SR-710 Tunnel Technical Study Community Meeting

Los Angeles Christian Presbyterian Church

February 2, 2010

Caltrans

STATE ROUTE 710 TUNNEL TECHNICAL STUDY

Metro

Welcome & Introductions

- Elected Officials
- Metro Staff
- Caltrans Staff
- Technical Team
- Community Outreach Team

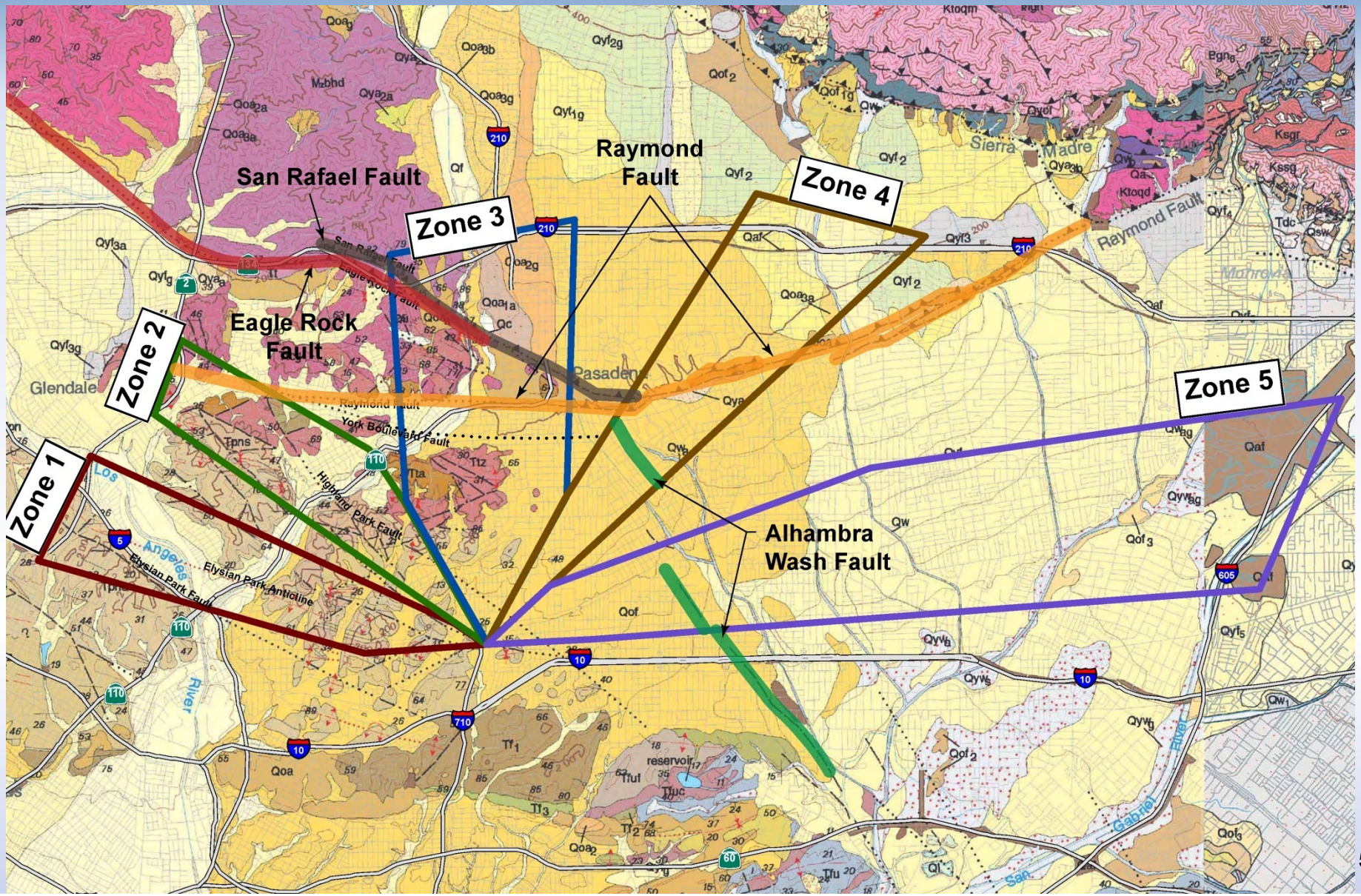
Meeting Purpose

- Review Purpose of the Study
- Present the Findings and Draft Geotechnical Summary Report
- Receive your feedback on the Draft Geotechnical Summary Report

Purpose of the Study

- Five zones were investigated
- Collected geotechnical, geological, and hydro-geological information for each zone
- Respect Route Neutrality

