

17 August 2020

Buck Endemann.
K.L. Gates LLP
4 Embarcadero Center
Suite 1200
San Francisco, California 94111

RE: Technical Memorandum
Propose Strata Verde Project
Reconfiguration of Y-Road Along Existing Alignment
San Benito County, California
CE&G Document #200520.002

TEXT TO ACCOMPANY FIGURE 2 FOR WIDENING OF Y-ROAD ALONG THE EXISTING ALIGNMENT

Widening Y-Road along its existing alignment is constrained on the west by the Caltrans right-of-way (ROW) and to the east by the adjoining hillside property. Road widening will necessarily be accomplished along the east side of the road within the existing fence lines which we assume is the property boundary. We estimate that the distance between the existing fence lines roughly varies between 60 and 80 feet. It is estimated that the distance between the fence line increases to approximately 200 to 250 feet at the existing cut slope. The project will require crossing jurisdictional areas and several landslide features as well as excavation into the existing cut slope. A summary of the geologic and geotechnical constraints is depicted on the attached Figure 2.

1. A massive landslide feature is depicted on the geologic and landslide features maps by Majmundar (1994) extending beneath the Betabel-Highway 101 Interchange. This landslide hazard will have to be addressed and will require extensive off-site mitigation measures and authorization of the neighboring landowner.

2. Widening of Y-Road will require repair and/or replacement and widening of two existing culverts. This work will occur within jurisdictional areas and require governing agencies approvals including, but not limited to the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, the California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service. The culverts will need to consider potential sediment impacts from the upslope/upstream areas which will likely require authorization of the neighboring property owner.

The gate to enter the property appears to be located near the southern culvert. We assume that Caltrans owns the property and Y Road south of the gate and to the Betabel-Highway 101 interchange.

3. Widening of Y-Road will likely impact the lower reaches of two 5-15' deep landslide features. Probable mitigation measures will include construction of retaining wall(s) along the east side of Y-Road. Retaining walls crossing the landslide features would require off-site stabilization measures such as tie-backs and authorization from the neighboring property owner.

3A. Widening of Y-Road will require grading/cutting into the lower reach of the large landslide at the north end of the cut slope. This landslide feature is estimated to be between 15 and 30' deep and extends for a considerable distance up slope onto the adjacent property. Stabilization measures for the section of the widened road within the landslide feature will require mitigation measures extending onto the upslope property and require the authorization of the neighboring property owner.

Remedial landslide stabilization measures on the upslope property would likely include, but not be limited to tie-back retaining walls, buttress fills, and associated subdrains.

Retaining walls will be required along the widened portion of Y-Road which extends across the cut slope. If tie-backs are required in this area, it is probable that they would remain within the cut slope boundary.

4. Portions of in-tract Collector Road A (Y-Road continuation) are located within the 100-year floodplain and will require design considerations and agency involvement. Liquefaction prone areas are likely to be encountered along the road alignment and are a design consideration.

5. Collector Road A (Y-Road continuation) will cross the active Sargent Fault and within the Alquist-Priolo Special Studies Zone. Crossing an active fault is a design consideration for buried utilities and structures.

LIMITATIONS

The findings and conclusions in this memorandum are based upon our understanding of the proposed project, geologic site reconnaissance, review of published geologic maps in our files, analysis of the collected data, and professional judgement.

Site conditions described in the text of this memorandum and shown on Figure 1 are those existing at the time of our last field reconnaissance and are not necessarily representative of the site conditions at other times or locations.

The findings of this memorandum should be considered valid for a period of three years unless the conditions of the site change. After a period of three years, Cal Engineering & Geology, Inc. should be contacted to review the site conditions and prepare a letter regarding the applicability of this report.

The evaluation or identification of the potential presence of hazardous materials at the site was not requested and was beyond the scope of this project and technical memorandum.

Cal Engineering & Geology Inc.



