

1 Introduction to the Project

Chapter 1 provides an introduction to the project location, purpose and need, and alternatives under consideration. It also introduces the environmental review process of the project including agency leadership of the project, public involvement, the purpose of the environmental impact statement and Section 4(f) evaluation, and next steps in the project.

Where is the project located?

The SR 502 Corridor Widening Project is located west of the City of Battle Ground in north Clark County, Washington. The project proposes improvement to SR 502 (NE 219th Street) between NE 15th Avenue and NE 102nd Avenue. The western terminus of the study area is approximately one mile east of Interstate 5 (I-5) and the eastern terminus is NE 102nd Avenue. The five-mile project corridor extends from the I-5/SR 502 interchange to near the western boundary of Battle Ground (Exhibit 1-1). The project termini serve as logical end points

DEFINITION

WHAT IS A STUDY AREA?

A study area is the area in which effects from the project may occur.

Although this term is used generally in the environmental impact statement, the study area varies by resource and is defined for each resource in the discipline reports included in the appendices.

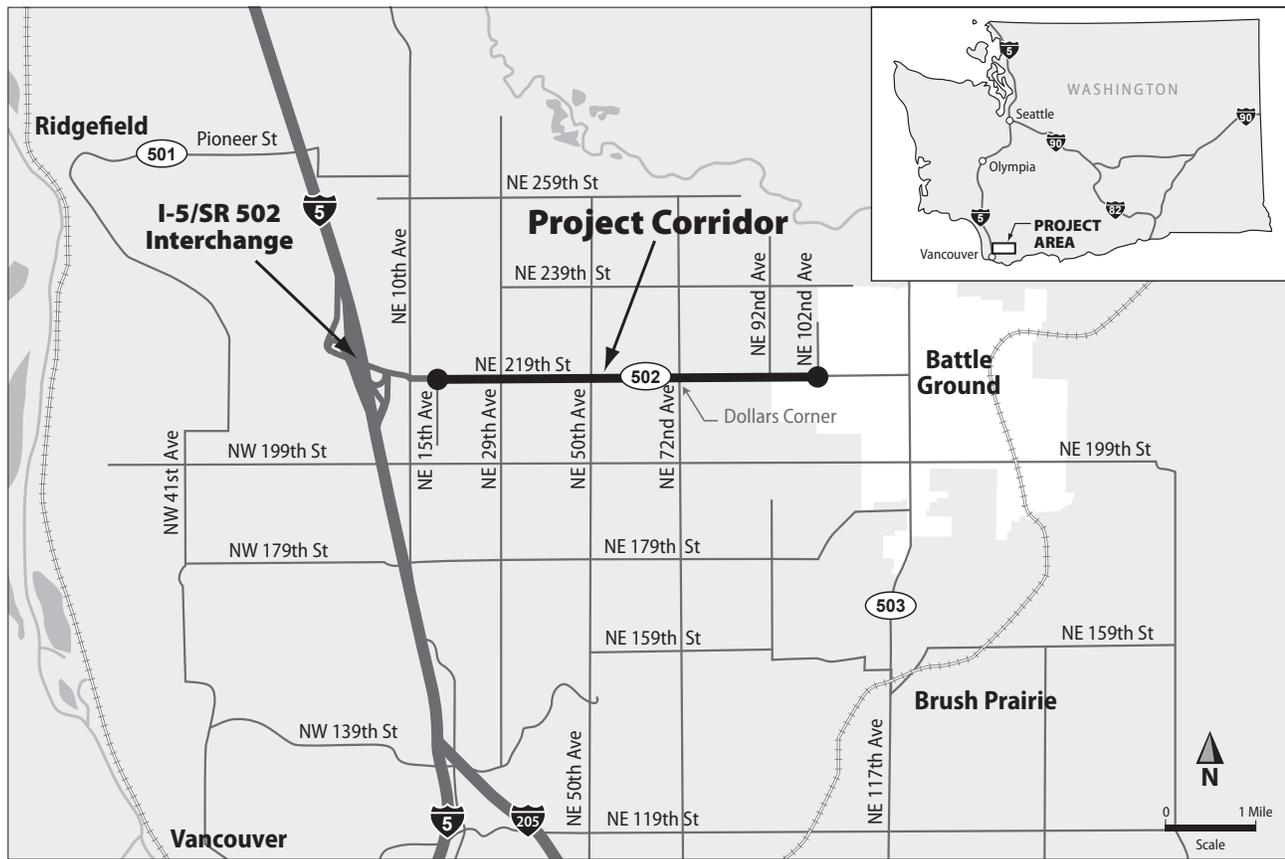


Exhibit 1-1: Project corridor vicinity map

for the project because the western terminus starts where improvements associated with the recently constructed I-5/SR 502 interchange end, and the eastern terminus extends to NE 102nd Avenue, where city street improvements begin – including four travel lanes, a center turn lane, sidewalks, bicycle lanes, curb, and gutter.

How have changes in north Clark County influenced the demand for improved transportation systems?

Throughout the 1990s, Clark County was the fastest growing county in Washington State in terms of jobs and population growth (Exhibit 1-2). Between 1990 and 2007, the County’s population grew 74 percent from approximately 238,000 to 415,000. While population growth has slowed recently, the county continues to experience an influx of jobs and people.