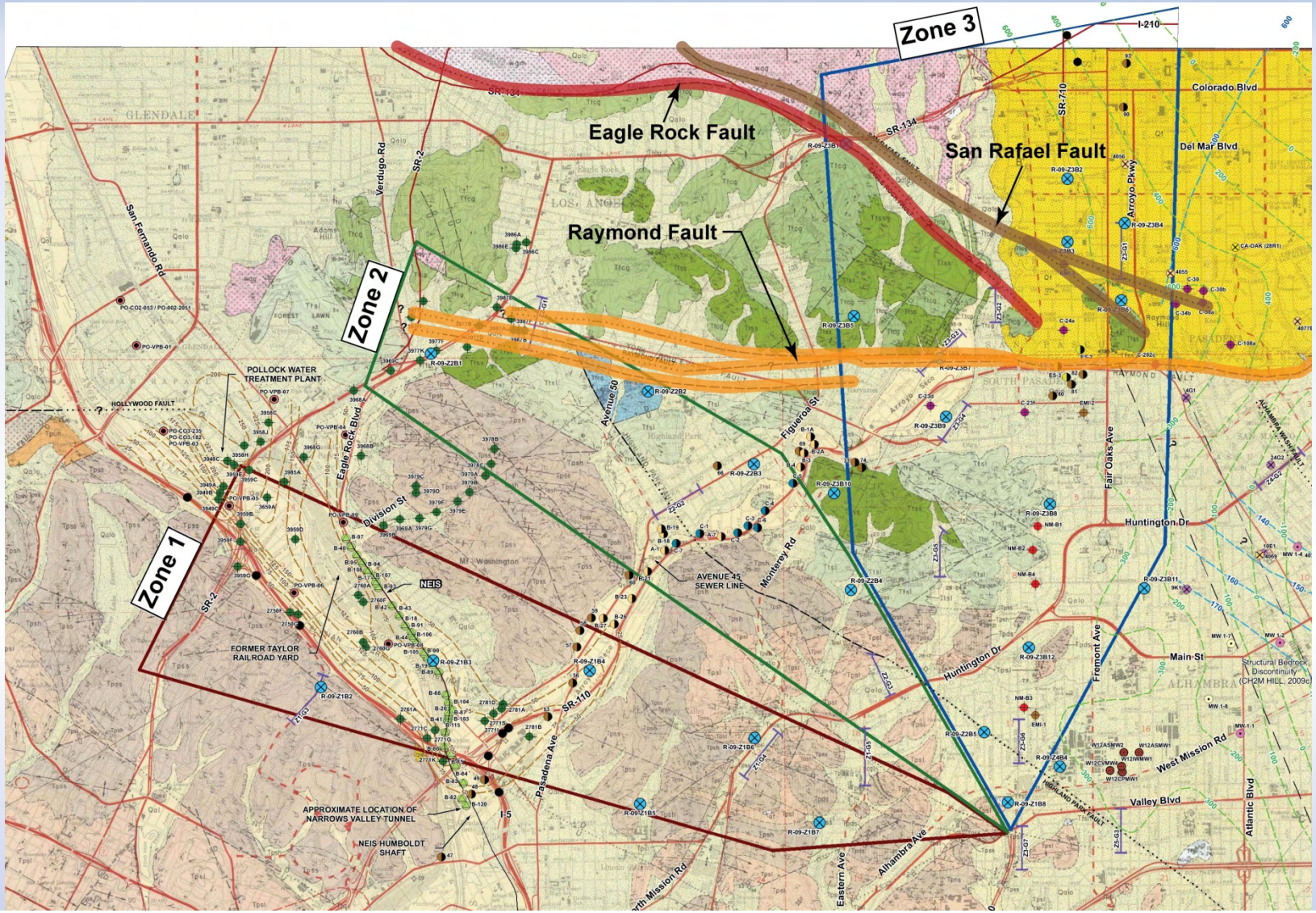
Study Zones


San Rafael Fault
Raymond Fault
Zone 4
Zone 3
Eagle Rock Fault
Zone 2
Zone 1
Zone 5
Alhambra Wash Fault
Glendale
Pasadena
Sierra Madre
Raymond Fault
Eagle Rock Fault
Raymond Fault
York Boulevard Fault
Highland Park Fault
Elysian Park Fault
Elysian Park Anticline
Los Angeles River
San Gabriel River
reservoir

