

MEMORANDUM #4

Date: September 1, 2021 (Revised November 1, 2021)

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Virginia Elandt | Planner | ODOT Region 3
Front Street Blueprint Advisory Committee | City of Coos Bay

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Subject: Front Street Blueprint (FSB) | Conceptual Alternate Facility Designs

Purpose and Background

The purpose of this memorandum is to describe and compare potential concept-level design alternatives for the future condition of Front Street corridor, between Market Avenue and Ivy Street, in Coos Bay, Oregon. The conceptual design alternatives were developed using:

- The baseline assumptions and existing inventory memorandum.
- The existing and future transportation conditions memorandum.
- Design objectives and elements from the Front Street Action Plan (FSAP).
- Applicable ODOT and City roadway facilities standards.
- A creative exploration of opportunities / challenges and urban design.

The baseline assumptions and existing inventory memorandum identified:

- Existing mix of industrial and commercial land uses in study area, some waterfront dependent.
- Rail line runs along and bisects Front Street with eight railroad crossings within study area.
- Coos County Area Transit “Weekend Express” route that runs along Front Street was suspended at the time of this study due to the Coronavirus pandemic.
- Study area is in Special Flood Hazard Area Zone AE, with Base Flood Elevation of 13 feet.
- Study area is within the tsunami inundation boundary.

The existing and future transportation conditions memorandum includes a base (2020) and future (2042) year vehicle and freight volumes analysis; a safety analysis (crashes); and pedestrian, bicycle, transit, and parking inventories. It found that:

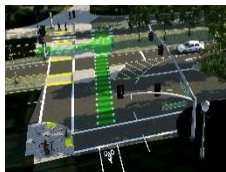
- All study intersections and minor movements at Stop-controlled intersections are determined to meet the performance standards in the base year of 2020 and future year of 2042 except the US 101 & Coos Bay Boulevard intersection, which is projected to operate at a critical intersection v/c ratio in the PM peak hour, above the ODOT mobility standard.
- Crash data shows turning movement collisions are the most prevalent and improvements aimed at reducing turning-related collisions would have the most benefit (reduced number and severity) in the study area.
- Study area, currently, is in Pedestrian Level of Traffic Stress 4 (highest) or 3 (second highest).
- There are no dedicated bicycle facilities in the project study area.

Design Objectives

The concept-level design alternatives are intended to address the following design objectives, which were identified previously in the Front Street Action Plan (FSAP) and City and State applicable guidelines (noted at the end of this memorandum).



Bicycle and Pedestrian Safety: Elements that improve the existing network by accommodating bicyclists, pedestrians, and transit users. Provide additional connections and fill in gaps. (FSAP Element: “Pedestrian and Bicycle Improvements”)



Access/Intersection Improvements: Elements to increase safety, reduce congestion, and improve driver expectancy. Elements to address reducing the number of driveways, driveway consolidation for single parcels, and relocation of poorly placed driveways. Traffic calming and speed reduction at intersections (tighter curb radii, curb extensions, truck aprons, speed cameras). (FSAP Element: “Crosswalk / Intersection Enhancements”)



Wayfinding and Public Art: Elements including a wayfinding system to provide directions to major attractions and significant historical locations. Locations for public art must be identified that enhance the user experience. (FSAP Element: “Gateway/Wayfinding”)



Pedestrian Pathways and Overlooks: Elements that identify locations for pedestrian access to the waterfront and public overlooks along the east side of Front Street for proposed concepts. (FSAP Element: “Public Access/Overlooks”)



Circulation/Connectivity Improvements: Elements supporting a balanced and well-connected transportation network for all modes, including safe connections from downtown Coos Bay across Highway 101. Elements to encourage transportation choices and reduce reliance on automobile travel within and through the Study Area.



Parking Management: A variety of parking such as shared parking, metered parking, increasing the capacity of existing publicly owned facilities, overflow parking plans and investment by the City in land for parking.

Analysis Summary

Advancing the vision of the FSAP is foundational to the FSB. Additionally, a variety of opportunities and challenges have been identified as part of this process (Memoranda 1-3) and are summarized below.

Opportunities

- Excellent, desirable waterfront setting; opportunities for overlooks; variety of natural, historic, and cultural features
- Low traffic volumes, and relatively slow speeds, mean pedestrians can feel safe – good potential for temporarily closing Front Street to vehicular traffic and holding pedestrian-only events through the year.
- Ample on-street parking available, with plans for an additional public parking lot between Cedar Ave and Date Ave
- Wide ROW, even with potential encroachments from existing buildings
- Existing working industrial properties bring people to Front Street every day
- Connection to existing terminus of Coos Bay Boardwalk
- Vocal champions for increased pedestrian connectivity and bayfront access
- Wayfinding locations that benefit from high visibility
- Variety of recreational and historical resources, including Coos Bay History Museum, help to create interesting stopping points for pedestrians.
- Proximity to Highway 101, city center of Coos Bay, Museum, Visitor’s Center, hotels, casino
- Opportunity site at Iron Works Building; could be repurposed
- Existing Street ROW accessing the waterfront at Alder, Birch, Cedar, and Date.

Challenges

- Lacking a density of activities and destinations (public and private spaces where people interact) along Front Street south of Coos Bay Village (such as restaurants, retail, and mixed uses)
- Meaningful connections and experiences to the waterfront setting and working/industrial heritage
- Needs safe, convenient pedestrian connection to city center/historical downtown.
- Discontinuous pedestrian facilities: sidewalks are not present throughout all blocks of the corridor, and there is a lack of curb ramps (and/or not fully accessible)
- No dedicated bike facility
- Existing rail tracks limiting potential changes due to the need to maintain rail use; rail presents safety concerns for bicyclists (potential for wheels to be caught in tracks)

For reference, the adopted Front Street Action Plan (2017) can be located online at this address:
http://coosbay.org/uploads/PDF/Plans/Front_Street_Action_Plan_Dec_2017_Final.pdf

The following diagram graphically illustrates some of the opportunities and challenges and where they occur within the study area (see Fig. 1) and is followed by five existing street sections (see Fig. 2 to 6).

