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STAFF REPORT

Date: August 11, 2022

To: TRPA Hearings Officer

From: TRPA Staff

Subject Deep Blue Trust Land Capability Challenge, 751 Champagne Road, Washoe

County, Nevada, Assessor's Parcel Number 126-262-09, TRPA File Number

LCAP2021-0420

Proposed Action:

Hearings Officer review and approve the proposed Land Capability Challenge.

Staff Recommendation:

Staff recommends the TRPA Hearings Officer approve the land capability challenge on the subject parcel. The challenge changes Class 3- 19,334 sq. ft. (60 percent of parcel) and Class 1a 19,334 sq. ft. (40 percent of parcel) to Class 6- 4,320 sq. ft. (9 percent of parcel), Class 4- 18,519 sq. ft. (38 percent of parcel). Just over half the parcel remains Class 1a- 25,818 sq. ft. (53 percent of parcel).

Background:

The subject parcel is shown as Class 3 and Class 1a on TRPA Land Capability Overlay Maps (aka Bailey Land Capability maps). The Soil Conservation Service Soil Survey of Tahoe Basin Area, California-Nevada (Rogers, 1974) places the subject parcel in the UmE, Umpa very stony sandy loam, 15 to 30 percent slopes and UmF, Umpa very stony sandy loam, 30 to 50 percent slopes mapunits. A land capability verification completed in 2021 verified the parcel as part UmE, Umpa very stony sandy loam, 15 to 30 percent slopes and UmF, Umpa very stony sandy loam, 30 to 50 percent slopes mapunits. The updated Soil Survey of Tahoe Basin Area, California and Nevada (NRCS, 2007) maps this parcel as mapunit 7151- Jorge very cobbly fine sandy loam, 5 to 15 percent slopes and 7152- Jorge very cobbly fine sandy loam, 15 to 30 percent slopes. This parcel has a geomorphic mapping of D2 for Streamcut volcanic flowlands, Headlands (Moderate hazard lands). The Umpa soils formed in colluvium and residuum over andesitic bedrock. Umpa soils have a very stony sandy loam A-horizon, with gravelly sandy loam subsurface textures in the upper 40 inches. Hard, fractured andesite is typically encountered between 20 and 40 inches below ground surface. The Jorge soils formed in colluvium and residuum over andesitic bedrock. Jorge soils have a stony sandy loam A-horizon, with gravelly sandy loam or very gravelly sandy loam subsurface textures in the upper 50 inches. An argillic horizon is present at 33 inches to a depth of 50 inches, where a C horizon is present. Depth to weathered andesitic bedrock is below 60 inches.

A land capability challenge (LCAP2021-0420) was filed by Ogilvy Consulting on behalf of the owner Deep Blue Trust on December 2, 2021. TRPA consultant, Marchel Munnecke, visited the site on May 24⁻ 2022 and observed as Davis 2 Consulting Earth Scientists completed two pit descriptions. The consultants submitted a final land capability report to TRPA on July 22, 2022.

Findings:

Two soil pits were excavated by backhoe to 65 and 60 inches. Site 1 was located approximately 4 feet north of the driveway and northeast of the residence. Site 2 was located approximately 22 feet south of the driveway on the southeast corner of the parcel. The soils at the two pits are very similar. They formed in colluvium and residuum from volcanic parent material. The soil at Site 1 is characterized by a coarse sandy loam surface texture, with gravelly sandy loam, very gravelly sandy clay loam, and very gravelly coarse sandy loam subsurface textures. Hard or weathered bedrock was not encountered in the pit. This soil has argillic horizons beginning at 12 inches and is classified as a Fine-loamy, mixed, frigid, Ultic Haploxeralfs. This soil is very deep, well drained, and is a member of Soil Hydrologic Group B. The soil at Site 2 is characterized by a gravelly coarse sandy loam surface texture, with gravelly coarse sandy loam, gravelly sandy clay loam, gravelly clay loam subsurface textures. Hard or weathered bedrock was not encountered in the pit. This soil is non-skeletal with argillic horizons beginning at 10 inches. This soil is classified as a Fine-loamy, mixed, frigid, Ultic Haploxeralfs. This soil is very deep, well drained, and is a member of Soil Hydrologic Group B. The vegetation in this upper area an open forest of Jeffrey pine, red fir and huckleberry oak.