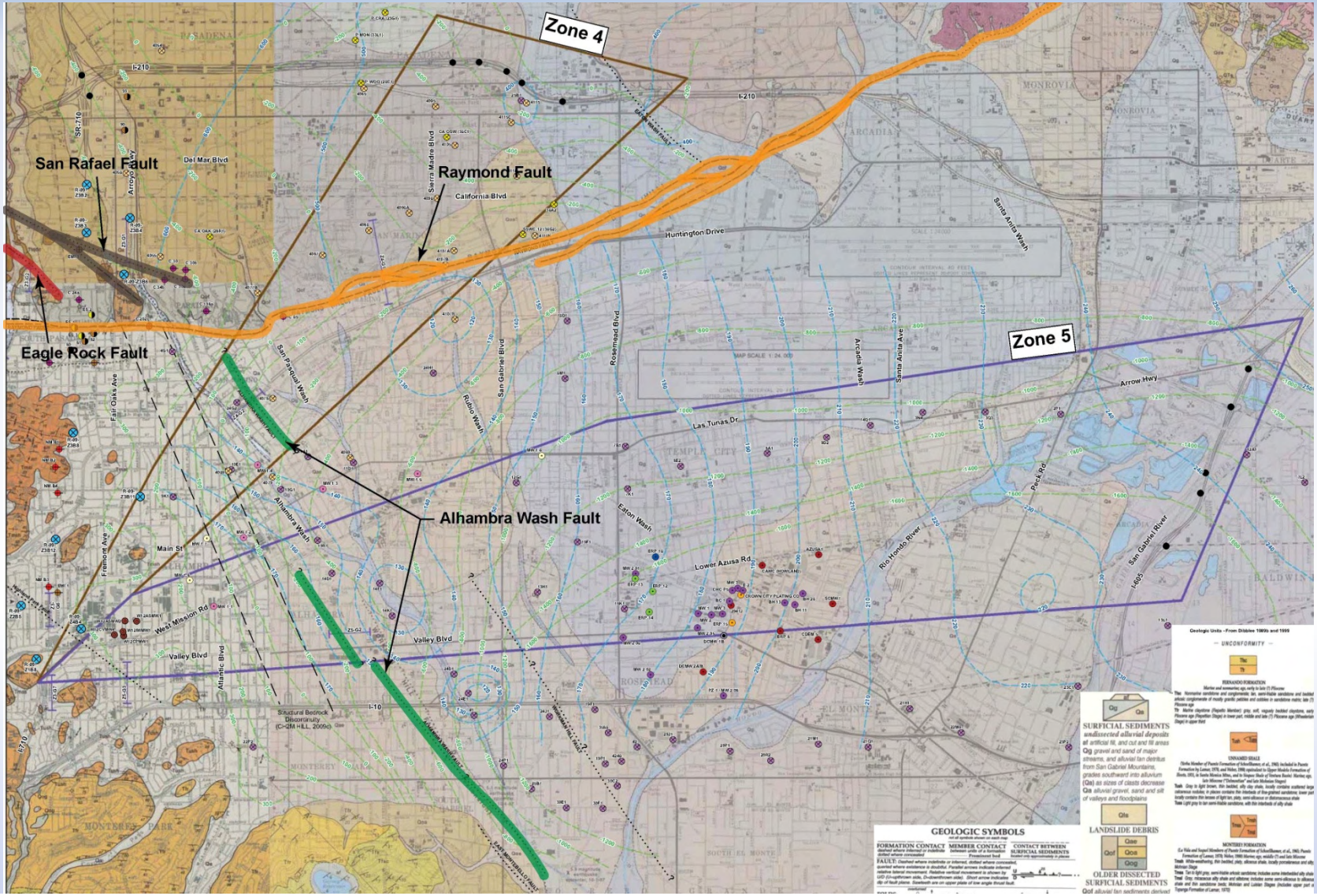
Scope of Tunnel Study

- Collected and reviewed existing information
- Completed field exploration
  - 25 deep core borings
  - 17 Seismic reflection lines
  - 78 surface wave measurements
- Evaluated collected data
- Prepared draft summary report

