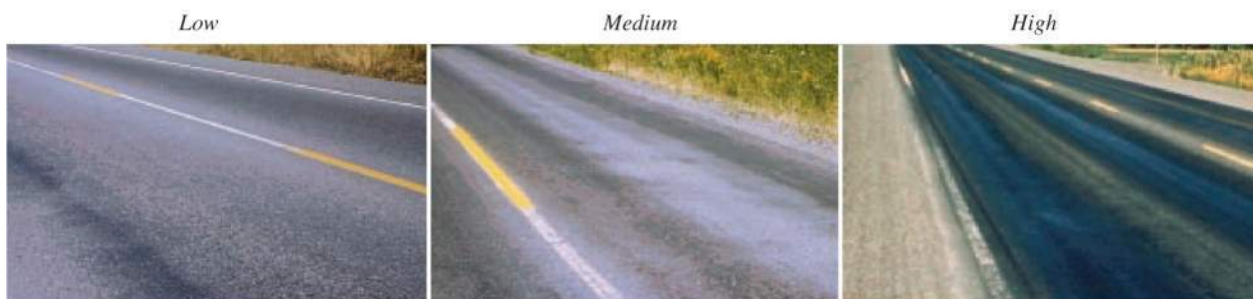


Figure 23. Flushing and Bleeding Severities

Frequency

- Extent of flushing observed is either localized, confined to the wheelpath, or across the entire lane.



Figure 24. Flushing and Bleeding on Park Place

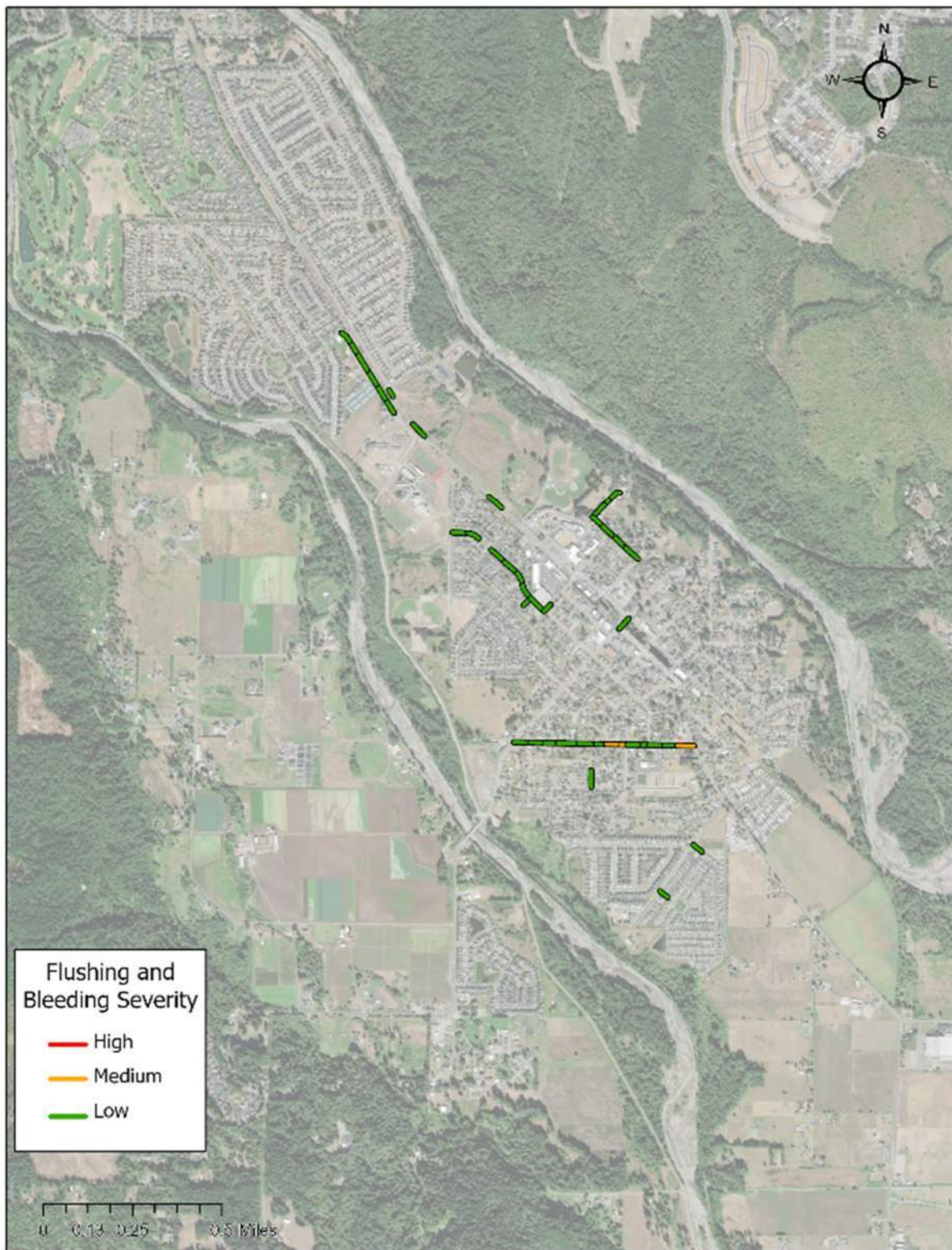


Figure 25. Flushing and Bleeding in Orting



4.3.8 Patching

Roadway patches occur anywhere the original construction of pavement has been cut into (Figure 27 below). Patching is a result of various activities. Patching can be the result of a utility repair below the roadway surface. Patching can occur to repair a failed portion of the roadway either a pothole or excessive cracking that affects a limited section of an otherwise good roadway. Patching can occur to address subgrade failures on the edges of pavement where the roadway width has been compromised. The assessment found a low frequency of patching and a high rate of patching success where patches are present. Patches failed are assessed by the type of failure present within the roadway segment and considered high severity if the patch has otherwise failed. No conditions of severe patching were assessed in the city of Orting. (Figure 28 on page 24).

Severity

- Low – Patch has at most low severity distress of any type.
- Medium – Patch has at most medium severity distress of any type.
- High – Patch has at most high severity distress of any type.



Figure 26. Patching Severities

Frequency

- Percentage of each wheelpath affected.



Figure 27. Patching on Bridge Street

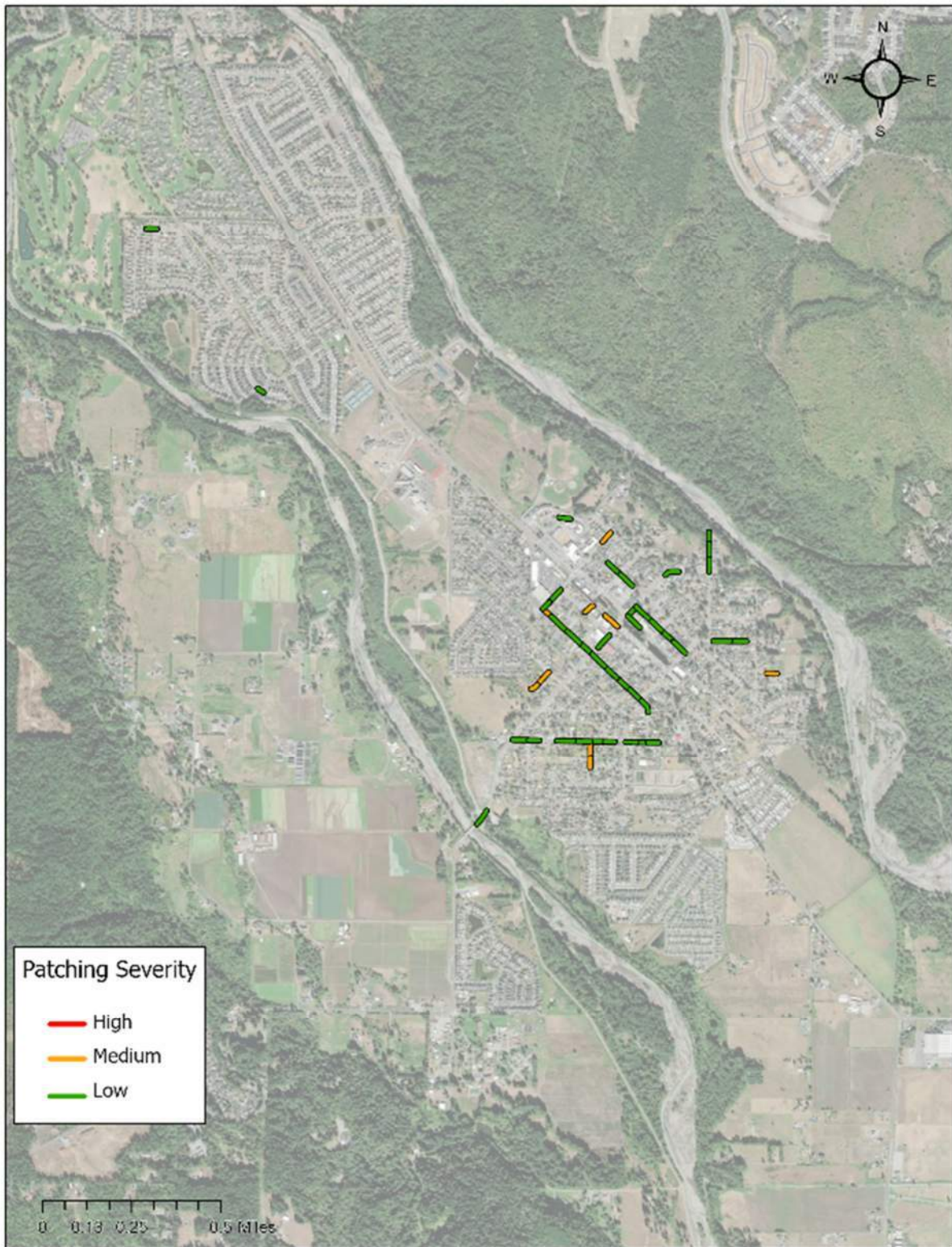


Figure 28. Patching in Orting



4.3.9 Corrugation and Waves

This distress was not significant, although a few cases were noted, in the baseline pavement condition assessment performed for Orting.

Severity

- Low – ½ inch to 2 inches per 10 feet.
- Medium – 2 inches to 4 inches per 10 feet.
- High – Over 4 inches per 10 feet.

Frequency

- Extent of corrugations measured in square feet.

4.3.10 Sags and Humps

Sags and humps are localized low or high points in a roadway respectively (see sags in Figure 29 below). These may result from settlement, tree roots, pavement shoving, or subgrade swelling. Patching should fix this condition if it is localized while a repave may be more appropriate if an entire roadway sags and humps. Sags and humps of medium and high severity were present on the lowest rated roads in this assessment, Old Pioneer Way, and Kansas Street (Figure 30 on page 27).

Severity

- Low – ½ inch to 2 inches per 10 feet.
- Medium – 2 inches to 4 inches per 10 feet.
- High – Over 4 inches per 10 feet.

Frequency

- Percentage of the lane-area affected.



Figure 29. Sags along Hays Avenue

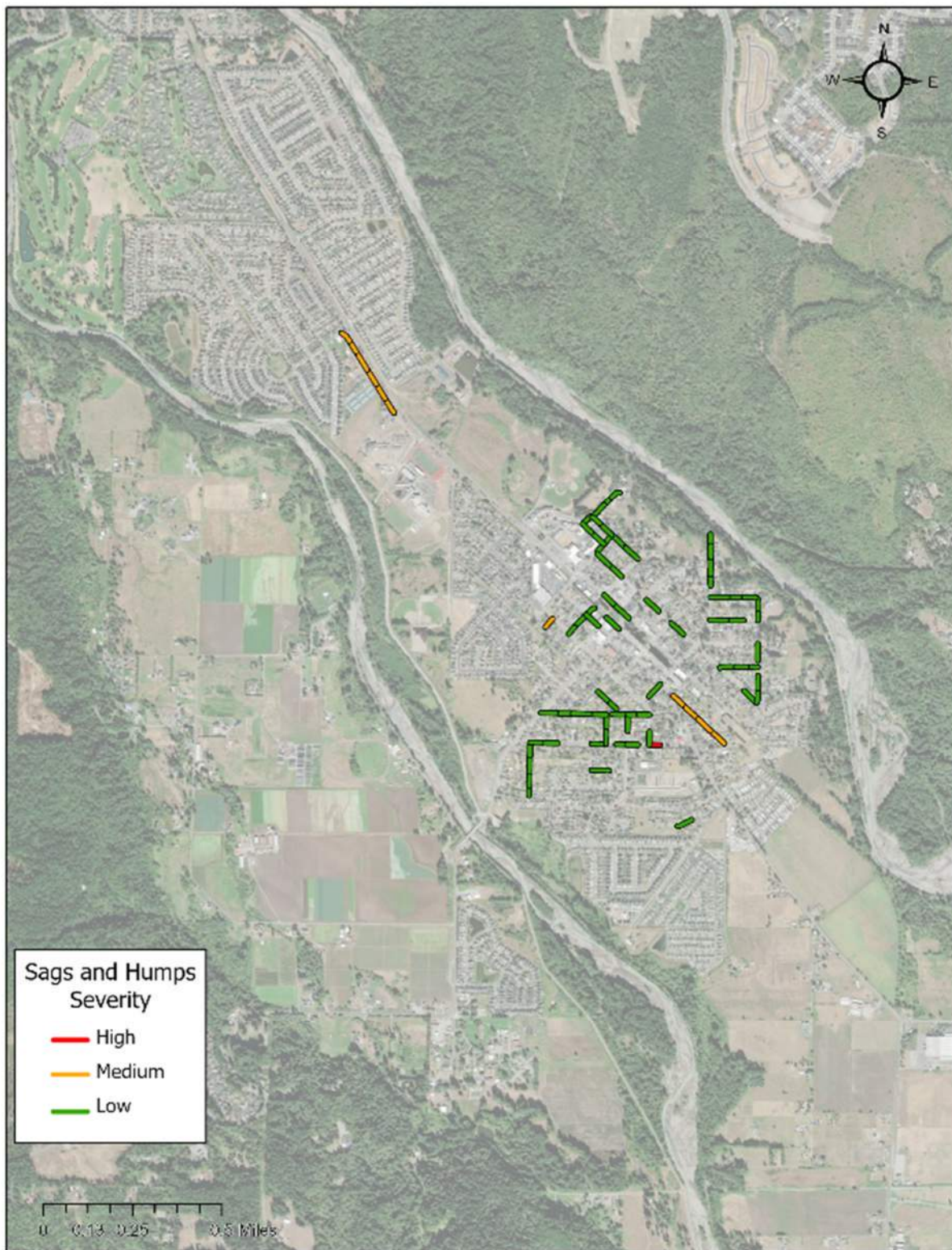


Figure 30. Sags and Humps in Orting



4.3.11 Block Cracking

This distress was not significant, although a few cases were noted, in the baseline pavement condition assessment performed for Orting.

Severity – Block Size

- Low – 9 x 9 feet or greater.
- Medium – 5 x 5 feet to 8 x 8 feet blocks.
- High – 4 x 4 feet blocks or less.

Severity – Crack Size

- Low – Less than ¼ inch.
- Medium – Over ¼ inch.
- High – Spalled.

Frequency

- Not measured for rutting, applied to entire segment.

4.3.12 Pavement Edge Condition

Low severity edge condition, or edge raveling, is common and often occurs near gravel driveways as seen in Figure 31 below. It can lead to more severe edge conditions, such as potholes, or very severe conditions where the travel lane is effectively less than 10 feet wide. Treatment for edge raveling and potholing includes patching or half road patching depending on the severity of the patch. Edge conditions were mainly present in a low severity case, but also has some medium severity segments and one high severity segment, as seen in Figure 32 on page 30.

Severity – Crack Size

- Low – Edge Raveling.
- Medium – Edge Patching.
- High – Edge lane less than 10 feet.

Frequency

- Percentage of the length of each segment evaluated.



Figure 31. Edge Raveling on Olive Street

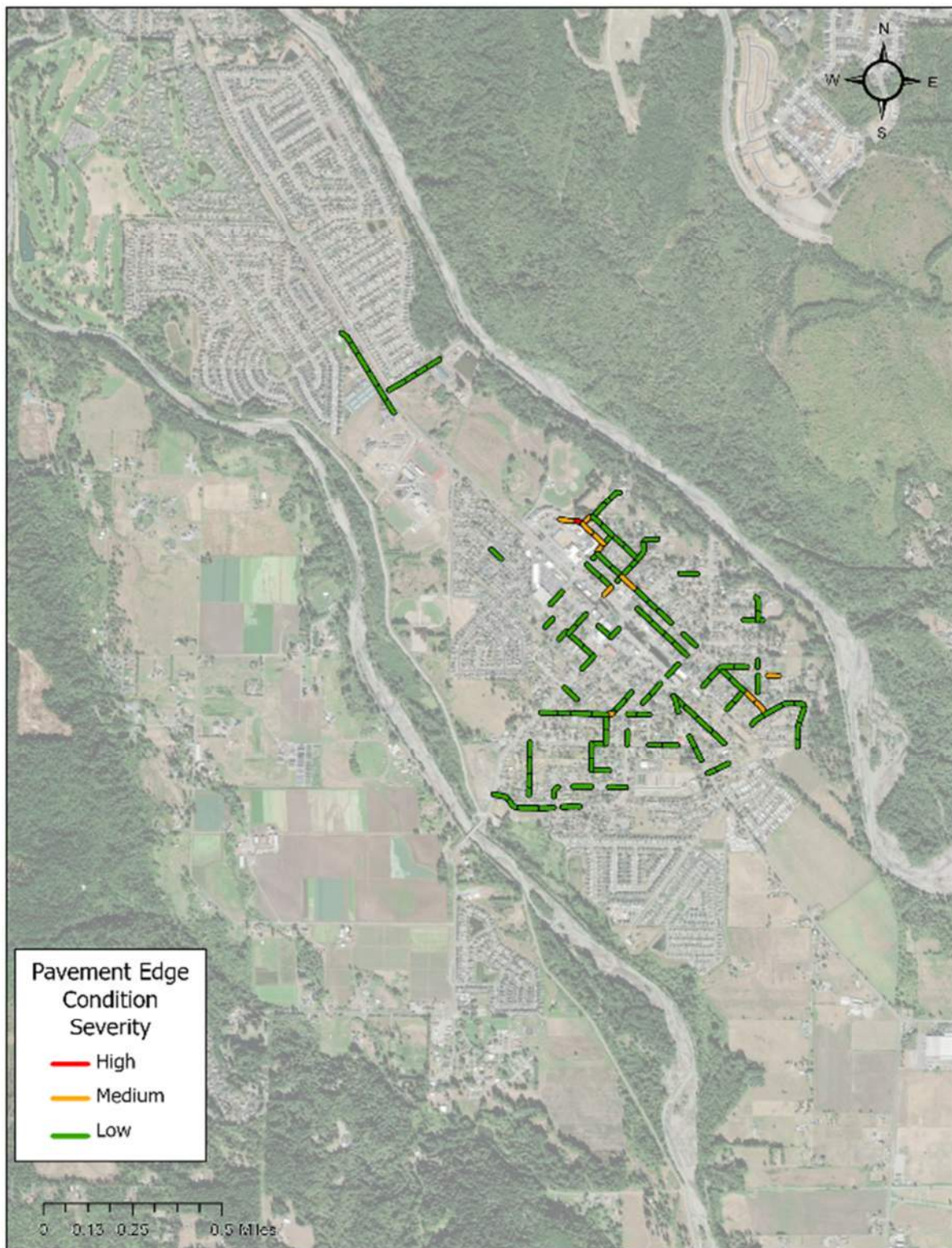


Figure 32. Edge Conditions in Orting



4.3.13 Crack Seal Condition

Crack sealing is a valuable maintenance method for cracks as it limits water infiltrating the base material (see Figure 33 below). This, in turn, delays or prohibits the expensive maintenance methods aimed at fixing the base levels. It is important to know where cracks are present that have not been sealed, so the final condition rated the extent of crack sealing and if there were any new cracks forming through the seal. Figure 34 on page 32 shows all the locations crack sealing was observed in Orting.



