

I-5 Skagit Transportation Study Report

Phase 1

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Prepared by: Transpo Group USA, Inc.

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Partners and Technical Expert Representatives

Skagit Council of Governments (SCOG)

Kevin Murphy, Executive Director Mark Hamilton, Senior Transportation Planner

City of Burlington

Brian Dempsey, City Engineer Brad Johnson, Planning Director

Skagit Transit

Brad Windler, Planning and Outreach

City of Mount Vernon

Bill Bullock, City Engineer Rebecca Bradley-Lowell, Senior Planner

Skagit County

Tom Weller, Assistant County Engineer Sarah Ruether, Long Range Planning Forrest Jones, Program Manager

Port of Skagit

Sara Young, Executive Director

Washington State Department of Transportation Northwest Region Mount Baker Area

Chris Damitio, Assistant Regional Administrator
Justin Resnick, Planning and Engineering Services Manager
John Shambaugh, Project Manager
Mike Koidal, Assistant Area Traffic Engineer
Shane Sullivan, Traffic Operations Engineer
Rich Souders, Transportation Engineer
Jared Nilsen, Administrative Assistant
Madison Sehlke, Communications Specialist

Northwest Region

Chris Thomas, Assistant Regional Traffic Engineer Design and Safety Manager
Jared Cassidy, Regional Safety Management Engineer
Christian Santiago, Traffic Design Engineer
Duke Do, Assistant Traffic Design Engineer
Sayuri Koyamatsu, Transportation Engineer
Eden Havens, Transportation Engineer
Matthew Thomas, ITS Operations Engineer
Elizabeth McGovern, Environmental Manager
Lisa Sakata, Environmental Consultant

RB McKeon, Communications Manager

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Methods and Assumptions

Acronyms & Abbreviations

AADT...... Average Annual Daily Traffic ADT...... Average Daily Traffic AWSC All Way Stop Control ESOWSDOT Environmental Services Office FHWA......Federal Highway Administration GMA...... Growth Management Act HCM...... Highway Capacity Manual RTPO......Regional Transportation Planning Organization LOS.....Level of Service MP..... Mile Post OFM...... Office of Financial Management RTP......Route Development Plan SOV Single Occupant Vehicle SR...... State Route STS Skagit Transportation Study SCOG Skagit Council of Governments

TDM...... Transportation Demand Management

TWSC...... Two Way Stop Control

TSMO Transportation System Management & Operations

WSDOT...... Washington State Department of Transportation

Safety

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

Introduction



he Washington State Department of Transportation Northwest Region Mount Baker Area initiated the Interstate 5 Skagit Transportation Study Phase I to address capacity and safety performance issues identified in the 2021 Technical Report: Interstate 5 Existing Conditions Analysis Mount Vernon / Burlington. The analysis included three areas: traffic operations, safety and merge lane threshold evaluation. The results showed that there were some segments on the I-5 corridor that experience higher vehicle density and poor levels of service for traffic operations, merge lane operations and crashes.

Using the information and findings from the 2021 Existing Conditions Analysis, WSDOT, along with its planning partners, has moved to the next stage of the transportation study to address the safety and congestion needs identified in the technical analysis. To address these issues, the I-5 Skagit Transportation effort was divided into two phases.

Phase I will gather additional multimodal transportation and socio-economic data, incorporate environmental factors, conduct a robust and equitable community engagement process, and analyze current (2022) and future (2045) transportation conditions to determine how I-5 in Skagit County can better meet regional mobility and safety needs. Phase II will include the identification of near-, mid-, and long-term strategies and solution alternatives to address areas in the corridor not meeting regional transportation performance expectations.

To improve information sharing and support project delivery, overall study objectives include incorporating Planning and Environmental Linkages (PEL) to minimize duplication between the planning and environmental review processes. Additionally, the study will be performed in a way where the outcomes from this study can be incorporated into a National Environmental Policy Act (NEPA) process during project delivery as warranted.



I-5 North through Mount Vernon

Project Area

The study area spans the 9-mile-long corridor that runs through the urban areas of Mount Vernon and Burlington in Skagit County. The Skagit River bisects the two communities of Mount Vernon and Burlington. The focus area of the corridor is the segment on I-5 from Old Highway 99 (exit 224) to Cook Road (exit 232), as shown in Exhibit 1.

There are eight interchanges in the study area; four provide access to state highways that intersect with I-5. State highways in the urban area include State Routes 536, 538, 20 and 11. There are only two north-south bridges across the Skagit River; the Skagit River Bridge (now known as the I-5 Trooper Sean M. O'Connell Jr. Memorial Bridge) and the Riverside Bridge, a local bridge that serves the communities of Burlington and Mount Vernon. In Mount Vernon, the SR 536 Division Street Bridge serves east and west Mount Vernon and is an alternative route to the Anacortes/San Juan Ferry Terminal and Whidbey Island.

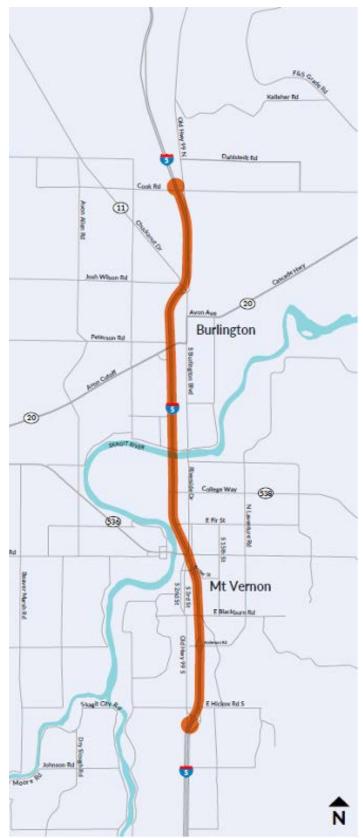


Exhibit 1 Project Area Exit 224 to 232

Purpose

The purpose of this I-5 Skagit Transportation Study is to investigate and assess the existing and future transportation needs within the corridor for traffic operations, congestion and safety, as well as meet objectives for interstate transport commerce expectations in accordance with adopted Federal Highway Administration (FHWA) and the Washington State Department of Transportation (WSDOT) guidelines and statewide goals. This study will analyze current and future conditions and overlay those needs with local, regional and statewide objectives.

The purpose of the project is to ensure that I-5 is performing at expected levels for passenger vehicles, freight, public transit and active modes of transportation and provide support for increased person throughput.



Need

The project needs related to the purpose statement are outlined below.

Enhanced Mobility

Traffic volumes in this corridor are near or exceeding highway design vehicle throughput capacity during weekday PM peak travel periods. North and south of the Skagit River Bridge, traffic volumes are approximately 77,000 average daily traffic (ADT) but increase to 81,000 ADT at the Skagit River Bridge.

According to the Skagit Council of Governments (SCOG) **2018 Regional Transportation Plan** travel demand model forecasts, daily traffic volumes are expected to increase along the I-5 corridor, with 2045 weekday volumes expected to be between 6 and 7 percent higher than today.

Additionally, several transportation modes rely on the interstate for daily service, including public transportation, rail and air transportation and experience increased traffic congestion, increased travel times, and variable schedule reliability for transit riders in the corridor. Skagit Transit provides fixed route bus transit service throughout the Skagit region with connections to Bellingham via Whatcom Transportation Authority (WTA) buses to Everett. Amtrak Cascades provides daily rail service to Portland, Seattle, and Vancouver, BC.. The Skagit Regional Airport (KBVS) serves the Skagit Valley and provides general aviation, freight and air taxi services with a focus on business aviation. Primary access to the airport is from SR 20 via SR 536 and I-5.

Population Growth

According to the 2020 U.S. Census, Mount Vernon has 35,200 residents, Burlington has 9,150 residents, and the combined city and surrounding urban growth area population is about 40 percent of Skagit County's total current population of 130,800. The current populations of Mount Vernon and Burlington have higher than average Hispanic or Latino residents, limited English language speakers, people living with disabilities and without health insurance, and high percentages of aging veterans. Future population and employment growth in the area indicates a need for increased local and regional transit, active transportation facilities and other modes of transportation, such as rail service.



Mount Vernon from the Kincaid St. Exit

The cities of Mount Vernon and Burlington are growing, and daily traffic volumes are expected to increase with 2045 weekday afternoon peak volumes expected to be 6 to 7 percent higher than today. The Skagit region is forecast to grow by 46,000 residents, and 80 percent (36,800) of those new residents are supposed to be accommodated in urban areas in accordance with the Growth Management Act (GMA), such as Mount Vernon and Burlington (SCOG Regional Transportation Plan).

All cities in the Skagit region are currently required to update their comprehensive plans by 2025, which provides an ideal opportunity to create better ways for people to move around without accessing I-5 directly to make local trips. Currently, existing land use patterns in the urban area and lack of complete streets limit opportunities for the community to connect to alternative modes of transportation other than by car, making it difficult to get around the community. This study will provide an opportunity to engage with communities in the urban area to re-envision land use patterns to better connect to alternative modes of transportation, such as public transit and active transportation options to access key medical and employment destinations. It also will provide an opportunity to match transportation facility needs on local and state highways to address existing and future land use needs.

Freight Mobility

The Skagit Valley is a major agricultural production area and relies heavily on the ability for food and produce to be shipped to market in a timely and efficient manner. I-5 is an international conduit from farm to market spanning the entire west coast of the U.S. from Canada to Mexico. In addition to many local agricultural products being shipped from the Skagit region, I-5 allows outside products to be shipped into the region from U.S. ports and international markets.

Increased traffic congestion on I-5 and other state highways can have negative effects on the reliability and efficiency of freight, impacting local and international markets. The project team included freight trucking schools and agricultural shipping interests in this Phase I study of the Skagit I-5 corridor and their concerns are being considered in the recommendations for further study in Phase II.



Study Area Characteristics

- I-5 in Skagit County is part of the 48,000-lane mile system of interconnected controlled or limited-access highways that form the National Highway System. FHWA, along with WSDOT, are responsible for this system and recognize that the interstate system is also part of regional and local transportation systems.
- The study area is about 9 miles in length with an estimated current population of about 44,350 residents in the Mount Vernon-Burlington urban area.
- I-5 is a four-lane divided interstate consisting of two 12-foot driving lanes with 8-foot shoulders in each direction, except on the Skagit River Bridge where the shoulders narrow to 3 feet.
- There are eight interchanges at least one mile apart within the corridor with a total of 30 ramps that provide access on and off I-5 to local communities.
 Four interchanges provide connections to SR 536, SR 538, SR 20 and SR 11. There are two east-west street crossings of I-5 in Burlington and four eastwest street crossings of I-5 in Mount Vernon.
- The Skagit River flows between Mount Vernon and Burlington. There are only two north-south bridges across the Skagit River: the Skagit River Bridge (known as the I-5 Trooper Sean M. O'Connell Jr. Memorial Bridge) and the Riverside Bridge connecting Burlington Boulevard to Riverside Drive in Mount Vernon.