The southern portions of Clark County around Vancouver are largely urbanized. North Clark County is less developed, and largely retains a rural or semi-rural character with open space, agricultural lands, and scattered development. Within the study area, a small cluster of commercial establishments are located at Dollars Corner at the SR 502/ NE 72nd Avenue intersection. The population of the study area grew 53 percent from 1990 to 2000 from 4,400 to 6,700 residents; however, since 2000 growth has slowed with the population only growing by approximately 400 people (to 7,100) from 2000 to 2007 (Exhibit 1-3).

The City of Battle Ground is a small, but fast growing community located on the SR 502 corridor just east of the study area. SR 502 currently serves as a major connection to Battle Ground. With the recent completion of the I-5/SR 502 interchange, SR 502 will serve as one of two primary access routes (along with SR 503) from Battle Ground to the regional highway system (I-5 and I-205) and the Portland, Oregon – Vancouver, Washington metropolitan area.

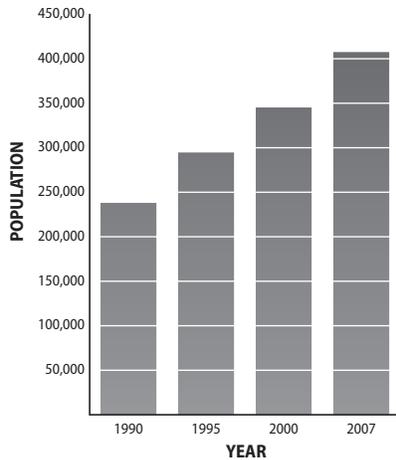


Exhibit 1-2: Population growth in Clark County, 1990–2007

Source: US Census Bureau, 1990, 1995, 2000; Washington Office of Financial Management, 2007.

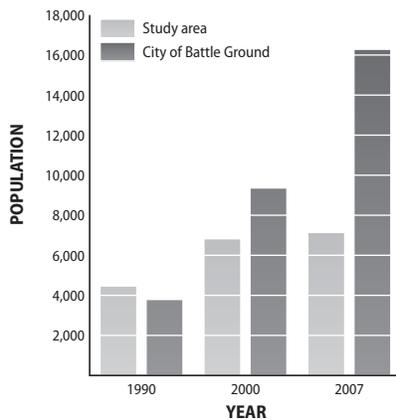


Exhibit 1-3: Population growth in the study area and the City of Battle Ground, 1990–2007

Source: US Census Bureau, 1990, 2000; Washington Office of Financial Management, 2007.



Intersection of SR 502/NE 50th Ave, looking east



Dollars Corner at the intersection of SR 502 and NE 72nd Ave, looking east

Battle Ground has more than tripled in size from fewer than 4,000 residents in 1990 to over 15,000 residents today (Exhibit 1-3). Strong residential growth in Battle Ground is expected to continue and is planned for in Clark County’s 2004–2024 *Comprehensive Plan*, which was adopted in 2007. With continuing growth, commuter traffic from Battle Ground to jobs in Vancouver and Portland will increase as well. This increase in commuter traffic will place additional demand on SR 502 to connect to I-5. Additionally, increasing commercial development in Battle Ground is attracting some commuters from other areas, creating a smaller-scale reverse commute.

