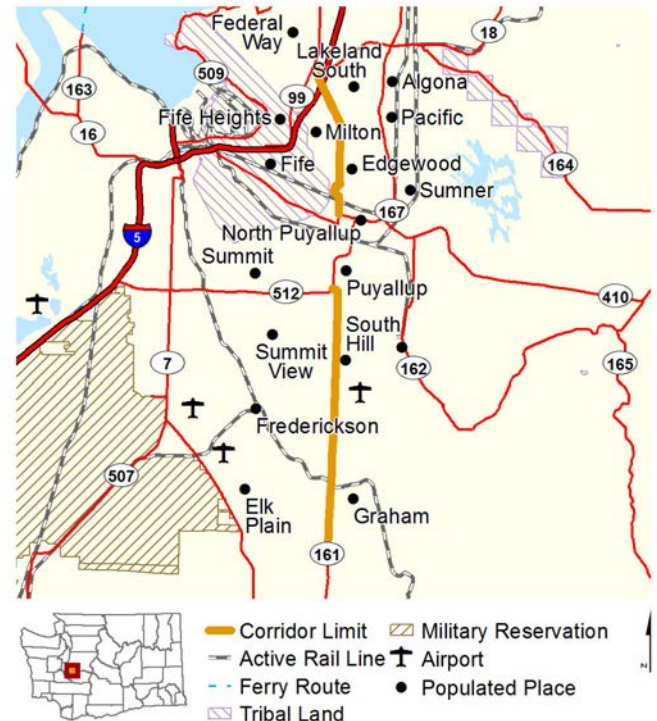


WSDOT's Corridor Sketch Initiative is a collaborative planning process with agency partners to identify performance gaps and select high-level strategies to address them on the 304 corridors statewide. This Corridor Sketch Summary acts as an executive summary for one corridor. Please review the User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

*SR 161: Graham City Limits (vic. 264th St) to SR 18 Jct (Federal Way)*

This 21-mile long north-south corridor is located east of Tacoma in Pierce County. The corridor runs between the Graham city limits, within the 264th Street vicinity, and the State Route 18 junction in Federal Way. Between South Hill and north Puyallup, SR 161 runs concurrent with SR 512 and SR 167. The majority of the corridor is suburban in character with denser residential development dispersed throughout. The primary land uses along the corridor are high- to medium-density residential and commercial space. The commercial space is distributed throughout the length of the corridor with businesses located on either side of the facility. The corridor passes through the communities of South Hill, Puyallup, Edgewood, Milton, and Federal Way. The Pierce County Airport-Thun Field is located directly at the end of the corridor near Graham. There are several schools located along the corridor as well as the South Hill Mall, and the Washington State Fairgrounds.



Current Function

SR 161 is a major north-south arterial connecting communities in southern Pierce County with Interstate 5. The corridor's primary users are urban freight and commuter traffic, as well as recreational traffic. The corridor provides local access to Graham, Puyallup, Edgewood, Milton, and Federal Way. These localities have high volumes of freight traffic and commuters from residential areas. Major traffic generators along the length of the corridor include large shopping centers such as the South Hill Mall, warehouses, the Washington State Fairgrounds, Wild Waves Theme Park, and the Pierce County Airport-Thun Field. There is a major freight presence on the corridor due to a Fred Meyer Distribution Center just north of Puyallup, and several additional commercial facilities. Other modes that are present on the corridor are pedestrians and bicyclists as well as public transit provided by Pierce Transit.

Future Function

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

## Highlights and Performance

This portion of SR 161 is a largely undivided, signalized highway with a variable number of lanes. The corridor varies between two lanes near the 264th St intersection and seven lanes through Puyallup. It includes a center turn lane for the majority of the route and occasional turn lanes. The annual average daily traffic on this corridor is highest at the southern SR 512 junction in Puyallup and lowest at the 264th St intersection in Graham.

### What's working well?

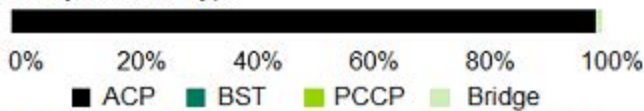
- Approximately 98% of surveyed pavements on the corridor are in fair or better condition.
- There are sidewalks available for pedestrian use on the majority of the corridor.
- Most of the corridor offers fixed-route transit and there are two large intermodal transit centers.
- There are noise walls installed and operational at required locations on the corridor.