- An additional bridge is located on SR 536 through Mount Vernon connecting to SR 20. This section of SR 536 serves as an alternate route to the Anacortes/San Juan Ferry Terminal and Whidbey Island.
- Bicycles are permitted on a portion of the interstate but restricted across the Skagit River bridge between the College Way Interchange (Exit 227) and the George Hopper Road Interchange (Exit 229). Many local streets in the urban area permit bicycle use, including the Riverside Drive bridge connecting Mount Vernon with Burlington across the Skagit River. However, there are limited dedicated bicycle lane facilities on local streets, especially along east-west facilities crossing I-5. There is one dedicated pedestrian and bicycle crossing under I-5 in Burlington.
- The posted speed limit is 60 mph in the Mount Vernon-Burlington urban areas and 70 mph on the north and south ends of the study area.
- Maintenance, incident response, snow and ice control, pavement repair and vegetation control are provided by WSDOT Mount Vernon Area 2 Maintenance Office for the interstate and nearby state highways.



Environment, Land Use, Population, Demographics

Environment

The project team conducted a qualitative environmental screening of the study area. Environmental factors were reviewed in accordance with WSDOT environmental guidance for transportation planning Chapter 200. This assessment included a desktop review of available information sources, along with a brief reconnaissance level screening for wetland and stream features. Additional analysis of environmental factors will be conducted during the alternatives analysis in Phase II and at the project level during the project delivery phase if warranted. No environmental constraints were identified within the study area at this preliminary stage. Refer to Appendix A Environmental Assessment.

Climate Vulnerability

The assessment found the 9-mile-long study area to be of moderate to high vulnerability for increased impacts from climate change. Specifically, SR 11, SR 20 and SR 536 were identified as high potential for increased climate impacts, while SR 538 was projected as low potential for vulnerability from climate impacts but could still be affected by reduced capacity.

Chronic Environmental Deficiency

No Chronic Environmental Deficiency priorities were identified within the study area.

Fish Passage Barriers

There are 10 fish-bearing crossings within the study area, two of which have been designated as fish passage barriers. Both barriers are located in Mount Vernon and are scheduled for upcoming replacement by WSDOT.

Habitat Connectivity

The study area was identified as having a low to medium priority for investing in habitat connectivity improvements. The area also was ranked low to medium for pollinator habitat risk. However, in the Mount Vernon area two high-rank urban gateway areas were identified for pollinator habitat restoration.

Noise Wall

Several areas, including an area in Mount Vernon, were noted in the WSDOT GIS Database as moderate to high priorities for noise mitigation.

Stormwater and Retrofit Priorities

There are four approved Total Maximum Daily Loads (TMDL) identified within the study area, one TMDL that is in development, and three total 303(d) listed waters. It is expected that all mapped stormwater discharge points in the study area will require compliance with TMDL actions, though none met the criteria for historic status.

Wetland and Mitigation Sites

Currently, there are 52 potential wetlands, eight streams and zero WSDOT mitigation sites within the study area. Identified potential wetlands and streams within the study area can be seen in Exhibit 2 below. A total of 26 bridges and culverts were identified within the study area, though none met the criteria for historic status.

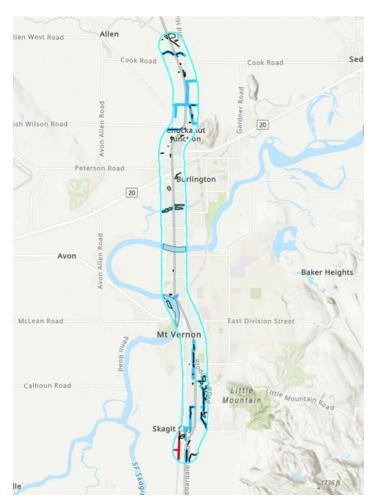


Exhibit 2 Study Area and Environmental Factors (Note: Light blue = streams; Red = Ditch)

Existing Conditions—Environment, Land Use, Population, Demographics

Hazardous Material Contamination Sites

Hazardous material contamination sites were identified in the study area using guidance from the Washington State Department of Ecology's Toxic Cleanup database. Four types of sites are identified and represented in Exhibit 3. Four sites are awaiting cleanup and 18 sites have started cleanup. Currently there are no sites where cleanup monitoring is taking place.

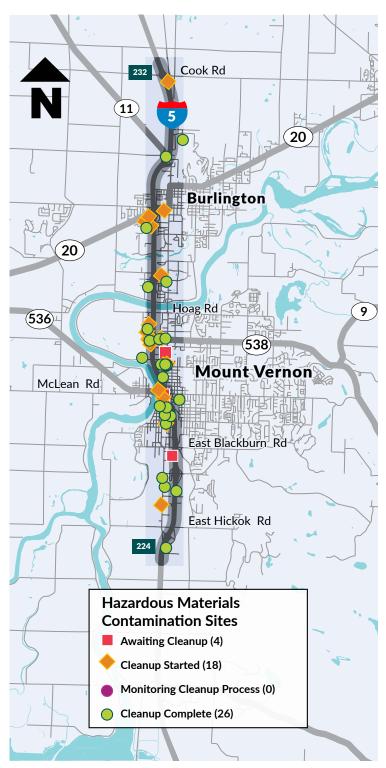


Exhibit 3 Hazardous Materials Contamination Sites

Land Use—Transportation Context

I-5 is a critical transportation link connecting Skagit County to Whatcom and Snohomish counties and is the primary north-south corridor crossing the Skagit River. While I-5 provides a critical north-south link, it also is a limited access facility that bisects the cities of Burlington and Mount Vernon and creates major mobility barriers to east-west travel for all modes of transportation, including active transportation, public transit and vehicles, including freight and farm equipment.

Average daily traffic (ADT) on I-5 is about 77,000 vehicles in the northern portion of the study area, about 81,000 ADT at the Skagit River Bridge and about 77,000 vehicles in the southern portion of the study area. As is typical on freeways in urban areas, weekday peak hour traffic congestion occurs primarily from 3-7 p.m. As documented in the 2021 baseline study, I-5 nears throughput capacity in some places, has higher than average safety issues in the southbound lanes from SR 20 to George Hopper Road and from College Way to Kincaid Street, and experiences some issues of concern with traffic merging from on-ramps to the I-5 mainline.

In addition to I-5, SR 11, SR 20, SR 536 and SR 538 are major east-west connections that bisect Burlington, Mount Vernon and Skagit County. These



Exit 230 (SR 20) Ramp

state highways are critical links in the regional transportation network. The presence of these major state highway transportation routes through these urban areas has influenced local land use development, the types of commercial and retail services that are available along them and the type of trip-making that occurs. In residential and commercial areas, I-5 and other state highway routes are typically characterized by lower income housing populated by higher percentages of people of color people with limited English language proficiency.

Population, Socio-Economic, and Demographic Profile

Skagit County currently has 130,800 residents, most of whom live in the western half of the county. Mount Vernon is the largest city with 35,200 residents, and Burlington has 9,150 residents.

According to the 2020 U.S. Census data, Mount Vernon and Burlington have higher percentages of some segments of the population when compared to Skagit County and Washington state:

- Hispanic or Latino residents.
- Spanish language spoken at home.
- Non-English languages spoken at home.
- Residents living in poverty.
- Residents living with disabilities.

Other notable demographic observations include:

- Mount Vernon, Burlington and Skagit County have high percentages of residents living without health care coverage.
- Skagit County has a high percentage of senior residents older than 65.
- Burlington has a high percentage of residents who are military veterans.
- Mount Vernon has a high percentage of school-age residents younger than 18.

Many of these groups have special needs and mobility challenges related to where they live and where they need to go. Many also are affected by the physical presence of I-5, incomplete street networks on either side of I-5 and a lack of complete streets limiting access to alternative modes of transportation, such as public transit and active transportation facilities.

More specific data can be found in Appendix B Population, Socio-Economic, Demographic Profile. Population, socio-economic and demographic conditions are changing in the Skagit Valley and, according to the SCOG Regional Transportation Plan, the Skagit region is expected to grow by 46,000 residents to a total county population of 177,000 by 2045.

Countywide planning policies agreed to by all jurisdictions within Skagit County direct that 80 percent (36,800) of these new residents be accommodated in cities, towns and Urban Growth Areas (UGA). Skagit County, Mount Vernon, Burlington, Sedro-Woolley, Anacortes, and La Conner are all working on Comprehensive Plan updates that are due in 2025.

Phase II of the I-5 Skagit Transportation Study will go into greater depth to understand issues that were brought to light in the June 7, 2023, Advisory Committee Meeting, stakeholder interviews and community engagement activities that occurred in late June 2023. Additionally, collaborating with local land use and transportation officials in Skagit County, Mount Vernon and Burlington, as well as a deeper look into block-level U.S. Census data, will help the project team pinpoint specific populations that have more specific transportation needs during identification of alternatives. This work will help inform the WSDOT study and local comprehensive plans for Mount Vernon, Burlington and Skagit County.

Environmental Justice

The I-5 Skagit Study incorporates environmental justice principles according to current WSDOT guidance for planning studies and will consider the evolving direction regarding the 2021 Healthy Environment for All (HEAL) Act. Phase I of the study will collect population, socio-economic and demographic data, as well as data regarding health disparities of the people served and impacted by I-5 who live within the study area.

Phase I environmental justice data sources are listed at Environmental guidance -Environmental justice & Title VI | WSDOT (wa. gov) and included the following references:

- EJ Screen produced by the U.S. Environmental Protection Agency (EPA)
- Washington Tracking Network Washington State Department of Health (DOH)
- 2022 SCOG Coordinated Public Transit Human Service Transportation Plan (HSTP)

The U.S. Census is also a source of information at the census tract level for Phase I, and website links for U.S. Census data sources are provided with Table 1.

Environmental Justice Study Area Data

WSDOT provides specific guidance for defining an Environmental Justice Study Area required by the National and State Environmental Policy Act (NEPA/ SEPA). Several thematic GIS maps have been created to highlight the I-5 study area (see below). Each map depicts the geographic distribution of population, socio-economic, demographic or health disparity clusters and patterns within and around the study area according to census tracts. A general discussion of the thematic findings is provided with the maps identified in Exhibits 4 and 5. These exhibits will be used to identify potential outreach opportunities to stakeholder groups and to further develop the Phase II Environmental Justice Analysis (EJA).

