

Project Summary

Introduction

The proposed project is to improve a 1.6 mile section of 20th Street SE between the US 2 Trestle and a point 400 feet west of 91st Avenue SE. Classified as an urban minor arterial, 20th Street SE provides an important east-west connection between Everett (via the US 2 Trestle) and State Route 9 (SR 9) and the Lake Stevens area (Figure 1). The existing roadway is primarily a 2-lane section, with shoulders and open and enclosed drainage systems. There are dedicated left and right turn lanes, as well as curb, gutter and sidewalks, at several intersections within the project limits.

The proposal will widen the existing roadway to four lanes between the US 2 Trestle and Cavalero Road, and five lanes between Cavalero Road and a point 400 feet west of 91st Avenue SE (Figure 2). The new roadway section would provide two westbound lanes and two eastbound travel lanes, and bike lanes and sidewalks on both sides of the roadway. Between Cavalero Road and 91st Avenue SE, ~~there will also be a landscaped median, and dedicated left turn and U-turn lanes will be installed at signalized intersections.~~ **the County is considering either a landscaped median or a two-way left turn lane.** Stormwater quantity and water quality treatment facilities are also proposed as part of this project. This project stops west of 91st Avenue SE because a different 20th Street SE project will widen the roadway between that point and South Lake Stevens Road, starting in Spring 2008.

This Environmental Impact Statement (EIS) is being undertaken in compliance with the Washington State Environmental Policy Act to disclose and evaluate the environmental impacts of the proposed roadway improvements (Table 1).

Existing Conditions

The purpose of the roadway project is to reduce current traffic congestion, increase operational capacity, and improve mobility and safety for vehicle, pedestrian, and bicycle traffic along 20th Street SE. The proposed improvements would provide a road system that would serve the growing Lake Stevens region, and continue to operate as the main east-west connector for central Snohomish County.

Level of Service

Level of service is a description of traffic conditions along a given roadway or at a particular intersection. The level of service ranges from “A” (free flow of traffic with minimum intersection delay) which is the optimum level, to “F” (forced flow, congested intersections, long delays), which is the worst. Level of service reflects factors such as speed, travel time, freedom to maneuver vehicles, traffic interruptions, and delays. As the projected development of the area continues, traffic volumes will also rise. The existing roadway will be loaded with these increased volumes, reducing the level of service to undesirable levels.

The most serious congestion problems occur at intersections, where the lack of adequate roadway capacity creates backups, especially during peak commute hours. Without the proposed improvements, congestion during peak hours will likely become the norm rather than the exception

and the duration of congestion will increase. Long delays will be common at intersections and significant reductions in travel speeds will occur. In addition, without the proposed project the lack of continuous pedestrian facilities would not be addressed. Improved sidewalk and bike lane connectivity is critical to the safe movement of pedestrians and bicyclists along the 20th Street SE corridor.

Project Background

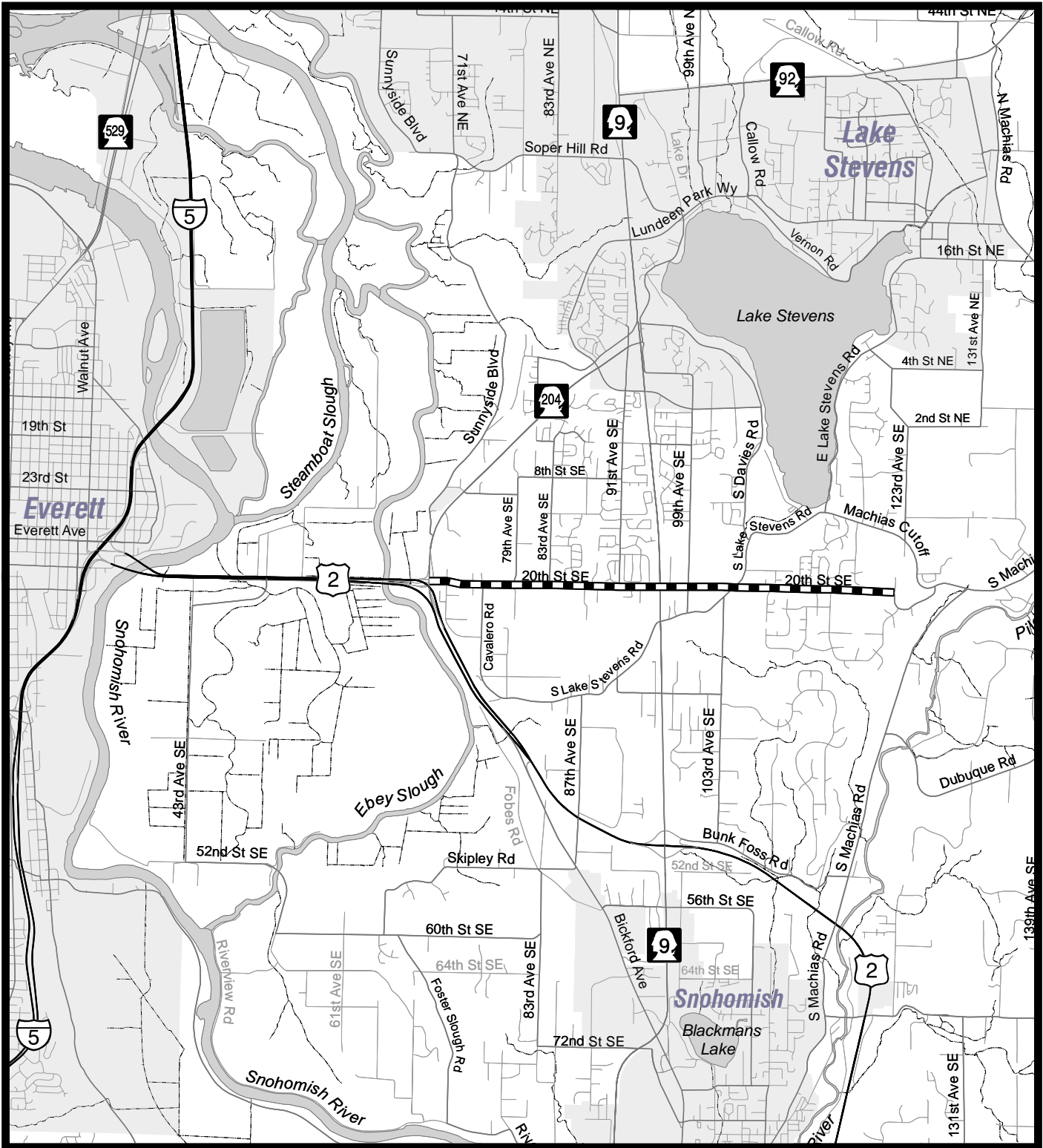
The 20th Street SE road corridor and US 2 Trestle is the primary roadway link across the Snohomish County floodplain between the Lake Stevens area, Everett and the I-5 corridor. The lack of adequate east-west corridors reduces mobility and exacerbates traffic congestion, especially for residents who commute by single occupancy vehicles (SOVs) to employment, retail, and commercial centers in the Everett and Southwest County areas.

