WSDOT

Corridor Sketch Summary

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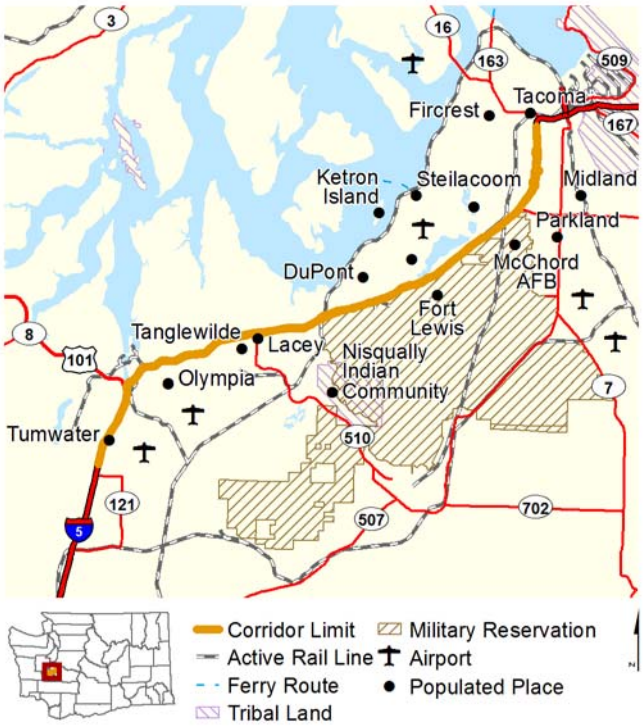
WSDOT's Corridor Sketch Initiative is a collaborative planning process with agency partners to identify performance gaps and select high-level strategies to address them on the 304 corridors statewide. This Corridor Sketch Summary acts as an executive summary for one corridor. Please review the User Guide for Corridor Sketch Summaries prior to using information on this corridor:

I-5 Tumwater to Tacoma (I-5 Tumwater to Arlington: South)

This 32-mile corridor on Interstate 5 runs between State Route 121 in the city of Tumwater, and SR 16 in the city of Tacoma. This section of I-5 goes through or near the cities of Tumwater, Olympia, Lacey, DuPont, Steilacoom, Lakewood, University Place, Fircrest, and Tacoma. The corridor also passes through the Billy Frank Jr. Nisqually National Wildlife Refuge, Nisqually Valley, and Joint Base Lewis McChord. Most of the area surrounding the corridor is mixed suburban and urban in character. A significant portion is also open space or rural in character, particularly the section along JBLM and the Wildlife Refuge. Within the urban areas, the primary land uses along the corridor are residential and commercial. JBLM also makes up a significant portion of the land use along the corridor. There are also industrial and state government uses on the corridor, particularly in Olympia. This section of the interstate runs parallel to Puget Sound. A rail line also runs parallel to the highway between Nisqually and Lakewood. Plant life along the corridor ranges from maintained grasses to mixed deciduous and coniferous trees, and saltwater estuary/wetland plants.



Current Function

I-5 is the major north-south route along the U.S. west coast, connecting most major cities between Canada and Mexico. This segment of I-5 connects Olympia and Tacoma and provides local access to communities between. The corridor shares interchanges with US 101, SR 121, SR 510, SR 512, and SR 16. This corridor is mainly used by commuters traveling between the Olympia and Seattle/Tacoma areas as well as travelers between Portland and Seattle. The corridor experiences some of the highest freight traffic volumes in Washington due to the proximity of major ports in Tacoma, Seattle, and Olympia. In addition, military convoys use this section of I-5. Traffic generators for the corridor include these major ports and employment centers like the state capitol, JBLM, and downtown Tacoma. Multiple transit agencies provide bus and vanpool services, and have park and rides along the corridor. Sound Transit and Amtrak Cascades provide commuter and intercity rail service, respectively. Bicycles are only permitted on small portions of the highway and minimally present. A bicycle trail parallels I-5 between Olympia and Lacey, connecting with other regional trails.

