

Chapter 2 Description of the Existing Facility

Chapter 2 describes the area surrounding SR 169 and various roadway features including the number of lanes and locations of bridges and signalized intersections.

1 Where is SR 169 located and what land uses surround the area?

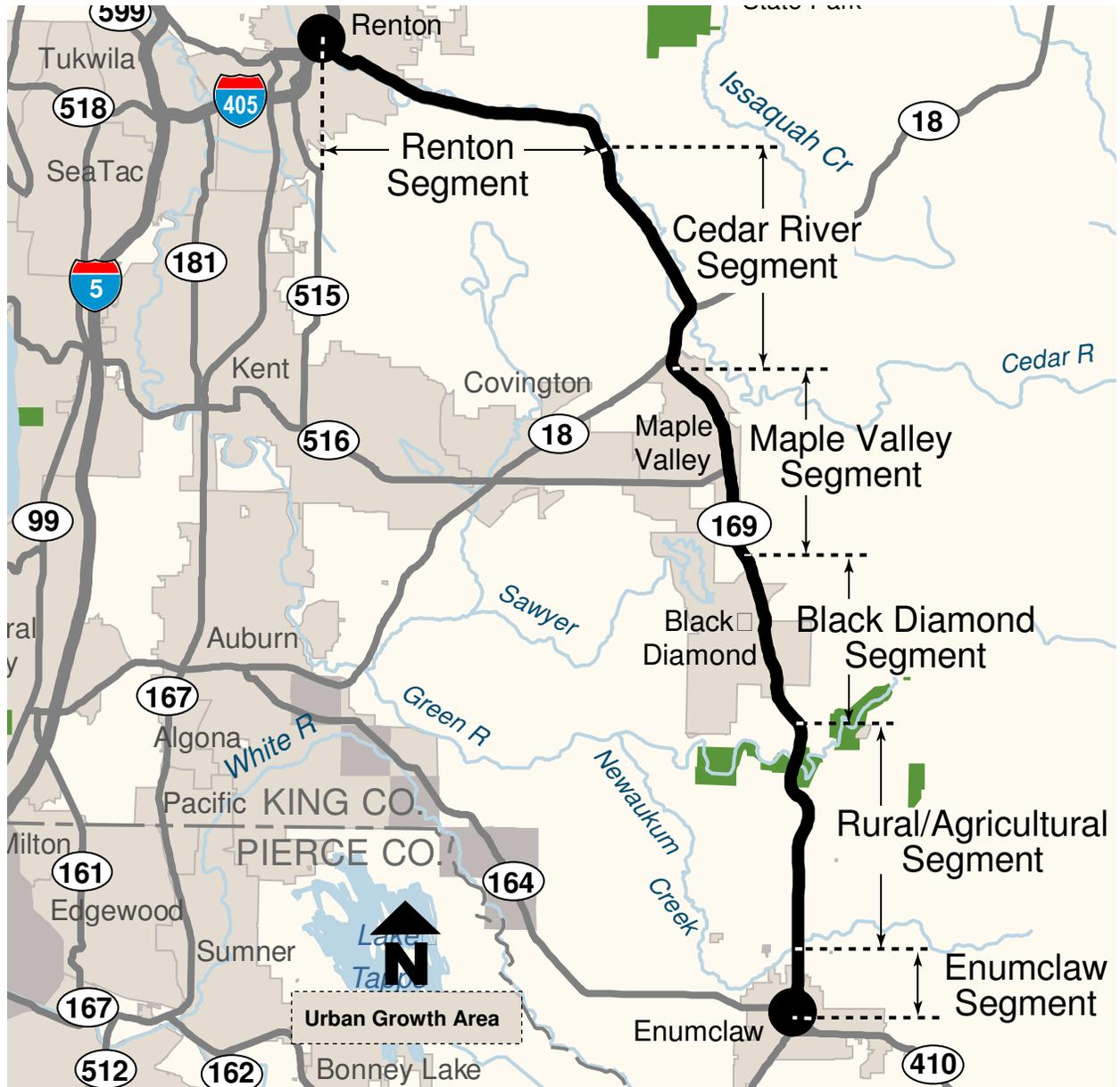
SR 169 is a 25 mile roadway corridor beginning in the City of Enumclaw where it intersects with SR 164. From its southern terminus SR 169 travels north through parts of unincorporated King County and the cities of Black Diamond, Maple Valley, and Renton where SR 169 ends at I-405. SR 169 is used by commuters, tourists, residents, freight haulers, and people destined to recreational, industrial, and commercial activities located in the area.

Land uses along SR 169 vary from urban to rural. Urban areas contain uses ranging from residences to businesses to industries, while rural uses are primarily agricultural, with sparse development. The varying land uses and terrain are examples of the area's diversity. For the purpose of this analysis, the corridor has been divided into six distinct segments shown in Exhibit 2.1 on the next page. Each segment's unique characteristics were considered while developing improvement recommendations appropriate to specific locations along the highway. Each roadway segment is described in the text that follows.



A number of recreational uses are located along the northern section of SR 169

Exhibit 2.1
SR 169 Corridor Segments



Enumclaw – Milepost 0.00 to 1.17

The Enumclaw segment extends from the SR 169/SR 164 junction in downtown Enumclaw to just north of the Enumclaw city limits at SE 424th Street. Land uses in the segment vary from urban to rural/agricultural. At the southern end of this segment within the city, land use is urban in nature containing mostly low-to-medium density residential uses, and some commercial and municipal facilities. The northern portion of the segment is more rural with residences spaced farther apart.

Rural / Agricultural – Milepost 1.17 to 6.02

The Rural / Agricultural segment extends from SE 424th Street to SE Green Valley Road. This segment is characterized by open space consisting of forest and agricultural lands. The southern half of this segment is mostly agricultural, while the northern half contains large forested areas. Thunder Mountain Middle School is located near the south end of this segment right off of SR 169. A number of gravel mines are located near SR 169 within this segment, and trucks often use this route for transporting gravel to other locations.

Appendix B

Appendix B contains information describing existing environmental conditions along SR 169 for natural resources and built environment resources (such as historic buildings)

A large portion of the agricultural properties located in the southern half of the SR 169 segment are located within King County's Agriculture Production District (APD)¹ and / or the county's Farmland Preservation Program.²

Black Diamond – Milepost 6.02 to 10.02

The Black Diamond segment extends from SE Green Valley Road to SE 291st Street. Land uses at both the south and north ends of the segment are rural with open space, forest, and agricultural lands. In the middle of this segment within Black Diamond, land uses include low-density residential, commercial, and municipal facilities.

Maple Valley – Milepost 10.02 to 15.07

The Maple Valley segment extends from SE 291st Street to SE 218th Street. Land uses are semi-urban, characterized by low-density residential and commercial development. Commercial developments are concentrated near the SR 169 intersections of SR 516 (Kent-Kangley Road) and Wax Road. Rock Creek Elementary School is located on the east side of SR 169 near SE 258th Street. Some of SR 169's higher traffic volumes and congestion are experienced within this segment, especially near the SR 516 intersection.



Black Diamond currently is characterized by low density commercial and residential uses.

¹ In 1985, King County established Agricultural Production Districts (APDs). An APD is farmland with large lot zoning requirements and a preference to be used for commercial agricultural purposes. The Growth Management Act (GMA) requires cities and counties to designate, where appropriate, agricultural lands that are not characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products. Lands within APDs should remain in parcels large enough for commercial agriculture. New development shall not disrupt agriculture operations and shall have a scale compatible with an active farming district. Removal of the land from the APD may only occur if it is mitigated through the addition of agricultural land abutting the same APD of equal acreage and of equal or greater soils and agriculture value.

² In 1979, voters approved a \$50 million ballot measure to protect farmland threatened by development. The Farmland Preservation Program (FPP) became the first voter-approved measure in the nation to protect farmland in a metropolitan area. By purchasing the development rights, the FPP keeps farmland open and available through covenants that restrict development and limit the properties uses exclusively for agriculture and open space. The covenants run with the land in perpetuity so the land is protected regardless of ownership. Under the FPP, the county owns the development rights; however, the lands remain in the private ownership of over 200 property owners. The county cannot sell or remove its interest in FPP lands with the exception of conveying public road or utility easements.

Cedar River – Milepost 15.07 to 19.22

The Cedar River segment extends from SE 218th Street to Jones Road/196th Avenue SE. The land use varies, but is mostly rural. Low density residential development, scattered commercial and light industrial development, and agricultural uses can all be found within this segment. King County's Cedar Hills Regional Landfill, off of Cedar Grove Road in this segment, is a destination of many daily disposal truck trips.

Renton – Milepost 19.22 to 25.26

The Renton segment extends from Jones Road / 196th Avenue SE to the I-405 interchange in Renton. The character of this segment varies from rural in the southern portion to semi-urban in the north. Within the semi-urban areas, uses include recreational, single and multi-family residential, and some commercial developments. Recreational areas in this segment include: Cedar River Park, Maplewood Riverside Park, Maplewood Golf Course, Ron Regis Park, Cedar Grove Park, and the Cedar River Trail. The Cedar River Trail follows SR 169 the entire length of this segment. This segment has heavy peak hour traffic volumes due to commuters traveling to and from I-405. Many daily heavy truck trips going to and from gravel pits; a cement factory; a coal mine; and a solid waste landfill all add to the already heavy traffic volumes throughout this segment.



Recent residential development along SR 169 near Renton

2 When did SR 169 become a State Route?

SR 169 has been a branch of Primary State Highway 5 (PSH 5) from 1937 to 1970. The State Route (SR) numbers were approved by the 1963 legislature and first posted in January 1964 but the PSH numbers remained as the official numbers in the state law until 1970. From 1923 to 1937, the highway now known as SR 169 had been a branch of State Route No. 5 – National Park Highway.³

³ See <http://www.angelfire.com/wa2/hwysofwastate/strd005.html>; and <http://www.angelfire.com/wa2/hwysofwastate/psh005.html>.