According to the Snohomish County Arterial Plan, the 20th Street SE Road corridor is a minor arterial. Minor arterials provide for movement within the large subareas of the County, functioning to disperse traffic from principal arterials such as SR 9 to local streets. Minor arterials may also serve secondary traffic generators such as community business centers, neighborhood centers, large church complexes, schools, and multi-family residential areas, enabling traffic to circulate between neighborhoods.








The project area is located within the Lake Stevens Urban Growth Area (UGA), an approximately 10.5 square mile area centered around the 1.6 square mile Lake Stevens. The project corridor and areas adjacent to 20th Street SE are being transformed from the low rural densities of the early 1970s, to urbanizing areas with increasingly denser and more intensive land use patterns. The intent of a UGA is to center future growth within already-developed areas, avoiding urban sprawl and maintaining low residential densities, agriculture, and open space in rural areas. In conformance with the Washington State Growth Management Act (GMA), the Snohomish County 2005 Ten-Year Update to the Comprehensive Plan (the Comprehensive Plan) has identified the Lake Stevens UGA around 20th Street SE as having the potential to accommodate medium-to-high density residential neighborhoods. The Comprehensive Plan's EIS underwent review consistent with the Washington State Environmental Policy Act (SEPA). Several factors were considered before this UGA determination was made (e.g. proximity to commercial centers, existing stormwater drainage and transportation infrastructure), and the EIS analyzed and documented these factors. After extensive public participation through the environmental process, it was deemed appropriate to locate future higher density development within this area of the Lake Stevens UGA.

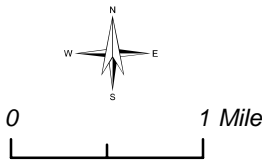
While the trend toward more urbanized development had previously been focused primarily on the Frontier Village area to the north of the project area, for the past few years increasing numbers of residential developments have been planned for and constructed in the area between Frontier Village and 20th Street SE. Much of the traffic from the Frontier Village area and these new developments, as well as from the City of Lake Stevens, areas west and east of the lake, and the southeast section of the Lake Stevens UGA, leads into and passes along 20th Street SE.

While regionally important, the 20th Street SE road system has changed little since the 1970s, with the exception of the intersection of 20th Street SE and SR 9, where signalization



Key to Features:

- | | | | |
|---|----------------|---|-------------|
|  | 20th Street SE |  | Freeways |
|  | Arterial Roads |  | Local Roads |
|  | Waterbodies |  | Streams |
|  | Cities | | |



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Figure 1: Vicinity Map

improvements has increased capacity and improved traffic flow. New signals have also been recently installed at the 20th Street SE intersections with 79th and 83rd Avenues SE, as part of private projects.

Other Projects in Vicinity

A further step in improving 20th Street SE to the east is currently underway with the planned expansion by Snohomish County of the roadway from two to five lanes between a point 400 feet west of 91st Avenue SE and South Lake Stevens Road. Stoplights will be installed at the intersections of 20th Street SE at 91st Avenue SE, 99th Avenue SE, and South Lake Stevens Road. Construction is scheduled to begin in 2008. The Washington State Department of Transportation (WSDOT) is also planning improvements to SR 9 north and south of its intersection with 20th Street SE. The project will widen SR 9 to five lanes, providing northbound and southbound left turn lanes, a southbound right turn lane, a northbound right turn pocket, one southbound through lane, and two northbound through lanes. Construction is scheduled to begin in 2008.

Alternatives

To address the effects of growth on this important corridor, a number of traffic and feasibility studies were conducted to determine the most effective response for improving traffic flow. The results of the traffic analyses indicate that 20th Street SE should be widened using at-grade improvements between US 2 and 91st Avenue SE, and that several intersections should be upgraded. The studies included 3-lane, 4-lane, 5-lane, 5-lane with a high occupancy vehicle (HOV) lane, and no action alternatives.

Two primary criteria were established to check the viability of alternatives for further consideration: Level of Service “E” must be achieved on all County controlled legs of the intersections in the project area, and a minimum arterial speed of 13 mph maintained during the AM and PM peak-hours. Both criteria had to be met for the design horizon year 2031. Two traffic memoranda, dated ~~February 13 and June 18, 2007~~ **November 14, 2007**, summarize the analyses of improvement alternatives for Opening Year 2010 and Design Horizon Year 2031. They are included in this EIS as Appendix A.

Two 5-lane alternatives represented the different potential combinations of additional lanes and transportation elements that initially appeared to address the purpose and need of this proposal. However, the 5-lane alternative that includes an HOV lane is the only alternative that most comprehensively addresses the capacity issues on 20th Street SE by encouraging fewer single occupancy vehicle (SOV) trips which would allow traffic to move more quickly. This goal would be achieved by using Transportation Demand Management (TDM) techniques that provide an alternative mode of transportation to the SOV trip. These techniques include providing information and incentives on HOV alternatives such as carpools, vanpools, and transit ridership. Therefore, the 5-lane without an HOV lane was dropped from further consideration, and the 5-lane with HOV lane option is recommended as the Preferred Alternative in this EIS.