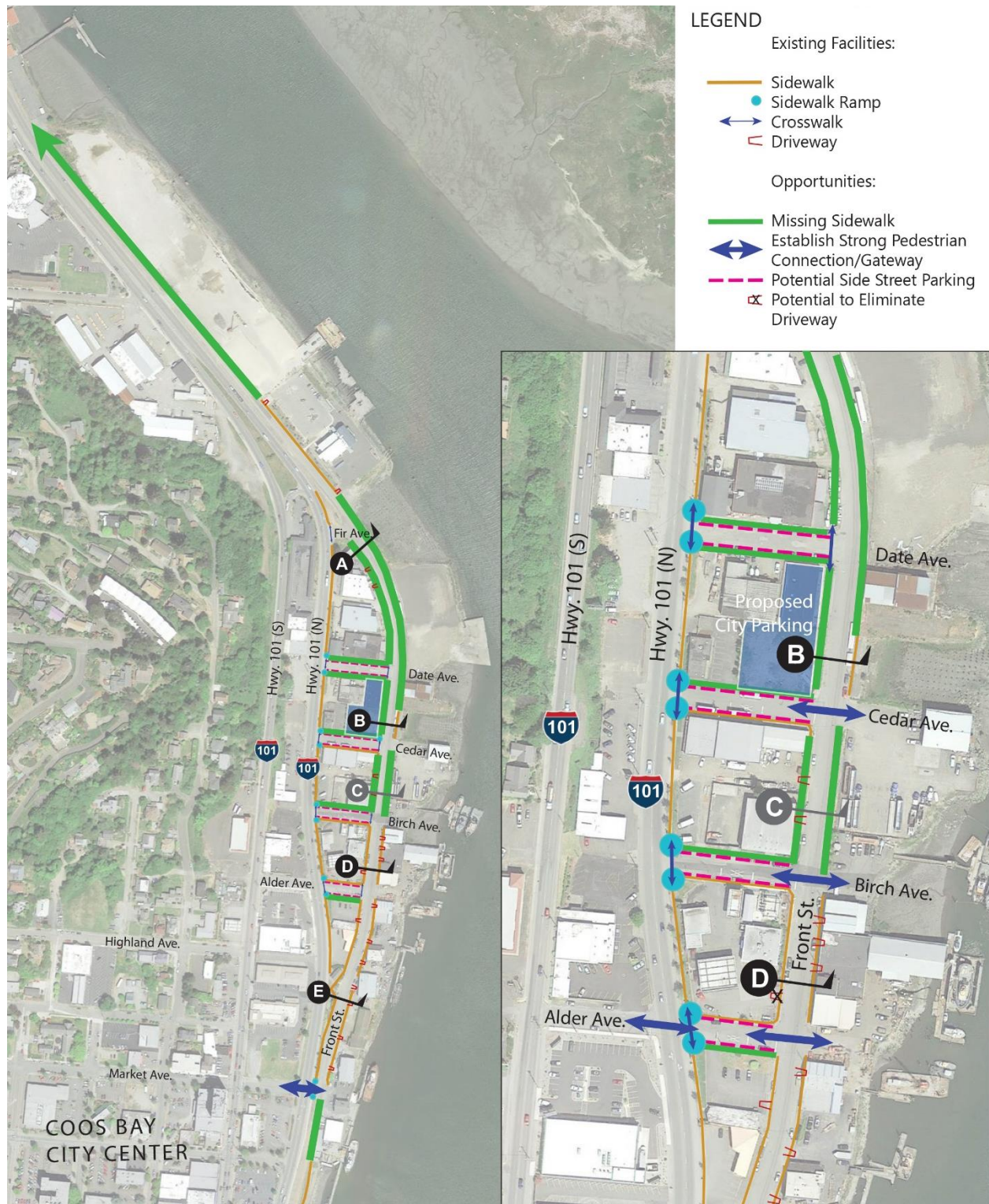


Figure 1: Opportunities / Challenges Diagram

EXISTING STREET SECTIONS

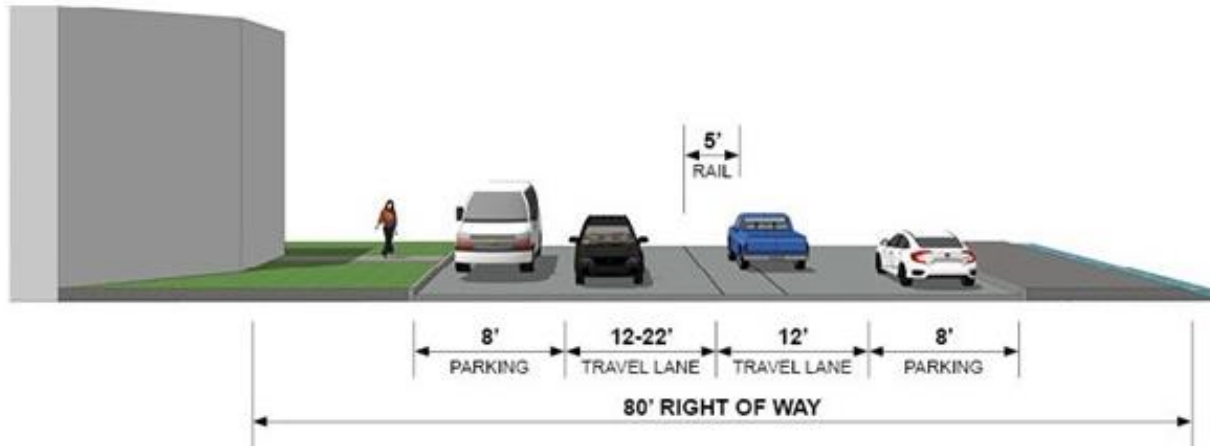


Figure 2: Existing Section A (Typical) - Front Street north of Date Ave.

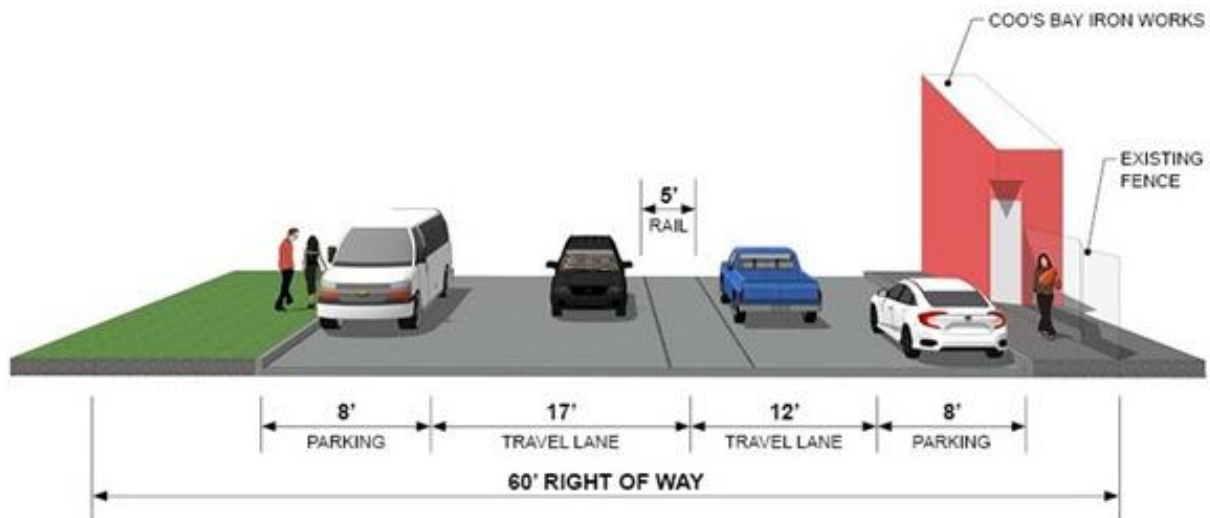


Figure 3: Existing Section B (Typical) - Front Street from Date Ave. to Cedar Ave.

