

T.I.N. ENGINEERING COMPANY

Geotechnical • Structural • Environmental

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File No.: 240106

December 14, 2024

Virginia Butler and Les Fishman
32203 Schooner Drive
Rancho Palos Verdes, California 90275

SUBJECT: Site Geologic Reconnaissance Report for Existing Residential Property at 32203 Schooner Drive, Rancho Palos Verdes, 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. Donald R. Warren, Grading Plan, Portion of Tract 22835, dated August 1, 1960.

Dear Butler and Fishman:

In accordance with the authorization by your realtor agent, we have completed this site geologic reconnaissance report for the existing residential property at 32203 Schooner Drive in the City of Rancho Palos Verdes of the County of Los Angeles. The subject site consists of a level building pad and an approximately 1 ½:1 ascending slope to the north. The level building pad is currently occupied by a one- to two-story, single family residential building with an attached garage to the southeast. An existing spool is located on the northwest side of the level building pad. The on-site rear northern ascending slope is approximately 25 to 30 feet high. Then, this northern ascending slope continues with an approximately 1 ½:1 to 2:1 off-site slope to the top. The total height of the northern ascending slope is about 100 feet. The subject site is surrounded by similarly developed residential properties to the east and west. Drainage is chiefly by sheet flow to the street. The subject site is landscaped with trees, shrubs, and lawns.

Cracks were observed on the interior walls of the southwestern bedroom. It appears that a fill was graded in the front yard to the south and the side yard to the southwest, respectively. Cracks/separations were observed on the tile-paved front entrance.

GEOLOGICAL STABILITY IN REGIONAL AREA OF SUBJECT SITE

Tract grading of the subject site was observed, tested, and inspected by Donald R. Warren in 1960. Reviews of the past grading by Donald R. Warren, the rear ascending slope was graded with fill as shown on Plate 4. The tract grading map by Donald R. Warren shows that no fill grading was performed in the existing level building pad. However, based upon our site observation on December 10, 2024, it appears that the fill grading was performed on the south and southwest sides of the subject site, respectively.

In review of the geologic map by Dibblee, Plate 1, the subject site is covered with bedrock and terrace deposits. The off-site ascending slope above the subject site is covered with basalt. Basalt bedrock is considered to be very stable bedrock material. Klondike Landslide is located approximately 700 feet westerly of the subject site. The geologic map by Robert Stone and Associates shows the relationship between Klondike Landslide and subject site, Plate 3. The subject site is not located in Klondike Landslide.

General Opinions, Conclusions, and Recommendations

1. The subject site is considered to be geologically stable.
2. It appears that the south and southwest sides of the subject site was graded with fill, respectively. Cracks were observed on the interior walls of the southwestern bedroom. These cracks were primarily caused by fill settlement. Underpinning the southwestern foundations of the residential building may be required. All underpinning footings should be founded into firm terrace deposits or bedrock. The depth to the firm terrace deposits or bedrock should be determined through a soil and geologic investigation.
3. The northern ascending slope is a graded fill slope. The fill slope was certified by Donald R. Warren in 1960. Neither surficial nor deep-seated instability was observed on the northern ascending slope.
4. Cracks/separations were observed in the tile-covered front entrance. These cracks/separations are primarily caused by a combination of an expansive soil underneath and a poor drainage control in that area.
5. The existing spool appears level. No distress was observed on the spool.
6. One outlet of the down-spout located on the southwest side of the residential building was pointing to the existing flower basin immediately next the existing residential building. This outlet of the down-spout should be connected with a solid pipe and daylighted to a safe point of discharge.