Future Function

Based on the projected population, land use, and economic trends, the future function of this corridor is anticipated to remain unchanged.

Highlights and Performance

The majority of this corridor is a six-lane, divided highway. Between the Thorne Lane interchange near JBLM and the SR 16 interchange in Tacoma, I-5 expands to an eight-lane divided highway. The annual average daily traffic on this corridor is highest near the S 56th Street interchange in south Tacoma and lowest near the Olympia Airport at Tumwater Boulevard.

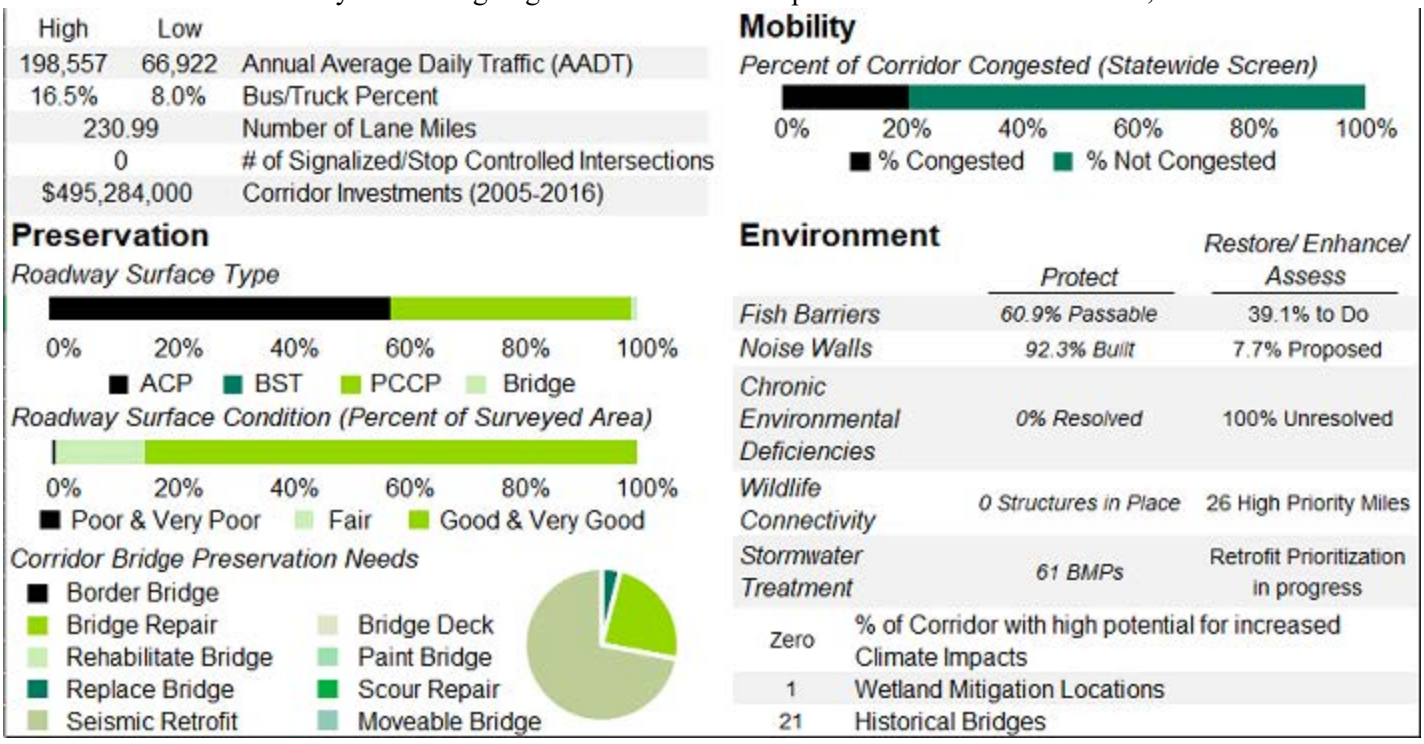
What's working well?

