TAHOE REGIONAL PLANNING AGENCY

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MEMORANDUM

Date: April 19, 2018

To: TRPA Hearings Officer

From: TRPA Staff

Subject: TLC 1970, LLC Land Capability Challenge; 1970 West Lake Blvd., Placer County, CA; Assessor's Parcel No: 084-140-024, TRPA File No: LCAP2018-0042

Proposed Action: TRPA Hearing's Officer review and approval of the proposed Land Capability Challenge.

Staff Recommendation: Staff recommends the TRPA Hearings Officer approve the land capability challenge changing the land capability classes as follows: Decrease Class 1b (10,675 sf.); decrease Class 5 (41,612 sf.); increase Class 6 (2,032 sf.); and increase Class 7 (49,545 sf.). These changes are itemized on the table on Page 3 and depicted on a map included in Attachment B.

Background: The parcel being challenged is currently mapped having only Class 5 soils, and secondarily Class 1b soil (as per 1995 TRPA site determination). The Soil Conservation Service Soil Survey of Tahoe Basin Area, California-Nevada (Rogers, 1974) identifies the Class 5 soils as Tallac gravelly coarse sandy loam, seeped (TcB, 0 to 5% slopes). This soil type is derived from glacial outwash and other alluvial materials (basic and volcanic mineralogy). The vicinity of the project has a geomorphic mapping of E-2 for Outwash, till and lake deposits (low hazard lands lands).

A TRPA site determination was completed on October 24, 1995 (Attachment B). A land capability challenge (LCAP2018-0042) was filed with TRPA on February 13, 2018. The subject parcel has a surveyed size of 56,796 sf.; which excludes land below Lake Tahoe high water line). The terrestrial land studied for this challenge was 56,086 sf (which is situated west of the existing seawall). Specifically, a detailed soil investigation was conducted for this land capability challenge by Denny Churchill, Consulting Soil Scientist, on November 08, 2017. On February 14, 2018, the TRPA contractor (Phil Scoles, Terra Science, Inc.) examined the same two soil pits described by the applicant's soil consultant. The contractor reviewed draft soil descriptions prepared by the applicant's soil consultant and engaged in interactive dialogue as part of the technical review. There was consensus on the proposed soil mapping of Class 6 and 7 soils, plus SEZ gravelly alluvial soil along the north-center edge of the parcel. Mr. Churchill finalized his technical report and mapping on February 16, 2018.

Findings: The subject parcel is part of a larger, east sloping glacial outwash terrace having mixed rock materials (primarily volcanic/igneous origins). The outwash terrace has 2 to 10% slopes (in east by northeast direction). A house, driveway, guest house, shed and landscaping comprise the center and west portions of the parcel. Pathways, patio, lawn and landscaping compose the lake side of the parcel. There is a rock and cement seawall along the shoreline of Lake Tahoe (at elevation 6229 to 6230 ft.). At the time of the TRPA contractor site visit, the residence was undergoing a remodel, both interior and exterior.

The north-center edge of the parcel contains a small depression that extends north on the adjacent parcel. This depression qualifies as Stream Environment Zone (SEZ) on the basis of plant community, gravelly alluvial soil type and seasonal high water table. The depression previously received overflow from upgradient lands west of California Highway 89 (aka West Lake Boulevard); however, such runoff is now intercepted by a stormwater treatment area located west of Highway 89 and north of Pineland Drive. Thus, onsite rain and snowmelt, plus seasonal high ground water, sustain the SEZ. The size of the SEZ is not affected by stormwater facility, since TRPA maps SEZs on their historical condition (or extent). This depression qualifies as Class 1b, which was previously identified dissecting the northwest part of the parcel. The previous mapping appeared to follow a small, landscaping channel that was dug through upland outwash terrace. The soil consultant refined the SEZ boundaries to reflect the natural depression and vicinity having a seasonal high water table.