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

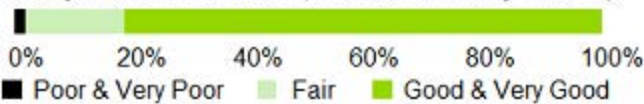
High	Low	
44,545	11,614	Annual Average Daily Traffic (AADT)
11.2%	3.3%	Bus/Truck Percent
60.27		Number of Lane Miles
41		# of Signalized/Stop Controlled Intersections
\$124,822,000		Corridor Investments (2005-2016)

### Preservation

#### Roadway Surface Type



#### Roadway Surface Condition (Percent of Surveyed Area)



#### Corridor Bridge Preservation Needs

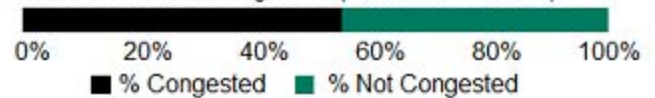


### What needs to change?

- Roughly 55% of the corridor experiences congestion on a regular basis.
- There are two bridges on the corridor with a performance gap for seismic retrofit.
- There are no dedicated bicyclist facilities on the corridor.
- The area between Edgewood and SR 18/I-5 in King County has a medium climate change vulnerability rating.

### Mobility

#### Percent of Corridor Congested (Statewide Screen)



### Environment

	Protect	Restore/ Enhance/ Assess
Fish Barriers	20% Passable	80% to Do
Noise Walls	100% Built	0% Proposed
Chronic Environmental Deficiencies	0% Resolved	0% Unresolved
Wildlife Connectivity	0 Structures in Place	1 High Priority Miles
Stormwater Treatment	118 BMPs	Retrofit Prioritization in progress
18.0	% of Corridor with high potential for increased Climate Impacts	
2	Wetland Mitigation Locations	
None	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 collected feedback from agency partners. Key themes included:

- Concerns about the impact of ongoing residential and commercial development on the corridor's mobility.
- Partners expressed a desire to see improvements made between 176th Street E/Sunrise Boulevard and 128th Street that would decrease the effects of turning traffic.
- A desire to address congestion at the corridor's Valley Avenue, 31st Avenue SW, and Woodland Avenue E intersections.
- One partner would like to explore ways in which to improve the corridor's accessibility in order to keep long-distance traffic off local roads, particularly Shaw Road and 86th Avenue E in Puyallup.
- A desire to increase fixed-route transit service from Puyallup to 176th Street E in order to provide more passenger/commuter options.
- One partner expressed an interest in extending parallel north-south local agency roads to reduce duration of congestion on SR 161.

## 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	<i>WSDOT will continue to work with partners in developing strategies to address economic vitality.</i>
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#### **Environment**

Protect and Maintain	<i>Protect and maintain existing assets that provide environmental function (these include WSDOT's mitigation sites, storm water systems, fish passable culverts).</i>
Enhance or Restore	<i>Enhance or restore natural areas and environmental functions associated with the multimodal transportation system.</i>
Fish Barrier Retrofit	<i>WSDOT has prioritized the removal of state-owned culverts that block habitat for salmon and steelhead. See interactive map of uncorrected fish barriers at <a href="http://www.wsdot.wa.gov/Projects/FishPassage/default.htm">http://www.wsdot.wa.gov/Projects/FishPassage/default.htm</a>.</i>

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#### **Mobility**

Assessment	<i>Further information about the proposed strategies can be found attached at the end of this document.</i>
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#### **Preservation**

Maintenance	<i>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.</i>
Pavement	<i>WSDOT has identified two Pavement actions in the next six years encompassing 72% of the corridor.</i>

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#### **Safety**

Investment	<i>WSDOT has identified two Safety Investment actions in the next six years encompassing 71% of the corridor.</i>
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#### **Stewardship**

Planning	<i>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.</i>
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This segment of SR 161 is an urban commuter, freight, recreational, and tourism corridor. This segment begins in the Graham community, passes through the South Hill community, and into the city of Puyallup.

This segment experienced up to 15 hours of daily congestion in 2015.

### Corridor Segment Characteristics

- SR 161 is typically an urban five lane facility (center two way left turn lane) with sidewalk on both sides north of 176<sup>th</sup> Street E-Sunrise Blvd E. Posted speeds range from 35 mph to 45 mph in rolling terrain.
- The Freight and Goods Transportation designation was T-2 from 224<sup>th</sup> Street E to SR 512 with 5,490,000 in annual tonnage and 1,700 daily trucks (4.5%) in 2017.
- The annual average daily traffic ranged from a low of 22,000 north of 224<sup>th</sup> Street E to a high of 44,000 before 128<sup>th</sup> Street E in 2016.

### Contributing Factors

- High traffic volumes with multiple signals reduce capacity. Development and zoning are factors too.

