

T.I.N. ENGINEERING COMPANY

Geotechnical • Structural • Environmental

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File No.: 240002

November 4, 2024

Jay De Miranda and Jackie Ellis
#20 Cinchring Road
Rolling Hills, California 902743

SUBJECT: Site Geologic Reconnaissance Report for Existing Residential Property at # 20
Cinchring Road, Rolling Hills, California

- REFERENCES:**
1. Thomas W. Dibblee, Jr., Geologic Map of the Palos Verdes Peninsula and Vicinity, Redondo Beach, Torrance, and San Pedro Quadrangles, Los Angeles County, California, 1999.
 2. State of California, Seismic Hazard Zones, Redondo Beach Quadrangle, dated March 25, 1999.
 3. Slosson and Associates, Geologic Map of Flying Triangle Landslide, dated February 6, 1987.

Dear Miranda and Ellis:

In accordance with your authorization, we have completed this site geologic reconnaissance report for the existing residential property at #20 Cinchring Road in the City of Rolling Hills of the Los Angeles County. The subject site consists of a level building pad and an approximately 2:1 descending slope to the west, and an approximately 1 ½:1 cut ascending slope to the east. The level building pad is currently occupied by a one-story, single family, residential building with an attached garage. The upper western descending slope, approximately 20 to 25 feet high, is a fill slope. Then, the fill slope continues with an approximately 30:1 natural slope to the bottom. The eastern 1 ½:1, approximately 20 to 25 feet high, is a cut slope. A minor fill slope, approximately 8 to 10 feet high, is located on the northwest side of the subject site. This small northwestern fill slope is currently retained by an existing rail road wood wall. Leaning was observed on the rail road wood wall. A concrete patio is located on the northwest corner of the existing level building pad. Concrete cracks/separations were observed on this concrete patio. An existing concrete walkway is located on the northeast side of the subject site. Concrete cracks/separations were observed on this concrete walkway. The subject site is landscaped with trees, bushes, and shrubs.

It appears that the subject site was graded with filling on the west and northwest and graded with cutting on the east.

GEOLOGICAL STABILITY IN REGIONAL AREA OF SUBJECT SITE

The subject site is located approximately 500 feet northwesterly of the active Flying Triangle landslide. Two unnamed landslides are located on the southerly and northerly sides of the subject site, respectively. The southern unnamed landslide appears associated with Flying Triangle Landslide. The south portion of the subject site appears located within the northern boundary of the southern unnamed landslide as shown on the regional geology map, Plate 3. It is no indication that the southern unnamed landslide is reactive. The northern unnamed landslide appears associated with Portuguese Bend Landslide. The north portion of the subject site appears located within the southern boundary of the northern unnamed landslide as shown on the regional geology map, Plate 3, as well. New road cracks/separations, located approximately 800 feet northeasterly of the subject site, were observed on Cinchring Road near the 12 Cinchring Road site. The northern unnamed landslide appears to be reactive after the past two-year rains. The north boundary of the northern unnamed landslide appears to have been expanded northerly approximately 60 feet. Locations of the Flying Triangle landslide, unnamed landslides, and new road cracks/separations on Cinchring Road near the 12 Cinchring Road site are shown on Regional Geologic Map by Slosson and Associates, Plate 3.

On October 22, 2024, we visited the subject site and observed the on-site and off-site conditions. The front court yard and garage apron are paved with asphalt. Abundant asphalt cracks were observed on the asphalt of the front court yard and garage apron. Poor maintenance of the existing asphalt and the presence of on-site expansive soil appear to be the primary causes of these asphalt cracks. The existing residential building is accessed by a private driveway off Cinchring Road. Asphalt cracks/separations were not observed at the junction of the private driveway and Cinchring Road. Fresh road asphalt cracks/separations were not observed on the section of Cinchring Road located on the north side of the subject site. It appears that the expansion of the southern boundary of the northern unnamed landslide was not occurred.

Opinions, Conclusions, and Recommendations

Based upon the site reconnaissance made on October 22, 2024, review of the regional geologic map by the Dibblee Jr., Reference 1, review of the geologic map by Slosson and Associates, and site observation, we have herein provided the following opinions, conclusions, and recommendations:

1. The existing residential building area is considered to be geologically stable. However, the northern and southern portions of the subject site are located within the southern and northern unnamed landslides, respectively. These two unnamed landslides are associated with Portuguese Bend and Flying Triangle Landslides. There is no indication of the expansion of

the southern boundary of the northern unnamed landslide. There is no indication of the expansion of the northern boundary of the southern unnamed landslide.

