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## 3.10 Hazardous Materials

This section describes the project’s potential direct and indirect hazardous and contaminated material impacts. It describes existing conditions relative to known or suspected hazardous and contaminated materials, anticipated impacts related to hazardous and contaminated materials, and measures to minimize or mitigate any such impacts, as necessary. [Appendix D.12A](#) contains the hazardous materials assessment referenced in this section.



### EXISTING CONDITIONS

NDOT conducted a hazardous materials assessment within the I-80/I-580/US 395 right-of-way and within a buffer area adjacent to the freeway system. The assessment identified contaminated soil and groundwater in the right-of-way or close enough to the right-of-way that it could move into the construction area through groundwater flow. The purpose of the hazardous materials assessment is to alert NDOT of contamination on property it may need to acquire and to allow NDOT to accurately budget for managing contaminated soil and groundwater. Also, the assessment will help protect workers who may encounter contaminated soil and groundwater during construction.

Based on NDOT’s initial search of databases, aerial photographs, topographic maps, and Sanborn maps, as well as a windshield survey, NDOT identified sites where releases of petroleum or other hazardous substances have been documented in either soil or groundwater. Also, pipelines near I-80 have released hazardous liquids, and coating material on the concrete of the bridge structures in the study area contains asbestos. No active federal superfund sites were identified within 1 mile of the Spaghetti Bowl or the four freeway legs that feed into it.

NDOT also evaluated the study area for the potential to contain naturally occurring asbestos and erionite, a non-asbestos fibrous mineral. These minerals are of interest because if soil or rock containing these minerals are disturbed, fibers could be released and cause a potential exposure risk to project workers and the public. NDOT conducted limited sub-surface testing and found no naturally occurring asbestos or erionite in the samples. If these minerals would be disturbed by the project, NDOT may develop material-handling and disposal requirements. [Appendix D.12B](#) contains more information about the potential for naturally occurring asbestos and erionite to be encountered in the study area.



## 3.10 HAZARDOUS MATERIALS

# HAZARDOUS MATERIALS IMPACTS

Potential impacts to hazardous and contaminated materials in the study area may occur because NDOT is proposing to widen the freeways, relocate freeway-to-freeway ramps and freeway on- or off-ramps, and modify local roads in some locations (Table 3.10-1). This project would not construct new roads on a new alignment. The freeway widening, new ramp locations, and local road modifications associated with Alternatives 1, 2, and 3 would result in new strips of land required for freeway use. NDOT designed Alternatives 1, 2, and 3 to avoid or minimize, to the extent practicable, impacts to the adjacent environment. As a result, the alternatives NDOT analyzed minimize impacts while addressing the purpose and need of the project.

**Table 3.10-1. Hazardous Materials Impacts**

	No Build	Alternative 1	Alternative 2 (Preferred Alternative)	Alternative 3
Hazardous Materials	No impact	Alternative 1 would affect 34 potentially contaminated sites.	Alternative 2 would affect 19 potentially contaminated sites.	Alternative 3 would affect 25 potentially contaminated sites.
		<p>Alternatives 1, 2, and 3 would not cause indirect impacts to contaminated materials because the project would not disturb contaminated parcels beyond the construction footprint, and the project would not induce unplanned development that could encounter contaminated soil or groundwater within the study area.</p> <p>Because Alternatives 1, 2, and 3 would disturb soil during construction, the potential to encounter naturally occurring asbestos and erionite would be the same for each alternative.</p> <p>To evaluate whether naturally occurring asbestos and erionite are present in the study area and the potential effects those minerals would have on material management and worker/public safety, NDOT would evaluate the data from the project's geotechnical fieldwork and collecting soil and rock samples.</p> <p><b>Construction.</b> Current and historical hazardous material areas may be encountered. Affected sites/areas will be evaluated and addressed on a site-specific or area-specific basis.</p>		





