TECH MEMO #6: PREFERRED ALTERNATIVES

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Project: City of Florence Transportation System Plan Update

Subject: Draft Tech Memo #6: Preferred Alternatives

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Introduction

This memorandum presents the preferred alternatives developed by the project team to address the gaps, deficiencies, and needs identified throughout the planning process. The preferred alternatives identified in this memorandum will form the basis for the plans, policies, programs, and projects included in the Florence Transportation System Plan (TSP) update.

Previous tech memos documented existing gaps and deficiencies in the transportation system (see Tech Memo #3: Existing Conditions Inventory and Analysis), future transportation system needs to address growth (see Tech Memo #4: Future Systems Conditions), and potential transportation system alternatives (see Tech Memo #5: Alternatives Analysis and Funding Program). The project team combined information provided in these and other tech memos to select the preferred alternatives and identify priorities for the preferred and cost constrained plans. The priorities reflect the goals and objectives and evaluation criteria developed for the



TSP update (see Tech Memo 2: Project Goals and Objectives and Evaluation Criteria). The information provided in this memorandum will be revised based on input from the project team, the project advisory committees, and the community.

Project Goals, Objectives, and Evaluation Criteria

Project goals, objectives, and evaluation criteria were developed early in the planning process to guide the development of the TSP update. The project goals, objectives, and evaluation criteria reflect the vision of a vibrant community and emphasize the desire to increase options for people walking, biking, and taking transit. The project goals and objectives were used to select the preferred alternatives, while the evaluation criteria were used to prioritize them in the planned and cost constrained plans.

PREFERRED ALTERNATIVES

A qualitative assessment of the transportation system alternatives was conducted by the project team to identify the preferred alternatives. The qualitative assessment considered the goals and objectives of the TSP update as well as potential environmental impacts, engineering challenges, and input from the community. The goals of the TSP update are documented in Tech Memo 2 and summarized below.

- » Goal 1: Creating a Safe Transportation System for All Prioritize the safe movement for all users and for all modes within the community along city, county, and state roadways. Minimize crashes and fatalities that occur on the transportation network.
- Soal 2: Building Facilities that Support Economic Development and Are Cost-Effective Build transportation facilities that are suited for the community and its continued economic development. Transportation decisions should balance the needs of the summer peak period and the needs of the year-round population, where those may be in conflict.
- » Goal 3: Meeting the Wide-Ranging Transportation Needs of All Users Build a transportation system that meets the needs of all users in Florence. Invest in nonautomotive transportation modes to help people travel within Florence. Connect neighborhoods to major activity centers without needing to use an automobile.
- » Goal 4: Minimizing Environmental Impacts Support policies and programs that minimize pollution and reduce impacts to the environment and climate change. Recognize that transportation impacts are more likely to be felt negatively by historically marginalized communities.
- » Goal 5: Adding Resilience to the Network and Planning for Emergencies Create a transportation network that can quickly evacuate residents in the event of a major earthquake and/or tsunami and can build resilience within the community.
- Soal 6: Coordinating with Local, Regional, and State Partners Foster good relationships with public and private partners in the common interest of building the city's transportation network.

Alternatives that received the same or similar scores were discussed by the project team and, in most cases, a preferred alternative was identified. However, in some cases two or more preferred alternatives remain and are presented below for further consideration. Attachment A contains the qualitative assessment of the alternatives.



EXISTING CITY GOALS AND POLICIES

The Florence Realization 2020 Comprehensive Plan includes 13 goals and 34 policies related to transportation, which were developed in the city's current transportation system plan from 2012. As discussed in Tech Memo #2: Goals, Objectives, and Evaluation Criteria, these goals and policies were molded into goals, objectives, and evaluation criteria to better assess project alternatives and the selection of preferred alternatives. However, not all goals and policies were rolled into the new set of project goals and objectives.

Existing goals and objectives include the following topics that are not covered by the six project goals listed above:

- » Creating an annual street maintenance plan
- » Having a transportation system that supports existing and proposed land uses
- » Providing adequate parking facilities, and avoid constructing off-street parking areas where backing onto a public street is necessary
- » Maintaining vision clearance on private property

Roadway System

The preferred alternatives developed for the roadway system include changes to the functional classification plan, new major street (arterial and collector) connections, new local street connections, traffic safety and operational enhancements, and more. Collectively, these alternatives will improve the safety and efficiency of the transportation system while accommodating the needs of future growth.

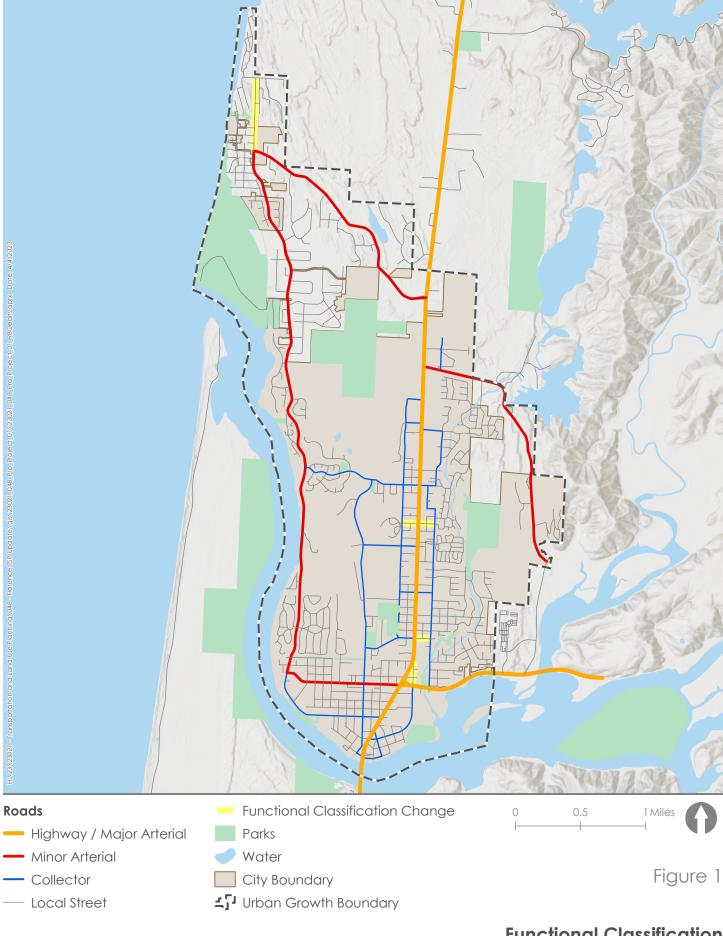
FUNCTIONAL CLASSIFICATION

The preferred alternatives include several changes to the City's functional classification plan, each of which increases the classification of City roadways from local streets to collectors. The changes reflect a review of the City's existing functional classification plan along with the functional classification plans of ODOT and Lane County. The changes are intended to better align the classifications with the roadway uses and to provide further arterial and collector connectivity within the built network. The proposed changes in functional classification are shown in summarized in Table 1 and shown in Figure 1.

Table 1. Proposed Functional Classification Changes

Street	Segment	Existing Classification	Proposed Classification
4 th Avenue	Heceta Beach Rd to Joshua Lane	Local Street	Collector
15 th Avenue	US 101 to Spruce Street	Local Street	Collector
30 th Street	Oak Street to Spruce Street	Local Street	Collector
Quince Street	OR 126 to US 101	Local Street	Collector

The City will coordinate with ODOT and Lane County to address discrepancies in the functional classification of roadways within the city.





Functional Classification Florence, Oregon



MAJOR STREET CONNECTIVITY AND ROADWAY CAPACITY

The preferred alternatives include several new major street connections (arterials and collectors) that will enhance connectivity within the city. The new connections reflect a review of existing major street connections as well as planned connections identified in the 2012 TSP. The future street system needs to balance the benefits of providing a well-connected roadway system with the connectivity challenges in the city due to existing constraints.

Table 2 identifies the preferred alternatives for the roadway system. The priorities shown in Table 2 are based on the project evaluation criteria as well as input from the project team; the priorities will be updated based on input from the advisory committees and the community. The cost estimates are based on average unit costs for similar roadway improvements in the northwest. Figure 2 illustrates the location of the preferred roadway system alternatives.