SR 169's vintage 1932 bridge across the Green River (the Green River / Dan Evans Bridge) was built by King County. SR 169, the Enumclaw-Maple Valley-Renton highway does not appear to have been part of the state highway system until 1937.⁴

3 How many lanes are there on SR 169?

The number of lanes on SR 169 ranges from two in the rural areas, to five in the urbanized areas as discussed in the text below. See the typical cross sections on SR 169 in Exhibit 2.2 and at key locations throughout the corridor where those cross sections exist in Exhibit 2.3.

⁴ (See http://beist/Bridge/Source/Bridges/CurrentBridge_info.asp?StructureID=000000IR)

**Exhibit 2.2
SR 169 Typical Cross-Sections**

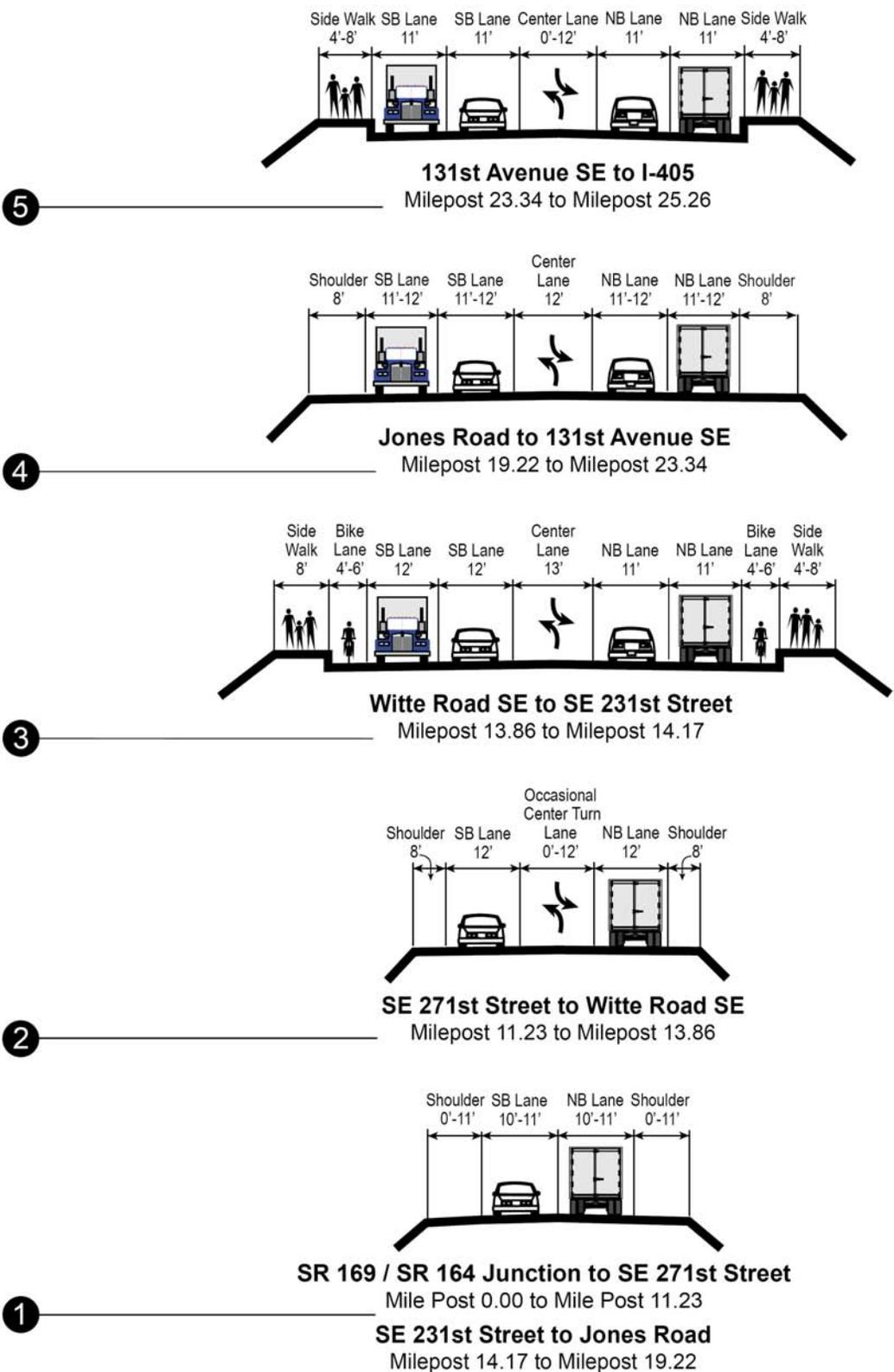
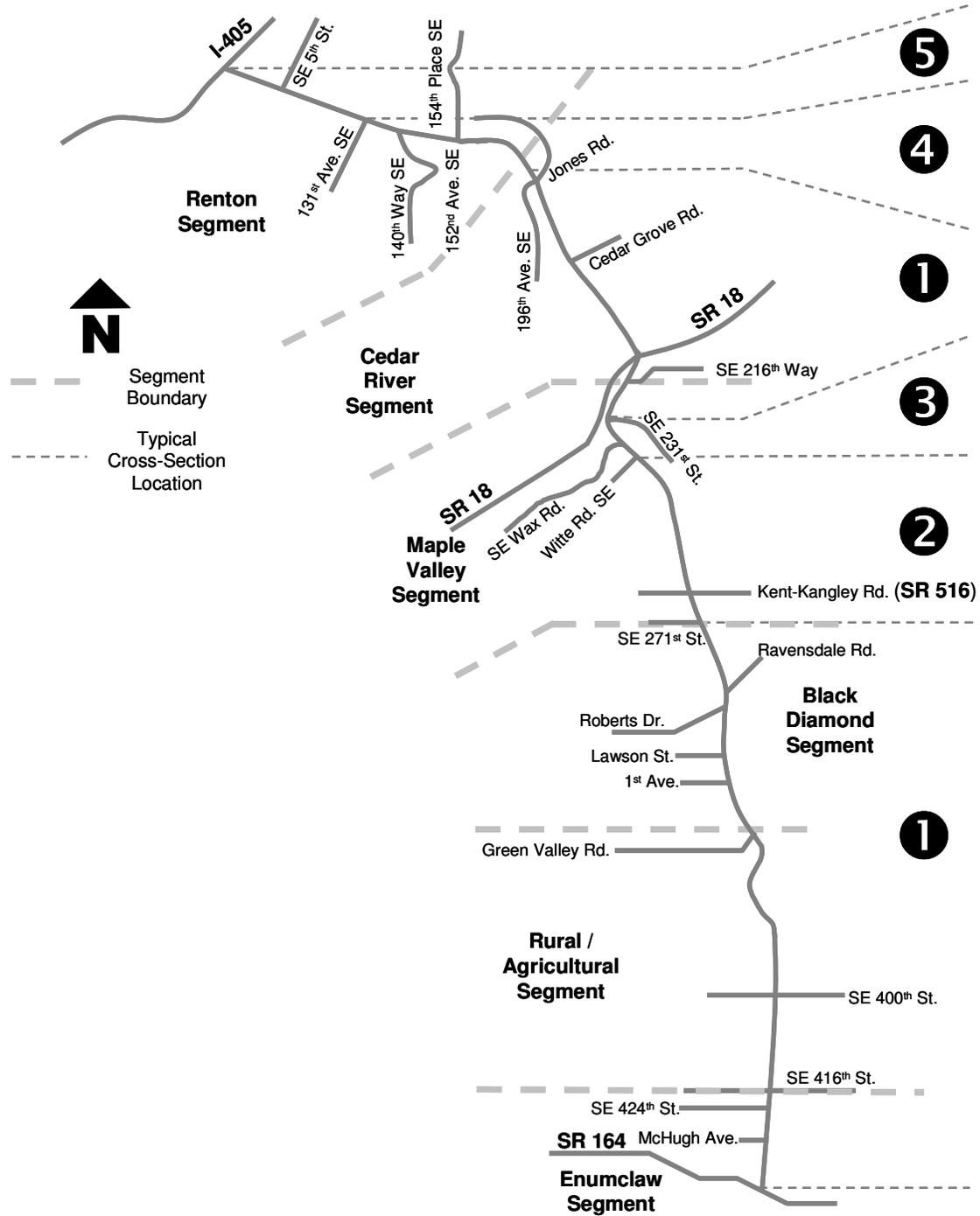


Exhibit 2.3
SR 169 Cross-Section Locations



4 Where are the intersections and turning lanes on SR 169?

There are approximately 90 intersections along SR 169. Twenty-two of those intersections were identified for analysis by the SR 169 RDP study team (14 signalized and 8 unsignalized). All but two of the signalized intersections are located between Maple Valley and Renton. Each of the approximately 40 major intersections is listed in Exhibit 2.4 starting on the following page.⁵ The exhibit description includes: the milepost location, the cross street, intersection type, the existing channelization, auxiliary lanes, and traffic control. Exhibit 2.4 also notes the 22 analyzed intersections.

The first signalized intersection is in Enumclaw at the SR 169 /SR 164 intersection. The second signalized intersection is north of Enumclaw at the recently signalized SE 400th Street intersection. Two flashing signals are used along the corridor. A flashing yellow/red light is located at Washington Avenue. Washington Avenue does not cross SR 169 at a right angle and is an example what is referred to as an awkward intersection. Drivers approaching from the side street do not have a clear view of cross traffic. In Black Diamond, a pedestrian only signal is used on the north leg of the Baker Street intersection. This 3-legged intersection lies between a business district on the east side of the highway and a school on the west side.

South of Maple Valley, in the predominantly rural portion of the corridor, separate turning lanes are provided at a limited number of locations. In the urban areas north of Black Diamond, most of the major intersections have separate right-turn and/or left-turn lanes.



Approaching the northbound turn pocket and southbound left turn lane near Thunder Mountain Middle School in the Rural / Agricultural segment.



A gravel truck traveling through the two-lane residential portion of Black Diamond.



Rural two-lane roadway of the Cedar River Segment.

⁵ Approximately 90 intersections on SR 169
 Approximately 40 intersections were identified as major intersections by SR 169 Corridor Study team

22 = ANALYZED INTERSECTIONS in SR 169 RDP
 (14 – Signalized intersections analyzed in Chapter 3 of this RDP; and
 8 – Unsignalized intersections analyzed in Chapter 3 of this RDP).

