Planning and Development Services
860 Levoy Drive, Suite 300 • Taylorsville, UT 84123
Phone: (385) 910-5600

Mountainous Planning District Planning Commission

Public Meeting Agenda

Thursday, March 20, 2025 3:00 P.M.

Location:
Join Zoom Meeting
https://us06web.zoom.us/j/7625846577
Meeting ID: 762 584 6577
One tap mobile
+16694449171,,7625846577# US

Anchor Location: 2001 South State Street
North Building, Room N1-110

UPON REQUEST, WITH 5 WORKING DAYS NOTICE, REASONABLE ACCOMMODATIONS FOR QUALIFIED INDIVIDUALS MAY BE PROVIDED. PLEASE CONTACT WENDY GURR AT 385-391-8268.
TTY USERS SHOULD CALL 711.

The Planning Commission Public Meeting is a public forum where, depending on the agenda item, the Planning Commission may receive comment and recommendations from applicants, the public, applicable agencies and MSD staff regarding land use applications and other items on the Commission's agenda. In addition, it is where the Planning Commission takes action on these items, which may include: approval, approval with conditions, denial, continuance or recommendation to other bodies as applicable.

BUSINESS MEETING

1) Election of Chair and Vice Chair 2025. (Motion/Voting)
2) 2025 Planning Commission Meeting Schedule. (Motion/Voting)
3) Approval of November 21, 2024 Planning Commission Meeting Minutes. (Motion/Voting)

ADMINISTRATIVE LAND USE APPLICATION(S)

WVR2025-001332 – Ron Smith is requesting a slope waiver to develop on a slope steeper than 30%. **Acres:** 6.00. **Location:** 10940 East Lambs Canyon. **Zone**: FR-1. **Planner:** Justin Smith (Motion/Voting)

PUBLIC HEARING(S)

OAM2025-001349 - An Ordinance of General Revision, Amending Section 19.15.140, Entitled "Retention of Single-Family Residence Status and Verification of Water and Sewer" of the Salt Lake Code of Ordinances, 2001, to Allow Separate Metering for Detached Accessory Dwelling Units; and Making Other Related Changes. **Presenter:** Zach Shaw (Motion/Voting)

BUSINESS MEETING (Cont.)

4) Planning Commissioner Training. **Counsel, Zach Shaw**
5) Other Business Items. (As Needed)

ADJOURN

Rules of Conduct for the Planning Commission Meeting

1. Applications will be introduced by a Staff Member.

2. The applicant will be allowed up to 15 minutes to make their presentation.

3. The Community Council representative can present their comments.

4. Persons in favor of, or not opposed to, the application will be invited to speak.

    a. Speakers will be called to the podium by the Chairman.
    b. Because the meeting minutes are recorded it is important for each speaker to state their name and address prior to making any comments.
    c. All comments should be directed to the Planning Commissioners, not to the Staff or to members of the audience.
    d. For items where there are several people wishing to speak, the Chairman may impose a time limit, usually 3 minutes per person, or 5 minutes for a group spokesperson.

5. Persons opposed to the application will be invited to speak.

6. The applicant will be allowed 5 minutes to provide concluding statements.

    a. After the hearing is closed, the discussion will be limited to the Planning Commission and the Staff.

Mountainous Planning District Planning Commission

2025 Regular Meeting Schedule

Meeting Place: Salt Lake County Council Chambers – 2001 South State Street, N1-110

Time: 3:00PM *Unless otherwise posted*

The Public is Welcome to Attend

Thursday January 16, 2025

Thursday February 20, 2025

Thursday March 20, 2025

Thursday April 17, 2025

Thursday May 15, 2025

Thursday June 19, 2025

Thursday July 1, 2025

Thursday August 21, 2025

Thursday September 18, 2025

Thursday October 16, 2025

Thursday November 20, 2025

Thursday December 18, 2025

UPON REQUEST, WITH 5 WORKING DAYS NOTICE, REASONABLE ACCOMMODATIONS FOR QUALIFIED INDIVIDUALS MAY BE PROVIDED. PLEASE CONTACT WENDY GURR AT 385-468-6707. TTY USERS SHOULD CALL 711.

The Public May Attend. Meetings May Be Closed For Reasons Allowed By Statute.

Planning and Development Services
2001 S. State Street N3-600 • Salt Lake City, UT 84190-4050
Phone: (385) 468-6700 • Fax: (385) 468-6674

MEETING MINUTE SUMMARY

MOUNTAINOUS PLANNING DISTRICT PLANNING COMMISSION MEETING

Thursday, November 21, 2024, 3:00 p.m.

Approximate meeting length: 20 minutes
Number of public in attendance: 1
Summary Prepared by: Wendy Gurr
Meeting Conducted by: Commissioner Sorenson

*NOTE: **Staff Reports** referenced in this document can be found on the State and County websites, or from Salt Lake County Planning & Development Services.

ATTENDANCE

Commissioners	Public Mtg	Business Mtg	Absent
James Palmer	x	x	
Nicole Omer	x	x	
Don Despain	x	x	
Burke Staker (Vice Chair)	x	x	
Sarah Reale			x
Daniel Schoenfeld	x	x	
Mackenzie Sorenson (Chair)			x
John Knoblock	x	x	
Dallas Bullock			x
Bonnie McAllister	x	x	

Planning Staff / DA	Public Mtg	Business Mtg
Wendy Gurr	x	x
Jim Nakamura	x	x
Ryan Anderson	x	x
Zach Shaw (DA)	x	x

ADMINISTRATIVE LAND USE APPLICATION(S)

Hearing began at – 3:03 p.m.

PAM2023-000826 – Kerry Winn is requesting approval to vacate the stubbed secondary access between lots 15/16 in the Cottonwood Canyon Estates Subdivision (aka the Tavaci subdivision). **Zone:** FR-0.5. **Location:** 3932 East Canyon Estate Drive (Lot 16). **Planner:** Jim Nakamura (Motion/Voting)

Greater Salt Lake Municipal Services District Planner Jim Nakamura provided an analysis of the amendment and proposed changes.

Commissioners and staff had a brief discussion regarding the utility easement, secondary access,

Commissioner Knoblock motioned to open the public hearing, Commissioner McAllister seconded that motion.

PUBLIC HEARING OPENED

Speaker # 1: Applicant/Manager HOA
Name: Kerry Winn
Address: 8138 South State Street, #3

DRAFT

Comments: Mr. Winn said he has been the manager of the HOA since 2005-2006. He managed for MACU and later Tavaci Holdings. In 2004, the road stub was made for secondary emergency access road, which is stubbed off to 600-foot cliff. Proposal is to incorporate stub road into lot 15 and vacate. Utility companies willing to vacate and secondary access will never be possible. HOA doesn't have to maintain. Took out the paved road, deemed to be dangerous and excavated to match the sloping contours, and doesn't exist anymore.

Commissioner Knoblock asked if the land would be incorporated into one of the two lots and administrative adjustment with respect to the property line. Mr. Winn says stubbed road has been incorporated into lot 15 via a plat adjustment and no objections to the same; HOA doesn't want responsibility of the common stub.

No one from the public was present to speak.

Commissioner McAllister motioned to close the public Hearing, Commissioner Omer seconded that motion.

PUBLIC HEARING CLOSED

Motion: To approve application #PAM2023-000826 in accordance with staff recommendations.
Motion by*:* Commissioner McAllister
2nd by: Commissioner Despain
Vote*:* Commissioners voted unanimous in favor (of commissioner's present)

BUSINESS MEETING

Meeting began at – 3:22 p.m.

1) Approval of the June 20, 2024 Planning Commission Meeting Minutes. (Motion/Voting)
Motion: To approve the June 20, 2024 Planning Commission Meeting Minutes as presented.
Motion by*:* Commissioner Omer
2nd by: Commissioner Knoblock
Vote*:* Commissioners voted unanimous in favor (of commissioner's present)

2) Other Business Items (as needed)
No other business items to discuss.

Commissioner Burke adjourned.

MEETING ADJOURNED

Time Adjourned – 3:23 p.m.

DRAFT

Municipal Service District Planning and Development Services
2001 S. State Street N3-600 • Salt Lake City, UT 84190-4050
Phone: (385) 468-6700 • Fax: (385) 468-6674
msd.utah.gov

WVR2024-001303

Slope Waiver

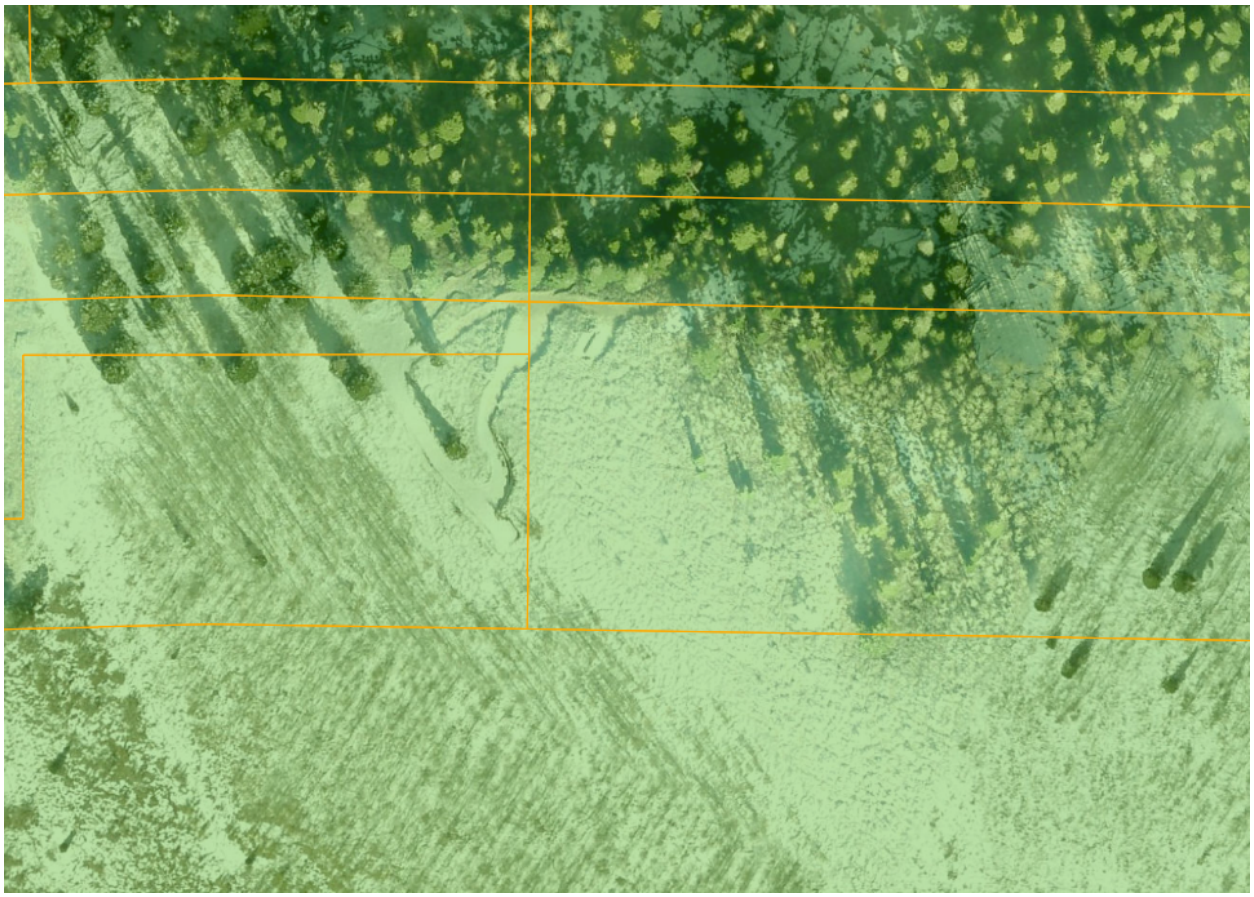
Public Body: Mountainous Planning Commission
Meeting Date: March 20, 2025
Parcel ID: 18-28-326-013-0000
Current Zone: FR-1
Property Address: 10940 E Lambs Canyon
Request: Slope Waiver
Applicant Name: Ron Smith
MSD Planner: Justin Smith
MSD Planning Staff Recommendation: Approval