7. Control of soil moisture is essential for the long term performance of improvements, particularly those located on or near expansive soils. All roof and surface drainage should be conducted away from the development in engineered non-erosive devices to a safe point of discharge.
8. An existing garden wall, approximately 1 to 1.5 feet high is located on the east side of the subject site. Distress was observed on this garden wall. The wall distress was primarily caused by root action of the adjacent large diameter tree. This tree has been killed at the time of this site reconnaissance.
9. The subject site is not located within the potential seismic hazard zones (liquefaction zones) mapped by the State as shown on Plate 2. However, the upper northern slope is located in a seismically-induced landslide hazard zone as shown on Plate 2. The existing residential building is not located in the seismically-induced landslide hazard zone. The rear ascending slope is a graded, certified fill slope. It is our opinion that a potential of the seismically induced landslide to affect the existing residential building is to be minimal.
10. 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.
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 3.5 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 review of the geologic information by the Dibblee map, the tract grading by Donald R. Warren in 1960, the geologic map by Robert Stone and Associates, and the site observation made by us on December 10, 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

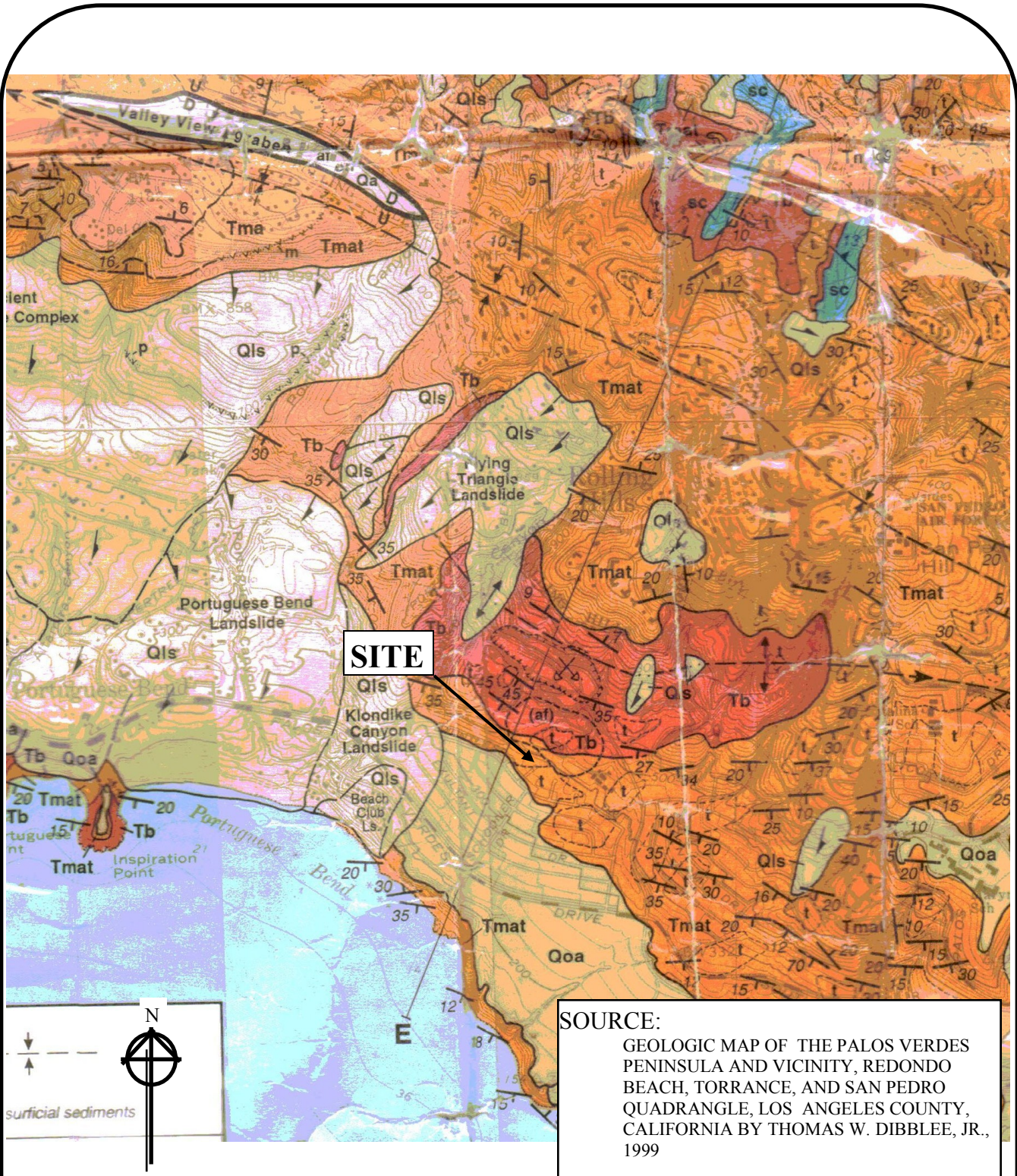


Tony S. C. Lee, M.S., P.E.
Project Engineer

TSCL:ir

- Enclosures: Geologic Map by DibbleePlate 1
- Liquefaction Map.....Plate 2
- Geologic Map by Robert Stone and Associates.. Plate 3
- Compacted fill Map by Donald R Warren..... Plate 4

Distribution: Client (1, by Email)



REGIONAL GEOLOGIC MAP BY DIBBLEE

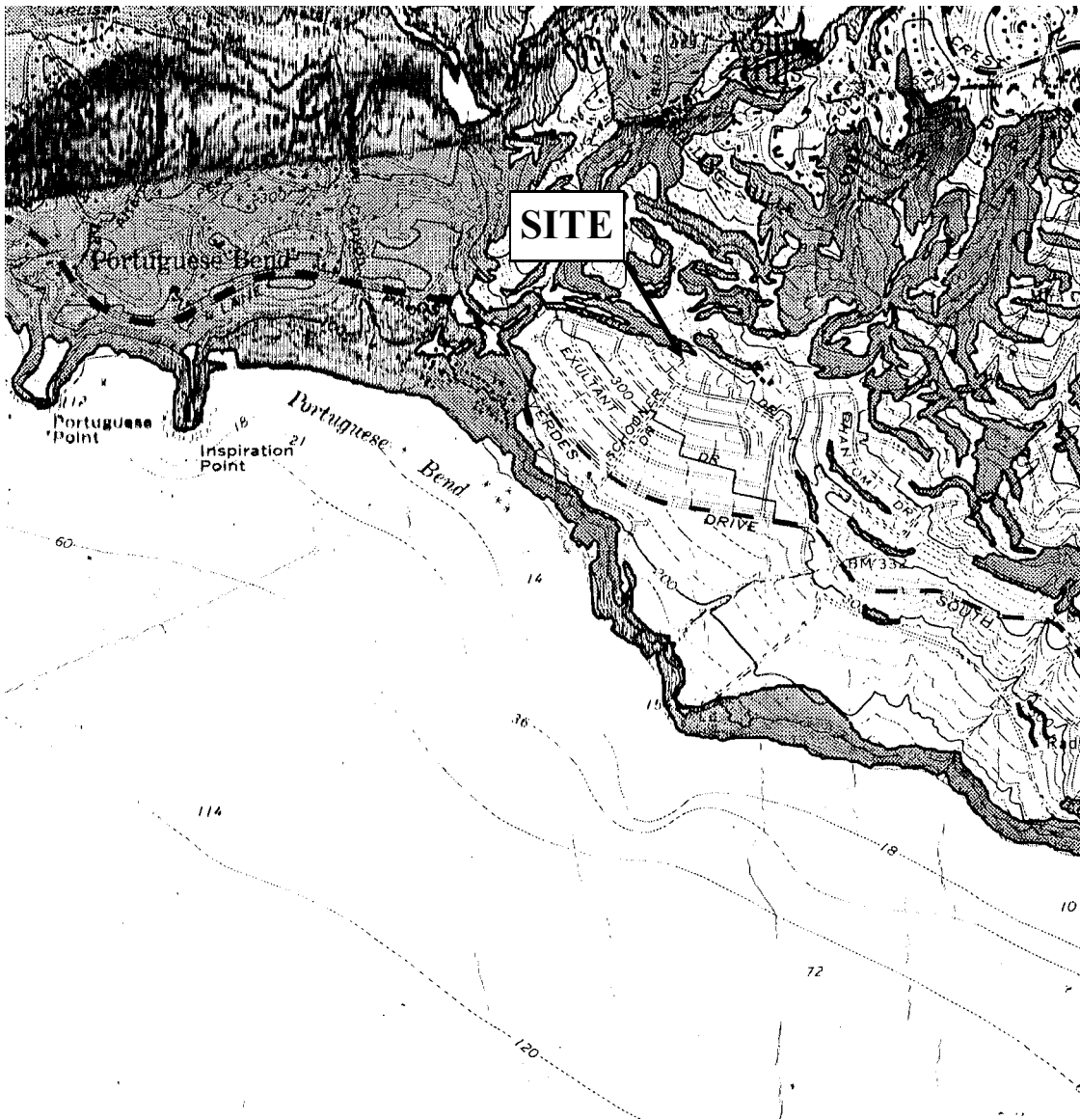
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DATE: December 14, 2024