## MEASURES TO MINIMIZE AND MITIGATE ADVERSE HAZARDOUS MATERIALS IMPACTS

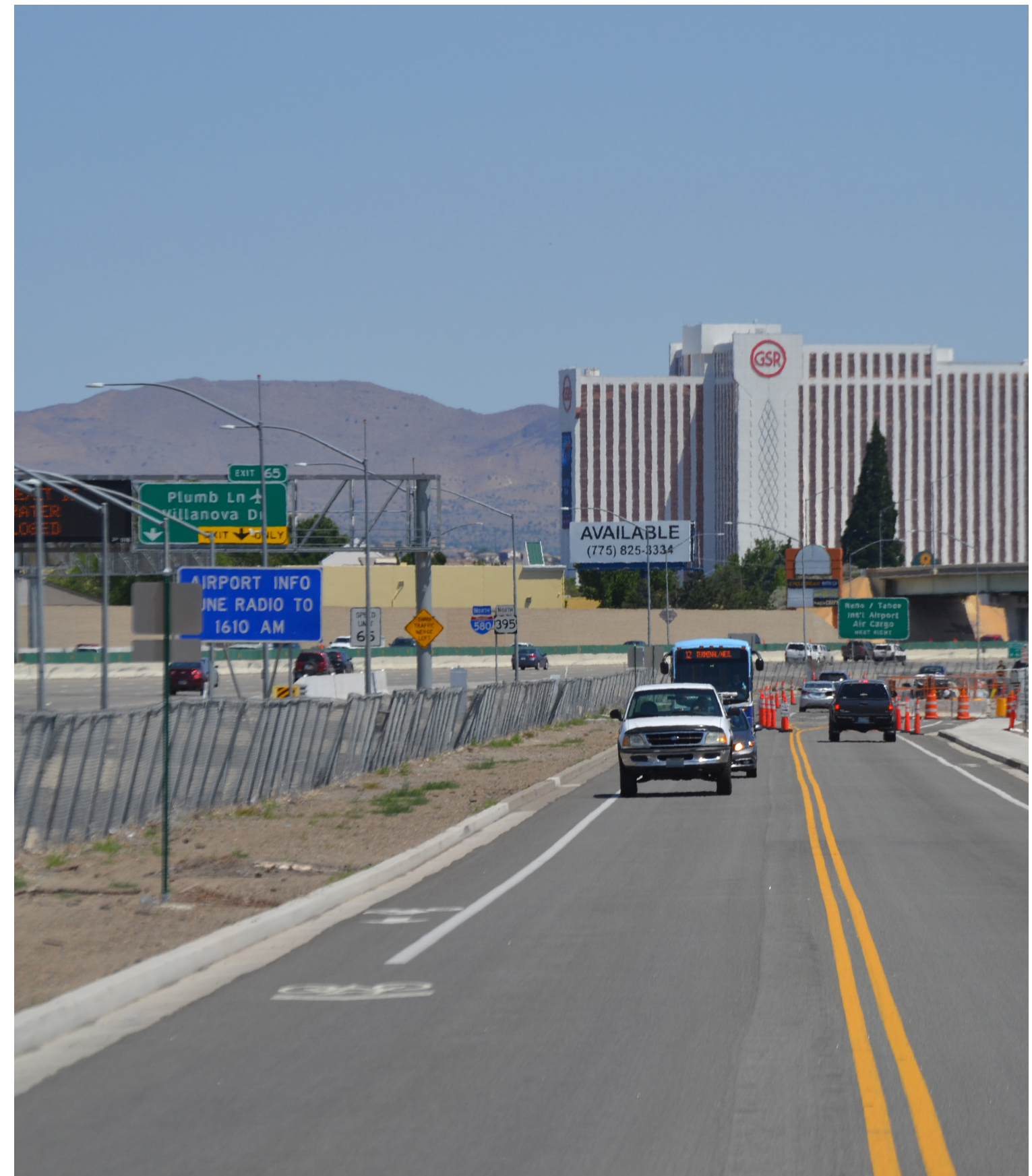
NDOT conducted a hazardous materials assessment to identify potentially contaminated properties and to protect Spaghetti Bowl construction workers who may encounter contaminated soil and groundwater.

From early in the alternatives development phase, NDOT has refined the design of Alternatives 1, 2, and 3 to avoid or minimize adverse effects on properties that contain hazardous or contaminated materials, while also meeting the project's purpose and need.

Properties with known contamination may be evaluated further on a site-by-site basis to include those properties previously identified or sites realized during project-related activities.

**Table 3.10-2. Mitigation Measures for Hazardous Materials Impacts**

	Mitigation All Alternatives
<b>Hazardous Materials</b>	<p>NDOT <b>will</b> survey all structures that <b>will</b> be disturbed or demolished to determine the presence of regulated materials, including universal wastes, asbestos-containing material, and heavy metals. NDOT <b>will</b> remove, manage, and dispose all regulated materials in accordance with applicable regulations, as needed.</p> <p>If NDOT determines that the project <b>will</b> disturb soil containing naturally occurring asbestos and erionite, it <b>will</b> develop best management practices, standard operating procedures, and additional measures that <b>will</b> be included in the project specifications to minimize the exposure to these minerals during earth-moving activities and disposal.</p> <p>Prior to acquiring properties with known contamination, NDOT may conduct additional levels of assessment to determine if further action is needed to evaluate impacts to the property's value and/or proposed construction. Any further assessment and remedial actions <b>will</b> be subject to the approval of the appropriate regulatory agencies, NDOT, and FHWA, as relevant.</p> <p>Special provisions to address predictable contingencies <b>will</b> be included in the construction plans.</p>



## HAZARDOUS MATERIALS REFERENCE

University of Nevada, Reno. 2013. *Nevada In Maps*. Accessed April 6, 2017. <https://mwdl.org/collections/NevadainMaps.php>.