Figure 33. Crack Seal down Silvernail Street

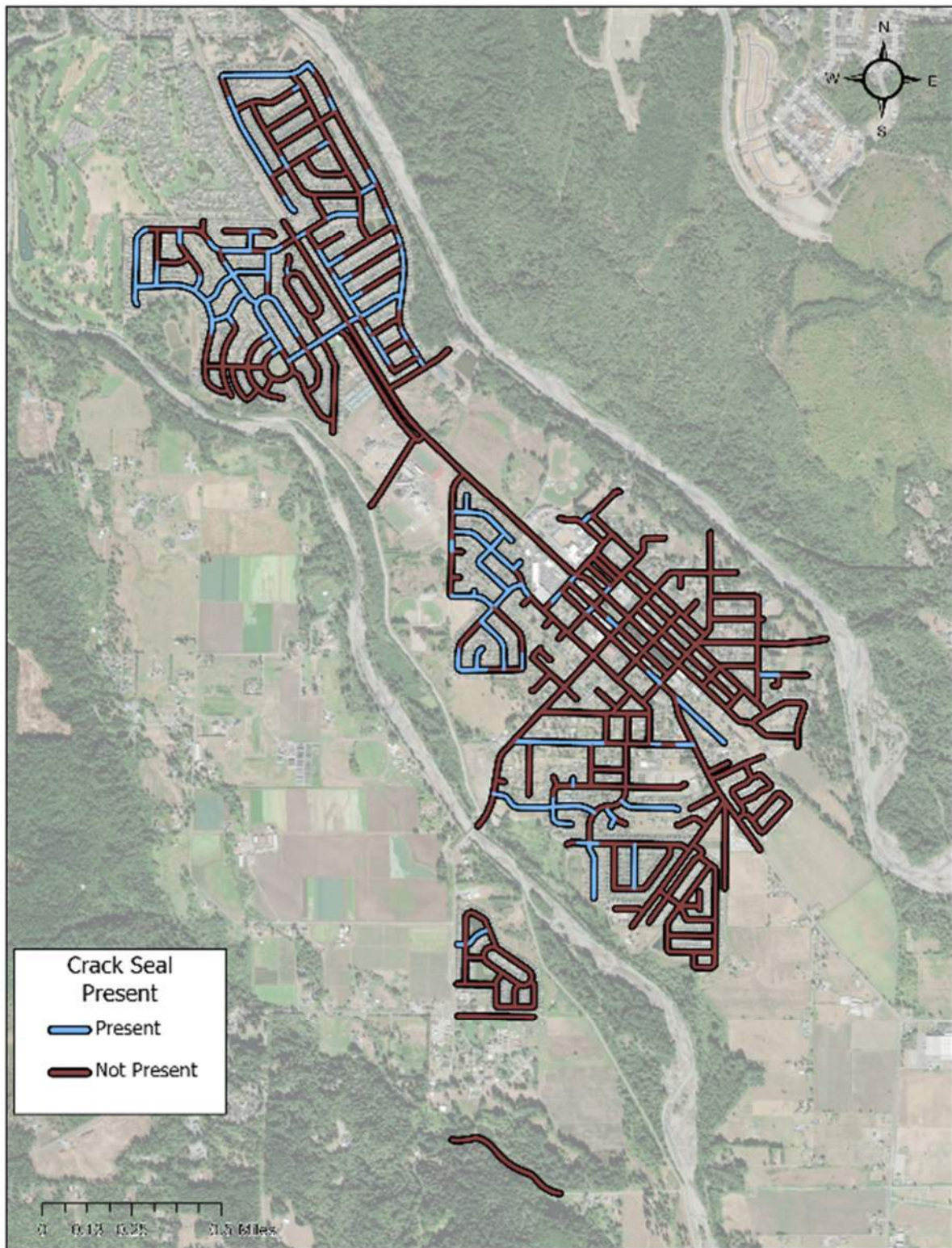


Figure 34. Crack Sealing in Orting



5. OVERALL PAVEMENT CONDITION RATINGS

5.1 INTRODUCTION

In order to compare and prioritize segments for inclusion in the City's pavement management system, it is helpful to have an overall rating of the pavement condition for each segment. With this data, segments can be prioritized for both maintenance and preservation actions and a plan to address them can be developed considering all segments, even though they experience different issues that, at times, have different solutions. This section describes how the overall rating was assigned for each segment and summarizes the condition of the city's roadway network.

5.2 OVERALL PAVEMENT CONDITION RATINGS METHODOLOGY

Based on the cumulative presence or lack-of, the distresses discussed in Section 4 and the severity and frequency of these distresses, we developed a weighted grading of pavement condition. This section describes how the overall rating was determined.

We collected field data for each segment and applied a rating scale based on the distresses found:

Not present (0); Low (1); Medium (2); High (3)

These severities are based on conditions specific to the distress type present, e.g., alligator cracking is rated based on the width of cracks and severity of roadway spalling, 0 being no alligator cracking and 3 being roadway spalling or large intrusive cracking. See individual distress sections for these rating metrics.

We then included a weighting factor on the significance of the distress type:

Alligator Cracking, Rutting (5)

Raveling and Aging, Corrugation and Waves (4)

Block Cracking, Longitudinal Wheel Path Cracking, Transverse Cracking, Crack Seal Condition, Flushing and Bleeding (3)

Patching, Sags and Humps (2)

Pavement Edge Condition, Longitudinal Non-wheel Path Cracking (1)

We included another factor based on the volume of the distress type included:

0 – 10%, 1-4, etc. (1)

11-25%, 4-9, etc. (1.2)

25%+, 10+, etc. (1.5)



The purpose of these modification factors is to quantify the distresses in each segment in a way that allows them to be compared to like segments and compare typical distresses found. From these quantitative ratings, a qualitative rating of Like New, Good, Average, or Poor was determined. This overall rating will help us compare the segments to each other if different types of distresses are present so that we can prioritize maintenance and preservation activities to include in the multi-year pavement management program. A full list of roadway segments, along with their field pavement condition ratings, has been included in Appendix C and is also shown in Figure 2 on page 8.

5.3 SUMMARY OF OVERALL PAVEMENT CONDITION RATINGS

Figure 1 on page 7 shows the overall pavement condition ratings summarized by each roadway's functional classification. This summary shows that 7% of the lane-miles are rated poor, 24% are rated average, 33% are rated good and the last 36% are rated like new (consolidated in Figure 35 below). As these figures demonstrate, the majority of the city's roadway network is in good or new condition and likely does not need any pavement preservation and/or maintenance work at this time.

Approximately 24% of the remaining 31% roadway segments are rated in average condition and would likely benefit from pavement preservation and/or maintenance work to their usable life. Only 7% of the city's network is rated in poor condition which would require more extensive reconstruction or replacement work. The most significant of the poor segments were along Kansas Street, which is a principal arterial south of downtown. This roadway was observed being used by commercial trucks to bypass downtown and the frequent high loads have deteriorated the pavement to a poor condition. At the time of assessment, a planned reconstruction of Kansas Street is scheduled for 2024.

The other, notably poor roadway is Old Pioneer Way, which is a local access road that starts at State Route 162 (SR 162) and runs parallel for several blocks and dead-ends before reaching Lane Blvd. NW. There were both commercial and residential developments along this roadway and it is a much lower traffic roadway than Kansas Street. These two roads, combined with a few other sporadic segments, make up the roughly 7% of roads in Orting with a poor condition.

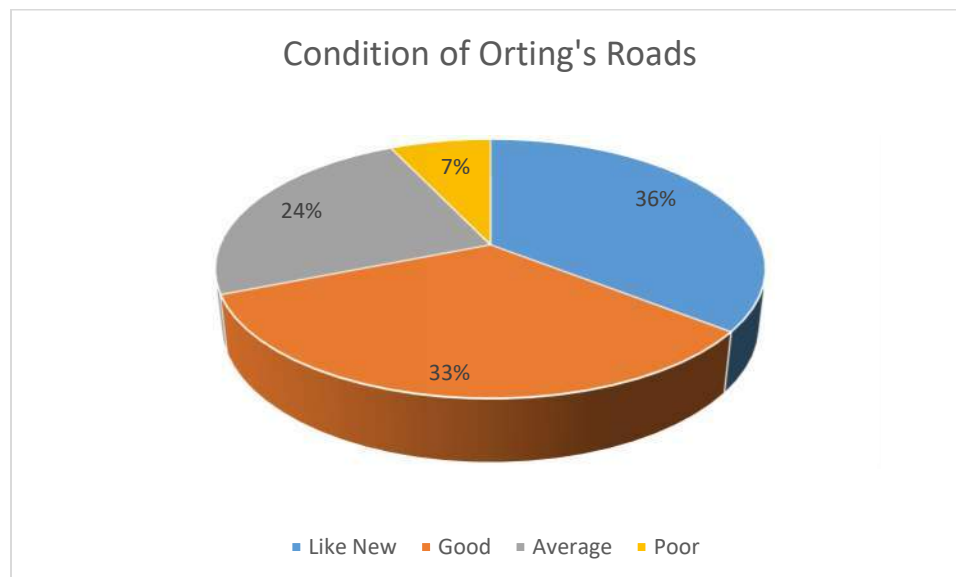


Figure 35. The Majority of Orting's Roadways are in a Good or Like New Condition



6. NEXT STEPS

The next step in the development of the city's Pavement Management System is to prioritize the poor and average sections and identify a list of projects to be programmed annually so that the City can pursue funding for this work. This will be done by considering the overall pavement condition ratings and functional classifications along with other considerations to prioritize each segment and then packaging like work into phases of pavement preservation and maintenance activities. A separate PMS report will include this work.



APPENDIX B

REFERENCES

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APPENDIX C

PRESERVATION TREATMENT UNIT COSTS

FINAL UNIT CONSTRUCTION COSTS

Chip Seal	\$12.20	per lf of lane	\$64,416	cost per lane mile
Mill and Fill	\$44.80	per lf of lane	\$236,544	cost per lane mile
Reconstruction	\$142.10	per lf of lane	\$750,288	cost per lane mile

LEGEND

	from uba
	calculation
	user input

Chip Seal		Mill and Fill (grind and overlay)		Reconstruction	
\$10.00	per sy	\$36.65	per sy	\$116.25	per sy
	All inclusive cost per prior research and WSDOT Chip Seal reference	10%	mobilization	10%	mobilization
		\$3.33	per sy, mobilization	\$10.57	per sy, mobilization
		\$11.50	per sy, planing bituminous pavement	\$45.20	per cy, roadway excavation incl. haul
		\$175.00	per ton, HMA CL. 1/2 IN. PG 58H-22	15	depth (in)
		\$358.75	per cy, HMA CL. 1/2 IN. PG 58H-22	\$18.83	per sy, roadway excavation incl. haul
		2	depth (in)	\$41.58	per ton, csbc
		\$19.93	per sy, HMA CL. 1/2 IN. PG 58H-22	\$76.92	per cy, csbc
		6%	% of construction cost for traffic control	9	depth (in)
		\$1.89	per sy, traffic control	\$19.23	per sy, csbc
				\$175	per ton, HMA CL. 1/2 IN. PG 58H-22
				\$358.75	per cy, HMA CL. 1/2 IN. PG 58H-22
				6	depth (in)
				\$59.79	per sy, HMA CL. 1/2 IN. PG 58H-22
				8%	% of construction cost for traffic control
				\$7.83	per sy, traffic control

Adjusting costs to lane width per LF					
11 lf wide lane (average)		assumes 6" HMA on 9" CSTC			
1 lf of lane length		9.0 sy/sf	9.0 sy/sf	9.0 sy/sf	
	\$12.20	per lf of lane	\$44.80	per lf of lane	\$142.10 per lf of lane



APPENDIX D

RECOMMENDED MAINTENANCE PROJECT TECHNICAL MEMO



Technical Memo

To City of Orting
From: Andrew Armstrong
Date: May 21, 2024
Project: City of Orting Pavement Management System
Subject Recommended Maintenance Projects

Introduction:

This memo covers the projects recommended for reconstruction and overlays following the initial pavement assessment. Reconstruction projects are shown in Table 1 and overlay projects are shown in Table 2. Project costs assume pavement work for the full width of the roadway (travel lanes and shoulders/parking lanes). Project costs also include curb ramp repairs for existing ramps out of compliance with ADA.

Table 1 – Recommended Reconstruction Projects

Project	Project Cost (in 2024 dollars)	Linear Feet of Lanes	Curb Ramps Needing Repair	Median PCR of Roadway Segments
Ammons Lane Reconstruction (West of Cardinal, East of parking lot)	\$256,000	1,118	0	12
Whitesell Street Reconstruction (North of Ammons Lane, South of Bowlin Avenue)	\$79,000	272	2	36
Eldredge Avenue Reconstruction (East of Whitesell Street, West of Calistoga Street)*	\$696,000	2,618	12	50
Leber Street/Van Scoyoc Avenue Reconstruction (North of Corrin Avenue, West of Calistoga Street)	\$723,000	3,056	3	35
Leber Court Reconstruction (South of Eldredge Avenue, cul-de-sac)**	\$209,000	769	4	20

*Sections of Eldredge need reconstruction, while some are in better shape. Recommend holding off on reconstruction for entire segment for a couple years to address other projects.

**Recommend lining Leber Court up with the Eldredge reconstruction to minimize mobilization costs.

Table 2 – Recommended Overlay Projects

Project	Project Cost (in 2024 dollars)	Linear Feet of Lanes	Curb Ramps Needing Repair	Median PCR of Roadway Segments
Old Pioneer Way Overlay (West of School Driveway, East of turn around)	\$222,000	2,842	2	50
Calistoga Street Overlay (South of Van Scoyoc Avenue, North of Eldredge Avenue)	\$317,000	2,942	13	61
River Avenue Overlay (South of Factory Street, North of Ammons Lane)	\$39,000	516	0	48
Bridge Street Overlay (North of Eldredge Avenue, South of Corrin Avenue)	\$127,000	1,300	4	43
Train Street Overlay (South of Ammons Lane to Washington Avenue, South of Van Scoyoc Avenue to Eldredge Avenue)	\$600,000	4,636	33	52
Calistoga Street Overlay (East of Calistoga Lane, West of River Avenue)	\$98,000	1,138	2	62
Cardinal Lane/Ammons Lane/Whitesell Street (South of Bowlin Avenue, North of Varner Avenue)	\$176,000	2,306	1	55
Corrin Avenue Overlay (East of Train Street, West of Bridge Street)	\$243,000	2,473	8	55

Table 3 shows cost estimating assumptions (cost factors) and Table 4 shows unit prices used to develop the project costs shown in Table 1 and Table 2.

Table 3 – Project Cost Factors

Design Contingency	10% of itemized construction costs	Estimates the construction costs of minor design elements that have not yet been identified (e.g., pavement markings, minor ADA improvements)
Inflation/Year	3% of itemized construction costs	Escalates the construction costs from 2024 to the year of construction.
Permitting	3% of total construction cost	Estimates permit costs for the City. Does not include environmental documentation.
Design	15% of total construction cost	Estimates costs to prepare PS&E and environmental documentation.
City PM/Administration	3% of total construction cost	Estimates City costs for administration and oversight of the project.
Construction Management	15% of total construction cost	Estimates construction inspection and management for the project.
Management Reserve	10% of total construction cost	Overall contingency for the project – reduces as the project definition progresses.



Table 4 – Unit Price Calculations

[illegible]

Self-Evaluation and ADA Transition Plan

City of Orting

Prepared For:

City of Orting

Prepared By:

SCJ Alliance

Patrick Holm, PE

1201 Third Ave, Suite 550

Seattle, WA 98101

206.739.5454

September 2024



Self-Evaluation and ADA Transition Plan

Project Information

Project: ADA Transition Plan

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Contact Phone: 360.893.9014

Project Representative

Prepared by: SCJ Alliance
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Seattle, WA 98101
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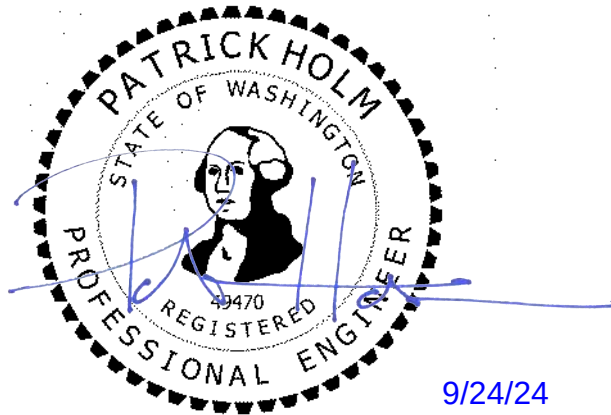
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Project Reference: SCJ #000838

Path: \\ad.scj.io\Global\Projects\4270 City of Orting\21-000838 Orting 2021-24 On-Call PE Services\Phase 12 - Transportation and Traffic Engineering\12.01 ADA Transition Plan\Program Access Plan Draft\Orting ADA Transition Plan Draft.docx

Signature

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.



9/24/24

Approved by Patrick Holm, PE

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1 Introduction

The City of Orting (City) is committed to providing equal access to its programs, services, and activities to all its residents. This Self-Evaluation and ADA Transition Plan (Plan) is a living document which will help guide planning and implementation for removing accessibility barriers within the City's jurisdiction. Public comments are always welcome and the City will update the Plan periodically.

2 Legal Requirements

The American with Disabilities Act (ADA) and the Rehabilitation Act of 1973, Section 504, requires cities with fewer than fifty employees, that is a recipient, or subrecipient, of federal financial assistance, to prepare a Self-Evaluation and ADA Program Access Plan. This document is a Self-Evaluation and ADA Transition Plan, which applies if the City employs more than fifty employees as well. The ADA also dictates that public entities must reasonably modify its policies, practices, and procedures to avoid discrimination against people with disabilities. WSDOT discusses these requirements in its Local Agency Guidelines (LAG) Manual (Wonch, 2022).

2.1 Legal Mandate

The ADA is a civil rights law for persons with disabilities that's purpose is to provide a "clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities." This law, passed in 1990, followed the Rehabilitation Act of 1973, and both combine to describe the City's responsibilities for ADA accessibility. This ADA Transition Plan is a requirement of the Rehabilitation Act, specifically Section 504, shown below.

No otherwise qualified individual with a disability in the United States shall, solely by reason of his or her disability, be excluded from the participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. This part applies to each recipient of Federal financial assistance from the Department of Transportation and to each program or activity that receives such assistance (Office of the Assistant Secretary for Administration & Management, n.d.).

2.1.1 Title I of the ADA

Title I of the ADA addresses employment practices and prohibits discriminating against qualified individuals with disabilities. This discrimination is prohibited in a number of areas, including but not limited to application processes, hiring, employment termination, promotion, compensation, and training. The City is an equal employment opportunity employer and complies with Title I (ADA, n.d.).

2.1.2 Title II of the ADA

Title II of the ADA, which adopts much of Section 504 of the Rehabilitation Act of 1973, is addressed in this Plan. It prohibits the City from denying equal opportunity to services, programs, and activities to persons with disabilities. This prohibition applies whether the denial is direct or indirect (ADA, n.d.).

2.2 ADA Self-Evaluation and Transition Plan Requirements

This Plan is intended to provide a framework for the continuous improvement of City programs and facilities for people with disabilities. This Plan addresses facilities within the public right-of-way, especially curb ramps, and is intended to be updated as barriers are removed, programs change, and/or

new facilities come under control of the City. Programs offered by the City must be accessible to all people. The administrative requirements of this plan include:

- Designation of an ADA Coordinator responsible for overseeing Title II compliance,
- Development of an ADA grievance/complaint procedure,
- Completion of a self-evaluation of facilities, programs, and services,
- Development of a transition plan where the self-evaluation identifies any accessibility deficiencies.

This Plan identifies and makes recommendations to correct practices that result in limitations on access. As part of the self-evaluation, the City:

- Identifies the city's programs, activities, and services
- Reviews the policies, practices, and procedures that govern the administration of the City's programs, activities, and services
- Provides opportunity for public comment
- Makes the report available to the public
- Corrects any programs, activities, and services that are not consistent with the requirements

This Plan identifies barriers for people with disabilities and a schedule to remove these barriers over time and includes:

- A list of the physical barriers in the City's facilities that limit the accessibility of its programs, activities, or services to individuals with disabilities
- A detailed outline of the methods to be used to remove these barriers and make the facilities accessible
- A schedule for taking the steps necessary to achieve compliance with ADA Title II
- An opportunity for the public to provide comment on the transition plan
- The name of the individual responsible for the plan's implementation

This Plan is an assessment of the City's right-of-way facilities to find barriers to City programs for people with disabilities. The facilities with barriers have been identified and summarized in Chapter 3.

2.3 Public Involvement

The ADA requires the involvement of people with disabilities in the development and review of the ADA Self-Evaluation and Transition Plan. The city's public grievance policy is shown in Appendix D.

2.4 ADA Coordinator

The City Clerk was designated as the ADA Coordinator. This position is responsible for ensuring the accessibility of all programs, services, and activities of the City. The City's ADA Coordinator is:

City Clerk
104 Bridge Street South
Orting, WA 98360
clerk@cityoforting.org
(360) 893-9008

2.5 Requesting Accommodation

Requests may first be directed to the individual responsible for the program, activity, or service to which access is requested. If access is not accommodated, a formal complaint in writing should be made to the ADA Coordinator within 30 working days of the complainant becoming aware of the alleged violation. Reasonable accommodation to assist in completing this is available upon request. These requests should be made according to the City of Orting Resolution No. 2015-15, passed on November 25, 2015, and shown in Appendix D. Attaching a photo to the request, if available, would be very helpful for the City.