This land capability challenge utilized a backhoe soil pit in the southwest corner to represent the unnamed soil that composes the majority of the parcel. This pit location was relatively undisturbed; whereas, the center of the property contained the house and driveway. TRPA typically does not remove paving for soil sampling, especially when similar, less disturbed conditions are available. For the backhoe pit (labeled 11/8/17-1 by the soil consultant), representative conditions are somewhat excessively drained soils with soil hydrologic group B (HSG-B) for the entire profile (no silica-cemented layer as required for the Tallac series). Further, the soil consultant found the soils more soil development (cambic horizon) and deeper root penetration than the 1974 mapped Tallac series. This soil also contains more gravels and finer textures than the Elmira and Gefo soil series, which sometimes occur on the west shore of Lake Tahoe (generally further south). As such, the onsite soils do not match known soil series described in the 1974 Soil Survey of the Lake Tahoe Basin (hence they are considered unnamed, XXX soils). The land capability classes for the XXX soils were determined from Page 20, Table 4 of Land-Capability Classification of the Lake Tahoe Basin, California-Nevada (Bailey, 1974). The table on the following page summarizes the changes in land capability and allowable land coverage as concluded by this land capability challenge.

Land Capability District	Slope Class (Range)	1995 TRPA Determination Area (sq. ft.)	2018 LCC Area (sq. ft.)	Net Change Total Area (sq. ft.)
Class 1b (Gr-SEZ)	0 to 5%	15,184(1)	4,509	-10,675
Class 5 (TcB)	5 to 9%	41,612	0	-41,612
Class 6 (XXX)	5 to 16%	0	2,032	+2,032
Class 7 (XXX)	0 to 5%	0	49,545	+49,545
Total Parcel Area		**56,796**	**56,086**	**-710 (2)**

(1) The Class 1b (Gr-SEZ) consists of Gravelly Alluvial soil (Gr). Land capability challenge did not examine beach area east (lakeward) of existing seawall, which is situated to high lake level of 6229 ft.

(2) Site acreage totals differ by 710 sf. This difference is likely attributed to a study area defined by the land capability challenge that excluded lands east of the seawall.

This memorandum was jointly prepared by TRPA contractor Phil Scoles (Terra Science, Inc.) and TRPA Associate Planner, Julie Roll. If you have questions on this Hearings Officer item, please contact Julie Roll at 775-589-5247 (jroll@trpa.org).

BAILEY LAND CAPABILITY CHALLENGE FINDINGS

Site Information	
Assessor's Parcel No. (APN):	084-140-24
TRPA File No. / Submittal Date:	LCAP2018-0042 / February 13, 2018
Owner or Applicant:	TLC 1970, LLC; 655 Montgomery, Suite 1700; San Francisco, CA 94111
Site Address:	1970 West Lake Blvd., Tahoe City (Sunnyside), CA 95145; T. 15N, R. 16E, NE1/ 4 of Sec. 24.

Environmental Setting	
Bailey Soil Mapping Unit / Hydrologic Soil Group (HSG) / Land Class / Geomorphic Hazard Unit	Tallac gravelly coarse sandy loam, seeped, 0 to 5% (TcB, HSG C) / E-2 Outwash, till and lake deposits (low hazard lands as per 1974 Bailey LC Report)
Landform and Soil Parent Material	Glacial outwash terrace capped with recent colluvium (mixed sources)
Slopes and Aspect	1 to 10% slopes / East by northeast
Elevation and Datum	6229 (high lake level) to 6238 feet (from David Kotzebue Architecture site with topo. survey, January 24, 2018)
Rock Outcrops and Surface Configuration	No rock outcrops or surface boulders.
SEZ and Hydrology Source	Yes. SEZ dominated by willow, wild rose and grasses. SEZ situated 0.5- to 1-foot below adjacent upland areas. SEZ sustained by seasonal high water and surface runoff. Field investigation determined Gravelly Alluvial soil within this small depression.
Vegetation	Upland only: White fir, Jeffrey pine, incense cedar, white thorn, currant, trailing snowberry, lawn and ornamental shrubs and forbs.
Ground Cover Condition	Good (vegetation 70 to 80%, duff 20 to 30%)
Site Features	Residence, guest house, shed, pathways, patio, rock and cement seawall along shoreline, driveway and landscaping.

Field Investigation and Procedures	
Consultant and Address	Denny M. Churchill, Consulting Soil Scientist 145 Cottonwood Court, Quincy, CA 95971 (530) 283-1271; dennychurchill@sbcglobal.net
TRPA Contractor Field Dates	February 14, 2018 (soil consultant work conducted on November 08, 2017).
SEZ Mapping / NRCS Hydric Soil	None. Gravelly Alluvial soil (Gr-SEZ, Class 1b) occurs near north-center edge of parcel.
Number of Soil Pits or Auger Holes	One backhoe pit excavated to 65 inches. One hand-dug

and Description Depth	pit in SEZ.
Additional or Repetitive TRPA Sample Locations	Same backhoe and hand-dug pits (observed with soil consultant).
Areas Not Examined	Residence, guest house, driveway, pathways, and patio, as well as east of existing seawall.