2. The existing residential building is accessed by a private driveway off Cinchring Road. No cracks or separations were observed at the junction of the private driveway and Cinchring Road. It appears that the existing residential building is not affected by the southern and northern unnamed landslides.
3. Groundwater plays an enormous role in destabilizing the landslide complex. The landslide movements are depended upon the groundwater in the landslide complex. The more groundwater is present in the landslide complex, the greater the likelihood of landslide movements. The south and north sides of the subject site are located within the unnamed landslides. However, the main residential building is not located in the landslide areas
4. The subject site was graded with filling on the west and northwest and graded with cutting on the east. It appears that eastern foundations of the house are founded into bedrock. However, the western and northwestern foundations of the house appear to be founded into either slope wash or fill. The depths of the fill and/or slope wash on the west and northwest sides of the level building pad can be determined through a soil and geologic investigation.
5. Cracks/separations were observed on the concrete deck to the northwest side of the existing level pad. These cracks/separations were primarily caused by fill settlement.
6. Cracks/separations were observed on the concrete walkway to the northwest. These cracks/separations were primarily caused by fill settlement.
7. House distress was not observed on the existing residential building at the time of this geo reconnaissance.
8. No springs or seepage was observed on the site.
9. No active or potentially active faults are known to traverse or trend toward the site. The site is not situated within the boundaries of an Alquist-Priolo Special Studies Zone.
10. The subject site is not located within the potential seismic hazard zones (liquefaction zones) mapped by the State as shown on Plate 2. The subject site is not located within a seismically-induced landslide hazard zone. The potential of the seismically-induced landslide at the subject site is to be minimal.
11. It appears that the existing house is in generally a fair condition. With implementation of the suggestions contained in this report, with particular emphasis on providing and maintaining drainage control facilities on and around the site. It is reasonable to expect this property to perform satisfactorily for its remaining economic life, barring damage that could result from ground shaking due to seismic events.

The subject site is located approximately 3 miles southerly of the Palos Verdes fault. This fault is the controlling fault with regard to maximum ground shaking at the subject site. The safety element of the Los Angeles County General Plan indicates that the Palos Verdes fault is active.

Because of the site's proximity to the active Palos Verdes fault, it is our opinion that this fault is the primary fault of concern to the subject site and will be the principal source of earthquakes that might have the greatest affect at the subject site. The Palos Verdes fault is expected to have a Maximum Moment Magnitude of 7.0 - 7.25 every 900 years. The slip rate of the Palos Verdes fault is assumed to be 3 mm/year, and is predominantly strike slip but with about 15 percent vertical component (Bruce A. Schell).

It is important to recognize that the potential damage from earthquakes is a risk common to all of southern California. The subject site could be subjected to severe and destructive ground shaking from earthquakes that occur on one of the several active faults that are located in southern California.

The subject site, as with all sites in Southern California, will experience significantly strong seismic ground motions caused by activity on regional faults in some time in the future.

Neither soil/ geologic investigation nor soil testing was performed on the subject site. The above described findings and conclusions are provided based upon the site observation made by us on October 22, 2024. The above described findings and statements of professional opinions do not constitute a guarantee or warranty, expressed or implied.

Thank you for this opportunity to be of service. If you have any questions regarding this opinion letter, please contact the undersigned at the letterhead location.