Requests for accommodation should include:

- The requestor's contact information (name, address, and telephone number)
- A brief description of the alleged violation
- A proposed accommodation or resolution

There is a City of Orting Public Access Request for Accommodation Form available, but it is not necessary.

2.6 Filing a Grievance

The City has a formal grievance procedure in place that was instituted in City of Orting Resolution No. 2015-15, passed on November 25, 2015. It is important to note that this grievance procedure does not preclude filing a complaint of discrimination with any appropriate state or federal agency, and that use of this grievance procedure is not a prerequisite in the pursuit of other remedies.

Step 1: Request accommodation from the individual responsible for the program, activity, or service to which access is requested.

Step 2: To file a grievance, make a formal complaint in writing to the ADA Coordinator within 30 working days of the complainant becoming aware of the alleged violation. This complaint should include the following information, and reasonable accommodation to assist in this is available upon request:

- Contact information for the person filing the grievance (full name, address, and phone number)
- The issue at hand, along with any other information that may support the grievance
- A proposed accommodation/resolution

There is a City of Orting Public ADA Complaint Form available for this purpose, but it is not necessary.

Step 2: The ADA Coordinator will conduct an informal, but thorough, review affording the complainant and the affected department(s) an opportunity to submit information relevant to the complaint and potential accommodation/resolution.

Step 3: A written response and description of the accommodations/resolutions, if any, will be issued by the ADA Coordinator and sent to the complainant within 30 calendar days after the complaint is received. If the complexities of the complaint require additional time, the complainant will be notified. The accommodation or resolution may not be the same as requested.

Step 4: The complainant may request a reconsideration of the case determination by submitting a request for reconsideration within ten (10) working days following the date the complainant receives the City's response.

Step 5. The Mayor or his or her designee will conduct his/her review of the complaint and issue his/her decision to the complainant within twenty (20) working days of receiving the request for reconsideration, unless the complexities of the complaint require additional time. The Mayor and/or his or her designee's decision is final.

Step 6. The City Clerk will maintain the files and records of the City of Orting related to ADA complaints filed and keep a log of complaints. The log shall include:

- a. The name and address of the person filing the complaint;
- b. The date of the complaint;
- c. The basis of the complaint;
- d. The disposition of the complaint.

2.7 Undue Burden

If the City can demonstrate that an action would result in a fundamental alteration in the nature of its program or activity, would create a direct threat to the participant or others, or would represent an undue financial and administrative burden, it is not required to take it. This determination must be based on an evaluation of all resources available for use in the city and alternative solutions must be examined.

2.8 Public Outreach

Information on this Plan was presented at the August 9, 2024 Public Works Department sponsored Touch-A-Truck event held at the Orting Main City Park. This public event was advertised on the City's Facebook page and a poster used is shown in Appendix G. However, no comments were received in-person or through the linked survey.

To allow for further public comment, this plan has also been posted on the City's website at <https://www.cityoforting.org/government/ada-plan>. These comments should be directed to the ADA Coordinator. This plan will be updated once per year to show completed projects as well as comments or changes suggested by the public as appropriate.

2.9 State and Local Requirements

Facilities in the public right of way must be compliant with the 2011 Public Right-of-Way Accessibility Guidelines (PROWAG) to the maximum extent feasible (U.S. Access Board, 2013).

2.10 Public Notice Requirements

The City's ADA provisions and grievance/complaint procedures are required to be posted both internally and externally. Posting on the City's website counts as external posting. The ADA provisions shall contain a brief description of how ADA accessibility is addressed in its employment, communications, policies, and resolution of complaints. Both ADA provisions and grievance/complaint procedures must be made available in alternative formats that address the needs of persons with disabilities.

3 Self-Evaluation of Policies, Procedures, and Programs

3.1 Introduction

Programs, services, and activities offered by the City must be accessible for all people to the maximum extent feasible. This section details the review of current Public Works policies and programs. The findings and recommendations contained in this section will serve as a basis for the implementation of specific improvements for providing access to City programs as required by the ADA.

3.2 Programmatic Modification

The ADA Coordinator, or designee, will follow-up with department staff to review the recommendations in this section. The ADA Coordinator, or designee, will coordinate with needed parties on the removal of barriers to accessibility when they are found.

3.3 Self-Evaluation Findings

3.3.1 Public Right of Way

3.3.1.1 City Facilities, Streets, and Parks

Publicly accessible facilities were evaluated for this plan and the results are shown in Appendix E. A summary of these findings follows:

The buildings evaluated were found to be sufficiently accessible. The parks evaluated needed a few updates to be accessible, generally maintenance on paths, playground surfacing, and accessible routes to sporting facilities and playgrounds. Several parks need updates for ADA accessible toilet rooms and ADA parking spots.

3.3.1.2 Public Streets and Curb Ramps

Facilities evaluated for this Plan include curb ramps, pedestrian activated signals, and sidewalks. The facilities were evaluated over a month-long period in early 2023 (March to April) with several follow up surveys using criteria from the PROWAG. These facilities were evaluated both in the field and using Google Street View, and the results are compiled in a GIS database. Of the City's approximately 605 existing curb ramps, 104 were found to be compliant with the PROWAG as shown in Figure 1. Of the 501 non-compliant curb ramps, 28 are missing the detectable warning strip (DWS), and the remainder, 473, need to be completely replaced because elements of the curb ramp do not meet width or grade standards.

Sidewalks were evaluated around parks and facilities, and three were found to be inaccessible as shown in Figure 1, Figure 2, and Appendix C. Sidewalks should continue to be evaluated with future roadway projects and based on the complaint form then prioritized following section 4.2.

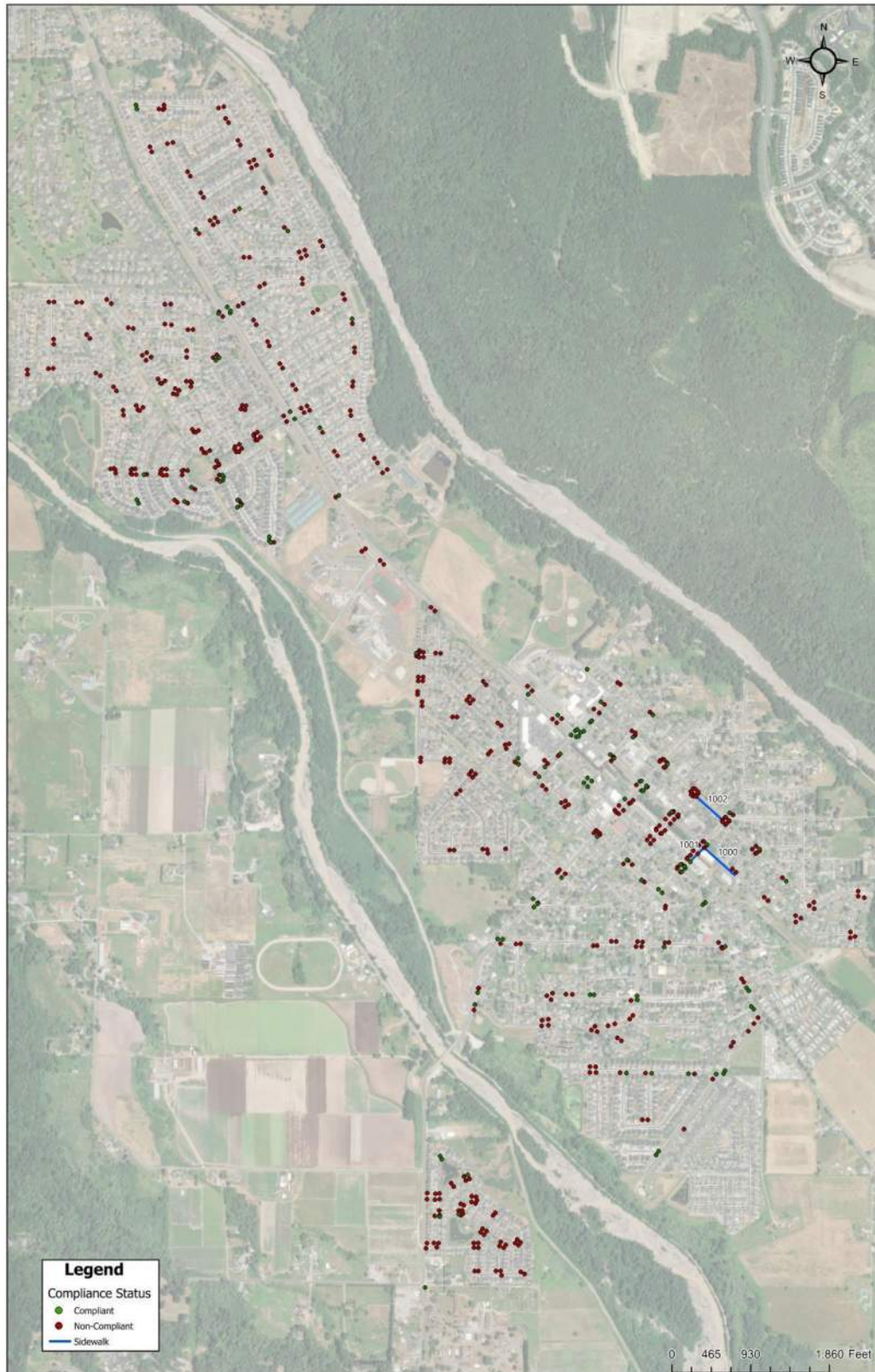


Figure 1. Curb Ramps Labeled by ADA Compliance

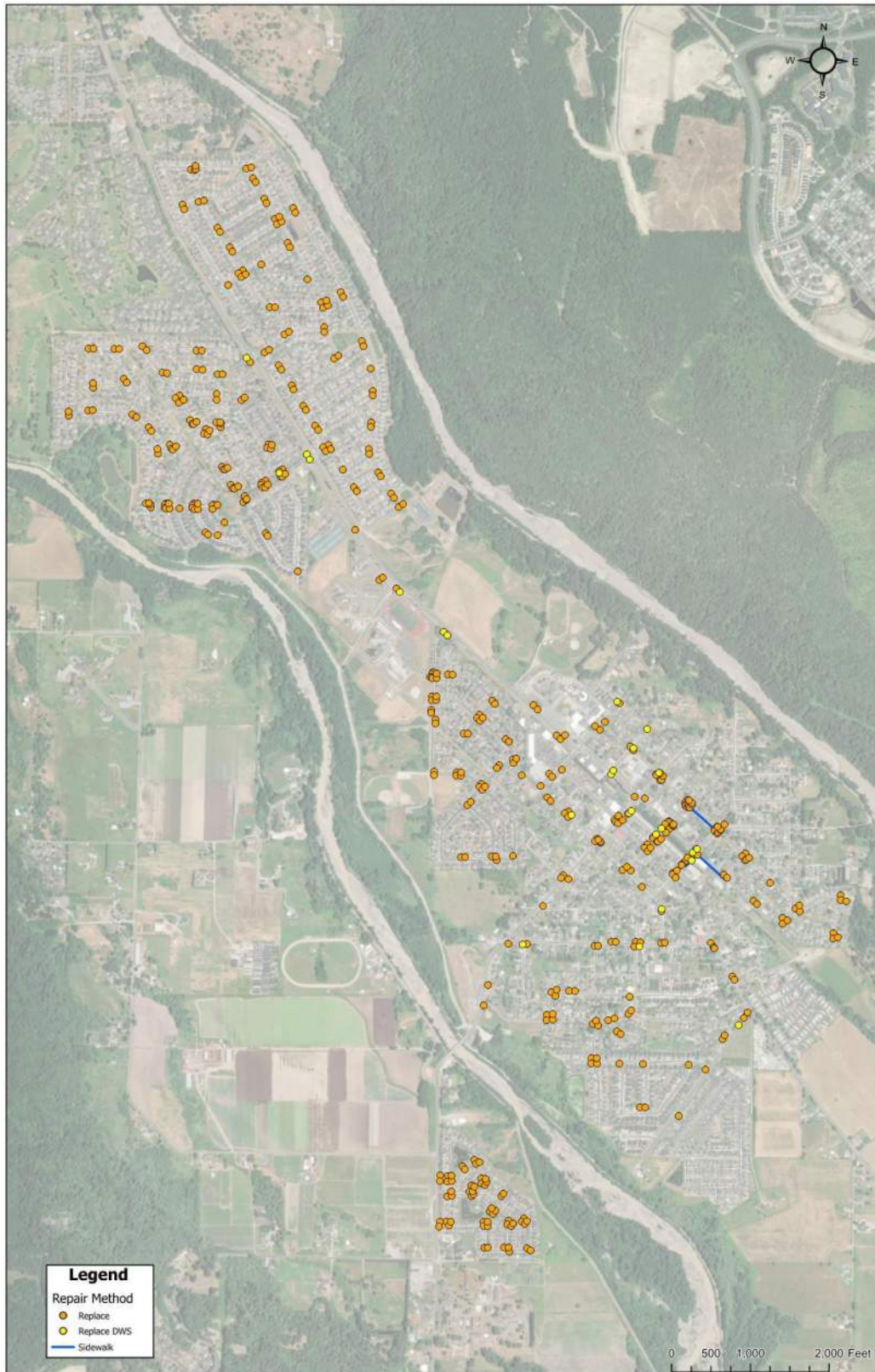


Figure 2. Noncompliant Curb Ramps labeled by Repair Method Needed

3.3.2 Programs, Services, and Activities

3.3.2.1 Public Meetings, Hearings, and Events

The city works hard to ensure its public meetings, hearings, and events are open and accessible to all citizens, regardless of disability.

- The first city council meeting of each month is taped and replayed on PCTV (Comcast channel 22) and Comcast On-Demand.
- All regular council and council committee meetings are open to the public.
- Accessibility complaints for these meetings can be voiced through the city ADA grievance policy in City of Orting Resolution No. 2015-15, passed on November 25, 2015.
- Requests for accessibility should be made as soon with the person or department that scheduled the event as possible and no later than 72 hours before the scheduled event. If it is not known who to contact, the ADA coordinator may be contacted (City of Orting, n.d.).

3.3.2.2 Printed Materials

The City will, upon request, attempt to provide appropriate aids and services leading to effective communication for qualified persons with disabilities so they can participate equally in the City's programs, services and activities.

- These requests should go through the person responsible for the program, service, or activity before following the ADA accommodation request procedure.

3.3.2.3 Website

The City's website includes accessibility features such as the ability to adjust font size, links to free viewers for attached documents, and the ability to print or provide feedback on specific pages. The website displays the ADA Plan as well as ADA Request forms under an ADA Plan section, linked here: <https://www.cityoforting.org/government/ada-plan>.

However, there are several website elements that should be updated for the web content accessibility guidelines (WCAG). These include updating text contrast several places and making links clearer and more differentiable. See Appendix F for a more thorough explanation.

3.3.2.4 Contracting/Purchasing

The City generally awards contracts based upon the lowest responsive and responsible bid per RCW 39.04.350, which qualifies as criteria that does not discriminate based on disability.

The City should include language in all of its bid solicitation documents explaining that the contractor must comply with Equal Employment Opportunity regulations.

3.3.2.5 Emergency Management Programs

The City has a number of emergency management programs, some in conjunction with Pierce County. Although they are governed by the same ADA Title II Complaint form and Grievance process as the rest of the City's programs, more information should be posted to the website about how they apply to all citizens regardless of disability.

3.3.2.6 Staff Training and Employment

The City's Personnel Policies & Procedures Manual contains information about the ADA as it relates to employees (City of Orting, n.d.). Included in this manual is information about requesting reasonable accommodations and the City's commitment to providing them.

4 ADA Transition Plan

4.1 Introduction

According to the ADA, localities that receive financial aid from the federal government and have less than fifty employees are required to create a Self-Evaluation and ADA Program Access Plan, although this document is a Self-Evaluation and ADA Transition Plan and also applies if the city employs more than 50 employees. Public institutions are required by the ADA to make reasonable modifications to their policies, practices, and procedures in order to prevent discrimination against individuals with disabilities. This Plan is a dynamic document that outlines the programmatic steps the City will take to remove all barriers to accessibility under its purview. This plan complies with Section 504 of the Rehabilitation Act's standards as well as the ADA's requirements for accessibility to public programs, services, and activities.

4.2 Prioritization of Barrier Removal

Removal of barrier prioritization will follow the methods laid out by WSDOT (Watkinson, 2018). They are:

Highest Priority

- Priority identified through public input or complaints received, and
- Areas with high concentrations of populations with disabilities (based on Census data),
- Intersections and roadway segments serving facilities including:
 - Government offices
 - Public schools
 - Hospitals, health clinics and health centers
 - Transit facilities (includes bus stops)

Second Highest Priority

- Areas with medium/mid-range concentrations of populations with disabilities (based on Census data)
- Intersections and roadway segments serving facilities including:
 - Public housing
 - Sports arenas
 - Licensing offices
 - Libraries
 - Shopping malls
 - Supermarkets
 - Strip retail centers
 - Other major employment sites

Third Highest Priority

- Areas with lower/low-range concentrations of populations with disabilities (based on Census data),
- Intersections and roadway segments serving facilities including:
 - Industrial areas
- Other areas not classified as high or medium priority

4.3 Barrier Removal Schedule

The barrier removal schedule includes all noncompliant ramps and is organized by the priority of each curb ramp. Curb ramp reference numbers, locations, repair method(s), and cost estimates are included for each project area, generally an intersection. This schedule should be used as a planning tool and further inspection may be required to determine if a full curb ramp replacement will be necessary based on future degradation. The estimates below include both DWS and curb ramp replacement.

Table 1. Highest Priority Curb Ramps

ID No.	Location (Highest Priority)	Repair Method	Estimated Cost (in 2024 dollars)
165-166	Lane Blvd & Washington Ave	2 DWS replacements	\$2,400
214-215	Washington Ave N & Rocky Rd NE	2 full replacements	\$0*
225-226	Ptarmigan Ridge Elementary	2 DWS replacements	\$2,400
227-228	Old Pioneer Way & Washington Ave	2 DWS replacements	\$2,400
229-230	Washington Ave & Whitehawk Blvd	2 DWS replacements	\$2,400
231-238	Whitehawk Blvd & Corrin Ave	8 full replacements	\$88,000
239-242	Whitehawk Blvd & Eldridge Ave	4 full replacements	\$44,000
292-293 & 297	Washington Ave & Whitesell St	3 full replacements	\$33,000
299	Whitesell St. & Rainer Ln	1 full replacement	\$11,000
300-301	Whitesell St. & Varner Ave	2 full replacements	\$22,000
588-591	Washington Ave and High School	4 full replacements	\$44,000
592 & 594	Washington Ave and High School	2 full replacements	\$22,000
598 & 599	Orting City Hall	2 DWS replacements	\$2,400
600 & 601	Washington Ave and High School	2 full replacements	\$22,000

*the curb ramps at this location will be superseded (replaced) by the pedestrian bridge project on Washington Ave.