PROJECT & BACKGROUND DESCRIPTION

Ron Smith is requesting a slope waiver in order to build a cabin at 10940 E Lambs Canyon Road. The original application was made in 2023 and proposed building a 12’ x 16’ cabin. Previously, a grading plan was approved in 2016 and a fire suppression water tank was added.

SITE & ZONE DESCRIPTION

The property is located in Lambs Canyon. The property is zoned FR-1 and contains Lots 116 and 117 along with half of Lot 115 of the Forest Home Subdivision Plat A. The applicant has an easement agreement for a septic system with the landowner to the west. The subject property is 6 acres in size.



STANDARDS AND FINDINGS

19.72.060 – Slope Protection

The slope protection standards of 19.72.060 restrict development activity on slopes greater than 30%. This section also requires that slopes in excess of 30% be left as open space that is free of any development activity. However, for Lots of Record, the Planning Commission is able to waive or modify the slope protection standards of lots that are older than this chapter (Foothills and Canyons Overlay Zone). The Forest Homes Plat A Subdivision was approved by the Board of County Commissioners in 1946, which would predate both the zoning and subdivision ordinances, and is therefore a lot of record under SLCO Code section 19.72.200.

The Planning Commission is only able to waive the slope protection standards upon satisfaction of the following criteria:

a) Strict compliance with the above protection standards:

i) renders the site undevelopable, or

ii) results in substantial economic hardship (denial of all reasonable economic use) not created by the applicant or otherwise self-imposed, or

iii) results in a building location that requires excessive grading, vegetation

removal, or driveway distances in conflict with the purposes of this chapter; and

b) The development substantially conforms to all other development, site design, and environmental standards of this chapter and in all other applicable ordinances and codes.

The site that has been chosen for the cabin sits on a slope around 34% when measured out over 50 feet as defined in the ordinance. There is a second site nearby that has a slope of less than 30%, but that site has issues due to requiring significant rock excavation as called out in the geotechnical report. The applicant's engineer notes in the geotechnical report that "Option B" would likely require considerably more earthwork and bedrock removal than "Option A." This is supported by the bore logs that are included in the appendix of the report. Option A, which would require the slope waiver, has 1 foot of topsoil, then 1.5 feet of clayey sandy gravel, and then 3 feet of fractured bedrock before the bore was unable to penetrate any further. Option B, the location under 30% slope, has 1 foot of topsoil followed by 1.5 feet of fractured bedrock, and then at 2.5 feet the bore was not able to continue.

From that information it is apparent that significantly more excavation may be necessary for the cabin to be located at Option B. The geotechnical report also calls out that Option B is located on a ridge, while Option A is located in the tree line just below the ridgeline. Option B could result in significantly more excavation as the recommended minimum depth of the foundation for frost conditions was 36 inches, which would be past the point of which the bedrock begins. Breaking the bedrock could require specialized equipment. Option A should be able to accommodate the cabin's foundation with significantly less excavation. Option B's location could result in significantly more grading and vegetation removal during the excavation process and would also be a more costly location to build on due to the additional work that would be required in comparison to Option A. Accordingly, it is Staff's opinion that the third criteria for a slope waiver has been satisfied, and a slope waiver would therefore be appropriate.

The associated land use application has received conceptual approvals from all agencies outside of Planning and Salt Lake City Department of Public Utilities. The applicant has been working with Salt Lake City Department of Public Utilities regarding their comments on the water tank. The Planning comment is regarding the proposal to build on a slope of greater than 30%, but less than 40%. A waiver would satisfy that comment.

ISSUES OF CONCERN

Typically, applications will receive a conceptual ok from Salt Lake City Department of Public Utilities before being heard by the Planning Commission. The applicant has a water tank on the property for fire suppression that is larger than Salt Lake City allows. To meet the requirement for slope waiver that the development substantially conform to all other applicable ordinances and codes, Staff recommends that approval of the slope waiver be conditioned on obtaining a watershed letter from Salt Lake City in accordance with applicable regulations.

NEIGHBORHOOD RESPONSE

No responses to this application have been received at the time of this report. Staff will provide updates to the Planning Commission when and if responses are received.

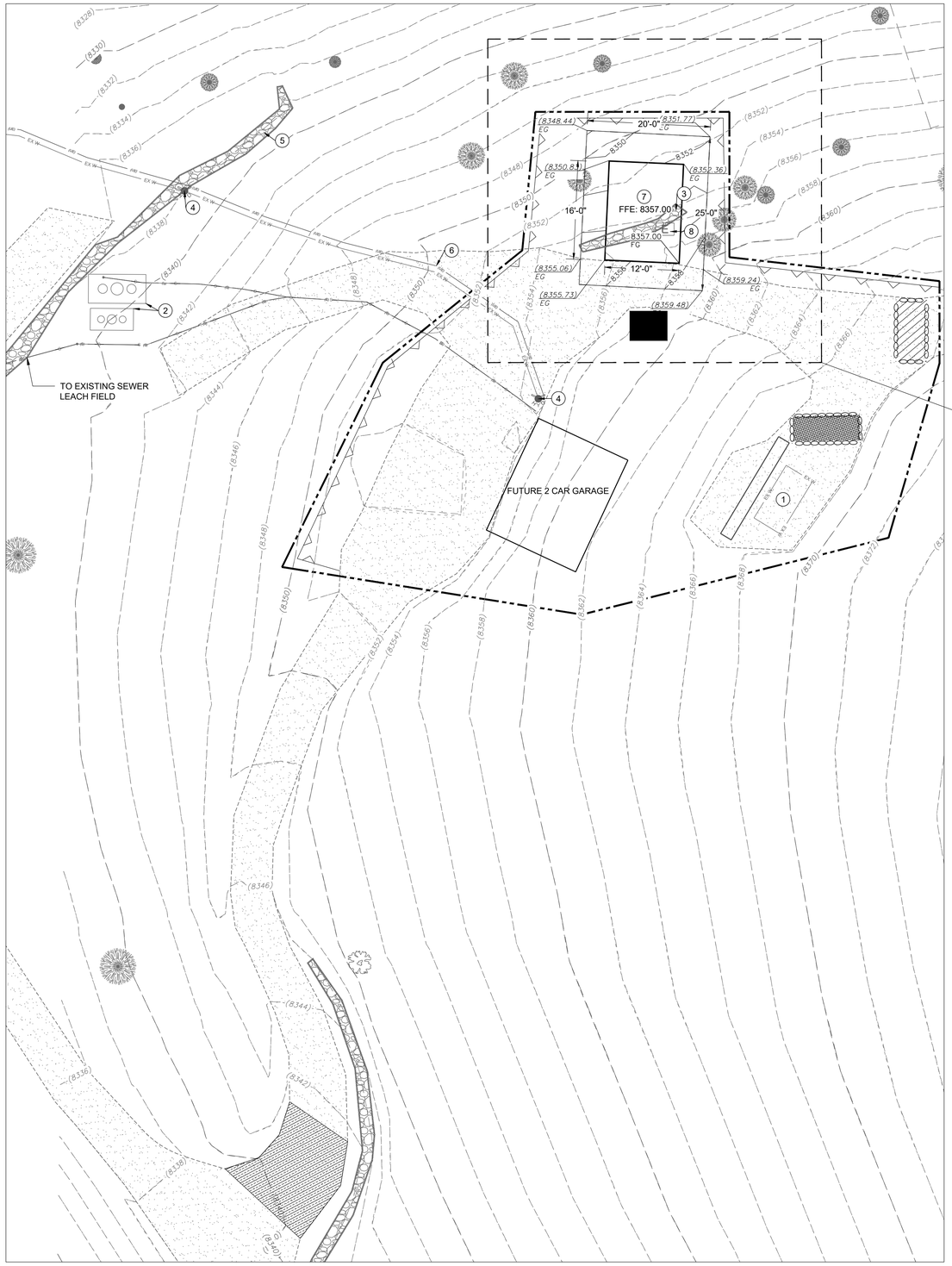
PLANNING STAFF RECOMMENDATION

Based on the findings stated above, the MSD Planning Staff recommends that the Mountainous Planning Commission approve of the slope waiver subject to the following conditions:

1. Applicant be required to get a Watershed Letter from Salt Lake City Public Utilities in accordance with applicable regulations.
2. Applicant be required to complete the technical review process.

