Corridor 509 - SR 522: I-405 Jct (Woodinville) to US 2 Jct (Monroe) Summary

Corridor Sketch Summarv

WSDOT

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:

SR 522: I-405 Jct (Woodinville) to US 2 Jct (Monroe)

This 14-mile corridor is located in King and Snohomish counties northeast of Seattle. The corridor runs roughly southwest-northeast in direction between Interstate 405 near Woodinville and Bothell and US Route 2 in Monroe. The corridor is primarily suburban in character with the most common land use along the corridor being low- to moderate-density residential. Both ends of the corridor are more urban in character. Land uses in these areas are denser and include commercial, industrial, retail services. and residential developments. Brightwater Treatment Plant and the Monroe Correctional Complex are near the more urban areas in Woodinville and Monroe, respectively. Population density diminishes and agricultural and open space uses are more prominent where State Route 522 crosses the Snohomish River, just northwest of the river's convergence with the Skykomish River. Small evergreen forests, parks, water bodies and natural areas such as Lord Hill Park and Paradise Valley Conservation Area are prominent across the rolling terrain of this corridor.

96 Silver Cathcart Monroe Mill Creek East Clearview Bothell • East High 203 Maltby Bridge • Bothell Woodinville 522 Cottage Lake Kingsgate Corridor Limit Populated Place - Active Rail Line Z Military Reservation **†** Airport

Current Function

SR 522 is a primary connection between the Seattle metropolitan area and Stevens Pass, which crosses the Cascades Mountains via US 2. The majority of corridor users on this section of SR 522 are commuters using the corridor to access jobs in central Puget Sound from the suburban communities in and around Monroe, Woodinville, and Maltby. In addition to I-405 and US 2, the corridor shares junctions with SR 202, SR 9, and SR 524, which provide local access to communities along the corridor. Commercial freight accessing the many industrial areas, Seattle, or Stevens Pass via US 2 also comprises a significant portion of traffic on the corridor. The corridor provides access for recreational travelers to various natural attractions like the Wenatchee and Mount Baker-Snoqualmie national forests. SR 522 is the most direct route to I-405 for several regional destinations including the Evergreen Speedway and the Evergreen State Fairgrounds. King County Metro and Community Transit provide transit services along sections of the corridor. Bicyclists and pedestrians are generally not present.

Future Function

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



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Highlights and Performance

This corridor is mainly a four-lane, divided highway with the exception of a short portion just east of the Snohomish river which has two lanes. There is one signalized intersection on the corridor. Average daily traffic is highest just east of the I-405 interchange in Woodinville and lowest at the US 2 interchange in Monroe.

What's working well?

- Transit services are well used only on part of the corridor near Woodinville and Bothell.
- The Samamish River trail on the corridor's west end
- provides continuous non-motorized access to Seattle.Several fish passage barriers have been corrected along the corridor.

What needs to change?

- Roughly 39% of the corridor experiences congestion on a regular basis.
- About 15% of pavements surveyed on the corridor are in poor to very poor condition.
- There are unstable slopes along the corridor.

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

High	Low					Mobility Percent of Corridor Congested (Statewide Screen)						
93,453	11,777	Annual Average Daily Traffic (AADT)										
6.9%	3.5%	Bus/Truck Percent										
49	49.57		Number of Lane Miles				20%	40%	60%	80%	100%	
2		# of Signalized/Stop Controlled Intersections					Scone	jested	% Not Co	ngested		
\$240,5	82,000	Corridor I	nvestments	(2005-2016	6)							
Preser	Preservation					Enviro	nment			Restore/	Enhance	
Roadway Surface Type							Protect		Assess			
					Fish Barriers		38.5% Passable		61.5% to Do			
0%	20%	40%	60%	80%	100%	Noise Walls		0% Built		0% Proposed		
ACP BST PCCP Bridge Roadway Surface Condition (Percent of Surveyed Area)						Chronic Environmental		0% Resolved		0% Unresolved		
						Deficiend						
0%	20%	40%	60% air 📕 Go	80% od & Very	100% Good	Wildlife Connectivity		5 Structur	es in Place	0 High Priority Miles		
Poor & Very Poor Eair Good & Very Good Corridor Bridge Preservation Needs Border Bridge						Stormwater Treatment		17 E	17 BMPs		Retrofit Prioritization	
Bridge Repair Bridge Deck Rehabilitate Bridge Paint Bridge						100.0	100.0 % of Corridor with high potential for increased Climate Impacts					
Replace Bridge Scour Repair					8	Wetland Mitigation Locations						
Seismic Retrofit Moveable Bridge					1	Historical Bridges						