Why is the SR 502 Corridor Widening Project needed?

Traffic congestion and collision rates on SR 502 are increasing as more and more drivers use this highway. Population growth in Battle Ground and the surrounding areas is expected to substantially increase traffic on the corridor in the future. **Therefore, the need for the project is to reduce collision rates and decrease congestion.**

Mobility on SR 502

SR 502 is the primary route from I-5 into Battle Ground and surrounding areas in north Clark County. Additional capacity is needed to improve mobility on SR 502.

By the year 2033, projected traffic volumes on SR 502 would nearly triple compared to 2005 traffic volumes (Exhibit 1-4). During the 2033 peak traffic periods (morning and evening) both eastbound and westbound traffic volumes would exceed the single lane capacity. In addition, all intersections between I-5 and SR 503 would fall from “somewhat congested” (Level of Service C/D) to “highly congested” (Level of Service E/F).

DEFINITION

WHAT IS CAPACITY?
The maximum amount of traffic that can be accommodated on a transportation facility is referred to as capacity. For a roadway, capacity is primarily related to the number of travel lanes, type of traffic control (stop lights, stop signs), type of access allowed (number of driveways and their configuration), amount of cross-traffic at intersections, and design speeds. It is measured by the number of vehicles per unit of time, typically vehicles per hour.

DEFINITION

WHAT ARE MORNING AND EVENING PEAK HOURS?
The morning (AM) peak hour is the time period when traffic is heaviest during the early morning commute, which for SR 502 is approximately 6:30 a.m. to 7:30 a.m. weekdays. The evening (PM) peak hour is when traffic is heaviest during the late afternoon commute, which in this corridor is approximately 4:30 p.m. to 5:30 p.m. weekdays.

KEY POINT

WHY WERE 2015 AND 2033 SELECTED AS ANALYSIS YEARS?
If the Build Alternative is built, construction would begin in the year 2012 and is expected to be completed and open to traffic by 2015. The near-term traffic analysis therefore reflects conditions that would be expected shortly after the project opens. Federal and state environmental guidelines, as well as the *Washington State Department of Transportation Design Manual*, call for a longer-term analysis of conditions at least 20 years past the expected start of construction. Construction was initially expected to begin in 2013, so 2033 was selected as the long-term analysis year, which is still at least 20 years past the current start of construction in 2012.

DEFINITION

WHAT IS CONGESTION?

Congestion refers to heavy traffic conditions characterized by travel speeds that are slower than normally observed under light or free-flow travel conditions. Congestion can result when the number of vehicles using a roadway approaches the road's capacity, typically on a recurring basis during the morning and evening commutes. In the SR 502 study area, congestion is compounded by the number of driveway and intersecting street connections. Congestion can also occur as the result of some irregular interruption of normal traffic flow, such as a traffic accident.

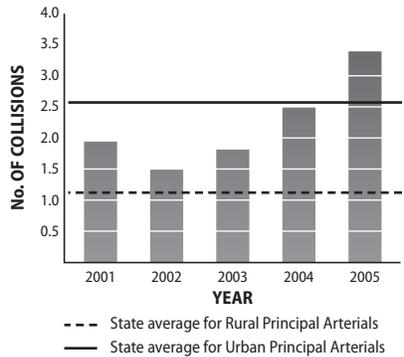


Exhibit 1-5: Number of collisions per million vehicle miles traveled on SR 502, 2001–2005

DEFINITION

WHAT IS ACCESS CONTROL?

Access control refers to how and where vehicles are allowed to enter and exit a roadway.

As a result of this congestion, with out any improvements, travel times from the I-5/SR 502 interchange to the SR 502/SR 502 intersection in central Battle Ground would nearly triple, increasing from 8–11 minutes in 2006 to 19–32 minutes by 2033. By the year 2033, the increased traffic levels on SR 502 and traffic backups at approaching intersections would result in delays of five minutes or more for vehicles attempting to turn left onto SR 502 during peak periods. Further information on projected traffic volumes and travel times is provided in Appendix Q, *Transportation Discipline Report*.

