T.I.N. ENGINEERING COMPANY

Geotechnical • Structural • Environmental

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File No.: 240024
September 25, 2024

Ms. Flavia Moraces
#7 Cinchring Road
Rolling Hills, California 902743

SUBJECT: Site Geologic Reconnaissance Report for Existing Residential Property at # 7 Cinchring Road, Rolling Hills, California

REFERENCES:
1. Thomas W. Dibblee, Ir., 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 Ms. Moraces:

In accordance with your authorization, we have completed this site geologic reconnaissance report for the existing residential property at #7 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 to 3: 1 descending slope to the south. The level building pad is currently occupied by a one-story, single family, residential building with an attached garage. The upper southern descending slope, approximately 10 feet high, is an approximately 1 1/2:1 to 2:1 fill slope. Then, this fill slope continues with 2 1/2:1 natural slope to lower Cinchring Road. The existing level backyard was covered with pavers. Cracks/separations were observed on the pavers. The subject site is landscaped with trees, bushes, and shrubs.

It appears that the subject site was graded with filling on the south and graded with cutting on the north. The deepest fill appears to be located on the southeast side of the existing level building pad.

GEOLOGICAL STABILITY IN REGIONAL AREA OF SUBJECT SITE

The subject site is located approximately 1,000 feet northerly of the active Flying Triangle landslide. An un-named landslide is located on the southwesterly side of the subject site. This un-named landslide appears to be reactive. New road cracks/separations were observed on lower Cinchring Drive. The north boundary of the un-named landslide appears to have been expanded northerly approximately 60 feet. Locations of the Flying Triangle landslide, un-named landslide, and new road cracks/separations on lower Cinchring Drive are shown on Regional Geologic Map by Slosson and Associates, Plate 3.

In review of the regional geologic map by Dibble, Plate 2, a syncline forms along the southern property boundary of the subject site that are undergoing compression where the southern portion of the subject site is being pushed together. The syncline appears to provide some degree of geological stability to the subject site.

Opinions, Conclusions, and Recommendations

Based upon the site reconnaissance made on September 9, 2024, reviews of the regional geologic map by the Dibblee Jr., Reference 1, and review of the geologic map by Slosson and Associates, we have herein provided the following opinions, conclusions, and recommendations:

1. The subject site is considered to be geologically stable.

2. The eastern un-named landslide is located near the south side of the subject site. New road cracks/separations were observed on lower Cinchring Road near the southern boundary of the subject site. We understand that the northern boundary of the un-named landslide appears to be expanded. However the existing residential building is located approximately 125 feet from the eastern boundary of the un-named landslide. The syncline appears to provide some degree of geological stability to the subject site.

3. The subject site was graded with filling on the south and graded with cutting on the north. It appears that northern house foundations of the house are founded into bedrock. However, the southern 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 south side of the level building pad can be determined through a soil and geologic investigation.

4. Cracks/separations were observed on the paver-covered level backyard. These cracks/separations were primarily caused by fill settlement. The south side of the level paver-covered backyard is covered with fill. The deepest fill is located on the southeast corner of the residential building. Control of soil moisture is essential in the fill areas. All roof and surface drainage should be conducted away from this area in engineered non-erosive devices to a safe point of discharge.

5. House distress was not observed on the existing residential building at the time of this geo reconnaissance.

6. Eaves and gutters should be installed for the existing residential building where there is none.

7. No springs or seepage was observed on the site.

8. 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.

9. 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.