Table 2. Preferred Roadway System Alternatives

Map ID	Location	Description	Priority	Cost (\$1,000)
		Preferred Roadway Alternatives	· · · ·	
R1	US 101 (Refinement Plan)	Complete a refinement plan from Munsel Lake Road to the Siuslaw River Bridge to evaluate the potential to reconfigure of the roadway with a 3-lane cross section	High	
R2	Bay Street (Streetscape Plan)	Complete a streetscape design plan from Kingwood Street to Nopal Street to evaluate the potential reconfiguration of the roadway	High	
R3	Pacific View Drive	Extend the roadway from the southern terminus to Rhododendron Drive at New Hope Lane		
R4	Munsel Lake Road	Extend the roadway from US 101 to Oak Street (Coordinate with Project R11)		
R5	Oak Street	Extend the roadway from 46 th Street to Heceta Beach Road		
R6	20 th Street	Extend the roadway from the western terminus to Kingwood Street		
R7	Spruce Street	Extend the roadway from the northern terminus to Heceta Beach Road		
R8	Heceta Beach Road	Extend the roadway from US 101 to Spruce Street (Coordinate with Project R10)		
R9	4 th Avenue	Upgrade the roadway from Heceta Beach Rd to Joshua Lane to Collector standard		
R10	Quince Street	Upgrade the roadway from OR 126 to US 101 to Collector standard		
R11	Rhododendron Drive	Install pull-out on the west side of the roadway where feasible		
		Preferred Intersection Alternatives		
R121	US 101/Heceta Beach Road	Reconfigure the intersection/modify the traffic control (e.g., traffic signal, roundabout) when warranted		



R13 ¹	US 101/Munsel Lake Road	Reconfigure the intersection/modify the traffic control (e.g., traffic signal, roundabout) when warranted
R14 ¹	US 101/35 th Street	Restripe the eastbound approach to the intersection to maximize the available storage
R15 ¹	US 101/27 th Street	Reconfigure the intersection/modify the traffic control (e.g., traffic signal, roundabout) when warranted
R16 ¹	US 101/15 th Street	Reconfigure the intersection/modify the traffic control (e.g., traffic signal, roundabout) when warranted
R171	US 101/OR 126	Restripe the eastbound and southbound approaches to maximize the available storage
R18 ¹	OR 126/Quince Street	Implement turning movement restrictions (right-in/right-out/left-in)
R191	OR 126/Spruce Street	Reconfigure the intersection/modify the traffic control (e.g., traffic signal, roundabout) when warranted
R20	9 th Street/Kingwood Street	Reconfigure the intersection to all-way stop-control
R21	35 th Street/Kingwood Street	Reconfigure the intersection to all-way stop-control
R22	35 th Street/Oak Street	Reconfigure the intersection to all-way stop-control
R23	Rhododendron Drive/Jetty Road	Install separate left- and/or right-turn lanes at the intersection
		Total High Priority Cost

Total Medium Priority Cost

Total Low Priority Cost

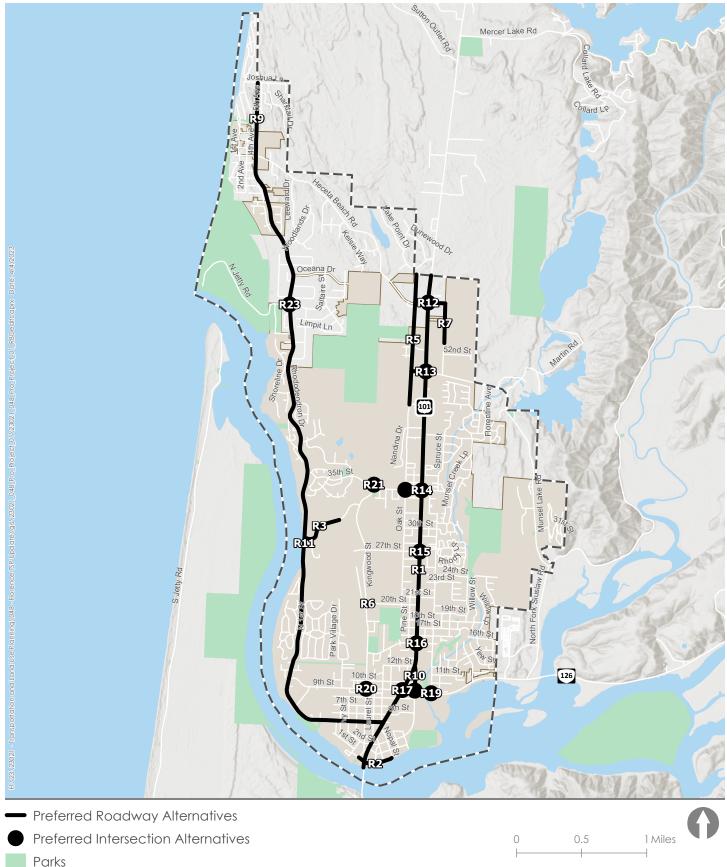
Total Cost

Note: The cost estimates do not include right-of-way acquisition or wetland mitigation due to the high variability depending on location, parcel sizes, and other characteristics. The cost estimates reflect the full cost of the projects, including costs likely to be funded by others, such as ODOT or private developers.

1. Project will require coordination with ODOT and approval from the State or Regional Traffic Engineer. Further evaluation may be required to determine the most appropriate form of traffic control.

LOCAL STREET CONNECTIVITY

Several local street connections were identified for the Florence TSP update. Figure 3 illustrates the location and general orientation of the connections. Roadway alignments and cost estimates are not provided as they are anticipated to be determined as part of future development. Any local street connections that are desired to be city-initiated projects should be identified as a high priority and included in the costconstrained plan. The City will refer to the local street connections shown in Figure 3 during development review to ensure future development and redevelopment improve local street access and circulation within the city.



Parks

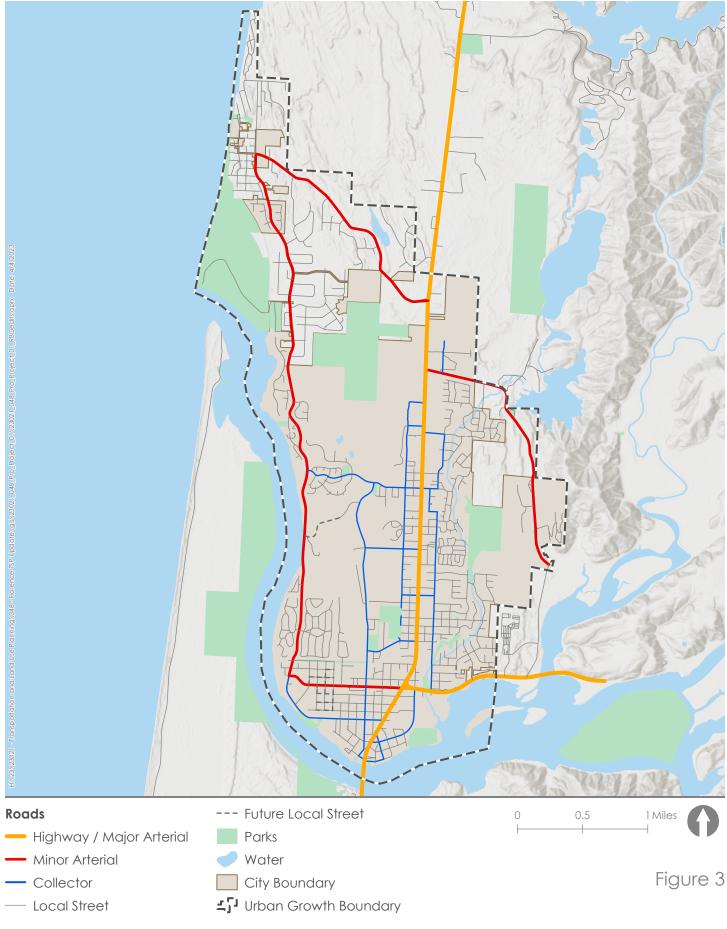
Water City Boundary

Liver Urban Growth Boundary





Figure 2







TRAFFIC SAFETY

The preferred alternatives developed for the roadway system also include traffic safety enhancements at locations with a history of fatal and severe injury crashes as well as locations with high crash rates. Table 3 identifies the preferred alternatives to address traffic safety. The priorities shown in Table 3 are based on the project evaluation criteria as well as input from the project team; the priorities will be updated based on input from the advisory committees and the community. The cost estimates are based on average unit costs for similar roadway improvements in the northwest. Figure 4 illustrates the location of the preferred traffic safety alternatives.