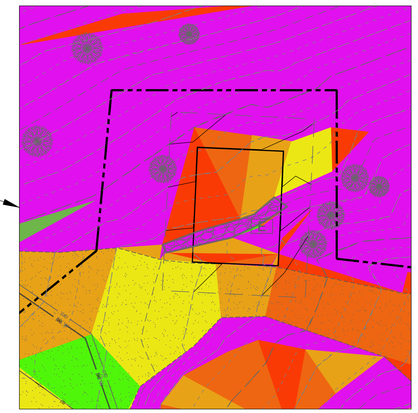
ATTACHMENTS:

A. Site Plan
B. Elevations
C. Options Letter
D. Slope Analysis
E. Geotechnical Report



Slopes Table

Number	Min.	Max.	Area	Color
1	1%	12%	4303	
2	12%	15%	2290	
3	15%	20%	5621	
4	20%	25%	12867	
5	25%	30%	19631	
6	30%	35%	11857	
7	35%	285%	19568	



SLOPE ANALYSIS

LEGEND

- -BMP SILT FENCE ER.102
- -BMP INSPECTIOIN AND MAINTENANCE, BMP STABILIZED CONSTRUCTION ENTRANCE AND WASH AREA ER.01-ER.02
- -TOPSOIL STOCKPILE AREA (OR AS DIRECTED BY OWNER) BMP EARTH BERM BARRIER ER.01
- -BMP MATERIALS STORAGE, BMP VEHICLE AND EQUIPMENT FUELING, BMP CONCRETE WASTE MANAGEMENT, BMP PORTABLE TOILETS, BMP EARTH BERM BARRIER ER.01-ER.02
- -BMP DUST CONTROLS, BMP GRADING PRACTICES, BMP CONTAMINATED OR ERODIBLE SURFACE AREAS, REPOSITORY STOCKPILE AREA (OR AS DIRECTED BY OWNER), BMP EARTH BERM BARRIER ER.01-ER.02

N

10 0 10 20

SCALE IN FEET
24x36 = 10
11x17 = 20

CONSTRUCTION KEY NOTES

1. PROTECT IN PLACE EXISTING FIRE SUPPRESSION TANK.
2. PROTECT IN PLACE EXISTING 1,500 GAL. SEALED VAULT AND 1,000 GAL. SEPTIC TANK. CONTRACTOR TO VERIFY LOCATION.
3. DEMO AND PROPERLY DISPOSE OF EXISTING ROCK WALL.
4. PROTECT IN PLACE EXISTING FIRE HYDRANT. CONTRACTOR TO VERIFY LOCATION.
5. PROTECT IN PLACE EXISTING ROCK WALL. CONTRACTOR TO VERIFY LOCATION.
6. PROTECT IN PLACE EXISTING UTILITIES. CONTRACTOR TO VERIFY LOCATION.
7. CONSTRUCT 12' X 16' CABIN. TRIM TREES AS NEEDED.
8. REMOVE AND RELOCATE EXISTING UTILITY.

LEGEND

- - - - - - LIMIT OF DISTURBANCE

GRADING GENERAL NOTES

SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL SOFT, YIELDING, OR UNSUITABLE MATERIAL AND REPLACING THEM WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM TEST D-1557 EXCEPT UNDER BUILDING FOUNDATIONS WHERE IT SHALL BE 95% MINIMUM OF MAXIMUM DENSITY. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT COMPACTION REPORT AS PREPARED BY A QUALIFIED REGISTERED GEOTECHNICAL ENGINEER, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREA WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS.

CONTRACTOR TO BECOME FAMILIAR WITH SOIL CONDITIONS

THE CONTRACTOR IS TO USE BEST MANAGEMENT PRACTICES FOR PROVIDING EROSION CONTROL AND DUST SUPPRESSION FROM CONSTRUCTION OF THIS PROJECT.

ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED. INCLUDING TREES, DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.

ALL DOORWAY LANDING SHALL BE ADA COMPLIANT .

AFTER THE BUILDING PERMIT IS ISSUED, SCHEDULE THE FOOTING EXCAVATION INSPECTION BEFORE PLACING CONCRETE FORMS AND REBAR

DRAINAGE STATISTICS:

RETENTION REQUIREMENTS
NEW DEVELOPMENTS ARE REQUIRED TO RETAIN THE 10-YR 24-HR RAINFALL EVENT PER PARK CITY STORM WATER MANAGEMENT PLAN.

REQUIRED STORAGE: 55 CF

55 CF WILL PERCOLATE INTO THE REMAINDER OF THE PROPERTY. RETENTION NOT REQUIRED FOR THIS SMALL OF AMOUNT

LEGEND AND ABBREVIATIONS

TC = TOP OF CURB
AC = ASPHALT AND CONCRETE
BSW = BACK OF SIDEWALK
FSW = FRONT OF SIDEWALK
FF = FINISH FLOOR
FG = FINISH GRADE
FL = FLOW LINE
FS = FINISH SURFACE
GB = GRADE BREAK
HP = HIGH POINT
EG = EXISTING GRADE
GR = STORM INLET GRATE

- X.XX% — DIRECTION OF FLOW & SLOPE
- (XX.XX) AC — EXISTING GRADE
- XX.XX TC — PROPOSED GRADE
- (XXXX) XXXX — EXISTING CONTOUR
- RIGHT-OF-WAY/PROPERTY LINE
- CENTERLINE
- EXISTING CURB, GUTTER & SIDEWALK
- EXISTING STRUCTURE

DISCLAIMER NOTE

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

CALL BEFORE YOU DIG.
IT'S FREE &
IT'S THE LAW.
(TOLL FREE)
1-800-662-4111
208-2100
(SALT LAKE METRO)
299 WEST 700 SOUTH, SUITE 101
SALT LAKE CITY, UTAH 84101

GILSON ENGINEERING
CIVIL • STRUCTURAL • LAND SURVEYING • Services
1245 SOUTH 450 EAST BUILDING C, UNIT 3, OREM, UT 84097
PHONE: (801) 571-9414 FAX: (801) 571-9449

LICENSED PROFESSIONAL ENGINEER
03/07/25
No. 362118
Bradley S. Gilson
STATE OF UTAH

REV	DATE	BY	COMMENTS

REVISIONS

1" SCALE MEASURES 1" ON FULL SIZE SHEET
ADJUST FOR HALF SIZE SHEET

DATE: MARCH 2025
DRAWING NAME: C.301 GRADING & DRAINAGE
DESIGNED/DRAWN BY: BPTTS
CHECKED: BG
APPROVED: BG

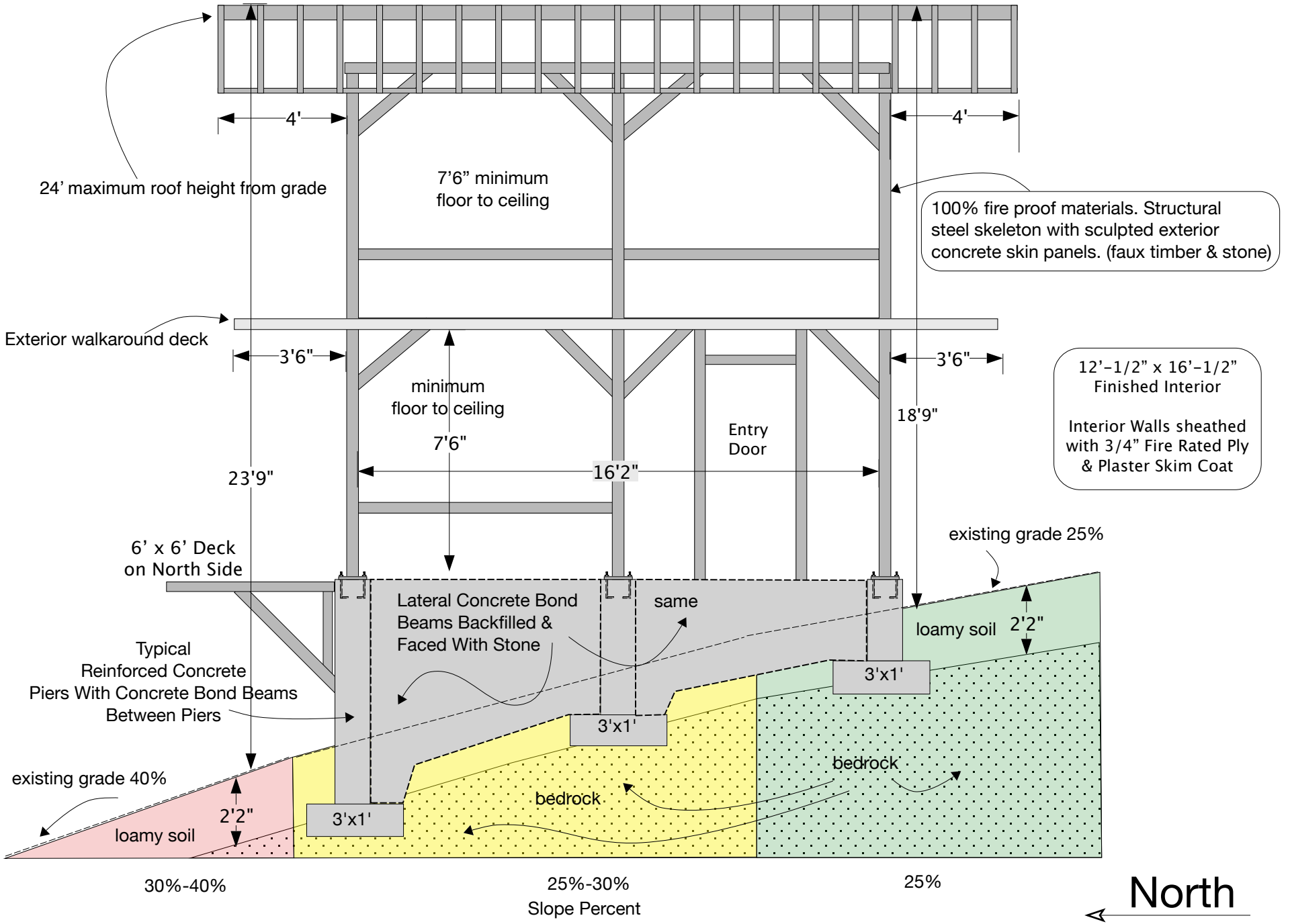
GRADING & DRAINAGE PLAN

COLLINS/SMITH LAMBS CABIN
10940 E LAMBS CANYON
SALT LAKE COUNTY, UTAH 84109

REVISION: 1

PROJ. # SMI.014.24

C.301



Kim Collins & Ron Smith PO Box 581111 SLC, UT 84158 kimron@yahoo.com (801) 448-4900	Parcel # 18-28-326-013 lots 115-1/2, 116, 117 Forest Home Subdivision Lambs Canyon	**2 story small cabin 12'x16' steel superstructure**	Scale 1/4"=1" West Elevation

CONSULTING ENGINEERS AND SURVEYORS
12401 So 450 East, Unit C2
(801) 571-9414
Fax: (801) 571-9449
www.gilsonengineering.com

October 16, 2024

Attn: Collins/Smith Lambs Cabin
Subject: Options Report
10940 E Lambs Canyon,
Salt Lake County, Utah

RE: 10940 E Lambs Canyon – Options Report

Gilson Engineering has completed two grading and drainage options for the proposed cabin located at 10940 E Lambs Canyon, Salt Lake County, Utah.