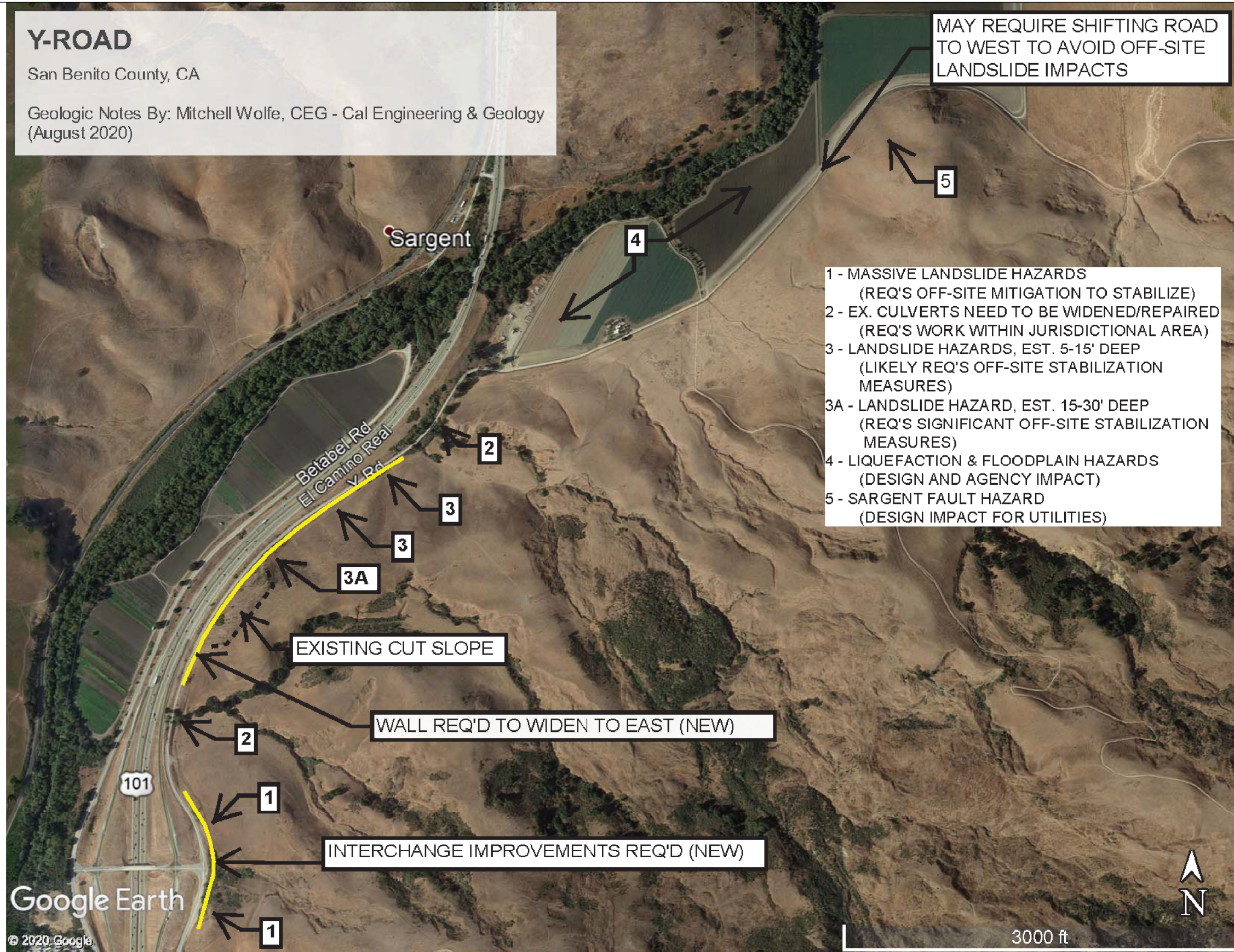
Mitchell D. Wolfe, P.G., E.G

Principal Geologist

Y-ROAD

San Benito County, CA

Geologic Notes By: Mitchell Wolfe, CEG - Cal Engineering & Geology
(August 2020)



MAY REQUIRE SHIFTING ROAD TO WEST TO AVOID OFF-SITE LANDSLIDE IMPACTS

- 1 - MASSIVE LANDSLIDE HAZARDS (REQ'S OFF-SITE MITIGATION TO STABILIZE)
- 2 - EX. CULVERTS NEED TO BE WIDENED/REPAIRED (REQ'S WORK WITHIN JURISDICTIONAL AREA)
- 3 - LANDSLIDE HAZARDS, EST. 5-15' DEEP (LIKELY REQ'S OFF-SITE STABILIZATION MEASURES)
- 3A - LANDSLIDE HAZARD, EST. 15-30' DEEP (REQ'S SIGNIFICANT OFF-SITE STABILIZATION MEASURES)
- 4 - LIQUEFACTION & FLOODPLAIN HAZARDS (DESIGN AND AGENCY IMPACT)
- 5 - SARGENT FAULT HAZARD (DESIGN IMPACT FOR UTILITIES)

EXISTING CUT SLOPE

WALL REQ'D TO WIDEN TO EAST (NEW)

INTERCHANGE IMPROVEMENTS REQ'D (NEW)

BASEMAP REFERENCE

- 1. BASEMAP FROM GOOGLE EARTH
- 2. GEOLOGIC NOTES BY MITCHELL WOLFE, CEG, CAL ENGINEERING & GEOLOGY (AUGUST 2020).



785 Ygnacio Valley Rd.
Walnut Creek, CA, 94596
www.caleng.com
Phone: (925) 935-9771

STRADA VERDE
Y ROAD, SAN JUAN BAUTISA
SAN BENITO COUNTY, CALIFORNIA

**Y ROAD RECONFIGURED ALIGNMENT
ALONG EXISTING ROAD**

200520	AUGUST 2020	FIGURE 2
--------	-------------	----------

M:\2020\00520-KL Gates-Strada Verde San Benito\GIS\ArcGIS\TemplateForOtherFigs2.mxd; 8/17/2020; JIindeman