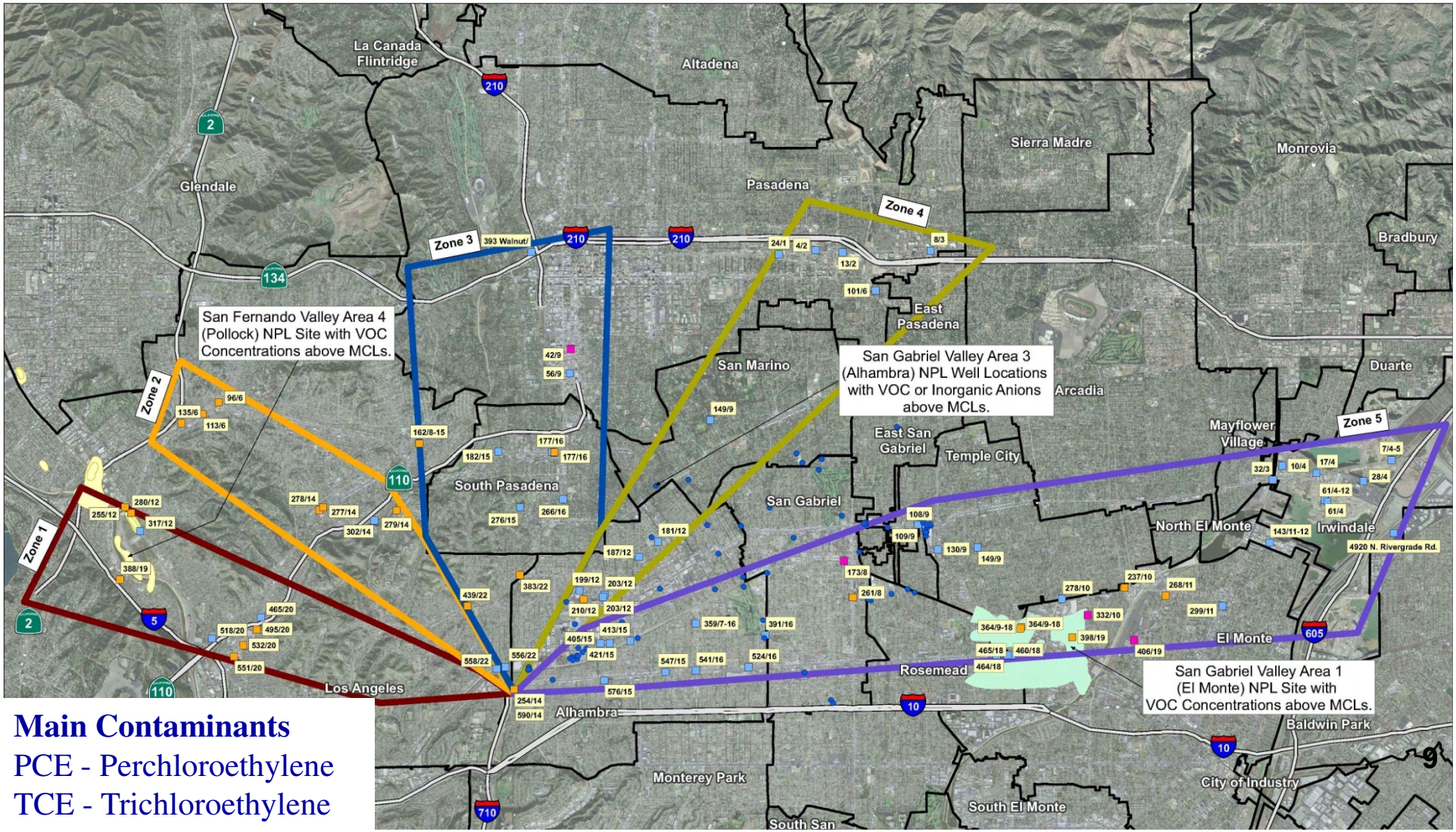
Summary of Data and Faulting Zones 1, 2, and 3