Exhibit 2.4**SR 169 Intersection Characteristics**

MP	SR 169 Intersection	Int. Type	Channelization /Auxiliary Lanes	Traffic Control (See Key)	Analyzed in this RDP?
ENUMCLAW SEGMENT					
0.00	Griffin Avenue (SR 164)	4-Leg	- Left-turn Lanes All	Signal	Yes
0.41	Kibler Avenue	4-Leg	- No Auxiliary Lanes	2-Way Stop	No
0.67	McHugh Avenue (SE 432nd Street)	4-Leg	- No Auxiliary Lanes	2-Way Stop	No
RURAL / AGRICULTURAL SEGMENT					
1.17	SE 424th Street	3-Leg	- No Auxiliary Lanes	1-Way Stop	No
1.67	SE 416th Street	4-Leg	- No Auxiliary Lanes	2-Way Stop	Yes
2.67	SE 400th Street	4-Leg	- NB & SB Left-turn Lanes	Signal	Yes
3.52	Enumclaw – Franklin Road	3-Leg	- No Auxiliary Lanes	1-Way Stop	Yes
3.59	SE 385th Street	4-Leg	- No Auxiliary Lanes	2-Way Stop	No
BLACK DIAMOND SEGMENT					
6.02	SE Green Valley Road	3-Leg	- EB Right-turn Flare	1-Way Stop	Yes
7.27	Jones Lake Road	3-Leg	- No Auxiliary Lanes	1-Way Stop	No
7.63	Lawson Street – Green River Gorge Road	4-Leg	- No Auxiliary Lanes	2-Way Stop	Yes
7.69	Baker Street	3-Leg	- No Auxiliary Lanes	Ped. Signal	Yes
7.90	Park Street	3-Leg	- No Auxiliary Lanes	1-Way Stop	No
8.25	Roberts Drive	3-Leg	- No Auxiliary Lanes	1-Way Stop	Yes

Exhibit 2.4

SR 169 Intersection Characteristics

MP	SR 169 Intersection	Int. Type	Channelization /Auxiliary Lanes	Traffic Control (See Key)	Analyzed in this RDP?
BLACK DIAMOND SEGMENT (continued)					
8.28	Black Diamond – Ravensdale Road	3-Leg	- No Auxiliary Lanes	1-Way Stop	Yes
MAPLE VALLEY SEGMENT					
10.02	SE 288th Street	3-Leg	- No Auxiliary Lanes	1-Way Stop	No
10.69	SE 280th Street	3-Leg	- NB & EB Left-turn Lanes; - SB & EB Right-turn Lane	Signal	No
10.95	SE 276th Street	4-Leg	- Left-turn Lanes All; - NB & SB Right-turn Lanes	Signal	No
11.23	SE 271st Place	3-Leg	- SB & WB Left-turn Lanes - WB Right-turn lane	1-Way Stop	No
11.44	SR 516 – Kent Kangley Road*	4-Leg	- Left-turn Lanes All; - WB Right-turn Lane	Signal	Yes
11.71	SE 264th Street*	3-Leg	- NB & EB Left-turn Lane; - SB Right-turn Lane	1-Way Stop	No

* NOTE: The configurations described above were the Existing Conditions at the time the data was developed for this study. In the ensuing months progress has been made on the SR 169 / SR 516 (Kent-Kangley) project. This particular project includes:

- 2 northbound and southbound through lanes;
- a northbound and southbound left turn lane;
- an eastbound and westbound through lane; and
- an eastbound and westbound left and right turn lane.

The SR 169 / SE 264th Street intersection has been improved to include:

- 2 northbound and southbound through lanes;
- 1 eastbound and westbound through lane;
- 1 eastbound and westbound left turn lane; and
- 1 eastbound and westbound right turn lane.

Exhibit 2.4

SR 169 Intersection Characteristics

MP	SR 169 Intersection	Int. Type	Channelization /Auxiliary Lanes	Traffic Control (See Key)	Analyzed in this RDP?
MAPLE VALLEY SEGMENT (continued)					
12.38	SE 253 rd Place	4-Leg	- NB & SB Left-turn Lanes; - NB & SB Right-turn Lanes;	2-Way Stop	No
12.53	SE 251 st Street	3-Leg	- SB Left-turn Lane	1-Way Stop	No
13.02	SE 244 th Street	3-Leg	- SB & WB Left-turn Lanes; - NB & WB Right-turn Lane	1-Way Stop	No
13.14	231 st Avenue SE	3-Leg	- NB & EB Left-turn Lanes; - SB & EB Right-turn Lane	1-Way Stop	No
13.37	228 th Avenue SE	3-Leg	- NB Left-turn Lane; - SB Right-turn Lane	1-Way Stop	No
13.53	SE 240 th Street	4-Leg	- Left-turn Lanes All; - NB & SB Right-turn Lanes	Signal	Yes
13.86	Witte Road SE	4-Leg	- Double EB Left-turn Lane; - Single NB, SB, & WB Left-turn Lanes; - NB & SB Right-turn Lane	Signal	Yes
14.04	SE Wax Road	4-Leg	- Left-turn Lanes All; - SB & EB Right-turn Lanes	Signal	Yes
14.17	SE 231 st Street	4-Leg	- Double NB Left-turn Lane; - Single SB, EB, & WB Left-turn Lanes; - Double EB Right-turn Lanes; - Single SB Right-turn Lane	Signal	Yes

Exhibit 2.4

SR 169 Intersection Characteristics

MP	SR 169 Intersection	Int. Type	Channelization /Auxiliary Lanes	Traffic Control (See Key)	Analyzed in this RDP?
MAPLE VALLEY SEGMENT (continued)					
14.95	Bain Street SE – Witte Road SE	4-Leg	- NB & SB Left-turn Lanes	2-Way Stop	No
CEDAR RIVER SEGMENT					
15.07	SE 216th Way	4-Leg	- NB & SB Left-turn Lanes; - WB Right-turn Lane	Signal	Yes
17.68	Cedar Grove Road	3-Leg	- SB Left-turn Lane	Signal	Yes
RENTON SEGMENT					
19.22	Jones Road – 196th Avenue SE	4-Leg	- NB, SB, & WB Left-turn Lanes; - SB Right-turn Lane	Signal	Yes
22.08	152nd Avenue SE	3-Leg	- Left-turn Lanes All; - SB, EB, & WB Right-turn Lane	Signal	Yes
22.32	149th Avenue SE	4-Leg	- EB & WB Left-turn Lanes; - NB, SB, & WB Right-turn Lanes	Signal	Yes
22.99	140th Way SE	3-Leg	- Double NB Left-turn Lanes; - WB Left-turn Lane; - NB & EB Right-turn Lanes	Signal	Yes
23.34	131st Avenue SE	4-Leg	- EB & WB Left-turn Lanes; - SB Right-turn Lane	Signal	No
23.99	Monroe Avenue SE	4-Leg	- SB, EB, & WB Left-turn Lanes	Signal	No
25.12	Park Place (Park Entrance)	4-Leg	- Left-turn Lanes All	Signal	No
25.18	I-405 NB Off-Ramp to EB	3-Leg	- No Auxiliary Lanes	1-Way Stop	Yes

Exhibit 2.4

SR 169 Intersection Characteristics

MP	SR 169 Intersection	Int. Type	Channelization /Auxiliary Lanes	Traffic Control (See Key)	Analyzed in this RDP?
RENTON SEGMENT (continued)					
25.18	I-405 NB Ramps (Signal)	3-Leg	- EB Left-turn Lane	Signal	No
25.26	I-405 SB On-Ramp – Sunset Blvd	4-Leg	- Double EB Left-turn Lanes; - Single WB Left-turn Lane; - Double SB Right-turn Lanes; - Single EB & WB Right-turn Lanes	Signal	Yes

Source: WSDOT 2005B State Highway Log

Key: NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound

1-Way = stop at minor approach

2-Way = stop at all approach

3-Leg = usually streets meeting at a "T" configuration. One dead-ending into another

4-Leg = two streets meeting and crossing each other.

5 How is SR 169 designated and classified?

The SR 169 corridor has a number of different roadway designations and classifications that are described below:

Highway of Statewide Significance

SR 169 was designated a Highway of Statewide Significance (HSS) by the state legislature during the 2006 legislative session.⁶ Highways of Statewide Significance include, at a minimum, interstate highways and other principal arterials that provide for regional and inter-regional travel and statewide connectivity.

All local agencies must include transportation facilities of statewide significance in their comprehensive plans. HSS designation is a factor considered when prioritizing state highway improvement projects. HSS facilities are exempt from concurrency per the Washington State Growth Management Act (GMA).

Federal, State, and Local Functional Classifications

Highways in Washington State are given a functional highway classification through a system which groups them into classes or systems according to the type of traffic each highway is intended to carry and its physical setting. The classification is used to determine what design guidelines are most appropriate for the roadway. The functional classification process is a cooperative effort involving the FHWA, WSDOT, Metropolitan Planning Organizations, Regional Transportation Planning Organizations, and local agencies. As a result, a single highway may have different functional classifications.

SR 169 is one of those highways with different functional classifications. The FHWA has not formally classified SR 169. However, FHWA has granted WSDOT the primary responsibility to develop and

What is a Highway of Statewide Significance?

SR 169 is designated as a Highway of Statewide Significance (HSS).

The HSS designation means that SR 169 is recognized as a principal arterial roadway that provides for regional and inter-regional travel and statewide connectivity.

Why are highways classified?

Highway classifications are used to determine what design guidelines are most appropriate for the highway.

⁶ House Bill 3266, Passed 2/13/06, effective 6/7/06. Also see the WSDOT HSS website: <http://www.wsdot.wa.gov/planning/HSS>.

update statewide functional classifications.⁷ As a result, WSDOT classifies each highway according to total traffic volumes and adjoining land uses. Each local agency along the corridor may classify roadways within their jurisdiction according to the present or planned future travel demands of their roadway. SR 169's state and local functional classifications are shown in Exhibit 2.5.