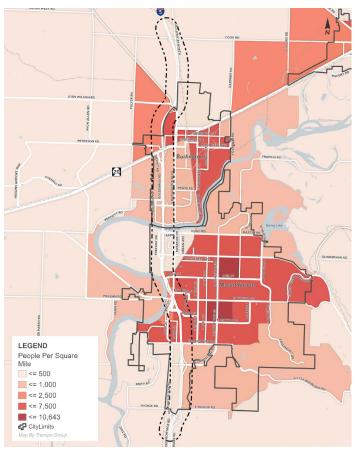


Exhibit 4 People Per Square Mile in the Vicinity of I-5

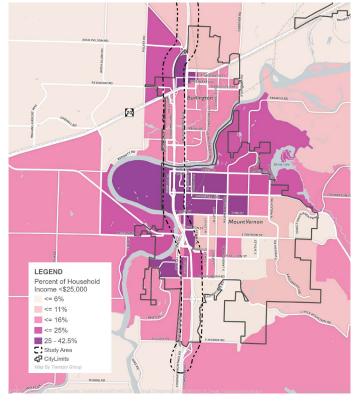


Exhibit 5 Percent of Household Income <\$25,000

Inclusion of Regional Native American Tribal Governments

WSDOT and consultants have made special efforts to reach out to the five Native American tribal governments (Sauk-Suiattle, Stillaguamish, Swinomish, Samish and Upper Skagit) in the Skagit region and have invited all to participate in advisory meetings and stakeholder interviews to express their observations, issues and concerns related to I-5.

Observations of the Demographic Data

Table 1 includes U.S. Census population, socio-economic, and demographic data for the cities of Mount Vernon and Burlington in comparison to data for Skagit County and Washington State. Exhibits 4 and 5 above highlight population density and percent of low-income households in the vicinity of I-5.

Table 1 Comparison of Population, Socio-Economic, and Demographic Data for I-5 Skagit Transportation Study Area

Categories	Mount Vernon	Burlington	Skagit County	Washington
Total Resident Population	35,000	9,800	131,179	7,785,786
Hispanic or Latino Residents	33.7%	31.0%	19.5%	13.6%
Spanish Spoken at Home	26.6%	21.7%	18.5%	10.6%
Non-English Spoken at Home	30.8%	25.7%	16.5%	20.8%
Education—Bachelor's or Higher	25.4%	22.6%	28.6%	39.0%
Housing Units	13,457	3,645	57,126	3,202,241
Owner-Occupied Housing	62.6%	50.0%	70.5%	64.0%
Median Gross Rent/Month	\$1,114	\$1,331	\$1,217	\$1,484
Area Employment Rate	58.1%	58.2%	58.3%	59.1%
Median Household Income	\$62,706	\$58,345	\$75,308	\$84,247
Residents Living in Poverty	16.5%	14.3%	11.6%	9.9%
Residents with Disability	14.2%	17.3%	9.8%	13.1%
Residents without Health Care Coverage	9.5%	9.9%	8.9%	6.4%
Residents Under 18 Years Old	26.1%	22.9%	21.3%	21.7%
Median Age of Residents (Years)	33.9	36.2	41.6	38.2
Residents Over 65 Years Old	16.8%	17.1%	21.8%	16.2%
Residents Military Veterans	7.7%	12.1%	8.0%	8.2%

INFORMATION **SOURCES**

MOUNT VERNON

data.census.gov/profile/ Mount Vernon city

BURLINGTON

data.census.gov/profile/Burlington

SKAGIT COUNTY

data.census.gov/quickfacts/ skagitcountywashington

WASHINGTON

data.census.gov/quickfacts/fact/ table/WA/PST045222

Community Engagement

Community engagement was a central piece in Phase I of the I-5 Skagit Transportation Study. As part of Phase I, equitable communication and stakeholder engagement strategies sought to solicit, understand and respond to the concerns of the community by conducting meetings, attending social gatherings, meeting residents where they shop and congregate, and through an online survey. The project team was committed to including community members in this process with an emphasis on reaching and involving people who have been historically underrepresented in community engagement processes. The engagement activities outlined in this plan supported an effort to meet community members where they were and empower the public to make their voices heard and be a part of the process.

Priority audiences included environmental justice communities, such as low-income, people with disabilities and minority communities. WSDOT utilized a suite of engagement tools to inform the study. These included stakeholder interviews, targeted outreach to vulnerable and disadvantaged populations, online surveys (English and Spanish), an advisory committee, fact sheets and other project materials.

The community's collective experiences, challenges and goals will be considered alongside the technical analysis. Together, they will validate the findings from the 2021 Existing Conditions Analysis and set the foundation for the identification and analysis of alternatives in Phase II to address needs and challenges identified by WSDOT, partner agencies and the community.

For a detailed account of the community engagement strategy see the Community Engagement Plan in Appendix C and the Engagement Summary Report in Appendix D for outreach efforts and engagement activities in Phase I for organizations, agencies and community stakeholders.



Project Website

Engagement Goals

- Validate the findings from the community engagement performed during the 2021 Existing Conditions Analysis.
- Identify community needs in the study area, including the needs of residents, businesses and other stakeholders.
- Engage the community throughout the process to understand regional needs and support for potential improvements.

Community Engagement

Engagement Strategies

The project team implemented the following strategies in Table 2 to inform and involve the community in Phase I of the I-5 Skagit Transportation Study:

	Phase I (Spring/Summer 2023)						
Audience	General public, priority communities	Community-based organizations, general public priority communities	General public, priority communities	CBOs, priority communities	General public	Advisory Committee	
Strategies	Distribute awareness-building project materials to the community The team will develop and distribute a range of materials throughout the community to connect people with project resources and opportunities to engage in this process.	Send targeted emails and phone calls to partners and community groups WSDOT and the consultant team will proactively reach out to key partners and community groups to build an informed audience and connect people with opportunities to engage in this process.	Table at community gathering places Tabling at community gathering places, such as grocery stores and farmers markets will support engaging with people in the study area who represent overburdened, vulnerable, or traditionally underserved communities, including minority, low-income, and non-English speaking.	Conduct interviews with stakeholders and community groups Interviews will establish an understanding of existing conditions and concerns, as well as identify considerations to support developing potential solutions.	Conduct a survey to gather input on existing issues, concerns and ideas Survey results will help inform the development and analysis of potential strategies and solutions.	Send targeted emails and phone calls to identify Advisory Committee members WSDOT will proactively reach out to key partners and community groups to build participation in the Advisory Committee.	
Tactics	Design, translate and print materials Determine mailing area and send mailer Distribute materials to key community locations Use NW Region and general WSDOT social media to share digital materials, as needed	Develop a contact list Draft emails and phone scripts Send emails and make phone calls Track responses and follow-ups	Identify popular community gathering locations Coordinate with site managers Compile materials for tabling Engage and interact with the public at events	Identify key stakeholders and community groups Develop an interview guide and questions Schedule and conduct interviews Record and analyze interview responses	Develop survey questions and format Choose an online survey platform Promote the survey through various channels Analyze survey responses and summarize findings	Identify Advisory Committee members Reach out to members to build awareness Work with Advisory Committee members to organize workshop Host Advisory Committee workshop	
Tools	Mailer Flyer Poster Social media posts	Contact list Email template Phone script Project materials Tracking spreadsheet	Table setup Project materials Sign-up sheets	Stakeholder contact list Email template Interview guide Project materials Tracking spreadsheet Stakeholder interview summary	Online survey Promotional materials Survey summary	Contact list Email template Workshop materials	
Evaluation	Number of events attended Number of people engaged	Number of contacts reached Response rate Level of interest and engagement	Number of events attended Number of people engaged	Number of interviews conducted Representation of interviewees Quality of insights and feedback collected	Number of completed surveys Demographic representation of survey respondents Quality and diversity of feedback collected	Representation on Advisory Committee Level of interest and engagement Participation in Advisory Committee workshop	

Table 2 Community Engagement Strategies and Tools Used Note: CBO = Community Based OrganizationsStakeholder engagement

Outreach Summary

- In May and June 2023, the community engagement team spent significant time and effort reaching out to the community in a wide variety of ways. A community advisory group was convened on June 7, 2023, with a wide variety of stakeholders participating.
- In mid-June, stakeholder interviews were held with a variety of community individuals and interest groups.
- In mid-June an online community survey was launched and broadly advertised to individuals and community groups.

Near the end of June, several stations were placed at community gathering locations and community members were asked to participate in surveys.

Stakeholder Interviews

The project team interviewed local government agencies and community-based organizations within the study area to build relationships, understand the needs of communities they serve or represent and gather input on engagement strategies for future phases of the study. Interviews were based on stakeholder's location within the study area, diversity of communities served and ability to share information internally and to other organizations in the community. Priority stakeholders contacted included the following groups:

- Community Action's Latino Advisory Committee
- Catholic Community Services
- Skagit County Farm Bureau
- Burlington Chamber of Commerce
- Mount Vernon Chamber of Commerce (interviewed)
- Friends of Skagit County
- Burlington-Edison School District
- Mount Vernon School District (interviewed)
- Skagit Transit (interviewed)
- North Cross Commercial Driving School, LLC
- Taylor Made TDS, Inc.
- Skagit City Trucking School, LLC

The project team reached out to the above priority stakeholders and held in-depth stakeholder interviews with three organizations. While some groups did not respond to our multiple outreach attempts, we still provided information, such as the link to the English and Spanish version of the online survey and fact sheet.

Interviewees provided additional context about the communities they serve and shared feedback about how and why people in their communities travel along the I-5 corridor, barriers to traveling on or within the study area, actions they take to avoid those barriers and strategies to engage the community in future phases of the study. See the Community Engagement Summary Report for a detailed summary.

Online Survey

During Phase I of the I-5 Skagit Transportation Study, WSDOT solicited input through an online public community survey to understand challenges experienced on I-5 in the Mount Vernon and Burlington area. The survey focused on travel patterns on local roads, preferred modes of travel and barriers and opportunities experienced when traveling in or through Mount Vernon and Burlington.

The survey ran from June 8 through June 26, 2023. A Spanish version of the survey ran from June 15 through June 26, 2023. People without internet or computer access were offered computer access at local libraries and via paper copies of the survey. A total of 1,144 people participated in the survey. WSDOT published the survey on the project website and shared the survey via Twitter (now known as X) and targeted emails to stakeholders. Additionally, the project team hosted pop-up events on June 23 at Skagit Station, Skagit Valley Food Co-op and Burlington Fred Meyer.

