Attachment 1

Mitigation Monitoring and Reporting Program

THE COUNTY OF SANTA CRUZ
1850

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County of Santa Cruz

DEPARTMENT OF COMMUNITY DEVELOPMENT AND INFRASTRUCTURE
701 OCEAN STREET, FOURTH FLOOR, SANTA CRUZ, CA 95060
PLANNING (831) 454-2580 PUBLIC WORKS (831) 454-2160
CDI.SANTACRUZCOUNTYCA.GOV

MITIGATION MONITORING AND REPORTING PROGRAM
for
Application No. 231473

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
Biological Resources					
BIO-1	*Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, or U.S. Fish and Wildlife Service?*	Nesting Migratory Birds and Raptors. Under the MBTA, nests that contain eggs or unfledged young are not to be disturbed during the breeding season. The nesting season for migratory birds and birds of prey is generally 1 February through 31 August. Implementation of the following measures will avoid potential impacts: ▪ If construction begins outside the 1 February to 31 August breeding season, there will be no need to conduct a preconstruction survey for active nests. ▪ If construction is scheduled to begin between 1 February and 31 August then a qualified biologist shall conduct a preconstruction survey for active nests. The survey will include a 250-foot radius from the work area for nesting birds of prey and a 50-foot radius from the work area for other nesting MBTA protected birds. The survey will be conducted from publicly accessible areas within one two weeks prior to construction. If no active nest of a bird of prey or MBTA bird is found, then no further mitigation measures are necessary. ▪ If an active nest of a bird of prey or MBTA bird is found, then the biologist shall determine a buffer suitable to protect the nest until fledging. The size of suitable buffers depends on the species of bird, the location of the nest relative to the project, project activities during the time the nest is active, and other project specific conditions. ▪ No construction activity shall be allowed in the buffer until the biologist determines that the nest is no longer active, or unless monitoring determines that a smaller buffer will protect the active nest. The buffer may be reduced if the biologist monitors the construction activities and determines that no disturbance to the active nest is occurring. ▪ If an active nest is identified in or adjacent to the construction zone after construction has started, the above measures will be implemented to ensure construction is not causing disturbance to the nest.	Applicant	Compliance monitored by the County Planning Department	Prior to ground-disturbing and construction activities
BIO-2	*Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or*	San Francisco Dusky-Footed Woodrat. Within one month prior to the onset of construction activities, a qualified biologist should conduct a preconstruction survey for woodrat houses, and clearly flag all houses within the construction impact area and immediate surroundings. Woodrat houses should be avoided and fenced to prohibit encroachment. If avoidance of woodrat houses is not possible, a qualified biologist should develop and implement a San Francisco dusky-footed woodrat relocation plan, in	Applicant	Compliance monitored by the County Planning Department	Prior to ground-disturbing and construction activities

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
	special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, or U.S. Fish and Wildlife Service?	coordination with the California Department of Fish and Wildlife (CDFW) and the Santa Cruz County Planning Department, possibly including trapping and house dismantling. Once complete, a brief report documenting preconstruction survey, fencing, trapping, relocation, and/or house relocation activities should be prepared and submitted to CDFW and the Santa Cruz County Planning Department prior to the start of ground disturbance.			
BIO-3	*Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, or U.S. Fish and Wildlife Service?*	Santa Cruz Black Salamander. A qualified biologist will conduct a preconstruction survey immediately prior to wildlife exclusion fencing (such as silt fence) installation around the perimeter of the site. Should this species be observed within the work areas, it should be allowed to leave on its own. Additionally, all holes should be capped at the end of each workday and trenches should be ramped at the end of each workday to prevent entrapment of Santa Cruz black salamander.	Applicant	Compliance monitored by the County Planning Department	Prior to ground-disturbing and construction activities
BIO-4	*Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, or U.S. Fish and Wildlife Service?*	Focused Plant Surveys. During the peak blooming periods for Dudley's lousewort and woodland woolly threads, and prior to ground disturbance, a biologist qualified in Santa Cruz Mountain botany shall conduct one focused survey in all project areas that have not been previously graded (including construction staging areas) (Figure 3. Habitat Map). Surveys will be conducted in accordance with current CDFW and CNPS rare plant survey protocols (CDFW 2018 and CNPS 2001). The surveys will occur during the peak blooming period for each species to determine its presence or absence. Based on the known blooming periods of these special-status plant species, one surveys in May would be necessary to adequately survey the project site. A report documenting the results of the survey will be prepared and, if appropriate, propose measures for avoiding, minimizing, and/or mitigating for possible impacts to special-status plants prior to and during construction. If the focused survey concludes species are not present within the project site, or if it is present but impacts can be completely avoided, then no further measures would be required. The report will be submitted to the Santa Cruz County Planning Department	Applicant	Compliance monitored by the County Planning Department	Prior to ground-disturbing and construction activities
BIO-5	*Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations (e.g.,*	Prior to the start of construction, the project applicant shall retain a qualified biologist to delineate the boundaries of sensitive natural communities within and adjacent to the project area. The biologist shall flag and map these areas in the field. Protective fencing (e.g., high-visibility construction fencing) shall be installed along the flagged boundaries to establish environmentally sensitive area (ESA) buffers. No ground disturbance, grading, or equipment staging shall occur within the fenced ESA. If avoidance of sensitive natural communities is not feasible, the applicant shall prepare	Applicant	Compliance monitored by the County Planning Department	Prior to ground-disturbing and construction activities

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
	wetland, native grassland, special forests, intertidal zone, etc.) or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	and implement a restoration and/or compensatory mitigation plan, in consultation with the California Department of Fish and Wildlife (CDFW), to ensure no net loss of sensitive natural community functions or values. The plan may include measures such as replanting with locally appropriate native species, habitat restoration, or off-site conservation at a minimum 1:1 ratio.			
BIO-6	*Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations (e.g., wetland, native grassland, special forests, intertidal zone, etc.) or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*	To minimize impacts on sensitive wildlife species, all project-related lighting shall be designed and installed to avoid spillover into adjacent natural habitats. The following measures will be implemented. ▪ Use fully shielded, downward-directed fixtures to prevent light from dispersing into surrounding habitat areas. ▪ Employ the minimum intensity and duration necessary for safety and security. Motion-sensor or timed lighting will be used where feasible. ▪ Avoid or minimize the use of blue-rich white light (short wavelengths), instead using warm-spectrum lighting (e.g., amber or yellow hues < 3,000 Kelvin) to reduce ecological disruption. ▪ Prohibit nighttime lighting of construction staging areas when not in active use. ▪ No lighting shall be directed toward intact habitats adjacent to the project area. ▪ Temporary construction lighting shall be removed immediately following completion of work.	Applicant	Compliance monitored by the County Planning Department	Prior to issuance of building permits
BIO-7	*Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*	A qualified biologist will delineate and flag the top of bank prior to construction. Protective construction fencing will be installed along the top of bank to ensure that grading and ground-disturbing activities remain above this area.	Applicant	Compliance monitored by the County Planning Department	Prior to ground-disturbing and construction activities
Tribal Cultural Resources					
TRI-1	*A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the*	Conduct a pre-construction meeting with all construction crew members prior to beginning any construction or site disturbance, including a qualified archaeologist and tribal representative. As part of the pre-construction meeting, a cultural sensitivity training regarding tribal cultural resources shall be provided to all construction crew members.	Applicant	Compliance monitored by the County Planning Department	Prior to ground-disturbing and construction activities

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
	criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				
TRI-2	*A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*	Ensure that a qualified archaeologist is present on site as an archaeological monitor during all grading and site disturbance activities to identify any potential sensitive tribal cultural resources that may be uncovered as a result of grading or site disturbance activities.	Applicant	Compliance monitored by the County Planning Department	During construction and site grading operations

Attachment 2

Project Site Plans (July 2024)

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DIRECTORY

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DEFERRED SUBMITTALS

1. FIRE ALARM
2. AUTOMATIC FIRE SPRINKLER SYSTEM
3. SEPTIC SYSTEM & LEECH FIELD

NOTE: DESIGN BUILD CONTRACTOR TO PROVIDE DRAWINGS AND SPECIFICATIONS AND OBTAIN SEPARATE PERMITS

FIRE DEPT NOTES

1. SEE FIRE ACCESS ROAD EXTENSION WITH GRADING ON CIVIL SHEETS
2. NEW FIRE SPRINKLER SYSTEM
3. TYPE 'A' FIRE EXTINGUISHER TO BE WITHIN 75' OF ANY GIVEN AREA
4. TYPE 'K' FIRE EXTINGUISHER TO BE WITHIN 30' OF ALL COOKING SURFACES

APPLIED CODES

- 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA GREEN BUILDING STANDARDS
- 2022 CALIFORNIA FIRE CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA ELECTRICAL CODE
- 2022 CALIFORNIA PLUMBING CODE
- ALONG WITH ANY OTHER APPLICABLE LOCAL AND STATE LAWS AND REGULATIONS

NEW CONSTRUCTION | MASTER PLAN AMENDMENT

BOYSCOUTS OF AMERICA VALLEY FOUNDATION TRAINING CENTER

26005 BIG BASIN WAY, SANTA CRUZ COUNTY, CA

NOTE: THIS IMAGE IS FOR CHARACTER PURPOSES ONLY. USE THIS ENTIRE SET FOR COMPLETE CONSTRUCTION INFORMATION

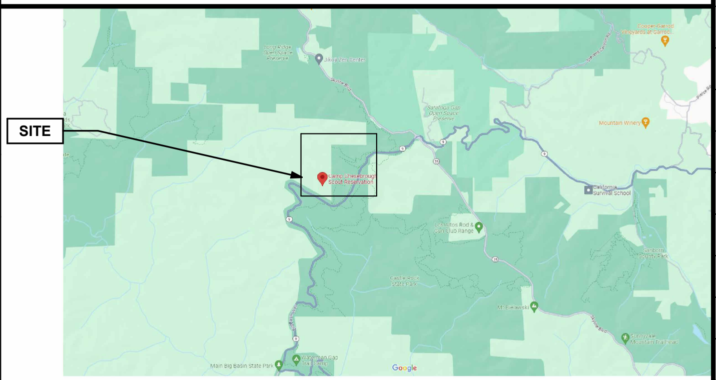
PROJECT DESCRIPTION

1. MASTER PLAN AMENDMENT FOR 1 NEW STRUCTURE TO SERVE PURPOSES OF MULTIPLE OTHER APPROVED GENERAL USES ON THE PROPERTY. NO.96-0683
2. GRADING AND SITE PREP FOR PAD OF NEW PREMANUFACTURED METAL BUILDING, PAVED ACCESSIBLE PARKING AND SIDEWALKS AROUND WITH GRAVEL PAD FOR GENERAL PARKING
3. NEW TRAINING FACILITY ON PAD WITH ASSEMBLY, KITCHEN, SHOWER/RESTROOMS, AND SUPPORT SPACES
4. NEW CONNECTION TO EXISTING UTILITIES FOR POWER
5. NEW WATER TANK FOR SUPPLY PROPOSED LOCATION ON CIVIL PLANS
6. NEW SEPTIC SYSTEM AND LEECH FIELD
7. NEW GREASE INTERCEPTOR BELOW GRADE @ PAVED DELIVERY PAD/UTILITY YARD
8. NEW PROPANE TANK FOR GAS COOKING AND HEATING
9. NEW BACKUP POWER GENERATOR
10. NEW PAVED FENCED UTILITY/DUMPSTER AREA WITH GATES AND PRIVACY SLATS
11. NEW BICYCLE STORAGE ENCLOSURE WITHIN 200' OF ENTRANCE FROM BIG BASIN WAY

PROGRAM STATEMENT

- THIS NEW FACILITY IS INTENDED TO ALLOW FOR ADDITIONAL CAMPING AND GROUP-USE LOCATION OPTIONS FOR USAGE ALREADY ON SITE. IT IS SUPPLEMENTAL TO EXISTING USE AROUND THE SAME PROPERTY CURRENTLY. THIS WOULD PROVIDE INSTRUCTIONAL SPACES FOR CHILDREN IN AND AROUND THE BUILDING ALONG WITH RESTROOMS TO SERVE NEARBY CAMPING AREA.
- THE KITCHEN WOULD SERVE IN A SIMILAR CAPACITY FOR GROUP CAMPING WITH A RANGE OF 10 TO 100 OR SO USING THE BUILDING AND SURROUNDING AREA FOR THE LENGTH OF THE STAY. WHEN NOT IN USE FOR A GATHERING, THE BUILDING/AREA IS NOT TYPICALLY STAFFED OR OCCUPIED AND MOST ADULTS INVOLVED ARE ON A VOLUNTEER BASIS TO HELP WITH CAMP SET-UP, TRAINING, FOOD PREPARATION, AND CLEAN-UP.
- USAGE IS MOSTLY WEEKENDS WITH 24-HOUR ACCESS TO THE BUILDING DUE TO ITS TYPE OF USE AND TRAINING WITH OCCASIONAL LONGER STAYS INTO THE WEEK DEPENDING ON GROUP NEEDS. THE SITE AND BUILDING ARE NOT OPEN TO GENERAL PUBLIC ACCESS WITHOUT RESERVATION AND DOES NOT MAINTAIN REGULAR BUSINESS HOURS TO BE OPEN.
- NOISE LEVELS ARE EXPECTED TO BE LOW BUT TYPICAL OF CHILDREN ALTERNATING BETWEEN PLAY AND ACTIVE LEARNING. VOLUNTEERS WOULD ARRIVE EITHER WITH CHILDREN OR A COUPLE OF HOURS BEFORE TO PREPARE THE SPACE AND LEAVE SOON AFTER THE GATHERING IS CONCLUDED. THE FACILITY IS LOCATED REMOTELY AND AWAY FROM OTHER INHABITED AREAS INTENTIONALLY TO ENCOURAGE GENERAL OUTDOOR ENVIRONMENTAL LEARNING. THIS ELIMINATES CONCERN OF NOISE LEVEL AND PUBLIC DISTURBANCE POTENTIALS.
- DELIVERIES TO THE SITE WOULD BE EXPECTED ONLY ON AN AS-NEEDED BASIS AROUND A GROUP GATHERING.
- TRASH PICKUP SCHEDULE WOULD BE ADDED TO THE EXISTING ONSITE SERVICE FOR OTHER BUILDINGS SERVING EXISTING CAMPSITES.

VICINITY MAP



RECENT PERMITS

PROPERTY MASTER PLAN : 96-0683

GRADING PERMIT : B-222144 - completed for flat group programming use areas

SEPERATE RESTROOMS : APP-231010 - replacement of existing currently in process

ELECTRICAL PANEL : B222042 - increase in onsite power for this app. and future work

OCCUPANCY LOAD

OCCUPANCY SCHEDULE

Number	Name	Area	Load Factor	Count
1	KITCHEN	579 SF	100	6
2	INSTRUCTION	1296 SF	15	87 (56 SEATS)
3	CIRCULATION	389 SF	300	2
4	RR3	29 SF	100	1
5	RR4	29 SF	100	1
6	UTILITY	187 SF	300	1
7	RR2	93 SF	100	1
8	RR1	93 SF	100	1
9	STORAGE	73 SF	300	1
15	STORAGE	182 SF	300	1
Grand total		2950 SF		102

PROJECT SUMMARY

APN	088-051-37
CONSTRUCTION TYPE	II-B
OCCUPANCY	A-3
OCCUPANT LOAD	104
ZONING	TP
SPRINKLED	YES
FIRE SERVICE	CSA 48 SANTA CRUZ COUTY FIRE
SANITATION DISTRICT	CSA 12 SEPTIC MAINT.
WATER SERVICE	(NEW/INCREASE) ONSITE STORAGE
STORIES	1 FINISHED FLOOR AT 397' ELEVATION
AREA OF WORK	3,600 SQFT
PROPERTY AREA	444.26 ACRE 19,351,965 SQFT
ALLOWABLE AREA	38,000 SQFT

A.H.J. STAMP

SHEET LIST

X#.# 'P' -INDICATES PLANNING DEPARTMENT SUBMISSION SHEETS

A0.1P	COVER SHEET
A0.2P	PROJECT ANALYSIS AND CITY DOCUMENTS
A0.3P	GENERAL NOTES
A1.0P	AREA SITE PLAN
C-1.0	CSR BUILDINGS
C-1.1	CSR BUILDINGS
C-1.2	CSR BUILDINGS 1
C-1.3	CSR BUILDINGS
C-1.4	CSR BUILDINGS
C-1.5	CSR BUILDINGS
C-1.6	CSR BUILDINGS
C-1.7	CSR BUILDINGS
C-1.8	CSR BUILDINGS
C0.0	COVER SHEET
CF1.0	FIRE ACCESS PLAN
C2.0	GRADING PLAN
C3.0	CROSS SECTIONS
C3.1	CROSS SECTIONS
C4.0	UTILITY PLANS
C4.1	UTILITY PLANS
C4.2	UTILITY PLANS
C4.3	UTILITY PLANS
C4.4	UTILITY PLANS
C5.0	CONSTRUCTION DETAILS
C5.1	CONSTRUCTION DETAILS
C6.0	STORMWATER MANAGEMENT
A1.1P	SITE PLAN
A1.2P	SITE PLAN DETAILS
A2.0P	EXIT PLAN
A2.1P	PROPOSED FLOOR PLAN
A2.4P	PROPOSED RCP
A2.5P	PROPOSED ROOF PLAN
A2.2P	DIMENSION & WALL DETAIL PLANS
FS-0	COVER PAGE
FS-1	FOOD SERVICE PLAN
FS-1.1	EQUIPMENT SCHEDULE
FS-1.2	EQUIPMENT SCHEDULE
FS-2	ELECTRICAL ROUGH-IN PLAN
FS-3	PLUMBING ROUGH-IN PLAN
FS-4	BACKING/ SPECIAL CONDITIONS
FS-5	ELEVATIONS
FS-5.1	ELEVATIONS
FS-5.2	ELEVATIONS
FS-5.3	ELEVATIONS
FS-5.4	ELEVATIONS
FS-6	RESERVED
FS-7	HOOD DRAWINGS
FS-7.1	HOOD DRAWINGS
FS-8	WALK IN DRAWINGS
A3.0P	EXTERIOR PERSPECTIVES
A3.1P	EXTERIOR ELEVATIONS
A3.2P	EXTERIOR ELEVATIONS
A4.1P	BUILDING SECTIONS
A4.2P	BUILDING SECTIONS
A4.3	INTERIOR ELEVATIONS
A4.4	INTERIOR ELEVATIONS
A5.1	RESTROOM ENLARGED PLANS AND SCHEDULE
A5.2	RESTROOM ELEVATIONS
A7.2	WALL DETAILS
A7.3	WALL DETAILS
A7.4	WALL DETAILS
A7.6	DETAILS
A5.3	RESTROOM DETAILS
A6.2	WINDOW SCHEDULE
A6.1	DOOR SCHEDULE
A6.4	FINISH SCHEDULE
A7.1	TYPICAL METAL STUD DETAILS
A7.5	CEILING DETAILS
A7.7	DOOR DETAILS
A7.8	DOOR & WINDOW DETAILS
S0.0	STRUCTURAL COVER SHEET
S0.1	STRUCTURAL SPECIFICATIONS
S1.0	FOUNDATION PLAN AND NOTES
S2.0	SECTIONS AND DETAILS 1
S2.1	SECTIONS AND DETAILS 2
F1	ANCHOR ROD SETTING PLAN
F2	ANCHOR ROD DETAILS
F3	REACTION DRAWINGS
E1	COVER SHEET
E2	PRIMARY STEEL BLDGA
E3	ROOF FRAMING BLDGA
E4	ROOF SHEETING
E5	SOFFIT SHEETING
E6	SIDEWALL BLDGA WALL SWA
E7	SIDEWALL BLDGA WALL SWC
E8	ENDWALL BLDGA WALLEWB & WALLWD
E9	MAIN FRAME CROSS SECTIONS
E10	MAIN FRAME CROSS SECTIONS
E11	MAIN FRAME CROSS SECTIONS
E12	MAIN FRAME CROSS SECTIONS
E13	PORTAL FRAME CROSS SECTION 13 FRAMELINEA -SWC
E14	CONNECTION DETAIL
R1	ERECTION GUIDES
R2	ERECTION GUIDES
R3	ERECTION GUIDES
R4	CONSTRUCTION DRAWINGS
R5	CONSTRUCTION DRAWINGS
R6	CONSTRUCTION DRAWINGS
R7	CONSTRUCTION DRAWINGS
R8	CONSTRUCTION DRAWINGS
R9	CONSTRUCTION DRAWINGS
R10	CONSTRUCTION DRAWINGS
R11	CONSTRUCTION DRAWINGS
R12	CONSTRUCTION DRAWINGS
R13	CONSTRUCTION DRAWINGS
R14	CONSTRUCTION DRAWINGS
R15	CONSTRUCTION DRAWINGS
R16	CONSTRUCTION DRAWINGS
R17	CONSTRUCTION DRAWINGS
R18	CONSTRUCTION DRAWINGS
R19	CONSTRUCTION DRAWINGS
R20	CONSTRUCTION DRAWINGS
R21	CONSTRUCTION DRAWINGS
R22	CONSTRUCTION DRAWINGS
R23	TRIM PROFILES
E0.0	ELECTRICAL COVER
E0.1	ELECT TITLE 24
E0.2	ELECT TITLE 24
E0.3	ELECT TITLE 24
E2.0	POWER & LIGHTING PLANS
E4.0	SINGLE LINE DIAGRAM
M001	MECHANICAL COVER SHEET
M002	MECHANICAL SCHEDULES
M003	MECHANICAL DETAILS
M004	MECHANICAL TITLE 24 COMPLIANCE
M100	MECHANICAL INTALL PLANS
P001	PLUMBING COVER SHEET
P101	PLUMBING SCHEDULES - SHEET 1
P102	PLUMBING SCHEDULES - SHEET 2
P103	PLUMBING TITLE 24-SHEET 1
P104	PLUMBING TITLE 24-SHEET 2
P105	PLUMBING TITLE 24-SHEET 3
P201	PLUMBING OVERALL UNDERGROUND PLAN
P202	PLUMBING ROOF PLAN
P301	PLUMBING UNDERGROUND ENLARGED PLAN WASTE AND VENT
P302	PLUMBING UNDERGROUND ENLARGED PLAN WASTE AND VENT
P303	PLUMBING ABOVE- GROUND ENLARGED PLAN DOMESTIC COLD WATER, DOMESTIC HOT WATER AND PROPANE GAS
P401	PLUMBING DETAILS- SHEET 1
P402	PLUMBING DETAILS - SHEET 2
P403	PLUMBING DETAILS - SHEET 3

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San Jose, CA 95112
Tel: 408.320.0248

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STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER

26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

SHEET TITLE:

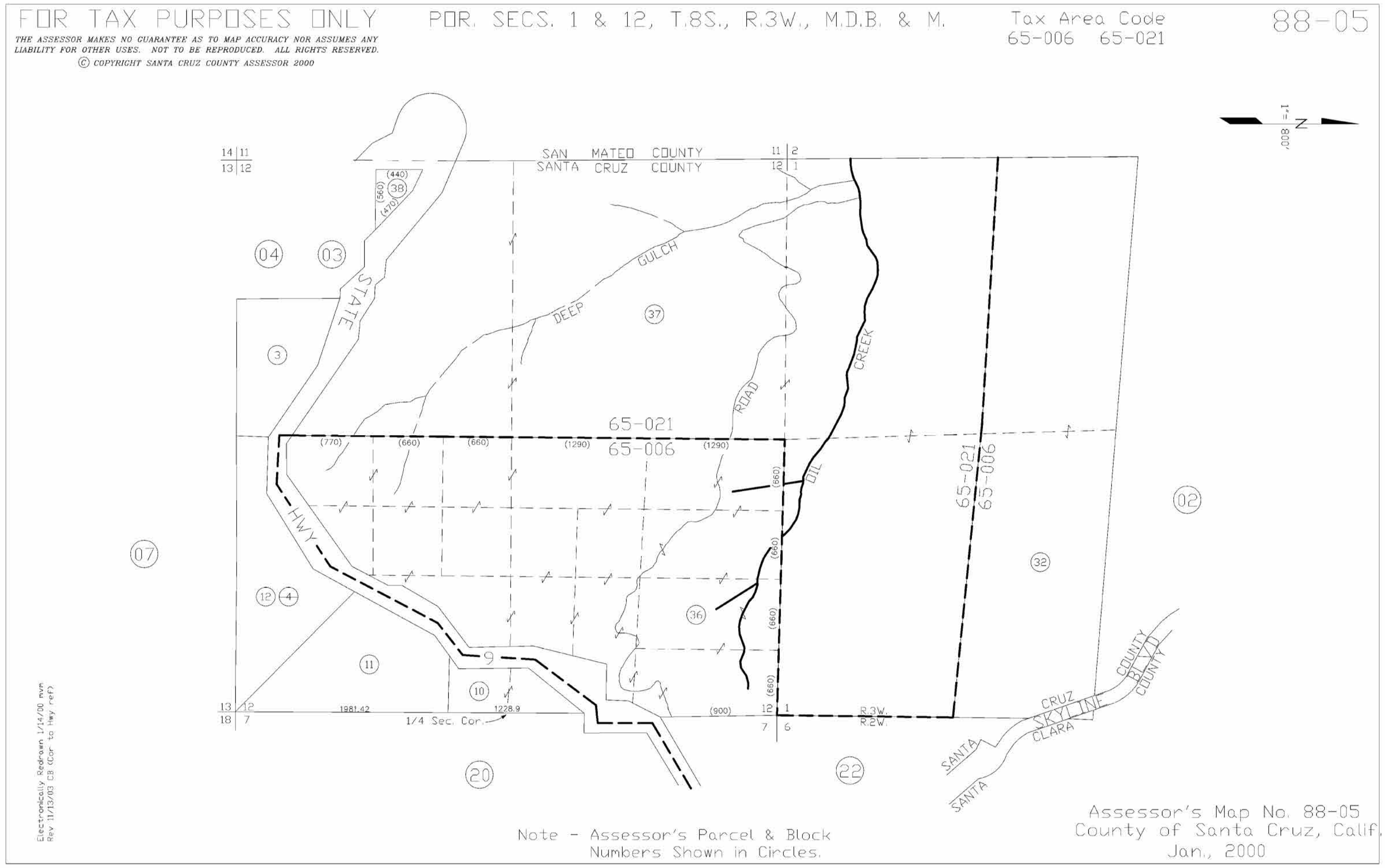
COVER SHEET

REVISIONS

No.	Description	Date
1	Planning Route4	7.30.2024

DRAWN:	JC
CHECKED:	-
DATE:	01.26.2024
SCALE:	
JOB No.:	23-2-12-SCOUTS
SHEET No.:	A0.1P

PARCEL MAP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POR. SECS. 1 & 12, T.8S., R.3W., M.D.B. & M.
Tax Area Code
65-006 65-021
88-05
1"=800'
N
SAN MATEO COUNTY
SANTA CRUZ COUNTY
STATE HWY
DEEP GULCH
ROAD
DIL CREEK
65-021
65-006
(04)
(03)
(38)
(37)
(36)
(32)
(02)
(07)
(11)
(10)
(20)
(22)
9
1/4 Sec. Cor.
R.3W.
R.2W.
SANTA CRUZ SKYLINE BLVD
SANTA CLARA COUNTY
Assessor's Map No. 88-05
County of Santa Cruz, Calif.
Jan., 2000
Note - Assessor's Parcel & Block Numbers Shown in Circles.
Electronically Redrawn 1/14/00 mvm
Rev 11/13/03 CB (Cor to Hwy ref)

COUNTY STAMP

SUBMITTALS NEEDED

- CABINETRY
- FIRE SPRINKLERS
- FIRE ALARM
- STRUCTURAL STEEL
- NON-STRUCTURAL STEEL
- FINISHES
- FIXTURES
- LIGHTING
- PLUMBING FIXTURES
- MECH. EQUIPMENT
- KITCHEN EQUIPMENT
- WINDOWS
- DOORS
- HARDWARE
- WATER PROOFING

PARKING SPACES

SPACES REQUIRED : + 5% COVERED BICYCLE	
ASSEMBLY OCC 56 SEATS : 1/3 SEATS	= 19 SPOTS
WAREHOUSE/UTILITY 685 SQFT : 1/1,000 SQFT	= 1 SPOT
CAFE 971 SQFT : 1/300 SQ FT	= 4 SPOTS
TOTAL	= 24 SPOTS (5% = 2 BICYCLE)

TYPE	COUNT
GENERAL	21 (GRAVEL PAD)
BICYCLE	x2 (INDV/ENCLOSURE TYPE)
ACCESSIBLE	3 (TOTAL)
VAN ACCESSIBLE	2
ELECTRIC CHARGING	3
TOTAL	24

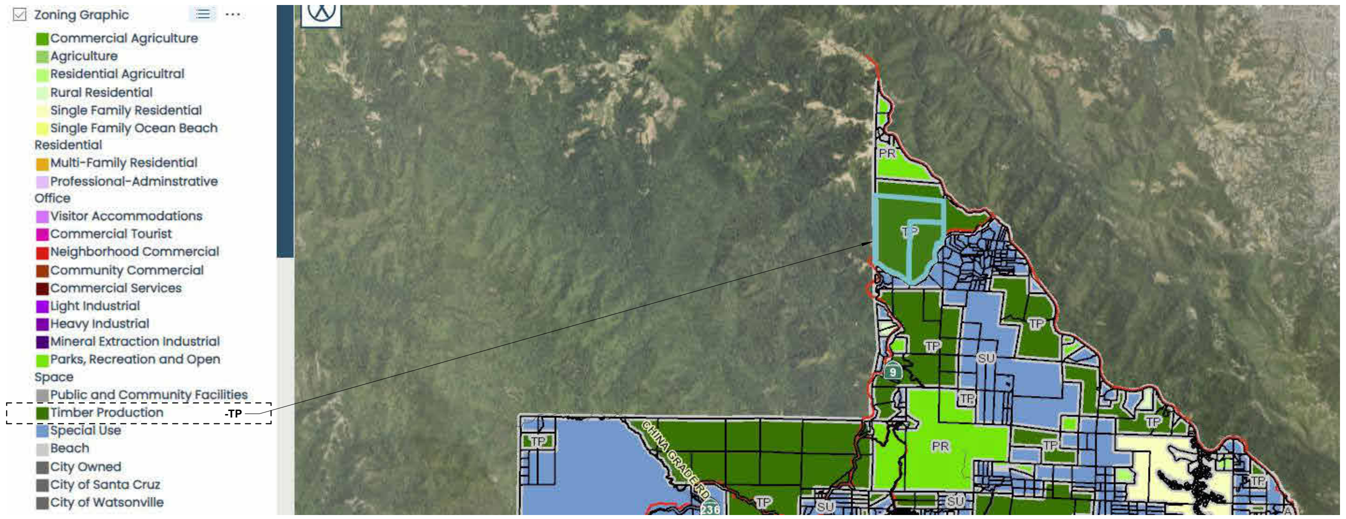
MIN. PLUMBING FIXTURES TABLE 422.1

OCCUPIED AREA	2,870 SQFT	TOTAL 104
TOTAL USERS	FEMALE	131/2 < 52
	MALE	131/2 > 52

REQUIRED BY TABLE 422.1 - A-3

WATER CLOSETS		LAVATORIES		URINALS	D.F.	SERVICE SINK
FEMALE 3:51-100	MALE 2:51-100	FEMALE 1:1-100	MALE 1:1-200	MALE 1:1-100	1:1-250	1
PROVIDED		PROVIDED		PROVIDED	PROVIDED	PROVIDED
4 UNISEX SINGLE USER		3 SHARED : 2 SINGLE USER		-	-	1

ZONING MAP - TP


☑ Zoning Graphic
🟩 Commercial Agriculture
🟩 Agriculture
🟩 Residential Agricultral
🟩 Rural Residential
🟨 Single Family Residential
🟨 Single Family Ocean Beach Residential
🟧 Multi-Family Residential
🟪 Professional-Adminstrative Office
🟪 Visitor Accommodations
🟪 Commercial Tourist
🟥 Neighborhood Commercial
🟫 Community Commercial
🟫 Commercial Services
🟪 Light Industrial
🟪 Heavy Industrial
🟪 Mineral Extraction Industrial
🟩 Parks, Recreation and Open Space
⬜ Public and Community Facilities
🟩 Timber Production
🟦 Special Use
⬜ Beach
⬛ City Owned
⬛ City of Santa Cruz
⬛ City of Watsonville
-TP
TP
PR
SU
9
236

topa architecture

1150 North First St. Ste. 140,

San Jose, CA 95112

Tel: 408.320.0248

GENERAL NOTES: SHEET IS PART OF A SET & IS NOT TO BE USED ALONE.

2. THIS SET IS NOT FOR CONSTRUCTION UNTIL THE ARCHITECT'S STAMP & SIGNATURE ARE ON THIS SHEET AS WELL AS LOCAL AUTHORITY PERMIT APPROVAL STAMP ON ALL SHEETS.

3. THESE PLAN & PRINTS ARE OWNED BY THE ARCHITECT & ARE FOR USE ON THIS PROJECT ONLY.REPRODUCTION AND/OR DISTRIBUTION WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT IS FORBIDDEN.

STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER

26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

SHEET TITLE:

PROJECT ANALYSIS AND CITY DOCUMENTS

REVISIONS

No.	Description	Date

DRAWN:	JC
CHECKED:	-
DATE:	01.26.2024
SCALE:	As indicated
JOB No.:	23-2-12-SCOUTS
SHEET No.:	A0.2P

GENERAL NOTES

CONSTRUCTION DOCUMENTS:

1. GENERAL NOTES SHALL APPLY TO ALL WORK OF THE PROJECT AND SHALL EXTEND TO CHANGES OR ADDITIONS AGREED TO DURING THE COURSE OF THE WORK.

2. CHANGES IN DESIGN OR MATERIALS WILL NOT BE ACCEPTED WITHOUT WRITTEN AUTHORIZATION FROM BOTH THE ARCHITECT AND OWNER. SUBMIT REQUESTS FOR SUBSTITUION AT LEAST FOUR WEEKS BEFORE PRIOR TO COMMENCEMENT OF AFFECTED WORK.

3. DIMENSIONS:
   A) IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON DRAWINGS.
   B) ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BEFORE PROCEEDING WITH THE WORK.
   C) DIMENSIONS ARE NOT ADJUSTABLE WITHOUT APPROVAL OF ARCHITECT IN WRITING.
   D) DIMENSIONS ARE BASED UPON SPECIFIC MATERIALS AND EQUIPMENT. SUBSTITIONS MAY AFFECT DIMENSIONS.SUBSTITUTION REQUESTS SHALL INDICATE THE IMPACT OF THE SUBSTITUTIONS UPON DIMENSIONS AND CLEARANCES.
   E) MINIMUM AND MAXIMUM DIMENSIONS AND SLOPES AS REQUIRED FOR DISABLE ACCESS ARE TO TAKE PRECEDENCE IN ALL CASES OF CONFLICT. CODE REQUIRED MINIMUMS AND MAXIMUMS ARE TO BE EXCEEDED WHERE POSSIBLE AND WHERE NOTED. NOTIFY ARCHITECT OF ANY DIMENSIONAL DISCREPANCIES PRIOR TO CONSTRUCTION.

4. DETAILS MARKED “TYPICAL” (TYP) SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY INDICATED OTHERWISE.

5. DETAILS MARKED “SIMILAR” (SIM) MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY SIMILAR DIMENSIONS OR NOTES ON THE PLAN.

6. A DELTA SYMBOL LOCATED AT THE TOP RIGHT HAND CORNER OF ANY DRAWING INDICATES THAT DRAWING HAS BEEN SIGNIFICANTLY REVISED AND SHOULD BE TREATED AS AN ENTIRELY NEW DRAWING.

7. SHOULD AN ERROR APPEAR IN SPECIFICATIONS OR DRAWINGS, OR IN WORK DONE BY OTHERS, AFFECTING THIS WORK, NOTIFY THE ARCHITECT IMMEDIATELY FOR INSTRUCTIONS AS TO PROCEDURE. IF CONTRACTOR PROCEEDS WITH WORK AFFECTED WITHOUT INSTRUCTIONS FROM THE ARCHITECT, THE CONTRACTOR SHALL MAKE GOOD ANY RESULTING DAMAGE OR DEFECT.

10. SHOULD CONFLICT OCCUR IN OR BETWEEN DRAWINGS AND SPECIFICATIONS OR WHERE DETAIL REFERENCES ON CONTRACT DRAWINGS HAVE BEEN OMITTED, CONTRACTOR IS DEEMED TO HAVE ESTIMATED THE MOST EXPENSIVE MATERIALS AND CONSTRUCTION INVOLVED UNLESS HE SHALL HAVE ASKED FOR AND OBTAINED WRITTEN DECISION FROM THE ARCHITECT AS TO WHICH METHOD OR MATERIALS WILL BE REQUIRED.

11. ALL CONSTRUCTION AND MATERIALS SHALL BE AS SPECIFIED AND/OR AS REQUIRED BY THE ADOPTED EDITION OF THE UNIFORM BUILDING CODE AND ALL LOCAL AND NATIONAL CODES AND AUTHORITIES WHICH ARE APPLICABLE.

12. ALL PRODUCTS, MATERIALS, AND FINISHES ARE TO BE INSTALLED PER THE MANUFACTURER ’S RECOMMENDED SPECIFICATIONS AND INSTALLATION PROCEDURES, UNLESS SPECIFICALLY NOTED OTHERWISE.

13. REFERENCES TO MAKES, BRANDS, MODELS, ETC., IS TO ESTABLISH TYPE AND QUALITY DESIRED. SUBSTITUTION OF ACCEPTABLE EQUALS WILL NOT BE PERMITTED, UNLESS SPECIFICALLY NOTED OTEHRWISE OR WHEN MADE ACCORDING TO PROCEDURES FOR SUBSTITUTIONS.

14. ALL INTERIOR AND EXTERIOR FINISHES AT ALL INSIDE AND OUTSIDE CORNER AND EDGE DETAILS FOR ALL FINISH MATERIAL MUST USE THE APPROPRIATE MANUFACTURER'S RECOMMENDED INSIDE AND OUTSIDE CORNER AND EDGE MATERIAL AND FINISHES.

15. ALL PATCHING, REPAIRING AND REPLACING OF MATERIALS AND SURFACES CUT OR DAMAGED IN EXECUTION OF WORK SHALL BE DONE WITH APPLICABLE MATERIALS SO THAT SURFACES REPLACED WILL, UPON COMPLETION, MATCH SURROUNDING SIMILAR SURFACES.

16. ALL WOOD TOUCHING/ COMING IN CONTACT WITH CONCRETE SHOULD BE PRESSURE TREATED. TYPICAL UNLESS NOTED OTHERWISE.

17. ALL GYPSUM BOARD TO BE A MINIMUM OF 5/8" SHEETROCK, U.N.O. SMOOTH FINISH OR AS OTHERWISE INDICATED ON DRAWINGS. INSTALL AS NEEDED TO MEET APPLICABLE CODES.

18. ALL SCREWS/NAILS IN FINISH WOODWORK TO BE COUNTERSUNK AND FILLED SMOOTH WITH PUTTY TO MATCH FINISH.

19. ALL WALLS FLOORS AND CEILINGS ARE TO BE FINISHED TO MATCH EXISTING ADJACENT SURFACES. ALL NEW FINISHES AND FIXTURES ARE TO BE APPROVED BY OWNER OR ARCHITECT, PRIOR TO INSTALLATION.

20. ANY ALTERATIONS OF EXISTING FACILITIES TO ACCOMADTE THE INSTALLATION OF NEW WORK SHALL BE REVIEWED BY THE ARCHITECT AND OWNER PRIOR TO COMMENCEMENT OF WORK.

21. NO PORTION OF THE WORK REQUIRING A SHOP DRAWING OR SAMPLE SUBMISSION SHALL BE COMMENCED UNTIL THE SUBMISSION HAS BEEN REVIEWED AND ACTED UPON BY THE ARCHITECT. ALL SUCH PORTIONS OF WORK SHALL BE IN ACCORDANCE WITH THE REVIEWED SHOP DRAWINGS AND SAMPLES.

22. GEOTECHNICAL INFORMATION REGARDING GEOTECHNICAL AND SOIL CONDITIONS AT THE SITE AT THE TIME OF THE REPORT WAS FURNISHED TO THE DESIGN TEAM BY THE OWNER. CONTRACTOR SHALL VERIFY SITE CONDITIONS PRIOR TO STARTING WORK.

23. SEE DOCUMENTS PREPARED BY THE CIVIL ENGINEERING, IF APPLICABLE, FOR ALL FINISH GRADES, DRAINAGE AND SITE DETAILS. REVIEW ALL SITE UTILITY DOCUMENTS, LANDSCAPE AND IRRIGATION DOCUMENTS PRIOR OR COMMENCEMENT OF ANY UNDERGROUNDING OR TRENCHING. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES. NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OF THE CONTRACT DOCUMENTS.

24. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR CONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLIANCE CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHERE IN THE FINISH WORK WILL NOT COMPLY WITH TITLE 24. CALIFORNIA CODE OF REGULATIONS A CHANGE ORDER, OR A SEPARATE SET OF PLANS OR SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

25. CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS AGREE THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS FURTHER AGREE TO DEFEND, INDEMNIFY AND HOLD THE ARCHITECT HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF.

CONTRACTOR RESPONSIBILITES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK AND OPERATIONS OF ALL TRADES AND DISCIPLINES. THE CONTRACTOR SHALL:
   A) SCHEDULE CONSTRUCTION OPERATION IN SEQUENCCE NEEDED TO OBTAIN THE BEST RESULTS WHERE INSTALLATION OF ONE PART OF THE WORK DEPENDS ON INSTALLATION OF OTHER COMPONENTS, BEFORE OR AFTER ITS INSTALLATION.
   B) COORDINATE INSTALLATION OF DIFFERENT COMPONENTS WITH OTHER CONTRACTORS TO ENSURE MAXIMUM ACCESSIBILITY FOR REQUIRED MAINTENANCE, SERVICE AND REPAIR.
   C) MAKE ADEQUATE PROVISIONS TO ACCOMADATE ITEMS SCHEDULED FOR LATER INSTALLATION.

2. GENERAL CONTRACTORS, SUB-CONTRACTORS, BUILDERS, AND OWNER ARE TO CHECK ALL DRAWINGS FOR ERRORS AND OMMISIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY ERRORS AND/OR OMISSIONS MUST BE REPORTED IMMEDIATELY TO THE ARCHITECT IN WRITING PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE DESIGNER WILL NOT TAKE LIABILITY FOR ANY ERRORS AND/OR OMISSIONS NOT REPORTED IMMEDIATELY IN WRITING PRIOR TO COMMENCEMENT OF CONSTRUCTION.

3. VERIFY ALL DIMENSIONS AND SITE CONDITIONS, INCLUDING LOCATING ALL EXISTING UTILITIES BELOW GRADE AND RELATED SERVICE CONNECTIONS WITH THE RESPECTIVE UTILITY COMPANY, PRIOR TO COMMENCING ANY WORK. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR INCONSISTENCIES WITH THESE PLANS AND SPECIFICATIONS OR ANY UNFORESEEN CONDITIONS PRIOR TO PROCEEDING WITH CONSTRUCTION.

4. IF THE MANUFACTURER'S SPECIFICATIONS AND APPLICABLE CODES ARE NOT CONSISTENT WITH EACH OTHER, NOTIFY THE ARCHITECT IMMEDIATELY PRIOR TO COMMENCEMENT OF ANY WORK AND AWAIT DIRECTION OR CONTRACTOR ACCEPTS FULL RESPONSIBILITY OF WORK COMPLETED.

5. THE CONTRACTOR SHALL LAYOUT THE WORK, SETTING GRADE STAKES, ESTABLISHING LINES AND ELEVATIONS AND ANY OTHER INFORMATION NECESSARY TO COMPLETE THE WORK AND BE RESPONSIBLE FOR THE ACCURACY THEREOF.

6. CONFINE OPERATIONS AT THE SITE TO AREAS PERMITTED BY LAW, ORDINANCES, PERMITS AND THE CONTRACT DOCUMENTS, AND SHALL NOT UNREASONABLY ENCUMBER THE SITE WITH ANY MATERIAL OR EQUIPMENT.

7. ALL MATERIAL STORED ON THE SITE SHALL BE PROPERLY STACKED AND PROTECTED TO PREVENT DAMAGE AND DETERIORATION UNTIL USE. FAILURE TO PROTECT MATERIALS MAY BE CAUSE FOR REJECTION OF WORK.

8. CONTRACTOR TO PROTECT ALL INTERIOR SPACES (AS REQUIRED) FROM ANY WEATHER, THEFT, OR VANDALISM.

9. THE CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING IMPROVEMENTS WITH A SMOOTH TRANSITION AND TO AVOID ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS SLOPES, LOW SPOTS OR HAZARDOUS CONDITIONS.

10. IF MATERIALS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED (ASBESTOS), DO NOT DISTURB; IMMEDIATELY NOTIFY ARCHITECT AND OWNER. HAZARDOUS MATERIALS WILL BE REMOVED BY OWNER UNDER A SEPARATE CONTRACT.

11. THE CONTRACTOR SHALL TAKE EFFECTIVE ACTION TO PREVENT THE FORMATION OF AN AIRBORNE DUST NUISANCE AND SHALL BE RESPONISBLE FOR ANY DAMAGE RESULTING FROM THEIR FAILURE TO DO SO.

12. ALL EXISTING UTILITIES AND IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORES TO THE SATISFACTION OF THE CONTROLLING PUBLIC AGENCY OR THE OWNER, AS APPLICABLE, AT THE CONTRACTOR’S SOLE EXPENSE.

13. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT PRIOR TO ANY EXCAVATION.

14. RELOCATE OR INSTALL NEW PLUMBING, GAS, AND ELECTRICAL LINES (AS REQUIRED) FOR THE NEW CONSTRUCTION.

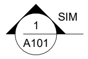
15. FIRE SPRINKLER WORK SHALL BE DESIGN-BUILD. PERMIT DRAWINGS FOR THIS WORK SHALL BE A DEFFERED SUBMITTAL MADE BY THE CONTRACTOR.

16. CONTRACTORS AND SUBCONTRACTORS RESPONSIBILITY TO MAKE SURE THAT MATERIALS, INSTALLATION AND CRAFTSMANSHIP FOR THIS PROJECT MEETS ALL APPLICABLE CODES. TYPICAL.

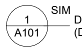
17. OWNER WILL EXERCISE SOLE AUTHORITY FOR DETERMINING CONFORMANCE OF MATERIALS, EQUIPMENT, AND SYSTEMS WITH THE INTENT OF THE DESIGN. REVIEW AND ACCEPTANCE OF ALL ITEMS PROPOSED BY CONTRACTOR FOR INCORPORATION INTO THIS WORK WILL BE BY OWNER. THIS FUNCTION OF THE OWNER WILL APPLY BOTH TO THE CONTRACT AS INITIALLY SIGNED AND TO CHANGES TO THE CONTRACT BY MODIFICATION DURING PROGRESS OF WORK.

18. THE FINISHED WORK WHALL BE FIRM, WELL AND SECURELY ANCHORED, IN TRUE ALIGNMENT, PLUMB, AND LEVEL WITHOUT WAVES, DISTORTIONS, HOLES, MARKS, CRACKS STAINS OR DICOLORATION. JOINTINGS SHALL BE CLOSE FITTING, NEAT, AND WELL SCRIBED. THE FINISHED WORK SHALL NOT HAVE XPOSED, UNSLIGHTLY ANCHORS OR FASTENERS AND SHALL NOT PRESENT HAZARDOUS, UNSAFE CORNERS. ALL WORK SHALL HAVE THE PROVISIONFOR EXPANSION, CONTRACTION, AND SHRINKAGE AS NECESSARY TO PREVENT CRACKS, BUCKLING, AND WARPING DUE TO TEMPERATURE AND HUMIDITY CONDITIONS.

SYMBOLS LEGEND



SECTION CALLOUT
(SECTION#/SHEET#)



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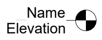
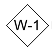


LEVEL MARKER
(LEVEL NAME/ ELEVATION IN FEET)

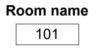


FINISH MATERIAL CALLOUT

WALL TYPE TAG

DOOR NUMBER TAG

WINDOW TYPE TAG



ROOM TAG
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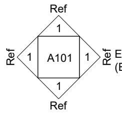
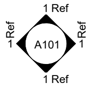


EXTERIOR ELEVATION MARK
(ELEVATION #/DETAIL #/SHEET #)



INTERIOR ELEVATION MARK
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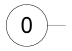
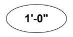


GRID NUMBER



CEILING HEIGHT TAG

ABBREVIATIONS

A	
AB	ANCHOR BOLT
AC	ASPHLAT CONCRETE
AC	ALTERNATING CURRENT
ACCMP	ASPHALT COATED CORRUGATED METAL PIPE
ACI	AMERICAN CONCRETE INSTITUTE
ACOUS	ACOUSTICAL
ACP	ASBESTOS CEMENT PIPE
AD	AREA DRAIN
ADD	ADDENDUM
ADD'NL	ADDITIONAL
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AGA	AMERICAN GAS ASSOCIATION
AGG	AGGREGATE
AH	AIR HANDLING
AIA	AMERICAN INSTITURE OF ARCHITECTS
AIEE	AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
AIR COND	AIR CONDITIONING
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ALT	ALTERNATE
ALUM	ALUMINUM
AMP	AMPERAGE
ANOD	ANODIZED
APPROX	APPROXIMATELY
ARCH	ARCHITECT / ARCHITECTURAL
ASB	ASBESTOS
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING, & AIR CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASPH	ASPHALT
ASR	AUTOMATIC SPRINKLER RISER
ASSOC	ASSOCIATION
ATEG	ACCOUSTIC TILE EXPOSED GRID
AVG	AVERAGE
B	
B&B	BURLAPPED & BALLED
BD	BOARD
BIT	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BM	BENCH MARK
BO	BOTTOM OF
BOT	BOTTOM
BRG	BEARING
BRON	BRONZE
BS	BOTH SIDED
BTU	BRITISH THERMAL UNIT
BTWN	BETWEEN
BVC	BEGINNING OF VERTICAL CURVE
BW	BOTH WAYS
C	
C/S	CROSS SLOPE
CAB	CABINET
CAL	CALIPER
CAR	CARPET
CB	CATCH BASIN
CBI	CATCH BASIN INVERT
CEM	CEMENT
CER	CERAMIC
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHWS (R)	CHILLED WATER SUPPLY (RETURN)
CI	CAST IRON
CIP	CAST IRON PIPE
CIR	CIRCULAR
CL	CENTER LINE OR CHAIN LINK (FENCE)
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	COMPANY
CO	CLEAN OUT
COL	COLUMN
COMB	COMBINATION
COMP	COMPOSITION
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COR	CORNER
CORP	CORPORATION
CORR	CORRIDOR
CRR	CORRUGATED
CTSK	COUNTER SINK
CU	CUBIC
CW	COLD WATER
CWS (R)	COLD WATER SUPPLY (RETURN)
CY	CUBIC YARD
D	
d	PENNY (NAILS)
DBL	DOUBLE
DC	DIRECT CURRENT
DEG	DEGREE
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGRAM
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DMH	DROP MAN HOLE
DN	DOWN
DO	DOOR OPENING
DR	DOOR, DRAIN
DS	DOWN SPOUT
DSP	DRY STAND PIPE
DW	DISH WASHER
DWG	DRAWINGS
DWR	DRAWER
E	
(E)	EXISTING
E	EAST
EA	EACH
EAP	EXPOSED AGGREGATE PACING
EF	EACH FACE
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMR	ELEVATOR MACHINE ROOM
ENAM	ENAMEL
ENCL	ENCLOSURE
ENGR	ENGINEER
EP	ELECTRICAL PANEL
EQ	EQUIVELANT, EQUAL
ETC	AND SO FORTH
EVC	END OF VERTICAL CURVE
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXH	EXHAUST
EXP	EXPANSION
EXPO	EXPOSED
EXT	EXTERIOR
F	
FA	FRESH AIR, FIRE ALARM
FAB	FABRICATE, FABRICATIONS
FB	FLAT BAR
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINSIH FLOOR
FFL	FINISH FLOOR LEVEL
FG	FINISH GRADE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHWS	FLAT HEAD WOOD SCREW
FIN	FINISH
FL	FLOW LINE
FL LT	FLOURESCENT LIGHT
FLR	FLOOR
FOB	FACE OF BLOCK
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOG	FACE OF GLAZING
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FOW	FACE OF WALL
FP	FIRE PROTECTION
FR	FLOOR SINK
FRPF	FIRE PROOF
FT	FEET
FTG	FOOTING
FURR	FURRING
FUT	FUTURE
G	
GA	GAUGE
GAL	GALLON
GALV	GALVANIZE, GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GD	GARBAGE DISPOSAL
GI	GALVANIZED IRON
GL	GLASS
GLB	GLUE-LAMINATED BEAM
GLU LAM	GLUE-LAMINATED
GND	GROUNF
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRAIL	GUARD RAIL
GV	GAS VALVE
GYP	GYPSUM
H	
HB	HOSE BIB
HC	HOLLOW CORE
HD	HEAD
HDR	HEADER
HDWR	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HORSE POWER, HIGH POINT
HR	HOUR
HRAIL	HAND RAIL
HT	HEIGHT
HTG	HEATING
HVAC	HEATING, VENTILATION, & AIR CONDITIONING
HW	HEAD WALL, HOT WATER
HWY	HIGHWAY
HYD	HYDRANT, HYDRAULIC
HZ	HERTZ
I	
ICW	INDUSTRIAL COLD WATER
ID	INSIDE DIAMETER
IES	ILLUMINATING ENGINEERS SOCIETY
IHW	INDUSTRIAL HOT WATER
IMPG	IMPREGNATE
IN	INCH
INC	INCORPORATED
INCL	INCLUDES
INFO	INFORMATION
INL	INLET
INSUL	INSULATION
INT	INTERIOR
INV	INVERT, INVERTED
ISOL	ISOLATE, ISOLATOR
J	
JAN	JANITOR
JB	JUNCTION BOX
JCT	JUNCTION
JST	JOIST
JT	JOINT
K	
KD	KILN DRIED
KIT	KITCHEN
KO	KNOCK OUT
KW	KILOWATT
L	
LAB	LABORATORY
LAG	LAG SCREW
LAM	LAMIANTE
LA	LANDSCAPE ARCHITECT
LC	LANDSCAPE CONTRACTOR
LAT	LATERAL
LAV	LAVATORY
L	LENGTH OF CURVE
LT	LIGHT
LTWC	LIGHT WEIGHT CONRETE
LIN	LINEAR
LF	LINEAR FEET
LG	LONG
LVR	LOUVER
LP	LOW POINT
LB	POUND (WEIGHT)
M	
MB	MACHINE BOLT
MS	MACHINE SCREW
MI	MALLEABLE IRON
MH	MAN HOLE
MFR	MANFUFACTURER
MAS	MASONRY
MO	MASONRY OPENING
MATL	MATERIAL
MATR	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MET	METAL
MTL	METAL
M	METER
MIN	MINIMUM, MINUTE
MIR	MIRROR
MOD	MODULE
MON	MONUMENT
MTD	MOUNTED
MUL	MULLION
N	
N	NORTH
NAT	NATURAL
NBS	NATIONAL BUREAU OF STANDARDS
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NG	NATURAL GRADE
NIC	NOT IN CONTACT
NIS	NOT IN SCOPE
NO	NUMBER
NOM	NOMINAL
NS	NO SCALE
NTS	NOT TO SCALE
O	
OA	OVERALL
OAI	OUTSIDE AIR INTAKE
OBS	OBSCURE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OVERFLOW
OFF	OFFICE
OFL	OVERFLOW LEADER
OFS	OUTSIDE FACE OF STUD
OH	OVAL HEAD
OPGN	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
OTO	OUT TO OUT
OVHD	OVERHEAD
P	
PA	PUBLIC ADDRESS
PC	PIECE
PCP	POROUS CONCRETE PIPE
PG&E	PACIFIC GAS & ELECTRIC
PH	PANIC HARDWARE
PL	PLATE, PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLMBG	PLUMBING
PLY	PLYWOOD
PM	PRESSED METAL
PNL	PANEL
POC	POINT OF CONNECTION
POL	POLISHED
PORC	PORCELAIN
PP	POWER POLE
PR	PAIR
PRCT	PRECAST
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED, POINT
PTD	PAPER TOWEL DISPENSER
PTD/R	PAPER TOWEL DISPENSER/RECEPTACLE
PTN	PARTITION
PTR	PAPER TOWEL RECEPTACLE
PVC	POLYVINYLCHLORIDE
PVT	POINT OF VERTICAL TANGENT
Q	
QT	QUART, QUARRY TILE
R	
R	RISER
RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE, REFLECTED CEILING PLAN
RD	ROOF DRAIN
RE	RIM ELEVATION
RECPT	RECEPTACLE
REF	REFERENCE, REFRIGERATOR
REFR	REINFORCEMENT
REL HUM	RELATIVE HUMIDITY
REQD	REQUIRED
RESIL	RESILIENT
REV	REVISION
RF	ROOF
RGTR	REGISTER
RH	ROUND HEAD
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RPM	REVOLUTIONS PER MINUTE
RR	RESTROOM
R	
RV	ROOF VENT
RWD	REDWOOD
RWL	RAIN WATER LEADER
S	
SAN	SANITARY
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SCHED	SCHEDULE
SECT	SECTION
SED	SEE ELECTRICAL DRAWINGS
SMD	SEE MECHANICAL DRAWINGS
SPD	SEE PLUMBING DRAWINGS
SSD	SEE STRUCTURAL DRAWINGS
SEIS	SEISMIC
SJ	SEISMIC JOINT
SS	SERVICE SINK
SHTG	SHEATHING
SHT	SHEET
SM	SHEET METAL
SH	SHELF
SHR	SHOWER
SIM	SIMILAR
SK	SINK
SC	SOLID CORE
S	SOUTH
SPECS	SPECIFICATIONS
SPR	SPRINKLER
SF	SQUARE FEET
SQ	SQUARE FEET
SY	SQUARE YARD
STAG	STAGGERED
S STL	STAINLESS STEEL
STD	STANDARD
STA	STATION
ST	STEEL
STIFF	STIFFENER
STOR	STORAGE
SD	STORM DRAIN
SI	STORM INLET
STR	STRINGER
STRL	STRUCTURAL
SUSP	SUSPENDED
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
T	
TANG	TANGENT
TE	TAPERED END
TEL	TELEPHONE
TV	TELEVISION
TEMP	TEMPERATURE
TEMPD	TEMPERED
TCP	TERRACOTTA PIPE
TER	TERRAZZO
THERMO	THERMOSTAT
THK	THICK, THICKNESS
TH	THRESHOLD
THRU	THROUGH
TPH	TOILET PAPER HOLDER
TOL	TOLERANCE
T&G	TONGUE & GROOVE
T&B	TOP AND BOTTOM
TO	TOP OF
TC	TOP OF CURB, TOP OF COUNTER
TP	TOP OF PARAPET, TOP OF PAVEMENT, TELEPHONE POLE
TPL	TOP OF PLATE
TS	TOP OF SLAB, TOP OF STEEL
TW	TOP OF WALL
TB	TOWEL BAR
TRANSF	TRANSFORMER
TRD	TREAD
TYP	TYPICAL
U	
UD	UNDER DRAIN
UL	UNDERWRITER'S LABORATORIES, INC
UNF	UNFINISHED
UBC	UNIFORM BUILDING CODE
USGS	UNITED STATES GEOLOGICAL SURVEY
UON	UNLESS OTHERWISE NOTED
UR	URINAL
V	
V	VENT, VOLT
VAR	VARIES, VARIABLE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VEN	VENEER
VERT	VERTICAL
VEST	VESTIBULE
VGDF	VERTICAL GRAIN DOUGLAS FIR
VIT	VITRIFIED
VOL	VOLUME
W	
W	WEST
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WF	WIDE FLANGE, WIRE FABRIC
WGL	WIRE GLASS
WH	WATER HEATER
WI	WROUGHT IRON
WIND	WINDOW
WM	WIRE MESH, WATER MESH,
WP	WATERPROOF, WORK POINT
WR	WATER RESISTANT
WSCT	WAINSCOT
WSP	WET STAND PIPE
WT	WEIGHT
WV	WATER VALVE
WWM	WELDED WIRE MESH
Y	
YD	YARD
#	
#	POUNDS (LB) OR NUMBER
@	AT
°	DEGREES
Ø	DIAMETER

topa architecture

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San Jose, CA 95112

Tel: 408.320.0248

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PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER

26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

SHEET TITLE:

GENERAL NOTES

REVISIONS

No.	Description	Date

DRAWN: JC
CHECKED: -
DATE: 01.26.2024
SCALE: 1" = 10'-0"
JOB No.: 23-2-12-SCOUTS
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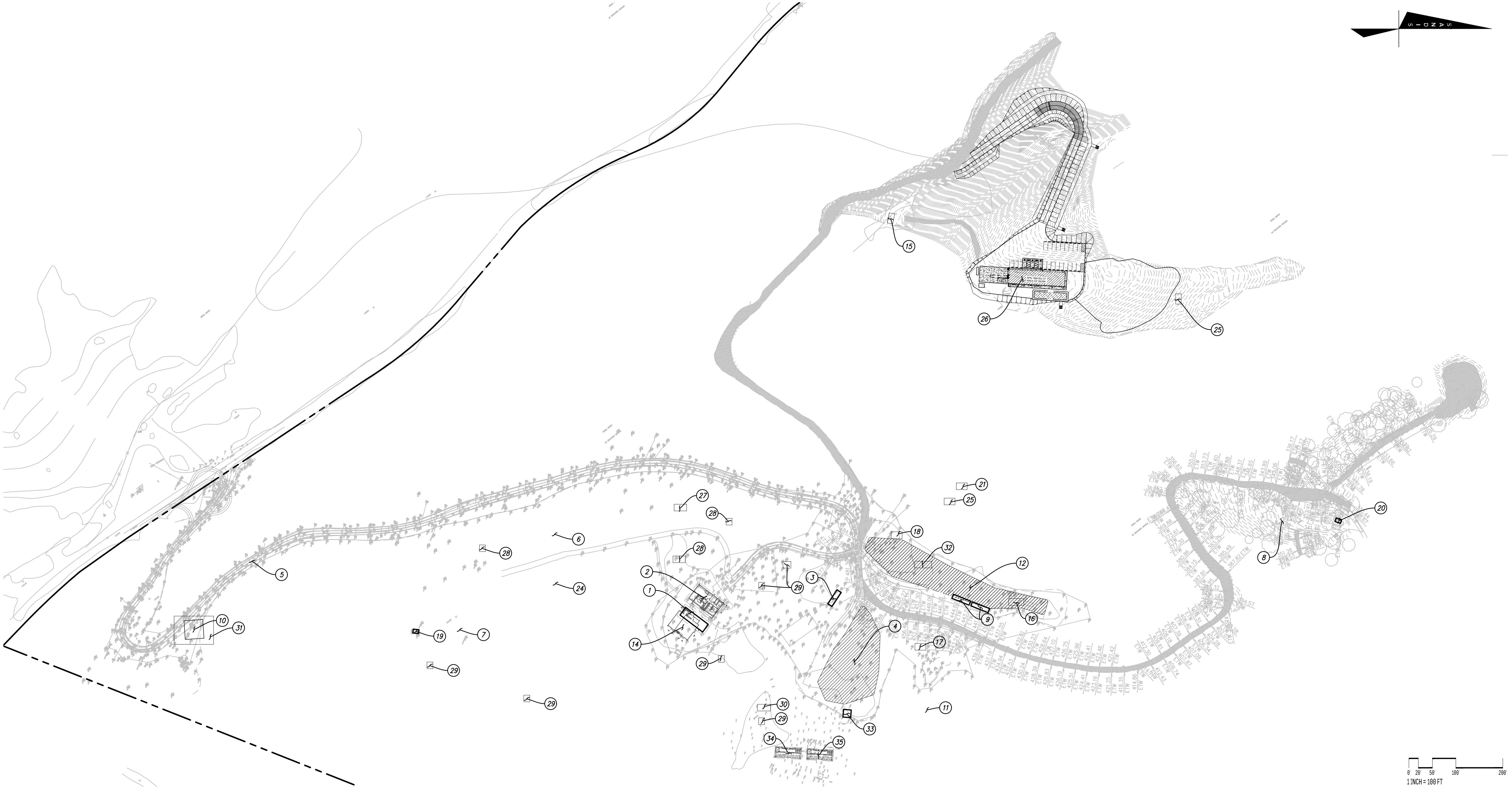

LEGEND

– – –

BUILDING LIST

① POLE BARN
② MULTI–USE BUILDING/KITCHEN
③ PUMP HOUSE BUILDING
④ PARKING LOT (GRAVEL)
⑤ GRAVEL ENTRANCE ROAD
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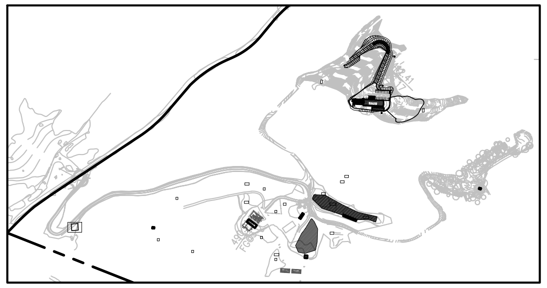

KEY MAP

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	4/17/24
SCALE:	
DRAWN BY:	RLM
APPROVED BY:	CJB
DRAWING NO.:	217084

DATE 4/17/24

CHAD J. BROWNING
R.C.E. NO. 68315, EXPIRES 9–30–25

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

CSR BUILDINGS

SHEET
C-1.0

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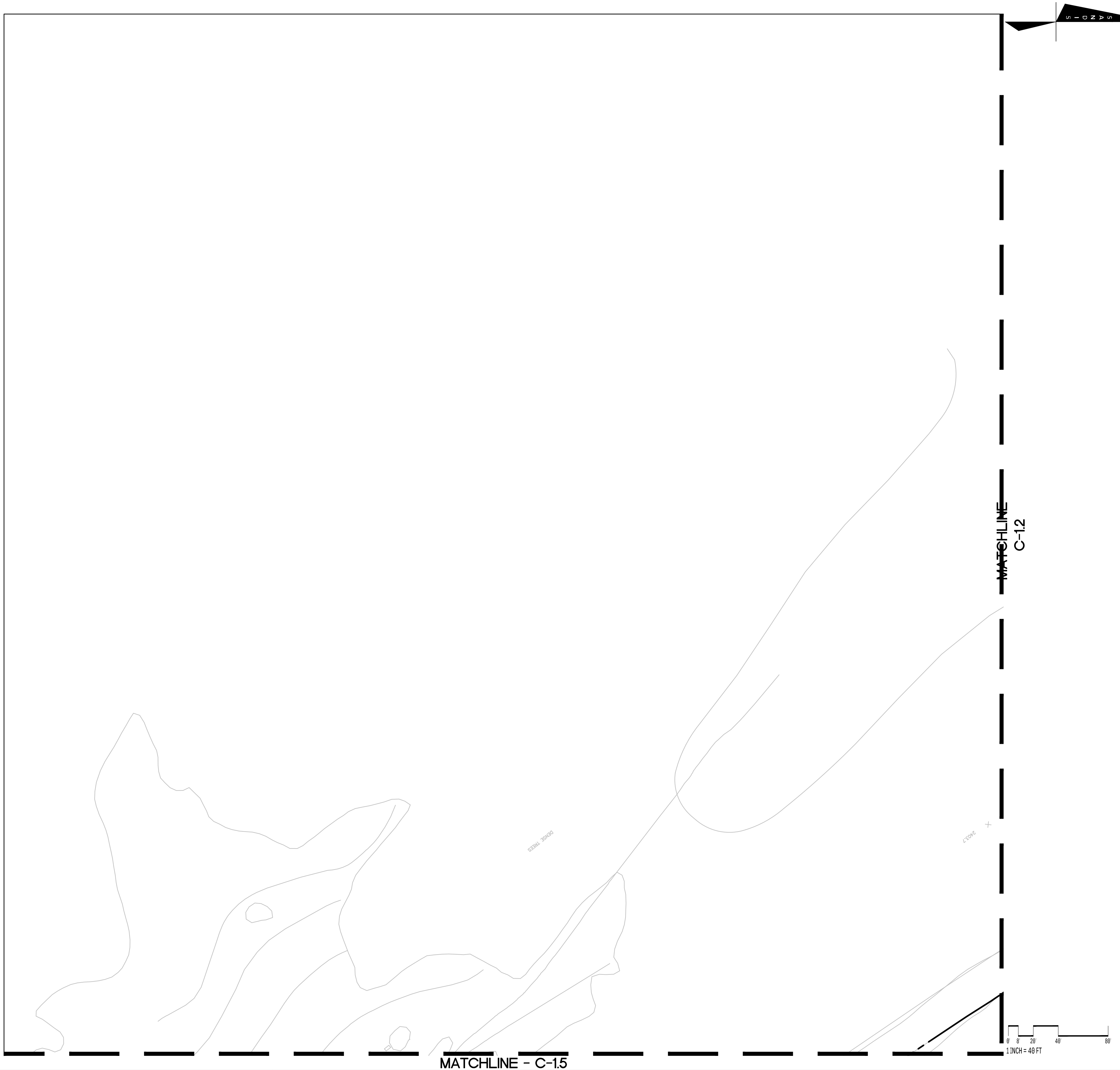

BUILDING LIST

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3	PUMP HOUSE BUILDING
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11	CAMPFIRE CIRCLE
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13	POWER POLE
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21	CAMPSITE LATRINE #3
22	CAMPSITE LATRINE #4 (REMOVED)
23	SMALL GROUP SLEEPING SHELTERS (REMOVED)
24	NEW CAMPSITE
25	NEW CAMPSITE
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29	TEACHING COVERED PAVILIONS
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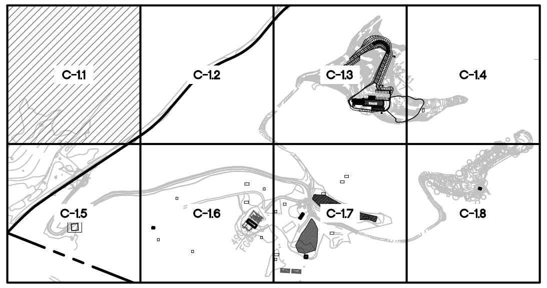
31	REPLACEMENT FOR EXISTING WATER TANKS
32	RECYCLING AND TRASH ENCLOSURE
33	RESTROOM - PARKING LOT
34	BB GUN INSTRUCTIONAL AREA
35	ARCHERY INSTRUCTIONAL AREA

LEGEND

— - - —	PROPERTY LINE



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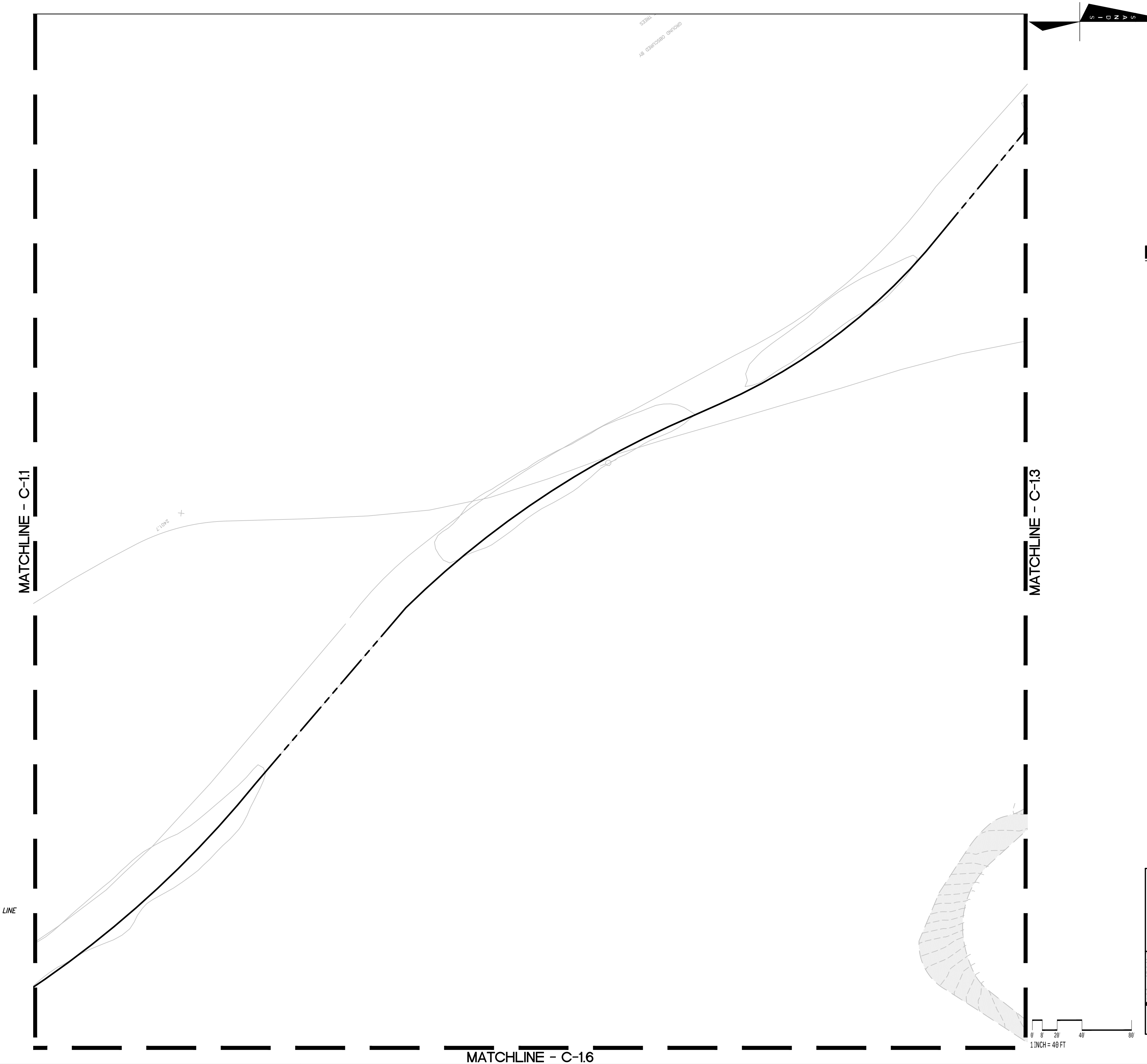

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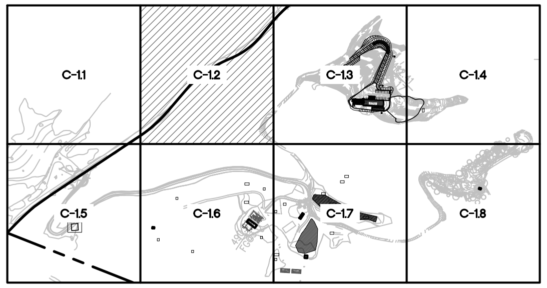

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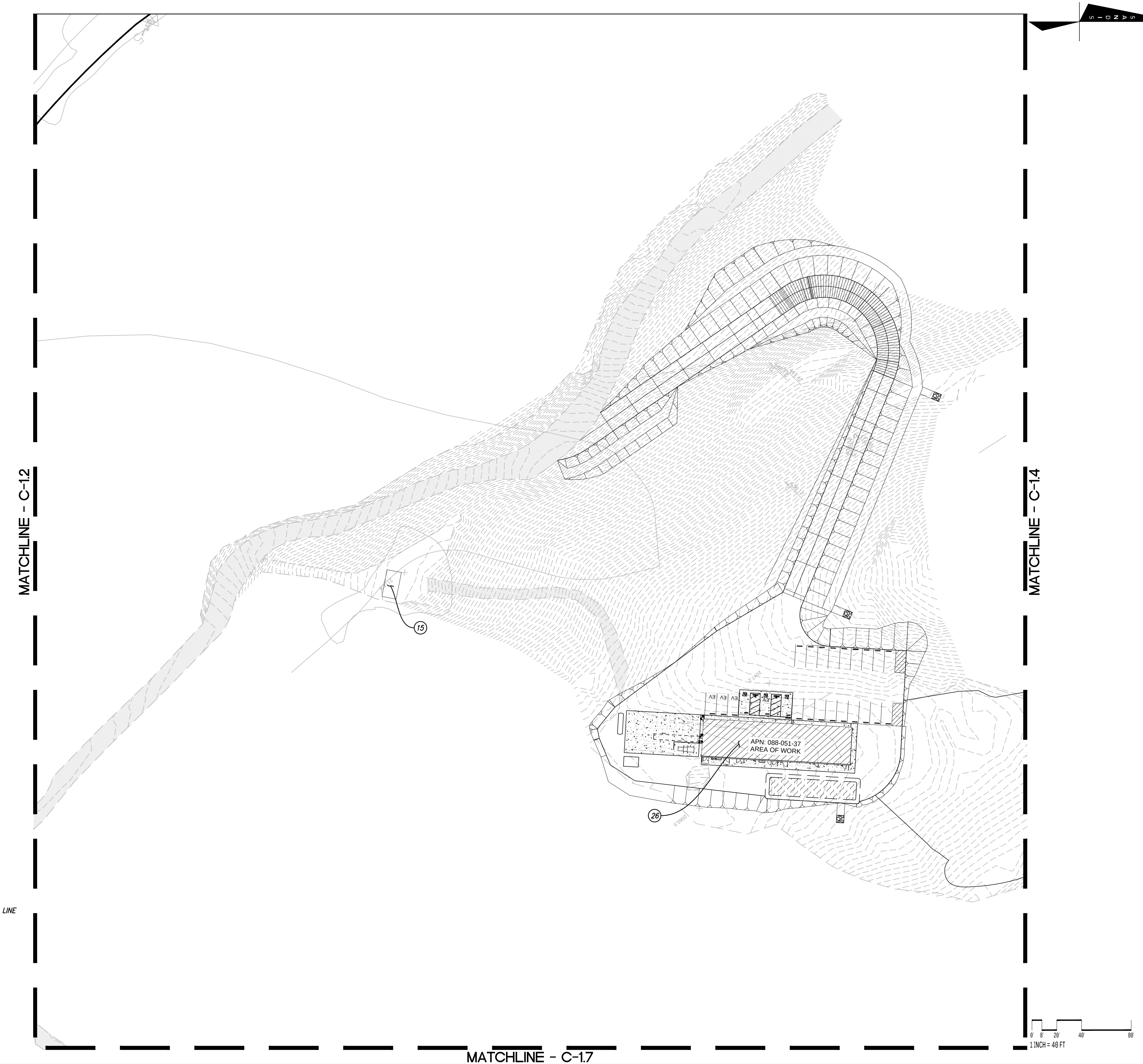

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LEGEND

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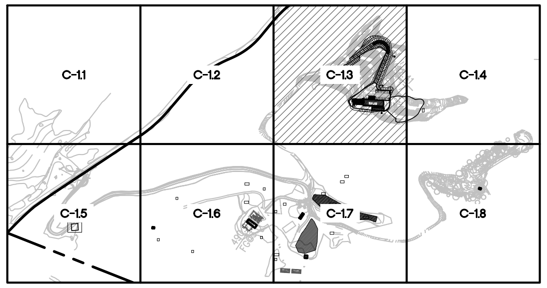

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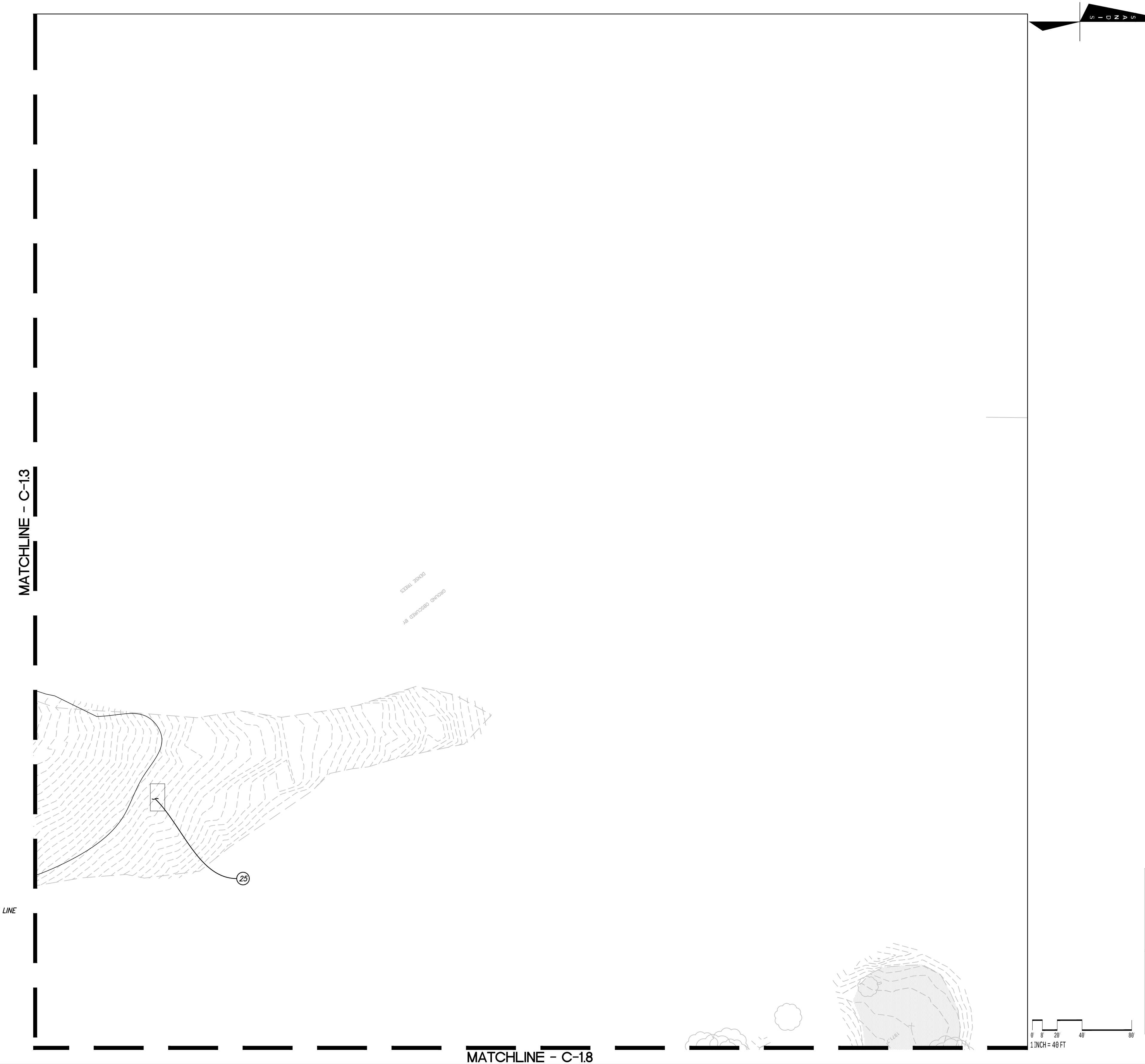

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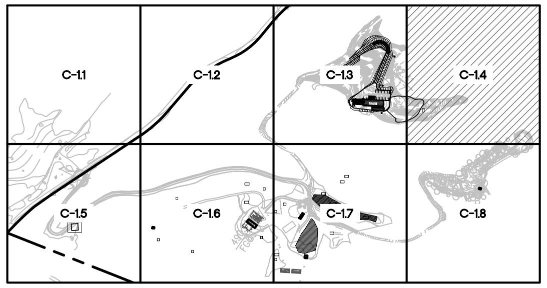

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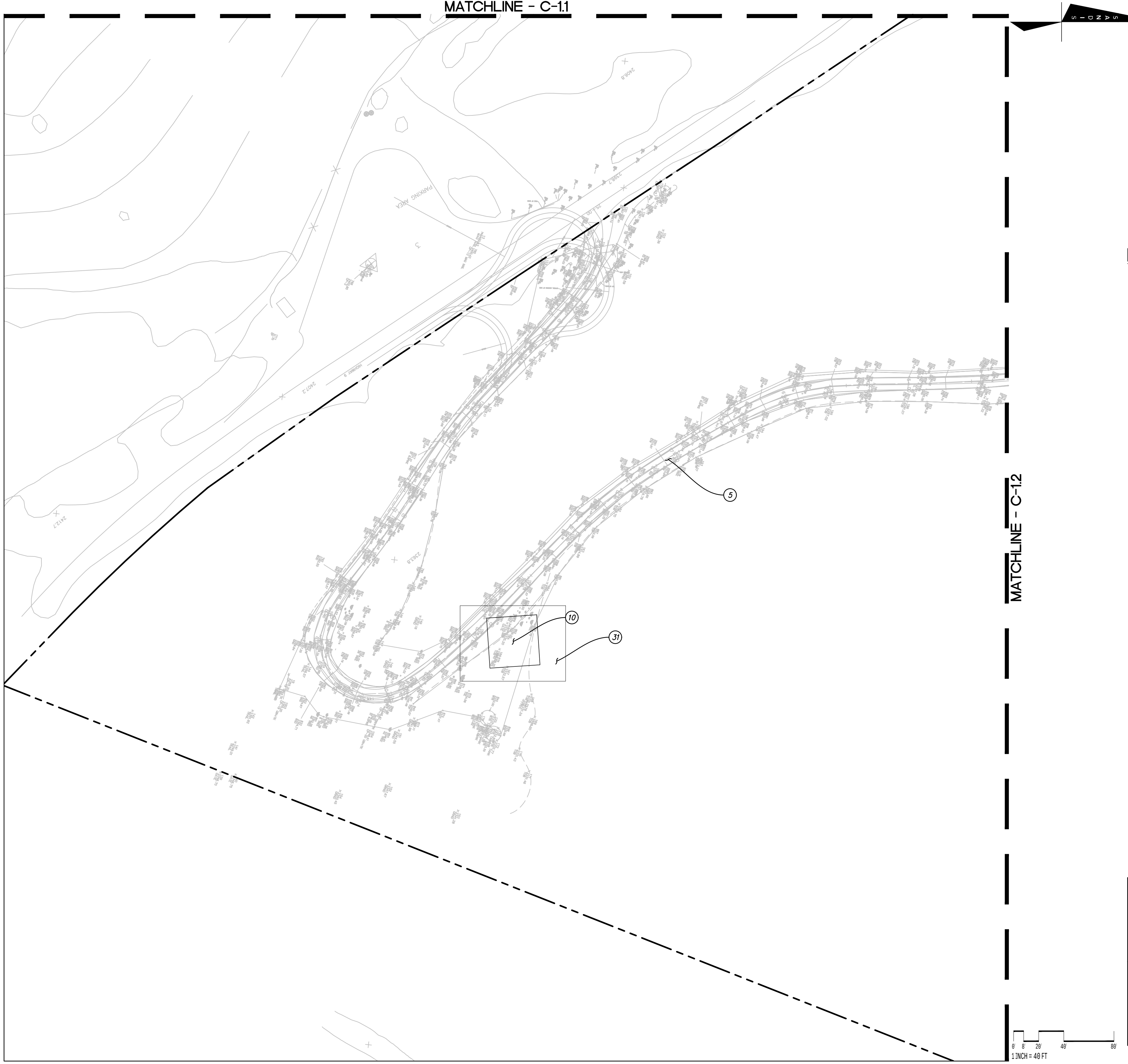

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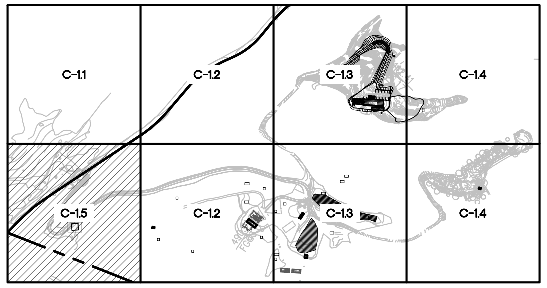
㉒	CAMPSITE LATRINE #4 (REMOVED)
㉓	SMALL GROUP SLEEPING SHELTERS (REMOVED)
㉔	NEW CAMPSITE
㉕	NEW CAMPSITE
㉖	VALLEY FOUNDATION TRAINING CENTER
㉗	SHOWER AND RESTROOM BUILDING
㉘	CABINS FOR SHORT TERM CAMPING
㉙	TEACHING COVERED PAVILIONS
㉚	CLIMBING AND RAPPELLING TOWER
㉛	REPLACEMENT FOR EXISTING WATER TANKS
㉜	RECYCLING AND TRASH ENCLOSURE
㉝	RESTROOM – PARKING LOT
㉞	BB GUN INSTRUCTIONAL AREA
㉟	ARCHERY INSTRUCTIONAL AREA

LEGEND

— — — PROPERTY LINE



KEY MAP

SANDIS CIVIL ENGINEERS SURVEYORS PLANNERS
1700 Winchester Boulevard, Campbell, CA 95008 I P. 408.636.0900 I F. 408.636.0999 I www.sandis.net
SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE: 4/17/24
SCALE:
DRAWN BY: RLM
APPROVED BY: CJB
DRAWING NO.: 217084

DATE 4/17/24

CHAD J. BROWNING
R.C.E. NO. 68315, EXPIRES 9-30-25

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

CSR BUILDINGS

SHEET
C-1.5

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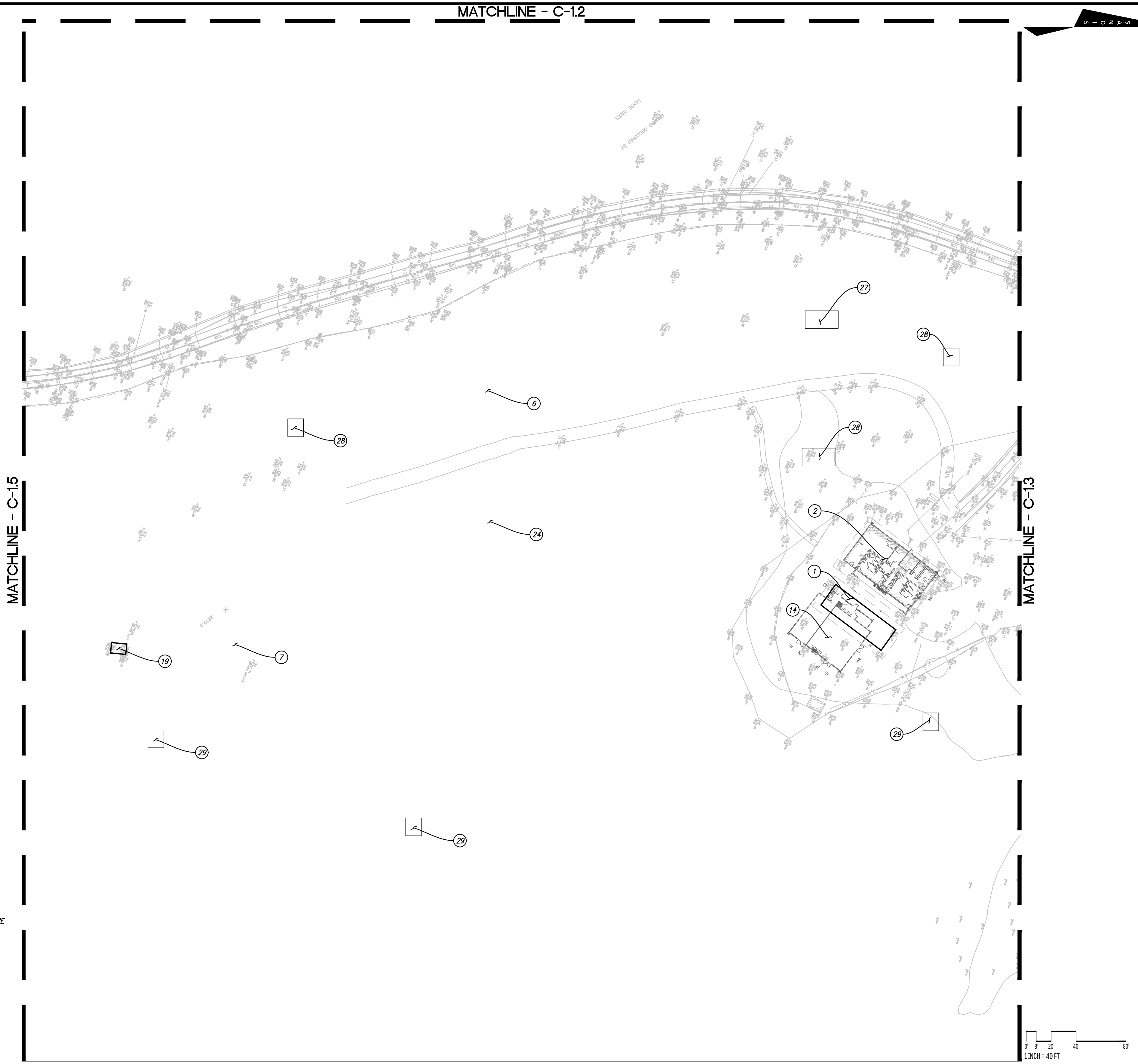

BUILDING LIST

①	POLE BARN
②	MULTI-USE BUILDING/KITCHEN
③	PUMP HOUSE BUILDING
④	PARKING LOT (GRAVEL)
⑤	GRAVEL ENTRANCE ROAD
⑥	TENT CAMPSITE #1 UPPER CAMPSITE
⑦	TENT CAMPSITE #2 UPPER CAMPSITE
⑧	TENT CAMPSITE #3 LOWER CAMPSITES
⑨	STORAGE TRAILERS (REMOVED IN 2021)
⑩	WATER TANKS
⑪	CAMPFIRE CIRCLE
⑫	SERVICE YARD
⑬	POWER POLE
⑭	MULTI-PURPOSE BUILDING (VALLEY FOUNDATION LODGE)
⑮	CAMP OFFICE & FIRST AID CENTER
⑯	STORAGE AND MAINTENANCE BUILDING
⑰	NATURE LODGE
⑱	CARETAKER'S HOUSE
⑲	CAMPSITE LATRINE #1
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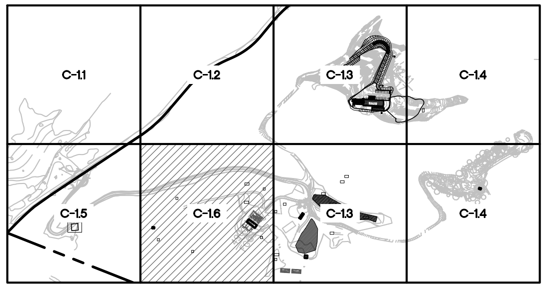
㉝	RESTROOM - PARKING LOT
㉞	BB GUN INSTRUCTIONAL AREA
㉟	ARCHERY INSTRUCTIONAL AREA

LEGEND

— — — PROPERTY LINE



KEY MAP

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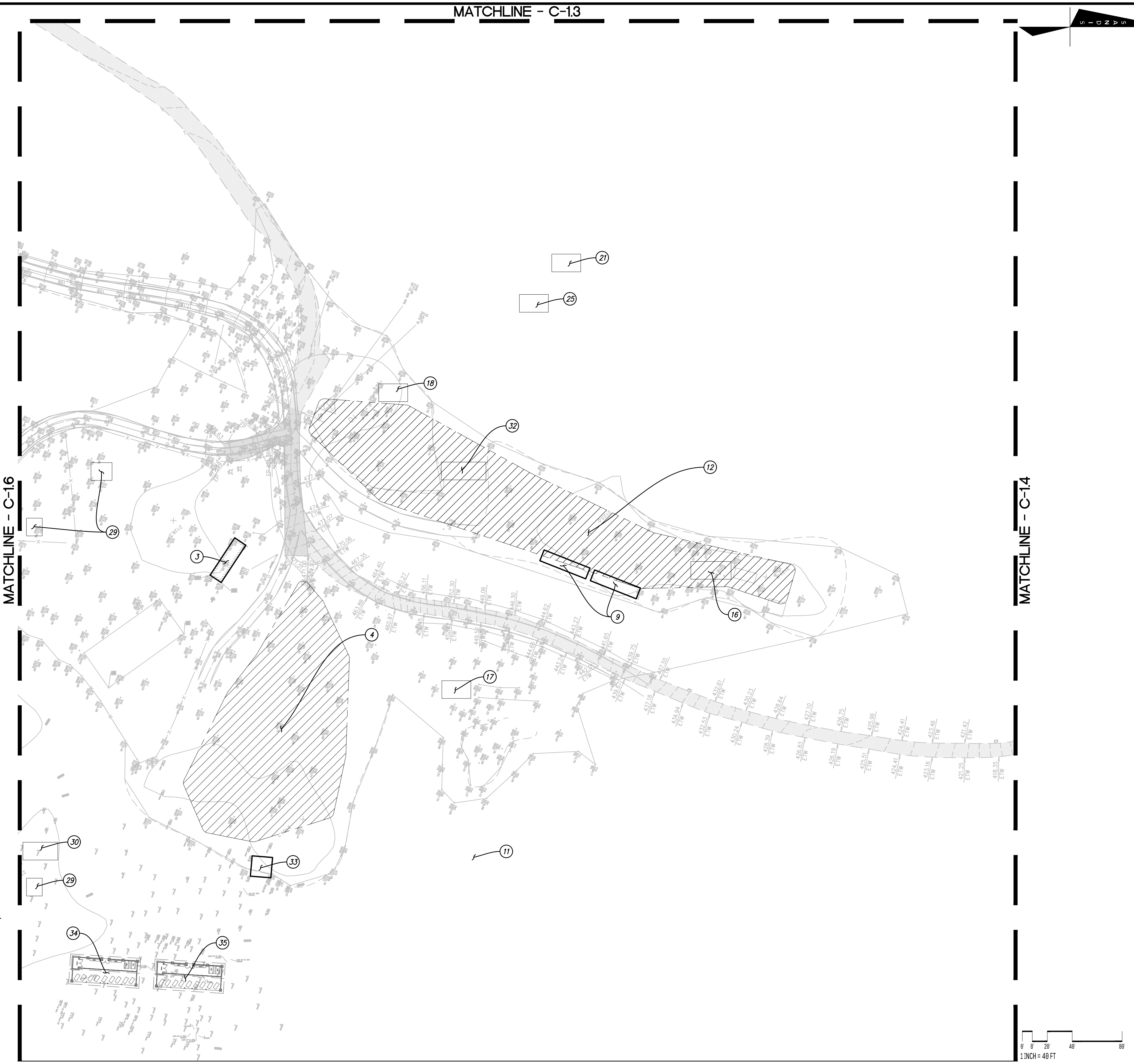

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㉝	PARKING LOT LATRINE
㉞	BB GUN INSTRUCTIONAL AREA
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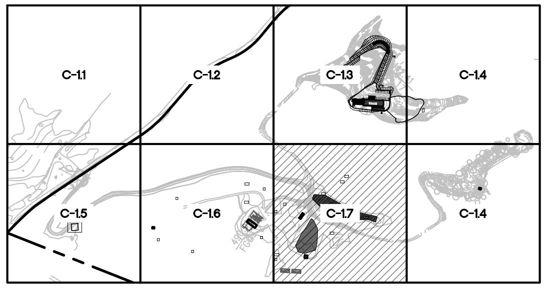
LEGEND

— — — PROPERTY LINE



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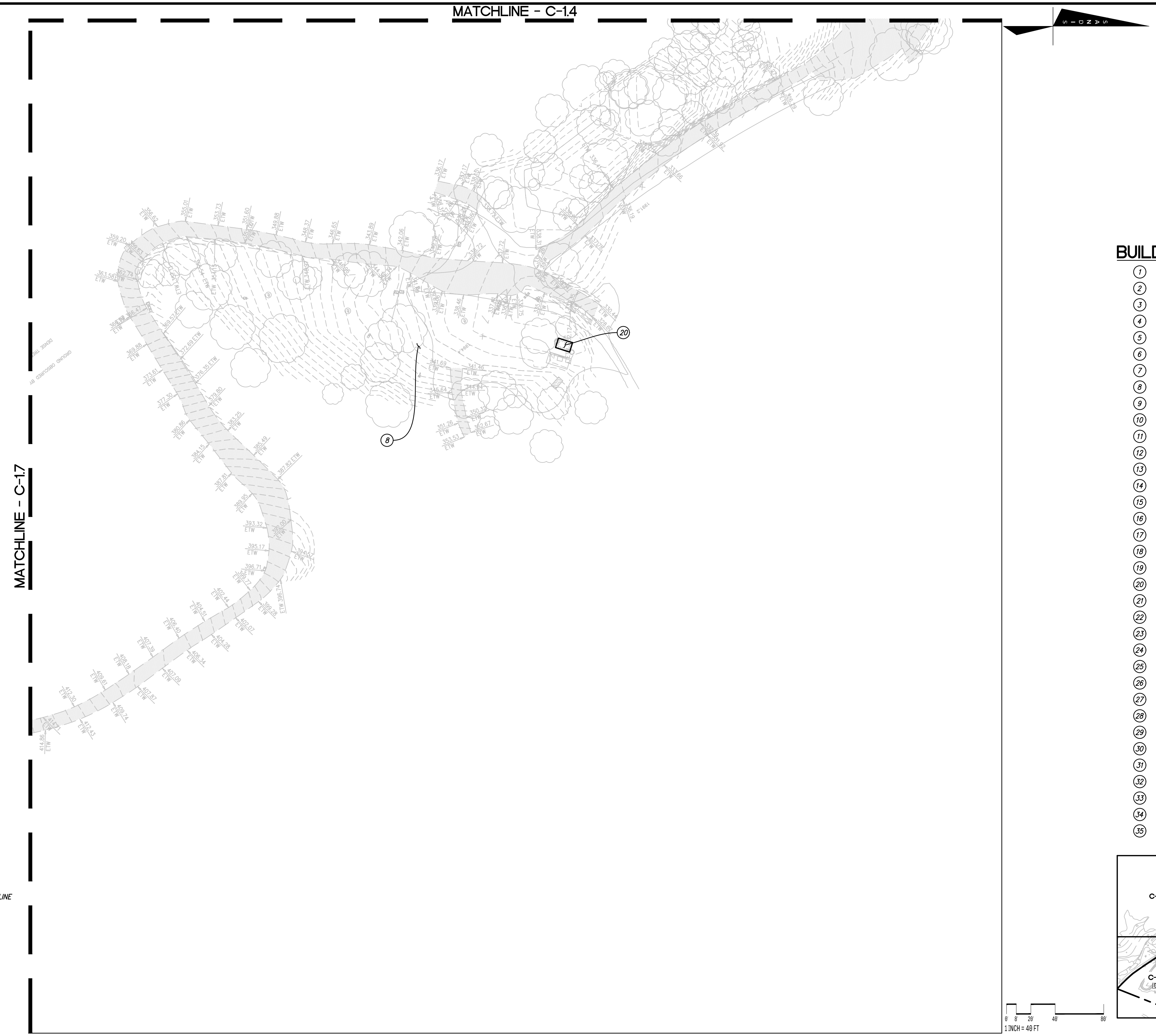

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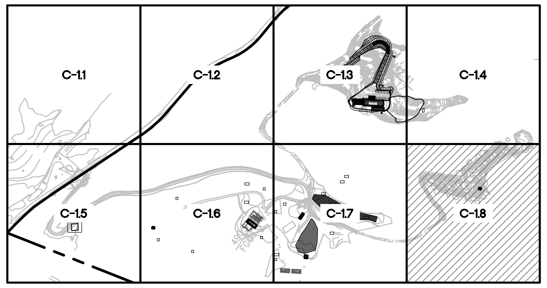

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NFPA 13, TABLE 9.2.2.1(a) MAXIMUM DISTANCE BETWEEN HANGERS (ft-in)

NOMINAL PIPE SIZE	3/4"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHTWALL	N/A	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE EXCEPT	N/A	12-0	12-0	12-0	12-0	12-0	12-0	N/A	N/A	N/A	N/A	N/A
COPPER TUBE	8-0	8-0	10-0	10-0	12-0	12-0	12-0	15-0	15-0	15-0	15-0	15-0
CPVC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	N/A	N/A	N/A	N/A	N/A
DUCTILE IRON PIPE	N/A	N/A	N/A	N/A	N/A	N/A	15-0	N/A	15-0	N/A	15-0	15-0

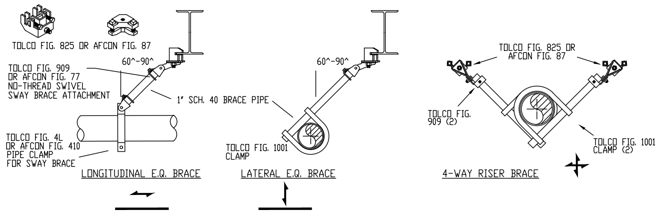
HANGER NOTES :

- HANG PIPING IN ACCORDANCE WITH NFPA 13, Sect. 17.2
- HANG ALL NEW ARM OVERS LONGER THAN 2'-0"
- PER NFPA 13 Sect. 17.4.2.1 FOR 1" AND 1-1/4" PIPE, 12'-0"
- BETWEEN HANGERS, 15'0" MAX. FOR 1-1/2" AND UP.
- PER NFPA 13 Table. 17.2.4.3.1 and 17.2.4.7.2
- BETWEEN HANGERS, 15'0" MAX. FOR 1-1/2" AND UP.
- MAINTAIN Min. 4" BETWEEN HANGER & SPRINKLER HEAD.
- MAXIMUM UNSUPPORTED END FROM HANGER TO SPRINKLER
- 1" = 3'-0", 1-1/4" = 4'-0", 1-1/2" & UP = 5'-0"
- IF STATIC = 100 PSI+ Max. 12" FROM ANY PENDENT

WALL LEGEND

▬ ▬ ▬	FULL HEIGHT RATED WALL
▬	FULL HEIGHT WALL
═	CEILING HEIGHT WALL

PIPING NOTES: WHERE HANGER RODS ARE LESS THAN 6" LINE RESTRAINT NOT REQUIRED PER SECT. 18.6.5.


TOLCO FIG. 825 OR AFCON FIG. 87
60^-90^
TOLCO FIG. 909 OR AFCON FIG. 77 NO-THREAD SWIVEL SWAY BRACE ATTACHMENT
1" SCH. 40 BRACE PIPE
TOLCO FIG. 4L OR AFCON FIG. 410 PIPE CLAMP FOR SWAY BRACE
LONGITUDINAL E.Q. BRACE
60^-90^
TOLCO FIG. 1001 CLAMP
LATERAL E.Q. BRACE
TOLCO FIG. 825 OR AFCON FIG. 87
TOLCO FIG. 909 (2)
TOLCO FIG. 1001 CLAMP (2)
4-WAY RISER BRACE

E.Q. BRACING DETAILS

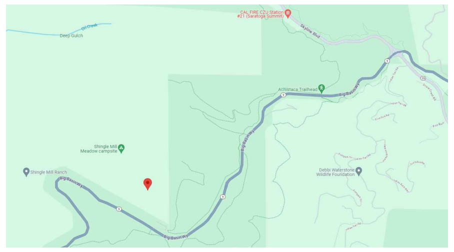
PROJECT DATA

ADDRESS: 26005 BIG BASIN WAY
LOS GATOS, CA 95033

CONST TYPE: I-A
OCCUPANCY : A-3
OF STORIES: 1
BUILDING AREA : 3,600 SQFT
PROJECT AREA : 3,600 SQFT

CODES USED:

ALL CONSTRUCTION SHALL COMPLY WITH:
2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA ELECTRICAL CODE
AND APPLICABLE SECTIONS OF THE SANTA CRUZ COUNTY MUNICIPAL CODE



5 VICINITY MAP
N.T.S.

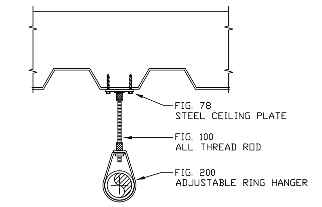
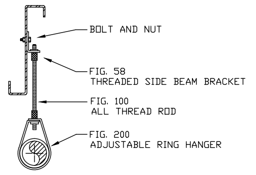
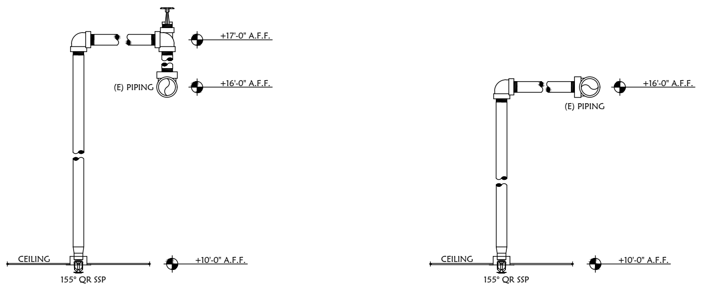


FIG. 78
STEEL CEILING PLATE
FIG. 100
ALL THREAD ROD
FIG. 200
ADJUSTABLE RING HANGER

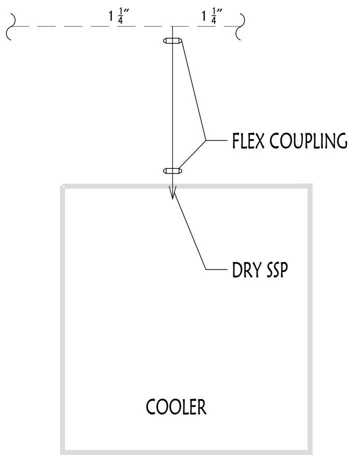
CEILING PLATE, ROD AND RING
METAL DECKING INSTALLATION


BOLT AND NUT
FIG. 58
THREADED SIDE BEAM BRACKET
FIG. 100
ALL THREAD ROD
FIG. 200
ADJUSTABLE RING HANGER

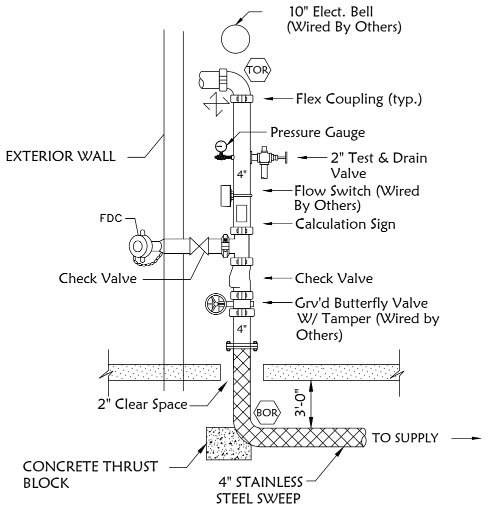
THREADED SIDE BEAM BRACKET, ROD & RING
"Z" PURLIN CONSTRUCTION


+17'-0" A.F.F.
(E) PIPING
+16'-0" A.F.F.
CEILING
+10'-0" A.F.F.
155° QR SSP
+16'-0" A.F.F.
(E) PIPING
CEILING
+10'-0" A.F.F.
155° QR SSP

2 SPRINKLER DETAIL
N.T.S.


1 1/4"
1 1/4"
FLEX COUPLING
DRY SSP
COOLER

3 COOLER DETAIL
N.T.S.


10" Elect. Bell (Wired By Others)
TOR
Flex Coupling (typ.)
Pressure Gauge
EXTERIOR WALL
2" Test & Drain Valve
4"
Flow Switch (Wired By Others)
FDC
Calculation Sign
Check Valve
Check Valve
Grv'd Butterfly Valve W/ Tamper (Wired by Others)
4"
2" Clear Space
3'-0"
BOR
TO SUPPLY
CONCRETE THRUST BLOCK
4" STAINLESS STEEL SWEEP

4 RISER DETAIL
N.T.S.

SCOPE OF WORK:

INSTALL NEW FIRE SPRINKLER SYSTEM FOR NEW BUILDING FEED BY A WATER TANK (TANK TO BE GRAVITY FEED). ALL UNDERGROUND WORK DONE BY OTHERS.