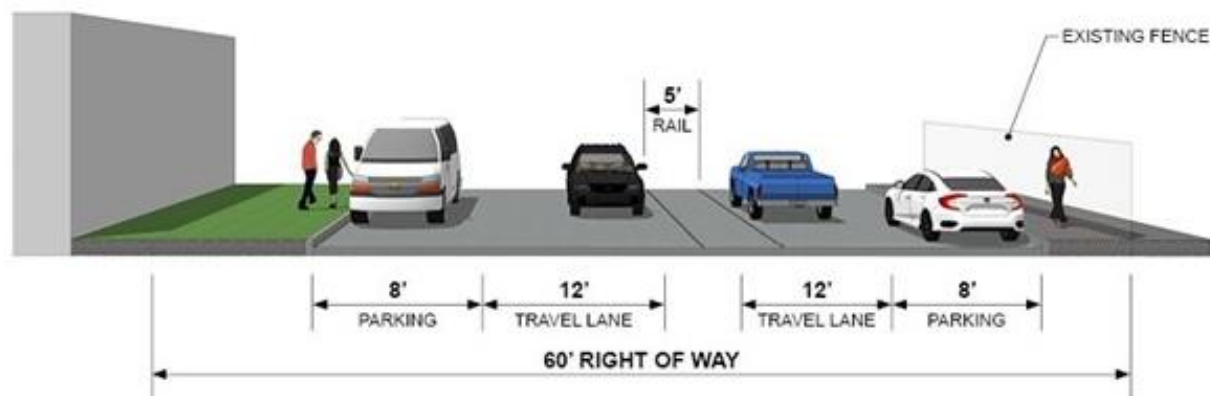


Figure 4: Existing Section C (Typical) - Front Street from Cedar Ave. and Birch Ave.

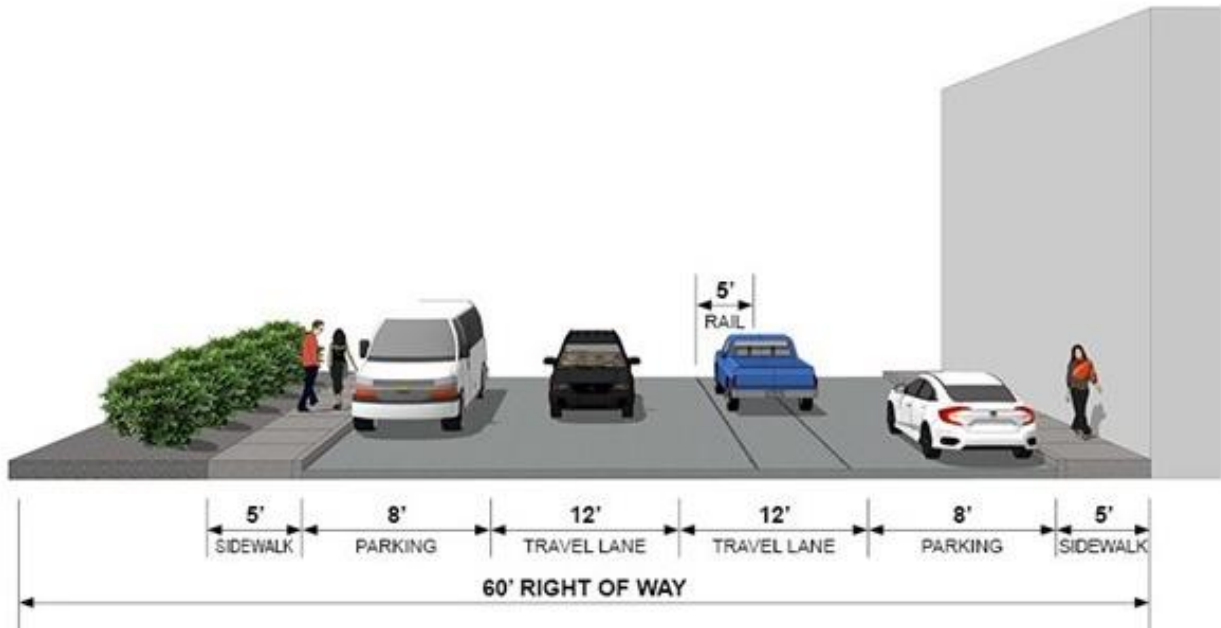


Figure 5: Existing Section D (Typical) - Front Street from Birch Ave. to Alder Ave.

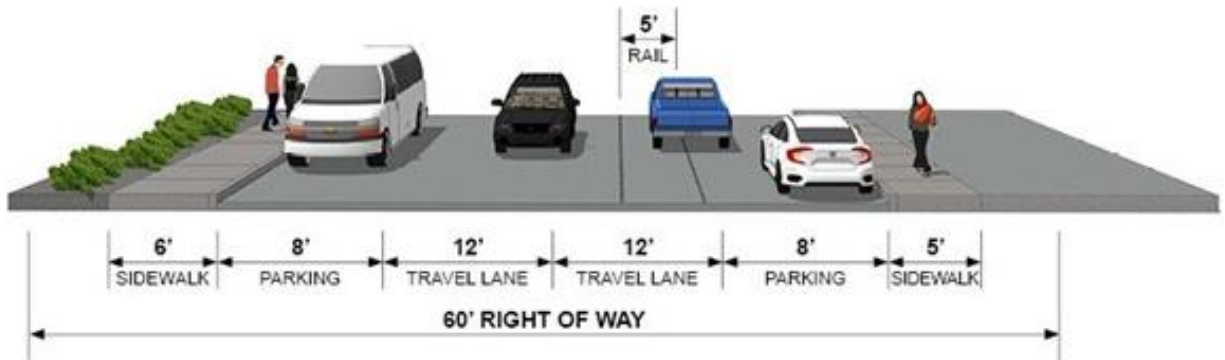


Figure 6: Existing Section E (Typical) - Front Street from Market Ave. to Alder Ave.