When comparing the two options, Option A stands out as the most feasible choice. This option will disturb less area. This is primarily because it avoids the challenges associated with carving into the rock that makes up the site as detailed by the geotechnical report. A portion of the building footprint may fall within slopes that are greater than 30% however it doesn't require the extensive groundwork that Option B would entail. This makes construction more straightforward and cost-effective.

Option B would require significant rock excavation. Building on steep rock terrain increases complexity, adds to construction time, and will lead to more extensive ground disturbance. If option A is deemed safe geotechnically, then it is the more practical and efficient option.

Don't hesitate to get in touch with me if you have any questions or concerns.

Sincerely,

Tyler Stanich
Project Engineer

Sincerely,
GILSON ENGINEERING
CONSULTING ENGINEERS AND SURVEYORS

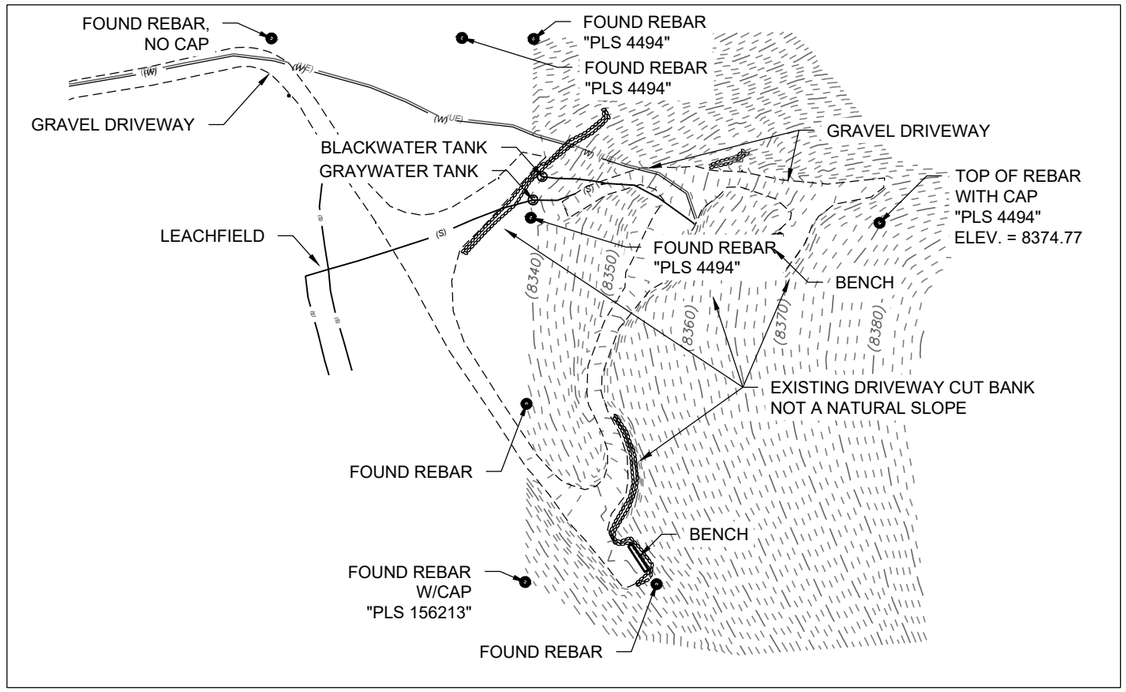


EXHIBIT SHOWING

EXISTING CONDITIONS AND SLOPE ANALYSIS OF PORTIONS OF

COLLINS/SMITH PROPERTY

PORTIONS OF LOTS 115-1/2, 116, & 117

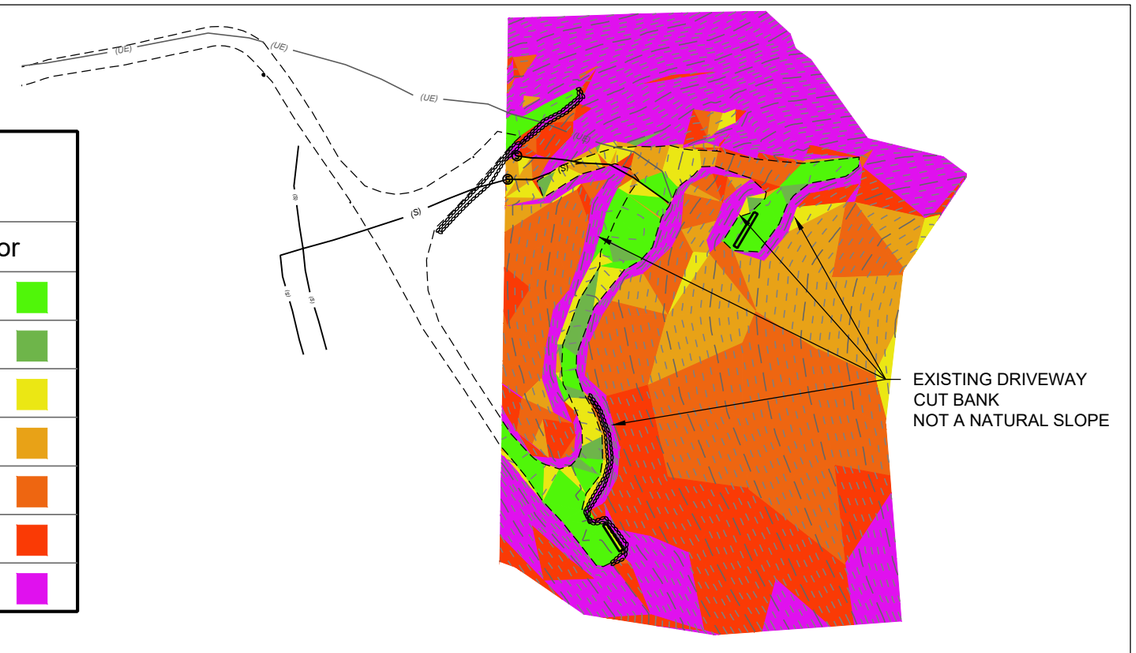
FOREST HOME SUBDIVISION PLAT "A"

SALT LAKE COUNTY PARCEL 18-28-326-013

SALT LAKE COUNTY, UTAH

PROJECT NOTES:

1. THIS EXHIBIT IS NOT A "BOUNDARY SURVEY" AND THIS PROJECT DID NOT INCLUDE A "BOUNDARY RETRACEMENT". THE PARCEL LINES SHOWN HEREON ARE A GRAPHICAL DEPICTION ONLY.
2. ON 6/03/2024 & 7/2/2024 GILSON ENGINEERING COMPILED TOPOGRAPHIC DATA ON PORTIONS OF THE SUBJECT PARCELS FOR THE PURPOSE OF DEPICTING A TOPOGRAPHIC SURFACE AND SLOPE ANALYSIS



Slopes Table

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4	20%	25%	12867	
5	25%	30%	19631	
6	30%	35%	11857	
7	35%	285%	19568	

LEGEND

- APPROX. PARCEL
- CONTOUR, MAJOR
- CONTOUR, MINOR
- GRAVEL ROAD
- TREE LINE
- (W) WATER LINE
- (S) SEWER LINE
- (UE) UGRD ELECTRIC

DATE: AUGUST 9, 2024	
PROJECT FILE: SMI.014.24	
FIELD: JB/DM	DRAFTED: KM
CHECKED: JB	APPROVED: JFM

N

70 0 70 140

SCALE IN FEET

GILSON ENGINEERING
Consulting Engineers & Surveyors
12401 SOUTH 450 EAST BUILDING C, UNIT 2, DRAPER, UT 84020
PHONE: (801) 571-9414 FAX: (801) 571-9449

civilsolutionsgroup inc.

GEOTECHNICAL ENGINEERING INVESTIGATION

Smith Cabin Geotechnical Investigation

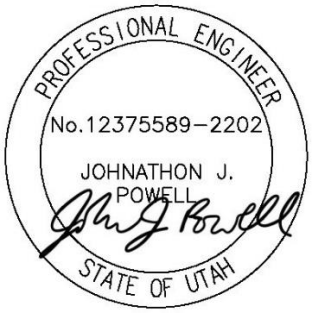
Prepared For:

Ron and Kim Smith
PO Box 581111
Salt Lake City, UT 84158
kimron@yahoo.com

Prepared By:

Civil Solutions Group, Inc.
John Powell, P.E.
498 West 100 South
Providence, Utah 84332

Original Submittal December 20, 2024
REV 1: January 13, 2025
Job Number: 23-347



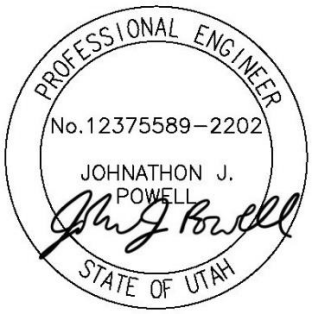
RE: Smith Cabin Geotechnical Investigation

Dear Mr. Smith,

Per your request this geotechnical engineering investigation is submitted for the subject property located approximately at 10940 East Lambs Canyon. This report contains the findings of the field investigation and the analysis conducted by Civil Solutions Group (CSG). This report also contains recommendations pertaining to construction and design of earth related portions of this project.

CSG completed the field investigation on September 9, 2024 at which time three test pits were excavated, examined, and recorded in detail. The test pit locations were selected based upon the proposed location of the building footprint and other site features. CSG recommends the site is suitable for proposed construction within the parameters defined within this report. Thank you for the opportunity to provide these services to you.

Sincerely,



John Powell, P.E.
Civil Solutions Group, Inc.

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Executive Summary

A geotechnical study was performed for the subject property at 10940 East Lambs Canyon. Our scope of services included excavating three test pits designated TP-1 to TP-3. The test pits were excavated with a Kubota KX040-4 mini excavator and advanced to a maximum depth of 5.5-feet below existing site grade. All field work was contained in the proposed development area and was completed on September 9, 2024.

The findings and recommendations generated from this exploration are summarized below:

- Onsite Soil – The site is composed mostly of clayey sandy gravel, gravelly silty sand, and bedrock. Fractured bedrock was encountered in all three test pits. Groundwater was not encountered at the time of the site investigation.
- Foundations - The planned structure should be supported entirely on continuous spread footings or spot footings. The recommended bearing capacity of in-situ soil is 1,500 pounds per square foot.
- Seismic Considerations - The 2021 International Building Code Seismic Design Category for this site is Category D (Risk Category II), with a soil site class of C. The site is located in an area with very low liquefaction potential. Bedrock was encountered and liquefaction will not present a risk during a seismic event.