GENERAL NOTES:

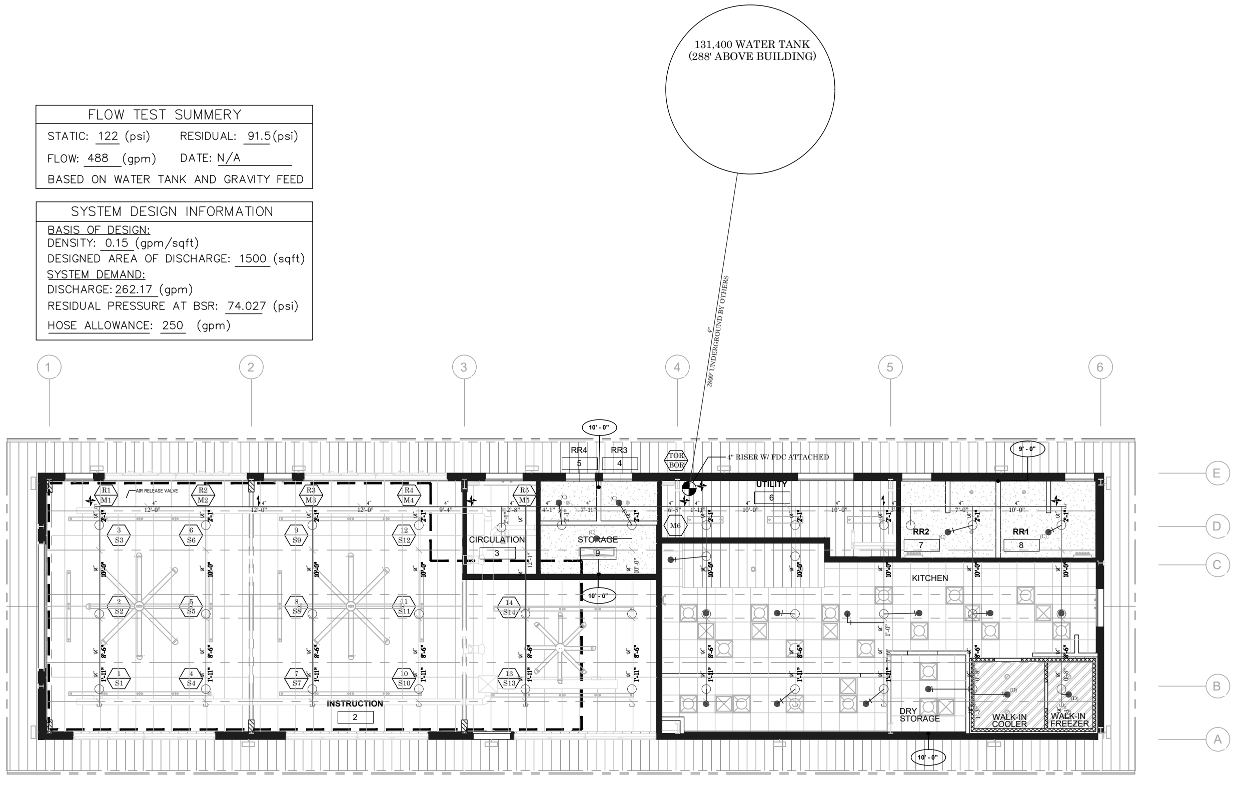
1. SYSTEM SHALL COMPLY WITH NFPA 13, 2022 AND LOCAL ORDINANCES.
2. SYSTEM DESIGN BASIS:
   2.1. ORDINARY HAZARD GROUP 1 - 0.15 GPM / 1500 SQFT.
3. INSTALLATION OF ALL SPRINKLERS WILL BE IN STRICT COMPLIANCE WITH THE MANUFACTURERS INSTALLATION GUIDE.
4. THE MINIMUM DISTANCE A SPRINKLER HEAD CAN BE LOCATED FROM A WALL IS 4 INCHES.
5. THE MINIMUM DISTANCE BETWEEN ANY 2 SPRINKLERS SHALL NOT BE LESS THEN 6'-0".
6. ALL THREADED PIPE 2" AND SMALLER SHALL BE DYNA-THREAT, BLACK STEEL ANSI/ASTM A135.
7. ALL GROOVED AND WELDED PIPE SHALL BE:
   7.1. 1" - SCH. 30 BLACK STEEL ANSI/ASTM A795.
   7.2. $1\frac{1}{4}$" TO 8" - SCH. 10 BLACK STEEL ANSI/ASTM A795.
8. FITTINGS SHALL BE CLASS 125 THREADED CAST IRON ANSO B16.4
9. ALL THREADED PIPE AND FITTINGS SHALL HAVE THREADS CUT TO ANSI/ASME STANDARD B1.20.1.
10. ALL PIPE WELDING SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF AWS D10.9 (STANDARD FOR BUILDINGS SERVICE PIPING), LEVEL AR-3..
11. ALL PIPING SHALL BE EARTHQUAKE BRACED AS OUTLINED IN NFPA 13, SECTIONS 18.5
12. ALL HANGER COMPONENTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 13 SECTION 17.4
13. ELECTRICAL WIRING AND ANY PAINTING OF THE PIPE THAT MAY BE REQUIRED SHALL BE DONE BY OTHERS.
14. FLOW AND TAMPER SWITCHES WILL BE PROVIDED, HOWEVER, ALL ELECTRICAL WIRING IS BY OTHERS.
15. ANY EXTERIOR PIPING SHALL BE CORROSION RESISTANT (NFPA 13 SECTION 8.7.5), BY BEING PAINTED BY OTHERS.
16. ALL NEW PIPING IS TO BE HYDROSTATICALLY TESTED TO CODE FOR A PERIOD NOT LESS THAN TWO HOURS.
17. A PLACARD CONTAINING THE SYSTEM HYDRAULIC REQUIREMENTS WILL BE MOUNTED AT SYSTEM RISER.
18. WATER SUPPLY INFORMATION: GRAVITY FEED TANK 288' ABOVE FUTURE BUILDING;
   18.1. STATIC: 122 psi
   18.2. RESIDUAL: 91.5 psi (ESTIMATE PRESSURE LOSS)
   18.3. FLOW: 488 GPM

FLOW TEST SUMMERY

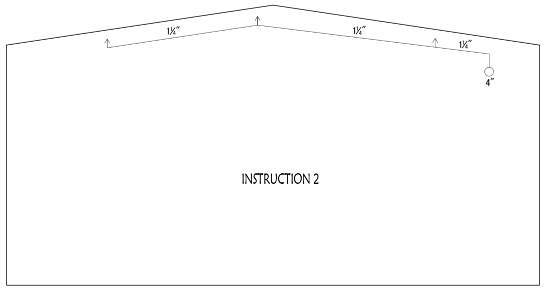
STATIC: 122 (psi) RESIDUAL: 91.5(psi)
FLOW: 488 (gpm) DATE: N/A
BASED ON WATER TANK AND GRAVITY FEED

SYSTEM DESIGN INFORMATION

BASIS OF DESIGN:
DENSITY: 0.15 (gpm/sqft)
DESIGNED AREA OF DISCHARGE: 1500 (sqft)
SYSTEM DEMAND:
DISCHARGE: 262.17 (gpm)
RESIDUAL PRESSURE AT BSR: 74.027 (psi)
HOSE ALLOWANCE: 250 (gpm)


131,400 WATER TANK (288' ABOVE BUILDING)
4" UNDERGROUND BY OTHERS
1
2
3
4
5
6
E
D
C
B
A
16'-6"
9'-6"
RR4
5
RR3
4
TOR
BOR
4" RISER W/ FDC ATTACHED
UTILITY
6
CIRCULATION
3
STORAGE
RR2
7
RR1
8
KITCHEN
INSTRUCTION
2
DRY STORAGE
WALK-IN COOLER
WALK-IN FREEZER
16'-6"

1 FIRE PROTECTION PLAN
1/8" – 1'-0"


1/4"
1/4"
1/4"
4"
INSTRUCTION 2

6 SECTION DETAIL
1/8" – 1'-0"

SYMBOLS

- 4 WAY BRACE
- LATERAL BRACING
- LONGITUDINAL BRACING
- COUPLING
- CAP
- CONTROL VALVE
- LINE BREAK
- RISE UP OR DOWN
- THRUST BLOCK

SPRINKLER LEGEND

SYMBOL	SIZE	K FACTOR	DESCRIPTION	TYPE	TEMP	SIN.	FINISH	TRIM	QUAN.
○	1/2"	5.6	RELIABLE QR SSU	UPRIGHT	200°	RA1425	BRASS	N/A	37
●	1/2"	5.6	RELIABLE QR SSP	PENDENT	200°	RA1414	CHROME	WHITE	11
●(C)	1/2"	5.6	GLOBE QR SSP	PENDENT	155°	GL5604	N/A	WHITE	5
●(D)	1/2"	5.6	RELIABLE QR DRY SSP	PENDENT	200°	R5714	CHROME	WHITE	2
						TOTAL IN THIS PROJECT			55

- - - -	MAIN LINE
- - - -	BRANCE LINE
───	ARM OVER
─/─	HANGER
	LINE RESTRAINT
■	MECHANICAL TEE
○	OUTLET
⬡	CALC NODE
◕	F.S.R. LOCATION

LIFEGUARD FIRE PROTECTION INC.

LIFEGUARD FIRE PROTECTION C-16 1001302

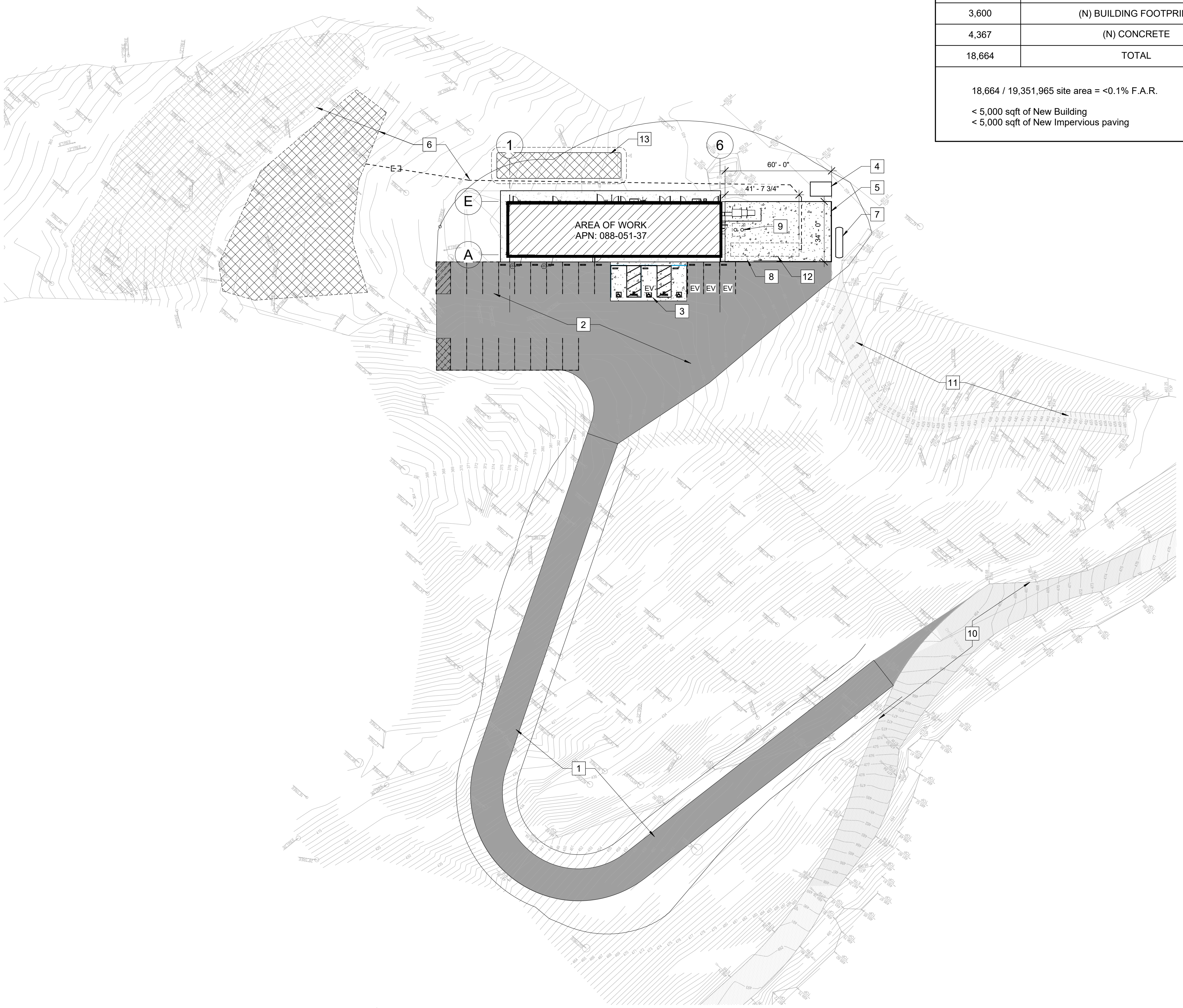
P.O. BOX 18100
SAN JOSE, CA 95158
PH# 408-483-5885
LICENSE # C16-1001302

PROJECT

REVISION:		DATE:
0	FOR APPROVAL	1/15/24

PROJECT:
BOYSCOUTS OF AMERICA
ADDRESS:
26005 BIG BASIN WAY
LOS GATOS, CA 95033
BLD. PERMIT:
SCALE: AS NOTED
DATE: 1/15/24
DRAWN BY: P. BAUER
REVISION: 0
SHEET NO.
FP-1/1

THIS PLAN IS RESTRICTED TO DESIGN LAYOUT OF AUTOMATIC FIRE SPRINKLERS ONLY. INFORMATION GIVEN ON THIS DRAWING REMAINS THE PROPERTY OF LIFEGUARD FIRE PROTECTION INC. AND IS FOR THE USE OF LIFEGUARD FIELD PERSONNEL.



① PROPERTY PLAN
1" = 30'-0"

PROPERTY BUILT AREAS

SQ.FT.	DESCRIPTION
3,600	(E) ASPHALT
1,050	(E) IMPERVIOUS CONCRETE
7,620	(E) BUILDING FOOTPRINT
3,600	(N) BUILDING FOOTPRINT
4,367	(N) CONCRETE
18,664	TOTAL

18,664 / 19,351,965 site area = <0.1% F.A.R.

< 5,000 sqft of New Building
< 5,000 sqft of New Impervious paving

COUNTY STAMP

PROPERTY PLAN KEYNOTES

Note Number	Note Text
1	NEW CHIP SEALED ROCK <15% SLOPE ACCESS ROAD, SEE CIVIL AND TOPOGRAPHY PLANS
2	NEW GRAVEL PAD FOR PARKING AND GENERAL CIRCULATION
3	NEW CONRETE PAD FORADA PARKING AND GENERAL CIRCULATION
4	NEW PAD FOR GENERATOR. CUMMINS RS40 QUIET SERIES
5	NEW LEVEL CONCRETE PAD UTILITY YARD FOR HVAC & DUMPSTER WITH PERIMETER CHAIN LINK FENCE AND ROLLING GATE
6	AREA FOR NEW 812.5 LNFT LEECH FIELD FOR SEPTIC SYSTEM
7	NEW PROPANE TANK
8	NEW 6" PERMIABLE TRAFFIC PAD FOR DELIVERIES
9	NEW GREASE INTERCEPTOR SERVICE PORTS
10	EXISTING SITE ACCESS ROAD
11	EXISTING POWER POLE ACCESS ROAD
12	NEW SEPTIC SYSTEM TANKS BELOW CONCRETE SLAB
13	(N) BIOSWALE FOR STORMWATER RETENSION S.C.D.

PROJECT NORTH TRUE NORTH

topa architecture
1150 North First St. Ste. 140,
San Jose, CA 95112
Tel: 408.320.0248

GENERAL NOTES: SHEET IS PART OF A SET & IS NOT TO BE USED ALONE.

2. THIS SET IS NOT FOR CONSTRUCTION UNTIL THE ARCHITECT'S STAMP & SIGNATURE ARE ON THIS SHEET AS WELL AS LOCAL AUTHORITY PERMIT APPROVAL STAMP ON ALL SHEETS.

3. THESE PLAN & PRINTS ARE OWNED BY THE ARCHITECT & ARE FOR USE ON THIS PROJECT ONLY.REPRODUCTION AND/OR DISTRIBUTION WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT IS FORBIDDEN.

STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER
26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

SHEET TITLE:

AREA SITE PLAN

REVISIONS

No.	Description	Date

DRAWN:	JC
CHECKED:	-
DATE:	01.26.2024
SCALE:	1" = 30'-0"
JOB No.:	23-2-12-SCOUTS
SHEET No.:	A1.0P

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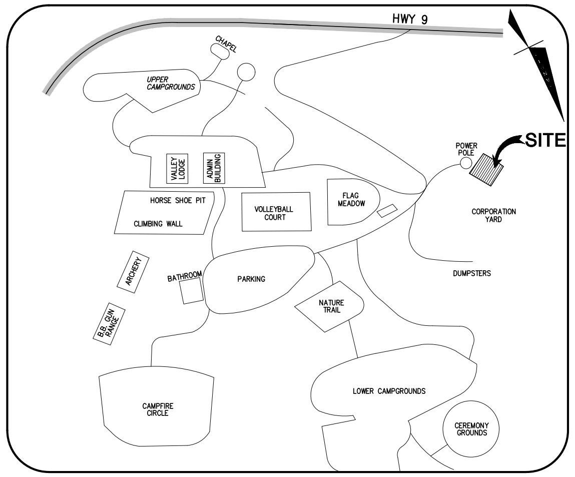
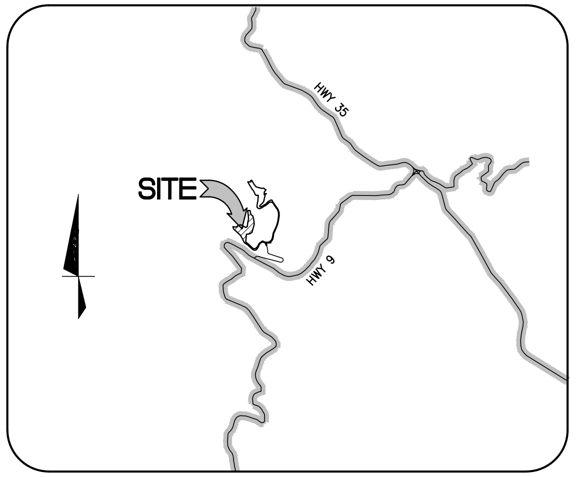
BOY SCOUTS OF AMERICA COUNCIL
SILICON VALLEY MONTERY BAY COUNCIL
CAMP CHESEBROUGH SITE IMPROVEMENTS



SITE MAP
N.T.S.



VICINITY MAP
N.T.S.

ABBREVIATIONS

BM	BENCHMARK
BOW	WALL BOTTOM OF
CLUST	TREE CLUSTER
DWY	DRIVEWAY
EP	EDGE OF PAVEMENT
ETW	EDGE OF TRAVELED WAY
FF	BUILDING FINISHED FLOOR
FG@DOOR	FINISHED GRADE AT DOOR
FH	FIRE HYDRANT
G	GROUND
P	PAVEMENT
TOW	TOP OF WALL

LEGEND

▨	BUILDING FACE
═	WALL, HEIGHT AND TYPE AS INDICATED
— — 1235 — — — — 1234 — —	CONTOURS
—— —— ——	TOP OF SLOPE LINE
– – – – –	TOE OF SLOPE LINE
⊕	BENCHMARK
○	SANITARY SEWER CLEANOUT
⧄	BACKFLOW PREVENTOR
WV ⋈	WATER VALVE
HYD	FIRE HYDRANT
FDC	FIRE DEPARTMENT CONNECTION
○+	HOSE BIBB
E	ELECTRIC VAULT / PULLBOX
⊤	SIGN
	FIRE PIT
197.30 STRIPE 198.70 CONC 198.76 BOW 195.17 TC / 194.76 FL	SPOT ELEVATION
12" OAK	TREE WITH DRIPLINE, SIZE AS INDICATED

SURVEY NOTES

1. ALL DISTANCES AND DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.
2. DATES OF FIELD SURVEY: 7/10/2023–7/12/2023, 8/7/2023, 9/22/2023 & 10/6/2023.
3. HORIZONTAL AND VERTICAL CONTROL FOR THIS SURVEY ARE ON AN ASSUMED BASIS.

EARTHWORK QUANTITIES

CUT 6,430 CY
FILL 6,740 CY
BALANCE 310 CY IMPORT

THE EARTHWORK QUANTITIES SHOWN ARE PROVIDED FOR THE PURPOSE OF GRADING PERMIT APPROVAL ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CARRY OUT THE CUT/FILL, IMPORT/EXPORT AS NECESSARY TO MEET THE DESIGN GRADES AS SHOWN ON THE PLANS REGARDLESS OF THE ESTIMATED EARTHWORK QUANTITIES AS INDICATED. SIGNIFICANT REVISIONS TO THE QUANTITIES NEED REVIEW BY THE CITY OF SALINAS. FILL SHORTAGE IS ANTICIPATED TO COME FROM ON–SITE SPOILS ACQUIRED FROM UTILITY TRENCHES AND FOOTING SPOILS.

CIVIL SHEET INDEX

C-0.0	COVER SHEET
CF-1.0	FIRE ACCESS PLAN
C-2.0	GRADING PLAN
C-3.0	CROSS-SECTIONS
C-3.1	CROSS-SECTIONS
C-4.0	UTILITY PLAN
C-4.1	UTILITY PLAN
C-4.2	UTILITY PLAN
C-4.3	UTILITY PLAN
C-4.4	UTILITY PLAN
C-5.0	CONSTRUCTION DETAILS
C-5.1	CONSTRUCTION DETAILS
C-6.0	STORMWATER MANAGEMENT PLAN

OWNER INFO

OWNER: BOY SCOUTS OF AMERICA COUNCIL

APN: 088 05 137

PROJECT INTENT

IMPROVEMENTS TO CREATE A BETTER ENVIRONMENT TO ENCOURAGE THE GROWTH AND KNOWLEDGE OF ADOLESCENT TEENS TO BECOME UPSTANDING CITIZENS OF THE U.S.

SANDIS | CIVIL ENGINEERS
SURVEYORS
PLANNERS
1700 Winchester Boulevard, Campbell, CA 95008 I P. 408.636.0900 I F. 408.636.0999 I www.sandis.net
SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	4/24/24
SCALE:	
DRAWN BY:	RLM
APPROVED BY:	CJB
DRAWING NO.:	217084

DATE 4/24/24

No. C68315
Exp. 9/30/25

CHAD J. BROWNING
R.C.E. NO. 68315, EXPIRES 9–30–25

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

COVER SHEET

SHEET
C-0.0
OF 13 SHEETS

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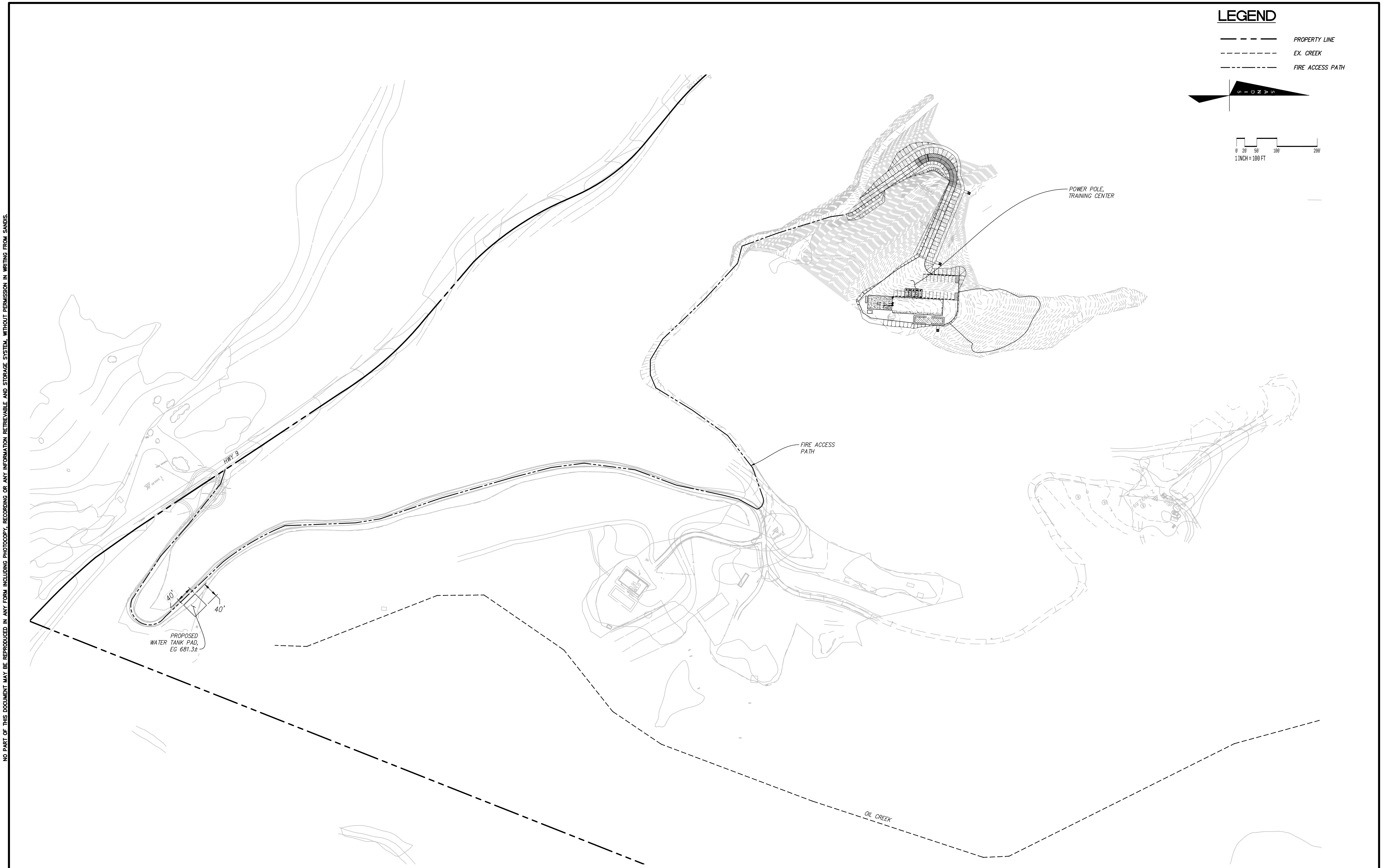
LEGEND
PROPERTY LINE
EX. CREEK
FIRE ACCESS PATH
SANDIS
0' 20' 50' 100' 200'
1 INCH = 100 FT
POWER POLE, TRAINING CENTER
FIRE ACCESS PATH
HWY 9
40'
40'
PROPOSED WATER TANK PAD, EG 681.3±
OIL CREEK

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE: 4/24/24
SCALE:
DRAWN BY: RLM
APPROVED BY: CJB
DRAWING NO.: 217084

DATE 4/24/24
No. C68315
Exp. 9/30/25
CHAD J. BROWNING
R.C.E. NO. 68315, EXPIRES 9-30-25

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

FIRE ACCESS
PLAN

SHEET
CF-1.0
OF 13 SHEETS

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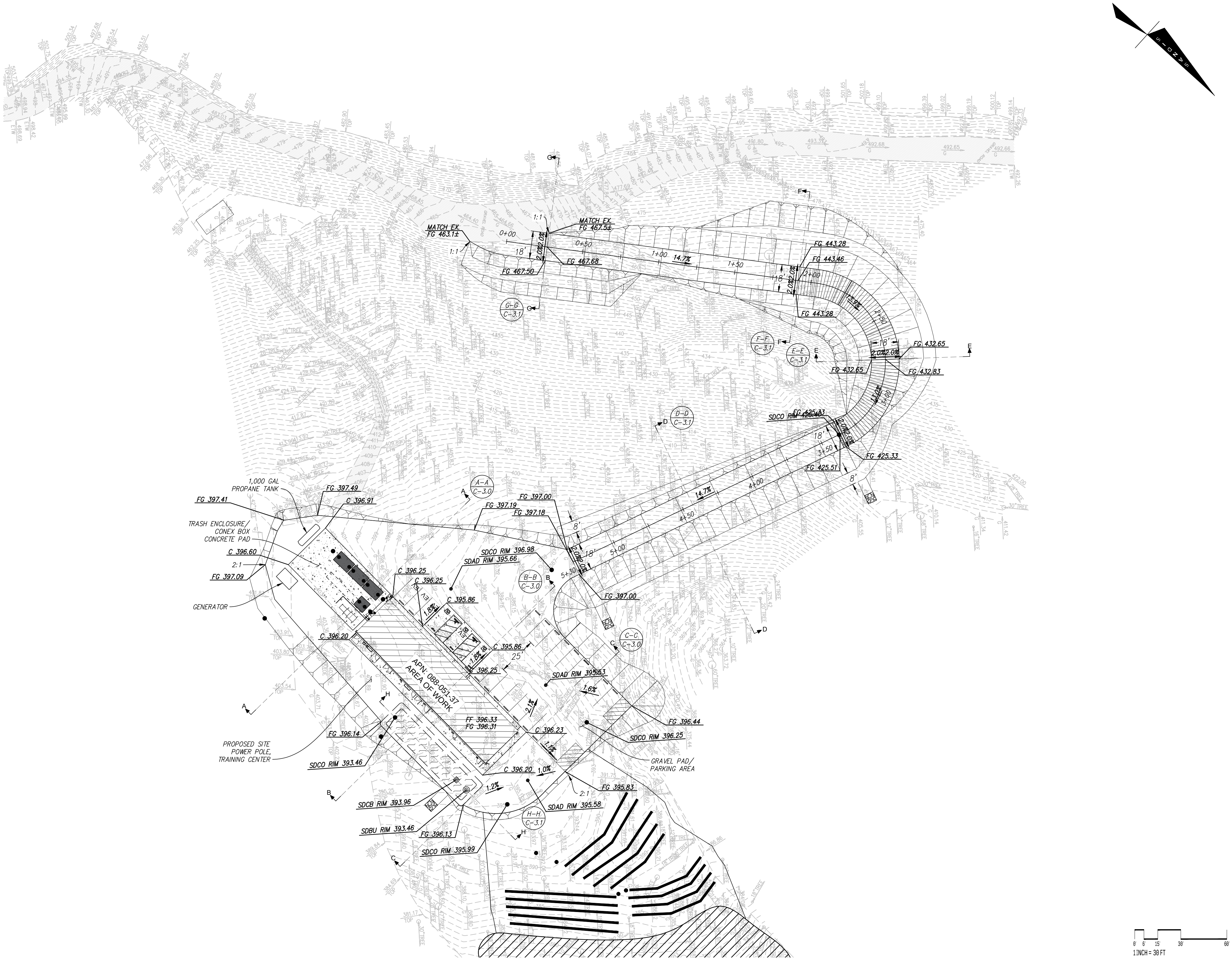
MATCH EX.
FG 463.1±
MATCH EX.
FG 467.5±
1:1
0+00
0+50
18'
2.0%
FG 467.50
FG 467.68
1+00
14.7%
1+50
FG 443.28
FG 443.46
2+00
FG 443.28
G-G
C-3.1
F-F
C-3.1
E-E
C-3.1
D-D
C-3.1
FG 432.65
FG 432.65
FG 432.83
FG 425.33
SDCO RIM 425.40
FG 425.33
FG 425.51
3+50
4+00
4+50
5+00
5+30
8'
A-A
C-3.0
1,000 GAL
PROPANE TANK
FG 397.49
FG 397.41
C 396.91
FG 397.19
FG 397.00
FG 397.18
TRASH ENCLOSURE/
CONEX BOX
CONCRETE PAD
C 396.60
2:1
FG 397.09
GENERATOR
SDCO RIM 396.98
SDAD RIM 395.66
B-B
C-3.0
C 396.25
C 396.25
C 395.86
FG 397.00
C-C
C-3.0
C 396.20
C 395.86
25'
396.25
1.8%
APN: 088-051-37
AREA OF WORK
SDAD RIM 395.53
1.6%
FG 396.44
SDCO RIM 396.25
FF 396.33
FG 396.31
C 396.23
PROPOSED SITE
POWER POLE,
TRAINING CENTER
FG 396.14
SDCO RIM 393.46
GRAVEL PAD/
PARKING AREA
C 396.20
1.0%
1.2%
FG 395.83
SDCB RIM 393.96
SDAD RIM 395.58
SDBU RIM 393.46
FG 396.13
H-H
C-3.1
SDCO RIM 395.99
N

0 6 15 30 60
1 INCH = 30 FT

LEGEND

1.0%	HARDSCAPE SLOPE
— — — —	GRADING EXTENT, 2:1 MAX
▨	GRAVEL

GENERAL GRADING NOTES

1. PROVIDE POSITIVE SURFACE DRAINAGE AWAY FROM ALL STRUCTURES BY SLOPING ALL HARDSCAPE SURFACES AT 2% AND LANDSCAPE SURFACES AT 5% AWAY FROM STRUCTURES UNLESS OTHERWISE NOTED ON PLANS.
2. ALL FILL, IMPORT SOILS AND GRADING SHALL BE IN CONFORMANCE WITH THE GEOTECHNICAL REPORT PERFORMED BY CORNERSTONE EARTH GROUP, DATED ON MARCH 3, 2023. IMPORT SUBMITTALS SHOULD BE SENT TO THE GEOTECHNICAL ENGINEER AT LEAST 1 WEEK IN ADVANCE OF IMPORTING ONSITE.
3. COORDINATE THE PLACEMENT OF ALL SLEEVES FOR LANDSCAPE IRRIGATION (WATER AND CONTROL WIRING) AND SITE LIGHTING PRIOR TO THE PLACEMENT OF ANY ASPHALT, BASEROCK OR CONCRETE SURFACING. SEE LANDSCAPING AND SITE ELECTRICAL DRAWINGS.
4. ROUGH GRADING TO BE WITHIN 0.1' AND FINISH GRADES ARE TO BE WITHIN 0.05', HOWEVER CONTRACTOR SHALL NOT CONSTRUCT ANY IMPROVEMENTS THAT WILL CAUSE WATER TO POND OR NOT MEET REQUIREMENTS IN GRADING NOTE #1 OR THE ADA REQUIREMENTS BELOW. DO NOT ADJUST GRADES ON THIS PLAN WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER/ARCHITECT.
5. THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO CONFORM TO THE LINES, GRADES, SECTIONS, AND DIMENSIONS AS SET FORTH ON THESE PLANS. ALL GRADED AREAS SHALL CONFORM TO THE VERTICAL ELEVATIONS SHOWN WITH A TOLERANCE OF ONE-TENTH OF A FOOT. WHERE GRADED AREAS DO NOT CONFORM TO THESE TOLERANCES, THE CONTRACTORS SHALL BE REQUIRED TO DO CORRECTIVE GRADING, AT NO EXTRA COST TO THE CLIENT/OWNER.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THE GROUND ELEVATIONS AND OVERALL TOPOGRAPHY OF THE SITE PRIOR TO THE START OF CONSTRUCTION AS TO THE ACCURACY BETWEEN THE WORK SET FORTH ON THESE PLANS AND THE WORK IN THE FIELD. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND CIVIL ENGINEER IN WRITING PRIOR TO START OF CONSTRUCTION WHICH MAY REQUIRE CHANGES IN DESIGN AND/OR AFFECT THE EARTHWORK QUANTITIES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE ANY EXISTING IMPROVEMENTS OF UNDERGROUND FACILITIES DAMAGED DURING THE CONSTRUCTION PERIOD.
8. THE RISE/ RUN/ STEP COUNT IS FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY ELEVATIONS AND BUILDING CODE COMPLIANCE PRIOR TO ANY WORK.
9. AREAS LACKING TOPOGRAPHIC INFORMATION (ELEVATIONS) HAVE BEEN INTERPOLATED USING STANDARD ENGINEERING METHODS. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AT CONFORMS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND REPORT BACK ANY DISCREPANCIES TO THE CIVIL ENGINEER.
10. ADJUST ANY MANHOLE OR UTILITY STRUCTURES TO PROPOSED GRADE PRIOR TO INSTALLING FINAL LIFT OF AC OR POURING CONCRETE.

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	4/24/24
SCALE:	
DRAWN BY:	RLM
APPROVED BY:	CJB
DRAWING NO.:	217084

DATE 4/24/24
REGISTERED PROFESSIONAL ENGINEER CHAD J. BROWNING No. C68315 Exp. 9/30/25 CIVIL
CHAD J. BROWNING
R.C.E. NO. 68315, EXPIRES 9-30-25

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

GRADING PLAN

SHEET
C-2.0
OF 13 SHEETS

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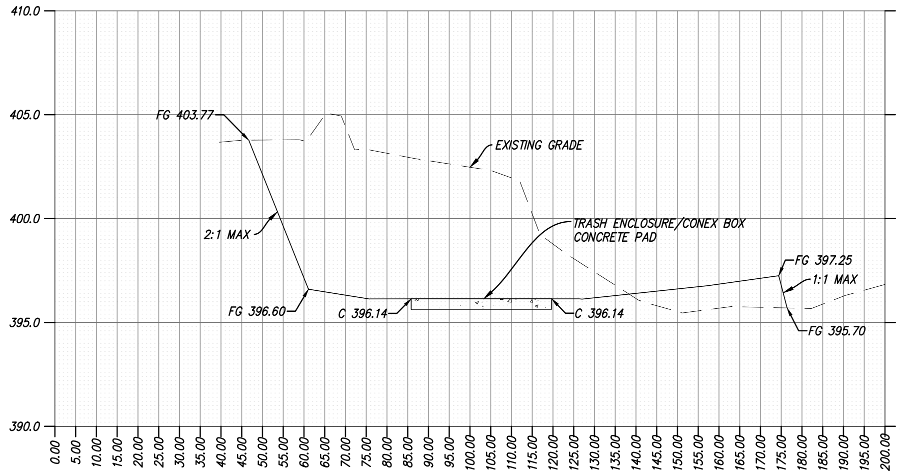
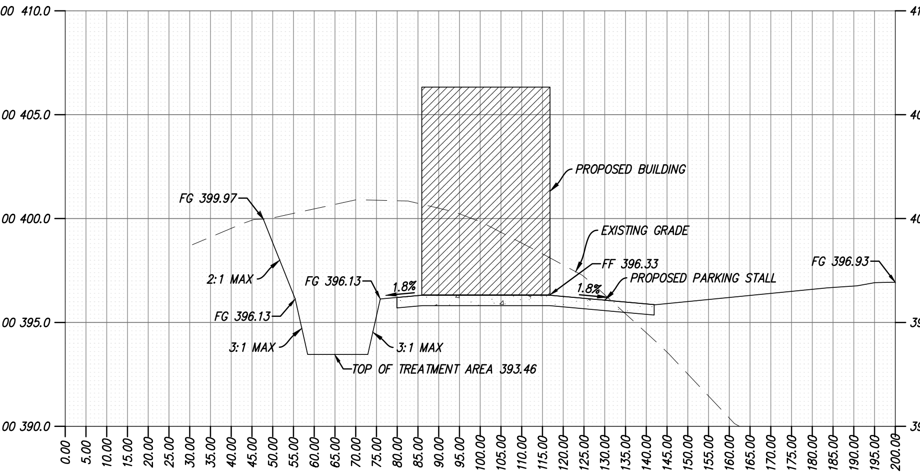

410.0
405.0
400.0
395.0
390.0
FG 403.77
EXISTING GRADE
2:1 MAX
TRASH ENCLOSURE/CONEX BOX
CONCRETE PAD
FG 397.25
1:1 MAX
FG 396.60
C 396.14
C 396.14
FG 395.70
410.00
405.00
400.00
395.00
390.00
0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65.00 70.00 75.00 80.00 85.00 90.00 95.00 100.00 105.00 110.00 115.00 120.00 125.00 130.00 135.00 140.00 145.00 150.00 155.00 160.00 165.00 170.00 175.00 180.00 185.00 190.00 195.00 200.00

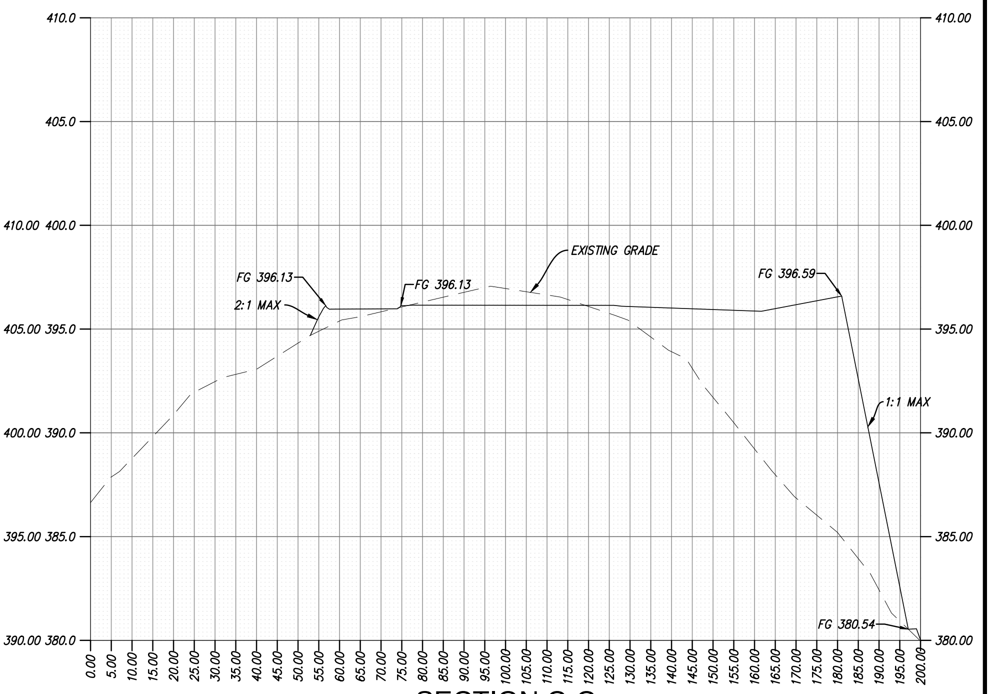
SECTION A-A

SCALES:
1"=20' HORIZ.
1"=4' VERT.


410.0
405.0
400.0
395.0
390.0
PROPOSED BUILDING
FG 399.97
EXISTING GRADE
FF 396.33
2:1 MAX
FG 396.13
1.8%
1.8%
PROPOSED PARKING STALL
FG 396.93
FG 396.13
3:1 MAX
3:1 MAX
TOP OF TREATMENT AREA 393.46
410.00
405.00
400.00
395.00
390.00
0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65.00 70.00 75.00 80.00 85.00 90.00 95.00 100.00 105.00 110.00 115.00 120.00 125.00 130.00 135.00 140.00 145.00 150.00 155.00 160.00 165.00 170.00 175.00 180.00 185.00 190.00 195.00 200.00

SECTION B-B

SCALES:
1"=20' HORIZ.
1"=4' VERT.


410.0
405.0
400.0
395.0
390.0
385.0
380.0
EXISTING GRADE
FG 396.13
FG 396.13
FG 396.59
2:1 MAX
1:1 MAX
FG 380.54
410.00
405.00
400.00
395.00
390.00
385.00
380.00
0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65.00 70.00 75.00 80.00 85.00 90.00 95.00 100.00 105.00 110.00 115.00 120.00 125.00 130.00 135.00 140.00 145.00 150.00 155.00 160.00 165.00 170.00 175.00 180.00 185.00 190.00 195.00 200.00

SECTION C-C

SCALES:
1"=20' HORIZ.
1"=4' VERT.

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE: 4/24/24
SCALE:
DRAWN BY: RLM
APPROVED BY: CJB
DRAWING NO.: 217084

DATE 4/24/24
No. C68315
Exp. 9/30/25
CHAD J. BROWNING
R.C.E. NO. 68315, EXPIRES 9-30-25

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

CROSS-SECTIONS

SHEET
C-3.0
OF 13 SHEETS

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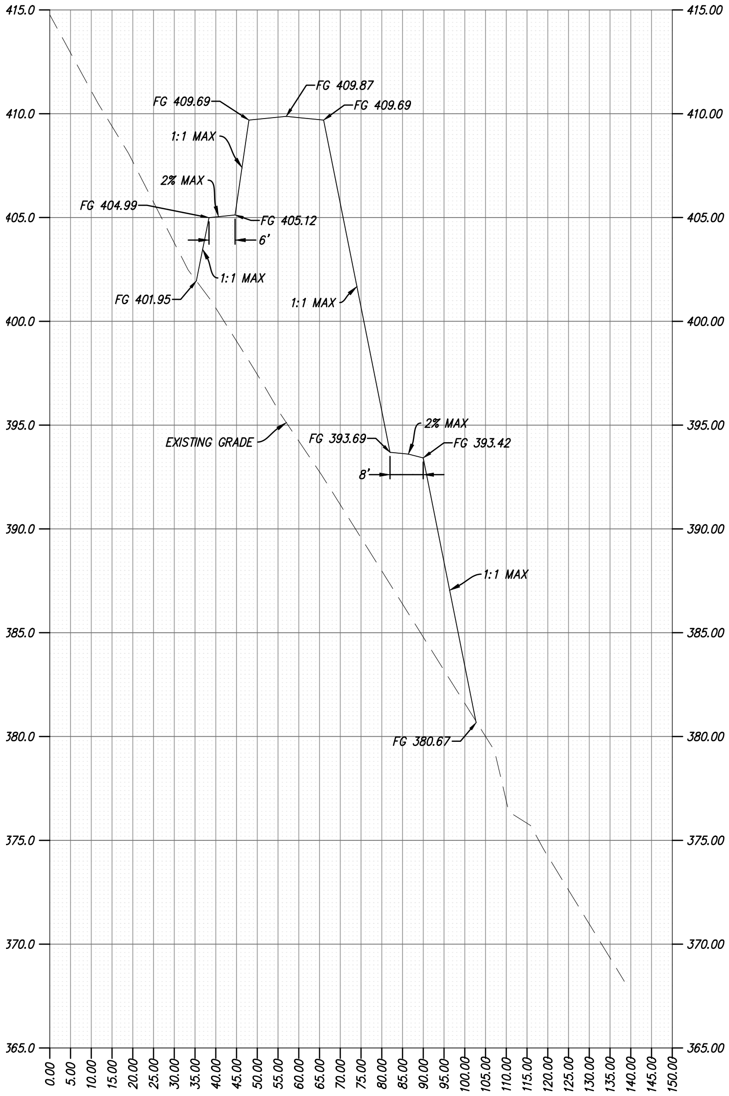
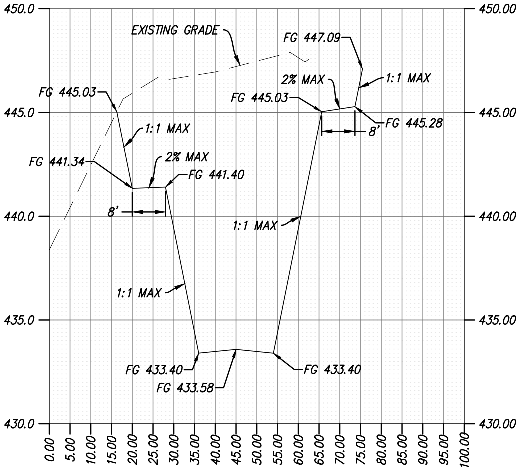


415.0 410.0 405.0 400.0 395.0 390.0 385.0 380.0 375.0 370.0 365.0
415.00 410.00 405.00 400.00 395.00 390.00 385.00 380.00 375.00 370.00 365.00
FG 409.69
FG 409.87
FG 409.69
1:1 MAX
2% MAX
FG 404.99
FG 405.12
6'
1:1 MAX
FG 401.95
1:1 MAX
EXISTING GRADE
FG 393.69
2% MAX
FG 393.42
8'
1:1 MAX
FG 380.67
0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65.00 70.00 75.00 80.00 85.00 90.00 95.00 100.00 105.00 110.00 115.00 120.00 125.00 130.00 135.00 140.00 145.00 150.00

SECTION D-D

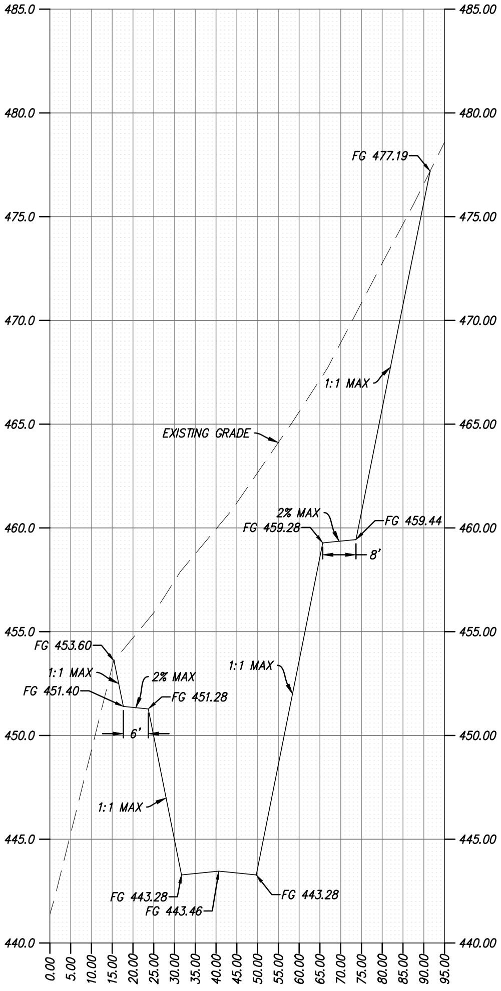
SCALES:
1"=20' HORIZ.
1"=4' VERT.



450.0 445.0 440.0 435.0 430.0
450.00 445.00 440.00 435.00 430.00
EXISTING GRADE
FG 447.09
FG 445.03
1:1 MAX
2% MAX
1:1 MAX
FG 445.03
FG 445.28
8'
FG 441.34
2% MAX
FG 441.40
8'
1:1 MAX
1:1 MAX
FG 433.40
FG 433.58
FG 433.40
0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65.00 70.00 75.00 80.00 85.00 90.00 95.00 100.00

SECTION E-E

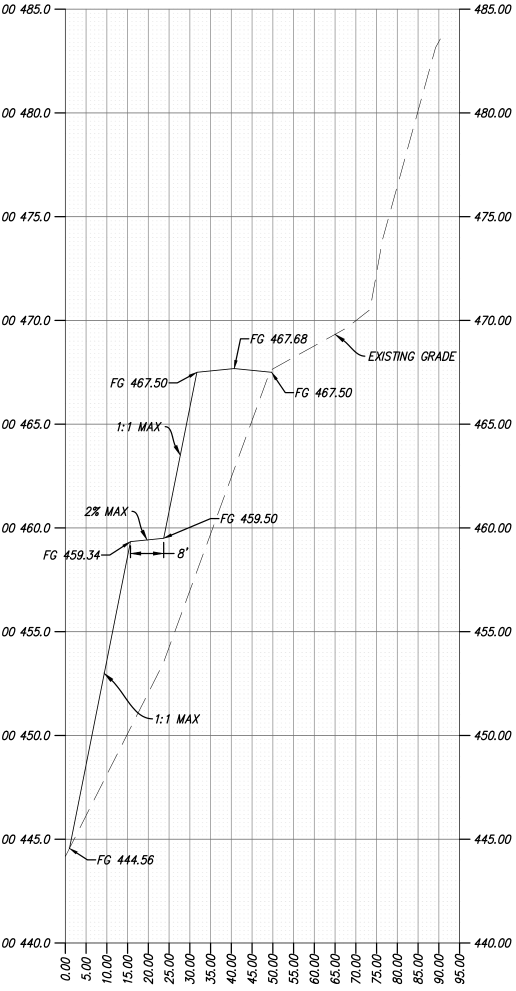
SCALES:
1"=20' HORIZ.
1"=4' VERT.



485.0 480.0 475.0 470.0 465.0 460.0 455.0 450.0 445.0 440.0
485.00 480.00 475.00 470.00 465.00 460.00 455.00 450.00 445.00 440.00
FG 477.19
1:1 MAX
EXISTING GRADE
2% MAX
FG 459.28
FG 459.44
8'
FG 453.60
1:1 MAX
2% MAX
FG 451.40
FG 451.28
1:1 MAX
6'
1:1 MAX
FG 443.28
FG 443.46
FG 443.28
0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65.00 70.00 75.00 80.00 85.00 90.00 95.00

SECTION F-F

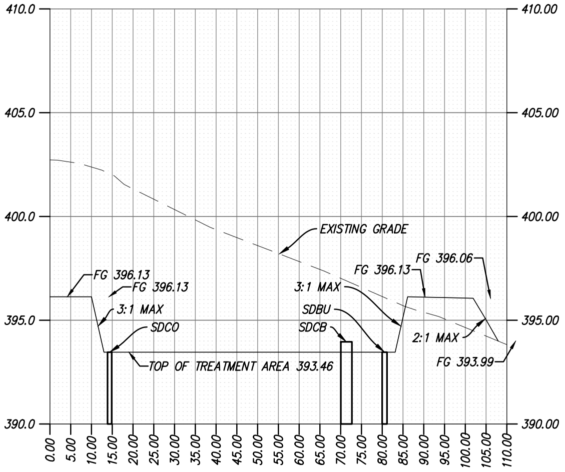
SCALES:
1"=20' HORIZ.
1"=4' VERT.



485.0 480.0 475.0 470.0 465.0 460.0 455.0 450.0 445.0 440.0
485.00 480.00 475.00 470.00 465.00 460.00 455.00 450.00 445.00 440.00
FG 467.68
EXISTING GRADE
FG 467.50
FG 467.50
1:1 MAX
2% MAX
FG 459.50
FG 459.34
8'
1:1 MAX
FG 444.56
0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65.00 70.00 75.00 80.00 85.00 90.00 95.00

SECTION G-G

SCALES:
1"=20' HORIZ.
1"=4' VERT.



410.0 405.0 400.0 395.0 390.0
410.00 405.00 400.00 395.00 390.00
EXISTING GRADE
FG 396.06
FG 396.13
FG 396.13
FG 396.13
3:1 MAX
3:1 MAX
SDBU
SDCO
SDCB
TOP OF TREATMENT AREA 393.46
2:1 MAX
FG 393.99
0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65.00 70.00 75.00 80.00 85.00 90.00 95.00 100.00 105.00 110.00

SECTION H-H

SCALES:
1"=20' HORIZ.
1"=4' VERT.

SANDIS
CIVIL ENGINEERS
SURVEYORS
PLANNERS

1700 Winchester Boulevard, Campbell, CA 95008 I P. 408.636.0900 I F. 408.636.0999 I www.sandis.net

SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	4/24/24
SCALE:	
DRAWN BY:	RLM
APPROVED BY:	CJB
DRAWING NO.	217084

DATE 4/24/24
No. 68315
CHAD J. BROWNING
R.C.E. NO. 68315, EXPIRES 9-30-25

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

CROSS-SECTIONS

SHEET
C-3.1
OF 13 SHEETS

File: S:\217084\(4) ENGINEERING\(2) PLAN SETS\(3) SHEET SET\ONSITE\C-3.0 CROSS-SECTIONS.dwg Date:Apr 24, 2024 – 1:39pm, rlopezma

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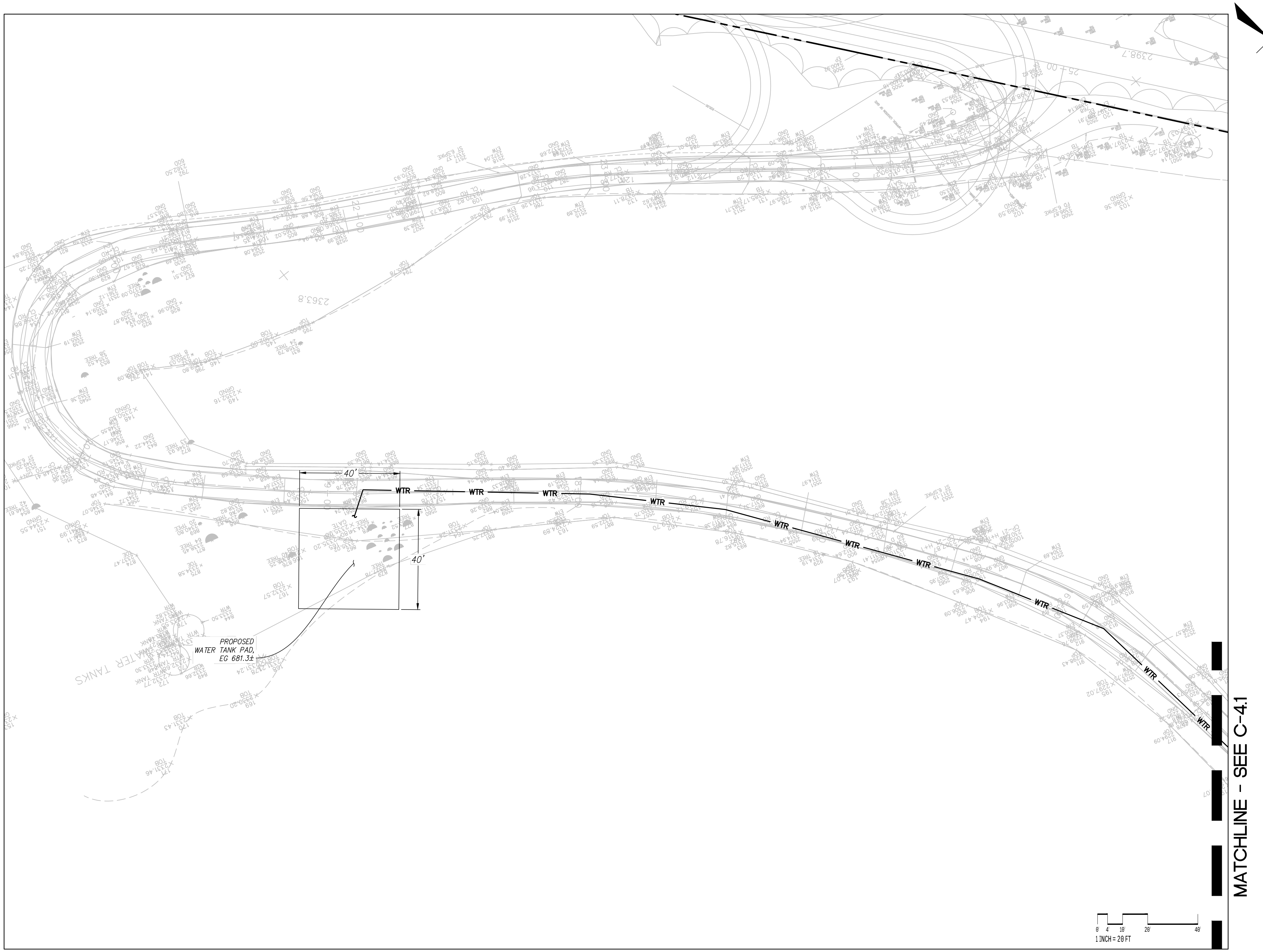

LEGEND

— — —	PROPERTY LINE
▨	BIO-TREATMENT AREA XX/XXXX

STORM DRAIN NOTES

1. PRIVATE STORM DRAIN LINE 4-INCH THROUGH 12-INCH WITH A MINIMUM OF TWO (2) FEET OF COVER IN NON-TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 GREEN PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH BELLS AND SPIGOT CONNECTIONS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS, 45° ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
2. PRIVATE STORM DRAIN LINE 6-INCH THROUGH 12-INCH WITH LESS THAN THREE (3) FEET OF COVER IN VEHICULAR TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) C900, RATED FOR 150 PSI CLASS PIPE. PROVIDE AND INSTALL "STORM DRAIN" MARKER TAPE FOR THE ENTIRE LENGTH OF PIPE TRENCH. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, OBTUSE ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
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4. ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES.
5. FOR GRAVITY FLOW SYSTEMS CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF ANY GRAVITY FLOW SYSTEM.
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7. INSTALL SEPARATE SUB-DRAIN SYSTEM BEHIND RETAINING WALLS PER GEOTECHNICAL REPORT AND CONNECT TO STORM DRAIN SYSTEM AS SHOWN ON PLANS.
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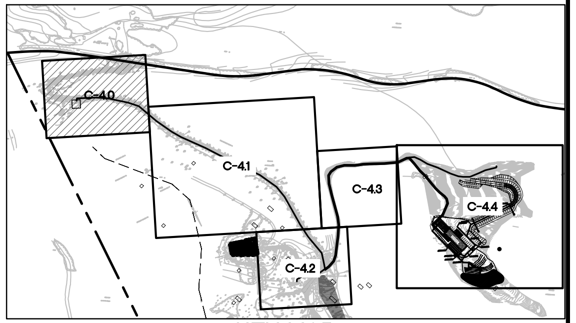
3. ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE WATER DISTRICT STANDARDS.
4. ALL WATER LINES SHALL BE INSTALLED WITH 36" MINIMUM COVER.
5. THRUST RESTRAINTS SHALL BE DESIGNED AND INSTALLED AT ALL TEES, CROSSES, BENDS (HORIZONTAL AND VERTICAL), AT SIZE CHANGES AND AT FIRE HYDRANTS.



KEY MAP

SANDIS CIVIL ENGINEERS SURVEYORS PLANNERS

1700 Winchester Boulevard, Campbell, CA 95008 I P. 408.636.0900 I F. 408.636.0999 I www.sandis.net
SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE: 4/24/24
SCALE:
DRAWN BY: RLM
APPROVED BY: CJB
DRAWING NO.: 217084

DATE 4/24/24
No. C68315
Exp. 9/30/25
CHAD J. BROWNING
R.C.E. NO. 68315, EXPIRES 9-30-25

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

UTILITY PLAN

SHEET
C-4.0
OF 13 SHEETS

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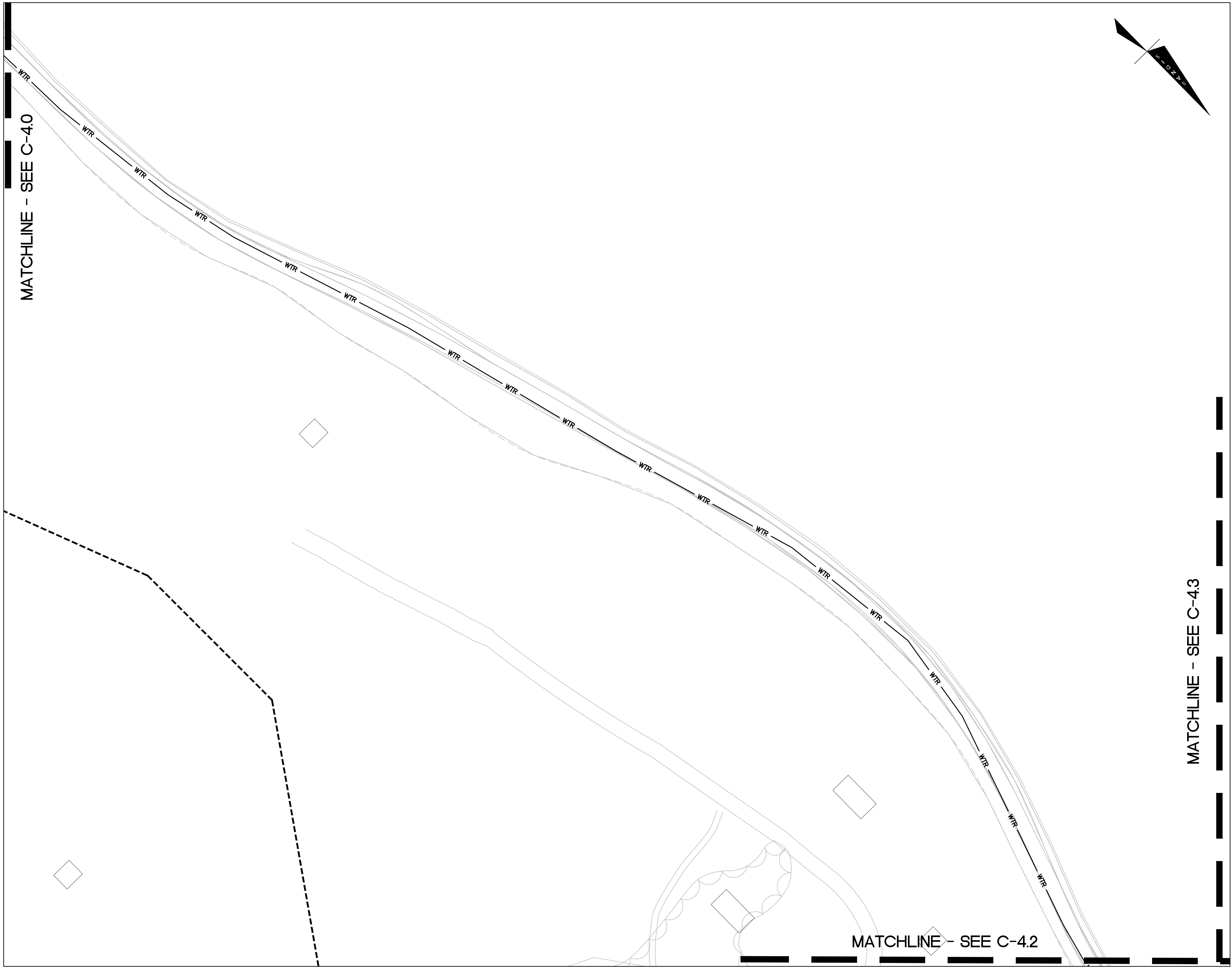

LEGEND

— — —	PROPERTY LINE
▨	BIO-TREATMENT AREA (XX / XXXX)

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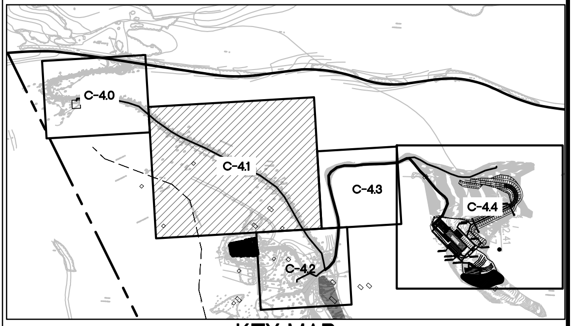

KEY MAP

0' 4' 10' 20' 40'
1 INCH = 20 FT

SANDIS CIVIL ENGINEERS SURVEYORS PLANNERS

1700 Winchester Boulevard, Campbell, CA 95008 I P. 408.636.0900 I F. 408.636.0999 I www.sandis.net

SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	4/24/24
SCALE:	
DRAWN BY:	RLM
APPROVED BY:	CJB
DRAWING NO.:	217084

DATE 4/24/24

No. C68315
Exp. 9/30/25

CHAD J. BROWNING
R.C.E. NO. 68315, EXPIRES 9-30-25

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

UTILITY PLAN

SHEET
C-4.1
OF 13 SHEETS

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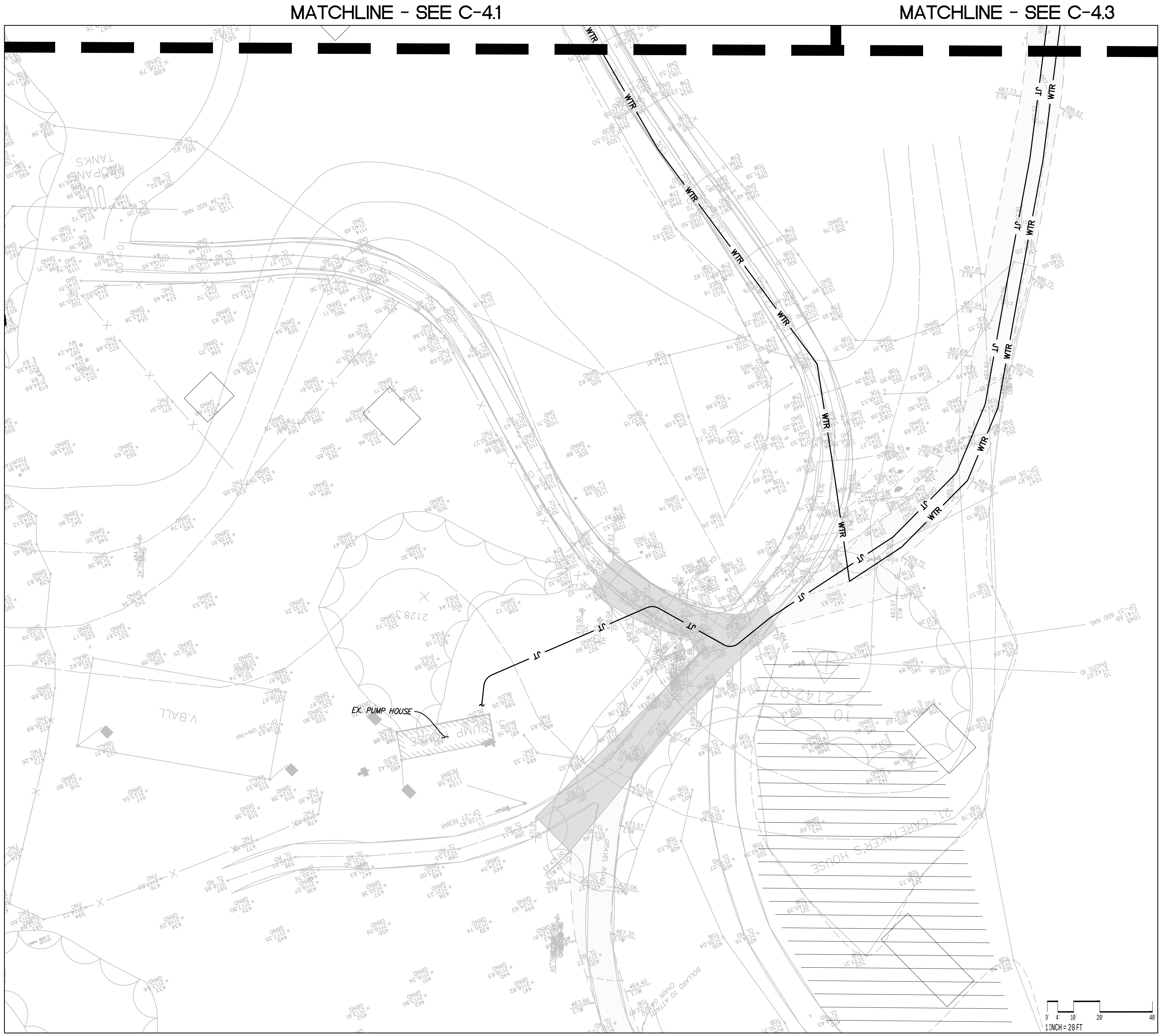

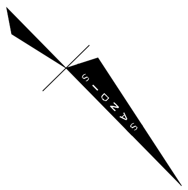

LEGEND

- - - PROPERTY LINE

▨ BIO-TREATMENT AREA XX/XXXX

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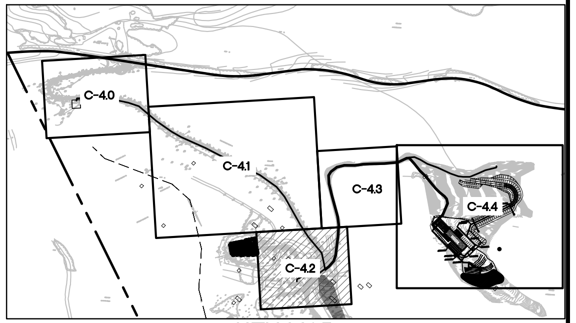

KEY MAP

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	4/24/24
SCALE:	
DRAWN BY:	RLM
APPROVED BY:	CJB
DRAWING NO:	217084

DATE 4/24/24

REGISTERED PROFESSIONAL ENGINEER
CHAD J. BROWNING
No. C68315
Exp. 9/30/25
CIVIL
STATE OF CALIFORNIA

CHAD J. BROWNING
R.C.E. NO. 68315, EXPIRES 9-30-25

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

UTILITY PLAN

SHEET
C-4.2
OF 13 SHEETS

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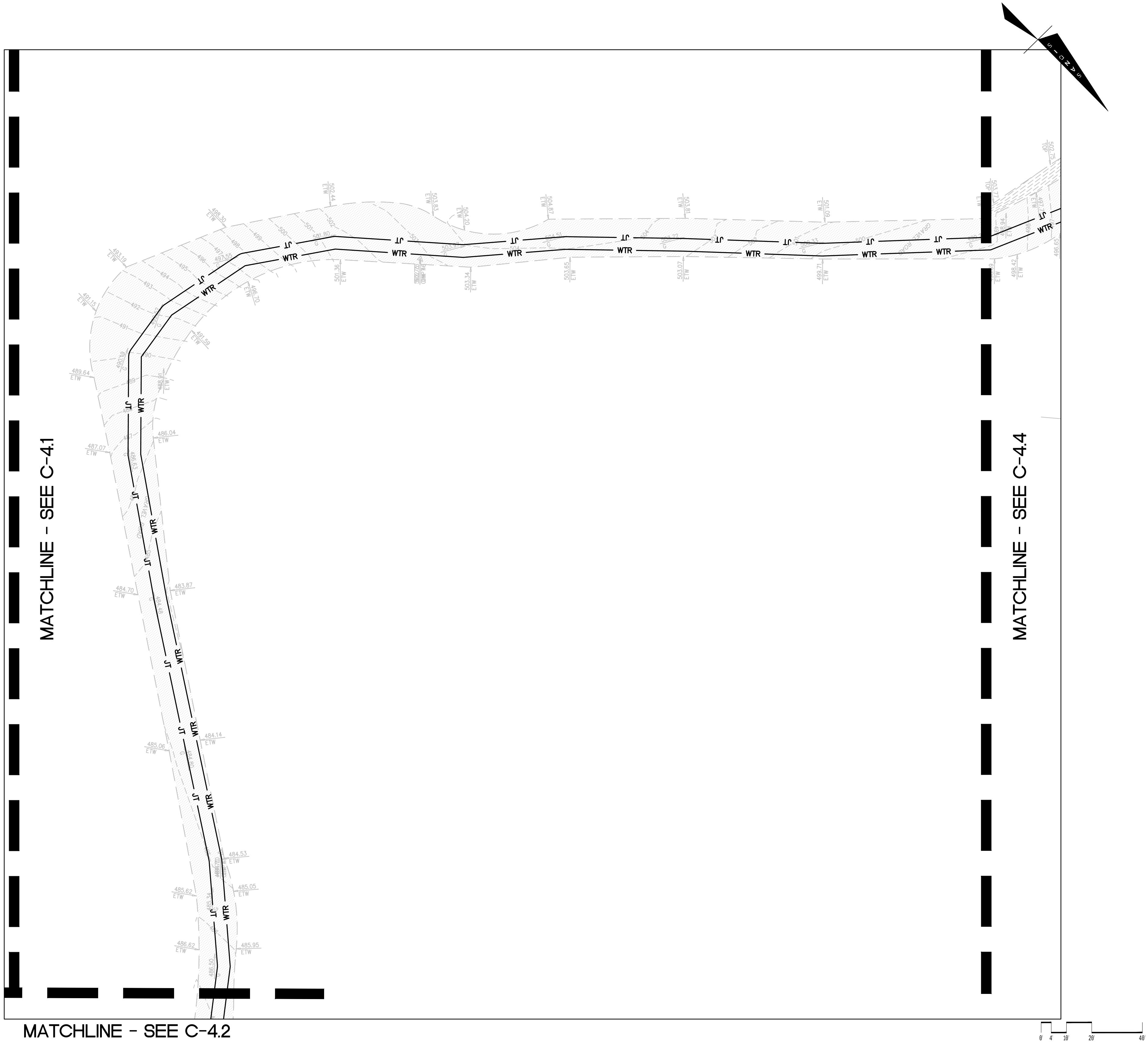

0 4 10 20 40
1 INCH = 20 FT

LEGEND

— — —	PROPERTY LINE
▨	BIO-TREATMENT AREA XX/XXXX

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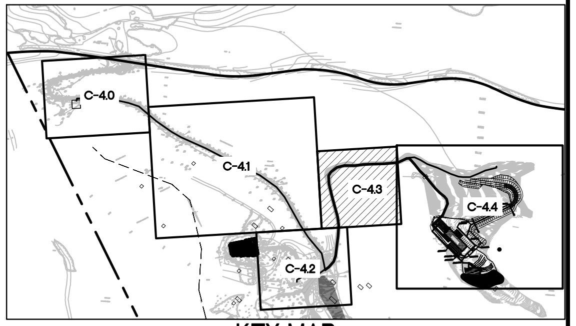
1. MAINTAIN WATER MAIN LINES 10' AWAY FROM SANITARY SEWER MAIN LINES. LATERALS SHALL BE SEPARATED PER PLAN DIMENSIONS.
2. WHERE WATER LINES HAVE TO CROSS SANITARY SEWER LINES, DO SO AT A 90 DEGREE ANGLE AND WATER LINES SHALL BE MINIMUM OF 12" ABOVE TOP OF SANITARY SEWER LINES.
3. ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE WATER DISTRICT STANDARDS.
4. ALL WATER LINES SHALL BE INSTALLED WITH 36" MINIMUM COVER.
5. THRUST RESTRAINTS SHALL BE DESIGNED AND INSTALLED AT ALL TEES, CROSSES, BENDS (HORIZONTAL AND VERTICAL), AT SIZE CHANGES AND AT FIRE HYDRANTS.



KEY MAP

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE: 4/24/24
SCALE:
DRAWN BY: RLM
APPROVED BY: CJB
DRAWING NO.: 217084

DATE 4/24/24

No. C68315
Exp. 9/30/25

CHAD J. BROWNING
R.C.E. NO. 68315, EXPIRES 9-30-25

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

UTILITY PLAN

SHEET
C-4.3
OF 13 SHEETS

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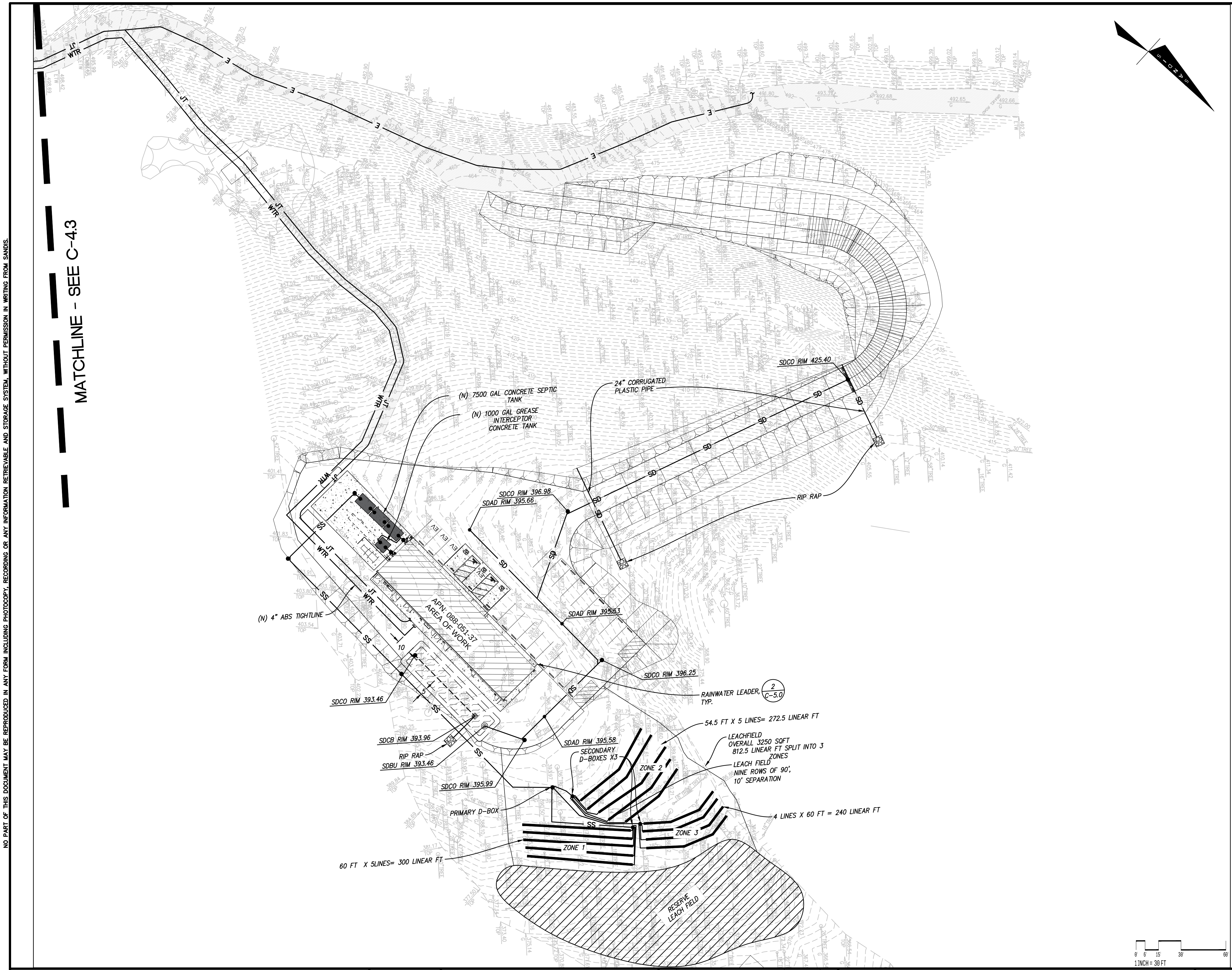

MATCHLINE - SEE C-4.3
JT WTR
E
(N) 7500 GAL CONCRETE SEPTIC TANK
(N) 1000 GAL GREASE INTERCEPTOR CONCRETE TANK
24" CORRUGATED PLASTIC PIPE
SDCO RIM 425.40
SD
RIP RAP
SDCO RIM 396.98
SDAD RIM 395.66
EV
APN: 088-051-37
AREA OF WORK
SS
(N) 4" ABS TIGHTLINE
10
SDAD RIM 395.53
SDCO RIM 396.25
RAINWATER LEADER, TYP.
2 / C-5.0
SDCO RIM 393.46
SDCB RIM 393.96
RIP RAP
SDBU RIM 393.46
SDAD RIM 395.58
SECONDARY D-BOXES X3
54.5 FT X 5 LINES= 272.5 LINEAR FT
LEACHFIELD OVERALL 3250 SQFT 812.5 LINEAR FT SPLIT INTO 3 ZONES
LEACH FIELD NINE ROWS OF 90', 10' SEPARATION
ZONE 2
SDCO RIM 395.99
PRIMARY D-BOX
ZONE 1
ZONE 3
4 LINES X 60 FT = 240 LINEAR FT
60 FT X 5LINES= 300 LINEAR FT
RESERVE LEACH FIELD
0 6 15 30 60
1 INCH = 30 FT

LEGEND

— — —	PROPERTY LINE
●	STORM DRAIN OR SANITARY SEWER CLEANOUT (3 / C-5.0)

STORM DRAIN NOTES

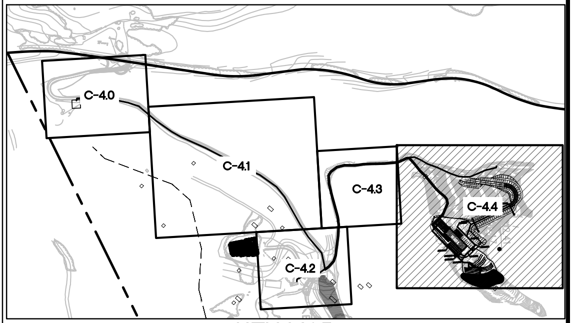
1. PRIVATE STORM DRAIN LINE 4-INCH THROUGH 12-INCH WITH A MINIMUM OF TWO (2) FEET OF COVER IN NON-TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 GREEN PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH BELLS AND SPIGOT CONNECTIONS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS, 45° ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
2. PRIVATE STORM DRAIN LINE 6-INCH THROUGH 12-INCH WITH LESS THAN THREE (3) FEET OF COVER IN VEHICULAR TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) C900, RATED FOR 150 PSI CLASS PIPE. PROVIDE AND INSTALL "STORM DRAIN" MARKER TAPE FOR THE ENTIRE LENGTH OF PIPE TRENCH. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, OBTUSE ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
3. ALL AREA DRAINS AND CATCH BASINS GRATES WITHIN PEDESTRIAN ACCESSIBLE AREAS SHALL MEET ADA REQUIREMENTS.
4. ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES.
5. FOR GRAVITY FLOW SYSTEMS CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF ANY GRAVITY FLOW SYSTEM.
6. DRAINS SHOWN ON CIVIL PLANS ARE NOT INTENDED TO BE THE FINAL NUMBER AND LOCATION OF ALL DRAINS. PLACEMENT AND NUMBER OF LANDSCAPING DRAINS ARE HIGHLY DEPENDENT ON GROUND COVER TYPE AND PLANT MATERIAL. CONTRACTOR SHALL ADD ADDITIONAL AREA DRAINS AS NEEDED AND AS DIRECTED BY THE LANDSCAPE ARCHITECT.
7. INSTALL SEPARATE SUB-DRAIN SYSTEM BEHIND RETAINING WALLS PER GEOTECHNICAL REPORT AND CONNECT TO STORM DRAIN SYSTEM AS SHOWN ON PLANS.
8. ALL DOWN SPOUTS SHALL DISCHARGE DIRECTLY ON TO ADJACENT PERVIOUS SURFACES OR SPLASH BLOCKS UNLESS OTHERWISE NOTED ON PLANS. SEE ARCHITECTURE PLANS FOR EXACT LOCATION OF THE DOWN SPOUTS.

SANITARY SEWER NOTES

1. ALL SEWER WORK SHALL BE IN CONFORMANCE WITH THE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT STANDARDS.
2. PRIVATE SANITARY SEWER MAIN AND SERVICE LINE 4-INCH THROUGH 8-INCH SHALL BE POLYVINYL CHLORIDE (PVC) SDR 26 GREEN SEWER PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH BELL AND SPIGOT CONNECTIONS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS OR 45°. ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
3. ALL LATERALS SHALL HAVE A TWO WAY CLEANOUT AT FACE OF BUILDING AND AS SHOWN ON PLANS.
4. IF (E) SEWER LATERAL IS TO BE USED, CONTRACTOR SHALL VIDEO INSPECT, PERFORM PRESSURE TEST ON (E) SEWER LATERAL, AND SHALL PERFORM ANY NEEDED REPAIRS.

WATER SYSTEM NOTES

1. MAINTAIN WATER MAIN LINES 10' AWAY FROM SANITARY SEWER MAIN LINES. LATERALS SHALL BE SEPARATED PER PLAN DIMENSIONS.
2. WHERE WATER LINES HAVE TO CROSS SANITARY SEWER LINES, DO SO AT A 90 DEGREE ANGLE AND WATER LINES SHALL BE MINIMUM OF 12" ABOVE TOP OF SANITARY SEWER LINES.
3. ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE WATER DISTRICT STANDARDS.
4. ALL WATER LINES SHALL BE INSTALLED WITH 36" MINIMUM COVER.
5. THRUST RESTRAINTS SHALL BE DESIGNED AND INSTALLED AT ALL TEES, CROSSES, BENDS (HORIZONTAL AND VERTICAL), AT SIZE CHANGES AND AT FIRE HYDRANTS.


C-4.0
C-4.1
C-4.3
C-4.4
C-4.2

KEY MAP

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SHEET
C-4.4
OF 13 SHEETS

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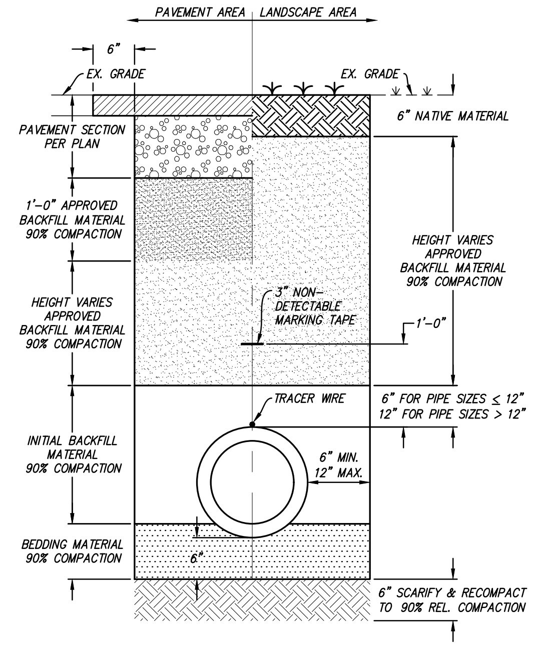
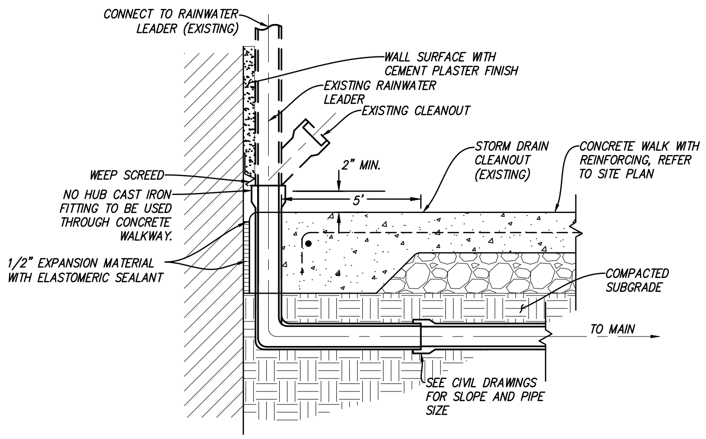

PAVEMENT AREA
LANDSCAPE AREA
6"
EX. GRADE
EX. GRADE
6" NATIVE MATERIAL
PAVEMENT SECTION PER PLAN
1'-0" APPROVED BACKFILL MATERIAL 90% COMPACTION
HEIGHT VARIES APPROVED BACKFILL MATERIAL 90% COMPACTION
HEIGHT VARIES APPROVED BACKFILL MATERIAL 90% COMPACTION
3" NON-DETECTABLE MARKING TAPE
1'-0"
TRACER WIRE
6" FOR PIPE SIZES ≤ 12"
12" FOR PIPE SIZES > 12"
INITIAL BACKFILL MATERIAL 90% COMPACTION
6" MIN. 12" MAX.
BEDDING MATERIAL 90% COMPACTION
6"
6" SCARIFY & RECOMPACT TO 90% REL. COMPACTION

NOTES:

1. SHORING TO BE PER CAL/OSHA CONSTRUCTION SAFETY ORDERS..
2. RESTORE ALL PAVEMENT MARKING IN-KIND WHERE REMOVED AS PART OF TRENCHING OPERATIONS.

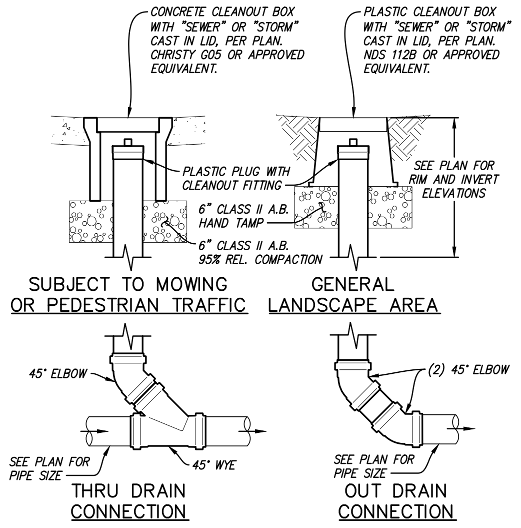
UTILITY TRENCH DETAIL ①

1"=1'


CONNECT TO RAINWATER LEADER (EXISTING)
WALL SURFACE WITH CEMENT PLASTER FINISH
EXISTING RAINWATER LEADER
EXISTING CLEANOUT
2" MIN.
STORM DRAIN CLEANOUT (EXISTING)
CONCRETE WALK WITH REINFORCING, REFER TO SITE PLAN
WEEP SCREED
NO HUB CAST IRON FITTING TO BE USED THROUGH CONCRETE WALKWAY.
5'
1/2" EXPANSION MATERIAL WITH ELASTOMERIC SEALANT
COMPACTED SUBGRADE
TO MAIN
SEE CIVIL DRAWINGS FOR SLOPE AND PIPE SIZE

RAINWATER LEADER TIE-IN ②

N.T.S.


CONCRETE CLEANOUT BOX WITH "SEWER" OR "STORM" CAST IN LID, PER PLAN. CHRISTY G05 OR APPROVED EQUIVALENT.
PLASTIC CLEANOUT BOX WITH "SEWER" OR "STORM" CAST IN LID, PER PLAN. NDS 112B OR APPROVED EQUIVALENT.
PLASTIC PLUG WITH CLEANOUT FITTING
SEE PLAN FOR RIM AND INVERT ELEVATIONS
6" CLASS II A.B. HAND TAMP
6" CLASS II A.B. 95% REL. COMPACTION
45° ELBOW
(2) 45° ELBOW
SEE PLAN FOR PIPE SIZE
45° WYE
SEE PLAN FOR PIPE SIZE

SUBJECT TO MOWING OR PEDESTRIAN TRAFFIC

GENERAL LANDSCAPE AREA

THRU DRAIN CONNECTION

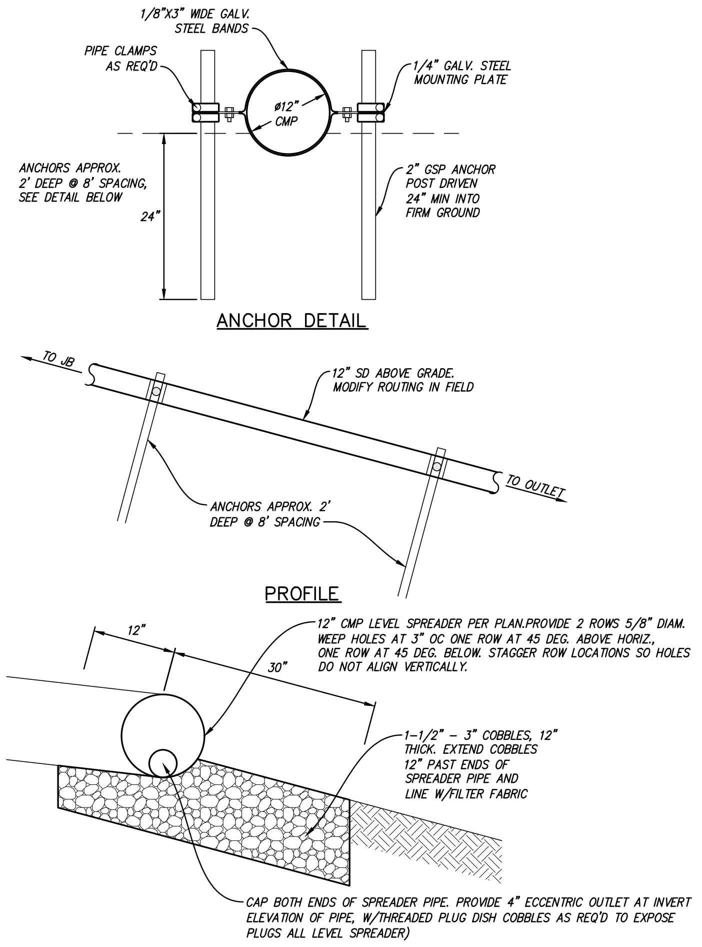
OUT DRAIN CONNECTION

NOTES:

1. RISER DIAMETER SHALL MATCH THRU/OUT PIPE SIZE.

STORM DRAIN OR SANITARY SEWER CLEANOUT ③

1"=1'

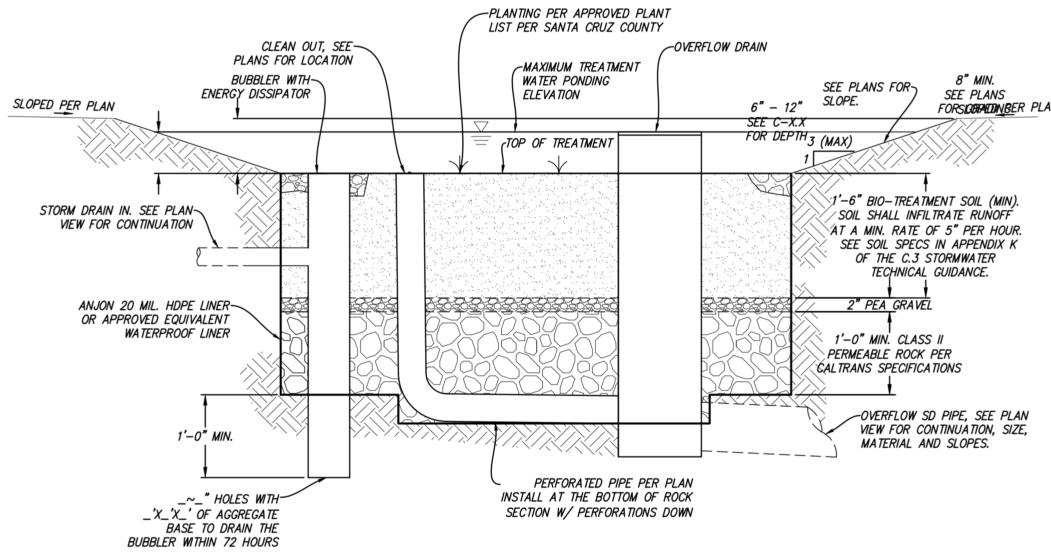

1/8"X3" WIDE GALV. STEEL BANDS
PIPE CLAMPS AS REQ'D
1/4" GALV. STEEL MOUNTING PLATE
ø12" CMP
ANCHORS APPROX. 2' DEEP @ 8' SPACING, SEE DETAIL BELOW
24"
2" GSP ANCHOR POST DRIVEN 24" MIN INTO FIRM GROUND
TO JB
12" SD ABOVE GRADE. MODIFY ROUTING IN FIELD
TO OUTLET
ANCHORS APPROX. 2' DEEP @ 8' SPACING
12"
30"
12" CMP LEVEL SPREADER PER PLAN.PROVIDE 2 ROWS 5/8" DIAM. WEEP HOLES AT 3" OC ONE ROW AT 45 DEG. ABOVE HORIZ., ONE ROW AT 45 DEG. BELOW. STAGGER ROW LOCATIONS SO HOLES DO NOT ALIGN VERTICALLY.
1-1/2" - 3" COBBLES, 12" THICK. EXTEND COBBLES 12" PAST ENDS OF SPREADER PIPE AND LINE W/FILTER FABRIC
CAP BOTH ENDS OF SPREADER PIPE. PROVIDE 4" ECCENTRIC OUTLET AT INVERT ELEVATION OF PIPE, W/THREADED PLUG DISH COBBLES AS REQ'D TO EXPOSE PLUGS ALL LEVEL SPREADER)

ANCHOR DETAIL

PROFILE

12" CMP LEVEL SPREADER ④

1"=1'

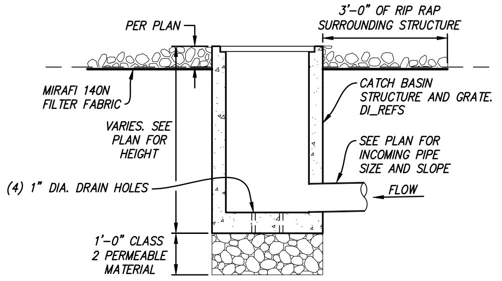

PLANTING PER APPROVED PLANT LIST PER SANTA CRUZ COUNTY
CLEAN OUT, SEE PLANS FOR LOCATION
OVERFLOW DRAIN
BUBBLER WITH ENERGY DISSIPATOR
MAXIMUM TREATMENT WATER PONDING ELEVATION
SEE PLANS FOR SLOPE.
8" MIN. SEE PLANS FOR GRADING
SLOPED PER PLAN
SLOPED PER PLAN
6" - 12" SEE C-X.X FOR DEPTH
TOP OF TREATMENT
3 (MAX)
1
STORM DRAIN IN. SEE PLAN VIEW FOR CONTINUATION
1'-6" BIO-TREATMENT SOIL (MIN). SOIL SHALL INFILTRATE RUNOFF AT A MIN. RATE OF 5" PER HOUR. SEE SOIL SPECS IN APPENDIX K OF THE C.3 STORMWATER TECHNICAL GUIDANCE.
ANJON 20 MIL. HDPE LINER OR APPROVED EQUIVALENT WATERPROOF LINER
2" PEA GRAVEL
1'-0" MIN. CLASS II PERMEABLE ROCK PER CALTRANS SPECIFICATIONS
OVERFLOW SD PIPE, SEE PLAN VIEW FOR CONTINUATION, SIZE, MATERIAL AND SLOPES.
1'-0" MIN.
_~_" HOLES WITH _'X_'X_' OF AGGREGATE BASE TO DRAIN THE BUBBLER WITHIN 72 HOURS
PERFORATED PIPE PER PLAN INSTALL AT THE BOTTOM OF ROCK SECTION W/ PERFORATIONS DOWN

NOTES:

1. BIO-RETENTION AREA SHALL BE THE MINIMUM SIZE SHOWN ON SHEET C-4.4 AND C-7.0.
2. INSTALL AND MAINTAIN MULCH LAYER ABOVE THE TREATMENT SOIL PER JURISDICTION REQUIREMENTS.

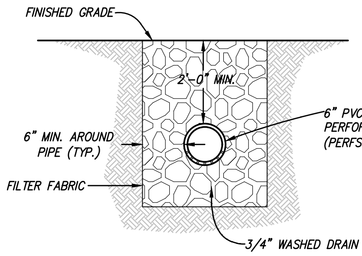
INFILTRATING BIO-RETENTION AREA ⑤

1"=1'


PER PLAN
3'-0" OF RIP RAP SURROUNDING STRUCTURE
MIRAFI 140N FILTER FABRIC
CATCH BASIN STRUCTURE AND GRATE. DI_REFS
VARIES. SEE PLAN FOR HEIGHT
SEE PLAN FOR INCOMING PIPE SIZE AND SLOPE
FLOW
(4) 1" DIA. DRAIN HOLES
1'-0" CLASS 2 PERMEABLE MATERIAL

BUBBLE UP BOX ⑥

1"=2'


FINISHED GRADE
2'-0" MIN.
6" PVC SDR-35 PERFORATED PIPE (PERFS. DOWN)
6" MIN. AROUND PIPE (TYP.)
FILTER FABRIC
3/4" WASHED DRAIN ROCK

PERFORATED PIPE IN TRENCH ⑦

N.T.S.

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C-5.0
OF 13 SHEETS

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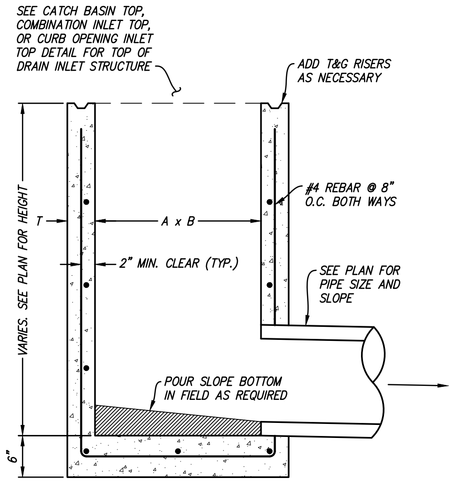
NOTE: MAX SIZES ARE BASED ON PERPENDICULAR CONNECTION


SEE CATCH BASIN TOP, COMBINATION INLET TOP, OR CURB OPENING INLET TOP DETAIL FOR TOP OF DRAIN INLET STRUCTURE
ADD T&G RISERS AS NECESSARY
#4 REBAR @ 8" O.C. BOTH WAYS
T
A x B
2" MIN. CLEAR (TYP.)
VARIES. SEE PLAN FOR HEIGHT
SEE PLAN FOR PIPE SIZE AND SLOPE
POUR SLOPE BOTTOM IN FIELD AS REQUIRED
6"

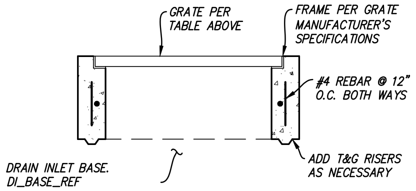
NOTES:

1. SEE PLANS FOR DRAIN INLET SIZE.
2. PRE-CAST DRAIN INLET IN LIEU OF CAST-IN-PLACE INLET IS ACCEPTABLE, OLDCASTLE OR APPROVED EQUIVALENT.

DRAIN INLET BASE ①

1"=1'

* OR APPROVED EQUIVALENT GRATE WITH 1/4" MAX OPENINGS


GRATE PER TABLE ABOVE
FRAME PER GRATE MANUFACTURER'S SPECIFICATIONS
#4 REBAR @ 12" O.C. BOTH WAYS
DRAIN INLET BASE. DI_BASE_REF
ADD T&G RISERS AS NECESSARY

NOTES:

1. SEE PLANS FOR CATCH BASIN SIZE AND TYPE.
2. FRAME SHALL BE ANCHORED TO CONCRETE PER MANUFACTURER'S SPECIFICATIONS.
3. FOR JUNCTION BOXES (JB) IN NON-VEHICULAR AREAS ONLY, REPLACE GRATE WITH NON-SLIP SOLID STEEL COVER. ADD "STORM DRAIN" TEXT TO LID.

