



COSMIX I-25 at Mark Dabling Blvd

Colorado Springs, CO

The Geopier GP3® system was installed directly adjacent to I-25 without interruption to the heavy traffic flow

Description: The project consisted of repairing a section of I-25 leading to a bridge crossing over Mark Dabling Blvd. that had experienced extreme differential settlements between the approach and bridge surface.

Subsurface Conditions: The soil profile included 35 feet of undocumented fill material consisting of clayey silty sands and sandy silty clays with occasional construction debris and gravel underlain by 10 feet of sandy silty clay underlain by claystone bedrock.

Geopier Solution: A plan was developed to remove sections of concrete roadway in a staged manner in order to maintain traffic flow on the very busy interstate. Once the concrete roadway was removed, five feet of subgrade was excavated prior to Rammed Aggregate Pier® (RAP) installation. RAP elements were installed in a grid pattern to stiffen and strengthen the subgrade soils. Once RAP installation was complete, a 5 foot thick load transfer platform was built above RAP elements prior to replacing the concrete roadway. This solution corrected the “bump before the bridge” and resulted in insignificant levels



of differential settlement between the approach and bridge structure.

PROJECT TEAM

Owner:

CDOT

Geotechnical Engineer:

Ground Engineering Consultants, Inc.

Structural Engineer:

CH2M Hill

General Contractor:

SEMA Construction

Geopier Installer:

Advanced Foundation Systems

Geopier Designer:

GFC-Colorado