The portion of the parcel with slopes greater than 30 percent were not assessed and remain Class 1a, as the capability class would not change the coverage due to the steeper slopes.

In the Soil Conservation Service *Soil Survey of Tahoe Basin Area, California-Nevada* (Rogers, 1974), the Umpa soils are moderately deep (20-40 inches over hard bedrock). The soils at this site are deeper than 40 inches to weathered bedrock (volcanic mudflow material). The soils at Sites 1 and 2 are within the range and characteristic of the Tahoma soil series. Based on soils and slopes, this parcel is mapped as JtD- Jorge-Tahoma cobbly sandy loams, 2 to 15 percent slopes, JwE- Jorge-Tahoma very stony sandy loams, 15 to 30 percent slopes, and UmF, Umpa very stony sandy loam, 30 to 50 percent slopes mapunits.

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

Land Capability District	Area (sq. ft.) 2021 LCV	Area (sq. ft.) 2022 LCC
Class 3 (UmE, 15 to 30% slopes)	19,334	0
Class 1a (UmF, 30 to 50 %		
slopes)	29,3230	25,818
Class 6 (JtD, 0 to 16 % slopes)	0	4,320
Class 4 (JwE, 15 to 30 % slopes)	0	18,519
Total Parcel Area	48,657	48,657

Contact Information:

This memorandum was jointly prepared by Marchel Munnecke and Julie Roll, Senior Planner. If you have questions on this Hearings Officer item, please contact Julie Roll, 775-589-5247, or email at jroll@trpa.gov.

BAILEY LAND CAPABILITY CHALLENGE FINDINGS

Site Information		
Assessor's Parcel Numbers: (APN)	N) 126-262-09	
TRPA File No. / Submittal Date:	LCAP2021-0420/ 12/2/2021	
Owner or Applicant:	Deep Blue Trust	
Address:	711 Christina Drive	
	Incline Village, NV 89451	

Environmental Setting		
Bailey Soil Mapping Unit ¹ /	UmE (Umpa very stony sandy loam, 15 to 30 percent	
Hydrologic Soil Group (HSG) / Land	slopes/ HSG C/ D2- Streamcut volcanic flow lands,	
Class / Geomorphic Hazard Unit	Headlands (Moderate hazard lands)	
Soil Parent Material	Colluvium over residuum from volcanic rock	
Slopes and Aspect	4 to 59 percent; sloping to the northwest and west.	
Elevation and Datum	7,230 to 7,304 feet, Auerback Engineering Corp, 1/25/21	
Rock Outcrops and Surface Configuration	The upper parcel is gently sloped to the north. There are a few areas of rock out crop to the north and south of the residence, within the 1a land capability. The slope to the west of the residence is between 30 to 60 percent, facing west.	
SEZ and Hydrology Source	NA	
Vegetation	The vegetation is an open Jeffrey pine forest with a few red fir, and huckleberry oak in the understory. The steeper slopes have few trees, and open cover of huckleberry oak.	
Ground Cover Condition	Good (vegetation 65 %, duff/mulch 70% cover)	
Site Features	Residence, asphalt driveway, pavers, stairs, walkways, decks, and rock structures.	

Field Investigation and Procedures		
Consultant and Address	Davis 2 Consulting Earth Scientist	
	PO Box 734	
	Georgetown, CA 95634	
TRPA Staff Field Dates	May 24, 2022	

¹ TRPA currently relies upon the <u>Soil Survey of Tahoe Basin, California-Nevada</u> (Rogers and Soil Conservation Service, 1974), which the Bailey Land Capability system is predicated upon.