Very truly yours,

T.I.N. ENGINEERING COMPANY

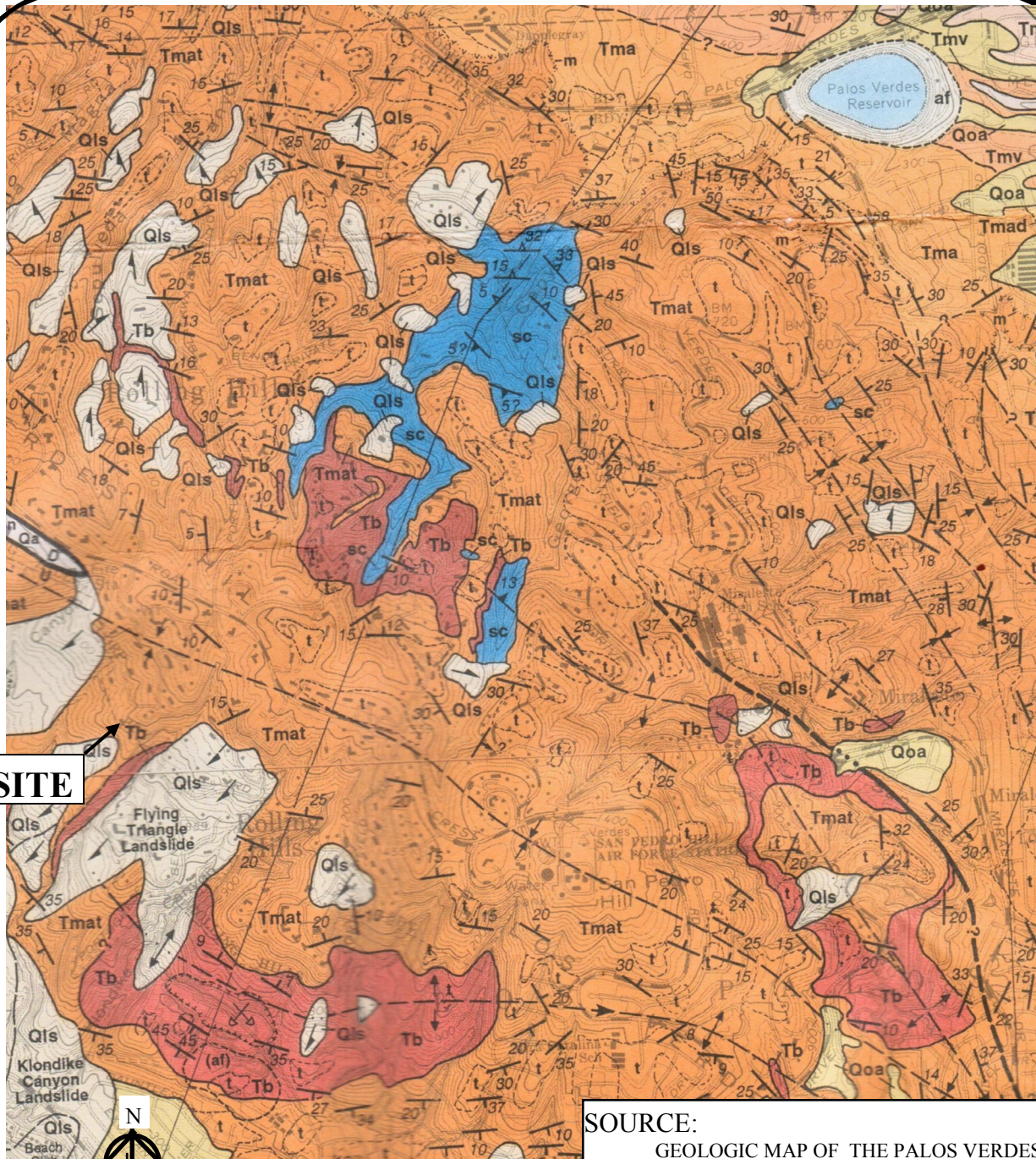


Tony S. C. Lee, M.S., P.E.
Project Engineer

TSCL:ir

- Enclosures: Regional Geologic Map by Dibble..... Plate 1
- Liquefaction Map Plate 2
- Regional Geologic Map by Slosson..... Plate 3

Distribution: Client (1, by Email)



SITE



SCALE 1" = 2,000'

SOURCE:

GEOLOGIC MAP OF THE PALOS VERDES PENINSULA AND VICINITY, REDONDO BEACH, TORRANCE, AND SAN PEDRO QUADRANGLE, LOS ANGELES COUNTY, CALIFORNIA BY THOMAS W. DIBBLEE, JR., 1999