Description of Selected Alternatives

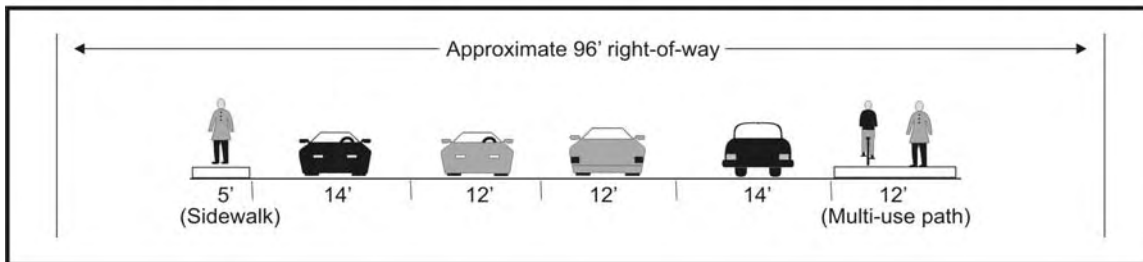
The Draft **Final** EIS for the improvements to 20th Street SE will examine one action alternative and a no action alternative. A summary of these two alternatives is provided here, followed by a summary of the alternatives that were analyzed but dropped from further consideration.

The Preferred Alternative

The section of 20th Street SE within the project area covers two slightly different configurations due to topography and the road network in this area. The proposal will widen the existing roadway to four travel lanes between the US 2 Trestle and Cavalero Road, and five lanes between Cavalero Road and a point 400 feet west of 91st Avenue SE. The 4-lane section will feature a 12-foot multi-use path for both pedestrians and bicyclists on the south side of the roadway, and a 5-foot sidewalk only on the north side. There will be left-turn lanes at the Cavalero Road intersection. A small section of 20th Street SE on the hill west of Cavalero Road will be modified to reduce the steep incline for vehicles heading eastwards, and to improve the sight distance towards the intersection.

US 2 Trestle to Cavalero Road

Four-lane section with two lanes in either direction, multi-use path, sidewalk, and left-turn lane at Cavalero Road

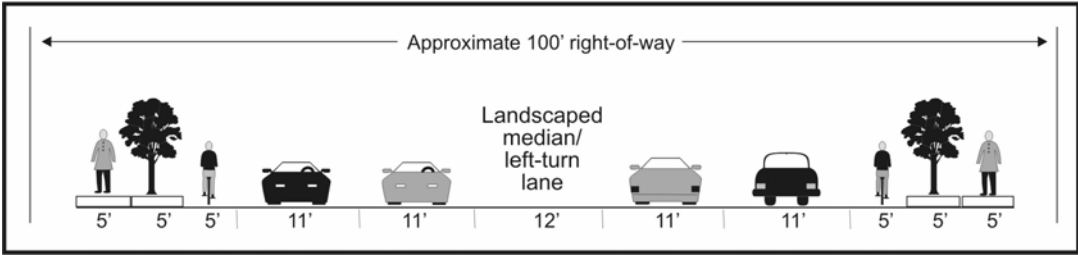


For the section between Cavalero Road east to 91st Avenue SE, ~~will include dedicated left turn lanes at signalized intersections, and landscaped medians between these intersections to increase capacity and safety throughout the corridor. At each signalized intersection, U-turns will replace left turn movements from properties adjacent to the roadway.~~ **the County is considering either a two-way left-turn lane or a landscaped median for the center lane. The landscaped median option would allow for U-turns at signalized intersections to replace left turn movements from properties adjacent to the roadway. There will be dedicated left-turn lanes at signalized intersections.** The curb-side westbound travel lane will be an HOV lane between Cavalero Road and 91st Avenue SE during the morning peak travel time. Traffic Demand Management (TDM) techniques to reduce drive-alone trips will be an important part of this alternative. The new roadway will provide bus pullouts at the intersections of Cavalero Road, and 79th and 83rd Avenues SE for both westbound and eastbound movements. Bike lanes, sidewalks, curbs and gutters and, where locations are feasible, planter strips on the outside edge of the roadway will also be installed, and the intersection of 20th Street SE and Cavalero Road will be signalized. New

stoplights have recently been installed at 79th and 83rd Avenues SE as part of developer improvements on 20th Street SE.

Cavalero Road to 91st Ave. SE

Five-lane section with two lanes in either direction, landscaped median/left-turn lane, U-turns and left-turn lanes at stoplights, bicycle lanes, sidewalks, and planter strips



No Action

This option considers the impacts of making no substantial improvements to the road corridor. Snohomish County or private developers may carry out small construction projects, including signal and sidewalk improvements. No additional lanes or intersection improvements would be built in connection with this proposal. Maintenance will take place as needed.

Description of Alternatives Dropped From Further Consideration

A description is provided here on the alternatives that, after in depth analysis, were eliminated from further consideration as they failed to meet either Level of Service “E” on County controlled legs of the project intersections, or a minimum arterial speed of 13 mph maintained during the AM and PM peak-hours. The Final Feasibility Study of December 2001 provides additional details concerning the rejected alternatives.

Five-Lane Alternative

This alternative was the most similar to the Preferred Alternative. It would have expanded 20th Street SE to four lanes between the US 2 Trestle and Cavalero Road, and five lanes between Cavalero Road and 91st Avenue SE, and also featured bike lanes and pedestrian sidewalks, and planter strips where feasible. However, it did not offer a westbound HOV lane during the AM peak-hour, which is needed to meet “person speed” as explained in the Transportation section of this Draft EIS.

Four-Lane Alternative

This alternative involved widening 20th Street SE between the US 2 Trestle and 91st Avenue SE from an existing 2-lane roadway to a 4-lane roadway featuring two westbound lanes, one eastbound lane, and a center turn lane. This alternative did not meet LOS “E” for afternoon eastbound traffic.