### Mobility Strategies:

#### Operational Improvements

- Consider fiber optic in conduit from 128<sup>th</sup> St E to 136<sup>th</sup> St E and improve signal timing efficiency.
- Evaluate corridor for mainline signal timing with coordination between systems around 136<sup>th</sup> St E to improve efficiency.
- Consider flashing arrows on the corridor to improve traffic flow if posted speed is lowered to 35 mph or less.

#### Demand Management

- Consider increasing transit opportunities to reduce congestion and increase mode options.
- Consider strategies between 176<sup>th</sup> St E-Sunrise Blvd E and 128<sup>th</sup> to reduce congestion.
- Consider new park and ride lot in South Hill/Graham to encourage mode options and reduce congestion.

### Local Network Improvements

- Evaluate two local agency roads located west of Meridian (SR 161) between 152<sup>nd</sup> St E and 160<sup>th</sup> St E near the Gem Heights development to reduce the duration of north-south congestion.
- Evaluate extending a local agency road (122<sup>nd</sup> Ave E) located east of Meridian (SR 161) between Sunrise Blvd and 200<sup>th</sup> St E-Howe Road to reduce duration of north-south congestion.
- Study options of parallel route 94<sup>th</sup> Ave E, located west of SR 161, to reduce duration of north-south congestion.

### Further Study

- Consider adaptive signals using detection of vehicles in a network grid to improve efficiency.
- Study wayfinding signage near South Hill Mall to reduce confusion and improve operations.
- Study local facilities' impacts on SR 161 congestion.
- Study SR 161 between 224<sup>th</sup> St E and SR 512 to reduce congestion.
- Study Pierce County Airport-Thun Field commuter air service to reduce congestion.
- Consider in-depth planning study results on short, mid, and long term congestion reduction strategies for 31<sup>st</sup> Ave SW near SR 512.
- Study feasibility of High Capacity Transit (HCT) between Downtown Puyallup and 176<sup>th</sup> Street E.
- Study 110<sup>th</sup> between 152<sup>nd</sup> and 136<sup>th</sup> offset to 144<sup>th</sup> to 122<sup>nd</sup> to reduce congestion.



This segment of SR 161 is an urban commuter, freight, recreational, and tourism corridor connecting the cities of Puyallup and Edgewood.

This segment experienced up to 15 hours of daily congestion in 2015.

### Corridor Segment Characteristics

- This segment of SR 161 is an urban three lane facility with a center two way left turn lane on its north end with 35mph posted speeds in rolling terrain. The southern end is three lanes with a northbound climbing/passing lane in steep terrain.
- The Freight and Goods Transportation designation was T-3 from Valley Ave E to Milton Way with 2,290,000 in annual tonnage and 820 daily trucks (4.6%) in 2017.
- The annual average daily traffic ranged from a low of 15,000 before 102<sup>nd</sup> Ave E to a high of 19,000 after 36<sup>th</sup> Street E in 2016.

### Contributing Factors

- Steep topography and curves is a challenge for trucks and larger vehicles in both directions.
- High traffic volumes and reduced capacity from signal at 36<sup>th</sup> St E results in queuing.

### Mobility Strategies:

#### Operational Improvements

- Evaluate signal timing of closely spaced signals in Edgewood to improve traffic flow and efficiency.

#### Local Network Improvements

- Evaluate the potential of building two parallel north-south alternative routes for congestion relief (one west of SR 161 on Freeman Rd E and the other east).

### Further Study

- Study installing traffic calming measures in Edgewood to lower speeds and reduce non-recurring congestion.
- Develop options for reducing impacts from slow vehicles climbing in the northbound direction to reduce congestion.
- Study long-range solutions to reduce congestion on SR 161 between 36<sup>th</sup> St E and 24<sup>th</sup> St E.
- Review nearby SR 167 Completion Project for potential strategies.



## For more information

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

### Dennis Engel

Olympic Region Planning Office

Planning Manager

360-357-2651

[engeld@wsdot.wa.gov](mailto:engeld@wsdot.wa.gov)

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.

Under 23 U.S. Code § 148 and 23 U.S. Code § 409, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

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Individuals requiring reasonable accommodations may request written materials in alternate formats, sign language interpreters, physical accessibility accommodations, or other reasonable accommodations by contacting the event sponsor (enter name of event sponsor and phone number), by (insert date-usually two weeks advance notice). Persons who are deaf or hard of hearing may contact the event sponsor through the Washington Relay Service at 7-1-1.

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Este material se puede hacer disponible en un formato alternativo por correo electrónico al equipo de Asuntos de diversidad/ADA WSDOT en [wsdotada@wsdot.wa.gov](mailto:wsdotada@wsdot.wa.gov) o llamando gratis, 855-362-4ADA (4232). Personas sordas o con problemas de audición pueden solicitar llamando el relé de estado de Washington al 711.

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