Table 2. Second Highest Priority Curb Ramps

ID No.	Location (2nd Highest Priority)	Repair Method	Estimated Cost (in 2024 dollars)
285	Whitesell St & Eldredge Ave	1 full replacement	\$11,000
287-289	Whitesell St & Corrin Ave	3 full replacements	\$33,000
290-291	Whitesell St & Scoyoc Ave	2 full replacements	\$22,000
305 – 306	Leber St & Varner Ave	2 full replacements	\$22,000
307 – 308	Leber St & Varner Ave	2 DWS replacements	\$2,400
316 & 318	Leber St & Washington Ave	2 DWS replacements	\$2,400
321 – 324	Corrin Ave & Leber St	4 full replacements	\$44,000
331 – 335	Corrin Ave & Calistoga St	5 full replacements	\$55,000
336 – 337	Van Scoyoc Ave & Calistoga St	2 full replacements	\$22,000
338-339	Van Scoyoc Ave & Calistoga St	2 DWS replacements	\$2,400
341	Washington Ave & Calistoga St	1 full replacement	\$11,000
369-370 & 372-376	Washington Ave & Calistoga St	7 full replacements	\$77,000
377-386	Varner Ave & Calistoga St	10 full replacements	\$110,000
436-441	Washington Ave & River Ave	6 full replacements	\$66,000
595	Rainer Lane & Calistoga St	1 full replacement	\$11,000

Table 3. Lowest Priority Curb Ramps

ID No.	Location (Lowest Priority)	Repair Method	Estimated Cost (in 2024 dollars)
3-8	Ames St NE Midblock	6 full replacements	\$66,000
9-10	Burr St & Riddell Ave	2 full replacements	\$22,000
11-12	Burr St & Hardtke Ave	2 full replacements	\$22,000
13-14	Burr St & Hansberry Ave	2 full replacements	\$22,000
15-16	Fielding St & Hardtke Ave	2 full replacements	\$22,000
17-18	Fielding St & Hansberry Ave	2 full replacements	\$22,000
19-20	Gipple St & Hardtke Ave	2 full replacements	\$22,000
21-24	Gipple St & Hansberry Ave	4 full replacements	\$44,000
25-26	Gipple St & Daffodil Ave	2 full replacements	\$22,000
28	Johns St & Riddell Ave	1 full replacement	\$11,000
29-32	Johns St & Kendall St	4 full replacements	\$44,000
33	Johns St & Michell Lane	1 full replacement	\$11,000
35-36	Johns St & Hansberry Ave	2 full replacements	\$22,000
37	Michell Lane & Hansberry Ave	1 full replacement	\$11,000
39-40	Kendall St & Hardtke Ave NE	2 full replacements	\$22,000

ID No.	Location (Lowest Priority)	Repair Method	Estimated Cost (in 2024 dollars)
41-44	Kendall St & Hansberry Ave	4 full replacements	\$44,000
45-46	Kendall St & Daffodil Ave	2 full replacements	\$22,000
47-48	Williams Blvd & Hardtke Ave NE	2 full replacements	\$22,000
49-50	Williams Blvd & Hansberry Ave	2 full replacements	\$22,000
51-52	Williams Blvd & Washington Ave	2 full replacements	\$22,000
56- 57	Williams Blvd & Riddell Ave	2 full replacements	\$22,000
58-59	Lawson Ct & Riddell Ave	2 full replacements	\$22,000
60-61	Mazza St & Hansberry Ave	2 full replacements	\$22,000
62-63	Mazza St & Riddell Ave	2 full replacements	\$22,000
64-65	Mazza Sr & Daffodil Ave	2 full replacements	\$22,000
66-67	Nelsen St & Riddell Ave	2 full replacements	\$22,000
69	Nelsen St & Daffodil Ave	1 full replacement	\$11,000
70-71	Roberts St & Riddell Ave	2 full replacements	\$22,000
72-73	Roberts St & Daffodil Ave	2 full replacements	\$22,000
74-75	Lane Blvd & Daffodil Ave	2 full replacements	\$22,000
76-79	Lane Blvd & Riddell Ave	4 full replacements	\$44,000
81	Silvernail St & Riddell Ave	1 full replacement	\$11,000
82-83	Silvernail St & Daffodil Ave	2 full replacements	\$22,000
84-85	Voss St & Riddell Ave	2 full replacements	\$22,000
86-87	Voss St & Daffodil Ave	2 full replacements	\$22,000
88-89	Weaver St & Daffodil Ave	2 full replacements	\$22,000
90-91	Rocky Rd & Daffodil Ave	2 full replacements	\$22,000
92-93	Williams Ct & Williams St	2 full replacements	\$22,000
94-95	Mellinger Ave & Williams St	2 full replacements	\$22,000
96-97	Mellinger Ave & Stone St	2 full replacements	\$22,000
98-99	Mellinger Ave & Williams Blvd NW	2 full replacements	\$22,000
100-101	Headley Ave & Williams Blvd NW	2 full replacements	\$22,000
102-103	Headley Ave & Stone St	2 full replacements	\$22,000
104-105	Noble Ave NW & Williams Blvd NW	2 full replacements	\$22,000
106-107	Headley Ave & Williams St	2 full replacements	\$22,000
108- 109	Nunnally Ave & Williams Blvd NW	2 full replacements	\$22,000
110-111	Jurin Ave & Whitley St	2 full replacements	\$22,000
112-113	Jurin Ave & Williams Blvd NW	2 full replacements	\$22,000
114-117	Anderson St & Nunnally Ave	4 full replacements	\$44,000
118-119	Anderson St & Williams St	2 full replacements	\$22,000
120-121	Anderson St & Boatman Ave	2 full replacements	\$22,000
122-123	Ozzie St & Williams St	2 full replacements	\$22,000
124-127	Ozzie St & Van Ogle Lane	4 full replacements	\$44,000
128-131	Ozzie St & Nunnally Ave	4 full replacements	\$44,000

ID No.	Location (Lowest Priority)	Repair Method	Estimated Cost (in 2024 dollars)
132-135	Cloud St & Nunnally Ave	4 full replacements	\$44,000
136-139	Cloud St & Nunnally Ave	4 full replacements	\$44,000
140 & 143	Sigafoos Ave NW & Ross Ave NW	2 full replacements	\$22,000
144-146	Spangler St & Williams St	3 full replacements	\$33,000
147	Spangler St & Williams St	1 DWS replacement	\$1,200
148-153	Spangler St & Van Ogle Lane	6 full replacements	\$66,000
154-157	Sigafoos Ave & Ross Ave	4 full replacements	\$44,000
158-163	Spangler St & O Farrell Lane	5 full replacements	\$55,000
168-173	Lane Blvd & Sigafoos Ave	5 full replacements	\$55,000
174-179	Lane Blvd & Boatman Ave	6 full replacements	\$66,000
180-183	Lane Blvd & Nunnally Ave	4 full replacements	\$44,000
184-187	Nunnally Ave & O Farrell Lane	4 full replacements	\$44,000
188-191	Nunnally Ave & Colorossi Cir	4 full replacements	\$44,000
193	Spangler St & Antonie Lane	1 full replacement	\$11,000
194-197	Spangler St & Colorossi Cir	4 full replacements	\$44,000
199	Geels Way & Colorossi Cir	1 full replacement	\$11,000
206-207	Boatman Ave & Williams Blvd NW	2 full replacements	\$22,000
210-211	Antonie Ln & O Farrell Lane	2 full replacements	\$22,000
213	Geels Way & O Farrell Lane	1 full replacement	\$11,000
216 & 220	Boatman Ave & Louise Wise Ave	2 full replacements	\$22,000
224	Sigafoos Ave & Louise Wise Ave	1 full replacement	\$11,000
243-244	Whitehawk Blvd & Service Rd	2 full replacements	\$22,000
245-246	Corrin Ave & Corrin Ct	2 full replacements	\$22,000
247-248	Whitehawk Blvd & Whitehawk Ct	2 full replacements	\$22,000
249-250	Whitehawk Blvd & Orting Ave	2 full replacements	\$22,000
251-252	Corrin Ave & Rowe St	2 full replacements	\$22,000
253-256	Eldredge Ave & Rowe St	4 full replacements	\$44,000
257-258	Kensington Ave & Rowe St	2 full replacements	\$22,000
259-262	Orting Ave & Orting Ct	4 full replacements	\$44,000
263-264	Eldredge Ave & Callendar Ct	2 full replacements	\$22,000
265-267	Eldredge Ave & Callendar St	3 full replacements	\$33,000
268-269	Kensington Ave & Callendar St	2 full replacements	\$22,000
270-273	Orting Ave & Callendar St	4 full replacements	\$44,000
274-275	Thompson Ave & Callendar St	2 full replacements	\$22,000
276-277	Groff Ave & Burnett Ct	2 full replacements	\$22,000
278-280	Groff Ave & Thompson Ave	3 full replacements	\$33,000
281	Groff Ave & Orting Ave	1 full replacement	\$11,000
282-284	Eldredge Ave & Eldredge Ct	3 full replacements	\$33,000
302	Bowlin Ave & Parker Lane	1 full replacement	\$11,000

ID No.	Location (Lowest Priority)	Repair Method	Estimated Cost (in 2024 dollars)
303-304	Bowlin Ave & Whitesell St	2 full replacements	\$22,000
309	Eldredge Ave & Whitesell Ct	1 DWS replacement	\$1,200
310	Eldredge Ave & Whitesell Ct	1 full replacement	\$11,000
311 & 313	Eldredge Ave & Leber Ct	2 full replacements	\$22,000
312 & 314	Eldredge Ave & Leber Ct	2 DWS replacements	\$2,400
319	Bowlin Ave & Leber St	1 DWS replacement	\$1,200
320	Bowlin Ave & Leber St	1 full replacement	\$11,000
325-326, 328-330	Eldredge Ave & Calistoga St	5 full replacements	\$55,000
347	Varner Ave & Calistoga St	1 DWS replacement	\$1,200
348-351	Varner Ave & Calistoga St	4 full replacements	\$44,000
353-354	Varner Ave & Calistoga St	2 full replacements	\$22,000
356-357	Eldredge Ave & Train St	2 DWS replacements	\$2,400
358	Eldredge Ave & Train St	1 full replacement	\$11,000
359-362	Corrin Ave & Train St	4 full replacements	\$44,000
363-367	Van Scoyoc Ave & Train St	5 full replacements	\$55,000
368	Van Scoyoc Ave & Train St	1 DWS replacement	\$1,200
388	Eldredge Ave & Taylor St	1 full replacement	\$11,000
389	Eldredge Ave & Taylor St	1 DWS replacement	\$1,200
390-391 & 393	Tacoma Ave & Calistoga St	3 full replacements	\$33,000
397	Deeded Lane & Calistoga St	1 full replacement	\$11,000
398-399	Kansas St & Calistoga St	2 full replacements	\$22,000
401-402	Kansas St & Coe Lane	2 full replacements	\$22,000
403-404	Kansas St & Ford Lane	2 full replacements	\$22,000
405-406	Kansas St & Hays Ave	2 full replacements	\$22,000
407-410	Kansas St & Grinnell Ave	4 full replacements	\$44,000
411-413	Kansas St & Eldredge Ave	3 full replacements	\$33,000
415	Eldredge Ave & River Ave	1 full replacement	\$11,000
416	Deeded Lane & Eldredge Ave	1 DWS replacement	\$1,200
417	Deeded Lane & Eldredge Ave	1 full replacement	\$11,000
419	Corrin Ave & Harman Way	1 full replacement	\$11,000
420-422	Kansas St & Harman Way	3 full replacements	\$33,000
425-427 & 431	Corrin Ave & River Ave	4 full replacements	\$44,000
432-435	Van Scoyoc Ave & River Ave	4 full replacements	\$44,000
442 & 444	Varner Ave & River Ave	2 full replacements	\$22,000
443 & 445	Varner Ave & River Ave	2 DWS replacements	\$2,400

ID No.	Location (Lowest Priority)	Repair Method	Estimated Cost (in 2024 dollars)
446-449	Varner Ave & River Ave	4 full replacements	\$44,000
450-451	Bridge St & River Ave	2 full replacements	\$22,000
452-453	Washington Ave & Hardefeldt St	2 full replacements	\$22,000
454-458	Varner Ave & Hardefeldt St	5 full replacements	\$55,000
460-461	Washington Ave & Olive St	2 full replacements	\$22,000
462	Varner Ave & Olive St	1 full replacement	\$11,000
464-466	Washington Ave & Brown St	3 full replacements	\$33,000
467-469	Varner Ave & Brown St	3 full replacements	\$33,000
470-472	Washington Ave & Brown Way	3 full replacements	\$33,000
473-475	Brown St & Brown Way	3 full replacements	\$33,000
476	Skinner Way & Calistoga St	1 full replacement	\$11,000
478-481	Skinner Way & Belfair Ave	4 full replacements	\$44,000
482-484	Belfair Ave & Johnson Ct	3 full replacements	\$33,000
485-486	Belfair St & Cammarano Ct	2 full replacements	\$22,000
487-488	Belfair St & Ford Lane	2 full replacements	\$22,000
489	Belfair St & Grinnell Ave	1 full replacement	\$11,000
492-494	Skinner Way & Grinnell Ave	3 full replacements	\$33,000
495-496	Coplan St & Grinnell Ave	2 full replacements	\$22,000
497-498	Coplan St & Coplan Ct	2 full replacements	\$22,000
499-500	Icey St & Grinnell Ave	2 full replacements	\$22,000
501-504	Balmer St & Grinnell Ave	4 full replacements	\$44,000
505	Balmer St & Koehler Ave	1 full replacement	\$11,000
507	Balmer St & Carrier Ave	1 full replacement	\$11,000
509-510	Buell St & Carrier Ave	2 full replacements	\$22,000
515	Park Pl & Beckett Lane	1 DWS replacement	\$1,200
516	Balmer St & Beckett Lane	1 full replacement	\$11,000
519	Maple Lane & Beckett Lane	1 full replacement	\$11,000
520-521	McMahon Lane & Beckett Lane	2 full replacements	\$22,000
522-523	BTWN McMahon Lane & Harman Way	2 full replacements	\$22,000
525-527	Harrison Lane & Harman Way	3 full replacements	\$33,000
528-529	Erickson Lane & Harman Way	2 full replacements	\$22,000
530	Harman Way & Beckett Lane	1 full replacement	\$11,000
531-532	Robin St & Calistoga Ave	2 full replacements	\$22,000
534-536	Robin St & Eagle Ave	3 full replacements	\$33,000
537-540	Robin St & Blue Jay Ave	4 full replacements	\$44,000
541-544	Hawk Ave & Blue Jay Ave	4 full replacements	\$44,000
545-547 & 602	Mockingbird St & Eagle Ave	4 full replacements	\$44,000
548-549	Cardinal St & Calistoga Ave	2 full replacements	\$22,000

ID No.	Location (Lowest Priority)	Repair Method	Estimated Cost (in 2024 dollars)
550-553	Cardinal St & Eagle Ave	4 full replacements	\$44,000
556-558	Cardinal St & Phoenix Ave	3 full replacements	\$33,000
560-563	Hawk Ave & Goldfinch Ave	4 full replacements	\$44,000
564-565	Starling St & Blue Jay Ave	2 full replacements	\$22,000
566-568	Starling St & Quail Ave	3 full replacements	\$33,000
569-570	Starling St & Goldfinch Ave	2 full replacements	\$22,000
571 & 573-575	Hawk Ave & Mockingbird St	4 full replacements	\$44,000
576-577	Hawk Ave BTW Phoenix Ave & Mockingbird St	2 full replacements	\$22,000
578-581 & 605	Hawk Ave & Phoenix Ave	5 full replacements	\$55,000
582-583	Hawk Ave BTW Phoenix Ave & Goldfinch Ave	2 full replacements	\$22,000
584	Williams Blvd & Washington Ave	1 full replacement	\$11,000
603-604	Cardinal St & Eagle Ave	2 full replacements	\$22,000
606-609	Hawk Ave & Quail Ave	4 full replacements	\$44,000

4.4 Curb Ramp Barrier Removal Triggers

Curb ramps are sorted first into two categories, compliant and noncompliant. Compliant ramps will remain, while noncompliant ramps are sorted into two further categories, replace or replace detectable warning strip (DWS). This is based on if the barrier is due to the characteristics of the ramp or the DWS.

Ramps found to be non-compliant may have elements that are compliant and can be preserved in order to reduce cost. However, the cost to benefit analysis of what elements are to remain should be conducted prior to bidding any ramp reconstruction work, to verify compliance when constructed.

4.5 Barrier Removal Budget

The city's budget of \$65,000 per year for the ADA Compliance Annual Program allows for 5 curb ramps to be replaced each year (see Appendix B for a detailed breakdown). Grant opportunities, such as Safe Routes to School, as well as including curb ramp replacements with roadway projects will allow for more curb ramps to be replaced each year without increasing the city's budget. Roadway maintenance projects, in particular reconstructions and overlays, should be planned with ADA repairs in mind as they may necessitate reconstruction of ADA facilities.

Appendix A

References

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Appendix B

Estimate

Project Development Level	Design Contingency	Inflation/yr	Permitting	Design	City PM/Admin	Construction Management	Management Reserve
Planning (<\$250k)	50%	3%	5%	25%	5%	25%	10%
Planning (\$250k-\$1M)	30%	3%	5%	15%	3%	15%	10%
Planning (>\$1M)	30%	3%	5%	12%	3%	15%	10%
30% Design (<\$250k)	30%	3%	5%	25%	5%	25%	10%
30% Design (\$250k-\$1M)	20%	3%	5%	15%	3%	15%	10%
30% Design (>\$1M)	20%	3%	5%	12%	3%	15%	10%
60% Design (<\$250k)	20%	3%	N/A	N/A	5%	25%	10%
60% Design (\$250k-\$1M)	10%	3%	N/A	N/A	3%	15%	10%
60% Design (>\$1M)	10%	3%	N/A	N/A	3%	15%	10%
90% Design (<\$250k)	N/A	3%	N/A	N/A	5%	25%	10%
90% Design (\$250k-\$1M)	N/A	3%	N/A	N/A	3%	15%	10%
90% Design (>\$1M)	N/A	3%	N/A	N/A	3%	15%	10%
Final Design (<\$250k)	N/A	3%	N/A	N/A	5%	25%	10%
Final Design (\$250k-\$1M)	N/A	3%	N/A	N/A	3%	15%	10%
Final Design (>\$1M)	N/A	3%	N/A	N/A	3%	15%	10%

City of Orting - 2024 ADA Replacement Estimate

Costs per Year

Year #	Year	Cost
1	2024	\$55,000
2	2025	\$57,000
3	2026	\$59,000
4	2027	\$62,000
5	2028	\$64,000
6	2029	\$66,000

Year #	1
Year	2024
Years of Escalation	0
CONSTRUCTION SUBTOTAL (2024)	\$25,000
DESIGN CONTINGENCY (30%)	\$7,500
SUBTOTAL	\$32,500
INFLATION/YR (3%)	\$32,500
TOTAL CONSTRUCTION + ROW (INFLATED)	\$32,500
PERMITTING (5%)	\$1,625
DESIGN (25%)	\$8,125
CITY PM/ADMINISTRATION (5%)	\$1,625
CONSTRUCTION MANAGEMENT (25%)	\$8,125
MANAGEMENT RESERVE (10%)	\$3,250

TOTAL COST	\$363,000
------------	-----------

CONSTRUCTION GRAND TOTAL	\$55,000
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City of Orting - 2024 ADA Replacement Estimate

Costs per Year

Year #	2	Year #	3
Year	2025	Year	2026
Years of Escalation	1	Years of Escalation	2
CONSTRUCTION SUBTOTAL (2024)	\$25,000	CONSTRUCTION SUBTOTAL (2024)	\$25,000
DESIGN CONTINGENCY (30%)	<u>\$7,500</u>	DESIGN CONTINGENCY (30%)	<u>\$7,500</u>
SUBTOTAL	\$32,500	SUBTOTAL	\$32,500
INFLATION/YR (3%)	\$33,475	INFLATION/YR (3%)	\$34,479
TOTAL CONSTRUCTION + ROW (INFLATED)	\$33,475	TOTAL CONSTRUCTION + ROW (INFLATED)	\$34,479
PERMITTING (5%)	\$1,674	PERMITTING (5%)	\$1,724
DESIGN (25%)	\$8,369	DESIGN (25%)	\$8,620
CITY PM/ADMINISTRATION (5%)	\$1,674	CITY PM/ADMINISTRATION (5%)	\$1,724
CONSTRUCTION MANAGEMENT (25%)	\$8,369	CONSTRUCTION MANAGEMENT (25%)	\$8,620
MANAGEMENT RESERVE (10%)	\$3,348	MANAGEMENT RESERVE (10%)	\$3,448
CONSTRUCTION GRAND TOTAL	\$57,000	CONSTRUCTION GRAND TOTAL	\$59,000

City of Orting - 2024 ADA Replacement Estimate

Costs per Year

Year #	4	Year #	5
Year	2027	Year	2028
Years of Escalation	3	Years of Escalation	4
CONSTRUCTION SUBTOTAL (2024)	\$25,000	CONSTRUCTION SUBTOTAL (2024)	\$25,000
DESIGN CONTINGENCY (30%)	<u>\$7,500</u>	DESIGN CONTINGENCY (30%)	<u>\$7,500</u>
SUBTOTAL	\$32,500	SUBTOTAL	\$32,500
INFLATION/YR (3%)	\$36,579	INFLATION/YR (3%)	\$37,676
TOTAL CONSTRUCTION + ROW (INFLATED)	\$36,579	TOTAL CONSTRUCTION + ROW (INFLATED)	\$37,676
PERMITTING (5%)	\$1,829	PERMITTING (5%)	\$1,884
DESIGN (25%)	\$9,145	DESIGN (25%)	\$9,419
CITY PM/ADMINISTRATION (5%)	\$1,829	CITY PM/ADMINISTRATION (5%)	\$1,884
CONSTRUCTION MANAGEMENT (25%)	\$9,145	CONSTRUCTION MANAGEMENT (25%)	\$9,419
MANAGEMENT RESERVE (10%)	\$3,658	MANAGEMENT RESERVE (10%)	\$3,768
CONSTRUCTION GRAND TOTAL	\$62,000	CONSTRUCTION GRAND TOTAL	\$64,000