CATCH BASIN TOP ②

1"=1'

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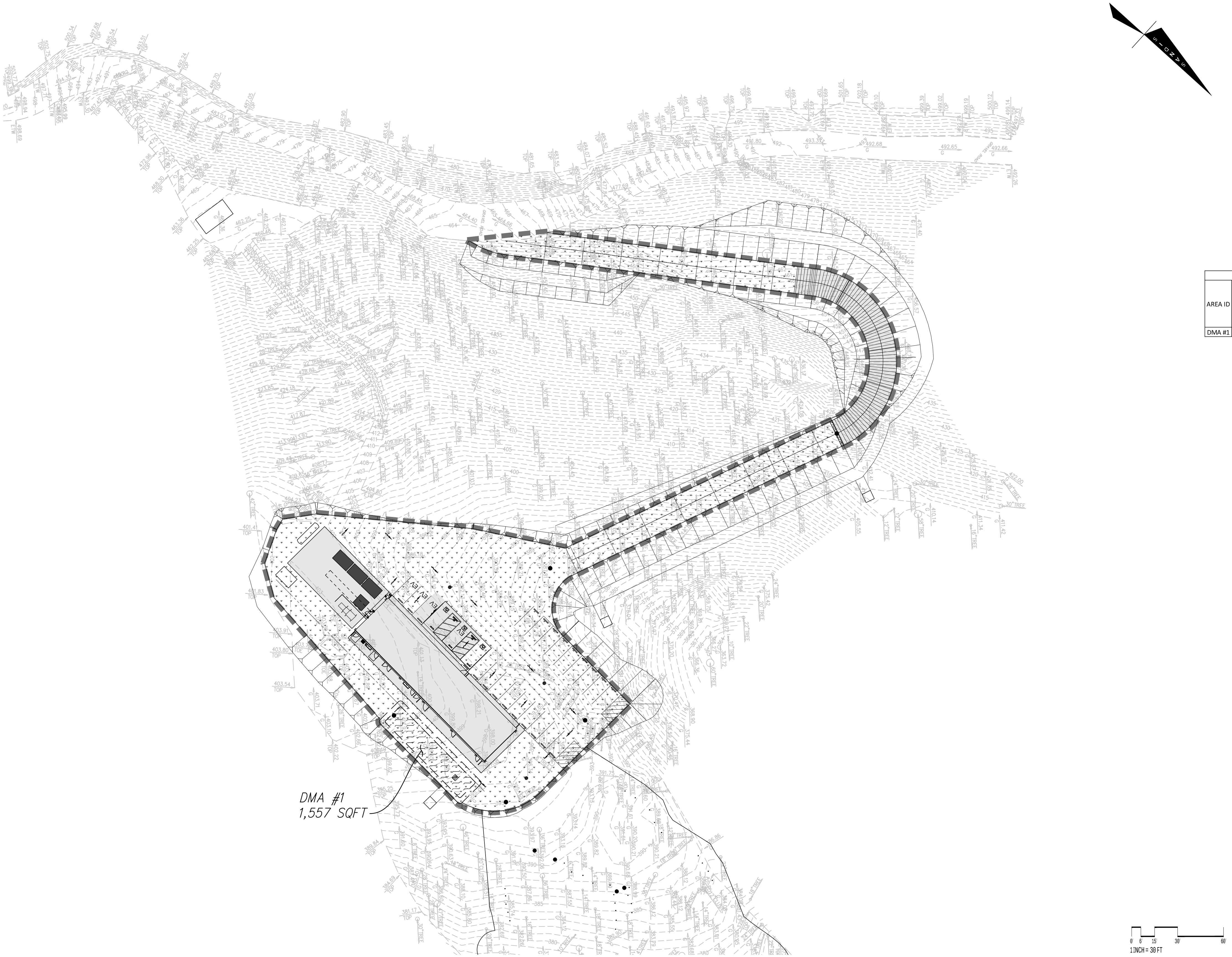

STORMWATER MANAGEMENT PLAN LEGEND

▨	PROPOSED PERVIOUS AREA
▩	PROPOSED IMPERVIOUS AREA
▤	BIO-RETENTION AREA
▬ ▬ ▬ ▬	DRAINAGE AREA BOUNDARY
——— - - - ———	FLOW LINE
←	FLOW DIRECTION

STORMWATER TREATMENT MEASURES

AREA ID	IMPERVIOUS AREA (SF)	PERVIOUS AREA (SF)	50% PERVIOUS AREA (SF)	TOTAL AREA (SF)	REQUIRED AREA (4% IMPERVIOUS AREA + 50% PERVIOUS AREA) (SF)	TREATMENT AREA PROVIDED (SF)
DMA #1	10617	24566	12283	35182	916	1016

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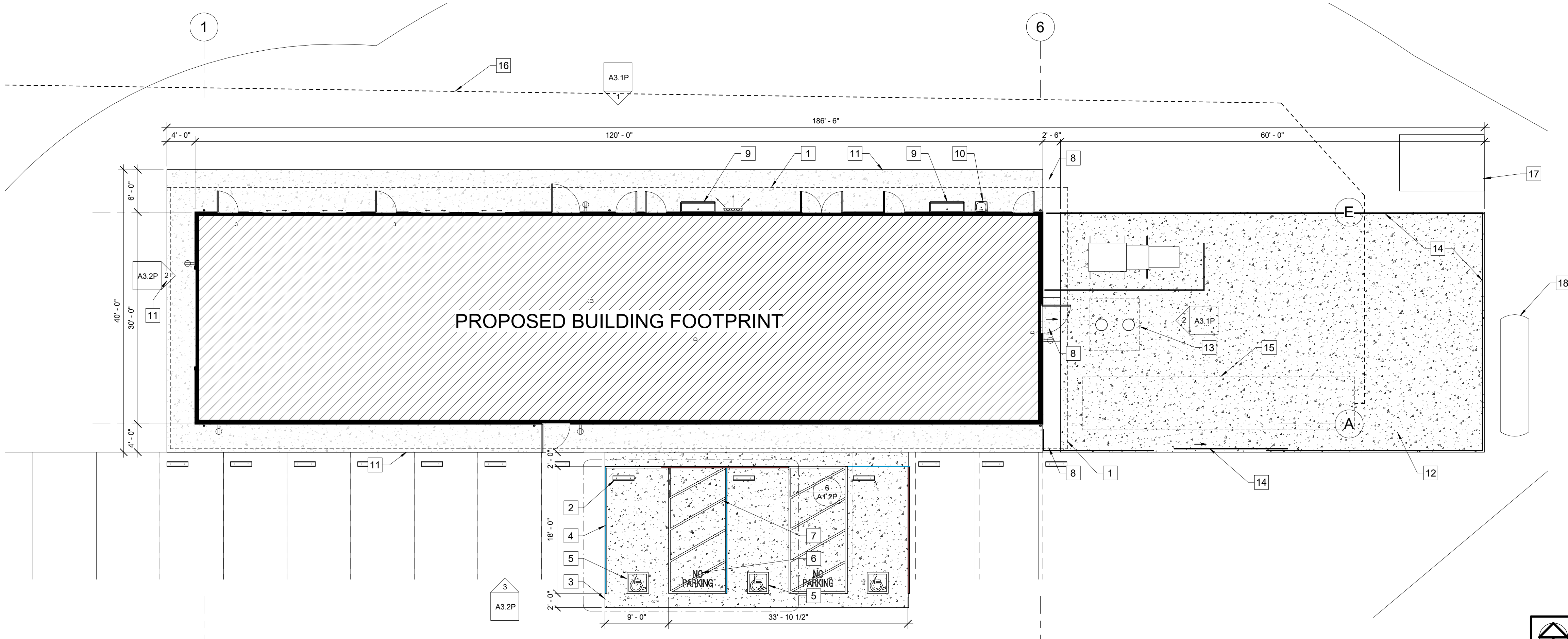
COUNTY STAMP

SITE PLAN KEYNOTES

Note Number	Note Text
1	EAVE ABOVE, SEE ELEVATIONS
2	8"X6"X36" WHEEL STOP
3	6"CONCRETE PAD FOR ACCESSIBLE PARKING 2% MAX SLOPE AL DIRECTIONS
4	4" STRIPE FOR PARKING STALLS
5	ACCESSIBLE STALL SYMBOL
6	(N) 12" HIGH WHITE "NO PARKING" LETTERS
7	4" DIAGONAL STRIPE FOR LOADING ZONE @36" O.C.
8	2'-6" SLOPE AT MAX 5%
9	OUTDOOR WALL MOUNTED TROUGH SINK
10	OUTDOOR WALL MOUNTED ACCESSIBLEH SINK
11	4" THICK CONCRETE SIDEWALK WITH THICKENED EDGE. MAX 1" DROP TO SOFTSCAPE 1% SLOPE AWAY FROM BUILDING
12	6" CONCRETE PAD UTILITY YARD MECH EQUIP, SEPTIC/SEWER SERVICE AREA, DUMPSTERS AND DELIVERIES
13	NEW GREASE INTERCEPTOR BELOW GRADE, S.P.D.
14	NEW CHAIN LINK FENCING WITH PRIVACY SLATS, POSTS AT MAX 8' O.C.
15	NEW SEPTIC SYTEM BELOW S.C.D.
16	DRAIN LINE TO NEW LEECH FIELDS
17	NEW BACKUP GENERATOR PAD LOCATION
18	NEW PROPANE TANK LOCATION


1
6
16
A3.1P
1
186' - 6"
4' - 0"
120' - 0"
2' - 6"
60' - 0"
9
1
11
9
10
8
17
E
14
18
6' - 0"
40' - 0"
30' - 0"
4' - 0"
A3.2P
2
11
PROPOSED BUILDING FOOTPRINT
2
A3.1P
13
15
8
A
12
11
8
1
14
2' - 0"
18' - 0"
2' - 0"
2
4
5
3
6
A1.2P
7
6
5
NO PARKING
NO PARKING
3
A3.2P
9' - 0"
33' - 10 1/2"

① SITE PLAN
1/8" = 1'-0"

PROJECT TRUE
NORTH

topa architecture

1150 North First St. Ste. 140,
San Jose, CA 95112
Tel: 408.320.0248

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STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER

26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

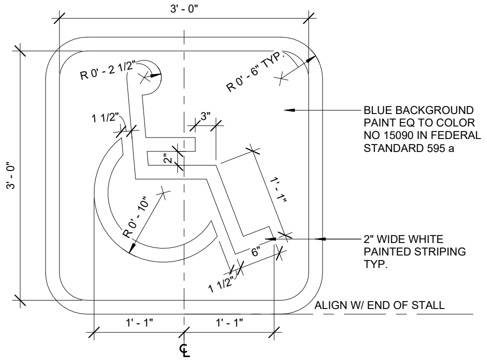
SHEET TITLE:

SITE PLAN

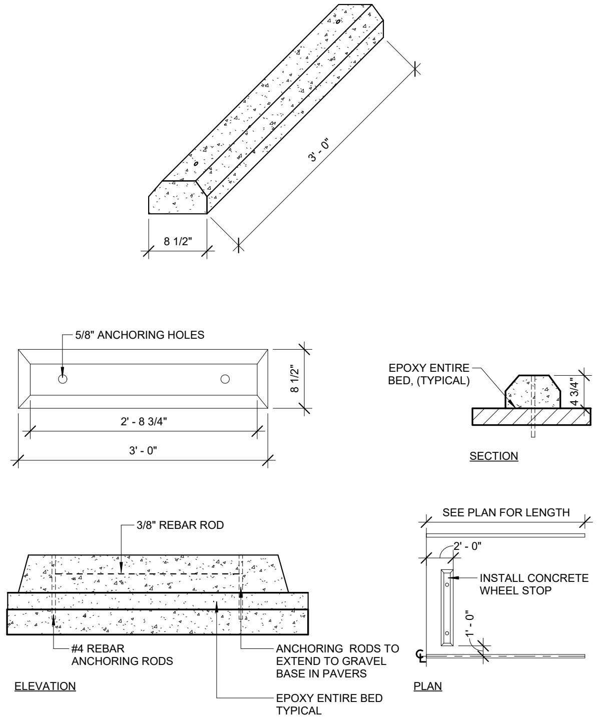
REVISIONS

No.	Description	Date

DRAWN:	JC
CHECKED:	-
DATE:	01.26.2024
SCALE:	1/8" = 1'-0"
JOB No.:	23-2-12-SCOUTS
SHEET No.:	A1.1P

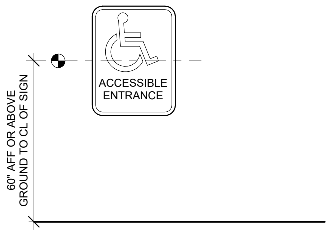

3' - 0"
3' - 0"
R 0' - 2 1/2"
R 0' - 6" TYP.
1 1/2"
3"
2"
1' - 1"
R 0' - 10"
6"
1 1/2"
1' - 1"
1' - 1"
℄
BLUE BACKGROUND PAINT EQ TO COLOR NO 15090 IN FEDERAL STANDARD 595 a
2" WIDE WHITE PAINTED STRIPING TYP.
ALIGN W/ END OF STALL

① ACCESSIBLE PARKING SYMBOL
1" = 1'-0"


3' - 0"
8 1/2"
5/8" ANCHORING HOLES
8 1/2"
2' - 8 3/4"
3' - 0"
EPOXY ENTIRE BED, (TYPICAL)
4 3/4"
SECTION
3/8" REBAR ROD
#4 REBAR ANCHORING RODS
ANCHORING RODS TO EXTEND TO GRAVEL BASE IN PAVERS
EPOXY ENTIRE BED TYPICAL
ELEVATION
SEE PLAN FOR LENGTH
2' - 0"
INSTALL CONCRETE WHEEL STOP
1' - 0"
PLAN

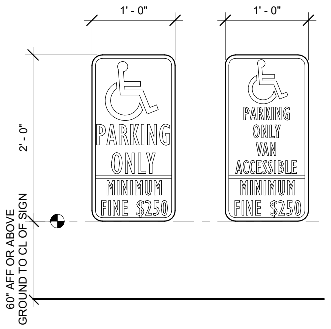
⑤ WHEEL STOP DETAIL
NTS

	HORIZ VIEWING DISTANCE	MIN CHARACTER HEIGHT
40" TO LESS THAN OR EQUAL TO 70" HEIGHT FROM FINISH FLOOR OR GROUND TO CENTERLINE OF SIGN	LESS THAN 72"	5/8"
	72" OR GREATER	5/8" PLUS 1/8" PER FOOT OF VIEWING DISTANCE ABOVE 72"


ACCESSIBLE ENTRANCE
60" AFF OR ABOVE GROUND TO CL OF SIGN

NOTES:
1. ENTRANCE SIGN W/ HORIZ VISIBLE DISTANCE OF LESS THAN 72" SHALL HAVE A MIN CHARACTER HEIGHT OF 5/8"
2. ENTRANCE SIGNS W/ HORIZONTAL VISIBLE DISTANCE OF 72" OR GREATER MUST HAVE A MIN CHARACTER HEIGHT OF 5/8" PLUS 1/8" FOR EVERY FOOT OF VIEWING DISTANCE ABOVE 72"

③ ACCESSIBLE ENTRANCE SIGN DETAIL
1" = 1'-0"


1' - 0"
1' - 0"
2' - 0"
PARKING ONLY
MINIMUM FINE $250
PARKING ONLY VAN ACCESSIBLE
MINIMUM FINE $250
60" AFF OR ABOVE GROUND TO CL OF SIGN

NOTES:
1. OFF STREET PARKING FACILITIES TO HAVE SIGN AT STREET ENTRANCE NOT LESS THAN 17"X22" MIN SIZE. SIGN TEXT TO BE BEADED (OR EQ.) TO STATE THE FOLLOWING:

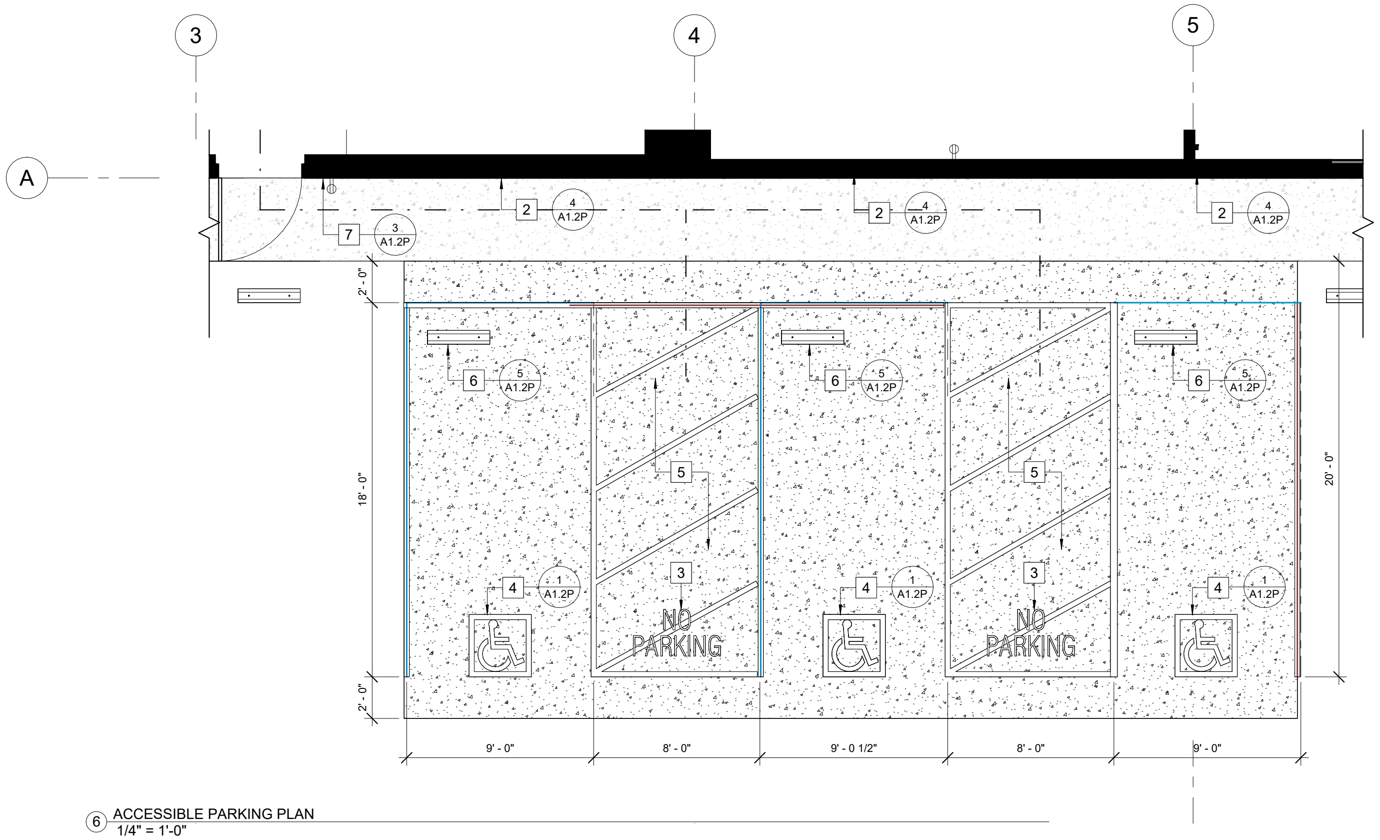
"UNAUTHORIZED VEHICLES PARKED IN DESIGNATED ACCESSIBLE SPACES NOT DISPLAYING DISTINGUISHING PLACARDS OR SPECIAL LICENSE PLATES ISSUED FOR PERSONS WITH DISABILITIES WILL BE TOWED AWAY AT THE OWNER'S EXPENSE. TOWED VEHICLES MAY BE RECLAIMED AT: _____ OR BY TELEPHONING __________"

GC TO FILL IN BLANKS PRIOR TO MANUFACTURING SIGN

2. ACCESSIBLE PARKING SPACE SIGN TO BE BEADED (OR EQ) W/ INTERNATIONAL SYMBOL OF ACCESSIBILITY AS SHOWN. SIZE TO BE 70 SQIN MIN

3. PROVIDE SIGN AT VAN STALL W/ ADD'L SIGN STATING "VAN ACCESSIBLE"

④ ACCESSIBLE PARKING SIGN DETAIL
1" = 1'-0"


3
4
5
A
7
3 A1.2P
2
4 A1.2P
2
4 A1.2P
2
4 A1.2P
6
5 A1.2P
6
5 A1.2P
6
5 A1.2P
5
5
3
3
4
1 A1.2P
4
1 A1.2P
4
1 A1.2P
NO PARKING
NO PARKING
2' - 0"
18' - 0"
2' - 0"
20' - 0"
9' - 0"
8' - 0"
9' - 0 1/2"
8' - 0"
9' - 0"

⑥ ACCESSIBLE PARKING PLAN
1/4" = 1'-0"

COUNTY STAMP

ACCESSIBLE PARKING NOTES

Note Number	Note Text
2	(N) ACCESSIBLE PARKING SIGN
3	(N) 12" HIGH WHITE "NO PARKING" LETTERS
4	(N) ACCESSIBLE PARKING SYMBOL
5	(N) ACCESS ASILE STRIPING
6	(N) WHEEL STOP
7	(N) ACCESSIBLE SIGN AT THE ENTRANCE

GENERAL NOTES

— · — · — · — · — · — · — · —

ACCESSIBLE PATH OF TRAVEL, PER CBC 11B-403
NOTES:
- MUST BE CONTINUOUSLY ACCESSIBLE W/ WALKING DIRECTIONAL SLOPE MAX OF 5% AND CROSS SLOPE MAX OF 2%
- MUST HAVE MAX SLOPE OF 2% IN ANY DIRECTION IN LOADING AREAS AND AT EACH TURN OF INTERSECTION OF PATHS OF TRAVEL
- HAVE A MAX OF 1/4" CHANGE IN ELEVATION W/O BEVELED EDGE. 1/2" CHANGE IN ELEVATION W/ BEVELED EDGE NOT STEEPER THAN 1:2
- IS MIN 48" IN WIDTH
- WHERE NECCESSARY TO CHANGE ELEVATION AT A SLOPE EXCEEDING 5%, SHALL HAVE PEDESTRIAN RAMPS

PROJECT
TRUE
NORTH

topa architecture
1150 North First St. Ste. 140,
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Tel: 408.320.0248

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STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER
26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

SHEET TITLE:

SITE PLAN DETAILS

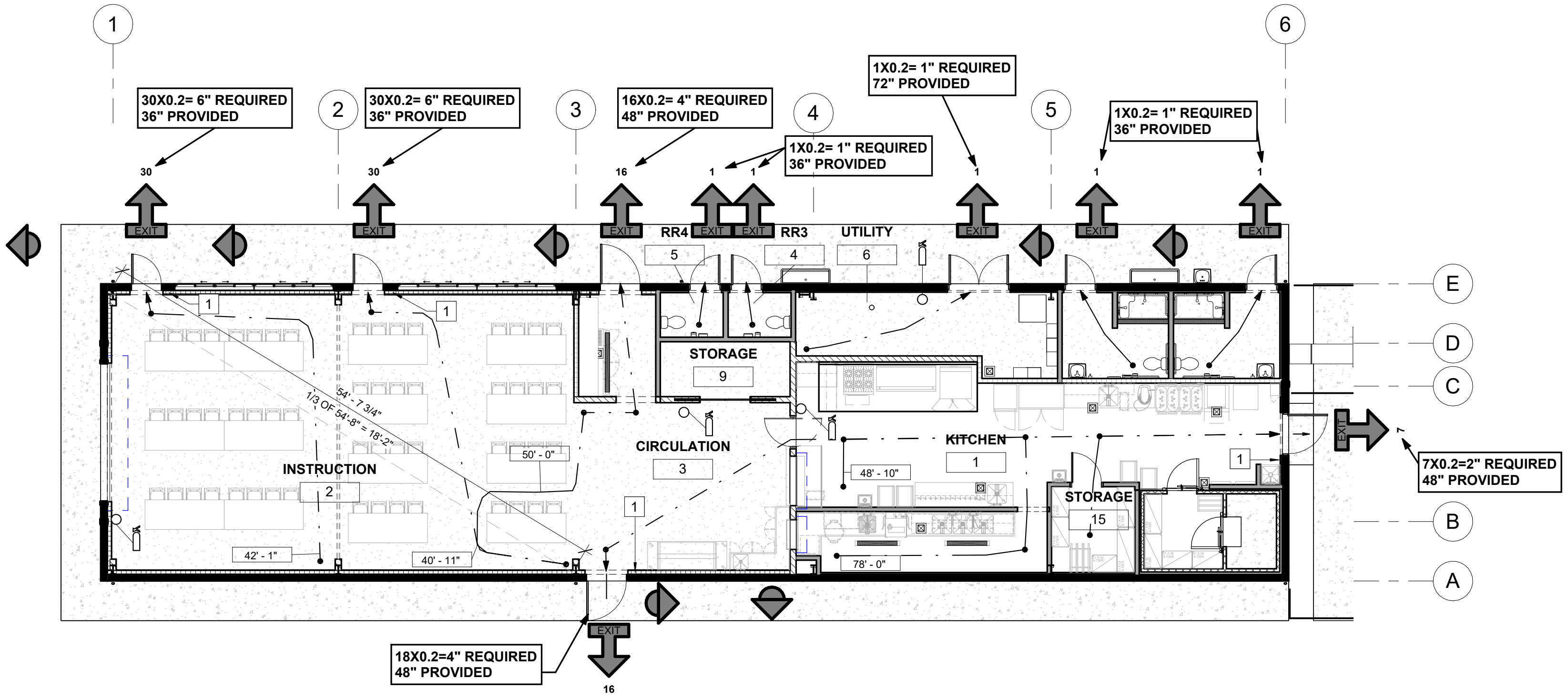
REVISIONS

No.	Description	Date

DRAWN:	Author
CHECKED:	Checker
DATE:	01.26.2024
SCALE:	As indicated
JOB No.:	23-2-12-SCOUTS
SHEET No.:	A1.2P

OCCUPANCY SCHEDULE

Number	Name	Area	Load Factor	Count
1	KITCHEN	579 SF	100	6
2	INSTRUCTION	1296 SF	15	87
3	CIRCULATION	389 SF	300	2
4	RR3	29 SF	100	1
5	RR4	29 SF	100	1
6	UTILITY	187 SF	300	1
7	RR2	93 SF	100	1
8	RR1	93 SF	100	1
9	STORAGE	73 SF	300	1
15	STORAGE	182 SF	300	1
Grand total		2950 SF		102


1
2
3
4
5
6
E
D
C
B
A
30X0.2= 6" REQUIRED
36" PROVIDED
30X0.2= 6" REQUIRED
36" PROVIDED
16X0.2= 4" REQUIRED
48" PROVIDED
1X0.2= 1" REQUIRED
36" PROVIDED
1X0.2= 1" REQUIRED
72" PROVIDED
1X0.2= 1" REQUIRED
36" PROVIDED
30
30
16
1
1
1
1
1
EXIT
RR4
5
RR3
4
UTILITY
6
STORAGE
9
INSTRUCTION
2
CIRCULATION
3
KITCHEN
1
STORAGE
15
54' - 7 3/4"
1/3 OF 54'-8" = 18'-2"
50' - 0"
42' - 1"
40' - 11"
48' - 10"
78' - 0"
7X0.2=2" REQUIRED
48" PROVIDED
7
18X0.2=4" REQUIRED
48" PROVIDED
16

①EXIT PLAN
1/8" = 1'-0"

COUNTY STAMP

EXIT PLAN LEGEND

# OF PEOPLE	
EXIT	EXIT
	EXIT DISCHARGE DIRECTION
— · —	EGRESS ROUTE
	FIRE EXTINGUISHER

EXIT PLAN NOTES

1. CHARACTERS, SYMBOLS AND THEIR BACKGROUNDS SHALL HAVE A NON-GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND.
2. CHARACTERS ON SIGNS SHALL HAVE A WIDTH TO HEIGHT RATIO OF BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH BETWEEN 1:5 AND 1:10.
3. LETTERS AND NUMERALS SHALL BE RAISED 1/32", UPPER CASE, SANS SERIF OR SIMPLE SERIF TYPEFACE AND SHALL BE ACCOMPANIED WITH GRADE BRAILLE. RAISED CHARACTERS SHALL BE AT LEAST 5/8" HIGH, BUT NO HIGHER THAN 2".
4. TACTILE EXIT SIGNAGE SHALL BE REQUIRED AT THE FOLLOWING LOCATIONS

1 EACH GRADE-LEVEL EXTERIOR DOOR

EXIT

2 EACH EXIT DOOR THAT LEADS DIRECTLY TO A GRADE-LEVEL EXTERIOR EXIT BY MEANS OF AN EXIT ENCLOSURE THAT DOES NOT UTILIZE A STAIR OR A RAMP, OR BY MEANS OF AN EXIT PASSAGEWAY EACH EXIT ACCESS DOOR FROM AN INTERIOR ROOM OR AREA THAT IS REQUIRED TO HAVE A VISUAL SIGN

EXIT ROUTE

3 EACH EXIT DOOR THROUGH A HORIZONTAL EXIT

TO EXIT

4 EACH EXIT DOOR THROUGH A HORIZONTAL EXIT DOOR THAT LEADS DIRECTLY TO A GRADE LEVEL EXTERIOR EXIT DOOR BY A STAIRWAY OR RAMP AS APPROPRIATE.

EXIT RAMP DOWN

PROJECT
TRUE
NORTH

topa
architecture
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San Jose, CA 95112
Tel: 408.320.0248

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STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER

26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

SHEET TITLE:

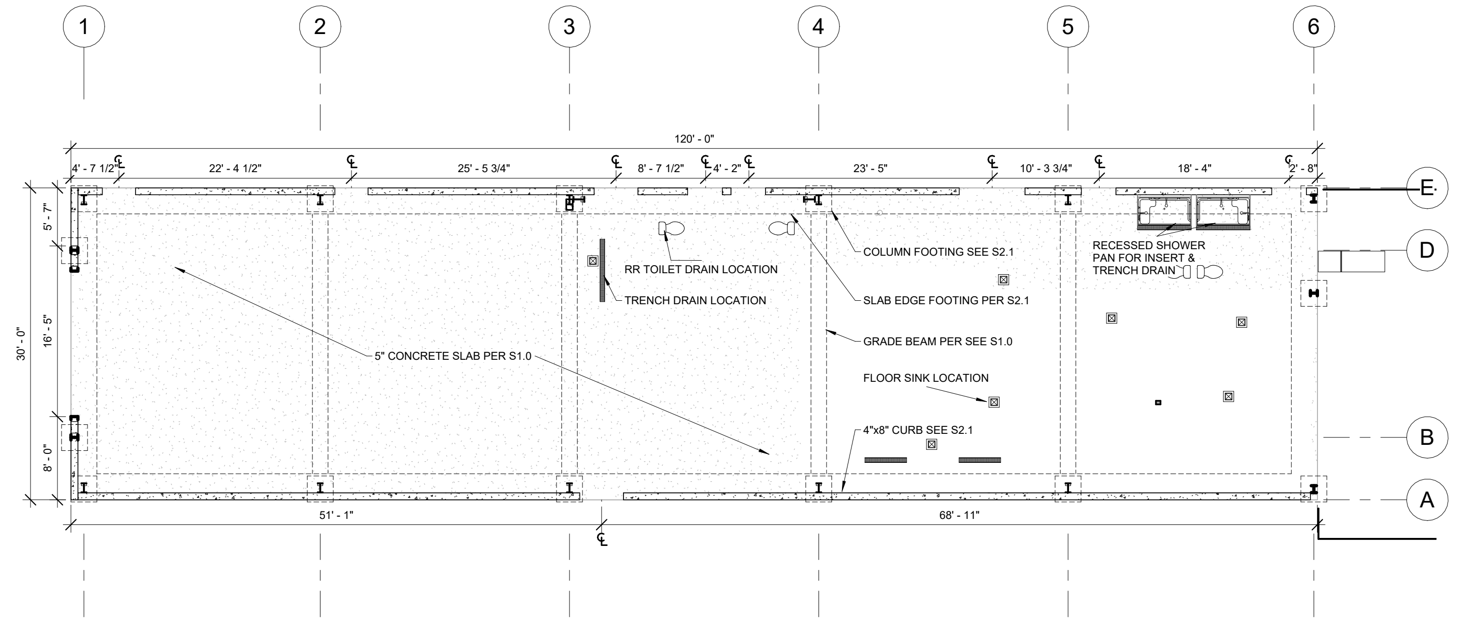
EXIT PLAN

REVISIONS

No.	Description	Date

DRAWN: JC
CHECKED: -
DATE: 01.26.2024
SCALE: As indicated
JOB No.: 23-2-12-SCOUTS
SHEET No.:

A2.0P


1
2
3
4
5
6
120' - 0"
4' - 7 1/2"
22' - 4 1/2"
25' - 5 3/4"
8' - 7 1/2"
4' - 2"
23' - 5"
10' - 3 3/4"
18' - 4"
2' - 8"
E
D
B
A
30' - 0"
5' - 7"
16' - 5"
8' - 0"
RR TOILET DRAIN LOCATION
TRENCH DRAIN LOCATION
COLUMN FOOTING SEE S2.1
SLAB EDGE FOOTING PER S2.1
GRADE BEAM PER SEE S1.0
5" CONCRETE SLAB PER S1.0
FLOOR SINK LOCATION
4"x8" CURB SEE S2.1
RECESSED SHOWER PAN FOR INSERT & TRENCH DRAIN
51' - 1"
68' - 11"

② FOUNDATION PLAN
1/8" = 1'-0"

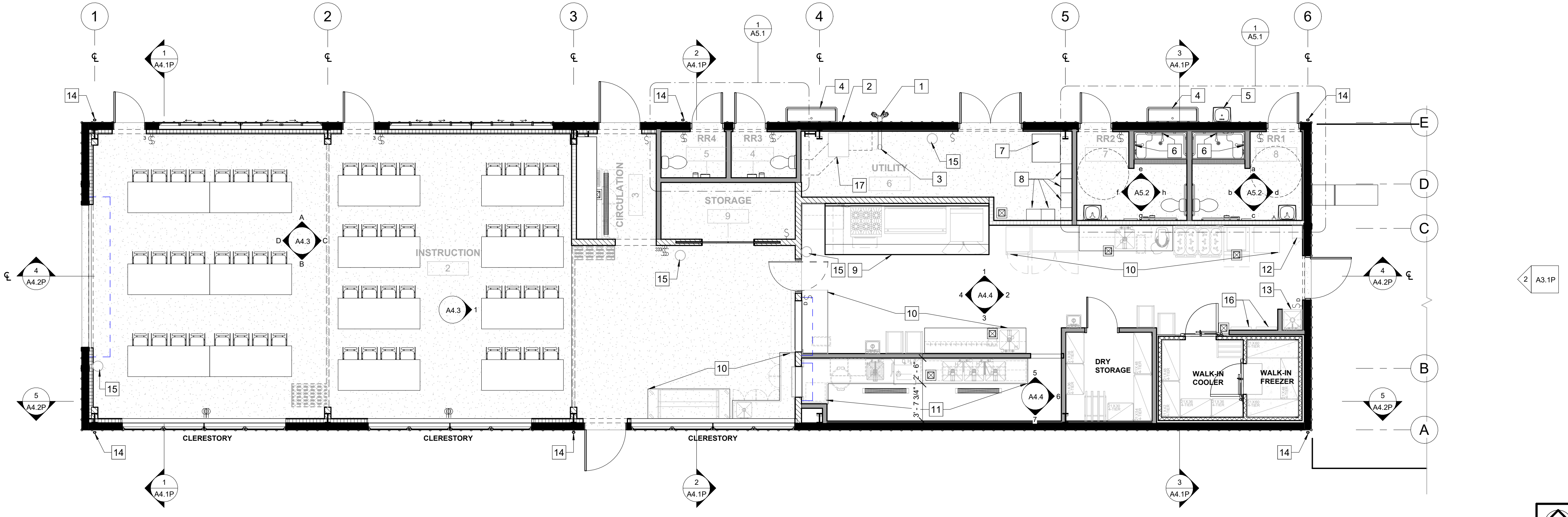
WALL LEGEND

■	- NEW METAL BUILD SUPPORT WALL ON 4"X8" CURB W/ 8" SIDE GIRTS TO SUPPORT EXTERIOR CLADDING O/ WEATHER PROOFING BY MANF. - WHERE INDICATED 3 5/8"MTL STUD 20 GA @16"O.C. OR 1 5/8" MTL STUD 20 GA @ 12" O.C. AT RESTROOMS, FURRED INTERIOR WALL W/ SPRAY INSULATION TO FILL CAVITY. SEE WALL TYPES FOR INTERIOR FINISH
▨	- NEW 6" METAL STUD WALL 18 GA @16"O.C. FULL HEIGHT UP TO ROOF. SEE FINISH SCHEDULE AND WALL TYPES FOR FINISHES AND PLUMBING PLAN FOR WATER/GAS/DRAIN LINES
▭	- NEW 4" METAL STUD WALL 18 GA @16"O.C. FULL HEIGHT UP TO ROOF. SEE FINISH SCHEDULE AND WALL TYPES FOR FINISHES
▬	- NEW 4" METAL STUD WALL 20 GA @16"O.C. HEIGHT UP TO LOCAL CEILING. SEE RCP AND FINISH SCHEDULE AND WALL TYPES FOR FINISHES
▩	- NEW 4" REFRIGERATION PANEL BY MANF LEAVE 2" MIN AIR GAP TO ADJACENT EXTERIOR WALLS AND STEEL FRAMING ELEMENTS
⌧	- NEW MODERNFOLD PREMIER ACOUSTI-SEAL 3 1/8" OPERABLE PARTITION PANEL HUNG FROM 4X10 HSS BEAM ABOVE. W/ CONTINUED 1 5/8" 25 GAGE @ 16" O.C.STUD WALL ABOVE BEAM TO ROOF FRAMING. 3/8" PLY WOOD AND 1" ACOUSTIC WOOD/WOOL PANELS IN NATURAL TAN FINISH

COUNTY STAMP

PROPOSED PLAN KEYNOTES

Note Number	Note Text
1	FIRE SUPPRESSION CONNECTION
2	EXTERIOR HOSE BIB
3	4" FIRE SPRINKLER RISER
4	OUTDOOR WALL MOUNTED TROUGH SINK
5	OUTDOOR WALL MOUNTED ACCESSIBLEH SINK
6	DUAL SHOWER HEAD ACCESSIBLE SHOWER INSERT FLORESTONE FL35-62
7	FLOOR MOUNTED TRANSFORMER S.E.D.
8	WALL MOUNTED TANKLESS WATER HEATERS, S.P.D.
9	TYPE I HOOD ABOVE COOKLINE, SEE FS KITCHEN DRAWINGS
10	KITCHEN EQUIPMENT AND COUNTERS, SEE FS SHEETS
11	DISH WASH AND PREP SINKS, SEE FS SHEETSND COUNTERS, SEE FS SHEETS
12	STAFF LOCKERS ON 6" LEGS
13	MOP SINK, SEE FS SHEETS
14	DOWNSPOUT PER MANF SHEET R9
15	(N) FIRE EXTINGUISHER
16	ELECTRICAL CONTROL/SUB PANEL
17	MECH UNIT, S.M.D. FOR OVERHEAD SUPPLY AND INTAKE FROM EXTERIOR


1
2
3
4
5
6
1 A5.1
1 A5.1
1 A4.1P
2 A4.1P
3 A4.1P
4 A4.2P
5 A4.2P
2 A3.1P
A4.3
A4.4
A5.2
E
D
C
B
A
14
15
1
2
3
4
5
6
7
8
9
10
11
12
13
16
17
RR4
5
RR3
4
RR2
7
RR1
8
UTILITY
6
STORAGE
9
CIRCULATION
3
INSTRUCTION
2
DRY STORAGE
WALK-IN COOLER
WALK-IN FREEZER
CLERESTORY
CLERESTORY
CLERESTORY
2' - 6"
3' - 7 3/4"

① PROPOSED FLOOR PLAN
3/16" = 1'-0"

PROJECT TRUE
NORTH

topa architecture

1150 North First St. Ste. 140,
San Jose, CA 95112
Tel: 408.320.0248

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STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER

26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

SHEET TITLE:

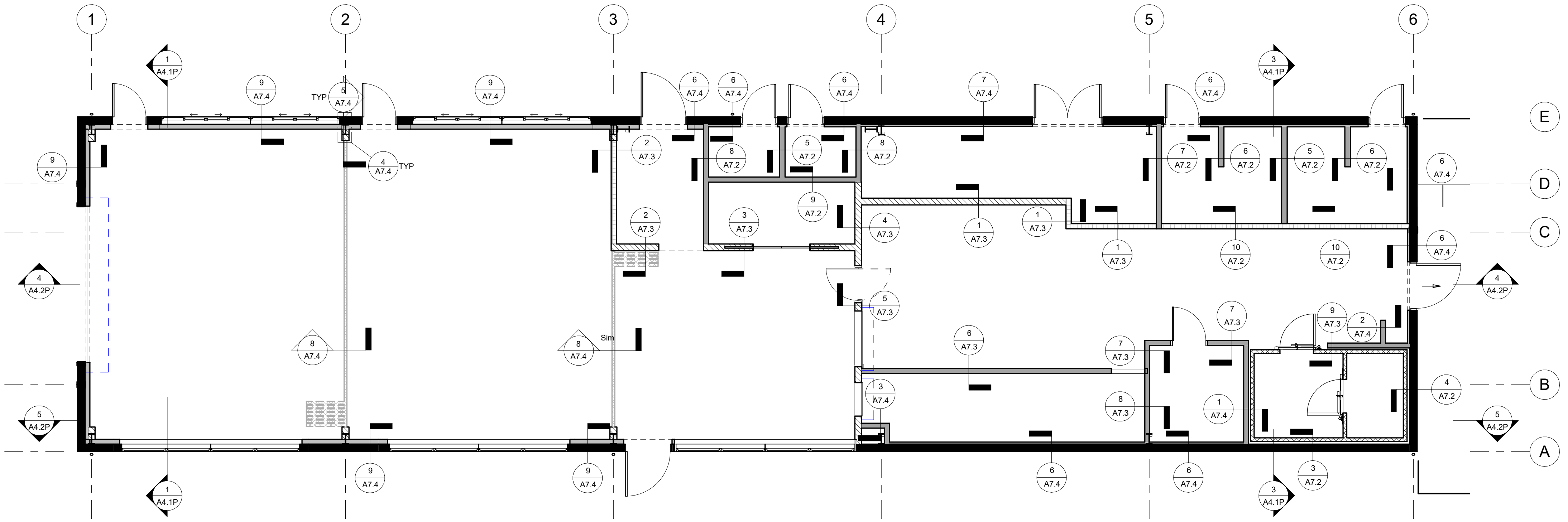
PROPOSED FLOOR PLAN

REVISIONS

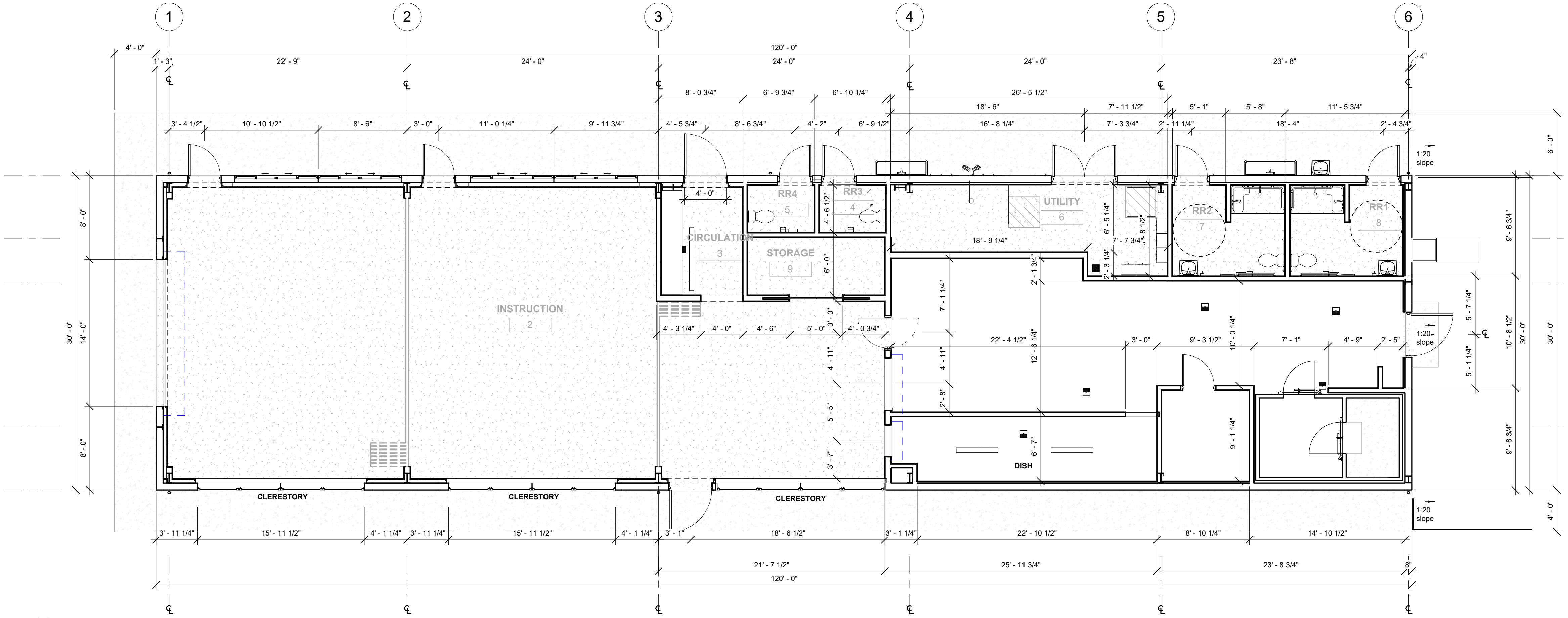
No.	Description	Date

DRAWN:	JC
CHECKED:	-
DATE:	01.26.2024
SCALE:	As indicated
JOB No.:	23-2-12-SCOUTS
SHEET No.:	

A2.1P


1
2
3
4
5
6
A
B
C
D
E
A4.1P
A4.2P
A7.2
A7.3
A7.4
TYP
Sim

② WALL REFERENCE PLAN
3/16" = 1'-0"


1
2
3
4
5
6
A
B
C
D
E
120' - 0"
4' - 0"
1' - 3"
22' - 9"
24' - 0"
24' - 0"
24' - 0"
23' - 8"
4"
8' - 0 3/4"
6' - 9 3/4"
6' - 10 1/4"
26' - 5 1/2"
18' - 6"
7' - 11 1/2"
5' - 1"
5' - 8"
11' - 5 3/4"
3' - 4 1/2"
10' - 10 1/2"
8' - 6"
3' - 0"
11' - 0 1/4"
9' - 11 3/4"
4' - 5 3/4"
8' - 6 3/4"
4' - 2"
6' - 9 1/2"
16' - 8 1/4"
7' - 3 3/4"
2' - 11 1/4"
18' - 4"
2' - 4 3/4"
1:20 slope
RR4
5
RR3
4
UTILITY
6
RR2
7
RR1
8
CIRCULATION
3
STORAGE
9
INSTRUCTION
2
DISH
CLERESTORY
CLERESTORY
CLERESTORY
3' - 11 1/4"
15' - 11 1/2"
4' - 1 1/4"
3' - 11 1/4"
15' - 11 1/2"
4' - 1 1/4"
3' - 1"
18' - 6 1/2"
3' - 1 1/4"
22' - 10 1/2"
8' - 10 1/4"
14' - 10 1/2"
21' - 7 1/2"
25' - 11 3/4"
23' - 8 3/4"
8"
120' - 0"
30' - 0"
14' - 0"
8' - 0"
8' - 0"
6' - 0"
4' - 0"
9' - 6 3/4"
10' - 8 1/2"
9' - 8 3/4"
30' - 0"
5' - 7 1/4"
5' - 1 1/4"
18' - 9 1/4"
7' - 7 3/4"
22' - 4 1/2"
12' - 6 1/4"
10' - 0 1/4"
9' - 1 1/4"
6' - 7"
9' - 3 1/2"
7' - 1"
4' - 9"
2' - 5"
4' - 3 1/4"
4' - 0"
4' - 6"
5' - 0"
4' - 0 3/4"

① DIMENSION PLAN
3/16" = 1'-0"

topa architecture

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Tel: 408.320.0248

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STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER

26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

SHEET TITLE:

DIMENSION & WALL DETAIL PLANS

REVISIONS

No.	Description	Date

DRAWN: JC
CHECKED: -
DATE: 01.26.2024
SCALE: 3/16" = 1'-0"
JOB No.: 23-2-12-SCOUTS
SHEET No.:

A2.2P

LIGHTING FIXTURE SCHEDULE

Type Mark	Count	Description	Manufacturer	Model
A	33	48" INTERCONNECTED LED LINER PENDANT	LITHONIA	GRAD LINEAR GRD SERIES
B	18	2X2 LED TROFFER LIGHT	LITHONIA OR EQUAL	GTL SERIES 2GTL
C	4	LED LENS REF 6" LIGHT	BY REF MANF	
D	6	2" CAN RECESSED W/ WATER PROOF LENS	LITHONIA	LDN 6-35-10-L06-AR-LS-120
EX	6	EXIT SIGN WITH GREEN LETTERS AND UNIVERSAL MOUNTING	LITHONIA OR EQUAL	QUANTUM LQM
F	2	12' ESSENCE CEILING FAN W/ LIGHT KITAND WALL REMOTE CONTROL BY BIG ASS FANS	Big Ass Fans	Essence Series
G	3	PENDANT LINEAR FIXTURE WITH RESISTENT LENS	LITHONIA	ZLID-L48-3000LM-120
H	2	RESTROOM SCONCE OVER SINK	PORTFOLIO	FV09-041-5
J	13	EXTERIOR WALL PACK	ALLURE	13" HIGH BLACK LED MOTION SENSOR OUTDOOR WALL LIGHT
K	1	SURFACE MOUNT LINEAR FIXTURE WITH PROTECTIVE LENS	LITHONIA	ZLID-L48-3000LM-120
L	1	6' ESSENCE CEILING FAN W/ LIGHT KITAND WALL REMOTE CONTROL BY BIG ASS FANS	Big Ass Fans	Essence Series

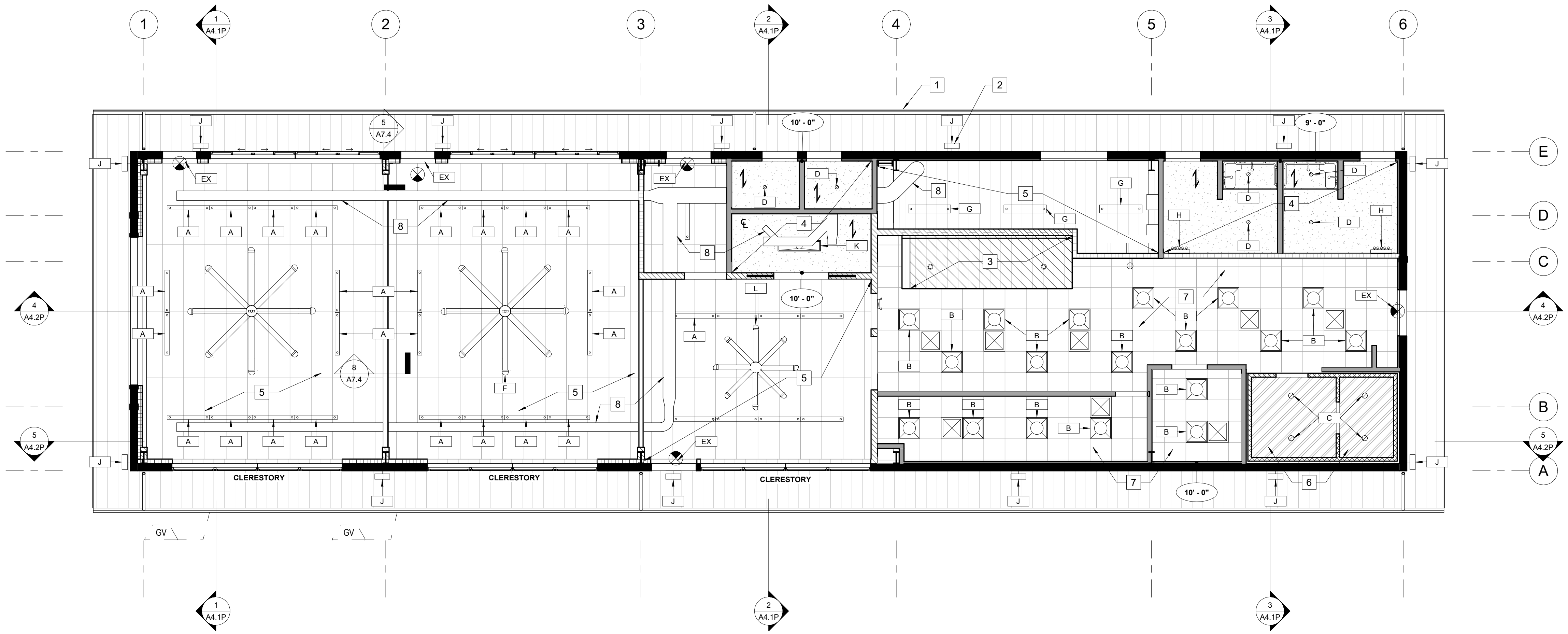
COUNTY STAMP

PROPOSED RCP KEYNOTES

Note Number	Note Text
1	EAVE ABOVE, SEE ELEVATIONS
2	EXTERIOR LIGHTING, SEE ELEVATIONS
3	NEW TYPE I HOOD WITH INTEGRAL LIGHTING AND ANSL FIRE SUPPRESSION
4	GYP. BD CEILING O/ 16" OC 3 5/8" MTL JOISTS, SMOOTH FINISH AND WASHABLE PAINT
5	VAULTED CEILING AT ROOF FRAMING ABOVE WITH SOUND INSULATION PANEL ABOVE
6	REFRIGERATION PANEL CEILING BY MANF
7	TBAR CEILING AT 10'-0"
8	EXPOSED DUCTWORK FROM ABOVE, S.M.D.

GENERAL NOTES

1. AT ANY TIME THE BUILDING IS OCCUPIED, THE MEANS OF EGRESS SHALL BE ILLUMINATED AT AN INTENSITY OF NOT LESS THAN 1 FOOT CANDLE AT FLOOR LEVEL. PROVIDE BATTERY BACKUP AS NEEDED PER ELECTRICAL PLAN
2. FOR LOCATIONS OF EMERGENCY BATTERY BACK UP FIXTURES SED
3. ⇄ INDICATES CEILING JOIST DIRECTION



① 1ST FLOOR RCP
3/16" = 1'-0"

PROJECT TRUE
NORTH

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1150 North First St. Ste. 140,
San Jose, CA 95112
Tel: 408.320.0248

GENERAL NOTES:

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PROJECT:

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CONTRACTOR

SHEET TITLE:

PROPOSED RCP

REVISIONS

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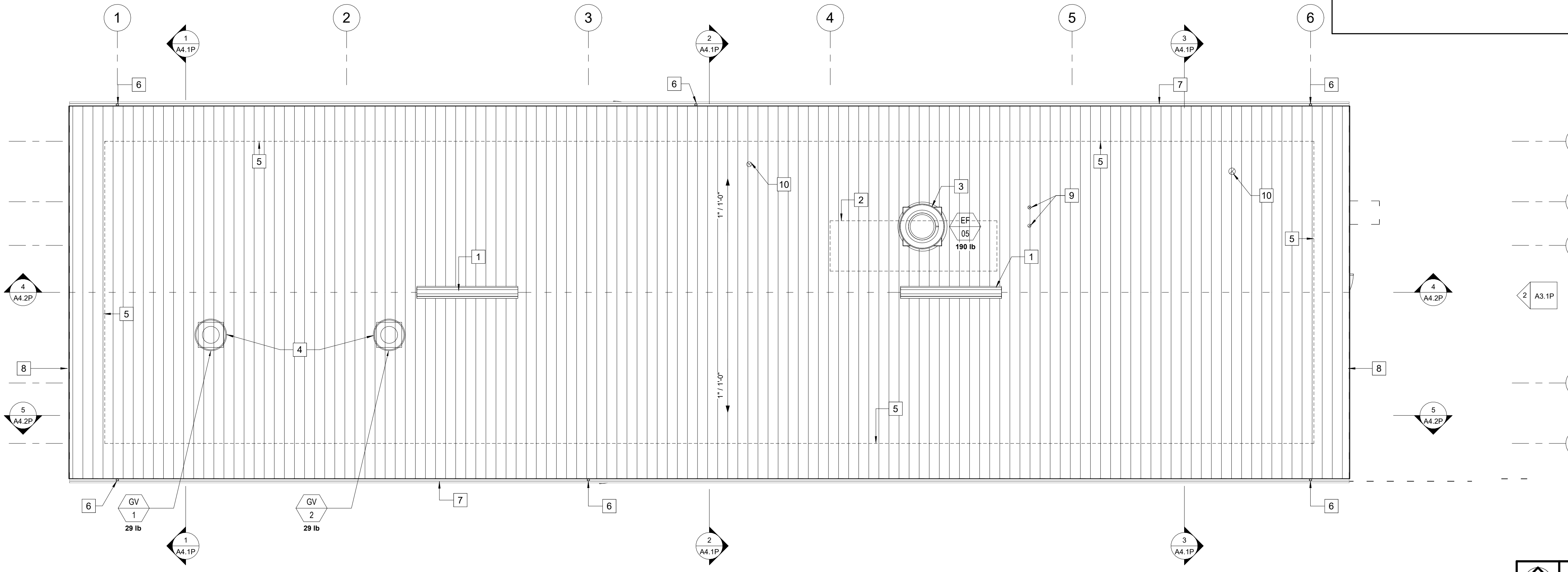

① ROOF PROPOSED PLAN
3/16" = 1'-0"

COUNTY STAMP

ROOF KEYNOTES

Note Number	Note Text
1	APPROX LOCATION OF 9"X10' RIDGE VENT, CONFIRM WITH MECHANICAL FINAL LOCATION IS 10' AWAY FROM ALL OTHER EXHAUST DAMPER BY MANF
2	GREASE HOOD BELOW ~1,200lb HANGING WEIGHT
3	(N) EXHAUST FAN WITH NON MOVING PARTS TO BE PAINTED TO MATCH ROOF WITH EPOXY WASHABLE EXTERIOR PAINT, S.M.D
4	(N) ROOF TOP EXHAUST NON MOVING PARTS TO BE PAINTED TO MATCH ROOF WITH EPOXY WASHABLE EXTERIOR PAINT, S.M.D
5	WALL LINE BELOW
6	(N) DOWN SPOUT
7	(N) GUTTER
8	FASCIA BY BUILDING MANF
9	PLUMBING VENT PIPE, S.P.D.
10	RESTROOM EXHAUST FAN VENT, S.M.D.

GENERAL NOTES

1. SEE DOOR SCHEDULE FOR TREATMENT OF DOORS TO REMAIN AND FOR ALL (N) DOORS
2. SEE WINDOW SCHEDULE FOR TREATMENT OF WINDOWS TO REMAIN AND FOR ALL (N) WINDOWS
3. SEE FINISH PLAN FOR ALL (N) FINISHES
4. SEE EQUIPMENT PLAN FOR LOCATIONS AND SPECS OF (N) AND (E) EQUIPMENT
5. SED FOR POWER AND DATA OUTLET LOCATIONS
6. SSD FOR FLOOR FRAMING PLAN AND LOCATIONS OF STRUCTURAL COLUMNS

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PROPOSED ROOF PLAN

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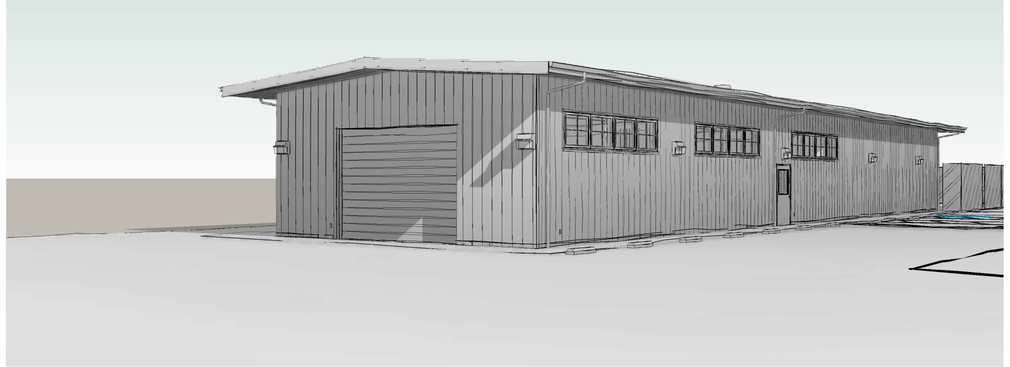
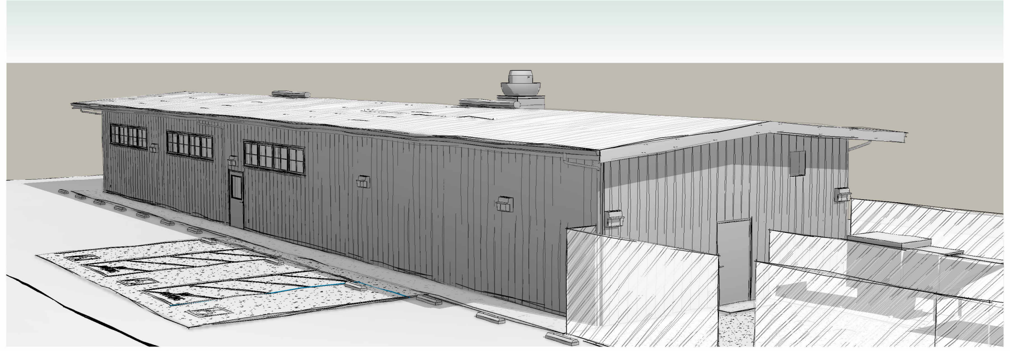
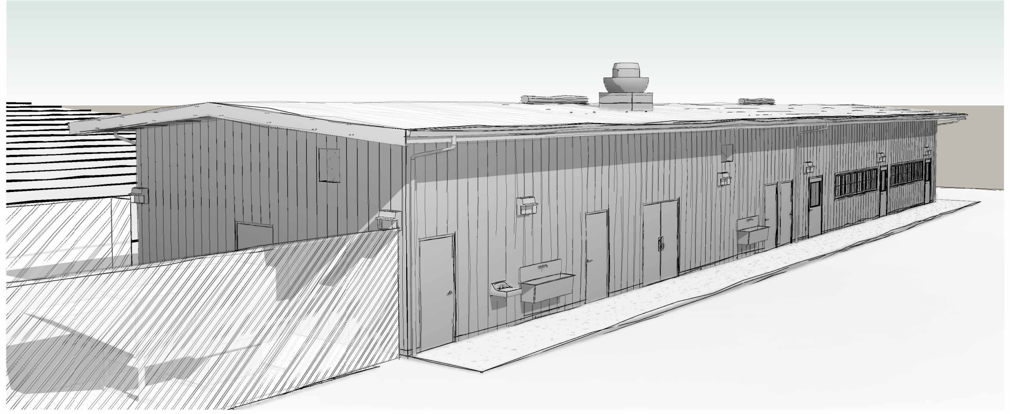


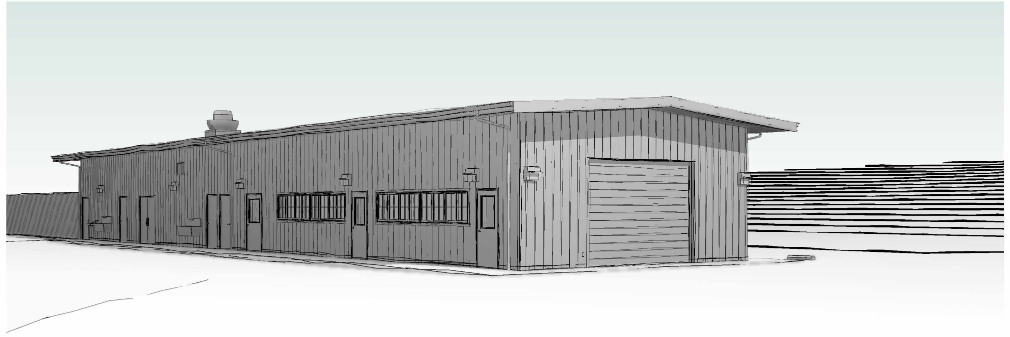
1 WEST



2 SOUTH



3 EAST



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EXTERIOR PERSPECTIVES

REVISIONS

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A3.0P

LEGEND

P-1	DUNN EDWARDS INTERIOR PAINT ADOBE DEC726 EGGSHELL
P-2	DUNN EDWARDS INTERIOR PAINT BAJA WHITE DEC722 EGGSHELL
P-3	DUNN EDWARDS INTERIOR PAINT TEDDY BEAR DE6131 EGGSHELL
P-4	DUNN EDWARDS INTERIOR PAINT COURTYARD GREEN DEC776 EGGSHELL
P-5	DUNN EDWARDS INTERIOR PAINT OLD BOOT DE6133 EGGSHELL
P-6	DUNN EDWARDS EXTERIOR PAINT BISQUE TAN DE6157 SEMIGLOSS O/ PRIMER
P-7	DUNN EDWARDS EXTERIOR PAINT SWISS COFFEE DEW341 SEMIGLOSS O/ PRIMER
P-8	DUNN EDWARDS INTERIOR PAINT BLACK DEA002 MATTE
P-9	DUNN EDWARDS EXTERIOR PAINT EVERGREEN FOREST DET534 SEMIGLOSS O/ PRIMER
S-1	TBD WOOD FINISH EXTERIOR STAIN -CLEAR
S-2	TBD WOOD FINISH INTERIOR STAIN -CLEAR

PAINT APPLICATION SCHEDULE

EXTERIOR PAINT:		
BODY:	DE6157 - BISQUE TAN	P-6
GUTTERS:	DET534 - EVERGREEN FOREST	P-9
DOWNSPOUTS:	DE6157 - BISQUE TAN	P-6
TRIM & EAVES:	DEW341 - SWISS COFFEE	P-7
DOORS:	DE6157 - BISQUE TAN	P-6
INTERIOR FINISHES:		
WALLS:	DE726 - ADOBE	P-1
CEILING:	DEC722 - BAJA WHITE	P-2
TRIM & BASE:	DE6131 - TEDDY BEAR	P-3
DOORS:	DE726 - ADOBE	P-1
STEEL:	WOOD WRAPPED	S-2
WOOD HARDWARE:	DEA002 - MATTE BLACK	P-8
ACOUSTIC PANEL:	DE726 - ADOBE	P-1
WAINSCOT:	UNPAINTED	
ACCENT:	DEC776 - COURTYARD GREEN	P-4
MODERN FOLD PARTITIONS:		
COVERING:	HYTEXRIB - COLOR TBD	
TRIM:	DE6131 - TEDDY BEAR	P-3

EXTERIOR COLORS

P-6	DUNN EDWARDS EXTERIOR PAINT BISQUE TAN DE6157 SEMIGLOSS O/ PRIMER	BISQUE TAN
P-7	DUNN EDWARDS EXTERIOR PAINT SWISS COFFEE DEW341 SEMIGLOSS O/ PRIMER	SWISS COFFEE
P-9	DUNN EDWARDS EXTERIOR PAINT EVERGREEN FOREST DET534 SEMIGLOSS O/ PRIMER	EVERGREEN FOREST

INTERIOR COLORS

P-1	DUNN EDWARDS INTERIOR PAINT ADOBE DEC726 EGGSHELL	ADOBE
P-2	DUNN EDWARDS INTERIOR PAINT BAJA WHITE DEC722 EGGSHELL	BAJA WHITE
P-3	DUNN EDWARDS INTERIOR PAINT TEDDY BEAR DE6131 EGGSHELL	TEDDY BEAR
P-4	DUNN EDWARDS INTERIOR PAINT COURTYARD GREEN DEC776 EGGSHELL	COURTYARD GREEN

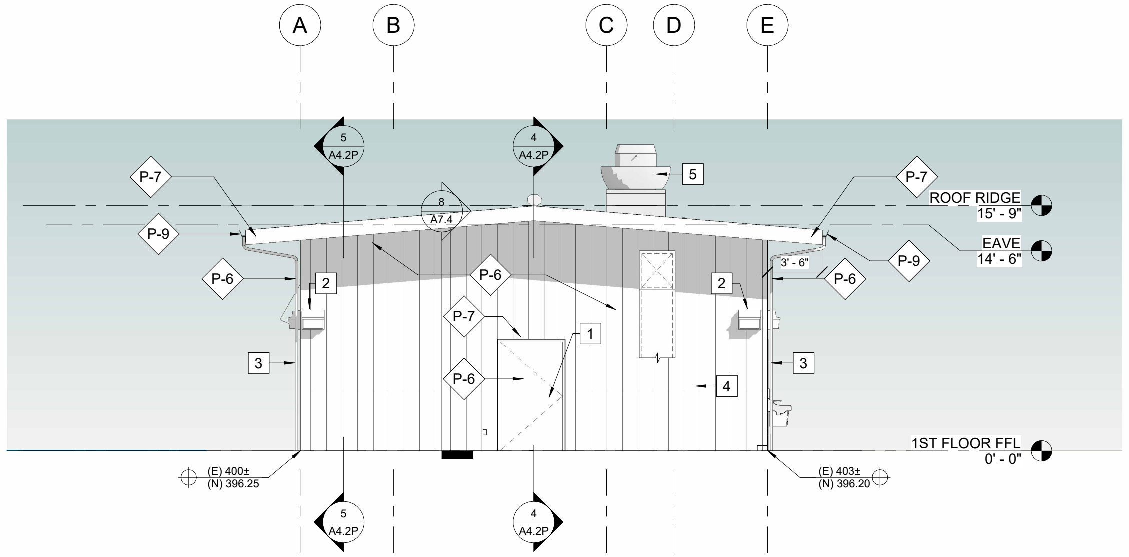
COUNTY STAMP

EXTERIOR ELEVATION KEYNOTES

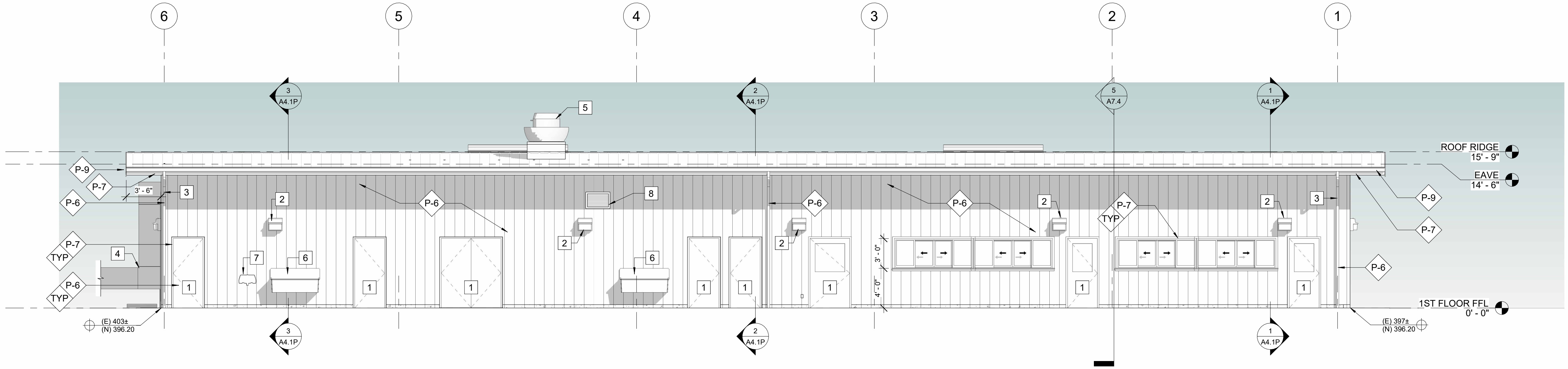
Note Number	Note Text
1	(N) DOOR, SEE DOOR SCHEDULE
2	EXTERIOR LIGHTING, S.E.D
3	DOWN SPOUTS TO OVERSIZED SLAB PENETRATION, SCD FOR DRAIN PLAN
4	MECHANICAL UNIT WITH INSULATED EXTERIOR DUCT WORK TO WALL ABOVE CEILING LEVEL
5	(N) EXHAUST FAN WITH NON MOVING PARTS TO BE PAINTED TO MATCH ROOF WITH EPOXY WASHABLE EXTERIOR PAINT, S.M.D
6	SINK. S.P.D
7	HAND SINK. S.P.D
8	NEW AIR INTAKE VENT WITH BUG SCREEN AND FILTER, S.M.D.
9	(N) INSULATED ROLL-UP DOOR BY BLDG MANF

GENERAL NOTES

1. AT ANY TIME THE BUILDING IS OCCUPIED, THE MEANS OF EGRESS SHALL BE ILLUMINATED AT AN INTENSITY OF NOT LESS THAN 1 FOOT CANDLE AT FLOOR LEVEL. PROVIDE BATTERY BACKUP AS NEEDED PER ELECTRICAL PLAN
2. FOR LOCATIONS OF EMERGENCY BATTERY BACK UP FIXTURES SED



② EAST EXTERIOR ELEVATION
3/16" = 1'-0"



① NORTH EXTERIOR ELEVATION
3/16" = 1'-0"

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CONTRACTOR

SHEET TITLE:

EXTERIOR ELEVATIONS

REVISIONS

No.	Description	Date

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DATE:	01.26.2024
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COUNTY STAMP

EXTERIOR COLORS

P-6 DUNN EDWARDS EXTERIOR PAINT BISQUE TAN DE6157 SEMIGLOSS O/ PRIMER	BISQUE TAN
P-7 DUNN EDWARDS EXTERIOR PAINT SWISS COFFEE DEW341 SEMIGLOSS O/ PRIMER	SWISS COFFEE
P-9 DUNN EDWARDS EXTERIOR PAINT EVERGREEN FOREST DET534 SEMIGLOSS O/ PRIMER	EVERGREEN FOREST

INTERIOR COLORS

P-1 DUNN EDWARDS INTERIOR PAINT ADOBE DEC726 EGGSHELL	ADOBE
P-2 DUNN EDWARDS INTERIOR PAINT BAJA WHITE DEC722 EGGSHELL	BAJA WHITE
P-3 DUNN EDWARDS INTERIOR PAINT TEDDY BEAR DE6131 EGGSHELL	TEDDY BEAR
P-4 DUNN EDWARDS INTERIOR PAINT COURTYARD GREEN DEC776 EGGSHELL	COURTYARD GREEN

LEGEND

P-1 DUNN EDWARDS
INTERIOR PAINT
ADOBE DEC726
EGGSHELL

P-3 DUNN EDWARDS
INTERIOR PAINT
TEDDY BEAR DE6131
EGGSHELL

P-5 DUNN EDWARDS
INTERIOR PAINT
OLD BOOT DE6133
EGGSHELL

P-7 DUNN EDWARDS
EXTERIOR PAINT
SWISS COFFEE DEW341
SEMIGLOSS O/ PRIMER

P-9 DUNN EDWARDS
EXTERIOR PAINT
EVERGREEN FOREST DET534
SEMIGLOSS O/ PRIMER

S-2 TBD WOOD FINISH
INTERIOR STAIN
-CLEAR

P-2 DUNN EDWARDS
INTERIOR PAINT
BAJA WHITE DEC722
EGGSHELL

P-4 DUNN EDWARDS
INTERIOR PAINT
COURTYARD GREEN DEC776
EGGSHELL

P-6 DUNN EDWARDS
EXTERIOR PAINT
BISQUE TAN DE6157
SEMIGLOSS O/ PRIMER

P-8 DUNN EDWARDS
INTERIOR PAINT
BLACK DEA002
MATTE

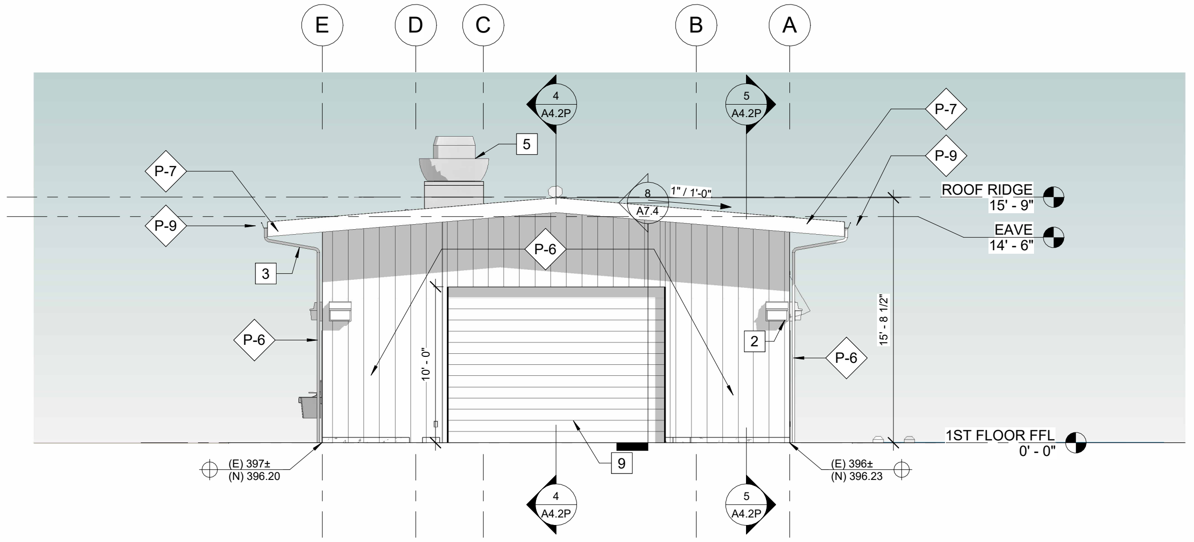
S-1 TBD WOOD FINISH
EXTERIOR STAIN
-CLEAR

PAINT APPLICATION SCHEDULE

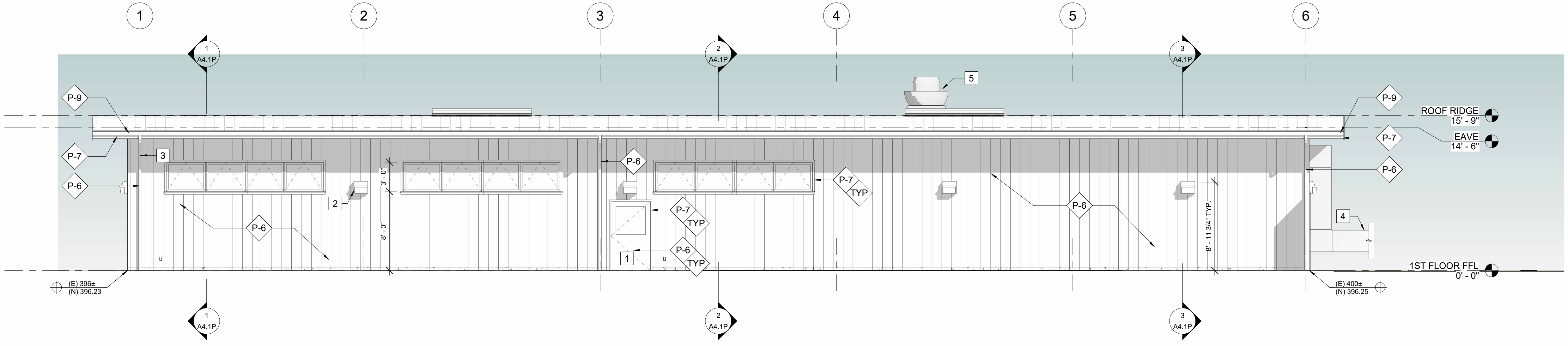
EXTERIOR PAINT:		
BODY:	DE6157 - BISQUE TAN	P-6
GUTTERS:	DET534 - EVERGREEN FOREST	P-9
DOWNSPOUTS:	DE6157 - BISQUE TAN	P-6
TRIM & EAVES:	DEW341 - SWISS COFFEE	P-7
DOORS:	DE6157 - BISQUE TAN	P-6
INTERIOR FINISHES:		
WALLS:	DE726 - ADOBE	P-1
CEILING:	DEC722 - BAJA WHITE	P-2
TRIM & BASE:	DE6131 - TEDDY BEAR	P-3
DOORS:	DE726 - ADOBE	P-1
STEEL:	WOOD WRAPPED	S-2
WOOD HARDWARE:	DEA002 - MATTE BLACK	P-8
ACOUSTIC PANEL:	DE726 - ADOBE	P-1
WAINSCOT:	UNPAINTED	
ACCENT:	DEC776 - COURTYARD GREEN	P-4
MODERN FOLD PARTITIONS:		
COVERING:	HYTEXRIB - COLOR TBD	
TRIM:	DE6131 - TEDDY BEAR	P-3

EXTERIOR ELEVATION KEYNOTES

Note Number	Note Text
1	(N) DOOR, SEE DOOR SCHEDULE
2	EXTERIOR LIGHTING, S.E.D
3	DOWN SPOUTS TO OVERSIZED SLAB PENETRATION, SCD FOR DRAIN PLAN
4	MECHANICAL UNIT WITH INSULATED EXTERIOR DUCT WORK TO WALL ABOVE CEILING LEVEL
5	(N) EXHAUST FAN WITH NON MOVING PARTS TO BE PAINTED TO MATCH ROOF WITH EPOXY WASHABLE EXTERIOR PAINT, S.M.D
6	SINK. S.P.D
7	HAND SINK. S.P.D
8	NEW AIR INTAKE VENT WITH BUG SCREEN AND FILTER, S.M.D.
9	(N) INSULATED ROLL-UP DOOR BY BLDG MANF



2 WEST EXTERIOR ELEVATION
3/16" = 1'-0"



3 SOUTH EXTERIOR ELEVATION
3/16" = 1'-0"

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CONTRACTOR

SHEET TITLE:

EXTERIOR ELEVATIONS

REVISIONS

No.	Description	Date

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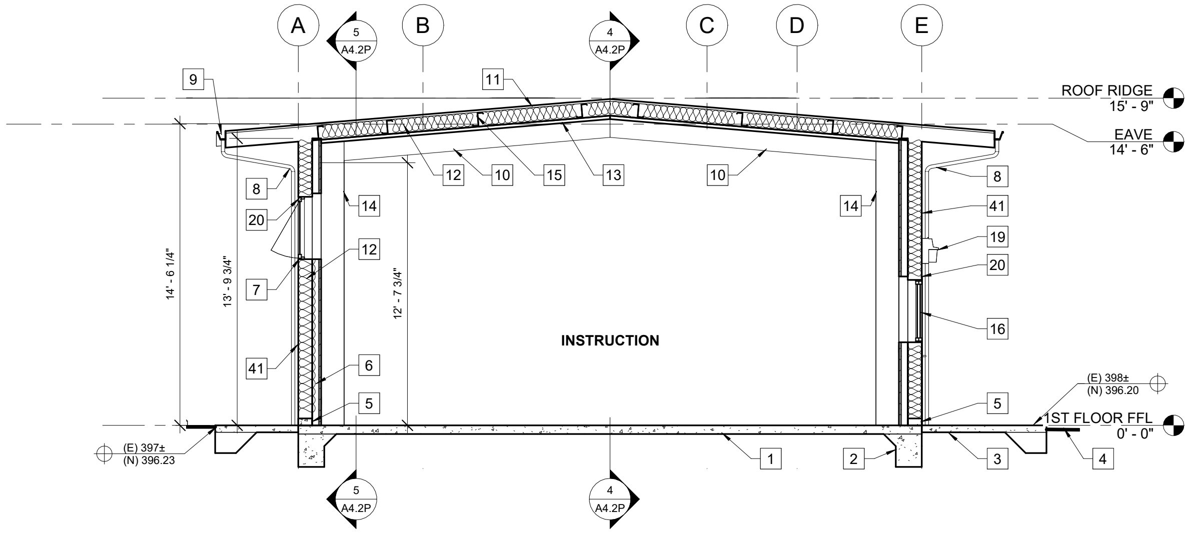
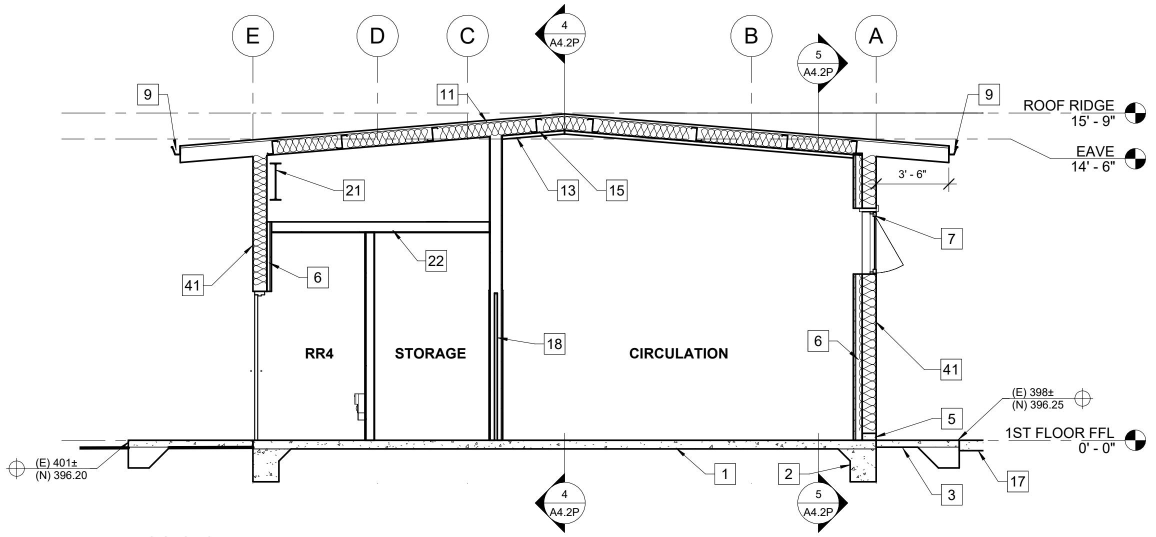
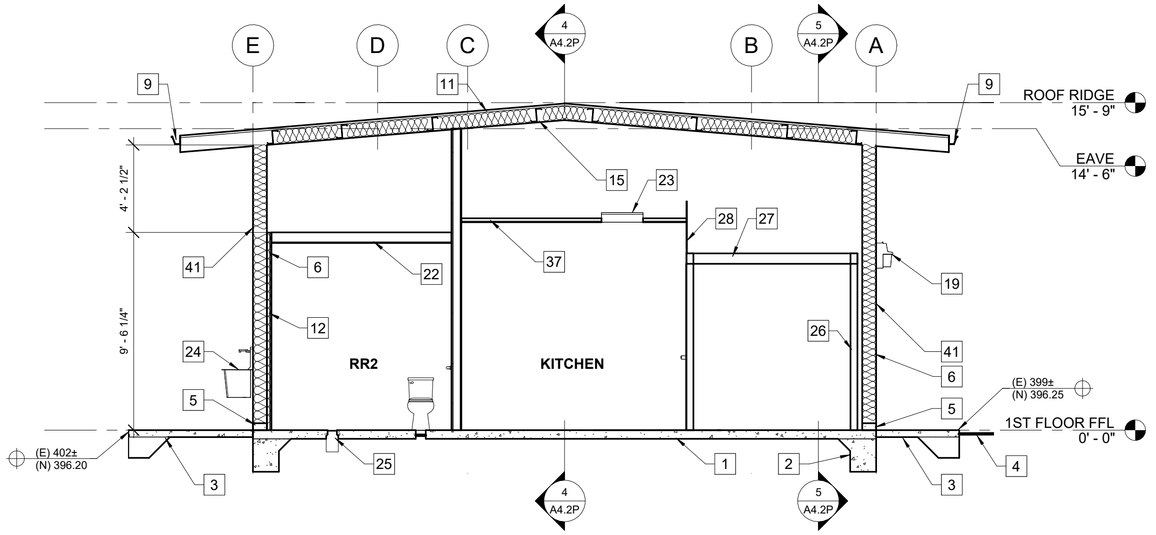

A
5 A4.2P
B
4 A4.2P
C
D
E
ROOF RIDGE 15' - 9"
EAVE 14' - 6"
1ST FLOOR FFL 0' - 0"
9
11
8
20
7
41
12
10
15
13
14
6
5
19
16
1
2
3
4
14' - 6 1/4"
13' - 9 3/4"
12' - 7 3/4"
INSTRUCTION
(E) 397±
(N) 396.23
(E) 398±
(N) 396.20

① BUILDING SECTION 1
1/4" = 1'-0"


E
D
C
4 A4.2P
B
5 A4.2P
A
ROOF RIDGE 15' - 9"
EAVE 14' - 6"
1ST FLOOR FFL 0' - 0"
3' - 6"
9
11
21
13
15
22
41
6
18
7
5
1
2
3
17
RR4
STORAGE
CIRCULATION
(E) 401±
(N) 396.20
(E) 398±
(N) 396.25

② BUILDING SECTION 2
1/4" = 1'-0"


E
D
C
4 A4.2P
B
5 A4.2P
A
ROOF RIDGE 15' - 9"
EAVE 14' - 6"
1ST FLOOR FFL 0' - 0"
4' - 2 1/2"
9' - 6 1/4"
9
11
15
23
28
27
37
22
6
41
12
19
26
24
5
25
1
2
3
4
RR2
KITCHEN
(E) 402±
(N) 396.20
(E) 399±
(N) 396.25

③ BUILDING SECTION 3
1/4" = 1'-0"

COUNTY STAMP

PROPOSED SECTION KEYNOTES

Note Number	Note Text
1	5" CONCRETE SLAB SEE SSD
2	THICKENED EDGE FOOTING SEE SSD
3	4" THICK PERMIABLE CONCRETE SIDEWALK WITH THICKENED EDGE. MAX 1" DROP TO SOFTSCAPE 1% SLOPE AWAY FROM BUILDING
4	NEW GRAVEL PAD FOR PARKING AND GENERAL CIRCULATION
5	4"x8" CURB WHERE INDIATED ON 2/A2.1
6	NEW INTERIOR FURRED WALL SEE WALL TYPES AND FINISH SCHED
7	NEW AWNING WINDOW SEE WIND SCHED
8	DOWNSPOUT PER MANF SHEET R9
9	GUTTER PER MANF SHEET R9
10	WOOD WRAPPED STEEL BEAM
11	CORRUGATED ROOF PANEL O/ INSL BY MANF
12	SPRAY INSULATION TO FILL CAVITY TO INTERIOR FURRING AFTER MANF INSL.
13	ACOUSTIC PANEL O/3/8" PLY TO 18GA 2x BLOCKING @ 24" O.C.
14	WOOD WRAPPED STEEL COLUMN
15	8" Z PURLIN PER BUILDING MANF
16	4"x8" CURB WHERE INDIATED ON 2/A2.1
17	6"CONCRETE PAD FOR ACCESSIBLE PARKING 2% MAX SLOPE AL DIRECTIONS
18	DOUBLE POCKET DOOR TO STORAGE
19	EXTERIOR LIGHTING, SEE ELEVATIONS
20	WINDOW HEAD AND FRAMING PER OPENING DETAIL SHEET R7 & R8
21	STEEL PORTAL FRAMING SEE SHEET E13
22	GYP BD CEILING ON 6" METAL STUD JOIST @16" O.C.
23	LIGHTING, S.E.D.
24	WALL MOUNTED TROUGH SINK, S.P.D.
25	PLUMBING DRAIN, S.P.D.
26	REFRIGERATION WALL PANEL
27	REFRIGERATION PANEL CEILING BY MANF
28	STAINLESS STEEL INFILL PANEL BY REF MANF
29	4" THICK PERMIABLE CONCRETE SIDEWALK WITH 5% SLOPE AWAY FROM BUILDING
30	NEW 6" PERMIABLE TRAFFIC PAD FOR DELIVERIES
31	EXTERIOR DOOR, SEE DOOR SCHED AND PROVIDE TRANSITION STRIP @ FLOOR MAX 3/8" HT.
32	ROLL UP DOOR BY BUILDING MANF
33	OPERABLE ROOF RIDGE VENT FIELD CONFIRM LOCATION WITH ARCH/OWNER PRIOR TO CUTTING OPENING
34	CEILING FAN, SEE R.C.P.
36	PROVIDE FLOOR MOUNTED SEAL FOR ROLL UP WEATHER SEAL
37	TBAR CEILING WITH WASHABLE TILES, SEE R.C.P.
38	GRADE BEAM PER S.S.D.
39	ELLIASON CRASH DOORS WITH HEAVY DUTY FRAME BY MANF
40	RAISED FLOOR WITH RAMP IN FREEZER BY REF MANF
41	CORRUGATED WALL PANEL BY BUILDING MANF WITH DRIP EDGE AND TOP TRIMMED TO FIT W/ FLASHING, SEER7-12

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Tel: 408.320.0248

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STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER
26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

SHEET TITLE:

BUILDING SECTIONS

REVISIONS

No.	Description	Date

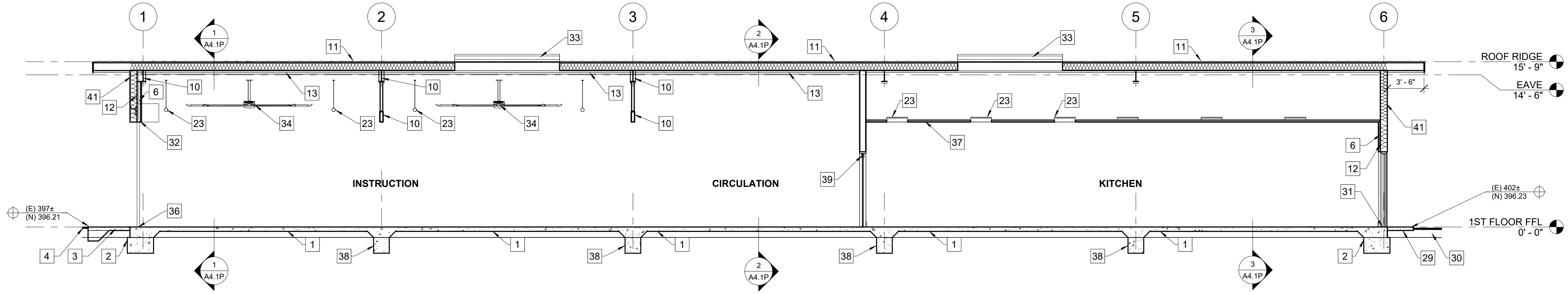
DRAWN:	JC
CHECKED:	-
DATE:	01.26.2024
SCALE:	1/4" = 1'-0"
JOB No.:	23-2-12-SCOUTS
SHEET No.:	

A4.1P

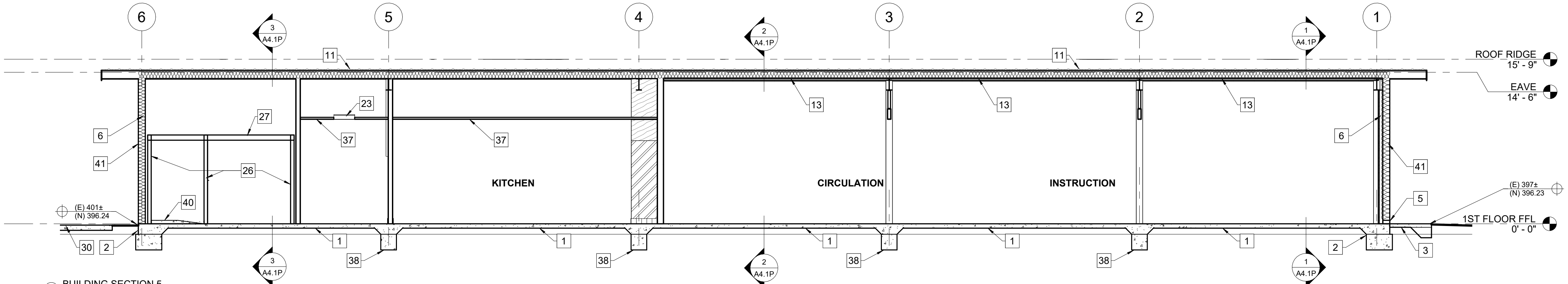
PROPOSED SECTION KEYNOTES

Note Number	Note Text
1	5" CONCRETE SLAB SEE SSD
2	THICKENED EDGE FOOTING SEE SSD
3	4" THICK PERMIABLE CONCRETE SIDEWALK WITH THICKENED EDGE. MAX 1" DROP TO SOFTSCAPE 1% SLOPE AWAY FROM BUILDING
4	NEW GRAVEL PAD FOR PARKING AND GENERAL CIRCULATION
5	4"x8" CURB WHERE INDIATED ON 2/A2.1
6	NEW INTERIOR FURRED WALL SEE WALL TYPES AND FINISH SCHED
7	NEW AWNING WINDOW SEE WIND SCHED
8	DOWNSPOUT PER MANF SHEET R9
9	GUTTER PER MANF SHEET R9
10	WOOD WRAPPED STEEL BEAM
11	CORRUGATED ROOF PANEL O/ INSL BY MANF
12	SPRAY INSULATION TO FILL CAVITY TO INTERIOR FURRING AFTER MANF INSL.
13	ACOUSTIC PANEL O/3/8" PLY TO 18GA 2x BLOCKING @ 24" O.C.
14	WOOD WRAPPED STEEL COLUMN
15	8" Z PURLIN PER BUILDING MANF
16	4"x8" CURB WHERE INDIATED ON 2/A2.1
17	6"CONCRETE PAD FOR ACCESSIBLE PARKING 2% MAX SLOPE AL DIRECTIONS
18	DOUBLE POCKET DOOR TO STORAGE
19	EXTERIOR LIGHTING, SEE ELEVATIONS
20	WINDOW HEAD AND FRAMING PER OPENING DETAIL SHEET R7 & R8
21	STEEL PORTAL FRAMING SEE SHEET E13
22	GYP BD CEILING ON 6" METAL STUD JOIST @16" O.C.
23	LIGHTING, S.E.D.
24	WALL MOUNTED TROUGH SINK, S.P.D.
25	PLUMBING DRAIN, S.P.D.
26	REFRIGERATION WALL PANEL
27	REFRIGERATION PANEL CEILING BY MANF
28	STAINLESS STEEL INFILL PANEL BY REF MANF
29	4" THICK PERMIABLE CONCRETE SIDEWALK WITH 5% SLOPE AWAY FROM BUILDING
30	NEW 6" PERMIABLE TRAFFIC PAD FOR DELIVERIES
31	EXTERIOR DOOR, SEE DOOR SCHED AND PROVIDE TRANSITION STRIP @ FLOOR MAX 3/8" HT.
32	ROLL UP DOOR BY BUILDING MANF
33	OPERABLE ROOF RIDGE VENT FIELD CONFIRM LOCATION WITH ARCH/OWNER PRIOR TO CUTTING OPENING
34	CEILING FAN, SEE R.C.P.
36	PROVIDE FLOOR MOUNTED SEAL FOR ROLL UP WEATHER SEAL
37	TBAR CEILING WITH WASHABLE TILES, SEE R.C.P.
38	GRADE BEAM PER S.S.D.
39	ELLIASON CRASH DOORS WITH HEAVY DUTY FRAME BY MANF
40	RAISED FLOOR WITH RAMP IN FREEZER BY REF MANF
41	CORRUGATED WALL PANEL BY BUILDING MANF WITH DRIP EDGE AND TOP TRIMMED TO FIT W/ FLASHING, SEER7-12

COUNTY STAMP


1
2
3
4
5
6
1 A4.1P
2 A4.1P
3 A4.1P
11
33
10
13
41
12
6
23
34
32
39
37
INSTRUCTION
CIRCULATION
KITCHEN
36
31
(E) 397±
(N) 396.21
(E) 402±
(N) 396.23
ROOF RIDGE
15' - 9"
EAVE
14' - 6"
3' - 6"
1ST FLOOR FFL
0' - 0"
4
3
2
1
38
29
30

④ BUILDING SECTION 4
3/16" = 1'-0"


6
5
4
3
2
1
3 A4.1P
2 A4.1P
1 A4.1P
11
13
23
27
37
6
41
26
40
KITCHEN
CIRCULATION
INSTRUCTION
(E) 401±
(N) 396.24
(E) 397±
(N) 396.23
ROOF RIDGE
15' - 9"
EAVE
14' - 6"
1ST FLOOR FFL
0' - 0"
30
2
1
38
5
3

⑤ BUILDING SECTION 5
3/16" = 1'-0"

topa architecture

1150 North First St. Ste. 140,
San Jose, CA 95112
Tel: 408.320.0248

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STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER

26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

SHEET TITLE:

BUILDING SECTIONS

REVISIONS

No.	Description	Date

DRAWN:	JC
CHECKED:	-
DATE:	01.26.2024
SCALE:	3/16" = 1'-0"
JOB No.:	23-2-12-SCOUTS
SHEET No.:	A4.2P

MIN. PLUMBING FIXTURES TABLE 422.1

OCCUPIED AREA		2,870 SQFT		TOTAL 104		
TOTAL USERS		FEMALE		131/2 < 52		
		MALE		131/2 > 52		
REQUIRED BY TABLE 422.1 - A-3						
WATER CLOSETS		LAVATORIES		URINALS	D.F.	SERVICE SINK
FEMALE 3:51-100	MALE 2:51-100	FEMALE 1:1-100	MALE 1:1-200	MALE 1:1-100	1:1-250	1
PROVIDED		PROVIDED		PROVIDED	PROVIDED	PROVIDED
4 UNISEX SINGLE USER		3 SHARED : 2 SINGLE USER		-	-	1

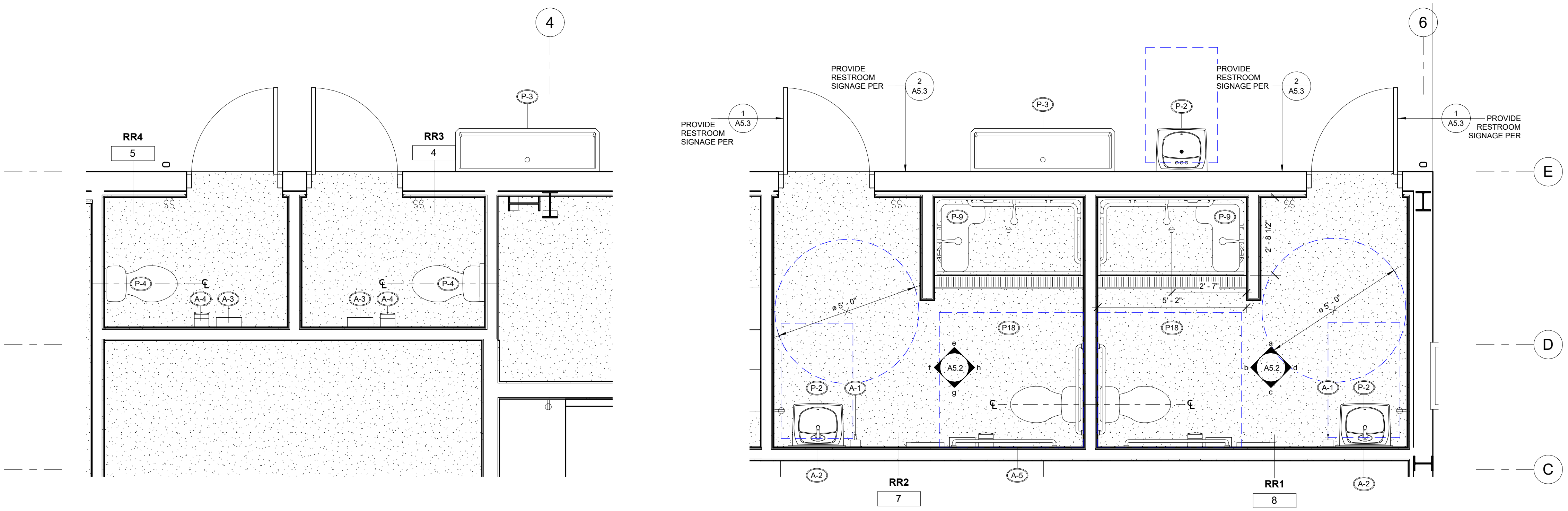
PLUMBING FIXTURE SCHEDULE

Type Mark	Count	Description	Manufacturer	Model	Remarks
P8	7	FLOOR SINK	Zurn	FD-2375	
P18	5	4' TRENCH DRAIN	Zurn	Z-886	Install in poured in place slab per mfr instructions
P-2	3	21-1/4 inch x 18-1/8 inch wall-mount/concealed arm carrier bathroom sink with 4 inch centerset faucet holes	KOHLER Co.	K-2005-0	
P-3	2	Trough Sink	Custom	TBD	
P-4	4	Windham™ 12 inch Rough-in Round-Front Toilet with Pro Force® Technology	Sterling	402015	
P-9	2	Barrier free fiberglass shower complete w/ valve, grab bar, and seat	Florestone	35-62H	w/ Delta R10000UNWS mixing valve & Delta T13290 Trim

RESTROOM ACCESSORIES SCHEDULE

Type Mark	Count	Description	Manufacturer	Model	Remarks
A-1	2	Dispenser, Soap, Wall Mounted	Bradley Corporation	6562	
A-2	2	Bobrick B-165 2436 Tempered Glass Channel Frame Mirror	Bobrick Washroom Equipment, Inc.	B-165 2436	
A-3	6	Bobrick B-254 Surface Mounted Sanitary Napkin Disposal	Bobrick Washroom Equipment, Inc.	B-254	
A-4	4	Bobrick B-4288 Contura Series Surface Mounted Multi-roll Toilet Tissue Dispenser	Bobrick Washroom Equipment, Inc.	B-4288	
A-5	2				
A-6	2	Single-handle centerset bathroom sink faucet with 0.5 gpm vandal-resistant aerator and red/blue indicator, less drain	KOHLER Co.	K-15199-4ND RA-CP	
A-10	3	Surface Mounted Toilet Seat Cover Dispenser	Bobrick	TBD	

COUNTY STAMP



① ENLARGED RESTROOM PLANS
1/2" = 1'-0"

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1150 North First St. Ste. 140,

San Jose, CA 95112

Tel: 408.320.0248

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STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER

26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

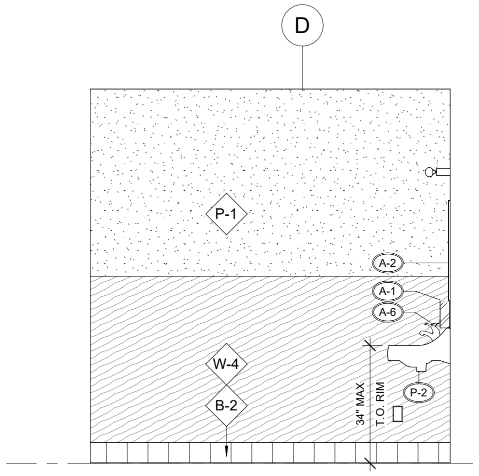
SHEET TITLE:

RESTROOM ENLARGED PLANS AND SCHEDULE

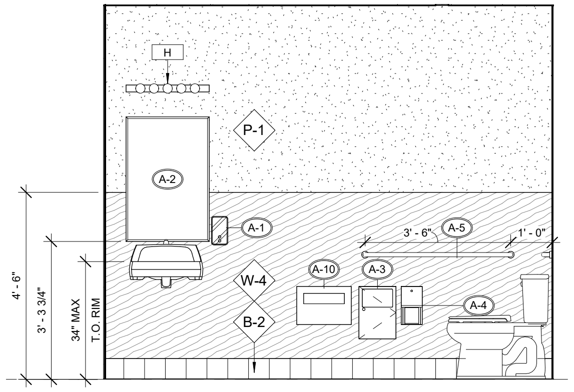
REVISIONS

No.	Description	Date

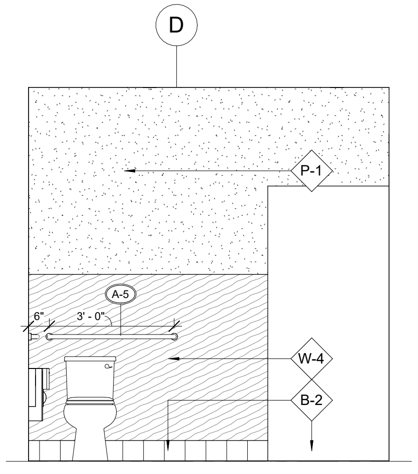
DRAWN:	PA
CHECKED:	JC
DATE:	01.26.2024
SCALE:	As indicated
JOB No.:	23-2-12-SCOUTS
SHEET No.:	A5.1


D
P-1
A-2
A-1
A-6
W-4
B-2
P-2
34" MAX
T.O. RIM

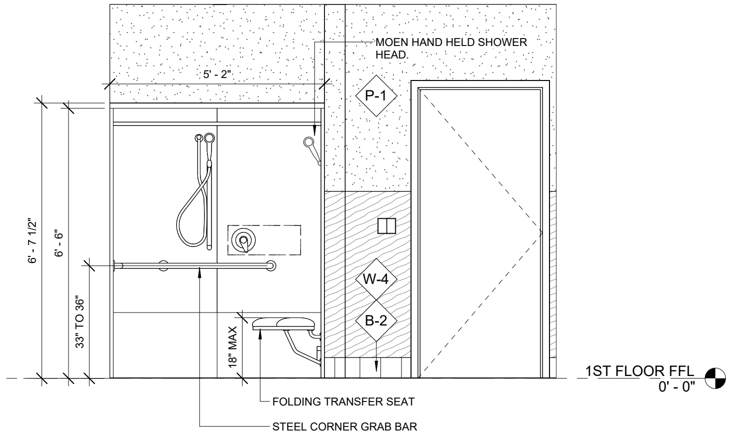
d RESTROOM 1 ELEVATION d
1/2" = 1'-0"