Three-Lane Alternative

This alternative involved widening 20th Street SE between SR 2 and 91st Avenue SE from an existing 2-lane roadway to a 3-lane roadway featuring one travel lane in each direction and a center turn lane. This alternative did not meet LOS “E”.

Public Involvement

The environmental process began with the issuing of a Determination of Significance (DS), followed by a public open house/scoping meeting on December 6, 2006 to introduce the 20th Street SE Roadway Improvement Project (US 2 to 91st Avenue SE) to the larger community. Notification of this meeting was by a newsletter mailed to 1,380 residents in the project area, feature stories in the Lake Stevens Journal, newspaper advertisements in the Herald and the Lake Stevens Journal, signs posted in the area, and posting on the County’s website.

The public meeting was held at Lake Stevens Middle School at 1031 91st Avenue SE, near the City of Lake Stevens, and approximately 20 residents attended. Channelization drawings and other graphics were presented at the meeting to illustrate the project. Following the meeting, three comment sheets were turned in by attendees, and Public Works subsequently received three letters and two e-mails.

Many residents expressed interest in the capacity the new roadway would provide for its potential to improve current traffic congestion. Impacts to existing septic systems and drainfields, and loss of property were residents’ primary concerns. Some residents were also concerned about additional traffic and congestion due to new residential developments and new traffic signals, particularly the new signal at Cavalero Road that could result in traffic being stopped on the steep Cavalero Hill. Other residents felt a park-and-ride was required so commuters had the option of using the new HOV lane or transit buses, and that it was less important to improve movement on 20th Street SE before improving the US 2 Trestle. Other issues expressed by residents included the safety of pedestrians, speeding, air pollution, and increased noise.

~~Comments received during the scoping process and Draft EIS comment period will be addressed in the Final EIS.~~ **The Draft EIS was issued on December 21, 2007. Comments received during the Draft EIS comment period are addressed in the Final EIS under Appendix D.**

Project Schedule

Pending completion of the environmental process, the proposed project could begin construction in late Summer/early Fall of 2009. Actual construction timing of the US 2 to Cavalero Road portion would be dependent upon receiving funding and securing the right-of-way needed for the project. Construction would take approximately two years.

The proposed widening and reconstruction of 20th Street SE could be accomplished in two major stages. The south half of the roadway, including walls, and a portion of the drainage collection system and stormwater quantity and water quality treatment facilities could be constructed in the first stage by shifting the traffic to the northern portion of the roadway. Temporary signal modifications may be required at the intersections of 79th and 83rd Avenues SE, where developers have already installed stoplights, to accommodate the shifted lanes. The traffic would then be shifted to the south on the new pavement section (excluding final pavement lift) and the road, walls,

and additional drainage collection system and stormwater quantity and water quality treatment facilities on the north side would be constructed.

Construction of the roadway and drainage improvements may require short term closures particularly for the utility crossings. In this situation, through traffic could be temporarily routed to SR 204 and US 2 via detours on streets adjoining 20th Street SE. Construction of intersection improvements would be completed in stages in order to maintain traffic flow and minimize impacts to adjacent properties. Throughout project construction, access would be maintained to properties on either side of the roadway, and for emergency vehicles.

If the No Action Alternative is selected, no construction activities would take place. Routine maintenance of the existing roadway would continue to keep it operational.

Project Documents

- Additional studies, including Traffic Analyses, Air Quality, Noise, and Cultural Resources studies were undertaken.
- A Critical Areas Study will be prepared to comply with Snohomish County's Critical Areas Regulations, SCC 30.62.
- A Biological Assessment will be prepared to comply with Section 7 of the Endangered Species Act and will be submitted to the National Marine Fisheries Service (NMFS) and the United States Fish and Wildlife Service (USFWS).
- ~~Following completion of the comment period for the Draft EIS document, a **This** Final EIS will be **has been** prepared **subsequent to completion of the comment period for the Draft EIS**.~~ The Final EIS will incorporate comments from citizens and agencies. A decision whether or not to pursue the Preferred Alternative will be made no less than seven days following the issuance of the Final EIS.
- A Notice of Action documenting the County's decision will be published in The Herald newspaper. The Notice of Action provides notice of the SEPA action and specifies an appeal period.

Permits and Approvals Required

- A U.S. Army Corps of Engineers (the Corps) Section 404 Permit will be required for wetland fills and to comply with the Clean Water Act. The Corps will be the lead federal agency on this project.
- A Washington Department of Ecology (Ecology) Section 401 Water Quality Certification will be required to comply with the Clean Water Act.
- Consultation with the NMFS and USFWS will be required in order to comply with Section 7 of the Endangered Species Act.
- Consultation with the Washington Department of Archaeology and Historic Preservation will be required in order to comply with Section 106 of the National Historic Preservation Act, 1966. Consultation would be initiated by the lead federal agency on the project, the U.S. Army Corps of Engineers.

- A Hydraulic Project Approval (HPA) will be required from the Washington Department of Fish and Wildlife (WDFW) for all stream crossing and in-stream work.
- A National Pollution Discharge Elimination System (NPDES) Permit will be required to comply with the Clean Water Act.
- Drainage design will conform to applicable provisions of the Snohomish County Code (SCC Title 30.63A), and to the Washington Department of Ecology's (Ecology) 2005 Stormwater Management Manual for Western Washington.
- Grading will conform to application provisions of the Snohomish County Code (SCC Title 30.63B).

