

# Introduction to Geotechnical Services

Roy Bibbens  
Supervising Transportation Engineer  
Office of Geotechnical Design North

## Geotechnical Services

Geotechnical Services provides statewide geotechnical engineering and engineering geology products and services for the Department. This includes:

Development of recommendations for earthwork and structures, including design and construction support

Geotechnical earthquake engineering

Emergency response

Soil and rock field investigations

Geotechnical laboratory testing

Statewide policy, standards, procedure and guidance for geotechnical engineering and engineering geology products and services

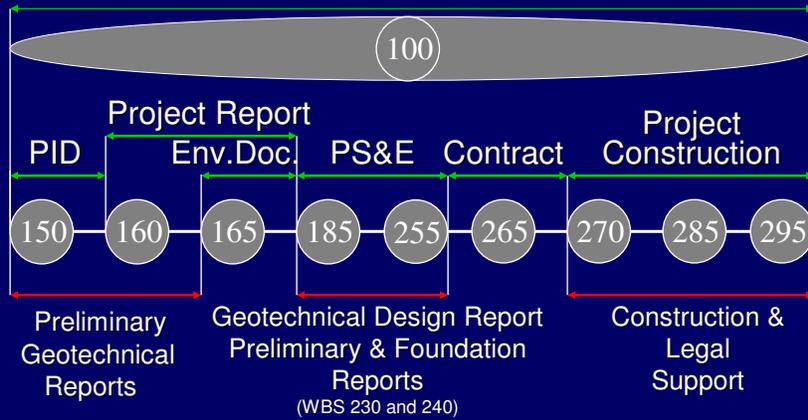
Liaison to professional groups involved in soil and geologic investigations, design and construction.

## Geotechnical Services (GS) Overview

- One of Eight Subdivisions within the Division of Engineering Services
- 240 Staff: Engineers, Geologists, Technicians, Drillers and Administrative Staff
- Office Locations: Sacramento; Eureka; Redding; Grass Valley; Oakland; San Luis Obispo; Los Angeles; San Diego



# Project Development Process and Typical GS Deliverables



State of California • Department of Transportation

**Geotechnical Services**

**DIVISION OF ENGINEERING SERVICES**

**Caltrans**

**Caltrans**

Geotechnical Services provides planning, design, construction and maintenance recommendations to achieve project objectives. Our recommendations help clients effectively manage project scope, schedule and cost risks.

Bay Bridge Pile Foundation

Construction Support

Landslides

Rockfall

Anchored Walls

# Geotechnical Services

- Earthwork:
  - Cuts
  - Fills
  - Embankment
  - Foundations
  - Compaction Issues

## Earthwork



1V:2H SL  
(maximum

Re  
Fa

New Di

## Landslides



## Rockfall



## Rockfall



## Rock Scaling

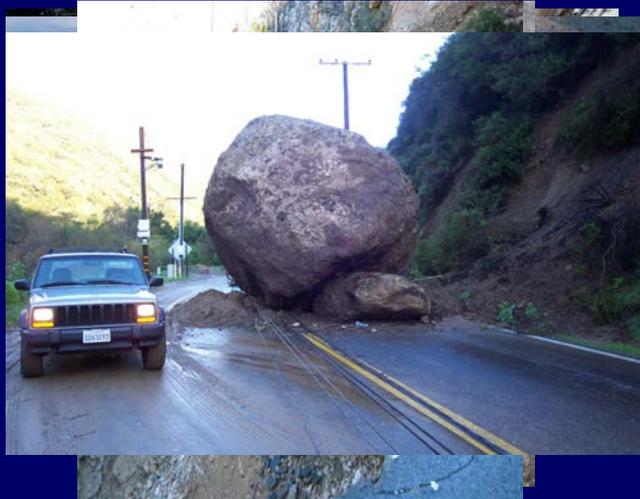


## Rockfall

- Rockfall: Nets, Cables and Blasting:



## Maintenance & Storm Damage



# Bridge Foundations



# Seismic Assessment



## Scour Assessment and Repair



## Retaining Walls



## Building Foundations



## Sign and Soundwall Foundations



## Construction Support



## Legal Support



## Drilling Services



## Drilling Services

- Over 100 Pieces of Equipment
- 40 Highly Trained Drillers
- 15 Drill Rigs
- 8 Full Time Crews
- Our Own Barge

## Geotechnical Support



## Geotechnical Services

For More Information, please visit our web page:

[www.dot.ca.gov/hq/esc/geotech/](http://www.dot.ca.gov/hq/esc/geotech/)