Summary of Data and Faulting, Zones 4 and 5



Limits of Potential Groundwater Contamination



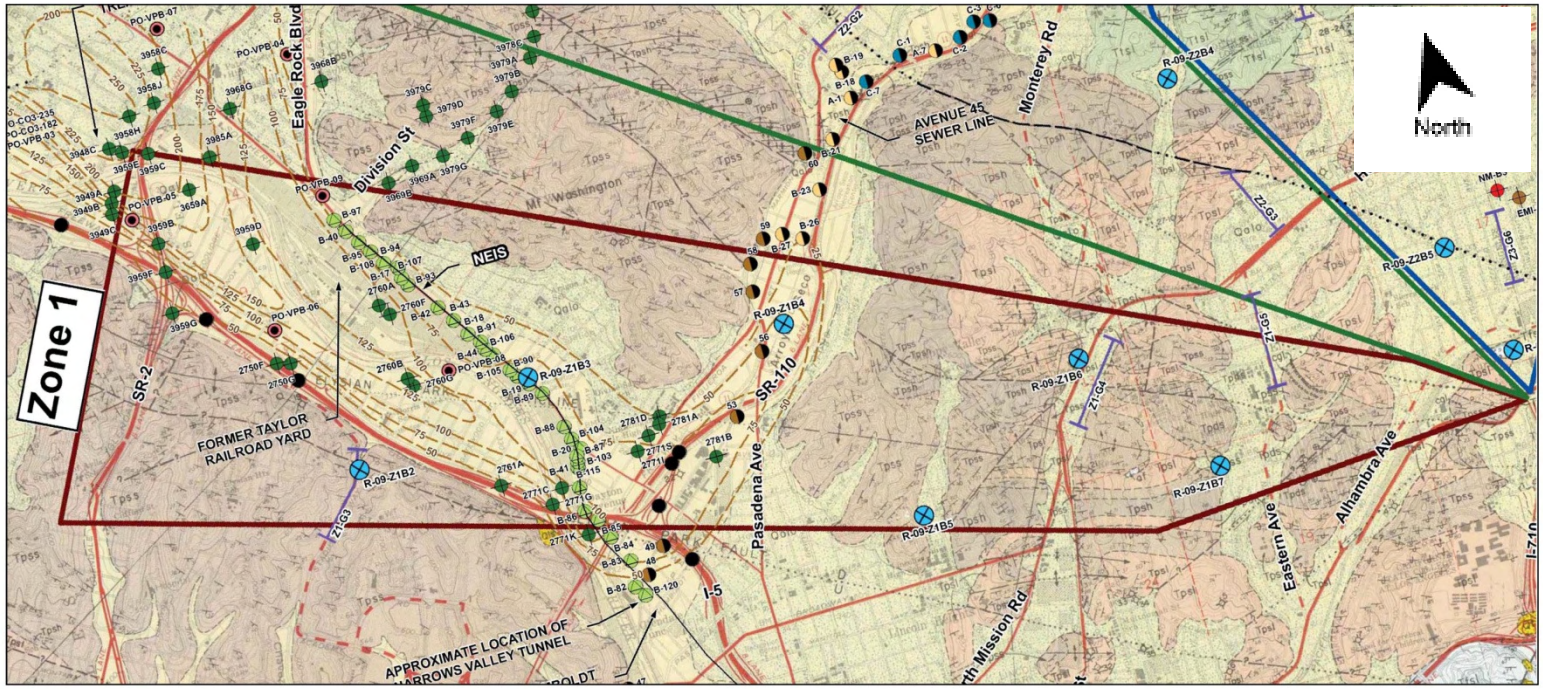
Main Contaminants

PCE - Perchloroethylene

TCE - Trichloroethylene

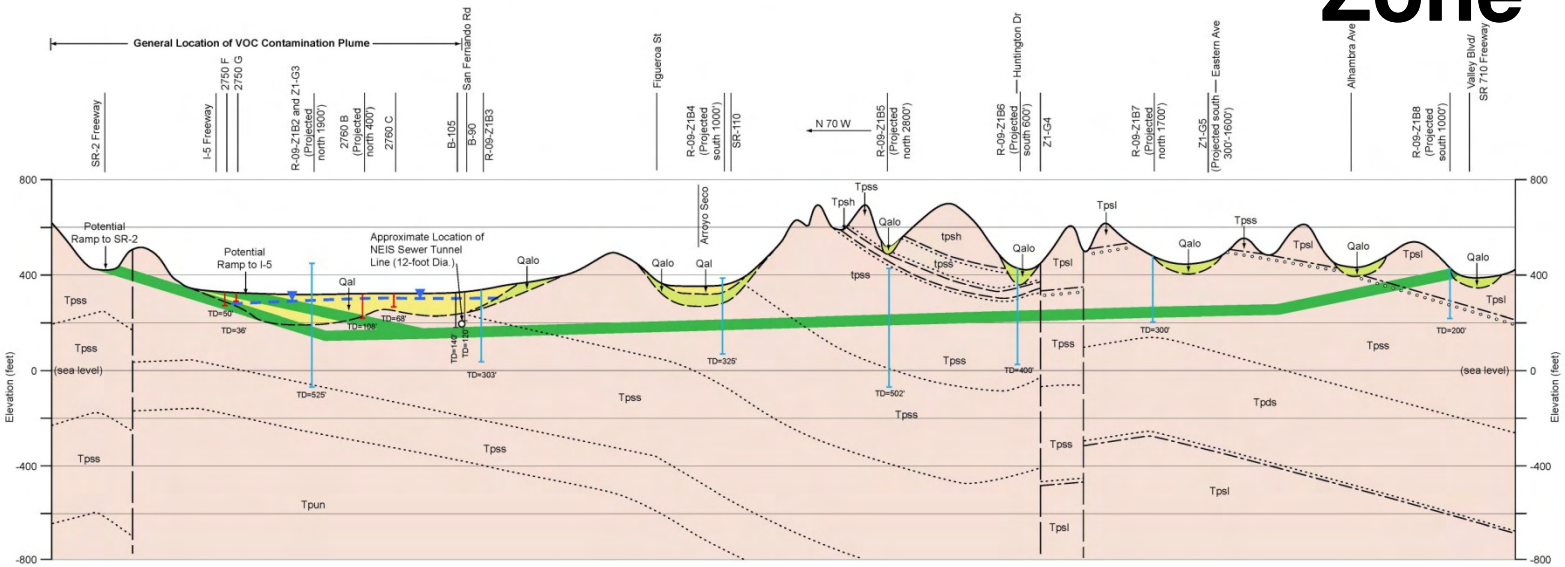
Subsurface Conditions of Zones 1-5

Geotechnical Map



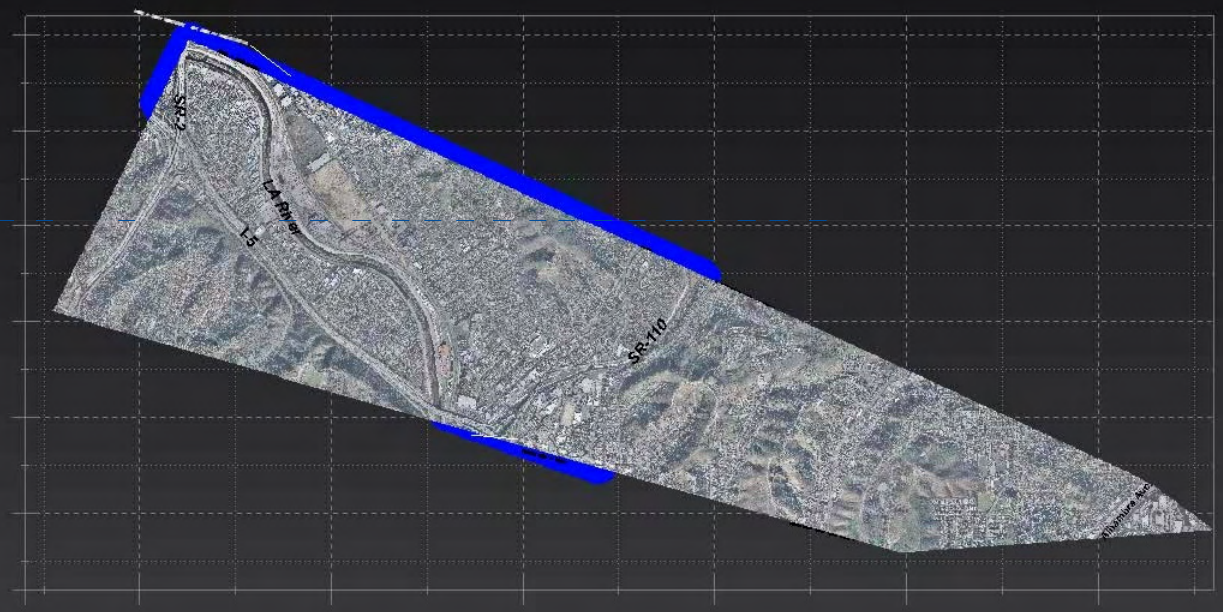
Representative Geologic Profile for Zone 1

Zone 1



Zone 1 (to SR-2 at I-5)

- Uniform geologic conditions consisting mainly of Puente Formation
  - Weak sandstone with thin siltstone interbeds
- Alluvium has potential for high groundwater inflows
- Several inactive faults within the Zone
- Potential gassy conditions
- Superfund site located in the northwest portion
- Groundwater is approximately 20 to 50 feet below surface