Summary of Environmental Impacts and Mitigation

Table 1. Summary of Environmental Impacts and Mitigation Table

Built Environment	
Land Use	
Preferred Alternative	<p>Impacts</p> <p><u>Construction:</u> Existing land uses would experience increased traffic congestion due to lane closures, and residents would have difficulty accessing their properties. The local road network system may experience redistribution of traffic flows, potentially resulting in safety issues for pedestrians and children due to poor sight lines.</p> <p><u>Operation:</u> An additional 9.1 acres of right-of way would be purchased for this project. This would permanently convert existing residential or other land use properties to transportation related uses such as roadway expansion and stormwater facilities. Forty-six parcels would be impacted, and 12 structures demolished.</p> <p>Mitigation</p> <p><u>Construction:</u> Construction activity will occur during daylight hours. A traffic control plan would be implemented to ensure safety and provide detour routes if necessary. Prior notification of road closures and detour routes, if needed, will be sent to area residents and property owners whenever possible.</p> <p><u>Operation:</u> Homeowners will be paid a fair market value for properties that need to be purchased for additional right-of-way. Sidewalks, bike lanes and landscaping strips would make the roadway a more pedestrian, transit and bike friendly corridor. All roadway design will be coordinated with existing and proposed future land development to ensure that safe access is provided to the roadway.</p>
No Action Alternative	<p>Impacts</p> <p><u>Construction:</u> There will be no impacts as construction will not occur.</p> <p><u>Operation:</u> Long-term impacts include land adjacent to the roadway being developed at higher densities. If the transportation network is not upgraded, there would be severe peak-hour traffic congestion. This would result in deteriorating levels of service and arterial efficiency, and access and mobility problems for residents. The traffic congestion would contribute to regional transportation issues, and affect the real estate market and employment opportunities.</p>

Summary of Environmental Impacts and Mitigation

	<p>Mitigation</p> <p><u>Construction:</u> There will be no impacts, so mitigation is not required.</p> <p><u>Operation:</u> There will be no impacts, so mitigation is not required.</p>
Transportation	
Preferred Alternative	<p>Impacts</p> <p><u>Construction:</u> Temporary lane closures, either one lane or two (for utility crossings) would increase traffic congestion, and may require traffic detours. The vertical alignment improvements at 20th Street SE and Cavalero Road may require a short-term closure of the north and south legs of Cavalero Road at the intersection, and a detour may be necessary. Driveways may require temporary connections to maintain access.</p> <p><u>Operation:</u> To maintain the westbound arterial speed on Arterial Unit #238 (US 2 to SR 9) above 13 mph in the AM peak-hour for 2010, a designated HOV lane and moderate TDM measures must be implemented. For 2031, significant TDM measures would be required in conjunction with the HOV lane.</p> <p>Mitigation</p> <p><u>Construction:</u> To ensure safety, warning lights, signage and temporary fencing will be erected, and a traffic control program will be instituted to move drivers through the construction zone or to direct them to detour routes. Residents will be kept informed of pending lane closures, and the construction contractor will work with residents to maintain driveway access and minimize impacts to properties. Construction sequencing will minimize impacts related to lane closures and to maintain traffic flow. If total lane closures become necessary, through traffic could be temporarily diverted to SR 204 and SR 2.</p> <p><u>Operation:</u> Two levels of criteria were established to evaluate the need to mitigate for operational impacts: LOS E at County controlled legs of intersections and a minimum arterial speed of 13 mph. These criteria were examined for the Opening Year 2010 and the Design Year 2031.</p> <p>To maintain intersections at the minimum LOS E on Arterial Unit #238 for 2010 or 2031, a designated HOV lane and moderate TDM measures must be implemented. To maintain the westbound arterial speed above 13 mph in the AM peak-hour for 2010, a designated HOV lane and moderate TDM measures must be implemented. These measures must encourage a modal shift of approximately 15% to reduce “opening day” peak hour traffic volumes by 12%. For 2031,</p>

Summary of Environmental Impacts and Mitigation

	<p>significant TDM measures would be required in conjunction with the HOV lane, and a modal shift of 50% to reduce volumes by 45%. The TDM program would need to be funded.</p>
<p>No Action Alternative</p>	<p>Impacts</p> <p><u>Construction:</u> There will be no impacts as construction will not occur.</p> <p><u>Operation:</u> By 2010, conditions at all three intersections in the project corridor will drop to LOS F for both AM and PM peak-hour traffic. Levels of service deteriorate even further by 2031. Arterial speeds in 2010 fall to unacceptable levels for the westbound direction in the AM peak-hour. Levels of service deteriorate even further by 2031.</p> <p>Mitigation</p> <p><u>Construction:</u> There will be no impacts, so mitigation is not required.</p> <p><u>Operation:</u> By 2010, conditions at the Cavalero Road intersection will have one County controlled leg that will operate at LOS F for both AM and PM peak-hours. By 2031, level of service and arterial speeds will deteriorate further to LOS F for at least one County controlled leg, for the intersections of Cavalero Road, 79th Avenue SE and 83rd Avenue SE. No mitigation is proposed since no project action will take place.</p>
<p>Noise</p>	
<p>Preferred Alternative</p>	<p>Impacts</p> <p><u>Construction:</u> There will be a temporary increase in sound levels for nearby residences during daylight hours due to heavy equipment and hauling of materials.</p> <p><u>Operation:</u> The roadway widening would move the nearest traffic closer to some properties, however, the HOV lane is expected to decrease traffic volumes. Noise levels would increase at some 33 residences. By 2031, the decrease in traffic volume would offset increases in traffic noise levels caused by the widened road.</p> <p>This would result in noise levels only slightly higher than existing levels at the majority of properties along the roadway. Noise impacts may occur at the East Everett residential development when it is constructed at the northwest corner of the intersection of Cavalero Road and 20th Street SE.</p> <p>Mitigation</p> <p><u>Construction:</u> Noise from construction activities would be minimized by maintaining vehicles and equipment in good working order, including using mufflers, engine intake silencers, and engine</p>