AGENDA ITEM NO. V.B

SEZ Mapping / NRCS Hydric Soil	None present	
Number of Soil Pits or Auger Holes	2 pits excavated by backhoe to 65 and 60 inches.	
and Description Depth		
Additional or Repetitive TRPA	NA	
Sample Locations		
Representative Soil Profile	Land Capability Challenge for Myers Project, 751	
Descriptions	Champagne Way, Incline Village, Washoe County,	
	Nevada (APN 126-262-009), July 22, 2022	
Areas Not Examined	Residence, asphalt driveway, pavers, stairs, walkways,	
	decks, and rock structures.	

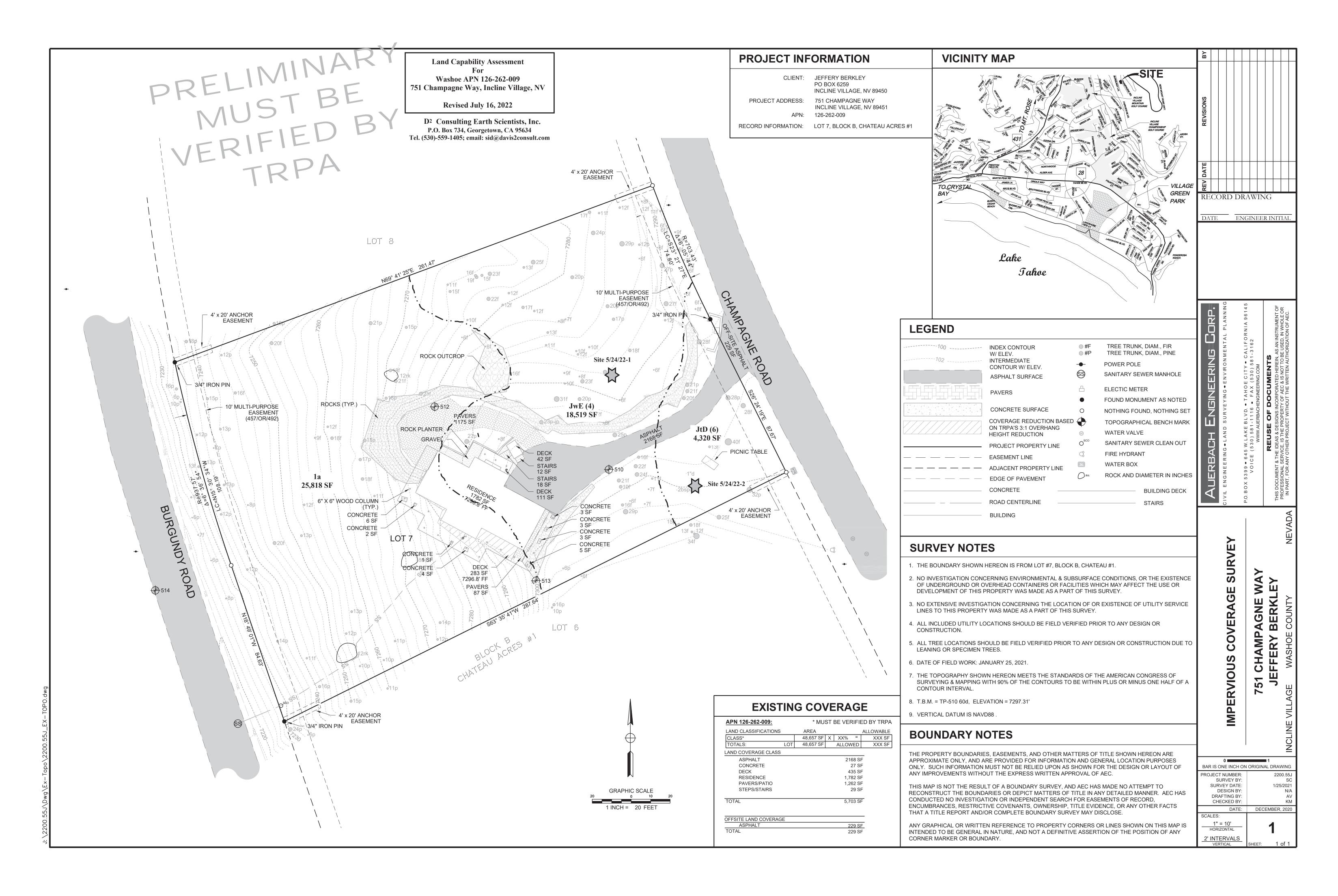
TRPA Findings		
2006 Soil Survey Map Unit	7151- Jorge very cobbly fine sandy loam, 5 to 15 percent slopes and 7152- Jorge very cobbly fine sandy loam, 15 to 30 percent slopes (Class 6 and Class 4 respectively), but portions of this parcel have slopes that are greater than 30% and would remain Class 1a.	
Consultant Soil Mapping	Class 6, JtD- Jorge-Tahoma cobbly sandy loams, 2 to	
Determination and Rationale	15 percent slopes, Class 4, JwE- Jorge-Tahoma very stony sandy loams, 15 to 30 percent slopes, and Class 1a, UmF- Umpa, very stony sandy loam, 30 to 50 percent slopes.	
	In the Soil Conservation Service Soil Survey of Tahoe Basin Area, California-Nevada (Rogers, 1974), the Umpa soils are moderately deep (20-40 inches over hard bedrock). The soils at this site are deeper than 40 inches to weathered bedrock (volcanic mudflow material). The soils at Sites 1 and 2 are within the range and characteristic of the Tahoma soil Based on soils and slopes, this parcel is mapped as JtD- Jorge-Tahoma cobbly sandy loams, 2 to 15 percent slopes and JwE- Jorge-Tahoma very stony sandy loams, 15 to 30 percent slopes.	
	The portion of the parcel with slopes greater than 30 percent remains mapped as Class 1a, UmF- Umpa very stony sandy loam.	
Slope Determination	4 to 39 percent slopes.	
TRPA Conclusion(s)	TRPA concurs with consultants' determination and rationale above.	
Applicable Area	See site topo for soil delineations.	