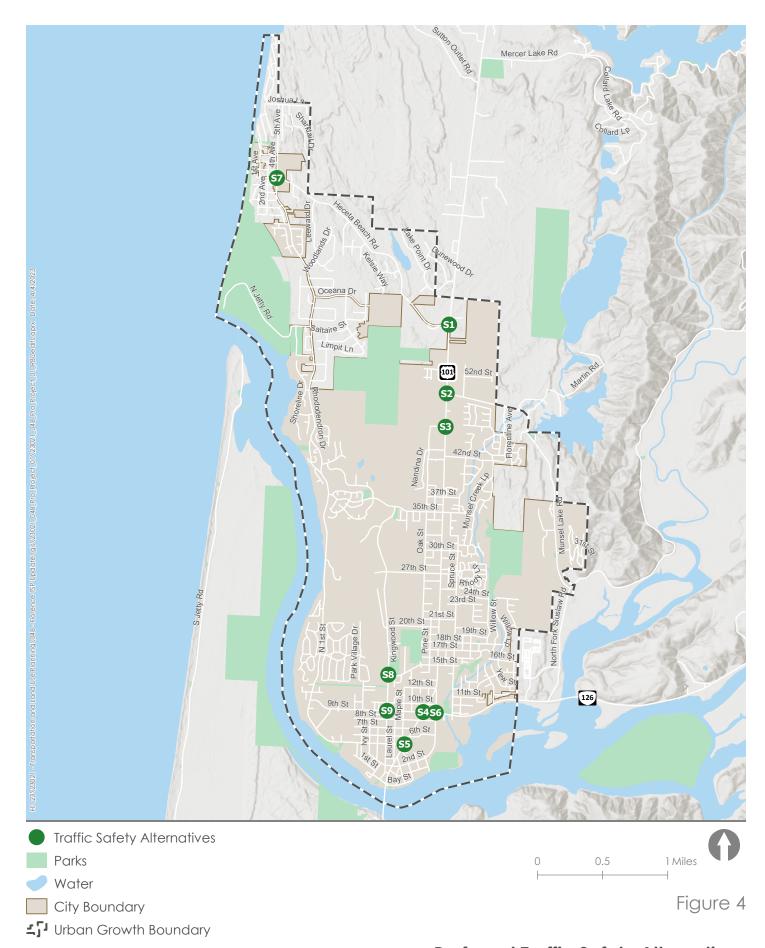
Table 3. Preferred Traffic Safety Alternatives

Map ID	Location	Description Priority (S	Cost \$1,000)
\$1	US 101/Heceta Beach Road	Install advance intersection warning signs with flashing beacons; install southbound dynamic speed feedback sign after entering Florence; and install intersection lighting	
\$2	US 101/Munsel Lake Road	Install advance intersection warning signs with flashing beacons and install intersection lighting	
\$3	US 101/46 th Street	Install advance intersection warning signs with flashing beacons; install street name signs; install intersection lighting; and trim/remove vegetation	
S4	US 101/OR 126	Increase visibility of traffic signal heads (larger bulbs, reflective backplates, etc.)	
\$5	US 101/ Rhododendron Drive	Increase visibility of traffic signal heads (larger bulbs, reflective backplates, etc.)	
\$6	OR 126/Quince Street	Install additional street lighting and evaluate need for traffic control modification (coordinate with Project R17)	
\$7	Rhododendron Drive/Heceta Beach Road	Install advance intersection warning signs on Heceta Beach Road; trim vegetation in SE and SW corners to increase sight distance; and install intersection lighting	
\$8	Kingwood Street/ 15 th Street	Install advance intersection warning signs on Kingwood Street and trim vegetation in SE corner to increase sight distance	
\$9	Kingwood Street/ 9 th Street	Install advance intersection warning signs on 9 th Street; install additional intersection lighting; and evaluate need for traffic control modification (coordinate with Project R19)	
		Total High Priority Cost	
		Total Medium Priority Cost	
		Total Low Priority Cost	
		Total Cost	

Note: The cost estimates do not include right-of-way acquisition or wetland mitigation due to the high variability depending on location, parcel sizes, and other characteristics. The cost estimates reflect the full cost of the projects, including costs likely to be funded by others, such as ODOT or private developers.

^{1.} Project will require coordination with ODOT and approval from the State or Regional Traffic Engineer.

^{2.} Speed feedback signs are considered enforcement tools, and the City will be expected to fund, operate, and maintain the speed feedback signed under an ODOT permit.







In addition to the Safety Alternatives identified in Table 3, several additional alternatives were considered along specific roadways:

- » US 101 and OR 126 implement traffic calming/speed reduction treatments on at the approach to major intersections.
- » Heceta Beach Road implement traffic calming/speed reduction treatments from Rhododendron Drive to US 101.
- » Munsel Lake Road implement traffic calming/speed reduction treatments from US 101 to N Fork Road.
- » N Fork Road implement traffic calming/speed reduction treatments from US 101 to Munsel Lake Road.
- » Kingwood Street implement traffic calming measures/speed reduction treatments from 20th Street to 35th Street.
- » Oak Street implement traffic calming measures/speed reduction treatments from 35th Street to 46th Street.
- » Park Village Drive-Loop implement traffic calming/speed reduction treatments around loop.

ACCESS MANAGEMENT

Numerous driveways and street connections increase the number of conflict points and potential for collisions and decrease mobility and traffic flow. *Tech Memo 5* identifies potential access management alternatives to preserve transportation system investments and guard against deteriorations in safety and increased congestion. The alternatives include:

- » Update the city-wide access spacing standards to include spacing between driveways,
- » Define a variance process for when the standard cannot be met, and
- Establish an approach for access consolidation over time to move in the direction of the access spacing standards at each opportunity.

Access Spacing Standards

The City's access spacing standards will continue to be determined by functional classification and provide standards for minimum intersection and driveway spacing. However, they will also include minimum spacing between driveways. Table 4 summarizes City's access spacing standards.

Table 4: City Access Spacing Standards

Functional Classification	Minimum Spacing Between Intersections (ft)	Minimum Spacing between Intersections and Driveways (ft)	Minimum Spacing between Driveways (ft)
Alley	N/A	15	N/A
Local Street	125	25	25
Collector Street	250	30	125
Arterial Street	250	50	125



Access Management Policies

The access management policies are provided below.

- » Defer to ODOT access spacing standards and policies on ODOT facilities.
- » Ensure all new developments meet access spacing standards.
- » Consolidate non-conforming access points as part of redevelopment to move in the direction of access spacing standards.
- Establish access variance policies for parcels whose highway/street frontage, topography, or location would otherwise preclude conforming access spacing.

A comprehensive list of potential access spacing variance policies and an approach for access consolidation are provided in Tech Memo 5.

Pedestrian System

The preferred alternatives developed for the pedestrian system include sidewalks that fill gaps and provide new facilities along city streets, shared-use paths/trails that augment and support the sidewalks, and enhanced crossings that enable people to safely cross streets. Collectively, these alternatives will help enhance and expand the multimodal transportation system and encourage walking and other non-motorized trips consistent with Goal 1 and Goal 3 of the TSP Update.

PEDESTRIAN SYSTEM ALTERNATIVES

Table 5 identifies the preferred alternatives developed for the pedestrian system. The priorities shown in Table 5 are based on the project evaluation criteria as well as input from the project team; the priorities were updated based on input from the Stakeholder Transportation Advisory Committee and the community. The cost estimates are based on average unit costs for similar roadway improvements in the northwest. Figure 5 illustrates the location of the preferred pedestrian system alternatives.