Community Engagement



In-Person Outreach

Online Survey Results

Survey Responses and Analysis

From June 8 through June 26, 2023 the project team broadcast the availability of an online community survey throughout the local area. A Spanish language version was also made available to local residents. Community input outlined and summarized below will support WSDOT's understanding of how the community uses I-5 and local roads to move throughout the study area and Skagit County and inform the development of solution alternatives in Phase II.

Questions Asked of Participants

- 1. When you travel in or through Mount Vernon and Burlington, do you primarily use local roads. I-5 or both?
- 2. What challenges do you experience when traveling in or through Mount Vernon and Burlington? (Select all that apply)
- 3. Please tell us more about these challenges.
- 4. How often do you experience these challenges?
- 5. Which modes of transportation do you use to travel in or through Mount Vernon and Burlington? (Please select all that apply)
- 6. Why do you choose to use these modes to travel in and through Mount Vernon and Burlington?
- 7. Which modes of transportation would you like to be able to use to travel in or through Mount Vernon and Burlington? (Please select all that apply)
- 8. Why would you like to be able to use these modes to travel in and through Mount Vernon and Burlington?
- 9. What are your primary reasons for traveling in or through Mount Vernon and Burlington? (Select all that apply)
- 10. How does I-5 impact your trips when traveling in or through Mount Vernon and Burlington? (500-character limit)
- 11. Which local roads do you use to avoid traveling on I-5? (500-character limit)
- 12. Which interchanges do you use to cross I-5 between Mount Vernon and Burlington? (Select all that apply)
- 13. What are the primary challenges you face at these interchange(s)? (500-character limit)
- 14. What is your ZIP code?

A full account of the responses to these questions is available in Appendix D Community Engagement Results.

Appendix E provides more details on future freeway operations and safety forecasts.

Development of Travel Forecasts

As part of the 2021 Existing Conditions Analysis, the project team developed traffic volumes for the I-5 mainline and ramp facilities. Using updated 2022 traffic counts, a set of revised existing 2022 traffic volumes were developed by WSDOT and forecast to 2045 conditions. The updated traffic volume forecasts were based on the Skagit Council of Governments travel demand model (SCOG Model), which has a future horizon year of 2045 and includes the population and land use growth anticipated in the region by 2045.

Assessment of Future I-5 Mainline and Ramp Performance

The assessment of corridor traffic operations is generally consistent with the prior 2021 analysis. The primary focus of the 2045 conditions performance metrics was freeway segment level of service (LOS). Other ramp related metrics (merge-lane volume threshold) were updated, as well, for comparison with the 2021 analysis. The LOS standard established for this section of I-5 is LOS D, since it is designated as a Highway of Statewide Significance.

Exhibit 6 for northbound traffic operations and Exhibit 7 for southbound traffic operations identify 15-minute freeway vehicle densities in units of passenger cars per mile per lane, as well as level of service conditions on the interstate by time of day. The higher the density number and the darker the color on the exhibits show a higher number of vehicles using the freeway. These factors usually indicate more congestion and slower speeds.

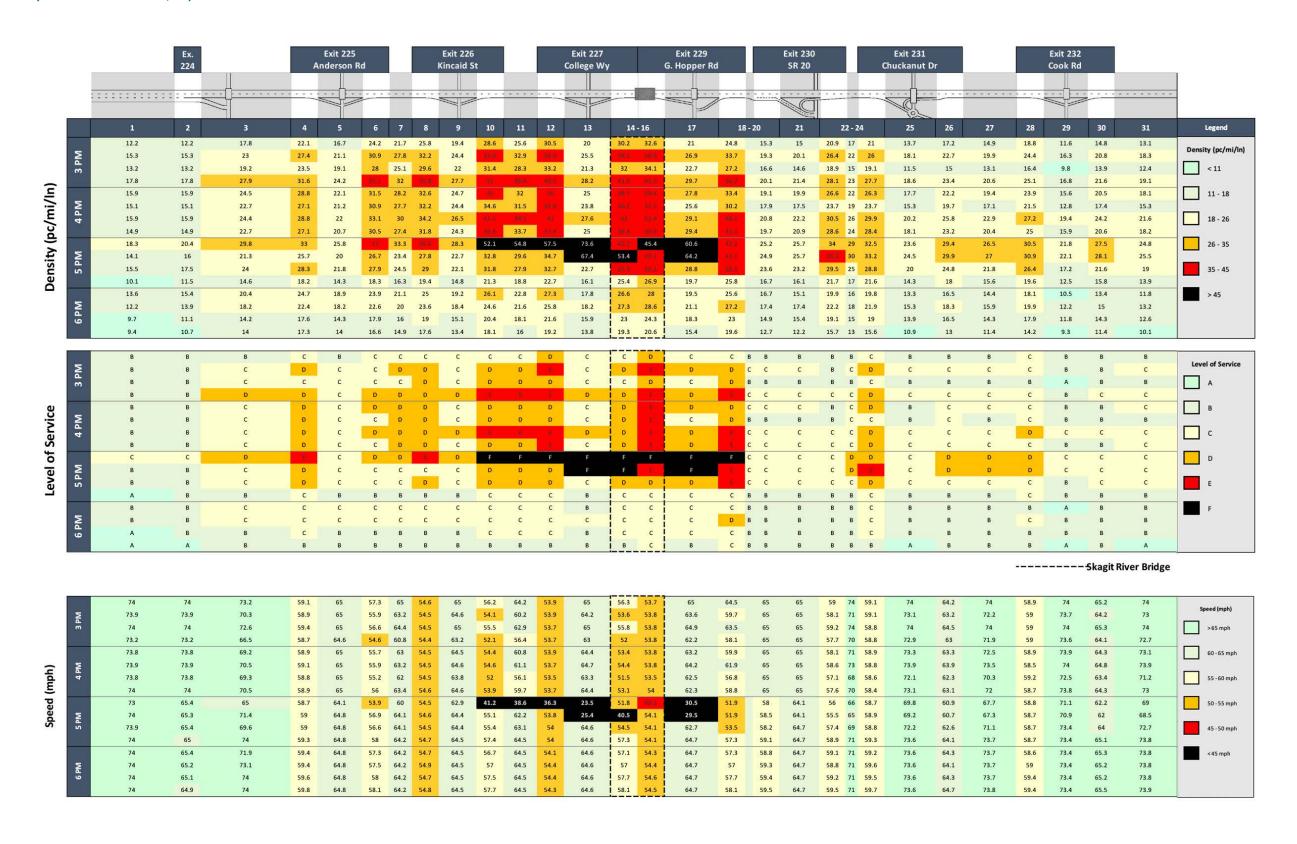
Northbound Operations

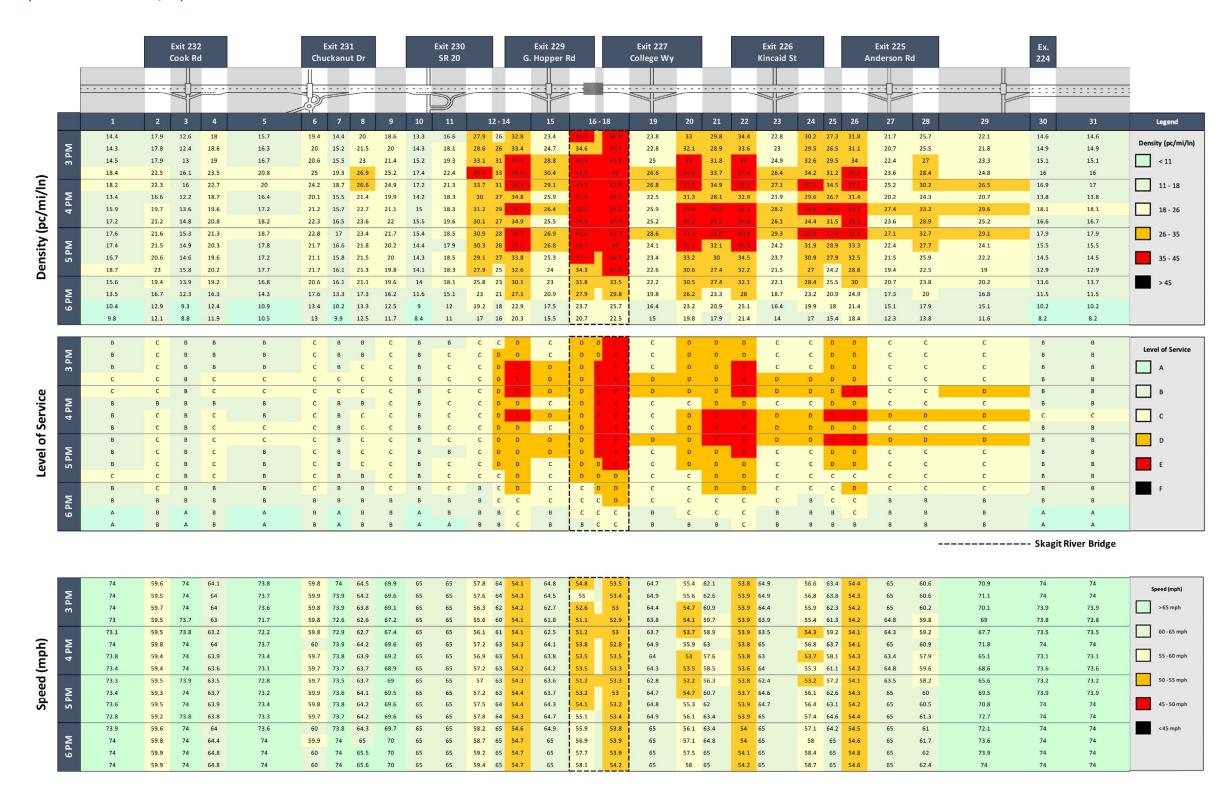
- 2021 LOS F conditions are expected to increase from two 15-minute periods to five by 2045 between Anderson Road (Exit 225) and George Hopper Road (Exit 229).
- Similar to 2021, the most congested area is associated with the Skagit River Bridge.
- Compared to 2021 conditions, LOS E conditions also expand to other time periods and other freeway segments, though mostly south of the Skagit River Bridge.