(continued on following page)

TRPA Findings	
2006 Soil Survey Map Unit[1]	Kneeridge gravelly sandy loam, very stony, 2 to 5% slope (map unit 7173, Class 7, HSG-B).
Consultant Soil Mapping Determination and Rationale	Soils across the site do not match any soils described in the 1974 soil survey, hence they are unnamed (XXX). The soil along the west, south and center of the parcel are gravelly and have similar parent material as the Tallac series (mapped by 1974 soil survey), but they lack a subsurface restricting layer. These are deep, excessive drained, gravelly coarse sandy loam textures and have slopes 0 to 5% (hence, Class 7). Where similar soil properties have slopes 5 to 9% (northeast corner), such areas qualify as Class 6. Both Class 6 and 7 soils have HSG-B (sandy loam textures). The north-center edge of the property has a small depression fed by upgradient runoff (likely limited to snowmelt) and seasonally high water table. This depression contains Gravelly Alluvial soil; thus, it is SEZ (Class 1B).
Slope Determination	0 to 5% slopes and 5 to 10% slopes. See soil consultant map and topographic survey within David Kotzebue Architecture site plan, January 24, 2018, Attachment B).
TRPA Conclusion(s)	Class 1b (Gravelly Alluvial SEZ); Class 6 unnamed soil (XXX) for 5 to 10% slopes; Class 7 unnamed soil (XXX) for 0 to 5% slopes.
Applicable Area	Entire site (see map, Attachment B, Feb., 2018)

Attachments:

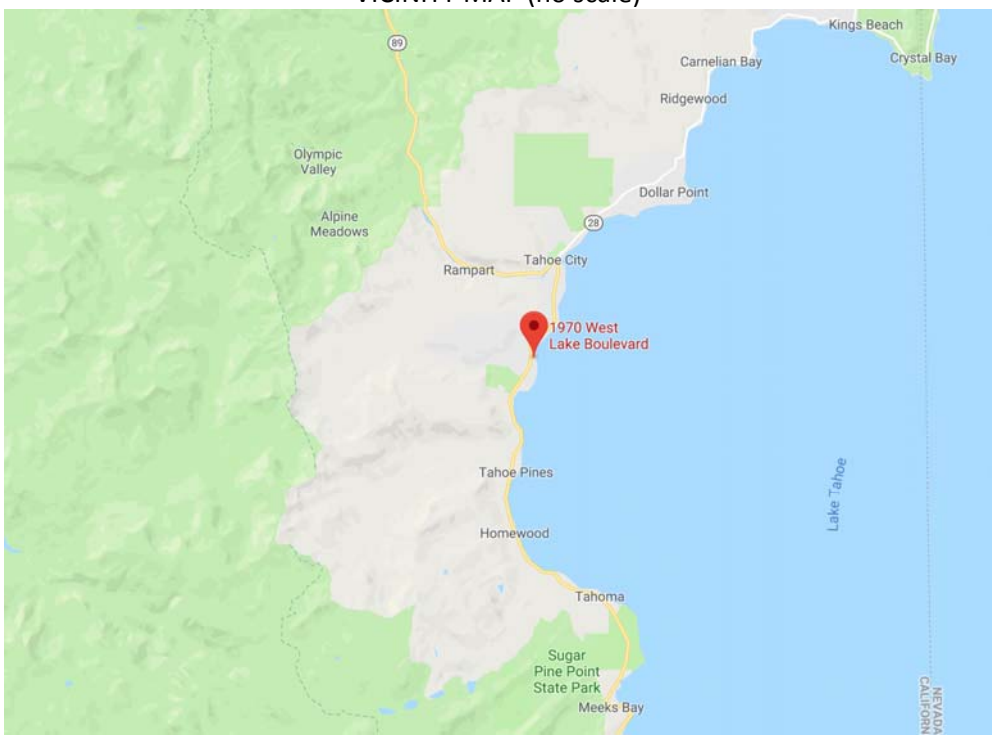
A. Vicinity map and TRPA land capability map
B. TRPA site determination map (Oct. 1995) and land capability challenge recommendation map
C. Applicant's soil consultant land capability soil report (2 soil pits)

[1] TRPA currently relies upon the Soil Survey of Tahoe Basin, California-Nevada (Rogers and Soil Conservation Service, 1974), which the Bailey Land Capability system is predicated upon. The 2006 soil survey update has not yet been formally adopted by TRPA for use with land capability matters.