Table 5. Preferred Pedestrian System Alternatives

Map ID	Location	Description	Priority	Cost (\$1,000)
		ODOT Streets		
P 1	US 101 37 th St to UGB	Complete sidewalks on both sides of the street		
P2	US 101 37 th St to Siuslaw River Bridge	Reconstruct sidewalks with landscape strips OR implement traffic calming (see above)	Low	
P3	OR 126 US 101 to N Fork Road	Construct sidewalks on both sides of the street from Spruce Street to Tamarack Street and a shared-use path on the north side from Tamarack Street to N Fork Road		



		Lane County Streets		
	Heceta Beach Rd	tune County sneets		
P4	US 101 to Rhododendron Dr	Construct shared-use path on one side of the street (include landscape strip as feasible)		
P5	Munsel Lake Rd US 101 to Spruce St	Construct sidewalks with landscape strips on one side of the street and a shared-use path on the other side of the street		
P6	Munsel Lake Rd Spruce St to Ocean Dunes Dr	Construct shared-use path on one side of the street (include landscape strip as feasible)		
P7	Munsel Lake Rd Ocean Dunes Dr to N Fork Rd	Construct shared-use path on one side of the street (include landscape strip as feasible)		
P8	N Fork Rd OR 126 to Munsel Lake Rd	Construct shared-use path on one side of the street (include landscape strip as feasible)	Low	
P9	N Jetty Rd Rhododendron Dr to North Jetty Beach	Construct shared-use path on one side of the street (include landscape strip as feasible)		
		City Streets – Arterial		
P10	9th St US 101 to Rhododendron Dr	Do nothing	N/A	N/A
P11	Rhododendron Dr US 101 to Hemlock St	Do nothing	N/A	N/A
P12	Rhododendron Dr Hemlock St to 9 th St	Construct sidewalks on the south/west side of the street	Low	
P13	Rhododendron Dr 9 th St to Wild Winds St	Construct shared-use path on one side of the street (include landscape strip as feasible)	High	
P14	Rhododendron Dr Wild Winds St to 35 th St	Construct shared-use path on one side of the street (include landscape strip as feasible)	High	
P15	Rhododendron Dr 35 th St to Heceta Beach Rd	Construct shared-use path on one side of the street (include landscape strip as feasible)	High	
		City Streets – Collector		
P16	2nd St US 101 to Harbor St	Fill in sidewalk gaps on both sides of the street within Old Town		
P17	21st St Oak St to US 101	Do nothing	N/A	N/A
P18	21st St	Fill in sidewalk gans on both sides of the street		
110	US 101 to Spruce St	Fill in sidewalk gaps on both sides of the street		



	US 101 to Kingwood St			
P20	35th St Rhododendron Dr to Kingwood St	Construct sidewalks on both sides of the street	High	
P21	35th St Kingwood St to Oak St	Fill in sidewalk gaps on both sides of the street	High	
P22	35th St Oak St to US 101	Fill in sidewalk gaps on both sides of the street	High	
P23	35th St US 101 to Spruce St	Do nothing	N/A	N/A
P24	42nd St US 101 to Spruce St	Construct sidewalks on both sides of the street		
P25	43 rd St Oak St to US 101	Fill in sidewalk gaps on both sides of the street		
P26	46th St Oak St to US 101	Do nothing	N/A	N/A
P27	Airport Rd/15 th St Kingwood St to US 101	Fill in sidewalk gaps on both sides of the street		
P28	Bay St Kingwood St to Nopal St	Reconstruct sidewalks to increase width	High	
P29	Kingwood St Bay St to 9 th St	Fill in sidewalk gaps on both sides of the street		
P30	Kingwood St 9 th St to Airport Wy	Fill in sidewalk gaps on both sides of the street		
P31	Kingwood St Airport Wy to 20 th St	Fill in sidewalk gaps on both sides of the street		
P32	Kingwood St 20 th St to 35 th St	Reconstruct sidewalks with landscape strips OR implement traffic calming (see above)		
P33	Maple St US 101 to Bay St	Do nothing	N/A	N/A
P34	Oak St 20 th St to 27 th St	Do nothing	N/A	N/A
P35	Oak St 27 th St to 35 th St	Construct sidewalk on the east side of the street		
P36	Oak St 35 th St to 46 th St	Reconstruct sidewalks with landscape strips OR implement traffic calming (see above)		
P37	Quince St 2 nd St to OR 126	Do nothing	N/A	N/A
P38	32nd-Redwood St Spruce St to 35 th St	Fill in sidewalk gaps on south and west side of the street		
P39	Spruce St 42 nd St to 35 th St	Fill in sidewalk gaps on both sides of the street		



P40	Spruce St 32 nd to 17 th St	Do nothing	N/A	N/A
P41	Spruce St 17 th St to OR 126	Fill sidewalks gaps on both sides of the street		
P42	Spruce St Munsel Lake Rd to northern terminus	Construct sidewalks on the west side of the street		
		City Streets – Other Streets of Significance		
P43	4th Ave Heceta Beach Rd to Joshua Ln	Construct sidewalks on both sides of the street (coordinate with Project R8)		
P44	20th St Kingwood St to US 101	Construct sidewalks on both sides of the street (coordinate with Project R5)		
P45	Laurel St-Old Town Wy US 101 to Maple St	Fill in sidewalk gaps on both sides of the street		
P46	30th St Oak St to US 101	Do nothing	N/A	N/A
P47	30th St US 101 to Spruce St	Do nothing	N/A	N/A
		Total High	Priority Cost	
		Total Medium	Priority Cost	
		Total Low	Priority Cost	
			Total Cost	

Table 6 identifies the preferred pedestrian crossing alternatives developed for the pedestrian system. Figure 6 illustrates the location of the preferred pedestrian crossing alternatives.

Table 6. Preferred Pedestrian Crossing Alternatives

Map ID	Location	Description	Priority	Cost (\$1,000)
		ODOT Streets		
C1	US 101	Install enhanced crossing treatments on US 101 at 46 th St, 42 nd St, 27 th St, and 20 th St, as well incorporating bicycle infrastructure into existing crossing at 15 th St		
C2	US 101	Install protected intersections at all signalized intersections; include at future intersection if a signal is being constructed		
C3	US 101	Add leading pedestrian intervals on US 101 at 35^{th}St and 21^{st}St		



		Lane County Streets
C4	Munsel Lake Rd	Install enhanced crossing treatments on Munsel Lake Rd at Munsel Landing County Park and at Ocean Dunes Dr
		City Streets
C5	9 th St	Install enhanced crossing treatments at existing crosswalks: Maple St, Kingwood St, and PeaceHealth access road
C6	Rhododendron Dr	Install enhanced crossings treatments on Rhododendron Dr at Kingwood St, Hemlock St, Greentrees Village, 35 th St, and Heceta Beach Rd
C7	Kingwood St	Install enhanced crossing treatments at Bay St, 27 th St, and 35 th St
C8	Oak St	Install enhanced crossing treatments at 35 th St, 27 th St, and 21 st St; install second crosswalk and school crosswalk signs at 30 th St
C9	Quince St	Install enhanced crossing treatments at 6th St for Florence Events Center access
C10	Spruce St	Install enhanced crossing treatments at shared-use path locations at 13 th St, 27 th St, and 29 th St
C11	Old Town	Install marked crosswalks with curb extensions on 2 nd St at Nopal St, Oak St, and Harbor St; install midblock crossings at Bay St and the boardwalk
		Total High Priority Cost
		Total Medium Priority Cost
		Total Low Priority Cost
		Total Cost

Table 7 identifies the preferred shared-use path alternatives developed for the pedestrian system. Figure 7 illustrates the location of the preferred shared-use path alternatives.

Table 7. Preferred Shared-use Path Alternatives

Map ID	Location	Description	Priority	Cost (\$1,000)
SU1	Munsel Creek Shared-use Path	Install and/or improve the segments of the Munsel Creek Trail between Quince Street and 16th Street and between 25th Street and 29th Street. Extend the path from the Munsel Lake Greenway to Munsel Lake Road.		
SU2	Estuary Trail	Install a shared-use path from the Boardwalk in Old Town to south end of Munsel Creek Trail.		
SU3	12 th Street Shared- use Path	Install and/or improve the existing path between Kingwood Street and Rhododendron Drive.		
SU4	Oak Street Shared-use Path	Install a shared-use path from Oak Street at $15^{\rm th}$ Street to $10^{\rm th}$ Street.		
SU5	Ivy Street Shared- Install a shared-use path from 12 th Street to 8 th Street. use Path			



SU6	Elm Street Shared- use Path	Install a shared-use path in the existing Elm Street right-of-way between 8 th Street and Rhododendron Drive.		
SU7	Driftwood Street Shared-use Path	Install a shared-use path in the existing Driftwood Street right-of-way between 12 th Street and 11 th Street.		
SU8	North Florence County Park Shared-use Path	nty Park County Park in the North Florence area.		
SU9	Oceana Drive Shared-use Path			
		Total High Priority Cost		
		Total Medium Priority Cost		
		Total Low Priority Cost		
		Total Cost		

PEDESTRIAN SYSTEM POLICIES

The pedestrian system policies are provided below:

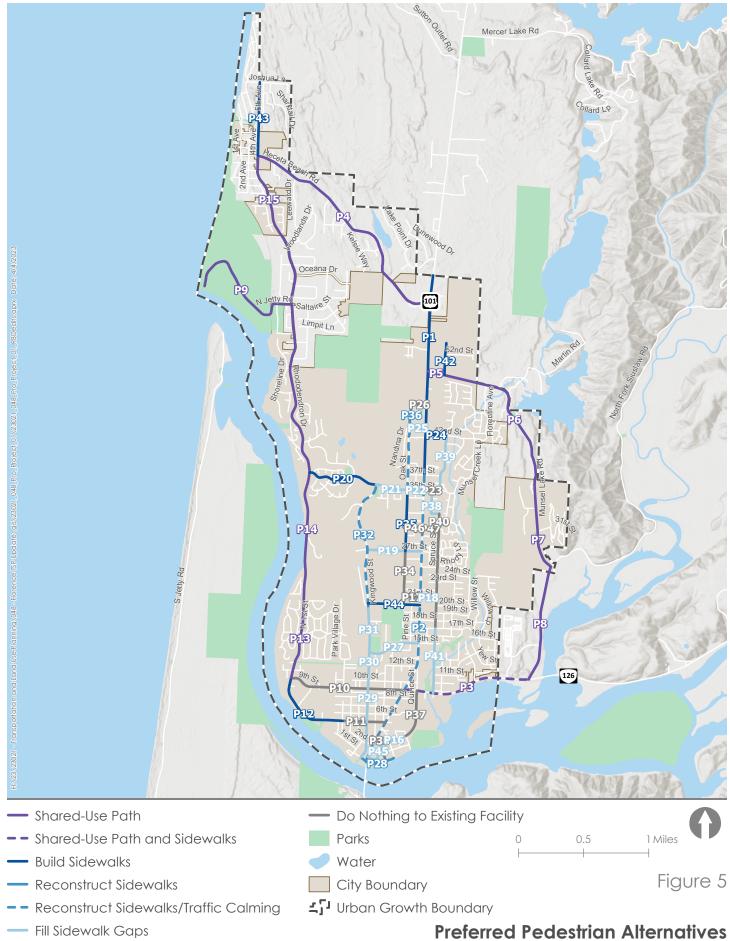
- The City will create a map (available on paper and electronically) showing safe walking routes.
- The City will educate pedestrians about the rules of the road and provide information about state law as well as City Code.
- The City will explore opportunities to further connect the shared-use path and trail system.
- » The City will systematically upgrade ADA facilities at intersections along major roadways.
- » The City will systematically upgrade sidewalks within Old Town to meet City standards.

Bicycle System

The preferred alternatives developed for the bicycle system include mixed-use shoulders, low-traffic bikeways, shared-lane pavement markings (sharrows) on-street bike lanes, buffered bike lanes, and separated bike lanes on city streets, as well as bicycle crossings, wayfinding signs, bike parking, bike corrals, and bike sharing that enable people to safely cross streets, navigate around Florence park their bicycles, and more easily use bicycles in general. Collectively, these alternatives will help enhance and expand the multimodal transportation system and encourage biking and other non-motorized.

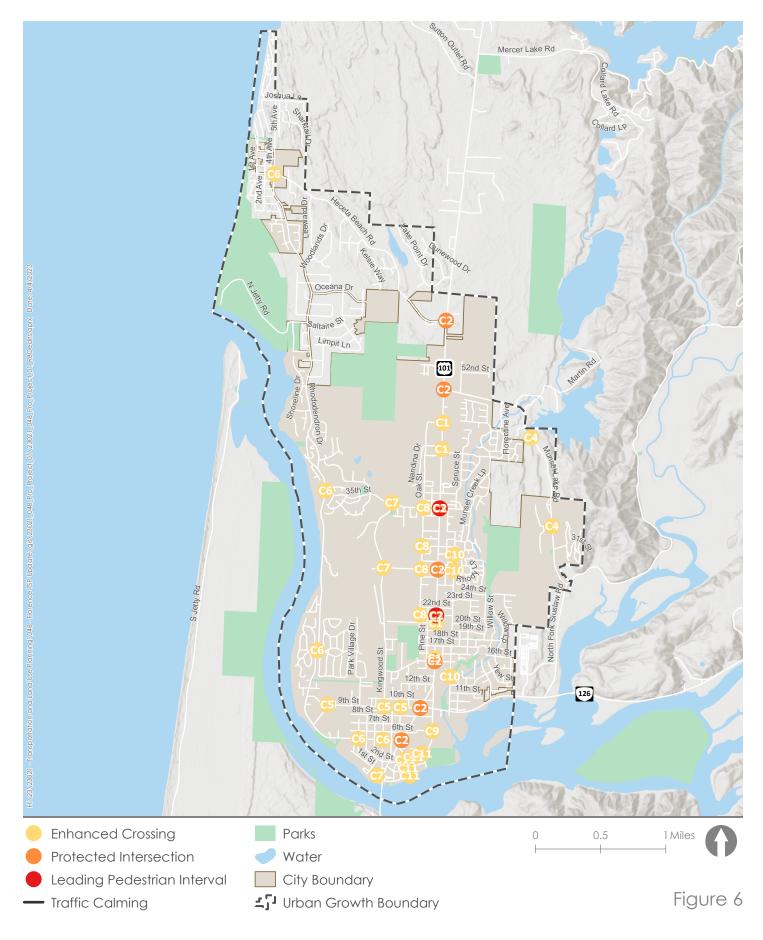
BICYCLE SYSTEM ALTERNATIVES

Table 8 identifies the preferred alternatives developed for the bicycle system. The priorities shown in Table 8 are based on the project evaluation criteria as well as input from the project team; the priorities were updated based on input from the Stakeholder Transportation Advisory Committee and the community. The cost estimates are based on average unit costs for similar roadway improvements in the northwest. Figure 8 illustrates the location of the preferred bicycle system alternatives.