This summary should be used in conjunction with the entire report for design purposes. It should be recognized that details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein. The entire report should be read for an understanding of the report limitations.

Introduction

General

Civil Solutions Group, Inc. (CSG) was contacted by Mr. Smith and was asked to conduct a geotechnical engineering investigation on the subject property located at 10940 East Lambs Canyon. The general location of the site may be seen in Figure 1, Vicinity Map. A more detailed location of the site showing the proposed development and surrounding improvements is shown in Figure 2, Site Map. It was described that the proposed construction for a small 12' by 16' cabin is anticipated to be two stories in height and of non-flamable construction.

Objectives and Scope

The objectives and scope of our study were defined between Mr. Smith and Mr. John Powell of CSG. In general, the objectives of this study were to:

- Define and evaluate subsurface soil and groundwater conditions across the site
- Provide foundation, earthwork, drainage, and geo-seismic recommendations

To accomplish these objectives, our scope has included the following:

- A field program consisting of the excavating, logging, and sampling of the three test pits
- A laboratory testing program
- An office program consisting of correlating available data, engineering analyses, and report preparation

Authorization

CSG was authorized to proceed with this scope of work through an executed contract returned to our office by Mr. Smith of Ron and Kim Smith. The executed contract was dated September 4, 2024.

Professional Statements

CSG certifies that our professional services have been performed, our findings developed, and our recommendations prepared in accordance with generally accepted engineering principles and practices in this area at this time. Supporting data upon which our recommendations are based is presented in the subsequent sections of this report. Recommendations made herein are governed by the physical properties of the soils encountered in the exploration excavation, observed and projected groundwater conditions, and the layout and design data as summarized in the Proposed Construction section of this report. If subsurface conditions other than those described in this report are encountered and/or if design and layout changes are implemented, CSG must be informed so that our recommendations can be reviewed and amended, if necessary.

Proposed Construction

The proposed construction is as follows: small cabin on a mountain lot with two potential locations. Option A (TP-3) is located in the tree line below the ridgeline, and Option B (TP-1 & 2) is on top of the ridge. Both Option A and Option B is adequate for placing the building. The cabin is anticipated to be two stories of height of non-flamable construction. If structural engineering plans are different than assumed, they should be provided to our office for review.

There are two options for the cabin's location on site, Option A and Option B (see Figure 2 – Site Map). It is anticipated that the site development for Option B will likely require considerably more earthwork and bedrock removal than Option A.

Column and wall loadings are anticipated to be on the order of 10-40 kips and 1-3 kips per lineal foot respectively.

Existing Site Conditions

General

The site lies approximately at 10940 East Lambs Canyon. The existing property is vacant of structures and has a lot of trees and other typical mountain plants and shrubs. The surrounding properties are also mountain property for cabins. The surface and subsurface soils that were explored appeared to be free of hazardous debris and other foreign objects.

Site Topography & Drainage Features

The majority of the site contains steep slopes, with a ridge that has the shallowest slopes. On-site there were no springs, streams, canals or standing water observed at the time of the site visit.

Site Soils

The soil conditions encountered in each of the three test pits, to the depths explored, were relatively similar. In test pit number 1 (TP-1), there was approximately 1-foot of topsoil with roots extending from vegetation. From approximately 1-foot beneath existing grade to the full depth explored, 5.5-feet, fractured bedrock layers with gravelly silty sand was encountered. The remaining test pits throughout the site had similar characteristics as TP-1. Groundwater was not encountered at the time of the site investigation. Soil encountered during the investigation can be referenced in the Soil Logs in the Appendix of this report. Materials encountered in the test pits are anticipated to exhibit strength and compressibility characteristics under the anticipated loading range.

Subsurface Exploration and Testing Programs

General

To define and evaluate the subsurface soil and groundwater conditions across the site, three test pits were excavated to depths of up to 5.5-feet below existing grade. The test pits were excavated using a Kubota KX040-4 mini excavator. Soil sampling was collected by hand from the test pit or by way of excavator bucket. Locations of the test pits are presented in Figure 2.

Field Program

The field portion of our study was conducted on September 9, 2024. Continuous logs of the subsurface findings were created and maintained as part of the field program. The field portion of our study was under the direct control and continual supervision of an experienced member of our geotechnical staff. Field classifications were logged, and any adjustments made once the laboratory data and analyses were received.

The CSG geotechnical team collected disturbed samples of typical soils that were found in the test pits. The disturbed samples were taken using bagged grab samples from the test pit, or from the excavator bucket.

Graphical depictions of the subsurface findings are shown in the Soil Logs contained within the Appendix of this report.

Laboratory Program

CSG partnered with RB&G Engineering to conduct a laboratory testing program on the samples retrieved from the sites. This laboratory testing program was conducted to provide data necessary for our engineering analyses. The program included partial gradation (sieve) analysis, Atterberg limits (if applicable), and chemical tests. The following describes the tests and summarize the test data. Samples from the field will be maintained in our office for a period of 90 days at which time they will be disposed of unless a written request is received from Ron and Kim Smith that they should be retained.

Sieve Analysis

Gradation tests (sieve analysis) were conducted on disturbed samples which were collected from the site. The gradation test aids in classifying the soils and can provide general index parameters. Gradation tests aid the design team in determining the overall composition of the soil and behaviors that the soil may exhibit under certain situations. The results of the tests are shown in Table 1 below:

Table 1 - Gradation & Soil Classifications

Test Pit Sample No.	Depth (feet)	Percent Passing #200 Sieve	Soil Classification
TP-1	2-2.5	13	GC
TP-3	2-2.5	36	SM

Atterberg Limits

Atterberg Limits were performed on relatively undisturbed samples to understand the plastic and liquid limits of the cohesive soil. Atterberg limits allow the design team to understand the potential for the soil to shrink and expand based on water content. The results are presented in Table 2 below:

Table 2 - Atterberg Limits

Test Pit Sample No.	Depth (feet)	Classification	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)
TP-1	2-2.5	GC	28	19	9
TP-3	2-2.5	SM	34	26	8

Chemical

To determine if the site soils will react detrimentally with concrete, a chemical sulfate test was performed on a representative sample of the natural soils at approximately the depth of the soil that

will come into direct contact with concrete improvements for the proposed development. The results of the chemical tests are shown in Table 3 below:

Table 3 - Chemical Properties of Soil

Test Pit Sample No.	Depth (feet)	Sulfate (mg/kg)
TP-1	2-2.5	<10

Discussions & Recommendations

Summary of Findings

It is recommended that the owner have a CSG field engineer or a qualified assistant oversee the site work, especially the footing excavation and preparation. Also, the building code requires inspection and reports on all structural site work.

Detailed discussions pertaining to earthwork, structural considerations, geoseismic setting, and groundwater are included in the following sections:

Earthwork

Site Preparation

Initial site preparation will consist of the removal of surface vegetation, topsoil, root balls, sod or any other deleterious materials extending at least three feet beyond the perimeter of all areas to be developed. Non-engineered fills will be completely removed three feet beyond the extents of all spread and continuous footings, rigid pavement areas, floor slabs and other areas that require a stabilized foundation. Stripped materials consisting of vegetation and organic materials should be wasted from the site or used to revegetate landscape areas.

Non-engineered fills may remain in areas where flexible pavements are to be placed if they are properly prepared. Proper preparation will consist of scarifying and moisture conditioning the upper nine inches and recompacting to the requirements of structural fill. It should be noted that compaction of fine-grained soils (silts and clays) as site grading fill will be very difficult, if not impossible, during wet and cold periods of the year.

The exposed natural subgrade should be proof-rolled prior to the placement of structural site grading fill, footings, floor slabs, or any other structural improvement made to the site. The proof-roll should be completed by driving a loaded piece of construction equipment, mounted with rubber tires, over the exposed natural subgrade surface at least twice. A CSG field engineer should oversee the proof roll and provide recommendations as needed. Soft spots should be completely excavated and removed if they are discovered. The soft spots should be replaced with stabilization fill. It is not anticipated that removal depth would be more than 2 vertical feet. If an excavation of more than 2 vertical feet is required, CSG should be notified to provide further recommendation.

In flexible pavement areas, unsuitable materials encountered during compaction and proof-rolling operations must be removed to a maximum depth of two feet and replaced with compacted granular structural fill.

Although evidence of underground facilities such as utilities, septic tanks, cesspools, basements, etc. was not observed during the field investigation, such features could be encountered during construction. If unexpected fills, debris or underground facilities are encountered, such features should be removed, and the excavation thoroughly cleaned prior to backfill placement and/or construction.

Temporary Excavations

All temporary excavations should follow OSHA Sloping and Benching – 1926 Subpart P App B requirements, which take precedence over any recommendations presented in this report.

Temporary excavations in cohesive soil, above or below the water table, not exceeding four feet in depth, may be excavated with nearly vertical sideslopes. Excavations within loose and/or cohesionless soils will be very difficult as they tend to flow into the excavation. They will require very flat sideslopes and/or shoring, bracing and dewatering.

All excavations must be inspected periodically by qualified personnel. If any signs of instability, excessive sloughing or other signs of potential failure are noted, immediate remedial action shall be initiated.

Structural Fill

The on-site native soils are not able to be used as structural fill. However, the on-site soils can be used as fill in landscape areas that are not expected to carry a load. The use of fine-grained soils (silts and clays) as landscape fill will be very difficult, if not impossible, during wet and cold periods of the year. Proper moisture control and conditioning will be required.

Fine-grained soils (silts and clays) are not recommended as structural fill in confined areas, such as around foundations and within utility trenches. This fill material should be composed of granular material.

All imported granular structural fill should consist of a fairly well-graded mixture of sand and gravel containing less than 15 percent fines (percent by weight of material passing the No. 200 sieve).

To stabilize soft subgrade conditions (if required), a mixture of coarse gravels and cobbles (stabilizing fill) should be utilized. A layer of 12 to 18 inches thick of stabilizing fill is typically sufficient to stabilize most soft/disturbed areas.