Blueprint Framework

The Blueprint Overall Concept advances the FSAP Vision, which is described as: *“Front Street will be a more bustling, vibrant, and inviting district with a mix of waterfront-related industrial employment, commercial, and limited residential uses. The area’s amenities and transportation facilities are more safely and easily accessible to pedestrians and cyclists, making connections to the rest of the City seamless. The continuation of the Coos Bay Boardwalk will serve as an attraction and provide for the enjoyment of the revitalized waterfront.”*

THREE KEY THEMES (from FSAP)

Pedestrian and bicycle access to the waterfront. *“The Coos Bay Boardwalk should be extended along the east side of Front Street as an (approximately) 14-foot-wide multi-use path, providing continuous pedestrian and cyclist access to the Coos History Museum (“Museum”). Along this path, City-owned right-of-way parcels along the waterfront can provide overlooks and places to sit and enjoy the view. Crossings of Highway 101 should be added to strengthen Front Street’s connection to downtown, and traffic flow along Front Street should be reconfigured to safely allow access for all modes of travel.”*

Programming and amenities. *“Through the planning process, community members expressed a strong desire for waterfront restaurants and breweries, as well as for pedestrian and boat access by extending the existing boardwalk north to a new non-motorized boat launch near the Museum. Other preferred uses include retail shops, water-dependent light industrial uses, and a park, plaza, or amphitheater with seating. Public open spaces should include places to sit, lighting, and shelter from the elements.”*

Celebrating Front Street’s history. *“Redevelopment along Front Street should celebrate its working waterfront heritage and the beauty inherent to its natural and industrial context. Some buildings are candidates for preservation and repurposing, such as the Coos Bay Iron Works. New buildings will be subject to the design standards of the Waterfront Heritage district, which evoke the historical appearance and industrial history of the waterfront. Additionally, public restrooms should be provided to support activities such as a non-motorized boat launch.”*

UPDATED CONCEPT DIAGRAM

With the FSAP adopted, the Front Street Blueprint work has focused on advancement and refinement of the FSAP elements, including:

- **Pedestrian and Bicycle Improvements:** primarily, a north/south extension of the Coos Bay Boardwalk.
- **Crosswalk / Intersection Enhancements:** striping, ramps, and/or other features.
- **Gateway / Wayfinding Elements:** locations for pedestrian-oriented signage and/or public art
- **Public Access / Overlooks:** publicly owned ROW that could provide water access and views
- **Redevelopment Opportunities:** parcels with near-term and future potential for renewed economic activity

These features have been refined from the FSAP and are illustrated in Figure 7: Overall Concept Diagram (see following page).

City of Coos Bay Front Street Blueprint

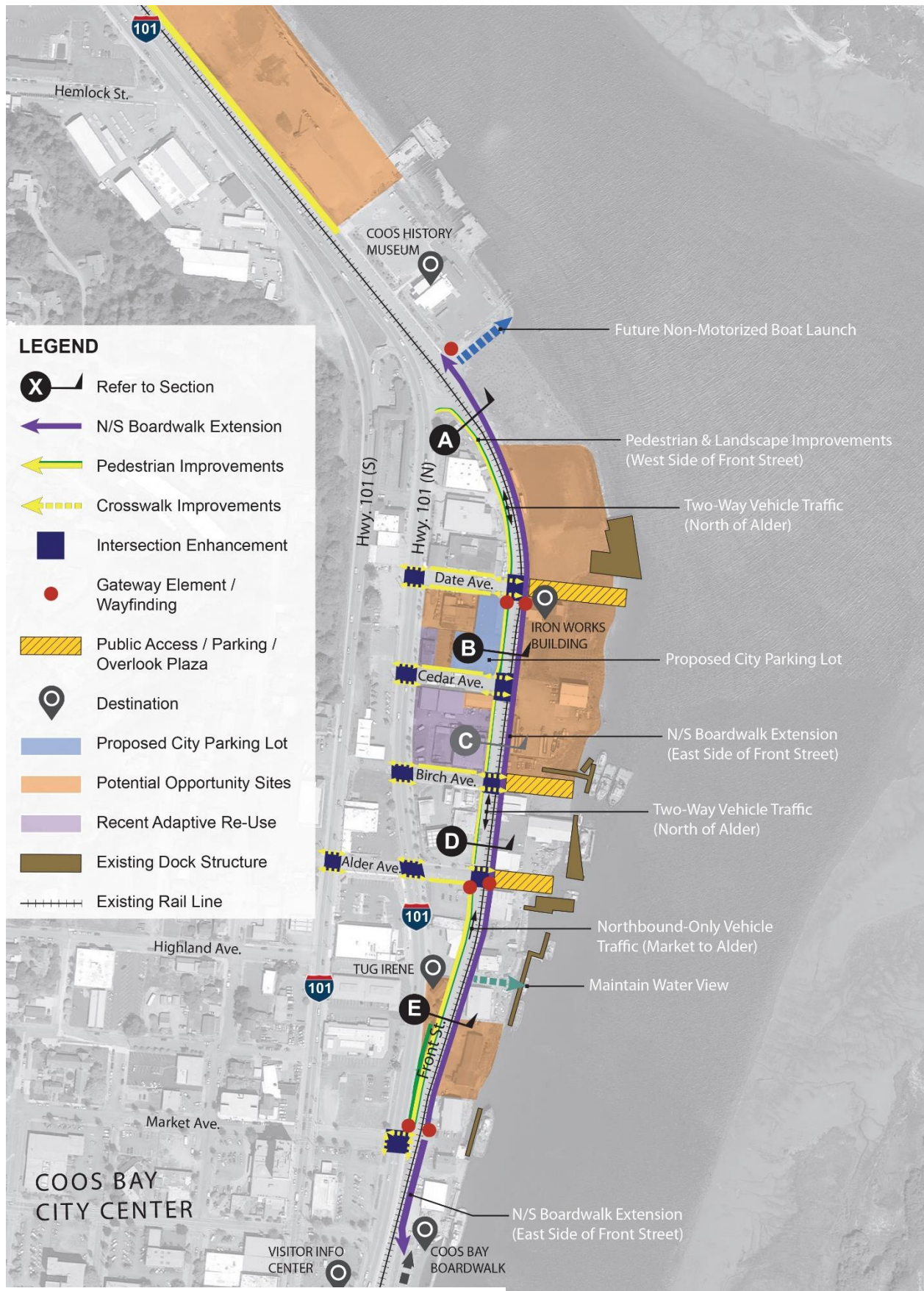


Figure 7: Overall Concept Diagram

Blueprint Alternatives

Within the Overall Concept, two concept-level design alternatives (1 and 2) have been developed illustrating potential physical reconfigurations of Front Street, and are identified as:

- Alternative 1: Multiuse Path Emphasis
- Alternative 2: On-Street Parking Emphasis

The main physical features characterizing each are described in Table 1 (below) and are illustrated in 3D section views of Front Street (Figs. 9-20) on following pages. Section A is north of Date Avenue. Section B is between Date and Cedar Avenues. Section C is between Cedar and Birch Avenues. Section C matches Section B, so the two sections are shown together. Section D is between Birch and Alder Avenue. Section E is from Market Avenue to Alder Avenue.