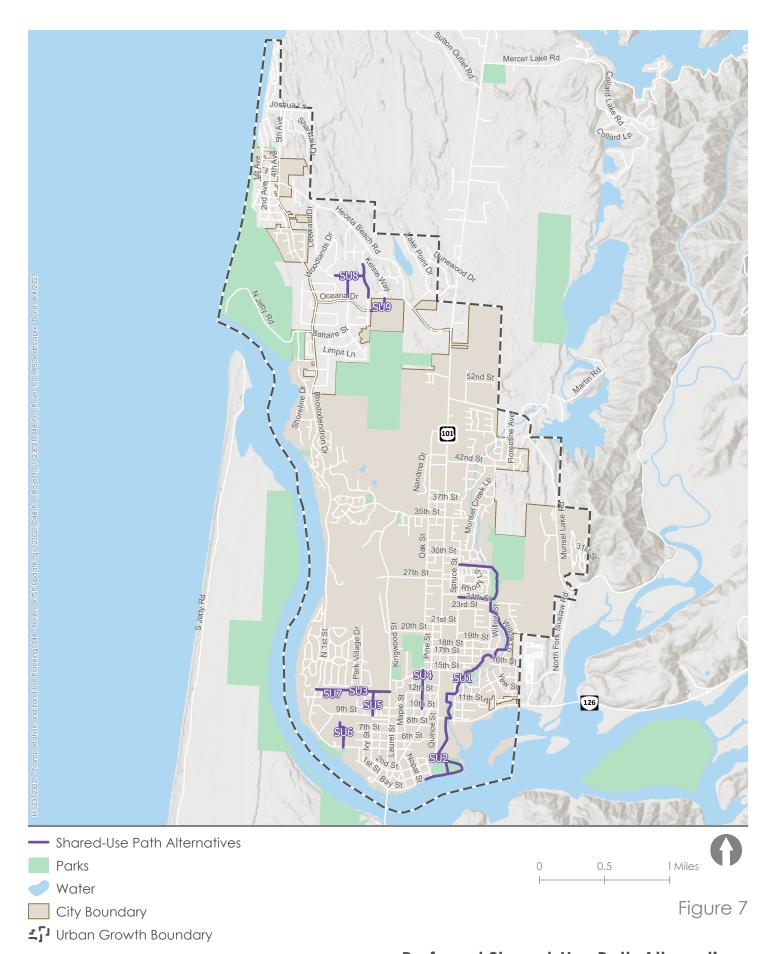


KITTELSON & ASSOCIATES

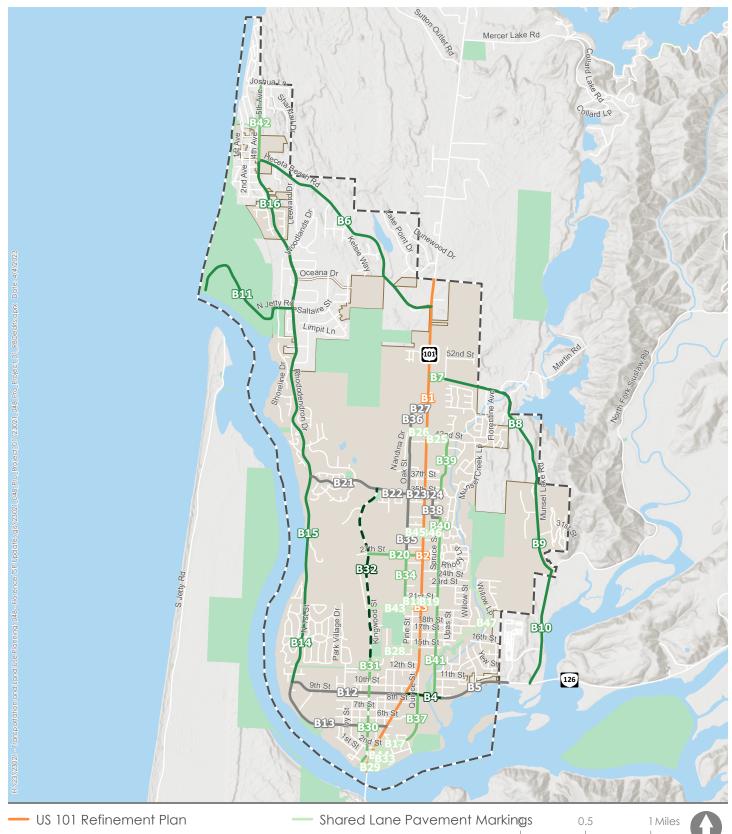
Preferred Pedestrian Alternatives Florence, Oregon











- Buffered Bike Lanes
- Buffered Bike Lanes/Traffic Calming
- Shoulder Bikeway
- Bike Lanes
- Bike Lanes/Traffic Calming



Do Nothing to Existing Facilities



Water

City Boundary

בֹין Urban Growth Bounda**Preferred Bicycle Alternatives**Florence, Oregon

Figure X



Table 8. Preferred Bicycle System Alternatives

Map ID	Location	Description		Cost (\$1,000)
В1	US 101 UGB to 32 nd St	Construct buffered bike lanes on both sides of the street (requires narrowing travel lanes) OR construct bike facilities consistent with US 101 Refinement Plan		
B2	US 101 32 nd St to 22 nd St	Construct buffered bike lanes on both sides of the street (requires narrowing travel lanes) OR construct bike facilities consistent with US 101 Refinement Plan		
ВЗ	US 101 22 nd St to Siuslaw River Bridge	Construct buffered bike lanes on both sides of the street (requires narrowing travel lanes) OR construct bike facilities consistent with US 101 Refinement Plan		
В4	OR 126 US 101 to Tamarack St	Construct buffered bike lanes on both sides of the street (requires narrowing travel lanes)		
В5	OR 126 Tamarack St to UGB	Do nothing		N/A
		Lane County Streets		
В6	Heceta Beach Rd US 101 to Rhododendron Dr	Construct shoulder bikeways on both sides of the High		
В7	Munsel Lake Rd US 101 to Spruce St	Construct on-street bike lanes on both sides of the street (coordinate with Project P5)		
В8	Munsel Lake Rd Spruce St to Ocean Dunes Dr	Construct shoulder bikeways on both sides of the street (coordinate with Project P6)		
В9	Munsel Lake Rd Ocean Dunes Dr to N Fork Rd	Construct shoulder bikeways on both sides of the street (coordinate with Project P7)		
B10	N Fork Rd OR 126 to Munsel Lake Rd	Construct shoulder bikeways on both sides of the street (coordinate with Project P8)		
B11	N Jetty Rd Rhododendron Dr to North Jetty Beach	Construct shoulder bikeways on both sides of the street (coordinate with Project P9)		
		City Streets – Arterials		
B12	9th St US 101 to Rhododendron Dr	Do nothing		
B13	Rhododendron Dr US 101 to 9 th St	Do nothing		
B14	Rhododendron Dr	Construct shoulder bikeways on both sides of the street (coordinate with Project P12)	High	



	9 th St to Wild Winds St			
B15	Rhododendron Dr Wild Winds St to 35 th St	Construct shoulder bikeways on both sides of the street (coordinate with Project P13)	High	
B16	Rhododendron Dr 35 th St to Heceta Beach Rd	Construct shoulder bikeways on both sides of the street (coordinate with Project P14) High		
	City Streets – Collectors			
B17	2nd St US 101 to Harbor St	Extend shared lane pavement markings from Maple St to US 101		
B18	21 st St Oak St to US 101	Add shared lane pavement markings		
B19	21st St US 101 to Spruce St	Add shared lane pavement markings		
B20	27th St US 101 to Kingwood St	Construct bike lanes from Oak \$t to U\$ 101		
B21	35th St Rhododendron Dr to Kingwood St	Do nothing	N/A	N/A
B22	35th St Kingwood St to Oak St	Do nothing	N/A	N/A
B23	35th St Oak St to US 101	Do nothing	N/A	N/A
B24	35th St US 101 to Spruce St	Do Nothing	N/A	N/A
B25	42nd St US 101 to Spruce St	Add shared lane pavement markings from Spruce to eastern terminus and create bike connection between the eastern terminus and Munsel Creek Lp		
B26	43rd St Oak St to US 101	Add shared lane pavement markings		
B27	46th St Oak St to US 101	Do nothing	N/A	N/A
B28	Airport Rd/15 th St Kingwood St to US 101	Add shared lane pavement markings		
B29	Bay St Kingwood St to Maple St	Add shared lane pavement markings		
В30	Kingwood St Bay St to 9 th St	Construct bike lanes on both sides of the street (requires removing on-street parking) OR implement traffic calming measures		
B31	Kingwood St 9 th St to Airport Wy	Construct bike lanes on both sides of the street from 9th St to 10th St (will require removing on-street parking) OR implement traffic calming measures		



B32	Kingwood St Airport Wy to 35 th St	Construct buffered bike lanes on both sides of the street (requires narrowing travel lanes) OR implement traffic calming measures			
В33	Maple St US 101 to Bay St	Add shared lane pavement markings			
B34	Oak St 20 th St to 27 th St	Construct bike lanes from 20 th St to Siuslaw Middle School Dwy (requires removing on-street parking)			
B35	Oak St 27 th St to 35 th St	Do nothing	Do nothing		
B36	Oak St 35 th St to 46 th St	Do nothing			
B37	Quince St 2 nd St to OR 126	Construct bike lanes on both sides of the street (requires removing on-street parking)			
B38	32nd-Redwood St Spruce St to 35 th St	Do nothing	N/A	N/A	
B39	Spruce St 42 nd St to 35 th St	Construct bike lanes on both sides of the street from 37th to 42nd (requires removing on-street parking)			
B40	Spruce St 32 nd St to 17 th St	Construct bike lanes on both sides of the street from 25 th St to 17 th Street (requires removing on-street parking)			
B41	Spruce St 17 th St to OR 126	Construct bike lanes on both sides of the street (requires removing on-street parking)			
City Streets – Other Roads of Interest					
B42	4th Ave Heceta Beach Rd to Falcon St	Construct bike lanes on both sides of the street (coordinate with Project R8)			
B43	20th St Kingwood St to US 101	Add shared lane pavement markings (coordinate with Project R5)			
B44	Laurel St-Old Town Wy US 101 to Maple St	Add shared lane pavement markings			
B45	30th St Oak St to US 101	Add shared lane pavement markings			
B46	30th St US 101 to Spruce St	Add shared lane pavement markings			
B47	Park Dr/18 th St/Willow Lp/Willow St	/Willow Add shared lane pavement marking			
		Total High Priority Cost			
		Total Medium Priority Cost			
		Total Low Pric	-		
	Total Cost				



BICYCLE SYSTEM POLICIES

The bicycle system policies are provided below:

- » The City will perform regular street sweeping of US 101.
- » The City will perform regular enforcement of "No Parking in Bicycle Lanes".
- The City will institute a program to educate and encourage existing businesses to provide bicycle parking.
- » The City will work toward becoming a "Bicycle-Friendly Community".
- >> The City will create a map (available on paper and electronically) showing designated bicycle route through town (roads with bicycle lanes, shared-use paths, sharrows).
- » The City will partner with the Port to promote bicycle camping
- » The City will educate bicyclists about rules of the road.
- The City will partner with Peace Health to promote Bike to Work/School month, week, day
- » The City will replace dangerous storm drains with drains that have cross-members.