Table 4 shown below is indicative of the material that should be used as structural fill and road base throughout the site:

Table 4 – Structural Fill Gradation Requirements

Fill Type *	Application	Requirements		
		Gradation		Plasticity
		Size	% Finer by Weight	
Structural Fill (A-1a) /Granular Borrow	Required for all fill under foundations, floor slabs, and pavements	3-inch No. 10 Sieve No. 40 Sieve No. 200 Sieve	100 50-max 30-max 15-max	Plasticity Index 6-max
Site Grading Fill	Fill in pavement and non-structural areas	4-inch No. 200 Sieve	100 35-max	Liquid Limit 36-max Plasticity Index 10-max
Stabilization Fill	Fill used to stabilize soft, potentially pumping subgrade	5-inch No. 200 Sieve	100 5-max	NA
Free Draining Granular Backfill	Retaining Walls	1½-inch 1-inch ½-inch No. 4	100 95 – 100 25 – 60 5-max	NA
Untreated Base Course	Fill used under the pavement sections	3/4” 3/8” No. 4 No. 16 No. 200	100 78-92 55-67 28-38 7-11	Non-Plastic

*All fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to the geotechnical engineer for evaluation.
**All fill to follow these requirements, or the requirements of the reviewing agency if different than those provided here.

Fill Placement and Compaction

All fill should be placed in lifts not exceeding 8 inches in loose thickness. Moisture should be adjusted to within ± 2% of optimum moisture content. Lifts will need to be compacted in thinner lifts if smaller compaction equipment is used. Structural fills should be compacted in accordance with the percent of maximum dry density as determined by the AASHTO T-180 (ASTM D-1557) compaction criteria and according to Table 5 below:

Table 5 - Fill Compaction Requirements

Location	Total Fill Thickness (feet)	Minimum Percentage of Maximum Dry Density
Beneath an area extending at least 3 feet beyond the footprint of a structure	0 to 8	95
Beneath pavements and travelled ways	0 to 8	95

Landscaped areas or areas not expected to carry a load	0 to 5	85
Landscaped areas or areas not expected to carry a load	5 to 8	92
Road Base	-	96

Prior to placement of fills, the subgrade must be prepared as discussed in the Site Preparation section of this report. In confined areas, subgrade preparation should consist of the removal of all loose and disturbed soils. Fill should be tested frequently for moisture content and compaction during placement. Should the results of the in-situ density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified compaction is achieved. This may require adjustment of the moisture content.

Utility Trenches

We recommend that all utility trenches on-site or as a part of this site, should utilize a Type A-1a or A-1b (AASHTO Designation) soil as backfill material. The on-site materials can be used for trench backfill if they meet these classifications and are properly moisture conditioned. This should be verified by the materials testing agency. All utility trenches which will ultimately bear structural loads should be compacted at the structural density requirements established in Table 5.

Drainage

Positive drainage should be provided during construction and maintained throughout the life of the development. Infiltration of water into utility trenches or foundation excavations should be prevented. Planters and other surface features which might retain water in areas adjacent to the buildings or pavements should be sealed, mechanically drained, or eliminated. In areas where sidewalks or paving do not immediately adjoin the structure, we recommend that protective slopes be provided with a minimum grade of approximately five percent for at least 10 feet from perimeter walls. Backfill against footings, exterior walls, and in utility and sprinkler line trenches should be well compacted and free of all construction debris to reduce the possibility of moisture infiltration. Roof runoff should be collected in rain gutters and downspouts. Downspouts, roof drains or scuppers should discharge into extensions when the ground surface beneath such features is not protected by exterior slabs or paving to divert collected water a minimum of 10 feet away from structures. Sprinkler systems should not be installed within five feet of foundation walls. Landscaped irrigation adjacent to the foundation systems should be minimized.

Structural Considerations

Spread and Continuous Wall Foundations

It is understood that the proposed structure will be supported on conventional spread and continuous wall foundations. These foundations should be established on the encountered bedrock. Under no circumstances shall footings be placed overlying non-engineered fills, loose soils, frozen soils, soil containing foreign debris, and any other deleterious material. Unsuitable material must be removed and replaced with an adequate structural fill as discussed in this report. For structural fill replacement beneath footings, the width of the structural fill shall be equal to width of the footing plus one foot on each side for each foot of fill thickness. For example, if the depth of structural fill

is three feet, then three feet of structural fill needs to extend past the edge of the footing on each side.

For design, the following parameters are provided:

Table 6 - Structural Design Parameters

Design Element	Standard
Recommended minimum depth of embedment for frost conditions	36-inches
Recommended minimum depth of embedment for non-frost conditions	15-inches
Recommended maximum bearing capacity of in-situ soil	1,500 pounds per square foot
Recommended width for continuous wall footings*	18 to 24-inches
Recommended width for isolated spread footings	36 to 60-inches
Recommended bearing pressure increase for seismic loading	33%
Coefficient of friction between footing and bedrock	0.65

Settlement of foundation elements are not expected as it is anticipated that the foundation will be sitting on bedrock.

Lateral Resistance

Lateral earth pressure are the lateral forces of the backfill material on walls. These forces can be represented as equivalent fluid density for foundation calculations. Lateral earth pressure can be assumed to be much higher if material behind structural walls is not free draining. The lateral pressures will vary if groundwater is encountered. At this site, groundwater was not encountered and is anticipated to be deep. Therefore, groundwater won't affect lateral pressure. The lateral earth pressures are shown in the table below:

Table 7 – Lateral Earth Pressure

Condition	Lateral Pressure Coefficient	Equivalent Fluid Density (pcf)
Passive	3.26	407
Active	0.31	38
At-Rest	0.45	56

Floor slabs

Due to the intended use and anticipated loading, floor slabs should be constructed with a minimum of 4" of concrete (4,000 psi, air-entrained – 6% ± 1%) over 4" of clean gravel material. The subgrade material shall be properly prepared as discussed previously in this report. Under no circumstances should floor slabs be established over non-engineered fill, loose or disturbed soils, sod, rubbish, construction debris, other deleterious materials, frozen soils, or soils with ponded water. If constructed in accordance with this section, settlements of at-grade floor slabs supporting loads of 200 pounds per square foot should be on the order of ¼" or less.

Where appropriate, saw-cut control joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations refer to the ACI Design Manual. Joints or any cracks that develop should be sealed with a water-proof, non-extruding compressible compound specifically recommended for heavy duty concrete pavement and wet environments.

The use of a vapor barrier should be considered beneath concrete slabs on grade that will be covered with wood, tile, carpet or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor barrier, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor barrier.

Soil Corrosiveness

The soil was sampled for sulfate levels at soil depths that will come into direct contact with the footings and foundations. These chemical levels are shown in Table 3 for reference.

Cement Use

Type I or IA mixes may be used in the design of these improvements. The soil tested contained a negligible number of water-soluble sulfates. Based on our test results, concrete in contact with the in-situ soils will have a low potential for sulfate reaction and therefore the mix types of I or IA are acceptable. Other types of mixtures may be used by the design team if other strength/functionality parameters are desired.

Construction Considerations

On most project sites, the site grading is generally accomplished early in the construction phase. However, as construction proceeds the subgrade may be disturbed due to utility excavations, construction traffic, desiccation, rainfall, etc. As a result, the floor slab or footing subgrade may not be suitable for placement of crushed gravel and concrete and corrective action will be required. We recommend areas underlying floor slabs and footings be rough graded and then thoroughly proof-rolled with a loaded tandem axle water or dump truck prior to final grading and placement of crushed gravel or concrete. Attention should be given to high traffic areas that were rutted and previously disturbed and to areas containing backfilled trenches. Areas where unsuitable conditions are located should be repaired by removing and replacing the affected material with properly compacted structural fill. All structural subgrade areas should be moisture conditioned and properly compacted to the recommendations in this report immediately prior to placement of the gravel and concrete.

Geoseismic Setting

Faulting

Based on a review of Utah Geological Survey fault maps, the site is approximately 8.6 miles east of the Wasatch Fault Line Salt Lake City section.

Soil Class

A site-specific seismic analysis was not a part of this scope of work, nor was it performed for the site at this time. The seismic values provided are determined using the ASCE 7 Hazard tool using the following inputs.

The soil site class is C (S_1 =0.246 g & S_S = 0.684 g), with a Seismic Design Category D (Risk Category II) in accordance with Chapter 20 of ASCE 7-16 and IBC 2021.

Liquefaction

The site is in an area that is anticipated as having very low liquefaction potential. Liquefaction requires water, seismic activity, and loose sandy soils. Bedrock was encountered near the surface; therefore, liquefaction will not present a risk during a seismic event.

Groundwater

Immediately following excavating operations, the groundwater was measured in each test pit. Seasonal and longer-term groundwater fluctuations on the order of one and one-half to three feet are projected, with the highest seasonal levels generally occurring during the late spring and early summer months. The groundwater measurements (as measured down from existing grade) are tabulated in Table 8 below:

Table 8 - Groundwater Depth

Test Pit Number	Time of Excavating (feet)
TP-1	Not Encountered
TP-2	Not Encountered
TP-3	Not Encountered

Closure

CSG should be retained to provide observations during grading, excavation, foundation construction, and other earth-related construction activities related to this project. The conclusions and recommendations presented in this report are based on the results of the field and laboratory tests which, in our opinion, define the characteristics of the soils at this site in a satisfactory manner. However, this report does not reflect variations that may occur between test pits, across the site, or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. If during or after construction, conditions are encountered which appear to be different than those presented in this report, it is requested that our office be advised, in order that appropriate action be taken.

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. Any persons using this report for bidding or construction purposes should perform independent investigations as they deem necessary to determine subsurface conditions. The scope of services for this project does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either express or implied, are intended or made. Site safety, excavation support, and dewatering requirements are the responsibility of others. If changes in the

nature, design, or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless CSG reviews the changes and either verifies or modifies the conclusions of this report in writing.

Glossary/Explanation of Terms or Procedures

Throughout this report, we have used a number of words or phrases which may be unfamiliar in nature. Also, several procedural concepts have been mentioned repeatedly. For this reason, we have decided to define or discuss these items to better communicate with the reader(s).

Compaction and Lift Size - Contractors should be aware that there is direct relationship between lift size and size of the compacting equipment. The smaller the compactor, the smaller the maximum lift height. With "wacker" compactors, the maximum lift should be held at about 3-4-inches. With walk-behind trench compactors (2-tons or so), the lifts should be no more than 6-inches thick. Eight-inch lifts can be used with large ride-on devices (7-10-tons or greater) that roll and vibrate/pound. Hoe pack devices on track hoes or backhoes can compact 6-8-inch lifts depending on size. However, the maximum lift size should not exceed 8-inches for most compactors. Note: a lift is defined as the loose or un-compacted thickness of the soil layer being compacted

Groundwater level - The groundwater level is a "rough guess" of where the uppermost water level is in a soil. We look for the first sign of free water coming in from the trench walls or appearing on the soil. In the soil logs, the groundwater level is identified by a solid or darkened triangle with a wavy line below it.