Southbound Operations

- 2021 LOS F conditions are expected to increase from zero to four 15-minute periods by 2045 between George Hopper Road (Exit 229) and College Way (Exit 227).
- Similar to 2021, the most congested area is associated with the Skagit River Bridge.
- Compared to 2021 conditions, LOS E conditions also expand to other time periods and other freeway segments, mostly south of the Skagit River Bridge, though this change is not at the same scale as northbound operations.
- Similar to 2021, the most congested area is associated with the Skagit River Bridge.
- Compared to 2021 conditions, LOS E conditions also expand to other time periods and other freeway segments, mostly south of the Skagit River Bridge, though this change is not at the same scale as northbound operations.







Merge-Lane Volume Threshold

This metric is used to assist in determining traffic flow and potential merge-lane conflicts from freeway on-ramps onto the freeway mainline. Combined onramp volumes that meet or exceed 1,700 vehicles per lane per hour indicate when a potential conflict may exist at the merge point. Heat maps were created of on-ramp merge volume conditions for northbound and southbound directions. Locations and times at

or above the 1,700 vehicles-per-hour threshold are shown with darker colors indicating a potential conflict and need to manage traffic flow in the merge lane.

Exhibit 8 for northbound ramp operations and Exhibit 9 for southbound ramp operations identify the time of day and flow rate of vehicles merging onto the interstate from an on-ramp.

I-5 Northbound I-5 Milepost 224.0		peratio	ns Hea	t Map			
	Exit 225	Exit 226	Exit 227	Exit 229	Exit 230	Exit 231	Exit 232
Time Period	Anderson Rd	Kincaid St	College Wy	George Hopper	SR 20	SR 11	Cook Rd
3:00 PM - 3:15 PM	366	402	420	381	341	305	287
3:15 PM - 3:30 PM	458	487	506	485	424	397	387
3:30 PM - 3:45 PM	418	435	443	416	321	279	281
3:45 PM - 4:00 PM	503	533	539	507	449	408	400
4:00 PM - 4:15 PM	439	455	488	459	405	367	362
4:15 PM - 4:30 PM	434	452	468	430	368	333	320
4:30 PM - 4:45 PM	458	511	523	496	453	415	409
4:45 PM - 5:00 PM	429	471	495	473	432	380	365
5:00 PM - 5:15 PM	523	559	592	593	531	493	484
5:15 PM - 5:30 PM	399	421	452	451	423	387	378
5:30 PM - 5:45 PM	415	438	477	471	399	354	331
5:45 PM - 6:00 PM	272	299	325	304	275	252	227
6:00 PM - 6:15 PM	413	426	447	438	393	363	331
6:15 PM - 6:30 PM	361	384	424	418	380	357	333
6:30 PM - 6:45 PM	298	305	331	324	277	251	236
6:45 PM - 7:00 PM	274	283	287	278	243	224	207

Veh/15 min	Veh/hr
<425	< 1700
<u>></u> 425	≥ 1700
≥ 475	≥ 1900
≥ 500	≥ 2000
≥ 525	≥ 2100
≥ 550	≥ 2200

A flowrate 1,700 vehicles/hour or higher suggests a need manage flows in merge lane. Darker colors indicate higher volumes and a greater need to manage flows.

Exhibit 8 2045 Northbound I-5 On-Ramp Heat Map

Northbound Operations

The 2021 analysis indicated that on-ramps at the Kincaid Street, College Way and George Hopper Road interchanges are higher than the 1,700 vehicles per lane threshold volumes. By 2045 Anderson Road and the SR 20 interchanges would exceed the threshold volumes and may create additional safety conflicts at the merge point with vehicles on the freeway.

I-5 Southbound Ramp Operations Heat Map I-5 Milepost 224.0 to 234.0

	Exit 232	Exit 231	Exit 230	Exit 229	Exit 227	Exit 226	Exit 225	Exit 224
Time Period	Cook Rd	SR 11	SR 20	George Hopper	College Wy	Kincaid St	Anderson Rd	Old Hwy 99
3:00 PM - 3:15 PM	331	363	425	484	454	434	429	444
3:15 PM - 3:30 PM	340	389	437	474	444	422	424	449
3:30 PM - 3:45 PM	349	413	489	526	472	456	443	454
3:45 PM - 4:00 PM	421	470	518	561	500	483	473	488
4:00 PM - 4:15 PM	393	451	485	544	492	495	476	494
4:15 PM - 4:30 PM	325	369	437	490	421	411	395	406
4:30 PM - 4:45 PM	345	393	452	497	499	500	501	514
4:45 PM - 5:00 PM	366	410	445	508	498	470	464	489
5:00 PM - 5:15 PM	350	382	427	519	494	491	478	491
5:15 PM - 5:30 PM	337	361	424	485	443	418	424	435
5:30 PM - 5:45 PM	327	358	413	471	427	411	402	411
5:45 PM - 6:00 PM	341	359	404	450	406	373	361	372
6:00 PM - 6:15 PM	340	373	395	440	422	404	393	408
6:15 PM - 6:30 PM	293	310	353	388	365	336	335	343
6:30 PM - 6:45 PM	225	241	298	335	327	289	300	306
6:45 PM - 7:00 PM	217	227	266	297	281	249	235	246

Veh/15 min	Veh/hr
<425	< 1700
<u>></u> 425	≥ 1700
≥ 475	≥ 1900
≥ 500	≥ 2000
≥ 525	≥ 2100
≥ 550	≥ 2200

A flowrate 1,700 vehicles/hour or higher suggests a need manage flows in merge lane. Darker colors indicate higher volumes and a greater need to manage flows.

Exhibit 9 2045 Southbound I-5 On-Ramp Heat Map

Southbound Operations

The 2021 analysis indicated that on-ramps at the George Hopper Road and College Way interchanges are higher than the 1,700 vehicles per lane threshold volumes. By 2045 most I-5 on-ramps would exceed the threshold volumes. Interchanges include SR 20 (Exit 230), George Hopper (Exit 229), College Way (Exit 227), Kincaid Street (Exit 226), Anderson Road (Exit 225) and Old Highway 99 (Exit 224).

Safety Assessment

The existing safety performance assessment was conducted in the 2021 Existing Conditions Analysis. This included a Target Zero Summary, Crash Summary Assessment and Highway Safety Manual Analysis. The 2021 analysis revealed that most of the study corridor is currently experiencing fewer crashes, on average, than a facility with similar characteristics, however some corridor segments are experiencing more crashes than similar facilities. Locations experiencing more crashes include northbound I-5 between Kincaid Street and George Hopper and southbound I-5 between SR 20 and Kincaid Street.

The safety performance assessment of the future scenario will be used primarily as a baseline for comparing alternatives in the Phase II effort of the study. The predictive safety analysis will be used to determine the safety performance of potential investments and enable comparisons with the 2021 baseline condition.

As forecasted volumes are higher in 2045, the overall crash frequencies increased as well compared to 2021 conditions. Predicted crash frequencies are generally forecast to be highest south of the College Way interchange.

Skagit 2045 Regional Transportation Plan

This section provides details about population growth, comprehensive plans, SCOG model forecasts and resulting forecast issues for the I-5 corridor in 2045. Much of this information is based on findings in the Skagit 2045 Regional Transportation Plan.

Travel Model Forecasts

The SCOG travel demand model forecasts a 6.5 percent increase in vehicle traffic volume by 2045. Potential traffic increases may occur on I-5 in the north and south portions of the study area from 77,000 to 82,000 ADT and a potential traffic increase at the Skagit River Bridge from 81,000 to 86,000 ADT. Regionwide, the SCOG travel model forecasts 28 percent more vehicle miles traveled by 2045. Exhibit 10 shows how traffic congestion is expected to worsen by 2045 as shown in the SCOG travel demand model.

Forecast Issues

By 2045 the I-5 mainline will be operating at or near LOS E and F conditions at many locations, impacting throughput capacity during the weekday PM peak hour. This may create traffic congestion on local street approaches to I-5 interchanges. Increased congestion and delay on I-5 and the local street system could disrupt the efficient transport of freight, goods services in the region and state and could have economic ramifications.

It bears repeating that integrated mixed use land use patterns and increased urban densities can promote opportunities for more active transportation and public transit ridership that can help relieve/ reduce vehicle pressure on I-5, state highways and local streets and roads. These are opportunities for WSDOT to work closely with local jurisdictions as they make important decisions in their comprehensive land use and transportation plans for how to accommodate future population growth within their existing city limits and urban growth areas.

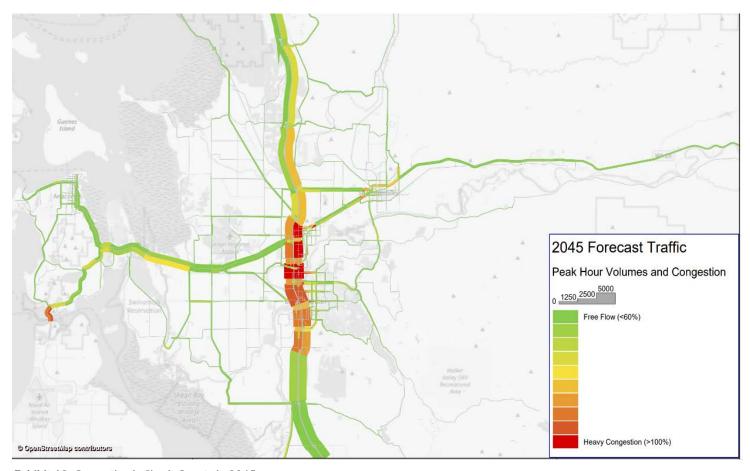


Exhibit 10 Congestion in Skagit County in 2045 (Source: SCOG 2045 Travel Demand Model)

Origin-Destination Patterns

Patterns related to the origin and destination of I-5 trips were obtained from Replica, a national model that incorporates location-based data sets (cellphone and fleet information), U.S. Census data and other data used in traveler information systems and applications.

Local versus Regional Trips

To understand the origin-destination patterns, the region was split into two districts, as shown in Exhibit 11. These district boundaries largely coincide with U.S. Census geographies. The "Internal District" represents "local" districts and are centered around Burlington, Sedro-Woolley and Mount Vernon. The "Regional District" represents "regional" districts north, south, east and west of the study area.

Within the Replica model, all I-5 northbound study area trips were selected to determine origin and destination patterns. This selection set included daily trips entering the study area from the south on the I-5 mainline as well as all northbound on-ramp volumes at the interchanges.

Based on this analysis the following patterns were observed for northbound daily trips:

- 20% of northbound I-5 trips started and stopped within "local" districts
- 43% of northbound I-5 trips had one end within "local" district and other in "regional"
- 37% of northbound I-5 trips had both ends within "regional" districts

The data indicates that about 20 percent of northbound trips are local use of the I-5 corridor for local daily circulation patterns. In addition, more than one third of the northbound trips are pass-through regional trips, including both I-5 and SR 20 regional trips.