Attachment A

Vicinity Map and TRPA Land Capability Maps

VICINITY MAP (no scale)



TRPA LAND CAPABILITY MAP

Attachment B

TRPA Site Determination Map (Oct. 1995) and Recommended Land Capability Challenge for LCAP2018-0042 (1970 West Lake Blvd, Tahoe City (Sunnyside), CA)

LIMITS OF BACKSHORE
INCLUDE 10' SETBACK PER JIM C
(DEV)

match L/SE 1 # 23

18x15
27+10=(37)
(26x15)=39x10

6234 6232 S 87° 31' 00" E 250.00' ± 6232 6234 36 36 6234

N 2° 29' 00" E 173.34'

LOT 9

SEZ (1b)

SEZ (1b) COMPACTED DIRT DRIVEWAY

15' SETBACK

LOT LINE

BACKSHORE

LIMITS OF BACKSHORE

PIER

WATERLINE AUG. 20, 1983 6228

DECK

LOW WATERLINE

LAKE TAHOE

PATIO

COMPACTED DIRT DRIVE

RESIDENCE (EXISTING)

SHED

CONC. PAD W/ CYCLONE 6' HIGH FENCE

LOT 10

OUTLINE OF PROPOSED BLDG.

GARAGE

CABIN PORCH

OUTLINE OF EXISTING CABIN/DECK TO BE REMOVED

N 15° 00' 00" W 124.65'

S 87° 50' 45" E 344.86'

6238 6236 6234 6232

HIGHWAY 89

NOTE:
TOPOGRAPHIC/SURVEY INFORMATION PROVIDED BY OWNER, BASED ON MAP PREPARED BY JWT INC., TAHOE CITY, CA. DATED 5/20/88 FOR LOTS 9 & 10, SUNNYSIDE TRACT #2, APN 84-1-24.

SITE PLAN

APPROVE

AGENDA ITEM NO. V.D.

Figure 1

Land Capability Assessment For Placer APN 084-140-024 1970 West Lake Blvd, Tahoe City, CA

January 26, 2018

TRPA Land Capability Challenge
for APN 084-140-024; LCAP2018-0042
1970 West Lake Boulevard (aka Cal. Hwy. 89)
Tahoe City (Sunnyside District), Placer County, CA

Field Investigation: February 14, 2018
Data Analysis: April 13, 2018
Conducted By: P.Scoles
(Soil Scientist)

