Geotechnical Section

Field Investigation Unit

Geotechnical Engineering Unit
“Never Design Something on Paper You Have to Wish Into the Ground.”
Karl Terzaghi, the Father of Soil Mechanics
Geotechnical Section Organization

GEOTECHNICAL SECTION
Jeff Jackson, P.E., Geotechnical Engineer

Soil & Rock Mechanics Laboratory
Al Brewer

Administrative Support
Jean Jagoda

Field Investigation Unit
Three Full Time Drill Crews

Engineering Unit
Eleven Civil Engineers & Geologists
Field Investigation Unit

Mike Lloyd, Supervisor

Crew 3
Ivyl Boyd, Crew Chief

Crew 4
John Winfield, Crew Chief

Crew 6
Ben Frederick, Crew Chief
DRILLING CAPABILITY

- 3 Crews
- CPT on F-550 Truck
- CME 850 - Tracked
- CME 1050 - ATV
- CME 55 - Truck Mounted
- CME 45 “Skid” Rig
- Barge (Mounts CME 45 Drill)
Bridge Foundation Investigations

Whether for pile, spread footing, or drilled shaft foundations.
Roadway Alignment Investigations

For subgrade, embankment, cut, fill, and culvert locations.
Geotechnical Engineering Unit

Scott Helm, P.G.
Operations Manager

Bret Roundy, P.G.
03 Geotechnical Mgr

Pat McCann, P.E.
03 Geotechnical Mgr

Lee Grosch, P.E.
03 Geotechnical Mgr

DJ Berg, P.E.
04 Geotechnical Mgr

Cameron Hoberdann, P.E.
05 Geotechnical Mgr

Pending

Nick Jaynes, P.E.
DJ CE Specialist

John Starkey, P.G.
DS CE Specialist

Bob Evans, G.I.T.
DK CE Specialist

Dan Kloth, P.E.
DS CE Specialist

Ch-002 20.0kV 13.4mm x<3 SE(M) 100 um
The Geotechnical Engineering Unit is responsible for-

- **PROJECT DESIGN**
  - Conduct geotechnical investigations, analyses, and design producing engineering reports, design memos and detailed drawings, and contract documents such as special provisions.

- **CONSTRUCTION SUPPORT**
  - Guidance for building geotechnical features and inspection support, geotechnical monitoring during construction, and evaluation of unexpected site conditions.

- **MAINTENANCE SUPPORT & EMERGENCY RESPONSE**
  - Assisting with emergencies arising from rockfall incidents, failure of slopes or pavement, stream/river bank instability, foundation and retaining wall issues, meteor impacts, zombie invasions, etc.
The Engineering Unit also-

- Has its own accredited laboratory for testing of soil and rock samples.
- Conducts and maintains long term, statewide, monitoring programs.
- Maintains the MDT Rock Slope Asset Management Program (RAMP, formerly known as the Rockfall Hazard Rating System.)
- Involved in numerous multidiscipline MDT research projects.
PROJECT DESIGN

Areas of Responsibility

- Pile Foundations
- Spread Footing Foundations
- Drilled Shaft Foundations
- Soil Slope Design
- Rock Slope Design
- Rockfall Mitigation
- Embankment Foundations
- Culvert Foundations
- Landslide Mitigation
- Earthwork Shrink/Swell
- Subsurface Drainage
- Geotextile Applications
- Erosion Mitigation
- Wetland Hydraulics
- Groundwater Issues
- Construction Dewatering
- Forensic Evaluations
- Stream Scour Mitigation
- Reinforced Soil Slopes
- Retaining Walls
- MSE Walls
- Soil Nail Walls
- Construction Blasting
- Demolition Blasting
Construction Monitoring and Support
Construction Monitoring and Support
Construction Monitoring and Support
Construction Monitoring and Support
And Occasionally

Destruction Monitoring and Support
Maintenance Support &
Emergency Response
Maintenance Support & Emergency Response

Slope Failures
Maintenance Support & Emergency Response

Slope Failures
Maintenance Support & Emergency Response

Repairs
Maintenance Support & Emergency Response

Repairs
Maintenance Support & Emergency Response

Repairs
Maintenance Support & Emergency Response

Repairs
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Eleven Civil Engineers & Geologists, assigned to specific Districts