City of Orting - 2024 ADA Replacement Estimate

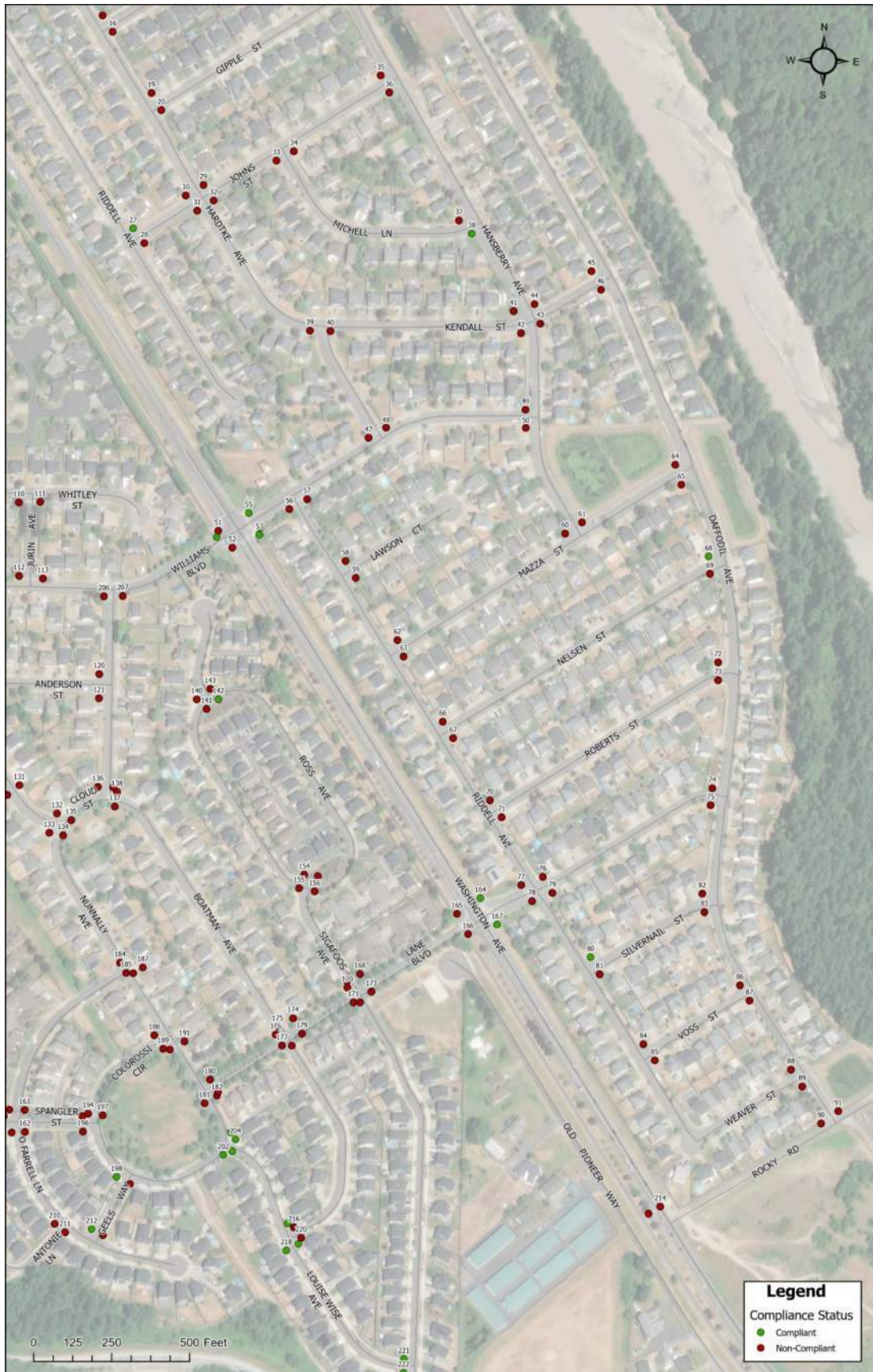
Costs per Year

Year #	6
Year	2029
Years of Escalation	5
CONSTRUCTION SUBTOTAL (2024)	\$25,000
DESIGN CONTINGENCY (30%)	\$7,500
SUBTOTAL	\$32,500
INFLATION/YR (3%)	\$38,807
TOTAL CONSTRUCTION + ROW (INFLATED)	\$38,807
PERMITTING (5%)	\$1,940
DESIGN (25%)	\$9,702
CITY PM/ADMINISTRATION (5%)	\$1,940
CONSTRUCTION MANAGEMENT (25%)	\$9,702
MANAGEMENT RESERVE (10%)	\$3,881
CONSTRUCTION GRAND TOTAL	\$66,000