Attachments:

- A. Parcel map with soil map units delineated
- B. Land capability challenge report
- C. Site photographs

Attachment A

Parcel map with soil map units delineated



Attachment B

Land capability challenge report

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Land Capability Challenge
For
Myers Project
751 Champagne Way, Incline Village
Washoe County, Nevada
(APN 126-262-009)

July 22, 2022

INTRODUCTION

A soil investigation was conducted on the parcel on May 24, 2022. 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 impervious coverage regulation, by Chapter 30 of the Code of Ordinances.

The parcel supports an existing single-family residential dwelling on 1.1 acres of land, located at 751 Champagne Way, Incline Village, Nevada. This work is advanced at the request of Frank and Natasha Myers.

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, hazard waste assessment or seismic analyses. In this report the term "soil" refers to the surface weathering of rocks and sediments as typically used in agriculture, forestry, and erosion control. In contrast, the typical engineering use of the "soil" refers to the strength of deeper materials, often a few to tens or more feet deep.

ENVIRONMENTAL SETTING

The site is located at 751 Champaign Way, Incline Village, Nevada. Vegetation consists of Jeffery pine, red fir, and Huckleberry oak. Slopes range between 13 and greater than 30 percent on north and northwest aspects. There are no stream environment zones (SEZ) influencing this parcel.

Soils are shown on the TRPA land capability overlay as UmE (Umpa very stony sandy loam, 15 to 30 percent slope) and UmE (Umpa very stony sandy loam, 30 to 50 percent slopes). Geology (Mathews, 1968) is characterized as Tv^a (andesite). Bailey's (1974) geomorphic analysis shows the parcel within D₂ (Headlands).