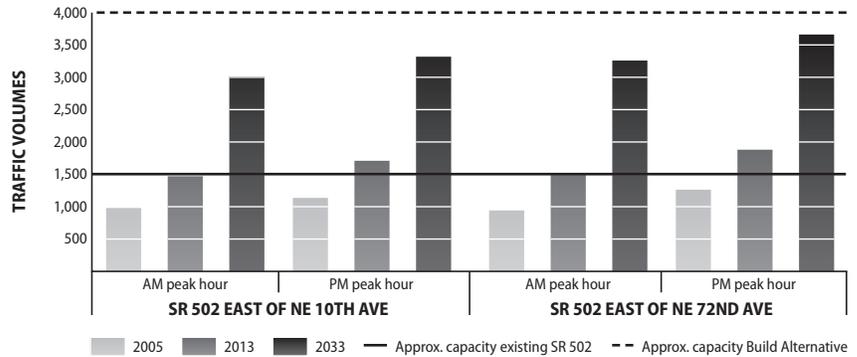


Exhibit 1-4: Projected average daily morning and afternoon peak hour traffic volumes

Safety on SR 502

The rate of collisions on SR 502 in the study area has increased steadily over the past several years (Exhibit 1-5). Over a five-year period from 2001–2005, there were a total of 184 collisions in the study area with 47 percent of these resulting in injury or possible injury and two percent resulting in fatalities. Collision types for the same period are shown in Exhibit 1-6.

This number of collisions is associated with the high rate of speed and the high number of access points along the corridor. As traffic increases in the future, the proportion of injury and fatal collision levels to traffic volumes are expected to continue to increase over time. Collisions at major intersections comprise approximately 30 percent of the collisions in the study area.

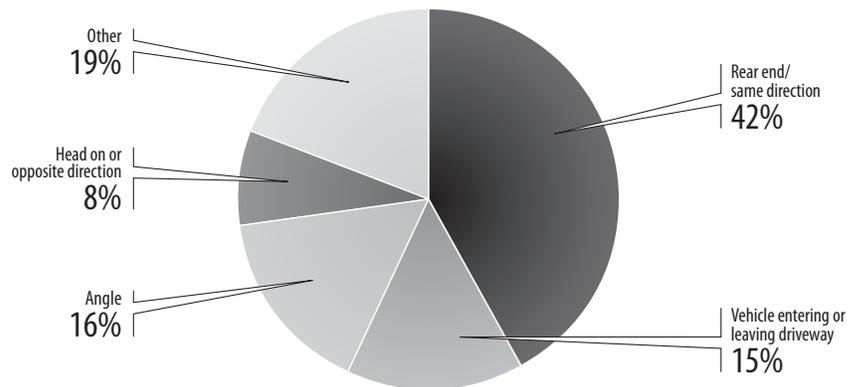


Exhibit 1-6: Collision types along the SR 502 corridor, 2001–2005

SR 502 currently has managed access with permitted points of entry, with frequent driveway and side-street connections to the roadway. The many driveways along SR 502 represent uncontrolled turning movements, which contribute to approximately 38 percent of collisions along the corridor.

With the projected increase in delays for left-turns onto SR 502, drivers are likely to become increasingly frustrated and take higher risks to enter the roadway, which may exacerbate safety concerns. Drivers are likely to look for alternate routes such as NE 199th Street or NE 179th Street to bypass the congestion on SR 502 and minimize safety concerns. As more traffic diverts to alternate corridors, with design standards that are less than those of state highways, the overall collision rate of the alternate corridors would likely increase. Since there are no designated bicycle lanes and few sidewalks and crosswalks along SR 502 in the study area, pedestrians and bicyclists would also face increasingly hazardous conditions along the corridor. For more information about congestion and safety concerns on SR 502, see Appendix Q, *Transportation Discipline Report*.

What is the purpose of the project?