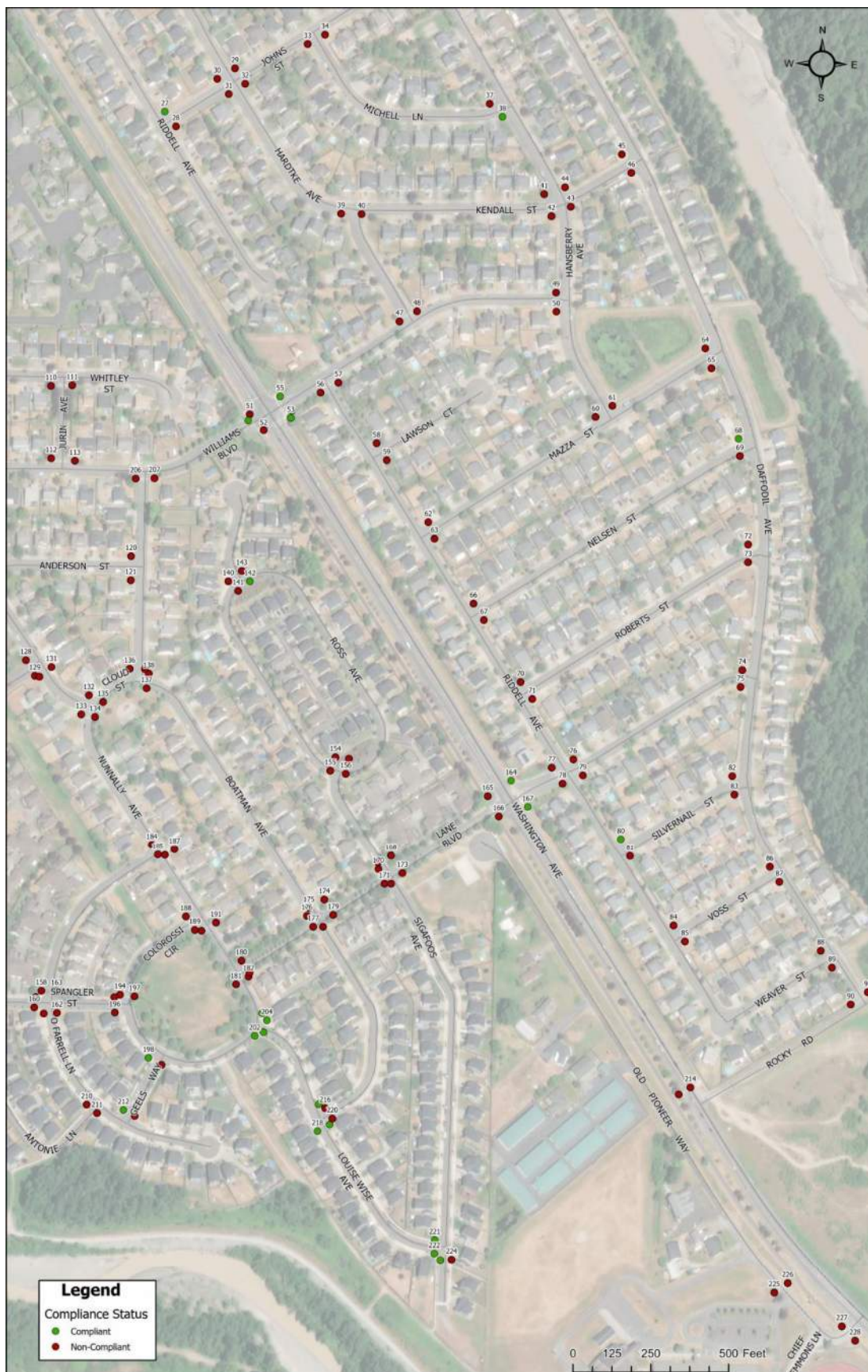
Appendix C

Zoomed In Maps



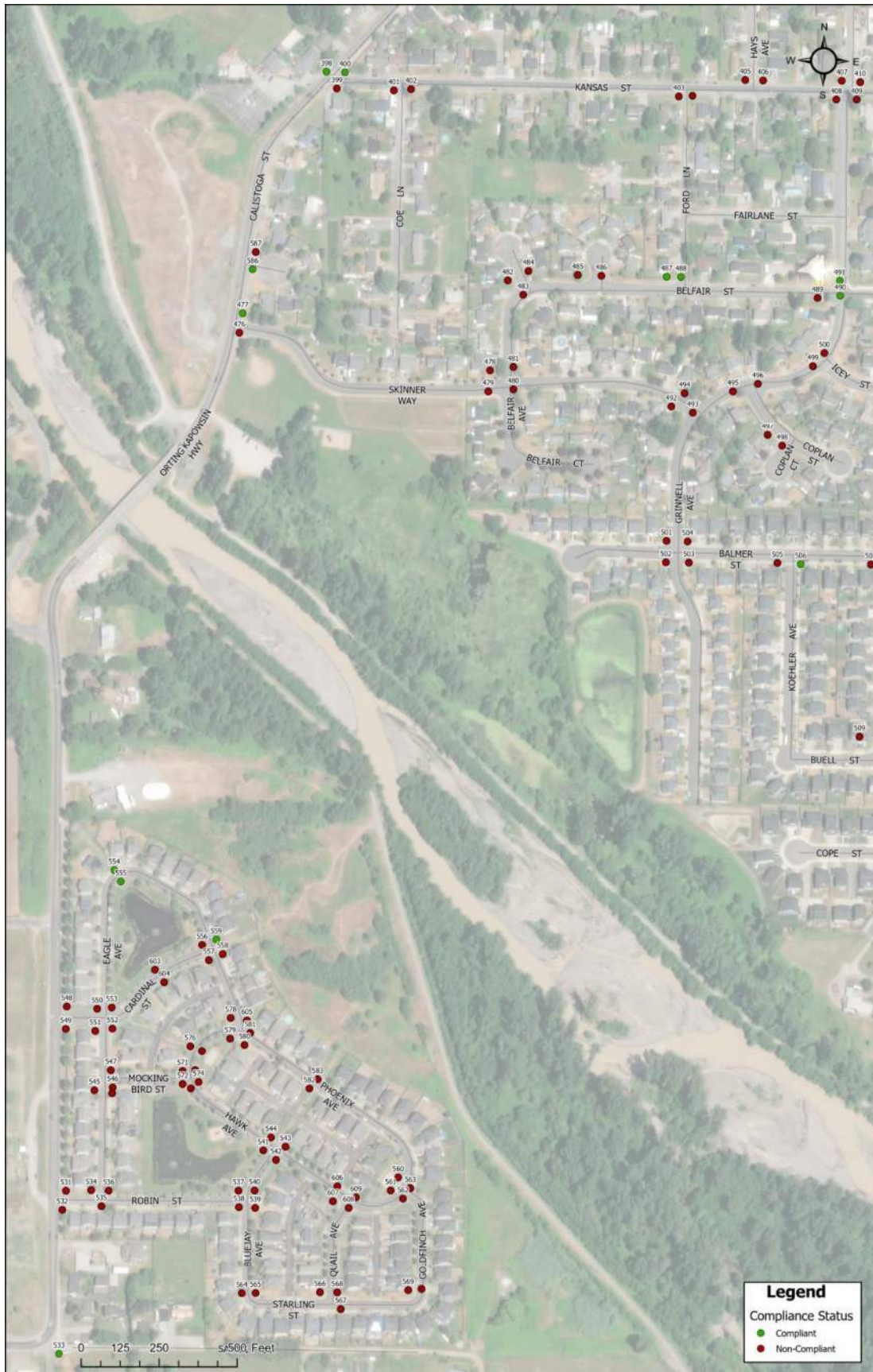


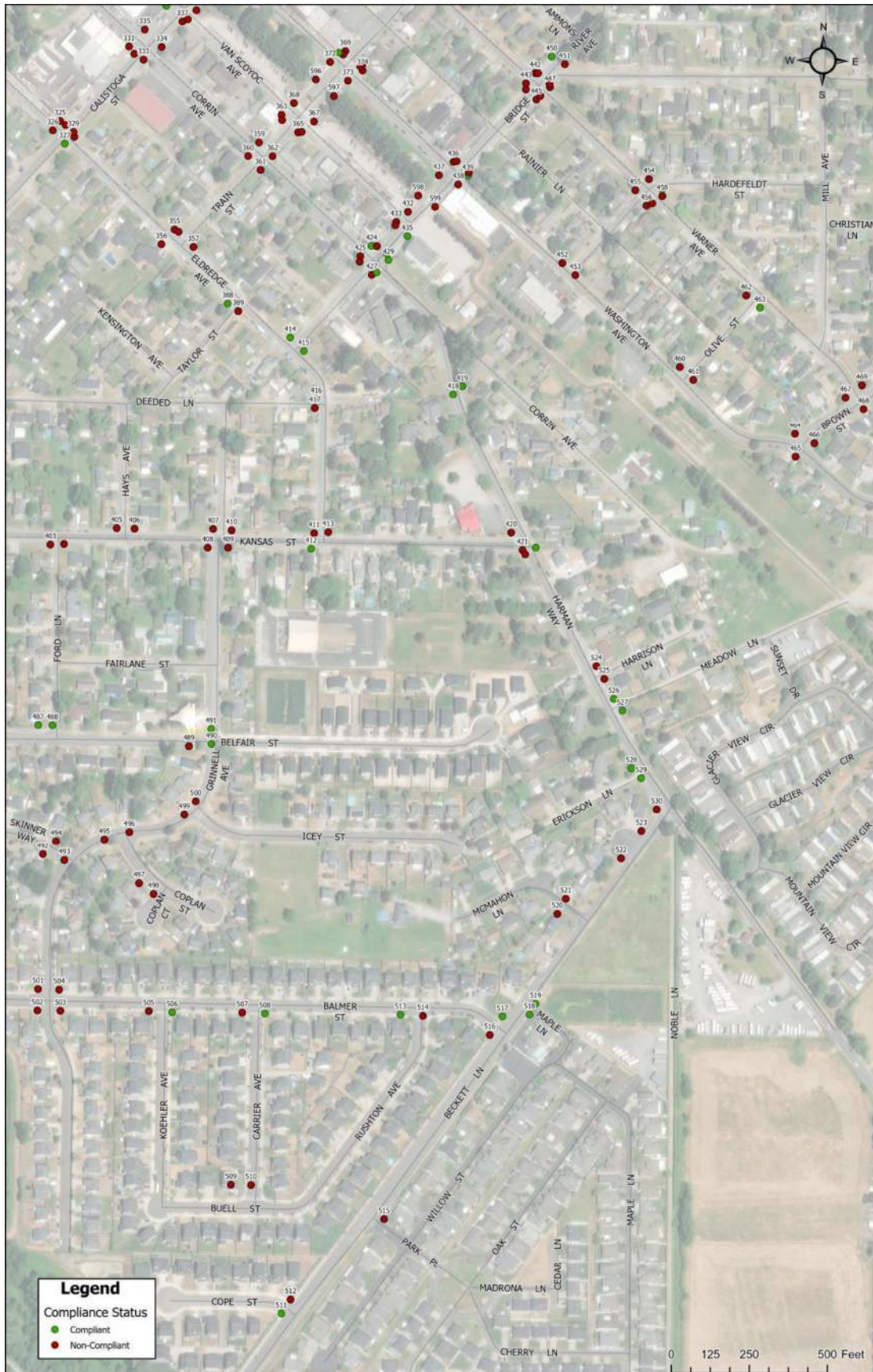






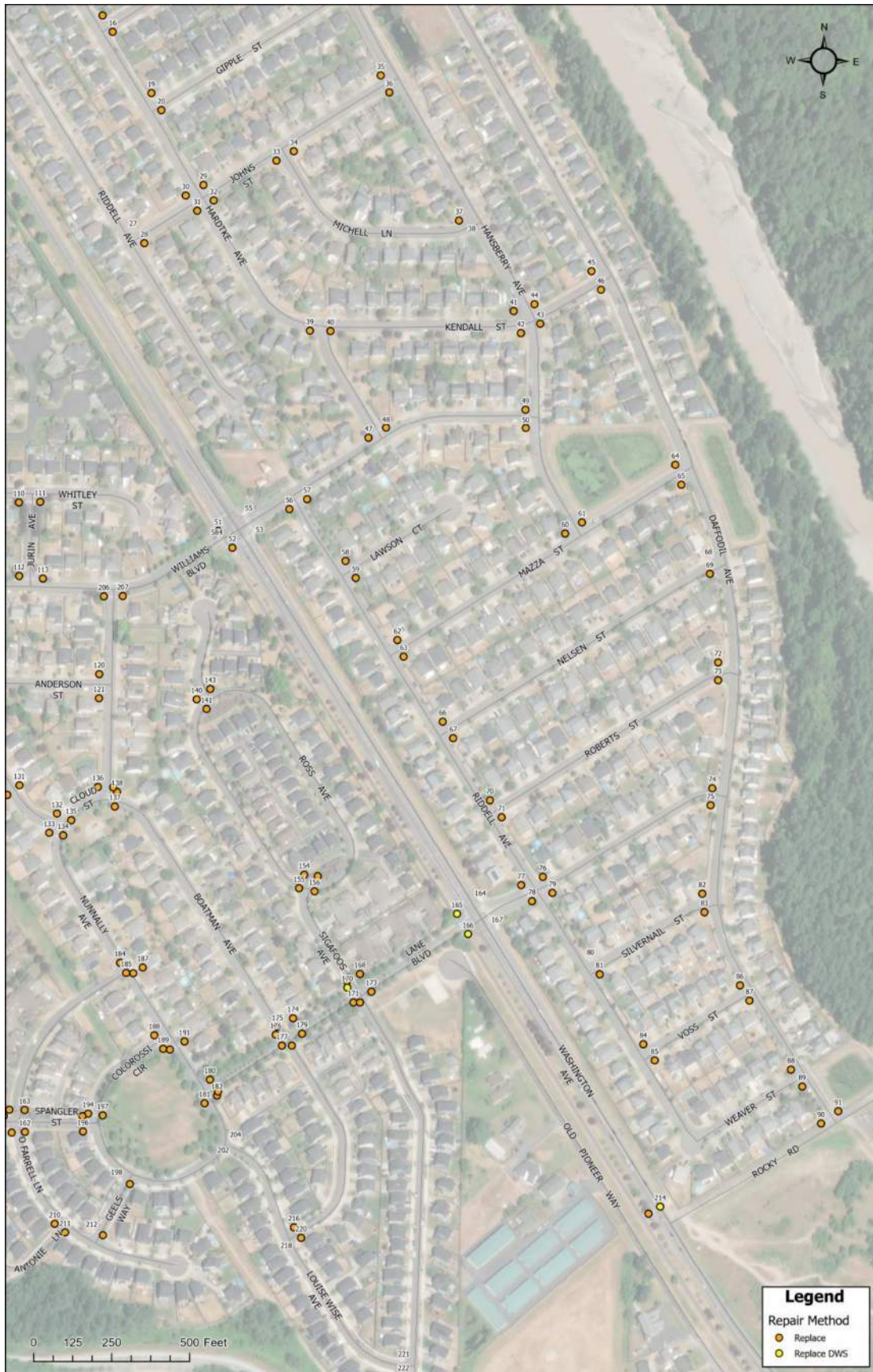


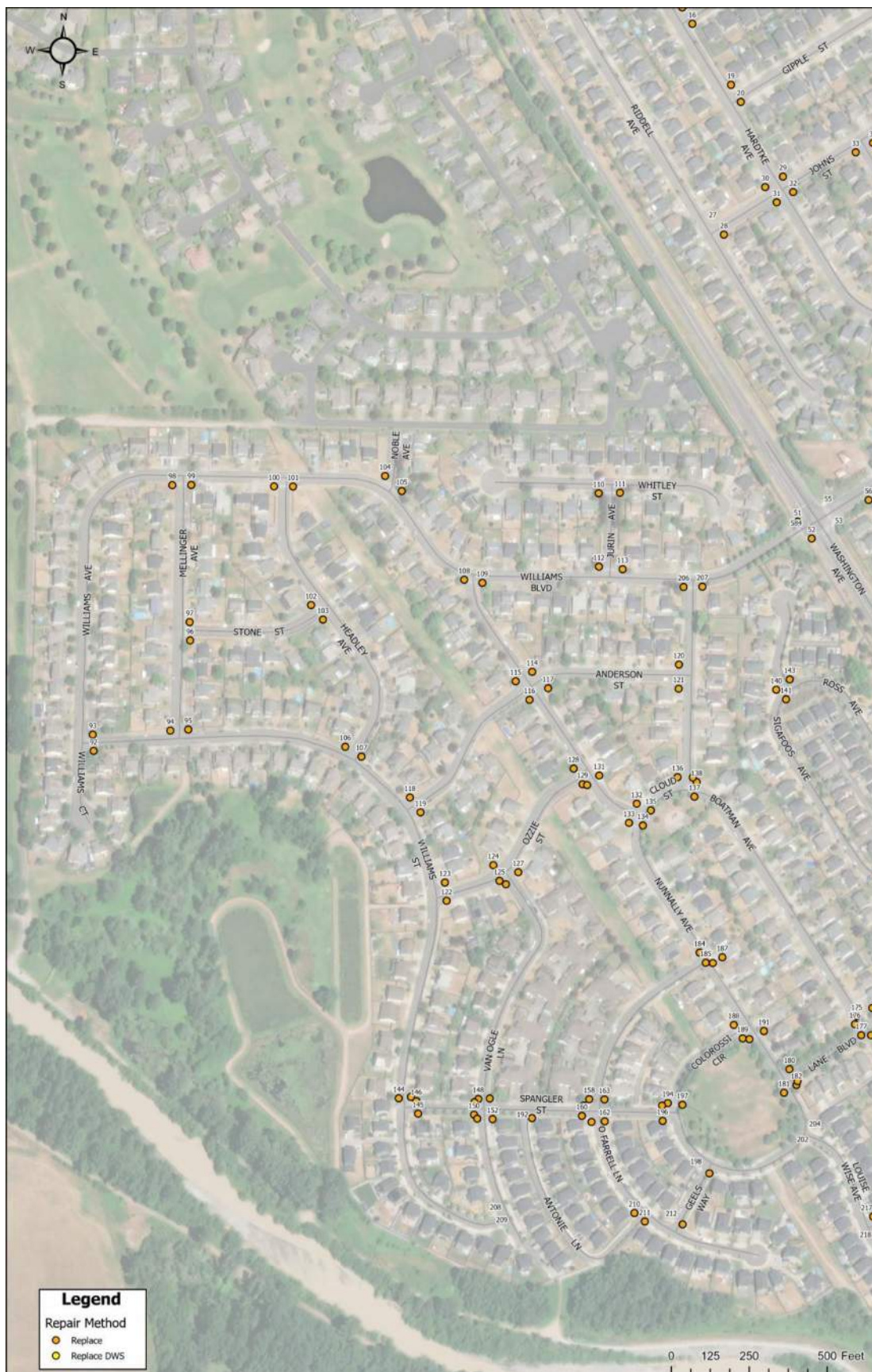






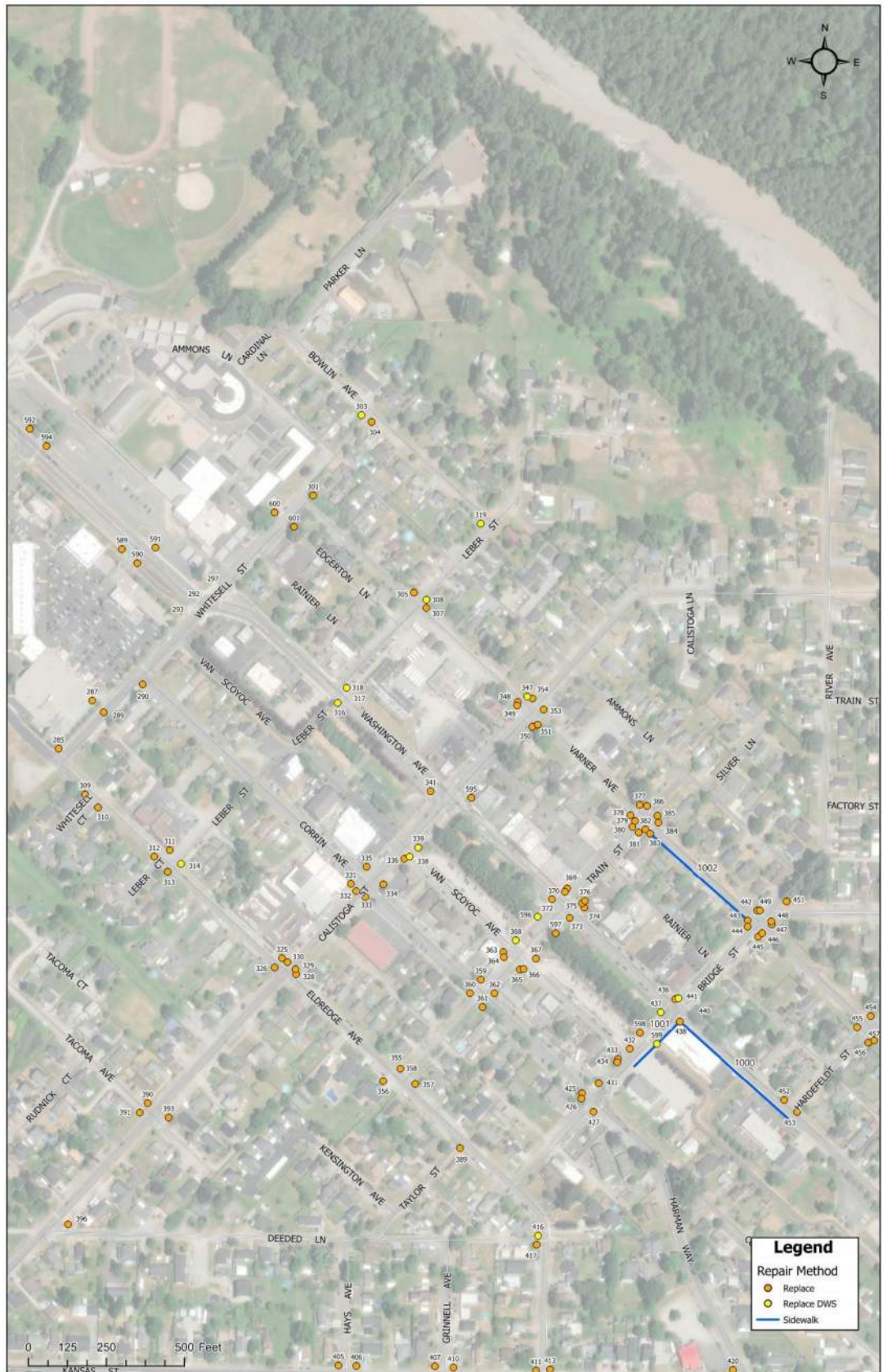


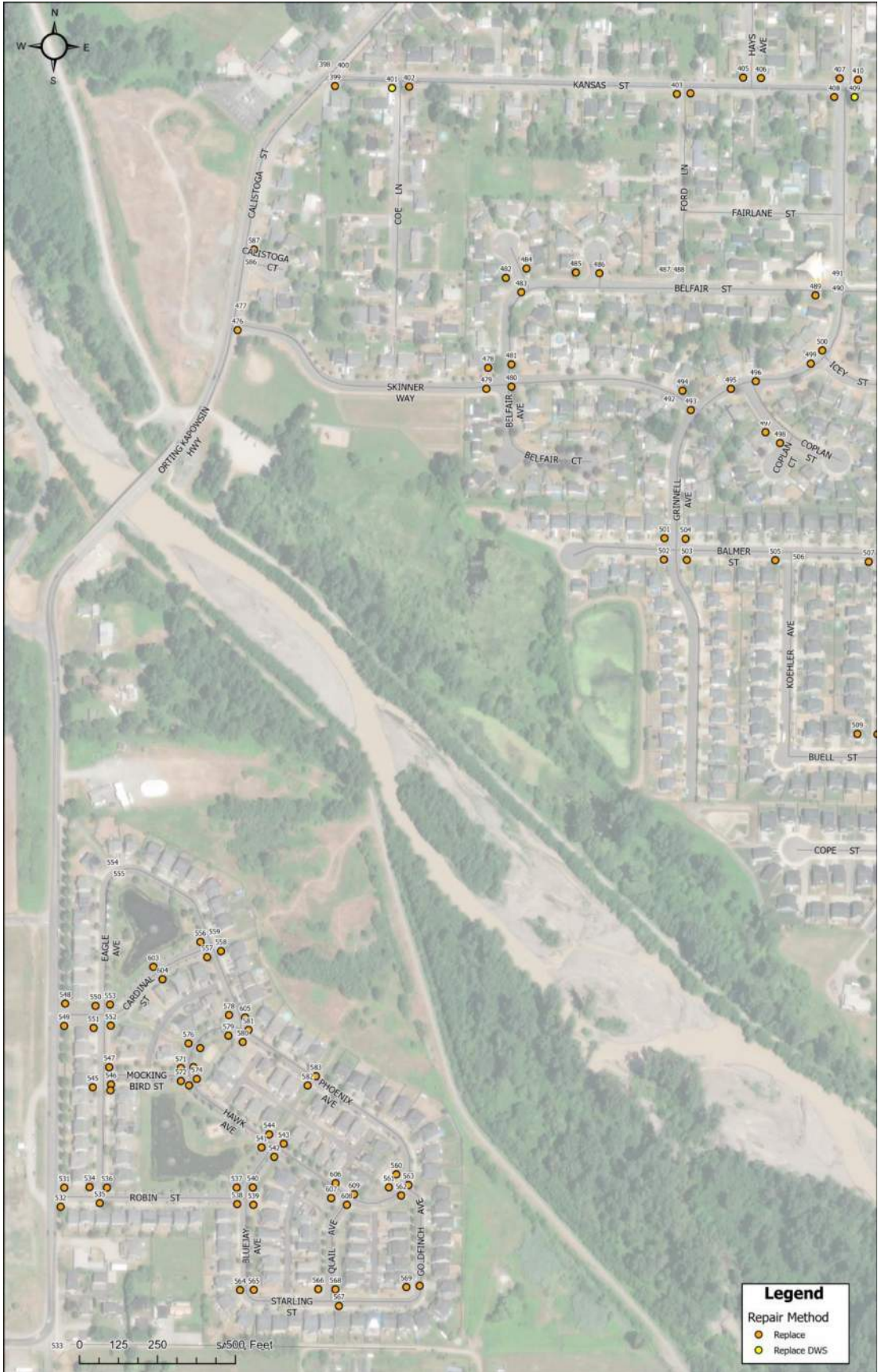


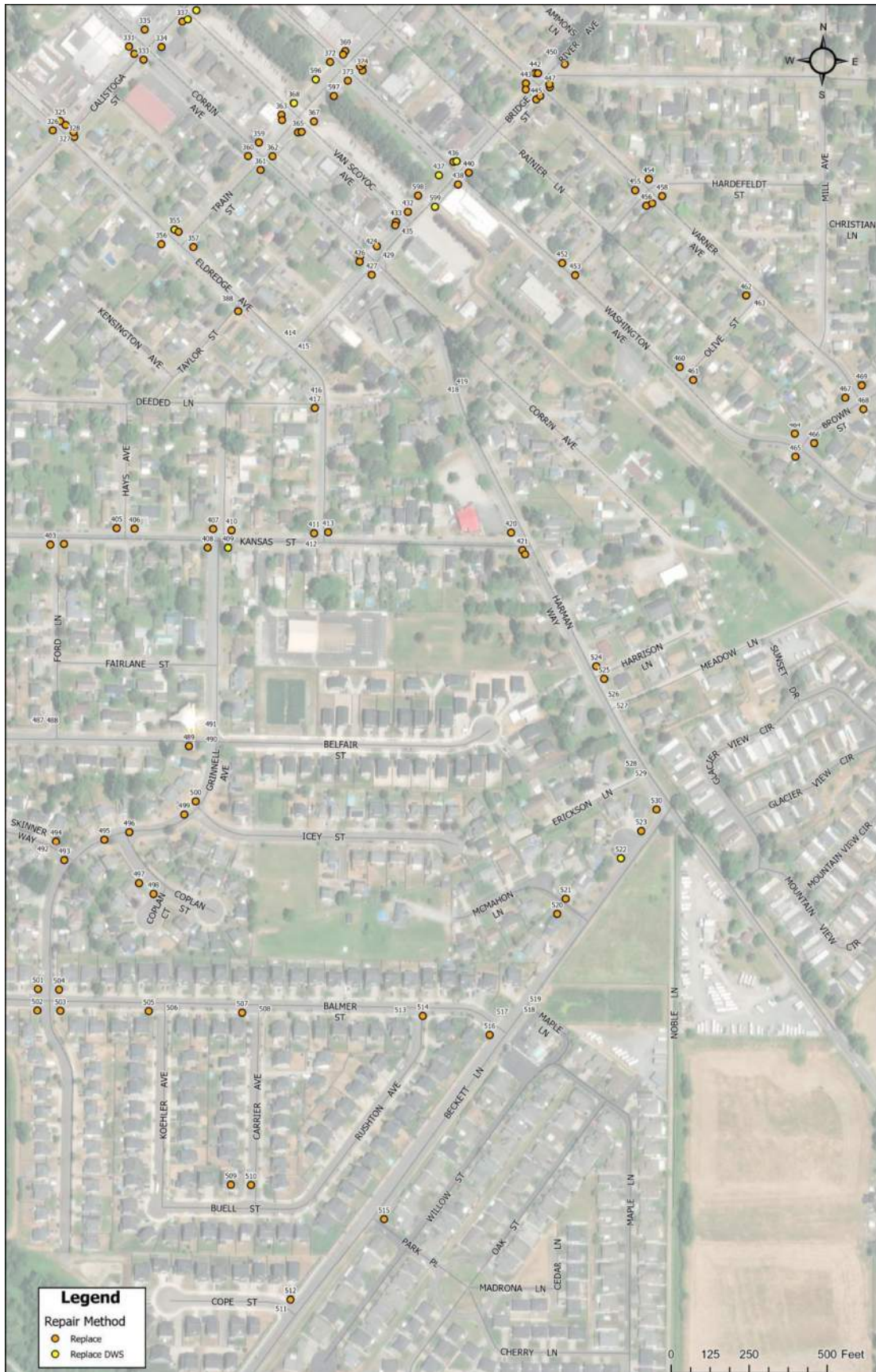


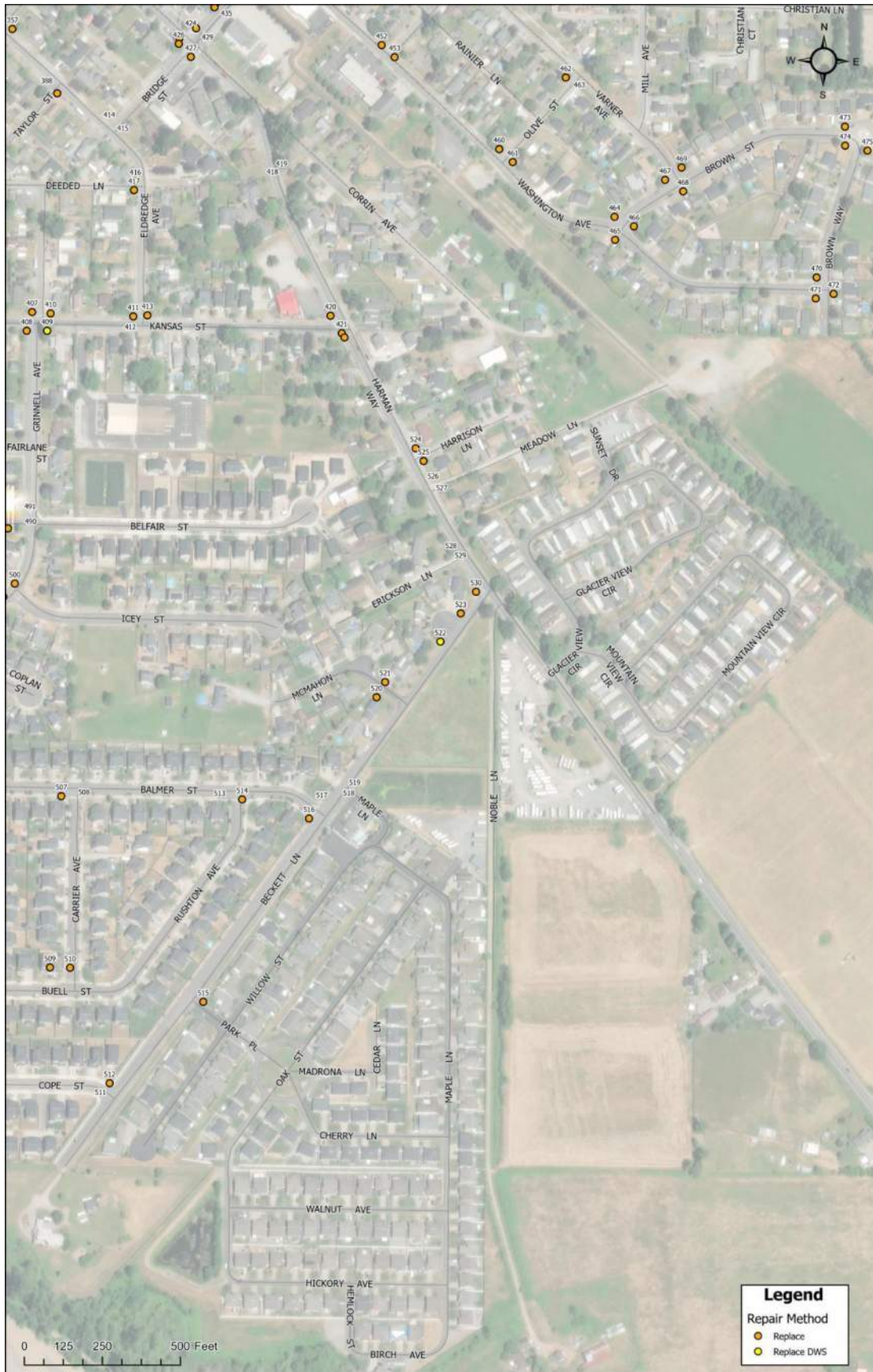












Appendix D

City of Orting Resolution No. 2015-15

CITY OF ORTING
WASHINGTON
RESOLUTION NO. 2015-15

**A RESOLUTION OF THE CITY OF ORTING,
WASHINGTON, ADOPTING A POLICY AND NOTICE
REGARDING THE AMERICANS WITH DISABILITIES
ACT**

WHEREAS, the Congress of the United States adopted the Americans with Disabilities Act of 1990 (ADA) to prohibit discrimination against individuals with disabilities; and

WHEREAS, the City Orting is required to comply with the ADA;

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ORTING,
WASHINGTON, DOES RESOLVE AS FOLLOWS:**

Section 1. The policy and procedures and notice are hereby adopted as an official policy of the City, in the form attached hereto as Exhibit A.

**PASSED BY THE CITY COUNCIL OF THE CITY OF ORTING, WASHINGTON,
AT AN OPEN PUBLIC MEETING THEREOF HELD THIS 25TH DAY OF NOVEMBER,
2015.**

CITY OF ORTING


Joachim Pestinger, Mayor

ATTEST/AUTHENTICATED:


Rachel Pitzel, City Clerk

Approved as to form:

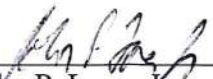

John P. Long, Jr.
Kenyon Disend, PLLC
City Attorney

Exhibit "A"

PURPOSE:

To establish a policy for ensuring reasonable access to services, programs and activities of the City of Orting and a procedure with which a person with disabilities can identify and request resolution of accommodation within a service, program or activity of local government.

ORGANIZATIONS AFFECTED:

Applies to all departments and divisions.

POLICY:

The City of Orting does not discriminate on the basis of disability. It is the policy of the City to assure disabled persons the opportunity to participate in, or benefit from employment, services, activities and facilities, where possible. The City, upon request, will provide reasonable accommodation in compliance with the Americans with Disabilities Act and the Washington Law against Discrimination.

DEFINITIONS:

Disabled Individual – an individual (1) with a physical or mental impairment that substantially limits one or more of the major life activities of such individual; (2) with a record of such impairment; or (3) who is regarded as having such an impairment.

Reasonable Accommodation – are modifications or adjustments that enable an individual with a disability to enjoy equal benefits and privileges as are enjoyed by other individuals without disabilities, without placing an undue hardship on the operation of the City.

REFERENCES:

1. The Americans with Disabilities Act of 1990, Title II.
2. Washington State Law against Discrimination, RCW Chapter 49.60.