While WSDOT and local classifications may vary, the classifications usually represent the same functional travel demands. It is often a difference of perspective. A WSDOT minor arterial may not have much daily traffic volume when compared to an interstate highway, but that same minor arterial may actually be classified as a local jurisdiction's principal arterial because it is a main access route for the jurisdiction.

⁷ [FHWA Directive 23 CFR 470](#) states that the State transportation agency has the primary responsibility for developing and updating a statewide highway functional classification in rural and urban areas to determine functional usage of the existing roads and streets. For more information on WSDOT Functional Classifications see the following WSDOT web page: <http://www.wsdot.wa.gov/mapsdata/tdo/functionclass.htm>.

Exhibit 2.5
State and Local Roadway Classifications for SR 169

Segment	Milepost & (Intersections)	WSDOT Functional Classification¹	Local Jurisdiction Classification
Enumclaw	0.00 to 0.41 (SR 169 / SR 164 intersection to Kibler Ave.)	Urban Minor Arterial	Minor Arterial ²
	0.41 to 1.17 (Kibler Ave. to SE 424th St.)	Urban Minor Arterial	Principal Arterial ^{2 and 3}
Rural / Agricultural	1.17 to 1.53 (SE 424th St. to near Newaukam Creek)	Urban Minor Arterial	Principal Arterial ³
	1.53 to 6.02 (near Newaukam Creek to SE Green Valley Rd)	Rural Minor Arterial	Principal Arterial ³
Black Diamond	6.02 to 6.99 (SE Green Valley Rd to Plass Rd)	Urban-Principal Arterial	Principal Arterial ³
	6.99 to 9.04 (Plass Rd to Summit Dr)	Urban-Principal Arterial	Major Arterial ⁴
	9.04 to 10.02 (Summit Dr to Third Ave)	Urban-Principal Arterial	Principal Arterial ³
Maple Valley	10.02 to 14.10 (Third Ave to Maple Valley city limit)	Urban-Principal Arterial	Principal Arterial ⁵
	14.10 to 15.07 (Maple Valley city limit to SE 216th Way)	Urban-Principal Arterial	Principal Arterial ³
Cedar River	15.07 to 15.22 (SE 216th Way to near SE 216th Pl)	Urban-Principal Arterial	Principal Arterial ⁵
	15.22 to 19.21 (near SE 216th Pl to near SE Jones Rd)	Rural Minor Arterial	Principal Arterial ³
	19.21 to 19.22 (SE Jones Rd vicinity)	Urban-Principal Arterial	Principal Arterial ³
Renton	19.22 to 23.34 (SE Jones Rd vicinity to near Maplewood Golf Course)	Urban Principal Arterial	Principal Arterial ³
	23.34 to 25.26 (near Maplewood Golf Course to I-405 interchange)	Urban Principal Arterial	Principal Arterial ⁶

1. Source: WSDOT State Highway Log (2005B)
2. Source: City of Enumclaw Comprehensive Plan Update (2004)
3. Source: King County Comprehensive Plan (2005)
4. Source: City of Black Diamond Comprehensive Plan (1996)
5. Source: City of Maple Valley Draft Transportation Plan (2005)
6. Source: City of Renton Transportation Element (2004)

Access Control Classification

Access control classifications are established to preserve traffic safety and efficiency of the road network, and to protect the public's existing and future investment in state routes. Most of SR 169 is a managed access facility, which means that access to the highway by way of driveways or intersecting roadways can be permitted. This is different than an interstate highway (such as I-405) where access is limited through interchanges at selected locations.

WSDOT has established five classes of access on managed access facilities with Class 1 access being the most restrictive and Class 5 being the least restrictive. The classifications can differ depending on the following criteria:

- speed limit;
- spacing between driveways;
- spacing between intersections;
- spacing between signals; and
- median treatment (i.e. restrictive median, two-way left turn lane, etc.)

One primary distinction between the different access classifications is the minimum spacing allowed between access connections. For example, access on a Class 5 roadway must be spaced at least 125 feet apart; whereas access on a Class 1 roadway must be spaced at least 1,320 feet apart. Typically, more access is allowed in urban sections of highways than in rural sections. Exhibit 2.6 summarizes the WSDOT Highway Access Control Classifications. The following exhibit, Exhibit 2.7, summarizes the access classifications along SR 169 by segment.

Why are access control classifications established on highways?

Access control classifications are established to preserve traffic safety and efficiency of the roadway network.

Limited Access Classifications

There are three SR 169 sections designated as limited access sites along the corridor. These limited access classifications are more restrictive than the managed access sections of the highway.

One section classified as “Limited Access Partial Control” is located in the Maple Valley segment (from MP 14.10 to MP 14.23 – near SE 231st Street). A limited access partial control designation means that commercial connections to the highway are not allowed. But at-grade intersections⁸ and driveways are allowed in specific locations.

The other two limited access sites are designated as Limited Access Full Control and are located in the Cedar River and Renton segments (Cedar River: from MP 15.20 to MP 15.22 – near SR 18; and Renton: from MP 25.15 to MP 25.26 – near the I-405 interchange). The full control designation means that all at-grade crossings and private driveways are prohibited. In the case of the full access control location in Renton near the I-405 interchange, the classification protects SR 169 traffic flow by prohibiting vehicles to access this section of the highway.

⁸ At-grade Intersection = An intersection at the same level as the highway. No overpass or underpass.

Exhibit 2.6
WSDOT Highway Access Control Classifications

Access Control Classification	Definition
Full Control Limited Access	Access is permitted only at interchanges with selected public streets, roads, rest areas, viewpoints, or weigh stations. All at grade crossings and private approaches are prohibited. <i>Example: Interstate Freeway such as I-405</i>
Class 1	Mobility is the primary function of this roadway. The speed limit ranges from 50 to 65 mph and there is a 1,320 foot minimum spacing between accesses. There is no direct access to the corridor if an alternative public street or road is available and a restrictive median is warranted along multi-lane sections. <i>Example: SR 99 (Aurora Ave.) north of Battery Street</i>
Class 2	This section is designed for providing mobility rather than access. The speed limit ranges from 45 to 55 in rural areas and there is a 660 feet minimum spacing between accesses. There is no direct access if alternative public streets or road access is available and a restrictive median along multi-lane is warranted. <i>Example: SR 169 between SE 400th Street to Black Diamond City Limit, or SR 169 between SE 216th Place vicinity to SE Jones Road</i>
Class 3	There is a balance between mobility and access in areas that are not built out. The speed limit ranges from 45 to 55 in rural areas and there is a 330 feet minimum spacing between accesses. Restrictive median along multi-lane sections is warranted, two-way-center-left-turn-lane may be required as conditions warrant. <i>Example: SR 169 between SE Jones Road to near 131st Avenue SE</i>
Class 4	There is a balance between mobility and access in areas that are almost built out. The speed limit ranges from 35 to 45 mph in rural areas and there is a 250 feet minimum spacing between accesses. Non-restrictive medians are allowed. <i>Example: SR 169 / SR 164 intersection to SE 400th Street</i>
Class 5	Access needs generally have priority over mobility needs. The speed limit ranges from 25 to 35 mph and there is a 125 feet minimum spacing between accesses. Non-restrictive medians are allowed. <i>Example: No Class 5 segments on SR 169, but Class 5 is on SR 164 between SR 18 and R Street</i>

Source: WSDOT

Exhibit 2.7
WSDOT Access Control Classifications for SR 169

Segment	Milepost	Access Control Classification¹
Enumclaw	0.00 to 1.17 (SR 169 / SR 164 intersection to SE 424th Street)	Class 4
Rural / Agricultural	1.17 to 2.67 (SE 424th Street to SE 400th Street)	Class 4
	2.67 to 6.02 (SE 400th Street to SE Green Valley Road)	Class 2
Black Diamond	6.02 to 6.75 (SE Green Valley Road to Black Diamond city limit)	Class 2
	6.75 to 9.02 (Black Diamond city limit to near Summit Drive)	Class 4
	9.02 to 10.02 (near Summit Drive to Third Avenue)	Class 3
Maple Valley	10.02 to 14.10 (Third Avenue to Maple Valley city limit)	Class 3
	14.10 to 14.23 (Maple Valley city limit to near MV park-and-ride lot)	Limited Access Partial Control
	14.23 to 15.07 (near MV park-and-ride lot to SE 216th Way)	Class 3
Cedar River	15.07 to 15.20 SE 216th Way to near SE 216th Place)	Class 3
	15.20 to 15.22 (SE 216th Place vicinity)	Limited Access Full Control
	15.22 to 19.22 (SE 216th Place vicinity to SE Jones Road)	Class 2
Renton	19.22 to 23.23 (SE Jones Road to near 131st Avenue SE)	Class 3
	23.23 to 25.15 (near 131st Avenue SE to near I-405 off ramp)	Class 4
	25.15 to 25.26 (near I-405 off ramp to I-405 interchange)	Limited Access Full Control

Sources: WSDOT Access Management program
(<http://www.wsdot.wa.gov/eesc/design/access/>), viewed June 30, 2005.
WSDOT Roadside Classification Plan (1996)
WSDOT State Highway Log (2004)

Freight and Goods on SR 169

The Freight and Goods Transportation System (FGTS) is an inventory of the tonnages of freight moving along highways, streets and roads within Washington State. The system is affected by changes in the economy, trade, and the transportation industry, such as changes in truck travel patterns, cargoes, and tonnages. The FGTS ranks roadways using five freight tonnage classifications, T-1 through T-5, as follows:



SR 169 is heavily used by freight from the many gravel sites nearby.

- T-1: More than 10 million tons per year.
- T-2: 4 million to 10 million tons per year.
- T-3: 300,000 to 4 million tons per year.
- T-4: 100,000 to 300,000 tons per year.
- T-5: 20,000 tons in 60 days.