Summary of Environmental Impacts and Mitigation

	<p>enclosures. Portable noise barriers may also be used. Equipment operators will lift rather than drag materials on site to minimize the use of back-up alarms on equipment.</p> <p><u>Operation:</u> A location at the eastern end of the project area, between 88th Drive SE and 91st Avenue SE, on location was identified where a noise barrier could be feasible. A noise barrier at this location was evaluated previously as part of another 20th Street SE project. The previous study concluded that a noise barrier would be <i>feasible</i> as per WSDOT and Snohomish County criteria, but would not meet Snohomish County's <i>reasonableness</i> criteria-based. <u>Based on this, a re-evaluation as per Snohomish County policy was not warranted.</u></p>
No Action Alternative	<p>Impacts</p> <p><u>Construction:</u> There will be no impacts as construction will not occur.</p> <p><u>Operation:</u> Traffic volumes and noise would increase due to projected local population growth regardless of whether the project is constructed. Such an increase in volumes would result in a 3 dBA increase over existing noise levels. Noise impacts would affect 36 residences.</p> <p>Mitigation</p> <p><u>Construction:</u> No impacts would occur, so no mitigation is required.</p> <p><u>Operation:</u> No noise mitigation is provided because if the roadway is not widened, traffic congestion would likely result in a decrease in traffic speed and reduce the potential for noise impacts.</p>
Hazardous Waste and Asbestos	
Preferred Alternative	<p>Impacts</p> <p><u>Construction:</u> There are no recorded hazardous waste sites within the project area, and no significant environmental impacts relating to hazardous waste or asbestos are expected during construction of the project. It is unlikely that asbestos materials would be encountered in the buildings, although there is a minor potential for encountering lead-based paint in older structures.</p> <p><u>Operation:</u> No impacts are anticipated.</p> <p>Mitigation</p> <p><u>Construction:</u> Level I environmental site assessments will be conducted on any properties it is necessary to acquire, to determine if they contain hazardous materials or asbestos. If any sites are identified as containing hazardous waste, a hazardous waste management plan would be prepared and implemented. Any waste</p>

Summary of Environmental Impacts and Mitigation

	<p>encountered would be disposed in accordance with the plan. If asbestos is found, the relevant agencies will be notified and the asbestos will be removed by trained and certified workers</p> <p><u>Operation:</u> Any hazardous waste or asbestos findings would take place prior to or during construction. Therefore, no impacts will occur during operation and no mitigation is required.</p>
<p>No Action Alternative</p>	<p>Impacts</p> <p><u>Construction:</u> No impacts will occur as no structures will be removed or demolished.</p> <p><u>Operation:</u> No impacts are anticipated.</p> <p>Mitigation</p> <p><u>Construction:</u> No construction will take place, so no mitigation is required.</p> <p><u>Operation:</u> No site assessments will take place, so no mitigation is required.</p>
<p>Public Services, Facilities, and Utilities</p>	
<p>Preferred Alternative</p>	<p>Impacts</p> <p><u>Construction:</u></p> <p><i>Police and Fire</i></p> <p>Emergency services could potentially be delayed due to congestion and lane closures, which would result in an increase in response times.</p> <p><i>Schools</i></p> <p>If traffic on 20th Street SE is detoured through neighborhood streets, this could disrupt and delay student pick-ups by school buses and their arrival at area schools.</p> <p><i>Transit</i></p> <p>Partial lane closures on the roadway would increase traffic congestion and result in delays to bus service. If it is necessary to close 20th Street completely for short periods, causing traffic to be diverted to SR 204, existing customers on 91st Avenue SE could lose their bus service.</p> <p><i>Water and Electric</i></p> <p>Temporary disruptions in service may occur if pipes or lines need to be relocated.</p>

Summary of Environmental Impacts and Mitigation

Sewer, Natural Gas, Telephone, and Cable Television

Temporary disruptions in service could occur if lines need to be relocated. Septic systems located along the roadway could also be impacted by the road widening.

Operation:

Police and Fire

The wider roadway would reduce peak-hour traffic congestion by improving traffic flow and visibility, resulting in faster response times. **Response times may be impacted if a landscaped median is selected for the center lane.**

Schools

Widening the roadway may require additional bus service, more crossing guards at crossings, or changing bus routes to pick up students from both sides of the road.

Transit

The roadway expansion and intersection improvements would benefit bus routes by improving traffic flow.

Water and Electric

Services will not be affected once the project is completed.

Sewer, Natural Gas, Telephone and Cable Television

Services will not be affected once the project is completed. However, some septic systems may need to be permanently relocated.

Mitigation

Construction:

Police and Fire

One lane would be kept open on 20th Street SE and priority travel will be given to emergency service vehicles. Notices of road closures will be provided in writing as required, so that services can plan alternate routes in advance. Emergency preempt systems will be provided at key intersections.

Schools

The provision of shoulders, bus pull-outs, bike lanes and sidewalks will decrease the potential for accidents.

Transit

The County will coordinate with Community Transit to ensure minimal disruptions to bus routes, which may involve a detour route.

Summary of Environmental Impacts and Mitigation

	<p><i>Water and Electric</i></p> <p>The County will coordinate with Snohomish County Public Utility District #1 to minimize disruptions to water and power services, and residents would be notified in advance of anticipated disruptions.</p> <p><i>Sewer, Natural Gas, Telephone and Cable Television</i></p> <p>The County will coordinate with the service providers to minimize disruptions to services, and residents would be notified in advance of anticipated disruptions.</p> <p><u>Operation:</u></p> <p><i>Police and Fire</i></p> <p>Emergency preempt systems will be provided on signalization at key intersections in project area, and controlled pedestrian access will occur at specified intersections. <u>In addition to the proposal of a landscaped median for the center lane, a two-way left-turn option will also be evaluated.</u></p> <p><i>Schools</i></p> <p>The provision of shoulders, bus pull-outs, bike lanes, and sidewalks will decrease the potential for accidents and enhance safety.</p> <p><i>Transit</i></p> <p>While there are no existing transit services or supporting facilities in the project corridor, the potential for future services will be enhanced due to the bus pull-outs incorporated into the project design.</p> <p><i>Water and Electric, Sewer, Natural Gas, Telephone and Cable Television</i></p> <p>These utilities will not be impacted by the operation of the roadway, so no mitigation is required. Any septic systems impacted by the widening of the roadway will have been relocated.</p>
No Action Alternative	<p>Impacts</p> <p><u>Construction:</u> No impacts are expected, as no construction would occur.</p> <p><u>Operation:</u> Traffic congestion will increase, resulting in a deterioration in response times by emergency services and Community Transit’s bus routes.</p> <p>Mitigation</p> <p><u>Construction:</u> No construction will occur, so no mitigation is required.</p> <p><u>Operation:</u> No mitigation is provided to compensate for deteriorating</p>