10. 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 2.5 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 September 9, 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,

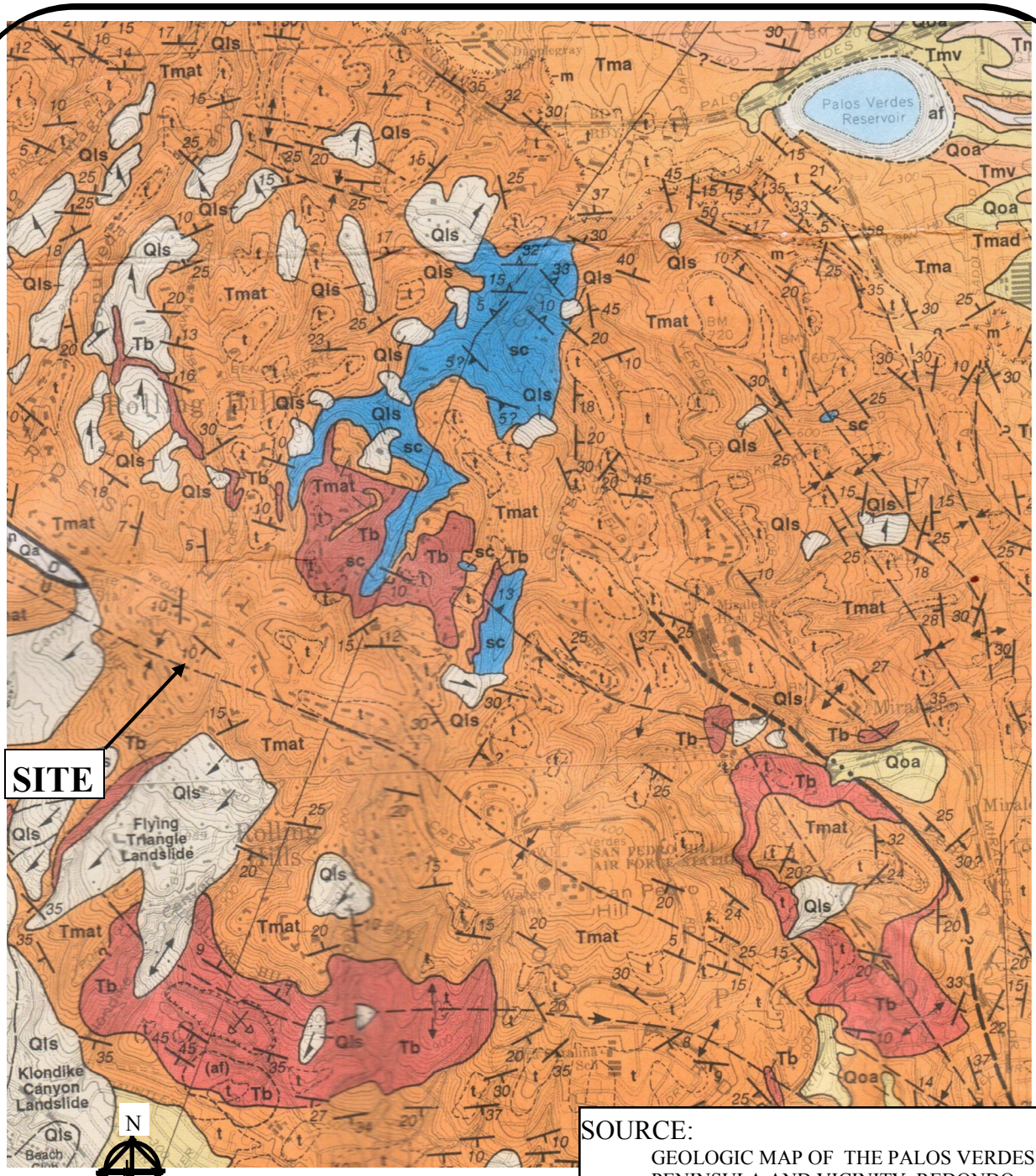
T.I.N. ENGINEERING COMPANY

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)



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

SCALE 1" = 2,000'