SR 169 has FGTS classifications from SR 516 (Kent-Kangley Road) in Maple Valley to the I-405 interchange in Renton. The SR 169 FGTS sections are listed in Exhibit 2.8 below:

**Exhibit 2.8
SR 169 FGTS Roadway Classifications⁹**

Milepost (MP)	Description	Length	2005 FGTS Classification	Estimated Annual Tonnage
11.44 to 17.68	SR 516 (Kent-Kangley Road to Cedar Grove Road)	6.24 miles	T-2	7.3 million tons
17.68 to 23.00	Cedar Grove Road to 140 th Way SE	5.32 miles	T-1	8.8 million tons
23.00 to 25.26	140 th Way SE to I-405 in Renton (end of corridor)	2.26 miles	T-1	16.7 million tons

6 How wide is the roadway right-of-way along SR 169?

Exhibit 2.9, on the next page, provides a summary of the existing Right-of-Way (ROW) along the SR 169 corridor. The table lists the minimum and maximum ROW along each identified segment according to King County Assessor property records. The dimensions shown in the exhibit have not been verified by as-built drawings, and field surveys are required prior to any project design on the corridor.

⁹ WSDOT Freight and Goods Transportation System 2005 Update.

Exhibit 2.9
Summary of Existing Right-of-Way Widths

Segment	Milepost	WSDOT ROW Guideline ¹ (feet)	Existing Average ROW (feet)	Minimum Existing ROW (feet)	Maximum Existing ROW (feet)
Enumclaw	0.00 to 1.17 (SR 169 / SR 164 intersection to SE 424th St.)	80	60	60	75
Rural / Agricultural	1.17 to 1.53 (SE 424th St. to north of Newaukam Creek)	80	60	60	75
	1.53 to 3.69 (north of Newaukam Creek to near SE 383rd St.)	120	65	60	120
	3.69 to 6.02 (near SE 383rd St. to SE Green Valley Rd.)	120	110	95	280
Black Diamond	6.02 to 6.50 (SE Green Valley Rd. to near Black Diamond's southern city limit)	80	110	95	280
	6.50 to 9.50 (near Black Diamond's southern city limit to near Black Diamond's northern city limit)	80	60	60	140
	9.50 to 10.02 (near Black Diamond city limit to Third Ave.)	80	60	60	140
Maple Valley	10.02 to 11.13 (Third Ave. to near SE 276th St.)	80	100	50	115
	11.13 to 13.45 (near SE 276th St. to near 228th Ave. SE)	80	100	50	120
	13.45 to 14.40 (near 228th Ave. SE to near Maple Valley park-and-ride lot)	80	120	100	140
	14.40 to 15.07 (near Maple Valley park-and-ride lot to SE 216th Way)	80	160	150	200
Cedar River ²	15.07 to 15.22 (SE 216th Way to near SE 216th Place)	80	160	150	200
	15.22 to 19.22 (near SE 216th Place to SE Jones Rd.)	120	160	150	200
Renton ²	19.22 to 19.31 (SE Jones Rd / 196th Ave. SE vicinity)	80	160	150	200
	19.31 to 22.20 (SE Jones Rd. / 196th Ave. SE vicinity to near 150th Lane SE)	80	150	150	190
	22.20 to 25.26 (near 150 th Lane SE to I-405 interchange)	80	165	95	220

1. WSDOT guideline based on highway functional classification (WSDOT Design Manual, 2005)

2. Shared ROW with adjacent public facilities (Cedar River Trail & SR 18)

7 What is the terrain like along the SR 169 Corridor?

WSDOT classifies the terrain of each state highway in the State Highway Log. There are two primary terrain types on SR 169, rolling and level. Rolling terrain means the roadway is located in an area containing hills that in most cases gently rise and fall. In areas of rolling terrain trucks may slow down frequently due to the roadway alignment and surrounding topography. Level terrain means the roadway is flat enough that trucks are typically able to maintain posted speeds.

The Washington State Highway Log (2005) lists the roadway between MP 0.00 to MP 16.00 (from Enumclaw to just north of SR 18) as rolling terrain. Most of the remaining sections of SR 169 are classified as level, with a small section of rolling terrain in the Renton segment between MP 23.36 and MP 24.52 (from the Maplewood Golf Course area almost up to Blaine Drive SE). Exhibit 2.10 below highlights the four most substantial grades along SR 169. Two of these areas have wider shoulders for use as truck climbing lanes by slower moving truck traffic during daylight hours.

What does WSDOT mean by terrain?

WSDOT's terrain classifications help provide a basis to describe the topography of the physical setting of a roadway.

Exhibit 2.10
SR 169 Roadway Grades

Milepost (MP)	Description	Length	Percent Grade	Posted Truck Climbing Section
4.4 to 5.0	South of Green River Bridge	0.6 miles	8%	None
5.3 to 5.7	North of Green River Bridge	0.4 miles	8%	Northbound – Shoulder Only
13.7 to 14.0	South of Wax Road in Maple Valley	0.3 miles	5% to 8%	None
14.5 to 14.9	North of Maple Valley city limit	0.4 miles	5% to 7%	Southbound – Shoulder Only

8 What are the posted speeds along SR 169?

The posted speeds are shown below in Exhibit 2.11 below. Posted speeds vary from 25 mph to 50 mph. Most of the highway has a posted speed limit of 50 mph.

Exhibit 2.11
Posted Speeds on SR 169

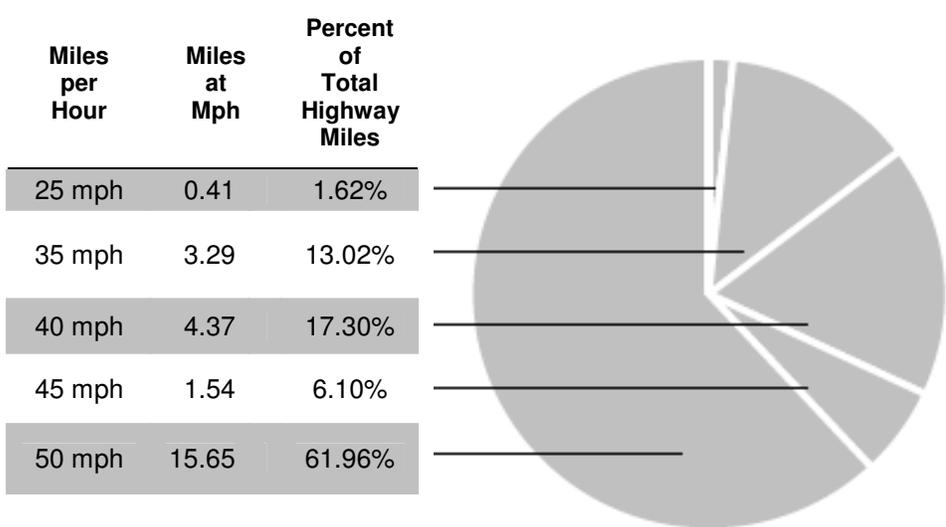
Segment	Milepost & Intersections	Speed Limit (mph)
Enumclaw	0.00 – 0.41 (SR 169 / SR 164 intersection to Kibler Ave.)	25
	0.41 – 1.17 (Kibler Ave. to SE 424th Ave.)	35
Rural / Agricultural	1.17 – 6.02 (SE 424th Ave. to SE Green Valley Rd.)	50
Black Diamond	6.02 – 7.49 (SE Green Valley Rd. to 1st Ave.)	50
	7.49 – 9.09 (1st Ave. to Black Diamond city limit)	35
	9.09 – 10.02 (Black Diamond city limit to Third Ave.)	50
Maple Valley	10.02 – 10.94 (Third Ave. to near SE 276th St.)	50
	10.94 – 11.94 (near SE 276th St. to SE 260th St.)	40
	11.94 – 13.48 (SE 260th St. to near SE 240th St.)	45
	13.48 – 14.41 (near SE 240th St. to near Maple Valley park-and-ride lot)	35
	14.41 – 15.07 (near Maple Valley park-and-ride lot to SE 216th Way)	40
Cedar River	15.07 – 15.48 (SE 216th Way to near SE 214th St.)	40
	15.48 – 19.22 (near SE 214th St. to SE Jones Rd. / 196th Ave SE)	50
Renton	19.22 – 22.96 (SE Jones Rd. / 196th Ave. SE to near 140th Way SE)	50
	22.96 – 25.26 (near 140th Way SE to I-405 interchange)	40

The total distance for each speed limit on the 25.26 mile SR 169 corridor is:

- 25 mph 0.41 miles
- 35 mph 3.29 miles
- 40 mph 4.37 miles
- 45 mph 1.54 miles
- 50 mph 15.65 miles

Each of SR 169 posted speed limits and its percentage of total highway miles is displayed in Exhibit 2.12 below.

Exhibit 2.12
SR 169 Posted Speed Limits – Percent of Total Highway Miles



9 Where are the SR 169 passing zones?

Passing zones along the two-lane sections of SR 169 are infrequent due to sight distance limitations that result from numerous horizontal and vertical curves.

Exhibit 2.13 summarizes the percentage of the SR 169 roadway where passing zones are provided.

Exhibit 2.13
Percentage of SR 169 with Passing Zones

Milepost	Percent of Roadway with Passing Zones	
	Northbound	Southbound
0.0 to 1.5 (SR 169 / SR 164 intersection to near end of Newaukam Creek bridge)	0%	0%
1.5 to 4.3 (near end of Newaukam Creek bridge to north of SE 383rd St.)	25%	0%
4.3 to 5.9 (north of SE 383rd St. to north of Dan Evans bridge over Green River)	0%	0%
5.9 to 7.5 (north of Dan Evans bridge over Green River to north of 1st Ave. in Black Diamond)	25%	0%
7.5 to 8.0 (north of 1st Ave. in Black Diamond to north of Park St. in Black Diamond)	80%	60%
8.0 to 11.2 (north of Park St. in Black Diamond to north of SE 276th St. in Maple Valley)	41%	34%
11.2 to 11.5 (north of SE 276th St. in Maple Valley to north of SR 516 – Kent-Kangley Rd.)	67%	0%
11.5 to 13.5 (north of SR 516 – Kent-Kangley Rd. to north of 228th Ave. SE in Maple Valley)	5%	10%
13.5 to 14.3 (north of 228th Ave. SE in Maple Valley to north of Maple Valley park-and-ride lot)	50%	50%
14.3 to 19.2 (north of Maple Valley park-and-ride lot to south of SE Jones Rd. / 196th Ave. SE)	31%	39%
19.2 to 25.2 (south of SE Jones Rd. / 196th Ave. SE to vicinity of I-405 interchange)	100%	100%

10 Where are bridges located on SR 169?

There are nine bridges or major culverts located along the SR 169 corridor as listed in Exhibit 2.14.