REGIONAL GEOLOGIC MAP BY DIBBLEE

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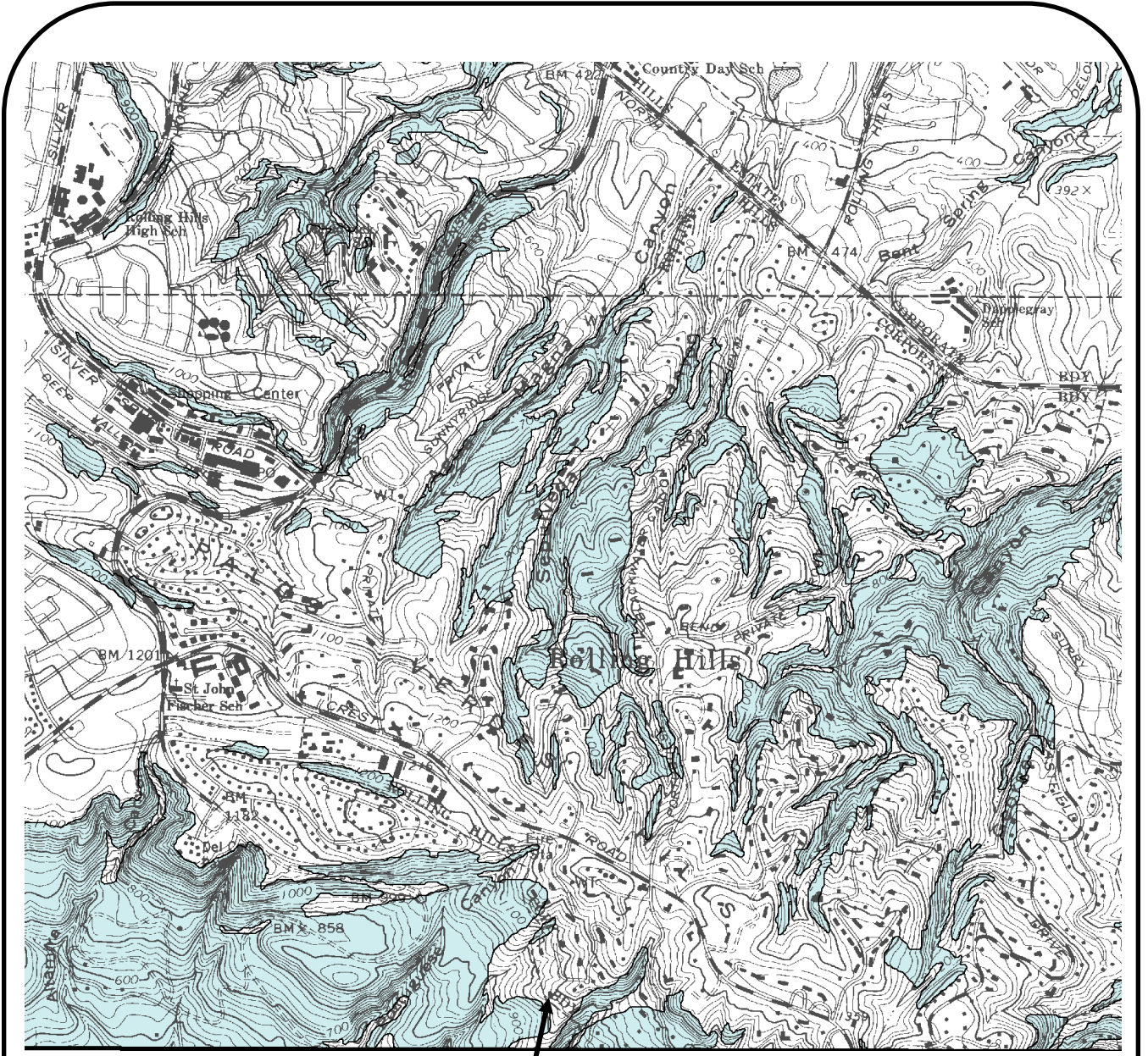
DATE: November 4, 2024

PLATE 1

SITE: Jay De Miranda and Jackie Ellis
#20 Cinchring Road, Rolling Hills, California

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SCALE 1" = 2,000'

SITE

MAP EXPLANATION
Zones of Required Investigation:

-  Liquefaction
Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.
-  Earthquake-Induced Landslides
Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