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 planners collected feedback from agency partners. Key themes included:

- Continued investment in high-capacity transit is a priority for partners particularly near Woodinville and Bothell.
- New off-corridor connections, such as a more-direct route between NE Woodniville Drive and 120th Ave NE, may help alleviate demand on the corridor itself.
- Partners expressed concern for lighting where local streets pass under the corridor particularly at 179th Ave SE in Monroe.
- Interest in creating SR 522 connections to local streets such as Tester Road south of Monroe.
- Desire in highway capacity expansion, particularly on the 2-lane section near the Snohomish River.

Strategies

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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.					
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 conti to be maintenance on snow and ice control, clean stormwater, and pavement rep					
Pavement	WSDOT has identified two Pavement actions in the next six years encompassing 51% of the corridor.					
Structures	WSDOT has identified two Structures actions in the next six years encompassing 5% of the corridor.					
Safety						
Investment	WSDOT has identified two Safety Investment actions in the next six years encompassing 25% of the 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.					

WSDOT

Mobility assessment for segment of Corridor 509 State Route 522: I-405 to US 2 (Milepost 10.45 – 24.68)

SR 522 is the main north-south connection between Bothell, Woodinville, and Monroe for vehicular traffic. The corridor continues south and west of this segment, providing connections to I-405, Lake Forest Park, and Seattle. This route supports a large amount of commuter traffic in the morning and evening, as well as commercial and recreational users.

Corridor Segment Characteristics

- In 2015, the average annual daily traffic ranged from 18,000 trips near the US 2 interchange to 93,000 trips between I-405 and SR 202.
- This segment of the corridor carries 2,805 trucks daily and 9,305,000 tons freight annually.
- Park & rides at Bothell and Woodinville are served by King County Metro and Sound Transit. Much of the segment is outside transit service districts.

Contributing Factors

- Traffic demand exceeds capacity during heavy commuter and tourist use particularly near interchanges, resulting in delay.
- Bottlenecking occurs in the area between Paradise Lake Road and the Snohomish River Bridge where the corridor transitions from four lanes to two lanes.
- Poor traffic flows on I-405 lead to backups on SR 522 westbound.
- Lack of local network connections forces additional traffic demand onto the segment.
- Lack of non-motorized facilities at interchanges make crossing the highway difficult for these users.
- Transit Service is commuter oriented, not frequent, all day service resulting in minimal transit mode share.
- The Maltby community is currently not within Community Transit's service area.
- Significant population growth in this area, and along the SR 9 and US 2 corridors result in recurring congestion, especially at intersections with SR 522.
- I-405's limited ability to accommodate higher peak period traffic volumes constrains the effectiveness of improvements to SR 522.

Mobility Strategies:

WSDOT compiled these strategies based on available information and existing plans. The agency will conduct engagement with its partners to further develop strategies for the corridor.

Operational Improvements

- Implement ramp metering and freight-friendly right turns to improve operational capability of intersections.
- Install intersection improvements to manage congestion during periods of high use.
- Provide traveler information on roadway conditions to reduce delay.

Demand Management

- Increase transit service paired with highway improvements to provide travel time savings and reliability, and increase ridership.
- Improve modal access, options, and connectivity to reduce single occupant vehicle trips.

Further Study

- Study possible improvements to local network to move local trip demand off SR 522.
- Study options to manage a bottleneck between Paradise Lake Road and the Snohomish River Bridge.
- Additional strategies to manage congestion may be identified through the Puget Sound Regional Council's regional planning process.



Traffic congestion and bottlenecks on SR 522 are located near interchanges with I-405, SR 9, US 2, and south of the Snohomish River Bridge

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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