H
A-2
P-1
A-1
3' - 6"
A-5
1' - 0"
A-10
A-3
W-4
B-2
A-4
4' - 6"
3' - 3 3/4"
34" MAX
T.O. RIM

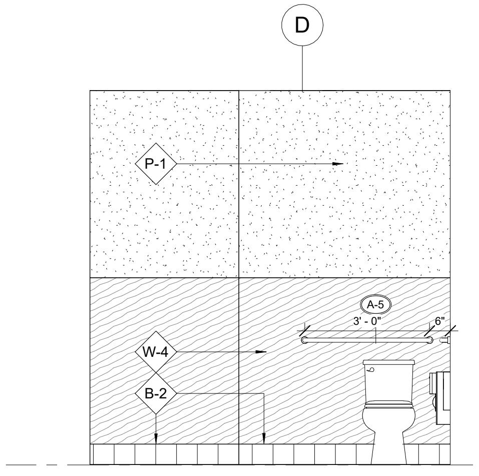
c RESTROOM 1 ELEVATION c
1/2" = 1'-0"


D
P-1
A-5
6"
3' - 0"
W-4
B-2

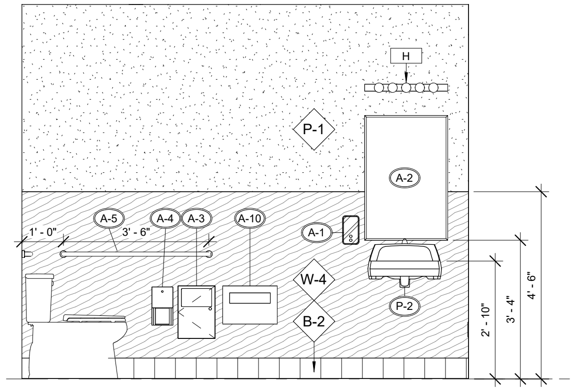
b RESTROOM 1 ELEVATION b
1/2" = 1'-0"


MOEN HAND HELD SHOWER HEAD.
5' - 2"
P-1
6' - 7 1/2"
6' - 6"
33" TO 36"
18" MAX
W-4
B-2
1ST FLOOR FFL
0' - 0"
FOLDING TRANSFER SEAT
STEEL CORNER GRAB BAR

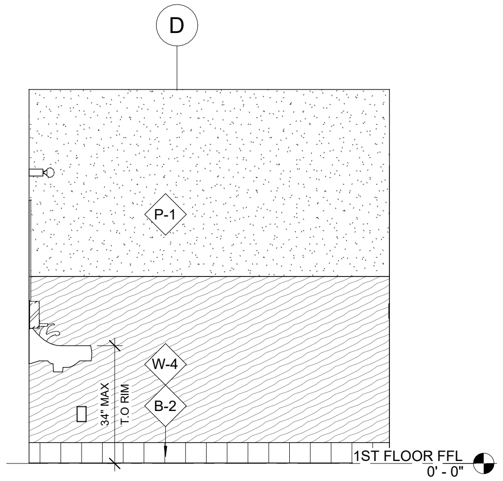
a RESTROOM 1 ELEVATION a
1/2" = 1'-0"


D
P-1
A-5
3' - 0"
6"
W-4
B-2

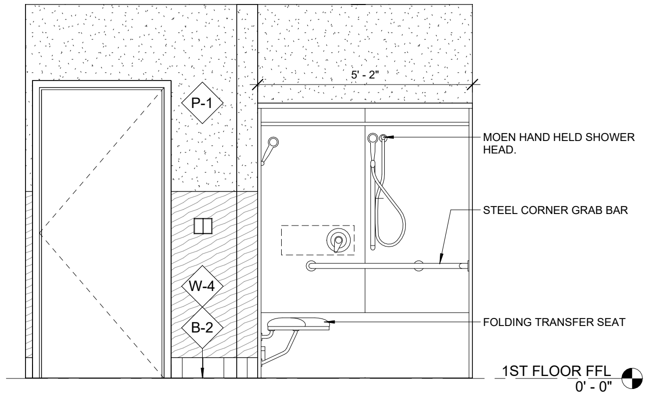
h RETROOM 2 ELEVATION h
1/2" = 1'-0"


H
P-1
A-2
1' - 0"
A-5
3' - 6"
A-4
A-3
A-10
A-1
W-4
B-2
P-2
2' - 10"
3' - 4"
4' - 6"

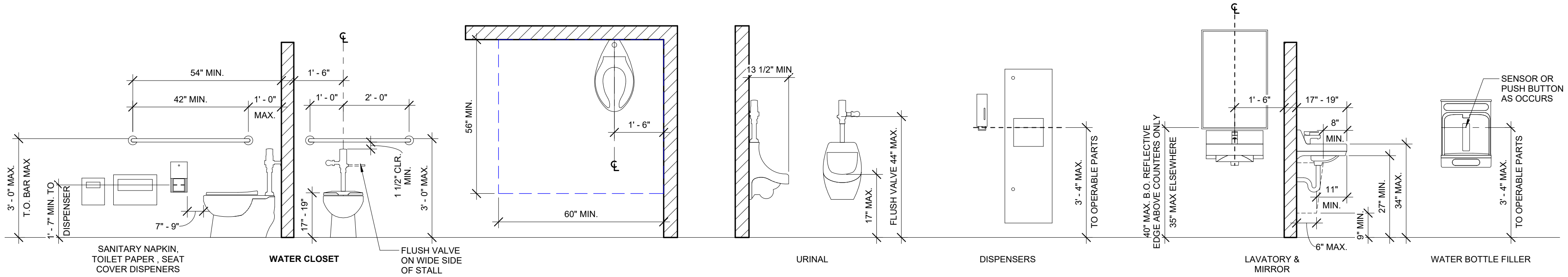
g RESTROOM 2 ELEVATION g
1/2" = 1'-0"


D
P-1
W-4
B-2
34" MAX
T.O RIM
1ST FLOOR FFL
0' - 0"

f RESTROOM 2 ELEVATION f
1/2" = 1'-0"


5' - 2"
P-1
MOEN HAND HELD SHOWER HEAD.
STEEL CORNER GRAB BAR
W-4
B-2
FOLDING TRANSFER SEAT
1ST FLOOR FFL
0' - 0"

e RESTROOM 2 ELEVATION e
1/2" = 1'-0"


54" MIN.
42" MIN.
1' - 0"
MAX.
3' - 0" MAX.
T.O. BAR MAX
1' - 7" MIN. TO DISPENSER
7" - 9"
SANITARY NAPKIN, TOILET PAPER , SEAT COVER DISPENERS
WATER CLOSET
1' - 6"
1' - 0"
2' - 0"
17" - 19"
1 1/2" CLR. MIN.
3' - 0" MAX.
FLUSH VALVE ON WIDE SIDE OF STALL
56" MIN.
1' - 6"
60" MIN.
13 1/2" MIN
17" MAX.
FLUSH VALVE 44" MAX.
URINAL
3' - 4" MAX.
TO OPERABLE PARTS
DISPENSERS
40" MAX. B.O. REFLECTIVE EDGE ABOVE COUNTERS ONLY
35" MAX ELSEWHERE
1' - 6"
17" - 19"
8"
MIN.
11"
MIN.
9" MIN.
27" MIN.
34" MAX.
6" MAX.
LAVATORY & MIRROR
SENSOR OR PUSH BUTTON AS OCCURS
3' - 4" MAX.
TO OPERABLE PARTS
WATER BOTTLE FILLER

NOTES AT ACCESSIBLE TOILET STALL:

- WHEN PROVIDED, COAT HOOKS SHALL BE MOUNTED AT 48" MAX A.F.F.
- DOOR PULLS (LOOP OR U-SHAPE HANDLE) SHALL BE MOUNTED AT BOTH SIDES OF DOOR
- SLIDE TYPE OR FLIP OVER LATCH (@ 34"-44" A.F.F.) AT ACCESSIBLE STALL DOORS
- DOOR SHALL BE SELF CLOSING
- REFER TO PLANS FOR DETAILED INFORMATION SPECIFIC TO THE PROJECT. ALL DIMENSIONS ARE TO FACE OF FINISH. GC TO VERIFY ALL WALL ASSEMBLIES AND INTERIOR FINISHES

9 RR ACCESSIBILITY DETAILS
1/2" = 1'-0"

topa architecture
1150 North First St. Ste. 140,
San Jose, CA 95112
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STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER
26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

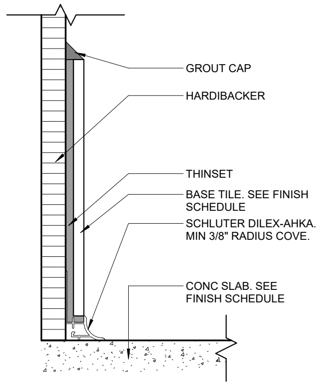
SHEET TITLE:

RESTROOM ELEVATIONS

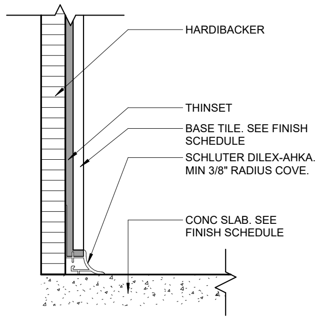
REVISIONS

No.	Description	Date

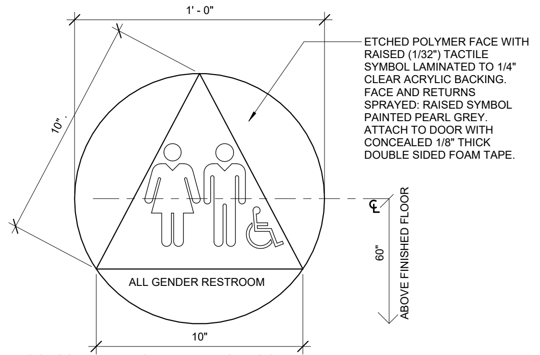
DRAWN:	PA
CHECKED:	JC
DATE:	01.26.2024
SCALE:	1/2" = 1'-0"
JOB No.:	23-2-12-SCOUTS
SHEET No.:	A5.2


GROUT CAP
HARDIBACKER
THINSET
BASE TILE. SEE FINISH SCHEDULE
SCHLUTER DILEX-AHKA. MIN 3/8" RADIUS COVE.
CONC SLAB. SEE FINISH SCHEDULE

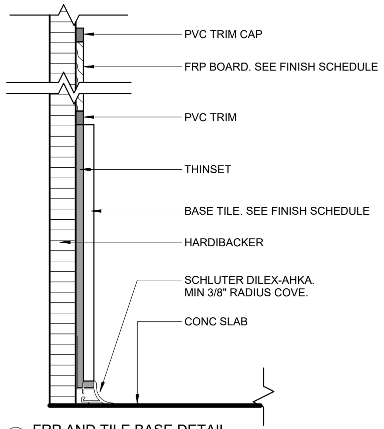
⑦ TILE BASE DETAIL
6" = 1'-0"


HARDIBACKER
THINSET
BASE TILE. SEE FINISH SCHEDULE
SCHLUTER DILEX-AHKA. MIN 3/8" RADIUS COVE.
CONC SLAB. SEE FINISH SCHEDULE

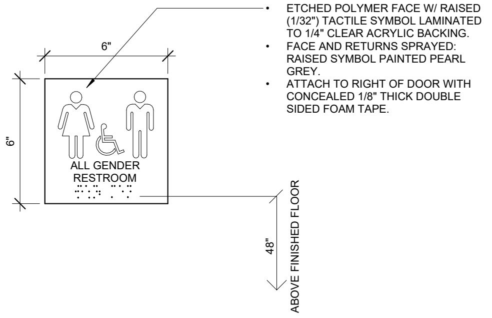
⑤ SCHLUTER BASE DETAIL
6" = 1'-0"


1' - 0"
10"
10"
ALL GENDER RESTROOM
ETCHED POLYMER FACE WITH RAISED (1/32") TACTILE SYMBOL LAMINATED TO 1/4" CLEAR ACRYLIC BACKING. FACE AND RETURNS SPRAYED: RAISED SYMBOL PAINTED PEARL GREY. ATTACH TO DOOR WITH CONCEALED 1/8" THICK DOUBLE SIDED FOAM TAPE.
℄
60"
ABOVE FINISHED FLOOR

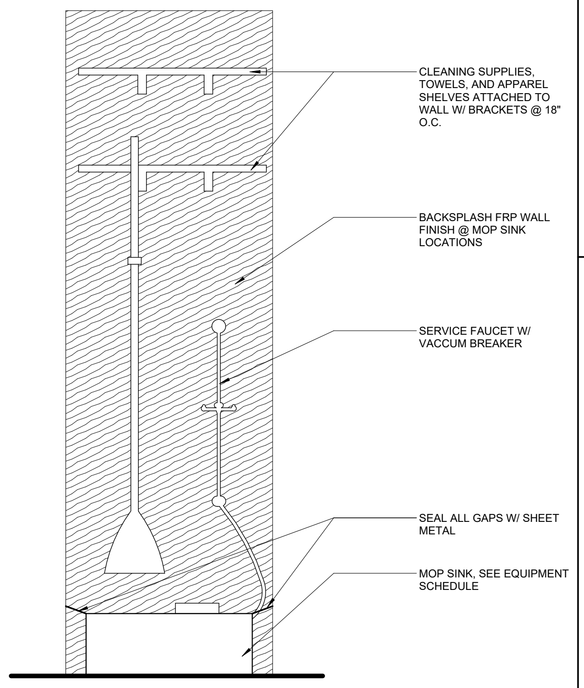
① ACCESSIBLE ALL GENDER RESTROOM DOOR SIGN
3" = 1'-0"


PVC TRIM CAP
FRP BOARD. SEE FINISH SCHEDULE
PVC TRIM
THINSET
BASE TILE. SEE FINISH SCHEDULE
HARDIBACKER
SCHLUTER DILEX-AHKA. MIN 3/8" RADIUS COVE.
CONC SLAB

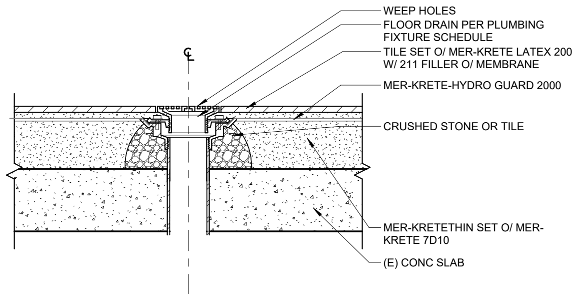
⑥ FRP AND TILE BASE DETAIL
6" = 1'-0"


6"
6"
ALL GENDER RESTROOM
• ETCHED POLYMER FACE W/ RAISED (1/32") TACTILE SYMBOL LAMINATED TO 1/4" CLEAR ACRYLIC BACKING.
• FACE AND RETURNS SPRAYED: RAISED SYMBOL PAINTED PEARL GREY.
• ATTACH TO RIGHT OF DOOR WITH CONCEALED 1/8" THICK DOUBLE SIDED FOAM TAPE.
48"
ABOVE FINISHED FLOOR

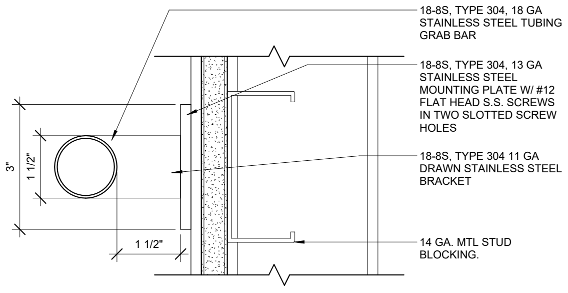
② ACCESSIBLE ALL GENDER RESTROOM SIGN
3" = 1'-0"


CLEANING SUPPLIES, TOWELS, AND APPAREL SHELVES ATTACHED TO WALL W/ BRACKETS @ 18" O.C.
BACKSPLASH FRP WALL FINISH @ MOP SINK LOCATIONS
SERVICE FAUCET W/ VACCUM BREAKER
SEAL ALL GAPS W/ SHEET METAL
MOP SINK, SEE EQUIPMENT SCHEDULE

⑧ MOP SINK ELEVATION DETAIL
1" = 1'-0"


WEEP HOLES
FLOOR DRAIN PER PLUMBING FIXTURE SCHEDULE
TILE SET O/ MER-KRETE LATEX 200 W/ 211 FILLER O/ MEMBRANE
MER-KRETE-HYDRO GUARD 2000
CRUSHED STONE OR TILE
℄
MER-KRETETHIN SET O/ MER-KRETE 7D10
(E) CONC SLAB

③ FLOOR DRAIN DETAIL
1 1/2" = 1'-0"


18-8S, TYPE 304, 18 GA STAINLESS STEEL TUBING GRAB BAR
18-8S, TYPE 304, 13 GA STAINLESS STEEL MOUNTING PLATE W/ #12 FLAT HEAD S.S. SCREWS IN TWO SLOTTED SCREW HOLES
18-8S, TYPE 304 11 GA DRAWN STAINLESS STEEL BRACKET
14 GA. MTL STUD BLOCKING.
3"
1 1/2"
1 1/2"

④ GRAB BAR METAL SHEET DETAIL
6" = 1'-0"

topa architecture

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STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER

26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

SHEET TITLE:

RESTROOM DETAILS

REVISIONS

No.	Description	Date

DRAWN:	Author
CHECKED:	Checker
DATE:	01.26.2024
SCALE:	As indicated
JOB No.:	23-2-12-SCOUTS
SHEET No.:	A5.3

HARDWARE LIST:

1. LOCK SET	"SCHLAGE" - ND-SERIES, RHODE, NO. ND75PD ENTRANCE LOCK COMPATABLE WITH RE-KEY OF C-KEYWAY
2. LATCH SET	"SCHLAGE" - ND-SERIES, RHODE, NO. ND70 PD
3. BUTTS	"IVES" - FULL MORTISE HINGES, 5 KNUCKLE, 4 BALL BEARING, HEAVYWEIGHT HINGES, 4 1/2" X 4 1/2" X 3 PAIRS PER DOOR - 5BB1HW
4. DOOR STOPS	"IVES" PER DOOR/LEAF NO. WS-20 HOLD OPEN OR WS44726D
5. CLOSURE	LCN CLOSURES 1070 SERIES PER DOOR WHERE REQUIRED
6. AUTOMATIC FLUSH BOLTS	"IVES" NO. FB458 FOR METAL DOORS, INCLUDING STRIKES, GLIDES, SUB PLATES AND SCREWS
7. DOUBLE LATCH SET	"SCHLAGE" - ND-SERIES, RHODE, NO. ND80PD ENTRANCE LOCK COMPATABLE WITH RE-KEY OF C-KEYWAY
8. FIRE SEPARATION	ONE (1) HOUR LABEL. TO BE GASKETED SEPARATION DOORS FOR SMOKE AND DRAFT CONTROL
9. WEATHER STRIP/GASKETING	WEATHER-STRIPPING AND GASKETING TO EXTERIOR DOORS TO MEET TITLE-24 REQUIREMENTS
10. ASTRAGAL	FOR ALL DOUBLE DOORS PROVIDE ASTRAGALS FOR EXTERIOR DOORS, IN ADDITION, PROVIDE WITH GASKET
11. BOLT LOCKSET	SCHLAGE B571 ONE SIDED DEADBOLT WITH OCCUPANCY INDICATOR
12. PUSH/PULL	"IVES" 8103E2-0
13. DOOR KNOB	"SCHLAGE" D-SERIES NO. D170 SINGLE DUMMY TRIM
14. PRIVACY LOCK	"SCHLAGE" ND-SERIES NO. ND40S BATH/BEDROOM PRIVACY LOCK
15. ENTRY LOCKS	"SCHLAGE" H-SERIES NO. H110 ENTRANCE SINGLE, COMBO LOCKING
16. SINGLE DUMMY TRIM	"SCHLAGE" - D-SERIES, RHODE, NO. ND170 SINGLE DUMMY TRIM
17. DEADBOLT CYLINDER & THUMBTURN	SCHLAGE ND SERIES RHOADES HANDLE ON DEADBOLT WITH INDICATOR AND C KEY OVERIDE. MODEL TBD
18. PUSH BARS	"IVES" 9100 PUSH BAR 1" DIA. REF.
19. PIVOT SET	"IVES" PIVOT SET 7215
20. DOOR PULL	SANITGRASP SG-101 HYGENIC INTERIOR DOOR HANDLE
21. RIM LOCK	"YALE" DEADBOLT SLIDE FOR CRASH DOOR SURFACE MOUNT WITH JAMB RECEIVER K0428, IN SILVER
22. KICK PLATES	"IVES" KICK PLATES B18
23. KEY ONLY DEADBOLT	"SCHLAGE" B562 DOUBLE CYLINDER
23. CRASH PLATE	"IVES" 8400 CRASH/KICK PLATE 46"x34" STAINLESS

NOTES:

A. ALL DOOR HARDWARE "TO OPEN" TO BE "SINGLE EFFORT" AND "NON-GRASP" TYPE HARDWARE CENTERED BETWEEN 34" MIN AND 44" MAX. A.F.F.
B. ALL HARDWARE TO BE STAIN/CHROME 626 OR SIILAR FINISH, APPROVED BY THE ARCHITECT
C. KEYING - ALL LOCKSETS SHALL BE MASTER KEYED WITH ADAPTABLE C-KEYWAY AND MINIMUM DUPLICATE ORIGINALS TO BE SUPPLIED TO OWNERS
D. SEE HARDWARE GROUPS FOR SPECIFIC HARDWARE USED FOR CERTAIN DOORS AND SEE FLOOR PLANS FOR DOOR NUMBERS, DOOR TYPES AND HARDWARE GROUPS.
E. MAXIMUM DOOR OPENING EFFORTS:
   a. EXTERIOR DOORS: 5.0 POUNDS
   b. INTERIOR DOORS: 5.0 POUNDS
   c. FIRE DOORS: 15.0 POUNDS
F. DOOR HARDWARE AT ALL EXIT DOORS MUST ALLOW DOORS TO BE OPENED FROM THE INSIDE W/O KEY, SPECIAL KNOWLEDGE, OR EFFORT
G. ELECTRIC CARD KEY ACCESS IS USED FOR GETTING INTO AREAS, BUT NEVER REQUIRED TO EXIT OUT OF ANY AREA OR OUT OF THE BUILDING, UBC 1003.3.1.8
H. ALL TOILET COMPARTMENT DOORS TO HAVE SLIDING LATCH AND LOOP TYPE HANDLE BELOW THE LATCH
I. ALL RATED DOORS TO HAVE CLOSURES AND SMOKE SEALS
J. ALL AUTOMATIC OPENING DOORS TO HAVE AUTOMATIC DOOR SENSORS
K. MANUALLY OPERATED EDGE - OR SURFACE - MOUNTED FLUSH BOLTS ARE NOT ALLOWED AS EXIT HARDWARE
L. UNLATCHING OF ANY DOOR LEAF SHALL NOT REQUIRE MORE THAN ONE OPERATION

HARDWARE GROUPS:

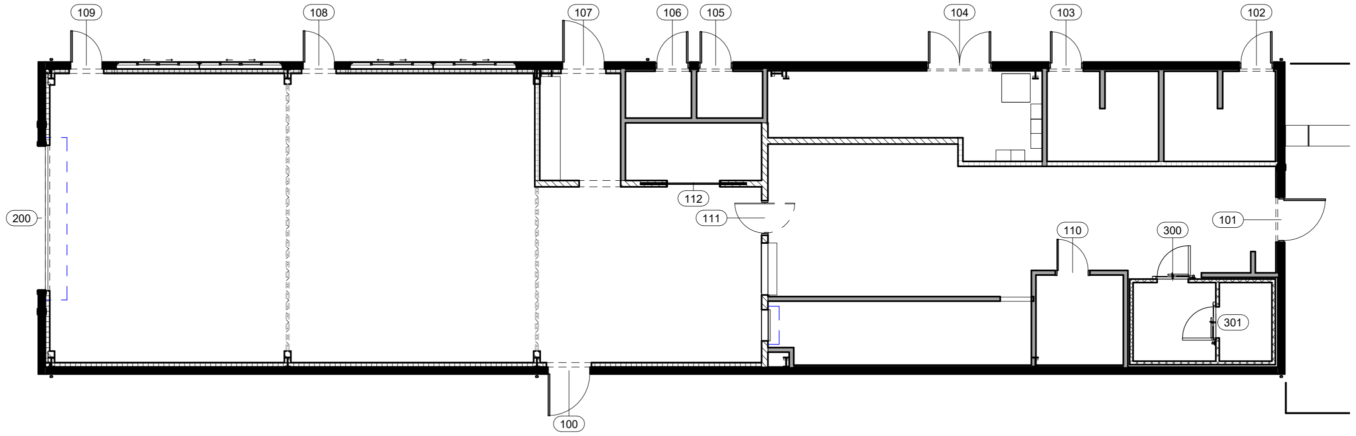
GROUP I:	**ENTRANCE DOOR : EXTERIOR** LOCK SET: BUTTS: DOORSTOPS: PUSH PANIC DEVICE: CLOSURE: WEATHERSTRIPPING (EXT. ONLY):	 ITEM #1 ITEM #3 ITEM #4 ITEM #7 ITEM #5 ITEM #9
GROUP II:	**DOUBLE ENTRANCE DOORS : EXTERIOR** LOCK SET: FLUSH BOLTS: BUTTS: DOORSTOPS: WEATHERSTRIPPING (EXT. ONLY) ASTRAGAL	 ITEM #7 ITEM #6 ITEM #3 ITEM #4 ITEM #9 ITEM #10
GROUP III:	**DOUBLE POCKET DOORS : LOCKING** PER MANUFACTURERS SPECIFICATIONS. EQUIPED WITH LOCKING LATCH	
GROUP IV:	**INTERIOR ENTRY LOCKSET** LATCH SET: BUTTS: DOORSTOPS: CLOSURE:	 ITEM #15 ITEM #3 ITEM #4 ITEM #5
GROUP V:	**INTERIOR PASSAGE** LATCH SET: DUMMY HANDLE: (AS APPLICABLE) BUTTS: DOORSTOPS:	 ITEM #2 ITEM #16 ITEM #3 ITEM #4
GROUP VI:	**INTERIOR PRIVACY THUMB** LATCH SET: BUTTS: DOORSTOPS:	 ITEM #14 ITEM #3 ITEM #4
GROUP VII:	**RESTROOMS : SINGLE USER** LATCH SET: BUTTS: DOORSTOPS: CLOSURE: LOCK BOLT: KICK PLATES, FLAT 10" HIGH	 ITEM#17 ITEM #3 ITEM #4 ITEM #5 ITEM #23 ITEM #22
GROUP VIII:	**CRASH DOOR : DOUBLE SWING** LOCK BOLT: KICK PLATES, FULL STAINLESS, JAMB GUARD AND STEEL SUPPORT FRAME BY MANF.	 ITEM #21

DOOR SCHEDULE

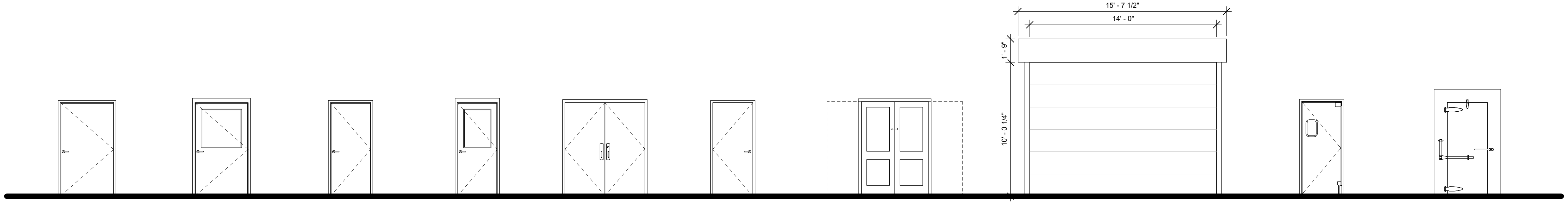
Mark	Door Type	Description	Width	Height	Thickness	Frame Material	Frame Finish	Door Material	Door Finish	Hardware Group	Manufacturer	Comments
100	A2	EXT. VIEW DOOR	4' - 0"	7' - 0"	0' - 1 3/4"	H.M.	PAINT	H.M.	PAINT	I	REPUBLIC	PROVIDE MAX 3/8" TRANSITION THRESHOLD & WEATHERSTRIPPING
101	A		4' - 0"	7' - 0"	0' - 1 3/4"	H.M.	PAINT	H.M. & T.GLASS	PAINT	I	REPUBLIC	PROVIDE MAX 3/8" TRANSITION THRESHOLD & WEATHERSTRIPPING
102	B	EXT. DOOR	3' - 0"	7' - 0"	0' - 1 3/4"	H.M.	PAINT	H.M.	PAINT	VII	REPUBLIC	PROVIDE RESTROOM &SHOWER SIGN SEE A5.2
103	B	EXT. DOOR	3' - 0"	7' - 0"	0' - 1 3/4"	H.M.	PAINT	H.M.	PAINT	VII	REPUBLIC	PROVIDE RESTROOM &SHOWER SIGN SEE A5.2
104	D	DOUBLE DOOR	6' - 0"	7' - 0"	0' - 1 3/4"	H.M.	PAINT	H.M.	PAINT	II	REPUBLIC	PROVIDE MAX 3/8" TRANSITION THRESHOLD & WEATHERSTRIPPING
105	B	EXT. DOOR	3' - 0"	7' - 0"	0' - 1 3/4"	H.M.	PAINT	H.M.	PAINT	VII	REPUBLIC	PROVIDE RESTROOM SIGN SEE A5.2
106	B	EXT. DOOR	3' - 0"	7' - 0"	0' - 1 3/4"	H.M.	PAINT	H.M.	PAINT	VII	REPUBLIC	PROVIDE RESTROOM SIGN SEE A5.2
107	A2	EXT. VIEW DOOR	4' - 0"	7' - 0"	0' - 1 3/4"	H.M.	PAINT	H.M. & T.GLASS	PAINT	I	REPUBLIC	PROVIDE MAX 3/8" TRANSITION THRESHOLD & WEATHERSTRIPPING
108	C	VIEW DOOR	3' - 0"	7' - 0"	0' - 1 3/4"	H.M.	PAINT	H.M. & T.GLASS	PAINT	I	REPUBLIC	PROVIDE MAX 3/8" TRANSITION THRESHOLD & WEATHERSTRIPPING
109	C	VIEW DOOR	3' - 0"	7' - 0"	0' - 1 3/4"	H.M.	PAINT	H.M. & T.GLASS	PAINT	I	REPUBLIC	PROVIDE MAX 3/8" TRANSITION THRESHOLD & WEATHERSTRIPPING
110	E	INT. DOOR	3' - 0"	7' - 0"	0' - 1 1/2"	H.M.	PAINT	H.M.	PAINT	V	REPUBLIC	
111	K	Exterior Grade Solid Wood Core Door with gasket	3' - 0"	7' - 0"	0' - 1"	H.M.		H.M.	NATURAL STAIN	VIII	Eliason	PROVIDE MAX 3/8" TRANSITION STRIP
112	F	POCKET DOOR	5' - 0"	7' - 0"	0' - 1 1/2"	WOOD		WOOD VENEER	NATURAL STAIN	III	TRUSTILE	
200	G	ROLL-UP	14' - 0"	10' - 0"	0' - 3"	METAL SECTION	NATURAL	METAL	NATURAL METAL	MANF	DBCI 3100	
201	A6	COUNTER ROLL-UP	3' - 0"	2' - 0"	0' - 1"						MCKEON - CFS	
202	A6	COUNTER ROLL-UP	5' - 0"	4' - 0"	0' - 1"						MCKEON - CFS	
300	R	REF PANEL	3' - 0"	7' - 0"		METAL	PRETREATED	REFRIGERATION PANEL	PRETREATED	MANF	REF MANF	
301	R	REF PANEL	3' - 0"	7' - 0"		METAL	PRETREATED	REFRIGERATION PANEL	PRETREATED	MANF	REF MANF	

GENERAL DOOR NOTES

1. 1/2" MAX. HIGH THRESHOLD 1/2 " MAXIMUM HIGH THRESHOLD (ABOVE FLOOR AND LANDING ON BOTH SIDES) AT BUILDING ENTRANCE
2. SPECIFY MAXIMUM DOOR OPENING EFFORTS OF 5 LBS. AT EXTERIOR AND INTERIOR DOORS. CBC 1133B.2.5 AND 15 LBS AT FIRE DOORS
3. ALL DOORS SHALL BE EQUIPPED WITH SINGLE-EFFORT, NON-GRASP HARDWARE (i.e., LEVER CENTERED BETWEEN 34" AND 44" MAX. ABOVE THE FLOOR.
4. DOOR HARDWARE AT ALL EGRESS DOORS ALLOWS DOORS TO BE READILY OPEN FROM THE INSIDE WITHOUT THE USE OF KEY, SPECIAL KNOWLEDGE OR EFFORT
5. INTERIOR OF DOOR OPENING TO RECEIVE DECORATIVE/PAINTABLE CAULKING
6. EXTERIOR OF DOOR OPENING TO HAVE WEATHERSTRIPPING AND SEALING



1 1ST FLOOR DOOR SCHEDULE
1/8" = 1'-0"



DOOR TYPE: A
(N) 4'-0" X 7'-0"
EXTERIOR HOLLOW METAL DOOR & HM FRAME

DOOR TYPE: A2
(N) 4'-0" X 7'-0"
EXTERIOR HOLLOW METAL DOOR W/ TEMPERED HALF GLASS VIEWLITE & HM FRAME

DOOR TYPE: B
(N) 3'-0" X 7'-0"
EXTERIOR HOLLOW METAL DOOR W/ HM FRAME

DOOR TYPE: C
(N) 3'-0" X 7'-0"
EXTERIOR HOLLOW METAL DOOR W/ TEMPERED HALF GLASS VIEWLITE & HM FRAME

DOOR TYPE: D
(N) PAIR 3'-0" X 7'-0"
EXTERIOR HOLLOW METAL DOOR & HM FRAME

DOOR TYPE: E
(N) 3'-0" X 7'-0"
INTERIOR HOLLOW METAL DOOR & HM FRAME

DOOR TYPE: F
(N) PAIR 2'-6" X 7'-0"
INTERIOR POCKET DOORS

DOOR TYPE: G
(N) 14'-0" X 10'-0"
EXTERIOR ROLL-UP DOOR

DOOR TYPE: H
(N) 3'-0" X 7'-0"
INTERIOR CRASH DOUBLE SWING DOORS HEAVY DUTY PIVOT HINGE

DOOR TYPE: R
(N) 3'-0" X 7'-0"
REFRIGERATED PANEL DOOR SYSTEM

DOOR ELEVATIONS
1/4" = 1'-0"

topa
architecture
1150 North First St. Ste. 140,
San Jose, CA 95112
Tel: 408.320.0248

GENERAL NOTES:
1. SHEET IS PART OF A SET & IS NOT TO BE USED ALONE.
2. THIS SET IS NOT FOR CONSTRUCTION UNTIL THE ARCHITECT'S STAMP & SIGNATURE ARE ON THIS SHEET AS WELL AS LOCAL AUTHORITY PERMIT APPROVAL STAMP ON ALL SHEETS.
3. THESE PLAN & PRINTS ARE OWNED BY THE ARCHITECT & ARE FOR USE ON THIS PROJECT ONLY.REPRODUCTION AND/OR DISTRIBUTION WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT IS FORBIDDEN.

STAMP:

PROJECT:

BSA VALLEY FOUNDATION TRAINING CENTER
26005 BIG BASIN WAY, LOS GATOS, CA 95033

CONTRACTOR

SHEET TITLE:

DOOR SCHEDULE

REVISIONS

No.	Description	Date

DRAWN: JC
CHECKED: -
DATE: 01.26.2024
SCALE: As indicated
JOB No.: 23-2-12-SCOUTS
SHEET No.:

A6.1

Attachment 3

Revised Project Civil Plans (October 2025)

THE COUNTY OF SANTA CRUZ
1850

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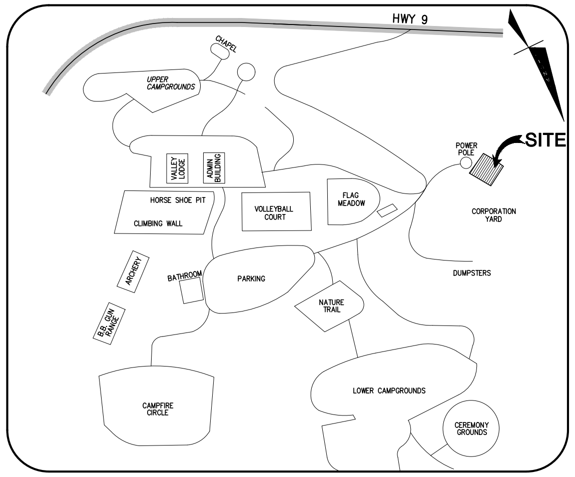
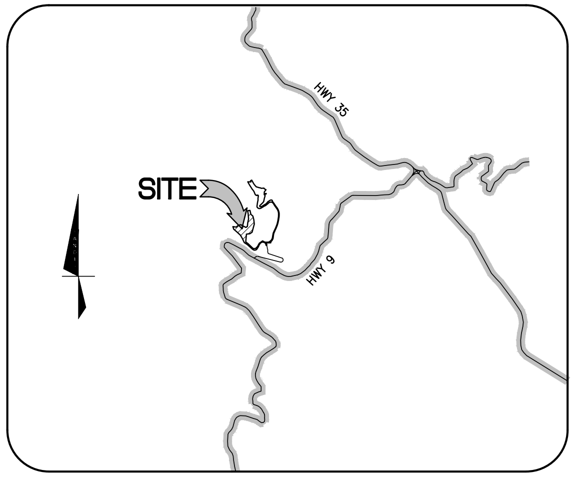
BOY SCOUTS OF AMERICA COUNCIL
SILICON VALLEY MONTERY BAY COUNCIL
CAMP CHESEBROUGH SITE IMPROVEMENTS



SITE MAP

N.T.S.



VICINITY MAP

N.T.S.

ABBREVIATIONS

BM	BENCHMARK
BOW	WALL BOTTOM OF
CLUST	TREE CLUSTER
DWY	DRIVEWAY
EP	EDGE OF PAVEMENT
ETW	EDGE OF TRAVELED WAY
FF	BUILDING FINISHED FLOOR
FG@DOOR	FINISHED GRADE AT DOOR
FH	FIRE HYDRANT
G	GROUND
P	PAVEMENT
TOW	TOP OF WALL

LEGEND

//////////	**BUILDING FACE**
═══════	**WALL, HEIGHT AND TYPE AS INDICATED**
— — — 1235 — — — — — — 1234 — — —	**CONTOURS**
—— —— ——	**TOP OF SLOPE LINE**
— — — — —	**TOE OF SLOPE LINE**
⊕	**BENCHMARK**
○	**SANITARY SEWER CLEANOUT**
▭	**BACKFLOW PREVENTOR**
WV ⋈	**WATER VALVE**
HYD	**FIRE HYDRANT**
FDC	**FIRE DEPARTMENT CONNECTION**
○+	**HOSE BIBB**
E	**ELECTRIC VAULT / PULLBOX**
⊸	**SIGN**
	FIRE PIT
197.30 STRIPE 198.70 CONC 198.76 BOW 195.17 TC 194.76 FL	**SPOT ELEVATION**
12" OAK	**TREE WITH DRIPLINE, SIZE AS INDICATED**

SURVEY NOTES

1. ALL DISTANCES AND DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.
2. DATES OF FIELD SURVEY: 7/10/2023–7/12/2023, 8/7/2023, 9/22/2023 & 10/6/2023.
3. HORIZONTAL AND VERTICAL CONTROL FOR THIS SURVEY ARE ON AN ASSUMED BASIS.

EARTHWORK QUANTITIES

CUT 6,151 CY
FILL 5,724 CY
BALANCE 427 CY EXPORT

THE EARTHWORK QUANTITIES SHOWN ARE PROVIDED FOR THE PURPOSE OF GRADING PERMIT APPROVAL ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CARRY OUT THE CUT/FILL, IMPORT/EXPORT AS NECESSARY TO MEET THE DESIGN GRADES AS SHOWN ON THE PLANS REGARDLESS OF THE ESTIMATED EARTHWORK QUANTITIES AS INDICATED. SIGNIFICANT REVISIONS TO THE QUANTITIES NEED REVIEW BY THE CITY OF SALINAS. FILL SHORTAGE IS ANTICIPATED TO COME FROM ON–SITE SPOILS ACQUIRED FROM UTILITY TRENCHES AND FOOTING SPOILS.

CIVIL SHEET INDEX

C-0.0	COVER SHEET
C-1.0	CSR BUILDINGS
FP-1/1	FIRE PROTECTION PLAN
C-2.0	FIRE ACCESS PLAN
C-3.0	GRADING PLAN
C-3.1	GRADING PLAN
C-4.0	CROSS-SECTIONS
C-5.0	UTILITY PLAN
C-5.1	UTILITY PLAN
C-5.2	UTILITY PLAN
C-5.3	UTILITY PLAN
C-5.4	UTILITY PLAN
C-6.0	CONSTRUCTION DETAILS
C-6.1	CONSTRUCTION DETAILS
C-7.0	STORMWATER MANAGEMENT PLAN
C-8.0	EROSION CONTROL PLAN
C-8.1	EROSION CONTROL DETAILS

OWNER INFO

OWNER: BOY SCOUTS OF AMERICA COUNCIL
APN: 088 05 137

PROJECT INTENT

IMPROVEMENTS TO CREATE A BETTER ENVIRONMENT TO ENCOURAGE THE GROWTH AND KNOWLEDGE OF ADOLESCENT TEENS TO BECOME UPSTANDING CITIZENS OF THE U.S.

PROJECT DESCRIPTION

THE PROJECT INCLUDES THE REPLACEMENT OF EXISTING WATER STORAGE TANKS, CONSTRUCTION OF A NEW FIRE ACCESS ROAD, AND GRADING AND DRAINAGE IMPROVEMENTS TO SUPPORT A NEW TRAINING FACILITY. WORK WILL INCLUDE ASSOCIATED UTILITY CONNECTIONS, SITE EARTHWORK, AND INSTALLATION OF APPURTENANT SITE IMPROVEMENTS AS SHOWN ON THE PLANS.

SANDIS CIVIL ENGINEERS SURVEYORS PLANNERS
1700 Winchester Boulevard, Campbell, CA 95008 I P. 408.636.0900 I F. 408.636.0999 I www.sandis.net
SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	12/11/25
SCALE:	N.T.S.
DRAWN BY:	RLM
APPROVED BY:	NB
DRAWING NO.:	217084

DATE October 14, 2025

NATHAN DICKINSON
R.C.E. NO. 79716, EXPIRES 9–30–26

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

COVER SHEET

SHEET
C-0.0
OF 16 SHEETS

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File: S:\217084\(4) ENGINEERING\(2) PLAN SETS\(3) SHEET SET\ONSITE\C-0.0 COVER.dwg Date:Dec 11, 2025 – 3:45pm, rlopezma

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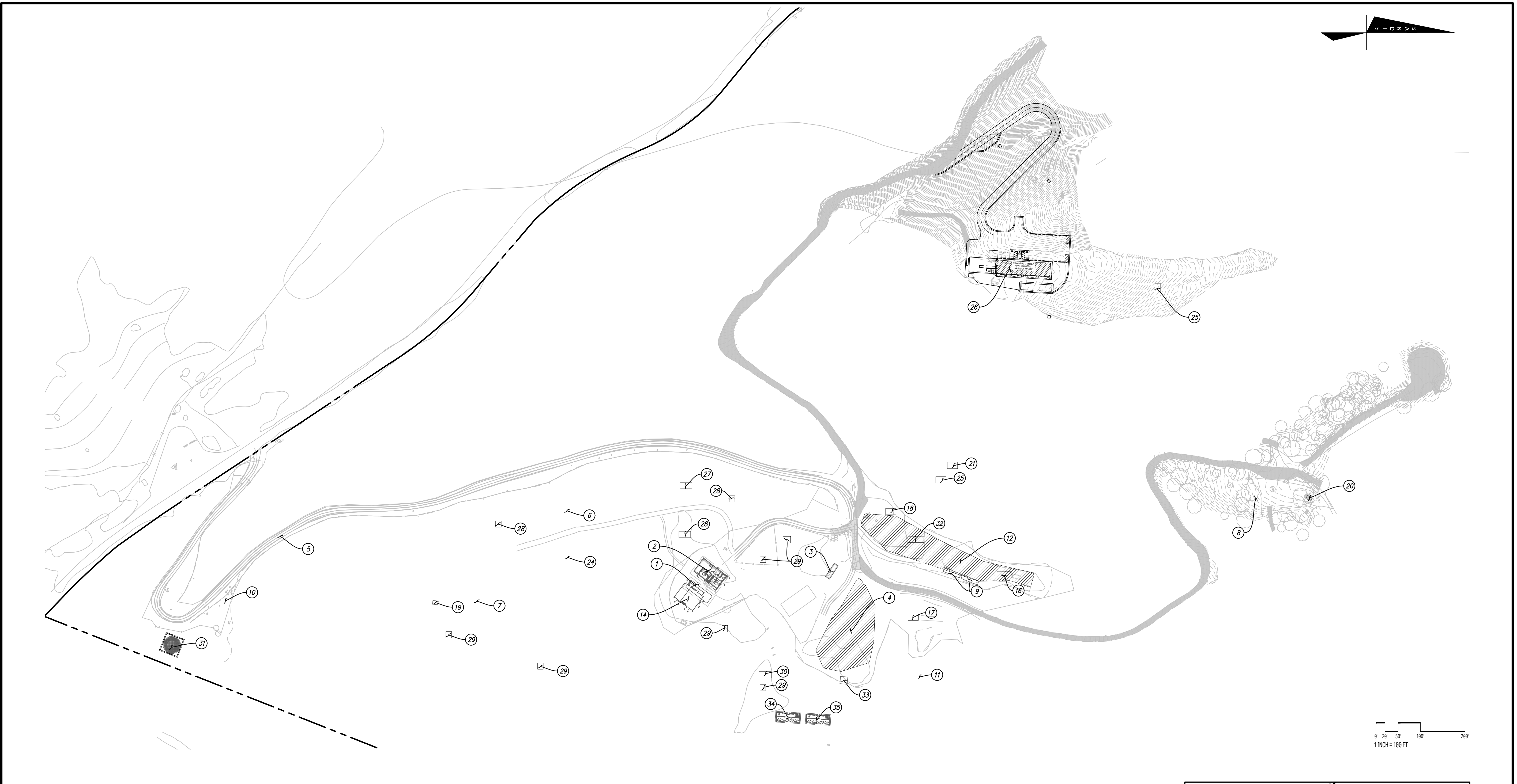
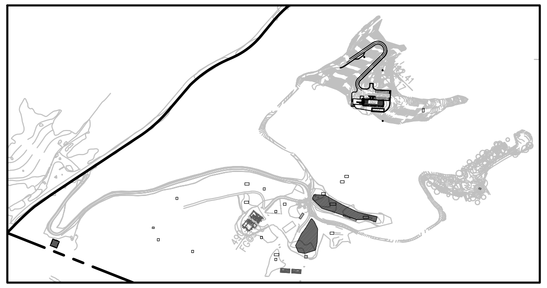


LEGEND

— — — PROPERTY LINE

BUILDING LIST

① POLE BARN
② MULTI-USE BUILDING/KITCHEN
③ PUMP HOUSE BUILDING
④ PARKING LOT (GRAVEL)
⑤ GRAVEL ENTRANCE ROAD
⑥ TENT CAMPSITE #1 UPPER CAMPSITE
⑦ TENT CAMPSITE #2 UPPER CAMPSITE
⑧ TENT CAMPSITE #3 LOWER CAMPSITES
⑨ STORAGE TRAILERS (REMOVED IN 2021)
⑩ WATER TANKS
⑪ CAMPFIRE CIRCLE
⑫ SERVICE YARD
⑬ POWER POLE
⑭ MULTI-PURPOSE BUILDING (VALLEY FOUNDATION LODGE)
⑮ UNUSED
⑯ STORAGE AND MAINTENANCE BUILDING
⑰ NATURE LODGE
⑱ CARETAKER'S HOUSE
⑲ CAMPSITE LATRINE #1
⑳ CAMPSITE LATRINE #2
㉑ CAMPSITE LATRINE #3
㉒ CAMPSITE LATRINE #4 (REMOVED)
㉓ SMALL GROUP SLEEPING SHELTERS (REMOVED)
㉔ NEW CAMPSITE
㉕ NEW CAMPSITE
㉖ VALLEY FOUNDATION TRAINING CENTER
㉗ SHOWER AND RESTROOM BUILDING
㉘ CABINS FOR SHORT TERM CAMPING
㉙ TEACHING COVERED PAVILIONS
㉚ CLIMBING AND RAPPELLING TOWER
㉛ REPLACEMENT FOR EXISTING WATER TANKS
㉜ RECYCLING AND TRASH ENCLOSURE
㉝ RESTROOM – PARKING LOT
㉞ BB GUN INSTRUCTIONAL AREA
㉟ ARCHERY INSTRUCTIONAL AREA



KEY MAP

SANDIS
CIVIL ENGINEERS
SURVEYORS
PLANNERS
1700 Winchester Boulevard, Campbell, CA 95008 I P. 408.636.0900 I F. 408.636.0999 I www.sandis.net
SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	12/11/25
SCALE:	1" = 100'
DRAWN BY:	RLM
APPROVED BY:	NB
DRAWING NO.:	217084

DATE October 14, 2025

NATHAN DICKINSON
R.C.E. NO. 79716, EXPIRES 9–30–26

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

CSR BUILDINGS

SHEET
C-1.0

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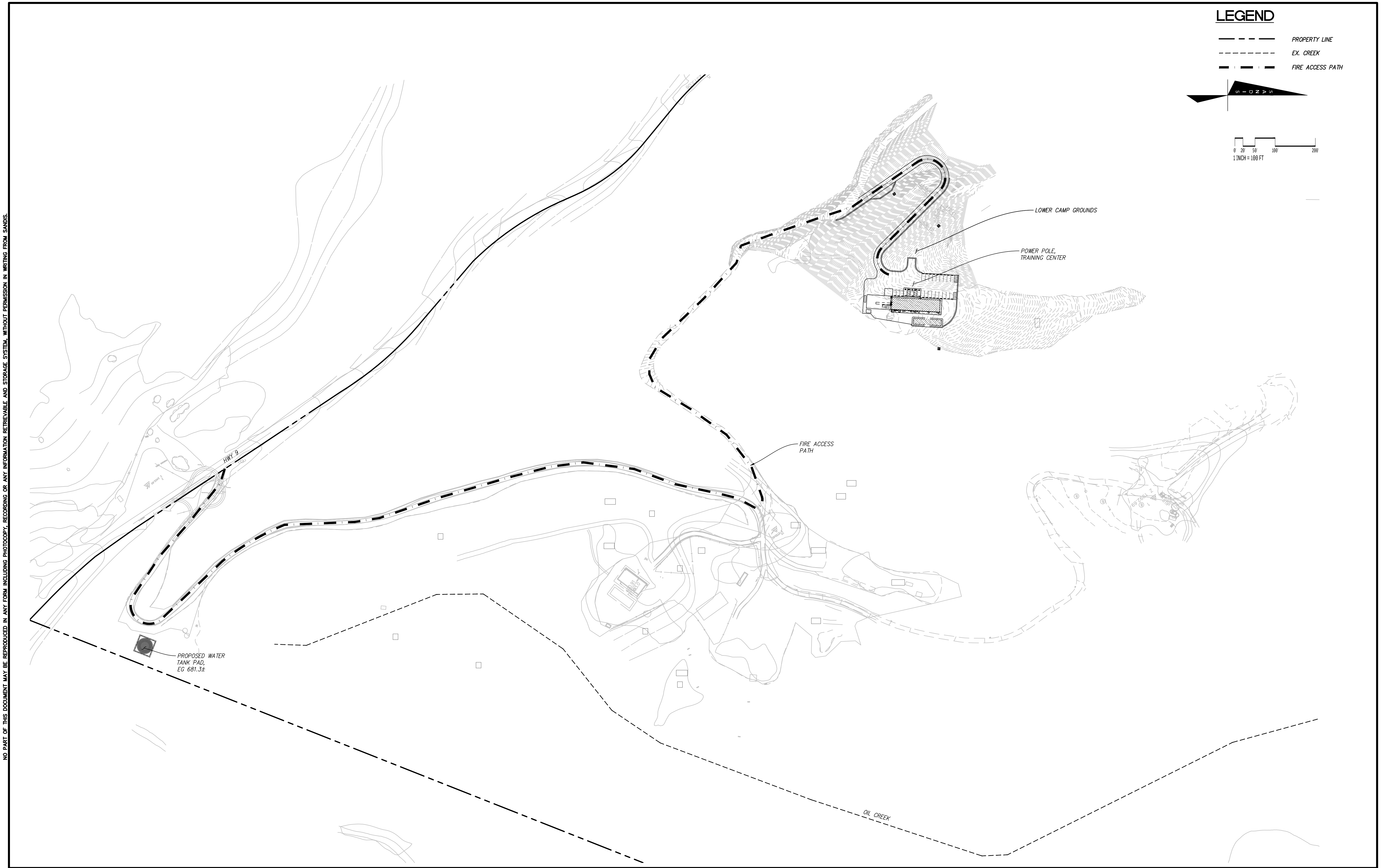
S A N D I S
0' 20' 50' 100' 200'
1 INCH = 100 FT
LOWER CAMP GROUNDS
POWER POLE,
TRAINING CENTER
FIRE ACCESS
PATH
HWY 9
PROPOSED WATER
TANK PAD,
EG 681.3±
OIL CREEK

LEGEND

— — — —	*PROPERTY LINE*
- - - - - - - -	*EX. CREEK*
▬ ▬ ▬	*FIRE ACCESS PATH*

SANDIS

CIVIL ENGINEERS
SURVEYORS
PLANNERS

1700 Winchester Boulevard, Campbell, CA 95008 I P. 408.636.0900 I F. 408.636.0999 I www.sandis.net

SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	12/11/25
SCALE:	1" = 100'
DRAWN BY:	RLM
APPROVED BY:	NB
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No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137,   26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY   CALIFORNIA

FIRE ACCESS PLAN

SHEET
C-2.0
OF 16 SHEETS

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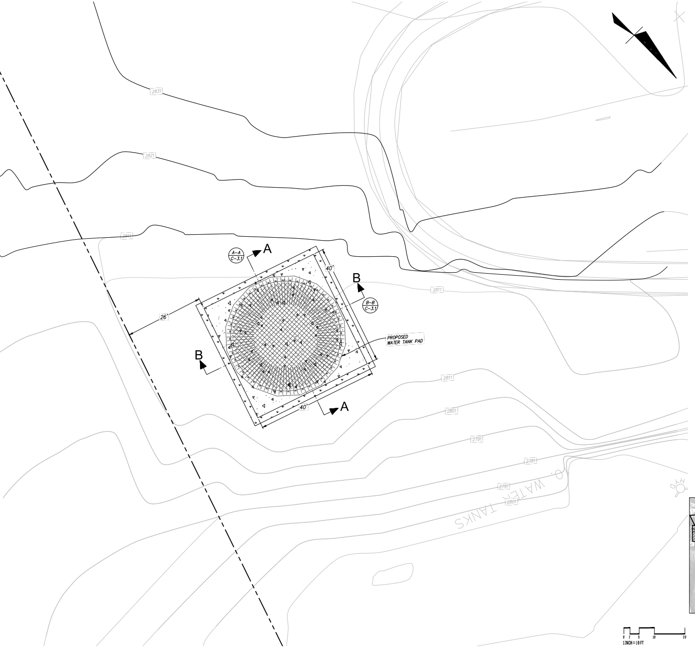
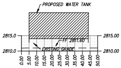
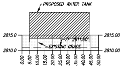




SECTION TANK A-A

SCALES:
1"=20' HORIZ.
1"=10' VERT.



SECTION TANK-B-B

SCALES:
1"=20' HORIZ.
1"=10' VERT.

LEGEND

1.0%	HARDSCAPE SLOPE
▢	AC PAVEMENT
▨	COMPACT GRAVEL WITH OIL AND SCREEN
▨	GRAVEL
▨	VEHICULAR CONCRETE (3 / C-6.1)
▢	PLANTING

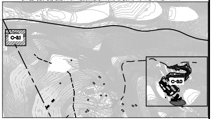
GENERAL GRADING NOTES

1. PROVIDE POSITIVE SURFACE DRAINAGE AWAY FROM ALL STRUCTURES BY SLOPING ALL HARDSCAPE SURFACES AT 2% AND LANDSCAPE SURFACES AT 5% AWAY FROM STRUCTURES UNLESS OTHERWISE NOTED ON PLANS.
2. ALL FILL, IMPORT SOILS AND GRADING SHALL BE IN CONFORMANCE WITH THE FOLLOWING GEOTECHNICAL REPORTS PERFORMED BY CORNERSTONE EARTH GROUP:
    a. FOR THE WATER TANK: REFER TO GEOTECHNICAL REPORT TITLED GEOTECHNICAL AND ENGINEERING GEOLOGY HAZARD EVALUATION NEW WATER TANK SITE IMPROVEMENTS AT CHESEBROUGH CAMP, DATED DECEMBER 20, 2024.
    b. FOR THE TRAINING CENTER AND REST OF SITE: REFER TO THE GEOTECHNICAL REPORT TITLED DATED GEOTECHNICAL INVESTIGATION AND GEOLOGIC HAZARDS EVALUATION CSR MASTER PLAN AND TRAINING CENTER, DATED MARCH 19, 2025.

    IMPORT SUBMITTALS SHOULD BE SENT TO THE GEOTECHNICAL ENGINEER AT LEAST 1 WEEK IN ADVANCE OF IMPORTING ONSITE.
3. COORDINATE THE PLACEMENT OF ALL SLEEVES FOR SITE LIGHTING PRIOR TO THE PLACEMENT OF ANY ASPHALT, BASEROCK OR CONCRETE SURFACING. SEE ELECTRICAL DRAWINGS.
4. ROUGH GRADING TO BE WITHIN 0.1' AND FINISH GRADES ARE TO BE WITHIN 0.05', HOWEVER CONTRACTOR SHALL NOT CONSTRUCT ANY IMPROVEMENTS THAT WILL CAUSE WATER TO POND OR NOT MEET REQUIREMENTS IN GRADING NOTE #1 OR THE ADA REQUIREMENTS BELOW. DO NOT ADJUST GRADES ON THIS PLAN WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER/ARCHITECT.
5. THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO CONFORM TO THE LINES, GRADES, SECTIONS, AND DIMENSIONS AS SET FORTH ON THESE PLANS. ALL GRADED AREAS SHALL CONFORM TO THE VERTICAL ELEVATIONS SHOWN WITH A TOLERANCE OF ONE-TENTH OF A FOOT. WHERE GRADED AREAS DO NOT CONFORM TO THESE TOLERANCES, THE CONTRACTORS SHALL BE REQUIRED TO DO CORRECTIVE GRADING, AT NO EXTRA COST TO THE CLIENT/OWNER.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THE GROUND ELEVATIONS AND OVERALL TOPOGRAPHY OF THE SITE PRIOR TO THE START OF CONSTRUCTION AS TO THE ACCURACY BETWEEN THE WORK SET FORTH ON THESE PLANS AND THE WORK IN THE FIELD. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND CIVIL ENGINEER IN WRITING PRIOR TO START OF CONSTRUCTION WHICH MAY REQUIRE CHANGES IN DESIGN AND/OR AFFECT THE EARTHWORK QUANTITIES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE ANY EXISTING IMPROVEMENTS OF UNDERGROUND FACILITIES DAMAGED DURING THE CONSTRUCTION PERIOD.
8. THE RISE/ RUN/ STEP COUNT IS FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY ELEVATIONS AND BUILDING CODE COMPLIANCE PRIOR TO ANY WORK.
9. AREAS LACKING TOPOGRAPHIC INFORMATION (ELEVATIONS) HAVE BEEN INTERPOLATED USING STANDARD ENGINEERING METHODS. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AT CONFORMS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND REPORT BACK ANY DISCREPANCIES TO THE CIVIL ENGINEER.
10. ADJUST ANY MANHOLE OR UTILITY STRUCTURES TO PROPOSED GRADE PRIOR TO INSTALLING FINAL LIFT OF AC OR POURING CONCRETE.

GEOTECHNICAL NOTE

1. REFER TO GEOTECHNICAL REPORT TITLED GEOTECHNICAL AND ENGINEERING GEOLOGY HAZARD EVALUATION NEW WATER TANK SITE IMPROVEMENTS AT CHESEBROUGH CAMP DATED DEC 20, 2024 FOR RECOMMENDATIONS SPECIFIC TO THE WATER TANK.



KEY MAP

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SILICON VALLEY · TRI VALLEY · CENTRAL VALLEY · SACRAMENTO · EAST BAY · SF

DATE:	12/11/25
SCALE:	1" = 10'
DRAWN BY:	RLM
APPROVED BY:	NB
DRAWING NO.:	217084

DATE October 14, 2025

NATHAN DICKINSON
R.C.E. NO. 79716, EXPIRES 9-30-26

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

GRADING PLAN

SHEET
C-3.1
OF 16 SHEETS

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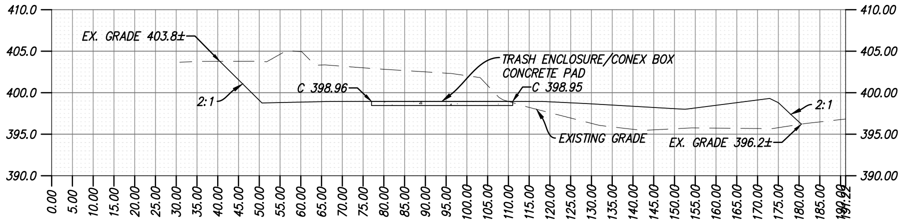
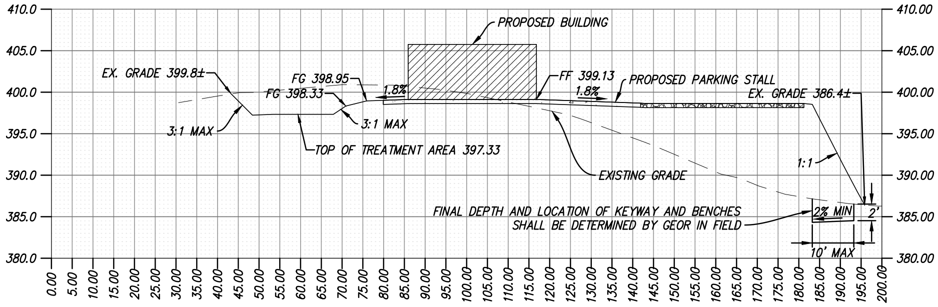

EX. GRADE 403.8±
TRASH ENCLOSURE/CONEX BOX CONCRETE PAD
C 398.96
C 398.95
2:1
2:1
EXISTING GRADE
EX. GRADE 396.2±
410.0
405.0
400.0
395.0
390.0
0.00
191.22

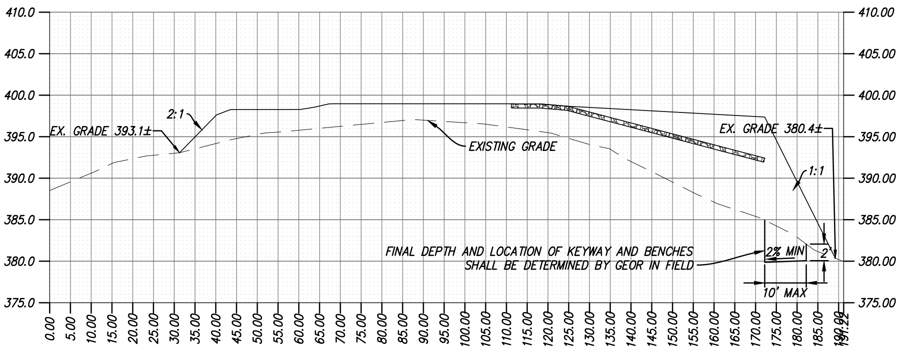
SECTION A-A

SCALES:
1"=20' HORIZ.
1"=10' VERT.


PROPOSED BUILDING
EX. GRADE 399.8±
FG 398.95
FG 398.33
1.8%
FF 399.13
1.8%
PROPOSED PARKING STALL
EX. GRADE 386.4±
3:1 MAX
3:1 MAX
TOP OF TREATMENT AREA 397.33
EXISTING GRADE
1:1
FINAL DEPTH AND LOCATION OF KEYWAY AND BENCHES SHALL BE DETERMINED BY GEOR IN FIELD
2% MIN
2'
10' MAX
410.0
380.0
0.00
200.00

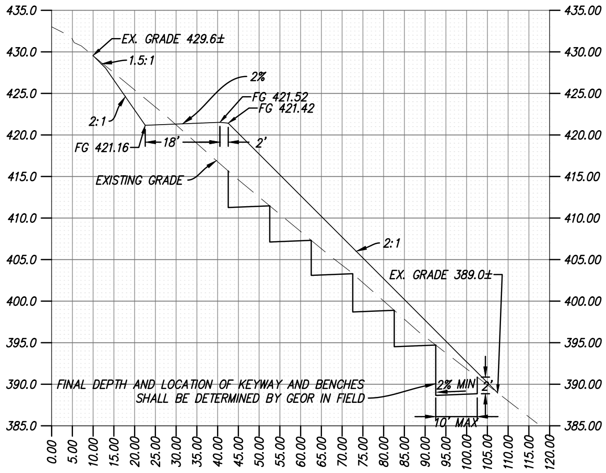
SECTION B-B

SCALES:
1"=20' HORIZ.
1"=10' VERT.


2:1
EX. GRADE 393.1±
EXISTING GRADE
EX. GRADE 380.4±
1:1
FINAL DEPTH AND LOCATION OF KEYWAY AND BENCHES SHALL BE DETERMINED BY GEOR IN FIELD
2% MIN
2'
10' MAX
410.0
375.0
0.00
191.22

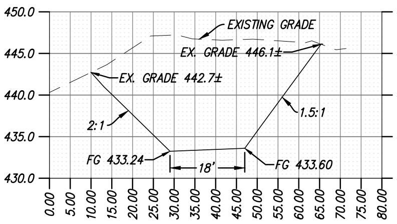
SECTION C-C

SCALES:
1"=20' HORIZ.
1"=10' VERT.


EX. GRADE 429.6±
1.5:1
2%
FG 421.52
FG 421.42
2:1
FG 421.16
18'
2'
EXISTING GRADE
2:1
EX. GRADE 389.0±
FINAL DEPTH AND LOCATION OF KEYWAY AND BENCHES SHALL BE DETERMINED BY GEOR IN FIELD
2% MIN
2'
10' MAX
435.0
385.0
0.00
120.00

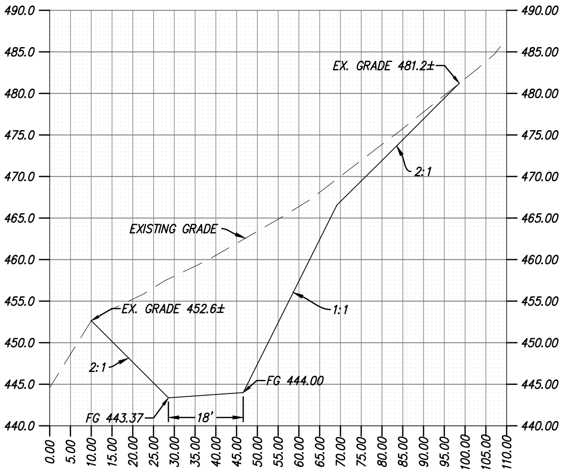
SECTION D-D

SCALES:
1"=20' HORIZ.
1"=10' VERT.


EXISTING GRADE
EX. GRADE 446.1±
EX. GRADE 442.7±
2:1
1.5:1
FG 433.24
18'
FG 433.60
450.0
430.0
0.00
80.00

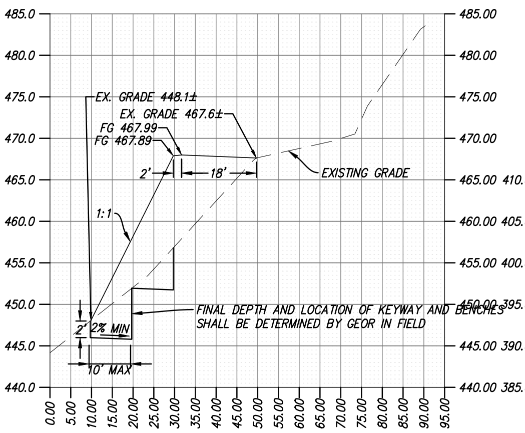
SECTION E-E

SCALES:
1"=20' HORIZ.
1"=10' VERT.


EX. GRADE 481.2±
2:1
EXISTING GRADE
1:1
EX. GRADE 452.6±
2:1
FG 444.00
FG 443.37
18'
490.0
440.0
0.00
110.00

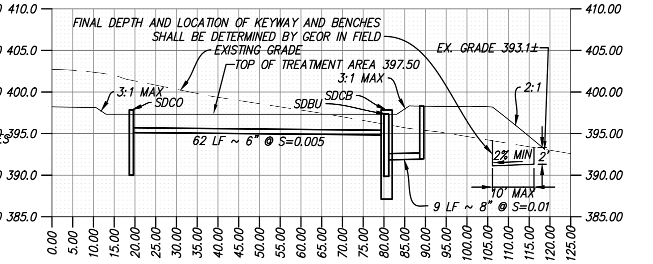
SECTION F-F

SCALES:
1"=20' HORIZ.
1"=10' VERT.


EX. GRADE 448.1±
EX. GRADE 467.6±
FG 467.99
FG 467.89
2'
18'
EXISTING GRADE
1:1
FINAL DEPTH AND LOCATION OF KEYWAY AND BENCHES SHALL BE DETERMINED BY GEOR IN FIELD
2'
2% MIN
10' MAX
485.0
440.0
0.00
95.00

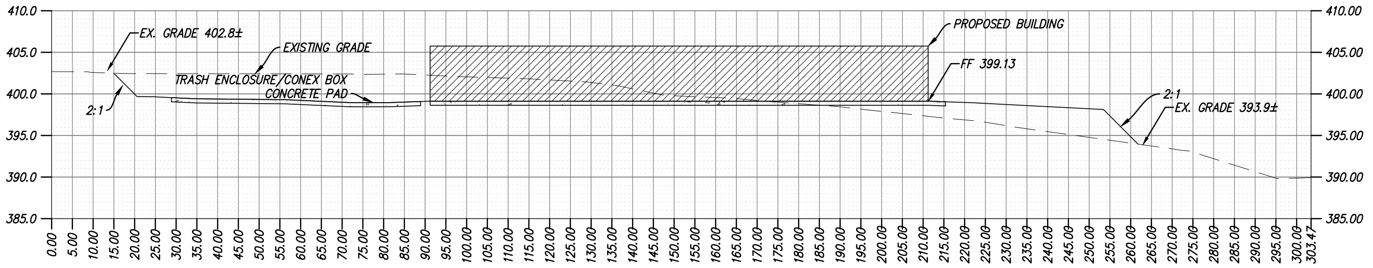
SECTION G-G

SCALES:
1"=20' HORIZ.
1"=10' VERT.


FINAL DEPTH AND LOCATION OF KEYWAY AND BENCHES SHALL BE DETERMINED BY GEOR IN FIELD
EXISTING GRADE
TOP OF TREATMENT AREA 397.50
EX. GRADE 393.1±
3:1 MAX
3:1 MAX
SDCO
SDBU
SDCB
2:1
62 LF ~ 6" @ S=0.005
2% MIN
2'
10' MAX
9 LF ~ 8" @ S=0.01
410.0
385.0
0.00
125.00

SECTION H-H

SCALES:
1"=20' HORIZ.
1"=10' VERT.


PROPOSED BUILDING
EX. GRADE 402.8±
EXISTING GRADE
TRASH ENCLOSURE/CONEX BOX CONCRETE PAD
FF 399.13
2:1
2:1
EX. GRADE 393.9±
410.0
385.0
0.00
303.47

SECTION I-I

SCALES:
1"=20' HORIZ.
1"=10' VERT.

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	12/11/25
SCALE:	1" = 20'
DRAWN BY:	RLM
APPROVED BY:	NB
DRAWING NO.:	217084

DATE October 14, 2025

NATHAN DICKINSON
R.C.E. NO. 79716, EXPIRES 9-30-26

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

CROSS-SECTIONS

SHEET
C-4.0
OF 16 SHEETS

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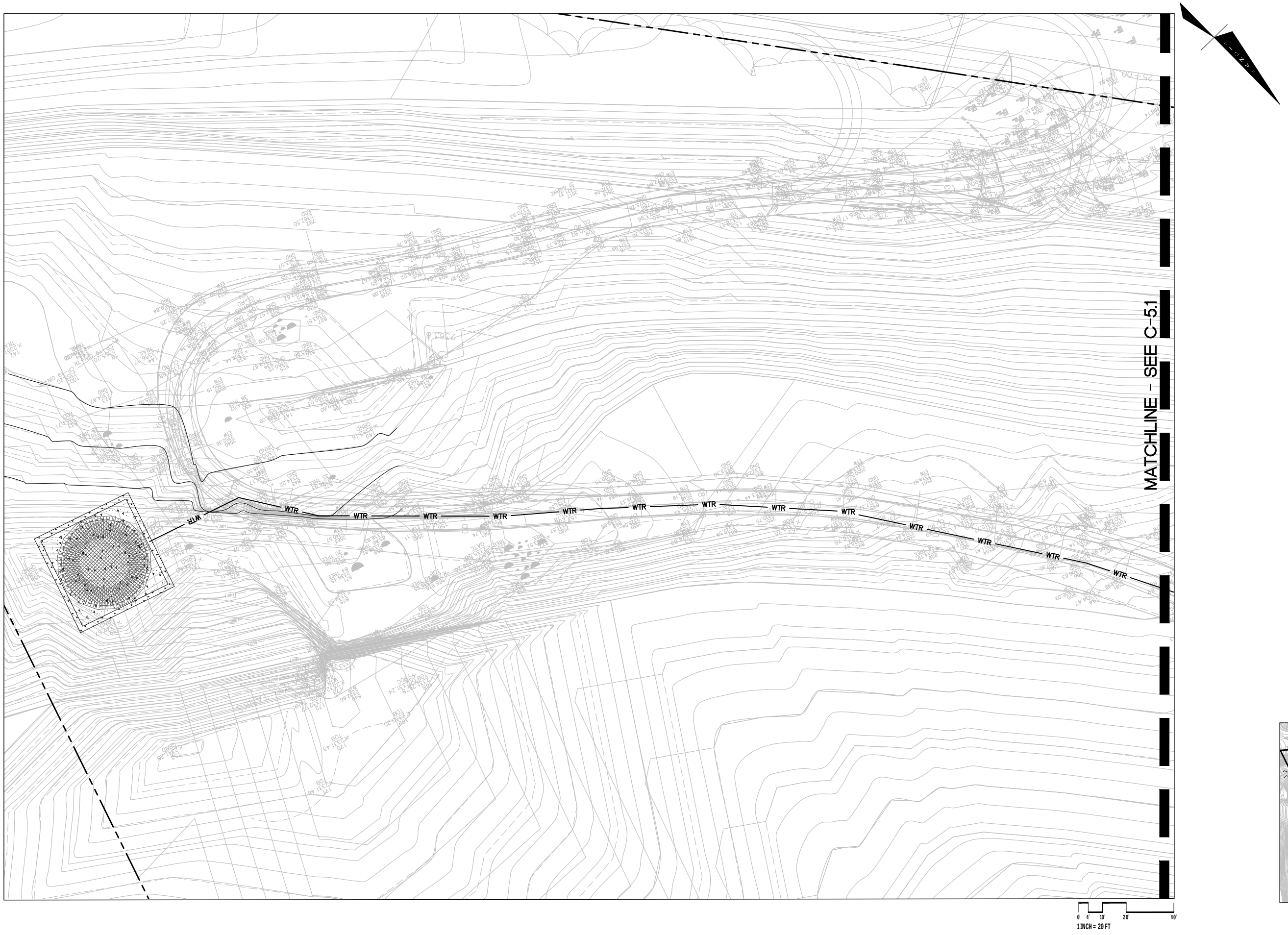


LEGEND

— — — —	PROPERTY LINE
●	STORM DRAIN OR SANITARY SEWER CLEANOUT

3
C-6.0

STORM DRAIN INLET NOTE

ALL STORM DRAIN INLETS AND CATCH BASINS SHALL BE MARKED WITH PROHIBITIVE LANGUAGE (SUCH AS: "NO DUMPING – DRAINS TO OCEAN. NO TIRE – DESECHO CORRE AL MAR") AND/OR GRAPHICAL ICONS TO DISCOURAGE ILLEGAL DUMPING. LEGIBILITY OF MARKINGS AND SIGNS MUST BE MAINTAINED BY THE PROPERTY OWNER.

STORM DRAIN NOTES

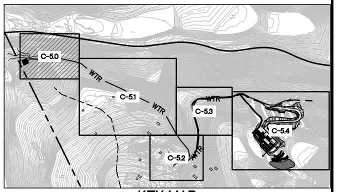
1. PRIVATE STORM DRAIN LINE 4-INCH THROUGH 12-INCH WITH A MINIMUM OF TWO (2) FEET OF COVER IN NON-TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 GREEN PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH BELLS AND SPIGOT CONNECTIONS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS, 45° ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
2. PRIVATE STORM DRAIN LINE 6-INCH THROUGH 12-INCH WITH LESS THAN THREE (3) FEET OF COVER IN VEHICULAR TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) C900, RATED FOR 150 PSI CLASS PIPE. PROVIDE AND INSTALL "STORM DRAIN" MARKER TAPE FOR THE ENTIRE LENGTH OF PIPE TRENCH. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, OBTUSE ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
3. ALL AREA DRAINS AND CATCH BASINS GRATES WITHIN PEDESTRIAN ACCESSIBLE AREAS SHALL MEET ADA REQUIREMENTS.
4. ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES.
5. FOR GRAVITY FLOW SYSTEMS CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF ANY GRAVITY FLOW SYSTEM.
6. DRAINS SHOWN ON CIVIL PLANS ARE NOT INTENDED TO BE THE FINAL NUMBER AND LOCATION OF ALL DRAINS. PLACEMENT AND NUMBER OF LANDSCAPING DRAINS ARE HIGHLY DEPENDENT ON GROUND COVER TYPE AND PLANT MATERIAL. CONTRACTOR SHALL ADD ADDITIONAL AREA DRAINS AS NEEDED AND AS DIRECTED BY THE LANDSCAPE ARCHITECT.
7. INSTALL SEPARATE SUB-DRAIN SYSTEM BEHIND RETAINING WALLS PER GEOTECHNICAL REPORT AND CONNECT TO STORM DRAIN SYSTEM AS SHOWN ON PLANS.
8. ALL DOWN SPOUTS SHALL DISCHARGE DIRECTLY ON TO ADJACENT PERVIOUS SURFACES OR SPLASH BLOCKS UNLESS OTHERWISE NOTED ON PLANS. SEE ARCHITECTURE PLANS FOR EXACT LOCATION OF THE DOWN SPOUTS.

SANITARY SEWER NOTES

1. ALL SEWER WORK SHALL BE IN CONFORMANCE WITH THE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT STANDARDS.
2. PRIVATE SANITARY SEWER MAIN AND SERVICE LINE 4-INCH THROUGH 8-INCH SHALL BE POLYVINYL CHLORIDE (PVC) SDR 26 GREEN SEWER PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH BELL AND SPIGOT CONNECTIONS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS OR 45°. ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
3. ALL LATERALS SHALL HAVE A TWO WAY CLEANOUT AT FACE OF BUILDING AND AS SHOWN ON PLANS.
4. IF (E) SEWER LATERAL IS TO BE USED, CONTRACTOR SHALL VIDEO INSPECT, PERFORM PRESSURE TEST ON (E) SEWER LATERAL, AND SHALL PERFORM ANY NEEDED REPAIRS.

WATER SYSTEM NOTES

1. MAINTAIN WATER MAIN LINES 10' AWAY FROM SANITARY SEWER MAIN LINES. LATERALS SHALL BE SEPARATED PER PLAN DIMENSIONS.
2. WHERE WATER LINES HAVE TO CROSS SANITARY SEWER LINES, DO SO AT A 90 DEGREE ANGLE AND WATER LINES SHALL BE MINIMUM OF 12" ABOVE TOP OF SANITARY SEWER LINES.
3. ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE WATER DISTRICT STANDARDS.
4. ALL WATER LINES SHALL BE INSTALLED WITH 36" MINIMUM COVER.
5. THRUST RESTRAINTS SHALL BE DESIGNED AND INSTALLED AT ALL TEES, CROSSES, BENDS (HORIZONTAL AND VERTICAL), AT SIZE CHANGES AND AT FIRE HYDRANTS.



KEY MAP

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	12/11/25
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No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

UTILITY PLAN

SHEET
C-5.0
OF 16 SHEETS

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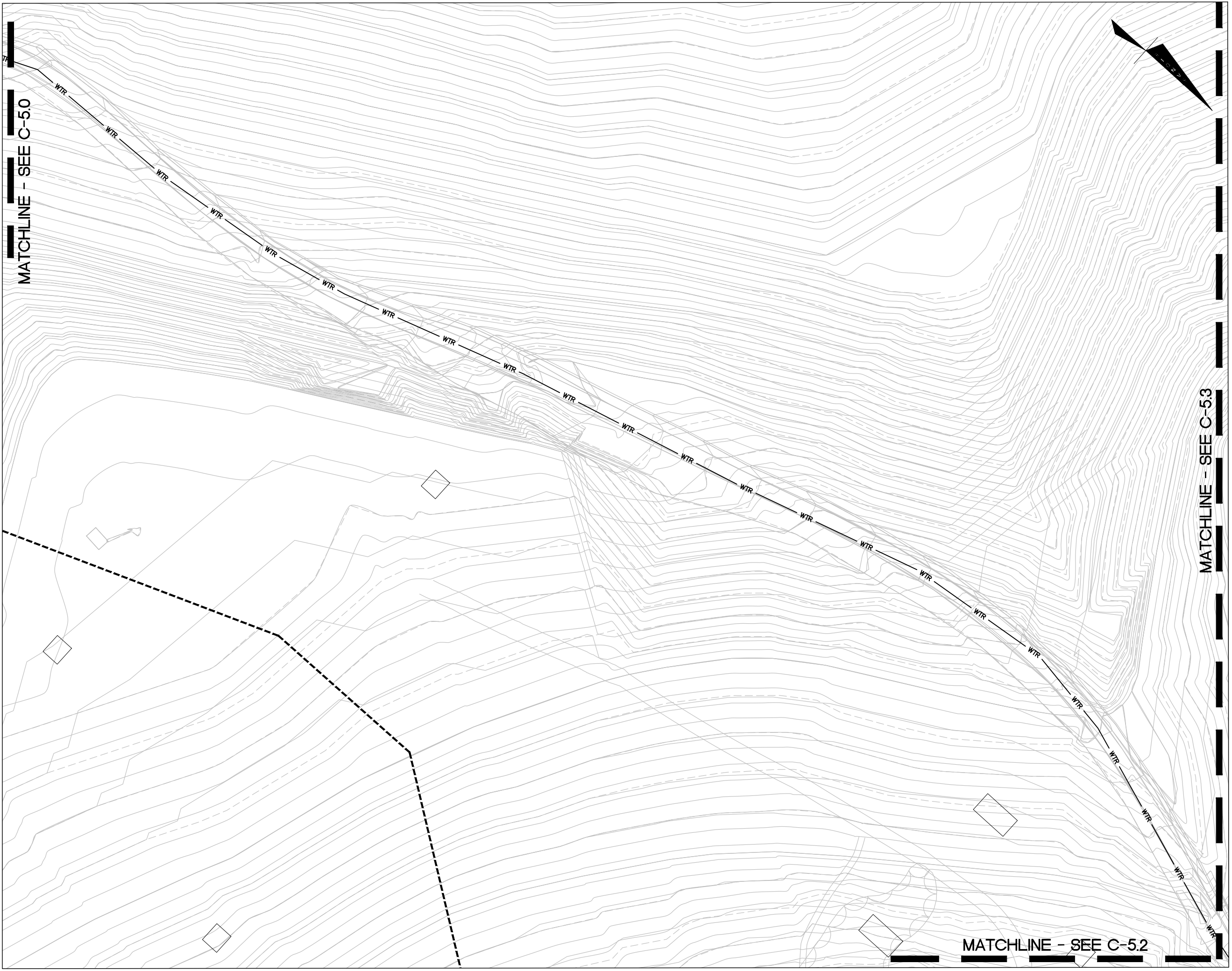


LEGEND

— — — —	PROPERTY LINE
●	STORM DRAIN OR SANITARY SEWER CLEANOUT 3/C-6.0

STORM DRAIN INLET NOTE

ALL STORM DRAIN INLETS AND CATCH BASINS SHALL BE MARKED WITH PROHIBITIVE LANGUAGE (SUCH AS: "NO DUMPING – DRAINS TO OCEAN. NO TIRE – DESECHO CORRE AL MAR") AND/OR GRAPHICAL ICONS TO DISCOURAGE ILLEGAL DUMPING. LEGIBILITY OF MARKINGS AND SIGNS MUST BE MAINTAINED BY THE PROPERTY OWNER.

STORM DRAIN NOTES

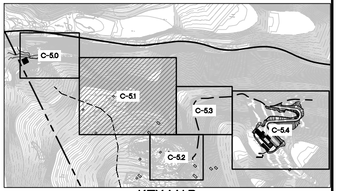
1. *PRIVATE STORM DRAIN LINE 4-INCH THROUGH 12-INCH WITH A MINIMUM OF TWO (2) FEET OF COVER IN NON-TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 GREEN PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH BELLS AND SPIGOT CONNECTIONS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS, 45° ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.*
2. *PRIVATE STORM DRAIN LINE 6-INCH THROUGH 12-INCH WITH LESS THAN THREE (3) FEET OF COVER IN VEHICULAR TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) C900, RATED FOR 150 PSI CLASS PIPE. PROVIDE AND INSTALL "STORM DRAIN" MARKER TAPE FOR THE ENTIRE LENGTH OF PIPE TRENCH. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, OBTUSE ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.*
3. *ALL AREA DRAINS AND CATCH BASINS GRATES WITHIN PEDESTRIAN ACCESSIBLE AREAS SHALL MEET ADA REQUIREMENTS.*
4. *ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES.*
5. *FOR GRAVITY FLOW SYSTEMS CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF ANY GRAVITY FLOW SYSTEM.*
6. *DRAINS SHOWN ON CIVIL PLANS ARE NOT INTENDED TO BE THE FINAL NUMBER AND LOCATION OF ALL DRAINS. PLACEMENT AND NUMBER OF LANDSCAPING DRAINS ARE HIGHLY DEPENDENT ON GROUND COVER TYPE AND PLANT MATERIAL. CONTRACTOR SHALL ADD ADDITIONAL AREA DRAINS AS NEEDED AND AS DIRECTED BY THE LANDSCAPE ARCHITECT.*
7. *INSTALL SEPARATE SUB-DRAIN SYSTEM BEHIND RETAINING WALLS PER GEOTECHNICAL REPORT AND CONNECT TO STORM DRAIN SYSTEM AS SHOWN ON PLANS.*
8. *ALL DOWN SPOUTS SHALL DISCHARGE DIRECTLY ON TO ADJACENT PERVIOUS SURFACES OR SPLASH BLOCKS UNLESS OTHERWISE NOTED ON PLANS. SEE ARCHITECTURE PLANS FOR EXACT LOCATION OF THE DOWN SPOUTS.*

SANITARY SEWER NOTES

1. *ALL SEWER WORK SHALL BE IN CONFORMANCE WITH THE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT STANDARDS.*
2. *PRIVATE SANITARY SEWER MAIN AND SERVICE LINE 4-INCH THROUGH 8-INCH SHALL BE POLYVINYL CHLORIDE (PVC) SDR 26 GREEN SEWER PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH BELL AND SPIGOT CONNECTIONS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS OR 45° ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.*
3. *ALL LATERALS SHALL HAVE A TWO WAY CLEANOUT AT FACE OF BUILDING AND AS SHOWN ON PLANS.*
4. *IF (E) SEWER LATERAL IS TO BE USED, CONTRACTOR SHALL VIDEO INSPECT, PERFORM PRESSURE TEST ON (E) SEWER LATERAL, AND SHALL PERFORM ANY NEEDED REPAIRS.*

WATER SYSTEM NOTES

1. *MAINTAIN WATER MAIN LINES 10' AWAY FROM SANITARY SEWER MAIN LINES. LATERALS SHALL BE SEPARATED PER PLAN DIMENSIONS.*
2. *WHERE WATER LINES HAVE TO CROSS SANITARY SEWER LINES, DO SO AT A 90 DEGREE ANGLE AND WATER LINES SHALL BE MINIMUM OF 12" ABOVE TOP OF SANITARY SEWER LINES.*
3. *ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE WATER DISTRICT STANDARDS.*
4. *ALL WATER LINES SHALL BE INSTALLED WITH 36" MINIMUM COVER.*
5. *THRUST RESTRAINTS SHALL BE DESIGNED AND INSTALLED AT ALL TEES, CROSSES, BENDS (HORIZONTAL AND VERTICAL), AT SIZE CHANGES AND AT FIRE HYDRANTS.*



KEY MAP

0' 6' 15' 30' 60'
1 INCH = 30 FT

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	12/11/25
SCALE:	1" = 30'
DRAWN BY:	RLM
APPROVED BY:	NB
DRAWING NO.:	217084

DATE October 14, 2025

NATHAN DICKINSON
R.C.E. NO. 79716, EXPIRES 9-30-26

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

UTILITY PLAN

SHEET
C-5.1
OF 16 SHEETS

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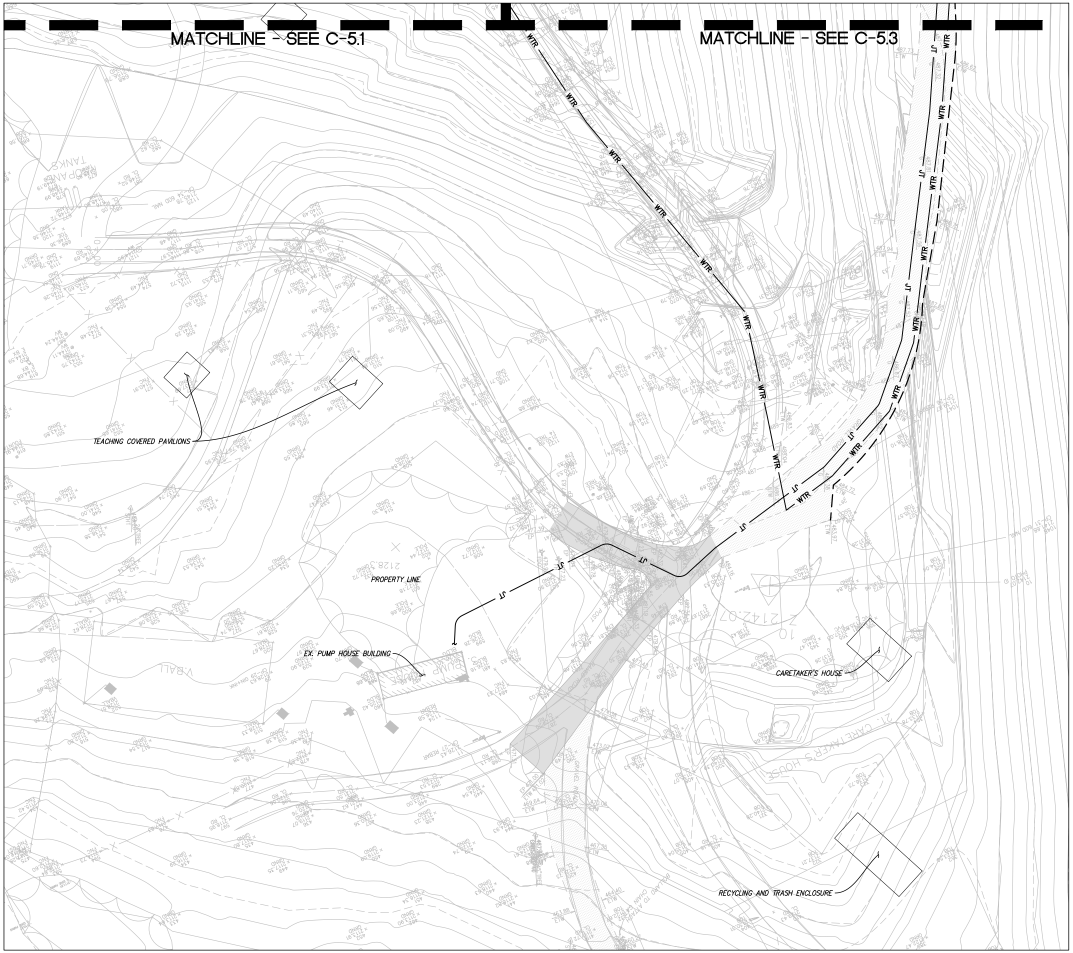

0 4 10 20 40
1 INCH = 20 FT

LEGEND

— — — —	PROPERTY LINE
●	STORM DRAIN OR SANITARY SEWER CLEANOUT (3 / C-6.0)

STORM DRAIN INLET NOTE

ALL STORM DRAIN INLETS AND CATCH BASINS SHALL BE MARKED WITH PROHIBITIVE LANGUAGE (SUCH AS: "NO DUMPING – DRAINS TO OCEAN. NO TIRE – DESECHO CORRE AL MAR") AND/OR GRAPHICAL ICONS TO DISCOURAGE ILLEGAL DUMPING. LEGIBILITY OF MARKINGS AND SIGNS MUST BE MAINTAINED BY THE PROPERTY OWNER.

STORM DRAIN NOTES

1. PRIVATE STORM DRAIN LINE 4-INCH THROUGH 12-INCH WITH A MINIMUM OF TWO (2) FEET OF COVER IN NON-TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 GREEN PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH BELLS AND SPIGOT CONNECTIONS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS, 45° ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
2. PRIVATE STORM DRAIN LINE 6-INCH THROUGH 12-INCH WITH LESS THAN THREE (3) FEET OF COVER IN VEHICULAR TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) C900, RATED FOR 150 PSI CLASS PIPE. PROVIDE AND INSTALL "STORM DRAIN" MARKER TAPE FOR THE ENTIRE LENGTH OF PIPE TRENCH. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, OBTUSE ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
3. ALL AREA DRAINS AND CATCH BASINS GRATES WITHIN PEDESTRIAN ACCESSIBLE AREAS SHALL MEET ADA REQUIREMENTS.
4. ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES.
5. FOR GRAVITY FLOW SYSTEMS CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF ANY GRAVITY FLOW SYSTEM.
6. DRAINS SHOWN ON CIVIL PLANS ARE NOT INTENDED TO BE THE FINAL NUMBER AND LOCATION OF ALL DRAINS. PLACEMENT AND NUMBER OF LANDSCAPING DRAINS ARE HIGHLY DEPENDENT ON GROUND COVER TYPE AND PLANT MATERIAL. CONTRACTOR SHALL ADD ADDITIONAL AREA DRAINS AS NEEDED AND AS DIRECTED BY THE LANDSCAPE ARCHITECT.
7. INSTALL SEPARATE SUB-DRAIN SYSTEM BEHIND RETAINING WALLS PER GEOTECHNICAL REPORT AND CONNECT TO STORM DRAIN SYSTEM AS SHOWN ON PLANS.
8. ALL DOWN SPOUTS SHALL DISCHARGE DIRECTLY ON TO ADJACENT PERVIOUS SURFACES OR SPLASH BLOCKS UNLESS OTHERWISE NOTED ON PLANS. SEE ARCHITECTURE PLANS FOR EXACT LOCATION OF THE DOWN SPOUTS.

SANITARY SEWER NOTES

1. ALL SEWER WORK SHALL BE IN CONFORMANCE WITH THE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT STANDARDS.
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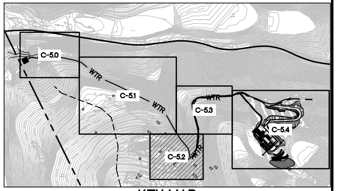
WATER SYSTEM NOTES

1. MAINTAIN WATER MAIN LINES 10' AWAY FROM SANITARY SEWER MAIN LINES. LATERALS SHALL BE SEPARATED PER PLAN DIMENSIONS.
2. WHERE WATER LINES HAVE TO CROSS SANITARY SEWER LINES, DO SO AT A 90 DEGREE ANGLE AND WATER LINES SHALL BE MINIMUM OF 12" ABOVE TOP OF SANITARY SEWER LINES.
3. ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE WATER DISTRICT STANDARDS.
4. ALL WATER LINES SHALL BE INSTALLED WITH 36" MINIMUM COVER.
5. THRUST RESTRAINTS SHALL BE DESIGNED AND INSTALLED AT ALL TEES, CROSSES, BENDS (HORIZONTAL AND VERTICAL), AT SIZE CHANGES AND AT FIRE HYDRANTS.



KEY MAP

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SHEET
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OF 16 SHEETS

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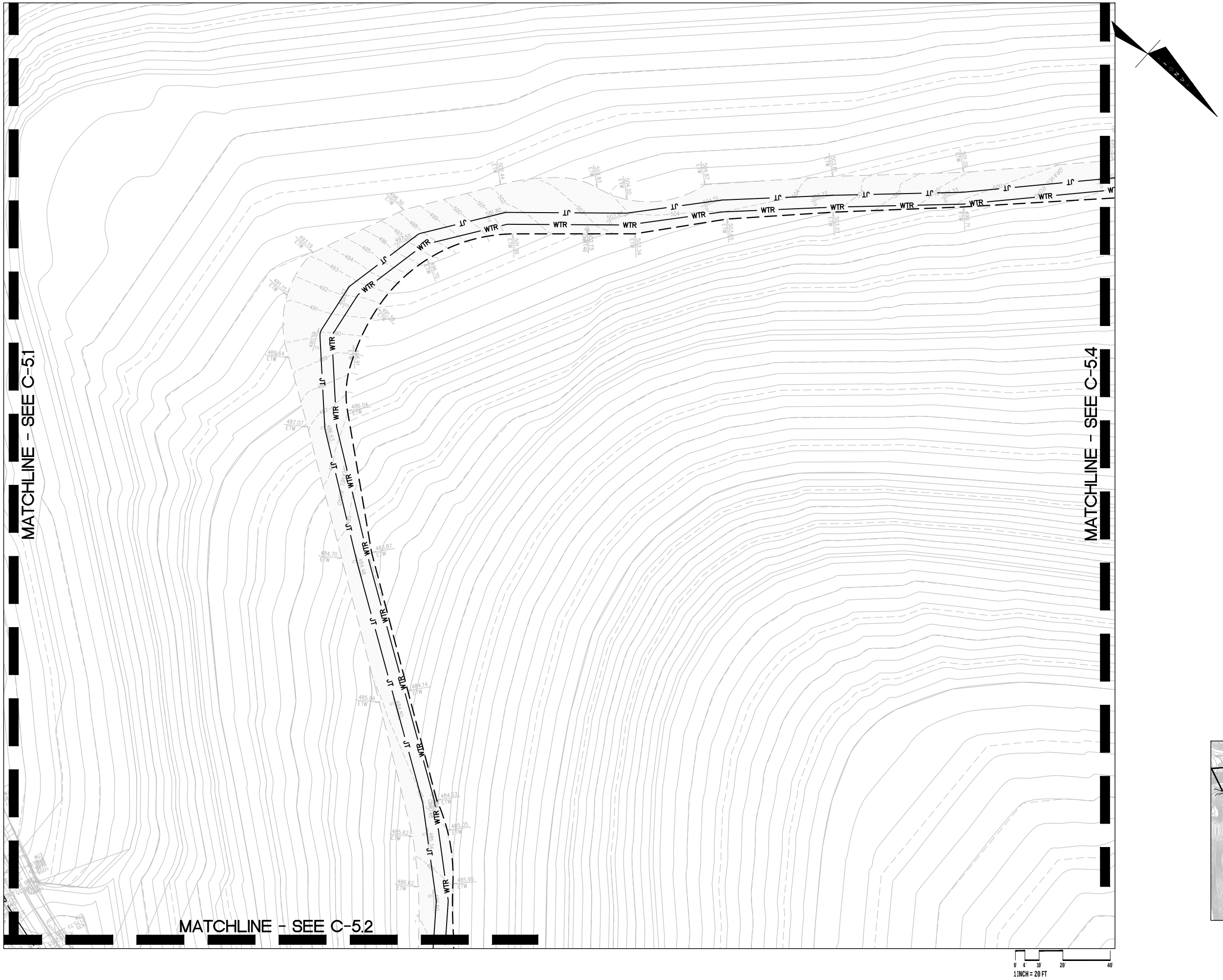

LEGEND

PROPERTY LINE

STORM DRAIN OR SANITARY SEWER CLEANOUT 3/C-6.0

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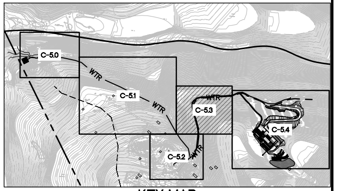

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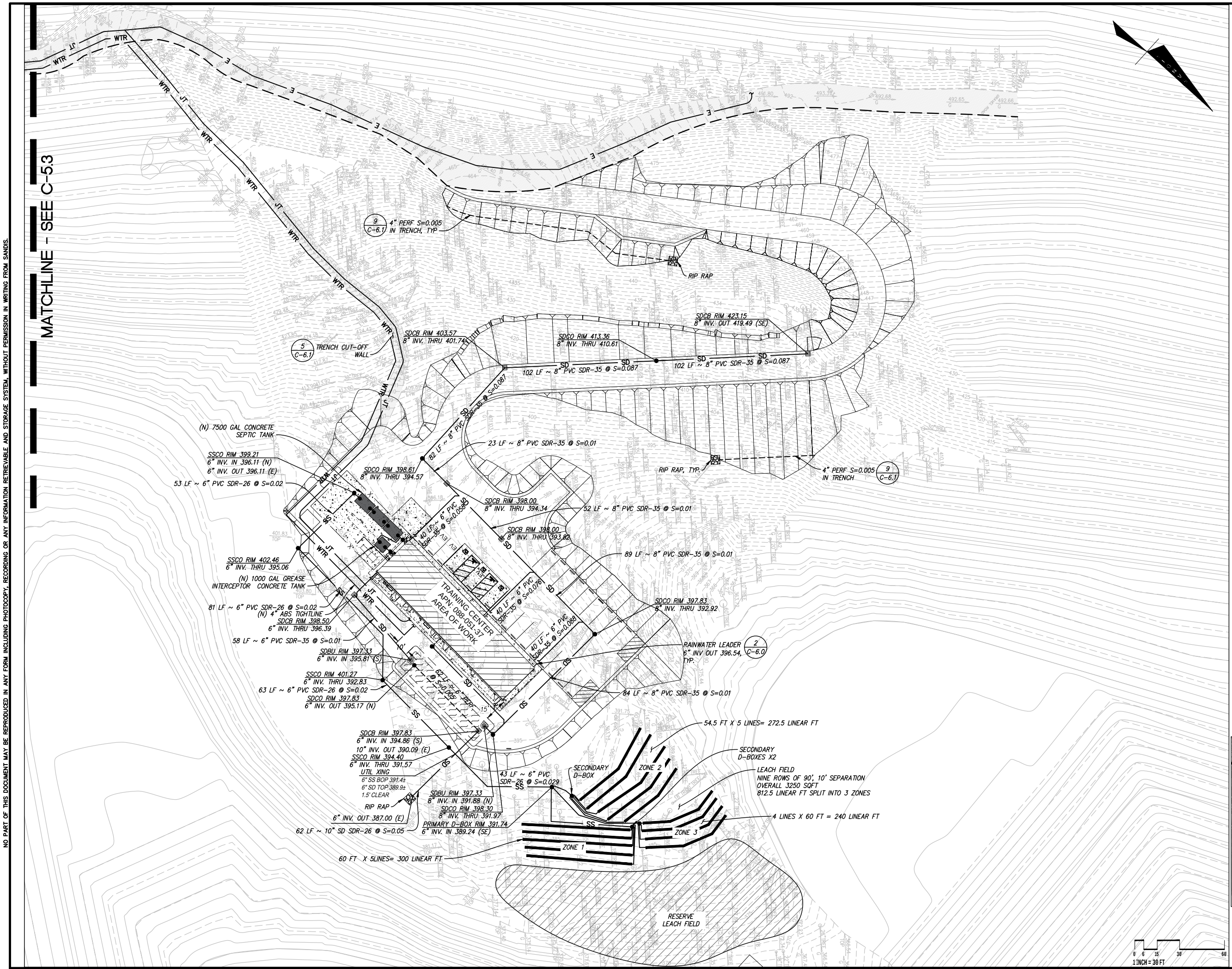
MATCHLINE - SEE C-5.3
WTR
JT
E
9 / C-6.1 4" PERF S=0.005 IN TRENCH, TYP
RIP RAP
5 / C-6.1 TRENCH CUT-OFF WALL
SDCB RIM 403.57
8" INV. THRU 401.74
SDCO RIM 413.36
8" INV. THRU 410.61
SDCB RIM 423.15
8" INV. OUT 419.49 (SE)
SD
102 LF ~ 8" PVC SDR-35 @ S=0.087
102 LF ~ 8" PVC SDR-35 @ S=0.087
82 LF ~ 8" PVC SDR-35 @ S=0.087
23 LF ~ 8" PVC SDR-35 @ S=0.01
RIP RAP, TYP.
4" PERF S=0.005 IN TRENCH 9 / C-6.1
(N) 7500 GAL CONCRETE SEPTIC TANK
SSCO RIM 399.21
6" INV. IN 396.11 (N)
6" INV. OUT 396.11 (E)
53 LF ~ 6" PVC SDR-26 @ S=0.02
SDCO RIM 398.61
8" INV. THRU 394.57
SDCB RIM 398.00
8" INV. THRU 394.34
52 LF ~ 8" PVC SDR-35 @ S=0.01
SDCB RIM 398.00
8" INV. THRU 393.82
40 LF ~ 6" PVC SDR-35 @ S=0.058
89 LF ~ 8" PVC SDR-35 @ S=0.01
SSCO RIM 402.46
6" INV. THRU 395.06
(N) 1000 GAL GREASE INTERCEPTOR CONCRETE TANK
TRAINING CENTER
APN: 088-051-37
AREA OF WORK
40 LF ~ 6" PVC SDR-35 @ S=0.076
SDCO RIM 397.83
8" INV. THRU 392.92
40 LF ~ 6" PVC SDR-35 @ S=0.088
RAINWATER LEADER 6" INV OUT 396.54, TYP. 2 / C-6.0
81 LF ~ 6" PVC SDR-26 @ S=0.02
(N) 4" ABS TIGHTLINE
SDCB RIM 398.50
6" INV. THRU 396.39
58 LF ~ 6" PVC SDR-35 @ S=0.01
SDBU RIM 397.33
6" INV. IN 395.81 (S)
10'
SSCO RIM 401.27
6" INV. THRU 392.83
63 LF ~ 6" PVC SDR-26 @ S=0.02
SDCO RIM 397.83
6" INV. OUT 395.17 (N)
62 LF ~ 6" PERF @ S=0.005
15'
84 LF ~ 8" PVC SDR-35 @ S=0.01
SS
SDCB RIM 397.83
6" INV. IN 394.86 (S)
10" INV. OUT 390.09 (E)
SSCO RIM 394.40
6" INV. THRU 391.57
UTIL XING
6" SS BOP 391.4±
6" SD TOP 389.9±
1.5' CLEAR
RIP RAP
6" INV. OUT 387.00 (E)
62 LF ~ 10" SD SDR-26 @ S=0.05
43 LF ~ 6" PVC SDR-26 @ S=0.029
SDBU RIM 397.33
8" INV. IN 391.88 (N)
SDCO RIM 398.30
8" INV. THRU 391.97
PRIMARY D-BOX RIM 391.74
6" INV. IN 389.24 (SE)
SECONDARY D-BOX
ZONE 1
ZONE 2
ZONE 3
54.5 FT X 5 LINES= 272.5 LINEAR FT
SECONDARY D-BOXES X2
LEACH FIELD
NINE ROWS OF 90', 10' SEPARATION
OVERALL 3250 SQFT
812.5 LINEAR FT SPLIT INTO 3 ZONES
4 LINES X 60 FT = 240 LINEAR FT
60 FT X 5LINES= 300 LINEAR FT
RESERVE LEACH FIELD
0 6 15 30 60
1 INCH = 30 FT

LEGEND

— — — —	PROPERTY LINE
●	STORM DRAIN OR SANITARY SEWER CLEANOUT 3 / C-6.0

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WATER SYSTEM NOTES

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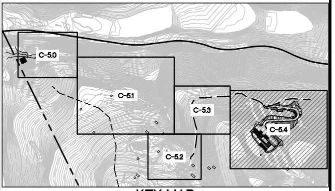
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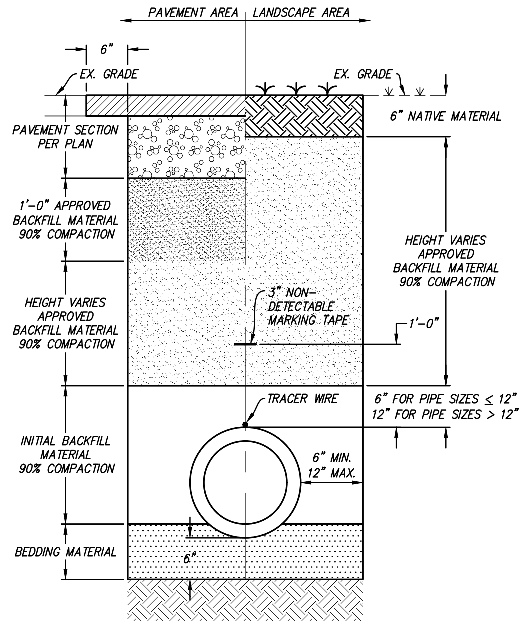
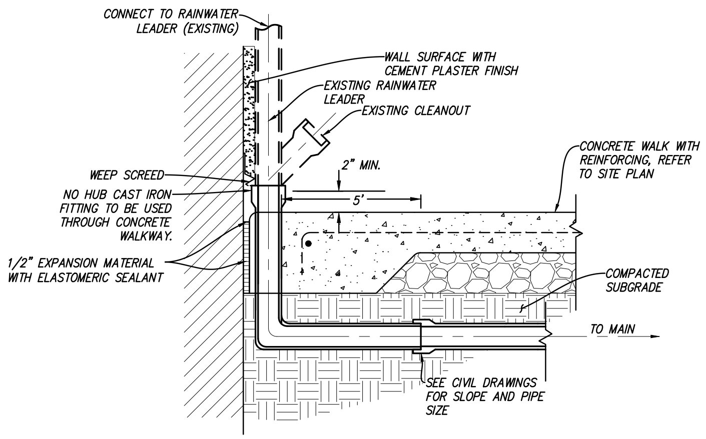

PAVEMENT AREA
LANDSCAPE AREA
6"
EX. GRADE
EX. GRADE
6" NATIVE MATERIAL
PAVEMENT SECTION PER PLAN
1'-0" APPROVED BACKFILL MATERIAL 90% COMPACTION
HEIGHT VARIES APPROVED BACKFILL MATERIAL 90% COMPACTION
HEIGHT VARIES APPROVED BACKFILL MATERIAL 90% COMPACTION
3" NON-DETECTABLE MARKING TAPE
1'-0"
TRACER WIRE
6" FOR PIPE SIZES ≤ 12"
12" FOR PIPE SIZES > 12"
INITIAL BACKFILL MATERIAL 90% COMPACTION
6" MIN.
12" MAX.
BEDDING MATERIAL
6"

NOTES:

1. SHORING TO BE PER CAL/OSHA CONSTRUCTION SAFETY ORDERS..
2. RESTORE ALL PAVEMENT MARKING IN-KIND WHERE REMOVED AS PART OF TRENCHING OPERATIONS.