**Exhibit 2.14
Bridges on SR 169**

Number	Segment	Milepost & Location	Crossing Description	Type of Structure	Length (feet)	Width (feet)
169 / 004	Rural / Agricultural	1.51 to 1.52 (between Thunder Mountain Middle School & SE 416th St.)	Newaukam Creek	Bridge	47	41
169 / 008		5.20 to 5.33 (between SE 383rd St. & SE Green Valley Rd.)	Green River – Dan Evans Bridge	Bridge	688	24
169 / 012	Maple Valley	10.41 to 10.44 (between Maple Valley city limit & SE 280th St.)	Burlington-Northern Railroad	Bridge	153	40
169 / 015.25		13.88 to 13.89 (between Witte Rd. & SE Wax Rd.)	Pedestrian Under-crossing / Lake Wilderness Trail	Bridge / Culvert	18	24
169 / 018		15.00 to 15.05 (between SE Bain Rd. & SE 218th St.)	Cedar River #1	Bridge	244	48
169 / 020	Cedar River	16.00 to 16.02 (between SE 214th St. & 218th PI SE)	Cedar River #2	Bridge	130	28
169 / 023.25	Renton	22.24 to 22.25 (between 150th Lane SE & 149th Ave. SE)	Drainage Channel	Bridge / Culvert	8 ¹	68
169 / 024		23.13 to 23.16 (between 140th Way SE & 131st Ave. SE)	Cedar River #3	Bridge	156	64
169 / 031.25		23.64 to 23.65 (between Renton city limit & Maplewood Ave. SE)	Wildwood Creek	Bridge / Culvert	8 ¹	48

Source: WSDOT 2002 Bridge List and 2005B State Highway Log

1. Height or Diameter of Culvert.

The largest bridge along the corridor is the Dan Evans Bridge over the Green River (MP 5.20 to MP 5.33). The steel truss bridge is approximately 688 feet in length and spans several hundred feet above the Green River. The other major bridges along the corridor are the three crossings of the Cedar River (labeled #1, #2, and #3 in Exhibit 2.14 above).

King County recently completed a new bridge project north of SR 169 across the Cedar River, where 154th Place SE was extended southward across the river and now meets SR 169. This new bridge, Elliott Bridge, replaces the old bridge located on 149th Avenue SE. The new bridge provides two 12-foot travel lanes and one 12-foot left-turn lane, with a 2-foot-wide shoulder on one side and a 10-foot-wide sidewalk on the other side.

11 Where are overpasses and interchanges located on SR 169?

SR 18 crosses over SR 169 at milepost 15.21. Access to SR 18 is possible at SE 231st Street in Maple Valley.

The only interchange along SR 169 is the three-quarter diamond interchange provided at I-405 in Renton. This interchange includes the following:

- an I-405 northbound-to-westbound SR 169 cloverleaf off-ramp. (In the Renton segment, SR 169 travels mainly in an east/west direction.)
- an I-405 northbound-to-eastbound SR 169 off-ramp that is stop-controlled.
- southbound I-405 access to SR 169 is located about one-half mile north of the interchange via Sunset Boulevard. Sunset Boulevard parallels the west side of I-405 in this area.
- the SR 169 on-ramp to southbound I-405 has one general purpose lane and a high occupancy vehicle (HOV) lane.
- the SR 169 on and off-ramps to northbound I-405 are single-lanes.
- all of the I-405 on-ramps are controlled with ramp meters.

12 What transit services and facilities are provided on SR 169?

Transit facilities along the SR 169 corridor are operated by King County Metro Transit (Metro) and include bus transit, vanpools, and Park & Ride lots. The regional transit agency, Sound Transit, does not serve the corridor. More information on these services and facilities can be found on Metro's website (www.transit.metrokc.gov).

Bus Routes on SR 169

There are three transit routes that provide weekday service along the corridor: Route 143, Route 149, and Route 912. Two of these routes provide direct regional service from Black Diamond to Renton and Seattle. The third route provides local service between Black Diamond, Covington, Enumclaw, and Maple Valley. No weekend services or dial-a-ride transit (DART) services are available.

Route 143

During peak weekday time periods, Metro Route 143 replaces Route 149 and extends transit service north from Renton to the City of Seattle. The route continues from the Renton Transit Center on SR 900 to I-5, where it terminates in downtown Seattle.

Route 149

Metro Route 149 provides direct service between Black Diamond and the Renton Park & Ride lot at the Renton Transit Center during weekdays. The route travels on SR 169 between the two cities. During the weekday commuter peak hours, Route 149 is replaced by Route 143 (see above).

Route 912

Route 912 operates between Covington and Enumclaw via southern Maple Valley and Black Diamond. The route utilizes SR 169 between Enumclaw and Maple Valley while utilizing a

combination of city and county roads at each end of the route

Most of the SR 169 RDP study area lies outside the boundary of Sound Transit’s Regional Transit District. As a result, Sound Transit does not provide transit service in the area. The closest regional express bus service is provided through Kent and Renton via SR 167, and commuter rail service to/from Seattle is provided in Kent, Tukwila, and Auburn. Exhibit 2.15 summarizes Metro transit ridership in the corridor.

**Exhibit 2.15
Transit Ridership Routes Serving SR 169**

Route No.	Scheduled Daily Trips	Service Span (Weekday)	Headway (Approximate)	Ridership ¹ Inbound	Ridership ¹ Outbound
143	3 (Weekday NB and SB)	NB: 6:00 a.m. to 7:00 a.m. SB: 5:00 p.m. to 6:00 p.m.	30 minutes	159	123
149	9 (Weekday NB and SB)	NB: 7:00 a.m. to 7:20 a.m. SB: 5:00 a.m. to 4:00 p.m.	30 to 120 minutes	45	52
912	4 (Weekday NB and SB)	NB: 10:00 a.m. to 3:40 p.m. SB: 9:15 a.m. to 2:50 p.m.	90 minutes	16	100

Source: King County Metro Transit, September 2005.
1. Average Weekday Total Daily Ridership (persons).

Bus Stops and Pullouts

Bus stops and pullouts are located throughout the SR 169 corridor in the Enumclaw, Black Diamond, Maple Valley, Cedar River, and Renton segments as shown in Exhibit 2.16.

Exhibit 2.16**Bus Stops & Pullouts on SR 169**

Segment	Milepost	Location	Bus Route	
NORTHBOUND				
Enumclaw	0.00	Enumclaw Transit Center (1 block west of SR 169 / SR 164 intersection)	Route 912	
	0.42	Kibler Avenue – South of intersection	Route 912	
	0.70	Porter Street – North of intersection	Route 912	
Rural / Agricultural		No Bus Stops		
Black Diamond	7.67	Baker Street – North of intersection	Routes 143, 149, & 912	
	8.32	Black Diamond / Ravensdale Road – North of intersection	Routes 143 & 149	
Maple Valley	8.64	Summit Drive – South of intersection	Routes 143 & 149	
	10.75	SE 280th Street – North of intersection Bus Pullout	Routes 143 & 149	
	11.48	Kent-Kangley Road – North of intersection	Routes 143 & 149	
	11.90	SE 261st Place – North of intersection	Routes 143 & 149	
	12.38	SE 253rd Place – South of intersection	Routes 143 & 149	
	13.06	SE 244th Street – North of intersection Bus Pullout	Routes 143 & 149	
	13.56	SE 240th Street – North of intersection Bus Pullout	Routes 143 & 149	
	14.22	SE 231st Street – North of intersection Bus Pullout & Shelter	Routes 143 & 149	
	Cedar River	15.2	SE 216th Place – North of intersection South of SR 18 undercrossing Bus Pullout	Routes 143 & 149
		15.78	SE 207th Street – North of intersection	Routes 143 & 149
16.62		218th Place SE – North of intersection (0.2 mile north)	Routes 143 & 149	
16.95		(0.8 mile) south of Cedar Grove Road	Routes 143 & 149	
17.44		(0.25 miles) south of Cedar Grove Road	Routes 143 & 149	
17.73		Cedar Grove Road – North of intersection Bus Pullout	Routes 143 & 149	
Renton	18.20	201st Place SE – North of intersection	Routes 143 & 149	
	20.87	174th Avenue SE – North of intersection Bus Pullout	Routes 143 & 149	
	21.65	161st Avenue SE – North of intersection Bus Pullout	Routes 143 & 149	
	22.13	152nd Avenue SE – North of intersection Bus Pullout	Routes 143 & 149	
	22.36	149th Avenue SE – North of intersection Bus Pullout	Routes 143 & 149	
	23.37	131st Avenue SE – North of intersection Bus Pullout	Routes 143 & 149	
	24.07	Monroe Avenue SE – North of intersection	Routes 143 & 149	
	24.65	Blaine Drive SE – South of intersection	Routes 143 & 149	
	25.16	Park Avenue North – North of intersection	Routes 143 & 149	

Exhibit 2.16 (cont'd)