Liquefaction - Loss of bearing strength of saturated and very fine-grained silts and sands during severe earthquakes. This strength-loss is due to the slow dissipation of pore pressure (due to low permeability) and the subsequent reduction of particle-to-particle contact induced by the shaking motion of the earthquake.

Piezowater or Piezometer - To measure the groundwater level after a soil test pit is excavated, a pipe (a piezometer) is placed in the pit and left for at least 48-hours. The bottom 12-inches of the piezometer is slotted and capped to keep soil from entering and plugging up the pipe. The piezometer is then backfilled. After 48-hours, the water level in the piezometer is recorded. This level is the piezowater level. It is often higher than the point where water is first seen in a test pit during excavation. The importance is that the piezometer level is the potential depth of the groundwater for a site location should a 'dig' be done at the site. However, this level may change over time depending on weather conditions (wet or dry years and periods); rust or mottling of the soils may indicate an historical level of the water. In the soil logs, the piezowater level is a line with an "open" triangle above it and a wavy line below the triangle. The "open" triangle signifies the fact that the overlying soil "cap" has been removed.

Topsoil - It is generally defined as surface soils (silts or clays) with greater than 2-percent organics; this soil is often dark brown to black in color. It generally has visible roots or organic matter and is highly compressible. Topsoil should never be used under a footing or load bearing structure; it is generally, too compressible and with loading, settles over time. It should be stockpiled for use in landscaped areas, used for wetland mitigation/re-seeding, as a pond liner, or exported from the site.

Undisturbed soil - This is soil in its natural state, undisturbed by past excavation, farming, construction, or perturbation of any type. It is a most important feature. Areas that have been filled are always considered disturbed. On the other hand, "cut" areas can be considered undisturbed if the soil was cut with a straight bladed bucket edge, and not tines. If soils are disturbed, and footings or walls will be bear on these soils, they must be re-compacted.

Non-Engineered Fill – Non-engineered fill material is non-native (imported) material that has not been tested in the lab for engineering properties nor has a record of proper placement and compaction. Therefore, it should not be used for structural fill. This material can be used if properly prepared, but Civil Solutions Group recommends any non-engineered material in which loads will bear on be tested prior to placement. Once placed, this material should be tested to ensure structural properties are met. Recommendations in this report are based upon the materials encountered during the field investigation.

Appendix

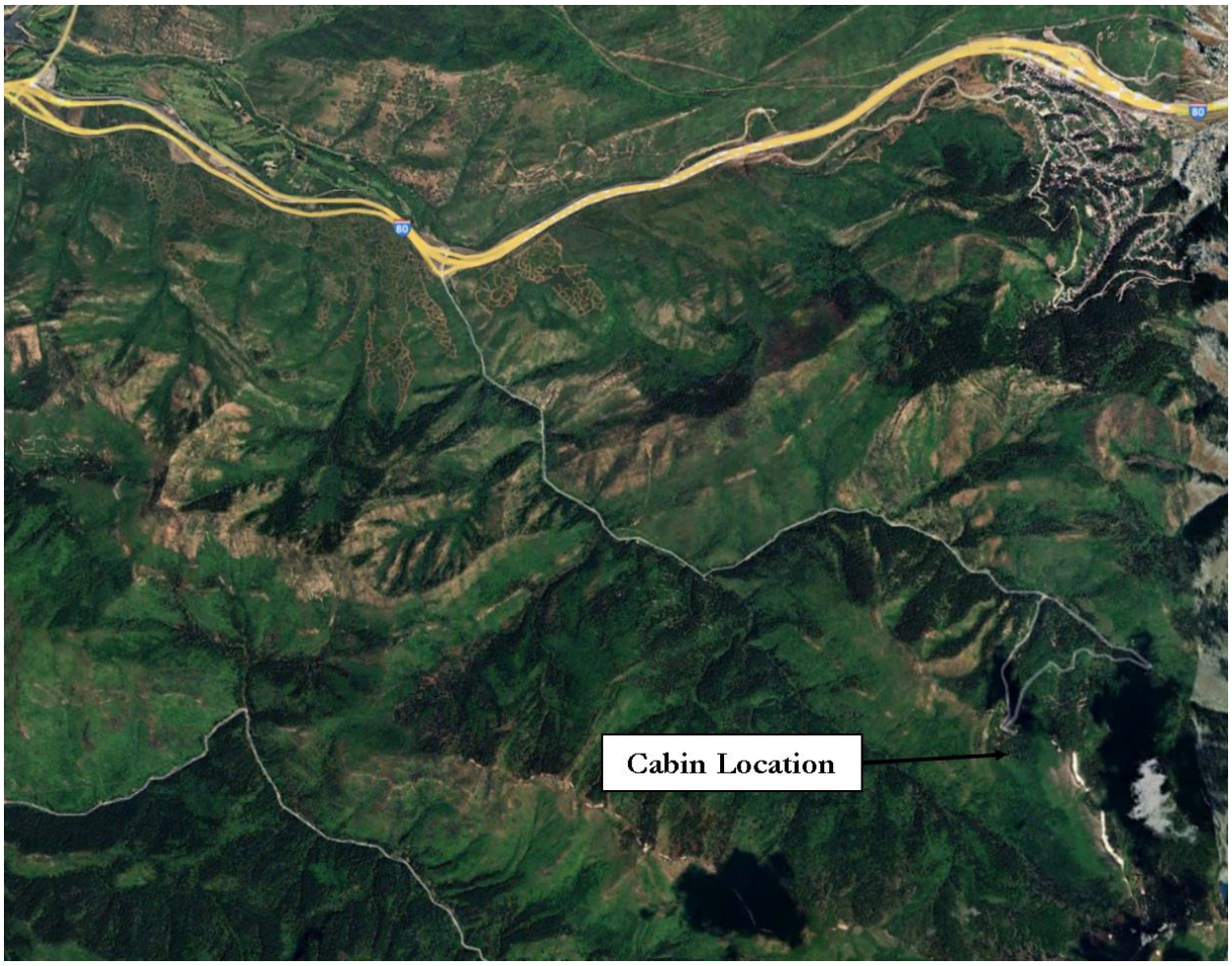

Figure 1 - Vicinity Map

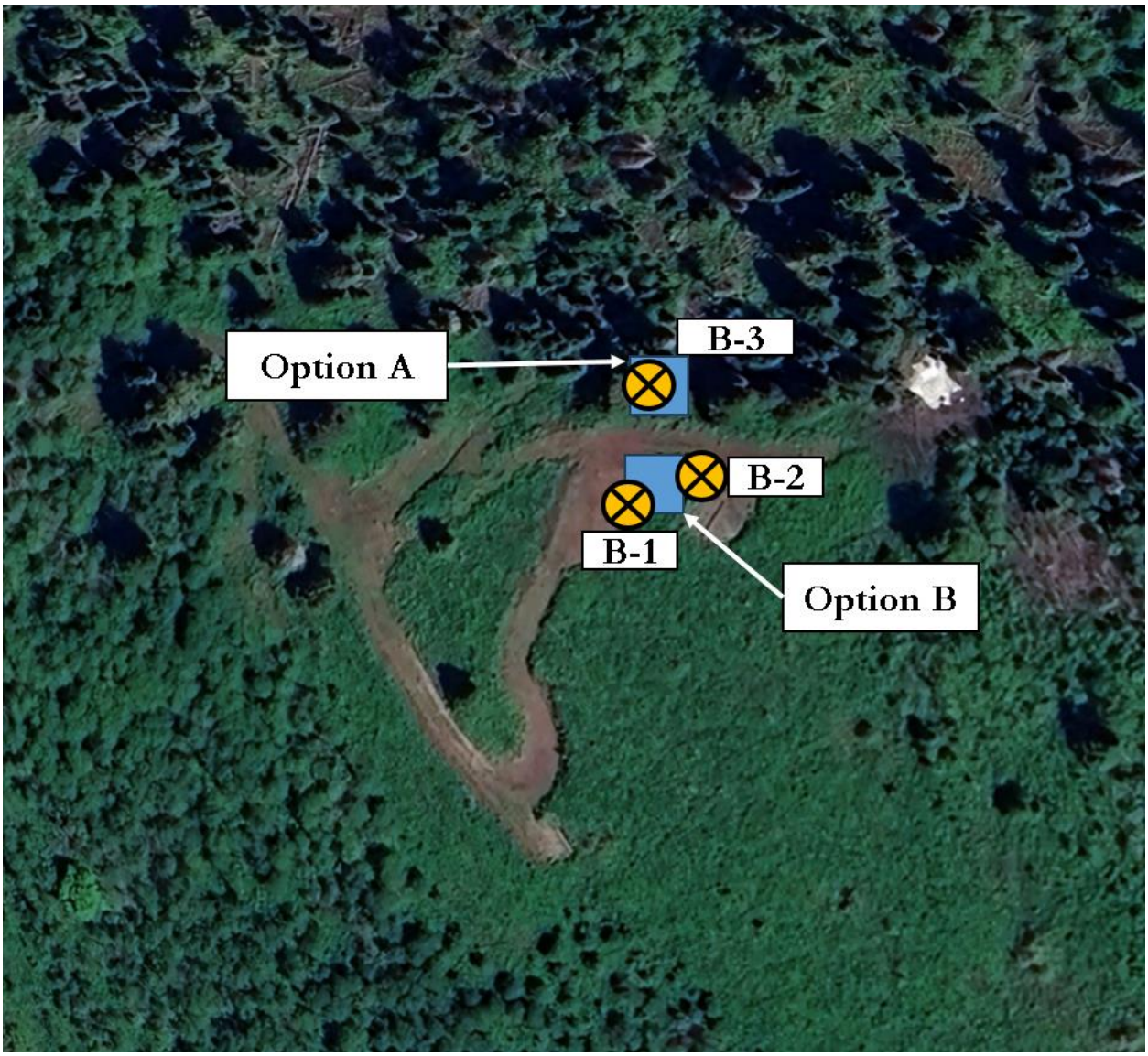

Figure 2 - Site Map

Figure 3 - Looking South

Figure 4 – Looking West

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	BLOW COUNT	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
1	2	3	4	5	6	7	8	9	10	11	12

COLUMN DESCRIPTIONS

1. **Water Level**: Depth to measure groundwater table. See symbol below.
2. **USCS**: Graphic depiction of subsurface material encountered; typical symbols are explained below.
3. **Description**: Description of material encountered; may include color, moisture, grain size, and density/consistency.
4. **Depth (ft.)**: Depth in feet below the ground surface.
5. **Blow Count**: Number of blows required to advance SPT sampler (12") beyond first 6" using a 140-lb hammer with a 30 inch drop.
6. **Sample Symbol**: Type of soil sample collected at depth interval shown; sampler symbols are explained below.
7. **Moisture (%)**: Water content of soil sample measured in laboratory; expressed as percentage of dry weight of specimen.
8. **Dry Density (pcf)**: The density of a soil measured in laboratory; expressed as pounds per cubic foot.
9. **% Passing 200**: Fines content of soil sample passing a No. 200 sieve measured in laboratory, expressed as a percentage.
10. **Liquid Limit (%)**: Water content at which a soil changes from plastic to liquid behavior.
11. **Plasticity Index (%)**: Range of water content at which a soil exhibits plastic properties.
12. **Remarks**: Comments and observations regarding drilling or sampling made by driller or field personnel. Other field and laboratory test results; using the following abbreviations:

CEMENTATION	MODIFIERS	MOISTURE CONTENT (FIELD TEST)
Weakly: Crumbles or breaks with handling of slight finger pressure.	Trace <5 %	Dry: Absence of moisture, dusty, dry to the touch.
Moderately: Crumbles or breaks with considerable finger pressure.	Some 5 - 12%	Moist: Damp but no visible water.
Strongly: Will not crumble or break with finger pressure.	With >12%	Saturated: Visible water, usually soil below water table.