Table 1. Summary of Alternatives – Physical Features

	Alternative 1	Alternative 2
Physical Features	<i>Multiuse Path Emphasis</i>	<i>On-street Parking Emphasis</i>
Bikes and Pedestrians	A1: 16’ multi-use path + 8’ boardwalk B1: 16’ multi-use path C1: see B1* D1: 18’ multi-use path E1: 16’ multi-use path	A2: 10’ boardwalk, bikes share travel lane B2: 10’ sidewalk, bikes share travel lane C2: see B2* D2: 10’ sidewalk, bikes share travel lane E2: 16’ multi-use path
Parking	A1: 8’ parallel (westside), none (eastside) B1: 8’ parallel (westside), none (eastside) C1: see B1* D1: 8’ parallel (westside), none (eastside) E1: 8’ parallel (westside), none (eastside)	A2: 8’ parallel (westside), 8’ parallel (eastside) B2: 8’ parallel (westside), 8’ parallel (eastside) C2: see B2* D2: 8’ parallel (westside), 8’ parallel (eastside) E2: 19’ angled head in (westside), none (eastside)
Rail Treatment	All sections: mixed with traffic	All sections: mixed with traffic
Traffic Pattern	A1-D1: Two way E1: One way northbound	A2-D2: Two way E2: One way northbound
Landscaping	A1: street trees + planter strip (westside) B1: tree wells (westside) C1: see B1* D1: tree wells (westside) E1: street trees + planter strip (westside)	A2: trees behind sidewalk (westside) B2: tree behind sidewalk (westside) C2: see B2* D2: street trees + planter strip (westside) E2: tree behind sidewalk (westside)

*Note: Sections at location “C” can be assumed to match corresponding section “B” designs.

PROPOSED STREET SECTIONS: ALTERNATIVE 1

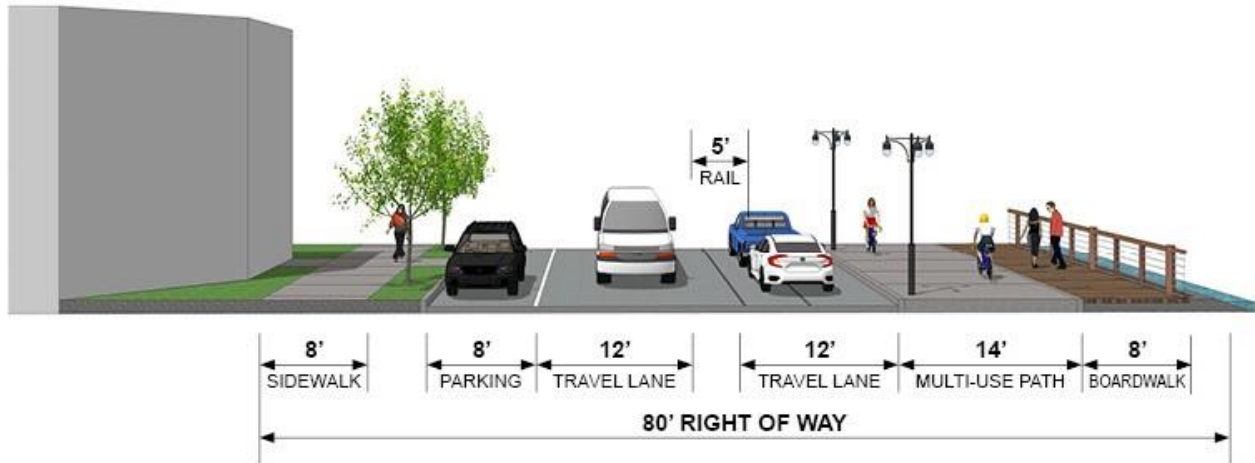


Figure 8: Alternative 1 - Proposed Section A (North of Date Street)

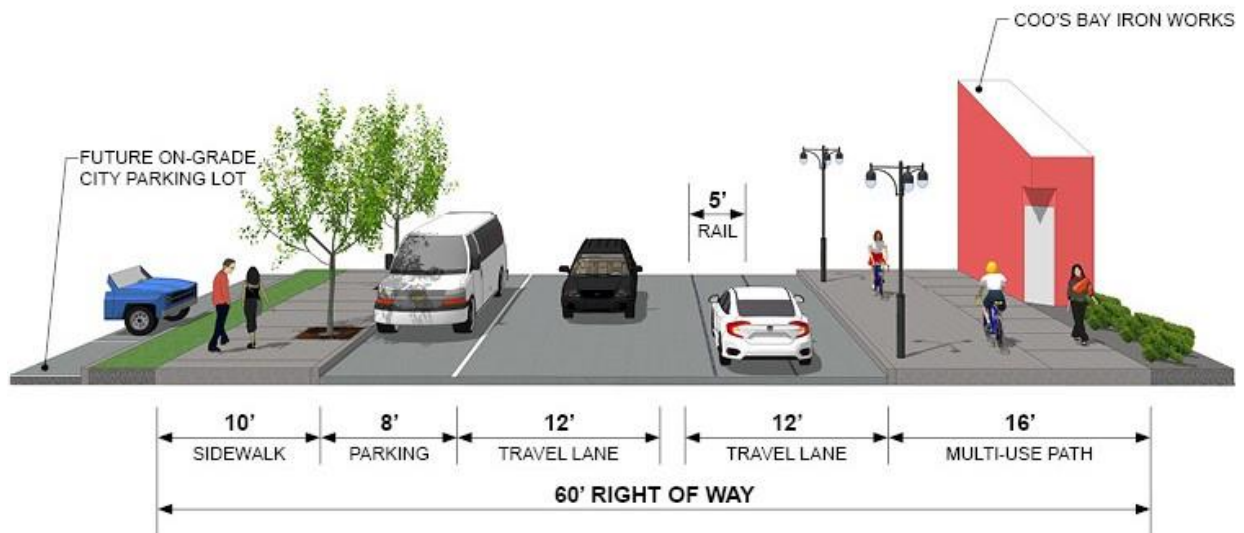


Figure 9: Alternative 1 - Proposed Section B (Date Street to Cedar Avenue)