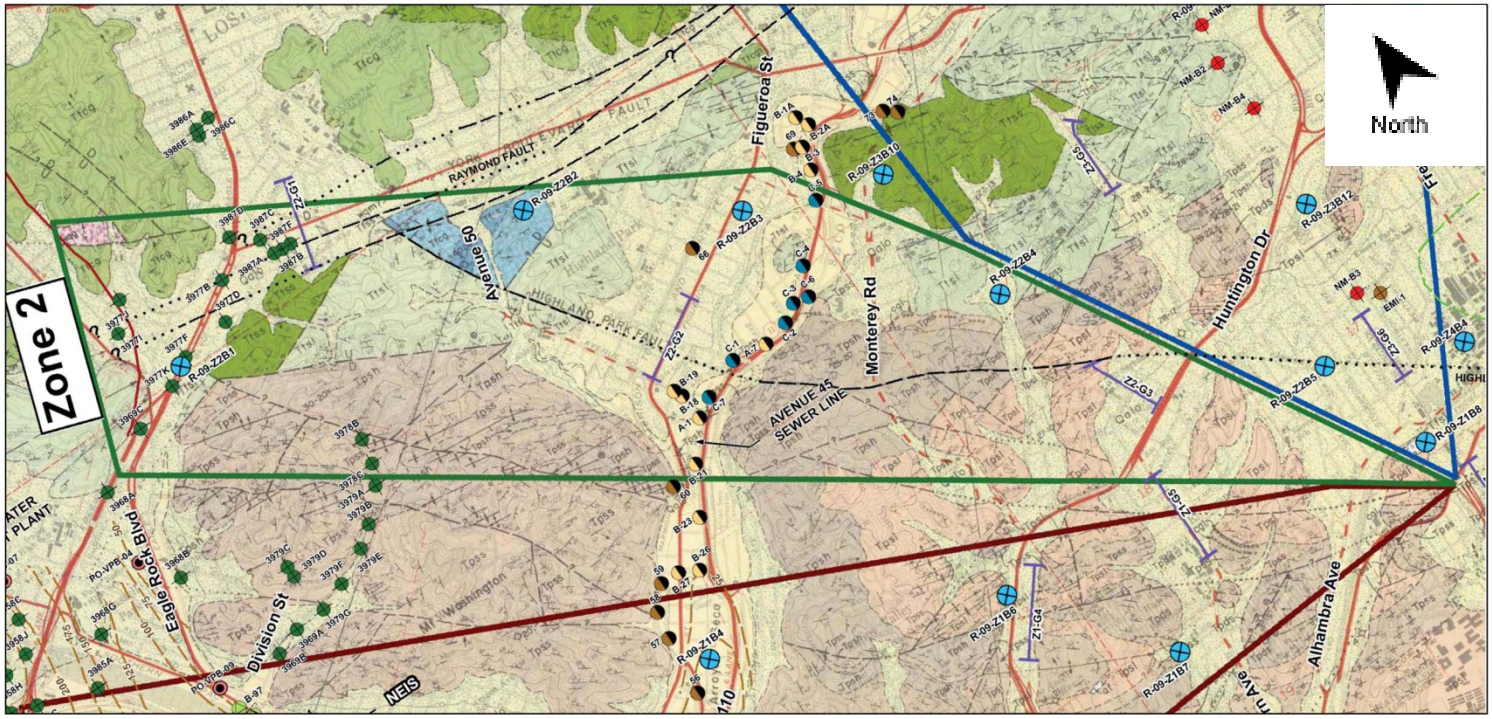
Tunnel

Puente Formation (Tp)

Alluvial Soil (Qalo)

