

I-5 Operations and Transportation Demand Management Analysis

Executive Summary

Interstate 5 (I-5) in Whatcom County is part of a 48,000-lane mile system of interconnected controlled or limited access highways that form part of the National Highway System. The original intended purpose authorized by the Federal Aid Highway Act of 1956 was “to provide for safe, efficient, speedy transcontinental travel and serve a strategic National Defense purpose”. The Federal Highway Administration, along with the Washington State Department of Transportation (WSDOT), is responsible for this system and recognizes that the Interstate System is not only a part of the National Highway System, but is also a part of regional and local transportation systems.¹

I-5 looking south from the Railroad Trail Bridge.



In 2017, WSDOT began a statewide planning process with our partners (Corridor Sketch Initiative) to evaluate the entire state-owned system and determine where things are working well and where changes may be needed. Within Whatcom County, the evaluation revealed that mobility and fish passage barriers posed the greatest challenges on I-5 from Fairhaven (SR 11) to Grandview (SR 548).

I-5 looking north between Lakeway and Iowa Street.



This I-5 Operations and Transportation Demand Management Analysis found that I-5 does have significant congestion during peak travel periods, but does not suffer from a capacity problem. I-5 does, however, suffer from an access problem. Over 50% of the traffic in the Analysis Area between Samish Way (exit 252) and Bakerview Road (exit 258) travel

less than three interchanges

in distance on I-5. This means that over half of the travel on I-5 is less than 3 miles in length, and all of that entering and exiting traffic creates significant disruption and friction on the system. Where feasible, metering the on-ramp traffic would create gaps making it easier to get onto and off of I-5, improving safety and regional traffic flow.²

Addressing major barriers such as I-5 through improved connectivity is central to the goals and objectives of this plan.

Bellingham Bicycle Master Plan – Chapter 3: Bicycle Network Recommendations

¹ U.S. Department of Transportation, Federal Highway Administration, Office of Infrastructure, [Interstate System Access Informational Guide](#), August 2010.

² Regional Traffic flows refer to trips that either travel through, or have an origin or destination within the Analysis area – data analyzed using the INRIX data with StreetLight software.

Congestion caused by such a large percentage of short trips by itself poses a significant challenge to all drivers, but the correlation to crashes is the most serious problem that the Analysis discovered. Shifting this local traffic from I-5 onto local city streets, which also exhibit significant congestion, would be problematic without meaningful travel demand management actions and improvements to transit and the active transportation system (walking and rolling).

Lakeway Drive / I-5 underpass looking toward the east.



To address the identified mobility and safety needs on I-5, the significant barrier to walking and rolling that I-5 imposes on the local network, and to facilitate the City's attainment of mode shift and emission reduction goals; we are recommending three distinct yet interrelated strategies and alternatives.

- **Focus Area #1: Interchange Operation and Safety Enhancement Improvements** (low cost traffic management improvements);
- **Focus Area #2: Ramp Metering and Traveler Information Signs**, (primarily during peak periods of congestion);
- **Focus Area #3: Lincoln-Lakeway Multimodal Transportation Study** (currently underway led by the City of Bellingham).

These actions meet the Washington State Legislature's policy direction to WSDOT to plan for state-owned facilities which specifically require WSDOT to first assess strategies to enhance the operational efficiency of the existing system before recommending system expansion.³

Ramp meter on I-5 in Seattle.



Focus Areas #2 and #3 will involve significant community engagement as these strategies and solutions are considered for inclusion into regional and local plans, and ultimately for funding.

WTA service in Bellingham.



The overall results of this I-5 Operations and Transportation Demand Management Analysis found that transportation systems management and operations (TSMO), travel demand management (TDM), maintenance, preservation and environmental stewardship are all necessary to meet the policy direction found in the City of Bellingham's mode shift goals⁴ and the Climate Protection Action plan⁵, Washington State goals for emissions reduction⁶, and WSDOT's Sustainability Executive Order⁷.

³ Washington State Revised Code of Washington, [Chapter 47.06.050 \(1\) \(c\) State-owned facilities component, capacity and operational improvement element](#), [2007 c 516 § 10; 2002 c 5 § 413; 1993 c 446 § 5.].

⁴ [City of Bellingham's Transportation Mode Shift Goals](#), 2020 Transportation Report on Annual Mobility.

⁵ [City of Bellingham Climate Protection Action Plan](#), 2018 Update.

⁶ Governor Jay Inslee - Executive Order 14-04 - [Washington carbon pollution reduction and clean energy action](#) - Clean Transportation.

⁷ WSDOT Secretary's Executive Order Number: E 1113.00, [Sustainability](#), April 29, 2020.

What are our Next Steps?

- Brief decision makers and stakeholders on the final results of the I-5 Traffic Operations and Transportation Demand Management Analysis.
- Initiate Stakeholder Outreach to gather additional comments on proposed recommendations.
- Forward recommendations to partner agencies for inclusion in their plans.
- Recommend incorporation of strategies and alternatives within state, regional and local plans and other work in alignment with the Washington State Transportation Plan, Public Transportation Plan, Active Transportation Plan and Highway System Plan.
- Evaluate alternatives, and determine feasibility/ costs to implement recommended Focus Areas through the Practical Solutions Framework.

How is the Report Organized?

This Report presents key assumptions, performance measures, engagement practices, and alternatives developed in coordination with the Washington State Department of Transportation (WSDOT), Whatcom Council of Governments (WCOG), Whatcom County, City of Bellingham, City of Ferndale, Port of Bellingham, Whatcom Transportation Authority (WTA), and Lummi Nation to develop the integrated I-5 Operations and Transportation Demand Management Analysis.

The organization of the report is as follows:

Chapter 1: Introduction provides an overview of the I-5 Traffic Operations and Transportation Demand Management Analysis.

Chapter 2: Analysis Area Characteristics presents a discussion of the demographics, land use, and coordination with existing state, regional, local agencies plans considered in the Analysis Area.

Chapter 3: Multimodal Transportation Characteristics provides an overview of the Regional Transportation System, transportation modes and associated I-5 corridor characteristics.

Chapter 4: Traffic Operations and System Performance provides an overview of the traffic operations, system performance and safety features in the Analysis Area.

Chapter 5: Strategies and Alternatives Evaluation presents information on the selection of transportation strategies, solutions and alternatives to address the problem and needs in the Analysis Area.

Chapter 6: Recommended Alternatives and Actions documents Analysis findings, summarizes recommended actions and identifies next steps to prepare pre-design and scoping documents necessary to program projects for implementation.