Bus Stops & Pullouts on SR 169

Segment	Milepost	Location	Bus Route
SOUTHBOUND			
Renton	25.14	Park Avenue North – North of intersection	Routes 143 & 149
	24.59	Blaine Drive SE – South of intersection	Routes 143 & 149
	24.04	Monroe Avenue SE – North of intersection	Routes 143 & 149
	23.31	131st Avenue SE – South of intersection Bus Pullout	Routes 143 & 149
	22.31	149th Avenue SE – North of intersection Bus Pullout	Routes 143 & 149
	22.06	152nd Avenue SE – South of intersection Bus Pullout	Routes 143 & 149
	21.48	161st Avenue SE – South of intersection Bus Pullout	Routes 143 & 149
	20.81	174th Avenue SE – South of intersection Bus Pullout	Routes 143 & 149
	20.35	174th Avenue SE – South of intersection	Routes 143 & 149
	Cedar River	18.23	201st Place SE – North of intersection
17.69		Cedar Grove Road – North of intersection Bus Pullout	Routes 143 & 149
17.43		(0.25 miles) south of Cedar Grove Road	Routes 143 & 149
16.93		(0.75 mile) south of Cedar Grove Road	Routes 143 & 149
16.59		218th Place SE – North of intersection (0.29 mile north)	Routes 143 & 149
15.78		SE 207th Street – North of intersection	Routes 143 & 149
15.16		SE 216th Place – North of intersection South of SR 18 undercrossing Bus Pullout	Routes 143 & 149
Maple Valley	14.28	SE 231st Street – North of intersection Bus Pullout North of Park and Ride Lot	Routes 143 & 149
	13.70	SE 237th Street -- South of intersection	Routes 143 & 149
	13.49	SE 240th Street – South of intersection Bus Pullout	Routes 143 & 149
	13.12	231st Avenue SE – South of intersection Bus Pullout	Routes 143 & 149
	12.41	SE 253rd Place – North of intersection	Routes 143 & 149
	11.84	SE 261st Place – South of intersection	Routes 143 & 149
	11.72	SE 264th Street – North of intersection Bus Pullout	Routes 143 & 149
	10.67	SE 280th Street – South of intersection Bus Pullout	Routes 143 & 149
Black Diamond	8.60	(0.44 miles) south of Summit Drive	Routes 143 & 149
	8.31	Black Diamond / Ravensdale Road – North of intersection	Routes 143 & 149
	7.70	Baker Street – North of intersection	Routes 143, 149, & 912
Rural / Agricultural		No Bus Stops	
Enumclaw	0.66	Porter Street – South of intersection	Route 912
	0.41	Kibler Avenue – South of intersection	Route 912
	0.00	Enumclaw Transit Center (1 block west of SR 169 / SR 164 intersection)	Route 912

Source: 2005B State Highway Log & King County Metro

Park-and-Ride Lots

Metro maintains two park-and-ride lots located along SR 169 and another two within the vicinity of SR 169. Along SR 169, park-and-ride lots are located in Maple Valley just north of SE 231st Street, and in Black Diamond at Baker Street. In addition, there is a park-and-ride lot at the Renton Transit Center in downtown Renton, and another in Enumclaw at the Sacred Heart Church on SR 164.

On average, the Renton Transit Center lot operates at 70 percent of capacity. The rest of the lots have less demand with utilization at 40 to 50 percent as shown in Exhibit 2.17. Except for the Enumclaw park-and-ride lot, all lots are served by Metro Routes 143, 149, and 912. The Enumclaw lot is served by Metro Route 915 which provides service to/from Auburn via SR 164.

**Exhibit 2.17
SR 169 Average Park-and-Ride Lot Occupancy Rates**

Location	Milepost	Demand	Supply	Percent Occupancy
Enumclaw (Sacred Heart Church)	Near 0.00	10	25	40%
Black Diamond (Masonic Temple)	7.69	12	30	40%
Maple Valley	14.24	59	122	48%
Renton (New Life Church)	22.08	11	25	44%
Renton (Transit Center)	Near 25.26	108	150	72%

Source: King County Metro Transit, October 2004.

13 What other methods are used to improve SR 169 operations?

Transportation System Management

Transportation Systems Management (TSM) refers to techniques used to improve the operating efficiency of the existing transportation system through better utilization of current highway capacity. Types of TSM measures include, but are not limited to:

- providing transit queue jump lanes,
- HOV lanes, and
- ramp meters.
- signal timing and coordination,
- intelligent transportation system programs (in-pavement loop speed detectors, traffic cameras)
- access consolidation,
- incident management, and
- reversible lanes

While there are currently no HOV lanes along SR 169, there are ramp meters at the I-405 northbound and southbound on ramps. These ramp meters usually operate during the weekday morning and afternoon peak periods. The meters allow I-405 to operate more efficiently. In addition, Renton is installing HOV lanes along SR 169 near 140th Way SE.

Transportation Demand Management

Transportation Demand Management (TDM) describes measures that reduce travel demand during peak periods and on a daily basis by providing alternatives to single occupant vehicle travel. Examples of TDM measures include Metro's programs to provide transit service, ridesharing, vanpooling, and park-and-ride lots.

All of the jurisdictions along the SR 169 corridor support the enhancement of transit services and additional non-motorized transportation facilities through their comprehensive plan policies to help reduce dependency on single occupancy vehicles.

14 What other types of transportation facilities are located on or near SR 169?

Rail

SR 169 passes over the Burlington Northern Santa Fe (BNSF) railroad tracks at milepost 10.41. This railroad line is referred to as the Stampede Pass route and is a mainline used to ship materials to and from eastern Washington and beyond. BNSF reactivated the line in 1996 to address projected growth at the ports. BNSF schedules indicate that two trains use the route each day, with additional trains using the tracks intermittently. No rail passenger service is provided along the rail line.

15 What types of non-motorized transportation facilities are provided on the SR 169 Corridor?

Pedestrian and Bicycle Facilities

Sidewalks are provided for pedestrians in the urban areas of Enumclaw, Black Diamond, Maple Valley, and Renton. There are few existing sidewalks in the rural areas.

The King County Bicycling Guide Map (2004) identifies the entire length of SR 169 as a bicycle route. Bicycles are able to share the roadway with other vehicles. Wide shoulders provide additional pavement for bicyclists in several locations. The only designated bicycle lanes on SR 169 are located within the Wilderness Village commercial area of Maple Valley. In addition, the Cedar River and Lake Wilderness trails provide routes for pedestrians and bicyclists.

Exhibit 2.18 lists pedestrian and bicycle facilities located on SR 169.

Exhibit 2.18

Summary of Pedestrian/Bicycle Facilities on SR 169

Milepost	West Side of SR 169	East Side of SR 169
Location		
0.0 to 0.7 (SR 169 / SR 164 intersection to near SE 432nd St. in Enumclaw)	Concrete sidewalks provided.	Concrete sidewalks provided.
0.7 to 1.5 (near SE 432nd St. in Enumclaw to north of Thunder Mountain Middle School)	No facilities.	Concrete / asphalt sidewalks provided along school frontage (MP 1.2 to 1.4).
1.5 to 4.3 (north of Thunder Mountain Middle School to north of 383rd St.)	Concrete sidewalks provided only at SE 400th Street signal.	Concrete sidewalks provided only at SE 400th Street signal.
7.6 to 8.0 (north of 1st Ave. in Black Diamond to north of Park St. in Black Diamond)	Concrete sidewalks provided only at Baker Street pedestrian signal.	Concrete sidewalks provided; Pedestrian signal at Baker Street.
8.0 to 11.2 (north of Park St. in Black Diamond to south of SE 271st Place in Maple Valley)	Concrete sidewalks provided only at SE 280th Street and SE 276th Street signals; also along commercial frontage (MP 11.1).	Concrete sidewalks provided only at SE 276th Street signal.
11.2 to 11.5 (south of SE 271st Place in Maple Valley to north of SR 516 in Maple Valley)	Concrete sidewalks provided only at SR 516 signal.	Concrete sidewalks provided.
11.5 to 13.5 (north of SR 516 in Maple Valley to south of SE 240th St. in Maple Valley)	Concrete sidewalks provided only along new residential frontage (MP 12.7).	No facilities.
13.5 to 13.8 (south of 240th St. in Maple Valley to south of Witte Rd. in Maple Valley)	Concrete sidewalks provided only at SE 240th Street signal; also along commercial frontage (MP 12.6).	Concrete sidewalks provided only at SE 240th Street signal.
13.8 to 14.2 (south of Witte Rd in Maple Valley to north of SE 231st Street in Unincorporated King County)	Concrete sidewalks provided; bicycle lanes provided.	Concrete sidewalks provided; Bicycle lanes provided.
14.2 to 19.2 (north of SE 231st St. in Unincorporated King County to south of SE Jones Rd. / 196th Ave. SE)	No facilities.	No facilities on street; Asphalt Cedar River Trail.
19.2 to 23.2 (south of SE Jones Rd. / 196th Ave. SE to east of 131st Ave. SE in Unincorporated King County)	Concrete sidewalks provided only at 140th Avenue, 149th Avenue, and 152nd Avenue signals.	No facilities on street; Asphalt Cedar River Trail.
23.2 to 23.8 (east of 131st Ave. SE in Unincorporated King County to east of Maplewood Ave. SE in Renton)	No facilities on street; Asphalt Cedar River Trail.	Asphalt sidewalk provided.
23.8 to 25.2 (east of Maplewood Ave. SE in Renton to the I-405 interchange vicinity)	Concrete sidewalks provided.	Concrete/asphalt sidewalks provided (narrow and overgrown in sections).

Source: Field Inventory

Crosswalks

There are limited grade-separated pedestrian crossings of SR 169. Grade-separated crossings exist as part of the Cedar River Trail and Lake Wilderness Trail. The Lake Wilderness Trail crosses under SR 169 at MP 13.88 in Maple Valley (just north of SE Witte Rd.). The Cedar River Trail crosses under SR 169 at MP 23.10 as the trail switches from the north to the south side of the highway (just north of 140th Way SE). A pedestrian crossing signal is located at the Baker Street intersection in Black Diamond (MP 7.70). The signal is located next to a bus shelter and the Black Diamond park-and-ride lot.

At-grade non-motorized crossings are situated throughout the corridor at both signalized and unsignalized intersections. Most of the crosswalks are within urban areas. Crosswalk locations are listed below in Exhibit 2.19.