- 98% of pavements on this corridor are in fair or better condition.
- The JBLM Connector route is helping to reduce demand on the corridor.
- Multiple transit agencies provide service on or near the corridor.

What needs to change?

- Roughly 22% of this corridor experiences congestion on a regular basis.
- There are weight restrictions on the Nisqually River bridges.
- There are 25 bridge preservation needs on this corridor including 18 seismic retrofits.
- There are fish passage barriers present on the corridor.

WSDOT monitors the state system in ongoing efforts to track asset performance. For this corridor, WSDOT finds:



1) 2015 data unless otherwise noted. 2) For more information see the User Guide for Corridor Sketch Summaries at http://bit.ly/WSDOTcorridorsketch

What we heard from our partners

WSDOT collected feedback from agency partners. Key themes included:

- Concern shared by all partners about impacts of the Nisqually River bridges' capacity and weight restrictions.
- Strong concern for how susceptible I-5 is at the Nisqually River to impacts from incidents and the effects of traffic diverging onto local network alternatives.
- Interest in climbing/passing lanes at key locations on the corridor such as leading out of the Nisqually River valley in both directions on the steep hills.
- Concerns over capacity issues at multiple interchanges such as US 101, Martin Way and Marvin Road interchanges.
- An emphasis on the importance of I-5 as an important express transit route and interest in improving transit facilities on the corridor such as High-Occupancy Vehicle lanes.
- During peak periods, the city of Tacoma experiences heavy delays due to ongoing construction.
- Partners are interested in Commute Trip Reduction options.

Strategies

WSDOT identified the following strategies and associated actions to keep the corridor working well and address performance gaps. Regional partners collaborated on high-level mobility strategies. The identified strategies are not meant to be all-inclusive, nor an established list of priorities. Further evaluation is needed before any strategy can be recommended as a solution to address performance. Project funding decisions will take place at the programming phase, and are subject to statewide prioritization. For more strategy information, visit the Corridor Sketch Summary User Guide.

Policy Goals / Strategies	Description and Near-Term Actions
Economic Vitality	
Under Development	*WSDOT will continue to work with partners in developing strategies to address economic vitality.*
Environment	
Protect and Maintain	*Protect and maintain existing assets that provide environmental function (these include WSDOT's mitigation sites, storm water systems, fish passable culverts).*
Enhance or Restore	*Enhance or restore natural areas and environmental functions associated with the multimodal transportation system. WSDOT has a planned Stormwater Retrofit action on this corridor.*
Fish Barrier Retrofit	*WSDOT has prioritized the removal of state-owned culverts that block habitat for salmon and steelhead. See interactive map of uncorrected fish barriers at http://www.wsdot.wa.gov/Projects/FishPassage/default.htm.*
Mobility	
Assessment	*Further information about the proposed strategies can be found attached at the end of this document.*
Preservation	
Maintenance	*Based on expenditure history, it is expected that the top three activities will continue to be maintenance on snow and ice control, pavement repair, and rest areas.*
Pavement	*WSDOT has identified three Pavement actions in the next six years encompassing 100% of the corridor.*
Structures	*WSDOT has identified three Structures actions in the next six years at specific locations within this corridor.*
Other Facilities	*WSDOT has identified one Other Facilities action in the next six years at a specific location within this corridor.*
Stewardship	
Planning	*Under Practical Solutions, the Corridor Sketch Initiative identifies corridor performance, and assesses alternative strategies to improve the quality, effectiveness, and efficiency of the transportation system.*

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Mobility assessment for segment of Corridor 484

I-5: US 101 Off ramp to Thurston County Line (Milepost 104.05-114.98)

I-5 serves as an urban, recreational, and national freight corridor which travels through the cities of Tumwater, Olympia, and Lacey. This segment includes high mainline traffic volumes with merging, diverging, and weaving movements between interchanges which reduce capacity.