REGIONAL GEOLOGIC MAP BY DIBBLEE

JOB No. : 240024	**DATE:** September 24, 2024	**P L A T E** 1

SITE: Ms. Flavia Moraces
#7 Cinchring Road, Rolling Hills, California

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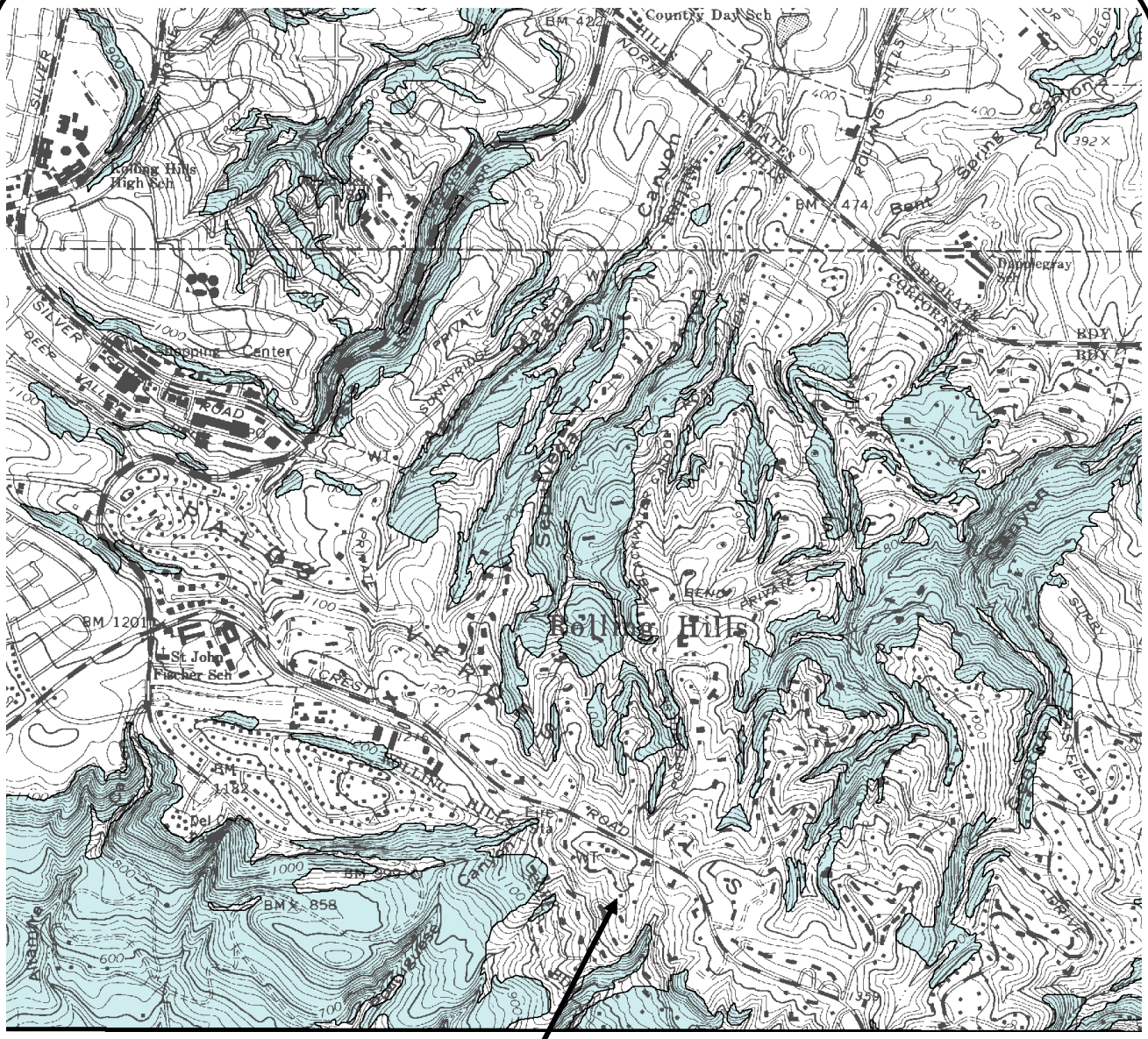

SCALE 1" = 2,000'