METHODOLOGY

For this investigation, we surveyed the parcel and immediately adjacent areas (Figure X). We then measured and technically described X discrete soil profiles, each representative of site-specific landforms. By use of hand augers and backhoe excavators, we exposed the near- surface sediments to depths ranging from 0 to 5 feet deep. We then formally described and measured the physical properties of the soils

following procedures of the National Cooperative Soil Survey. We similarly documented groundwater levels using visual and color (Munsell) indicator methodologies associated with standard drainage class assessment. Information gathered at the site was compared to the *Soil Survey of the Lake Tahoe Basin, California-Nevada* (Rogers et al, 1974) and to criteria of the *Land-Capability Classification of the Lake Tahoe Basin, California-Nevada* (Bailey, 1974) for proper placement in the appropriate land capability class. A detailed topographic base map supplied by Auerbach Engineering Corp. was available in the field for ground control and slope analysis. Information pertaining to land capability districts is shown on the attached base map (Figure X).

FINDINGS

Soils are found to be deep and well drained, members of Soil Hydrologic Group B. They can be characterized having dark yellowish brown sandy loam topsoil approximately 12 inches thick, over dark yellowish brown gravelly sandy clay loam subsoil to 60 inches depth. Soils in two backhoe pits are nearly identical in areas of the parcel that measure less than 30 percent slope. Soil in areas greater than 30 percent slope were not investigated because there would be no significant change in land capability from what is currently shown on the TRPA overlay.

Soils in the gentler slope areas, less than 30 percent slope, are different than those shown on the TRPA map sheet because they are deep (> 60 inches) and well drained and members of Hydrologic Soil Group B, as opposed to Umpa series soils, which are moderately deep (20 to 40 inches), somewhat poorly well drained and member of Hydrologic Group C.

Soils found most closely fit the range and characteristics of the Tahoma series soils as mapped elsewhere in the Incline Village area. Tahoma series soils in the 0 to 15 percent slope range place in Land Capability Level 6 while the same series places in Level 4 where slopes range from 15 to 30 percent slopes. Level 6 receives 30 percent allowable impervious coverage, Level 4 receives 20 percent impervious coverage. Areas greater than 30 percent receive Level 2 and 1 percent impervious coverage.

CONCLUSIONS AND RECOMMENDATIONS

Soils found are recommended to place in: JwD (Jorge-Tahoma stony sandy loam, 2 to 15 percent slopes); JwE (Jorge-Tahoma stony sandy loam, 15 to 30 percent slopes) and JwF (Jorge-Tahoma stony sandy loam, 30 to 50 percent slopes). Impervious Coverage for these units is as follows in Table 1.

Table 1

14010 1		
SMU	LCC	Square Feet
JwD	6	4,320
JwE	4	18,519
JwF	2	25,818

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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,

Sidney W. Davis, CPSS /SC No. 1031

Representative Soil Profile Descriptions

Stop No. 1

- Oi 0-1 inch, conifer needles, duff and wood chips.
- 1 − 4 inches, dark yellowish brown (10YR 3/4) moist; coarse sandy loam; moderate fine granular structure; soft, loose, nonsticky and nonplastic; many very fine and few medium roots; many very fine and fine interstitial pores; fifteen percent gravel; clear smooth boundary.
- A2 4 12 inches, dark yellowish brown (10YR 3/4) moist; gravelly sandy loam; moderate medium granular structure; soft, loose, nonsticky and nonplastic; many fine medium roots; many very fine and fine interstitial pores; twenty percent gravel; gradual smooth boundary.
- Bt1 12 28 inches, dark yellowish brown (10YR 4/4) moist; gravelly sandy loam; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many fine medium and coarse roots; many fine tubular pores; few thin colloid in bridges between mineral grains; fifteen percent gravel; gradual smooth boundary.
- Bt2 28 50 inches, dark yellowish brown (10YR 4/4) moist; gravelly sandy clay loam; moderate medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common fine medium coarse roots; many fine tubular pores; common thin colloid in bridges between mineral grains; twenty percent gravel; gradual smooth boundary.
- 2Bt3 50 65 inches; dark yellowish brown (10YR 4/6) moist; very gravelly coarse sandy loam; moderate medium angular blocky structure; hard, friable, sticky and plastic; few fine medium roots; common fine tubular pores; common medium thick clay films on face of peds and line pores; forty percent gravel.