Similar analysis was conducted for southbound daily trips:

14 percent of southbound I-5 trips started and stopped within local districts.

46 percent of southbound I-5 trips had one local trip end and one regional trip end.

39 percent of southbound I-5 trips had both ends within regional districts.

Smaller than northbound conditions, about 14 percent of southbound trips are local users using the I-5 corridor for local circulation patterns. Similar to northbound conditions, more than a third of southbound trips are pass-through regional traffic.

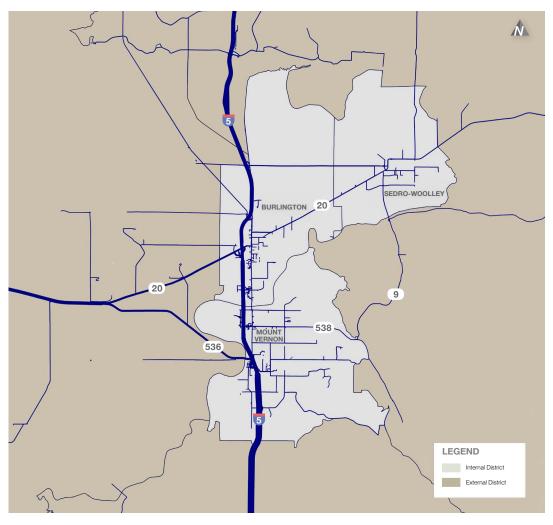


Exhibit 11 Districts Used in Origin-Destination Analysis

Almost half of southbound trips are associated with local users linked with regional locations. Commercial southbound trips have similar patterns, with local short trips at 9 percent and trips with only one end in the local area at 52 percent.

Combined results show northbound and southbound trips together, as follows.

- 17% of I-5 trips started and stopped within "local" districts
- 44% of I-5 trips had one trip end within a "local" district, other end in "regional" districts.
- 38 percent of I-5 trips had both ends within "regional" districts.

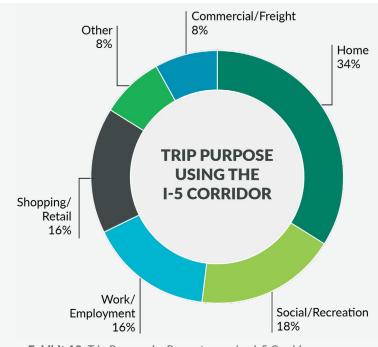


Exhibit 12 Trip Purpose by Percentage using I-5 Corridor

Interchange-to-Interchange Patterns

I-5 interchange-to-interchange origin-destination pattern was analyzed to determine the rate of vehicles entering and exiting the freeway at the next interchange. These interchange-to-interchange patterns provide insights on how local users use the I-5 mainline corridor for short urban trips. Of note are the College Way interchange (Exit 227) and George Hopper Road (Exit 229) interchange. These two interchanges are on the opposite sides of the Skagit River and reveal the limited opportunities for north-south movement of local traffic between Mount Vernon and Burlington.

Northbound I-5 Trips

- Almost 80 percent of on-ramp trips for Anderson Road, Kincaid Street, College Way, and George Hopper Road exited within the study area.
- The George Hopper Road interchange had the highest percentage of northbound trips (57 percent) that exited at the next interchange at SR 20.
- The College Way interchange had 53 percent exiting at interchanges to the north, which include George Hopper Road and SR 20.

These patterns reflect the major commercial connections of Mount Vernon and Burlington's two regional commercial areas and significance of the SR 20 corridor. The SR 20 corridor provides westbound access to Whidbey Island, Anacortes and the San Juan Islands. Eastbound trips on SR 20 provide access to many outlying communities in Skagit County and Eastern Washington. At SR 20 northbound on-ramp trips become more regional compared to the southern end of the corridor.

Southbound I-5 Trips

- 60 percent of on-ramp trips for the College Way, George Hopper Road, SR 20, SR 11 and Cook Road interchanges exited within the study area.
- There is a sizeable portion of George Hopper Road and College Way southbound trips linked to the Kincaid Street interchange.

Trip Purpose

The Replica model was used to identify the general trip purposes for travelers using the I-5 corridor in the study area. This includes any trip in vehicles that use any part of I-5 within the corridor. Exhibit 12 shows the trip purpose as a percentage of I-5 trips based on trip ends. Most trips were to places of residence (34 percent), followed by social/recreation (18 percent), work (16 percent), shopping (16 percent), freight (8 percent) and undefined other (8 percent). Working with local jurisdictions, there may be opportunities to divert some of the trips on I-5 to local street trips, either in the form of enhancing active transportation facilities, facilitating new local street connection or reconnecting the local street network.

Trip Lengths

The Replica Model was used to identify the trip lengths for travelers using the I-5 corridor in the study area. This includes any vehicle trip that uses any part of I-5 within the corridor. Exhibits 13 and 14 show trip lengths in miles and minutes.

Additional research is needed to understand the full trip making purposes in the study area and how the four state highways that intersect the I-5 corridor influence travel demand characteristics.

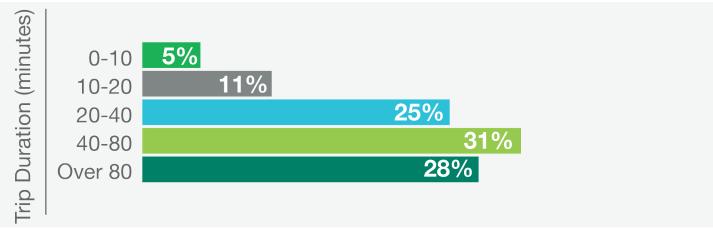


Exhibit 13 Distribution of Daily Trip Lengths (in Miles)

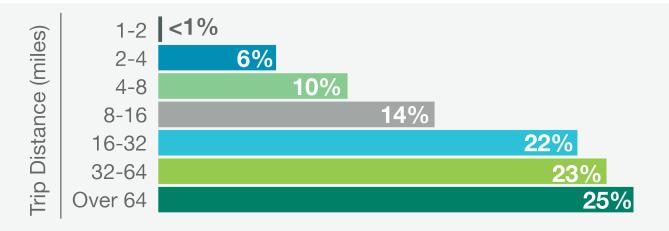


Exhibit 14 Distribution of Daily Trip Lengths (in Minutes)

ITS & Technology Strategies

The ITS & Technology Options Development Plan report (Appendix F) was completed and provided an inventory of current and planned ITS strategy applications on the corridor. The ITS/technology strategies should be included in the overall assessment process during Phase II to determine feasibility together with other potential alternatives. Table 3 outlines the draft candidate ITS/technology strategies

Additional technology strategies may include planned events or incident signal timing, special event transportation management, traveler information systems and electric vehicle infrastructure.

Table 3 Mainline Technology Options Summary

Technology	Potential Application to Corridor
Adaptive Ramp Metering	 Applicability to I-5 on-ramps during AM/PM peak and special events Requires multi-jurisdictional coordination
Adaptive Signal Systems	 Control arterial traffic flow in advance of and off I-5 exits Requires multi-jurisdictional coordination
Variable Message Signs (VMS)	 Traffic warnings to vehicles on I-5 to improve traffic flow and safety performance Useful to manage traffic flow during special events (e.g. Tulip Festival) Priority need from Traffic Management Center
Variable Speed Limits	 Limited utility given I-5 corridor is only two lanes in each direction Can be useful in managing emergencies.
Dynamic Lane Assignment	 Limited utility given I-5 corridor is only two lanes in each direction Could support Hard Shoulder Running operations
Hard Shoulder Running	 Could be used to alleviated severe congestion situations, such as special events Constrained by bridge crossings (with no shoulder space) on the Project I-5 corridor Supports emergency resilience
Parallel route detouring communication to travelers	 Could be supported by WSDOT Shoreline NW Region TMC Need to consider the safety performance considerations and efficiency needs on the parallel/detour route Supports emergency resilience
Queue Warnings	 Improves traffic flow and safety performance for all vehicles on mainline Reduces hard braking incidents, especially for trucks

Study Summary

The primary analysis conducted on the corridor included a traffic operations analysis and a safety analysis to help identify baseline needs. These two analyses provided WSDOT with information on the operating conditions of the highway corridor and associated interchanges. When analyzing the operating conditions of a highway, safety is one of the factors used by WSDOT to identify when traffic improvements may be needed. Several other factors are also considered by traffic engineers to help support their decisions such as land use, the frequency and density of traffic or level of service, delay, road/street geometric data, intersection controls and roadway geometrics.

Existing local land use characteristics and future projected land use patterns and traffic volumes are also significant factors that are considered and can contribute to the long-term operational efficiency of the regional transportation network (See Forecast Issues, page 23).

The I-5 corridor is about 9 miles long and extends from Old Highway 99 (exit 224) on the south end to Cook Road (exit 232) on the north end. I-5 is a critical transportation link connecting Skagit County to Whatcom, Snohomish, Island and San Juan counties. Additionally, I-5 is the primary north-south crossing of the Skagit River. While I-5 provides a critical north-south link, it is also a limited access facility that bisects the cities of Burlington and Mount Vernon and creates mobility barriers for east-west travel for all modes of transportation, including walking, bicycling, public transit and vehicles, including freight and farm equipment.

Average daily traffic (ADT) on I-5 is about 77,000 vehicles in the northern portion of the study area, about 81,000 ADT at the Skagit River Bridge and about 77,000 vehicles in the southern portion of the study area. As is typical on freeways in urban areas, weekday peak hour traffic congestion occurs primarily from 3-7 p.m. As documented in the 2021 baseline study, I-5 nears throughput capacity in the southbound lanes from SR 20 to George Hopper Road and from College Way to Kincaid Street. There are also some congestion issues with merging vehicle volumes from on-ramps to the mainline of I-5.

In addition to I-5, SR 11, SR 20, SR 536 and SR 538 are major east-west connections that bisect Burlington, Mount Vernon and Skagit County. These state highways are also critical links in the regional transportation network. The presence of these major state highway transportation routes through the urban area has influenced local land use development, the types of commercial and retail services that are available along them and the types of trip-making that occurs. In commercial areas, these major routes are typically characterized by retail, restaurants, services and offices. In residential areas, these major routes are typically characterized by lower income single and multi-family housing populated by higher percentages of non-white people with limited English language proficiency.