Exhibit 2.19
Crosswalks on SR 169

Segment	Milepost	Location	Traffic Control
Enumclaw	0.00	SR 169 at SR 164	Signal
	0.04	Myrtle Avenue	No Signal
	0.17	Washington Avenue	No Signal
	0.34	Battersby Avenue	No Signal
	0.41	Kibler Avenue	No Signal
	0.52	Chinook Avenue	No Signal
Black Diamond	7.70	Near Baker Street	Pedestrian Signal
Maple Valley	10.95	SE 276th Street	Signal
	11.44	SR 516 (Kent-Kangley Road)	Signal
	13.53	SE 240th Street	Signal
	14.04	SE Wax Road	Signal
	14.17	SE 231st Street	Signal
	15.07	SE 216th Way	Signal
Cedar River	17.68	Cedar Grove Road	Signal
	19.22	Jones Road / 196th Avenue SE	Signal
Renton	22.08	152nd Avenue SE	Signal
	22.32	149th Avenue SE	Signal
	23.34	131st Avenue SE	Signal
	23.99	SE 7th Street / Monroe Avenue SE	Signal

Source: Field Inventory; WSDOT SR View

Trails

Two regional trails (the Cedar River Trail and the Lake Wilderness Trail) border or parallel the SR 169 corridor and provide an alternative to traveling on the SR 169 right-of-way for pedestrians, bicyclists, and equestrians. The two trails follow an old railroad grade and spur line.

Cedar River Trail

The Cedar River Trail is 16 miles in length and follows an old railroad right-of-way from downtown Renton to King County's Landsburg Park, alongside the Cedar River. The trail is a former Chicago, Milwaukee, St. Paul, and Pacific rail corridor that headed east across Snoqualmie Pass. The eastern terminus of the trail is located at Landsburg Park where the Cedar River Watershed boundary begins. Along the Cedar River north of Maple Valley, a former spur line becomes the Lake Wilderness Trail and connects with Maple Valley and Lake Wilderness Park, continuing south to Four Corners (SR 169 / SR 516 intersection at Kent-Kangley Road). The trail is paved from Renton to the Cedar River Bridge north of Maple Valley. Access is provided at several locations along SR 169. All non-motorized uses are allowed on the trail, but access to equestrians is restricted within Renton city limits.



The Cedar River Trail parallels SR 169 between Renton and Maple Valley.

Lake Wilderness Trail

The Lake Wilderness Trail is a former Northern Pacific rail corridor and parallels SR 169 to the west. The trail is unpaved and connects Maple Valley neighborhoods located west of SR 169 to key recreation facilities such as Lake Wilderness Park. It also provides non-motorized access to Wilderness Village and the Four Corners commercial areas. A large culvert allows the trail to cross underneath SR 169 just north of the Witte Road intersection (MP 13.88) in the Wilderness Village commercial area. The trail is not maintained south of Four Corners. The trail connects to the Cedar River trail to the north, which allows a continuous link to Renton and the I-405 trail system.

16 What utilities are located along the SR 169 Corridor?

Exhibit 2.20 lists utility providers that have utility permits or franchises for occupation within the SR 169 right-of-way. The list of providers was obtained from WSDOT’s Northwest Region Utility Section.

Exhibit 2.20 Utility Providers with Permits in the SR 169 Right-of-Way

Utility Provider

Bonneville Power Administration
Cadman, Inc.
Cedar River Water and Sewer District
City of Enumclaw
City of Seattle
City of Renton
Comcast
Covington Water District
Electric Lightwave
Enumclaw School District No. 216
Group W Cable Inc.
M. M. Hurlburt – 2” waterline
King County Wastewater Treatment Division
King County Water District #66
MCI Worldcom
MFS Network Technologies
Millennium Digital Media
North Enumclaw Water Co.
Qwest
Washington Department of Natural Resources

Source: WSDOT, Northwest Region Utility Section

17 How does the existing roadway on SR 169 compare to WSDOT's design guidelines?

The WSDOT Design Manual directs the engineering analyses applied to state highway projects. It provides uniform procedures for documenting and implementing design decisions. The Design Manual contains design guidelines that are broken into three categories and include “basic design level,” “modified design level,” and “full design level”:

Basic Design Level

Basic design level preserves pavement structures, extends pavement service life, and maintains safe operations of the highway.

Modified Design Level

Modified design level preserves and improves existing roadway geometrics, safety, and operational elements.

Full Design Level

The full design level is the highest level of design and is used on new and reconstructed highways. These projects are designed to provide optimum mobility, safety, and efficiency of traffic movement.

Many of the existing design elements of SR 169, including lane widths and shoulder widths, do not meet the current full design level requirements, as shown in Exhibit 2.21. WSDOT's full design level guidelines may not apply in all areas of the SR 169 corridor (in some sections modified or basic design levels may be appropriate).

Exhibit 2.21
Comparison of WSDOT Design Guidelines
and Existing Conditions on SR 169

Segment	Milepost	Roadway Type	Existing No. of Lanes	Existing Shoulder Width	Full Design Standard Shoulder Width	Existing Lane Width	Full Design Standard Lane Width
Enumclaw	0.00–0.70	Two-Lane	2	0 (curb)	8'	11'	12'
	0.70–0.85	Two-Lane	2	4'	8'	11'	12'
	0.85–1.17	Two-Lane	2	4'	8'	11'	12'
Rural / Agricultural	1.17-1.53	Two-Lane	2	4'	8'	11'	12'
	1.53-6.02	Two-Lane	2	4–8'	8'	11'	12'
Black Diamond	6.02–6.75	Two-Lane	2	8'	8'	11'	12'
	6.75–7.60	Two-Lane	2	8'	8'	11'	12'
	7.60–8.00	Two-Lane	2	3'	8'	11'	12'
	8.00–9.04	Two-Lane	2	3–11'	8'	10–11'	12'
Maple Valley	9.04–10.02	Two-Lane	2	8-11'	8'	10'	12'
	10.02–11.10	Two-Lane	2	4–8'	8'	10'	12'
	11.10–13.70	Undivided Multi-lane	2 to 3	0–12'	8'	10–12'	*11–12'
	13.70–14.10	Undivided Multi-lane	3	0–8'	8'	10–12'	*11–12'
Cedar River	14.10–15.07	Undivided Multi-lane	2 to 5	0–16'	8'	12'	*11–12'
	15.07–15.22	Two Lane	2	8–10'	8'	12'	12'
	15.22–19.22	Two Lane	2	4–10'	8'	11–12'	12'
Renton	19.22–23.34	Undivided Multi-lane	5	6–8'	8'	11–12'	*11–12'
	23.34–24.00	Undivided Multi-lane	5	0 (curb)	4'	11–12'	*11–12'
	24.00–24.70	Undivided Multi-lane	5	0 (curb)	4'	11'	*11–12'
	24.70–25.26	Undivided Multi-lane	5	0 (curb)	4'	11'	*11–12'

Source: WSDOT Design Manual, January 2005, WSDOT State Highway Log

*12-foot lanes are required when the truck directional design hourly volume (DDHV) is 150 or greater.

WSDOT requires that roadway characteristics, such as lane, median and shoulder widths, that do not meet design guidelines to be upgraded to meet guidelines when new projects are completed along a roadway. In some cases, this may not be possible due to do environmental constraints. When upgrades are not possible, a design deviation approved by the WSDOT headquarters will be required.

18 What roadway improvements have been constructed or are funded?

There are a number of projects that have recently been completed or are currently programmed for design and construction utilizing federal, state, and local funding sources. Exhibit 2.22 provides a summary of projects recently constructed or planned and funded along SR 169.

Exhibit 2.22

SR 169 List of Funded Projects

Segment	Milepost	Location	Improvement	Status
Rural / Agricultural	1.51 to 3.41	Newaukum Creek Bridge to 264th Avenue SE	Repave roadway	Completed
	1.67	SR 169 at SE 416th St	Construct intersection improvements to reduce collisions Project Web page: http://www.wsdot.wa.gov/Projects/SR169/416thIntersection/	Construct in 2008
	3.41 to 5.20	264th Ave SE to Green River Bridge	Repave roadway	Completed
Rural / Agricultural	5.33 to	Green River Bridge	Maple Valley will widen	Completed
Black Diamond	11.44	to SR 516	the roadway to add	
Maple Valley		(Kent-Kangley Road)	lanes and left turn pockets, room for U-turns, install a new signal at SE 264th Street; and build new bike lanes, sidewalks, curbs, and gutters. Project Web page: http://www.wsdot.wa.gov/Projects/SR169/516FourCorners/	
Black Diamond	10.02	SR 169 at SE 291st St	Improve intersection and realign approaches.	Construct in 2007
Maple Valley	10.69	SR 169 at SE 280th St	Construct bus pullouts and sidewalks	Completed

Exhibit 2.22 (continued)

SR 169 List of Funded Projects

Segment	Milepost	Location	Improvement	Status
Maple Valley	11.44	SR 169 at SR 516 (Kent-Kangley Road)	Widen intersection to provide bike and pedestrian path. Provide safety improvements.	Complete by end of 2007
	13.53 to 13.86	SE 240th St up to Witte Rd	Add southbound travel lane and bike lane and improve intersection. Construct additional southbound turn lane (only one southbound turning lane exists today).	Ongoing
	14.17	SR 169 at 231st Way (access to SR 18)	Provide transit improvements and construct pedestrian walkway.	Completed
Maple Valley Cedar River	11.44 to 19.22	SR 516 to Cedar Grove Park	Pave Cedar River Trail where it's unpaved.	Completed
Cedar River	19.22	SR 169 near Jones Road	Correct problems with steep slope and repave	To begin in 2006
Renton	22.08 to 22.32	SR 169 at 152nd Ave SE and 149th Ave SE	Replace existing bridge at 149th Ave SE with new bridge at 152nd Ave SE. Connect bridge to 154th Place SE	Completed
Renton	22.32	SR 169 at 149th Ave SE	Provide transit improvements	Completed
	22.99	SR 169 at 140th Way SE (Phase 3)	Intersection improvements including HOV lanes	Design and environmental approval complete
	25.00 to 25.26	SR 169 from new Cedar River Park entrance to I-405 (Phase 2)	Widen SR 169 from new Cedar River Park entrance to I-405. - Includes HOV queue jump at I-405 northbound ramp intersection. - Synchronize traffic signals. - Construct a northbound I-405 right turn lane onto eastbound SR 169	Construct in 2007-2008

Exhibit 2.22 (continued)

SR 169 List of Funded Projects

Segment	Milepost	Location	Improvement	Status
	25.00 to 25.26	SR 169 near I-405 (Phase 1)	Relocate Cedar River Park entrance away from I-405 ramps.	Completed

Projects in italics are fully or partially funded by the 2005 9.5 cent gas tax.