NOTICE:

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990, the City of Orting does not discriminate against qualified individuals with disabilities on the basis of disability in the City's services, programs or activities.

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990, the City of Orting does not discriminate on the basis of disability in its hiring or

employment practices and complies with all regulations promulgated by the Equal Employment Opportunity Commission under Title I of the ADA.

Effective Communication: The City of Orting, will, upon request, attempt to provide appropriate aids and services leading to effective communication for qualified persons with disabilities so they can participate equally in the City's programs, services and activities. We strive to make information and communication accessible to people who have speech, hearing or vision impairments.

Modifications to Policies and Procedures: The City of Orting will make reasonable modifications to policies and programs to ensure that people with disabilities have equal opportunity to enjoy all City programs, services and activities. For example, individuals with service animals are welcomed in city offices and parks, where animals are generally prohibited.

Anyone who requires an auxiliary aid or service for effective communication or modification of policies or procedures to participate in a City program, service or activity, should contact the person or department who scheduled the event as soon as possible but no later than 72 hours before the scheduled event. If you are not sure who you should contact, you may contact the ADA Coordinator identified in this notice.

The ADA does not require the City to take any action that would fundamentally alter the nature of its programs or services, or impose an undue financial or administrative burden.

The City will not place a surcharge on a particular individual with a disability or group of individuals with disabilities to cover the cost of providing auxiliary aids/services or reasonable modifications of policy.

ADA Questions and Complaints: The City of Orting has an ADA Coordinator and a grievance procedure. Those are intended to ensure that complaints are handled promptly. Equitable resolution is strived for through the review process. Please contact the ADA Coordinator with questions or complaints about the ADA compliance efforts.

ADA Coordinator:

Rachel Pitzel
110 Train Street SE
Orting, WA 99360
Phone: (360) 893-2219
E-mail: rpitzel@cityoforting.org

PROCEDURE:

1. The City Clerk of the City of Orting shall be the City's ADA Coordinator.
2. Requests for accommodation may first be directed to the individual responsible for the program, activity or service to which access is requested.
3. If access is not accommodated, a formal complaint must be submitted in writing to the ADA Coordinator within 30 working days after the complainant becomes aware of the alleged violation. Reasonable accommodation to assist in completing the form is available upon request.
4. The complaint must contain the name, address, and telephone number of the individual filing the complaint; briefly describe the alleged violation and the requested accommodation resolution. A form is available, but is not necessary.
5. The ADA Coordinator will conduct an informal, but thorough, review affording the complainant and the affected department(s) an opportunity to submit information relevant to the complaint and potential accommodation/resolution.
6. A written response and description of the accommodations/resolutions, if any, will be issued by the ADA Coordinator and sent to the complainant within 30 calendar days after the complaint is received, unless the complexities of the complaint require additional time, in which case the complainant will be notified. The accommodation or resolution may not be the same as requested.
7. The complainant may request a reconsideration of the case determination by submitting a request for reconsideration within ten (10) working days following the date the complainant receives the City's response.
8. The Mayor or his or her designee will conduct his/her review of the complaint and issue his/her decision to the complainant within twenty (20) working days of receiving the request for reconsideration, unless the complexities of the complaint require additional time. The Mayor and/or his or her designee's decision is final.
9. The City Clerk will maintain the files and records of the City of Orting related to ADA complaints filed and keep a log of complaints. The log shall include:
 - a. The name and address of the person filing the complaint;
 - b. The date of the complaint;
 - c. The basis of the complaint; and
 - d. The disposition of the complaint.

10. The individual's right to a prompt and equitable solution of the complaint will not be impaired by his/her pursuit of other remedies such as filing a grievance of an ADA complaint with the responsible federal department or agency. Use of this grievance procedure is not a prerequisite to the pursuit of other remedies.

**CITY OF ORTING
PUBLIC ACCESS REQUEST FOR
ACCOMMODATION FORM**

NAME OF ENTITY: CITY OF ORTING

RETURN TO: CITY CLERK

Name of Individual Requesting Accommodation	Address	Phone

Explain what functional disability you have that limits your ability to participate in a (Name of Entity) program or service: (e.g. "I am confined to a wheelchair.")

Describe the program, service or activity you cannot access due to your disability, and what you believe are the barriers to access or participation.

Proposed Accommodation/Resolution:

RESERVED FOR ENTITY USE

DATE RECEIVED:	BY:
DATE SENT TO ADA COORDINATOR:	
DATE CITY RESPONSE SENT:	

**CITY OF ORTING PUBLIC ADA
COMPLAINT FORM**

NAME OF ENTITY: CITY OF ORTING

RETURN TO: CITY CLERK

NAME OF COMPLAINANT	ADDRESS	PHONE
ISSUE: (Identify the nature of disability and how it impairs a major life function)		
PROPOSED ACCOMMODATION/RESOLUTION:		
RESERVED FOR ENTITY USE		
DATE RECEIVED: _____ BY: _____		
DATE SENT TO ADA COORDINATOR: _____		
DATE CITY RESPONSE SENT: _____		

Appendix E

City of Orting Facilities Memo



Technical Memo

To: John Bielka, City of Orting
From: Andrew Armstrong, SCJ Alliance
Date: February 23, 2024
Project: City of Orting ADA Transition Plan
Subject: ADA Accessibility of the City of Orting Facilities

Introduction:

The City of Orting maintains a number of facilities for the public, including buildings and parks. Facilities must meet the ADA Accessibility Guidelines (US Access Board, n.d.). These guidelines apply to parks and buildings constructed, altered, or added onto post-2010. This means that although the City of Orting's facilities are not all up to current standards, they are not necessarily out of compliance. Existing barriers to access are required to be removed when they are readily achievable (ADA, 2012). This memo describes the compliant features as well as the noncompliant features and the actions that should be taken to bring them into compliance with the current standards. These features were assessed by visual inspection over multiple site visits.

1 Publicly Accessible Buildings

Buildings were evaluated for ADA Parking Stalls and ADA compliant walkways to ADA compliant restrooms. The buildings evaluated were:

- ◆ Library
- ◆ City Hall
- ◆ Old City Hall
- ◆ Public Works Building

1.1. Parking:

- ◆ Library: 1 ADA Parking Stall, 8 Total Stalls
- ◆ City Hall: 2 ADA Parking Stalls, 13 Total Stalls
- ◆ Old City Hall: 1 ADA Parking Stall, 8 Total Stalls
- ◆ Public Works Building: 1 ADA Parking Stall, 15 Total Stalls
- ◆ These buildings all have a compliant number of ADA Parking Stalls (Figure 1)

Minimum Number of Accessible Parking Spaces			
§208.2			
Minimum Number of Accessible Parking Spaces Table			
* at least 1 of every 6 accessible spaces or fraction of 6			
** 501 to 1000: 2% of total			
*** 1001 and over: 20 + 1 for each 100 or fraction thereof over 1000			
Parking Facility Total	Minimum Number of Accessible Spaces		
	Standard	Van*	Total (Standard + Van)
1 to 25	0	1	1
26 to 50	1	1	2
51 to 75	2	1	3
76 to 100	3	1	4
101 to 150	4	1	5

Figure 1. ADA Accessible Parking Spaces Requirement (U.S. Access Board, n.d., Chapter 5: Parking Spaces)

1.2. Walkways:

- ◆ All buildings have ADA compliant walkways to access ADA compliant restrooms.
- ◆ Old City Hall has one doorway with only 32" of clear width, but this is compliant since it does not last for 24" (Figure 2).

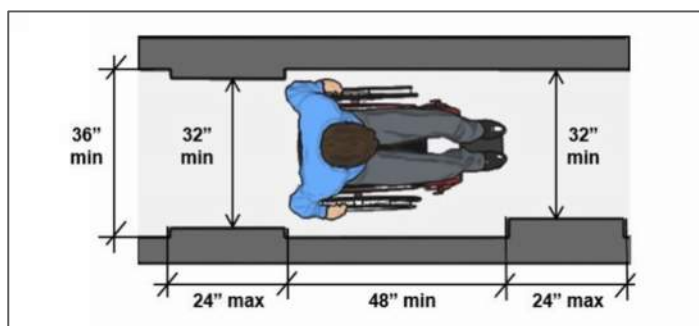


Figure 2. Minimum Clearance Requirements (U.S. Access Board, n.d., Chapter 4: Accessible Routes)

2 Parks

The City's parks were evaluated for ADA compliant walkways, restrooms, parking spots, and playgrounds. The parks evaluated were:

- ◆ Callistoga Park
- ◆ Cemetery
- ◆ Charter Park
- ◆ Gratzner Sports Park
- ◆ Main City Park
- ◆ Rainier Meadows Park
- ◆ Whitehawk Park
- ◆ Williams Park
- ◆ 3 Corners Park
- ◆ Memorial Park
- ◆ North Park
- ◆ Triangle Park
- ◆ Foothills Trail

2.1. Calistoga Park

Calistoga Park has a parking lot with many potholes and no ADA parking stalls, which is non-compliant. ADA Parking stalls should be provided following Figure 1, and ADA access aisles should be provided to be compliant. A gravel path leads to one of the two playgrounds and the dog park, although it needs maintenance and does not continue into the dog park. This path does not provide access to the baseball field, which is non-compliant (Figure 5).

The playgrounds both have wood chip surfacing that needs maintenance to level it out and increase its compaction. The curb outlining the playgrounds must be altered to not be a barrier to an ADA accessible route. The playgrounds have seven elevated play components accessible via transfer system, five elevated play components not accessible via transfer system, and 10 ground-level play components (four of which are swings). This would be compliant if the ground-level play components were ADA accessible (Figure 3). However, two of the ground-level play components have no accessible walkway and the other four need surfacing maintenance to provide an ADA accessible route. As there are less than 20 elevated play components, a transfer system may be used to connect 50% of the elevated play components and it is compliant (Figure 4).

Ground Level Requirements Based on Elevated Play Components

The number and variety of ground-level play components required to be on an accessible route is also determined by the number of elevated components provided in the play area. The intent of this requirement is to provide a variety of experiences for individuals who choose to remain with their mobility devices, or choose not to transfer to elevated play components.

Table 240.2.1.2

Number of elevated play components provided	Minimum number of ground-level play components required to be on accessible route	Minimum number of different types of ground-level play components required to be on accessible route
1	Not applicable	Not applicable
2 to 4	1	1
5 to 7	2	2
8 to 10	3	3
11 to 13	4	3
14 to 16	5	3
17 to 19	6	3
20 to 22	7	4
23 to 25	8	4
More than 25	8 plus 1 for each additional 3 over 25, or fraction thereof	5

If ramps provide access to at least 50 percent of the elevated play components – which must include at least three different play types – then additional ground-level components are not required. An example: the composite structure of a play area has four elevated play components (bubble panel, slide, steering wheel, and tic-tac-toe panel). According to the table, a minimum of one ground level play component must be provided, and a minimum of one different type. The spring rider or swing can be used to meet the “one of each type” requirement and can also be used to meet the minimum number determined by Table 240.2.1.2. The number of ground-level components determined by “one of each type” can also fulfill the minimum ground level requirement that is indicated by the elevated play components table.

Figure 3. Ground Level Component Requirements (U.S. Access Board, n.d., Chapter 10: Play Areas)

A transfer system provides access to elevated play components within a composite system by connecting different levels with transfer platforms and steps. A transfer system provides access to elevated play components without the use of a wheelchair or mobility devices. At least 50 percent of the elevated play components can be connected by a transfer system in play areas with fewer than 20 elevated components. In play areas with 20 or more elevated play components, transfer systems may be used to connect up to 25 percent of the elevated play components and the rest of the elevated play components required to be on an accessible route must be connected by a ramp.

Figure 4. Transfer System Requirements (U.S. Access Board, n.d., Chapter 10: Play Areas)

Accessible routes must connect each area of sport activity. Areas of sport activities must comply with all ADAAG requirements, except that they are exempt from the requirement that surfaces must be stable, firm, and slip resistant, and from the restrictions on carpets, grating, and changes in level. They are also exempt from restrictions on protruding objects. These provisions are not required inside of the area of sport activity since they may affect the fundamental nature of the sport or activity. For example, an accessible route is required to connect to the boundary of a soccer field, but there is no requirement to change the surface of a field to an accessible surface.

Where light fixtures or gates are provided as part of a court sport or other area of sport activity, they must comply with ADAAG provisions for controls and operating mechanisms, and for gates and doors.

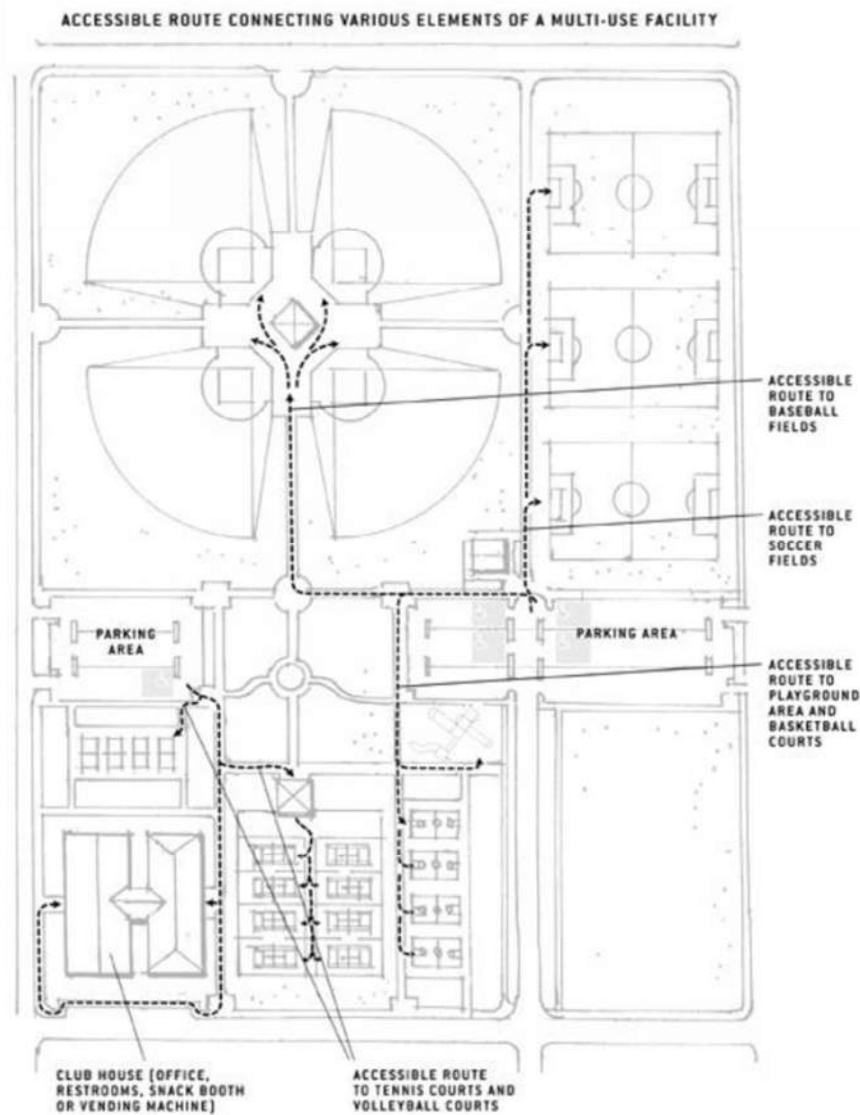


Figure 5. Accessible Routes to Facilities Requirements (U.S. Access Board, n.d., Chapter 10: Sports Facilities)

2.2. Cemetery

The cemetery has no parking lot or walking path, but it does have an ADA accessible portable toilet. It is unclear where an ADA accessible route to this portable toilet should be provided from, but access to this toilet should be provided to be compliant.

2.3. Charter Park

Charter Park has an accessible path to the skateboard park and two ADA parking spots with 38 total stalls.

2.4. Gratzner Sports Park

Gratzner Sports Park has a gravel parking lot with two ADA Parking spots noted. A gravel path starts at the parking lot, but this path must extend to the baseball fields and requires maintenance to meet ADA requirements (Figure 5). The ADA parking stalls, and an access aisle, should be paved to make them compliant and meet the firm, stable, and slip resistant surfacing requirement.

2.5. Main City Park

Main City Park has two gravel parking lots that each have one paved ADA parking spot, and since the parking lots are gravel, it is unclear how many total spots there are. The number is around 25 parking spots per lot, and having 25 spots or under means one ADA Accessible parking spot is all that is required so this parking lot is compliant (Figure 1).

The park provides an ADA compliant walkway to the permanent restrooms as well as the ADA compliant portable toilet. The basketball court lacks an accessible walkway (Figure 5), while the gazebo has one that fails the cross-slope test as it is turning to go up the gazebo. Both are non-compliant and should be updated. Several picnic tables have ADA access provided.

The structural components of the playground include seven ground-level play components and eight elevated play components. The playground surfacing needs maintenance to level out the surfacing and increase its compaction. The curb outlining the playgrounds must be altered to not be a barrier to an ADA accessible route. The structural components would be compliant if an accessible path reached three of them (Figure 3). The elevated components are connected with a transfer system, which is compliant (Figure 4).

2.6. Rainier Meadows Park

Rainier Meadows Park has a paved walkway connecting the playground to the sidewalk. The paved walkway does not provide access to the basketball court and needs maintenance as noted by a complaint from the public during the survey. The playground surfacing needs maintenance to level out the surfacing and increase its compaction. The curb outlining the playgrounds must be altered to not be a barrier to an ADA accessible route.

The structural components of the playground include one ground level component and six elevated play components. To be compliant, the playground should provide two ADA compliant and accessible ground level components as well as an accessible route to the transfer system (Figure 3). The transfer system is compliant (Figure 4).

2.7. Whitehawk Park

Whitehawk Park has a paved parking lot with two ADA accessible parking spots and 18 total parking spots. There is an ADA accessible route connecting the parking lot, the basketball court, and the playground. This route does not connect to the baseball field, which is non-compliant (Figure 5). There is a portable toilet provided, but it is not ADA compliant, which means an ADA compliant one should be provided as well or in place of it (Figure 6).

The playground has nine elevated play components and four ground-level play components (Figure 3). The playground surfacing needs maintenance to level out the surfacing and increase its compaction. The curb outlining the playgrounds must be altered to not be a barrier to an ADA accessible route. At least three of the ground-level play components must be on an accessible route, as well as the transfer system. The transfer system for the elevated play components is compliant (Figure 4).

Required Compliance

[§213](#)

Plumbing and building codes address the number and type of toilet rooms and toilet fixtures required for a facility. The ADA Standards, on the other hand, do not address the number of toilet rooms or fixtures required for a facility, but instead specify which ones must be accessible where provided. In new construction, access is required to all toilet rooms, including those for employees. However, where single user toilet rooms are clustered in one location, at least half for each use must comply (§213.2., Ex. 4). In the case of single user portable units, access is required to at least 5% at each cluster, excluding those on construction sites for construction personnel which are fully exempt (§213.2, Ex. 3, §203.2).

Figure 6. ADA Accessible Portable Toilet Requirements (U.S. Access Board, n.d., Chapter 6: Toilet Rooms)

2.8. Williams Park

Williams Park has a paved ADA accessible route through it with access to a bench and a picnic table.

2.9. 3 Corners Park

3 Corners Park has a gravel walkway through it that needs maintenance to be ADA accessible (Figure 7).

Surface [1017.2]



The surfaces of trails, passing spaces, and resting intervals must be firm and stable. A firm trail surface resists deformation by indentations. A stable trail surface is not permanently affected by expected weather conditions and can sustain normal wear and tear from the expected uses between planned maintenances.

Paving with concrete or asphalt may be appropriate for highly developed areas. For less developed areas, crushed stone, fine crusher rejects, packed soil, soil stabilizers, and other natural materials may provide a firm and stable surface. Natural materials also can be combined with synthetic bonding materials to provide greater stability and firmness. These materials may not be suitable for every trail.

DESIGN TIP—Building a firm and stable surface

A firm and stable surface does not always mean concrete and asphalt. Some natural soils can be compacted so that they are firm and stable. Other soils can be treated with stabilizers without drastically changing their appearance. Designers are encouraged to investigate the options and use surfacing materials that are consistent with the site's level of development and that require as little maintenance as possible.

Figure 7. Trail Surfacing Requirements (U.S. Access Board, n.d., Chapter 10: Outdoor Developed Areas)

2.10. Memorial Park

Memorial Park has a paved ADA accessible route through it.

2.11. North Park

North Park has a paved ADA accessible route to the building and most of the benches. However, the building was locked so it is unclear what is inside.

2.12. Triangle Park

Triangle Park has a paved ADA accessible sidewalk around it and a gravel route through it with access to a bench. This gravel walkway needs maintenance to be considered accessible (Figure 7).