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	traffic conditions that result in delays to service providers and schools.
Displacement and Relocation Assistance	
Preferred Alternative	<p>Impacts</p> <p><u>Construction:</u></p> <p>Approximately 9.1 acres of additional right-of-way would need to be acquired for the roadway widening and stormwater detention facilities. It is expected that additional land will be required for wetland/riparian mitigation sites. This will require the demolition of approximately 12 homes along 20th Street SE and relocation of homeowners. There will be a partial land loss for other homeowners.</p> <p><u>Operation:</u> The immediate impact on the resale value of existing properties due to closer proximity to the roadway is not clear. In the long-term, the new roadway, bike lanes and sidewalks would increase mobility and accessibility to the roadway, which could increase the desirability of the area to future homeowners.</p> <p>Mitigation</p> <p><u>Construction:</u> A compensation settlement would be provided by the County to property owners for loss of property and, if applicable, loss of income. Relocation assistance would also be provided.</p> <p>Residents who will not be displaced may also experience some loss to their property area due to partial right-of-way acquisition.</p> <p><u>Operation:</u> As all impacts will take place and be resolved during construction, no mitigations are expected to be necessary during operation of the roadway.</p>
No Action Alternative	<p>Impacts</p> <p><u>Construction:</u> No impacts would occur as no properties would be acquired are demolished for additional right-of-way.</p> <p><u>Operation:</u> While the rural residential character of the area would continue, it would be impacted by increased traffic congestion,</p> <p>Mitigation</p> <p><u>Construction:</u> No impacts would occur so no mitigation is required.</p> <p><u>Operation:</u> No impacts would occur so no mitigation is required.</p>

Summary of Environmental Impacts and Mitigation

Cultural Resources	
Preferred Alternative	<p>Impacts</p> <p><u>Construction:</u> No impacts are anticipated because no <u>the one</u> cultural resources were found that was identified within the area of potential affect (APE) during the archaeological survey, and no structures were found to be eligible for the National Register of Historic Places. <u>has subsequently been demolished.</u></p> <p><u>Operation:</u> No impacts are anticipated because no cultural resources were found during the archaeological survey, and no structures were found to be eligible for the National Register of Historic Places. <u>With the completion of the project, no impacts to cultural resources are anticipated from the operation of the roadway.</u></p> <p>Mitigation</p> <p><u>Construction:</u> Equipment and materials will be stored, where practicable, in currently developed locations. If significant cultural resources are found, all construction activity will immediately stop so the site can be assessed by a qualified archaeologist. If human skeletal remains are found, the Snohomish County Sheriff's Department, the Washington Department of Archaeology and Historic Preservation and, if necessary, the Tulalip Tribes will be contacted.</p> <p><u>Operation:</u> No impacts are anticipated so no mitigation is required.</p>
No Action Alternative	<p>Impacts</p> <p><u>Construction:</u> No construction and ground-breaking activities would take place, so no impacts would occur.</p> <p><u>Operation:</u> No impacts would occur during operation of this alternative.</p> <p>Mitigation</p> <p><u>Construction:</u> No construction and ground-breaking activities would take place, so no impacts will occur.</p> <p><u>Operation:</u> No impacts would occur, so no mitigation is required.</p>

Summary of Environmental Impacts and Mitigation

Natural Environment	
Geology and Soils	
Preferred Alternative	<p>Impacts</p> <p><u>Construction:</u> Construction activities will include the excavation and fill of areas that will disturb soils, and there will be a net soil loss, which could result in erosion and slope instability.</p> <p><u>Operation:</u> Soils would be converted to impervious surface, which could increase the velocity and volume of stormwater runoff and accelerate erosion of undisturbed areas.</p> <p>Mitigation</p> <p><u>Construction:</u> Best Management Practices (BMPs) and appropriate erosion control and spill prevention control methods will be implemented. Methods for reducing the potential for slope instability could include dewatering. The impacts of site clearing could be minimized by designing structures to conform to the existing slope geometry. Exposed areas will be reseeded as soon as final grading is completed.</p> <p><u>Operation:</u> Permanent erosion control features will be integrated into the project design, and will include stormwater collection, detention and treatment facilities. Retaining walls used will be designed for at-rest soil conditions so that groundwater movement is minimized.</p>
No Action Alternative	<p>Impacts</p> <p><u>Construction:</u> No impacts would occur as no ground-disturbing activities will take place.</p> <p><u>Operation:</u> No impacts would occur from the roadway remaining in its existing condition.</p> <p>Mitigation</p> <p><u>Construction:</u> No ground-disturbing activities will take place, so no mitigation is required.</p> <p><u>Operation:</u> The roadway will continue in its existing condition, so no mitigation is required.</p>
Water Resources	
Preferred Alternative	<p>Impacts</p> <p><u>Construction:</u> Disturbance and exposure of soils, and clearing and</p>

Summary of Environmental Impacts and Mitigation

	<p>removal of buffer vegetation, could increase amount of sediment discharged to Mosher Creek, Fox Creek and Ebey Slough, and adjacent wetlands during storm events. Sediment can clog fish gills and harm in-water plants and fish habitat. Five wetlands will be permanently partially filled, for a total wetland fill estimated at 0.35 acres. Seven wetland buffers will be permanently partially filled. Wetland and stream buffer fills are estimated at 0.64 acres. Fuel and construction-related chemicals could accidentally spill and contaminate Fox Creek and wetlands.</p> <p><u>Operation:</u> Wetland and stream functions would be lost or reduced due to permanent loss of habitat area. The impacts would include increased rate and quantity of stormwater runoff due to additional impervious surface, loss of filtration, loss of vegetative structure, and increased rates of pollutant discharge. The amount of impervious surface area will increase from 6.9 acres to 12.9 acres, which could increase peak stormwater runoff flows and the amount of sediment carried downstream.</p> <p>Mitigation</p> <p><u>Construction:</u> BMPs and erosion control measures such as silt fences will be implemented to minimize sediment carried to wetlands and streams. If water is flowing in these streams, monitoring will take place for suspended solids. Vegetation removal will be minimized and exposed soils will be revegetated. Retaining walls will be constructed in some areas to minimize fill in critical areas. Impacts to wetlands and streams will be mitigated with wetland restoration and, if necessary, off-site wetland mitigation.</p> <p><u>Operation:</u> Potential impacts from impervious surface areas will be minimized by the full retrofit of stormwater quantity and water quality treatment facilities, which will treat runoff from both existing and new impervious surface.</p>
No Action Alternative	<p>Impacts</p> <p><u>Construction:</u> No impacts would occur as the road would not be widened.</p> <p><u>Operation:</u> Area wetlands and streams will continue to receive runoff, due to lack of detention and treatment facilities from the existing roadway.</p> <p>Mitigation</p> <p><u>Construction:</u> No impacts would occur, so no mitigation is required.</p> <p><u>Operation:</u> No impacts to water resources will occur that will require mitigation.</p>