Transit System

Public transit service within Florence is provided by Rhody Express (for local trips), Link Lane (for intercity trips to Eugene and to Yachats), and Coos County Area Transit (for intercity trips to Coos Bay). In addition to coordinating with local and regional transit agencies to help implement their planned service enhancements, Florence can support development of a more efficient transit service by providing easy and safe walking and bicycling connections between key roadways, neighborhoods, and local destinations; by working with Rhody Express to explore local route improvements; by working with transit providers to improve service frequency and marketing in Florence; by providing amenities, such as shelters and benches, at transit stops; and by planning for park-and-ride and mobility hub locations. These types of enhancements can encourage increased transit ridership consistent with Goal 3 and Goal 6 of the TSP update.

TRANSIT SYSTEM ALTERNATIVES

Table 9 identifies the preferred alternatives developed for the transit system. The priorities shown in Table 9 are based on the project evaluation criteria as well as input from the project team; the priorities were updated based on input from the Stakeholder Transportation Advisory Committee and the community. Figure 9 illustrates the location of the preferred transit system alternatives, where applicable.



Table 9. Preferred Transit System Alternatives

Map ID	Location	Description	Priority	Cost (\$1,000)
T1	Local Service	Explore adding service to Rhododendron Dr and Heceta Beach neighborhood		
Т2	Intercity Service	Increase intercity service frequency, access to Eugene Airport and Southwest Oregon Regional Airport		
Т3	Marketing	Improve marketing for intercity service, specifically for Link Lane service to Eugene and to Yachats		
T4	Transit Center	Establish a transit center at the Grocery Outlet bus stop on 21st St, add bathroom facilities to transit center center, formally establish a park-and-ride with Grocery Outlet, add transit shelters and/or benches to existing stop locations.		
T5	Bus Stops	Add shelters and/or benches to existing bus stops and build bus stops that are accessible.		
Т6	Park and Rides	Explore establishing a park-and-ride at Three Rivers Casino and Florence Events Center		
17	Explore establishing mobility hubs at Grocery Outlet (primary location), Port of Siuslaw parking lot (secondary location), and Florence Events Center (secondary location)			
		Total High Pr	iority Cost	
		Total Medium Pr	iority Cost	
		Total Low Pr	iority Cost	
			Total Cost	

TRANSIT SYSTEM POLICIES

The transit system policies are provided below:

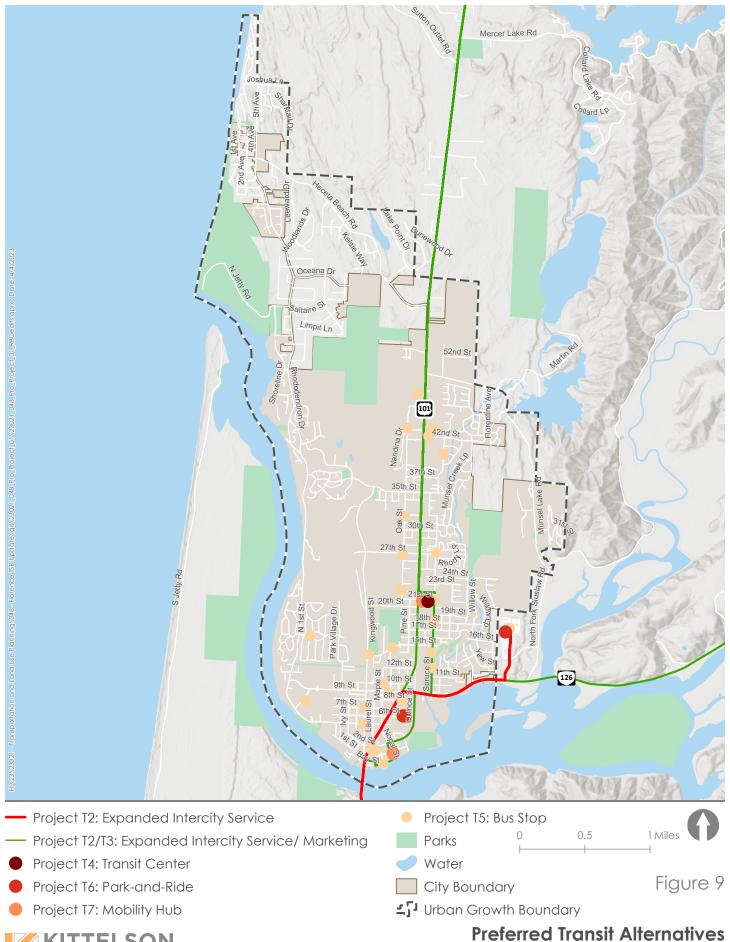
The City will work with Rhody Express, Link lane, and Coos County Transit to ensure adequate access to local transit stops.

Freight, Air, and Rail Systems

The freight, air, and rail transportation systems are smaller transportation networks within Florence that are confined to more limited locations within the city (or outside of the city for the rail network). Each of these systems is detailed below.

FREIGHT SYSTEM POLICIES

The Oregon Highway Plan identifies OR 126 and US 101 (from the intersection of OR 126 south) as freight routes in Florence. US 101 to the north of OR 126, while not designated as a freight route, clearly has significant freight capacity. Additionally, the segment of US 101 from OR 126 to Bay Street is designated as a Special Transportation Area (STA), where local access needs to be weighed against broader freight needs.



& ASSOCIATES

Preferred Transit Alternatives Florence, Oregon



Two of the major freight generators identified in *Tech Memo #3A: Transportation System Inventory* (Florence Municipal Airport and Florence Industrial Park) are located off Kingwood Street, as well as the City's Public Works Department building. Of the remaining freight generators (local grocery stores and the Port of Siuslaw), the city's four grocery stores are all located on US 101, and the Port of Siuslaw is accessible from OR 126 via Quince Street or from US 101 via 2nd Street.

The freight alternatives identified in Tech Memo #5: Alternatives Analysis and Funding Program were determined to be better suited as policies. These freight policies include:

- » Accommodate local freight traffic on Kingwood Street via 9th Street, 27th Street, and 35th Street.
- » Ensure that planned pedestrian and bicycle improvements on City streets with local freight traffic (Kingwood Street, 9th Street, 27th Street, 35th Street, Quince Street, and 2nd Street) are designed to allow for safe and distinct space for all modes.
- » Develop policies related to maintenance along designated freight routes to ensure the facilities do not become degraded over time.
- Develop policies related to pedestrian and bicycle facilities along designated freight routes to ensure greater separation of travel modes.
- >> Establish truck loading zones within the downtown area and develop policies related to the use of the truck loading zones, specifically for businesses on Bay Street.

AIR SYSTEM POLICIES

The Florence Municipal Airport is located west of Kingwood Street and accommodates small aircraft on its 3,000-foot runway. The airport completed the Airport Master Plan Update in February 2010 to better understanding existing facilities and activities, determine future airport needs, and create a capital improvement program to meet these future needs. While the projects in the Airport Master Plan Update largely fall outside of the TSP Update, there are policies that Florence can implement to support the airport. These policies include:

- » Collaborate with the Florence Municipal Airport and the Oregon Department of Aviation to ensure that future roadway connections (such as an extension of Pacific View Drive) do not impact future runway expansion.
- » Coordinate with the Oregon Department of Aviation on proposed changes to land use, zoning, or transportation within the vicinity of the airport to maintain Federal Aviation Regulation (FAR) Part 77 airspace services depicted in the Airport Master Plan Update.
- Work with neighboring residential uses to minimize issues of noise and vibration if/when night operations become a reality at the airport.

RAIL SYSTEM POLICIES

There are no rail facilities within Florence and the nearest passenger rail service is located in Eugene/Springfield. The Coos Bay Rail Link, a 134-mile rail line which runs between Eugene and Coos Bay and is operated by the Port of Coos Bay, crosses the Siuslaw River approximately 2.5 miles east of Florence. The following policies were developed to address rail transportation:



Work with Link Lane on adding runs or adjusting existing runs to better coordinate with Amtrak and Cascade POINT service at the Eugene Amtrak Station.