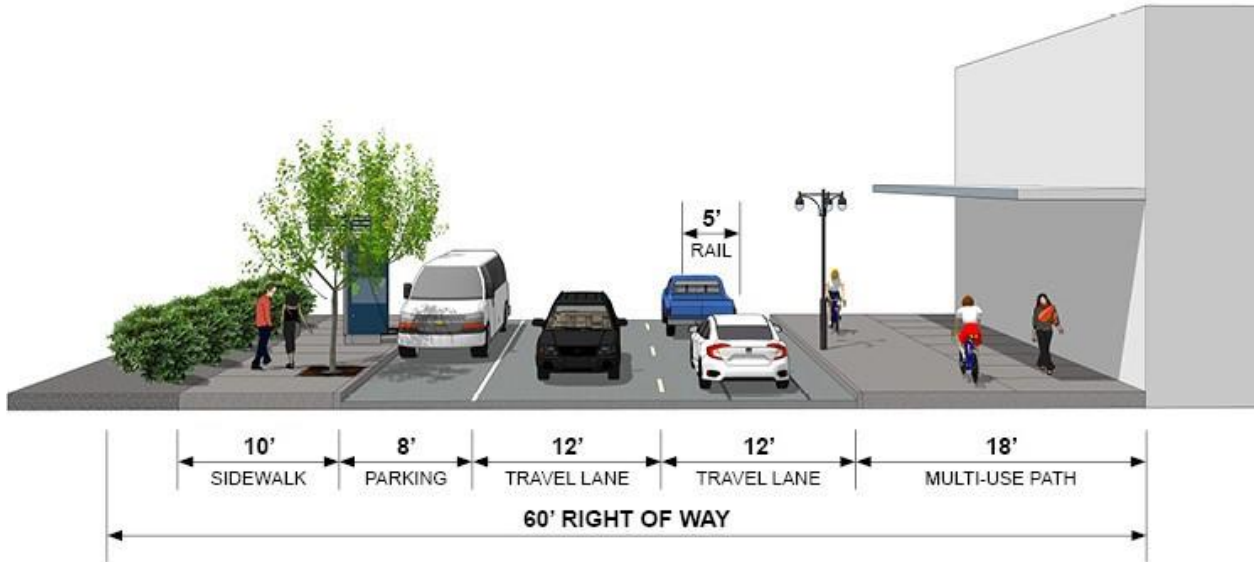


Figure 10: Alternative 1 - Proposed Section C and D (Cedar Avenue to Alder Avenue)

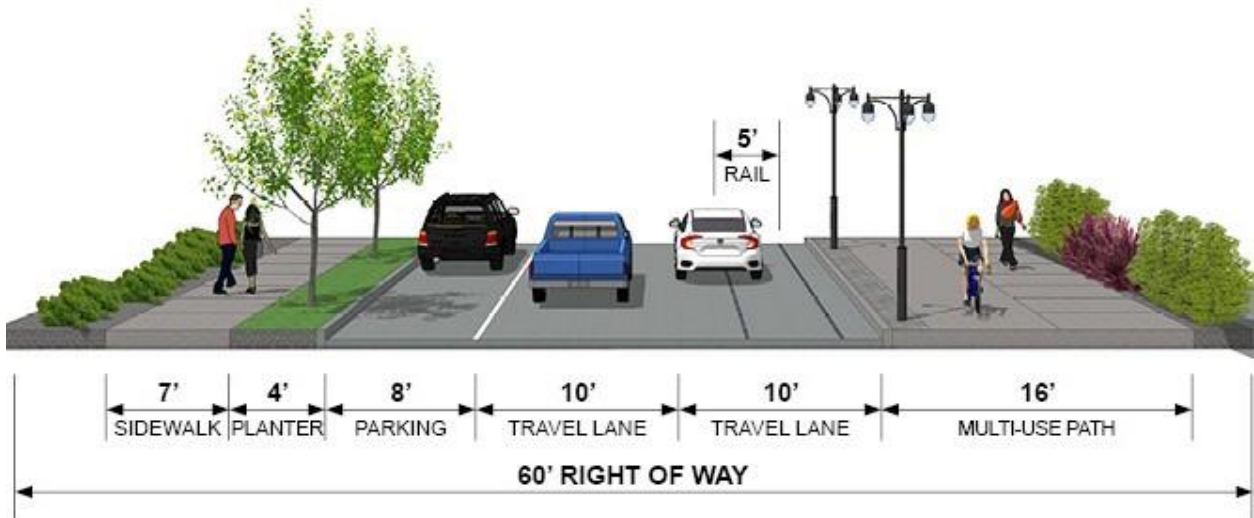


Figure 11: Alternative 1 - Proposed Section E (Market Avenue to Alder Avenue)

PROPOSED STREET SECTIONS: ALTERNATIVE 2

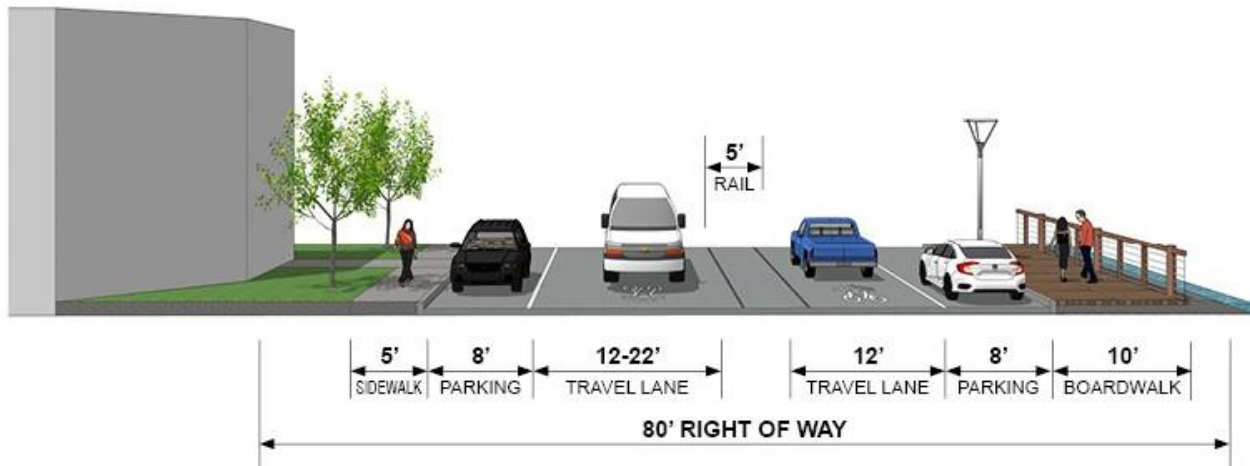


Figure 12: Alternative 2 - Proposed Section A (North of Date Street)