Summary of Environmental Impacts and Mitigation

Plants and Wildlife	
Preferred Alternative	<p>Impacts</p> <p><u>Construction:</u> Approximately 0.6 acres of forested vegetation will be permanently removed for construction of the roadway and stormwater quantity and water quality treatment facilities. Approximately 0.35 acres of wetland and 0.64 acre of wetland/stream buffer would be permanently filled.</p> <p><u>Operation:</u> There could be impacts to vegetation, fish and wildlife in the form of stream and wetland hydrology changes that affect habitat downstream, and increased rates of pollutant discharge.</p> <p>Mitigation</p> <p><u>Construction:</u> As there are no bald eagles within one mile of the project area, no timing restrictions will be implemented during construction. Disturbed areas will be revegetated with native plant species. Construction activities affecting streams and wetlands will comply with local, state and federal regulations.</p> <p><u>Operation:</u> Potential impacts will be minimized through the full retrofit of stormwater quantity and water quality treatment facilities. Mitigation sites and temporarily impacted wetland and buffer areas will be monitored and maintained.</p>
No Action Alternative	<p>Impacts</p> <p><u>Construction:</u> No impacts would occur as the roadway would not be widened.</p> <p><u>Operation:</u> The road would not be widened and stormwater facilities would not be built. This would result in continued stormwater runoff to streams and wetlands.</p> <p>Mitigation</p> <p><u>Construction:</u> No impacts would occur, so no mitigation is required.</p> <p><u>Operation:</u> No mitigation is proposed to alleviate existing conditions that impact plant and wildlife species.</p>
Air Quality	
Preferred Alternative	<p>Impacts</p> <p><u>Construction:</u> Ground-disturbing activities would cause localized increases in fugitive dust and suspended particulate matter. Construction vehicles and idling traffic, will emit air pollutants that could degrade air quality. Odors could be caused during paving</p>

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	<p>operations using tar and asphalt. These impacts would be temporary.</p> <p><u>Operation:</u> Vehicles traveling on 20th Street SE will emit nitrogen oxides and hydrocarbons, contributing to air pollution. However, under the worst case scenario, carbon monoxide (CO) concentrations under all future roadway configurations is less than the 8-hour CO standards. The traffic analysis indicated that this alternative would result in the same or decreased AM peak-hour traffic delays at all project-affected intersections.</p> <p>Mitigation</p> <p><u>Construction:</u> Best available control technology will be used to reduce emissions during construction. Efforts will be made to avoid engine-powered equipment and prolonged periods of vehicle idling. Dust will be reduced by minimizing exposed soils, washing truck wheels, and cleaning streets.</p> <p><u>Operation:</u> The proposed project will not result in any significant adverse air quality impacts, so no mitigation measures are warranted or proposed.</p>
No Action Alternative	<p>Impacts</p> <p><u>Construction:</u> No impacts would occur as no construction activities will take place.</p> <p><u>Operation:</u> The traffic study indicated that intersection congestion could deteriorate further, which could increase vehicle-related emissions and somewhat degrade air quality further.</p> <p>Mitigation</p> <p><u>Construction:</u> No construction activities would occur that could affect air quality, so no mitigation is required.</p> <p><u>Operation:</u> The proposed improvements would not occur, so no mitigation is required.</p>
Visual Quality	
Preferred Alternative	<p>Impacts</p> <p><u>Construction:</u> Short-term changes to visual quality will occur due to construction equipment, staging, stockpiling of materials, traffic congestion, and localized glare from lighting sources. Natural areas will be cleared of vegetation and converted to impervious areas, and topography will be modified to create fill and cut slopes for retaining walls.</p> <p><u>Operation:</u> The expansion of 20th Street SE would permanently change views and visual quality due to a wider roadway, topography</p>

Summary of Environmental Impacts and Mitigation

	<p>and grade changes, increased impervious surface areas, and tree removal that acted as vegetative screening.</p> <p>Mitigation</p> <p><u>Construction:</u> Impacts could be reduced by grading excavation cuts into the existing slope at top and sides to make them look more natural, and the roadway alignment could make minor shifts to conform to existing topography and reduce vegetation clearing. Staging areas would be located away from visually attractive areas. Construction activities would be primarily limited to daylight areas to avoid or reduce use of artificial lighting sources.</p> <p><u>Operation:</u> To reduce vehicle headlight glare, intersections would be designed with appropriate approach angles, and lights at signalized intersections will be timed to improve traffic flow. Lighting would be selected to avoid excessive backlighting.</p>
No Action Alternative	<p>Impacts</p> <p><u>Construction:</u> No construction activities will occur that could alter the visual landscape except for developer installed residential developments. Views to the west from Cavalero Hill will be obstructed.</p> <p><u>Operation:</u> The lack of additional roadway capacity will likely increase traffic congestion beyond peak times, and new residential development will continue to be built that will change the rural character of the area.</p> <p>Mitigation</p> <p><u>Construction:</u> No activities will take place, so no mitigation is required.</p> <p><u>Operation:</u> The roadway will not be widened, so no mitigation is required.</p>