Strategies and Recommendations for Study in Phase II

1. Was a Problem Identified in the I-5 Skagit Study?

The Phase I Needs Assessment revealed that some existing and future sections of the I-5 corridor are meeting performance expectations, but many sections of the corridor are not meeting performance objectives, as listed below:

A. Traffic operations: The traffic operations analysis revealed that some segments of the I-5 corridor exceed the throughput design capacity (LOS D) and future forecasts indicate that LOS will continue to deteriorate and expand to other corridor segments, as listed below:

- Northbound LOS F conditions are forecast to increase from two 15-minute periods to five by 2045 between Anderson Road (Exit 225) and George Hopper Road (Exit 229).
- Northbound LOS E conditions also are forecast to expand to other time periods and other freeway segments, primarily south of the Skagit River Bridge.
- Southbound LOS F conditions are forecast to increase from zero to four 15-minute periods by 2045 between George Hopper Road (Exit 229) and College Way (Exit 227).
- Southbound LOS E conditions also expand to other time periods and other freeway segments, primarily south of the Skagit River Bridge, but to a lesser extent than northbound operations.
- Similar to existing conditions for northbound and southbound, the heaviest congestion is forecast to be at the Skagit River Bridge.

- B. Merge-Lane Volumes: The analysis of the onramp merge lane operations onto the freeway show results exceeding the 1,700 vehicles-per-hour threshold in many locations, indicating that existing traffic flow at some on-ramps may create conflicts with I-5 mainline operations. Additionally, future forecast conditions indicate that further on-ramp locations will be impacted and exceed the threshold performance objective in the future, as listed below:
- Under current conditions northbound on-ramps at Kincaid Street, College Way and George Hopper Road interchanges exceed the merge-lane threshold volume performance objective of 1,700 vehicles per hour. By 2045 Anderson Road and SR 20 interchanges would exceed the threshold.
- Under current conditions, the southbound onramps at George Hopper Road and College Way interchanges exceed the merge-lane threshold volume performance objective of 1,700 vehicles per hour. By 2045 most of the I-5 interchange on-ramps would exceed the threshold, including from SR 20 (Exit 230), Kincaid Street (Exit 226). Anderson Rd (Exit 225) and Old Highway 99 (Exit 224).
- C. Safety Assessment: The 2021 analysis revealed that most of the corridor is currently experiencing fewer crashes, on average, than a facility with similar characteristics. However, some locations are experiencing more crashes than facilities with similar characteristic, including:
- Northbound I-5 between Kincaid Street and George Hopper Road.
- Southbound I-5 between SR 20 and Kincaid Street.
- Both directions on a one-mile section between College Way and George Hopper Road.
- Both directions in the vicinity of the SR 20 interchange.

Strategies and Recommendations for Study in Phase 2

The future safety assessment primarily will be used as a baseline for comparing alternatives in the Phase II effort of the study. The predictive safety analysis will be used to compare if potential investments have fewer crashes than the 2021 baseline condition. As forecasted volumes are higher in 2045, the overall crash frequencies increased, as well, compared to 2021 conditions. Predicted crash frequencies are generally highest south of the College Way interchange. Because forecast volumes are higher in 2045, the overall crash frequencies increased, as well, compared to 2021 conditions.

D. Local vs. Regional Trips: The origin and destination analysis revealed that many vehicle trips on the I-5 corridor entered or exited from interchanges in the study area. Additionally, most trips were more than 16 miles in length, suggesting that state highways that intersect with I-5 in the study area play a significant role in regional travel. The data also showed a significant amount of north-south local short trips were occurring between College Way and George Hopper Road over the Skagit River, which contributes to traffic congestion, delay, and decreased level of service around the Skagit River Bridge. Local trips begin and end within the study area, local/regional trips have one trip end beginning or ending in the study area, and regional trips have both trip ends beginning and ending outside of the study area. Combined results show northbound and southbound trips together, as follows:

- 22 percent of I-5 trips started and stopped within local districts.
- 53 percent of I-5 trips had one trip end in local districts with the other end in a regional district.
- 25 percent of I-5 trips had both ends within regional districts.

Additional research is needed to better understand the influence of the four state highways that intersect with the I-5 corridor in the study area.

E. Underserved populations: The Phase I Needs Assessment and U.S. Census data revealed that compared to Skagit County and Washington state, Mount Vernon and Burlington have higher percentages of:

- Hispanic or Latino residents.
- Spanish language spoken at home.
- Non-English languages spoken at home.
- Residents living in poverty.
- Residents living with disabilities.

In addition, the Phase I Needs Assessment also revealed that:

- Mount Vernon, Burlington and Skagit County have high percentages of residents living without health care coverage.
- Skagit County has a high percentage of senior residents older than 65.
- Burlington has a high percentage of resident military veterans.
- Mount Vernon has a high percentage of school-age residents younger than 18.

Many of these groups have special needs and mobility challenges related to where they live and where they need to go, and many are affected by the physical presence and mobility barrier of I-5 and other state highways in the Skagit region.

- **F. Community engagement:** In May and June 2023, the project team reached out to a broad range of stakeholders in the study area using a variety of methods for communication, interaction and collecting public input (See Appendices C and D) and found:
- In general, traffic congestion, poor infrastructure, safety and lack of public transportation options were identified as the biggest challenges to people with mobility challenges, special needs or limited English proficiency.

Strategies and Recommendations for Study in Phase 2

- Traffic congestion: Many respondents highlighted traffic congestion as a significant challenge. They mentioned long queues, delays and bottlenecks at interchanges, resulting in frustration and delays.
- Poor infrastructure: Many respondents expressed concerns about the inadequate infrastructure at interchanges. They cited issues, such as insufficient lanes, outdated designs and lack of proper signage, leading to confusion, collisions and inefficient traffic flow.
- Safety: Safety emerged as another prominent concern. Respondents pointed out the absence of pedestrian crossings, lighting conditions, and merging lanes. These concerns may contribute to crashes and highlights concerns about the experience of users at the interchanges.
- Lack of public transportation options: A recurring theme was the absence or limited availability of public transportation options at I-5 interchanges. Respondents mentioned that the inconvenience of not having access to buses, trains or other forms of public transportation forces more people to rely on private vehicles, exacerbating traffic congestion.

2. What Additional Steps Should be Taken to Address Problems and Needs on the **Skagit I-5 Corridor?**

The analysis revealed that many locations on the Skagit I-5 corridor were not meeting performance expectations for safety and mobility.

The regional travel demand model forecasts for population growth include associated increases in vehicle traffic from regional traffic throughput on I-5 and future development in the study area and other locations in Skagit County. All these factors may impact transportation operations and safety performance on several I-5 corridor segments.

Population, socio-economic and demographic conditions are changing in the Skagit Valley and, according to the SCOG Regional Transportation Plan, the Skagit region is expected to grow by 46,000 residents to a total county population of 177,000 by 2045. Countywide planning policies agreed

to by all jurisdictions within Skagit County direct that 80 percent (36,800) of these new residents be accommodated in cities, towns and UGAs.

To address these concerns, it is recommended that WSDOT work closely with SCOG, Skagit County and the cities, towns, tribes, ports and others within the region to move forward with Phase II to identify and analyze strategies and solution alternatives to address identified problems and needs identified in the study area associated with I-5.

3. What Other Recommended Measures **Should Be Considered**

Coordinate with local jurisdictions and agencies in the study area to plan for better integration of land use, housing and transportation facilities with the equity needs during the update of local comprehensive land use and transportation plans. This coordination can assist WSDOT and SCOG's efforts to manage, operate and improve the I-5 corridor and other regional transportation facility needs by working together to incorporate best practices for land use, housing, transportation and equity to better meet regional transportation performance objectives. More specifically:

- Work with local schools, transit providers, advocacy organizations and neighborhoods to gain greater understanding of population-specific and locationspecific transportation needs.
- Work with service providers to create transportation partnerships to address the needs of those with transportation mobility challenges.
- Work with Skagit County, Mount Vernon and Burlington to promote compact mixed-use land use patterns with complete sidewalks, bikeways and transit-supportive features, consistent with GMA, to produce less vehicle trips reliant on I-5 and other state highways for local travel.
- Work with local governments to incentivize redevelopment of low-density, under-utilized parcels along transportation corridors, such as College Way, Riverside Drive, Burlington Boulevard, SR 20, etc.

Strategies and Recommendations for Study in Phase 2

- Work with Skagit Transit to explore potential for flyways at I-5 interchange ramps and higherfrequency transit service area on major corridors.
- Work with local governments to explore opportunities for local complete street connections to address unconnected or incomplete street connections across I-5, state highways and within the study area to improve circulation in urban areas and reduce the reliance on I-5 for local trips.
- Work with local governments to identify opportunities and funding for pedestrian and bicycle crossings of I-5 and state highways, consistent with the WSDOT Active Transportation Plan and RCW 47.24.060 to incorporate Complete Streets features.

ENGLISH

Title VI Notice to Public

It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equity and Civil Rights (OECR). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OECR's Title VI Coordinator at (360) 705-7090.

Americans with Disabilities Act (ADA) Information

This material can be made available in an alternate format by emailing the Office of Equity and Civil Rights at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA(4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

ESPAÑOL

Notificación de Titulo VI al Público

La política del Departamento de Transporte del Estado de Washington (Washington State Department of Transportation, WSDOT) es garantizar que ninguna persona, por motivos de raza, color u origen nacional, según lo dispuesto en el Título VI de la Ley de Derechos Civiles de 1964, sea excluida de la participación, se le nieguen los beneficios o se le discrimine de otro modo en cualquiera de sus programas y actividades. Cualquier persona que considere que se ha violado su protección del Título VI puede presentar una queja ante la Oficina de Equidad y Derechos Civiles (Office of Equity and Civil Rights, OECR) del WSDOT. Para obtener más información sobre los procedimientos de queja del Título VI o información sobre nuestras obligaciones contra la discriminación, comuníquese con el coordinador del Título VI de la OECRv.

Información de la Ley sobre Estadounidenses con Discapacidades (ADA, por sus siglas en inglés)

Este material puede estar disponible en un formato alternativo al enviar un correo electrónico a la Oficina de Equidad y Derechos Civiles a <u>wsdotada@wsdot.wa.gov</u> o llamando a la línea sin cargo 855-362-4ADA(4232). Personas sordas o con discapacidad auditiva pueden solicitar la misma información llamando al Washington State Relay al 711.

