

Blueprint for Urban Design

ODOT's Approach to Design for Oregon Communities

Case Study: Highway 43 Corridor

March 2020

BLUEPRINT FOR URBAN DESIGN

Volume 1 of 2

ODOT's Approach for Design in Oregon Communities



Case Study: Highway 43 Corridor

- Facility Planning Example
- Highway 43 Corridor, West Linn, Oregon



Case Study: Highway 43 Corridor

- Project Catalyst
 - Lack of clarity and consistent application of existing 2008 corridor plan created a need for an update to gain design concurrence and move to implementation.
- Project Goals
 - Provide access for bicyclists of all ages and abilities
 - Improve pedestrian and transit access
 - Provide consistent access for maintenance and emergency vehicles
 - Reduce reliance on the automobile
 - Improve access and support adjacent land uses in the corridor
 - Develop realistic cost estimates
 - Minimize major right-of-way impacts
 - Secure agreement between ODOT and City of West Linn on a concept design

Section 4.2.1 provides guidance for establishing project goals.

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- Context: Urban Mix



Urban Mix

Mix of land uses within a well-connected roadway network. May extend long distances. Commercial uses front the street with residential neighborhoods on top or immediately behind land uses.

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- Context: Residential Corridor



Residential Corridor

Mostly residential uses within a well-connected or somewhat connected roadway network. May extend long distances. Single-family homes may have direct access to the state roadway.

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- Modal Expectations
 - High pedestrians, bicyclists, and transit
 - Low-to-medium freight/trucks
 - Medium automobile
 - Emphasis on providing access and safety

Chapter 2, Section 2.1.4 provides guidance for designing for multimodal users.

Table 2-3: Modal Consideration in Different Urban Contexts

Land Use Context	Motorist	Freight	Transit	Bicyclist	Pedestrian
Traditional Downtown/CBD	Low	Low	High	High	High
Urban Mix	Medium	Low	High	High	High
Commercial Corridor	High	High	High	Medium	Medium
Residential Corridor	Medium	Medium	Low	Medium	Medium
Suburban Fringe	High	High	Varies	Low	Low
Rural Community	Medium	Medium	Varies	High	High

High: Highest level facility should be considered and prioritized over other modal treatments.

Medium: Design elements should be considered; trade-offs may exist based on desired outcomes and user needs.

Low: Incorporate design elements as space permits.

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- Performance Measures
 - Level of traffic stress
 - Presence of continuous bicycle and pedestrian facilities
 - Presence of consistent three-lane cross section for maintenance and property access
 - Number of buildings and properties impacted
 - Order of magnitude costs
 - Volume-to-capacity ratio at key intersections

Section 4.2.2 outlines strategies for identifying performance measures to meet the project goals and desired outcomes.