Descriptions and stratum lines are interpretive; field descriptions may have been modified to reflect lab test results. Descriptions on the logs apply only at the specific boring locations and at the time the borings were advanced; they are not warranted to be representative of subsurface conditions at other locations or times.

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			SYMBOLS Graph	SYMBOLS Letter	TYPICAL DESCRIPTIONS
COARSE-GRAINED SOILS: More than 50% of No. 200 sieve size.	GRAVELS: More than 50% of coarse fraction retained in No. 4 sieve.	CLEAN GRAVELS (little or no fines)		GW	Well-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
				GP	Poorly Graded Gravel, Gravel-Sand Mixtures, Little or No Fines
		GRAVELS WITH FINES (appreciable amount of fines)		GM	Silty Gravels, Gravel-Sand-Silt Mixtures
				GC	Clayey Gravels, Gravel-Sand-Clay Mixtures
	SANDS: More than 50% of coarse fraction passing through No. 4 sieve.	CLEAN SANDS (little or no fines)		SW	Well-Graded Sands, Gravelly Sands, Little or No Fines
				SP	Poorly Graded Sands, Gravelly Sands, Little or No Fines
		SANDS WITH FINES (appreciable amount of fines)		SM	Silty Sands, Sand-Silt Mixtures
				SC	Clayey Sands, Sand-Clay Mixtures
FINE-GRAINED SOILS: More than 50% of material is smaller than No. 200 sieve size.	SILTS AND CLAYS: Liquid limit less than 50%			ML	Inorganic Silts and Very Fine Sands, Rock Flour, Silty or Clayey Fine Sands or Clayey Silts with Slight Plasticity
				CL	Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays
				OL	Organic Silts and Organic Silty Clays of Low Plasticity
	SILTS AND CLAYS: Liquid limit greater than 50%			MH	Inorganic Silts, Micacious or Diatomacious Fine Sand or Silty Soils
				CH	Inorganic Clays of High Plasticity, Fat Clays
				OH	Organic Clays of Medium to High Plasticity, Organic Silts
HIGHLY ORGANIC SOILS				PT	Peat, Humus, Swamp Soils with High Organic Contents

Note: Dual Symbols are used to indicate borderline soil classifications

STRATIFACTION

DESCRIPTION	THICKNESS
Seam	up to 1/8"
Layer	1/8" - 12"

STRATIFACTION

Occasional: One or less per 6" of thickness.

Numerous: More than one per 6" of thickness.

TYPICAL SAMPLER GRAPHIC SYMBOLS

- GS — Grab Bag Sample
- SS — Standard Penetration Test
- Rock Core
- No Recovery
- 3.25" OD 2.42" ID D&M Sampler
- 3.0" OD 2.42" ID D&M Sampler
- California Sampler
- TS — Thin-walled Shelby tube

LOG KEY SYMBOLS

- Water Level

Figure 5 – Key to Soil Logs

BORE LOG: TP-1

LOGGED BY: John Powell REVIEWER: JP ADDRESS: 10940 East Lambs Canyon

LATITUDE: -111.62122

LONGITUDE: 40.70407

DATE: 2024-09-09

Depth	Lithologic Description	Symbol	Samples	Gradation (%) Gravel	Sand	Silt/Clay	Atterberg Limits LL (%)	PL (%)	Moisture (%)		Standard Penetration Test (SPT)
	Ground Surface										
0	**Topsoil with roots** 1 ft										
1	**Clayey Sandy Gravel, GC** Dry, Reddish Brown, Soft Layers of Bedrock that Broke Easily 2.5 ft		GB	54	33	13	28	19	4.5		
2											
3	**Fractured Bedrock** Reddish Brown, Fractured Bedrock, Fractures Were More Spaced With Larger Chunks of Rock 5.5 ft										
4											
5											
6	Test Hole Terminated at 5.5 ft, Refusal										
7											
8											
9											
10											
11											
12											
13											
14											
15											

civilsolutionsgroup inc.

PROJECT TITLE: Smith Cabin

PROJECT NO.: 23-347

CLIENT: Ron and Kim Smith

SHEET: 1 of 1

BORE LOG: TP-2

LOGGED BY: John Powell REVIEWER: JP ADDRESS: 10940 East Lambs Canyon

LATITUDE: -111.62113

LONGITUDE: 40.70410

DATE: 2024-09-09

Depth	Lithologic Description	Symbol	Samples		Atterberg Limits LL (%)	Atterberg Limits PL (%)	Moisture (%)		Standard Penetration Test (SPT)
	Ground Surface								
0	**Topsoil with roots** 1 ft								
1	**Fractured Bedrock** Reddish Brown Fractured Bedrock 2.5 ft								
2									
3	Test Hole Terminated at 2.5 ft, Refusal								
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

civilsolutionsgroup inc.

PROJECT TITLE: Smith Cabin

PROJECT NO.: 23-347

CLIENT: Ron and Kim Smith

SHEET: 1 of 1

BORE LOG: TP-3

LOGGED BY: John Powell REVIEWER: JP ADDRESS: 10940 East Lambs Canyon

LATITUDE: -111.62124

LONGITUDE: 40.70419

DATE: 2024-09-09

Depth	Lithologic Description	Symbol	Samples	Gradation (%) Gravel	Sand	Silt/Clay	Atterberg Limits LL (%)	PL (%)	Moisture (%)		Standard Penetration Test (SPT)
	Ground Surface										
0	**Topsoil with roots** 1 ft										
1	**Gravelly Silty Sand, SM** Dry, Brown 2.5 ft		GB	12	52	36	34	26	2.8		
2											
3	Test Hole Terminated at 2.5 ft, Refusal										
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

civilsolutionsgroup inc.

PROJECT TITLE: Smith Cabin

PROJECT NO.: 23-347

CLIENT: Ron and Kim Smith

SHEET: 1 of 1

SALT LAKE COUNTY ORDINANCE

ORDINANCE NO. _____ _____, 2025

AN ORDINANCE OF GENERAL REVISION, AMENDING SECTION 19.15.140, ENTITLED "RETENTION OF SINGLE-FAMILY RESIDENCE STATUS AND VERIFICATION OF WATER AND SEWER" OF THE SALT LAKE CODE OF ORDINANCES, 2001, TO ALLOW SEPARATE METERING FOR DETACHED ACCESSORY DWELLING UNITS; AND MAKING OTHER RELATED CHANGES.

The County Legislative Body of Salt Lake County ordains as follows:

SECTION I. The amendments made here are designated by underlining the new substituted words. Words being deleted are designated by brackets and interlineations.

SECTION II. Section 19.15.140 of the Salt Lake County Code of Ordinances is amended as follows in order to allow separate metering for detached accessory dwelling units ("ADUs").

19.15.140 - Retention of single-family residence status and verification of water and sewer.

A. ADUs are part of a single-family residence and shall not be used as a multi-family residence.

B. [~~ADUs~~] IADUs may not be separately metered apart from the single-family residence. Detached ADUs may be separately metered so long as the property owner is billed for both.

C. Applications for ADUs must include submittal of written verification from water and sewer providers that water and sewer are available to the ADU (or in the event of a septic system, verification from the Salt Lake Health Department that the system meets applicable

regulations and is performing properly).D.ADUs may not be sold or subdivided separately from the single-family residence.

SECTION III. This ordinance shall become effective fifteen (15) days after its passage and upon at least one publication of the ordinance or a summary thereof in a newspaper published and having general circulation in Salt Lake County.

APPROVED AND ADOPTED this _____ day of _____, 2025.

SALT LAKE COUNTY COUNCIL

By: _____
Chair

ATTEST:

_____
Lannie Chapman
Salt Lake County Clerk

REVIEWED AS TO FORM & LEGALITY:

_____

ORDINANCE HISTORY

Councilmember Pinkney voting	_____
Councilmember Bradshaw voting	_____
Councilmember Theodore voting	_____
Councilmember Stewart voting	_____
Councilmember Romero voting	_____
Councilmember Winder Newton voting	____ _____
Councilmember Stringham voting	_____
Councilmember Harrison voting	_____
Councilmember Moreno voting	_____

Vetoed and dated this _____ day of _____, 2025.

By: _____
MAYOR JENNIFER WILSON
OR DESIGNEE

(Complete as Applicable)
Veto override: Yes____ No_____ Date_____
Ordinance Published in Newspaper: Date_____
Effective Date of Ordinance:_____
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SUMMARY OF

SALT LAKE COUNTY ORDINANCE NO. _____

On the _____ day of _____, 2024, the County Council of Salt Lake County adopted Ordinance No. _____, an ordinance of general revision, amending Section 19.15.140, entitled "Retention of Single-Family Residence Status and Verification of Water and Sewer" of the Salt Lake Code of Ordinances, 2001, to allow separate metering for detached accessory dwelling units; and making other related changes.

.

SALT LAKE COUNTY COUNCIL

By: _____
Chair

ATTEST:

_____
Sherrie Swensen
Salt Lake County Clerk

APPROVED AS TO FORM:

_____

Councilmember Pinkney voting	_____
Councilmember Bradshaw voting	_____
Councilmember Theodore voting	_____
Councilmember Stewart voting	_____
Councilmember Romero voting	_____
Councilmember Newton voting	_____
Councilmember Stringham voting	_____
Councilmember Harrison voting	_____
Councilmember Moreno voting	_____

A complete copy of Ordinance No. _____ is available in the office of the Salt Lake County Clerk, 2001 South State Street, N2-100A, Salt Lake City, Utah.