Land Capability Assement For

Jan Brisco Consulting
620 North Lake Blvd, PO Box 1888
Tahoe City, CA 96145

Land Capability Assement By

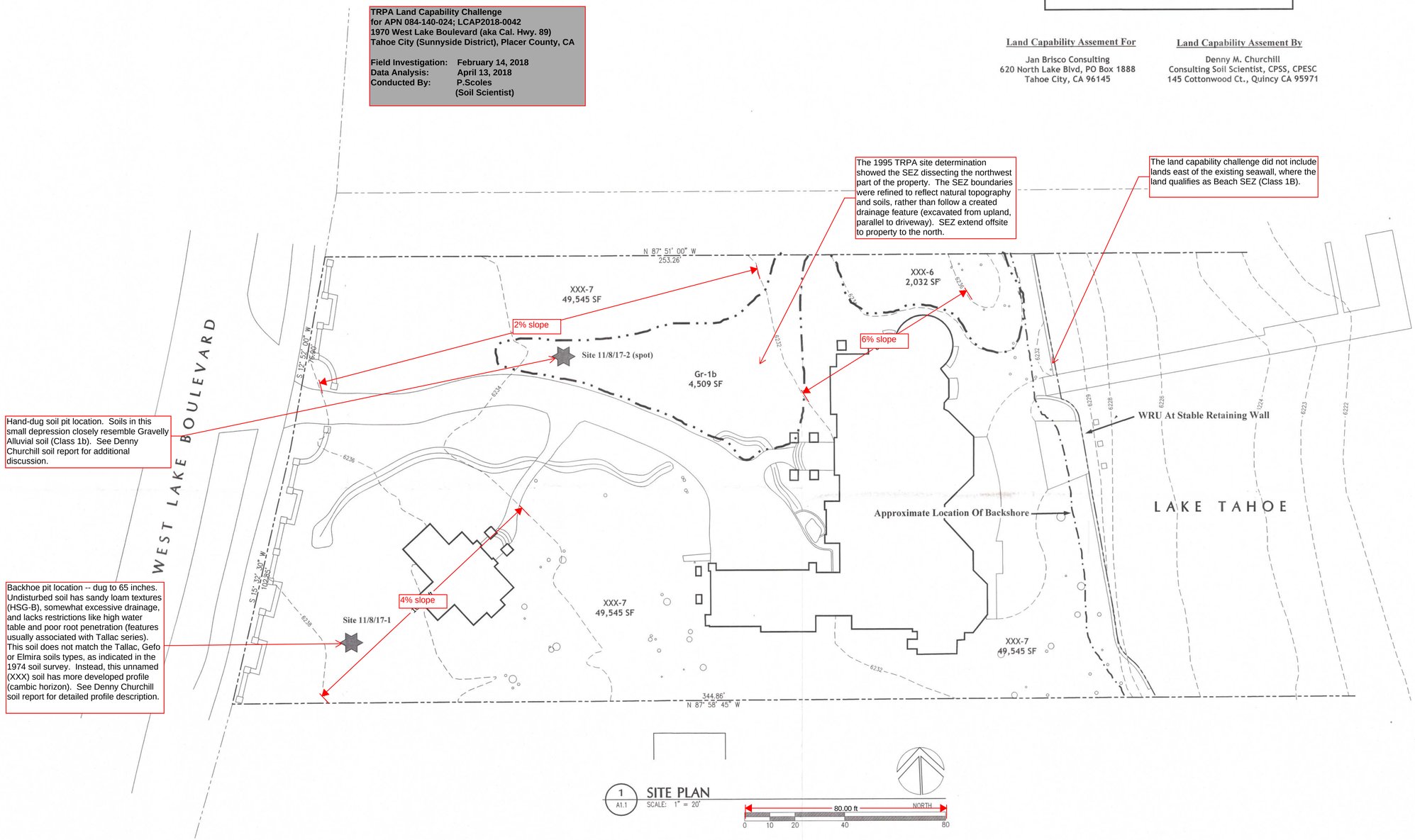
Denny M. Churchill
Consulting Soil Scientist, CPSS, CPESC
145 Cottonwood Ct., Quincy CA 95971

The 1995 TRPA site determination showed the SEZ dissecting the northwest part of the property. The SEZ boundaries were refined to reflect natural topography and soils, rather than follow a created drainage feature (excavated from upland, parallel to driveway). SEZ extend offsite to property to the north.

The land capability challenge did not include lands east of the existing seawall, where the land qualifies as Beach SEZ (Class 1B).

Hand-dug soil pit location. Soils in this small depression closely resemble Gravelly Alluvial soil (Class 1b). See Denny Churchill soil report for additional discussion.

Backhoe pit location -- dug to 65 inches. Undisturbed soil has sandy loam textures (HSG-B), somewhat excessive drainage, and lacks restrictions like high water table and poor root penetration (features usually associated with Tallac series). This soil does not match the Tallac, Gefo or Elmira soils types, as indicated in the 1974 soil survey. Instead, this unnamed (XXX) soil has more developed profile (cambic horizon). See Denny Churchill soil report for detailed profile description.



1 A1.1 **SITE PLAN**
SCALE: 1" = 20'

80.00 ft NORTH
0 10 20 40 80

DAVID KOTZEBUE
Architecture

29 Holly Lane
El Sobrante, CA 94803
david@dkarchitecture.com
t 415 286 3233
f 510 223 7914

LICENSED ARCHITECT
DAVID RUSSELL KOTZEBUE
C-17056
6-30-19
Renewal Date
STATE OF CALIFORNIA

Drawings and Specifications are the property of the Architect whether the project for which they are prepared is executed or not. Reproductions shall not be made without the Architect's express written permission.