SR 502 is congested and experiences a high rate of accidents, which in turn limits regional connectivity. **The purpose of the project is to improve mobility and safety along the SR 502 corridor between NE 15th Avenue and NE 102nd Avenue, and to improve regional connectivity between Battle Ground, north Clark County, and I-5.**

To address the project purpose, the following project goals and objectives have been established to balance environmental, community, and transportation values for the project:

- Provide open, comprehensive, and frequent communication about the project’s process and decisions
- Ensure the SR 502 corridor functions as a state highway and National Highway System corridor
- Seek opportunities to enhance transit, pedestrian, and bicycle travel
- Minimize acquisition of private property
- Comply with all environmental laws and regulations
- Coordinate and minimize adverse effects to utilities
- Consider design elements that are reasonably funded, less complex to build, and simpler to maintain
- Consider mobility beyond the 2033 design horizon year.

KEY POINT

The Build Alternative is the preliminary preferred alternative.

What solutions are being considered?

This draft environmental impact statement evaluates two alternatives:

- No Build Alternative
- Build Alternative

The Build Alternative would widen and reconfigure SR 502 (Exhibit 1-7). The Build Alternative is the preliminary preferred alternative.

Washington State Department of Transportation explored several other alternatives for improving mobility and safety on the corridor, but these were not carried forward due to environmental considerations and lack of public support. Additional details regarding the project alternatives considered are presented in Chapter 2, *Developing the Alternatives*.

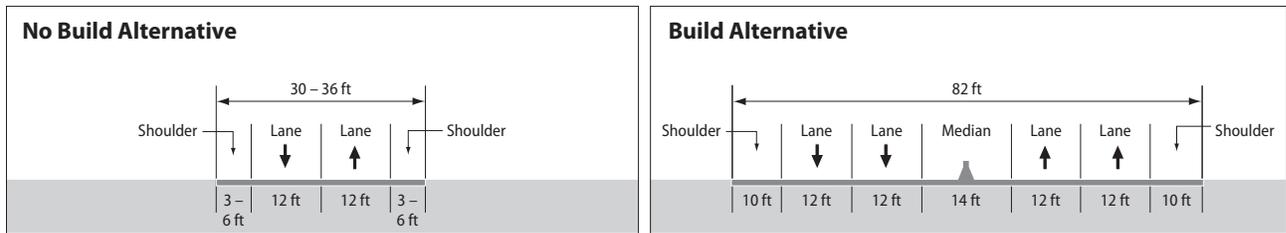


Exhibit 1-7: Comparison of a typical cross section of SR 502 under the No Build and Build Alternatives

No Build Alternative

Under the No Build Alternative there would be no improvements to SR 502. This alternative would retain the existing facility along with programmed and funded projects elsewhere in the study area (see Chapter 2, *Developing the Alternatives*, for a list of these other, separate projects).

The No Build Alternative provides a baseline against which to measure and compare the effects of the project’s Build Alternative.

Build Alternative (Preliminary Preferred Alternative)

The Build Alternative would provide improvements to the existing SR 502 from just west of NE 15th Avenue to NE 102nd Avenue. Along this section of the SR 502 corridor, two lanes would be constructed in each direction with a median treatment, such as a barrier or curb, separating westbound and eastbound travel. Signals would be added at the intersections at NE 29th Avenue, NE 50th Avenue, NE 92nd Avenue, and the existing signalized intersection at NE 72nd Avenue (Dollars Corner) would be improved and expanded. SR 502 would be a modified control limited access facility with fewer driveway connections. Except at the four signalized intersections and two directional median openings, turns to and from SR 502 would be restricted to right-in/right-out turning movements at all intersections and driveways along the corridor.

DEFINITION

WHAT IS A MODIFIED CONTROL LIMITED ACCESS FACILITY?

A modified control limited access facility is a roadway with limited access points that are planned and established for each individual parcel. Modified control is intended to prevent further deterioration in the safety and operational characteristics of the existing highway by limiting the number and location of the access points. The abutting property access rights and type of use are recorded on the property deed. Access approaches are limited to one approach for each parcel of land or when adjoining parcels are under one contiguous owner. Parcels that have access to another public road or street are not normally allowed direct access to SR 502.

Paved shoulders that could be used by pedestrians and bicyclists would be constructed along the north and south side of SR 502 for the entire corridor, and sidewalks would be provided in the rural commercial center at Dollars Corner. Crosswalks would be installed at signalized intersections.

Who is leading the project?

