Chapter 1
Summary

The Renton Nickel Improvement Project is one of three "nickel" projects being implemented by the Washington State Department of Transportation (WSDOT) to improve transportation conditions along I-405. In 2003, the Washington State Legislature approved a 5-cent-per-gallon gas tax to fund highway improvements. An additional 9.5-cent-per-gallon gas tax was approved in 2005. Funding for construction of the Renton Nickel Improvement Project will come from a combination of both of these revenue sources. Cost for project construction has been estimated at $157 million.

Where is the Renton Nickel Improvement Project located?

The Renton Nickel Improvement Project is on the south end of the I-405 corridor between I-5 and SR 169, see Exhibit 1-1. This 3.6-mile section of I-405 passes through the cities of Tukwila and Renton. This project also includes the north end of southbound SR 167 from I-405 to the SW 41st Street exit.

What is the Renton Nickel Improvement Project?

The Renton Nickel Improvement Project is part of the I-405 Corridor Program and is the first step in constructing WSDOT's Master Plan in this area. The basic construction elements of this project are:

- Construct one new northbound general-purpose lane and one new southbound general-purpose lane on I-405 from I-5 to SR 169.
- Construct one new southbound general-purpose lane on SR 167 from I-405 to the SW 41st Street off-ramp.
- Extend the SR 167 southbound HOV lane to begin at I-405.
- Replace the Benson Road Bridge over I-405 on a new alignment.
- Replace the I-405 bridges over Springbrook Side Channel and Oakesdale Avenue with new southbound and northbound bridges and remove the Springbrook Creek box culvert.

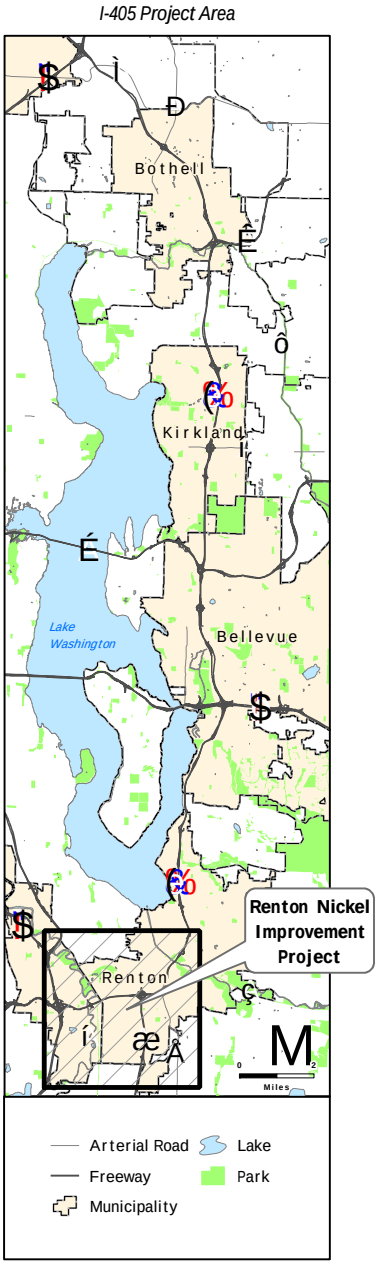
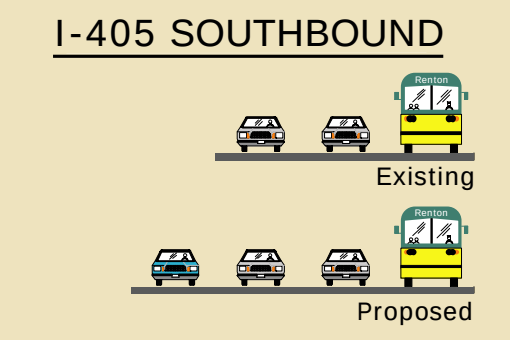


Exhibit 1-1. I-405 Corridor and Renton Nickel Improvement Project Study Area

Other project features include widening over Talbot Road; replacing the guard rails on the I-405 bridges over SR 181 and the Burlington Northern Santa Fe railroad; improving stormwater treatment, detention, and conveyance; adding architectural treatments to enhance the highway's appearance; and incorporating numerous measures to avoid or minimize effects to the environment. Chapter 4 discusses the project in detail.

What benefits will the project provide?

The Build Alternative will benefit the area by reducing congestion at chokepoints, reducing the duration of congestion during peak commuter travel hours, and improving freight movement.



The Renton Nickel Improvement Project will add a lane in both directions. In particular, the new lane will relieve the heavy congestion experienced on I-405 southbound between SR 169 and the SR 167 interchanges.

This section of I-405, from the I-5 interchange to the SR 169 interchange, is congested due to large traffic volumes and merging and diverging traffic. The new lanes will help relieve congestion and improve safety by providing motorists with more time and extra room to accelerate or decelerate and move into and out of the stream of traffic when getting on and off the freeway. This provides a smoother transition for motorists getting on and off I-405 in Tukwila and Renton and helps decrease rear-end and sideswipe collisions.