Revisions
Job Number
Issue

Proposed Remodel For
TOM and LINDA COATES
1970 West Lake Blvd
Tahoe City, CA 96145

APN 084-140-024-000

Title SITE PLAN
Scale 1"=20'
Date 24 JANUARY 2018
Sheet A1.1

084-140-024 // LCAP2018-0042 // 02/07/2018
TLC 1970 LLC
JAN BRISCO
1970 W LAKE BLVD - Placer County
079 - Land Capability Challenge

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FEB 01 2018
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AGENDA ITEM NO. V.D.

Attachment C

Applicant's Soil Consultant Land Capability Soil Report

Land Capability Assessment
For
Placer Parcel APN 084-140-024

Revised February 16, 2018

INTRODUCTION

A soil investigation was conducted by Denny M. Churchill, Consulting Soil Scientist on Placer County Parcel APN 084-140-024 on November 8, 2017. The objective of the study was to identify soils and other features and relate them to Land Capability which is administered by the Tahoe Regional Planning Agency (TRPA) for the purpose of impervious coverage regulation as defined in Chapter 30 of the Code of Ordinances.

The parcel supports a single-family dwelling in a mixed residential setting on approximately 1.30 acres of land (from 6229.1 elevation) located at 1970 W. Lake Blvd., Sunnyside, Placer County, CA. This work is advanced at the request of Ms. Jan Brisco, principal of Jan Brisco Consulting, agents for Tom and Linda Coates.

Soil information contained in this report is for the strict use of land capability and it should not be used for building foundation design, slope stability or seismic analysis.

ENVIRONMENTAL SETTING

The parcel site is located at T15N R16E, NE/4 of section 24. Vegetation is representative of Type 17-mixed conifer and consists of White fir, incense cedar, Jefferey pine, currant, trailing snowberry, white thorn and scattered willow. Slopes range from 5 to 10 percent on a north east aspect. Historically, this property as well as adjacent parcels have been affected by storm runoff and snow melt events from both W. Lake Boulevard as well as developed areas across the highway. The presence of diversions and small ditches along this reach of highway attests to the impacts of seasonal runoff. In 2017, a large catch basin was completed on the west side of W. Lake Boulevard and appears to be shunting overland flows from Pineland Drive and Tamarack. The outlet daylights near the Sunnyside Restaurant parking lot. The development of this catchment appears to have significantly reduced the runoff impacts to this and adjacent properties.

The level of infrastructure (above and below ground) on this parcel posed significant challenges in locating sites of minimal disturbance. Site 11/8/17-1 was considered representative of the soils found on the parcel. The site was placed in a location of mature conifers with a mixed shrub under story, and was considered to be the least disturbed portion of the parcel.

A sizable Stream environment Zone (SEZ) was delineated on the property during the land capability verification process. It appears that this determination was based on the presence of mature willows and that the area was representative of a Type 7: Willow shrub complex. The recent site visit does not support that determination and the area is in

1974) for proper placement in the appropriate land capability class. A detailed topographic base map supplied by David Kotzebue Architecture (September 17, 2017) was available in the field for ground control and slope analysis. Information pertaining to land capability districts is shown on Figure 1.

FINDINGS

Referring to Figure 1, soils at site 11/8/17-1 are found to be deep, somewhat excessively drained, and members of Soil Hydrologic Group B. They can be characterized as having brown or dark yellowish brown gravelly coarse sandy loam top soil approximately 16 inches thick, over a dark yellowish brown subsoil to a depth of 60 inches. These soil are dissimilar to Tallac gravelly coarse sandy loam, seeped, because they lack a weakly silica cemented hard pan at depth, as well as any indication that surface water infiltration is reduced.

Soils at site 11/8/17-2 (spot) were not fully described but were found to be deep, somewhat poorly drained, and members of Soil Hydrologic Group C-D. They were very gravelly throughout and saturated beginning at 24 inches. Evidence in the form of reduction/oxidation were observed beginning at 30 inches. Supporting vegetation was consistent with Type 7-Riparian shrub complex.

CONCLUSIONS AND RECOMMENDATIONS

Soils found at site 11/8/17-1 are unnamed inclusions in the TcB map unit. They are unmapped in the published Lake Tahoe Soil Survey and would place in Land Capability Class 7.

Soils found at site 11/8/17-2 fall within the range of characteristics of map unit Gr-Gravelly alluvial lands and place in Land Capability Class 1b.