For the SR 502 project, the Federal Highway Administration and Washington State Department of Transportation are lead agencies under the National Environmental Policy Act. Washington State Department of Transportation is the lead agency under the Washington State Environmental Policy Act. The lead agencies oversee the environmental review process and coordinate input from other partners. These partners include the following cooperating and participating agencies:

- US Army Corps of Engineers
- US Fish and Wildlife Service
- National Oceanic and Atmospheric Administration – National Marine Fisheries Service
- US Environmental Protection Agency
- Bonneville Power Administration
- Natural Resources Conservation Service
- Washington State Department of Fish and Wildlife
- Washington State Department of Ecology
- Washington State Department of Archaeology and Historic Preservation
- Southwest Washington Regional Transportation Council
- City of Battle Ground
- Clark County
- Clark County Fire and Rescue
- Cowlitz Indian Tribe
- Chinook Indian Tribe
- Port of Ridgefield
- Clark County Public Transportation Benefit District (C-TRAN)
- Clark Public Utilities

The lead agencies also coordinate with the Technical Advisory Committee and the Executive Committee. Washington State Department of Transportation also will address concerns of the Cowlitz Indian Tribe and Chinook Indian Tribe by following the process specified by Section 106 of the National Historic Preservation



KEY POINT

TECHNICAL ADVISORY COMMITTEE

The Technical Advisory Committee is comprised of technical staff from Clark County, City of Battle Ground, Southwest Regional Transportation Council, and Washington State Department of Transportation. The Technical Advisory Committee reviews technical aspects of the project and advises the project team and the Executive Committee.



KEY POINT

EXECUTIVE COMMITTEE

The Executive Committee includes agency officials from the same agencies as represented in the Technical Advisory Committee. The role of this committee is to advise Washington State Department of Transportation on key decisions based on input received from the Technical Advisory Committee and the public.

Act, the 2003 Washington State Department of Transportation Tribal Consultation Policy, and the 2008 Washington State Department of Transportation Model Comprehensive Tribal Consultation Process for the National Environmental Policy Act.

How has the public been involved?

Public involvement efforts for this project have been underway since 1996. Several open houses were held in 1999 and 2000. Washington State Department of Transportation engaged the public in conceptual discussions about this project in 2001 as part of the creation of the I-5/I-205 North Corridor Strategy Report, and in 2002 as part of the creation of the Access Point Decision Report.

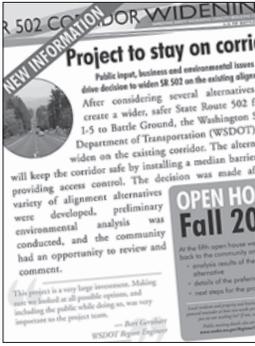
At the beginning of the SR 502 Corridor Widening Project the project team developed and began implementing a program to engage the public and provide information about the project. A public involvement plan was developed that established specific goals and activities.

An important component of this plan was outreach to all interested members of the public, including low-income, minority, and limited English proficiency populations.

Activities conducted as part of the public involvement process include:



- **Stakeholder interviews** – Early in the project, focused interviews were conducted with local stakeholders to learn about community interests.
- **Open houses** – A series of widely publicized open houses have been initiated to provide a public forum for sharing project information and answering project related questions.
- **Community forums** – These small group meetings provided a venue for exchanging information and addressing and resolving community issues.
- **Access hearing** – Washington State Department of Transportation shared the revised access plan for SR 502 and explained how the project would change access points to properties adjacent to SR 502 at a public access hearing. Members of the public were given the opportunity to provide written or verbal comments on the access plan.



- **Newsletters/postcards** – Project newsletters and postcards updated the status of the project and provided another channel for communicating accurate project information. All mailings announcing specific public open house meetings included notices in Spanish and Russian as well as contact information for persons requiring additional assistance at upcoming meetings.

- **Kiosks** – Informational kiosks/posters were placed at local businesses in the study area including: Albertson’s (grocery store), Battle Ground City Hall, Battle Ground Community Library, Clark County Fire and Rescue, Cherry Seeds Coffee (coffee drive through), First Independent Bank, and Fred Meyer (grocery store), as well as Battle Ground Public Schools. All of these publications included notices in Spanish and Russian and notices compliant with the Americans with Disabilities Act.