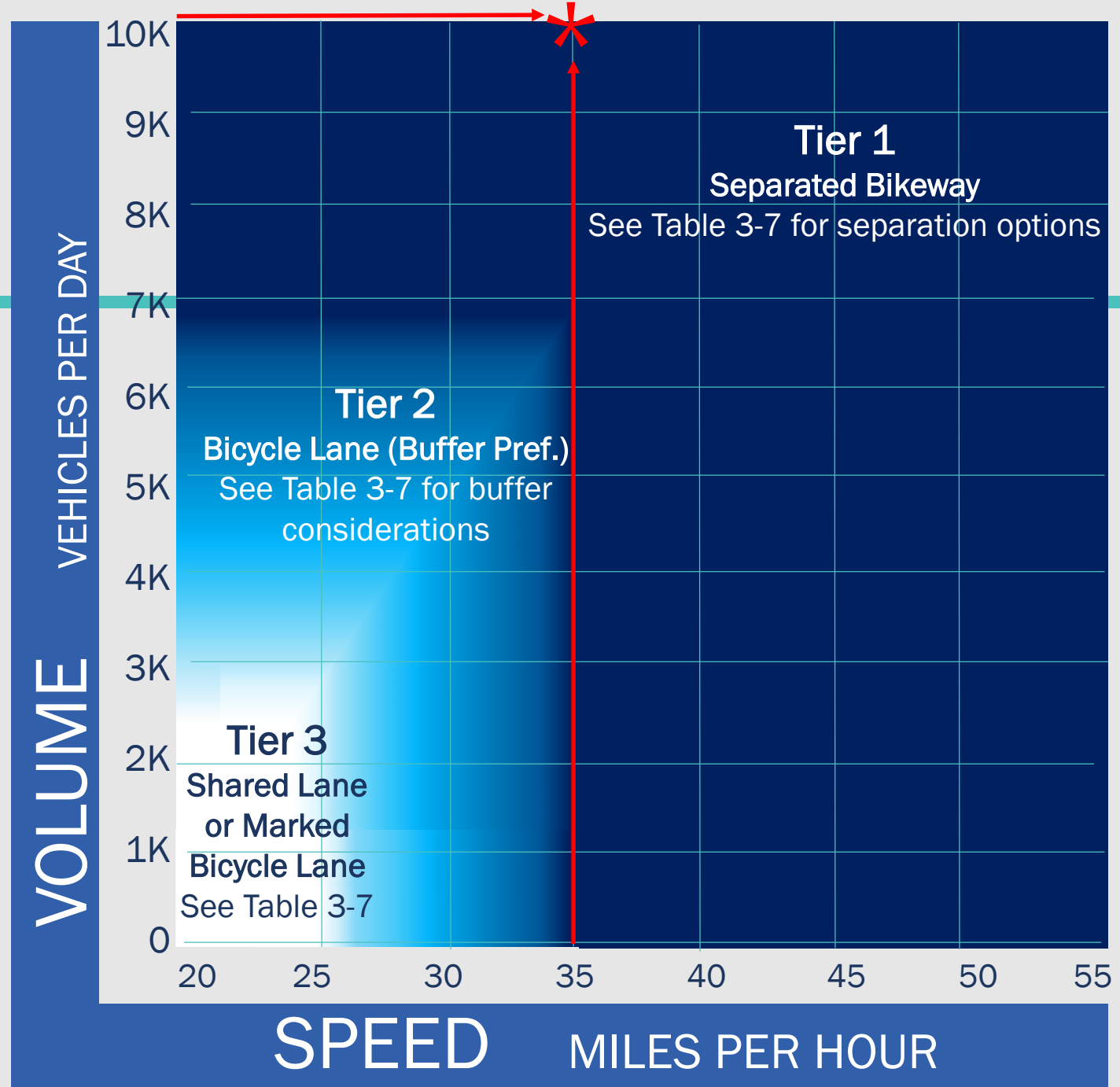
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- Alternatives
 - A wider cross section with all elements at standard widths
 - A variety of alternative options for including some elements at narrower widths
 - Included both a two-lane and three-lane cross section
 - All alternatives had bicycle and pedestrian facilities

