APPENDIX A: METHODOLOGY

How did we collect information on hazardous materials for this report?

The I-405 Team collected information for this technical memorandum by the following methods:

- Reviewing and summarizing publicly available records and databases to obtain information indicating the location of hazardous materials.
- Identifying historical land use of the project area. The project area is defined as the potential impact area. The study area specifically evaluated for environmental effects included the area within 1/4 mile of the project area.
- Reviewing available geologic literature and topographic maps to evaluate local geology and soil types, surface drainage pathways, groundwater depths, and overall groundwater flow direction.
- Conducting windshield surveys to observe site features and possible sources of hazardous materials.

A portion of the project corridor was previously evaluated for the presence of hazardous materials under the Renton Nickel Project. These areas were not revisited, considered or reported as part of this effort. This technical memorandum identified sites of concern with potential hazardous materials both in and adjacent to the study area. Further investigation is recommended for any parcels identified in this memorandum that are to be acquired for this project.

How were individual sites considered for in-depth analysis?

The initial screening process for determining which sites required further analysis included the following two criteria:

- The site is located in the proposed study area and potentially contained hazardous materials.
- The site contained hazardous materials and was located hydraulically at an incline higher than the proposed study area.

The I-405 Team further assessed the sites of concern, and determined whether these sites were "reasonably predictable" or "substantially contaminated" with respect to the presence of hazardous materials.

"Reasonably predictable" sites are sites where recognized environmental conditions are known based on existing data or can be predicted based on site observations, previous experience in similar situations or by using best professional judgment. These sites are typically small, the contaminants are localized and are relatively non-toxic, and abatement/remediation activities are routine (e.g., asbestos abatement or petroleum hydrocarbon-contaminated soil remediation).

"Substantially contaminated" sites are typically large or have large volumes of contaminated materials, have a long history of industrial or commercial use, and the contaminants are persistent, difficult or expensive to manage.

The I-405 Team identified sites of concern by collecting information from the sources listed below.

Regulatory Database Review

The I-405 Team reviewed local, state, and federal databases provided by Environmental Data Resources, Inc. (EDR)[1.] to identify potential sources of hazardous materials that could affect the study area. The I-405 Team contracted EDR to conduct a regulatory data search consistent with WSDOT, American Society for Testing and Materials, and Federal Highway Administration (FHWA) standards and guidelines. EDR provided a comprehensive search of existing environmental regulatory agency databases for known or suspected contaminant-related concerns within the study area. Appendix B contains the full database list and results of EDR's database research.

Historical Research

The I-405 Team conducted historical research efforts to identify and characterize past land use activities. From these records, the I-405 Team:

- Compiled a land use inventory by reviewing available aerial photographs. Available aerial photographs were dated between 1961 and 1992.
- Reviewed topographic, geologic and groundwater occurrence maps to determine soil types, depths to groundwater and overall groundwater flow direction. This review included coordinating with the authors of the Tukwila to Renton Improvement Project Geology and Soils Technical Memorandum and Water Resources Discipline Report. The I-405 Team used this information to evaluate the potential sub-surface migration pathway of hazardous materials in the environment.

Data Validation

The I-405 Team requested and reviewed publicly available files from the Washington State Department of Ecology (Ecology) for specific properties where hazardous materials were likely to exist based on the EDR report and historical background research. This review focused on identifying the nature and extent of known contamination and cleanup activities on properties within the study area.

Windshield Survey

The I-405 Team conducted a windshield survey[2.] of the study area focused on properties where hazardous materials were known or suspected to be present. The survey included all properties that could affect construction or operation within the study area. The I-405 Team conducted a windshield survey by driving the public access roads within 0.25 miles of the Tukwila to Renton Improvement Project corridor to a) verify the addresses of identified hazardous materials sites and b) look for previously unidentified hazardous materials sites that might affect Project construction or operation. In conducting the windshield survey, the I-405 Team looked only at features in plain sight from public access corridors. The team did not enter any properties or view conditions within buildings. The I-405 Team noted the following information during the windshield survey:

[1.] Environmental Data Resources, EDR Data Map, 2006. The EDR report includes a list of databases we reviewed, including selected detailed information from federal and state lists, and maps illustrating the identifiable sites within the indicated search radius. Sites are located on the focus maps provided by EDR. The EDR report is attached as Appendix B

[2.] The I-405 Team conducted a windshield survey by driving the public access roads within 0.25 miles of the Tukwila to Renton Improvement Project corridor to: a) verify the addresses of identified hazardous materials sites; and b) look for previously unidentified hazardous materials sites that might affect project construction or operation. In conducting the windshield survey, the I-405 Team looked only at features in plain sight from public access corridors. The team did not enter any properties or view conditions within buildings.

- The presence of improvements on the site.
- The usage and physical setting, including slope, drainage features and soils.
- Indications suggesting the presence of underground storage tanks (USTs), above-ground storage tanks, buried pipelines, drums, hazardous and/or solid waste disposal, soil staining and distressed vegetation.
- General housekeeping observations[3].
- Adjacent and nearby properties with a potential to contribute hazardous materials.

[3] General housekeeping observations include noting how well the site is maintained. For example, the I-405 Team noted if soil is stained or if garbage, junk cars, and/or discarded chemical containers are scattered about the property.

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