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## STAFF REPORT

Date: February 11, 2021

To: TRPA Hearings Officer

From: TRPA Staff

Subject: Alexander Land Capability Challenge; 435 Lakeview Ave, Washoe County, NV, APN: 123-122-03; TRPA File # LCAP2020-0379

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### Summary and Staff Recommendation:

Staff recommends the TRPA Hearings Officer approve the land capability challenge on the subject parcel. The challenge changes Class 1a (RcF, 30 to 50 percent slopes) to Class 4 -XXX, 9 to 30 percent slopes (17,497 sq. ft., 80 percent of parcel) and Class 2- XXX, >30 percent slopes (4,285 sq. ft., 20 percent of parcel).

### Background:

The subject parcel is shown as Class 1a on TRPA Land Capability Overlay Maps (aka Bailey Land Capability maps). The Soil Survey of Tahoe Basin Area, California-Nevada (Rogers, 1974) places the subject parcel in the RcF, Rock outcrop- Cagwin complex, 30 to 50 percent slopes. The updated Soil Survey of Tahoe Basin Area, California and Nevada (NRCS, 2007) places this parcel in mapunit 7412, Cagwin-Rock outcrop complex, 15 to 30 percent slopes and 7413, Cagwin- Rock outcrop complex, 30 to 50 percent slopes. A site assessment was not completed on this parcel. This parcel has a geomorphic mapping of C2- Stream cut granitic slopes, strongly dissected lands (high hazard lands). The Cagwin soils are moderately deep, somewhat excessively drained soils that formed in material weathered from granitic rock. Cagwin soils have loamy coarse sand textures in the A-horizon, with loamy coarse sand or coarse sand subsurface textures in the upper 27 inches. Weathered granitodiorite grus is encountered between 20 and 40 inches below ground surface.

A land capability challenge (LCAP2020-0379) was filed by Gary Furumoto on September 21, 2020. Mr. Furumoto is representing the owner, Mark Alexander. A private soil consultant was not hired for this project. TRPA consultant, Marchel Munnecke, visited the site on October 19, 2020, and described one backhoe pit to 65 inches.

### Findings:

One soil pit was excavated by backhoe to 60 inches, and hand excavated slightly deeper to 65 inches. The pit was located north northeast of the residence just north of upper driveway. The pit is approximately 5 feet off the property, on the adjacent property (475 Tuscarora Ave.). The pit is located off the parcel because the majority of this parcel has been affected by cut and fill for the construction of the residence and driveway or has been terraced for landscaping. The location of the pit is representative of the soils in this slope class. This pit is also being used for a land capability challenge that is being concurrently processed on the adjacent parcel (APN 123-122-06, 475 Tuscarora Road). The

soil at this pit is characterized by a gravelly coarse sandy loam surface texture, very gravelly coarse sandy loam, extremely stony loamy coarse sand, and very stony loamy coarse sand subsurface textures. This soil formed in colluvium from mixed parent material. The high content of stones between 33 to 51 may be a remnant from when the elevation of Lake Tahoe was higher. This soil is very deep, somewhat excessively drained, and is a member of Soil Hydrologic Group A. This parcel has an open forest composed of Jeffrey pine and white fir with a few montane shrubs such as huckleberry oak, greenleaf manzanita, creeping snowberry and smokebush ceanothus in the understory. The area around the house is terraced and landscaped.

This soil is dissimilar to the Cagwin soil that was mapped on the parcel in the Soil Survey of Tahoe Basin Area, California-Nevada (Rogers, 1974). This soil is deeper than 65 inches, and the Cagwin soils are 20 to 40 inches deep over decomposed granitic bedrock. Decomposed granitic bedrock was not encountered in the pit. This soil is dissimilar to the Inville, Jorge and Tahoma soils because it is courser in texture and lacks argillic soil development. This soil is most similar to the Meeks soil, but does not have a silica cemented horizon at depth. Therefore, this soil is not a mapped soil in the Soil Survey of the Tahoe Basin Area, California-Nevada (Rogers, 1974) and is an unnamed (XXX) soil.

Table 4 in the Land-Capability Classification of the Lake Tahoe Basin, California and Nevada is utilized to classify unnamed soils. Based on Table 4, this parcel is Class 4- XXX, 16-30 percent slopes and Class 2-XXX, >30% slopes. The determination between Class 2 and Class 1a, was based on the lack of bedrock outcrops and similarity of the landform and forest vegetation to the area where the pit was described. The ability of the soil to support a relatively uniform forest indicates the soils are sufficiently deep.

The table below summarizes the changes in land capability as concluded by this land capability challenge.