This segment of I-5 experiences congestion for up to two hours on weekdays and weekends north of US 101 (PM peak) and north of SR 510 (AM peak).

Corridor Segment Characteristics

- I-5 functions as an urban, six-lane divided freeway with additional auxiliary lanes at specificlocations along the segment. The posted speed is 60 mph through rolling terrain.
- The state capital and state government offices are located along the segment which travels through the cities of Tumwater, Olympia, and Lacey.
- The Freight and Goods Transportation designation for the segment was T-1 with 57,570,000 to 61,880,000 in annual tonnage and 10,000 to 12,000 daily trucks (13.0% to 9.3%) in 2015.
- The average daily traffic on the segment ranged from 90,000 vehicles at SR 510 to 146,000 vehicles north of the US 101 Deschutes Way ramp in 2016.

Contributing Factors

- High traffic volumes with merging, diverging, and weaving between interchanges reduce mainline capacity.

Mobility Strategies: Operational Improvements

- Implement Statewide Intelligent Transportation System plan that includes ramp meters to improve efficiency.
- Install hard shoulder running strategies to reduce congestion.
- Update timing and channelization for north-south and east-west local streets to increase throughput.

Demand Management

- Install illumination and park and ride lot expansion at Grand Mound to encourage mode shift.

Demand Management (Continued)

- Implement “Go Transit” initiative and options for JBLM to encourage public transit use.
- Transit oriented development/parking at downtown Olympia transit hub.
- Transit connections for first and last mile.
- Establish defined bike routes on the segment for non-motorized use to determine mode shift.
- Replace vanpools (Intercity Transit vanpools).
- Implement transit pass program to increase ridership.
- Implement Commute Trip Reduction programs, specifically between Olympia and JBLM to reduce the number of vehicles on the road.
- Install park and ride lot cameras to monitor utilization and increase security.

Policy Change

- Design/build for safety and operational improvements.
- Coordinate with Washington State Patrol on enforcement to enhance mobility.
- Landscaping to “balance” visibility for business and reduce encampments/litter.
- Consider policy options to address non-motorized infrastructure needs for new school locations to reduce traffic impacts and address safe routes to school.

Further Study

- Study interchange ramp terminal improvements to improve efficiency and reduce queuing.
- Look into the use of High Occupancy Vehicle lanes to provide reliability and reduce congestion.
- Evaluate multimodal mobility strategies identified in the I-5 corridor mobility strategy study.
- Study the I-5/US 101 interchange for southbound off weaving and northbound off queuing to improve traffic flow.
- Transit only hard shoulder running for reliability (inside shoulder if adequate width).
- Future replacement of steel truss Nisqually River bridges to improve Nisqually River delta.

Further Study (Continued)

- Look into coordinating with county on permitting for "super loads" across Nisqually River to reduce truck detour travel time.
- Rail connections into Thurston county (Sound Transit passenger rail with transit development at or near future stations).
- Study transit enhancements to reduce single occupancy vehicle trips.
- Study interchange ramp terminal improvements to improve efficiency and reduce queuing
- Look into the use of High Occupancy Vehicle lanes to provide reliability and reduce congestion.
- Evaluate multimodal mobility strategies identified in the I-5 corridor mobility strategy study from the Lewis County line to the Steilacoom-DuPont Road interchange.
- Study the I-5/US 101 interchange for southbound off weaving and northbound off queuing.
- Develop options to improve transit reliability along the corridor to improve efficiency.
- Work with Thurston Regional Planning Council and Sound Transit on rail connections into Thurston County.
- Review recommendations for improving freight mobility from the commerce corridor feasibility study.
- Evaluate options for reducing slowdowns due to climbing freight vehicles leading out of the Nisqually delta in both directions on the steep hills.
- Consider options for reducing congestion at and between the Martin Road and Marvin Road interchanges.
- Develop options for reducing queuing at the southbound Martin Way ramp terminalsignal.
- Study strategies for transit connections for the first and last mile to encourage public transit use.