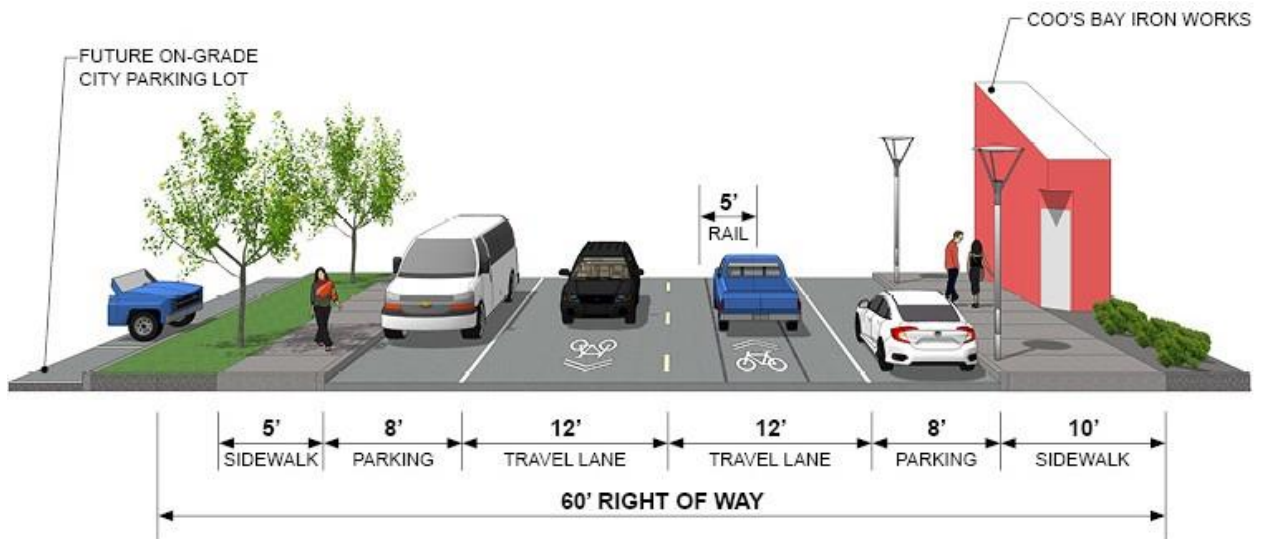


Figure 13: Alternative 2 - Proposed Section B (Date Street to Cedar Avenue)

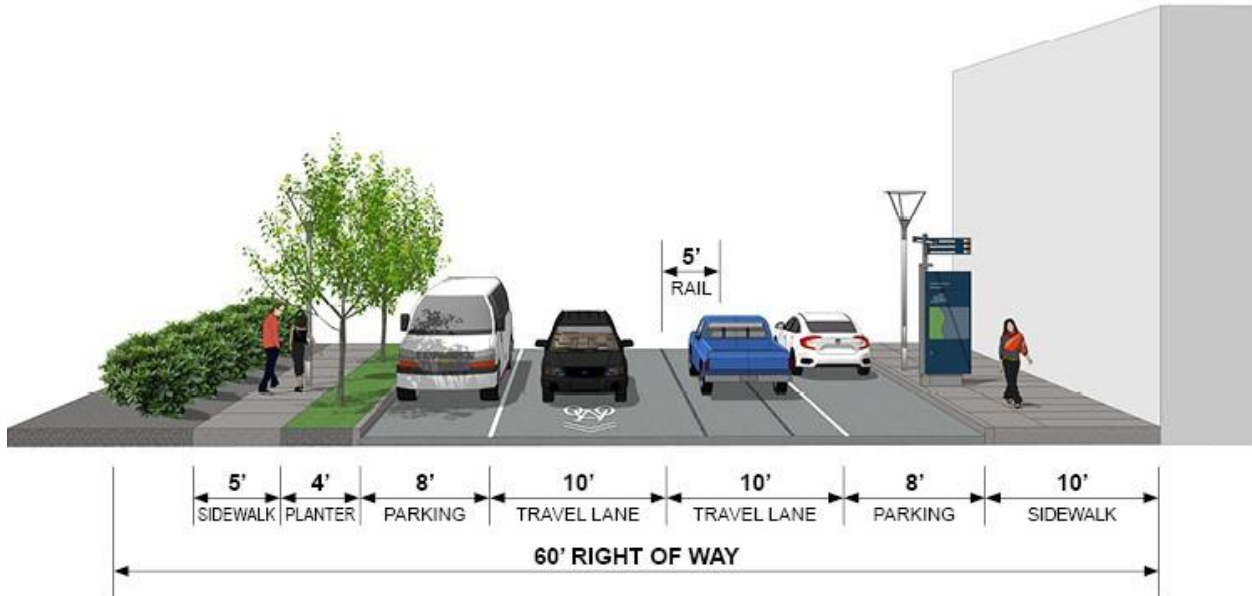


Figure 14: Alternative 2 - Proposed Section C and D (Cedar Avenue to Alder Avenue)

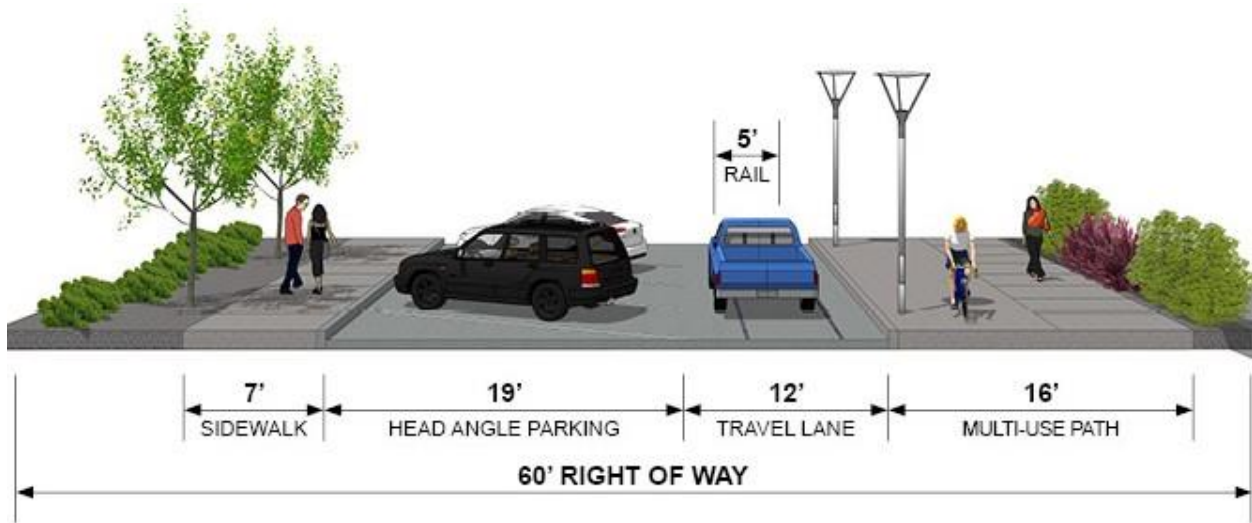


Figure 15: Alternative 2 - Proposed Section E (Market Avenue to Alder Avenue)

