

3.1 Introduction

From a regional perspective, the Project Area is predominantly located within the Wasatch Plateau Subsection of the Basin and Range-Colorado Plateau Transition Physiographic Province (Stokes, 1986). The Wasatch Plateau is marked by gently rolling or near-flat surfaces on the plateau summits and stream cut canyons on the east flank of the Wasatch Plateau. Adjacent to the Wasatch Plateau, the eastern end of the Project Area is located within the Mancos Shale Lowlands Subsection of the Canyonlands Section of the Colorado Plateau Province. Topography in this Subsection is influenced by easily eroded sedimentary rock at the eastern base of the High Plateaus.

The topography of the area generally includes steep canyon walls, escarpments, and badlands. Flat ledges, vertical cliffs, and sloping erosional and depositional surfaces due to the differential erosion of interbedded shale and sandstones all contribute to the varied relief in the Project Area. Faulting and fracturing also affect the local topography. Topographic relief across the project site ranges from approximately 7,700 feet at the western boundary to 6,000 feet on the east.

All of the Alternative routes for the proposed project would descend from the southeast side of the Wasatch Plateau through canyons into Castle Valley.

Along the Quitchupah Creek Road alignment (Alternative B), most of the alluvial deposits are easily eroded fine sand to silts with minor coarse sand and gravel. The existing road in Quitchupah Creek canyon is subject to the effects of erosion, and at times becomes impassable due to washouts and deposition of alluvial debris on lowlands.