WSDOT

Mobility assessment for segment of Corridor 484

I-5: Nisqually River to SR 16 Vicinity (Milepost 114.93-131.94)

This segment of I-5 is an urban recreational and freight corridor between the Nisqually River bridge and SR 16 in the city of Tacoma. This segment goes through or near the cities of DuPont, Steilacoom, Lakewood, and Tacoma.

This corridor segment experienced up to two hours of daily congestion in 2015 with spikes up to 15 hours.

Corridor Segment Characteristics

- This segment typically ranges from a six-lane divided facility to an eight-lane divided facility (eight lanes north of Thorne Lane Interchange).
- The Freight and Goods Transportation designation was T-1 from Thurston/Pierce County line to Pacific Ave (SR 705) with 72,360,000 in annual tonnage and 13,000 daily trucks (9.9%) in 2017.
- The annual average daily traffic ranged from a low of 118,000 at Steilacoom Dupont Road to a high of 198,000 north of 72nd Street in 2016.

Contributing Factors

- High traffic volumes with merging, diverging, and weaving between interchanges reduce mainline capacity.
- Commuters heading to and from JBLM, State Governments in Olympia, and other large employers between Olympia and Tacoma cause congestion.

Mobility Strategies: Operational Improvements

- Consider installing on-ramp meters on I-5 between SR 512 and SR 16.
- Consider allowing people to drive on I-5 shoulders during designated hours in Pierce County.
- Consider installing park and ride lot cameras to monitor congestion and overall safety.
- Consider increasing Washington State Patrol enforcement.
- Study implementing safety and operational improvements from the Nisqually River to SR 16 in Tacoma.
- Consider green sight-line blockers on top of median barriers to reduce congestion due to incidents on opposite side of freeway.