Alternatives Evaluation

The two alternatives include Concept Elements that address the Blueprint Design Objectives. Key to identifying a preferred alternative is understanding the differences among the concept-level design alternatives and comparing them. The locations and dimensions of the physical features in the street sections vary among the alternatives and differentiate them. Since the alternatives are at the concept level, the following evaluation is qualitative and relative. Based upon the project scope of work, and consultant team recommendations, several criteria have been identified, and are listed in Table 2 (see below; symbol key located below table on page 15).

Table 2: Alternatives Evaluation Matrix

CRITERION	Evaluation	Alt. 1	Alt. 2
Improves Access and Mobility	<p><i>Does alternative support all modes of travel?</i></p> <p>Both alternatives include a variety of multi-use path, bike facilities, and new sidewalk. Both alternatives accommodate the rail track.</p>	●	◐
Improves Corridor Safety	<p><i>Is the alternative safe for pedestrians, bicyclists, motorists, trucks, and rail users?</i></p> <p>Alternative 1 includes a dedicated multi-use path in all Sections A-E that separates pedestrians and bicycles from auto traffic, and therefore provides more safety. Alternative 2 has multi-use path only in Section E, with safety concerns regarding bicycles and the railroad tracks.</p>	●	○
Encourages Private Investment	<p><i>Does alternative complement private development on adjacent parcels?</i></p> <p>Both alternatives include investments in physical features - street improvements, wayfinding, and accessibility - that complement and encourage existing private development and potential redevelopment.</p>	●	◐
Minimizes Cost and Implementation Complexity	<p><i>Is the alternative simple and affordable to implement? What level of property owner coordination? How complex are the improvements?</i></p> <p>Both alternatives envision a similar range of physical change to the Front Street corridor, with Alternative 2 being slightly less expensive (due to utilizing a higher percentage of street level asphalt).</p>	◐	●
Supports Land Uses, District Vibrancy, and Flexibility	<p><i>Can alternative adapt to denser development? Does it work better, depending on who is occupying different spaces? Is there space near opportunity sites to allow for street activation (e.g., cafés)? Does the alternative draw visitors to/through area, increase amenities, and improve access? Do improvements create a 'place', and become a key destination in Coos Bay? Do improvements</i></p>	●	◐

	<p><i>accommodate all users, and ped connections from downtown?</i></p> <p>Both alternatives accommodate denser development. Street activation is possible when the section includes adequate space for outdoor seating, special events (e.g. sidewalk sales and boardwalk events), and temporary and removable “furniture” such as A-board signs, planters, and benches. All three alternatives include a boardwalk in Section A. Alternative 2 has a narrower sidewalk.</p>		
On-Street Parking	<p><i>Does the alternative add, remove, or maintain parking?</i></p> <p>Alternative 1 removes parking along the east curb, and Alternative 2 maintains the most on-street parking.</p>	☐	●
Minimizes Environmental Impact and Supports District Resiliency	<p><i>Does alternative support district resiliency?</i></p> <p>One consideration is that the Front Street area is in Special Flood Hazard Area Zone AE and within the tsunami inundation boundary. Improvements that encourage development and redevelopment more on the west side of Front Street may both help mitigate problems and provide better connection to downtown, providing long-term economic and environmental resiliency. Alternative 2 has parking on the east side of Front Street in Section D, which may be less desirable than keeping improvements (except pedestrian access to the waterfront) on the west side.</p>	●	☐

SYMBOL KEY: ● = BEST PERFORMANCE ☐ = FAIR PERFORMANCE ○ = POOR PERFORMANCE

The two alternatives provide infrastructure and amenities that could foster the vision of Front Street as a safe, vibrant, flexible district that better connects to downtown and retains its historic waterfront character. Community and stakeholder feedback are being used to inform and guide the selection of the preferred alternative for refinement.

Parking Analysis

A cursory analysis of parking within the study area was performed to quantify the potential change between existing and future conditions and is summarized below.

EXISTING ON-STREET (2021)

• Eastside Front Street	56 spaces
• Westside Front Street	30 spaces
• Side Streets	32 spaces
• Eastside Bayshore Drive	36-40 spaces
TOTAL	154 - 158 spaces

ALT 1: MULTIUSE PATH PRIORITY

• Eastside Front Street	0 - 32 spaces
• Westside Front Street	30 spaces
• Side Streets + Eastside Bayshore Drive	68-72 spaces
• City Parking Lot (2022)	40-45 spaces
• New Angled Parking (south of Alder)	10 spaces
TOTAL	148 - 189 spaces

ALT 2: PARKING PRIORITY

• Eastside Front Street	56 spaces
• Westside Front Street	30 spaces
• Side Streets + Eastside Bayshore Drive	68-72 spaces
• City Parking Lot (2022)	40-45 spaces
• New Angled Parking (south of Alder)	10 spaces
TOTAL	204 - 213 spaces

REFERENCE DOCUMENTS

Applicable Standards

ODOT Facilities

- Blueprint for Urban Design
- Oregon Highway Design Manual
- Transportation Planning Rule (OAR 660-012), as amended
- Access Management Rule (OAR 734-051), as amended
- Oregon Highway Plan (with 2018 amendments)

City of Coos Bay

- City Comprehensive Plan (2010)
- City zoning, ordinances, and associated street standards
- City Transportation System Plan (2020)
- Front Street Action Plan (2017)
- Coos Waterfront Park and Walkway Concept Plan (2012)
- Coos Bay Engineering Design Standards (2016) for Commercial/Industrial Local Street
 - Minimum ROW width - 60'
 - Vehicle lane width - 12'
 - On-street parking – two at 8' each
 - Sidewalk curb – two at 5' each
 - Max grade – 16%
 - Design speed 25 mph

Other

- NACTO Urban Street Design Guide
- NACTO Urban Bikeway Design Guide
- NACTO Transit Street Design Guide
- NACTO Global Street Design Guide