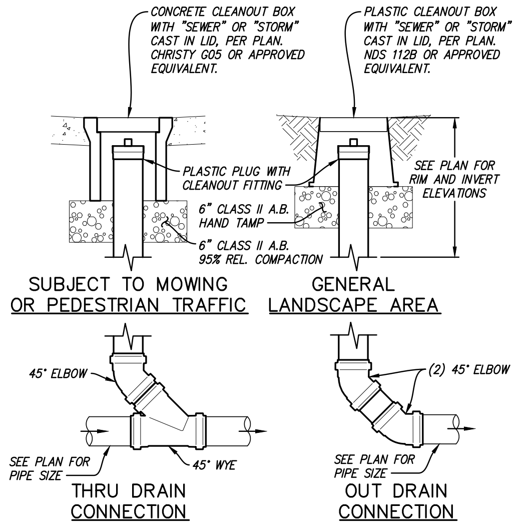
UTILITY TRENCH DETAIL ①

1"=1'


CONNECT TO RAINWATER LEADER (EXISTING)
WALL SURFACE WITH CEMENT PLASTER FINISH
EXISTING RAINWATER LEADER
EXISTING CLEANOUT
2" MIN.
5'
CONCRETE WALK WITH REINFORCING, REFER TO SITE PLAN
WEEP SCREED
NO HUB CAST IRON FITTING TO BE USED THROUGH CONCRETE WALKWAY.
1/2" EXPANSION MATERIAL WITH ELASTOMERIC SEALANT
COMPACTED SUBGRADE
TO MAIN
SEE CIVIL DRAWINGS FOR SLOPE AND PIPE SIZE

RAINWATER LEADER TIE-IN ②

N.T.S.

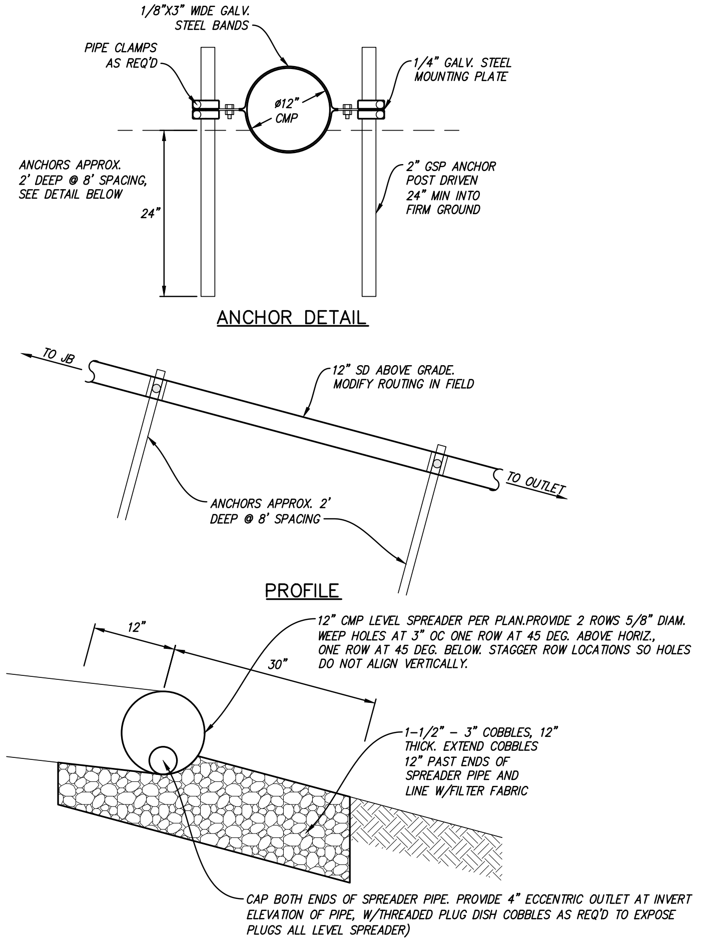

CONCRETE CLEANOUT BOX WITH "SEWER" OR "STORM" CAST IN LID, PER PLAN. CHRISTY G05 OR APPROVED EQUIVALENT.
PLASTIC CLEANOUT BOX WITH "SEWER" OR "STORM" CAST IN LID, PER PLAN. NDS 112B OR APPROVED EQUIVALENT.
PLASTIC PLUG WITH CLEANOUT FITTING
SEE PLAN FOR RIM AND INVERT ELEVATIONS
6" CLASS II A.B. HAND TAMP
6" CLASS II A.B. 95% REL. COMPACTION
SUBJECT TO MOWING OR PEDESTRIAN TRAFFIC
GENERAL LANDSCAPE AREA
45° ELBOW
(2) 45° ELBOW
SEE PLAN FOR PIPE SIZE
45° WYE
SEE PLAN FOR PIPE SIZE
THRU DRAIN CONNECTION
OUT DRAIN CONNECTION

NOTES:

1. RISER DIAMETER SHALL MATCH THRU/OUT PIPE SIZE.

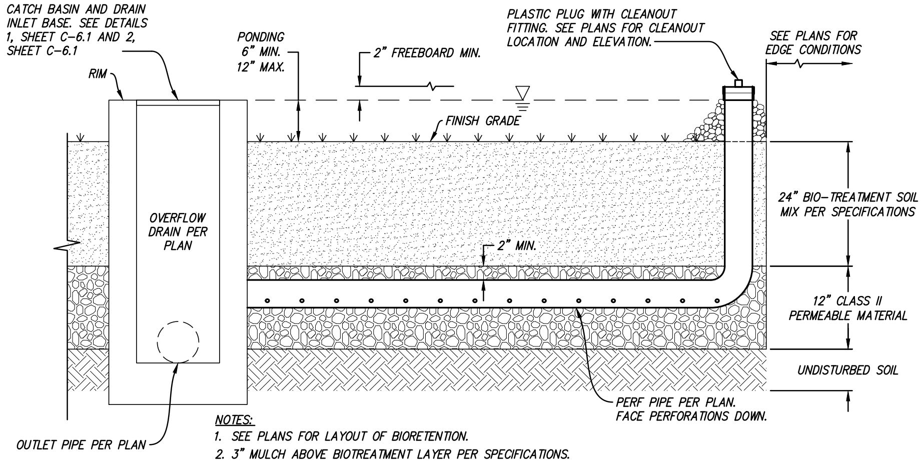
STORM DRAIN OR SANITARY SEWER CLEANOUT ③

1"=1'


1/8"X3" WIDE GALV. STEEL BANDS
PIPE CLAMPS AS REQ'D
1/4" GALV. STEEL MOUNTING PLATE
ø12" CMP
ANCHORS APPROX. 2' DEEP @ 8' SPACING, SEE DETAIL BELOW
24"
2" GSP ANCHOR POST DRIVEN 24" MIN INTO FIRM GROUND
ANCHOR DETAIL
TO JB
12" SD ABOVE GRADE. MODIFY ROUTING IN FIELD
TO OUTLET
ANCHORS APPROX. 2' DEEP @ 8' SPACING
PROFILE
12"
30"
12" CMP LEVEL SPREADER PER PLAN.PROVIDE 2 ROWS 5/8" DIAM. WEEP HOLES AT 3" OC ONE ROW AT 45 DEG. ABOVE HORIZ., ONE ROW AT 45 DEG. BELOW. STAGGER ROW LOCATIONS SO HOLES DO NOT ALIGN VERTICALLY.
1-1/2" - 3" COBBLES, 12" THICK. EXTEND COBBLES 12" PAST ENDS OF SPREADER PIPE AND LINE W/FILTER FABRIC
CAP BOTH ENDS OF SPREADER PIPE. PROVIDE 4" ECCENTRIC OUTLET AT INVERT ELEVATION OF PIPE, W/THREADED PLUG DISH COBBLES AS REQ'D TO EXPOSE PLUGS ALL LEVEL SPREADER)

12" CMP LEVEL SPREADER ④

1"=1'

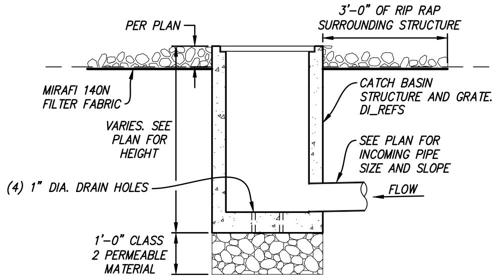

CATCH BASIN AND DRAIN INLET BASE. SEE DETAILS 1, SHEET C-6.1 AND 2, SHEET C-6.1
RIM
PONDING 6" MIN. 12" MAX.
2" FREEBOARD MIN.
PLASTIC PLUG WITH CLEANOUT FITTING. SEE PLANS FOR CLEANOUT LOCATION AND ELEVATION.
SEE PLANS FOR EDGE CONDITIONS
FINISH GRADE
OVERFLOW DRAIN PER PLAN
2" MIN.
24" BIO-TREATMENT SOIL MIX PER SPECIFICATIONS
12" CLASS II PERMEABLE MATERIAL
UNDISTURBED SOIL
PERF PIPE PER PLAN. FACE PERFORATIONS DOWN.
OUTLET PIPE PER PLAN

NOTES:

1. SEE PLANS FOR LAYOUT OF BIORETENTION.
2. 3" MULCH ABOVE BIOTREATMENT LAYER PER SPECIFICATIONS.

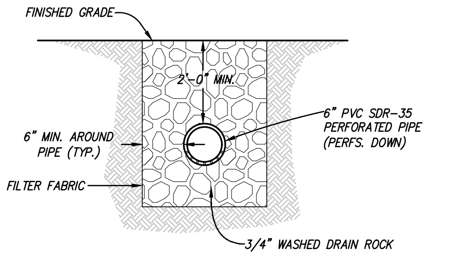
UNLINED BIORETENTION SECTION ⑤

1"=1'


PER PLAN
3'-0" OF RIP RAP SURROUNDING STRUCTURE
MIRAFI 140N FILTER FABRIC
CATCH BASIN STRUCTURE AND GRATE. DI_REFS
VARIES. SEE PLAN FOR HEIGHT
SEE PLAN FOR INCOMING PIPE SIZE AND SLOPE
FLOW
(4) 1" DIA. DRAIN HOLES
1'-0" CLASS 2 PERMEABLE MATERIAL

BUBBLE UP BOX ⑥

1"=2'


FINISHED GRADE
2'-0" MIN.
6" PVC SDR-35 PERFORATED PIPE (PERFS. DOWN)
6" MIN. AROUND PIPE (TYP.)
FILTER FABRIC
3/4" WASHED DRAIN ROCK

PERFORATED PIPE IN TRENCH ⑦

N.T.S.

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE: 12/11/25
SCALE: N.T.S.
DRAWN BY: RLM
APPROVED BY: NB
DRAWING NO. 217084

DATE October 14, 2025

NATHAN DICKINSON
R.C.E. NO. 79716, EXPIRES 9-30-26

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

CONSTRUCTION
DETAILS

SHEET
C-6.0
OF 16 SHEETS

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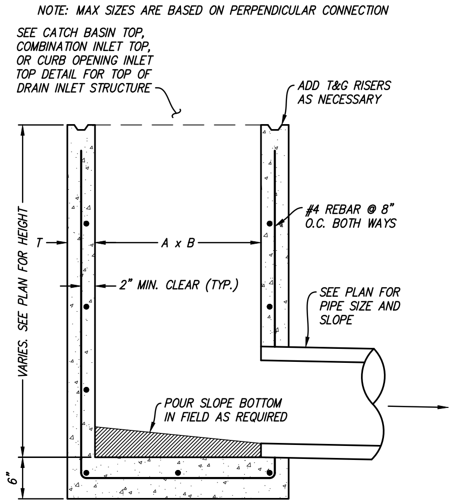

NOTE: MAX SIZES ARE BASED ON PERPENDICULAR CONNECTION
SEE CATCH BASIN TOP, COMBINATION INLET TOP, OR CURB OPENING INLET TOP DETAIL FOR TOP OF DRAIN INLET STRUCTURE
ADD T&G RISERS AS NECESSARY
#4 REBAR @ 8" O.C. BOTH WAYS
T
A x B
2" MIN. CLEAR (TYP.)
VARIES. SEE PLAN FOR HEIGHT
SEE PLAN FOR PIPE SIZE AND SLOPE
POUR SLOPE BOTTOM IN FIELD AS REQUIRED
6"

NOTES:

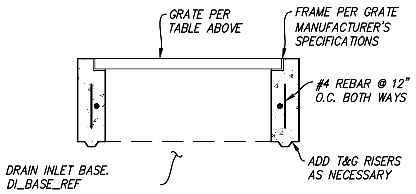
1. SEE PLANS FOR DRAIN INLET SIZE.
2. PRE-CAST DRAIN INLET IN LIEU OF CAST-IN-PLACE INLET IS ACCEPTABLE, OLDCASTLE OR APPROVED EQUIVALENT.

DRAIN INLET BASE

1"=1'

1

* OR APPROVED EQUIVALENT GRATE WITH 1/4" MAX OPENINGS


GRATE PER TABLE ABOVE
FRAME PER GRATE MANUFACTURER'S SPECIFICATIONS
#4 REBAR @ 12" O.C. BOTH WAYS
DRAIN INLET BASE. DI_BASE_REF
ADD T&G RISERS AS NECESSARY

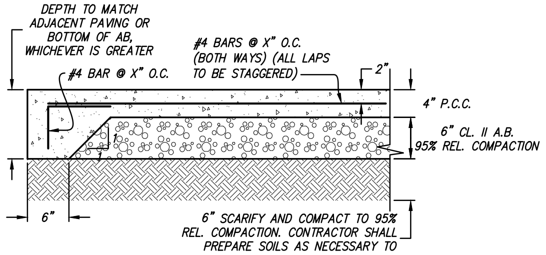
NOTES:

1. SEE PLANS FOR CATCH BASIN SIZE AND TYPE.
2. FRAME SHALL BE ANCHORED TO CONCRETE PER MANUFACTURER'S SPECIFICATIONS.
3. FOR JUNCTION BOXES (JB) IN NON-VEHICULAR AREAS ONLY, REPLACE GRATE WITH NON-SLIP SOLID STEEL COVER. ADD "STORM DRAIN" TEXT TO LID.

CATCH BASIN TOP

1"=1'

2


DEPTH TO MATCH ADJACENT PAVING OR BOTTOM OF AB, WHICHEVER IS GREATER
#4 BAR @ X" O.C.
#4 BARS @ X" O.C. (BOTH WAYS) (ALL LAPS TO BE STAGGERED)
2"
4" P.C.C.
6" CL. II A.B. 95% REL. COMPACTION
1
1
6"
6" SCARIFY AND COMPACT TO 95% REL. COMPACTION. CONTRACTOR SHALL PREPARE SOILS AS NECESSARY TO PROVIDE A STABLE SUBGRADE

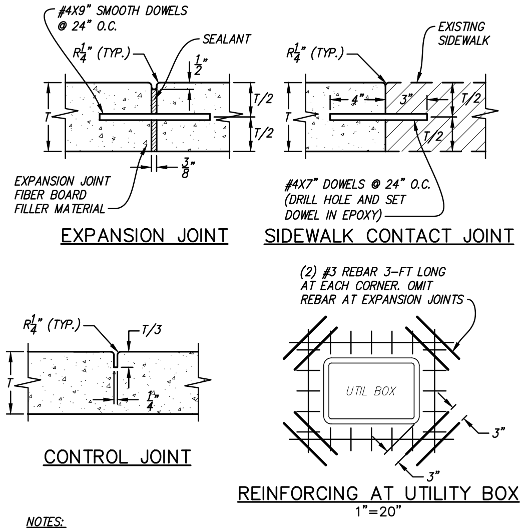
NOTES:

1. EXPANSION JOINTS EVERY 10' MAXIMUM, CONTROL JOINTS EVERY 5' MAXIMUM. SEE DETAIL 4, SHEET C-6.1 FOR JOINT DETAIL. CONCRETE TO BE UNCOLORED.

CONCRETE

1"=1'

3


#4X9" SMOOTH DOWELS @ 24" O.C.
R1/4" (TYP.)
SEALANT
1/2"
T
T/2
T/2
3/8"
EXPANSION JOINT FIBER BOARD FILLER MATERIAL
EXPANSION JOINT
R1/4" (TYP.)
EXISTING SIDEWALK
4"
3"
T/2
T/2
#4X7" DOWELS @ 24" O.C. (DRILL HOLE AND SET DOWEL IN EPOXY)
SIDEWALK CONTACT JOINT
R1/4" (TYP.)
T/3
T
1/4"
CONTROL JOINT
(2) #3 REBAR 3-FT LONG AT EACH CORNER. OMIT REBAR AT EXPANSION JOINTS
UTIL BOX
3"
3"
REINFORCING AT UTILITY BOX
1"=20"

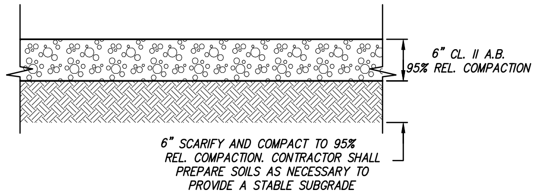
NOTES:

1. REFER TO LANDSCAPE PLANS AND/OR PROJECT SPECIFICATIONS FOR JOINT SPACING.
2. REFER TO LANDSCAPE PLANS FOR SCORE PATTERN.

CONCRETE JOINTS

1"=0.5'

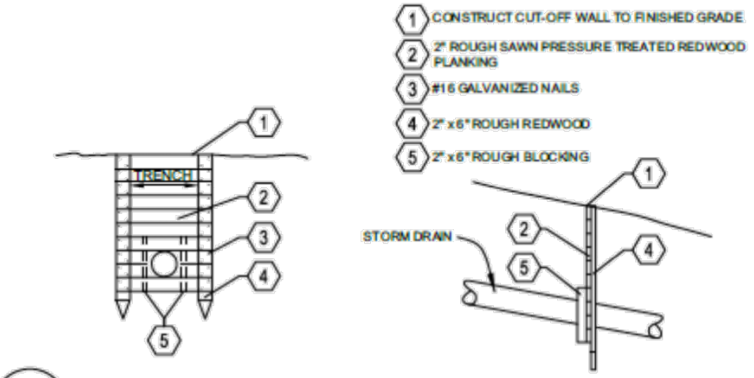
4


6" CL. II A.B. 95% REL. COMPACTION
6" SCARIFY AND COMPACT TO 95% REL. COMPACTION. CONTRACTOR SHALL PREPARE SOILS AS NECESSARY TO PROVIDE A STABLE SUBGRADE

GRAVEL PAVEMENT

1"=1'

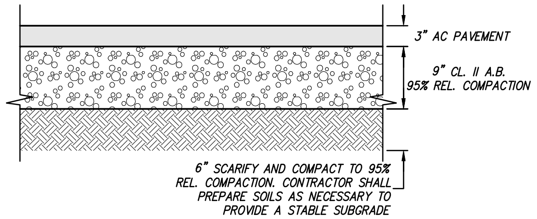
5


1 CONSTRUCT CUT-OFF WALL TO FINISHED GRADE
2 2" ROUGH SAWN PRESSURE TREATED REDWOOD PLANKING
3 #16 GALVANIZED NAILS
4 2" x 6" ROUGH REDWOOD
5 2" x 6" ROUGH BLOCKING
TRENCH
1
2
3
4
5
STORM DRAIN
1
2
5
4

6

TRENCH CUT-OFF WALL

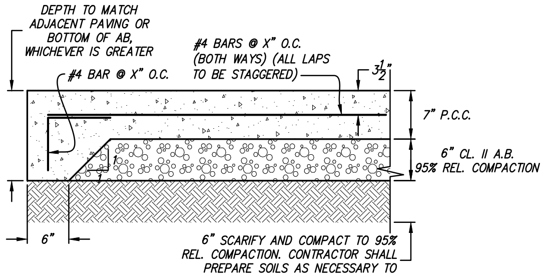
NTS


3" AC PAVEMENT
9" CL. II A.B. 95% REL. COMPACTION
6" SCARIFY AND COMPACT TO 95% REL. COMPACTION. CONTRACTOR SHALL PREPARE SOILS AS NECESSARY TO PROVIDE A STABLE SUBGRADE

ASPHALT PAVEMENT

1"=1'

7


DEPTH TO MATCH ADJACENT PAVING OR BOTTOM OF AB, WHICHEVER IS GREATER
#4 BAR @ X" O.C.
#4 BARS @ X" O.C. (BOTH WAYS) (ALL LAPS TO BE STAGGERED)
3 1/2"
7" P.C.C.
6" CL. II A.B. 95% REL. COMPACTION
1
1
6"
6" SCARIFY AND COMPACT TO 95% REL. COMPACTION. CONTRACTOR SHALL PREPARE SOILS AS NECESSARY TO PROVIDE A STABLE SUBGRADE

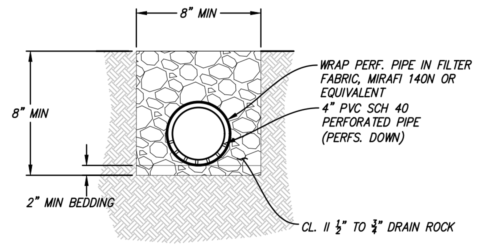
NOTES:

1. EXPANSION JOINTS EVERY 10' MAXIMUM, CONTROL JOINTS EVERY 5' MAXIMUM. SEE DETAIL 4, SHEET C-6.1 FOR JOINT DETAIL. CONCRETE TO BE UNCOLORED.

CONCRETE STRESS PAD

1"=1'

8


8" MIN
8" MIN
WRAP PERF. PIPE IN FILTER FABRIC, MIRAFI 140N OR EQUIVALENT
4" PVC SCH 40 PERFORATED PIPE (PERFS. DOWN)
2" MIN BEDDING
CL. II 1/2" TO 3/4" DRAIN ROCK

PERFORATED PIPE IN TRENCH

N.T.S.

9

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

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SCALE:	N.T.S.
DRAWN BY:	RLM
APPROVED BY:	NB
DRAWING NO.:	217084

DATE October 14, 2025

NATHAN DICKINSON
R.C.E. NO. 79716, EXPIRES 9-30-26

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
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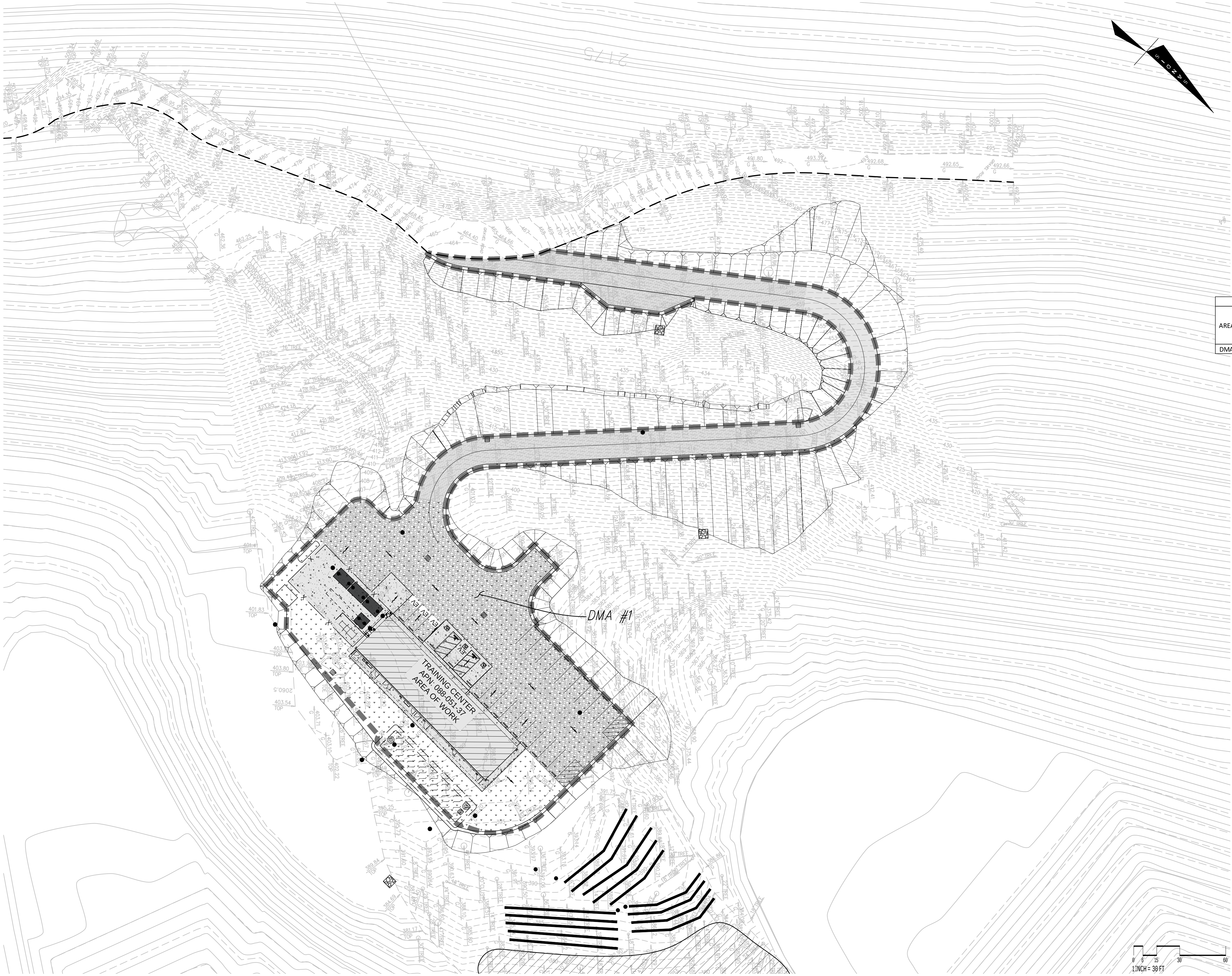

STORMWATER MANAGEMENT PLAN LEGEND

▨	*PROPOSED PERVIOUS AREA*
▨	*PROPOSED IMPERVIOUS AREA*
▨	*BIO-RETENTION AREA*
▬ ▬ ▬	*DRAINAGE AREA BOUNDARY*
── - - ──	*FLOW LINE*
←	*FLOW DIRECTION*

STORMWATER TREATMENT MEASURES

AREA ID	IMPERVIOUS AREA (SF)	PERVIOUS AREA (SF)	50% PERVIOUS AREA (SF)	TOTAL AREA (SF)	REQUIRED AREA (4% IMPERVIOUS AREA + 50% PERVIOUS AREA) (SF)	TREATMENT AREA PROVIDED (SF)
DMA #1	19803	21309	10655	30458	1218	1016

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STORMWATER MANAGEMENT PLAN

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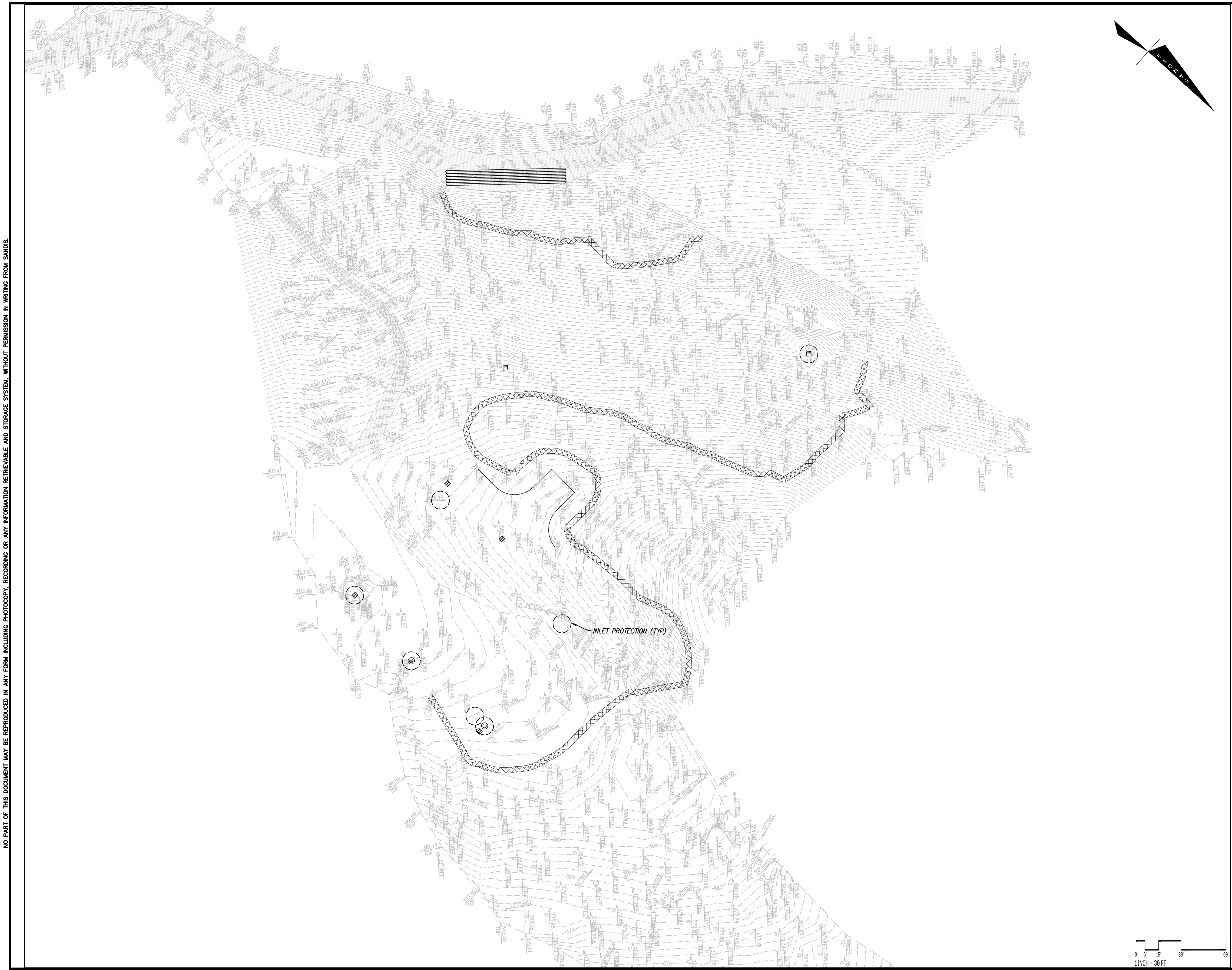

LEGEND

▤	STABILIZED EXIT (TC-1 / C-8.1)
▨	FIBER ROLL
─◇─◇─◇─	CONSTRUCTION FENCE WITH FABRIC. CONTRACTOR TO PROVIDE CONSTRUCTION FENCE
◌	INLET PROTECTION (SE-10 / C-8.1)
── ‒ ‒ ──	PROPERTY LINE

WATER POLLUTION CONTROL NOTES:

A. TEMPORARY CONSTRUCTION ENTRANCE/EXIT LOCATION SHOWN IS APPROXIMATE. CONTRACTOR TO PROVIDE LOCATION WHERE APPROPRIATE.

B. THIS PLAN REPRESENTS POSSIBLE WATER POLLUTION CONTROL MEASURES INCLUDING EROSION CONTROL AND SEDIMENT CONTROL.

C. EXISTING SURFACES SHALL BE UNDISTURBED TO THE EXTENT PRACTICAL.

D. GROUND WATER SHALL NOT BE DISCHARGED WITH STORM WATER. GROUND WATER DEWATERING OPERATIONS SHALL BE COORDINATED AS NEEDED WITH OWNER.

E. CONTRACTOR SHALL PROVIDE EFFECTIVE SOIL COVER FOR AREAS OF CONSTRUCTION ACTIVITY THAT HAVE BEEN DISTURBED AND ARE NOT SCHEDULED TO BE ACTIVE FOR AT LEAST 14 DAYS.

F. ALL EROSION CONTROL AND SEDIMENT CONTROLS TO BE OBTAINED INSTALLED AND MAINTAINED AS REQUIRED IN PROJECT SWPPP.

G. CONTRACTOR TO INSTALL RUN-ON AND RUN-OFF CONTROL MEASURES ACCORDING TO PLANS OR AS NECESSARY TO ENSURE SEDIMENT IS NOT TRANSPORTED FROM SITE.

H. CONTRACTOR TO PROVIDE BACK-UP EROSION PREVENTION MEASURES (SOIL STABILIZATION) WITH SEDIMENT CONTROL MEASURES SUCH AS STRAW WATTLES, SILT FENCE, GRAVEL INLET FILTERS, AND/OR SEDIMENT TRAPS OR BASINS. ENSURE CONTROL MEASURES ARE ADEQUATE, IN PLACE, AND IN OPERABLE CONDITIONS. SEDIMENT CONTROLS, INCLUDING INLET PROTECTION, ARE NECESSARY BUT SHOULD BE A SECONDARY DEFENSE BEHIND GOOD EROSION CONTROL MEASURES.

I. STOCKPILE LOCATION(S) TO BE DETERMINED BY THE CONTRACTOR. COORDINATE WITH SITE QSP.

J. ALL CONCRETE TRUCKS TO USE CHUTE WASH BUCKETS FOR CONCRETE RINSE, ALL CONCRETE PUMPS TO CAPTURE CONCRETE RINSE IN SECONDARY CONTAINMENT AND PROPERLY DISPOSE.

K. STREET SWEEPING SHALL BE CHECKED DAILY TO ENSURE DEPOSITED SEDIMENT AND DEBRIS DOES NOT ENTER THE STORM DRAIN SYSTEM. USE REGENERATIVE VACUUM STREET CLEANER TO MITIGATE AIR AND WATER POLLUTION.

L. RUNOFF THAT HAS CONTACTED AMENDED SOIL AREAS SHALL NOT BE ALLOWED TO LEAVE THE SITE OR ENTER THE STORM DRAIN SYSTEM.

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SANTA CRUZ COUNTY CALIFORNIA

EROSION CONTROL PLAN

SHEET
C-8.0
OF 16 SHEETS

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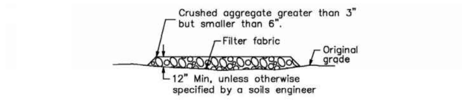
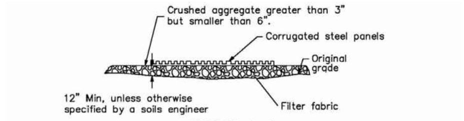
Stabilized Construction Entrance/Exit TC-1

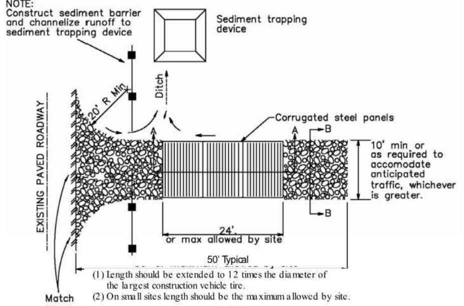

Crushed aggregate greater than 3" but smaller than 6".
Filter fabric
Original grade
12" Min, unless otherwise specified by a soils engineer

SECTION B–B
NTS


Crushed aggregate greater than 3" but smaller than 6".
Corrugated steel panels
Original grade
12" Min, unless otherwise specified by a soils engineer
Filter fabric

SECTION A–A
NOT TO SCALE

NOTE:
Construct sediment barrier and channelize runoff to sediment trapping device


Sediment trapping device
Ditch
20' R Min
EXISTING PAVED ROADWAY
Corrugated steel panels
A
A
B
B
10' min or as required to accomodate anticipated traffic, whichever is greater.
24'
or max allowed by site
50' Typical
Match Existing Grade

(1) Length should be extended to 12 times the diameter of the largest construction vehicle tire.
(2) On small sites length should be the maximum allowed by site.

PLAN
NTS

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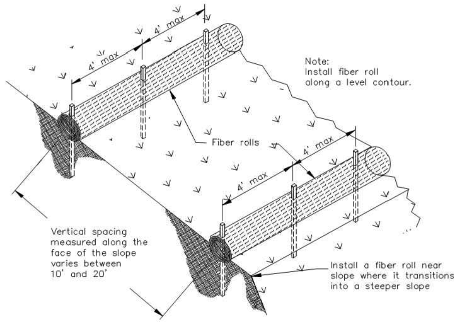
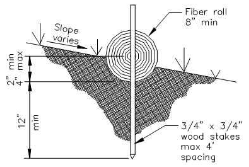
Fiber Rolls SE-5


4' max
4' max
Note:
Install fiber roll along a level contour.
Fiber rolls
4' max
4' max
Vertical spacing measured along the face of the slope varies between 10' and 20'
Install a fiber roll near slope where it transitions into a steeper slope

TYPICAL FIBER ROLL INSTALLATION
N.T.S.


Slope varies
Fiber roll 8" min
2" min 4" max
12" min
3/4" x 3/4" wood stakes max 4' spacing

ENTRENCHMENT DETAIL
N.T.S.

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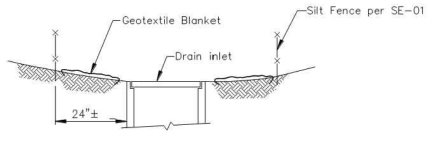
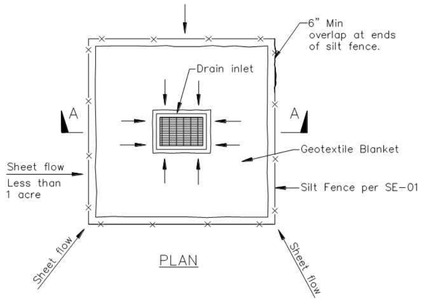
Storm Drain Inlet Protection SE-10


Geotextile Blanket
Silt Fence per SE–01
Drain inlet
24"±

SECTION A–A


6" Min overlap at ends of silt fence.
Drain inlet
A
A
Geotextile Blanket
Sheet flow
Less than 1 acre
Silt Fence per SE–01
Sheet flow
Sheet flow

PLAN

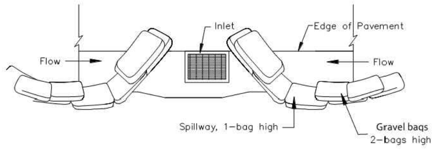
DI PROTECTION TYPE 1
NOT TO SCALE

NOTES:

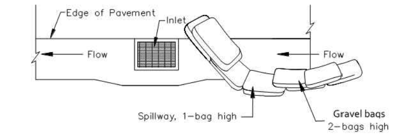
1. For use in areas where grading has been completed and final soil stabilization and seeding are pending.
2. Not applicable in paved areas.
3. Not applicable with concentrated flows.

July 2012 California Stormwater BMP Handbook 7 of 10
Construction
www.casqa.org

Storm Drain Inlet Protection SE-10


Inlet
Edge of Pavement
Flow
Flow
Spillway, 1–bag high
Gravel bags 2–bags high

TYPICAL PROTECTION FOR INLET ON SUMP


Edge of Pavement
Inlet
Flow
Flow
Spillway, 1–bag high
Gravel bags 2–bags high

TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:

1. Intended for short–term use.
2. Use to inhibit non–storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.
6. Protection can be effective even if it is not immediately adjacent to the inlet provided that the inlet is protected from potential sources of pollution.

DI PROTECTION TYPE 3
NOT TO SCALE

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE:	12/11/25
SCALE:	########
DRAWN BY:	RLM
APPROVED BY:	NB
DRAWING NO.:	217084

DATE October 14, 2025

NATHAN DICKINSON
R.C.E. NO. 79716, EXPIRES 9–30–26

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

EROSION CONTROL DETAILS

SHEET
C-8.1
OF 16 SHEETS

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File: S:\217084\(4) ENGINEERING\(2) PLAN SETS\(3) SHEET SET\ONSITE\C–8.0 EROS.dwg Date:Dec 11, 2025 – 3:53pm, rlopezma

Attachment 4

Non-Industrial Timber Management Plan Excerpt

THE COUNTY OF SANTA CRUZ
1850

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2002 FOREST PRACTICE RULES
APPLY TO THIS NTMP

FOR ADMIN. USE ONLY Amendments-
date & S or M

1. __________ 7.
2. __________ 8.
3. __________ 9.
4. __________ 10.
5. __________ 11.
6. __________ 12.

NONINDUSTRIAL TIMBER MANAGEMENT PLAN

STATE OF CALIFORNIA
DEPARTMENT OF FORESTRY
AND FIRE PROTECTION
RM - 68 (Rev. 01-00)

NTMP Name: **BSMF-CAMP CHESEBROUGH NTMP**

(In the CDF FPS, this is "THP Description")

FOR ADMIN. USE ONLY

NTMP # 1-02NTMP-025 SCR/SMO

Dates Rec'd JUL 11 2002

Date Filed JUL 21 2002

Date Approved DEC 10, 2002

This Nonindustrial Timber Management Plan (NTMP) form, when properly completed, is designed to comply with the Forest Practice Act (FPA) and Board of Forestry and Fire Protection rules. **If financial assistance is requested to cover some of the expenses of the NTMP, contact the local CDF Forestry Assistance Specialist prior to preparation of the NTMP.** See separate instructions for information on completing this form. NOTE: The form must be printed legibly in ink, typewritten, or electronically printed. The NTMP is divided into six sections. If more space is necessary to answer a question, continue the answer at the end of the appropriate section of your NTMP. However, if writing an electronic version, insert additional space for your answer. Distinguish answers from questions by font change, **bold** or underline.

SECTION I - GENERAL INFORMATION

This NTMP conforms to my/our plan and upon approval, I/we agree to conduct harvesting in accordance therewith. Consent is hereby given to the Director of Forestry and Fire Protection, and his or her agents and employees, to enter the premises to inspect timber operations for compliance with the Forest Practice Act and Forest Practice Rules.

1. TIMBER OWNER(S) OF RECORD:

Name BOY SCOUT MEMORIAL FOUNDATION
Address 970 West Julian Street
City San Jose State California Zip 95126 Phone (408) 377-6711
Signature , PRESIDENT Date July 8, 2002
Mr. Thomas Lackovic, President

NOTE: The timber owner is responsible for payment of a yield tax. Timber Yield Tax information may be obtained at the Timber Tax Division, State Board of Equalization, P.O. Box 942879, Sacramento, California 94279-0060; phone 1-800-400-7115; BOE Web Page at http:// www.boe.ca.gov.

2. TIMBERLAND OWNER(S) OF RECORD:

Name BOY SCOUT MEMORIAL FOUNDATION
Address 970 West Julian Street
City San Jose State California Zip 95126 Phone (408) 377-6711
Signature , PRESIDENT Date July 8, 2002
Mr. Thomas Lackovic, President

3. LICENSED TIMBER OPERATOR(S): Name TO BE INCLUDED WITH FUTURE NTO Lic. No. __________

NOTE: If LTO is not known upon plan submission, submit information in a Notice of Timber Operations (NTO) as per 14 CCR 1090.7.

4. PLAN SUBMITTER(S): BOY SCOUT MEMORIAL FOUNDATION (SAME AS TIMBER- AND TIMBERLAND-OWNER)

RECEIVED
JUL 11 2002
COAST AREA OFFICE
RESOURCE MANAGEMENT

a. If LTO is not present on-site, list person to contact on-site who is responsible for the conduct of the operation . If unknown, so state, but name must be included on each Notice of Timber Operations or amended into NTMP.

On-site contact will be LTO or other person, named in Notice of Timber Operations.

b. ☒ Yes ☐ No Will the timber operator be employed for the construction and maintenance of roads and landings during conduct of timber operations? If no, who is responsible?

c. Who is responsible for erosion control maintenance after timber operations have ceased and until certification of the Work Completion Report? If not the LTO, then a written agreement must be provided per 14 CCR 1050 (c).

The LTO shall be responsible for all erosion control maintenance during and after the conduct of operations, until the end of the first winter period after operations. It shall be the timberland owner's responsibility for an additional two winter periods past the end of the first winter period. Per 14 CCR 916.9(p), the erosion control maintenance period on permanent and seasonal roads and associated landings that are not abandoned shall be three years.

6. Expected date of commencement of timber operations, which in addition will require filing a Notice of Timber Operations:
☒ date of NTMP conformance, or ☐ ____________(date)

7. The timber operation will occur within the:

☐ COAST FOREST DISTRICT
☒ Southern Subdistrict of the Coast F.D.

☐ The Tahoe Regional Planning Authority Jurisdiction
☒ A County with Special Regulations, identify:
Santa Cruz and San Mateo Counties

☐ SOUTHERN FOREST DISTRICT
☐ High use subdistrict of the Southern F.D.

☐ Coastal Zone, no Special Treatment Area.
☒ Special Treatment Area(s), type and identify:
Castle Rock State Park, Long Ridge Open Space Preserve, Highway 9 (a designated scenic road)

☐ NORTHERN FOREST DISTRICT

☐ Other

8. Location of the timber operation by legal description:
Base and Meridian: ☒ Mount Diablo; ☐ Humboldt; ☐ San Bernardino.

Section	Township	Range	Acreage	County	Assessor's Parcel Number (Zoning)
1 (Portion)	**8 South**	**3 West**	**315.4**	**Santa Cruz**	**088-051-037 (TPZ)**
12 (Portion)	**8 South**	**3 West**		**Santa Cruz**	
2 (Portion)	**8 South**	**3 West**	**103.2**	**San Mateo**	**085-160-160 (TPZ)**
		TOTAL ACREAGE	**418.6** (Logging Area Only)		

The property is located on two USGS 7.5' Topographic Quadrangles, BIG BASIN and MINDEGO HILL.

9. Planning Watershed: CALWATER Version, Identification Number, and Name:

CalWater 2.2, #2202.400106 (Waterman Creek), 8574 acres. The NTMP area is located within a planning watershed having threatened and impaired values (*per* the Clean Water Act 33 U.S.C. s/s 9601 *et seq.* (1980) Sec. 303).

10. ☐ Yes ☒ No Has a Timberland Conversion been submitted and approved? If yes, list approval date, permit number, and expiration date.

11. ☐ Yes ☒ No Is there a THP or NTMP on file with CDF for any portion of the plan area for which a report of satisfactory stocking has not been issued by CDF? If yes, identify the THP or NTMP number(s):

12. ☐ Yes ☒ No Was a Notice of Preparation (NOP) posted as required by 14 CCR 1090.2 (g)? Who posted the Notice? **The Notice of Preparation was posted by the RPF's supervised designee as additionally specified by 14 CCR 924.1, & 926.3(c).**

PART OF PLAN

RPF#2514
11/19/02

13. RPF preparing the NTMP: Name **Eric K. Huff** RPF Number **#2544**

Address **3564 Highway 1**

City **Davenport** State **CA** Zip **95017** Phone **(831) 457-6382**

a. ☒ Yes ☐ No I have notified the plan submitter(s), in writing, of their responsibilities pursuant to Title 14 CCR 1090.9 - .10 of the Forest Practice Rules, of their responsibilities for compliance with the Forest Practice Act and Board rules, and where applicable, Board rules regarding site preparation, stocking, and maintenance of roads, landings, and erosion control facilities.

A letter notifying the plan submitter of their responsibility was sent on April 29, 2002. A copy is located in Section V of this NTMP.

b. ☒ Yes ☐ No I or my supervised designee will meet with the LTO prior to commencement of operations to advise of sensitive conditions and provisions of the plan pursuant to 14 CCR 1090.11.

c. ☒ Yes ☐ No I will provide the LTO with a copy of the approved NTMP and Notice of Timber Operations (NTO) as per 14 CCR 1090.09(e) and (g). If no, who will provide the LTO a copy of the approved NTMP, subsequent amendments, and NTO?

d. I have the following authority and responsibilities for preparation and administration of the NTMP and timber operation. (Include both work completed and work remaining to be done):

The responsibilities of the RPF include plan preparation, plan review, NTO preparation, plan implementation, timber marking, and all other aspects of a timber harvest. The RPF shall make amendments to the plan on behalf of the Plan Submitter, if necessary.

e. Additional required work requiring an RPF, which I do not have the authority or responsibility to perform:

None.

f. After considering the rules of the Board of Forestry and Fire Protection and the mitigation measures incorporated in this NTMP, I have determined that the timber operation:

☐ will have a significant adverse impact on the environment. (Statement of reasons for overriding considerations contained in Section III)

☒ will not have a significant adverse impact on the environment.

Registered Professional Forester: I certify that I, or my supervised designee, personally inspected the NTMP area, and this plan complies with the Forest Practice Act, the Forest Practice Rules and the Professional Foresters Law.

Signature ______________________ Date 7/5/02

Eric K. Huff, RPF # 2544

Lands of the Boy Scout Memorial Foundation
Camp Chesebrough

Non-Industrial Timber Management Plan

Prepared For:
Boy Scout Memorial Foundation
P.O. Box 28547
San Jose, California 95159

Prepared By:
Big Creek Lumber Company
3564 Highway 1
Davenport, California 95017

July 9, 2002

Santa Clara County Council, Inc.
Boy Scouts of America

PURPOSES OF NON-INDUSTRIAL TIMBER MANAGEMENT PLAN

- To serve as a planning document which will facilitate the perpetual, sustained, uneven-aged management of Camp Chesebrough's timber resources, in compliance with California Forest Practice Rules
- To provide the Boy Scout Memorial Foundation with current data regarding the status, productivity, and accessibility of the timber resources on Camp Chesebrough
- To propose strategies and tactics for managing the forestland resources of Camp Chesebrough consistent with the landowner's stewardship objectives, and of a standard at least equal to the standards of the Forest Stewardship Council in certifying forest management
- To provide a plan for the management of Camp Chesebrough consistent with the Goals & Objectives set forth below:

NTMP GOALS FOR FORESTLAND MANAGEMENT

1. To produce, in a sustainable manner, high-quality timber products from Camp Chesebrough's forestlands
2. To manage Camp Chesebrough's forestlands with consideration of ecosystem components and ecosystem processes
3. To conduct forest management activities that complement and augment Camp Chesebrough's Scouting activities
4. To retain high resource values for the aesthetic, wildlife, soil, and forage resources over Camp Chesebrough
5. Construct infrastructure, where necessary, and maintain existing infrastructure to allow access to the timber resources. All appurtenant roads and drainage control structures shall be maintained to prevent significant adverse impact upon the soil, water, and biologic resources

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11/19/02

BIOLOGICAL RESOURCES (SECTION II, #32)

A query of the Natural Diversity Database (NDDB) for recorded observations of special-status species within the assessment area yielded 26 recorded observations (10 animals, 16 plants). As well, one special-status species which was not returned on the NDDB query, but which warrants consideration, was considered (pearl orchid, *Piperia candida*).

No known individuals or populations of special-status species exist within the NTMP area. Known special-status species found within the assessment area are given below (E-Endangered, T-Threatened, SC-Species of Special Concern, 1A- CNPS "Presumed Extinct In California, 1B-CNPS "Rare, Threatened, or Endangered in California and Elsewhere"):

Birds, Amphibians, Reptiles, and Mammals

A stream survey of Oil Creek was conducted in August and October of 1995 by Ms. Jennifer Nelson (Department of Fish & game). A copy of this survey is included in Section V of this NTMP.

A survey for nesting raptors was conducted May-July, 2001 by Mr. John Bulger for a portion of the NTMP area. The results of this survey are shown in a report, included in Section V of this NTMP.

- Burrowing owl (*Athene cunicularia*) Status: DFG-SC

  The closest known occurrence of this species is 9.09 miles from the project area. Burrowing owls are year-long residents of open, dry grasslands and desert habitats, and of grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine forests. These owls usually nest in old burrows of ground squirrels or other small mammals. There is no suitable habitat for this species within the project area.

- California red-legged frog (*Rana aurora draytonii*) Status: Federal-T, DFG-SC

  The closest known occurrence of Red-legged frog is 2.27 miles downstream of the project area. This observation was made in September of 1998, and consisted of two adults. The location of the observation is a coastal stream (Peters Creek) surrounded by a mixed redwood forest. Red-legged frogs have also been sighted in the Pescadero Creek drainage at Pescadero Marsh Nature Preserve and near the town of Loma Mar. The Pescadero Marsh observation have been reported in the Federal Register (Volume 16, No. 1, OI/May 23, 996, Pg. 25815), and is one of only three areas within the historic range currently supporting more than 350 adults. Red-legged frogs inhabit pools of streams, marshes, and occasionally ponds. These frogs may at times travel upland away from such habitat.

  There are no known individuals or populations of red-legged frog within the project area, but there is certainly suitable habitat. Protection measures for red-legged frogs are incorporated into this NTMP. These measures include the minimization of road use, skyline cable yarding from upland yarder settings, the protection of wet areas, and the minimization of watercourse crossings. Further analysis of this species and its potential to occur within the project area is provided in Section IV of this NTMP.

- California tiger salamander (*Ambystoma californiense*) Status: Federal-E (Santa Barbara Co), DFG-SC

  The nearest known occurrence of this species is 3.79 miles from the project area. This observation was made in 1893 at an existing quarry. The salamander was then taken for a museum record. This species is most commonly found in annual grasslands, but also occurs in the grassy understory of valley-foothill hardwood habitats, and uncommonly along streamcourses. There is no suitable habitat for this species within the project area.

- Coho Salmon-Central California ESU Status: Federal-T, California-E, DFG-SC

Coho are not known to occur in Oil Creek or Pescadero Creek. The nearest known occurrences of Coho are in Boulder Creek, the San Lorenzo River, and Scott Creek. There remains a potential for this species to re-populate Pescadero Creek, and then Oil Creek as well. This NTMP has incorporated measures to protect and restore Coho habitat (and that of the current resident fish, such as Steelhead). These measures include the retention of canopy near watercourses, the recruitment of large woody debris, and the mitigation of potential sediment sources.

- Foothill yellow-legged frog (*Rana boylii*) Status: DFG-SC

The nearest known occurrence of this species is 5.30 miles from the project area. This observation was made in September of 1999 at the Pescadero Creek County Park. A single adult was observed. This species is found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadows. No known individuals or populations of this species occur within the project area. Habitat for this species within the project area is limited, but existent. The protection measures for the red-legged frog also provide protection for this species.

- Long-eared owl (*Asio otus*) Status: DFG-SC

The nearest known occurrence of this species is 2.08 miles from the project area. This observation was made in 1987 at the Monte Bello Open Space Preserve. A pair was observed copulating in February 1987 and then, in May 1987, an adult was seen feeding 3 fledglings. This species is found most commonly in riparian bottomlands dominated by riparian species such as willow (*Salix* spp.) and cottonwood (*Populus* spp.). They also may be found in dense stands of oak paralleling stream courses. Typically found in such environments where there is adjacent open land with a productive population of mice and other rodents. Use old nests of crows, hawks, or magpies for breeding. There are no known individuals or populations of this species within the project area. During the course of a raptor survey conducted in 2001 of a portion of the NTMP area, no long-eared owls were encountered, although they were specifically sought in the survey.

- Marbled murrelet (*Brachyramphus marmoratus*) Status: Federal-T, California-E

The nearest known occurrence of marbled murrelet is 6.44 miles from the project area, located in Big Basin Redwoods State Park. The marbled murrelet is closely associated with old-growth and mature conifer forests for nesting. Declines of this species have been attributed, in part, to loss or modification of forest habitat. There is no suitable habitat for marbled murrelet within the project area.

- San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) Status: Federal-E, California-E

The nearest known occurrences of this species are at several undisclosed ponds within the La Honda and Mindego Hill USGS 7.5' quadrangles. The preferred habitat for this species are densely vegetated ponds near open hillsides where they are able to feed, sun, and find available cover in rodent burrows. Temporary ponds and other seasonal freshwater bodies are also used. This species' preferred prey is California red-legged frog. The presence of this species within the project area is unlikely, as there is little to no suitable habitat.

- Steelhead salmon-Central California ESU (*Oncorhynchus mykiss irideus*) Status: Federal-T

Steelhead are known to occur within the Class I watercourses of the project area. As well, steelhead populations exist in Pescadero Creek, Slate, Creek, Boulder Creek, San Gregorio Creek, and the San Lorenzo River. A temporary barrier to fish migration exists downstream, outside of the project area. Likely, the resident steelhead within the project area will return to anadromy once this barrier is removed. This NTMP has incorporated measures to protect and restore steelhead habitat. These measures include the retention of canopy near watercourses, the recruitment of large woody debris, and the mitigation of potential sediment sources. Further analysis of this species and its potential to occur within the project area is provided in Section IV of this NTMP.

- Townsend's big-eared bat (*Corynorhinus townsendii townsendii*) Status: DFG-CS

  The nearest known occurrence of this species is an undisclosed building somewhere within the Big Basin USGS 7.5' Quadrangle. This species is most abundant in mesic environments, and commonly uses caves, mines, tunnels, buildings, and other artificially-made structures for roosting. Recent research has indicated that old-growth redwood hollows may be an important roost site for cavity-roosting bats, including Townsend's big-eared bat. There is no known suitable roosting habitat for this species within the project area. However, there is a slight potential for this species to utilize burned-out hollows of second-growth redwood. This NTMP has incorporated measures to preserve, where feasible, those structural elements in the forest that may provide suitable roosting habitat for Townsend's big-eared bat.

Plants

A botanical survey of the project area was conducted on March 19, 2002 by Mr. Randall Morgan. A report detailing the results of the survey is included in Section V of this NTMP.

- Ben Lomond buckwheat (*Eriogonum nudum* var. *decurrens*) Status: CNPS-1B

  The nearest known occurrence of this plant is near the Saratoga Summit Ranger Station. This observation was made in 1953. In discussing this observation with Mr. Randall Morgan, a plant taxonomist, it was deemed that this observation was likely a mis-identification, as it is unlikely for this plant to occur in the habitat of the site. This species occurs in sandy soils of coastal habitats. There is no suitable habitat for this grass species within the project area.

- Ben Lomond spineflower (*Chorizanthe pungens* var. *hartwegiana*) Status: Federal-E, CNPS-1B

  The nearest known occurrence of this annual herb is 5.87 miles from the project area. This species occurs, like the other sandhill species it is associated with, in sandy soils of coastal habitats. There is no suitable habitat for this species within the project area.

- Bonny Doon manzanita (*Arctostaphylos silvicola*) Status: CNPS-1B

  The nearest known occurrence of this plant is 3.98 miles from the project area. This shrub species occurs in sandy chaparral and closed-cone pine habitats. There is no suitable habitat for this species within the project area.

- Caper-fruited tropidocarpum (*Tropidocarpum capparideum*) Status: CNPS-1A

  This plant was observed in 1907 at an undisclosed location within the Cupertino and Castle Rock Ridge USGS 7.5' Quadrangles. This annual herb is presumed extant. There is no suitable habitat for this species within the project area.

- Dudley's lousewort (*Pedicularis dudleyi*) Status: California-Rare, CNPS-1B

  The nearest known occurrence of this plant is 1.33 miles from the project area, located downstream of the NTMP area. This species occurs primarily in coniferous forest and maritime chaparral. This is a hairy perennial herb, with pinnately compound leaves occurring mostly as basal leaves. The above-ground portion of this plant is renewed each year. The inflorescence is up to 6 cm long, with lower bracts longer than flowers. The corolla is beaked, 2-lipped, up to 24 mm long, club-like, and is light pink to purple. This plant generally flowers between April and June. Typically associated with *Adenocaulon bicolor, Galium* sp., *Hierochloe odorata, Lithocarpus densiflorus, Myrica californica, Oxalis oregano, Pseudotsuga menziesii, Rosa gymnocarpa, Scoliopus bigelovii, Sequoia sempervirens, Trientalis latifolia, Trillium ovatum, vaccinium ovatum*, and *Viola sempervirens*. There are no known individuals or populations within the project area. There is potential habitat for this species within the project area. Protection and avoidance measures have been incorporated into this NTMP. These measures include the conversion of harvest area from ground-based logging to skyline cable logging to minimize soil disturbance.

- Legenere (*Legenere limosa*) Status: CNPS-1B

  The nearest known occurrence of this plant is 5.87 miles from the project area. This annual herb occurs in vernally-flooded conditions in vernal-pool habitats and wetlands. There is no suitable habitat for this species within the project area.

- Pajaro manzanita (*Arctostaphylos pajaroensis*) Status: CNPS-1B

  The nearest known occurrence of this plant is 7.95 miles from the project area. This shrub occurs in sandy soils in chaparral habitat. There is no suitable habitat for this species within the project area.

- Pearl orchid (*Piperia candida*) Status: List 4

  This perennial herb occurs in open to shaded sites in coniferous and mixed evergreen forests of coastal mountains. This plant is up to 0.5 m tall from a bulb-like tuber, with basal leaves 7-18cm long, 12-30mm wide. The inflorescence is up to .3m tall, open and 1-sided. Upper sepal is pointed forward, white or green with white margins, lower white, midvein green, lateral petals pointed forward to ascending, white, midvein green, narrowly triangular, recurved toward spur, spur 1.5-3.5mm. This plant flowers between May and August. This species is commonly associated with *Arbutus menziesii, Lithocarpus densiflora, Piperia elongate, Piperia transversa*, and *Sequoia sempervirens*. There are no known individuals or populations of this plant within the project area. This species was specifically sought in the botanical survey, and was not found.

- Robust monardella (*Monardella villosa* ssp. *Globosa*) Status: CNPS-1B

  The nearest known occurrence of this plant is 5.49 miles from the project area. This perennial rhizomatous herb occurs in open chaparral and woodland habitats. There is no suitable habitat for this species within the project area.

- San Mateo wooly sunflower (*Eriophyllum latilobum*) Status: Federal-E, California-E, CNPS-1B

  The nearest known occurrence of this species is 6.82 miles from the project area. This perennial herb occurs in foothill woodlands on Serpentine substrates. There is no suitable habitat for this species within the project area.

- Santa Cruz cypress (*Cupressus abramsiana*) Status: Federal-E, California-E, CNPS-1B

  The nearest known occurrence of this plant is 4.92 miles from the project area, on Butano Ridge (1400' elevation). This tree occurs in closed-cone pine forests with a granitic sedimentary sandstone substrate. There is no suitable habitat for this species within the project area.

- Santa Cruz manzanita (*Arctostaphylos andersonii*) Status: CNPS-1B

  The nearest known occurrence of this shrub is 3.41 miles from the project area. This shrub occurs in openings and along edges of chaparral, mixed evergreen, and redwood forests. There are no known individuals or populations of this plant within the project area. The chaparral located within the project area is outside of the harvest area. No new roads or disturbance-causing activities are proposed under this NTMP in areas of chaparral. Thus, complete avoidance of the potential habitat for this species provides measures for the protection of this plant.

- Santa Cruz microseris (*Stebbinsoseris decipiens*) Status: CNPS-1B

  The nearest known occurrence of this plant is 8.33 miles from the project area. This annual herb is found in coastal prairie, chaparral, closed-cone pine forest, mixed evergreen forest, and northern coastal scrub, occurring on Serpentine substrates. There is no suitable habitat for this species within the project area.

- Santa Cruz Mountains beardtongue (*Penstemon rattanii* var. *kleei*) Status: CNPS-1B

  The nearest known occurrence of this plant is 6.63 miles from the project area. This perennial herb is found in chaparral, hardwood forests, and coniferous forests. Typically, this plant is associated with *Arctostaphylos tomentosa*, *Chrysolepis chrysophylla*, *Pinus attenuate*, and *Quercus wislizenii*. There is no suitable habitat for this species within the project area.

- Schreiber's manzanita (*Arctostaphylos glutinosa*) Status: CNPS-1B

  The nearest known occurrence of this plant is 7.95 miles from the project area. This shrub is found in chaparral and closed-cone pine forests. There are no known individuals or populations of this plant within the project area. The chaparral located within the project area is outside of the harvest area. No new roads or disturbance-causing activities are proposed under this NTMP in areas of chaparral. Thus, complete avoidance of the potential habitat for this species provides measures for the protection of this plant.

- Western leatherwood (*Dirca occidentalis*) Status: CNPS-1B

  The nearest known occurrence of this species is 5.30 miles from the project area. This shrub is found on cool, moist slopes in foothill woodland and riparian forests. This shrub is typically associated with *Aesculus californica*, *Dryopteris arguta*, *Lonicera hispidula*, *Pentagramma triangularis*, *Quercus agrifolia*, *Saqnicula crassicaulis*, *Smilacina racemosa*, *Symphoricarpos albus laevigatus*, *Thalictrum fendleri polycarpum*, *Toxicodendron diversilobum*, and *Umbellularia californica*. There is no suitable habitat for this species within the project area.

- White-rayed pentachaeta (*Pentachaeta bellidiflora*) Status: Federal-E, California-E, CNPS-1B

  The nearest known occurrence of this species is 7.20 miles from the project area. This annual herb is found in valley grassland on serpentine substrate. There is no suitable habitat for this species within the project area.

Attachment 5

Timber Production Zone Compatibility Analysis Letter

THE COUNTY OF SANTA CRUZ
1850

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DKM Forestry
483 Spruce St.
Half Moon Bay, CA. 94019
(650) 703-1452
Dennis@DKMForestry.com

Boy Scouts of America
Silicon Valley Monterey Bay Council
1900 The Alameda, Suite 100
San Jose, CA. 95126

June 11, 2024

Re: TPZ Compatibility Analysis for Boy Scouts of America property, Santa Cruz County Assessor's Parcel #088-051-37

The parcel under consideration is zoned as Timber Production (TP) and has an Existing Approved Non-Industrial Timber Management Plan (NTMP), 1-02NTMP-025-SCR-SMO. In accordance with TP zoning regulations, a Registered Professional Forester must assess any proposed development project on TP lands to ensure that it aligns with timber management practices. This assessment involves examining the project design in the context of timber harvesting operations, which includes activities such as falling, skidding, loading, and trucking logs.

I have been involved with the subject property since around 2016 and possess a thorough understanding of its topography and timber resources. The parcel, encompassing around 444 acres, consists of commercial redwood and Douglas-fir timberland, as well as mixed hardwood. The timber is evenly distributed throughout the entirety of the property, with the majority being second-growth redwood and Douglas-fir.

The current owner's representative, Michael Wilson, is currently undertaking a variety of development on the property and has sought my professional opinion on whether the proposed infrastructure is compatible with periodic, selective timber harvesting.

I have reviewed the following proposed development sites as identified on the attached site plans (Figure 1):

#10 Watertanks
#21 Campsite Latrine
#25 New Campsite x2
#26 Valley Foundation Training Center
#27 Shower and Restroom Building
#28 Cabins for short-term camping x2
#29 Teaching Covered Pavillions x5
#30 Climbing and Rappelling Tower

#31 Replacement for Existing Watertanks
#32 Recycling and Trash Enclosure

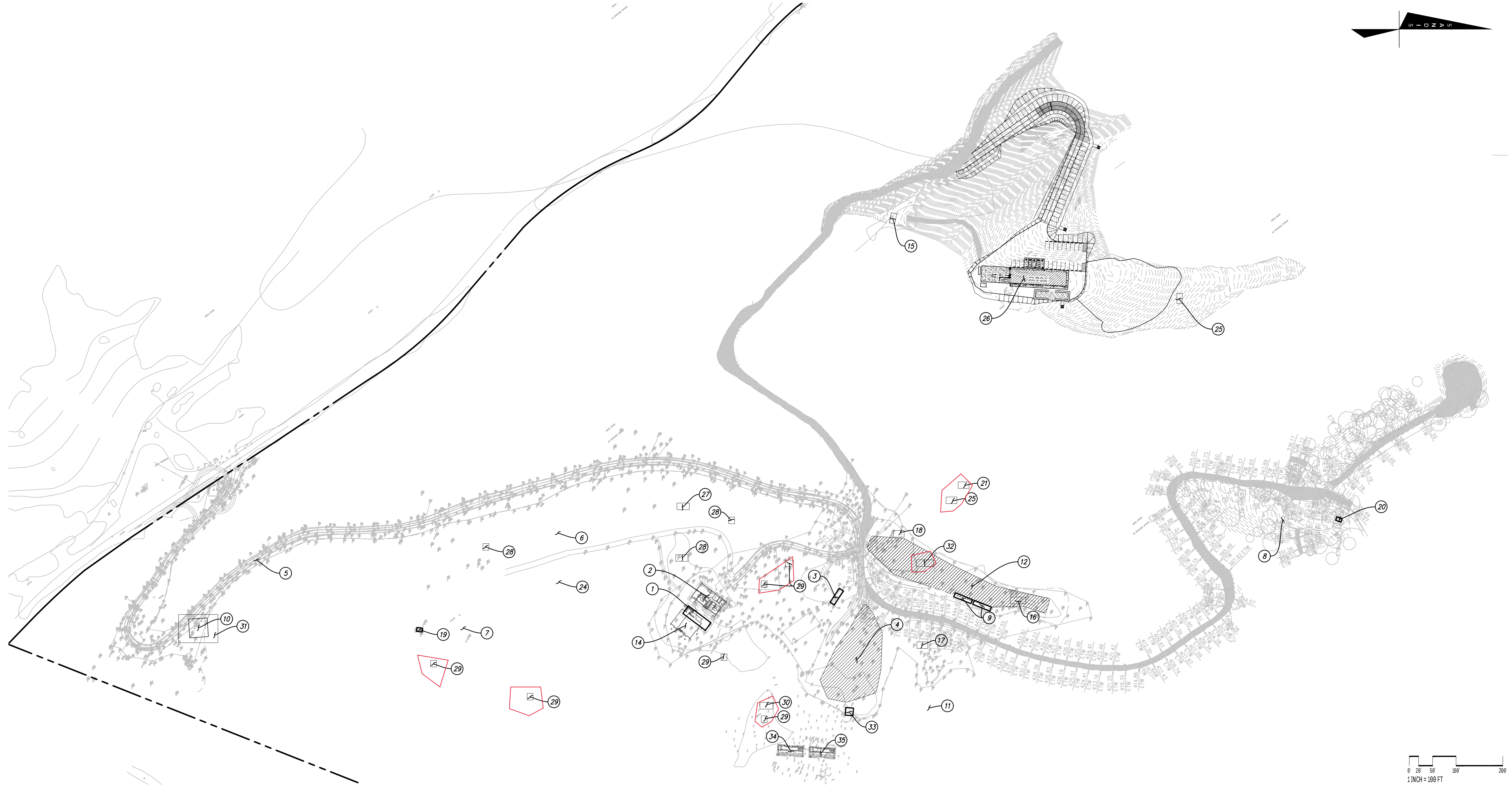
A Less than Three Acre Conversion Exemption was approved and operations were conducted in early 2024 under CALFIRE permit # 1-24EX-00013-SCR to permit the conversion of timberland to prepare for the landowner's planned developments. The landowner shall be advised of the definitions of the Conversion of Timberland via Article 7 of the California Forest Practice Rules for all future development.

Based on my on-site analysis, I am of the belief that the proposed project is indeed compatible with periodic selective harvesting using existing NTMP infrastructure. To illustrate this, I have included the existing previously approved harvest Operations map (Figure 2) from the NTMP that identifies existing harvest infrastructure. Moving forward, I anticipate collaborating closely with the Scouts to supervise harvests that minimize conflicts between infrastructure and periodic timber harvesting.

Sincerely,

Dennis McCorkle, Registered Professional Forester #3120

Figure 1



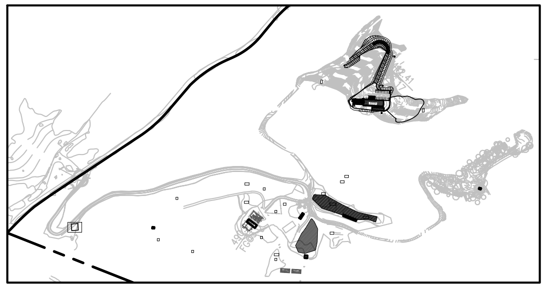
NO PART OF THIS DOCUMENT MAY BE REPRODUCED IN ANY FORM INCLUDING PHOTOCOPY, RECORDING OR ANY INFORMATION RETRIEVABLE AND STORAGE SYSTEM, WITHOUT PERMISSION IN WRITING FROM SANDIS.

LEGEND

— — —

BUILDING LIST

① POLE BARN
② MULTI-USE BUILDING/KITCHEN
③ PUMP HOUSE BUILDING
④ PARKING LOT (GRAVEL)
⑤ GRAVEL ENTRANCE ROAD
⑥ TENT CAMPSITE #1 UPPER CAMPSITE
⑦ TENT CAMPSITE #2 UPPER CAMPSITE
⑧ TENT CAMPSITE #3 LOWER CAMPSITES
⑨ STORAGE TRAILERS (REMOVED IN 2021)
⑩ WATER TANKS
⑪ CAMPFIRE CIRCLE
⑫ SERVICE YARD
⑬ POWER POLE
⑭ MULTI-PURPOSE BUILDING (VALLEY FOUNDATION LODGE)
⑮ CAMP OFFICE & FIRST AID CENTER
⑯ STORAGE AND MAINTENANCE BUILDING
⑰ NATURE LODGE
⑱ CARETAKER'S HOUSE
⑲ CAMPSITE LATRINE #1
⑳ CAMPSITE LATRINE #2
㉑ CAMPSITE LATRINE #3
㉒ CAMPSITE LATRINE #4 (REMOVED)
㉓ SMALL GROUP SLEEPING SHELTERS (REMOVED)
㉔ NEW CAMPSITE
㉕ NEW CAMPSITE
㉖ VALLEY FOUNDATION TRAINING CENTER
㉗ SHOWER AND RESTROOM BUILDING
㉘ CABINS FOR SHORT TERM CAMPING
㉙ TEACHING COVERED PAVILIONS
㉚ CLIMBING AND RAPPELLING TOWER
㉛ REPLACEMENT FOR EXISTING WATER TANKS
㉜ RECYCLING AND TRASH ENCLOSURE
㉝ RESTROOM – PARKING LOT
㉞ BB GUN INSTRUCTIONAL AREA
㉟ ARCHERY INSTRUCTIONAL AREA



KEY MAP

SANDIS | CIVIL ENGINEERS SURVEYORS PLANNERS

1700 Winchester Boulevard, Campbell, CA 95008 | P. 408.636.0900 | F. 408.636.0999 | www.sandis.net

SILICON VALLEY TRI-VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

DATE: 4/17/24
SCALE:
DRAWN BY: RLM
APPROVED BY: CJB
DRAWING NO. 217084

DATE 4/17/24

CHAD J. BROWNING
R.C.E. NO. 68315, EXPIRES 9-30-25

No.	REVISION/ISSUE	DATE	BY

BSA CHESEBROUGH SCOUT RESERVATION
APN: 088 05 137, 26005 HWY 9, LOS GATOS, CA
SANTA CRUZ COUNTY CALIFORNIA

CSR BUILDINGS

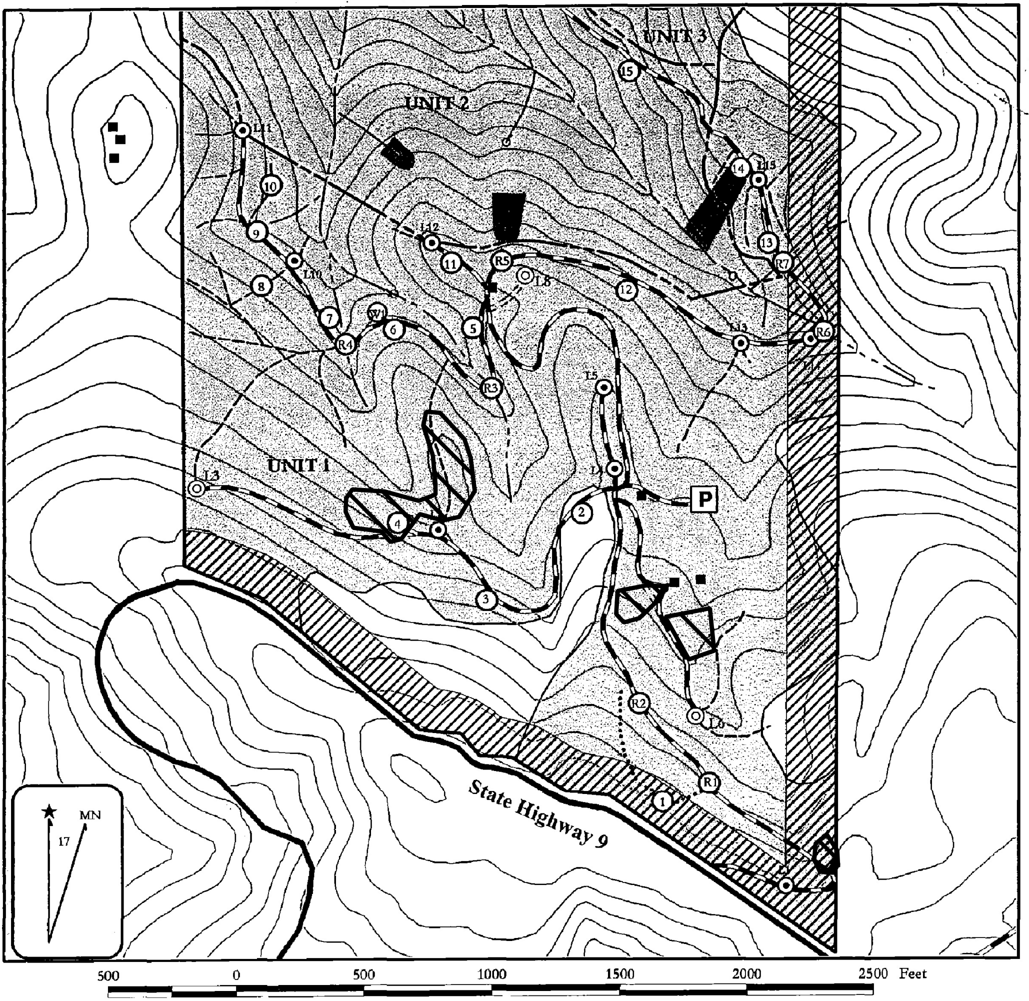
SHEET
C-1.0

Copyright © 2024 by Sandis

File: S:\217084\(4) ENGINEERING\(3) EXHIBITS\2024-02-29 CSR BUILDINGS\C-1.0 CSR BUILDINGS.dwg Date:Apr 17, 2024 – 10:29am, rlopezmo

Figure 2

BSMF-CAMP CHESEBROUGH NTMP
Management Unit 1 Operations Map


UNIT 3
UNIT 2
UNIT 1
L11
L12
L10
L8
L3
L5
L4
L6
L13
L14
L15
W1
R1
R2
R3
R4
R5
R6
R7
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
P
State Highway 9
MN
17
500
0
500
1000
1500
2000
2500 Feet

LEGEND

○	Spring
○	Mitigation Site
○	Road Crossing
■	Structure
●	Water Tanks
P	Parking Lot
⊙	Existing Landing
◎	Proposed Landing
▬▬▬	State Highway
▬ ▬ ▬	Existing Seasonal Road
= = = = = = = =	Proposed Seasonal Road
————	Existing Trail
………………	Proposed Trail
——— — —	Management Unit Boundary
——— - -	Class 1 Watercourse
——— — — —	Class 2 Watercourse
- - - —	Class 3 Watercourse
▨	Special Treatment Area
■	Unstable Area/Cutbank Failure
░	Chesebrough NTMP Area

Contour Interval = 40 Feet

1:6000

PART OF PLAN

BIG CREEK

Big Creek Lumber Company
3564 Highway 1
Davenport, CA 95017
(831) 457-6387
travisb@big-creek.com

EMM

36 EMM RPF#2544 11/19/02

⧄ Areas Withheld from NTO

Attachment 6

Biotic Report

THE COUNTY OF SANTA CRUZ
1850

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LIVE OAK
ASSOCIATES, INC.

April 19, 2024

Michael Wilson
Boy Scouts of American
Silicon Valley Monterey Bay Council
970 W Julian Street
San Jose, CA 95126

Subject: Biological Evaluation Letter Report for the proposed Valley Foundation Training Center at the Boy Scouts of America Camp at 26005 Big Basin Way, Santa Cruz County, California (PN 2878-01)

Dear Mr. Wilson:

At your request, Live Oak Associates, Inc. (LOA), completed the following biological evaluation letter report for developing the Valley Foundation Training Center at 26005 Big Basin Way, Santa Cruz County, California. The site is located at the Boy Scouts Camp on Highway 9 and includes evaluating a small water tank site on the entrance road, and an approximately one-acre site for the construction of the Valley Foundation Training Center located at 26005 Big Basin Way, Santa Clara County, California (Figure 1).

The primary objectives of this report are to 1) identify habitats onsite, 2) review local documents and available public data bases to determine if the site might potentially support special status plant and animal species and regulated habitats (e.g., wetlands, riparian, etc.), and 3) identify any evidence that the site represents atypical vegetation cover or occurrence of wildlife species that might infer exposure to contaminants such as pesticides. Other sources of information used in the preparation of this analysis included the *California Natural Diversity Data Base* (CDFW 2024), special status species lists prepared by the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service, and manuals and references related to plants and animals found in and around Santa Cruz County.

EXISTING CONDITIONS

LOA plant and wetland ecologist Arren Allegretti and LOA wildlife ecologist Robert Shields conducted a site visit on April 2, 2024.

Regional Setting

The site is located at 26005 Big Basin Way, Santa Cruz County, California. The project site is located in the Big Basin 7.5” U.S. Geological Survey (USGS) quadrangle and in Section 12 of Township 8 south Range 3 west and is surrounded by natural mixed woodland.

The Boy Scout Camp is sited in the Santa Cruz Mountains, a very small area of the Camp makes up the work areas. Although the work areas have been logged (with a permit), the surrounding habitat consists of Douglas Fir-Madrone-Tanoak Forest and Woodland. Douglas fir dominates this habitat adjacent to the work areas.

Adaptations to fire and other natural disturbances, such as infestations of fungi and insects, contribute to the overall development and structure of Douglas fir forests. Due to intense regional logging that occurred over the last century, regional stands of Douglas-fir are relatively young. Consequently, the relative age and maturity of these stands influence their overall structure and resilience to natural and anthropogenic disturbances such as fire and climate change. To sustain forest resilience, management considerations include a focus on fire and vegetation management.

Habitats

Two habitats were observed within the work areas during the site visit.

Logged (Mixed Woodland). This habitat type has been completely logged and the understory has been completely impacted, including impacting the soil itself.

Developed (Roadway). This is a graveled roadway.

Animals observed within the work areas and adjacent habitat during the April 2024 site visit included the band-tailed pigeon (*Patagioenas fasciata*), Anna’s hummingbird (*Calypte anna*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), northern flicker (*Colaptes auratus*), western flycatcher (*Empidonax difficilis*), warbling vireo (*Vireo gilvus*), Steller’s jay (*Cyanocitta stelleri*), common raven (*Corvus corax*), chestnut-backed chickadee (*Poecile rufescens*), bushtit (*Psaltriparus minimus*), golden-crowned kinglet (*Regulus satrapa*), brown creeper (*Certhia americana*), Pacific wren (*Troglodytes pacificus*), American robin (*Turdus migratorius*), dark-eyed junco (*Junco hyemalis*), yellow-rumped warbler (*Setophaga coronate*), Wilson’s warbler (*Cardellina pusilla*), shrew mole (*Neurotrichus gibbsii*), western gray squirrel (*Sciurus griseus*), Botta’s pocket gopher (*Thomemys bottae*), and mule deer (*Odocoileus hemionus*).

Special Status Species

The site was found to lack any suitable habitat for any special status plant species known to occur regional. Therefore, plant species known to occur regionally are presumed absent. A search of published accounts for all relevant special status animal species was conducted for the Big Basin USGS 7.5” quadrangle in which the project site occurs and for the eight surrounding quadrangles (Mindego Hill, La Honda, Cupertino, Franklin Point, Castle Rock Ridge, Ano Nuevo, Davenport, and Felton) using the California Natural Diversity Data Base (CNDDB) Rarefind (CDFW 2024). The species and their potential to occur in the study area are summarized in Appendix A. All but five animal species listed in Appendix A would not be expected to occur on site. San Francisco dusky-footed woodrats and Santa Cruz black salamanders may occur adjacent to the work areas and have the potential to move onto the work areas. Foraging and movement habitat exists in the work areas for the Pallid and Townsend's bats and cougar. nesting habitat exists onsite for white-tailed kite and marginal foraging habitat exists for the Townsend's big-eared bat and pallid bat (see Appendix A). Discussions for these three species occur below.

Jurisdictional Waters

Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds, reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Wildlife (CDFW), and the California Regional Water Quality Control Board (RWQCB). Potential wetlands and jurisdictional waters are absent from the site.

No regulated habitats occur onsite.

POTENTIAL OCCURRENCE OF SPECIAL STATUS PLANTS AND ANIMALS

Special Status Plants

As the work areas have been impacted by permitted logging and the understory has been fully impacted as well, the site does not support habitat suitable for special status plant species. Rare plant surveys are not warranted for this project.

Special Status Wildlife

Twenty-one of the 26 species considered in Appendix A are considered absent from the site or unlikely to occur on the site as it lacks suitable habitat for these species, or it is outside of the species' known range (Appendix A). Only five of the 26 species that occur in the region may occur onsite; the perimeter of the site supports limited, but potential breeding and marginal foraging habitat for the Santa Cruz black salamander and San Francisco dusky-footed woodrat as well as potential foraging habitat for the pallid bat and Townsend's big-eared bat; cougar is well-known within the Santa Cruz mountains and may move through the site from time to time. As the bats and cougar's potential to occur on the site is limited, we have not included minimization measures. Minimization measures are included below for the Santa Cruz black salamander and San Francisco dusky-footed woodrat as well as nesting birds and raptors.

Migratory birds (including special status species) may nest in the cleared ground of the site or in trees or shrubs adjacent to the site (see section below). Construction of the site would result in a slight decrease in marginal foraging or breeding habitat for these species regionally. Therefore, impacts to habitat for birds would not be regionally significant and would not constrain construction activities. The applicant, however, is obligated to comply with the provisions of the Migratory Bird Treaty Act and will be required to conduct nesting bird surveys prior to any ground disturbance if conducted during the breeding season (February 1 to August 31).

Nesting Raptors and Migratory Birds

Trees, shrubs, and ground areas occurring on and adjacent to the site could be used by tree-nesting raptors, including the white-tailed kite, and other migratory birds for breeding. All nesting raptors and migratory birds, regardless of their status, are protected by state and federal laws. Therefore, construction activities that adversely affect the nesting success of raptors and migratory birds (i.e., lead to the abandonment of active nests) or result in mortality of individual birds constitute a violation of state and federal laws. Project-related activities that occur during the breeding season could be constrained in the vicinity of any active nests. If tree or shrub removal or ground disturbance activities are scheduled to commence during the breeding season (February 1 through August 31), pre-construction nesting bird surveys should be conducted by a qualified biologist in order to identify possible nesting activity. A construction-free buffer of suitable dimensions should be established around any active raptor and migratory bird nests (up to 250 feet, depending on the location and species) for the duration of the project or until it has been determined that the chicks have fledged and are independent of their parents.

San Francisco Dusky-Footed Woodrat
Although San Francisco dusky-footed woodrat nests were not observed within the work areas or immediately adjacent to the work areas, this species may occur in the vicinity of the work areas and a preconstruction survey should be conducted for woodrat nests within 25 feet of the work areas within 30 days prior to start of construction to allow enough time for woodrat nest relocation should the need arise. Should woodrat nests require relocation, relocation will occur outside the season for young and will be conducted by a qualified biologist with significant prior experience relocating nests.

Santa Cruz Black Salamander
Although the work areas do not currently support suitable habitat for this species, this species has been observed nearby and could potentially occur in intact habitat adjacent to the work areas. Therefore, a qualified biologist will conduct a preconstruction survey immediately prior to wildlife exclusion fencing (such as silt fence) installation around the perimeter of the site. Should this species be observed within the work areas, it should be allowed to leave on its own. Additionally, all holes should be capped at the end of each workday and trenches should be ramped at the end of each workday to prevent entrapment of Santa Cruz black salamander.

Tree Removal
Trees have already been removed from the work areas under a timber operations permit from CalFire.

Riparian Corridor and Special Habitats
Riparian corridors and special habitats are absent from the work areas.

Wildlife Movement
The small size of the work areas is not expected to impact wildlife movements, as the region surrounding the work areas is open for wildlife movement.

Conclusion

In summary, special status wildlife species were not observed during the April 2024 site visit, and there are no records of special status species known to occur on the property. Additionally, habitats onsite are generally unsuitable for most special status species known to occur in the region. There is the potential for nesting raptors and migratory birds. Focused preconstruction surveys would need to be completed prior to the commencement of construction activities. Reasonable measures could be taken that would avoid impacts to nesting migratory birds and raptors if they are found onsite prior to construction.

If you have any questions regarding our conclusions, please contact me at kkrakow@loainc.com or (408) 281-5889 at your earliest convenience.

Sincerely,

Katrina Krakow

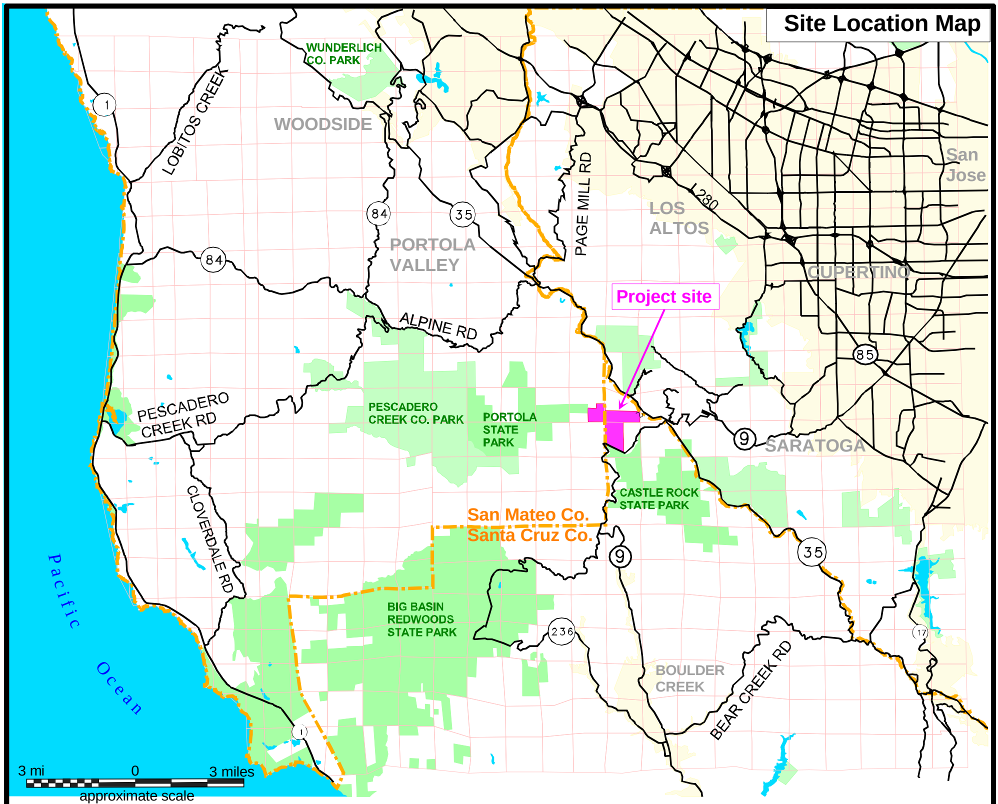
Katrina Krakow, M.S.
Senior Project Manager
Staff Ecologist

References

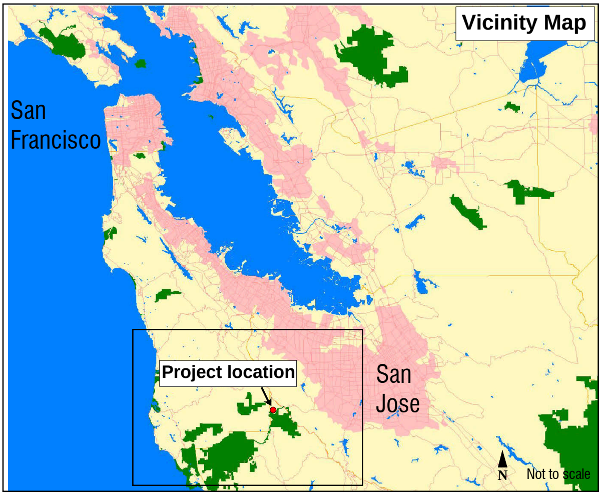
California Department of Fish and Wildlife. 2024. Special animals (April 2024). The Natural Resources Agency, Sacramento, CA.

________. 2024. California natural diversity database. The Resources Agency, Sacramento, CA.

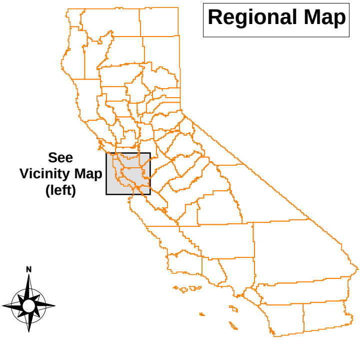
U. S. Fish and Wildlife Service. 2024. Endangered and threatened wildlife and plants.


Site Location Map

WUNDERLICH CO. PARK
1
LOBITOS CREEK
WOODSIDE
84
35
PAGE MILL RD
LOS ALTOS
280
San Jose
PORTOLA VALLEY
84
CUPERTINO
Project site
ALPINE RD
85
PESCADERO CREEK RD
PESCADERO CREEK CO. PARK
PORTOLA STATE PARK
9
SARATOGA
CASTLE ROCK STATE PARK
San Mateo Co.
Santa Cruz Co.
CLOVERDALE RD
9
35
Pacific
Ocean
BIG BASIN REDWOODS STATE PARK
236
17
BOULDER CREEK
BEAR CREEK RD
1
3 mi
0
3 miles
approximate scale


Vicinity Map

San Francisco
Project location
San Jose
N
Not to scale


Regional Map

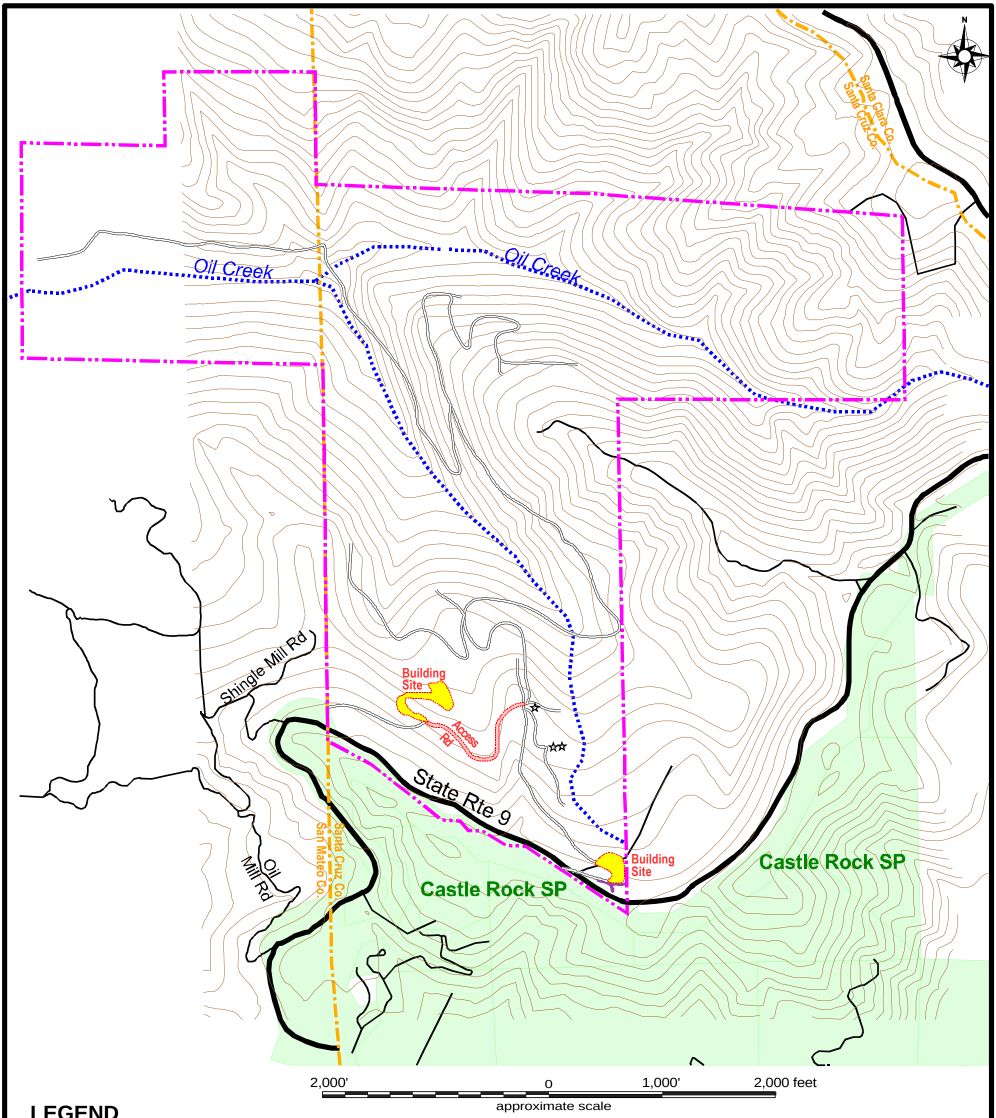
See Vicinity Map (left)
N

LIVE OAK
ASSOCIATES, INC.

Cheseborough Boy Scout Camp BE

Site Location / Vicinity Map

Date	Project #	Figure #
4/15/2024	**2878-01**	**1**


N
Santa Clara Co.
Santa Cruz Co.
Oil Creek
Oil Creek
Shingle Mill Rd
Building Site
Access Rd
Building Site
State Rte 9
Oil Mill Rd
Santa Cruz Co.
San Mateo Co.
Castle Rock SP
Castle Rock SP
2,000'
0
1,000'
2,000 feet
approximate scale

LEGEND

- Approximate Property Boundary
- Approximate Project A.P.E.Sites
- 🟨 Logged (Mixed Woodland)
- ■ Developed (Access Road)

LIVE OAK
ASSOCIATES, INC.

Cheseborough Boy Scout Camp BE
Habitats / Land Cover

Date	Project #	Figure #
4/15/2024	**2878-01**	**2**

APPENDIX A: SPECIAL STATUS SPECIES

A search of published accounts for all relevant special status plant and animal species was conducted for the Big Basin USGS 7.5” quadrangles in which the project site occurs and for the eight surrounding quadrangles (Mindego Hill, La Honda, Cupertino, Franklin Point, Castle Rock Ridge, Ano Nuevo, Davenport, and Felton) using the California Natural Diversity Data Base (CNDDB) Rarefind (CDFW 2024). These species and their potential to occur in the study area are summarized in Table 1 below.

The work areas have been significantly disturbed, as trees have been removed and the entire understory disturbed, including the soil, therefore, special status plants are not expected to occur within the work areas.

Wildlife that would be treated as absent from the site would be those species whose range is outside of the region of the project site, and species requiring specific habitats, including aquatic, grassland, and breeding and upland habitats, that do not exist on the site have not been included in the table below.

TABLE 2A: SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY.

ANIMALS (adapted from CDFW 2024 and USFWS 2024)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Western bumble bee *Bombus occidentalis*	CCE	In California, mainly occurring within the coastal and Sierra Nevada ranges within meadows and grasslands and some natural areas within urban environments. Indication of recent population potentially being restricted to high elevation and coastal areas. Historically occurred from the Channel Islands to the northern California border. Flight period is February to late November, peaking in late June and late September. Tends to construct nest underground in animal burrows on west and south-west facing slopes. Overwintering sites are likely in friable soils or in debris or leaf litter.	**Unlikely.** The site does not support grassland habitat, and likely does not support enough nectar sources for this species.
Ohlone tiger beetle (OTB) *Cicindela ohlone*	FE	California native grasslands with California oatgrass and purple needlegrass; prefers sunlit barren or sparsely vegetated grasslands with mima mound topography.	**Absent.** Considering the lack of native bunchgrasses growing in association with mima mound topography, the site does not support suitable habitat for this species.
Mount Hermon June beetle *Polyphylla barbata*	FE	Occurs in the Zayante sandhills of Santa Cruz County, CA. Habitat includes sand parkland and sandy areas in chaparral and ponderosa pine stands.	**Absent.** The work areas are outside of the range for this species.
Zayante band-winged grasshopper *Trimerotropis infantilis*	FE	Endemic to the Zayante Sandhills of Santa Cruz County. Habitat includes sand parkland and sandy areas in chaparral and ponderosa pine stands. Co-occurs with the plant *Erysimum teretifolium*.	**Absent.** The work areas are outside of the range for this species. Additionally suitable habitat for this species does not occur on this site due to the absence of Zayante sands and its indigenous plant communities (Arnold 2021).
Monarch butterfly *Danaus plexippus*	FT (candidate)	Overwinter on the California coast in relatively dense grove of trees, such as Monterey pine, Monterey cypress, or eucalyptus. Host plant is the milkweed.	**Unlikely.** Although monarchs may fly over the site from time to time, this species overwinters on the coast, not in the mountains.

TABLE 2A: SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY.

ANIMALS (adapted from CDFW 2024 and USFWS 2024)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts

Smith's blue butterfly *Euphilotes enoptes smithi*	FE	Endemic to inland and coastal sand dunes, serpentine grasslands, and cliff-side chaparral habitats with *Eriogonum* species in Monterey, Santa Cruz, and San Mateo Counties, CA	**Absent.** The work areas are outside of the range for this species.
California tiger salamander *Ambystoma californiense*	FT, CT	Breeds in vernal pools and stock ponds of central California. Adults aestivate in grassland habitats adjacent to the breeding sites.	**Absent.** No historic or current records of this species are known within three miles of the site (CNDDB 2024).
Foothill yellow-legged frog *Rana boylii*	CT, CE	Occurs in swiftly flowing streams and rivers with rocky substrate with open, sunny banks in forest, chaparral, and woodland habitats, and can sometimes be found in isolated pools and ponds.	**Absent.** Habitats required by this species are absent. Although the closest recorded observation of this species is within a mile of the work area, it was observed in Oil Creek, as this species is highly connected with flowing water, therefore, this species is not expected to move into the work areas.
California red-legged frog *Rana draytonii*	FT, CSC	Rivers, creeks and stock ponds of the Sierra foothills and coast range, preferring pools with overhanging vegetation.	**Absent.** Habitats required by this species are absent. The closest recorded observation of this species is a proximity polygon, the centroid of which being approximately one and a half miles from the site (CDFW 2024).
Western pond turtle *Actinemys marmorata*	CSC	An aquatic turtle of ponds, marshes, slow-moving rivers, streams, and irrigation ditches with aquatic vegetation. Needs basking sites and sandy banks or grassy open fields for egg laying.	**Absent.** The site does not support suitable habitat for this species. Additionally, there are no records of this species within three miles of the site (CDFW 2024).
Western snowy plover *Charadrius alexandrines nivosus*	FT, CSC	Uses man-made agricultural wastewater ponds and reservoir margins. Breeds on barren to sparsely vegetated ground at alkaline or saline lakes, reservoirs, ponds, and riverine sand bar.	**Absent.** Breeding and foraging habitat is absent from the site and the vicinity of the site.

TABLE 2A: SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY.

ANIMALS (adapted from CDFW 2024 and USFWS 2024)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts

Marbled murrelet *Brachyramphus marmoratus*	FT, CE	Occurs in coastal salt water areas, usually within 2 km from the coast and occasionally rivers and lakes within 20 km from the ocean, but nests in old growth coniferous forests usually within 9 km from the ocean.	**Unlikely.** Although Critical habitat for this species exists approximately one mile from the work areas both west and southeast of the work areas, all trees have already been removed from the site itself and the trees within the vicinity of the site are not old growth trees. Therefore, while marbled murrelets may nest within the nearby Critical Habitat polygons, they forage in the ocean, therefore, while they may fly over the work areas to and from their foraging waters, they are not likely to stop on the work areas or nest adjacent to the work areas.
Tricolored Blackbird *Agelaius tricolor*	CT, CSC	Breeds near fresh water, primarily emergent wetlands, with tall thickets. Forages in grassland and cropland habitats.	**Absent.** Breeding and foraging habitat is absent from the site and the vicinity of the site.
Bank Swallow *Riparia riparia*	CT	Occurs in open areas near flowing water, nests in steep banks along inland water or coast. State-wide.	**Absent.** The site does not provide breeding nor foraging habitat for this species.
Cougar (Central Coast ESU) *Puma concolor*	CT (Candidate)	Occurs in a wide range of habitats including, but not limited to, conifer forest, chaparral and riparian and oak woodlands.	**Possible**. Although the Santa Cruz Mountains are known habitat for the cougar, the work areas of the site have been cleared and do not provide particularly good habitat themselves. Most importantly, this project does not interfere with cougar movement, as the work areas are small within a largely suitable landscape, as an adult female's home range is at least 25 square miles.

TABLE 2B: SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY.

ANIMALS (adapted from CDFW 2024 and USFWS 2024)

Species Considered California State Species of Special Concern or Fully Protected

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Red-bellied newt *Taricha rivularis*	CSC	This species lays eggs in running water and can be found in coastal woodlands and redwood forest along the coast of northern California north of San Francisco except a small population occurring in the Steven's Creek watershed near the San Francisco Bay.	**Absent.** The work areas are outside of this specie's range and the site is not near a creek.

TABLE 2B: SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY.

ANIMALS (adapted from CDFW 2024 and USFWS 2024)

Species Considered California State Species of Special Concern or Fully Protected

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Santa Cruz black salamander *Aneides niger*	CSC	Occurs in deciduous woodland, coniferous forests, and coastal grasslands around the Santa Cruz Mountains and foothills. This species is also known to occur on the developed flats in pockets within older developments. They can be found under rocks near streams, in talus, under damp logs, rotting wood, and other objects.	**Possible.** Although the work areas do not currently support suitable habitat for this species, this species has been observed nearby and could potentially occur in intact habitat adjacent to the work areas.
California giant salamander *Dicamptodon ensatus*	SCC	Occurs in or adjacent to cold clear permanent to semi-permanent streams and seeps.	**Absent.** Habitat required by this species is absent from the site.
White-tailed Kite (nesting) *Elanus leucurus*	CP	Open grasslands and agricultural areas throughout central California.	**Unlikely.** The site does not offer suitable nesting habitat or foraging habitat; foraging habitat is also not locally available.
Black swift (nesting) *Cypseloides niger*	CSC	Migrants found in many habitats of state; in Sierra nests are often associated with waterfalls.	**Absent.** The site does not provide suitable breeding or foraging habitat for this species.
Long-eared owl *Asio otus*	CSC	Occur on edge habitats including in clumps of trees or edges of open forests that are adjacent to grasslands, shrublands, wetlands, marshes, and farmlands. Need stick nests built by other birds in trees.	**Unlikely.** This species is known from approximately two miles to the north (CDFW 2024). However, suitable habitat is absent from the site and the vicinity of the site.-eared owls may use site as foraging area, but unlikely as the nearest recorded observation is more than 14 miles to the south of the site.
Burrowing owl *Athene cunicularia*	CSC	Open, dry grasslands, deserts and ruderal areas. Requires suitable burrows. Often associated with California ground squirrels.	**Absent.** The site and vicinity of the site does not support suitable habitat in the form of grassland and other open habitat.
Pallid bat *Antrozous pallidus*	CSC	Grasslands, chaparral, woodlands, and forests of California; most common in dry rocky open areas that provide roosting opportunities; buildings, bridges, live trees, and snags are also used for roosts (Gervais 2016).	**Possible.** Foraging habitat is present onsite; however, roosting habitat for this species is absent from the site.
Townsend's big-eared bat *Corynorhinus townsendii*	CSC	Primarily a cave-dwelling bat that may also roost in buildings. Occurs in a variety of habitats.	**Possible.** Foraging habitat is present onsite; however, roosting habitat for this species is absent from the site.