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Notes: Buried surface below 50 inches. HSG B.

Soil Series: Tahoma

Soil Classification: Fine-loamy, mixed, frigid, Ultic Haploxeralfs

Soil Drainage Class: Well drained

Hydrologic Soil Group: B





Figure 1 - Stop 1 profile.

Figure 2 - Stop 1 landscape.

Stop No. 2

- Oi 0-1 inches, Conifer needles and duff.
- A1 1 4 inches, dark yellowish brown (10YR 4/4) moist; gravelly coarse sandy loam; strong medium granular structure; soft, loose, nonsticky and nonplastic; common very fine and fine roots; many very fine and fine interstitial pores; medium acid; fifteen percent gravel; clear smooth boundary.
- 4 10 inches, dark yellowish brown (10YR 4/4) moist; gravelly coarse sandy loam; moderate medium subangular blocky structure; soft, loose, nonsticky and nonplastic; many fine medium and few coarse roots; many very fine and fine interstitial pores; medium acid; twenty percent gravel; clear wavy boundary.
- Bt1 10 30 inches, dark yellowish brown (10YR 4/4) moist; gravelly sandy clay loam near clay loam; moderate medium subangular blocky structure; slightly hard, very friable; slightly sticky and slightly plastic; common fine medium coarse roots; common fine medium tubular pores; common thin clay films occur on faces of peds and colloid in bridges between mineral grains; slightly acid; thirty percent gravel; clear wavy boundary.

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Bt2 30 – 42 inches, dark yellowish brown (10YR 4/4) moist; gravelly clay loam; strong medium subangular blocky structure; hard, friable, sticky and plastic; common fine medium and few coarse roots; common fine medium tubular pores; many medium thick clay films on face of peds and line pores; slightly acid; twenty percent gravel; clear smooth boundary.

2Bt3 42 – 60 inches, olive brown (2.5Y 4/4) moist; very gravelly sandy clay loam; strong medium angular blocky structure; hard, friable, sticky and plastic; few fine medium coarse roots; few fine medium tubular pores; many medium thick clay films on face of peds and line pores; slightly acid; forty percent gravel.

Note: Thick clay films at base.