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

SEISMIC HAZARD ZONES

JOB No. : 240024	**DATE:** September 24, 2024	**P L A T E** 2

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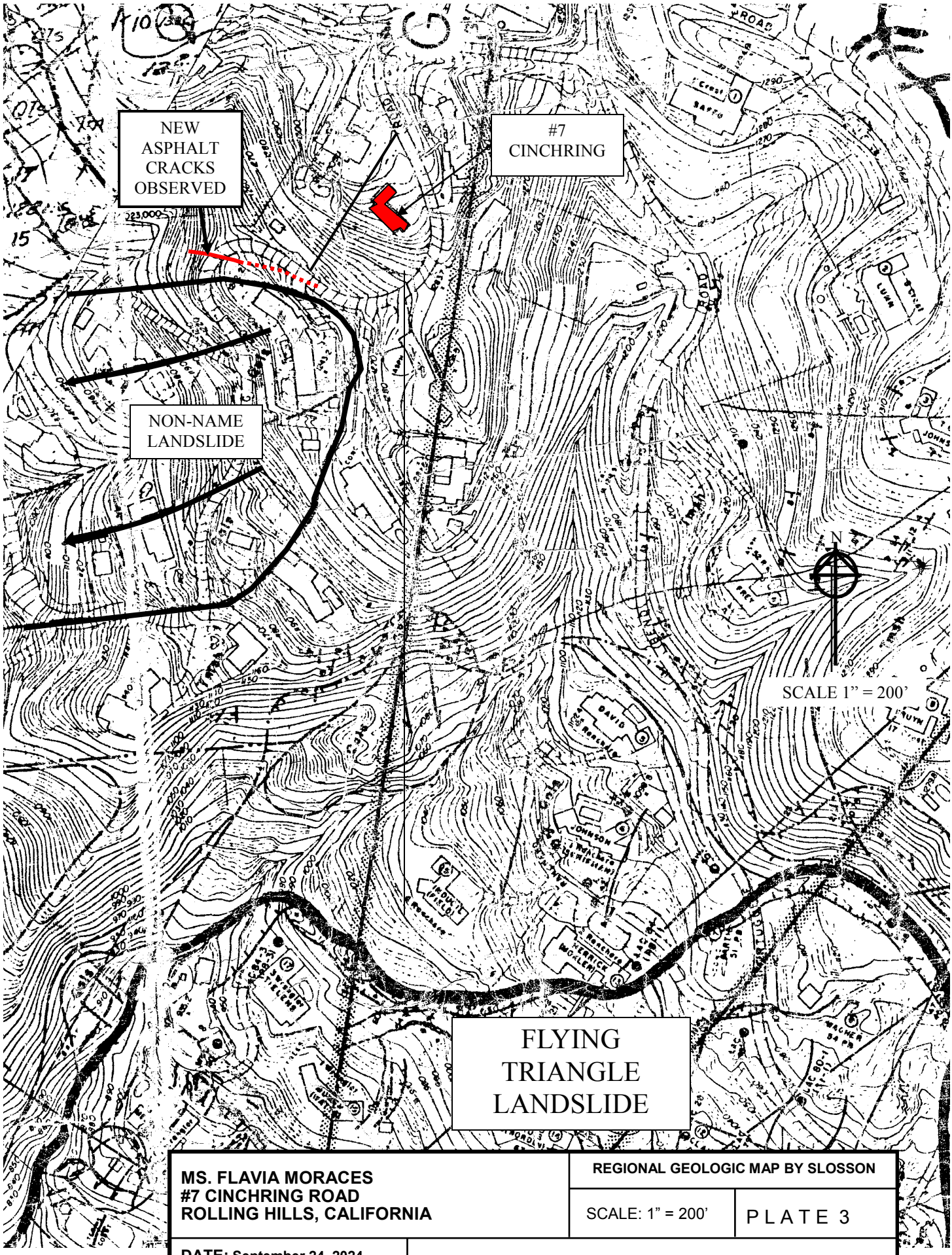

MS. FLAVIA MORACES **#7 CINCHRING ROAD** **ROLLING HILLS, CALIFORNIA**	**REGIONAL GEOLOGIC MAP BY SLOSSON**	
	SCALE: 1" = 200'	PLATE 3
DATE: September 24, 2024 JOB NO.: 240024	**T.I.N. ENGINEERING COMPANY**	