Please refer to the following soil profile descriptions that support the findings and the attached map showing the spatial distribution of the appropriate land capability classes on the parcel.

Respectfully submitted,

Denny M. Churchill
Certified Professional Soil Scientist No. 0755

CONCLUSIONS AND RECOMMENDATIONS

Soils found at site 11/8/17-1 are unnamed inclusions in the TcB map unit. They are unmapped in the published Lake Tahoe Soil Survey and would place in Land Capability Class 7.

Soils found at site 11/8/17-2 fall within the range of characteristics of map unit Gr-Gravelly alluvial lands and place in Land Capability Class 1b.

Please refer to the following soil profile descriptions that support the findings and the attached map showing the spatial distribution of the appropriate land capability classes on the parcel.

Respectfully submitted,

Denny Churchill

Digitally signed by Denny Churchill
DN: cn=Denny Churchill, o, ou, email=dennychurchill@sbcglobal.net, c=US
Date: 2018.02.16 10:31:09 -08'00'

Denny M. Churchill
Certified Professional Soil Scientist No. 0755

Representative Soil Profile Descriptions

Site 11/8/17-1 Machine excavated pit to 65 inches.

Location: 39^0 08' 16.54" N. Latitude; 120^0 09' 14.66" W. Longitude (WG84 datum)
Elevation: 6237 feet (from David Kotzebue Architecture, 9/17/2017)
Landform: Lake outwash terrace (slopes to the north east).
Vegetation: White fir, incense cedar, Jeffery pine, trailing snowberry, white thorn, currant and scattered willow.

Oi 0 to 2 inches, needles, leaves and thick mull (under conifer canopy).

A1 2 to 8 inches, dark yellowish brown (10YR 4/4) gravelly coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak to moderate fine granular structure; soft, very friable, nonsticky and nonplastic; common to many very fine to medium roots throughout; common fine interstitial pores; 25 percent gravels and 5 percent stones; clear wavy boundary.

A2 8 to 16 inches, dark yellowish brown (10YR 4/4) gravelly coarse sandy loam, dark brown (10YR 3/3) moist; moderate fine granular structure; soft, very friable, nonsticky and nonplastic; common to many very fine to medium roots throughout; common fine interstitial pores; 25 percent gravels and 5 percent stones; clear wavy boundary.

Bw1 16 to 28 inches, dark yellowish brown (10YR 4/4) very gravelly sandy loam, dark yellowish brown (10YR 3/4) moist; moderate fine granular to weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; many fine to medium and few coarse roots; few, patchy, faint sand coats; many fine interstitial pores; 35 percent subangular gravels and 10 percent subangular stones; clear wavy boundary.

Bw2 28 to 48 inches, dark yellowish brown (10YR 4/6) very gravelly fine sandy loam, dark yellowish brown (10YR 3/4) moist; weak to moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common fine to medium and few coarse roots; few, patchy, faint sand coats; many fine interstitial pores; 35-40 percent subrounded gravels and 10 percent subangular stones; clear irregular boundary.

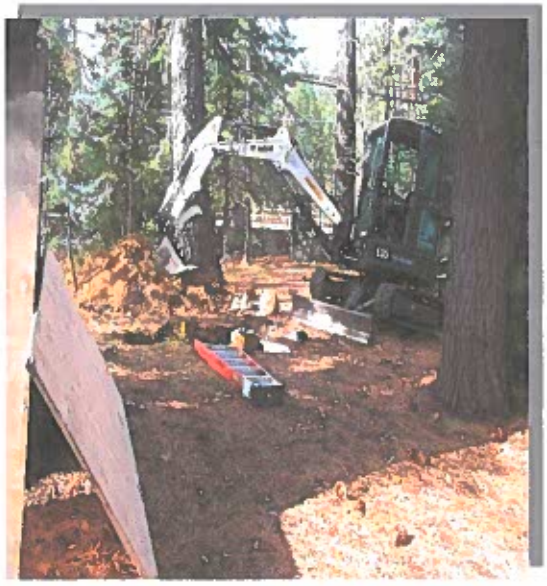
C1 48 to 60 inches, yellowish brown (10YR 5/6) very stony fine sandy loam, dark yellowish brown (10YR 4/4) moist; massive; soft, friable, slightly sticky and nonplastic; few to common fine and coarse roots; many fine interstitial pores; 45 percent subangular stones and 20 percent subrounded gravels; clear irregular boundary.