한국어 - KOREAN

제6조 관련 공지사항

워싱턴 주 교통부(WSDOT)는 1964년 민권법 타이틀 VI 규정에 따라, 누구도 인종, 피부색 또는 출신 국가를 근거로 본 부서의 모든 프로그램 및 활동에 대한 참여가 배제되거나 혜택이 거부되거나, 또는 달리 차별받지 않도록 하는 것을 정책으로 하고 있습니다. 타이틀 VI에 따른 그/그녀에 대한 보호 조항이 위반되었다고 생각된다면 누구든지 WSDOT의 평등 및 민권 사무국(OECR)에 민원을 제기할 수 있습니다. 타이틀 VI에 따른 민원 처리 절차에 관한 보다 자세한 정보 및/또는 본 부서의 차별금지 의무에 관한 정보를 원하신다면, (360) 705-7090으로 OECR의 타이틀 VI 담당자에게 연락해주십시오.

미국 장애인법(ADA) 정보

본 자료는 또한 평등 및 민권 사무국에 이메일 <u>wsdotada@wsdot.wa.gov</u> 을 보내시거나 무료 전화 855-362-4ADA(4232)로 연락하셔서 대체 형식으로 받아보실 수 있습니다. 청각 장애인은 워싱턴주 중계 711로 전화하여 요청하실 수 있습니다.

русский - RUSSIAN

Раздел VI Общественное заявление

Политика Департамента транспорта штата Вашингтон (WSDOT) заключается в том, чтобы исключить любые случаи дискриминации по признаку расы, цвета кожи или национального происхождения, как это предусмотрено Разделом VI Закона о гражданских правах 1964 года, а также случаи недопущения участия, лишения льгот или другие формы дискриминации в рамках любой из своих программ и мероприятий. Любое лицо, которое считает, что его средства защиты в рамках раздела VI были нарушены, может подать жалобу в Ведомство по вопросам равенства и гражданских прав WSDOT (ОЕСR). Для дополнительной информации о процедуре подачи жалобы на несоблюдение требований раздела VI, а также получения информации о наших обязательствах по борьбе с дискриминацией, пожалуйста, свяжитесь с координатором ОЕСR по разделу VI по телефону (360) 705-7090.

Закон США о защите прав граждан с ограниченными возможностями (ADA)

Эту информацию можно получить в альтернативном формате, отправив электронное письмо в Ведомство по вопросам равенства и гражданских прав по адресу wsdotada@wsdot.wa.gov или позвонив по бесплатному телефону 855-362-4ADA(4232). Глухие и слабослышащие лица могут сделать запрос, позвонив в специальную диспетчерскую службу штата Вашингтон по номеру 711.(4232). Глухие и слабослышащие лица могут сделать запрос, позвонив в специальную диспетчерскую службу штата Вашингтон по номеру 711.

tiếng Việt - VIETNAMESE

Thông báo Khoản VI dành cho công chúng

Chính sách của Sở Giao Thông Vận Tải Tiểu Bang Washington (WSDOT) là bảo đảm không để cho ai bị loại khỏi sự tham gia, bị từ khước quyền lợi, hoặc bị kỳ thị trong bất cứ chương trình hay hoạt động nào vì lý do chủng tộc, màu da, hoặc nguồn gốc quốc gia, theo như quy định trong Mục VI của Đạo Luật Dân Quyền năm 1964. Bất cứ ai tin rằng quyền bảo vệ trong Mục VI của họ bị vi phạm, đều có thể nộp đơn khiếu nại cho Văn Phòng Bảo Vệ Dân Quyền và Bình Đẳng (OECR) của WSDOT. Muốn biết thêm chi tiết liên quan đến thủ tục khiếu nại Mục VI và/hoặc chi tiết liên quan đến trách nhiệm không kỳ thị của chúng tôi, xin liên lạc với Phối Trí Viên Mục VI của OECR số (360) 705-7090.

Thông tin về Đạo luật Người Mỹ tàn tật (Americans with Disabilities Act, ADA)

Tài liệu này có thể thực hiện bằng một hình thức khác bằng cách email cho Văn Phòng Bảo Vệ Dân Quyền và Bình Đằng wsdotada@ wsdot.wa.gov hoặc gọi điện thoại miễn phí số, 855-362-4ADA(4232). Người điếc hoặc khiếm thính có thể yêu cầu bằng cách gọi cho Dich vu Tiếp âm Tiểu bang Washington theo số 711.

ARABIC - العَرَبيّة

العنوان 6 إشعار للجمهور

تتمثل سياسة وزارة النقل في ولاية واشنطن (WSDOT) في ضمان عدم استبعاد أي شخص، على أساس العرق أو اللون أو الأصل القومي من المشاركة في أي من برامجها وأنشطتها أو الحرمان من الفوائد المتاحة بموجبها أو التعرض للتمييز فيها بخلاف ذلك، كما هو منصوص عليه في الباب السادس من قانون الحقوق المدنية لعام 1964. ويمكن لأي شخص يعتقد أنه تم انتهاك حقوقه التي يكفلها الباب السادس تقديم شكوى إلى مكتب المساواة والحقوق المدنية (OECR) التابع لوزارة النقل في ولاية واشنطن. للحصول على معلومات إضافية بشأن إجراءات الشكاوى و/أو بشأن التزاماتنا بعدم التمييز بموجب الباب السادس، يرجى الاتصال بمنسق الباب السادس في مكتب المساواة والحقوق المدنية على الرقم 7090-705 (360).

معلومات قانون الأمريكيين ذوى الإعاقة (ADA)

يمكن توفير هذه المواد في تنسيق بديل عن طريق إرسال رسالة بريد إلكتروني إلى مكتب المساواة والحقوق المدنية على wsdotada@wsdot.wa.gov أو عن طريق الاتصال بالرقم المجاني: Washington State Relay على الرق 711. الصم أو ضعاف السمع تقديم طلب عن طريق الاتصال بخدمة Washington State Relay على الرق 711.

中文 - CHINESE

《权利法案》 Title VI公告

<華盛頓州交通部(WSDOT)政策規定,按照《1964年民權法案》第六篇規定,確保無人因種族、膚色或國籍而被排除在WSDOT任何計畫和活動之外,被剝奪相關權益或以其他方式遭到歧視。如任何人認為其第六篇保護權益遭到侵犯,則可向WSDOT的公平和民權辦公室(OECR)提交投訴。如需關於第六篇投訴程式的更多資訊和/或關於我們非歧視義務的資訊,請聯絡OECR的第六篇協調員,電話(360) 705-7090。

《美国残疾人法案》(ADA)信息

可向公平和民權辦公室發送電子郵件<u>wsdotada@wsdot.wa.gov</u>或撥打免費電話 855-362-4ADA(4232), 以其他格式獲取此資料。听力丧 失或听觉障碍人士可拨打711联系Washington州转接站。

Af-soomaaliga - SOMALI

Ciwaanka VI Ogeysiiska Dadweynaha

Waa siyaasada Waaxda Gaadiidka Gobolka Washington (WSDOT) in la xaqiijiyo in aan qofna, ayadoo la cuskanaayo sababo la xariira isir, midab, ama wadanku kasoo jeedo, sida ku qoran Title VI (Qodobka VI) ee Sharciga Xaquuqda Madaniga ah ah oo soo baxay 1964, laga saarin ka qaybgalka, loo diidin faa'iidooyinka, ama si kale loogu takoorin barnaamijyadeeda iyo shaqooyinkeeda. Qof kasta oo aaminsan in difaaciisa Title VI la jebiyay, ayaa cabasho u gudbin kara Xafiiska Sinaanta iyo Xaquuqda Madaniga ah (OECR) ee WSDOT. Si aad u hesho xog dheeraad ah oo ku saabsan hanaannada cabashada Title VI iyo/ama xogta la xariirta waajibaadkeena ka caagan takoorka, fadlan la xariir Iskuduwaha Title VI ee OECR oo aad ka wacayso (360) 705-7090.

Macluumaadka Xeerka Naafada Marvkanka (ADA)

Agabkaan ayaad ku heli kartaa qaab kale adoo iimeel u diraaya Xafiiska Sinaanta iyo Xaquuqda Madaniga ah oo aad ka helayso wsdotada@wsdot.wa.gov ama adoo wacaaya laynka bilaashka ah, 855-362-4ADA(4232). Dadka naafada maqalka ama maqalku ku adag yahay waxay ku codsan karaan wicitaanka Adeega Gudbinta Gobolka Washington 711.

If you have difficulty understanding English, you may, free of charge, request language assistance services by calling (360) 705-7090 or email us at: wsdotada@wsdot.wa.gov

ESPAÑOL - SPANISH

Servicios de traducción

Aviso a personas con dominio limitado del idioma inglés: Si usted tiene alguna dificultad en entender el idioma inglés, puede, sin costo alguno, solicitar asistencia lingüística con respecto a esta información llamando al (360) 705-7090, o envíe un mensaje de correo electrónico a: wsdotada@wsdot.wa.gov

한국어 - KOREAN

번역 서비스

영어로 소통하는 것이 불편하시다면 (360) 705-7090, 으로 전화하시거나 다음 이메일로 연락하셔서 무료 언어 지원 서비스를 요청하실 수 있습니다: wsdotada@wsdot.wa.gov

русский - RUSSIAN

Услуги перевода

Если вам трудно понимать английский язык, вы можете запросить бесплатные языковые услуги, позвонив по телефону (360) 705-7090, или написав нам на электронную почту: wsdotada@wsdot.wa.gov

tiếng Việt - VIETNAMESE

các dịch vụ dịch thuật

Nếu quý vị không hiểu tiếng Anh, quý vị có thể yêu cầu dịch vụ trợ giúp ngôn ngữ, miễn phí, bằng cách gọi số (360) 705-7090, hoặc email cho chúng tôi tại: wsdotada@wsdot.wa.gov

الْعَرَىئَةُ - ARABIC

خ دمات الترجمة

إذا كنت تجد صعوبة في فهم اللغة الإنجليزية، فيمكنك مجا نًا طلب خدمات المساعدة اللغوية عن طريق الاتصال بالرقم 7090-705 (360) أو مراسلتنا عبر البريد الإلكتروني : wsdotada@wsdot.wa.gov

中文 - CHINESE

翻译服务

如果您难以理解英文,则请致电: (360) 705-7090,或给我们发送电子邮件:wsdotada@wsdot.wa.gov,请求获取免费语言援助服务。

Af-soomaaliga - SOMALI

Adeegyada Turjumaada

Haddii ay kugu adag tahay inaad fahamtid Ingiriisida, waxaad, bilaash, ku codsan kartaa adeegyada caawimada luuqada adoo wacaaya (360) 705-7090 ama iimayl noogu soo dir: wsdotada@wsdot.wa.gov