- **Website** – The project website makes project information available to the public.

To date, a total of seven open houses, three community forums, 42 stakeholder interviews, and the access hearing have been held. These sessions provided valuable insight into public views and helped the project team refine project alternatives. Specific comments received from the public have addressed concerns about effects to residences and businesses, neighborhoods, and natural resources. Additional details on the public involvement activities and comments received from the public are provided in Appendix D, *Public Involvement*.

Why was this draft environmental impact statement developed?

The National Environmental Policy Act and the Washington State Environmental Policy Act require that projects with potential for significant adverse environmental effects be reviewed through the environmental impact statement process. The proposed project was originally classified as requiring an environmental assessment. The purpose of an environmental assessment is to analyze the potential effects of the project to human and environmental resources to determine whether or not those effects are potentially significant. If effects are determined to be potentially significant, then an environmental impact statement is prepared. In early 2008, as technical studies were underway as part of the environmental assessment process, the project team recognized that the project could result in potential

KEY POINT

PROJECT WEBSITE

The project website provides information on the SR 502 Corridor Widening project. Information on the project’s public involvement activities are also posted on the website at:
www.wsdot.wa.gov/Projects/SR502/Widening/

DEFINITION

WHAT ARE THE NATIONAL ENVIRONMENTAL POLICY ACT AND WASHINGTON STATE ENVIRONMENTAL POLICY ACT?

The National Environmental Policy Act and the Washington State Environmental Policy Act are the federal and state legislative directions that require agencies to incorporate environmental considerations into decision making by preparing Environmental Impact Statements that consider the effects of proposed actions.

significant effects. With input from the public at the May 2008 open house, the project team made the decision to prepare an environmental impact statement.

The environmental impact statement identifies options for meeting the project's purpose and need, evaluates the beneficial and adverse effects of these alternatives on the community and environment, and identifies measures to avoid, minimize, or mitigate negative effects. This process allows decision-makers to consider effects on the environment along with other important factors, such as need, feasibility, and cost. The environmental impact statement process is intended to disclose the likely effects of a project at an early stage in project development so that decisions can still take account of the environmental analysis and public and agency review comments.

This draft environmental impact statement summarizes a series of technical analyses prepared for the project. It is designed to be easily accessible to readers and to present information concisely in text, graphics, and tables. Readers interested in more detailed information on a particular topic can refer to the technical analyses in the appendices, which cover the topics addressed in this draft environmental impact statement.

This environmental impact statement is organized by the following major topics:

- **Introduction to the Project** – project purpose and need, environmental impact statement process, public involvement
- **Project Alternatives** – development of the alternatives, description of alternatives considered but withdrawn from further review, selection of alternatives for study in the environmental impact statement
- **Comparison of the Alternatives** – effects of the alternatives on safety and mobility
- **Comparison of the Alternatives** – environmental considerations
- **Construction Effects** – temporary construction effects of the alternatives
- **Other Considerations** – climate change, indirect and cumulative effects
- **Environmental Commitments** – mitigation measures

Why was a draft Section 4(f) evaluation prepared?

The SR 502 Corridor Widening Project is eligible for federal-aid highway funds and is therefore subject to the requirements of Section 4(f) of the US Department of Transportation Act of 1966. Section 4(f) requires that the agencies leading the project identify all potential Section 4(f) property (see definition in sidebar), identify and evaluate

alternatives to determine which (if any) avoid adverse effects to all Section 4(f) property. If no alternatives avoid adverse effects to all Section 4(f) property, other alternatives must be evaluated to determine which cause the least overall harm when all possible minimization and mitigation measures are included.

There are six historic properties in the study area which are considered Section 4(f) properties because they are eligible for listing on the National Register of Historic Places.

The Section 4(f) evaluation for the project, located in Appendix B, identifies and describes the Section 4(f) properties in the study area, discusses how each property would be affected by each alternative, evaluates the alternatives considered for the project, and identifies measures to minimize harm resulting from unavoidable adverse effects to the Section 4(f) properties.

What are the next steps?