PLATE 1

SITE: Virginia Butler and Les Fishman
 32203 Schooner Drive, Rancho Palos Verdes, California



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SCALE 1" = 2,000'

SEISMIC HAZARD ZONES

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.

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

JOB No. : 240106

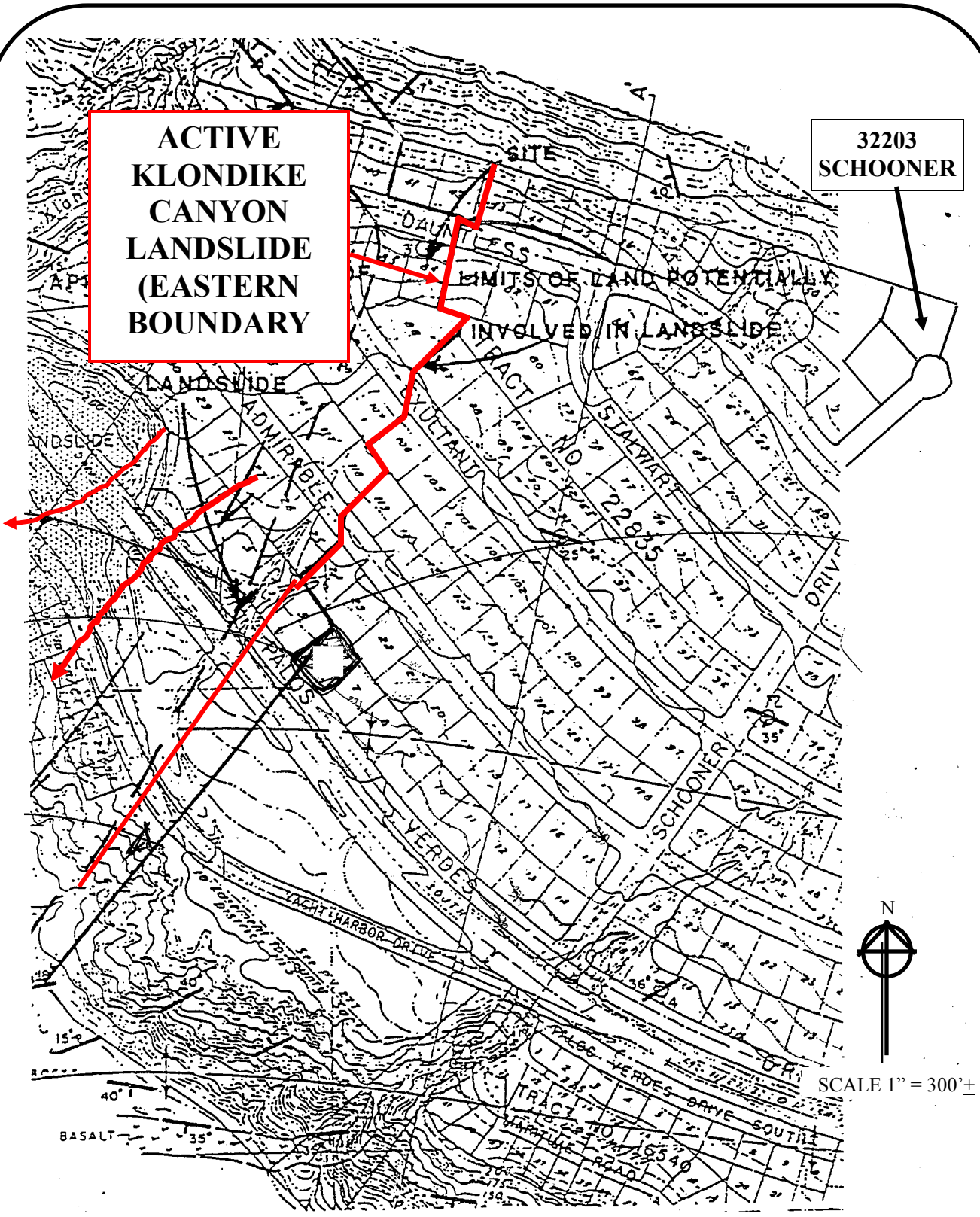
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PLATE 2