TABLE 2B: SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY.

ANIMALS (adapted from CDFW 2024 and USFWS 2024)

Species Considered California State Species of Special Concern or Fully Protected

Common and scientific names	Status	General habitat description	*Occurrence in the study area
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	CSC	Hardwood forests, oak riparian and shrub habitats.	**Possible.** Although woodrat nests were not observed within the work areas or within the immediate vicinity of the work areas, this species could occur within the vicinity of the site and therefore, could more onto the work areas.
American badger *Taxidea taxus*	CSC	Found in drier open stages of most shrub, forest and herbaceous habitats with friable soils.	**Absent.** The site does not support suitable habitat for this species. Additionally, the nearest recorded observation of this species is nearly three miles from the site (CDFW 2024).

Present: Species observed on the site at time of field surveys or during recent past.
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible: Species not observed on the site, but it could occur there from time to time.
Unlikely: Species not observed on the site and would not be expected to occur there except as a transient.
Absent: Species not observed on the site and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CR	California Rare
FC	Federal Candidate	CSC	California Species of Special Concern
CRPR	California Rare Plant Rank	CFP	California Fully Protected

APPENDIX B: SIGNIFICANCE CRITERIA AND RELEVANT GOALS, POLICIES, AND LAWS

Significance Criteria

General plans, area plans, and specific projects are subject to the provisions of the California Environmental Quality Act. The purpose of CEQA is to assess the impacts of proposed projects on the environment before they are constructed. For example, site development may require the removal of some or all of its existing vegetation. Animals associated with this vegetation could be destroyed or displaced. Animals adapted to humans, roads, buildings, pets, etc., may replace those species formerly occurring on a site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. These impacts may be considered significant. According to *2024 CEQA Status and Guidelines* (2024), "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered "significant" if they will:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Relevant Goals, Policies, and Laws

Threatened and Endangered Species

State and federal "endangered species" legislation has provided the CDFW and USFWS with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal Endangered Species Acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the California Native Plant Society are collectively referred to as "species of special status." Permits may be required from both the

CDFW and USFWS if activities associated with a proposed project will result in the take of a listed species. To "take" a listed species, as defined by the state of California, is "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" said species (California Fish and Game Code, Section 86). "Take" is more broadly defined by the federal Endangered Species Act to include "harm" of a listed species (16 USC, Section 1532(19), 50 CFR, Section 17.3). Furthermore, the CDFW and the USFWS are responding agencies under CEQA. Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

Migratory Birds

State and federal laws also protect most bird species. The State of California signed Assembly Bill 454 into law in 2019, which clarifies native bird protection and increases protections where California law previously deferred to Federal law. The Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., scc. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

Birds of Prey

Birds of prey are protected in California under provisions of the State Fish and Game Code, Section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFW.

Additionally, the Bald and Golden Eagle Protection Act (16 U.S.C., scc. 668-668c) prohibits anyone from taking bald or golden eagles, including their parts, nests, or eggs, unless authorized under a federal permit. The act prohibits any disturbance that directly affects an eagle or an active eagle nest as well as any disturbance caused by humans around a previously used nest site during a time when eagles are not present such that it agitates or bothers an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death, or nest abandonment.

Bats

Section 2000 and 4150 of the California Fish and Game Code states that it is unlawful to take or possess a number of species, including bats, without a license or permit, as required by Section 3007. Additionally, Title 14 of the California Code of Regulations states it is unlawful to harass, herd, or drive a number of species, including bats. To harass is defined as "an intentional act which disrupts an animal's normal behavior patterns, which includes, but is not limited to, breeding, feeding or sheltering." For these reasons, bat colonies in particular are considered to be sensitive and therefore, disturbances that cause harm to bat colonies are unlawful.

Wetlands and Other Jurisdictional Waters

Section 404 of the federal Clean Water Act (CWA) regulates the discharge of dredged or fill material into "navigable waters" (33 U.S.C. §1344), defined in the CWA as "the waters of the United States, including the territorial seas" (33 U.S.C. §1362(7)). The CWA does not supply a definition for waters of the U.S., and that has been the subject of considerable debate since the

CWA's passage in 1972. A variety of regulatory definitions have been promulgated by the two federal agencies responsible for implementing the CWA, the Environmental Protection Agency (EPA) and USACE. These definitions have been interpreted, and in some cases, invalidated, by federal courts.

Waters of the U.S. are presently defined by the EPA and USACE's joint 2023 Revised Definition of 'Waters of the U.S.' Rule (2023 WOTUS Rule), with certain interpretive modifications imposed by the U.S. Supreme Court's May 25, 2023, decision in the case of Sackett v. Environmental Protection Agency. These waters include:

- Waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
- The territorial seas.
- Interstate waters, including interstate wetlands.
- Impoundments of waters otherwise defined as waters of the United States under the definition.
- Tributaries to other waters of the U.S. that are relatively permanent, standing or continuously flowing bodies of water.
- Wetlands adjacent to other waters of the U.S. that have a continuous surface connection to those waters.

The 2023 WOTUS Rule also defines a number of exclusions from the definition of waters of the U.S., many of which are longstanding exclusions from earlier regulatory regimes. These generally include:

- Waste treatment systems.
- Prior converted cropland.
- Ditches excavated wholly in and draining only dry land that do not carry a relatively permanent flow of water.
- Certain artificial features, e.g., irrigation basins, swimming pools, borrow pits, and artificially irrigated areas.
- Swales and erosional features characterized by low volume, infrequent, or short duration flow.

All activities that involve the discharge of dredge or fill material into waters of the U.S. are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that results in no net loss of wetland functions or values.

Under the Porter-Cologne Water Quality Control Act of 1969, the State Water Resources Control Board has regulatory authority to protect the water quality of all surface water and groundwater in the State of California ("waters of the State"). Nine RWQCBs oversee water quality at the local and regional level. The RWQCB for a given region regulates discharges of fill or pollutants into waters of the State through the issuance of various permits and orders. Discharges into waters of the State that are also waters of the U.S. require a Section 401 Water Quality Certification from the RWQCB as a prerequisite to obtaining a Section 404 Clean Water Act permit. Discharges into waters of the State that are not also waters of the U.S. require Waste Discharge Requirements (WDRs), or waivers of WDRs, from the RWQCB.

The RWQCB also administers the Construction Storm Water Program and the federal National Pollution Discharge Elimination System (NPDES) program. Projects that disturb one or more acres of soil must obtain a Construction General Permit under the Construction Storm Water Program. A prerequisite for this permit is the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. Projects that discharge wastewater, storm water, or other pollutants into a water of the U.S. may require a NPDES permit.

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code. Activities that may substantially modify such waters through the diversion or obstruction of their natural flow, change or use of any material from their bed or bank, or the deposition of debris require a Notification of Lake or Streambed Alteration. If CDFW determines that the activity may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. Such an agreement typically stipulates that certain measures will be implemented to protect the habitat values of the lake or drainage in question.

Local Ordinances

Significant Trees Protection Ordinance of the County of Santa Cruz (Chapter 16.34).

The County of Santa Cruz has an ordinance for Significant Tree Protection and requires a permit for removal of Significant Trees.

Chapter 16.34 of the County's Municipal Code identifies a Significant Tree as:

"…any tree, sprout clump, or group of trees, as follows:

(A) Within the urban services line or rural services line, any tree which is equal to or greater than 20 inches d.b.h. (approximately five feet in circumference); any sprout clump of five or more stems each of which is greater than 12 inches d.b.h. (approximately three feet in circumference); or any group consisting of five or more trees on one parcel, each of which is greater than 12 inches d.b.h. (approximately three feet in circumference).

(B) Outside the urban services line or rural services line, where visible from a scenic road, any beach, or within a designated scenic resource area, any tree which is equal to or greater than 40 inches d.b.h. (approximately 10 feet in circumference); any sprout clump of five or more stems, each of which is greater than 20 inches d.b.h. (approximately five feet in circumference); or, any group consisting of 10 or more trees on one parcel, each greater than 20 inches d.b.h. (approximately five feet in circumference).

(C) Any tree located in a sensitive habitat as defined in Chapter 16.32 SCCC. Also see SCCC 16.34.090(C), exemption of projects with other permits."

Riparian Corridor and Wetlands Protection Ordinance of the County of Santa Cruz (Chapter 16.30).

The County of Santa Cruz has an ordinance to limit development in riparian corridors.

Chapter 16.30 of the County's Municipal Code identifies a Riparian Corridor as:

"(1) Lands within a stream channel, including the stream and the area between the mean rainy season (bankfull) flowlines;

(2) Lands extending 50 feet (measured horizontally) out from each side of a perennial stream. Distance shall be measured from the mean rainy season (bankfull) flowline;

(3) Lands extending 30 feet (measured horizontally) out from each side of an intermittent stream. Distance shall be measured from the mean rainy season (bankfull) flowline;

(4) Lands extending 100 feet (measured horizontally) from the high water mark of a lake, wetland, estuary, lagoon or natural body of standing water;

(5) Lands within an arroyo located within the urban services line, or the rural services line;

(6) Lands containing a riparian woodland."

The ordinance provides these protections:

"No person shall undertake any development activities other than those allowed through exemptions and exceptions as defined below within the following areas:

(A) Riparian corridors.

(B) Areas within the urban services line or rural services line which are within a buffer zone as measured from the top of the arroyo. All projects located on properties abutting an arroyo shall be subject to review by the Planning Director. The width of the buffer shall be determined according to the following criteria:

CRITERIA FOR DETERMINING BUFFER FROM ARROYOS						
CHARACTER OF VEGETATION IN BUFFER						
	Riparian Vegetation			**Live Oak or Other Woodland**		
Average slope within 30 feet of edge	20—30%	10—20%	0—10%	20—30%	10—20%	0—10%
Buffer distance (feet) from: perennial streams	50	50	50	50	40	30
Buffer distance (feet) from: intermittent streams	50	40	30	30	30	20
Buffer distance (feet) from: ephemeral streams	30	30	20	20	20	20

The buffer shall always extend 50 feet from the edge of riparian woodland and 20 feet beyond the edge of other woody vegetation as determined by the drip-line, except as provided for in SCCC 16.30.060. Once the buffer is determined, a 10-foot setback from the edge of the buffer is required for all structures, to allow for construction equipment and use of yard area. See allowable density credits within the General Plan.

CRITERIA FOR DETERMINING BUFFER FROM ARROYOS

CHARACTER OF VEGETATION IN BUFFER

	Grassland or Other			**Buffer Area Is Developed or Otherwise Disturbed (does not include recent clearing)**		
Average slope within 30 feet of edge	20—30%	10—20%	0—10%	20—30%	10—20%	0—10%
Buffer distance (feet) from: perennial streams, bodies of water	50	30	20	30	20	20
Buffer distance (feet) from: intermittent streams	30	20	10	20	10	10
Buffer distance (feet) from: ephemeral streams	20	10	10	20	10	10

The buffer shall always extend 50 feet from the edge of riparian woodland and 20 feet beyond the edge of other woody vegetation as determined by the drip-line, except as provided for in SCCC 16.30.060. Once the buffer is determined, a 10-foot setback from the edge of the buffer is required for all structures, to allow for construction equipment and use of yard area.
See allowable density credits within the General Plan.
[Ord. 4346 § 70, 1994; Ord. 3335 § 1, 1982; Ord. 2460, 1977].”

Attachment 7

Biotic Report Acceptance Letter (October 2025)

THE COUNTY OF SANTA CRUZ
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County of Santa Cruz

DEPARTMENT OF COMMUNITY DEVELOPMENT AND INFRASTRUCTURE

INTER-OFFICE CORRESPONDENCE

DATE: 10/23/2025

TO: File

FROM: Kathleen McLaughlin, Resource Planner

SUBJECT: Biotic Report Review Acceptance

For discretionary application 231473 (APN: 088-051-37) a *Biological Evaluation Letter Report for the proposed Valley Foundation Training Center at the Boy Scouts of America Camp at 26005 Big Basin Way, Santa Cruz County, California (PN 2878-01)*, dated April 19, 2024, was prepared by Live Oak Associates, Inc.

On behalf of Environmental Planning, the report was reviewed and accepted by me and Matthew Johnston (Principal Planner/Environmental Coordinator).

Kathleen McLaughlin, Resource Planner

DocuSigned by:

Signature: Kathleen McLaughlin Date: 10/23/2025

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Attachment 8

Special-Status Plants within the Project Vicinity

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Attachment 8

Table 1 Special-Status Plant Species with the Potential to Occur in the Project Vicinity

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on the Project Site
Alkali milk-vetch *(Astragalus tener* var. *tener)*	--/--/1B.2	Alkaline sites in playas, valley and foothill grassland (on adobe clay), and vernal pools; elevation 1-60m. Blooming Period: March - June	Unlikely. No suitable grasslands and vernal pools.
Anderson's manzanita *(Arctostaphylos andersonii)*	--/--/1B.2	Broadleaved upland forest, chaparral, and North Coast coniferous forest. Known only from the Santa Cruz Mountains. Prefers open sites in redwood forest; elevation 180-800m. Blooming Period: November - April	Unlikely. Project area logged. No manzanita observed during site visit.
Arcuate bush-mallow *(Malacothamnus arcuatus)*	--/--/1B.2	Chaparral, in gravelly alluvium; elevation 80-355m. Blooming Period: April - September	Absent. No chaparral present in project area.
Ben Lomond buckwheat *(Eriogonum nudum* var. *decurrens)*	--/--/1B.1	Chaparral, cismontane woodland, lower montane coniferous forest, and ponderosa pine sand hills; elevation 50-800m. Blooming Period: June - October	Unlikely. No sandy Zayante soil series present. Species requires open areas with little to no shade, typically within sandhill chaparral or the open understory of Pacific ponderosa pine forests.
Ben Lomond spineflower *(Chorizanthe pungens* var. *hartwegiana)*	FE/--/1B.1	Lower montane coniferous forest; found on Ben Lomond sands and Zayante coarse sands in maritime ponderosa pine sand hills; elevation 120-470m. Blooming Period: April - July	Absent. No edaphic conditions suitable for species within project area.
Bent-flowered fiddleneck *(Amsinckia lunaris)*	--/--/1B.2	Coastal bluff scrub, cismontane woodland, and valley and foothill grassland, on decomposed shale soils; elevation 3-500m. Blooming Period: March - June	Unlikely. No suitable open, grassy slopes, woodland openings, and on gravelly or serpentine soils.
Blasdale's bent grass *(Agrostis blasdalei)*	--/--/1B	Sandy or gravelly soil close to rocks, often in nutrient-poor soil with sparse vegetation. Blooming Period: May - July	Unlikely. No suitable sandy or gravelly soil close to rocks with space vegetation. Area logged and understory disturbed.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on the Project Site
Bonny Doon manzanita *(Arctostaphylos silvicola)*	--/--/1B.2	Chaparral, closed-cone coniferous forest, and lower montane coniferous forest. Known only from inland marine Zayante sands in Santa Cruz County; elevation 120-390m. Blooming Period: February – March	Absent. No suitable edaphic conditions. Area logged and understory disturbed
Bristly sedge *(Carex comosa)*	--/--/2B.1	Coastal prairie, marshes and swamps (lake margins), and valley and foothill grassland; elevation 0-625m. Blooming Period: May - September	Absent. No coastal prairie, marshes or swamps, or grasslands. Area logged and understory disturbed.
Butano Ridge cypress *(Hesperocyparis abramsiana var. butanoensis)*		Closed-cone coniferous forest, lower montane coniferous forest, chaparral, sandstone; elevation 400-490m.	Unlikely. Area logged and forest disturbed. No cypress observed during site visit.
Chaparral ragwort *(Senecio aphanactis)*	--/--/2B.2	Cismontane woodland and coastal scrub. Prefers drying alkaline flats; elevation 20-575m. Blooming Period: January - April	Unlikely. No alkaline flats. Area logged and understory disturbed.
Choris' popcorn-flower *(Plagiobothrys chorisianus* var. *chorisianus)*	--/--/1B.2	Chaparral, coastal scrub, coastal prairie, mesic sites; elevation 15-100m. Blooming Period: March - June	Absent. No mesic sites in chaparral, coastal scrub, or coastal prairie. Area logged and understory disturbed.
Coastal marsh milk-vetch (*Astragalus pycnostachyus var. pycnostachyus*)	--/--/1B.2	Coastal dunes, marshes and swamps, coastal scrub. Mesic sites in dunes or along streams or coastal salt marshes; elevation 0-155 m. Blooming Period: April - October.	Absent. No mesic sites in coastal dunes, coastal scrub, or marshes/swamps. Area logged and understory disturbed.
Deceiving sedge *(Carex saliniformis)*	--/--/1B.2	Wet areas in coastal prairie, coastal scrub, meadows and seeps, and coastal salt marshes and swamps; elevation 3-230m. Blooming Period: June - July	Absent. No mesic sites in meadows, coastal scrub, or coastal prairie. Area logged and understory disturbed.
Dudley's lousewort *(Pedicularis dudleyi)*	--/SR/1B.2	Chaparral, North Coast coniferous forest, valley and foothill grassland. Deep shady woods of older coast redwood forests, also in maritime chaparral; elevation 100-490m. Blooming Period: April - June	Low probability. Suitable habitat within steep undisturbed understory of Doug fir woodland and mixed evergreen forest. 3.5 miles from project site. Occurrence No. 3 (CNDDB 2025).
Fragrant fritillary *(Fritillaria liliacea)*	--/--/1B.2	Coastal scrub, valley and foothill grassland, and coastal prairie. Often on serpentine; various soils reported though usually clay in grassland; elevation 3-410m. Blooming Period: February - April	Absent. No coastal scrub, grasslands, or coastal prairie. Area logged and understory disturbed.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on the Project Site
Franciscan thistle *(Cirsium andrewsii)*	--/--/1B.2	Coastal bluff scrub, broadleafed upland forest, coastal scrub, coastal prairie. Sometimes serpentine seeps; elevation 0-295 m. Blooming Period: March-July.	Unlikely. No coastal scrub, broadleaf upland forest, or coastal prairie. Area logged and understory disturbed.
Humboldt County milk-vetch *(Astragalus agnicidus)*	--/SE/1B.1	Broadleaved upland forest, north coast coniferous forest. Disturbed openings in partially timbered forest lands; also along ridgelines, south aspects; elevation 116-670m. Blooming Period: April - September	Unlikely. Known primarily from Mendicino and Humboldt Counties. Closest observation 13 miles south in burned areas at Wilder Ranch State Park. Occurrence 80 (CNDDB 2025).
Kellman's bristle moss *(Orthotrichum kellmanii)*		Chaparral, cismontane woodland. Sandstone outcrops with high calcium concentrations from eroded boulders out of non-calcareous sandstone bedrock. Rock outcrops in small openings within dense chaparral with overstory of scattered *Pinus attenuata*; elevation 370-1160m. Blooming Period: January - February	Absent. No sandstone outcrops with high calcium within chaparral and *Pinus attenuata*.
Kellogg's horkelia *(Horkelia cuneata* ssp. *sericea)*	--/--/1B.1	Closed-cone coniferous forest, maritime chaparral, coastal scrub, sandy or gravelly openings; elevation 10-200m. Blooming Period: April - September	Absent. No closed cone coniferous forest, maritime chaparral, coastal scrub in gravely or sandy openings. Area logged and understory disturbed.
Kings Mountain manzanita *(Arctostaphylos regismontana)*	--/--/1B.2	Broadleaved upland forest, chaparral, North Coast coniferous forest. Granitic or sandstone outcrops; elevation 305-730m. Blooming Period: January - April	Absent. No granitic or sandstone outcrops. None observed during site visit.
Legenere *(Legenere limosa)*	--/--/1B.1	In beds of vernal pools; elevation 1-880m. Blooming Period: April - June	Absent. No vernal pools present.
Loma Prieta hoita *(Hoita strobilina)*	--/--/1B.1	Wet areas on serpentine substrate in chaparral, cismontane woodland, and riparian woodland; elevation 30-860m. Blooming Period: May - October	Absent. No wet areas present within project area.
Marsh microseris *(Microseris paludosa)*	--/--/1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland; elevation 5-300m. Blooming Period: April - June	Unlikely. Area logged and understory disturbed. Suitable mesic habitats not present in project area.
Marsh sandwort *(Arenaria paludicola)*	FE/SE/1B.1	Sandy openings in freshwater or brackish marshes and swamps; elevation 3-170m. Blooming Period: May - August	Absent. No sandy openings in marshes and swamps.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on the Project Site
Minute pocket moss *(Fissidens pauperculus)*	--/--/1B.2	North coast coniferous forest. Moss growing on damp soil along the coast; elevation 10-100m. Evergreen	Absent. No suitable damp soils.
Northern curly-leaved monardella *(Monardella sinuata ssp. nigrescens)*	--/--/1B.2	Sandy sites in chaparral, coastal dunes, coastal scrub, and lower montane coniferous forest (ponderosa pine sandhills); elevation 0-300m. Blooming Period: April - September	Absent. No sandy sites in chaparral, coastal dunes, coastal scrub, or ponderosa pine sandhills.
Northern slender pondweed (*Stuckenia filiformis ssp. alpina*)	--/--/2B.2	Marshes and swamps. Shallow, clear water of lakes and drainage channels. 5-2325 m.	Absent. No marshes or swamps present.
Ohlone manzanita *(Arctostaphylos ohloneana)*	--/--/1B.1	Coastal scrub, closed cone coniferous forests, Monterey shale; elevation 455-520m. Blooming Period: February - March	Absent. No coastal scrub or closed-cone forest. No suitable edaphic conditions.
Pacific Grove clover *(Trifolium polyodon)*	--/SR/1B.1	Closed-cone coniferous forest, coastal prairie, meadows and seeps, valley and foothill grassland, mesic; elevation 5-120m. Blooming Period: April - June	Absent. No closed cone forest, coastal prairie or grasslands. No mesic sites or meadows and seeps in these habitat areas.
Pine rose *(Rosa pinetorum)*	--/--/1B.2	Closed-cone coniferous forest; elevation 2-300m. Blooming Period: May - July	Unlikely. No closed-cone forest present.
Point Reyes horkelia (Horkelia marinensis)	--/--/1B.2	Coastal dunes, coastal prairie, coastal scrub. Sandy flats and dunes near coast; in grassland or scrub plant communities. 2-775 m.	Unlikely. No coastal dunes, coastal prairie, coastal scrub. No sandy flats or dunes. Not near coast in grasslands or scrub plant communities.
Point Reyes meadowfoam *(Limnanthes douglasii ssp. sulphurea)*	--/SE/1B.2	Freshwater marshes and swamps, vernal pools, coastal prairie, meadows and seeps. Vernally wet depressions in open rolling, coastal prairies and meadows; typically in dark clay soil; elevation 10-135m. Blooming Period: March - May	Absent. No freshwater marshes or swamps, vernal pools, coastal prairie, or meadows. No wet depression in open rolling prairie.
Robust spineflower *(Chorizanthe robusta* var. *robusta)*	FE/--/1B.1	Sandy or gravelly openings in cismontane woodland, coastal dunes, and coastal scrub; prefers sandy terraces and bluffs or loose sand; elevation 3-300m. Blooming Period: April - July	Unlikely. No sandy openings in cismontane woodlands, coastal dunes or coastal scrub.
San Francisco campion *(Silene verecunda* ssp. *verecunda)*	--/--/1B.2	Coastal scrub, valley and foothill grassland, coastal bluff scrub, chaparral, and coastal prairie on mudstone/shale and serpentine substrates; elevation 30-645m. Blooming Period: March - August	Absent. No coastal scrub, grassland, coastal bluff scrub, chaparral, or coastal prairie on mudstone or serpentine.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on the Project Site
San Francisco collinsia *(Collinsia multicolor)*	--/--/1B.2	Serpentine sites in closed cone coniferous forest and coastal scrub. Prefers decomposed shale (mudstone) mixed with humus; elevation 30-250m. Blooming Period: March - May	Absent. No serpentine sites in closed-cone forest or coastal scrub, or decomposed shale mixed with humus.
San Francisco popcornflower *(Plagiobothrys diffusus)*	--/SE/1B.1	Valley and foothill grassland, and coastal prairie. Historically from grassy slopes with marine influence; elevation 60-485m. Blooming Period: March - June	Absent. No grassland or coastal prairie.
San Mateo woolly sunflower *(Eriophyllum latilobum)*	FE/SE/1B.1	Cismontane woodland, coastal scrub, lower montane coniferous forest. Often on roadcuts; found on and off of serpentine; elevation 30-610 m.	Unlikely. Only record for this species is historic within 9 quad searches (Occurrence No 3. CNDDB 2025)
Sand-loving wallflower *(Erysimum ammophilum)*	--/--/1B.2	Maritime chaparral, coastal dunes, coastal scrub, sandy openings; elevation 0 – 60m. Blooming Period: February - June	Absent. No sandy openings in maritime chaparral, coastal dunes, or coastal scrub.
Santa Cruz clover *(Trifolium buckwestiorum)*	--/--/1B.1	Broadleaved upland forest, cismontane woodland, and coastal prairie; prefers moist grassland and gravelly margins; elevation 105-610m. Blooming Period: April - October	Unlikely. Suitable habitat present, but due to previous disturbance through timber harvest, intact populations unlikely.
Santa Cruz cypress *(Hesperocyparis abramsiana* var. *abramsiana)*	FE/SE/1B.2	Closed-cone coniferous forest and lower montane coniferous forest in the Santa Cruz Mountains on sandstone and granitic derived soils; elevation 300-800m. Evergreen	Unlikely. Not observed during site visit. Site previously logged
Santa Cruz microseris *(Stebbinsoseris decipiens)*	--/--/1B	Broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland, open areas, sometimes serpentine; elevation 10-500m. Blooming Period: April - May	Unlikely. No suitable open areas in broadleaf upland forest, closed-cone coniferous forest, chaparral, coastal prairie, grassland habitat.
Santa Cruz Mountains beardtongue *(Penstemon rattanii* var. *kleei)*	--/--/1B.2	Chaparral and lower montane coniferous forest. Sandy shale slopes in transition zone between forest and chaparral; elevation 400-1100m. Blooming Period: May - June	Unlikely. No transition zones between chaparral and forest within project areas.
Santa Cruz Mountains pussypaws *(Calyptridium parryi* var. *hesseae)*	--/--/1B.1	Sandy or gravelly openings in chaparral and cismontane woodland; elevation 305-1530m. Blooming Period: May - August	Unlikely. No sandy or gravely openings in chaparral or cismontane woodland.
Santa Cruz tarplant *(Holocarpha macradenia)*	FT/SE/1B.1	Coastal prairie, coastal scrub, and valley and foothill grassland; often on clay or sandy soils; elevation 10-220m. Blooming Period: June - October	Unlikely. No coastal prairie, coastal scrub, or grassland habitats.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on the Project Site
Santa Cruz wallflower *(Erysimum teretifolium)*	FE/SE/1B.1	Lower montane coniferous forest and chaparral. Pine Parkland Area, on inland marine sands (Zayante coarse sand); elevation 120-610m. Blooming Period: March - July	Unlikely. No inland marine sands present. Outside of Pine Parkland Area.
Schreiber's manzanita *(Arctostaphylos glutinosa)*	--/--/1B	Closed-cone coniferous forest, chaparral. Mudstone or diatomaceous outcrops, often with Pinus attenuata; elevation 170-690m. Blooming Period: November - April	Absent. No closed-cone forest, or chaparral on mudstone or diatomaceous earth outcrops present.
Scotts Valley polygonum *(Polygonum hickmanii)*	FE/SE/1B.1	Valley and foothill grassland. Purisima sandstone or mudstone with a thin soil layer, vernally moist due to runoff; elevation 210-250m. Blooming Period: May - October	Unlikely. No grassland with sandstone or mudstone soils.
Scotts Valley spineflower *(Chorizanthe robusta* var. *hartwegii)*	FE/--/1B.1	Meadows, and valley and foothill grassland. In grasslands with mudstone and sandstone outcrops; elevation 230-245m. Blooming Period: April - July	Absent. No suitable meadows or grassland with mudstone and sandstone outcrops.
Scouler's catchfly (*Silene scouleri ssp. scouleri*)	--/--/2B.2	Coastal bluff scrub, coastal prairie, valley and foothill grassland; elevation 5-315 m. Blooming Period: June - August.	Absent. No coastal bluff scrub, coastal prairie, or grasslands.
Short-leaved evax *(Hesperevax sparsiflora* var. *brevifolia)*	--/--/1B.2	Coastal bluff scrub, coastal dunes, coastal prairie. Sandy bluffs and flats; elevation 0-640 m. Blooming Period: March-June.	Absent. No coastal bluff scrub, coastal prairie, or grasslands.
Tear drop moss *(Dacryophyllum falcifolium)*	--/--/1B.3	Carbonate substrates in North Coast coniferous forest; elevation 50-275m.	Absent. No carbonate substrates in north coast coniferous forests.
Toren's grimmia *(Grimmia torenii)*	--/--/1B.3	Moss. Cismontane woodland, lower montane coniferous forest, chaparral. Openings, rocky, boulder and rock walls, serpentine, volcanic soils; elevation 325-1160m.	Absent. No rocky openings or rock walls or serpentine volcanic soils in cismontane woodlands.
Vaginulate grimmia *(Grimmia vaginulata)*	--/--/1B.1	Moss. Chaparral, openings, rocky, boulder and rock walls, carbonate; elevation 685-1135m.	Unlikely. No chaparral habitats present.
Western leatherwood *(Dirca occidentalis)*	--/--/1B.2	Broadleaf upland forest, chaparral, closed cone coniferous forest, cismontane woodland, North Coast coniferous forest, riparian forest, and riparian woodland. Found on brushy slopes, in mesic sites, mostly in mixed evergreen and foothill woodland communities; elevation 30-550m. Blooming Period: January - April	Unlikely. Suitable brushy slopes in mixed evergreen communities. However, none observed during site visit. Understory disturbed during logging activities.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on the Project Site
White-flowered rein orchid *(Piperia candida)*	--/--/1B.2	Broadleaf upland forest, lower montane coniferous forest, and North Coast coniferous forest; sometimes serpentine; elevation 30-1310m. Blooming Period: May - September	Unlikely. Possible historical populations in coniferous forests, but know known only to survive in serpentine bunchgrass communities.
White-rayed pentachaeta *(Pentachaeta bellidiflora)*	FE/SE/1B.1	Valley and foothill grassland. Open dry, rocky slopes and grassy areas, often on soils derived from serpentine bedrock; elevation 35-620m. Blooming Period: March - May	Unlikely. No suitable grassland habitat with dry rocky slopes and grassy areas.
Woodland woollythreads *(Monolopia gracilens)*	--/--/1B.2	Serpentine, open sites in broadleaved upland forest, chaparral, cismontane woodland, North Coast coniferous forest, and valley and foothill grassland; elevation 100-1200m. Blooming Period: March - July	Low probability. Suitable habitat in undisturbed second growth understory along road shoulder, and undisturbed project areas.

SOURCE: CDFW 2025, CNPS 2025, USFWS 2025
NOTE: Status Codes:
Federal (USFWS)
FE: Listed as Endangered under the Federal Endangered Species Act.
FT: Listed as Threatened under the Federal Endangered Species Act.
FC: A Candidate for listing as Threatened or Endangered under the Federal Endangered Species Act.
FSC: Species of Special Concern.
FD: Delisted under the Federal Endangered Species Act.

State (CDFW)
SE: Listed as Endangered under the California Endangered Species Act.
ST: Listed as Threatened under the California Endangered Species Act.
SR: Listed as Rare under the California Endangered Species Act.
SC: A Candidate for listing as Threatened or Endangered under the California Endangered Species Act.
SSC: Species of Special Concern.
SFP: Fully Protected species under the California Fish and Game Code.
SD: Delisted under the California Endangered Species Act.

CNPS Rare Plant Ranks and Threat Code Extensions
1B: Plants that are considered Rare, Threatened, or Endangered in California and elsewhere.
2B: Plants that are considered Rare, Threatened, or Endangered in California, but more common elsewhere.
.1: Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat).
.2: Fairly endangered in California (20-80% occurrences threatened).
.3: Not very endangered in California (<20% of occurrences threatened or no current threats known).

Potential to Occur
Present: Observed during field surveys, known occurrence of species within the site
High: Known occurrence of species in the vicinity from the CNDDB or other records; presence of suitable habitat conditions
Moderate: Known occurrence of species in the vicinity from the CNDDB or other records; presence of marginal habitat conditions
Low: Species known to occur in the vicinity from the CNDDB or other records; presence of low quality habitat conditions
Unlikely: Species not known to occur in the vicinity from the CNDDB or other documentation; no suitable habitat is present
Not Present: Species not observed during surveys

Attachment 9

Cultural Resources Assessment Report Acceptance Letter (October 2025)

THE COUNTY OF SANTA CRUZ
1850

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County of Santa Cruz

DEPARTMENT OF COMMUNITY DEVELOPMENT AND INFRASTRUCTURE

INTER-OFFICE CORRESPONDENCE

DATE: 10/23/2025

TO: File

FROM: Kathleen McLaughlin, Resource Planner

SUBJECT: Cultural Resources Report Review Acceptance

For discretionary application 231473 (APN: 088-051-37) a *Cultural Resources Assessment Letter Report for the Camp Chesebrough Project, Santa Cruz County, California*, dated November 26, 2024, was prepared by Albion Environmental, Inc.

On behalf of Environmental Planning, the report was reviewed and accepted by me and Matthew Johnston (Principal Planner/Environmental Coordinator).

Kathleen McLaughlin, Resource Planner

DocuSigned by:

Signature: Kathleen McLaughlin Date: 10/23/2025

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Attachment 10

Geologic and Geotechnical Reports

THE COUNTY OF SANTA CRUZ
1850

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CORNERSTONE
EARTH GROUP

TYPE OF SERVICES	Geotechnical Investigation and Geologic Hazards Evaluation
PROJECT NAME	CSR Master Plan and Training Center
LOCATION	26005 Big Basin Way Los Gatos, California
CLIENT	Boy Scouts of America
PROJECT NUMBER	1360-2-3
DATE	March 19, 2025

GEOTECHNICAL

CORNERSTONE
EARTH GROUP

Type of Services	**Geotechnical Investigation and Geologic Hazards Evaluation**
Project Name	**CSR Master Plan and Training Center**
Location	**26005 Big Basin Way** **Los Gatos, California**
Client	**Boy Scouts of America**
Client Address	**1900 The Alameda, Suite 100** **San Jose, California 95126**
Project Number	**1360-2-3**
Date	**March 19, 2025**

Prepared by **Stephen C. Ohlsen, P.E., G.E.**
Senior Project Engineer
Geotechnical Project Manager

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CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

John R. Dye, P.E., G.E.
Senior Principal Engineer
Quality Assurance Reviewer

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APPENDIX D: SLOPE STABILITY OUTPUT

Type of Services | **Geotechnical Investigation and Geologic Hazard Evaluation**
Project Name | **CSR Master Plan and Training Center**
Location | **26005 Big Basin Way**
Los Gatos, California

EXECUTIVE SUMMARY

The project as it is currently envisioned includes the following components of the Chesebrough Scout Reservation (CSR) Master Plan as detailed in civil drawings prepared by Sandis, dated April 17, 2024. The master plan includes a new water tank, new recycling and trash facility, campsite improvements including several new cabins and canopies, and a new access road off of Power Pole Road leading to a new 3,200 square foot Training Center (TC) structure. Recommendations for the water tank have been provided under separate cover. A summary of our geologic and geotechnical evaluation and recommendations for the project is presented below.

- A Geologic Hazard Assessment (GHA) prepared by the County (1993) for the site included a map indicating a large landslide in the project vicinity from an earlier Cooper-Clark (1974) map. Based on our review of the project plans, exploratory test pits and geologic site reconnaissance, the proposed grading for the access road and Training Center will not contribute to the removal of lateral support on the downslope side, nor does it represent a significant loading of the site that could contribute to reactivation of this potential ancient landslide.
- Additionally, a subtle swale is visible on the county provided LiDAR basemap (Figure 4), but the path of the swale appears to wrap around the east side of the TC area and continues past the TC area to the south. On a local level, Trench T-1 was positioned to determine the risk of landsliding immediately above the Training Center. It was extended in three different directions to capture the lateral extent of surficial (and potential debris flow-type) deposits. Based on our logging of Trench T-1, the bedrock contact observed did not exhibit shear or failure surfaces possibly indicative of translational movement and the surficial unit did not exhibit characteristics of a debris flow.
- As such, in our opinion, the landslide potential at the immediate Training Center site is generally low.
- We also evaluated the potential for slope instability at the TC and along the new access road. The potential for slope instability to impact the Training Center is considered low while the potential impact to the new access road is moderate due to the surficial

colluvium encountered within our explorations. To mitigate the potential impact to the new access road, we recommend that either the colluvium in the cutslope above the proposed roadway be trimmed back to a maximum inclination of 2:1 (horizontal:vertical), or a debris catchment fence be constructed along the mid-slope bench.

- Our evaluation also addressed geologic and seismic hazards including potential for fault rupture, risk of erosion and estimations of ground shaking.
- The proposed Training Center and various camp improvements may be supported on shallow foundations.
- Moderately expansive surficial soils were encountered at the site. To reduce the potential for damage to the planned structures, slabs-on-grade should have sufficient reinforcement and be supported on a layer of non-expansive fill; footings should extend below the zone of seasonal moisture fluctuation.

Please refer to the following report sections for additional discussion and details regarding each of the above items.

SECTION 1: INTRODUCTION

This geotechnical report was prepared for the sole use of Boy Scouts of America for the Chesebrough Scout Reservation (CSR) Master Plan and Training Center project in Los Gatos, California. The location of the site is shown on the Vicinity Map, Figure 1. For our use, we were provided with the following documents:

- A geotechnical and geohazard report titled, “Geotechnical and Geohazard Investigation for Proposed Improvements at Camp Chesebrough Boy Scout Reservation, Santa Cruz County, California,” prepared by Lowney Associates, dated July 28, 1993.
- A geotechnical report titled, “Geotechnical Investigation for New Multi-Use Building Camp Chesebrough Boy Scout Reservation, Santa Cruz County, California,” prepared by Romig Engineers, Inc., dated April 2007.
- Civil drawings (4 sheets) titled, “Grading Plan and three Cross-sections, BSA Chesebrough Scout Reservation, 26005 Hwy 9, Los Gatos, CA,” prepared by Sandis, dated November 14, 2024.

Cornerstone Earth Group (CEG) had previously prepared a report titled “Engineering Geology Assessment Report, Site Improvements at Chesebrough Camp, 26005 Big Basin Way, CA-9, Los Gatos, California”, dated July 26, 2024. This current report addresses deficiencies identified in the July 26 letter, by the County of Santa Cruz Planning Division in their August 26, 2024 letter titled “Review of the Engineering Geology Assessment Report dated 26 July 2024 by CEG. CEG has also provided evaluation of geologic hazards and geotechnical recommendations for the proposed new water tank included in the CSR master plan in a report titled “Geotechnical and Engineering Geology Hazard Evaluation, New Water Tank Site Improvements at Chesebrough Camp, 26005 Big Basin Way, CA-9, Los Gatos, California,” dated December 20, 2024.

1.1 PROJECT DESCRIPTION

The project as it is currently envisioned includes the following components of a Master Plan as detailed in civil drawings prepared by Sandis, dated April 17, 2024. The master plan includes a new Water tank, new recycling and trash facility, campsite improvements including several new cabins and canopies, and a new access road off of Power Pole Road leading to a new 3,200 square foot Training Center (TC) structure, see Figure 5. Geologic and geotechnical recommendations regarding the new water tank were presented in our report dated December 20, 2024

We understand that the new access road off Power Pole Road will traverse a sidehill and cross a small swale before entering a parking area adjacent to the proposed TC structure. Grading for the TC structure will include cuts up to 4 feet and fills on the order of 1 to 2 feet. We understand that the Training Center building is a prefabricated single-story steel frame structure. The resulting spoils will be placed as fill in the adjacent new parking area. A leach field will occupy an area immediately to the north of the TC while a concrete pad for a trash enclosure will be located to the south. No other structures are planned in the immediate vicinity and to our knowledge the cut and fill quantities will balance with no area needed for disposal of spoil or the borrow of fill material.

1.2 SCOPE OF SERVICES

Our scope of services was presented in our proposal dated June 7, 2024 and consisted of field and laboratory programs to evaluate physical and engineering properties of the subsurface soils, engineering analysis to prepare recommendations for site work and grading, building foundations, flatwork, and pavements, and preparation of this report. Brief descriptions of our exploration and laboratory programs are presented below.

1.3 EXPLORATION PROGRAM

Field exploration consisted of 14 test pits excavated on June 20, September 4, and November 5, 2024 by track-mounted medium and mini excavators, one trench excavated on November 5 and 21, 2024 and two exploratory borings drilled with limited-access, hollow-stem auger and rotary-wash drilling equipment. The borings were drilled to depths ranging from 29½ to 30 feet. The borings were backfilled with cement grout in accordance with local requirements. The test pits extended to depths of 4 ½ to 11 feet while the trench extended to depths

The pits and trench were loosely backfilled and the loose fills will need to be re-worked during site grading unless the pits are outside the limits of sensitive improvements.

The approximate locations of our exploratory borings, test pits, and trench are shown on the Site Plans, Figure 5B through 5D. Details regarding our field program are included in Appendix A.

1.4 PREVIOUS FIELD EXPLORATION BY OTHERS

Previous field exploration was performed by Fox Onsite Solutions on October 31, 2023, which consisted of one test pit at the location of the future leach field to a depth of 13 feet. The approximate location of the previous exploration is also shown on the Site Plan, Figure 5D. Copies of the previous exploration logs are included in Appendix C.

1.5 LABORATORY TESTING PROGRAM

In addition to visual classification of samples, the laboratory program focused on obtaining data for foundation design and seismic ground deformation estimates. Testing included moisture contents, dry densities, torsional shear tests, unconfined compressive strength tests and triaxial compression tests. Details regarding our laboratory program are included in Appendix B.

1.6 ENVIRONMENTAL SERVICES

Environmental services were not requested for this project. If environmental concerns are determined to be present during future evaluations, the project environmental consultant should review our geotechnical recommendations for compatibility with the environmental concerns.

SECTION 2: REGIONAL SETTING

The general geologic framework of the central and northern Santa Cruz Mountains region has been characterized by both the U.S. Geological Survey (USGS) and the California Geological Survey (CGS), as noted in the References section herein. In the Santa Cruz Mountains, the San Andreas fault has juxtaposed two major tectonic blocks with contrasting basement complexes and with differing stratigraphy. The block to the northeast of the San Andreas fault is characterized by heterogeneous rocks of the Franciscan assemblage. This assemblage of late Jurassic to late Cretaceous age is in faulted contact with upper Cretaceous clastic sedimentary rocks of the Great Valley sequence, which in turn are overlain by Cenozoic clastic sedimentary rocks (Chin, et al, 1993). Southwest of the San Andreas fault and northeast of the San Gregorio fault, crystalline rocks of the Salinian block form the basement complex. Cretaceous strata are absent and Cenozoic clastic sedimentary and volcanic rocks rest upon the crystalline basement. Southwest of the San Gregorio fault, typical crystalline rocks of the Salinian block are not exposed and upper Cretaceous clastic sedimentary strata crops out along the coast (Brabb, 1970, 1989, 1997). Resting unconformably upon these strata are Cenozoic clastic sedimentary and volcanic rocks that differ from those to the northeast (Clark, 1981).

Brabb et al (1997) on his geologic map of Santa Cruz County shows the project site situated within a northwest trending sequence of lower to mid-Miocene age rocks folded into synclines and anticlines. Rocks within this sequence include the Lambert Shale, a marine clastic shale which is semi-siliceous and locally fossiliferous and is located along the northern portion of the Chesebrough property. Another portion of the Chesebrough property lies within San Mateo County, with similar geology mapped by Brabb et al (1998). The Monterey Formation, consisting of marine shale, organic mudstone and siltstone, is similar lithologically and stratigraphically to the Lambert Shale as it is semi-siliceous and middle Miocene in age. The

Monterey Formation rocks are exposed and outcrop closer to Highway 9 and the central portion of the project site. We have adopted the regional geologic mapping by Brabb et al (1997) as shown on Figure 2, Vicinity Geologic Map.

Several faults associated with the San Andreas Fault System are within the general vicinity of the project site. These include faults considered capable of generating significant earthquakes and are generally associated with the well-defined areas of crustal movement, which trend northwesterly. Active or potentially active faults which may significantly affect the site include those listed in the table below.

Table 1: Faults in the Los Gatos Area

Fault Name	Distance (miles)	Distance (km)	Direction from Site	Slip Rate* (mm/yr)	Slip Sense	M_wMax.*
Butano	0.2	0.3	SW	Unspecified	R Lat	6.4
San Andreas (Santa Cruz Mtn Segment)	2.7	4.4	NE	24	R Lat	7.9
Monte Vista - Shannon	6.6	10.6	NE	0.2 - 1	Rev	7.0
San Gregorio	11.0	17.6	W	3	R Lat	7.0
Sargent - Berrocal	13.3	21.5	SE	3	Rev	6.8
Zayante-Vergeles	18.4	29.5	SE	0.2 - 1	R Lat	6.8
Monterey Bay - Tularcitos	22.6	38.4	S	0.5	R Lat	7.3

A major seismic event on these and other Bay Area faults may cause significant ground shaking at the project sites. Regional faults and their relative activity level in the greater San Francisco Bay region and Santa Cruz area are shown on Figure 3, Regional Fault Activity Map.

SECTION 3: GEOLOGIC SITE CHARACTERIZATION

3.1 DESKTOP STUDY

In addition to a literature search of published and unpublished reports and maps, we performed a desktop review of available historical aerial imagery provided online by UC Santa Barbara (1941 to 1981), Google Earth (1952 to 2022), as well as historic USGS topographic maps (USGS, 1902, 1955, 1961, 1991 and 2021). This imagery is summarized in Table 2 below. Because of the heavy tree canopy, details of site development from aerial photographs are not available. Relatively recent (2020) LiDAR imagery found on the Santa Cruz County GIS portal provided reasonable shaded relief imagery, as shown on Figure 4, LiDAR Imagery Map. A summary of pertinent surface changes at and near the site is as follows:

- 1902: 1:250,000 scale topographic map indicates former route of Highway 9 (Big Basin Way) was further to the south, and no structures are shown on the project site.

- 1955: The 1:24,000 scale topographic map of Big Basin and Mindego Hill quadrangles shows the current alignment of Highway 9 but no other developments.
- By 1961 a road and ridgeline clearing extends from Highway 9 westward into the property, and later the 1991 indicates part of it is established as Castle Rock State Park
- In 1963 aerial photos show the current southern entrance to the camp

Table 2: Table of Historic Aerial Imagery

Flight No.	Frame	Date	Scale	Composition
Google Earth	N/A	5-12-2023	variable	Color
Google Earth	N/A	6-10-2022	variable	Color
Google Earth	N/A	4-27-2006	variable	Color
Google Earth	N/A	9-30-2002	variable	Color (partial)
GSV-EZR	4-79	4-8-1981	1:24,000	B/W
CAS-65-130	207, 208	5-12-1965	1:12,000	B/W
CAS-SCR	1-74, 1-75	6-27-1963	1:12,000	B/W
CJA-9R	42	8-13-1956	1:20,000	B/W
Google Earth	N/A	5-2-1953	variable	B/W (partial)
CDF5	2-45	5-5-1948	1:24,000	B/W
C-6660	434, 435	4-11-1941	1:24,000	B/W

3.2 FIELD RECONNAISSANCE MAPPING AND SUBSURFACE INVESTIGATION

From the surface mapping and test pits we have prepared site geologic maps for the specific study areas. We performed a geologic site reconnaissance on June 20, 2024 to map the site geology and to observe our current test pit exploration program. The purpose of the field program was to identify site features representative of faulting or landsliding. Project civil drawings that provided limited topography and building layout (existing and future) were prepared by Sandis in April of 2024 at scale 1 inch = 40ft. We have supplemented those drawings with topography derived from Lidar on the Santa Cruz County website. As shown on Figures 5A to 5D Enlarged Site and Geo Map – Watertank Area, Trash Enclosure Area, Cabin Area, and Training Center Area, respectively, we observed the excavation of and logged eleven (11) test pits (TPs); TP-1 to TP-10b (Appendix A). The test pits were cut with either a CAT backhoe or a Takeuchi mini-excavator, and were approximately 4 to 12 feet long, 3 to 6 feet wide, and 7 to 7 feet deep. As noted above, discussion and recommendations regarding the proposed new water tank have been published under a separate cover.

Following the initial reconnaissance mapping, and to address comments raised by Santa Cruz County (County) on September 4, 2024, four additional TPs (TP-11 to TP-14) were made in the TC area (Figure 5D Enlarged Site Map – Training Center). The test pits were excavated with a medium sized CAT excavator, and were 14 to 23 feet long, approximately 3 feet wide, and 6 to 11 feet deep.

We conducted additional reconnaissance mapping on November 1 and 5, 2024 around the Training Center area to evaluate possible features observed in the area from the LiDAR imagery, to refine the earlier mapping and to determine additional exploration points, and to site two new test pits and an exploratory trench. As shown on Figure 5D (Enlarged Site Map – Training Center Area), we observed and logged two test pits, TP- 15 and TP-16, and an "L-shaped" trench T-1 (logs provided in Appendix A). The excavations were cut with a Takeuchi mini-excavator. The test pits were approximately 8 to 10 feet in length, 3 feet wide, and 6 feet deep. Trench T-1 had a total length of 76 feet, and was cut in two sections in the shape of an "L". The first section was approximately 33 feet long and cut from the southwest to the northeast, before making an approximately 90 deg turn to the west where the second section continued another 41 feet to the northwest. The first section of the trench was four to six feet in depth and three to five feet wide. The second section of the trench following the turn was approximately ten feet in depth, and approximately eight feet wide and benched.

On November 21, 2024, Trench T-1 was extended to better define the lateral extent to the east of the surficial soils and underlying bedrock. As shown on Figure 5D Enlarged Site Plan - Training Center, the T-1 extension started at the elbow in the "L-shaped" Trench T-1, and extended to the southeast changing its configuration to a "T-shaped" trench. The trench extension was cut with a Takuchi mini-excavator, and was approximately 26 feet long, 3 to 4 feet wide, and 5 feet deep.

3.3 BOREHOLE DRILLING AND SAMPLING

To address County comments about the reliability of published shear strength data by the CGS, we performed two exploratory borings with CME-55 track-mounted, mud-rotary drilling equipment on January 21 and 22, 2025. The purpose of the borings was to collect in-situ samples for laboratory analysis of soil and rock strength. The samples were collected with split spoon, Modified California sampler, Pitcher Barrel and NX rock core sampling methods. Boring EB-1 was located southwest of the Training Center and on the inside shoulder of Power Pole Road. Boring EB-2 was located along the alignment of the new Access Road and west of the Training Center and was advanced to 29½ feet deep. An alternate shallow boring was drilled adjacent to EB-2 to allow for the driller to set up for a dedicated Pitcher sampling point. All borings were backfilled with a cement-bentonite mixture. The logs are provided in Appendix A.

The subsurface exploration program for the Training Center began in 2023 and continued into 2025. Table 3 provides a summary of the exploration details and purpose of each exploration point, with a discussion of the findings to follow.

Table 3: Exploration Summary for Training Center

Exploration Pt (see Figure 5B-5D)	Date	Location	Depth (feet)	Purpose
T-1 (one of 4 trenches excavated)	10/31/23	Leach field, Training Ctr	13	Fox Onsite Solutions – OWTS Feasibility
TP-3	6/20/24	Caretaker's House	4.5	General subsurface exploration
TP-4	6/20/24	Pump House	5.5	General subsurface exploration
TP-5	6/20/24	Teaching Pavilion	6	General subsurface exploration
TP-6	6/20/24	Multi-purpose Building	6	General subsurface exploration
TP-7	6/20/24	Cabins for short term camping	5	General subsurface exploration
TP-8	6/20/24	Cabins for short term camping	7	General subsurface exploration
TP-9	6/20/24	Covered Pavilions	7	General subsurface exploration
TP- 10a	6/20/24	Access Rd cut	4	Bedrock depth & structure
TP-10b	6/20/24	Access Rd cut	6.5	Bedrock depth & structure
TP-11	9/4/24	Training Ctr footprint	8.5	General subsurface exploration
TP-12	9/4/24	Training Ctr footprint	11	General subsurface exploration
TP-13	9/4/24	Access Rd swale	6.5	Potential fill placement
TP-14	9/4/24	Training Ctr footprint	6.5	General subsurface exploration
TP-15	11/5/24	Swale upslope of Power Pole Rd	6	Colluvial source of potential landslide
TP-16	11/5/24	Swale upslope of Power Pole Rd	5.5	Colluvial source of potential landslide
Trench T-1	11/5/24	Divide just south of Training Ctr	Variable (up to 8ft)	Constrain landslide deposit limit
Trench T-1 extension	11/21/24	Divide just south of Training Ctr	Variable (up to 8ft)	Constrain landslide deposit limit
Boring EB-1	1/22/25	General Training Ctr/Access Road area – Along Power Pole Road	30	Soil profile and lab samples
Boring EB-2	1/21/24	General Training Ctr/Access Road area – Between TP-10a and TP-10b	29½	Soil profile and lab samples

3.4 FINDINGS

3.4.1 New Access Road Alignment

Test Pits TP-10a and 10b were excavated along the alignment of the access road to the site and encountered sandy clay to depths of 4 and 6½ feet respectively, with some hard cemented siltstone. This unit had the appearance of colluvium but may represent a lobe of old landslide debris. No groundwater or adverse bedding was observed.

Test Pit TP-13, located in a swale where the proposed access road is to meet the Training Center parking area is proposed for a fill embankment. TP-13 extended to a depth of 6½ feet exposing a medium brown silty clay with sand that was stiff and contained roots. Beneath this soil at a depth of 2½ feet was a mottled brown to red to yellow sandy clay with small gravel that had the appearance of colluvium and texture of potential slide debris. This intermediate unit was in a transitional contact with an underlying light grey to yellow siltstone that contained an inclusion of a very hard and strong boulder that was massive.

Boring EB-2 encountered five feet of surficial soils consisting of very stiff sandy lean clay (CL). Beneath the surficial soils, we encountered approximately 3 feet of medium dense poorly-graded clayey gravel (GC); both units are interpreted to be colluvium (symbol Qcol). This basal unit was similar to some of the road cut exposures mapped previously and is shown on Figure 5D. Beneath the colluvium, bedrock consisting of olive-brown shale was encountered at 8 feet. This Lambert Shale (Tla) was little to moderately weathered, friable and of low hardness. Rock core retrieved from depths of 24 to 29 feet did not show evidence of shearing or slickensides indicative of landslide movement.

The rock is slightly to moderately weathered, friable to moderately strong, and generally massive, but locally it is closely-fractured. It was interpreted to represent weathered bedrock. Shearing within the rock mass or along boundaries with the surficial units was not observed. The rock is consistent with the County's regional geologic mapping of the Lambert Shale (Symbol Tla).

Test pit and boring logs and cross-section F-F' show diagrammatically the relationship the earth materials to the proposed Access Road.

3.4.2 Existing Power Pole Road

At this time, we understand that no improvements are planned or currently proposed to the existing Power Pole Road from the main camp area to the new proposed access road to the Training Center and that it serves as a functional existing access road.

3.4.3 Training Center Site

TP-11 and TP-12 were located within the footprint of the new Training Center structure and extended to depths of about 8½ and 10 feet, respectively. The test pits were benched;

however, TP-12 was not entered. TP-11 exposed 1 to 3½ feet of grey to tan sandy clay with gravel with some angular cobbles. Beneath this unit was a yellow brown siltstone with mudstone that was massive and strong with oxidation along some fracture surfaces. TP-12 exposed a yellow brown sandy clayey gravel that was dense and had a basal cobble zone to a depth of about 3½ feet. Below this depth was a mottled light brown to orange and tan shale with interbeds of mudstone. It was weak to friable and was moist to wet.

TP-14 was also excavated within the Training Center footprint to a depth of 6½ feet. Beneath a thin veneer of fill was a dark brown to grey silty sandy clay with heavy organics and some cobbles was observed. Below this unit was a variably thick (1 to 3½ feet) dark brown to dark grey silty clay which contained blocky, subangular siltstone clasts and cobbles in a sandy clay matrix which we interpret to be colluvium. The colluvium rode above a rough surface of both yellow brown interbedded sandstone and siltstone as well as white to tan shale that was deeply weathered, weak and of low hardness. The logs of these test pits are included in Appendix A.

Test Pit logs and Cross-sections B-B’ and I-I’ show diagrammatically the relationship the earth materials to the proposed Training Center pad and area.

3.4.4 Slope above Training Center Site

Based on discussions with the County geologist on September 23, 2024, we initiated an investigation of a potential landslide deposit extending from a swale upslope of Power Pole Road downslope towards the Training Center site. Two test pits were excavated into the upslope swale to determine the depth to bedrock and if existing colluvium could mobilize downslope as a debris flow or translation slide mass.

Test pits TP-15 and TP-16 extended to depths of 6½ feet and 5½ feet, respectively, and encountered olive green to brown gravelly clay that was dense, moist and contained angular clay clasts and gravel, which we interpret to be colluvium. The colluvium was in transitional contact with an olive green to brown siltstone at approximately 2 to 4 feet below ground surface, the siltstone was moderately hard, moderately strong and moderately weathered and had apparent dips of between 47° to 50° to the northeast.

An “L” shaped test trench (T-1) was excavated at the base of the steep haul road/trail leading from Power Pole Road to the Training Center. The impetus for the trench location and alignment was to capture the vertical and lateral dimensions of any pre-existing landslide deposit that could have been deposited in the past from either the aforementioned swale or areas to the west. The approach was to have the hinge point of the trench at the top of the gentle topographic divide south of the Training Center so as to minimize the depth of the trench.

The trench was excavated and benched to depths of approximately 8 feet (southern limb) to near 10 feet (western limb) and exposed a dark brown silty clay to clayey silt that was stiff to very stiff, moist and with moderate plasticity. The unit was laterally extensive and remarkably consistent with locally less than 5% shale fragments in the finer grained soil matrix.

Near the southern and western ends of the trench tan to yellow brown shale/siltstone was observed near the base of the trench. The contact surface at the southern end of the trench sloped at about 30° and contained some subtle bedding and the bedrock was deeply to moderately weathered, moderately hard and intensely fractured. The exposure at the western end of the trench was similar but because of the depth it could not be entered safely. Based on these two basal exposures, our geologist decided that an eastern extension and deepening of the trench was prudent to further constrain the limits of the upper unit and see if any failure surfaces were evident.

Attempts to deepen the southern (upslope) portion of the trench were unsuccessful due to unsafe conditions from heavy rainfall, a slippery clayey surface and slope steepness. We were able to obtain bedrock attitudes in the shale from the base at the southern end showing dip angles between 18° and 28° to the north-northwest (NNW), which is at or steeper than the slope surface. A 26-foot extension of the trench in the eastern direction to a depth of 5 feet was excavated and it exposed a basal bedrock surface at the eastern end at the center of the now “T”-shaped trench. This large soil unit did not exhibit evidence of recent movement indicative of a debris flow (entrained voids or organic debris) or a definitive failure surface indicative of a translational or bedrock-controlled landslide (shear plane or laterally extensive bedding plane). The logs of these test pits are included in Appendix A.

Boring EB-1 encountered 4 feet of surficial soil consisting of very stiff sandy lean clay (CL). Beneath the surficial soils, we encountered approximately 6 feet of very stiff to hard lean clay (CL) which are interpreted to be colluvium (symbol Qcol). This unit was light to reddish brown and contain fine to med grained sand and subangular gravels. Beneath the colluvium, at a depth of 10 feet bedrock consisting of olive-brown shale. This Lambert Shale (Tla) was little to moderately weathered, friable and of low hardness. The shale exhibited faceted surfaces and rock fabric at 23½ feet.

The test pits and boring logs and Cross-section J-J’ show diagrammatically the relationship of the earth materials to the slope above the Training Center area. The strength values of colluvium and bedrock samples retrieved during drilling and a further discussion of slope stability follows in the Geologic Hazards section. Laboratory tests are included in Appendix B.

3.4.5 Campsites

The central campsite area contains two existing large structures (Pole barn and a 2008-era renovated Multiuse building) and some smaller cabin sites situated on a multi-level graded pad that appears to have been was constructed recently. Future improvements in the area include pavilions, latrine and additional campsite amenities. The central campsite area occupies a bowl-shaped depression that may be related to an ancient landslide as there is no alluvial explanation as to its geomorphology. The area slopes gently to the north and northeast with colluvium deposits overlying siltstone along the flanks near Test Pits TP-7 and TP-8 and transitioning into colluvium that may be mixed with some fill as evidenced by ash deposits in and around TP-6 and TP-9, as shown by the dual af/Qcol designation on Figure 5C. A new restroom (latrine) has recently been constructed at the south end of this area and had stiff native soils exposed in footing and trench excavations. Based on geologic observations of the four test pits excavated, some potential fill material may overly colluvium. Above the area and west of the access road, road cuts expose colluvium that contain variable amounts of rock fragments in a sandy clay matrix. Subtle concavities in the slope above TP-8 suggest an old landslide feature but evidence does not indicate recent movement, certainly not in the near 60 years that the road and campsites have been in existence.

3.4.6 Trash Collection Facility

This area occupies a high point at the intersection of several unpaved roads and has three subareas of future development, as shown on Figure 5B. Based on conversations with the BSA site manager, grading was conducted along the top and flanks of the area with engineered fill placed. This engineered fill was placed, compacted, and tested under observation of Cornerstone personnel during the construction of the expansion of the existing corporation yard, taking place between November 2022 and April 2023. The ridgeline area will eventually include a Caretakers house, a storage and maintenance building and surrounding parking, all presumably on shallow foundations bearing on fill or native soil. The trash collection site is adjacent to an area of dumped (undocumented fill) and drops off to the east and west. Test Pit TP-3 encountered a uniform fill section overlying silty and sandy clay soils that were hard to very stiff. Subareas to the south will include teaching pavilions, a pumphouse building and more parking. Test Pit TP-4 appeared to be excavated in an area that is relatively undisturbed as evidenced by intact A- and B-horizon soils which were of a hard consistency. The last subarea to the southwest had Test Pit TP-5 which exposed a dense, clayey gravel, consisting of mostly subangular siltstone cobbles in a clast-supported structure that exhibited bedrock qualities however the test pit was unstable, possibly either due to the low fines content or the potential for either fill or landslide debris. A steep, two level slope behind the existing metal shop exposed the same material in a 2:1 (H:V) inclination that did not exhibit raveling or instability. This last area contains future athletic facility amenities.

3.5 GROUNDWATER

Groundwater was not encountered in any of our borings during drilling; however, the borings were not left open but were immediately backfilled when the boring was completed. As predominantly clays and shallow bedrock was encountered, the borings were not left open long enough for water to seep into the boring holes. Several of our test pits, TP-11 through TP-14, were left open for several weeks, however no water was observed within the excavations.

As with all hillside or sloping environments, there is a potential for temporary perched water conditions, especially in winter months. It is not uncommon for water to be perched at the top of bedrock or geologic formations, which underlie surficial soils. These occurrences are considered to be localized seepage emerging from the bedrock and overlying soils rather than a laterally continuous groundwater table. Fluctuations in groundwater levels occur due to many factors including seasonal fluctuation, underground drainage patterns, regional fluctuations, and other factors.

SECTION 4: GEOLOGIC HAZARDS AND CONSTRAINTS ANALYSIS

The most significant geologic hazard in the general vicinity that could most affect the project site are landslides. Lesser hazards include surface fault rupture, erosion and secondary effects from earthquake ground shaking. Below is a discussion of each.

4.1 FAULT SURFACE RUPTURE

Surface Fault Rupture is common within the greater San Francisco Bay Area, in particular along the San Andreas Fault in recent times. Following passage of the Alquist-Priolo (AP) Act in 1972, faults considered active were designated as being within a Special Study Zones (SSZ) that required a thorough investigation by geologists to address fault rupture hazard. The California Geologic Survey has not included the project site in their Fault Rupture Hazard Zone, nor in their seismic hazards evaluation of landslides and liquefaction. The nearby Butano Fault is not considered active and the closest fault considered capable of surface rupture is the San Andreas Fault Zone, approximately 2¾ miles to the east.

Our interpretation of fault rupture potential initially included an aerial photo review and Lidar evaluation of topographic lineaments such as some aligned ridges, linear troughs and deflected drainages. Our site reconnaissance looked at breaks in slope, scarps, and juxtaposed bedrock lithologies (faulted) at contacts and or zones of gouge. As presented in the report by Lowney (1993), the site is shown on the map of ground failures following the Loma Prieta Earthquake, but no ground failures were reported in the site vicinity. While we cannot preclude the possibility of fault rupture near the site it is our opinion that fault rupture hazard at the site is generally low.

4.2 ESTIMATED GROUND SHAKING

Earthquake Ground Shaking can be caused by moderate to severe (design-level) earthquakes, which is the case for most sites within the greater Bay Area. Further, the duration and intensity of the shaking are a function of the distance to the causative fault, the ground conditions beneath the structure and the type of construction. The most recent large earthquake in the Santa Cruz Mountains was the October 17, 1989 6.9 Mw Loma Prieta Earthquake which had an epicenter 20 miles to the southeast of the project site. While later analysis of ground motion records determined it occurred on unnamed oblique fault segments of the San Andreas Fault Zone, there was no appreciable surface fault rupture near the epicenter. What did occur was ground deformation associated with pre-existing landslides or planes of weakness. Post-earthquake research by Noland and Weber (USGS, 1998) focused mostly in the epicentral area and along Summit Road in the Santa Cruz Mountains. They did not observe ridgetop cracking outside of the greater epicentral region which tend to be focused in more ridgetop settings. Work by Ponti and Wells (1991) looked at off fault ground disturbance and noted extensional fissures formed a left-stepping, crudely en echelon pattern along ridges of the hanging-wall block southwest of the San Andreas fault. Other types of ground disturbance of significance are liquefaction, and lateral spreading which all tend to occur in areas of more granular soils (cohesionless), which in general are not present on the project site. A peak ground acceleration (PGA) can be estimated for analysis using a value equal to F_{PGA} x PGA, as allowed in the 2022 edition of the California Building Code and ASCE 7-16. For our analysis, we used a site-specific MCE_G peak ground acceleration, PGA_M, of 1.14g.

4.3 EROSION

Erosion can result as a by-product of poor site grading practices and drainage design and is affected mostly by rainfall frequency and intensity. Certain site characteristics such as bare ground, steep slopes, cohesionless soils and concentrated surface and point source discharges intuitively would result in severe erosion. Maintaining good tree canopy cover and mulch, constructing water bars, properly designed and placed drainage culverts are all best practices that minimize erosion. Our review of the site conditions and the requirements of the timber harvest plans all indicate that erosion is not an ongoing problem at the project site, however, as with all hillside sites, it is a concern that should be addressed during site grading as the Santa Cruz mountains are generally steep, are subject to high rainfall and the study area has been subjected to timber harvesting. Therefore, we conclude that risk due to erosion is low; however, a temporal application of risk is relevant for storm intensity which can accelerate runoff and erosion that can lead to landslides and localized flooding.

4.4 LANDSLIDES

Landslides are common in the Santa Cruz Mountains. A thorough evaluation of landslide hazard for this site included three steps - review of published geologic and seismic hazard maps, site reconnaissance and analysis of lidar imagery as previously discussed and subsurface exploration consisting of test pits, trenching and borings.

Regional mapping by the USGS of Santa Cruz County (County) by Brabb et al (1997) and San Mateo County (Brabb et al (1998) does not include mapping of landslides in the general vicinity. A review of the Santa Cruz County GIS website (2021) showed geologic mapping via photo interpretation by Cooper-Clark Consultants (1975) of historic landslides and debris flows that indicates relatively little active landsliding in the immediate area. A GHA prepared by the County (1993) for the site included a map indicating a large landslide in the project vicinity from an earlier Cooper-Clark (1974) map. The Santa Cruz County website includes themed maps of landslide certainty as shown on Figure 7 – County Landslide Hazards Map. The figure shows the general area of the Training Center and access road as being along the western margin of the Questionable Landslide Deposit (map symbol Q?). It is unclear exactly what this designation signifies other than a relative level of uncertainty.

Several large wildfires have occurred in the region over the years which have contributed to active and potential debris flows. Chief among these was the 2020 CZU Lightning Complex, to the west which encompassed a large portion of central to coastal Santa Cruz and southern San Mateo Counties. Within its burn perimeter, are areas described as high debris flow potential. Spatial Informatics Group (2020) have prepared hazard maps showing the areas that have potential debris flows, which do not include the project site. While there is some evidence of burned trees and stumps in the Training Area, no debris flow hazards from the recent fire events extend towards the project site, as the fire perimeter extended only to west side of the ridgeline upslope of the project site.

Recent (2020) Lidar Imagery provided by the County of Santa Cruz, presented in Figure 4 (LiDAR Imagery Map) shows ground conditions without interference from tree cover. It reflects the two "?" landside features from the County website. Smaller features observed during our reconnaissance mapping (such as grading activities) are not obvious on the Lidar imagery. A key measure of risk due to landslides is to evaluate historic ground disturbance from grading and logging. Even though the site has been logged with skid roads, access roads and minor fills placed, there was little observed active landsliding observed on maps, imagery or in the field. Evidence of the bowl-shaped head of an ancient landslide was observed near the Water tank area as discussed in a prior report just downslope of Highway 9; however, there was no direct evidence of movement (lateral or vertical) at the proposed location of the new Training Center and runoff from Power Pole Road appears to be directed to the north. Reactivation of pre-existing landslides can occur from a large earthquake event.

As shown on Figure 4, there is a Questionable Landslide Deposit (QLD and Symbol ?) to the south and east of the TC site; the deposit is roughly ellipsoid with its long-axis trending from south-southeast to north-northwest. The mass of soil is approximately 1,250 feet long and approximately 700 feet wide. A subtle swale is visible on the county provided LiDAR basemap (Figure 4), but the path of swale appears wrap around the east side of the TC area and continues past the TC area to the south.

On a local level, Trench T-1 was positioned to determine the risk of landsliding immediately above the Training Center. It was extended in three different directions to capture the lateral extent of surficial (and potential debris flow-type) deposits. It was extended to depths to determine the basal conditions of any deposit. From the previous discussion, a basal bedrock contact was observed and while sloping at approximately 30°, it did not exhibit shear or failure surfaces possibly indicated of translational movement. The surficial unit did not exhibit characteristics of a debris flow (entrained air voids, woody debris or chaotically oriented rock clasts). It may represent an older mud flow or accumulation of colluvium.

Our interpretation of the QLD is that it is located to the southeast of the topographic platform that the Training Center will occupy, as shown on Figure 5D. The surficial unit observed in the trench is not related to the QLD and does not represent a landslide risk to the Training Center. Geologic Cross-section J-J' depicts our interpretation of the slope above and through the Training Center Site. Relatively shallow colluvial soil units occupy the slope; however, evidence of shear failure surfaces in our borings, test pits and trenches do not support the presence of deep seated translational-type landslides.

The proposed grading for the access road and Training Center will not contribute to the removal of lateral support on the downslope side, nor does it represent a significant loading of the site that could contribute to reactivation of this potential ancient landslide. Therefore, in our opinion, the landslide potential at the immediate Training Center site is generally low.

Even though the evidence for landsliding within the Training Center area is sparse, we have conducted slope stability analysis using site topography and laboratory strength tests to determine the risk of slope failure of cross sections B-B' and I-I' through the Training Center and

F-F’ through the access road alignment, see Figure 6A through 6C. The results are presented later in this section.

4.5 SLOPE STABILITY

4.5.1 General

We noted no current signs of slope instability on the slopes adjacent to the proposed training center site and there was no evidence of active landslide source material necessary for debris flows. However, due to the adjacent sloping conditions, we performed a stability analysis to evaluate the proposed new access road coming off the existing Power Pole Road and training center sites. The results of our slope stability analyses are presented in the following sections.

4.5.2 Stability Method of Analysis

To evaluate the stability of the proposed development, we performed static and seismic slope stability analyses. As discussed above, the proposed access road and training center locations are generally underlain by undocumented fills, colluvial soils, and relatively shallow sandstone and siltstone bedrock of the Monterey Formation.

The stability of a slope is influenced by many factors including but not limited to the geologic structure and composition, inclination, height of slope, groundwater, surcharges, and climatic factors such as rainfall and irrigation. In geotechnical engineering, “stability” is expressed as a ratio of resisting moments and forces divided by driving moments and forces termed the factor of safety (FS). Factors of safety can be calculated for static and seismic conditions. In performing the slope stability analyses, we followed the guidelines set forth by California Geologic Survey in Special Publication 117A (2008) and the Santa Cruz County Guidelines for Geotechnical Investigation Reports.

Computer assisted slope stability analysis was performed using the computer program SLIDE2 Version 9.037, which uses circular and block modes of failure. The program consisted of inputting slope geometry, the different soil layers or geologic layers, unit weights, groundwater, and strength parameters. For our slope angles, soil and bedrock layers, soil and bedrock properties, assumptions were interpreted based on our review of our boring information, laboratory testing, site reconnaissance, site topography, and our experiences.

SLIDE2 uses a “pseudo-static” method of analysis, which models the effects of transient or pulsating earthquake loading on a potential slide mass by using an “equivalent” static horizontal acceleration acting on the mass of the potential slide. The ground motion parameter used in a pseudo-static analysis is referred to as the seismic coefficient “k”. CGS (2008) has published recommendations for the selection of the “k” value in a publication titled, “Guidelines for Evaluation and Mitigation of Seismic Hazards in California, Special Publication 117A.” To provide consistent reviews of stability analyses submitted to the County, the County of Santa Cruz has put forth guidelines indicated that the “k” value may be determined by utilizing the *design-level ground motion* ($PGA_M/1.5$) in conjunction with Figure 1 of the CGS publication SP117A, 2008. The County indicates that ***a displacement of 5 cm shall be used where potential*** *failure planes intersect building envelopes, otherwise a maximum displacement of 15 cm may be assumed*. For our analysis, we first evaluated the static condition and determined that no potential failure planes, i.e. planes with safety factor of less than 1.5, were intersecting the training center footprint, therefore, we utilized 15 cm when developing the "k" value for the site. While we believe that a "k" value derived from 15 cm is most appropriate for the project site, we did also evaluate the "k" value for a maximum displacement of 5 cm.

The site is located adjacent to the San Andreas Fault and strong ground shaking can be expected during a seismic event near the site. For this site, we determined a "k" value of about 0.31 for our analysis for 15 cm maximum displacement and checked the Training Center sections with a "k" value of about 0.41 for the 5 cm maximum displacement. This was obtained from limiting displacements to a 15 cm threshold and a peak horizontal ground acceleration value 0.749g or $PGA_M/1.5$ (1.124g/1.5).

4.5.3 Soil and Bedrock Properties

While fills were not encountered beneath the future Training Center pad, based on our review of the proposed grading plan and finished floor elevations, we understand that the pad will transition from cut to thin engineered fills. As such, we recommend that areas of cut be scarified a minimum of 12 inches and reworked as engineered fill to support the entire pad on a minimum of 12 inches of engineered fill, as discussed further in the "Earthwork" section below. Beyond the extents of Training Center pad grading, colluvial clay soils will be present above the Monterey Formation bedrock. For our stability analysis, we utilized three different earth materials: future engineered fills, colluvial soils, and Monterey Formation siltstone/sandstone bedrock. Based on evaluation of our exploratory borings and test pits explorations we further separated the bedrock into an upper weathered/weaker zone, generally categorized as the upper 10 feet of bedrock, and a deeper less weathered zone. The soil and bedrock properties used in our slope stability analysis are shown in Table 4 below. A discussion of our rationale for selection of the soil properties is presented in the following paragraphs.

The strength parameters of the bedrock material were based on review of laboratory testing and our engineering judgement. To evaluate the bedrock material, we performed two exploratory borings, EB-1 and EB-2, and performed several tests on a variety of samples. We performed drained fully softened torsional shear strength tests (ASTM D7608) and drained residual torsional shear strength tests (ASTM D6467), and two unconfined compressive strength and Young's modulus of rock core (ASTM D7012D). The fully softened shear strength test resulted in a $\phi = 34°$ while the residual shear strength test indicated a $\phi = 28°$. In our opinion, the reconstituted residual shear strength test is more representative of landslide shear zone, which does not represent the conditions encountered in our explorations or observed in the field, as such this value was not used in our analysis.

For our analysis, we also estimated rock mass properties based on the Generalized Hoek-Brown failure criterion (Hoek and Diedrichs, 2006). We note that one of the unconfined compressive strength tests was performed on a sample of rock collected by a Modified California sample and was more disturbed during recovery than anticipated, and as such, in our opinion, the test result is unreliable and does not represent the strength of the encountered bedrock. However, as noted above, we did account for a reduction of strength due to weathering and fracturing and lower blow counts generally encountered in the upper 10 feet of the bedrock profile. A second unconfined compressive strength test was performed on an intact sample of rock from the rock core that was performed towards the bottom of EB-2. This test resulted in an unconfined compressive strength (UCS) of 6,541 psi or approximately 940 kips per square foot (ksf). For our analysis, we assumed an UCS value of 100 ksf or approximately equivalent to 10 percent of the laboratory test value for the upper 10 feet of bedrock to account for the weathering, fracturing and lower blow counts encountered. For the lower section of bedrock, we used an UCS value of 450 ksf or approximately 50 percent of the laboratory value to account for potential variability in the rock type and strength. For the Geologic Strength Index (GSI) we used 40 for both the upper and lower bedrock layers, corresponding to fair to poor surface conditions (highly weathered to moderately weathered with altered surfaces), and blocky structure. This value generally corresponds to the suggested zone for siltstone or silty shale with sandstone layers (Marinos and Hoek, 2000). For the intact rock material constant, m_i, we used a value of 6, as suggested for shales in the program Slide2.

For the colluvial clayey sand/sandy clay soils, we performed a consolidated undrained triaxial compression test with pore pressure (ASTM D4767) on a relatively undisturbed sample from EB-2 at a depth of 3 feet. The test resulted in a total $\phi = 31°$ and $C = 0$ psf and an effective $\phi = 44°$ and effective $C = 50$ psf. For the long-term (static) analysis we used a $\phi = 40°$ and $C = 50$ psf and for the short-term (seismic) analysis we used a $\phi = 31°$ and $C = 0$ psf.

For the engineered fill soils, we used a $\phi = 36°$ and $C = 0$ psf for both the long-term (static) analysis and short-term (seismic) analysis. The selection of values was based on engineering judgement considering the nature of the fill soils and the anticipated compaction effort for the engineered fills.

Unit weights for the colluvial soil layers were determined from laboratory testing. Average unit weights were taken to represent an approximate unit weight for each layer since the materials vary within each soil layer. The unit weight for the engineered fill was estimated based on our engineering judgement. The unit weight for the bedrock was based on laboratory testing and our engineering judgement.

Table 4: Summary of Soil and Bedrock Strength Properties

Material Description	Total Unit Weight (pcf)	Saturated Unit Weight (pcf)	Short-Term or Seismic Condition		Long-Term or Static Condition	
			Cohesion (psf)	Friction Angle (degrees)	Cohesion (psf)	Friction Angle (degrees)
Engineered Fill*	120	N/A	0	36	100	36
Colluvium (Clayey Sand)*	120	N/A	50	40	0	31
Upper 10 feet Siltstone/Sandstone**	110	N/A	*UCS = 100ksf ; GSI = 40 ; mi = 6			
Below 10 feet Siltstone/Sandstone**	110	N/A	*UCS = 450ksf ; GSI = 40 ; mi = 6			

* Mohr-Coulomb
**Generalized Hoek-Brown

4.5.4 Groundwater

Groundwater was not encountered within any of our exploratory test pits or borings. Based on the anticipated slope of the underlying bedrock and existing site topography, in our opinion, perched groundwater is unlikely to form beneath the Training Center or within the adjacent slope. Therefore, we have not included a groundwater level within our model.

4.5.5 Surficial Loads

Based on our review of the provided structural plans, we understand that the proposed Training Center will be of steel-frame construction and be approximately a single story. A distributed structural load of 300 pounds per square foot (psf) was assumed for our analysis.

4.5.6 Static Analysis

Using the topography depicted on the civil plans prepared by Sandis and the subsurface profile from our exploratory test pits and our exploratory borings, we performed static slope stability analysis using the computer program SLIDE2. The objective of our analysis was to evaluate the potential failure of the existing slope and whether the slope would yield factors of safety greater than 1.5 under static conditions implying that the existing slope is relatively stable under static conditions from a global stability viewpoint. The Bishop Simplified and Morgenstern-Price methods of analyses were used in our static slope stability analyses to evaluate the global stability of the slopes using potential circular type failure surfaces. In this method, the computer program was allowed to search for the circular failure surface corresponding to the lowest factor of safety for the slope.

The results of our static analysis for the cross sections B-B’ and I-I’ indicated a factor of safety of greater than 1.5, implying adequate stability under static conditions. Results of section F-F’ indicated a factor of safety of 1.37, implying general stability under static conditions and that some additional mitigation is necessary to raise the factor of safety to appropriate standard of practice levels. The results of our analysis each cross section is presented in the following table. A copy of the stability output, illustrating the subsurface and surface geometry, and low factor-of-safety surfaces, are attached in Appendix D.

4.5.7 Seismic Analysis

We also performed seismic slope stability analysis using a “pseudo-static method analysis” for the profiles. As previously discussed, a factor of safety greater than 1.0 would imply relative stability from a global stability viewpoint and limited deformation under seismic conditions. The results from our SLIDE model analysis show the factor of safety with respect to the global stability of the various existing slopes adjacent to the Training Center, i.e. cross sections B-B’ and I-I’ to both be greater than 1.0, implying relative stability.

The results from our SLIDE model analysis show the factor of safety with respect to the global seismic stability of the new access road, i.e. cross section F-F’, to be less than 1.0, which implies potential instability or slope deformation following an earthquake. The factors of safety below 1.0 were constrained to the surficial colluvium layer and did not cross into the upper layer of bedrock. We also ran a case where the upslope colluvium was cut back at a 2:1 (horizontal:vertical) rather than the currently proposed 1:1. The factor of safety with respect to the global seismic stability of this 2:1 slope case was 1.01, implying relative stability. As such, we recommend that the upslope colluvium be trimmed back to a minimum of a 2:1 slope. If a 2:1 slope is not feasible, as an alternative, a debris catchment fence should be installed at the currently proposed mid-slope bench to mitigate the predicted slope movement that may occur within the colluvium during a design level seismic event. Additional discussion regarding the potential for a catchment fence is presented in the following sections.

Copies of the seismic stability analysis outputs are attached in Appendix D.

Table 5: Summary of Stability Analysis Results

Section ID	Factor of Safety		
	Long-Term or Static Condition	**Short-Term or Seismic Condition (15cm)**	**Short-Term or Seismic Condition (5cm)**
B-B’	13.24	5.01	4.01
I-I’	3.58	1.57	1.24
F-F’	1.37	0.80	-
F-F’ with trimmed Qcol	1.85	1.01	-
F-F’ Lower Slope	1.81	1.00	-

SECTION 5: CONCLUSIONS

5.1 SUMMARY

From a geotechnical viewpoint, the project is feasible provided the concerns listed below are addressed in the project design. Descriptions of each concern with brief outlines of our recommendations follow the listed concerns.

- Strong ground shaking
- Potential for localized slope instability
- Wet weather construction
- Presence of localized expansive soils

5.1.1 Strong Ground Shaking

Strong ground shaking is expected at this site, as with most sites in the Bay Area, during a major earthquake in the area. To mitigate the effects of strong ground shaking, the planned tank should be designed in accordance with the recommendations in the “Foundation” section below, and the most recent California Building Code.

5.1.2 Potential for Localized Slope Instability

As discussed, the potential for slope instability to impact the Training Center is considered low while the potential impact to the new access road is moderate. As discussed above, our analysis indicates the potential for shallow failures/instability in the surficial colluvium in the cutslope above the proposed new access road under the currently proposed 1:1 (horizontal:vertical) cuts. As such, to mitigate the potential for minor debris flow materials and sediment accumulating on or adjacent to the proposed roadway following a design level seismic event, we recommend that either the colluvium in the cutslope above the proposed roadway be trimmed back to a maximum inclination of 2:1 (horizontal:vertical), or a debris catchment fence be constructed along the mid-slope bench. Recommendations for design of the catchment fence are presented in the “Earthwork” section.

Recommendations addressing these concerns are presented in the “Earthwork” section of this report. The approximate location of the recommended colluvium 2:1 sloping and potential debris catchment area is presented in Figures 9.

5.1.3 Wet Weather Construction

We recommend that earthwork be performed during the dry season. Onsite earth materials tend to be highly cohesive silty, sandy and gravelly clay mixtures which are sensitive to water content and are difficult to work with in wet conditions (over optimum moisture content). Erosion control measures for short term construction-related storm runoff should be implemented as well as Best Management Practices (BMP). The use of a licensed civil engineer would be required for the design of surface drainage infrastructure.

5.1.4 Presence of Localized Expansive Soils

Moderately expansive surficial soils were encountered at the site within the test pits. Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wetted. To reduce the potential for damage to the planned structures, slabs-on-grade should have sufficient reinforcement and be supported on a layer of non-expansive fill; footings should extend below the zone of seasonal moisture fluctuation. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from structures as well as limiting landscaping watering. Detailed grading and foundation recommendations addressing this concern are presented in the following sections.

5.2 PLANS AND SPECIFICATIONS REVIEW

We recommend that we be retained to review the geotechnical aspects of the project structural, civil, and landscape plans and specifications, allowing sufficient time to provide the design team with any comments prior to issuing the plans for construction.

5.3 CONSTRUCTION OBSERVATION AND TESTING

As site conditions may vary significantly between the small-diameter borings performed during this investigation, we also recommend that a Cornerstone representative be present to provide geotechnical observation and testing during earthwork and foundation construction. This will allow us to form an opinion and prepare a letter at the end of construction regarding contractor compliance with project plans and specifications, and with the recommendations in our report. We will also be allowed to evaluate any conditions differing from those encountered during our investigation and provide supplemental recommendations as necessary. For these reasons, the recommendations in this report are contingent of Cornerstone providing observation and testing during construction. Contractors should provide at least 48-hour notice when scheduling our field personnel.

SECTION 6: EARTHWORK

6.1 SITE CLEARING AND PREPARATION

6.1.1 Site Stripping

The site should be stripped of all surface vegetation, and surface and subsurface improvements to be removed within the proposed development area. Demolition of existing improvements is discussed in the prior paragraphs. A detailed discussion of removal of existing fills is provided in the following sections. Surface vegetation and topsoil should be stripped to a sufficient depth to remove all material greater than 3 percent organic content by weight. Based on our site observations, surficial stripping should extend about 6 inches below existing grade in vegetated areas.

6.1.2 Tree and Shrub Removal

Trees and shrubs designated for removal should have the root balls and any roots greater than ½-inch diameter removed completely. Mature trees are estimated to have root balls extending to depths of 2 to 4 feet, depending on the tree size. Significant root zones are anticipated to extend to the diameter of the tree canopy. Grade depressions resulting from root ball removal should be cleaned of loose material and backfilled in accordance with the recommendations in the “Compaction” section of this report.

6.2 TEMPORARY CUT AND FILL SLOPES

The contractor is responsible for maintaining all temporary slopes and providing temporary shoring where required. Temporary shoring, bracing, and cuts/fills should be performed in accordance with the strictest government safety standards. On a preliminary basis, the upper 8 feet at the site may be classified as OSHA Soil Type C materials.

Excavations performed during site demolition and fill removal should be sloped at 3:1 (horizontal:vertical) within the upper 5 feet below building subgrade. Actual excavation inclinations should be reviewed in the field during construction, as needed. Excavations below building subgrade and excavations in pavement and flatwork areas should be sloped in accordance with OSHA soil classification requirements.

6.3 SUBGRADE PREPARATION

After site clearing and demolition is complete, and prior to backfilling any excavations resulting from fill removal or demolition, the excavation subgrade and subgrade within areas to receive additional site fills or slabs-on-grade should be scarified to a depth of 6 inches, moisture conditioned, and compacted in accordance with the “Compaction” section below. Where the bottom of excavations expose the underlying bedrock, no scarification need be performed prior to placement of fill. Where bottom of foundations overly two differing materials, i.e. fill / colluvium / bedrock, the foundation should be over-excavated and backfilled as engineered fill to provide a uniform bearing support.

6.4 WET SOIL STABILIZATION GUIDELINES

Native soil and fill materials, especially soils with high fines contents such as clays and silty soils, can become unstable due to high moisture content, whether from high in-situ moisture contents or from winter rains. As the moisture content increases over the laboratory optimum, it becomes more likely the materials will be subject to softening and yielding (pumping) from construction loading or become unworkable during placement and compaction.

There are several methods to address potential unstable soil conditions and facilitate fill placement and trench backfill. Some of the methods are briefly discussed below. Implementation of the appropriate stabilization measures should be evaluated on a case-by-case basis according to the project construction goals and the site conditions.

6.4.1 Scarification and Drying

The subgrade may be scarified to a depth of 6 to 12 inches and allowed to dry to near optimum conditions, if sufficient dry weather is anticipated to allow sufficient drying. More than one round of scarification may be needed to break up the soil clods.

6.4.2 Removal and Replacement

As an alternative to scarification, the contractor may choose to over-excavate the unstable soils and replace them with dry on-site or import materials. A Cornerstone representative should be present to provide recommendations regarding the appropriate depth of over-excavation, whether a geosynthetic (stabilization fabric or geogrid) is recommended, and what materials are recommended for backfill.

6.5 MATERIAL FOR FILL

6.5.1 Re-Use of On-site Soils

On-site soils with an organic content less than 3 percent by weight may be reused as general fill. General fill should not have lumps, clods or cobble pieces larger than 6 inches in diameter; 85 percent of the fill should be smaller than 2½ inches in diameter. Minor amounts of oversize material (smaller than 12 inches in diameter) may be allowed provided the oversized pieces are not allowed to nest together and the compaction method will allow for loosely placed lifts not exceeding 12 inches.

6.5.2 Potential Import Sources

Non-expansive material should be inorganic with a Plasticity Index (PI) of 15 or less, and not contain recycled asphalt concrete where it will be used within the habitable building areas. Imported soil for use as general fill material should be inorganic with a Plasticity Index (PI) of 20 or less, and not contain recycled asphalt concrete where it will be used within the habitable building areas. To prevent significant caving during trenching or foundation construction, imported material should have sufficient fines. Samples of potential import sources should be delivered to our office at least 10 days prior to the desired import start date. Information regarding the import source should be provided, such as any site geotechnical reports. If the material will be derived from an excavation rather than a stockpile, potholes will likely be required to collect samples from throughout the depth of the planned cut that will be imported. At a minimum, laboratory testing will include PI tests. Material data sheets for select fill materials (Class 2 aggregate base, ¾-inch crushed rock, quarry fines, etc.) listing current laboratory testing data (not older than 6 months from the import date) may be provided for our review without providing a sample. If current data is not available, specification testing will need to be completed prior to approval.

Environmental and soil corrosion characterization should also be considered by the project team prior to acceptance. Suitable environmental laboratory data to the planned import quantity should be provided to the project environmental consultant; additional laboratory testing may be required based on the project environmental consultant’s review. The potential import source should also not be more corrosive than the on-site soils, based on pH, saturated resistivity, and soluble sulfate and chloride testing.

6.6 COMPACTION REQUIREMENTS

All fills, and subgrade areas where fill, slabs-on-grade, and pavements are planned, should be placed in loose lifts 8 inches thick or less and compacted in accordance with ASTM D1557 (latest version) requirements as shown in the table below. In general, clayey soils should be compacted with sheepsfoot equipment and sandy/gravelly soils with vibratory equipment; open-graded materials such as crushed rock should be placed in lifts no thicker than 18 inches and consolidated in place with vibratory equipment. Each lift of fill and all subgrade should be firm and unyielding under construction equipment loading in addition to meeting the compaction requirements to be approved. The contractor (with input from a Cornerstone representative) should evaluate the in-situ moisture conditions, as the use of vibratory equipment on soils with high moistures can cause unstable conditions. General recommendations for soil stabilization are provided in the “Wet Soil Stabilization Guidelines” section of this report. Where the soil’s PI is 20 or greater, the expansive soil criteria should be used.

Table 6: Compaction Requirements

Description	Material Description	Minimum Relative[1] Compaction (percent)	Moisture[2] Content (percent)
General Fill	On-Site Expansive Soils	87 – 92	>3
	Low Expansion Soils	90	>1
Trench Backfill	On-Site Expansive Soils	87 – 92	>3
	Low Expansion Soils	90	>1
Trench Backfill (upper 6 inches of subgrade)	On-Site Low Expansion Soils	95	>1
Crushed Rock Fill	¾-inch Clean Crushed Rock	Consolidate In-Place	NA
Non-Expansive Fill	Imported Non-Expansive Fill	90	Optimum
Flatwork Subgrade	On-Site Expansive Soils	87 - 92	>3
	Low Expansion Soils	90	>1
Flatwork Aggregate Base	Class 2 Aggregate Base[3]	90	Optimum
Pavement Subgrade	On-Site Expansive Soils	87 - 92	>3
	Low Expansion Soils	95	>1
Pavement Aggregate Base	Class 2 Aggregate Base[3]	95	Optimum
Asphalt Concrete	Asphalt Concrete	95 (Marshall)	NA

1 – Relative compaction based on maximum density determined by ASTM D1557 (latest version)
2 – Moisture content based on optimum moisture content determined by ASTM D1557 (latest version)
3 – Class 2 aggregate base shall conform to Caltrans Standard Specifications, latest edition, except that the relative compaction should be determined by ASTM D1557 (latest version)

6.7 TRENCH BACKFILL

Utility lines constructed within public right-of-way should be trenched, bedded and shaded, and backfilled in accordance with the local or governing jurisdictional requirements. Utility lines in private improvement areas should be constructed in accordance with the following requirements unless superseded by other governing requirements.

All utility lines should be bedded and shaded to at least 6 inches over the top of the lines with crushed rock (⅜-inch-diameter or greater) or well-graded sand and gravel materials conforming to the pipe manufacturer's requirements. Open-graded shading materials should be consolidated in place with vibratory equipment and well-graded materials should be compacted to at least 90 percent relative compaction with vibratory equipment prior to placing subsequent backfill materials.

General backfill over shading materials may consist of on-site native materials provided they meet the requirements in the "Material for Fill" section, and are moisture conditioned and compacted in accordance with the requirements in the "Compaction" section.

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the "foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

On expansive soils sites it is desirable to reduce the potential for water migration into building and pavement areas through the granular shading materials. We recommend that a plug of low-permeability clay soil, sand-cement slurry, or lean concrete be placed within trenches just outside where the trenches pass into building and pavement areas.

6.8 PERMANENT CUT AND FILL SLOPES

All permanent cut and fill slopes in soil should have a maximum inclination of 2:1 (horizontal:vertical) for slopes up to 10 feet high; slopes greater than 10 feet should be inclined at no greater than 3:1. Fill slopes should be overbuilt and trimmed back, exposing engineered fill when complete. Refer to the "Erosion Control" section of this report for a discussion regarding protection of slope surfaces.

6.8.1 Keyways and Benches

Fill placed on existing ground inclined at 6:1 or greater should be benched into the existing slope and a keyway constructed at the toe of the fill. Benches should be angled slightly into the slope be spaced vertically at no greater than 10 feet between benches and be at least 5 feet wide. Depending on the thickness of any colluvial/residual soil layer that blankets the bedrock, the benches may need to be widened beyond the minimum width to extend into competent bedrock. The keyway should also be angled slightly into the slope (minimum 2 percent inclination), extend at least 2 feet into competent soil/bedrock, and be at least 10 feet wide. A typical keyway and bench detail is depicted in Figure 8 and preliminary keyway locations are depicted on Figure 9.

6.8.2 Fill Drainage

A permanent subsurface drainage system consisting of a series of perforated gravity pipes or drainage strips should be constructed between engineered fill placed against a bedrock slope and within all keyways. This system is intended to intercept perched water flowing through the bedrock and transmit it to suitable outlet structures and reduce the potential for hydrostatic pressures building up behind the fills and causing slope instability. The drain lines should be placed at the back of the keyways and benches. Bench drains should be spaced vertically at no greater than 10 feet.

The drainage system should be constructed in small trenches or v-ditches, and will consist of a minimum 4-inch-diameter perforated SDR 35 (perforations placed downward), bedded and shaded in Caltrans Class 2 Permeable Material (latest version) or ¾-inch crushed rock; if crushed rock is used, the rock should be encapsulated in filter fabric (Mirafi 140N or equivalent). The bedding should be at least 2 inches, and the trench should be at least 8 inches in width and depth. Alternatively, geocomposite strip drains may be used. All drainage lines should slope towards suitable outlet structures at an inclination of at least 0.5 percent. Suitable outlet structures may consist of connecting the drainage lines to a storm drain system, with a sump if required; if the drain lines will outlet overland at the toe of the slope, an appropriate rock spill pad should be provided; the drain lines should not outlet onto the slope.

Vertical cleanouts should be provided at all upslope ends of the drainage lines and at all 90-degree bends.

6.8.3 Plan Review and Construction Monitoring

While we are not aware of any proposed cut/fill slopes at this time, if any are planned, we should be retained to review the conceptual grading and sub-drainage plans and provide more specific input regarding the location of keyways and fill drainage, as needed. A Cornerstone representative should be on site during keyway and fill slope construction. Field modifications to the planned keyway and benching may be required based on encountered field conditions.

We recommend that the project civil engineer or land surveyor be retained to survey in place all keyways, sub-drainage lines, solid pipes, and cleanouts, and create an as-built plan. This plan will be of use for any future maintenance or repair work.

6.9 DEBRIS FLOW CATCHMENT STRUCTURES

As discussed in the "Conclusions" section, the proposed cut slope into colluvium above the proposed new access road may pose risk of future soil creep or landslide deformation following a design level seismic event. To mitigate the potential for debris flow materials from impacting the proposed roadway, if the upper slope cannot be cut back to a 2:1 (horizontal:vertical) slope, we recommend that debris flow catchment structure be considered. Catchment structures may consist of fences that are designed to impede the movement of debris flow material.

To reduce impacts to the access road and drainage ditch upslope of the access road, if the upslope colluvium will not be cut to a 2:1 or less, we recommend that a catchment fence be constructed above the upslope roadcut bench, as shown conceptually on Figure 9. The fence should consist of a heavy duty chain link or wire fence that is at least 4 feet high and designed to resist an impact force equivalent to a fluid pressure of 125 pounds per cubic foot extending over the lower 3 feet of the fence. Catchment fence poles should be spaced no more than 6 feet on center and be securely embedded in shallow drilled piers at least 12 inches in diameter and at least 6 feet below finished grade. Lateral loads exerted on the catchment fence poles may be resisted by a passive resistance based on an ultimate equivalent fluid pressure of 500 pcf acting against twice the projected area of piers below the pier cap or grade beam within pier groups of two or more and over two pier diameters for single piers, up to a maximum uniform pressure of 4,000 psf at depth. Passive pressures should be ignored to a depth where there is a minimum of 8 feet horizontal distance from face of pier to the sloping grade. The structural engineer should apply an appropriate factor of safety to the ultimate passive pressures

The lower 2 feet of fence should be covered on the upslope side with a ¼ inch wire mesh to adequately retain debris flow material while still allowing for water drainage. Catchment fences should be periodically observed and cleared as necessary.

6.10 SITE DRAINAGE

Surface runoff should not be allowed to flow over the top of or pond at the top or toe of engineered slopes. Ponding should also not be allowed on or adjacent to the training center or other structures. Hardscape surfaces should slope at least 2 percent towards suitable discharge facilities; landscape areas should slope at least 3 percent towards suitable discharge facilities. Runoff should be directed away from the training center pad areas in closed conduits, to approved discharge facilities, or on to hardscaped surfaces that drain to suitable facilities. Retention, detention, or discharge facilities should be spaced at least 10 feet from the building pad. These facilities are not recommended where stormwater infiltration may affect slopes at lower elevations on or adjacent to the site. Based on discussions with the project civil engineer, Sandis, we understand that the proposed retention facility adjacent to the Training Center will discharge to an overland release further down the slope at a location approved by Cornerstone and Sandis.

6.11 PERMANENT EROSION CONTROL MEASURES

Hillside grading will require periodic maintenance after construction to reduce the potential for erosion and sloughing. At a minimum all slopes should be vegetated by hydroseeding or other landscape ground cover. The establishment of vegetation will help reduce runoff velocities, allow some infiltration and transpiration, trap sediment within runoff, and protect the soil from raindrop impact. Depending on the exposed material type and the slope inclination, more aggressive erosion control measures may be needed to protect slopes for one or more winter seasons while vegetation is establishing. For slopes with inclinations of 2:1 (horizontal:vertical) or greater, erosion control may consist of jute netting, straw matting, or erosion control blankets used in combination with hydroseeding.

Both construction and post-construction Storm Water Pollution Prevention Plans (SWPPPs) should be prepared for the project-specific requirements. We recommend that final grading plans be provided for our review.

6.13 LANDSCAPE CONSIDERATIONS

Since the near-surface soils are moderately to highly expansive, we recommend greatly reducing the amount of surface water infiltrating these soils near foundations and exterior slabs-on-grade. This can typically be achieved by:

- Using drip irrigation
- Avoiding open planting within 3 feet of the building perimeter or near the top of existing slopes
- Regulating the amount of water distributed to lawns or planter areas by using irrigation timers
- Selecting landscaping that requires little or no watering, especially near foundations.

We recommend that the landscape architect consider these items when developing landscaping plans.

SECTION 7: 2022 CBC SEISMIC DESIGN CRITERIA

7.1 SEISMIC DESIGN CRITERIA

We understand that the project structural design will be based on the 2022 California Building Code (CBC), which provides criteria for the seismic design of buildings in Chapter 16. The "Seismic Coefficients" used to design buildings are established based on a series of tables and figures addressing different site factors, including the soil profile in the upper 100 feet below grade and mapped spectral acceleration parameters based on distance to the controlling seismic source/fault system.

Our explorations generally encountered colluvial soils overlying shallow bedrock deposits to a depth of 30 feet, the maximum depth explored. Based on our explorations and review of local geology, the site is underlain by shallow colluvial soils underlain by shallow rock with anticipated SPT "N" values above 50 blows per foot. Therefore, we have classified the site as Soil Classification C. The mapped spectral acceleration parameters S_s and S_1 were calculated using the web-based program ATC Hazards by Locations, located at https://hazards.atcouncil.org/, based on the site coordinates presented below and the site classification. Recommended values for design are presented in Table 7. The table below lists the various factors used to determine the seismic coefficients and other parameters.

Table 7: CBC Site Categorization and Site Coefficients

Classification/Coefficient	**Design Value**
Site Class	C
Site Latitude	37.248703°
Site Longitude	-122.149054°
0.2-second Period Mapped Spectral Acceleration[1], S_S	2.297g
1-second Period Mapped Spectral Acceleration[1], S_1	0.83g
Short-Period Site Coefficient – Fa	1.2
Long-Period Site Coefficient – Fv	1.4
0.2-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects - S_{MS}	2.756g
1-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects – S_{M1}	1.162g
0.2-second Period, Design Earthquake Spectral Response Acceleration – S_{DS}	1.837g
1-second Period, Design Earthquake Spectral Response Acceleration – S_{D1}	0.937g
Site Amplification Factor at PGA – F_{PGA}	1.1
Site Modified Peak Ground Acceleration – PGA_M	1.124

SECTION 8: FOUNDATIONS

8.1 SUMMARY OF RECOMMENDATIONS

In our opinion, the proposed structures may be supported on shallow foundations provided the recommendations in the "Earthwork" section and the sections below are followed

8.2 SHALLOW FOUNDATIONS

8.2.1 Conventional Shallow Footings

Conventional shallow footings should bear entirely on natural, undisturbed soil, bedrock or engineered fill, be at least 15 inches wide, and extend at least 18 inches below the lowest adjacent grade. To reduce the potential for differential settlement, all foundation should be underlain by at least 1 foot of engineered fill to mitigate the potential for differential settlement across short distances (such as at bedrock to fill transitions). If needed, the foundations should be over-excavated to provide a uniform bearing support by over-excavating at least 12 inches below bottom of footing in shallow bedrock areas and backfilling with compacted on-site soil.

Lowest adjacent grade is defined as the deeper of the following: 1) bottom of the adjacent interior slab-on-grade, or 2) finished exterior grade, excluding landscaping topsoil. The deeper footing embedment is due to the presence of moderately to highly expansive soils and is intended to embed the footing below the zone of significant seasonal moisture fluctuation, reducing the potential for differential movement.

Footings constructed to the above dimensions and in accordance with the “Earthwork” recommendations of this report are capable of supporting maximum allowable bearing pressures of 2,500 psf for dead loads, 3,750 psf for combined dead plus live loads, and 5,000 psf for all loads including wind and seismic. These pressures are based on factors of safety of 3.0, 2.0, and 1.5 applied to the ultimate bearing pressure for dead, dead plus live, and all loads, respectively. These pressures are net values; the weight of the footing may be neglected for the portion of the footing extending below grade (typically, the full footing depth). Top and bottom mats of reinforcing steel should be included in continuous footings to help span irregularities and differential settlement.

The bottom of footings may be designed with a modulus of subgrade of 100 pci.

8.2.2 Footing Settlement

Structural loads were not provided to us at the time this report was prepared, but we assume building loads are relatively light and have perimeter wall loads less than 1 to 2 kips per lineal foot.

Based on the above loading and the allowable bearing pressures presented above, and provided the footings are over-excavated as needed to mitigate bedrock to fill transitions, we estimate that the total static footing settlement will be on the order of ½ inch or less, with less than ¼ inch of post-construction differential settlement between adjacent foundation elements, assumed to be on the order of 30 feet.

8.2.3 Lateral Loading

Lateral loads may be resisted by friction between the bottom of footing and the supporting subgrade, and also by passive pressures generated against footing sidewalls. An ultimate frictional resistance of 0.45 applied to the footing dead load, and an ultimate passive pressure based on an equivalent fluid pressure of 450 pcf may be used in design. The structural engineer should apply an appropriate factor of safety (such as 1.5) to the ultimate values above. Where footings are adjacent to landscape areas without hardscape, the upper 12 inches of soil should be neglected when determining passive pressure capacity.

8.2.4 Conventional Shallow Footing Construction Considerations

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the "foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

Footing excavations should be filled as soon as possible or be kept moist until concrete placement by regular sprinkling to prevent desiccation. A Cornerstone representative should observe all footing excavations prior to placing reinforcing steel and concrete. If there is a significant schedule delay between our initial observation and concrete placement, we may need to re-observe the excavations.

SECTION 9: CONCRETE SLABS AND PEDESTRIAN PAVEMENTS

9.1 INTERIOR SLABS-ON-GRADE

Due to the moderate to high expansion potential of the surficial soils, the proposed slabs-on-grade should be supported on at least 12 inches of non-expansive fill (NEF) to reduce the potential for slab damage due to soil heave. The NEF layer should be constructed over subgrade prepared in accordance with the recommendations in the "Earthwork" section of this report. If moisture-sensitive floor coverings are planned, the recommendations in the "Interior Slabs Moisture Protection Considerations" section below may be incorporated in the project design if desired. If significant time elapses between initial subgrade preparation and slab-on-grade NEF construction, the subgrade should be proof-rolled to confirm subgrade stability, and if the soil has been allowed to dry out, the subgrade should be re-moisture conditioned to at least 3 percent over the optimum moisture content.

The structural engineer should determine the appropriate slab reinforcement for the loading requirements and considering the expansion potential of the underlying soils. For unreinforced concrete slabs, ACI 302.1R recommends limiting control joint spacing to 24 to 36 times the slab thickness in each direction, or a maximum of 18 feet.

9.2 INTERIOR SLABS MOISTURE PROTECTION CONSIDERATIONS

The following general guidelines for concrete slab-on-grade construction where floor coverings are planned are presented for consideration by the developer, design team, and contractor. These guidelines are based on information obtained from a variety of sources, including the American Concrete Institute (ACI) and are intended to reduce the potential for moisture-related problems causing floor covering failures, and may be supplemented as necessary based on project-specific requirements. The application of these guidelines or not will not affect the geotechnical aspects of the slab-on-grade performance.