Soil Series: Tahoma

Soil Classification: Fine-loamy, mixed, frigid, Ultic Haploxeralfs

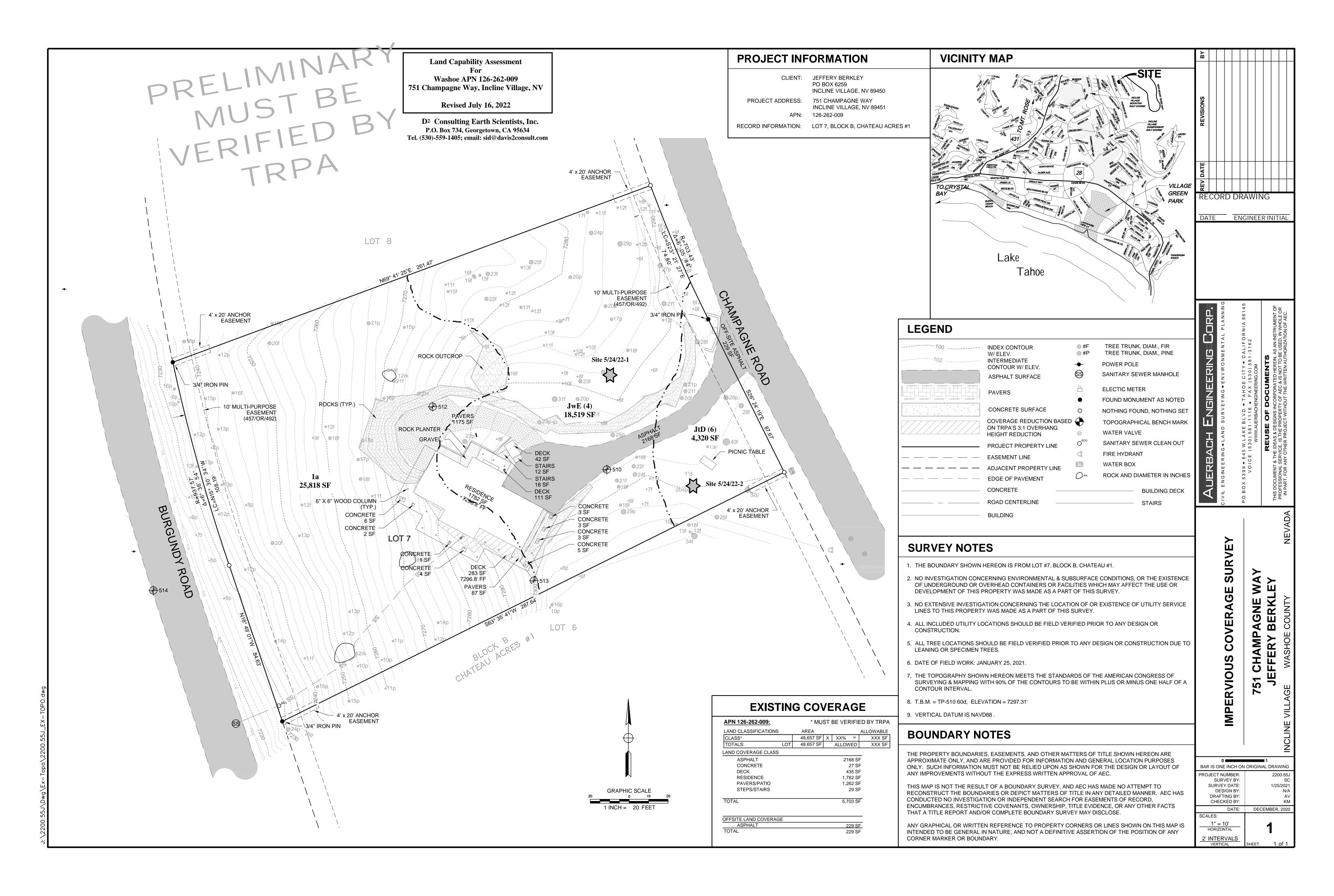
Soil Drainage Class: Well drained

Hydrologic Soil Group: B



Figure 3 - Stop 2 profile.

Figure 4 - Stop 2 landscape.



Attachment C

Site photographs

TAHOE

REGIONAL

PLANNING

AGENCY

Phone: 775-588-4547 Fax: 775-588-4527 www.trpa.gov

PHOTOGRAPHS (Addendum to APN 126-262-09, August 18, 2022 Staff Summary)



Photo 1 – a. Site 1 pit. Photo 1-b. Site 1 looking west toward residence.



Photo 2 – a. Site 2 pit. Photo 2-b. From road looking south toward Site 2 area.

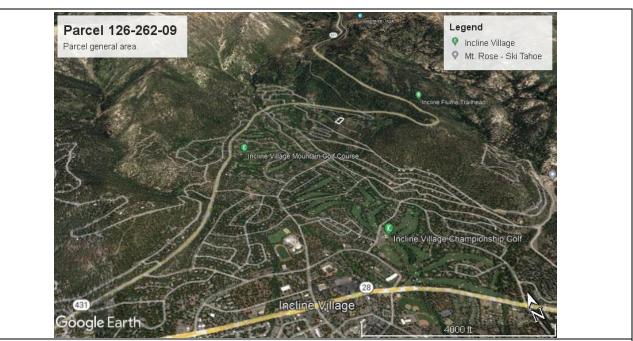


Image 3– Google Earth map of general area with approximate parcel area in red.



Image 4– Google Earth map of approximate parcel area.



Image 5– ESRI map with 1974 Soil Survey mapunit delineations.