

3.20 SOILS AND GEOLOGY

This section discloses potential impacts of the project on local soils and geology.

3.20.1 Affected Environment

The existing I-25 highway is constructed primarily on fill soil, including waste steel mill slag in the southern portion of the corridor. Geologic conditions that could affect the project include expansive soils, shallow bedrock, unstable or potentially unstable slopes, or seismic risks. Mapping from the National Resource Conservation Service indicates the study area is located in an area of silty clay, clay loam, and sandy loam soils. The highway through Pueblo is located in an urban setting.

3.20.2 Environmental Consequences

3.20.2.1 No Action Alternative

The No Build Alternative would not involve new construction and therefore would not affect soils or geologic conditions.

3.20.2.2 Build Alternatives

Because both Build Alternatives generally follow the current I-25 alignment, which was built on fill, it is unlikely that the Build Alternatives would encounter unstable soils or geological hazards during construction.

3.20.2.3 Indirect Effects

Obtaining sufficient quantities of construction fill for the Build Alternatives may require the purchase of material from several commercial quarries in the region. Aggregate for concrete and other granular material for construction fill would be mined from borrow pits distant from the project area, reducing by a small amount the regional availability of aggregate and fill for use on other projects. Because material extraction would occur farther away from the project area compared to other construction activities, this is an indirect impact of the Build Alternatives. The volume of aggregate used for construction of either Build Alternative would be small in comparison with the regional supply.

3.20.3 Mitigation

A detailed geotechnical and soils analysis of the subsurface will be required during the final project design process to determine the structural stability and load-bearing capacity of geology and soils in the study area. The results of the geotechnical analysis will be used to establish the final roadway and structures designs.