Safe Routes to School

Safe Routes to School (SRTS) plans make it safer for students to walk, bike, or take public transit to school. Safer routes encourage more walking and biking and provide convenient and accessible options to and from school and in surrounding neighborhoods. SRTS programs include six components known as the Six E's: evaluation, education, encouragement, engineering, enforcement, and equity. The following summarizes several plans and policies the City can implement to support SRTS within the city.

SAFE ROUTES TO SCHOOL POLICIES

The SRTS policies are provided below.

- » Coordinate with the Florence School District to develop SRTS plans for local schools.
- » Develop education programs that provide students with information on transportation options and the benefits of walking and biking to school.
- Develop encouragement programs that generate excitement and interest in walking and biking through events and activities.
- Continue to implement physical improvements to the transportation system aimed at making walking and biking to school safer, more comfortable and convenient.
 - » Several alternatives are identified within the pedestrian and bicycle sections of this memorandum that could help the city further enhance the transportation system around schools.
- » Develop an evaluation program that assesses which strategies and approaches are successful.
- Develop an equity program that ensures that program initiatives are benefiting all demographic groups.

Emerging Technology

Transportation technologies are rapidly evolving, and cities are evaluating what steps they can take to be prepared. The challenge is that most emerging technologies are initiated by the private sector and can be difficult to predict. So how can cities use their money efficiently while also seeing the benefits of emerging technology? The following summarizes several plans and policies the City can implement to prepare for emerging technology.

EMERGING TRANSPORTATION TECHNOLOGY POLICIES

The following summarizes a list of discrete steps (primarily planning and policy related) that the City can take to be prepared for the emergence of new transportation technologies.

» Create a Transportation Technology Liaison Role: This role should serve to carry out the listed tasks below.



- » Connect with cities in the surrounding area (Eugene), establish a service zone for any emerging technology coming to the area.
- Develop partnerships and programs with Lane Community College and the University of Oregon to attract students.
- » Review the development code and create avenues for flexible uses.
- » Hold public outreach to determine which emerging technologies local residents are interested in.
- » Meet with ODOT, Lane County, and other relevant jurisdictions in the surrounding area and discuss emerging technologies.
- » Establish a primary and secondary mobility hub in the City.
- » Consider adding EV charging stations at key destinations (PeaceHealth Pease Harbor Medical Center, grocery stores, Three Rivers Casino Resort, and Old Town) and EV charging requirement to development code.
- » Invest in pick-up drop-off loops and adaptive reuse design for any parking structures/lots.
- » Allow multiple ride-hailing services and micromobility services (E-scooters, bike share, etc.) to be established in Florence.

Parking Management

The preferred parking management policies and strategies are summarized below. These policies and strategies are focused on improving user information, enhancing parking management, enhancing enforcement, and increasing the parking supply. Most of these policies and strategies are applicable to Old Town; however, the City could implement them in other locations throughout the city to better manage parking demand while also improving access and circulation for all travel modes.

PARKING MANAGEMENT STRATEGIES

The preferred parking management strategies are shown in Table 10. As indicated below, most of these strategies are applicable to Old Town, but could be implemented in other areas as well.

Table 10. Preferred Parking Management Strategies

Map ID	Location	Description	Priority	Cost (\$1,000)
PM1	US 101, OR 126, and Quince St	Install wayfinding signs that direct motorists to off- street public parking facilities in Old Town		
PM2	Old Town	Develop neighborhood parking maps and how to park resources in coordination with local destinations and post them online and in prominent locations		
РМ3	Old Town	Create a parking ambassador position to provide information and guidance on parking in Old Town		
PM4	Old Town Area A	Stripe on-street parking stalls on both sides of all streets in Old Town Area A		



PM5	Old Town Area A	Install signage on both sides of all streets in Old Town Area A to indicate time limitations (3-hours), hours of enforcement (8:00 AM to 5:00 PM), and directional arrows indicating the stalls where restrictions apply
PM6	Old Town Area B	Stripe on-street parking stalls on both sides of all streets in Old Town Area B
PM7	Old Town	Implement and manage and area parking permit program for residents and employees of local businesses Old Town
PM8	Old Town/ City Wide	Implement regular parking enforcement of on-street parking regulations in Old Town and other areas as applicable
PM9	Old Town/ Citywide	Establish remote parking areas that are served by transit to relocate parking demand to the fringe area of the community
PM10	PM10 Citywide Establish public-private partnerships to open access to existing private parking facilities or construct new parking (for instance, through co-financing) to serve both site-specific users and the public	
		Total High Priority Cost
		Total Medium Priority Cost
		Total Low Priority Cost
		Total Cost

PARKING MANAGEMENT POLICIES

The preferred parking management policies are summarized below.

- » The City will establish a parking collaborative in Old Town to align the City's interest with local businesses and associations.
- The City will require good neighbor agreements between local businesses and associations to indicate how parking needs will be met and issues will be addressed.
- The City will conduct outreach to educate and inform the public about changes to parking policies and strategies in Old Town and provide information on travel options.
- The City will coordinate with community destinations to improve safety and security in Old Town (e.g., neighborhood watch, community policing, special police patrols, improved lighting, pedestrian escorts, monitoring of facilities)
- The City will continue to monitor, measure, and evaluate the performance of the parking system and adjust policies and strategies to increase efficiency.
 -)) Implement/recalibrate restrictions (e.g., time limits/users)
 - » Establish parking zones (e.g., loading zones, pick-up/drop-off zones)
 - » Reconfigure parking facilities to identify additional space for parking



Transportation Demand Management

Transportation Demand Management (TDM) is a general term used to describe any action that removes single occupancy vehicle (SOV) trips from the roadway during peak time periods. As population and employment increase in the city, the number of trips will also increase. The ability to change travel behavior and provide alternative modes will help accommodate the growth in trips without the need for significant investments in new infrastructure. A major focus of TDM is on major employers; however, there are many things the City can do to support TDM implementation. The following summarizes the preferred TDM alternatives that can be applied by the City.

- » Learn about TDM and the role it can play in achieving local planning objectives
- Encourage and require local businesses to implement TDM solutions
- Work to build partnerships with community organizations to support TDM implementation.
- Help create TDM programs to provide local TDM services
- » Improve non-motorized transportation facilities, public transit services, and other transportation services
- » Support carshare, ridesharing, bikeshare, e-scooters, and other micromobility services
- » Apply more comprehensive transportation planning, including multimodal level of service indicators when evaluating transportation improvements
- » Implement TDM strategies, such as commute trip reductions programs for employees, and special transportation management when sponsoring events that attract crowds.

TDM strategies help achieve many of the City's goals, including reduced traffic congestion, reduced parking demand, improved mobility for non-drivers, improved community livability, improved public fitness and health, and others.

Transportation System Cost Summary

Table 11 summarizes the full cost of the preferred and cost constrained plans for the TSP Update. As shown, the full cost of the preferred plan is approximately X million over the 20-year period, including X million in high priority projects, X million in medium priority projects, and X million in low priority projects. Based on the anticipated funds available for capital improvements, the cost constrained plan includes the high priority projects.

¹ The high priority projects include those that are most likely to be funded by the City over the 20-year planning horizon. The medium and low priority project are aspirational and will be funded through grants and additional funding sources as they become available and/or by private developers as part of future development.



Table 11: Planned Transportation System Cost Summary

Project Type	High Priority	Medium Priority	Low Priority	Total			
	Planned Transportation System						
Roadway	\$0	\$0	\$0	\$0			
Freight	\$0	\$0	\$0	\$0			
Safety	\$0	\$0	\$0	\$0			
Pedestrian	\$0	\$0	\$0	\$0			
Bicycle	\$0	\$0	\$0	\$0			
Transit	\$0	\$0	\$0	\$0			
Safe Routes to School	\$0	\$0	\$0	\$0			
Emerging Technology	\$0	\$0	\$0	\$0			
Parking	\$0	\$0	\$0	\$0			
TDM	\$0	\$0	\$0	\$0			
Total	\$0	\$0	\$0	\$0			

Note: TDM = Transportation Demand Management

Given limited funding, the City will need to identify additional revenue sources to implement all projects identified in the preferred plan over the next 20 years. A summary of these potential revenue sources is provided in Tech Memo 5.

Attachments

» Qualitative Evaluation of Transportation System Alternatives

ATTACHMENT A: QUALITATIVE EVALUATION OF TRANSPORTATION SYSTEM ALTERNATIVES