2.13. Foothills Trail

The Foothills Trail is a paved path through the City of Orting. Although sections of it could use maintenance, it provides the 5' ADA accessible route throughout the city. Many of the street crossings for this trail are noncompliant and need maintenance as noted in the curb ramp section of the plan.

3 References

ADA. (2012, March 08). *Americans with Disabilities Act Title III Regulations*. United States Department of Justice. <https://www.ada.gov/law-and-regs/regulations/title-iii-regulations/#part-36-nondiscrimination-on-the-basis-of-disability-in-public-accommodations-and-commercial-facilities-as-amended-by-the-final-rules-published-on-august-11-2016-and-december-2-2016>

U.S. Access Board. (n.d.) *About the ABA Guide*. Guide to the ABA Accessibility Standards. <https://www.access-board.gov/ada/guides/>.

U.S. Access Board. (n.d.) *About the ADA Accessibility Standards*. Guide to the ADA Accessibility Standards. <https://www.access-board.gov/ada/>.

U.S. Access Board. (n.d.) *About the ADA Guides*. Guide to the ADA Accessibility Standards. <https://www.access-board.gov/ada/guides/>.

Appendix F

City of Orting Website Accessibility Report



ORTING
Washington

GOVERNMENT

PUBLIC SAFETY

RECREATION/EVENTS

UTILITIES



Public Notices



Project Updates



Permits



Pay Utility Bill



Orting Alerts



Orting's Flood Information Center

EVENTS

MAY

27

City of Orting offices are closed - Memorial Day
12:00 AM

MAY

29

City Council Meeting
07:00 PM

JUN

05

CGA Committee Meeting
09:00 AM

JUN

05

Public Works Committee Meeting
02:30 PM

JUN

Public Safety Meeting

NEWS

City Council Meeting - Wednesday, May 29th, 2024 - 7:00pm

The City of Orting City Council Meeting will be held in person at Orting City Hall located at 104 Bridge St S, Orting, WA 98360 and on Zoom.

City Council Study Session - Wednesday, May 15th, 2024 - 6:00pm

The City of Orting Study Session will be held in person at Orting City Hall located at 104 Bridge St S, Orting, WA 98360 and on the platform Zoom.

Water Main Flushing - May 6th - May 24th - 9:00pm - 5:00am

Orting Public Works annually flushes our water system to maintain clean, reliable drinking water. Flushing removes rust, sediment, and mineral deposits, ensuring optimal water quality.

The City of Orting is hiring!

The City of Orting is hiring for a Term Limited Maintenance Assistant and also for 2024 Summer Day Camp Counselors.

City Council Meeting - Wednesday, May 8, 2024 - 7:00pm

The Orting City Council meeting will be held in person at Orting City Hall located at 104 Bridge St S, Orting, WA 98360 and on Zoom.

Website Accessibility Report

City of Orting

May 24, 2024



SCJ ALLIANCE
CONSULTING SERVICES

Evaluation Criteria

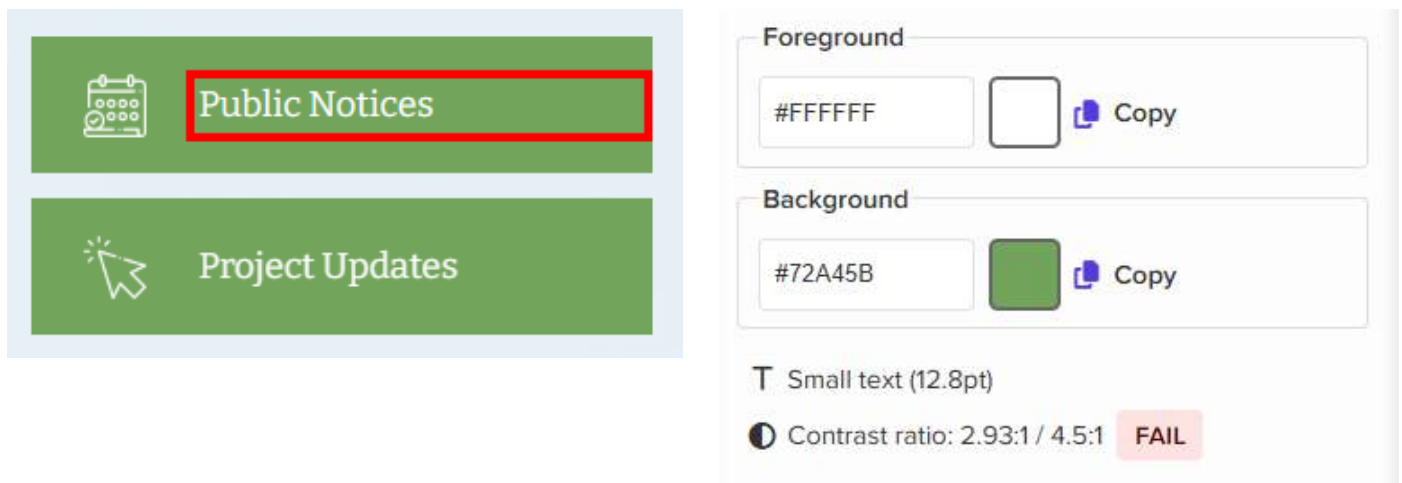
Under the American Disabilities Act (ADA)¹, websites for public use are asked to meet WCAG 2.1 AA accessibility requirements.² In order to determine if websites pass, an accessibility checker, Silktide, was used. It is a tested and approved tool by the Web Accessibility Initiative (WAI)³. The following sections detail what failed this test on the City of Orting website.

Text Contrast

To comply with WCAG AA, the color of text must sufficiently contrast with its background color, so that people with moderate visual impairments can read it. The following elements of the Orting website fail this.

1. White Text on Green Background

This specific color green does not provide enough contrast for the white text on it. To remedy this, the color contrast should be increased or a new color with a 4.5:1 contrast ratio selected.



The image shows a screenshot of two website buttons: 'Public Notices' and 'Project Updates'. The 'Public Notices' button has a calendar icon and white text on a green background, which is highlighted with a red rectangle. The 'Project Updates' button has a cursor icon and white text on a green background. To the right is a contrast checker tool. It shows the foreground color as #FFFFFF (white) and the background color as #72A45B (green). The contrast ratio is calculated as 2.93:1, which is below the required 4.5:1, resulting in a 'FAIL' status. The tool also indicates the text size is 'Small text (12.8pt)'.

Property	Value
Foreground	#FFFFFF
Background	#72A45B
Contrast ratio	2.93:1 / 4.5:1
Status	FAIL

Link Purpose

The purpose of a link should be clear from the text inside the link. Links like "learn more" are not helpful to users with assistive technology.

1. Search Bar

The link text associated with the search bar icon is just "go." It is too generic and doesn't help users understand what the link does in isolation. "search site" would be a more descriptive way to do that.

¹ADA Act Requirements for websites: <https://bit.ly/ADAReqs>

² WCAG AA Standards Quick Reference Guide: <https://www.w3.org/WAI/WCAG22/quickref/>

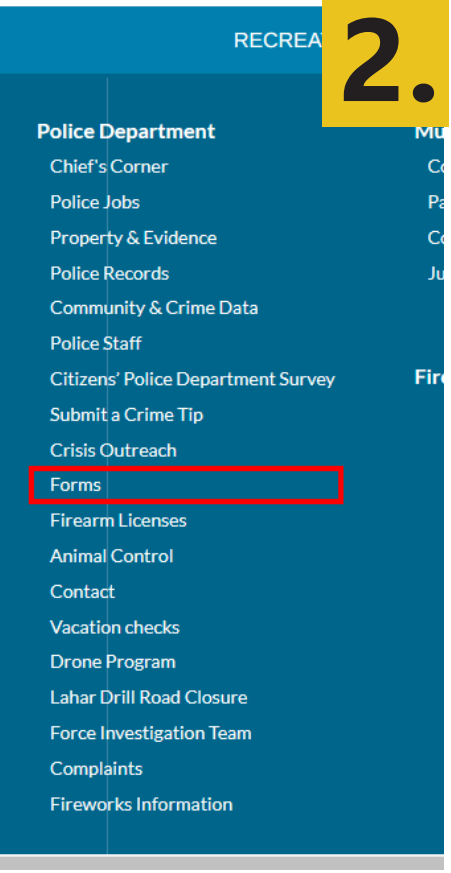
³ WAI approved tools: <https://www.w3.org/WAI/test-evaluate/tools/list/>

Links with Different Destinations

Screen reader users will see links on a page listed without context, so you should ensure the same link text is not used to point to different web addresses.

1. Forms

There are multiple links labeled forms that go to different places.



1. This link takes you here: <https://www.cityoforting.org/government/forms>

2. This link takes you here: <https://www.cityoforting.org/public-safety/police-department/forms>

2.Contact

There are multiple links labeled Contact that go to different places.



1. This link takes you here: <https://www.cityoforting.org/public-safety/police-department/contact>

2. This link takes you here: <https://www.cityoforting.org/public-safety/municipal-court/contact>

WCAG 2.2 AAA

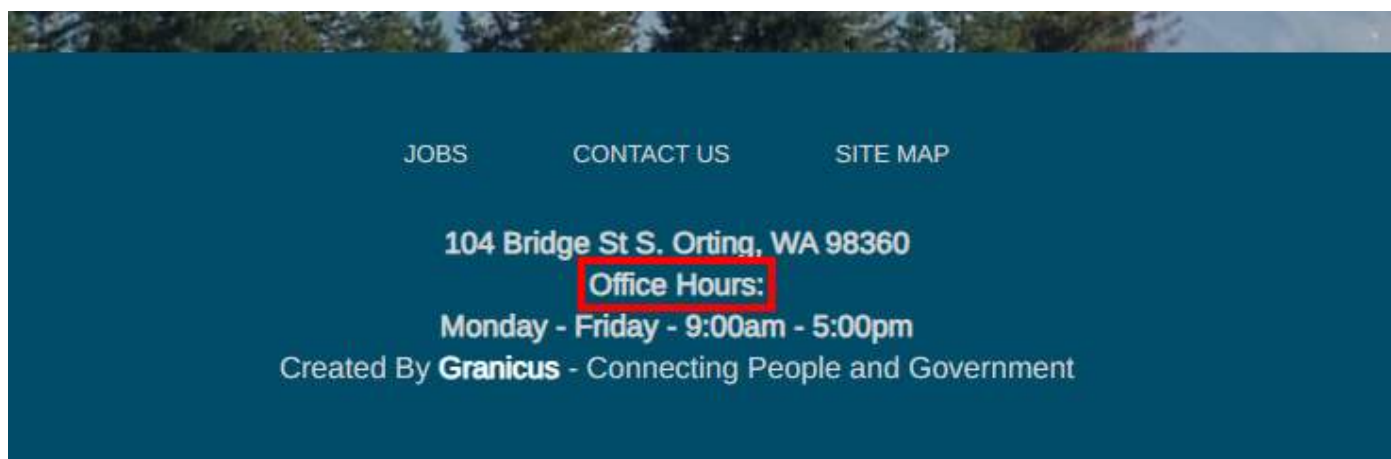
While not required to meet AAA standards, WCAG suggests that, whenever possible, they should be met to be considered truly accessible. They acknowledge that at many junctures this level of accessibility may not be possible.

Text Contrast

To comply with the strictest accessibility standard (WCAG AAA), the color of text must strongly contrast with its background color, so that people with significant visual impairments can read it.

1. Smaller white text on navy background

The footer text does not meet the contrast ratio for text that small. It can be either be made slightly larger (about 2pts) or the color contrast should be increased slightly.



O Office Hours: ^

Foreground

#D5D5D5  Copy

Background

#004C68  Copy

T Small text (12pt)

🕒 Contrast ratio: 6.41:1 / 7:1 **FAIL**

J Jobs ^

Foreground

#D5D5D5  Copy

Background

#004C68  Copy

T Small text (9.8pt)

🕒 Contrast ratio: 6.41:1 / 7:1 **FAIL**

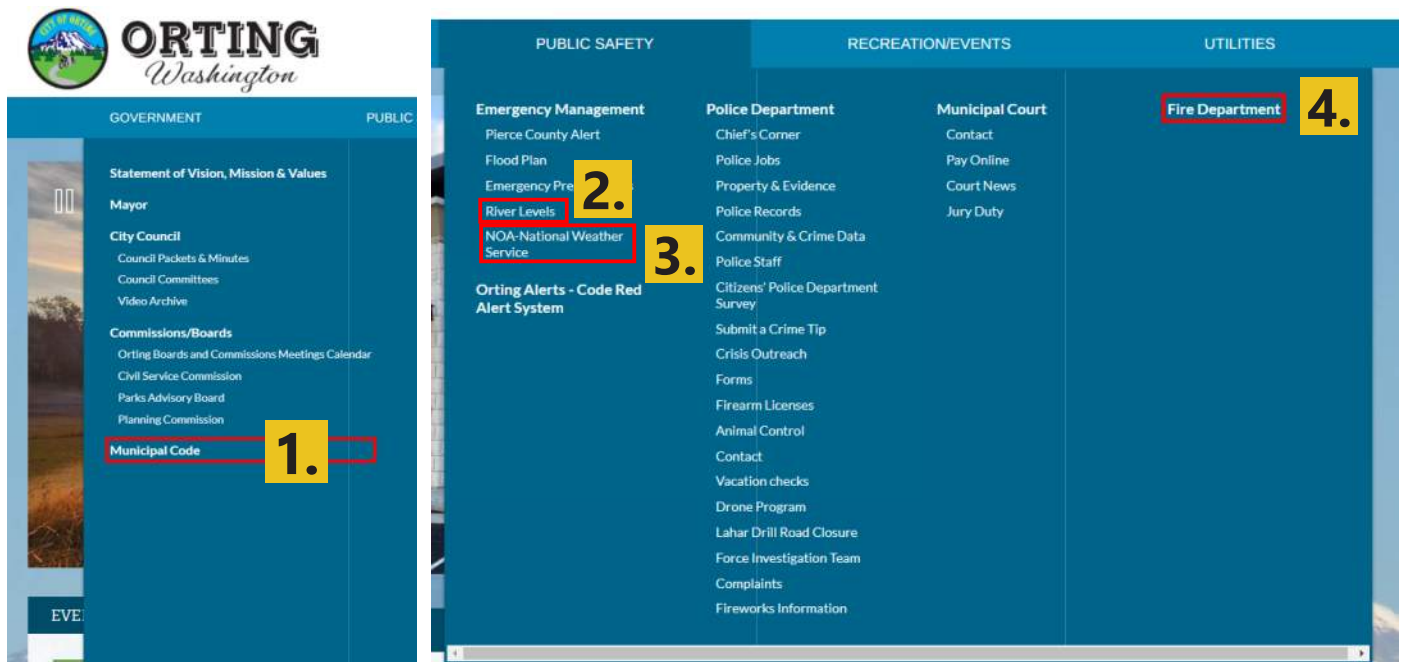
⁴Quick reference to WCAG 2.1 AAA standards: <https://www.w3.org/WAI/WCAG22/quickref/#top>

Explain Opening New Tabs

Avoid opening links in a new tab or window. Where you must do this, include an explanation in the text of the link.

1. Links in drop down menu

Several links in the drop down menu don't appear to say they open in a new tab or window. It probably shouldn't then be opening in a new window.



1. This link takes you here: <https://codelibrary.amlegal.com/codes/ortingwa/latest/overview>
2. This link takes you here: <https://www.usgs.gov/centers/washington-water-science-center>
3. This link takes you here: <https://forecast.weather.gov/MapClick.php?CityName=Orting&state=WA&site=SEW&textField1=47.0981&textField2=-122.203&e=0#.Xd2RDOhKhaS>
4. This link takes you here: <https://www.ovfr.org/>

2. Toolbar Link

This link also doesn't say it opens in a new tab or window. It probably shouldn't open in a new window.



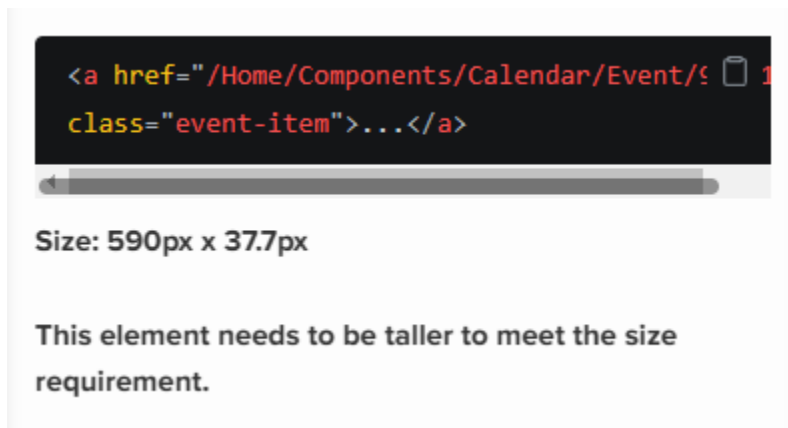
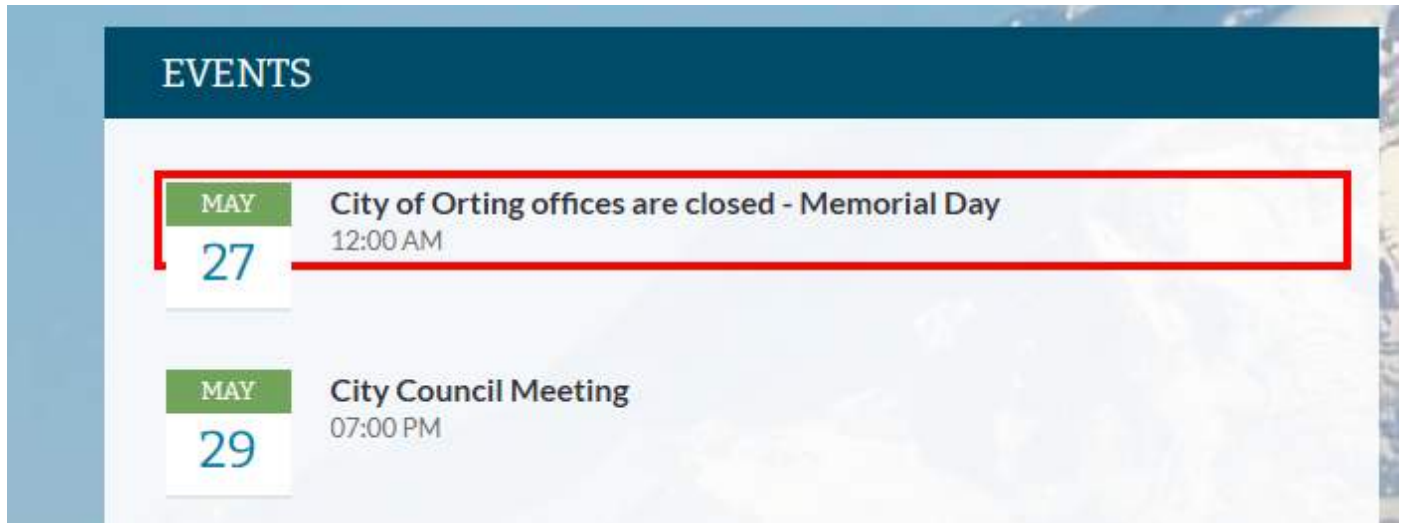
This link takes you here: <https://www.xpressbillpay.com/#/?org=Orting10907>

Large Enough Controls

All interactive components on a page, such as buttons or fields, should ideally be large enough to be easily used by people with motor impairments.

1. Calendar Links

All of the calendar links need to be taller to meet the size requirement.



Appendix G

Outreach Poster

ADA Rights-of-Way Transition Plan

Providing Access to All



The City of Orting has developed a draft plan to make roads, sidewalks, and trails more accessible to the public, with the baseline being the standard in the Americans with Disabilities Act (ADA).

What is Rights-of-Way?

The area including roads, pedestrian ramps, and sidewalks.

The Transition Plan reviews and develops the City's policies, practices, and programs involving upgrades to public rights-of-way.

Why are We Doing This?

This Plan is an opportunity to assess where the city is at in providing improved access opportunities to our population. As a first step we have evaluated city assets against the standards in the Americans with Disability Act, but we also want to know where the public finds access challenges based on your personal experience and unique mobility needs. This plan also can be used in grant applications for sidewalk and curb ramp improvement projects.

Curb Ramps

ADA accessible curb ramps allow for safe travel across streets and onto sidewalks. In the City of Orting there are 605 curb ramps in total, with only 104 being found to be compliant. Of the noncompliant, 23 just need a new detectable warning strip and the rest need to be fully replaced.



Help our city become more accessible!



Take our
Accessibility
Survey!



Scan the QR Code or type <https://bit.ly/OrtingADA> into your preferred web browser to be taken to the City of Orting ADA Survey.