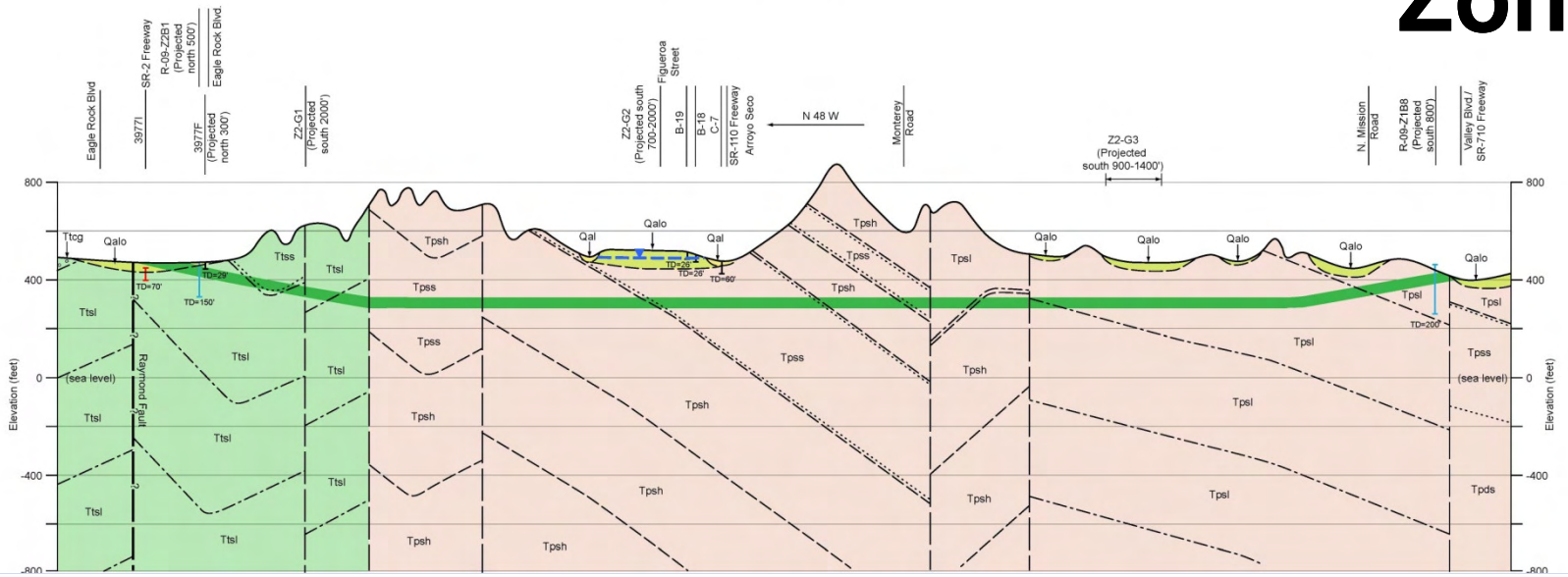
CH2MHILL

Geotechnical Map



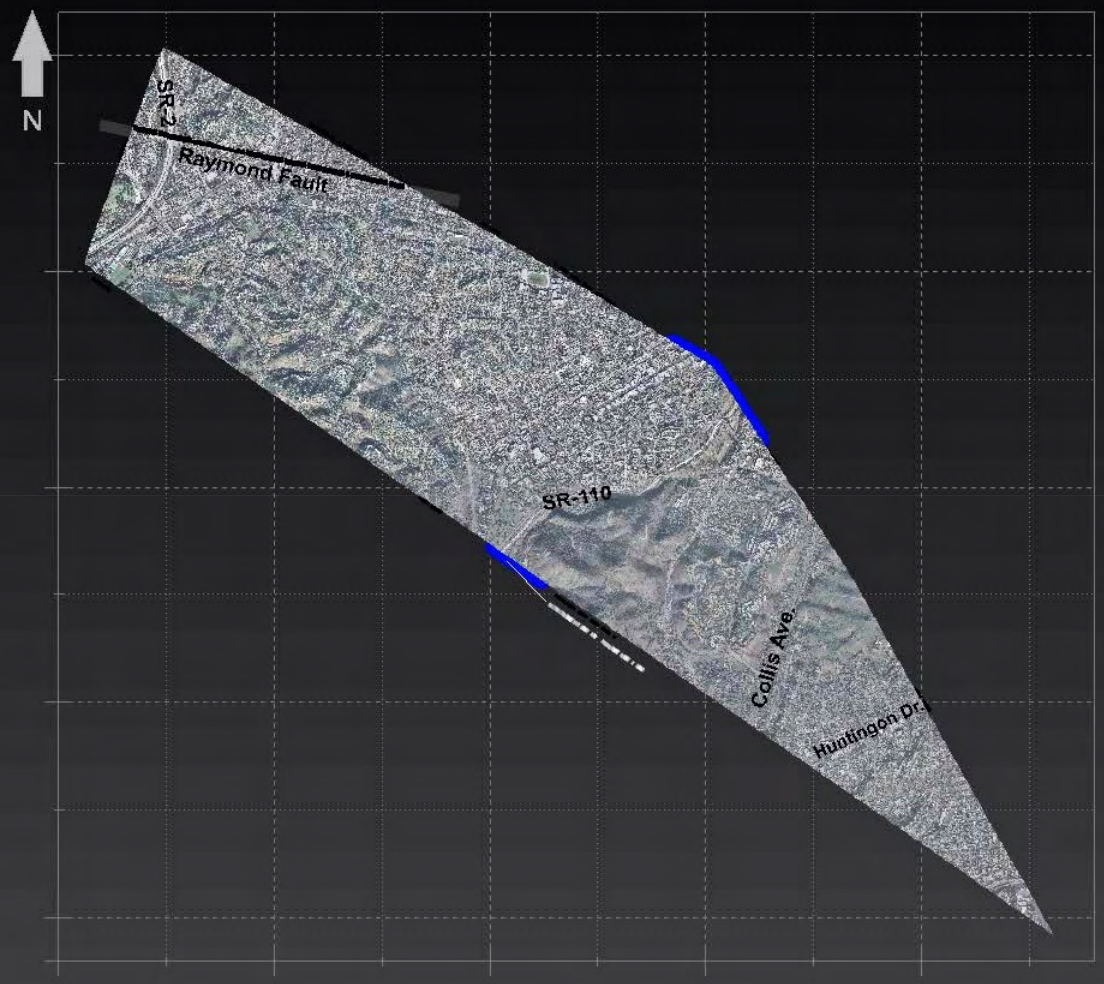
Representative Geologic Profile for Zone 2

Zone 2



Zone 2 (to SR-2)

- Topanga, Puente and Fernando Formations:
  - Topanga Formation (siltstone, sandstone)
  - Puente Formation (sandstone, siltstone, shale)
  - Fernando Formation (sandstone, conglomerate)
- Shallow alluvium at northwest end
- Variable geologic structures
- Several inactive faults within the zone
- Raymond fault crosses near northwest end
- Groundwater locally up to 20 ft below surface



Alluvial Soil (Qalo)

Fernando Formation (Tf)

Topanga Formation (Tt)

Puente Formation (Tp)

Tunnel

CH2MHILL