- Place a minimum 15-mil vapor retarder conforming to ASTM E 1745, Class C requirements or better directly below the concrete slab; the vapor retarder should extend to the slab edges and be sealed at all seams and penetrations in accordance with manufacturer's recommendations and ASTM E 1643 requirements. A 4-inch-thick capillary break, consisting of crushed rock should be placed below the vapor retarder and consolidated in place with vibratory equipment. The capillary break rock may be considered as the upper 4 inches of the non-expansive fill previously recommended. The mineral aggregate shall be of such size that the percentage composition by dry weight as determined by laboratory sieves will conform to the following gradation:

Sieve Size	Percentage Passing Sieve
1"	100
¾"	90 – 100
No. 4	0 – 10
No. 200	0 – 5

- The concrete water:cement ratio should be 0.45 or less. Mid-range plasticizers may be used to increase concrete workability and facilitate pumping and placement.

- Water should not be added after initial batching unless the slump is less than specified and/or the resulting water:cement ratio will not exceed 0.45.

- Polishing the concrete surface with metal trowels is not recommended.

- Where floor coverings are planned, all concrete surfaces should be properly cured.

- Water vapor emission levels and concrete pH should be determined in accordance with ASTM F1869-98 and F710-98 requirements and evaluated against the floor covering manufacturer's requirements prior to installation.

9.3 EXTERIOR FLATWORK

Exterior concrete flatwork subject to pedestrian and/or occasional light pick up loading should be at least 4 inches thick and supported on at least 6 inches of Class 2 aggregate base overlying subgrade prepared in accordance with the "Earthwork" recommendations of this report. Flatwork that will be subject to heavier or frequent vehicular loading should be designed in accordance with the recommendations in the "Vehicular Pavements" section below. To help reduce the potential for uncontrolled shrinkage cracking, adequate expansion and control joints should be included. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness. Flatwork should be isolated from adjacent foundations or retaining walls.

SECTION 10: VEHICULAR PAVEMENTS

10.1 ASPHALT CONCRETE

The following asphalt concrete pavement recommendations tabulated below are based on Procedure 608 of the Caltrans Highway Design Manual, estimated traffic indices for various pavement-loading conditions, and on a design R-value of 10. The design R-value was chosen based on engineering judgement considering the variable and expansive soil conditions.

Table 8: Asphalt Concrete Pavement Recommendations

Design Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base[1] (inches)	Total Pavement Section Thickness (inches)
4.0	2.5	7.0	9.5
4.5	2.5	8.5	11.0
5.0	3.0	9.0	12.0
5.5	3.0	11.0	14.0
6.0	3.5	11.5	15.0
6.5	4.0	12.5	16.5

[1] Caltrans Class 2 aggregate base; minimum R-value of 78; subgrade R-value of 10

Frequently, the full asphalt concrete section is not constructed prior to construction traffic loading. This can result in significant loss of asphalt concrete layer life, rutting, or other pavement failures. To improve the pavement life and reduce the potential for pavement distress through construction, we recommend the full design asphalt concrete section be constructed prior to construction traffic loading. Alternatively, a higher traffic index may be chosen for the areas where construction traffic will use the pavements.

Asphalt concrete pavements constructed on expansive subgrade where the adjacent areas will not be irrigated for several months after the pavements are constructed may experience longitudinal cracking parallel to the pavement edge. These cracks typically form within a few feet of the pavement edge and are due to seasonal wetting and drying of the adjacent soil. The cracking may also occur during construction where the adjacent grade is allowed to significantly dry during the summer, pulling moisture out of the pavement subgrade. Any cracks that form should be sealed with bituminous sealant prior to the start of winter rains. One alternative to reduce the potential for this type of cracking is to install a moisture barrier at least 24 inches deep behind the pavement curb.

10.2 STRESS PADS FOR TRASH ENCLOSURES

Pads where trash containers will be stored, and where garbage trucks will park while emptying trash containers, should be constructed on Portland Cement Concrete. We recommend that the trash enclosure pads and stress (landing) pads where garbage trucks will store, pick up, and empty trash consist of a minimum PCC thickness of 7 inches. The compressive strength, underlayment, and construction details should be consistent with the above recommendations for PCC pavements.

10.3 PAVEMENT CUTOFF

Surface water penetration into the pavement section can significantly reduce the pavement life, due to the native expansive clays. While quantifying the life reduction is difficult, a normal 20-year pavement design could be reduced to less than 10 years; therefore, increased long-term maintenance may be required.

It would be beneficial to include a pavement cut-off, such as deepened curbs, redwood-headers, or "Deep-Root Moisture Barriers" that are keyed at least 4 inches into the pavement subgrade. This will help limit the additional long-term maintenance.

SECTION 11: LIMITATIONS

This report, an instrument of professional service, has been prepared for the sole use of Boy Scouts of America specifically to support the design of the CSR Master Plan and Training Center project in Los Gatos, California. The opinions, conclusions, and recommendations presented in this report have been formulated in accordance with accepted geotechnical engineering practices that exist in Northern California at the time this report was prepared. No warranty, expressed or implied, is made or should be inferred.

Recommendations in this report are based upon the soil and groundwater conditions encountered during our subsurface exploration. If variations or unsuitable conditions are encountered during construction, Cornerstone must be contacted to provide supplemental recommendations, as needed.

Boy Scouts of America may have provided Cornerstone with plans, reports and other documents prepared by others. Boy Scouts of America understands that Cornerstone reviewed and relied on the information presented in these documents and cannot be responsible for their accuracy.

Cornerstone prepared this report with the understanding that it is the responsibility of the owner or their representatives to see that the recommendations contained in this report are presented to other members of the design team and incorporated into the project plans and specifications, and that appropriate actions are taken to implement the geotechnical recommendations during construction.

Conclusions and recommendations presented in this report are valid as of the present time for the development as currently planned. Changes in the condition of the property or adjacent properties may occur with the passage of time, whether by natural processes or the acts of other persons. In addition, changes in applicable or appropriate standards may occur through legislation or the broadening of knowledge. Therefore, the conclusions and recommendations presented in this report may be invalidated, wholly or in part, by changes beyond Cornerstone's

control. This report should be reviewed by Cornerstone after a period of three (3) years has elapsed from the date of this report. In addition, if the current project design is changed, then Cornerstone must review the proposed changes and provide supplemental recommendations, as needed.
An electronic transmission of this report may also have been issued. While Cornerstone has taken precautions to produce a complete and secure electronic transmission, please check the electronic transmission against the hard copy version for conformity.

Recommendations provided in this report are based on the assumption that Cornerstone will be retained to provide observation and testing services during construction to confirm that conditions are similar to that assumed for design, and to form an opinion as to whether the work has been performed in accordance with the project plans and specifications. If we are not retained for these services, Cornerstone cannot assume any responsibility for any potential claims that may arise during or after construction as a result of misuse or misinterpretation of Cornerstone's report by others. Furthermore, Cornerstone will cease to be the Geotechnical-Engineer-of-Record if we are not retained for these services.

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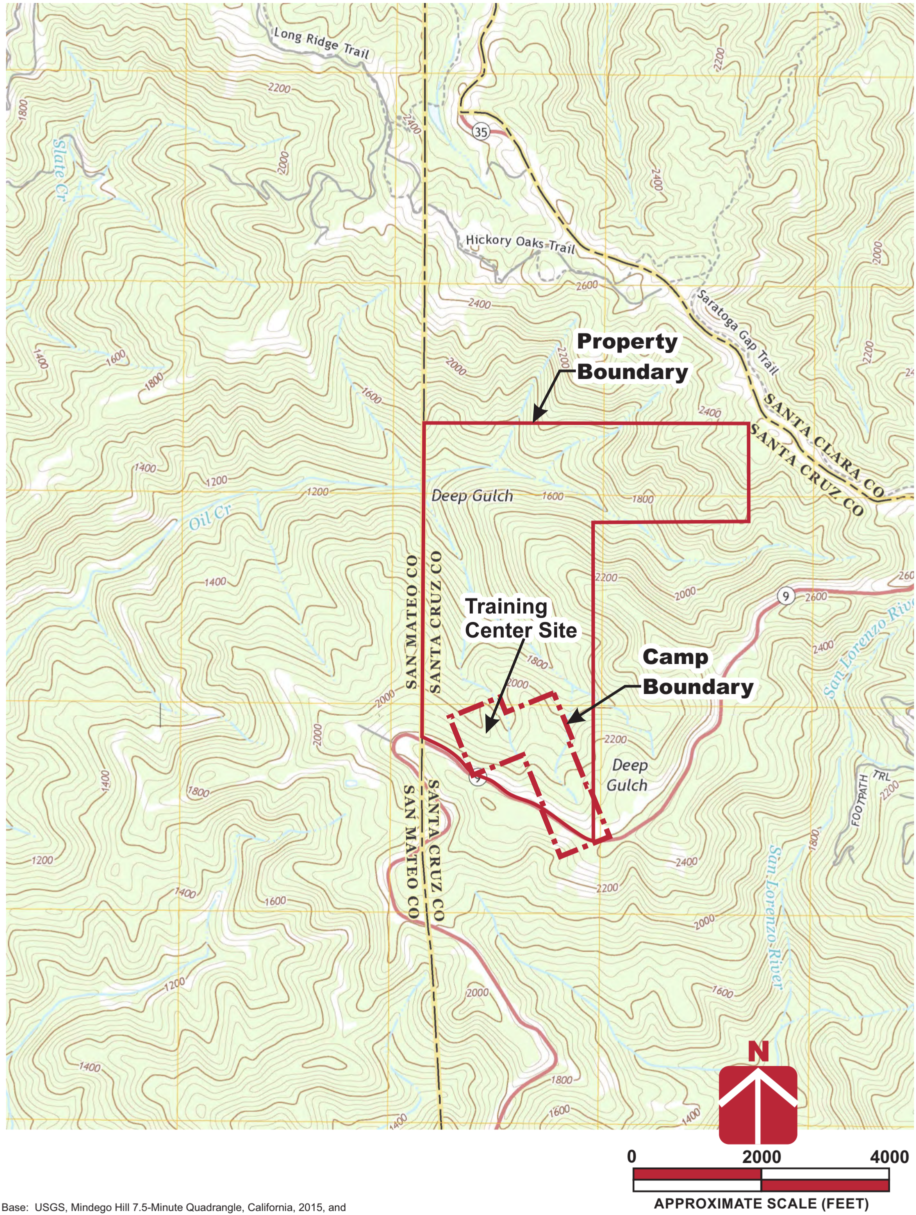

Long Ridge Trail
Slate Cr
35
Hickory Oaks Trail
Saratoga Gap Trail
SANTA CLARA CO
SANTA CRUZ CO
Property Boundary
Deep Gulch
Oil Cr
SAN MATEO CO
SANTA CRUZ CO
Training Center Site
Camp Boundary
9
San Lorenzo River
Deep Gulch
FOOTPATH TRL
SANTA CRUZ CO
SAN MATEO CO
San Lorenzo River
N
0
2000
4000
APPROXIMATE SCALE (FEET)

Base: USGS, Mindego Hill 7.5-Minute Quadrangle, California, 2015, and
USGS, Big Basin 7.5-Minute Quadrangle, California, 2015.

CORNERSTONE EARTH GROUP

Vicinity Map

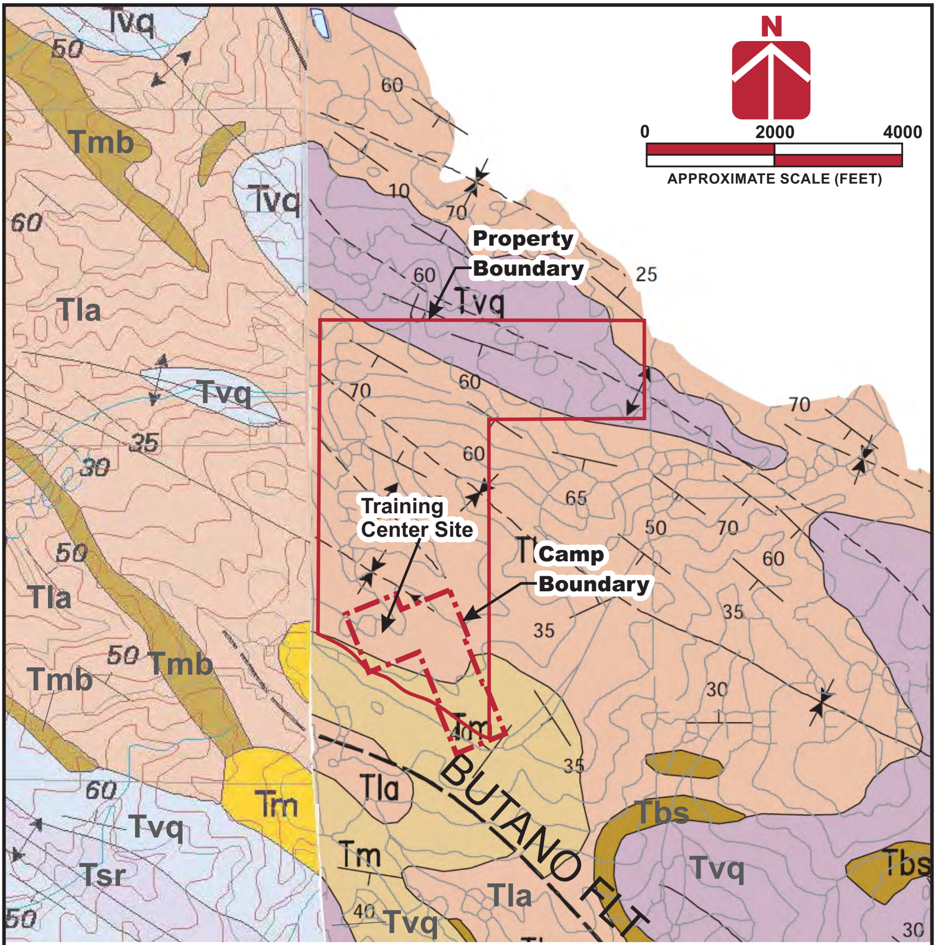
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3

Figure Number Figure 1

Date January 2025

Drawn By RRN


N
0
2000
4000
APPROXIMATE SCALE (FEET)
Tvq
50
Tmb
Tvq
60
Tla
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35
30
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Tmb
60
Tvq
Tsr
Tm
50
60
10
70
Property Boundary
60
Tvq
25
70
60
60
70
Training Center Site
65
50
70
60
Camp Boundary
35
35
30
Tm
40
Tla
Tm
BUTANO FLT
Tla
40 Tvq
35
Tbs
Tvq
Tbs
30

Geologic Units

Tm	Monterey Formation (middle Miocene)
Tla	Lambert Shale (Oligocene and lower Miocene)
Tmb	Mindego Basalt and related volcanic rocks (Miocene and/or Oligocene)
Tvq	Vaqueros Sandstone (lower Miocene and Oligocene)
Tsr	Rices Mudstone Member (Oligocene and upper Eocene)
Tbs	Shale in Butano Sandstone (lower Eocene)

Symbols

Contact - dashed where approximate, dotted where concealed

Fault - dashed where approximate, dotted where concealed

35 Strike and dip of bedding

Anticline, arrow on axial trace of fold indicates direction of plunge

Syncline, arrow on axial trace of fold indicates direction of plunge

Base: Geologic Map of Santa Cruz County, California, by Brabb, 1997, and
Geology of the Onshore Part of San Mateo County, California, by Brabb, 1998.

CORNERSTONE
EARTH GROUP

Vicinity Geologic Map

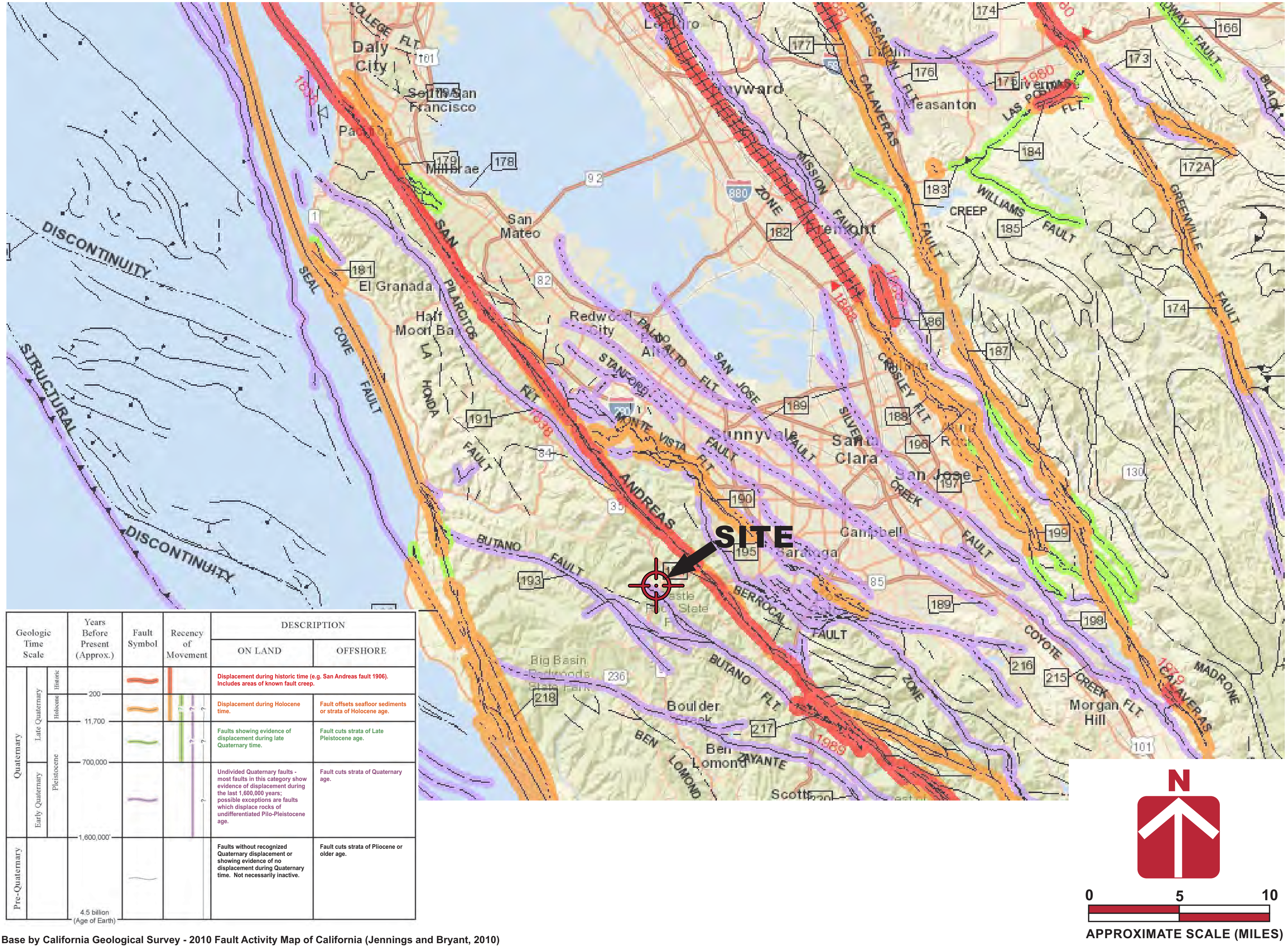
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

Figure Number
Figure 2

Date
January 2025

Drawn By
RRN


SITE
SAN ANDREAS FLT
1906
SEAL COVE FAULT
DISCONTINUITY
STRUCTURAL DISCONTINUITY
PILARCITOS
LA HONDA FAULT
BUTANO FAULT
BERROCAL FAULT
ZAYANTE
BEN LOMOND
STANFORD
PALO ALTO
MONTE VISTA
SAN JOSE FLT
SILVER CREEK FAULT
CROSLEY FLT
MISSION FAULT
HAYWARD
ZONE
CALAVERAS FAULT
PLEASANTON FLT
WILLIAMS FAULT
LAS POSITAS FLT
CREEP
GREENVILLE FAULT
COYOTE CREEK FLT
MADRONE
CALAVERAS
ZONE
COLLEGE FLT
1989
1868
1980
1979
Daly City
South San Francisco
Pacifica
Millbrae
San Mateo
El Granada
Half Moon Bay
Redwood City
Palo Alto
Sunnyvale
Santa Clara
San Jose
Campbell
Saratoga
Los Gatos
Castle Rock State Park
Big Basin Redwoods State Park
Boulder Creek
Ben Lomond
Scotts Valley
Morgan Hill
Milpitas
Fremont
Hayward
Pleasanton
Livermore
Dublin
San Leandro
N
0
5
10
APPROXIMATE SCALE (MILES)

Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION	
						ON LAND	OFFSHORE
Quaternary	Late Quaternary	Historic		🟥		Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
		Holocene	200	🟧	?	Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
		Pleistocene	11,700	🟩	?	Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
	Early Quaternary		700,000	🟪	?	Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Pilo-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary			1,600,000 4.5 billion (Age of Earth)	—		Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.

Base by California Geological Survey - 2010 Fault Activity Map of California (Jennings and Bryant, 2010)

Project Number
1360-2-3

Figure Number
Figure 3

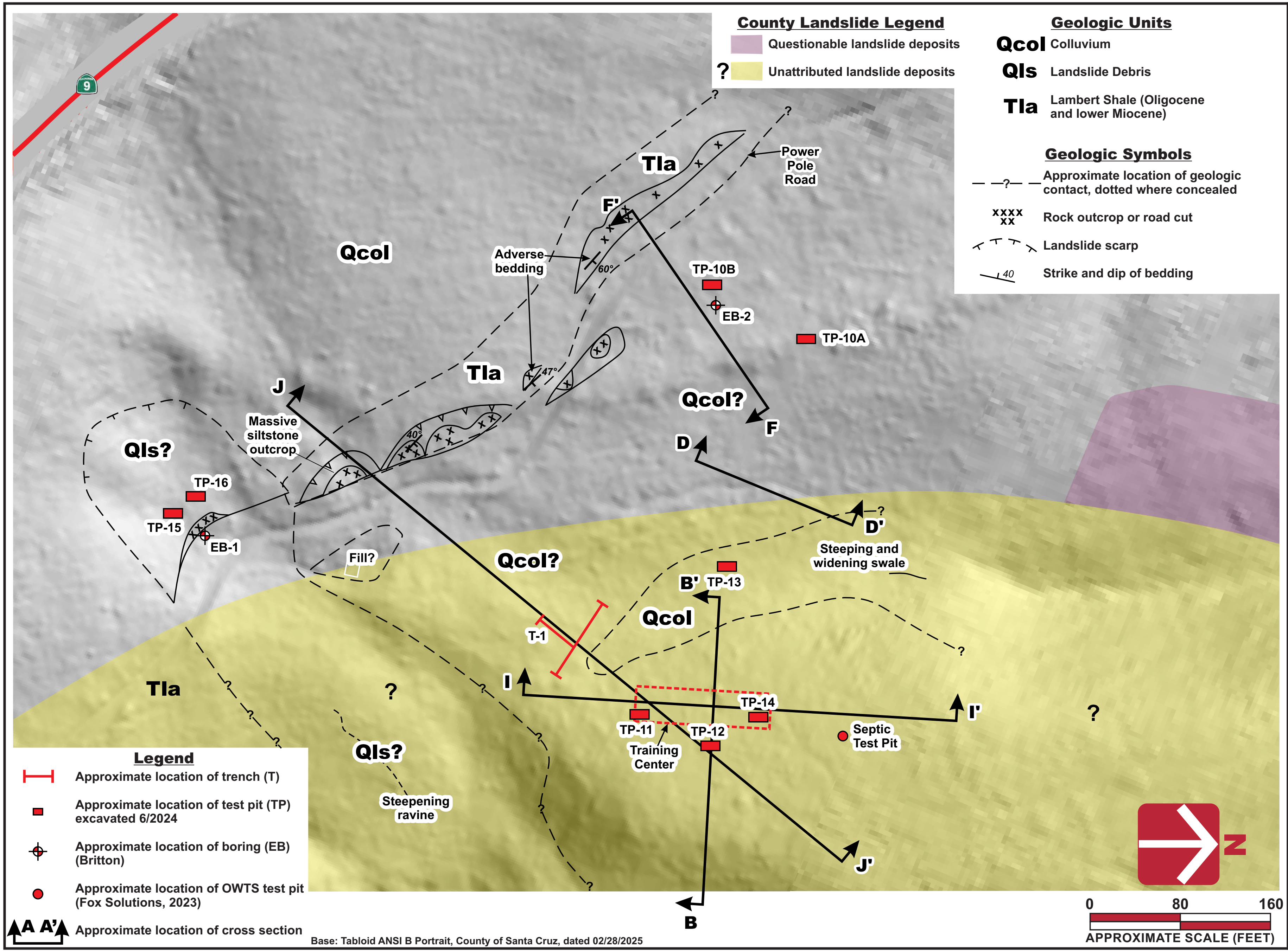
Drawn By
RRN

Date
January 2025

Regional Fault Map

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE
EARTH GROUP


9
Qcol
Tla
Adverse bedding
60°
F'
Power Pole Road
TP-10B
EB-2
TP-10A
Tla
47°
J
Qcol?
F
D
Massive siltstone outcrop
Qls?
40°
TP-16
TP-15
EB-1
Fill?
Qcol?
D'
Steeping and widening swale
B'
TP-13
Qcol
T-1
I
Tla
?
TP-14
I'
?
TP-11
TP-12
Septic Test Pit
Training Center
Qls?
Steepening ravine
J'
B
N
0
80
160
APPROXIMATE SCALE (FEET)

County Landslide Legend

🟪 Questionable landslide deposits

? 🟨 Unattributed landslide deposits

Geologic Units

Qcol	Colluvium
Qls	Landslide Debris
Tla	Lambert Shale (Oligocene and lower Miocene)

Geologic Symbols

— —?— —	Approximate location of geologic contact, dotted where concealed
xxxx xx	Rock outcrop or road cut
⊤ ⊤ ⊤	Landslide scarp
40	Strike and dip of bedding

Legend

├─┤	Approximate location of trench (T)
🟥	Approximate location of test pit (TP) excavated 6/2024
⊕	Approximate location of boring (EB) (Britton)
●	Approximate location of OWTS test pit (Fox Solutions, 2023)
A A'	Approximate location of cross section

Base: Tabloid ANSI B Portrait, County of Santa Cruz, dated 02/28/2025

Project Number 1360-2-3

Figure Number Figure 4

Date March 2025

Drawn By RRN

LIDAR and County Landslide Map

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE EARTH GROUP

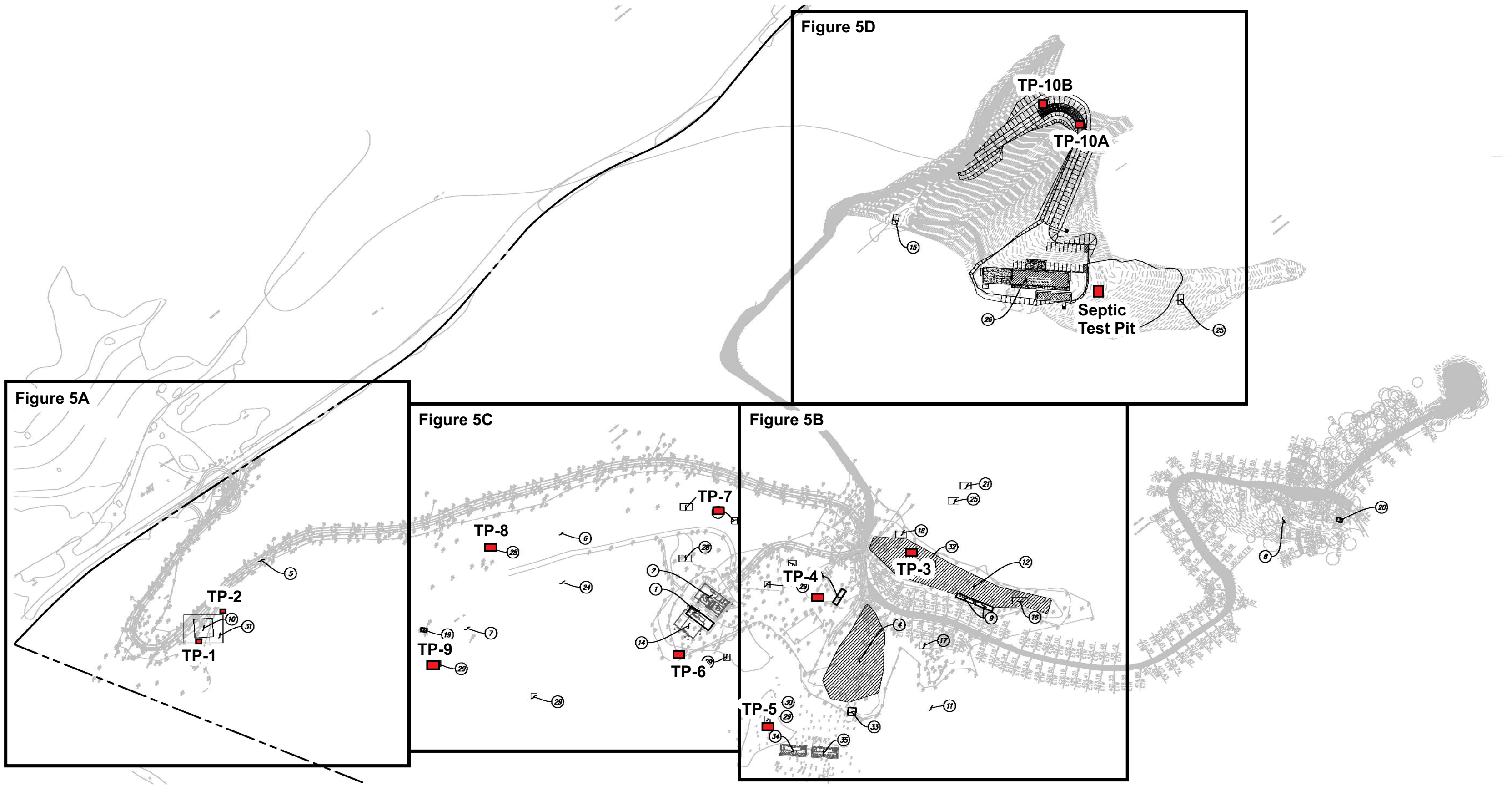
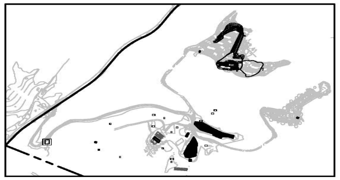


Figure 5D
TP-10B
TP-10A
Septic Test Pit
Figure 5A
TP-2
TP-1
Figure 5C
TP-7
TP-8
TP-9
TP-6
Figure 5B
TP-4
TP-3
TP-5
1
2
4
5
6
7
8
9
10
11
12
14
15
16
17
18
19
20
21
24
25
26
28
29
30
31
32
33
34
35



KEY MAP

BUILDING LIST

①	POLE BARN
②	MULTI-USE BUILDING/KITCHEN
③	PUMP HOUSE BUILDING
④	PARKING LOT (GRAVEL)
⑤	GRAVEL ENTRANCE ROAD
⑥	TENT CAMPSITE #1 UPPER CAMPSITE
⑦	TENT CAMPSITE #2 UPPER CAMPSITE
⑧	TENT CAMPSITE #3 LOWER CAMPSITES
⑨	STORAGE TRAILERS (REMOVED IN 2021)
⑩	WATER TANKS
⑪	CAMPFIRE CIRCLE
⑫	SERVICE YARD
⑬	POWER POLE
⑭	MULTI-PURPOSE BUILDING (VALLEY FOUNDATION LODGE)
⑮	CAMP OFFICE & FIRST AID CENTER
⑯	STORAGE AND MAINTENANCE BUILDING
⑰	NATURE LODGE
⑱	CARETAKER'S HOUSE
⑲	CAMPSITE LATRINE #1
⑳	CAMPSITE LATRINE #2
㉑	CAMPSITE LATRINE #3
㉒	CAMPSITE LATRINE #4 (REMOVED)
㉓	SMALL GROUP SLEEPING SHELTERS (REMOVED)
㉔	NEW CAMPSITE
㉕	NEW CAMPSITE
㉖	VALLEY FOUNDATION TRAINING CENTER
㉗	SHOWER AND RESTROOM BUILDING
㉘	CABINS FOR SHORT TERM CAMPING
㉙	TEACHING COVERED PAVILIONS
㉚	CLIMBING AND RAPPELLING TOWER
㉛	REPLACEMENT FOR EXISTING WATER TANKS
㉜	RECYCLING AND TRASH ENCLOSURE
㉝	RESTROOM – PARKING LOT
㉞	BB GUN INSTRUCTIONAL AREA
㉟	ARCHERY INSTRUCTIONAL AREA

Base by Sandis, CSR Buildings - C-1.0, dated 04/17/2024

Legend

🟥	Approximate location of test pit (TP) (Cornerstone, 2024)
⌖	Approximate location of hand auger boring (HA) (Cornerstone, 2023)

N

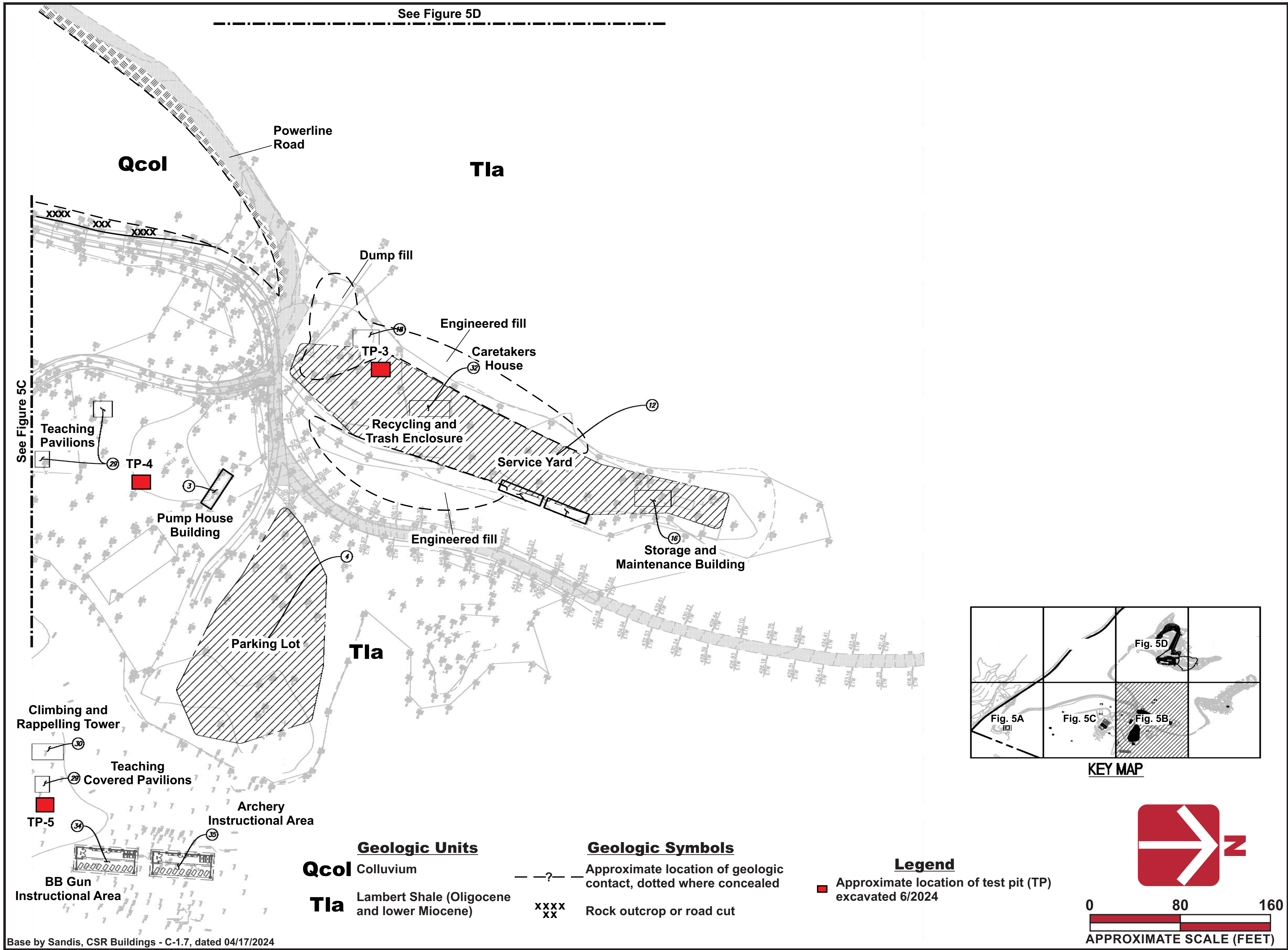
0 250 500
APPROXIMATE SCALE (FEET)

Project Number 1360-2-3
Figure Number Figure 5
Drawn By RRN
Date July 2024

Overall Site and Geologic Map

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE
EARTH GROUP


See Figure 5D
Powerline Road
Qcol
Tla
xxxx
xxx
xxxx
Dump fill
Engineered fill
18
TP-3
Caretakers House
32
12
Recycling and Trash Enclosure
Service Yard
See Figure 5C
Teaching Pavilions
29
TP-4
3
Pump House Building
Engineered fill
16
Storage and Maintenance Building
4
Parking Lot
Tla
Climbing and Rappelling Tower
30
Teaching Covered Pavilions
29
TP-5
Archery Instructional Area
34
35
BB Gun Instructional Area
Fig. 5D
Fig. 5A
Fig. 5C
Fig. 5B
KEY MAP
N
0
80
160
APPROXIMATE SCALE (FEET)

Geologic Units

Qcol	Colluvium
Tla	Lambert Shale (Oligocene and lower Miocene)

Geologic Symbols

— —?— —	Approximate location of geologic contact, dotted where concealed
xxxx xx	Rock outcrop or road cut

Legend

🟥 Approximate location of test pit (TP) excavated 6/2024

Base by Sandis, CSR Buildings - C-1.7, dated 04/17/2024

Enlarged Site and Geologic Map - Trash Enclosure Area

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3

Figure Number Figure 5B

Date December 2024

Drawn By RRN

CORNERSTONE EARTH GROUP

Project Number 1360-2-3

Figure Number Figure 5C

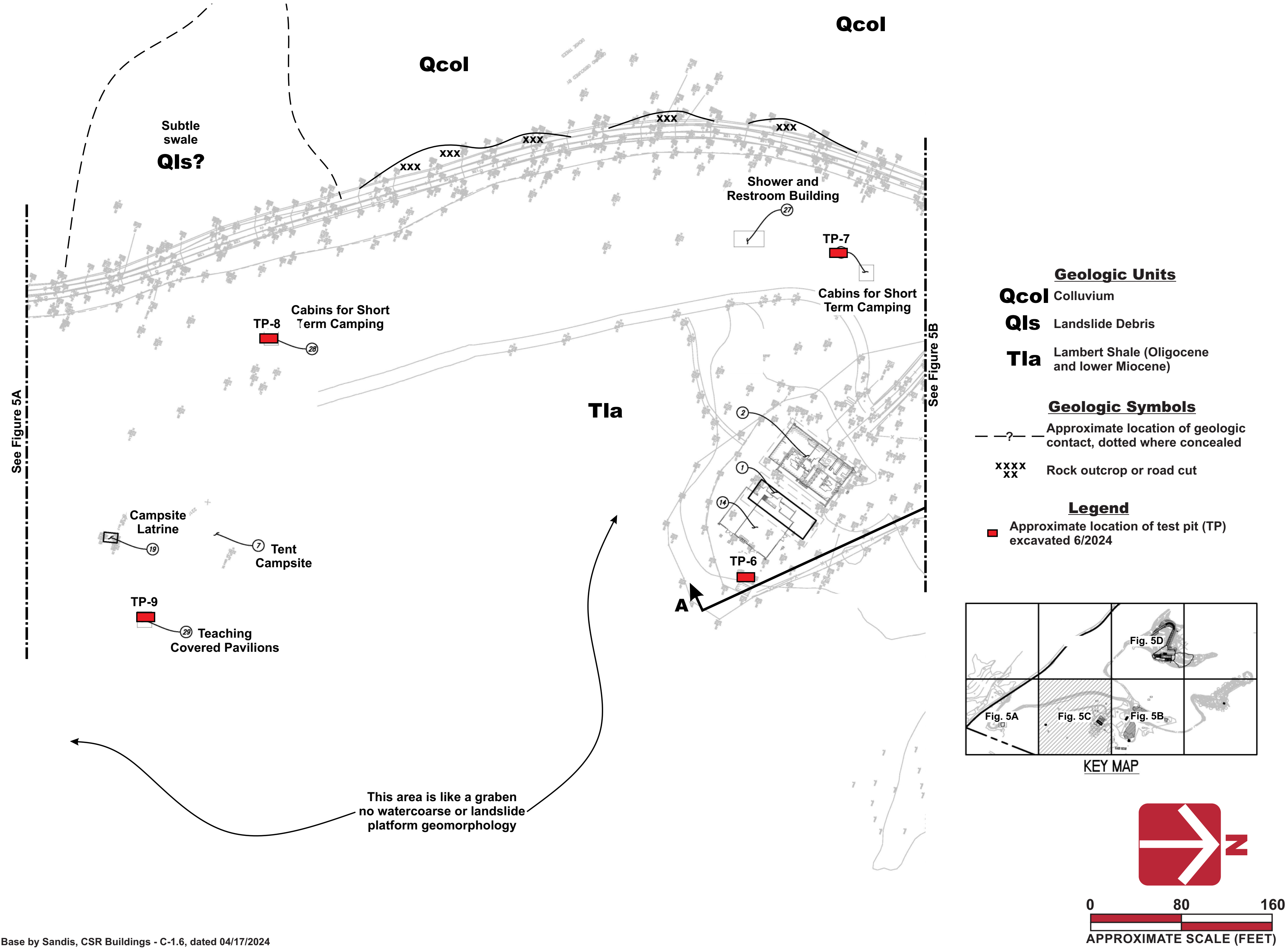
Drawn By RRN

Date December 2024

Enlarged Site and Geologic Map - Cabin Area

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE EARTH GROUP


Qcol
Qcol
Subtle swale
Qls?
xxx
xxx
xxx
xxx
xxx
Shower and Restroom Building
27
TP-7
Cabins for Short Term Camping
TP-8
Cabins for Short Term Camping
28
See Figure 5A
See Figure 5B
Tla
2
1
14
TP-6
A
Campsite Latrine
19
7
Tent Campsite
TP-9
29
Teaching Covered Pavilions
This area is like a graben no watercoarse or landslide platform geomorphology
Fig. 5D
Fig. 5A
Fig. 5C
Fig. 5B
KEY MAP
N
0
80
160
APPROXIMATE SCALE (FEET)

Geologic Units

Qcol	Colluvium
Qls	Landslide Debris
Tla	Lambert Shale (Oligocene and lower Miocene)

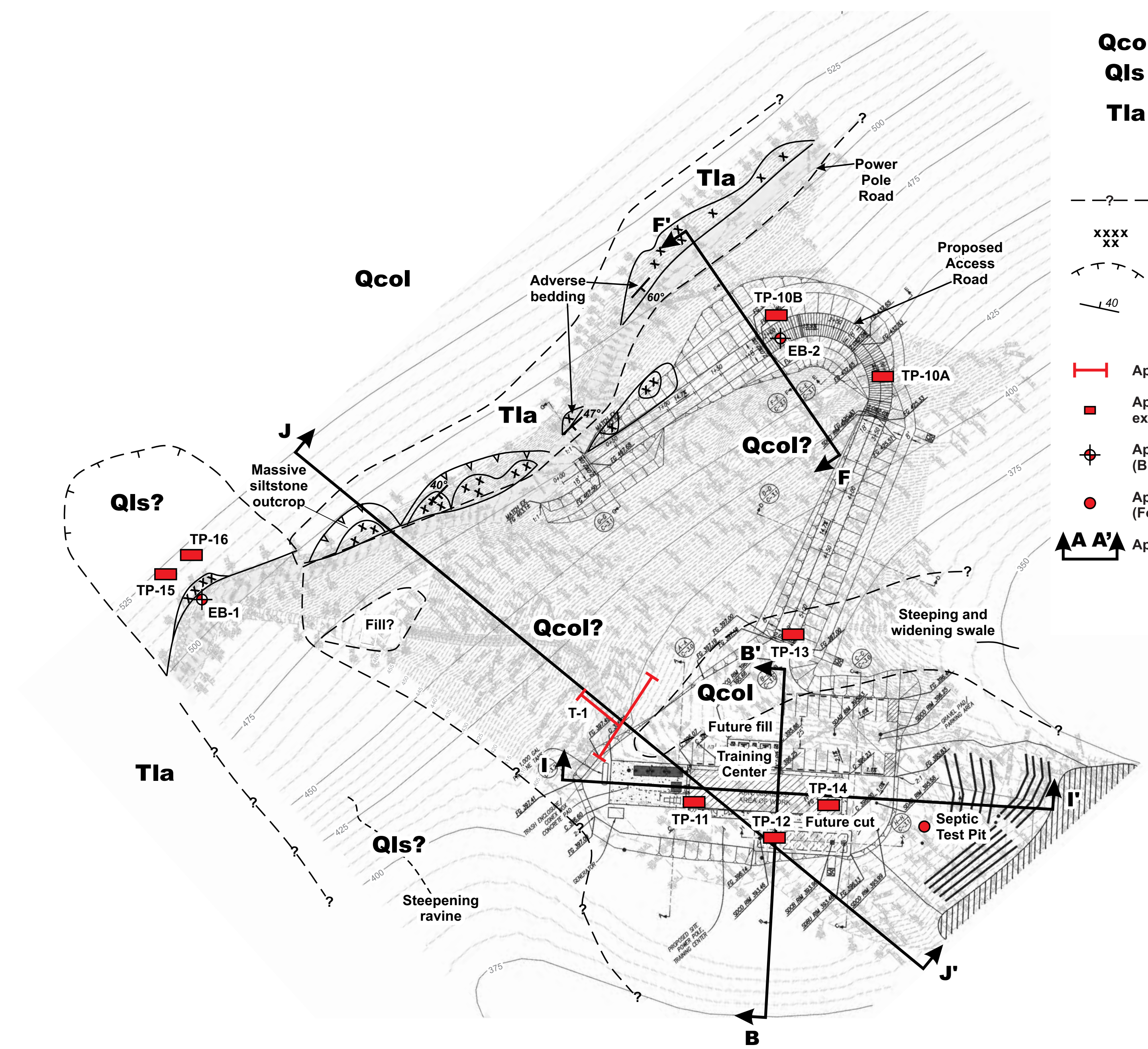
Geologic Symbols

— —?— —	Approximate location of geologic contact, dotted where concealed
xxxx xx	Rock outcrop or road cut

Legend

🟥	Approximate location of test pit (TP) excavated 6/2024

Base by Sandis, CSR Buildings - C-1.6, dated 04/17/2024


Tla
Power Pole Road
F'
Qcol
Adverse bedding
60°
Proposed Access Road
TP-10B
EB-2
TP-10A
Tla
47°
J
Qcol?
F
Qls?
Massive siltstone outcrop
40°
TP-16
TP-15
EB-1
Fill?
Qcol?
Steeping and widening swale
B'
TP-13
Qcol
T-1
Future fill
Training Center
I
I'
TP-14
Tla
TP-11
TP-12
Future cut
Septic Test Pit
Qls?
Steepening ravine
J'
B
525
500
475
450
425
400
375
350

Base by Sandis, Grading Plan - C-2.0, dated 11/14/2024

Geologic Units

Qcol	Colluvium
Qls	Landslide Debris
Tla	Lambert Shale (Oligocene and lower Miocene)

Geologic Symbols

— —?— —	Approximate location of geologic contact, dotted where concealed
xxxx xx	Rock outcrop or road cut
⌒	Landslide scarp
40	Strike and dip of bedding

Legend

⊢⊣	Approximate location of trench (T)
🟥	Approximate location of test pit (TP) excavated 6/2024
⊕	Approximate location of boring (EB) (Britton)
●	Approximate location of OWTS test pit (Fox Solutions, 2023)
A A'	Approximate location of cross section

N

0 80 160

APPROXIMATE SCALE (FEET)

Site and Geologic Map - Training Center Area

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

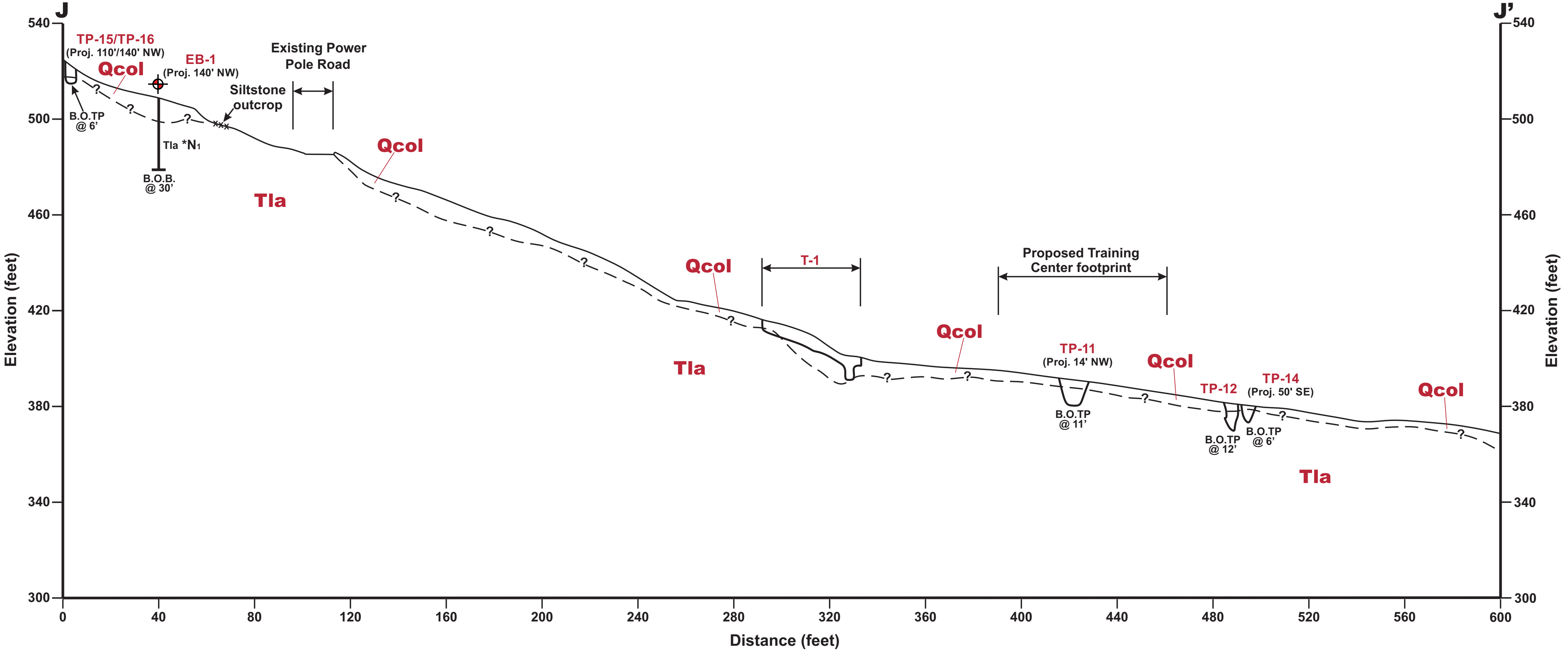
Project Number 1360-2-3

Figure Number Figure 5

Date March 2025

Drawn By RRN

CORNERSTONE
EARTH GROUP


J
J'
540
500
460
420
380
340
300
Elevation (feet)
TP-15/TP-16
(Proj. 110'/140' NW)
Qcol
EB-1
(Proj. 140' NW)
Existing Power
Pole Road
Siltstone
outcrop
B.O.TP
@ 6'
?
Tla *N1
B.O.B.
@ 30'
Tla
Qcol
Qcol
T-1
Proposed Training
Center footprint
Tla
Qcol
TP-11
(Proj. 14' NW)
Qcol
B.O.TP
@ 11'
TP-12
TP-14
(Proj. 50' SE)
B.O.TP
@ 12'
B.O.TP
@ 6'
Qcol
Tla
0
40
80
120
160
200
240
280
320
360
400
440
480
520
560
600
Distance (feet)

Section J-J'

(View Looking Northwest)
1"=40' H:V

Explanation

Geologic Units

Qcol	Colluvium
Qls	Landslide deposits
Tla	Lambert Shale (Oligocene and lower Miocene)

Symbols

CL	Lean Clay
TP-11/T-1	Approximate location of test pit (TP) / trench (T)

* Notes: N_1 = Dipping ~40° NE, Projected ~50' SE.

Notes:
1) Surficial fills associated with existing pavements, landscaping or utilities are not shown.
2) The subsurface profile is conceptual and is based on limited subsurface data obtained from widely spaced borings. Actual subsurface conditions may vary significantly between borings.
3) See Figure 5 for location of cross section.

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EARTH GROUP

Geologic Cross Section J-J'

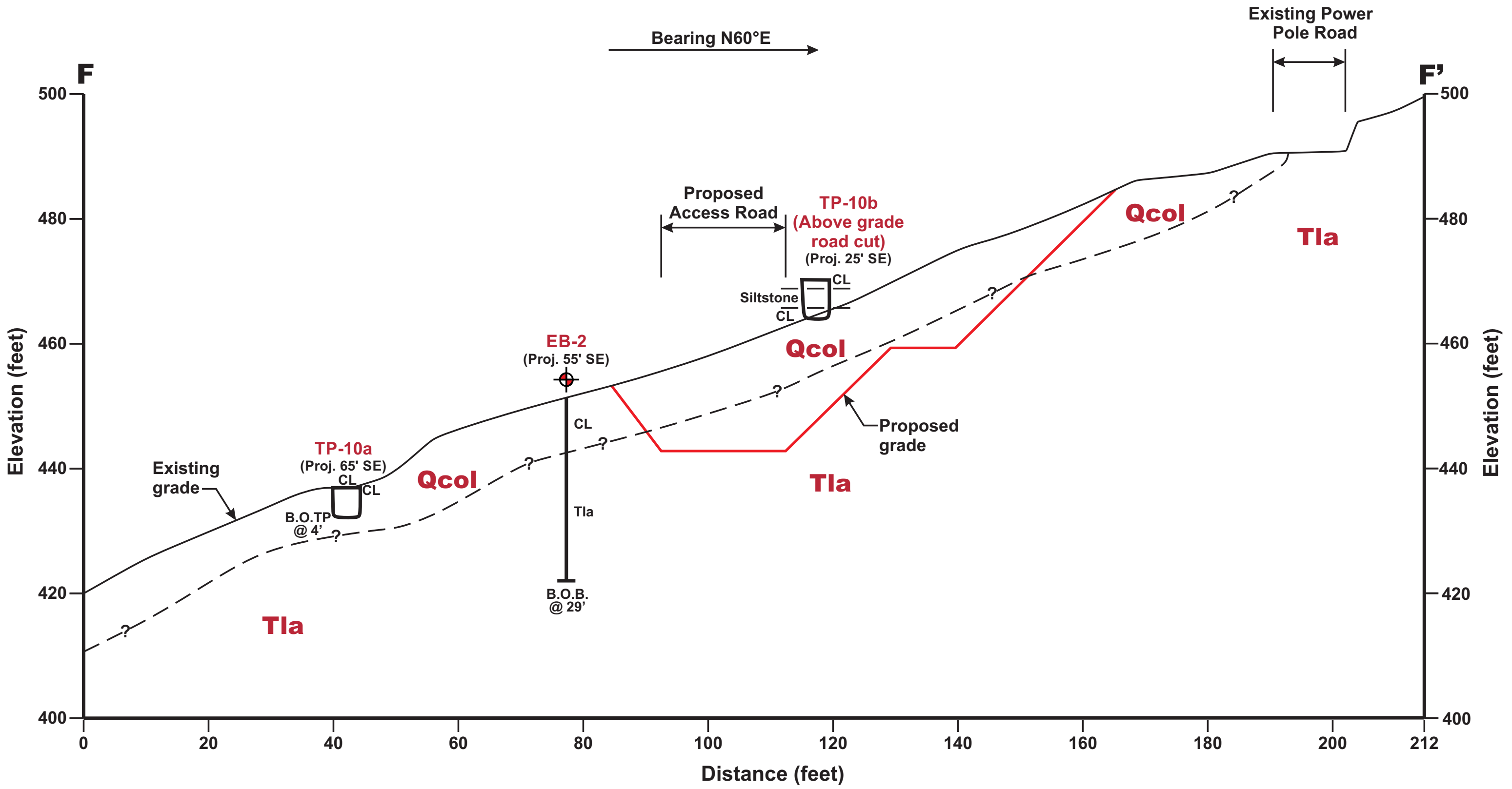
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

Figure Number
Figure 6c

Date
March 2025

Drawn By
RRN


Bearing N60°E
Existing Power Pole Road
F
F'
500
480
460
440
420
400
Elevation (feet)
Proposed Access Road
TP-10b (Above grade road cut) (Proj. 25' SE)
CL
Siltstone
CL
Qcol
Tla
EB-2 (Proj. 55' SE)
CL
Tla
B.O.B. @ 29'
Qcol
Proposed grade
Tla
Existing grade
TP-10a (Proj. 65' SE)
CL
CL
B.O.TP @ 4'
Qcol
Tla
?
0
20
40
60
80
100
120
140
160
180
200
212
Distance (feet)

Section F-F'

(View Looking Southeast)
1"=20' H:V

Explanation

Geologic Units

Tla Lambert Shale (Oligocene and lower Miocene)

Symbols

CL	Lean Clay
⌖	Approximate location of boring (EB) (Britton)
TP-10b	Approximate location of test pit (TP)

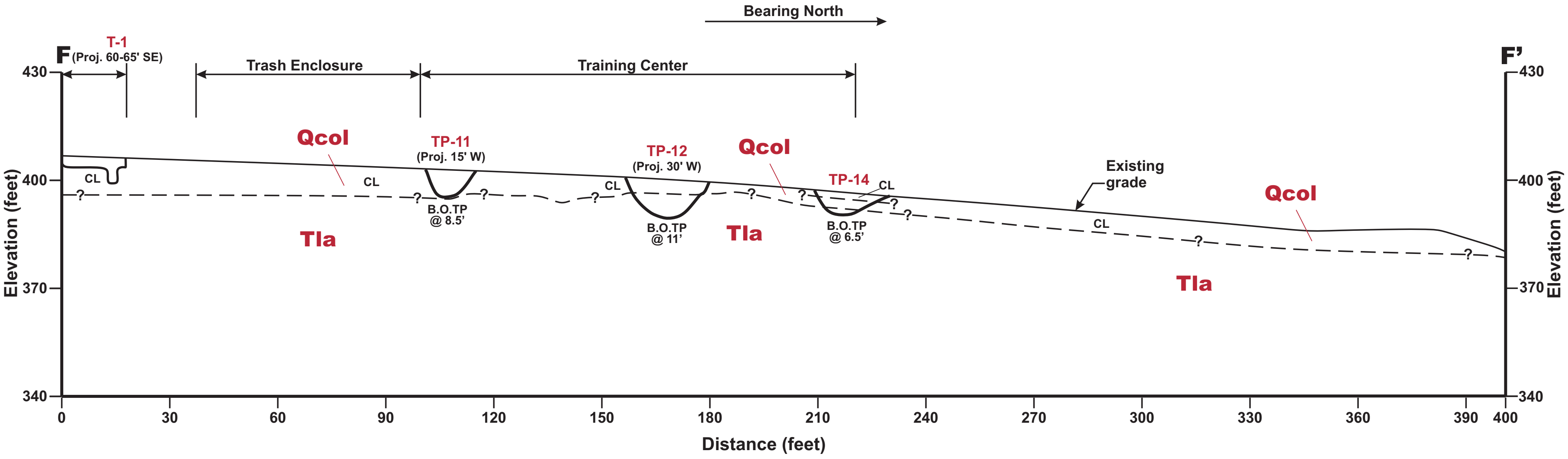
Notes:
1) Surficial fills associated with existing pavements, landscaping or utilities are not shown.
2) The subsurface profile is conceptual and is based on limited subsurface data obtained from widely spaced borings. Actual subsurface conditions may vary significantly between borings.
3) See Figure 5 for location of cross section.

Project Number 1360-2-3
Figure Number Figure 6d
Drawn By RRN
Date March 2025

Geologic Cross Section F-F'

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE
EARTH GROUP


Bearing North
F
F'
T-1
(Proj. 60-65' SE)
Trash Enclosure
Training Center
430
400
370
340
Elevation (feet)
Qcol
TP-11
(Proj. 15' W)
TP-12
(Proj. 30' W)
TP-14
CL
?
B.O.TP @ 8.5'
B.O.TP @ 11'
B.O.TP @ 6.5'
Tla
Existing grade
0
30
60
90
120
150
180
210
240
270
300
330
360
390
400
Distance (feet)

Section I-I'

(View Looking West)
1"=30' H:V

Explanation

Geologic Units		Symbols	
Qcol	Colluvium	CL	Lean Clay
Tla	Lambert Shale (Oligocene and lower Miocene)	TP-12	Approximate location of test pit (TP)

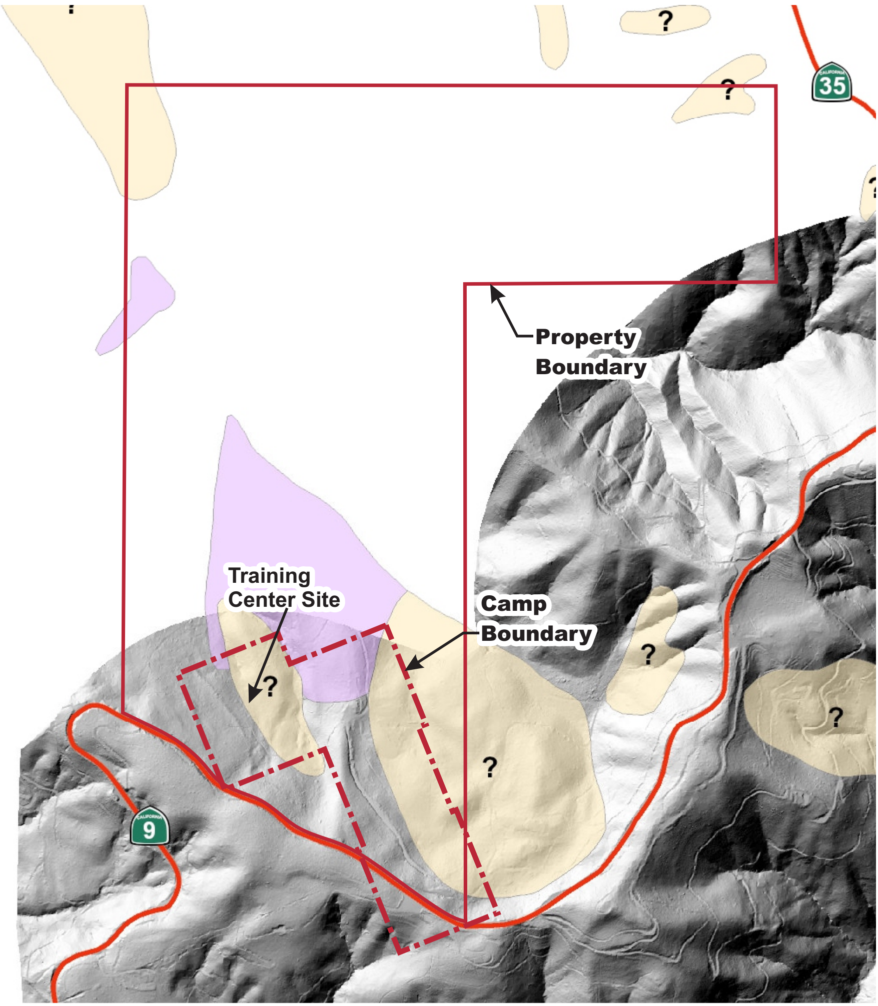
Notes:
1) Surficial fills associated with existing pavements, landscaping or utilities are not shown.
2) The subsurface profile is conceptual and is based on limited subsurface data obtained from widely spaced borings. Actual subsurface conditions may vary significantly between borings.
3) See Figure 5 for location of cross section.

Project Number 1360-2-3
Figure Number Figure 6e
Drawn By RRN
Date March 2025

Geologic Cross Section I-I'

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE EARTH GROUP



State Highways

🟥 State Highways

Major Roads

— Major Roads

County Landslide Map

🟫 D- Definite Landslide Deposit

🟩 DR- Definite Rapid Landslide Deposit

🟧 P - Probable Landslide Deposit

🟨 ? - Questionable Landslide Deposit

🟪 Unattributed Landslide Deposit

N

0 1000 2000

APPROXIMATE SCALE (FEET)

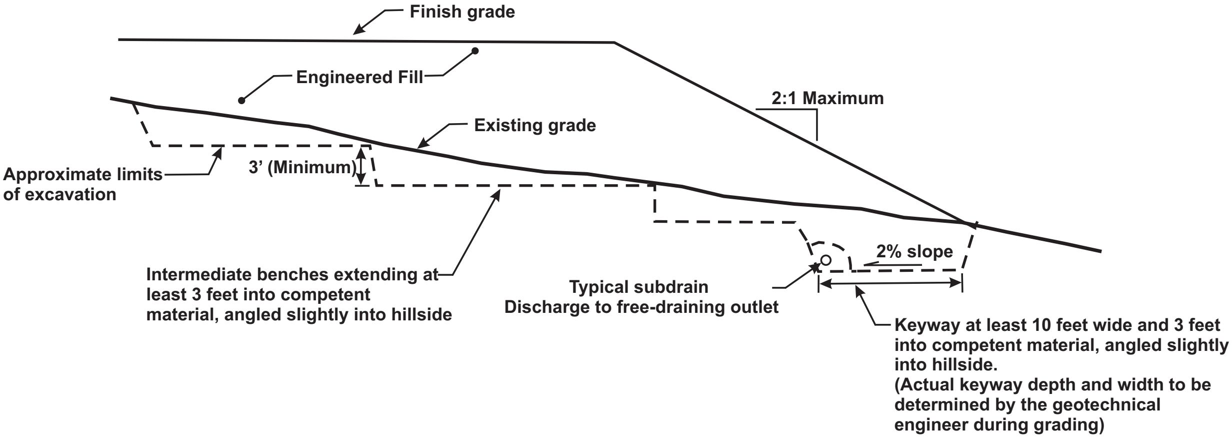
Base: County of Santa Cruz, San Mateo County Resource Conservation District, Cal Fire, California Department of Parks and Recreation, Tukman Geospatial LLC, MidPeninsula Regional Open SpaceDistrict.

CORNERSTONE
EARTH GROUP

County Landslide Hazard Map

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number	1360-2-3
Figure Number	Figure 7
Date	January 2025
Drawn By	RRN


Finish grade
Engineered Fill
2:1 Maximum
Existing grade
Approximate limits of excavation
3' (Minimum)
Intermediate benches extending at least 3 feet into competent material, angled slightly into hillside
Typical subdrain
Discharge to free-draining outlet
2% slope
Keyway at least 10 feet wide and 3 feet into competent material, angled slightly into hillside.
(Actual keyway depth and width to be determined by the geotechnical engineer during grading)

Typical Keyway and Benching Detail

Not to scale

Note: Fill slopes should be over-built at least 18 inches and trimmed to expose compacted fill.

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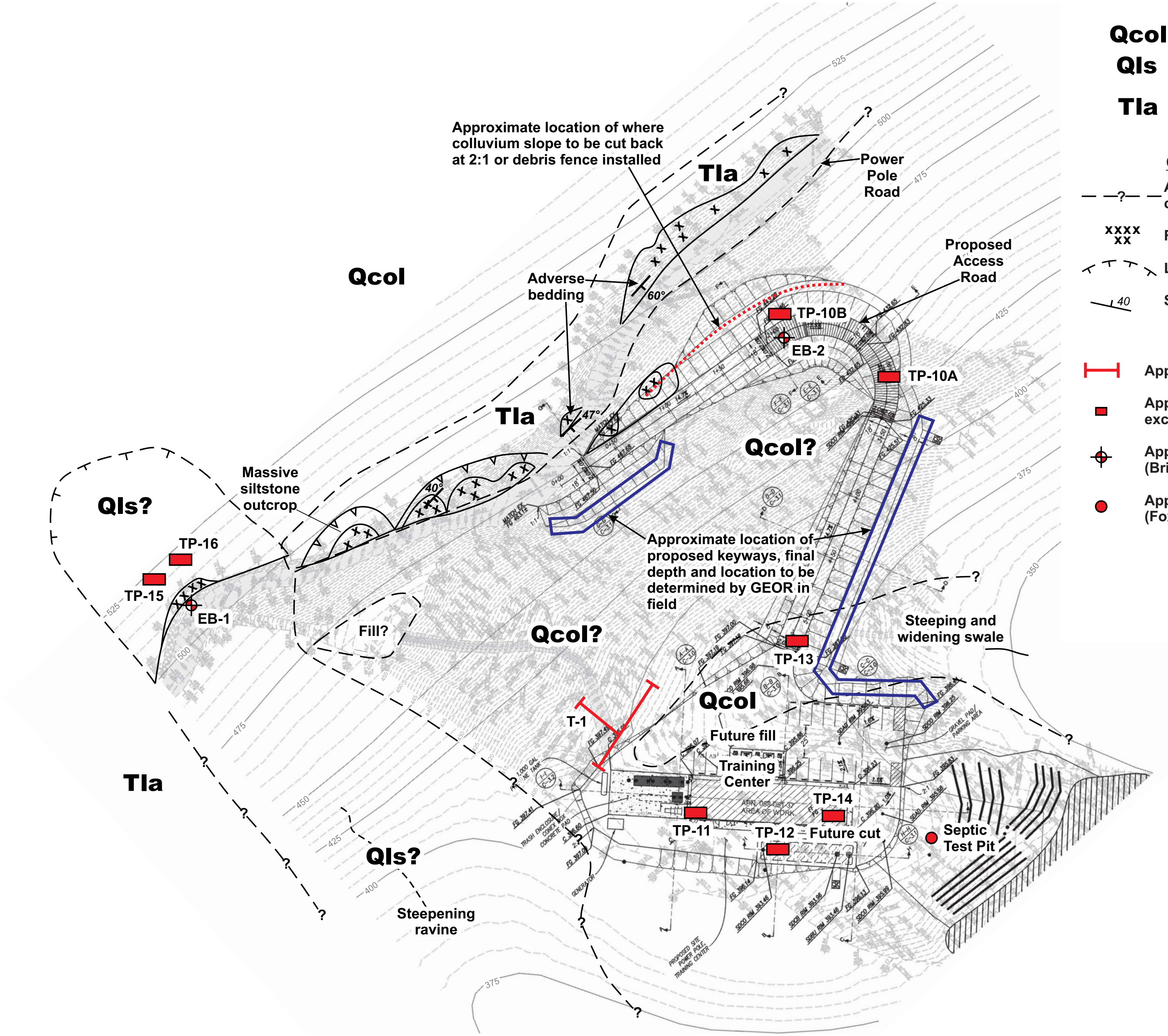
EARTH GROUP

Typical Keyway and Benching Detail

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number	1360-2-3
Figure Number	Figure 7
Date	February 2025
Drawn By	RRN


Approximate location of where colluvium slope to be cut back at 2:1 or debris fence installed
Tla
Power Pole Road
Qcol
Adverse bedding
60°
Proposed Access Road
TP-10B
EB-2
TP-10A
Tla
47°
Qcol?
Qls?
Massive siltstone outcrop
40°
TP-16
TP-15
EB-1
Approximate location of proposed keyways, final depth and location to be determined by GEOR in field
Fill?
Qcol?
Steeping and widening swale
TP-13
Qcol
T-1
Future fill
Training Center
TP-14
TP-11
TP-12
Future cut
Septic Test Pit
Tla
Qls?
Steepening ravine
525
500
475
450
425
400
375
350
?

Geologic Units

Qcol	Colluvium
Qls	Landslide Debris
Tla	Lambert Shale (Oligocene and lower Miocene)

Geologic Symbols

— —?— —	Approximate location of geologic contact, dotted where concealed
xxxx xx	Rock outcrop or road cut
⌒	Landslide scarp
40	Strike and dip of bedding

Legend

├─┤	Approximate location of trench (T)
🟥	Approximate location of test pit (TP) excavated 6/2024
⊕	Approximate location of boring (EB) (Britton)
●	Approximate location of OWTS test pit (Fox Solutions, 2023)

0 80 160
APPROXIMATE SCALE (FEET)

N

Base by Sandis, Grading Plan - C-2.0, dated 11/14/2024

Project Number	1360-2-3
Figure Number	Figure 9
Date	March 2025
Drawn By	RRN

Site Mitigation Map - Training Center Area

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE EARTH GROUP

APPENDIX A: FIELD INVESTIGATION

The field investigation consisted of a surface reconnaissance and a subsurface exploration program using track-mounted limited-access hollow-stem auger and mud-rotary drilling equipment. Two 8-inch-diameter exploratory borings were drilled on January 22, 2025 to depths of 29½ to 30 feet. Fourteen test pits were also performed on June 20, September 4, and November 5, 2024 by track-mounted medium and mini excavators and 1 trench was excavated on November 5 and 21, 2024, to depths ranging from 4½ to 11 feet. The approximate locations of exploratory borings, test pits, and trench are shown on the Site Plan, Figure 5B through 5D. The soils encountered were logged in the field by our representative and described in accordance with the Unified Soil Classification System (ASTM D2488). Boring logs, test pit logs, and trench logs, as well as a key to the classification of the soil and bedrock, are included as part of this appendix.

Boring, test pit, and trench locations were approximated using existing site boundaries and other site features as references. Elevations of explorations were not determined. The locations of the borings, test pits, and trench should be considered accurate only to the degree implied by the method used.

Representative soil samples were obtained from the borings at selected depths. All samples were returned to our laboratory for evaluation and appropriate testing. The standard penetration resistance blow counts were obtained by dropping a 140-pound hammer through a 30-inch free fall. The 2-inch O.D. split-spoon sampler was driven 18 inches and the number of blows was recorded for each 6 inches of penetration (ASTM D1586). 2.5-inch I.D. samples were obtained using a Modified California Sampler driven into the soil with the 140-pound hammer previously described. Relatively undisturbed samples were also obtained with 2.875-inch I.D. Pitcher Barrel Tube sampler which were drilled forward. Rock coring was performed using a NX Rock Core sampler. Unless otherwise indicated, the blows per foot recorded on the boring log represent the accumulated number of blows required to drive the last 12 inches. The various samplers are denoted at the appropriate depth on the boring logs.

Field tests included an evaluation of the unconfined compressive strength of the soil samples using a pocket penetrometer device. The results of these tests are presented on the individual boring logs at the appropriate sample depths.

Attached boring, test pit, and trench logs and related information depict subsurface conditions at the locations indicated and on the date designated on the logs. Subsurface conditions at other locations may differ from conditions occurring at these boring, test pit, and trench locations. The passage of time may result in altered subsurface conditions due to environmental changes. In addition, any stratification lines on the logs represent the approximate boundary between soil types and the transition may be gradual.

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-10)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND	
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE	CLEAN GRAVELS <5% FINES	Cu>4 AND 1<Cc<3	GW	WELL-GRADED GRAVEL	●
			Cu>4 AND 1>Cc>3	GP	POORLY-GRADED GRAVEL	○
		GRAVELS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL	○
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL	▨
	SANDS >50% OF COARSE FRACTION PASSES ON NO 4. SIEVE	CLEAN SANDS <5% FINES	Cu>6 AND 1<Cc<3	SW	WELL-GRADED SAND	░
			Cu>6 AND 1>Cc>3	SP	POORLY-GRADED SAND	░
		SANDS AND FINES >12% FINES	FINES CLASSIFY AS ML OR CL	SM	SILTY SAND	▥
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND	▨
FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT<50	INORGANIC	PI>7 AND PLOTS>"A" LINE	CL	LEAN CLAY	▨
			PI>4 AND PLOTS<"A" LINE	ML	SILT	▥
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OL	ORGANIC CLAY OR SILT	▤
	SILTS AND CLAYS LIQUID LIMIT>50	INORGANIC	PI PLOTS >"A" LINE	CH	FAT CLAY	▨
			PI PLOTS <"A" LINE	MH	ELASTIC SILT	▥
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OH	ORGANIC CLAY OR SILT	▤
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR		PT	PEAT	⁂

OTHER MATERIAL SYMBOLS

- ▨ Poorly-Graded Sand with Clay
- ▨ Clayey Sand
- ▥ Sandy Silt
- ▩ Artificial/Undocumented Fill
- ░ Poorly-Graded Gravelly Sand
- ░ Topsoil
- ● Well-Graded Gravel with Clay
- ● Well-Graded Gravel with Silt
- ░ Sand
- ▥ Silt
- ░ Well Graded Gravelly Sand
- ▥ Gravelly Silt
- ■ Asphalt
- ● Boulders and Cobble

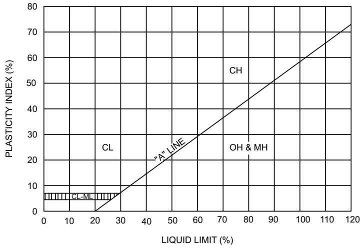
SAMPLER TYPES

☒	SPT	■	Shelby Tube
⧗	Modified California (2.5" I.D.)	○	No Recovery
▯	Rock Core	✋	Grab Sample

ADDITIONAL TESTS

CA	-	CHEMICAL ANALYSIS (CORROSIVITY)	PI	-	PLASTICITY INDEX
CD	-	CONSOLIDATED DRAINED TRIAXIAL	SW		SWELL TEST
CN	-	CONSOLIDATION	TC	-	CYCLIC TRIAXIAL
CU	-	CONSOLIDATED UNDRAINED TRIAXIAL	TV	-	TORVANE SHEAR
DS	-	DIRECT SHEAR	UC	-	UNCONFINED COMPRESSION
PP	-	POCKET PENETROMETER (TSF)	(1.5)	-	(WITH SHEAR STRENGTH IN KSF)
(3.0)	-	(WITH SHEAR STRENGTH IN KSF)	UU	-	UNCONSOLIDATED UNDRAINED TRIAXIAL
RV	-	R-VALUE			
SA	-	SIEVE ANALYSIS: % PASSING #200 SIEVE			
▼	-	WATER LEVEL			

PLASTICITY CHART



PENETRATION RESISTANCE (RECORDED AS BLOWS / FOOT)				
SAND & GRAVEL		SILT & CLAY		
RELATIVE DENSITY	BLOWS/FOOT*	CONSISTENCY	BLOWS/FOOT*	STRENGTH** (KSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.5
MEDIUM DENSE	10 - 30	MEDIUM STIFF	4 - 8	0.5-1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

* NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

** UNDRAINED SHEAR STRENGTH IN KIPS/SQ. FT. AS DETERMINED BY LABORATORY TESTING OR APPROXIMATED BY THE STANDARD PENETRATION TEST, POCKET PENETROMETER, TORVANE, OR VISUAL OBSERVATION.

CORNERSTONE
EARTH GROUP

LEGEND TO SOIL DESCRIPTIONS

Figure Number
A-1

HARDNESS

Soft – Reserved for plastic material alone.
Low hardness – Can be gouged deeply or carved easily with a knife blade.
Moderately hard – Can be readily scratched by a knife blade: scratch leaves a heavy trace of dust and is readily visible after the powder has been blown away.
Hard – Can be scratched with difficulty: scratch produces little powder and is often faintly visible.
Very hard – Cannot be scratched with knife blade: leaves a metallic streak.

STRENGTH

Plastic or very low strength.
Friable – Crumbles easily by rubbing with fingers.
Weak – An unfractured specimen of such material will crumble under light hammer blows.
Moderately strong – Specimen will withstand a few heavy hammer blows before breaking.
Strong – Specimen will withstand a few heavy ringing blows and will yield with difficulty only dust and small flying fragments.
Very strong – Specimen will resist heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments.

WEATHERING – The physical and chemical disintegration and decomposition of rocks and minerals by natural processes such as oxidation, reduction, hydration, solution, carbonation, and freezing and thawing.

Deep – Moderate to complete mineral decomposition: extensive disintegration: deep and thorough discoloration: many fractures, all extensively coated or filled with oxides, carbonates and/or clay or silt.
Moderate – Slight change or partial decomposition of minerals: little disintegration: cementation little to unaffected. Moderate to occasionally intense discoloration. Moderately coated fractures.
Little – No megascopic decomposition of minerals: little or no effect on normal cementation. Slight and intermittent, or localized discoloration. Few stains or fracture surfaces.
Fresh – Unaffected by weathering agents. No disintegration or discoloration. Fractures usually less numerous than joints.

FRACTURING

Intensity	**Size of Pieces in Feet**
Very little fractured	Greater than 4.0
Occasionally fractured	1.0 to 4.0
Moderately fractured	0.5 to 1.0
Closely fractured	0.1 to 0.5
Intensely fractured	0.05 to 0.1
Crushed	Less than 0.05

BEDDING OF SEDIMENTARY ROCKS

Splitting Property	**Thickness**	**Stratification**
Massive	Greater than 4.0 feet	very thick-bedded
Blocky	2.0 to 4.0 feet	thick-bedded
Slabby	0.2 to 2.0 feet	thin-bedded
Flaggy	0.05 to 0.2 feet	very thin-bedded
Shaly or Platy	0.01 to 0.05 feet	laminated
Papery	less than 0.01 feet	thinly laminated

CORNERSTONE
EARTH GROUP

Physical Properties of Rock Descriptions

Figure Number
A-2

CORNERSTONE EARTH GROUP

BORING NUMBER EB-1

PAGE 1 OF 1

PROJECT NAME Chesebrough Boy Scout Camp
PROJECT NUMBER 1360-2-3
PROJECT LOCATION Los Gatos, CA
DATE STARTED 1/22/25 **DATE COMPLETED** 1/22/25
GROUND ELEVATION **BORING DEPTH** 30 ft.
DRILLING CONTRACTOR Britton Exploration
LATITUDE 37.248000° **LONGITUDE** -122.148668°
DRILLING METHOD CME 55 Track Rig, 6 inch rotary wash
GROUND WATER LEVELS:
LOGGED BY BTM
∇ **AT TIME OF DRILLING** Not measured due to rotary wash
NOTES Undisturbed samples obtained by Pitcher Barrel method.
▼ **AT END OF DRILLING** Not measured due to rotary wash

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL

ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf (1.0 2.0 3.0 4.0)
	0	▨	**Lean Clay (CL)** very stiff, moist, dark brown and brown mottled, some fine to medium sand, trace organics, moderate plasticity *Hollow-stem augered to 5 feet, then converted to rotary wash.*	14	MC					○
		▨		23	MC					>4.5 ○
		▨	**Lean Clay (CL) [Qcol]** very stiff to hard, moist, light brown to reddish brown, some fine to medium sand, trace coarse sand, some subangular gravel, moderate plasticity							
	5	▨			UNDIST					
		▨	*Drained Residual Torsional Shear Strength & Drained Fully Softened Torsional Shear Strength at 9.0 feet.*	50 5"	MC					
	10	▩	**Lambert Shale [Tla]** low hardness, friable, moderate to little weathering, olive brown, moderate plasticity							
		▩	*Unconfined Compressive Strength and Young's Modulus of Rock Core at 14.5 feet.*	63	MC-5B	103	20			
	15	▩								
		▩		50 4"	MC					
	20	▩								
		▩	Faceted surfaces and rock fabric apparent at 23.5 feet.	36	MC					
	25	▩								
		▩		60	MC					
	30		Bottom of Boring at 30.0 feet.							

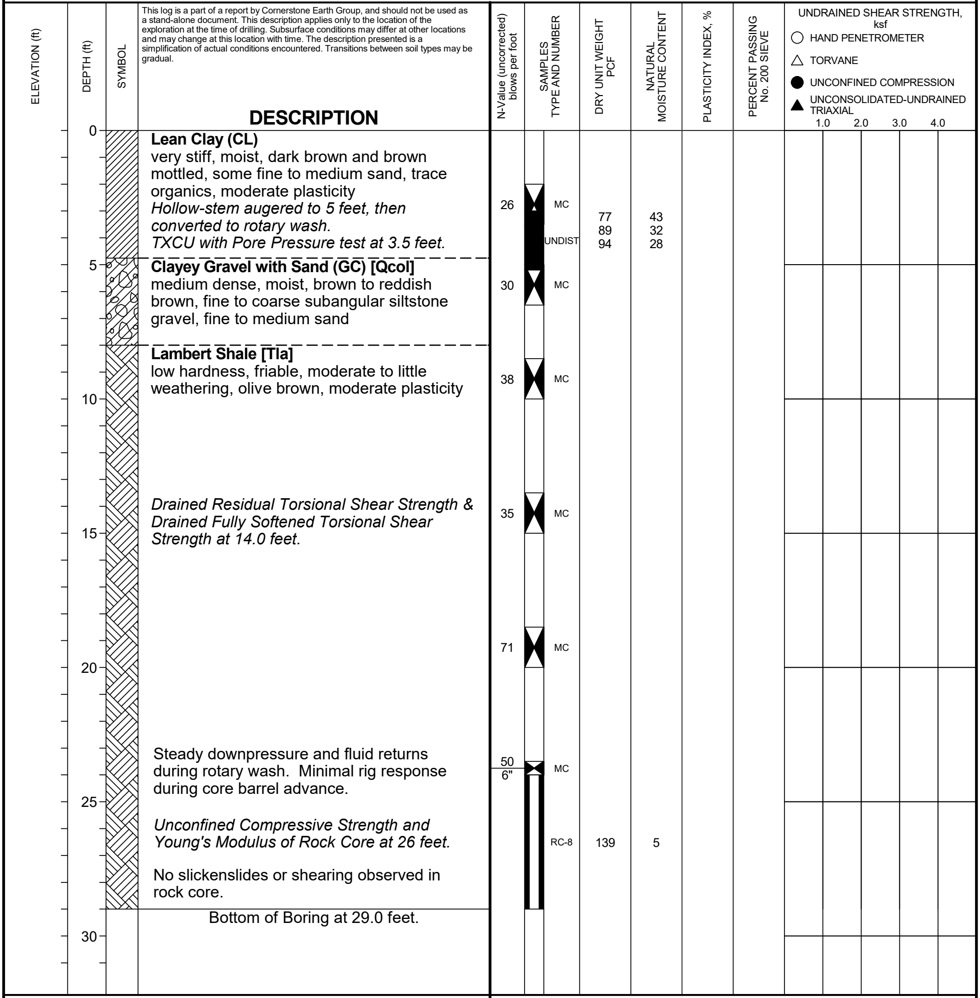
BORING NUMBER EB-2

PAGE 1 OF 1

CORNERSTONE EARTH GROUP

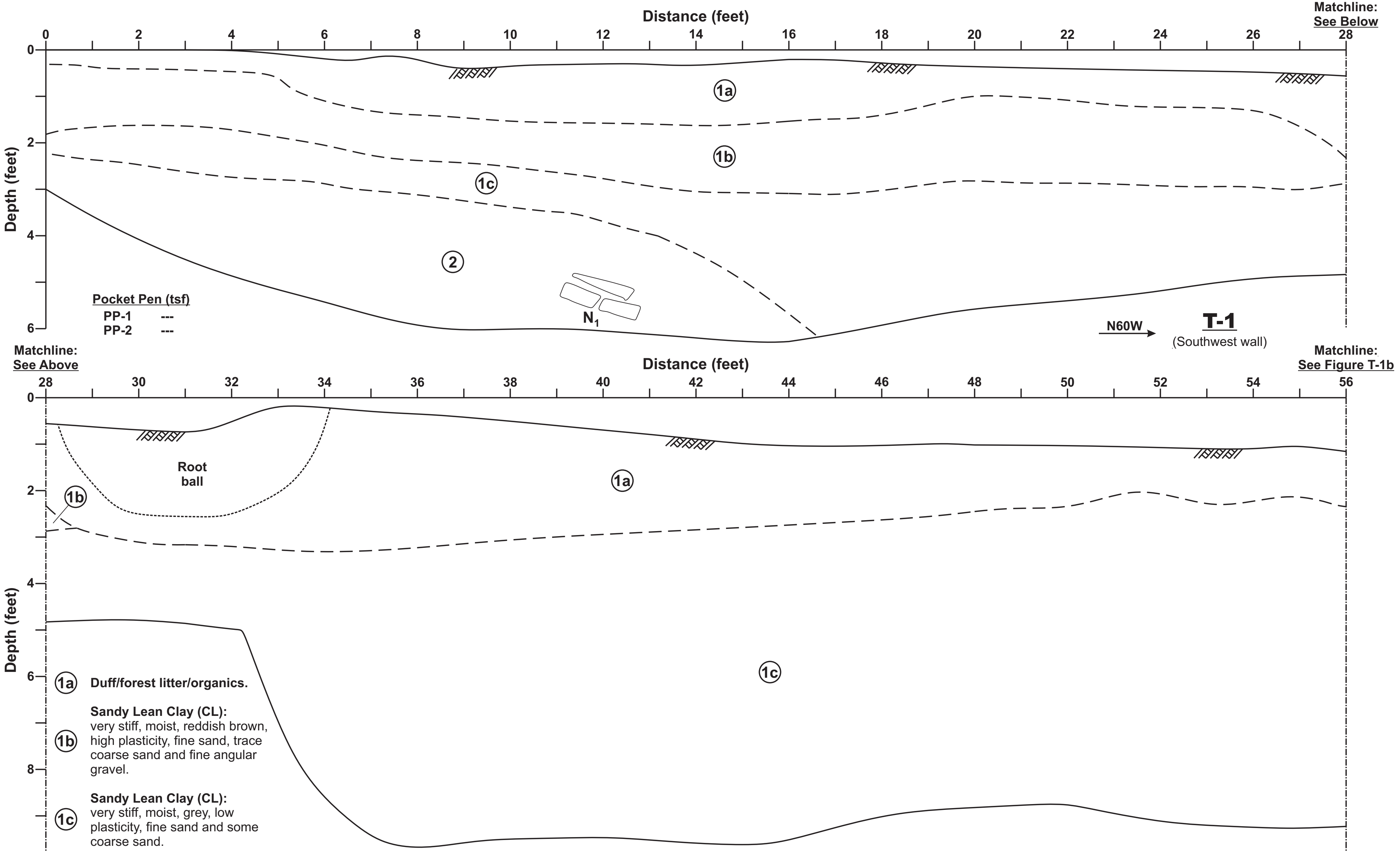
PROJECT NAME Chesebrough Boy Scout Camp
PROJECT NUMBER 1360-2-3
PROJECT LOCATION Los Gatos, CA
DATE STARTED 1/22/25 **DATE COMPLETED** 1/22/25
GROUND ELEVATION **BORING DEPTH** 29 ft.
DRILLING CONTRACTOR Britton Exploration
LATITUDE 37.248000° **LONGITUDE** -122.148668°
DRILLING METHOD CME 55 Track Rig, 6 inch rotary wash
GROUND WATER LEVELS:
LOGGED BY BTM
▽ **AT TIME OF DRILLING** Not measured due to rotary wash
NOTES Undisturbed samples obtained by Pitcher Barrel method.
▼ **AT END OF DRILLING** Not measured due to rotary wash

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.



UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
	0		**Lean Clay (CL)** very stiff, moist, dark brown and brown mottled, some fine to medium sand, trace organics, moderate plasticity *Hollow-stem augered to 5 feet, then converted to rotary wash.* *TXCU with Pore Pressure test at 3.5 feet.*	26	MC UNDIST	77 89 94	43 32 28			
	5		**Clayey Gravel with Sand (GC) [Qcol]** medium dense, moist, brown to reddish brown, fine to coarse subangular siltstone gravel, fine to medium sand	30	MC					
	10		**Lambert Shale [Tla]** low hardness, friable, moderate to little weathering, olive brown, moderate plasticity	38	MC					
	15		*Drained Residual Torsional Shear Strength & Drained Fully Softened Torsional Shear Strength at 14.0 feet.*	35	MC					
	20			71	MC					
	25		Steady downpressure and fluid returns during rotary wash. Minimal rig response during core barrel advance. *Unconfined Compressive Strength and Young's Modulus of Rock Core at 26 feet.* No slickenslides or shearing observed in rock core.	50 6"	MC RC-8	139	5			
	30		Bottom of Boring at 29.0 feet.							


Distance (feet)
Matchline: See Below
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
Depth (feet)
0
2
4
6
1a
1b
1c
2
N1
N60W
T-1
(Southwest wall)
Matchline: See Above
Matchline: See Figure T-1b
Distance (feet)
28
30
32
34
36
38
40
42
44
46
48
50
52
54
56
Depth (feet)
0
2
4
6
8
10
Root ball
1b
1a
1c

Pocket Pen (tsf)

PP-1	**---**
PP-2	**---**

① **1a** **Duff/forest litter/organics.**

1b **Sandy Lean Clay (CL):** very stiff, moist, reddish brown, high plasticity, fine sand, trace coarse sand and fine angular gravel.

1c **Sandy Lean Clay (CL):** very stiff, moist, grey, low plasticity, fine sand and some coarse sand.

2 **Clayey Gravel (GC):** dense to very dense, moist, olive-brown, angular blocky cobbles, appear imbricated down slope.

PP Pocket penetrometer reading

Notes:

N_1 = N44E/50NW

Scale: 1” = 2’

CORNERSTONE EARTH GROUP

Trench 1

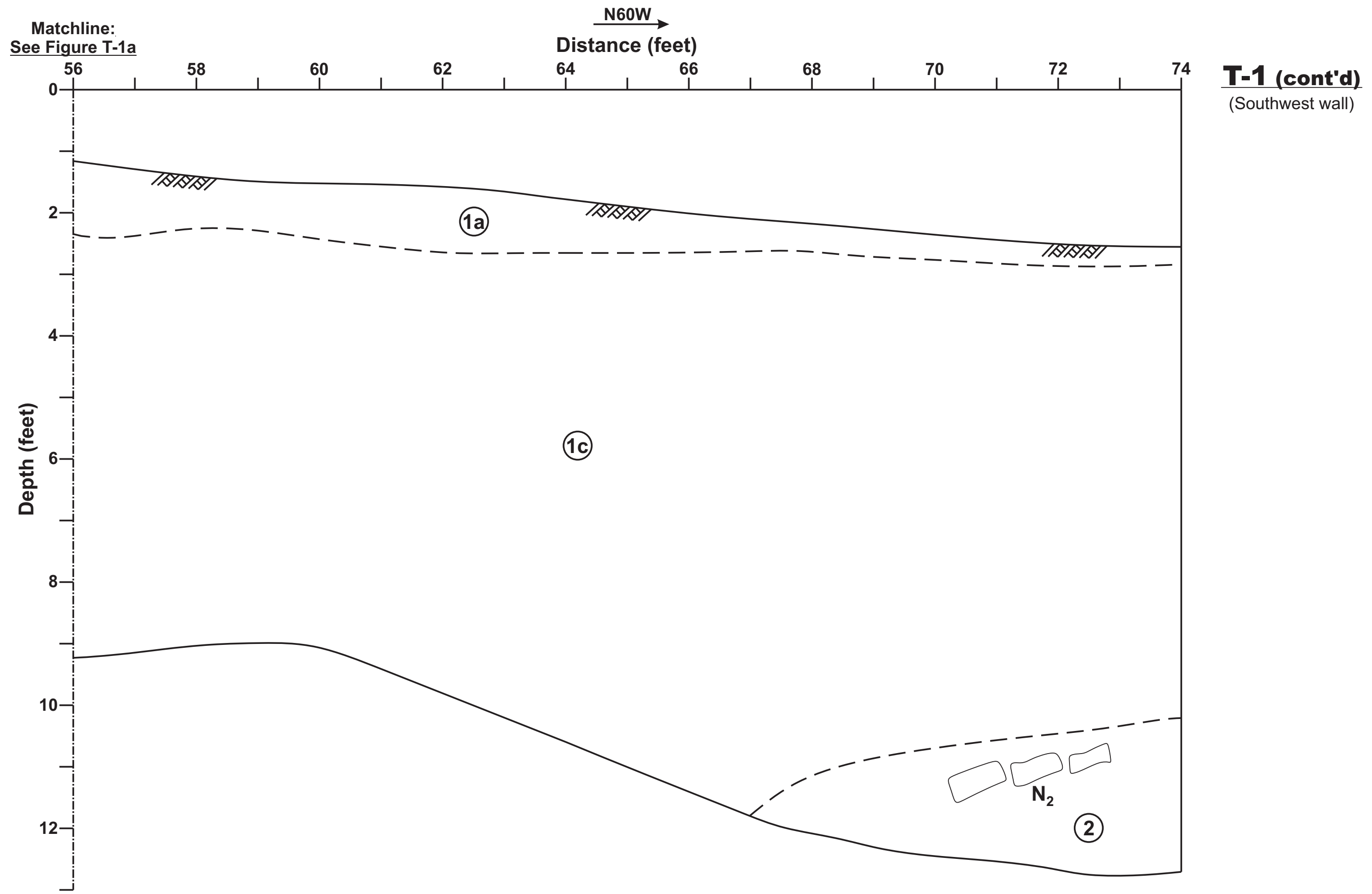
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3

Figure Number Figure T-1a

Date February 2025

Drawn By RRN



Matchline:
See Figure T-1a
N60W
Distance (feet)
56
58
60
62
64
66
68
70
72
74
T-1 (cont'd)
(Southwest wall)
0
2
4
6
8
10
12
Depth (feet)
1a
1c
N2
2

Pocket Pen (tsf)

PP-1	---
PP-2	---

1a	**Duff/forest litter/organics.**
1b	**Sandy Lean Clay (CL):** very stiff, moist, reddish brown, high plasticity, fine sand, trace coarse sand and fine angular gravel.
1c	**Sandy Lean Clay (CL):** very stiff, moist, grey, low plasticity, fine sand and some coarse sand.
2	**Clayey Gravel (GC):** dense to very dense, moist, olive-brown, angular blocky cobbles, appear imbricated down slope.
PP	Pocket penetrometer reading

Notes:

N_2 = N56W/50SW: imbricated interbedded clasts

Scale: 1” = 2’

CORNERSTONE EARTH GROUP

Trench 1 (cont'd)

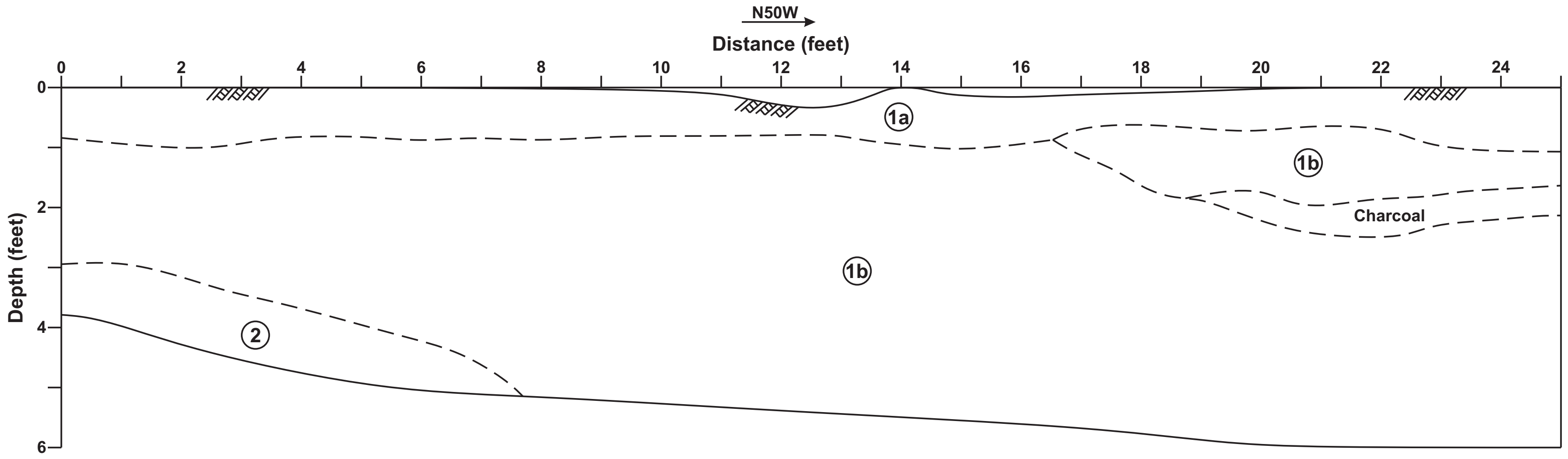
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3

Figure Number Figure T-1b

Date February 2025

Drawn By RRN


N50W
Distance (feet)
0
2
4
6
8
10
12
14
16
18
20
22
24
Depth (feet)
0
2
4
6
1a
1b
Charcoal
1b
2

T-1 Extention

(Northwest wall)

1a **Duff/forest litter/organics.**

1b **Sandy Lean Clay (CL):** very stiff, moist, reddish brown, high plasticity, fine sand, trace coarse sand and fine angular gravel.

2 **Clayey Gravel (GC):** dense to very dense, moist, olive-brown, angular blocky cobbles.

PP Pocket penetrometer reading

Pocket Pen (tsf)	
PP-1	---
PP-2	---

Scale: 1” = 2’

Trench 1 Extention

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

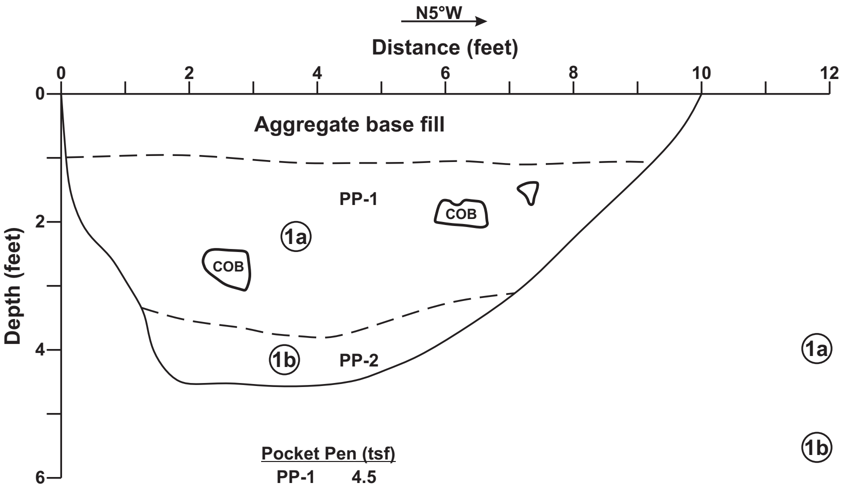
Project Number 1360-2-3

Figure Number Figure T-1c

Date February 2025

Drawn By RRN

CORNERSTONE
EARTH GROUP


N5°W
Distance (feet)
0
2
4
6
8
10
12
Depth (feet)
0
2
4
6
Aggregate base fill
PP-1
COB
COB
1a
1b
PP-2

TP-3

(Southwest wall)

Pocket Pen (tsf)

PP-1	4.5
PP-2	3.0

⓵a	**Sandy Clay (CL/CH):** hard, moist, dark brown to brown, fine to coarse sand, some fine to coarse gravel, trace cobbles.
⓵b	**Silty Clay (CL):** very stiff, moist, light brown and brown mottled, moderate plasticity, fine to coarse sand and silt.
PP	Pocket penetrometer reading

Scale: 1" = 2'

CORNERSTONE
EARTH GROUP

Test Pit 3

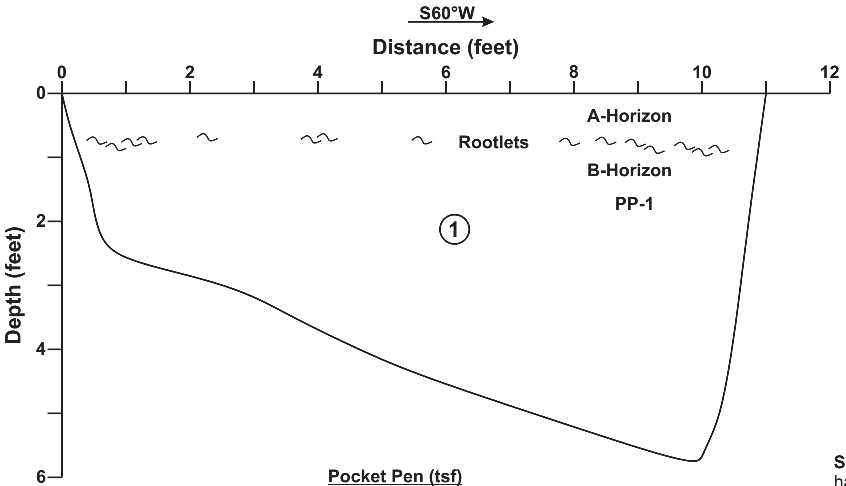
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3

Figure Number Figure TP-3

Date February 2025

Drawn By RRN


S60°W
Distance (feet)
0
2
4
6
8
10
12
Depth (feet)
0
2
4
6
A-Horizon
Rootlets
B-Horizon
PP-1
①

TP-4

(Southeast wall)

Pocket Pen (tsf)	
PP-1	**4.5+**

① **Sandy Lean Clay (CL):** hard, moist, dark brown to brown, verigated, low plasticity, fine sand and silt, trace fine angular to subangular gravels.

PP Pocket penetrometer reading

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 4

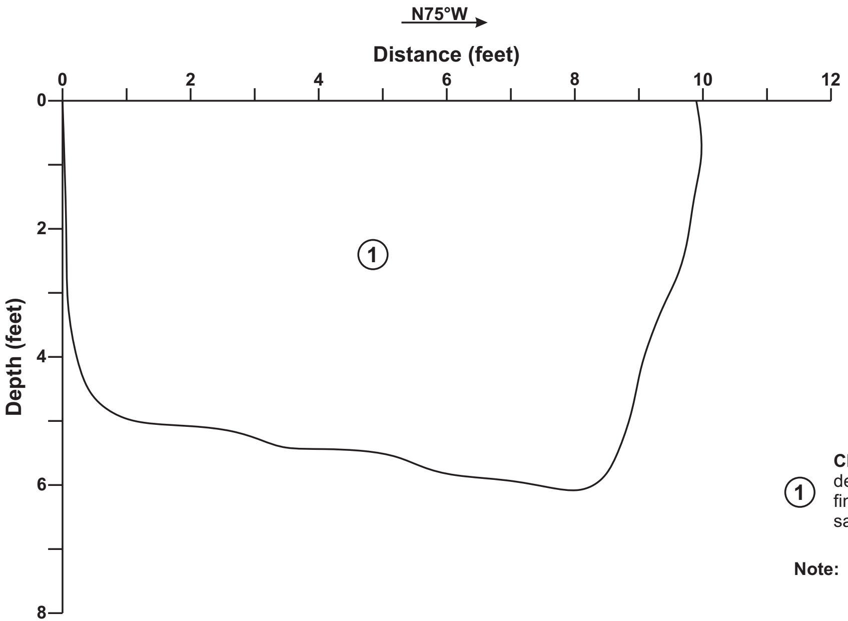
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3

Figure Number Figure TP-4

Date July 2024

Drawn By RRN


N75°W
Distance (feet)
0
2
4
6
8
10
12
Depth (feet)
0
2
4
6
8
①

TP-5

(Southern wall)

① **Clayey Gravel (GC):**
dense, moist, brown to light brown,
fine to coarse cobbles, fine to coarse
sand, (potentially clast supported).

Note: Sidewall collapsed.