Demand Management

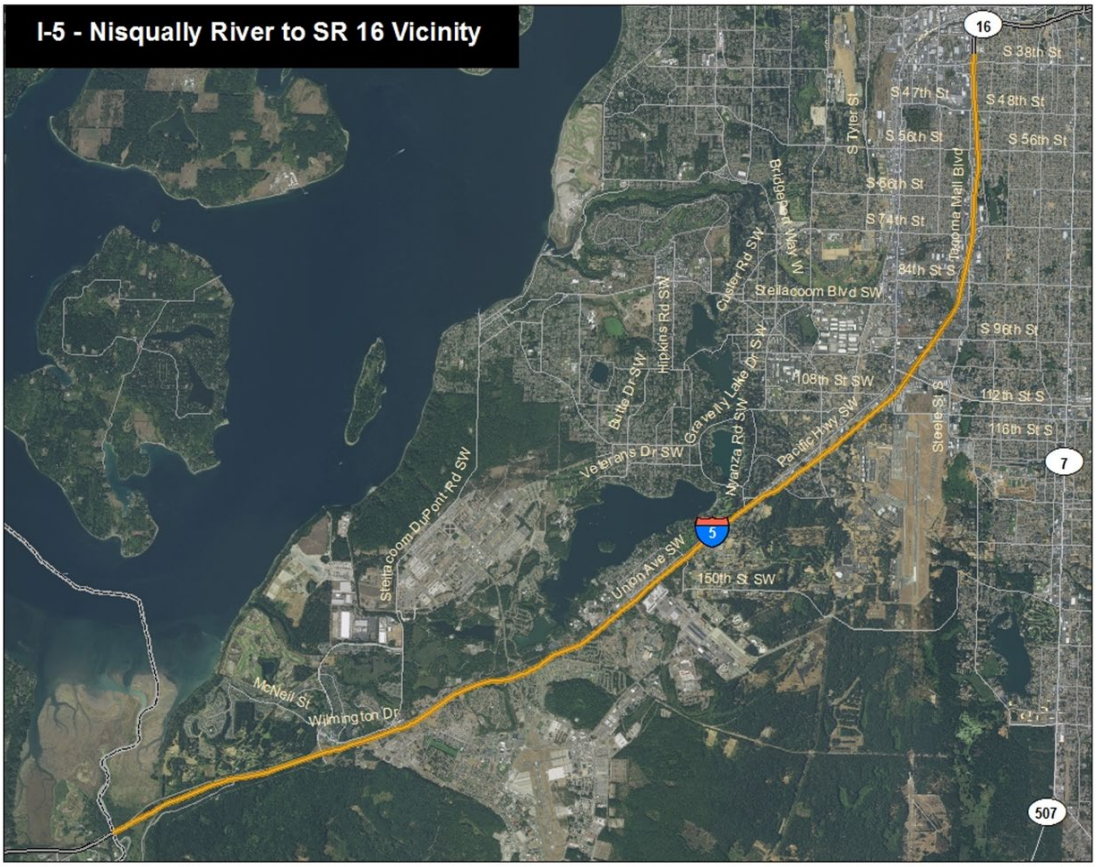
- Study Go-Transit initiative and options for JBLM including potential Park and Rides, transit shuttle system, civilian vanpools, and connections to transit off the base at park and ride lots.
- Work with local state agencies and employers to provide transit alternatives or incentives to their employees to alleviate traffic on I-5 through Commute Trip Reduction.
- Consider implementing Intercity Transit Vanpool.
- Study ways to increase low-income transit ridership through the corridor.
- Study implementing separated bicycle-pedestrian trail north of Martin Way in Thurston County to Mounts Road in Pierce County.
- Study partnering with national ride share providers like Uber and Lyft to provide transit connections for travelers (first and last mile connections).
- Encourage Pierce Transit route between downtown Tacoma to Lakewood Transit Center.
- Encourage Sound Transit Lakewood Station Access Improvements at Pacific Highway SW near 47th Ave SW vicinity (~600 new parking stalls).
- Encourage Sound Transit Sounder extension to DuPont with new stations at Tillicum and DuPont with new parking facility at Tillicum station (~125 new stalls).
- Encourage Sound Transit South Tacoma Station Access Improvements at S 56th St and Washington St in Tacoma.
- Encourage Ports to adjust freight movements to off-peak periods and JBLM to adjust/stagger shifts to reduce platooning of arrivals and departures.
- Consider constant updating of WSDOT's Travel Information Website for incidents, construction, alerts, etc..
- Encourage affordable housing and jobs in Tacoma to reduce need for long commutes.

Local Network Strategies

- Study the traffic impacts on local roadways as alternative routes to I-5 between Tumwater and DuPont.

Further Study

- Evaluate strategies to facilitate access to the Tacoma Mall area.
- Consider implementing High Occupancy Vehicle to reduce congestion and improve transit reliability.
- Study additional widening improvements along I-5 and replacing the Nisqually River Bridges to reduce congestion.
- Study Electric Vehicle Charging Systems at park and ride lots or rest areas to reduce emissions.
- Evaluate options for reducing freight slowdowns out of the Nisqually Valley.
- Review Commerce Corridor feasibility study for tolled truck facility between I-90 and Chehalis.
- Study frontage roads on both sides of I-5 to reduce congestion.
- Study freeway to freeway interchange at I-5/SR 512 Interchange to improve efficiency.
- Consider light rail options between Olympia and Tacoma to reduce congestion.
- Evaluated alternate route through or near the JBLM area for non-recurring congestion.
- Consider completion of the SR 704 Cross-Base Highway to reduce congestion.



For more information

To find out more information about this corridor or how to get involved, please contact:

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Washington State Department of Transportation's Corridor Sketch Initiative is a set of planning activities that engage our partners to define the context and performance information for all of the state's 304 highway corridors. The Corridor Sketch complements and supports regional planning processes in Washington. It is not intended to duplicate, substitute or compete with other planning efforts; nor is it intended to generate lists of projects.

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