SEISMIC HAZARD ZONES

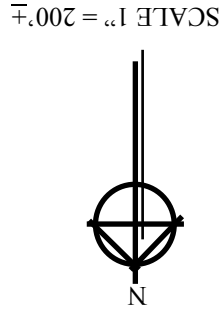
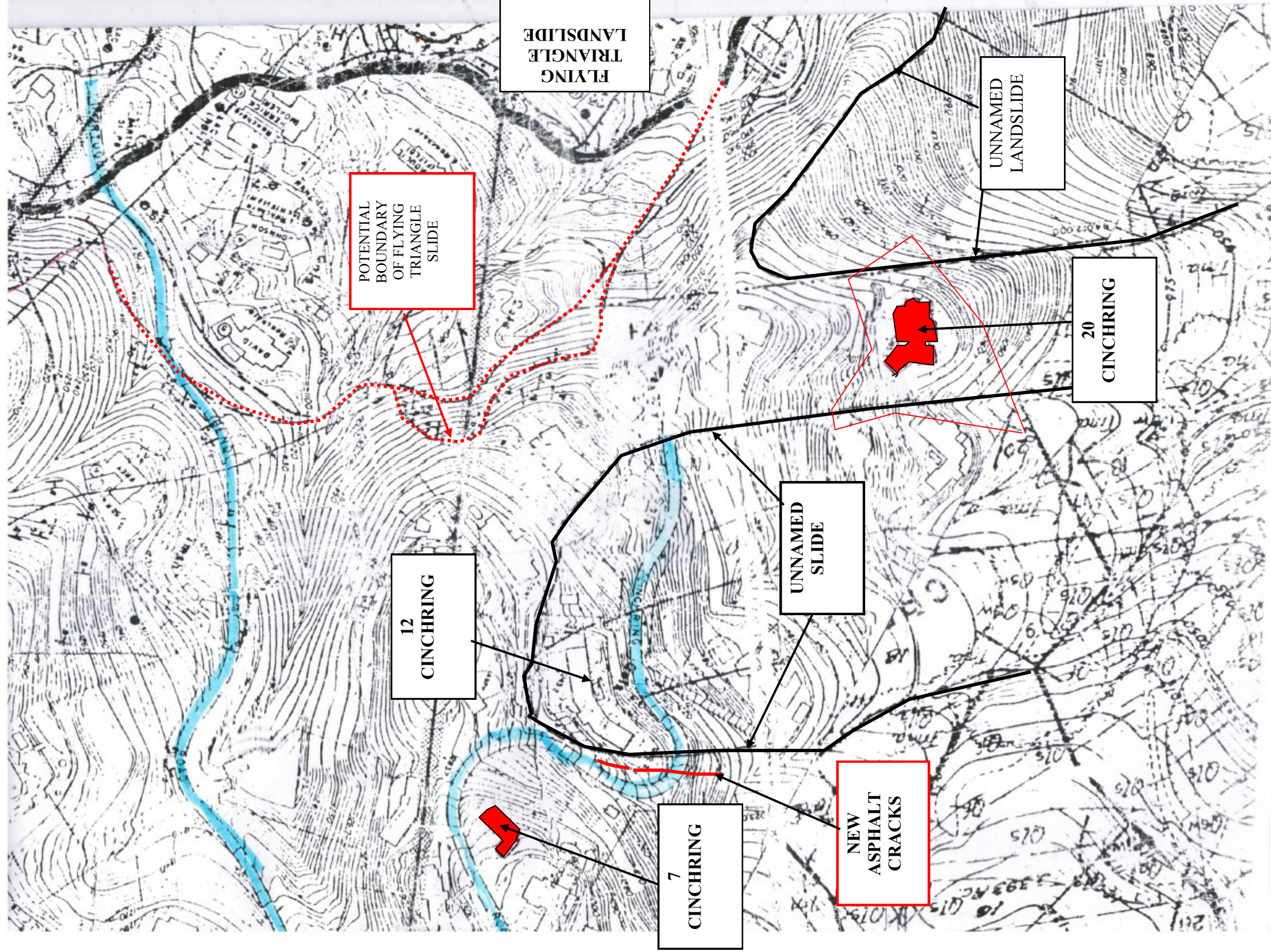
SOURCE:
SEISMIC HAZARD ZONES OFFICE MAP
TORRANCE QUADRANGLE, STATE OF
CALIFORNIA, MARCH 25, 1999

JOB No. : 240002

DATE: November 4, 2024

PLATE 2

SITE: Jay De Miranda and Jackie Ellis
#7 Cinching Road, Rolling Hills, California



REGIONAL GEOLOGIC MAP BY SLOSSON		PLATE 3	
JAY DE MIRANDA AND JACKIE ELLIS #20 CINCHRING ROAD ROLLING HILLS, CALIFORNIA		SCALE: 1" = 200'±	
DATE: NOVEMBER 4, 2024		T.I.N. ENGINEERING COMPANY	
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