The draft environmental impact statement and draft Section 4(f) evaluation will be available for public review and comment for 45 days. Appendix U, *Draft Environmental Impact Statement Distribution List*, lists the agencies and tribes that the document will be distributed to as well as the locations where copies will be available for review by the public. The document will also be available on the Internet or by contacting Washington State Department of Transportation.

In addition to circulation for public comment as a component of the draft environmental impact statement, the Section 4(f) evaluation will undergo a concurrent review by the US Department of the Interior, which will distribute the evaluation to the bureaus within the department.

After circulating the draft environmental impact statement and draft Section 4(f) evaluation and receiving comments from agencies, tribes, and the public, the preliminary preferred alternative (Build Alternative) could be modified by the lead agencies. Comments on the draft environmental impact statement will be an important factor in any decisions about modifying the preliminary preferred alternative. The lead agencies also will consider input received from the Technical Advisory Committee and the Executive Committee. Comments from the resource agencies also will be a key factor, since they will be approving permits for the project which could affect project implementation.

Additional work will then begin to prepare the final environmental impact statement, which will present the preferred alternative. The

DEFINITION

WHAT IS SECTION 4(f)?

Section 4(f) of the US Department of Transportation Act of 1966 stipulates that US Department of Transportation (USDOT) agencies cannot approve a transportation program or project requiring the use of Section 4(f) property unless the following conditions apply:

The transportation program or project will not have more than a *de minimis* effect on a property; or

There is no feasible and prudent alternative to the using the property; and

The transportation program or project includes all possible planning to minimize harm to the property resulting from such use.

DEFINITION

WHAT IS SECTION 4(F) PROPERTY?

Section 4(f) property refers to land that is subject to Section 4(f). This includes:

- Publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or
- Land of an historic site of national, state, or local significance that is included in or is eligible for inclusion in the National Register of Historic Places (23 CFR 774.17).

preferred alternative may be the preliminary preferred alternative or a modified version of it. Washington State Department of Transportation will further develop the engineering design for the preferred alternative. Additional environmental studies, if needed, also will be completed and specific mitigation measures will be developed at this time. The results of this additional work will then be incorporated in the final environmental impact statement. The final environmental impact statement also will include the comments on the draft environmental impact statement received during the public comment period and responses to those comments by the lead agencies.

After the final environmental impact statement has been issued, the Federal Highway Administration will prepare a record of decision to document the course of action for implementation. The record of decision identifies the preferred alternative, the other alternatives considered, and the plan for mitigation.

Right of way acquisition is expected to take place during 2009–2011. Final design will be completed in 2011. Construction is expected to begin in 2012.

How can I get involved?

Washington State Department of Transportation would like decisions on improvements to SR 502 to be made with input from as many interested parties as possible. The best way to get involved is to comment on the draft environmental impact statement. Washington State Department of Transportation will respond to these comments and address them in the final environmental impact statement. There are two ways to comment on the draft environmental impact statement:

- **Attend the public hearing** – A public hearing will be held on June 23, 2009. The project team will describe the alternatives and present exhibits that illustrate the alternatives. The public hearing also will provide an opportunity for the public to ask questions or offer comments on the draft environmental impact statement.
- **Submit comments** – Written comments on the draft environmental impact statement can also be submitted during the comment period, which is from June 5, 2009 to July 20, 2009. Comments should be addressed to:

Chris Tams, Area Engineer, Washington State Department of Transportation Southwest Region, P.O. Box 1709, Vancouver, WA 98668-1709, or

Dean Moberg, Federal Highway Administration, 711 S. Capitol Way,
Suite 501, Olympia, WA 98501

If you would like to continue to receive updates on the status of
the project, you can add your name to the mailing list by calling
(360) 759-1310 or sending an email to swGorge@wsdot.wa.gov.
You will then receive copies of the project newsletter and email updates.
You can also view updates on the project website at:
<http://www.wsdot.wa.gov/Projects/SR502/Widening/>

We look forward to receiving your comments.

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1 Introduction to the Project

2 Developing the Alternatives

3 Comparison of the Alternatives – Safety and Mobility

4 Comparison of the Alternatives – Environmental Effects

5 Construction Effects

6 Other Considerations

7 Environmental Commitments