The project reduces congestion approaching the SR 167 interchange and it complements the completed southbound I-405 to southbound SR 167 flyover ramp.

This project will construct one noise wall along South 14th Street from the intersection of South 14th Street and South 15th Street east to Talbot Road. This wall will benefit residents in that area by lowering noise levels.

Another benefit of this project is that it continues the application of the Context Sensitive Solutions (CSS) design choices made by the communities within the I-405 corridor. The Benson Road Bridge realignment over I-405 will reflect the application of these design choices as explained further in Chapter 4.

When will construction begin and how long will it take?

Construction of the Renton Nickel Improvement Project is scheduled to begin early in 2008 and be completed by late 2010. The project will take two and a half years to complete. However, construction activities are not expected to be constant for the entire study area

throughout this time, and in some locations, the work is expected to take substantially less time than two years.

How will the project affect the built environment?

Transportation. Travel speeds in the project area will increase as much as 20 miles per hour during the daily commuting periods, when the project is finished. This will reduce congestion and improve safety, allowing people and freight to move through the area more efficiently.

Noise and Vibration. Approximately 105 residences, two parks, two trails, and an aquatic center in the study area already approach or exceed the noise abatement criteria of 67 dBA. Ten of these residences exceed the criteria because of noise from local traffic. This project will increase noise for thirty-nine additional residences to above the noise abatement criteria if no walls are built.

Based on our analysis, it is reasonable and feasible to build one noise wall along the north side of the Talbot Hill neighborhood to reduce noise. This wall will extend east from the South 14th Street/South 15th Street intersection to Talbot Road South.

Visual Quality. The project will have minor changes to visual quality. Generally, existing topography and vegetation will screen the project from freeway neighbors who have the highest view sensitivity (level of concern), frequency (number of times the view is seen), and duration (amount of time the view is seen). Some freeway neighbors will have their views toward the road negatively affected by bridge replacements, retaining walls, and the noise wall. Efforts will be made to retain existing trees, where feasible, to minimize the effect on visual quality for the proposed noise wall as shown to the right. However, some trees will need to be permanently removed from the hill slope near Tukwila City Hall, around the area for the new southbound and northbound I-405 bridges over Springbrook Creek and Oakesdale Avenue, and along the southbound side of SR 167 between Oakesdale Avenue and Lind Avenue.

View of proposed noise wall as seen by residents, local traffic, and pedestrians along the base of the Talbot Hill Neighborhood, particularly along South 14th Street

Architectural treatments will be applied to new permanent structures, for example the new Benson Road Bridge over I-405. These treatments will be per CSS guidelines developed to enhance the look of the I-405 corridor.

Public Services and Utilities. Constructing this project will have minor short-term effects on public services and utilities in the study area. Relocating utility lines may cause temporary, minor disruptions in service. The

project will improve response time for emergency service vehicles along I-405 and SR 167.

Energy. The project will reduce fuel consumption by reducing the number of drivers who take alternate routes to avoid congestion.

Environmental Justice. The Renton Nickel Improvement Project will not have disproportionately high or adverse effects on minority and/or low-income people.

The Renton Fire Station is a historic resource and will not be affected by this project.

Cultural Resources. No archaeological resources were identified as part of this study. The I-405 Project Team evaluated 124 historic resources (constructed prior to 1955) within the study area. One of these resources (the Renton Fire Station) is eligible for the National Register of Historic Places. This resource and three others (the Cedar River Park Railroad Bridge, the Renton Substation of the Snoqualmie Falls Power Company, and the Renton Coal Mine Hoist Foundation) are listed on the Washington Historic Register. None of these resources will be directly or indirectly affected by this project.

Parks and Recreation, Section 4(f). The I-405 Project Team identified ten public parks and four historic properties in the study area. The project will not acquire or have any adverse effects on these lands. During construction of the new southbound and northbound bridges over Springbrook Creek, the project will temporarily detour the Springbrook Trail where it currently crosses under I-405 as shown to the left. When the trail reopens, it will have been slightly realigned to avoid the new bridge supports.

This portion of Springbrook Trail that crosses under I-405 will be detoured temporarily during construction of the new I-405 southbound and northbound bridges over Springbrook Creek and Oakesdale Avenue

Economic Elements. This project will benefit the economy by reducing traffic congestion. People will find it easier to get to work and to shopping centers and businesses will be able to move freight more efficiently. In addition, the project will generate roughly $800,000 in city sales tax revenue that would be split between Tukwila and Renton.

Land Use Patterns. This project is not expected to change the existing or planned land use patterns for the cities of Renton or Tukwila. WSDOT will need to acquire property and easements in several areas. These acquisitions are considered to be minor; however, twelve businesses from two locations will need to be displaced to make room for the project's stormwater facilities.

Land Use Plans and Policies. As part of the overall I-405 Corridor Program, this project supports local jurisdictions' land use and growth management plans.