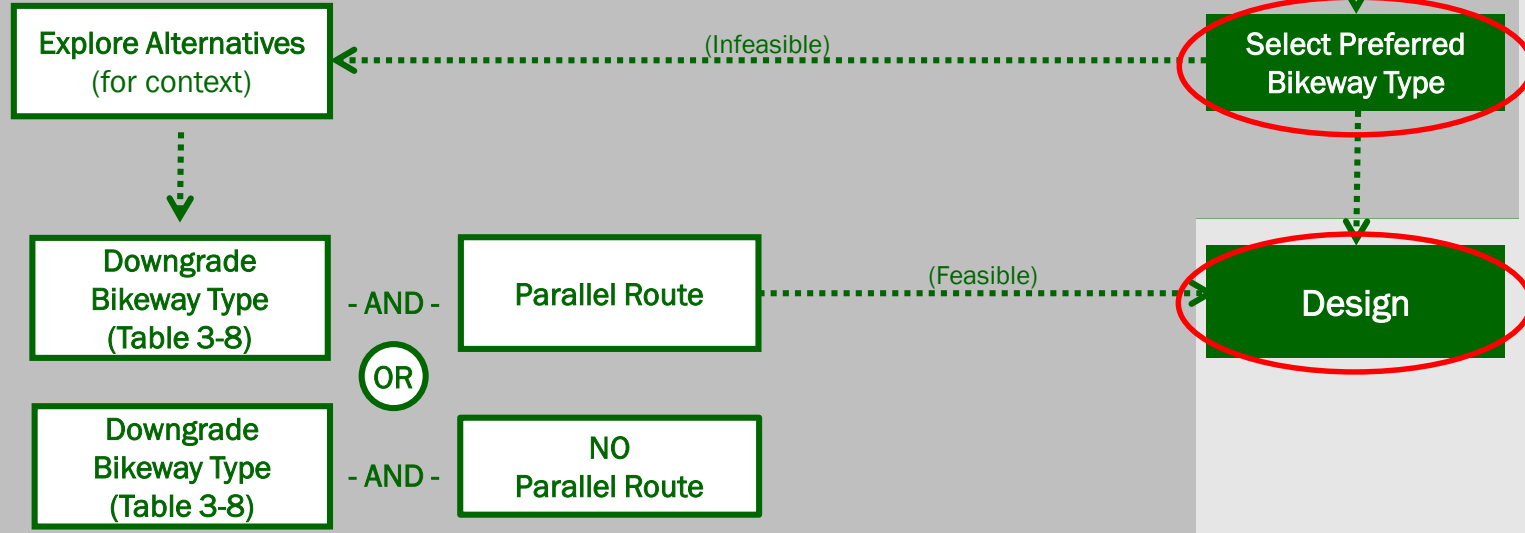
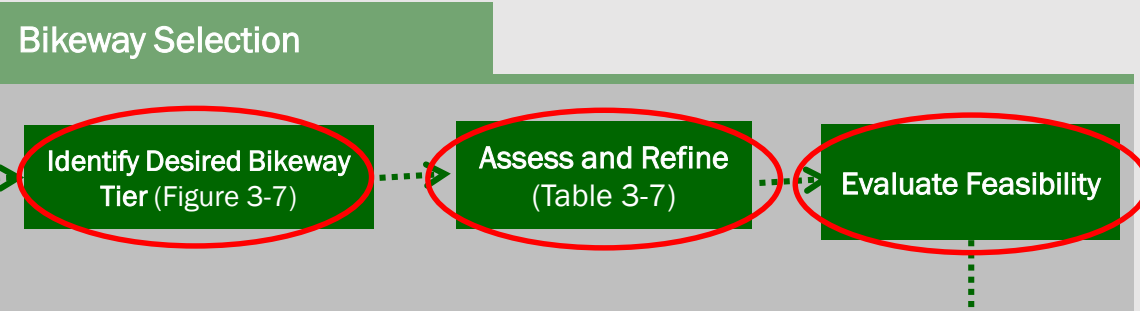
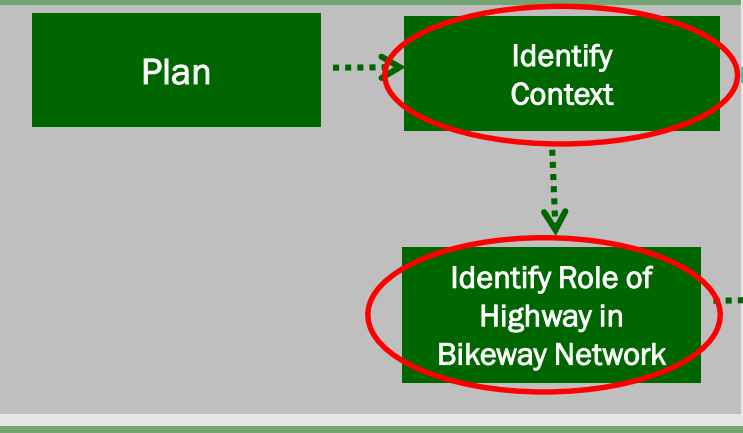
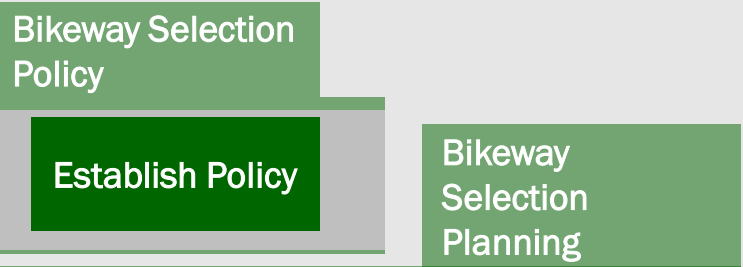
Section 4.2.2 provides additional information on evaluating performance alternatives

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- Posted 35 MPH
- ADT – 18,900 to 20,000
- Preferred Bicycle Facility
 - Tier 1 (Separated Bikeway)



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- Table 3-14 Design For Urban Mix
- Table 3-14 Design For Residential Corridor