Land Capability District	Area (sq. ft.)	
	1974 Soil Survey	2020 LCC
Class 1a (RcF, 30 to 50% slopes)	21,782	0
Class 4 (XXX, 9 to 30% slopes)	0	4,285
Class 2 (XXX, > 30 % slopes)	0	17,497
<b>Total Parcel Area</b>	21,782	21,782

#### BAILEY LAND CAPABILITY CHALLENGE FINDINGS

Site Information	
<b>Assessor's Parcel Numbers: (APN)</b>	123-122-03
<b>TRPA File No. / Submittal Date:</b>	LCAP2020-0379 / 9/21/2020
<b>Owner or Applicant:</b>	Owner: Mark Alexander
<b>Address:</b>	P.O. Box 1787, Crystal Bay, NV 89402

<b>Environmental Setting</b>	
<b>Bailey Soil Mapping Unit<sup>1</sup> / Hydrologic Soil Group (HSG) / Land Class / Geomorphic Hazard Unit</b>	RcF, Rock outcrop- Cagwin complex, 30 to 50 percent slopes / HSG C/ C2 (Stream cut granitic slopes, strongly dissected lands (high hazard lands))
<b>Soil Parent Material</b>	Mixed colluvium over and residuum, possible layer of lake effected by lake level or lake deposits
<b>Slopes and Aspect</b>	24 to 36 percent; sloping to the southeast.
<b>Elevation and Datum</b>	6,600 to 6,656 feet, Kenneth Barrow P.L.S., August 29, 2005 site topo.
<b>Rock Outcrops and Surface Configuration</b>	There are no bedrock outcrops or evidence of bedrock near the surface.
<b>SEZ and Hydrology Source</b>	NA
<b>Vegetation</b>	This parcel has an open forest composed of Jeffrey pine and white fir with some montane with a few montane shrubs such as huckleberry oak, greenleaf manzanita, creeping snowberry and smokebush ceanothus in the understory.
<b>Ground Cover Condition</b>	Good (vegetation 65%, duff/mulch 80% cover)
<b>Site Features</b>	Residence, paved driveway, concrete deck, front and rear decks, sheds, rock walls, gravel areas, and fences.

<b>Field Investigation and Procedures</b>	
<b>Consultant and Address</b>	Marchel Munnecke
<b>TRPA Staff Field Dates</b>	October 19, 2020
<b>SEZ Mapping / NRCS Hydric Soil</b>	None present
<b>Number of Soil Pits or Auger Holes and Description Depth</b>	1 backhoe pit to about 58 inches, small hole hand dug further to 65 inches.
<b>Additional or Repetitive TRPA Sample Locations</b>	NA
<b>Representative Soil Profile Descriptions</b>	See Attachment B, 123-122-03 Soil Profile Description.
<b>Areas Not Examined</b>	Residence, paved driveway, concrete deck, front and rear decks, sheds, rock walls, gravel areas, and fences.

<b>TRPA Findings</b>	
<b>2006 Soil Survey Map Unit</b>	7412, Cagwin-Rock outcrop complex, 15 to 30 percent slopes (Class 2) and 7413, Cagwin- Rock outcrop complex, 30 to 50 percent slope (Class 1a).
<b>Consultant Soil Mapping Determination and Rationale</b>	This soil is dissimilar to the Cagwin soil that was mapped on the parcel in the <u>Soil Survey of Tahoe Basin Area, California-Nevada</u> (Rogers, 1974). This soil is deeper than 58 inches, and the Cagwin soils are 20 to 40 inches

<sup>1</sup> 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.

	<p>deep over decomposed granitic bedrock. Decomposed granitic bedrock was not encountered in this pit. This soil is dissimilar to the Inville, Jorge and Tahoma soils because it is coarser in texture and lacks argillic soil development. This soil is most similar to the Meeks soil, but does not have a silica cemented horizon at depth. Therefore, this soil is not a mapped soil in the <u>Soil Survey of the Tahoe Basin Area, California-Nevada</u> (Rogers, 1974) and is an unnamed (XXX) soil.</p> <p>Table 4 in the <u>Land-Capability Classification of the Lake Tahoe Basin, California and Nevada</u> is utilized to classify unnamed soils. Based on Table 4, this parcel is Class 4- XXX, 16-30 percent slopes and Class 2-XXX, &gt;30% slopes.</p>
<b>Slope Determination</b>	24 to 36 percent slopes.
<b>TRPA Conclusion(s)</b>	TRPA concurs with consultants' determination and rationale above.
<b>Applicable Area</b>	See parcel map for soil delineations.

Contact Information:

This memorandum was jointly prepared by TRPA consultant, Marchel Munnecke (Pyramid Botanical Consultants) and TRPA Senior Planner, Julie Roll. If you have questions on this Hearings Officer item, please contact Julie Roll, 775-589-5247, or email at [jroll@trpa.org](mailto:jroll@trpa.org).

Attachments:

- A. Topo Site Plan
- B. Soil Profile Description
- C. Site Photographs

Attachment A

Topo Site Plan

Attachment B

Soil Profile Description

Attachment C

Site Photographs