SECTION 1 INTRODUCTION

What are the primary features of the Tukwila to Renton Project?

WSDOT is proposing to construct the I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2), referred to as the Tukwila to Renton Project, to relieve congestion. The Tukwila to Renton Project extends approximately four and one half miles along Interstate 405 (I-405), from I-5 to State Route 169 (SR 169), and approximately two miles along SR 167, from I-405 to SW 43rd Street. The project will:

- Add capacity to both I-405 and SR 167.
- Replace bridges over the Green River and Cedar River and add one new bridge over the Green River.
- Improve the SR 181 and SR 169 interchanges.
- Reconstruct the SR 167 interchange consisting of new general-purpose direct-connector ramp from southbound I-405 to southbound SR 167, HOV direct-connector ramps from northbound SR 167 to northbound I-405 and from southbound I-405 to southbound SR 167, and a split-diamond interchange at Lind Avenue and Talbot Road with connecting frontage roads.
- Replace the two local street accesses to Renton Hill.

These improvements represent the second phase of the I-405 Corridor Program for this portion of I-405. The first phase consists of improvements in the Renton Nickel Improvement Project.

Why do we consider noise as we plan this project?

Sound is an element of daily life that when perceived as unpleasant, unwanted, or disturbingly loud, is called *noise*. The I-405 Team's noise specialists considered the effects of noise in order to understand the potential effect of traffic and construction noise on public health and welfare. Federal regulations (23 CFR 772) and WSDOT noise abatement criteria (NAC) require a noise analysis for projects that add capacity to a highway or when a highway is realigned.

Are you new to reading noise reports?

Environmental disciplines generally have vocabularies all their own. We encourage readers who are new to noise-related terminology to invest a few minutes now reviewing the Glossary and the list of Acronyms and Abbreviations in the preceding sections. An understanding of the A-weighted decibel (dBA) and the Equivalent A-weighted sound level (L_{eq}) will be especially helpful in following our analysis of this important environmental element.

Additional travel lanes on I-405 and higher peak-hour speeds that result from reduced congestion could increase perceived noise levels at sensitive receptors, such as residences and parks in the study area. This noise analysis determines whether mitigation measures such as noise barriers are warranted to buffer noise-sensitive areas from the roadway.

What are the key points from this report?

Under baseline conditions, some places in the study area already exceed the NAC, including approximately 98 residences, 2 hotels, 6 parks, and 3 trails. Eleven of these residences and 2 hotels exceed the NAC because of noise generated from local traffic on Main Avenue S, S Grady Way, Benson Road S, NE 3rd Avenue, the SR 169/NE 3rd Avenue connector, and/or SR 169.

If the project is built, noise levels will increase primarily at residences in the Renton Hill and Talbot Hill neighborhoods. For the most part, noise levels will grow over time with an increase of 0 to 12 dBA L_{eq} by the year 2030. Some sensitive receptors in the western portion of the study area, representing 16 residences and 1 trail, will experience noise-level reductions of 1 to 6 dBA L_{eq} by the year 2030, yet will still be at or above the NAC. Freeway Park, also a sensitive receptor, will be removed by the project along with 30 potentially noise-sensitive residences in the Talbot Hill neighborhood and at the Berkshire Apartments.

If this project is built, 92 residences, 1 park, and 1 library will go from being below the NAC to being at or above the NAC. Added to the 98 residences, 2 hotels, 5 parks, and 3 trails that are already at or above the NAC under baseline conditions, a total of 190 future residences, 2 hotels, 6 parks, 3 trails, and 1 library are predicted to experience noise levels at or above the NAC of 67 dBA set for residences in 2030.

What measures are proposed to avoid or reduce impacts?

Noise Barrier East 5, which was built under the Renton Nickel Improvement Project, will be relocated to a new location with the Tukwila to Renton Project. In its new location, Noise Barrier East 5 will not provide noise level reductions over baseline conditions for the five receptors that represent 32 residences in the Talbot Hill area. These residences will

experience additional noise effects, although the magnitude of these effects will be minimized by the shielding effects of the replacement noise barrier.

Two new noise barriers meet WSDOT criteria for placement along the Tukwila to Renton Project. Noise Barrier 8 is planned for construction along the WSDOT right-of-way line east of Benson Road S and southeast of I-405, near the Berkshire Apartments. Without the Tukwila to Renton Project, noise levels behind Noise Barrier 8 range from 54 to 71 dBA. At a height of 20 feet, Noise Barrier 8 would reduce the number of residences that experience noise levels that approach, meet, or exceed the NAC with the project from 27 to 5 residences in the area behind Noise Barrier 8.

Noise Barriers 10A and 10B were evaluated together as a system. The barrier system is planned for construction atop a retaining wall from Renton Avenue S to the end of Mill Avenue S. At a height of 14 to 20 feet and 20 feet respectively, Noise Barriers 10A and 10B would reduce the number of residences that experience noise levels that approach, meet, or exceed the NAC from 76 to 29 residences in the area behind the two barriers.

What will happen if we adopt the No Build Alternative?

If this project is not built, no additional residences will approach, meet, or exceed the NAC (the equivalent sound level of 67 dBA) until at least the year 2030. The 98 residences, 2 hotels, 6 parks, and 3 trails that already approach, meet, or exceed the NAC will continue to do so until at least 2030.

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