Table 3-14: Design Element Recommendations for Residential Corridor

Design Element		Guidance
Pedestrian Realm	Frontage zone	1'
	Pedestrian zone	8' to 6'
	Buffer zone	5' to 2'
	Curb/Gutter ¹	2' to 0.5'
Transition Realm	Separated Bicycle Lane (Curb Constrained Facility) ²	8' to 7'
	On-Street Bicycle Lane (not including Buffer) ²	6' to 5'
	Bicycle/Street Buffer (preferred for On-Street Lane) ²	5' to 2'
	Right Side Shoulder (if travel lane directly adjacent to curb) ^{3,5}	4' to 0'
	On-Street Parking	N/A
Travelway Realm ⁵	Travel Lane ^{4,5}	11' to 12'
	Right Turn Lane (including Shy Distances)	12' to 13'
	Left Turn Lane ⁶	12' to 14'
	Left Side / Right Side Shy Distance ³	1' to 0
	Two-Way Left-Turn Lane ⁶	12' to 14'
	Raised Median – No Turn Lane (including Shy Distances)	8' to 11'
	Left-Turn Lane with Raised Curb Median/Separator (including 16" separator & Shy Distances) ⁷	14' to 15'

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- Alternative Proposed Sections Highway 43: (Table 3-14 BUD)

- Curb-to-Curb Width: 32'
 - Travel Lanes – 2 x 11' Lanes (22')
 - Median – 12'
- Bicycles
 - Street Buffer = 5'
 - Bicycle lanes = 8'
- Pedestrians:
 - Pedestrian zone = 8'

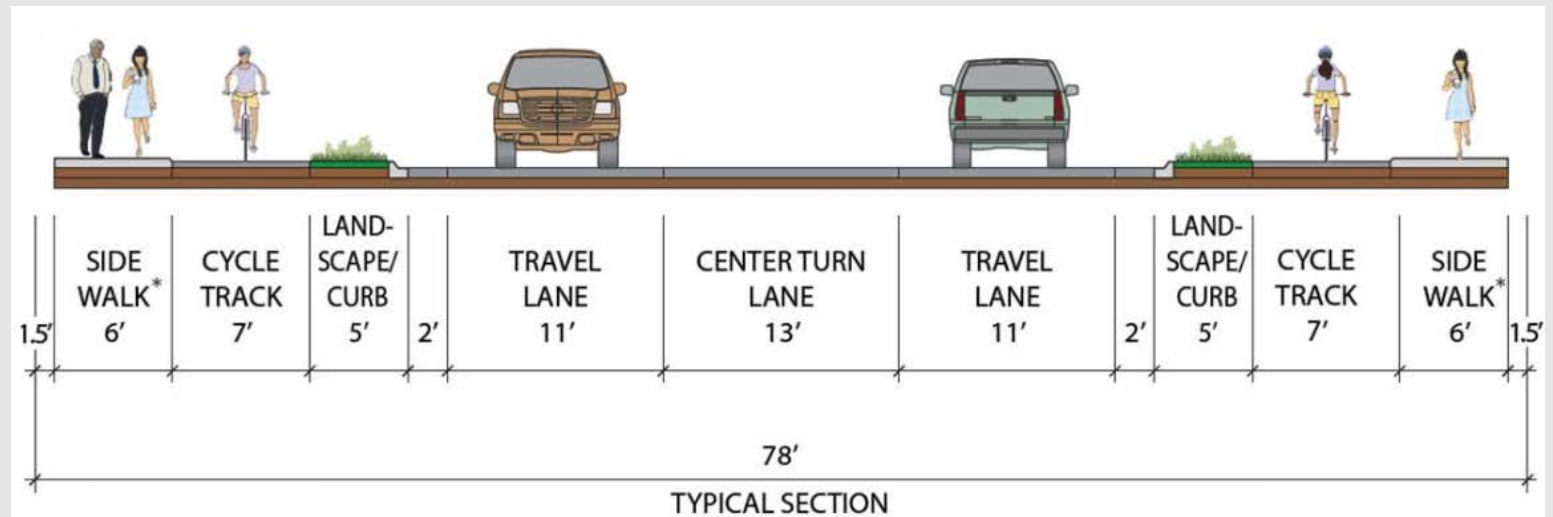
- OR (HDM Table 6-3)

- Curb-to-Curb Width: 50'
 - Travel Lanes – 2 x 12' Lanes
 - Median – 14'
 - Bicycles – 2 x 6' Lanes
- Separated Sidewalk
 - Buffer = 4'
 - Sidewalk = 6'

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- Design Decisions

- Narrower travel lanes (11')
- Median (13')
- Reduced shoulder width (2')
- Separated bicycle facilities (7' plus buffer)
- Continuous sidewalks (6')
- Enhanced transit stops and crossings
- Remove buffer between raised cycle track and vehicle travel lanes in very constrained areas



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- Questions?