No evidence of a weakly cemented layer was observed, as well as any presence of ground water intrusion.

Parent material: Colluvium over alluvium (glacial outwash)
Drainage class: Somewhat excessively drained. Moderately rapid permeability.
Slope: 5 percent sloping north 80 degrees east.
1974 soil series: Similar to Tallac but lacks the cemented pan to depth.
2003 soil series: Similar to Tallac but lacks the cemented pan to depth.
Soil classification: Fine-loamy, mixed, frigid, Humic Dystroxerepts
Hydrologic Soil Group: B (loamy textures, no subsurface water or restrictions)

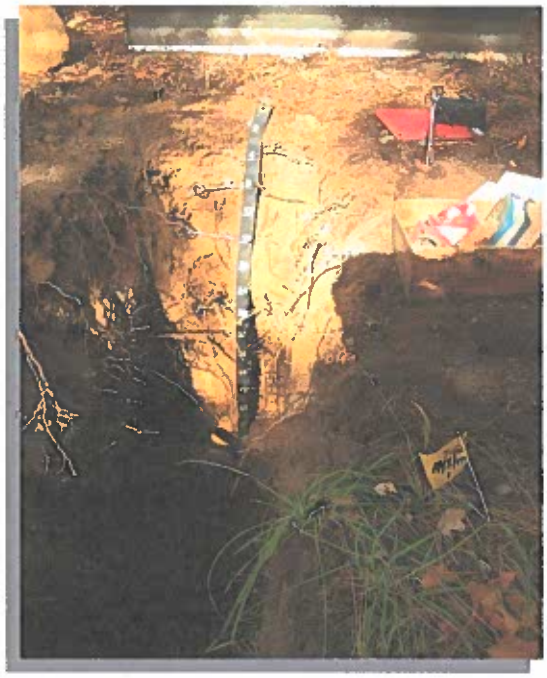
Photo Series

Site 11/8/17-1



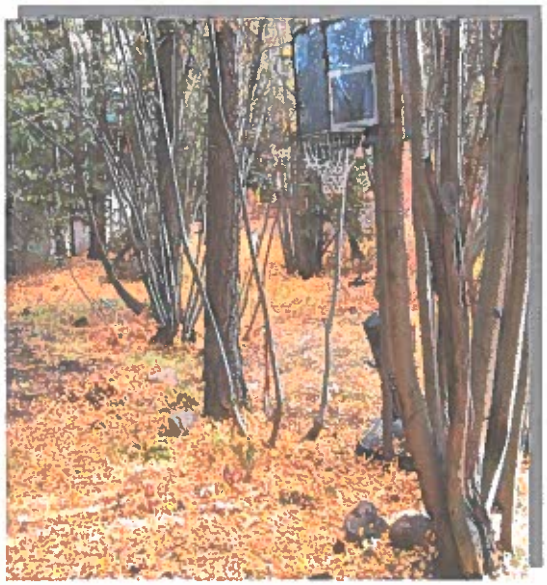
Up Slope Towards W. Lake Blvd

Down Slope Towards Main Residence

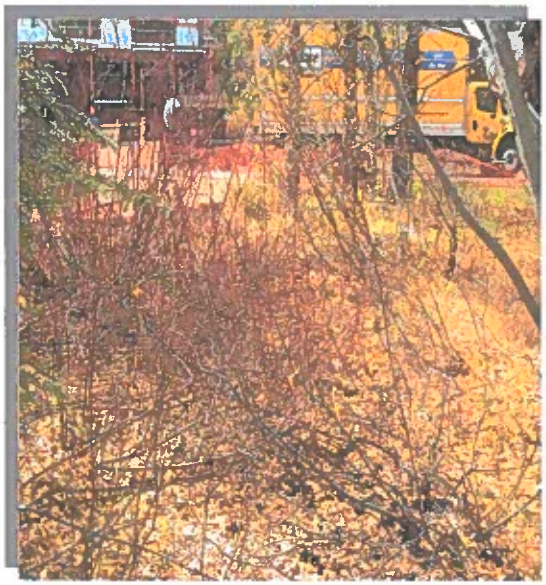


Representative Soil Profile

Site 11/8/17-2 (Spot)



Up Slope Towards W. Lake Blvd



Down Slope Towards Lake

Stable Retaining Wall