SITE: Virginia Butler and Les Fishman
32203 Schooner Drive, Rancho Palos Verdes, California

**ACTIVE
KLONDIKE
CANYON
LANDSLIDE
(EASTERN
BOUNDARY**

**32203
SCHOONER**



JOB No. : 240106

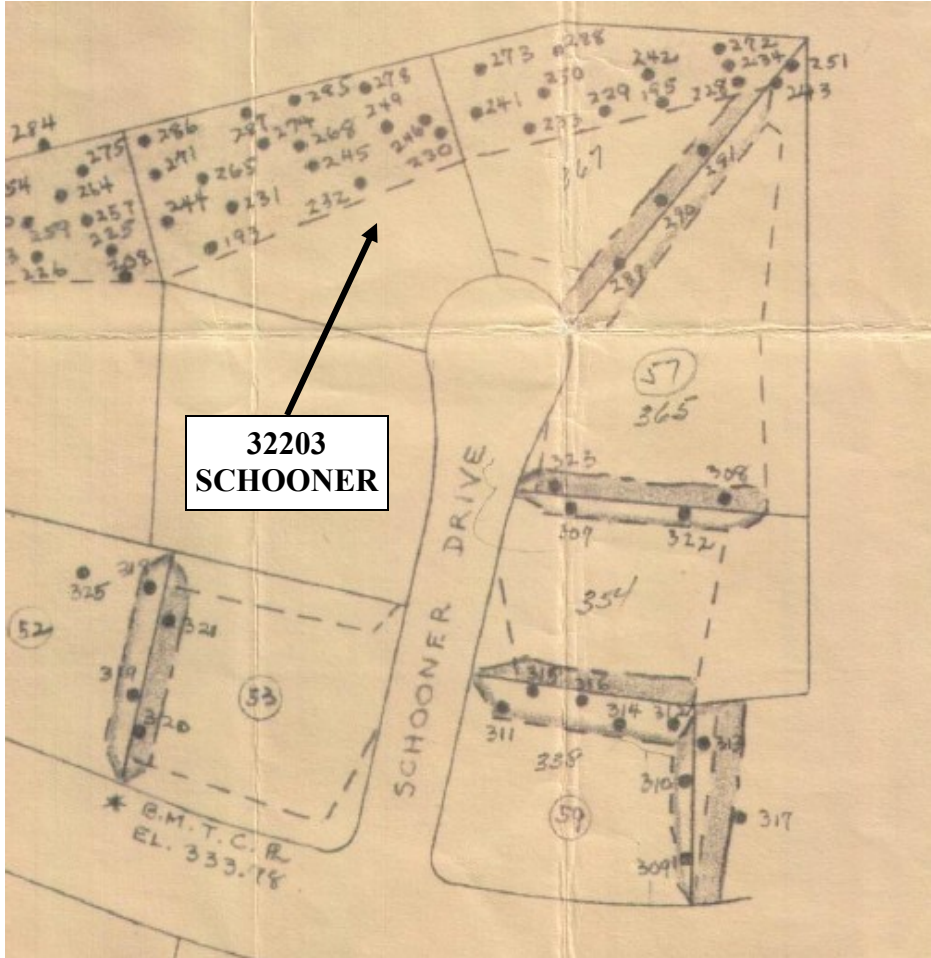
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PLATE 3

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**32203
SCHOONER**



SCALE 1" = 100'

**COMPACTED FILL MAP
BY DONALD WARREN**

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PLATE 4

SITE: Virginia Butler and Les Fishman
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