Social Elements. Minor, temporary increases in traffic congestion during construction may add to travel times for the public, neighborhood residents, and community service agencies. Once the project is complete, travelers in the study area will benefit from higher speeds and reduced travel times. This project will have no effect on community interactions or cohesion.

How will the project affect the natural environment?

Wetlands. The study area contains 19.4 acres of wetlands. The majority of these wetlands are low quality due to disturbance caused by the original construction of I-405, SR 167, and commercial and residential development of the surrounding area. Retaining walls designed for this project serve to avoid or minimize wetland filling; however, some filling is unavoidable. This project will permanently fill 1.66 acres of wetland and temporarily disturb 0.64 acres of wetland. Filled in wetlands will be compensated for by using credits from the Springbrook Creek Wetland and Habitat Mitigation Bank, a project that will create 130 acres of new and enhanced wetland area.

What is the Springbrook Creek Wetland and Habitat Mitigation Bank?

The Springbrook Creek Wetland and Habitat Mitigation Bank is being developed as a joint effort between WSDOT and the City of Renton. This 'bank' will construct a new high quality wetland complex that will serve to replace other wetlands that are filled in by projects such as the Renton Nickel Improvement Project. In addition to wetland mitigation, the site will provide flood storage mitigation.

Surface Water and Water Quality. This project will add 15 acres of new impervious surface area to the highway. Stormwater from an area of the highway equal in size to the new impervious area will be collected and treated. Stormwater facilities will be constructed so that changes in stream flow and water quality will be negligible.

Fish and Aquatic Resources. Many species of salmonids can be found in the study area, including chinook, coho, chum, pink, and sockeye salmon, steelhead trout, and sea-run cutthroat. Several of the rivers and streams in the study area are important to chinook salmon, bull trout, and Dolly Varden, which are federally listed endangered species. Some in-stream habitat (1.04 acres) and some riparian buffers (2.39 acres) will be either temporarily or permanently affected by this project. However, as noted above, effects from water quality will be negligible.

The box culvert that currently supports I-405 at Springbrook Creek will be removed as part of this project, and Springbrook Creek's streambed will be restored in this location. Although the existing culvert is currently fish passable, removing this structure will improve the streambed, allow more light to reach the stream, and allow the stream to be restored to a more natural state.

One of five openings in the existing Springbrook Creek Box Culvert that will be removed as part of the project

Floodplains. Some fill will be added to the floodplain in three areas: around the new I-405 southbound and northbound bridges over Springbrook Creek and Oakesdale Avenue, along the south side of I-405 between Oakesdale Avenue and Lind Avenue, and on the west side of SR 167 near SW 23rd Street where the Panther Creek Tributary crosses the highway. To compensate for lost flood storage due to filling and new bridge piers, the project will remove the existing box culvert and embankment where Springbrook Creek crosses under I-405. In addition, excavation to construct the Springbrook Creek Wetland and Habitat Mitigation Bank will provide compensatory floodplain storage. These actions will provide sufficient flood storage so that flood elevations will not change in the study area.

What is liquefaction?

Liquefaction usually occurs in saturated, loose, granular soil such as sand, silty sand, and sandy silt. During a strong earthquake, these soils lose their grain-to-grain contact and essentially become slurry with characteristics like quicksand.

Soils, Geology, and Groundwater. This project will be constructed in a highly variable geologic area that includes large liquefaction zones that can be problematic during earthquakes. The new bridges will be designed to current seismic standards and will be founded on deep piles to minimize damage from soil liquefaction during earthquakes. Although project construction will likely increase erosion, disturb moisture-sensitive soils, and produce construction-related vibration, these effects will be temporary. The project will not affect the City of Renton's water supply wells because the highway will only be restriped in the areas that would affect the aquifer or the aquifer's recharge area.

Air Quality. This project will not affect regional air quality and will be in compliance with National Ambient Air Quality Standards. Dust and odors may be present during construction, but these effects will be minor and temporary.

Upland Vegetation and Wildlife. This project will permanently remove about 13 acres of low quality wildlife habitat, which is less than 0.01 percent of the total available habitat in the study area. There are no federal or state listed protected wildlife species or wildlife habitat within the study area.

Hazardous Materials. The study area has 14 sites where hazardous materials have been used or stored. None of these sites will be affected by the project.

No substantial operational effects were identified during this study. This study represents an initial site assessment to identify hazardous material sites in the study area. Further investigation is recommended for any parcels that are to be acquired for this project. There is a low risk that the Renton Nickel Improvement Project will release contaminants as a result of disturbing soils,

groundwater, or sediments in construction areas where contamination is present.

Cumulative Effects. The Renton Nickel Improvement Project is not expected to have adverse cumulative effects on air quality, surface water, wetlands, or fish because each project in the area will avoid, minimize, and mitigate for negative effects. Wetlands in the general area will likely be positively affected because the development of the Springbrook Creek Wetland and Habitat Mitigation Bank will provide higher quality, larger wetlands for wildlife habitat than those that will be filled in because of this project and other local projects.

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