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

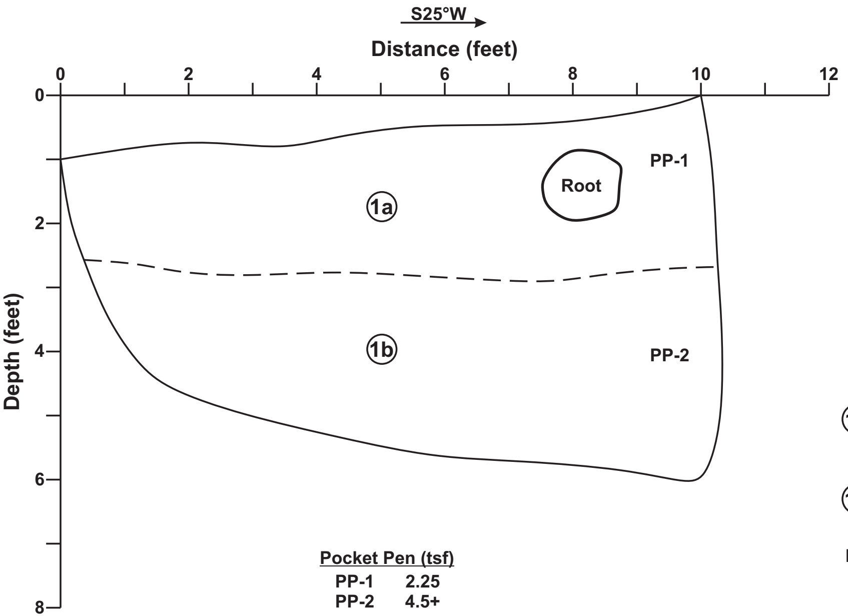
Test Pit 5

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number	1360-2-3
Figure Number	Figure TP-5
Date	July 2024
Drawn By	RRN

TP-6

(Eastern wall)


S25°W
Distance (feet)
0
2
4
6
8
10
12
0
2
4
6
8
Depth (feet)
1a
1b
Root
PP-1
PP-2

Pocket Pen (tsf)

PP-1	**2.25**
PP-2	**4.5+**

1a	**Silty Clay (CL):** very stiff, moist, dark brown, low plasticity, trace coarse sand.
1b	**Silty Clay (CL):** hard, moist, brown, fine sand, trace moderate to coarse sand.
PP	Pocket penetrometer reading

Scale: 1" = 2'

CORNERSTONE
EARTH GROUP

Test Pit 6

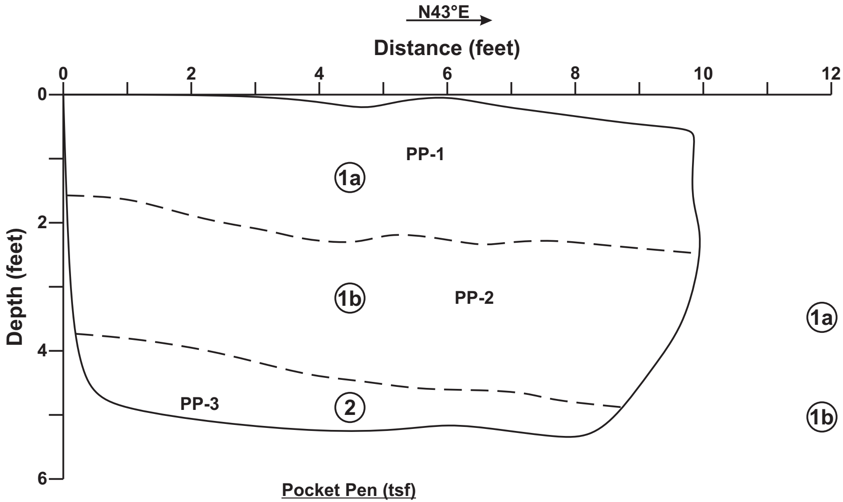
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

Figure Number
Figure TP-6

Date
July 2024

Drawn By
RRN



TP-7

(Northwest wall)

Pocket Pen (tsf)

PP-1	1.0
PP-2	2.25
PP-3	1.5

1a	**Sandy Fat Clay (CH):** stiff, moist, dark gray, moderate plasticity, fine sand and silt, trace coarse sand.
1b	**Sandy Clay (CL):** very stiff, moist, brown, low plasticity, fine to coarse sand and silt, trace coarse sand.
	Lambert Shale [Tla] (lower Miocene)
2	Siltstone cobbles (GW), Clayey matrix, matrix supported (GC), cobbles are angular, matrix supported Breccia.
PP	Pocket penetrometer reading

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 7

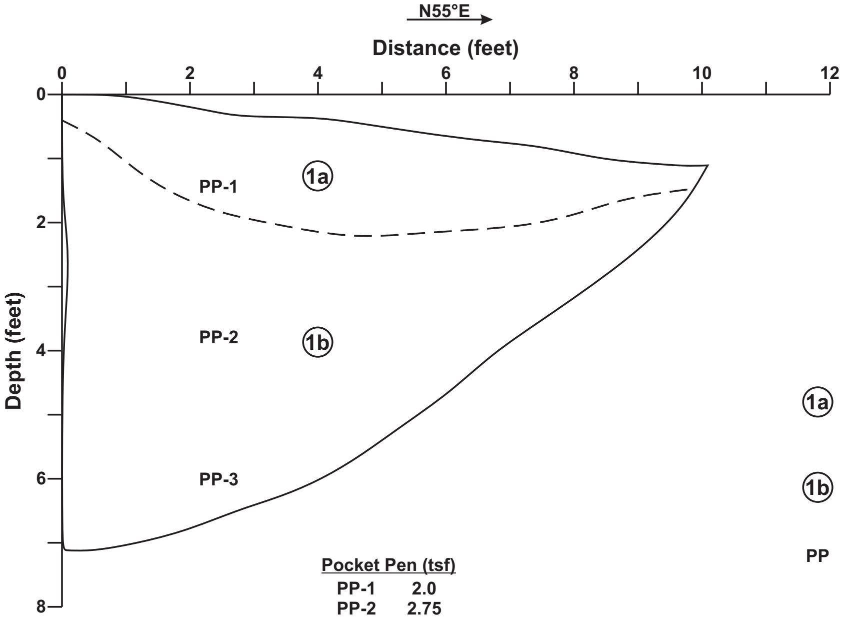
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

Figure Number
Figure TP-7

Date February 2025

Drawn By RRN


N55°E
Distance (feet)
0
2
4
6
8
10
12
Depth (feet)
0
2
4
6
8
PP-1
1a
PP-2
1b
PP-3

TP-8

(Northwest wall)

⓵a	**Silty Clay (CL):** very stiff, moist, brown, low plasticity, fine sand and silt.
⓵b	**Sandy Clay (CL):** stiff to very stiff, moist, light brown, low plasticity, coarse sand.
PP	Pocket penetrometer reading

Pocket Pen (tsf)	
PP-1	**2.0**
PP-2	**2.75**
PP-3	**1.5**

Scale: 1" = 2'

CORNERSTONE
EARTH GROUP

Test Pit 8

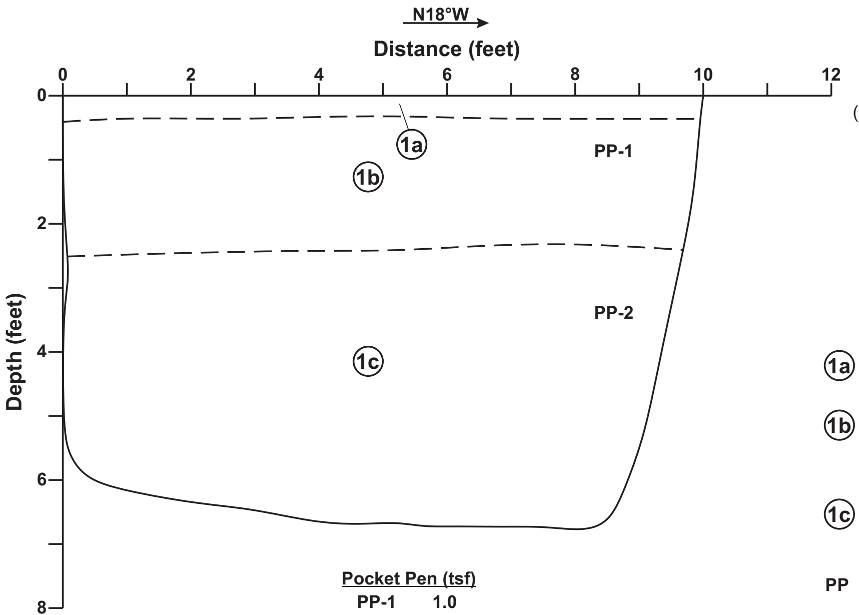
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

Figure Number
Figure TP-8

Date
July 2024

Drawn By
RRN


N18°W
Distance (feet)
0
2
4
6
8
10
12
Depth (feet)
0
2
4
6
8
1a
1b
1c
PP-1
PP-2

TP-9

(Southwest wall)

⓵a	Duff, gray, organics, silt.
⓵b	**Silty Clay (CH):** stiff, moist, dark gray, fine sand, low plasticity.
⓵c	**Sandy Clay (CL/CH):** very stiff, moist, brown, fine sand and silt, moderate to low plasticity, trace fine gravels.
PP	Pocket penetrometer reading

Pocket Pen (tsf)

PP-1	**1.0**
PP-2	**2.25**

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 9

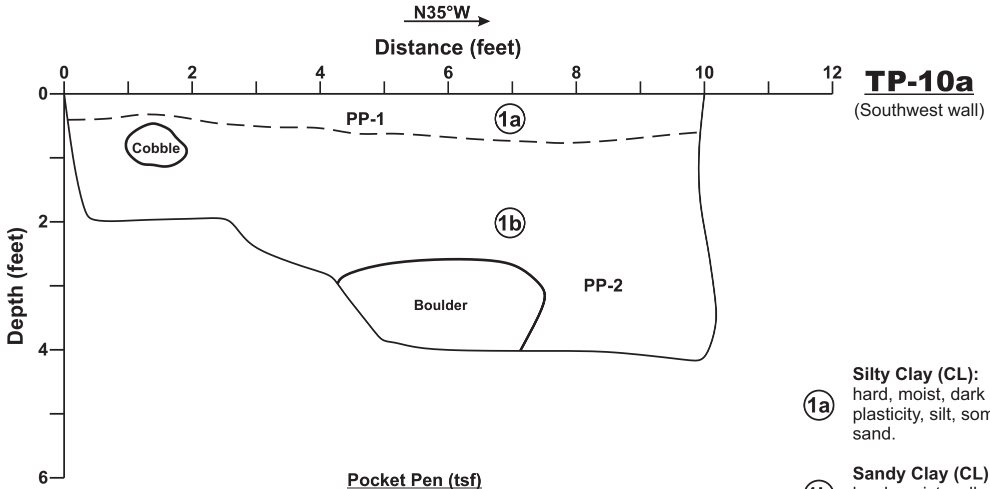
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

Figure Number
Figure TP-9

Date
July 2024

Drawn By
RRN


N35°W
Distance (feet)
0
2
4
6
8
10
12
TP-10a
(Southwest wall)
Depth (feet)
0
2
4
6
PP-1
1a
Cobble
1b
Boulder
PP-2

Pocket Pen (tsf)

PP-1	4.5+
PP-2	4.5+

(1a) **Silty Clay (CL):** hard, moist, dark brown, moderate plasticity, silt, some fine to medium sand.

(1b) **Sandy Clay (CL):** hard, moist, yellowish brown, moderate plasticity, silt, trace fine to medium sand.

PP Pocket penetrometer reading

Note: Observed siltstone boulder, backhoe broke a tooth.

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 10a

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3

Figure Number Figure TP-10a

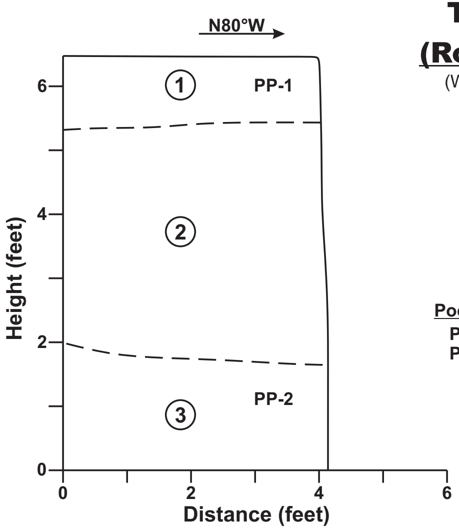
Date July 2024

Drawn By RRN

TP-10b

(Road Cut)

(Western wall)



Pocket Pen (tsf)

PP-1	**4.5+**
PP-2	**4.5+**

①	**Sandy Clay (CL):** hard, moist, pinkish gray, fine to coarse sand and silt.
②	**Massive Siltstone Boulder:** hard, moist, tan, strong, slightly weathered.
③	**Lean Clay (CL):** hard, moist, light brown, moderate plasticity, some silt.
PP	Pocket penetrometer reading

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 10b

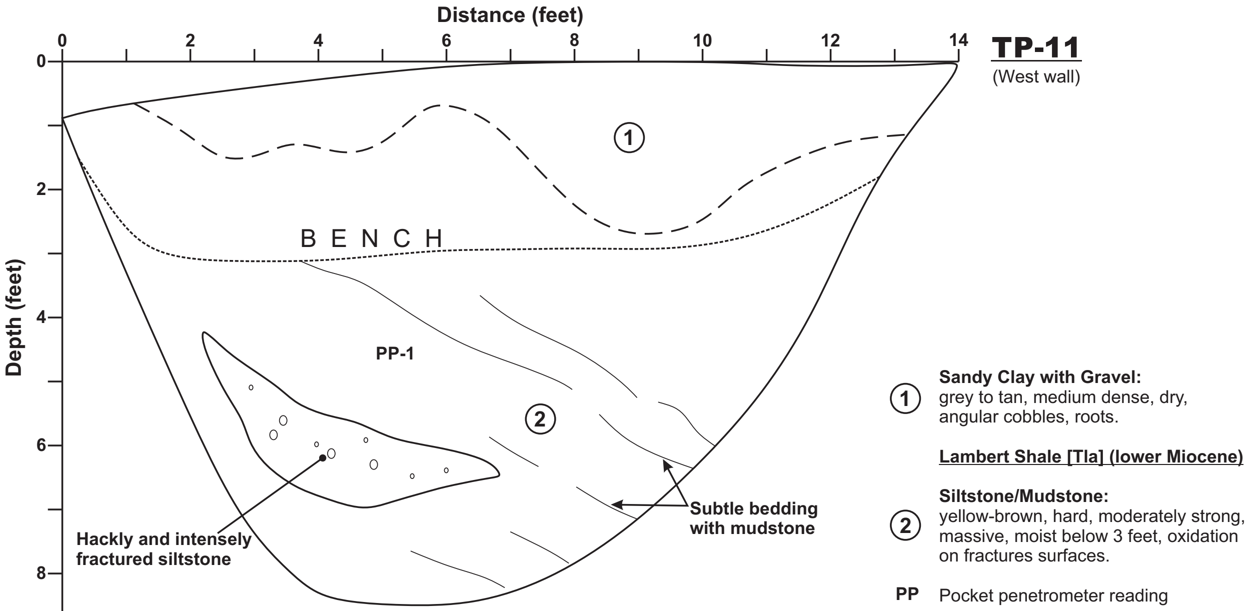
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

Figure Number
Figure TP-10b

Date
March 2025

Drawn By
RRN


Distance (feet)
0
2
4
6
8
10
12
14
TP-11
(West wall)
Depth (feet)
0
2
4
6
8
①
B E N C H
PP-1
②
Hackly and intensely fractured siltstone
Subtle bedding with mudstone

① **Sandy Clay with Gravel:** grey to tan, medium dense, dry, angular cobbles, roots.

Lambert Shale [Tla] (lower Miocene)

② **Siltstone/Mudstone:** yellow-brown, hard, moderately strong, massive, moist below 3 feet, oxidation on fractures surfaces.

PP Pocket penetrometer reading

Pocket Pen (tsf)	
PP-1	**4.0**

Scale: 1” = 2’

CORNERSTONE EARTH GROUP

Test Pit 11

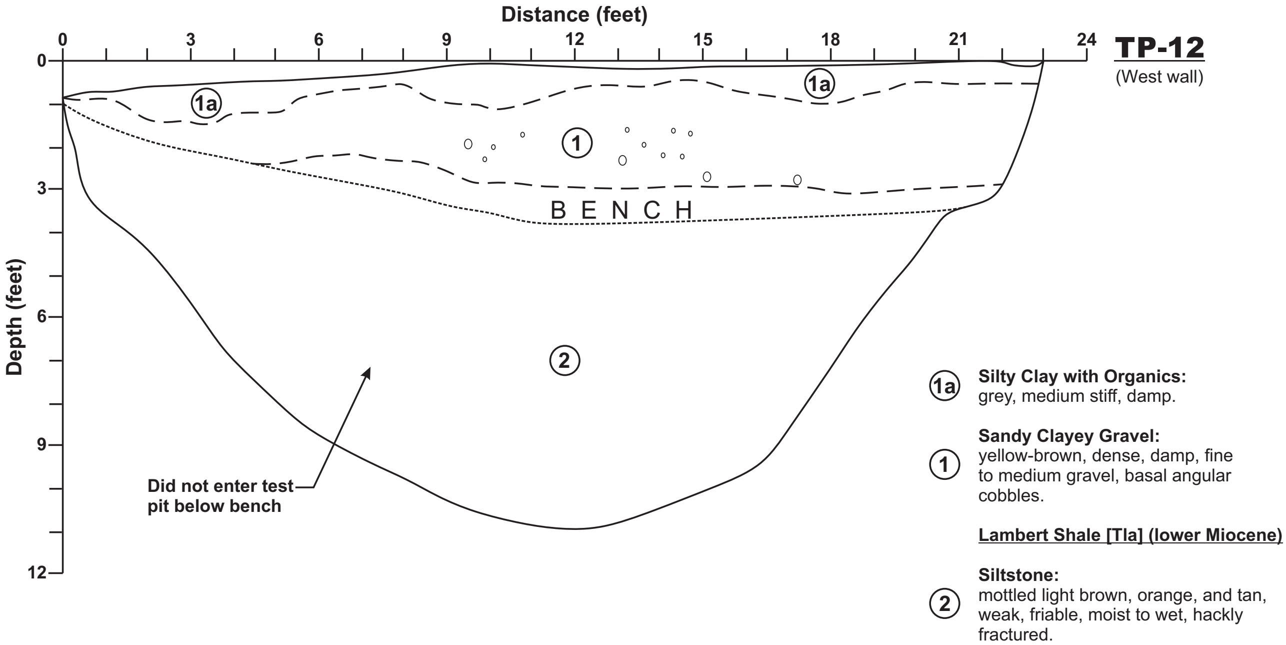
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3

Figure Number Figure TP-11

Date February 2025

Drawn By RRN


Distance (feet)
0
3
6
9
12
15
18
21
24
Depth (feet)
0
3
6
9
12
TP-12
(West wall)
1a
1a
1
B E N C H
2
Did not enter test pit below bench

(1a) **Silty Clay with Organics:** grey, medium stiff, damp.

(1) **Sandy Clayey Gravel:** yellow-brown, dense, damp, fine to medium gravel, basal angular cobbles.

Lambert Shale [Tla] (lower Miocene)

(2) **Siltstone:** mottled light brown, orange, and tan, weak, friable, moist to wet, hackly fractured.

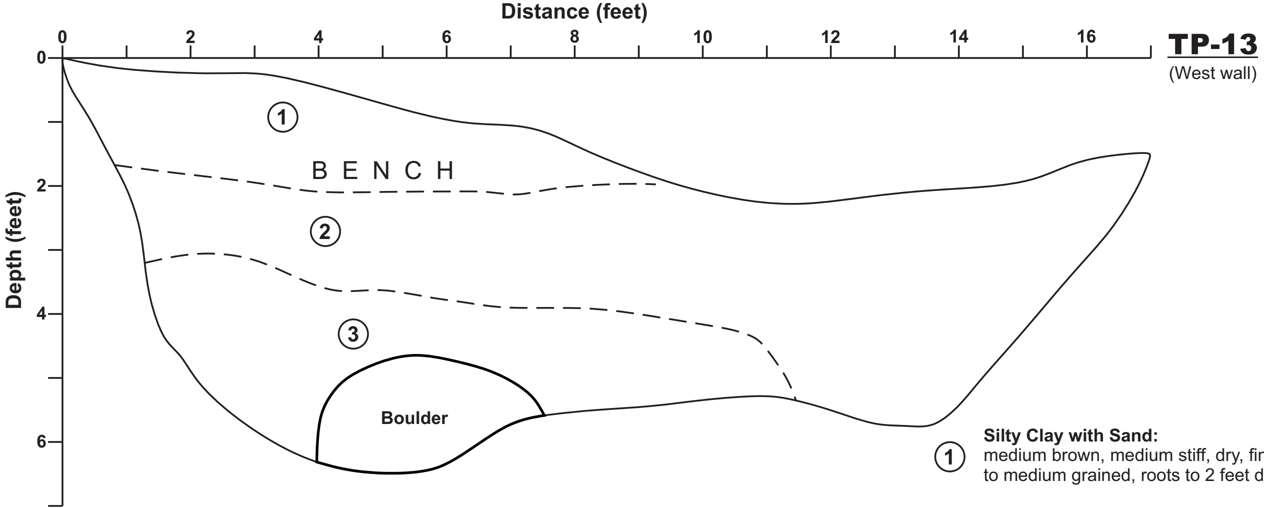
Scale: 1” = 3’

CORNERSTONE
EARTH GROUP

Test Pit 12

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number	1360-2-3
Figure Number	Figure TP-12
Date	February 2025
Drawn By	RRN


Distance (feet)
0
2
4
6
8
10
12
14
16
TP-13
(West wall)
Depth (feet)
0
2
4
6
①
BENCH
②
③
Boulder

① **Silty Clay with Sand:**
medium brown, medium stiff, dry, fine to medium grained, roots to 2 feet deep.

② **Colluvium:**
mottled brown-red-yellow, moist, angular coarse sand, small gravel.

Lambert Shale [Tla] (lower Miocene)

③ **Siltstone:**
light grey-yellow, hard, strong, massive, contains inclusion of large cemented, strong boulder.

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 13

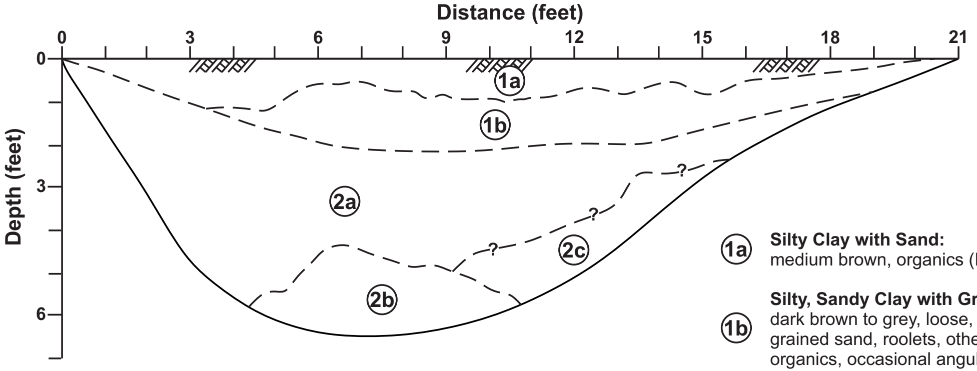
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

Figure Number
Figure TP-13

Date February 2025

Drawn By RRN



TP-14

(West wall)

1a **Silty Clay with Sand:** medium brown, organics (Fill).

1b **Silty, Sandy Clay with Gravel:** dark brown to grey, loose, dry, medium grained sand, roolets, other slash and organics, occasional angular cobbles.

2a **Colluvium (potential slide debris):** motted yellow-brown, mostly blocky, subangular siltstone cobble, fragments with sandy clay.

Lambert Shale [Tla] (lower Miocene)

2b **Siltstone:** mottled yellow-brown to tan, blocky, hard.

2c **Siltstone:** white to tan, weak, low hardness, deeply weathered bedrock.

Scale: 1” = 3’

CORNERSTONE
EARTH GROUP

Test Pit 14

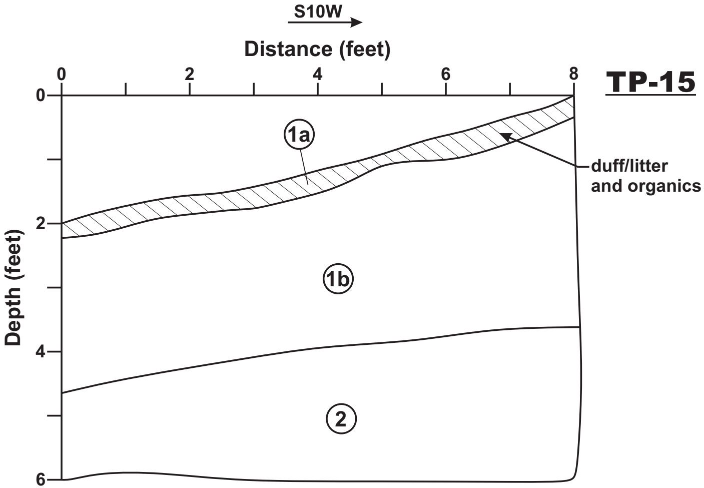
Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3

Figure Number Figure TP-14

Date February 2025

Drawn By RRN


S10W
Distance (feet)
0
2
4
6
8
TP-15
Depth (feet)
0
2
4
6
1a
1b
2
duff/litter
and organics

1a **Sandy Clay (CL):**
slightly moist, low plasticity, light grey,
fine sand, trace coarse sand and fine gravel.

1b **Well Graded Gravel (GW):**
dense, moist, fine sand and silt, medium
angular gravel and angular cobbles.

Lambert Shale [Tla] (lower Miocene)

② steeply dipping towards Power Pole Road,
apparent bedding attitude ~S60E/~55NE,
jointed, slabby, hard, strong, moderately
weathered, oxidized halos.

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 15

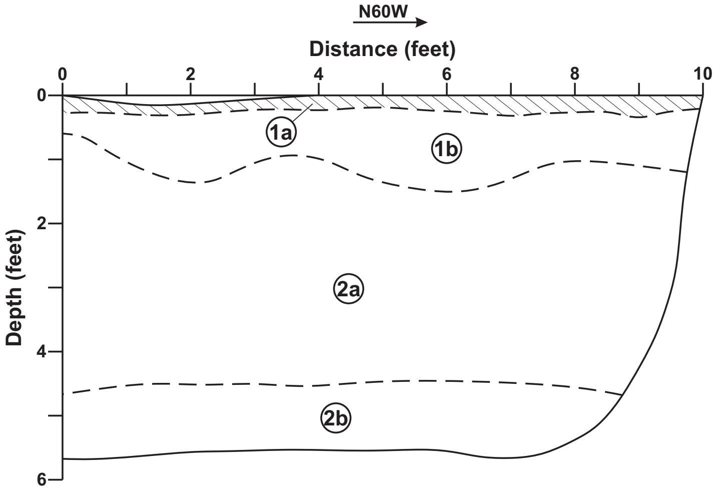
**Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA**

Project Number
1360-2-3

Figure Number
Figure TP-15

Date
March 2025

Drawn By
RRN



TP-16

1a **Duff/litter/organics**

1b **Sandy Fat Clay (CH): topsoil**
very stiff, moist, medium plasticity,
fine sand and silt, trace angular gravel.

2a **Silty Sand (SM): colluvium**
dense, moist, yellow-brown, fine sand
and silt, some coarse sand and subangular
gravel.

Lambert Shale [Tla] (lower Miocene)

2b slabby, hard, moderately strong, lightly
weathered, bedding attitude ~N60W/30NE.

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 16

Chesebrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number	1360-2-3
Figure Number	Figure TP-16
Date	February 2025
Drawn By	RRN

APPENDIX B: LABORATORY TEST PROGRAM

The laboratory testing program was performed to evaluate the physical and mechanical properties of the soils retrieved from the site to aid in verifying soil classification.

Moisture Content: The natural water content was determined (ASTM D2216) on five samples of the materials recovered from the borings. These water contents are recorded on the boring logs at the appropriate sample depths.

Dry Densities: In place dry density determinations (ASTM D2937) were performed on five samples to measure the unit weight of the subsurface soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

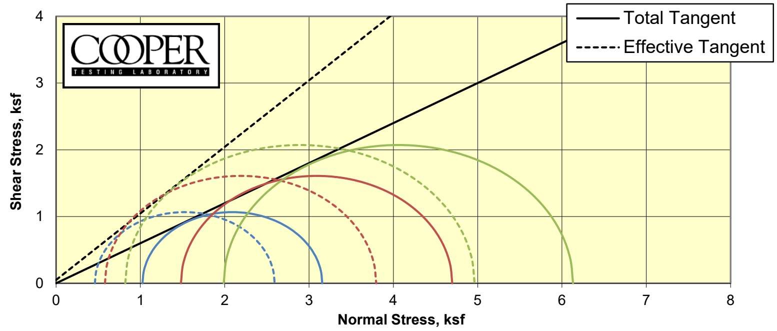
Consolidated-Undrained Triaxial Compression with Pore Pressure Measurements: The undrained shear strength was determined on one relatively undisturbed sample of colluvium soil material by consolidated undrained triaxial shear strength testing with pore pressure measurements (ASTM D4767). The results of this test are included as part of this appendix.

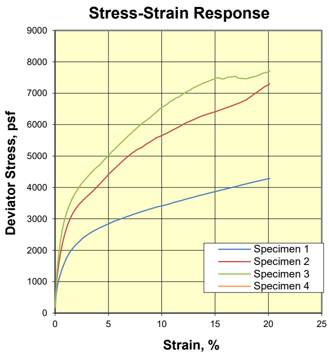
Torsional Ring Shear: Two torsional ring shear tests (ASTM D6467 and D7608) were performed on remolded (fully softened and residual) samples of the colluvium and bedrock to assist in evaluating the residual and fully softened peak shear strength. Tests were performed under drained loading conditions. Results of the torsional ring shear tests are included as part of this appendix.

Consolidated Unconfined Triaxial Compression: One test (ASTM D47678) was performed on the colluvium to assist in evaluating the total and effective friction angle and cohesion strength of the samples. Results of the test are presented graphically in this appendix.

Unconfined Compressive Strength with Young’s Modulus: Two tests (ASTM D7608) were performed on the bedrock to assist in evaluating the strength of the samples. Results of the test are presented graphically in this appendix.

Consolidated Undrained Triaxial Compression with Pore Pressure
ASTM D4767





Specimen	1	2	3	4
Boring	EB-2	EB-2	EB-2	
Sample				
Depth	3.0(Tip-14")	3.0(Tip-7")	3.0	
Visual Description	Reddish Brown Sandy CLAY w/ Gravel	Reddish Brown Sandy CLAY w/ Gravel	Reddish Brown Sandy CLAY w/ Gravel	
MC (%)	28.8	31.9	42.9	
Dry Density (pcf)	93.5	89.0	76.9	
Saturation (%)	96.7	96.4	97.1	
Void Ratio	0.803	0.894	1.193	
Diameter (in)	2.85	2.85	2.86	
Height (in)	6.01	6.05	6.01	
	Final			
MC (%)	28.8	32.3	43.2	
Dry Density (pcf)	94.8	90.0	77.8	
Saturation (%)	100.0	100.0	100.0	
Void Ratio	0.778	0.872	1.166	
Diameter (in)	2.84	2.84	2.85	
Height (in)	5.98	6.02	5.97	
Cell Pressure (psi)	57.1	60.2	63.8	
Back Pressure (psi)	50.0	49.9	50.0	
	Effective Stresses At:			
Strain (%)	1.8	1.7	2.5	
Deviator (ksf)	2.132	3.218	4.143	
Excess PP (psi)	3.9	6.3	8.1	
Sigma 1 (ksf)	2.592	3.797	4.964	
Sigma 3 (ksf)	0.460	0.579	0.821	
P (ksf)	1.526	2.188	2.892	
Q (ksf)	1.066	1.609	2.072	
Stress Ratio	5.634	6.555	6.049	
Rate (in/min)	0.0005	0.0005	0.0005	

CTL Number:	640-1571		
Client Name:	Cornerstone Earth Group		
Project Name:	CSR Master Plan		
Project Number:	1360-2-3		
Date:	2/24/2025	By:	MD/DC

Total C	**0.000**	**ksf**
Total phi	**31.0**	**degrees**
Eff. C	**0.050**	**ksf**
Eff. Phi	**44.9**	**degrees** ©

Remarks: Strengths picked at the peak effective stress ratios.

COOPER
TESTING LABORATORY

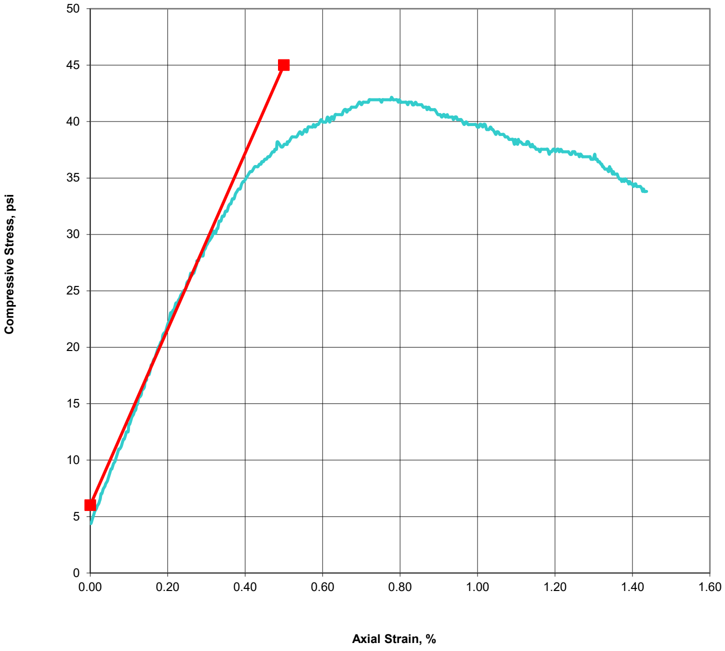
Unconfined Compressive Strength and Young's Modulus of Rock Core (ASTM D7012D)

CTL Job No.:	640-1571F	Boring:	EB-1	Date:	2/26/2025
Client:	Cornerstone Earth Group	Sample:	5B	By:	PJ
Project Name:	CSR Master Plan	Depth,ft.:	14.5	Checked:	DC
Project No.:	1360-2-3				

Visual Description: Brown Rock
Moisture Condition at Test Sample was washed and in a moist state.
Test Temperature, (°C) Ambient
Remarks:

Sample Height, in.	5.01
Sample Diameter, in.	2.41
Height / Diameter	2.1
Sample Area, in^2	4.55
Wet Density, pcf	124.3
Dry Density, pcf	103.4
Moisture Content, %	20.3
Strain Rate, % / min	0.25

Unconfined Compressive Strength (psi)	**42**
Young's Modulus (E) (psi)	**7,800**



COOPER
TESTING LABORATORY

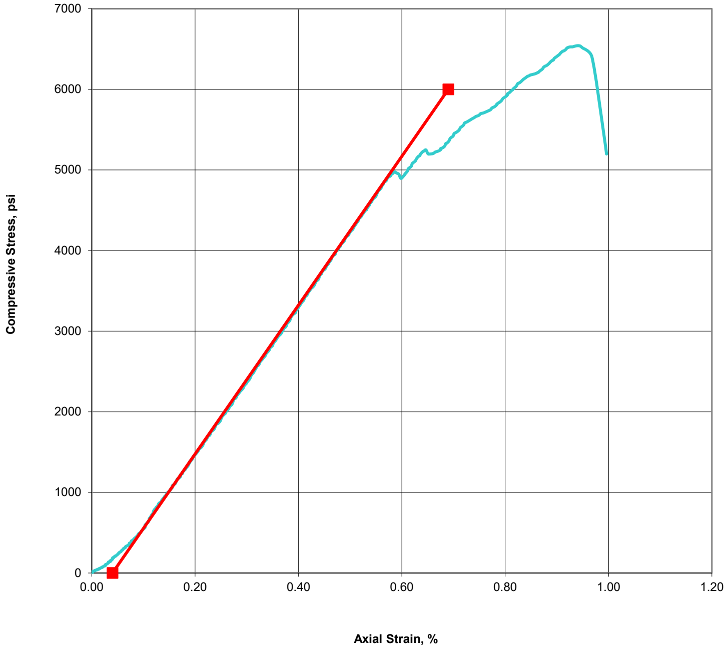
Unconfined Compressive Strength and Young's Modulus of Rock Core (ASTM D7012D)

CTL Job No.:	640-1571G	Boring:	EB-2	Date:	2/18/2025
Client:	Cornerstone Earth Group	Sample:		By:	PJ
Project Name:	CSR Master Plan	Depth,ft.:	26	Checked:	DC
Project No.:	1360-2-3				

Visual Description: Gray Rock
Moisture Condition at Test: Sample was washed and in a moist state.
Test Temperature, (°C): Ambient
Remarks: Spalling occurred at ends of sample during trimming. Therefore, the measured density is approximate.

Sample Height, in.	4.95
Sample Diameter, in.	2.38
Height / Diameter	2.1
Sample Area, in^2	4.46
Wet Density, pcf	146.0
Dry Density, pcf	138.6
Moisture Content, %	5.3
Strain Rate, % / min	0.25

Unconfined Compressive Strength (psi)	**6541**
Young's Modulus (E) (psi)	**923,100**



COOPER
TESTING LABORATORY

Drained Fully Softened Torsional Shear Strength
(ASTM D7608)

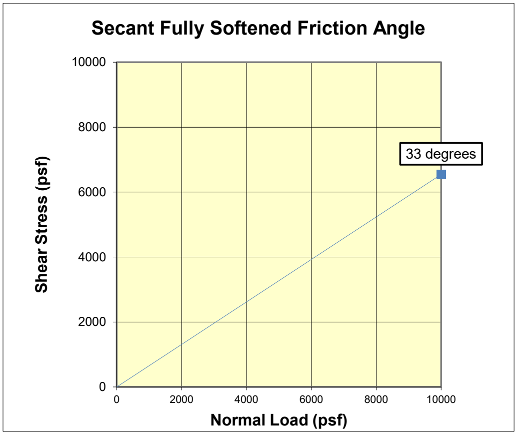
CTL Job No.:	640-1571	**Boring:**	EB-1	**Date:**	2/7/2025	**Clay, %:**	
Client:	Cornerstone Earth Group	**Sample:**	4A	**By:**	PJ	**LL:**	
Project Name:	CSR Master Plan	**Depth (ft):**	9.0	**Checked:**	DC	**PL:**	
Project Number:	1360-2-3	**Test Type:**	Reconstituted Fully Softened				

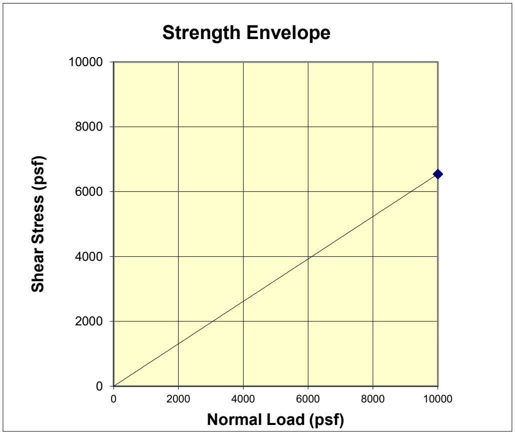
Soil Type: Brown SILT

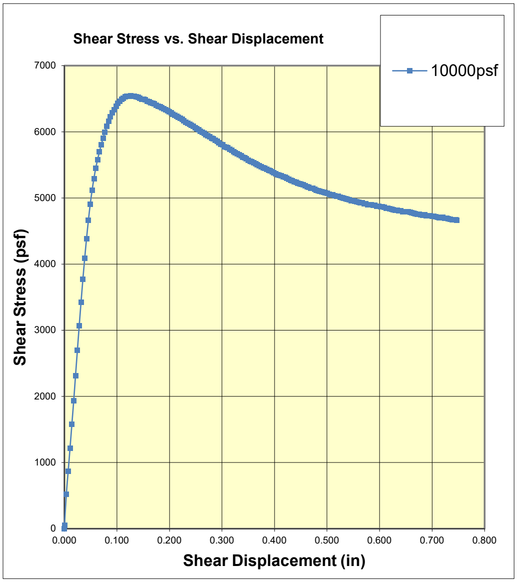
Remarks:

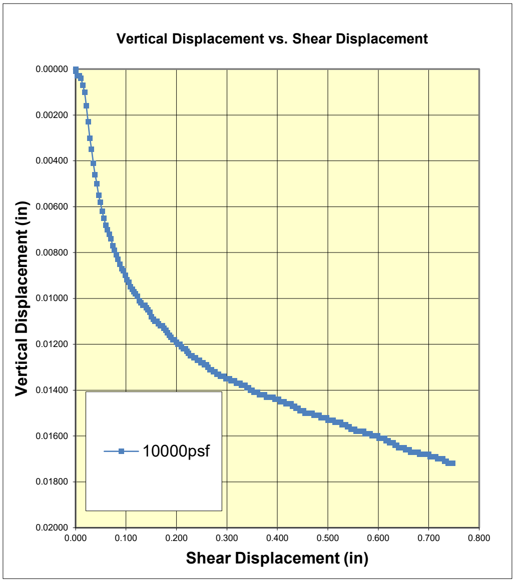
Normal Load (psf): 10000

Secant Phi (deg): 33


Secant Fully Softened Friction Angle


Strength Envelope


Shear Stress vs. Shear Displacement


Vertical Displacement vs. Shear Displacement

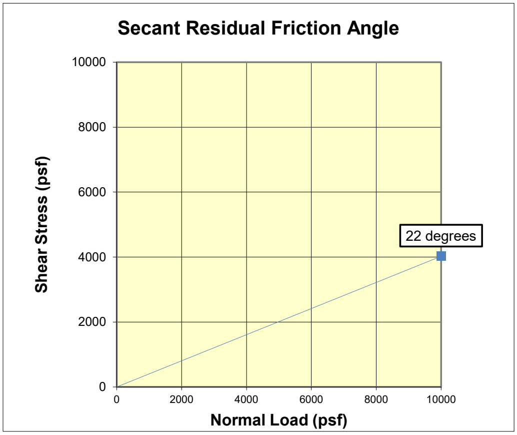
COOPER
TESTING LABORATORY

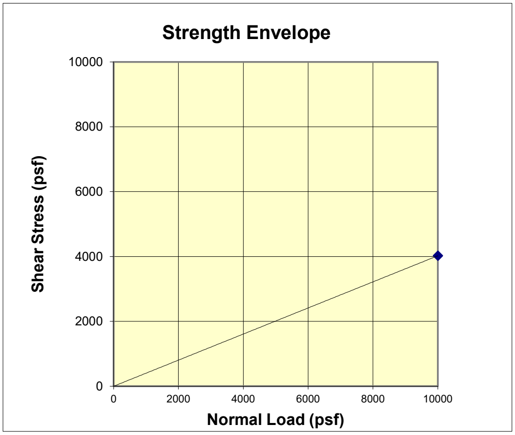
Drained Residual Torsional Shear Strength
(ASTM D6467)

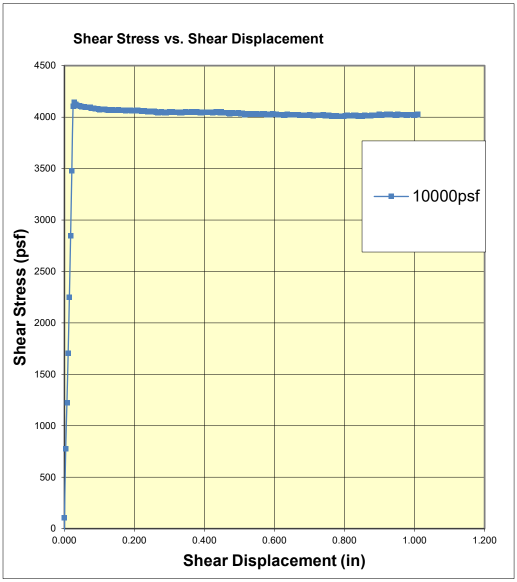
CTL Job No.:	640-1571	**Boring:**	EB-1	**Date:**	2/7/2025	**Clay, %:**	
Client:	Cornerstone Earth Group	**Sample:**	4A	**By:**	PJ	**LL:**	
Project Name:	CSR Master Plan	**Depth (ft):**	9.0	**Checked:**	DC	**PL:**	
Project Number:	1360-2-3	**Test Type:**	Reconstituted Residual				

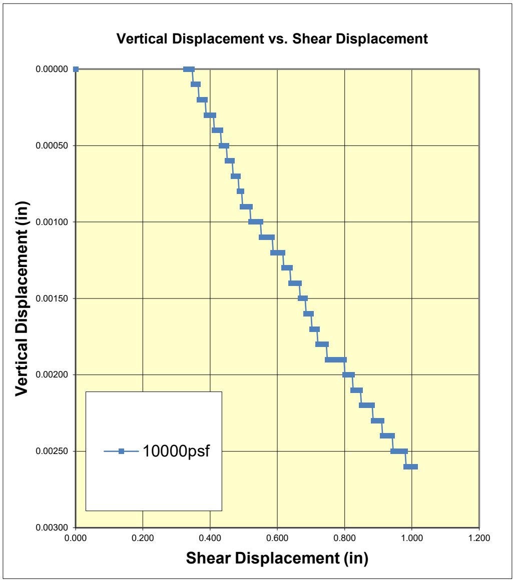
Soil Type: Brown SILT
Normal Load (psf): 10000
Secant Phi (deg): 22

Remarks: A small friction correction was applied to tnhe point.


Secant Residual Friction Angle


Strength Envelope


Shear Stress vs. Shear Displacement


Vertical Displacement vs. Shear Displacement

COOPER
TESTING LABORATORY

Drained Fully Softened Torsional Shear Strength
(ASTM D7608)

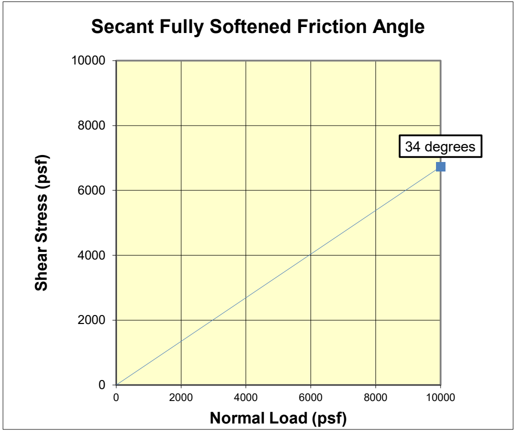
CTL Job No.:	640-1571	**Boring:**	EB-2	**Date:**	2/11/2025	**Clay, %:**	
Client:	Cornerstone Earth Group	**Sample:**	4A	**By:**	PJ	**LL:**	
Project Name:	CSR Master Plan	**Depth (ft):**	14.5	**Checked:**	DC	**PL:**	
Project Number:	1360-2-3	**Test Type:**	Reconstituted Fully Softened				

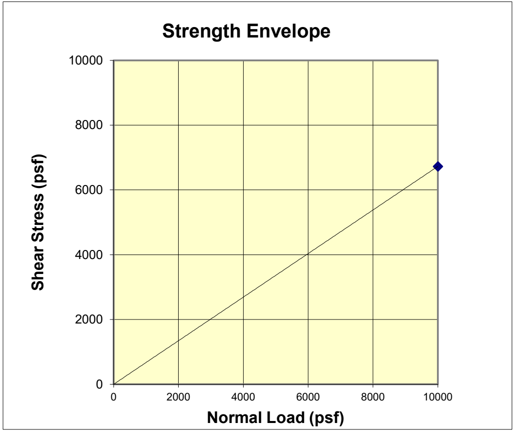
Soil Type: Brown SILT (Siltstone)

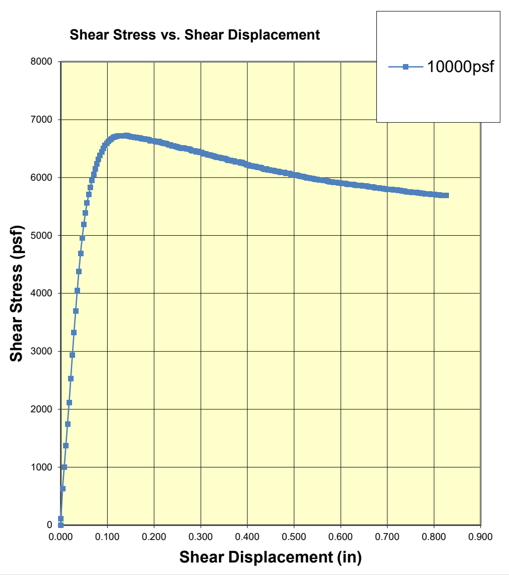
Normal Load (psf): 10000

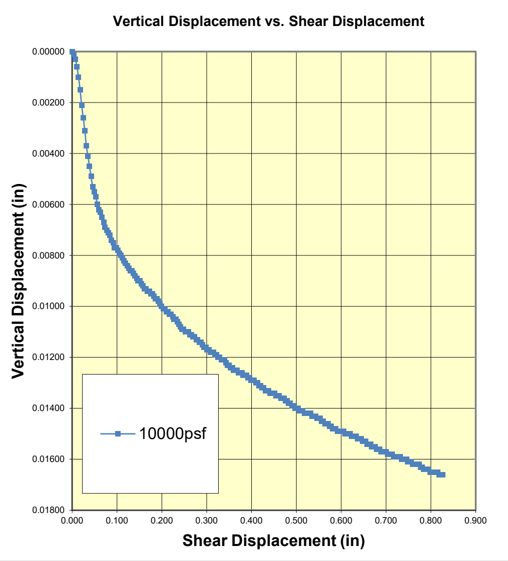
Secant Phi (deg): 34

Remarks:









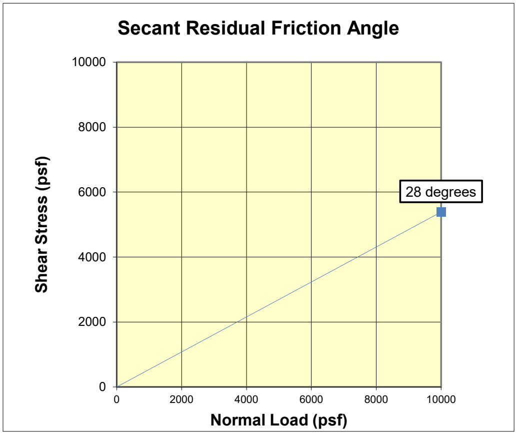
COOPER
TESTING LABORATORY

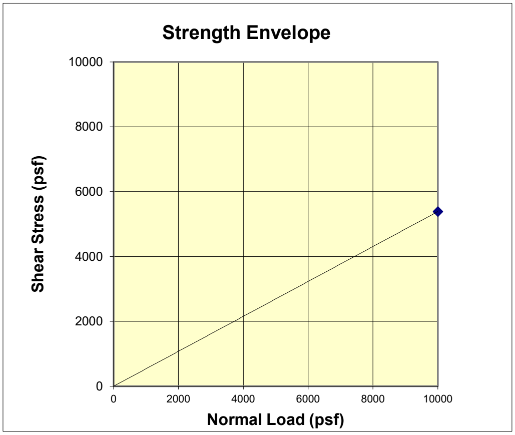
Drained Residual Torsional Shear Strength (ASTM D6467)

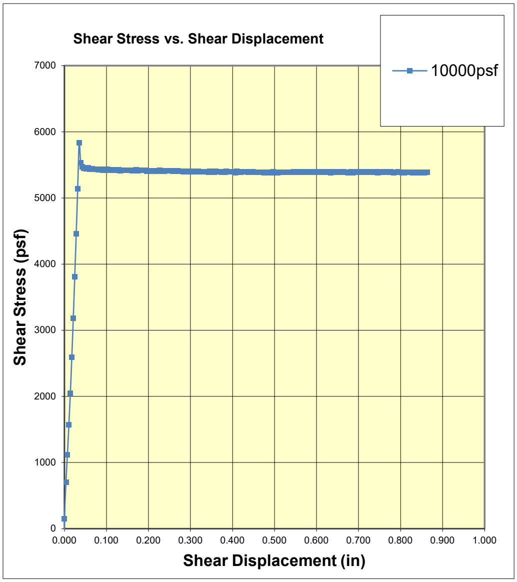
CTL Job No.:	640-1571	**Boring:**	EB-2	**Date:**	2/11/2025	**Clay, %:**	
Client:	Cornerstone Earth Group	**Sample:**	4A	**By:**	PJ	**LL:**	
Project Name:	CSR Master Plan	**Depth (ft):**	14.5	**Checked:**	DC	**PL:**	
Project Number:	1360-2-3	**Test Type:**	Reconstituted Residual				

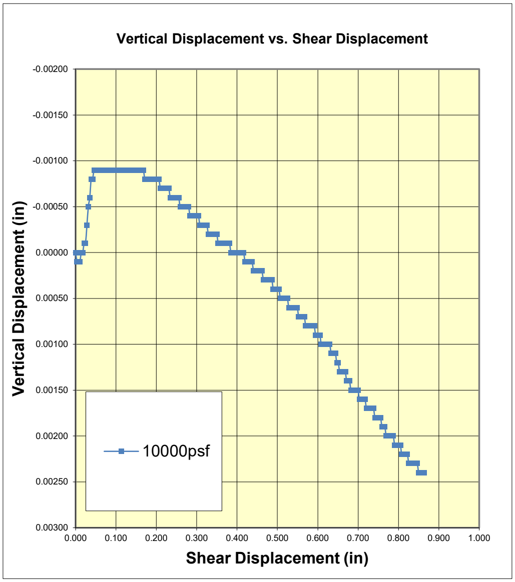
Soil Type: Brown SILT (Siltstone)
Normal Load (psf): 10000
Secant Phi (deg): 28

Remarks: A small friction correction was applied to the point.


Secant Residual Friction Angle


Strength Envelope


Shear Stress vs. Shear Displacement


Vertical Displacement vs. Shear Displacement

APPENDIX C: PREVIOUS EXPLORATION BY OTHERS

Fox Onsite Solutions on October 31, 2023

Santa Cruz County Onsite Wastewater Treatment System Feasibility Study

APN	APN 088-051-37
Address	26005 Hwy 9, Los Gatos, CA 95033
For Applicant	Boy Scouts of America
Prepared by	Sterling Scott, R.E.H.S.#9469

Project Description:

Onsite Wastewater Treatment System (OWTS) site evaluation testing for an upgrade of an existing commercial campground property, Boy Scouts of America Camp Chesebrough. A new facility will serve as a classroom and dining hall. (Total Occupancy and Gallons Per Day to be determined).

Site Notes:

- Size: 444.26 Acres
- Topography: Majority of the property is over <30% Slope. The area that is being tested meets slopes under 30% and relatively flat.
- An entirely new OWTS is to be designed. There is no other nearby infrastructure in the proposed location.

Site Variables:

1. Commercial Use (High GPD Use)

SOIL PROFILE

Test Date: 10/31/23

Overview:

Soil profile conducted with full size excavator to locate ideal material and verify any potential groundwater. A total of four trenches were excavated and witnessed by EH Inspector Sean Basalyga.

T-1 Soil Profile:

From	to	Description, texture, and structure notes
0′	2′	Top Soil w/ Roots
2′	6′	Fractured Brown Mudstone
6′	8′	Fractured Brown Mudstone
8′	13′	Fractured Brown Mudstone
Notes	-Location: Northwest of Proposed Structure -No Groundwater Encountered -Test Trench Remained Very Consistent	

Soil Profile Findings:

Soil profiles from T-1 exhibited a fractured mudstone that contained a loamy/silty consistency although compact and compressed. Due to the lack of Groundwater and soil consistency it was decided that percolation throughout the area north of the test trench would be ideal to test for a potential leachfield.

PERCOLATION TESTING

Test Date: 11/1/23

Overview:

A total of six percolation pipes were installed throughout the area north of T-1. Four pipes were placed at 3′ depths and two pipes were placed at 6′ depths, to observe rates in the mudstone material. The testing was witnessed by inspector Sean Basalyga.

Percolation Rates:

Hole P#	Pipe Depth (FT)	MPI
1	6	29.9
2	3	1.18
3	3	28
4	3	5.24
5	6	6.67
6	3	1.01

Infiltratative Zone Average: **8.85 (~9) MPI**
Deep Depths Average: **18.285 MPI**

Application Rate:

- Conventional: **0.8**
- Alt. Tx: **1.32**

OWTS TESTING SUMMARY

Summary and Suggested Upgrade:

OWTS testing indicates that the parcel has favorable soils at the 3’ depth range (fractured mudstone). The property passed percolation testing within a medium range (9 MPI Average). The setback for groundwater separation would be 8’ below the 3’ depth and no groundwater or signs of groundwater was encountered at 11’.

Consultant suggests upgrade with a new conventional system. Because of the potential use of a kitchen, given design should account for a grease trap for kitchen wastes that will be separate from wastewater flowing from bathrooms/sinks. This will all be verified at a later date closer to the design phase.

With these parameters in place an Onsite Wastewater Treatment System (OWTS) with conventional leachfield is adequate to meet Santa Cruz County LAMP standards. Contact me with any questions or concerns.

Sincerely,

Sterling Scott, Associate Environmental Consultant
sterling@foxonsite.com
REHS #9469
Fox Onsite Solutions

Attachments:
1. Testing Site Map
2. Soil Profile Log
3. Percolation Data Sheet
4. OWTS Feasibility Report

Fox Onsite Solutions LLC
Ryan Fox REHS #8605
ryan@foxonsite.com

SOIL PERCOLATION TESTS

FOX ONSITE SOLUTIONS

APN: 088-031-37	DATE: 11/1/23
LOCATION: CAMP CHESEBROUGH	OWNER: BOY SCOUTS OF AMERICA

HOLE #: P1 **DEPTH:** 6'

30 MIN RDS

	TIME		WATER LEVEL				
	START	FINISH	START	FINISH	ΔMIN	ΔINCH	MPI
1	1102	1132	38	34.5	30	3.5	8.6
2	1133	1203	37.5	33.75	30	3.75	8
3	1263	1233	37.25	34	30	3.25	9.23
4	1233	103	37.25	34.5	30	2.75	10.9
5	103	133	37.5	35	30	2.5	12
6	133	203	37.5	34.5	30	3	10
7	204	234	37.25	34.5	30	2.75	10.9
8							
9							
10							

EMPTY: 31 **REFILL:** 37 **MPI AVG:** 29.9

NOTES:

HOLE #: P2 **DEPTH:** 3'

LESS THA 10 m

	TIME		WATER LEVEL				
	START	FINISH	START	FINISH	ΔMIN	ΔINCH	MPI
1	1103		104	BOTTOMED			
2	1119	1127	104	110	6	6	1
3	1128	1133	104	108.75	5	4.75	1.05
4	1134	1139	164	108.25	5	4.25	1.18
5	1139	1144	104	108.75	5	4.75	1.18
6	1145	1150	104	108.25	5	4.25	1.18
7	1150	1155	104	108.25	5	4.25	1.18
8	1155	1200	164	108.25	5	4.25	1.18
9							
10							

EMPTY: 110 **REFILL:** 104 **MPI AVG:** 1.18

NOTES:

HOLE #: P3 **DEPTH:** 3'

30 MIN RDS

	TIME		WATER LEVEL				
	START	FINISH	START	FINISH	ΔMIN	ΔINCH	MPI
1	1105	1135	236.25	238.5	30	2.25	13
2	1136	1206	235	237	30	2	15
3	1206	1236	235	236.75	30	1.75	17
4	1237	107	235	236.25	30	1.25	24
5	107	137	235	236.25	30	1.25	24
6	137	207	235	236	30	1	36
7	208	238	235	236	30	1	30
8					30		
9							
10							

EMPTY: 242.25 **REFILL:** 236.25 **MPI AVG:** 28

NOTES:

HOLE #: P4 **DEPTH:** 3'

10 m

	TIME		WATER LEVEL				
	START	FINISH	START	FINISH	ΔMIN	ΔINCH	MPI
1	11:04	1129	279.75	273.75	21	6	3.5
2	11:30	1140	280	276.5	10	3.5	2.9
3	1141	1151	280	277.5	10	2.5	4
4	1151	1201	280	277.75	10	2.25	4.44
5	1201	1211	280	277.75	10	2.25	4.44
6	1211	1221	280	278	10	2	5
7	1221	1231	280.25	278.25	10	2	5
8	1231	1241	280.25	278.5	10	1.75	5.7
9	115	125	280	278.5	10	1.5	6
10							

EMPTY: 273.75 **REFILL:** 279.75 **MPI AVG:**

NOTES: 5.24

HOLE #: P5 **DEPTH:** 6'

10 min RDS

	TIME		WATER LEVEL				
	START	FINISH	START	FINISH	ΔMIN	ΔINCH	MPI
1	1110	1140	148	142.25	30	5.75	5.2
2	1209	1218	149	146	10	3	3.3
3	1218	1228	149	146.5	10	2.5	8
4	1228	1238	149	146.5	10	2.5	8
5	1239	1249	149.25	146.75	10	2.5	8
6	1249	1259	149	146.5	10	2.5	8
7	1259	109	149	146.5	10	2.5	8
8	1:10	120	149	146.75	10	2.25	4
9							
10							

EMPTY: 142.25 **REFILL:** 147 **MPI AVG:**

NOTES: OFF 1/4 INCH (TIME READING) 6.67

HOLE #: P6 **DEPTH:** 3'

5 m R

	TIME		WATER LEVEL				
	START	FINISH	START	FINISH	ΔMIN	ΔINCH	MPI
1	1112	1122	23	30.25	10	7.25	1.38
2	1123	1131	23	30.25	8	7.25	1.10
3	1132	1137	23	28.75	5	5.75	.87
4	1138	1141	23	28	5	5	1
5	1142	1147	23	28 7/8	5	5.875	.85
6	1148	1153	23	28	5	5	1
7	1153	1158	23	27.7/8	5	4.875	1.03
8	1159	1204	23	28	5	5	1
9							
10							

EMPTY: 30.25 **REFILL:** 23 **MPI AVG:**

NOTES: 1.01

Infiltrative Zone Average MPI: 8.85
Deep MPI (<120mpi): 18.285
Application Rate: 0.8
Nitrate concern area?:

Notes:
OUTSIDE OF NITRATE CONCERN AREA.

Fox Onsite Solutions LLC
Ryan Fox REHS #8605
ryan@foxonsite.com

SOIL PROFILE

FOX ONSITE SOLUTIONS

APN: 088 - 051 - 37	DATE: 10/31/23
LOCATION: 26003 HWY 9, 95033	OWNER: BOY SCOUTS OF AMERICA

SOIL PROFILE #: T1

FROM	TO	SOIL TYPE	NOTES
0	2'	TOP SOIL w/ ROOD	
2'	6'	FRACTURED [illegible]STONE MUD	NO GW
6'	8'	BROWN " "	
8'	13'	" " "	ENCOUNTERED

DEPTH TO GROUNDWATER: NO GW

SOIL PROFILE #:

FROM	TO	SOIL TYPE	NOTES

DEPTH TO GROUNDWATER: ______

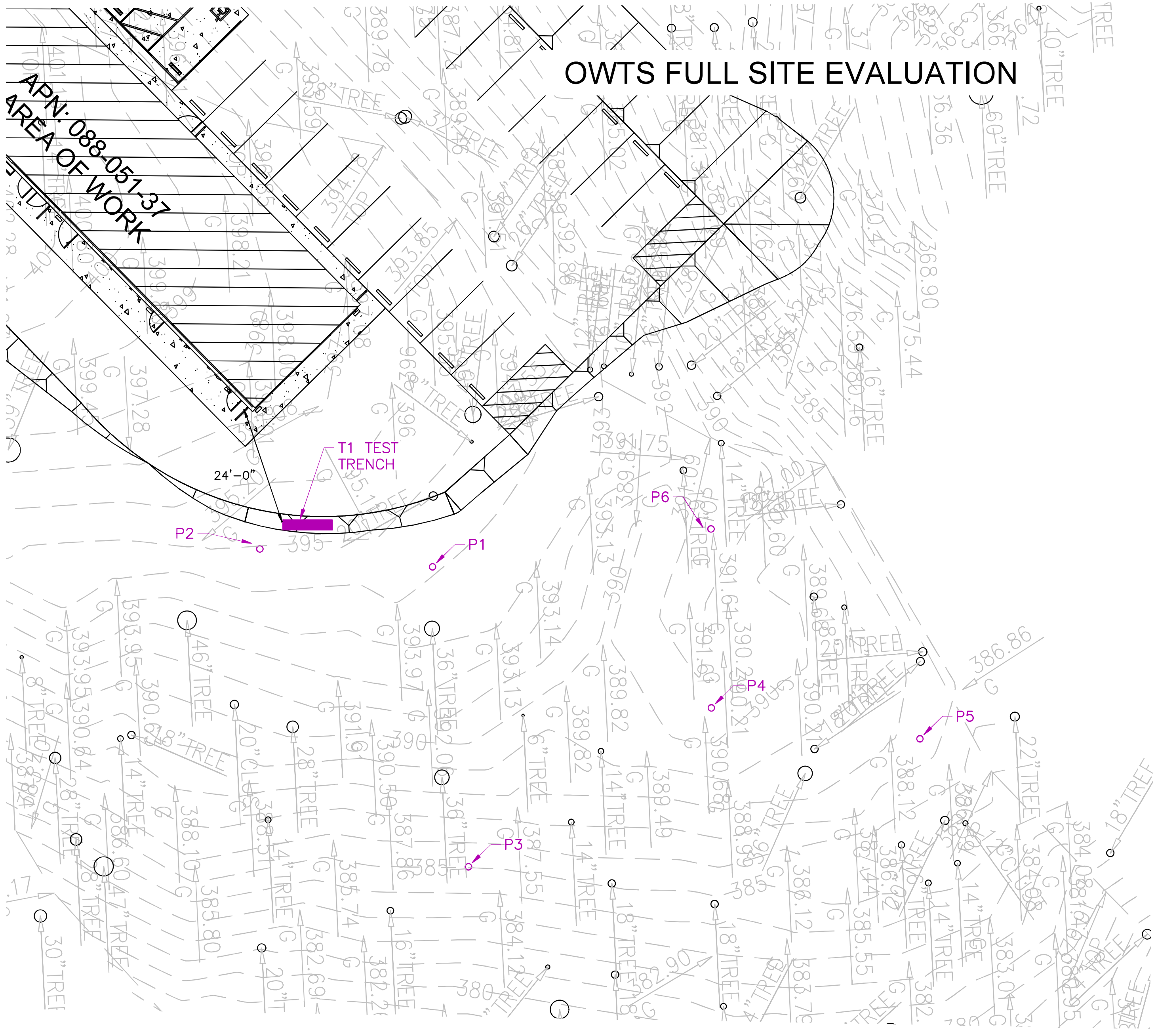
SOIL PROFILE #:

FROM	TO	SOIL TYPE	NOTES

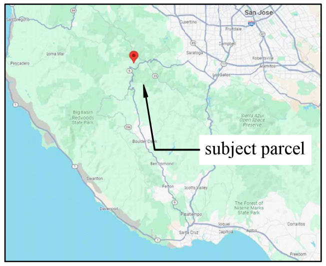
DEPTH TO GROUNDWATER: ______

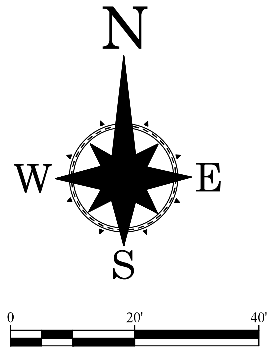
NOTES:

OWTS FULL SITE EVALUATION


APN: 088-051-37
AREA OF WORK
T1 TEST
TRENCH
24'–0"
P1
P2
P3
P4
P5
P6
395
393.14
393.13
393.97
393.95
391.61
390.21
390.68
389.82
389.49
388.12
386.86
385.55
384.12
384.08
383.01
382.69
22" TREE
36" TREE
46" TREE
28" TREE
14" TREE
18" TREE
16" TREE
20" CLUS
30" TREE
47" TREE
6" TREE
8" TREE
60" TREE
10" TREE

LOCATION


subject parcel
San Jose



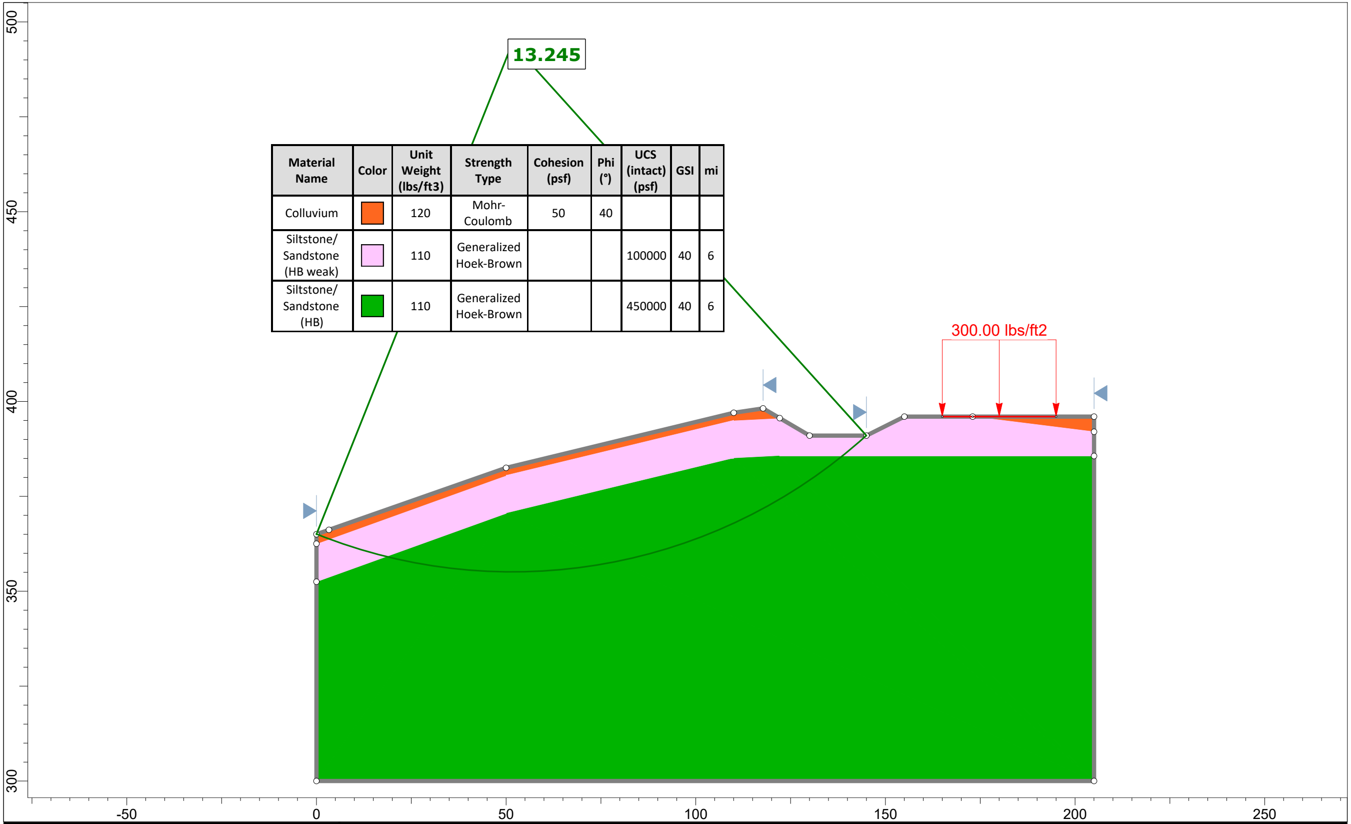
FOX ONSITE SOLUTIONS

Ryan Fox R.E.H.S. #8605
1575 Sheffield Ave
San Jose, CA 95125
ryan@foxonsite.com
(831) 531-7205
foxonsitesolutions.com

APN:	088-051-37	Date:	1/25/24
Project Location:	26005 HWY 9, LOS GATOS, CA 95033		
Property Owner:	BOY SCOUTS OF AMERICA		
Mailing Address:	26005 HWY 9, LOS GATOS, CA 95033		
Owner Contact Info:			
Scale:	1" = 20'	Revision:	1

BOYSCOUTCAMPCHESBOUGH_OWTSTESTING_1.25.24.DWG

APPENDIX D: SLOPE STABILITY ANALYSES OUTPUTS


13.245
300.00 lbs/ft2
500
450
400
350
300
-50
0
50
100
150
200
250

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	UCS (intact) (psf)	GSI	mi
Colluvium	🟧	120	Mohr-Coulomb	50	40			
Siltstone/ Sandstone (HB weak)	🟪	110	Generalized Hoek-Brown			100000	40	6
Siltstone/ Sandstone (HB)	🟩	110	Generalized Hoek-Brown			450000	40	6

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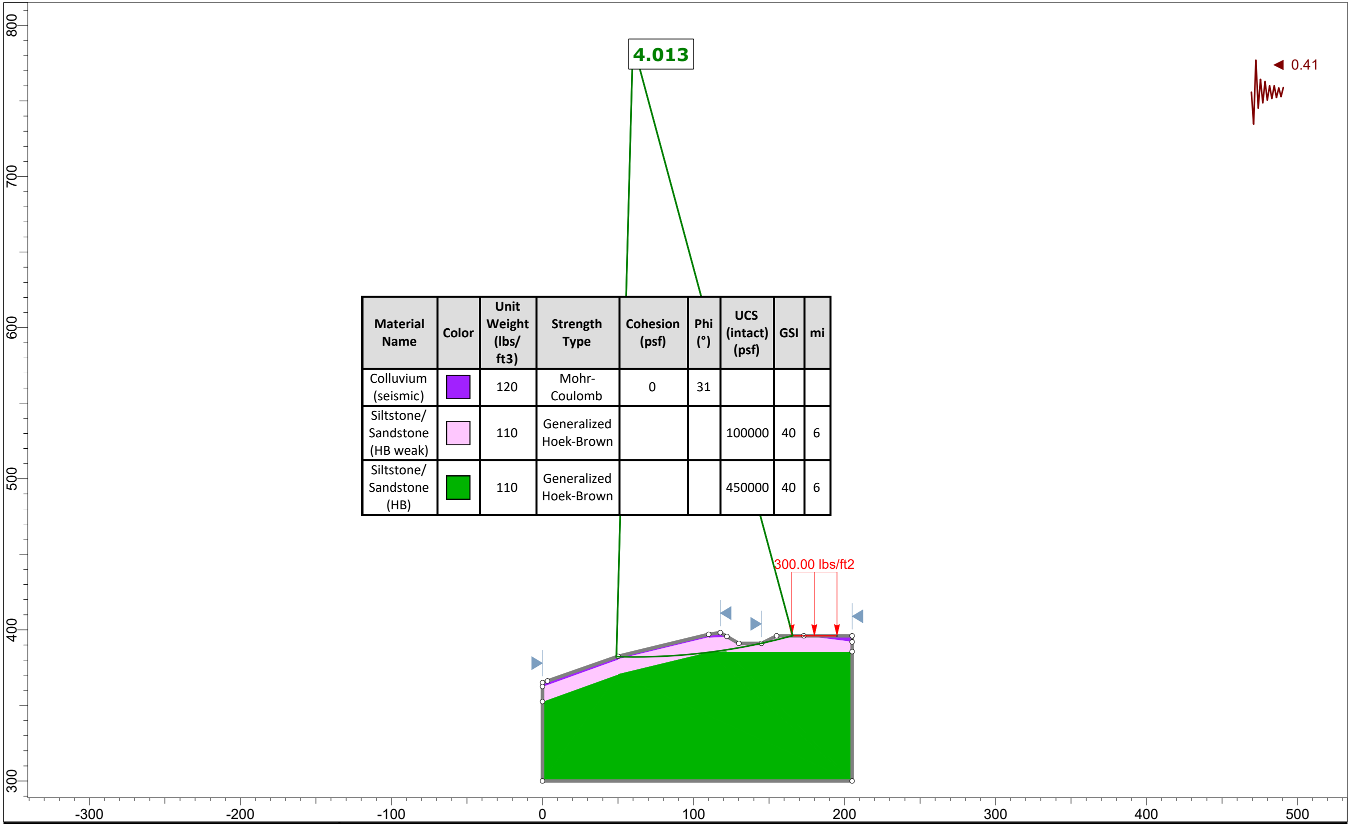
SLIDEINTERPRET 9.038

Project	Slide2 - An Interactive Slope Stability Program		
Group	Future Grades	*Scenario*	Static
Drawn By		*Company*	
Date	11/14/2024, 11:47:28 AM	*File Name*	Training Center section B-B'.slmd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0.41
300.00 lbs/ft2
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700
600
500
400
300
-300
-200
-100
0
100
200
300
400
500

Material Name	Color	Unit Weight (lbs/ ft3)	Strength Type	Cohesion (psf)	Phi (°)	UCS (intact) (psf)	GSI	mi
Colluvium (seismic)	🟪	120	Mohr-Coulomb	0	31			
Siltstone/ Sandstone (HB weak)	⬜	110	Generalized Hoek-Brown			100000	40	6
Siltstone/ Sandstone (HB)	🟩	110	Generalized Hoek-Brown			450000	40	6

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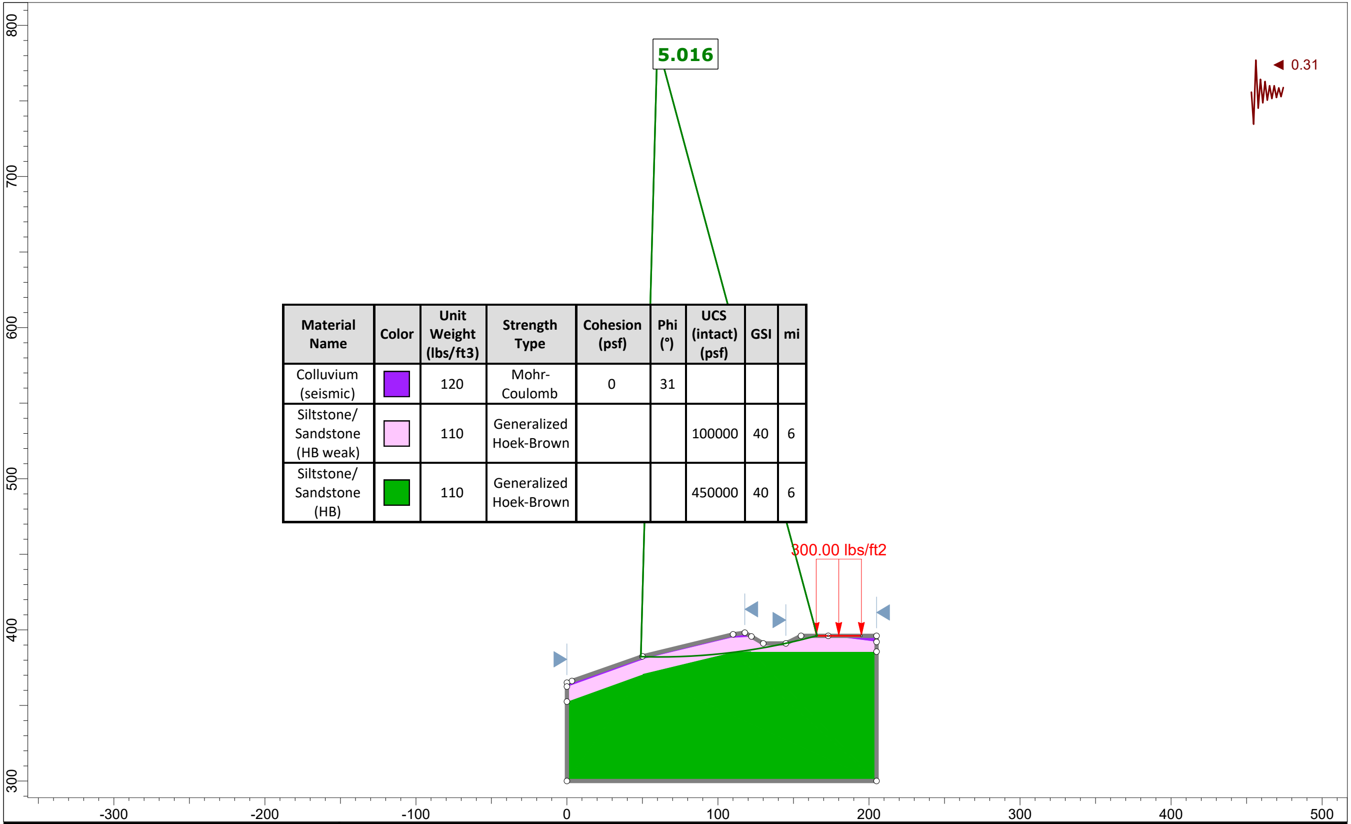
SLIDEINTERPRET 9.038

Project	Slide2 - An Interactive Slope Stability Program		
Group	Future Grades	*Scenario*	Pseudo-static 5cm
Drawn By		*Company*	
Date	11/14/2024, 11:47:28 AM	*File Name*	Training Center section B-B'.slmd



5.016
0.31
300.00 lbs/ft2
800
700
600
500
400
300
-300
-200
-100
0
100
200
300
400
500

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	UCS (intact) (psf)	GSI	mi
Colluvium (seismic)	🟪	120	Mohr-Coulomb	0	31			
Siltstone/ Sandstone (HB weak)	⬜	110	Generalized Hoek-Brown			100000	40	6
Siltstone/ Sandstone (HB)	🟩	110	Generalized Hoek-Brown			450000	40	6

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Project	Slide2 - An Interactive Slope Stability Program		
Group	Future Grades	*Scenario*	Pseudo-static 15cm
Drawn By		*Company*	
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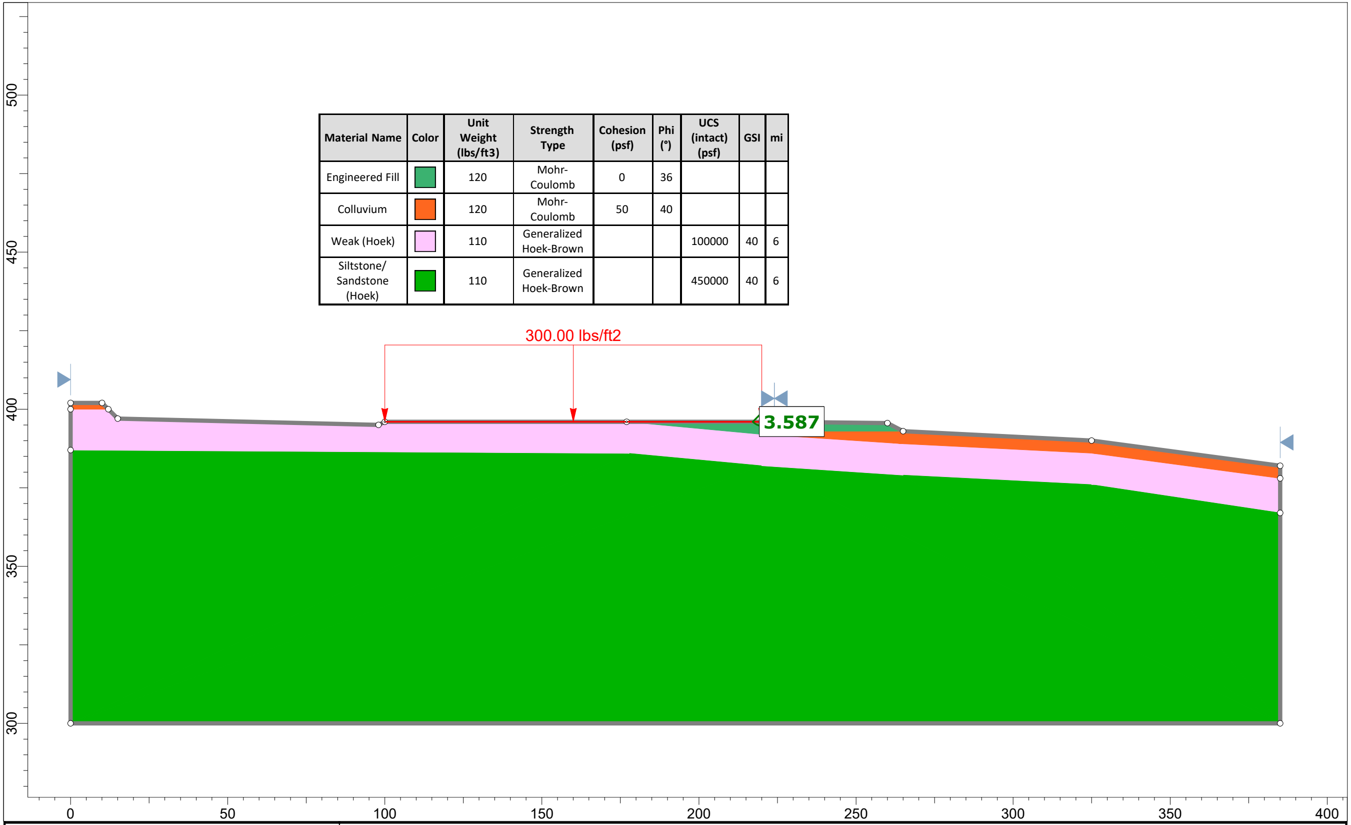
SLIDEINTERPRET 9.038


500
450
400
350
300
0
50
100
150
200
250
300
350
400
300.00 lbs/ft2
3.587

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	UCS (intact) (psf)	GSI	mi
Engineered Fill	🟩	120	Mohr-Coulomb	0	36			
Colluvium	🟧	120	Mohr-Coulomb	50	40			
Weak (Hoek)	🟪	110	Generalized Hoek-Brown			100000	40	6
Siltstone/ Sandstone (Hoek)	🟩	110	Generalized Hoek-Brown			450000	40	6

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SLIDEINTERPRET 9.038

Project Slide2 - An Interactive Slope Stability Program

Group Proposed Grades

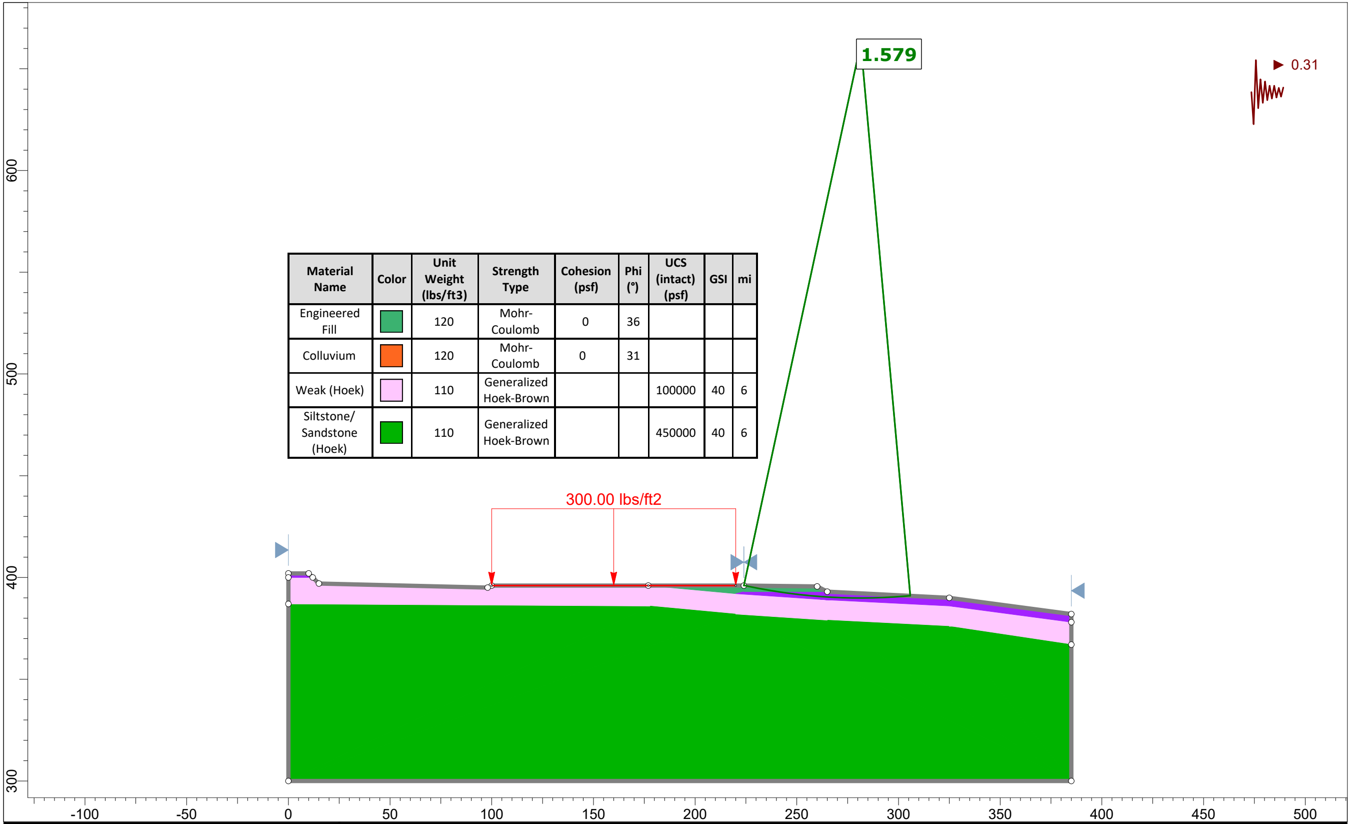
Scenario Static

Drawn By

Company

Date 11/14/2024, 11:47:28 AM

File Name Training Center section I-I'.slmd



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	UCS (intact) (psf)	GSI	mi
Engineered Fill	🟩	120	Mohr-Coulomb	0	36			
Colluvium	🟧	120	Mohr-Coulomb	0	31			
Weak (Hoek)	🟪	110	Generalized Hoek-Brown			100000	40	6
Siltstone/ Sandstone (Hoek)	🟩	110	Generalized Hoek-Brown			450000	40	6

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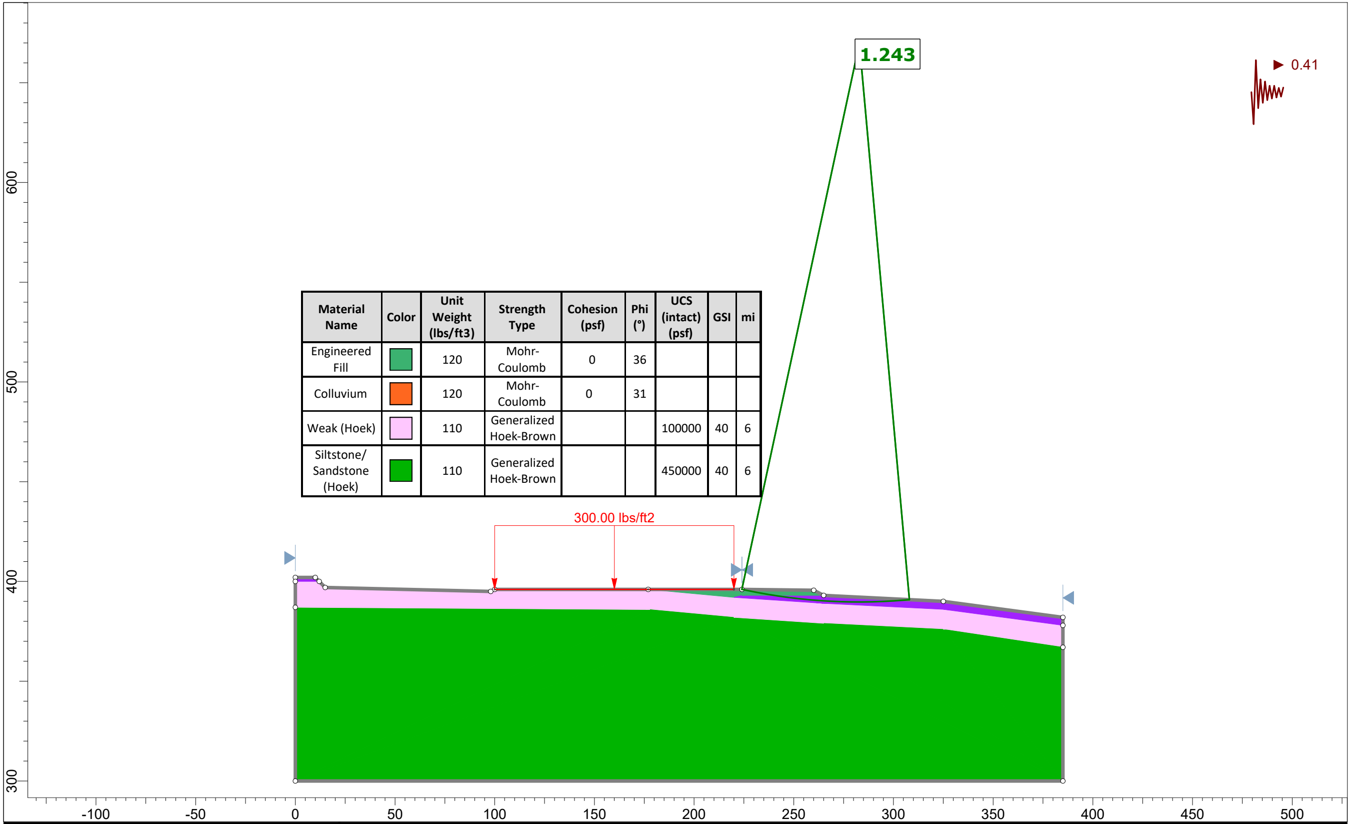
SLIDEINTERPRET 9.038

Project	Slide2 - An Interactive Slope Stability Program		
Group	Proposed Grades	*Scenario*	Pseudo-static 15cm
Drawn By		*Company*	
Date	11/14/2024, 11:47:28 AM	*File Name*	Training Center section I-I'.slmd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300.00 lbs/ft2
600
500
400
300
-100
-50
0
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100
150
200
250
300
350
400
450
500

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	UCS (intact) (psf)	GSI	mi
Engineered Fill	🟩	120	Mohr-Coulomb	0	36			
Colluvium	🟧	120	Mohr-Coulomb	0	31			
Weak (Hoek)	🟪	110	Generalized Hoek-Brown			100000	40	6
Siltstone/ Sandstone (Hoek)	🟩	110	Generalized Hoek-Brown			450000	40	6

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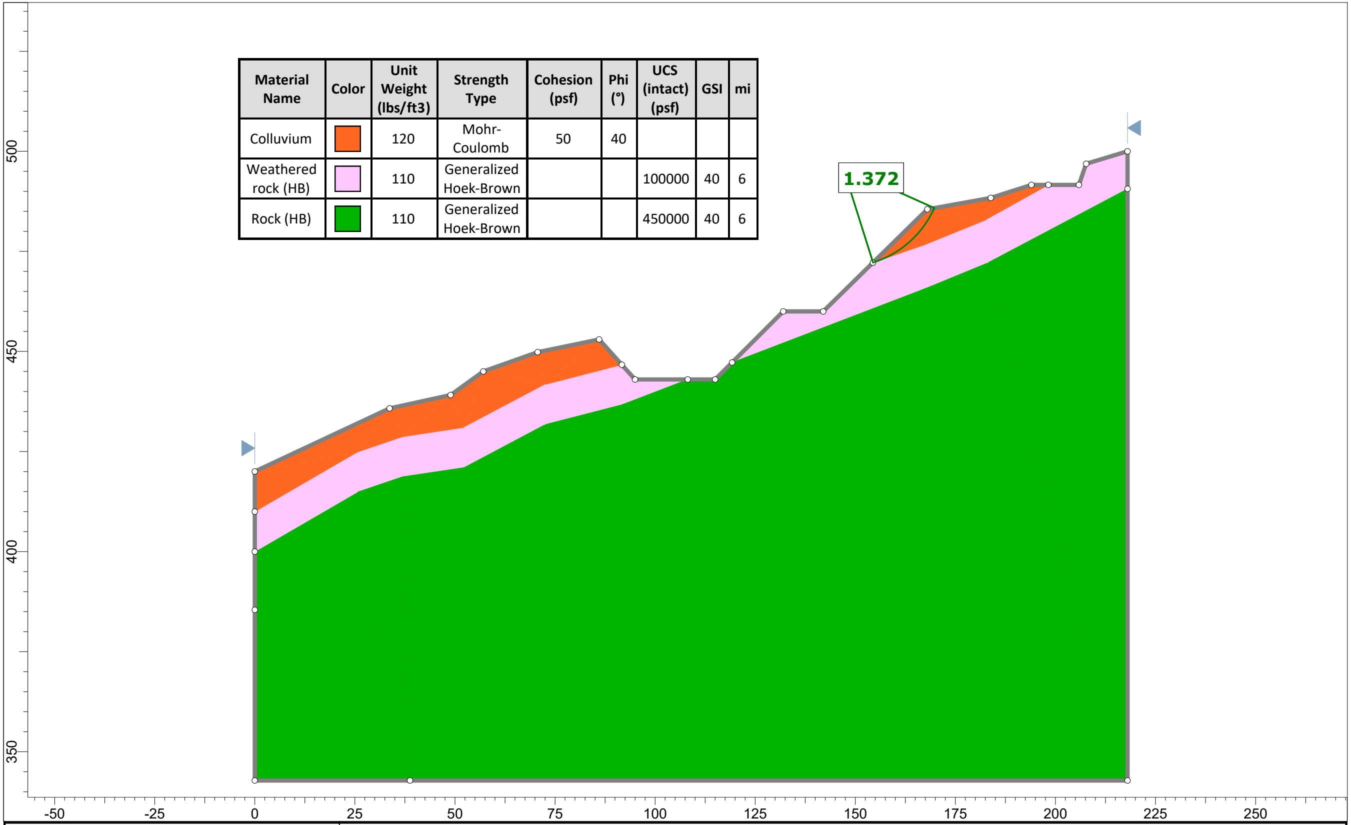
SLIDEINTERPRET 9.038

Project	Slide2 - An Interactive Slope Stability Program		
Group	Proposed Grades	*Scenario*	Pseudo-static 5cm
Drawn By		*Company*	
Date	11/14/2024, 11:47:28 AM	*File Name*	Training Center section I-I'.slmd



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	UCS (intact) (psf)	GSI	mi
Colluvium	🟧	120	Mohr-Coulomb	50	40			
Weathered rock (HB)	🟪	110	Generalized Hoek-Brown			100000	40	6
Rock (HB)	🟩	110	Generalized Hoek-Brown			450000	40	6

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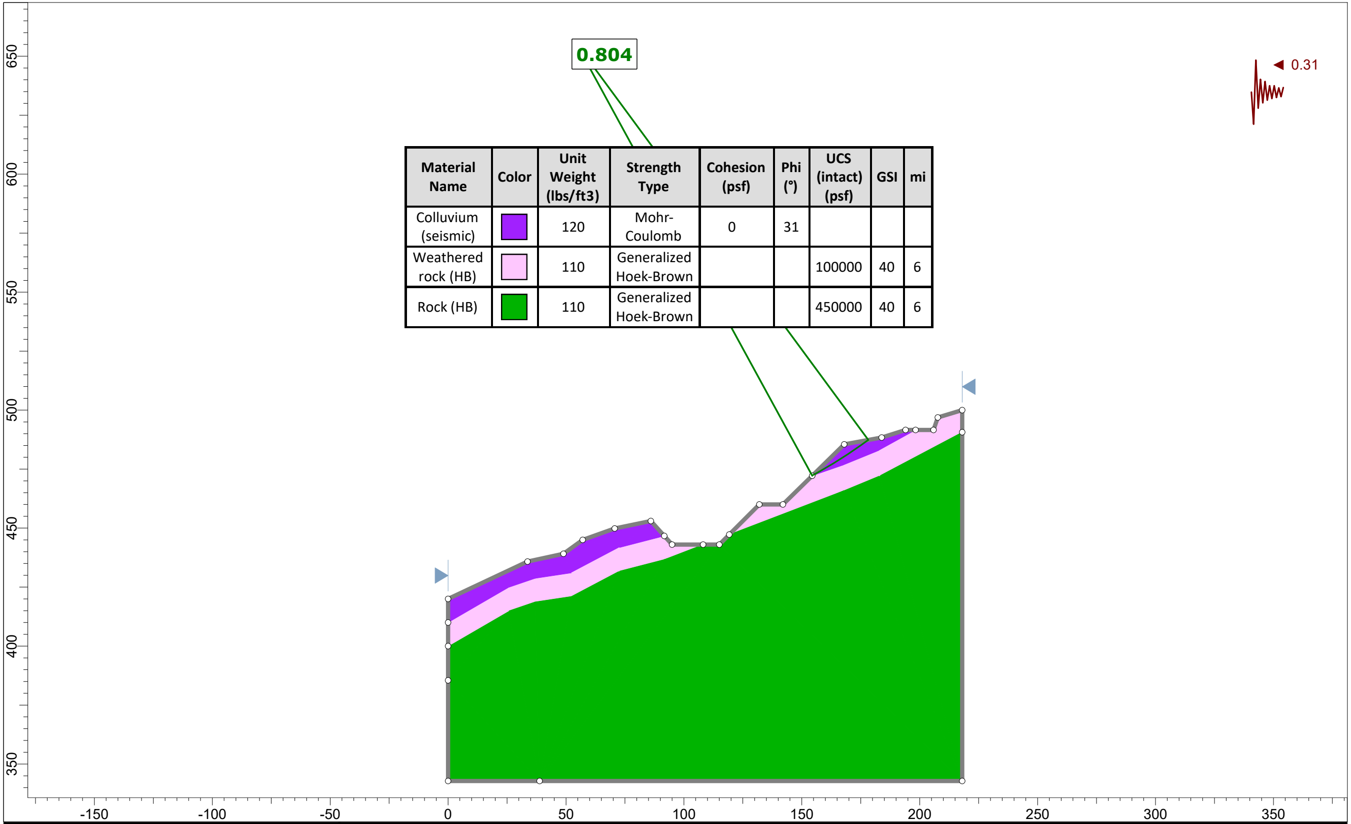
SLIDEINTERPRET 9.038

Project	Slide2 - An Interactive Slope Stability Program		
Group	Proposed (1:1)	*Scenario*	Static
Drawn By		*Company*	
Date	11/14/2024, 11:47:28 AM	*File Name*	Training Center section F-F'.slmd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600
550
500
450
400
350
-150
-100
-50
0
50
100
150
200
250
300
350

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	UCS (intact) (psf)	GSI	mi
Colluvium (seismic)	🟪	120	Mohr-Coulomb	0	31			
Weathered rock (HB)	▢	110	Generalized Hoek-Brown			100000	40	6
Rock (HB)	🟩	110	Generalized Hoek-Brown			450000	40	6

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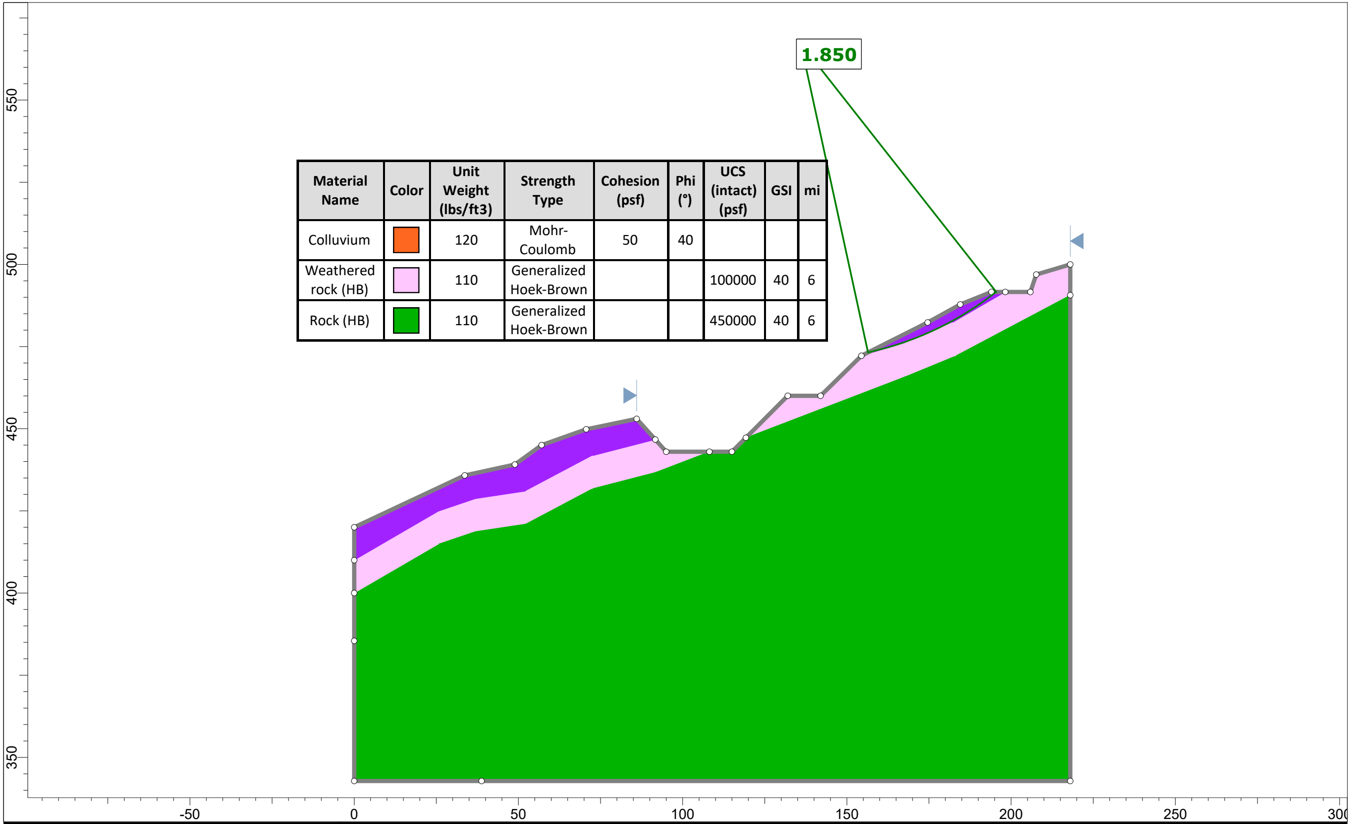
SLIDEINTERPRET 9.038

Project	Slide2 - An Interactive Slope Stability Program		
Group	Proposed (1:1)	*Scenario*	Pseudo-static 15cm
Drawn By		*Company*	
Date	11/14/2024, 11:47:28 AM	*File Name*	Training Center section F-F'.slmd

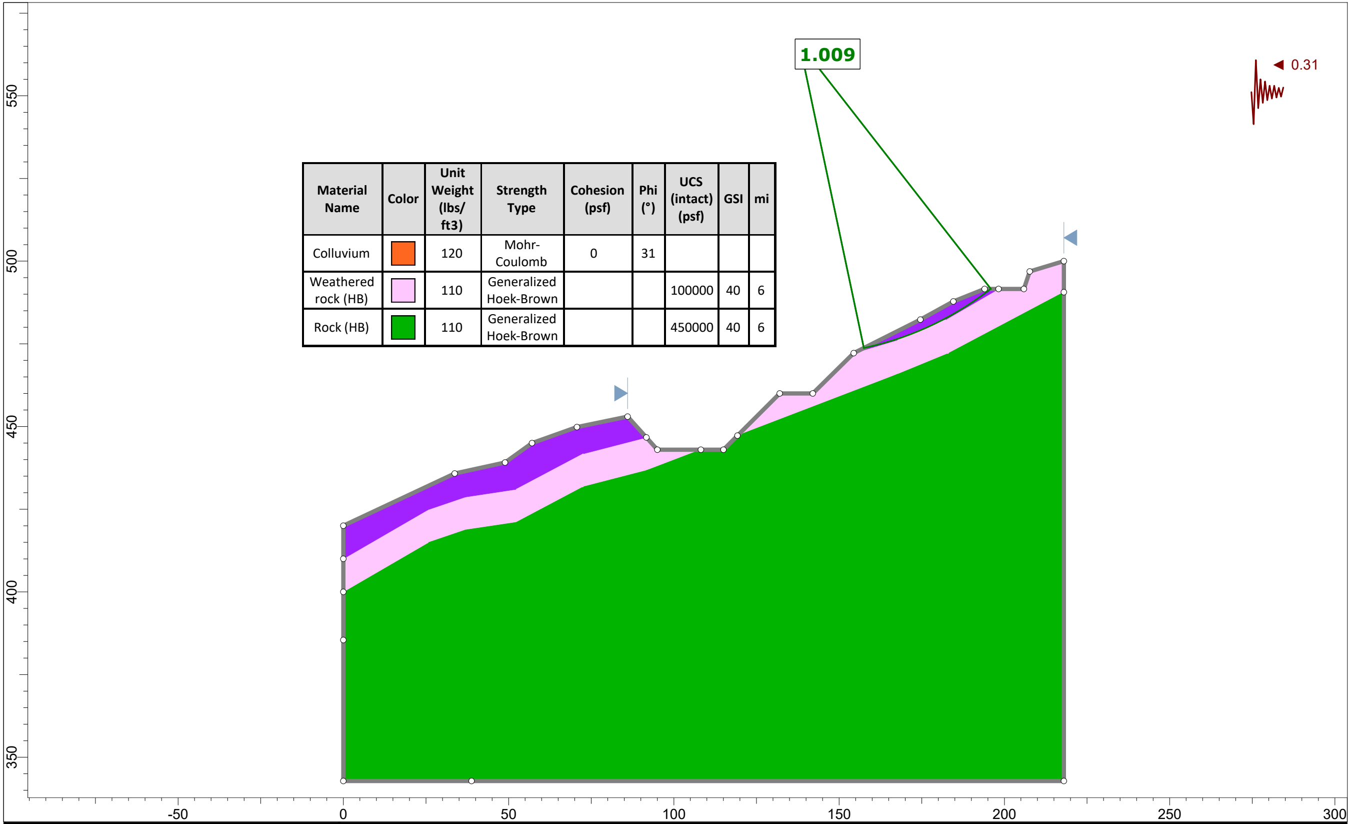


Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	UCS (intact) (psf)	GSI	mi
Colluvium	🟧	120	Mohr-Coulomb	50	40			
Weathered rock (HB)	▨	110	Generalized Hoek-Brown			100000	40	6
Rock (HB)	🟩	110	Generalized Hoek-Brown			450000	40	6

rocscience

SLIDEINTERPRET 9.038

Project	Slide2 - An Interactive Slope Stability Program		
Group	Set back col	*Scenario*	Static
Drawn By		*Company*	
Date	11/14/2024, 11:47:28 AM	*File Name*	Training Center section F-F'.slmd

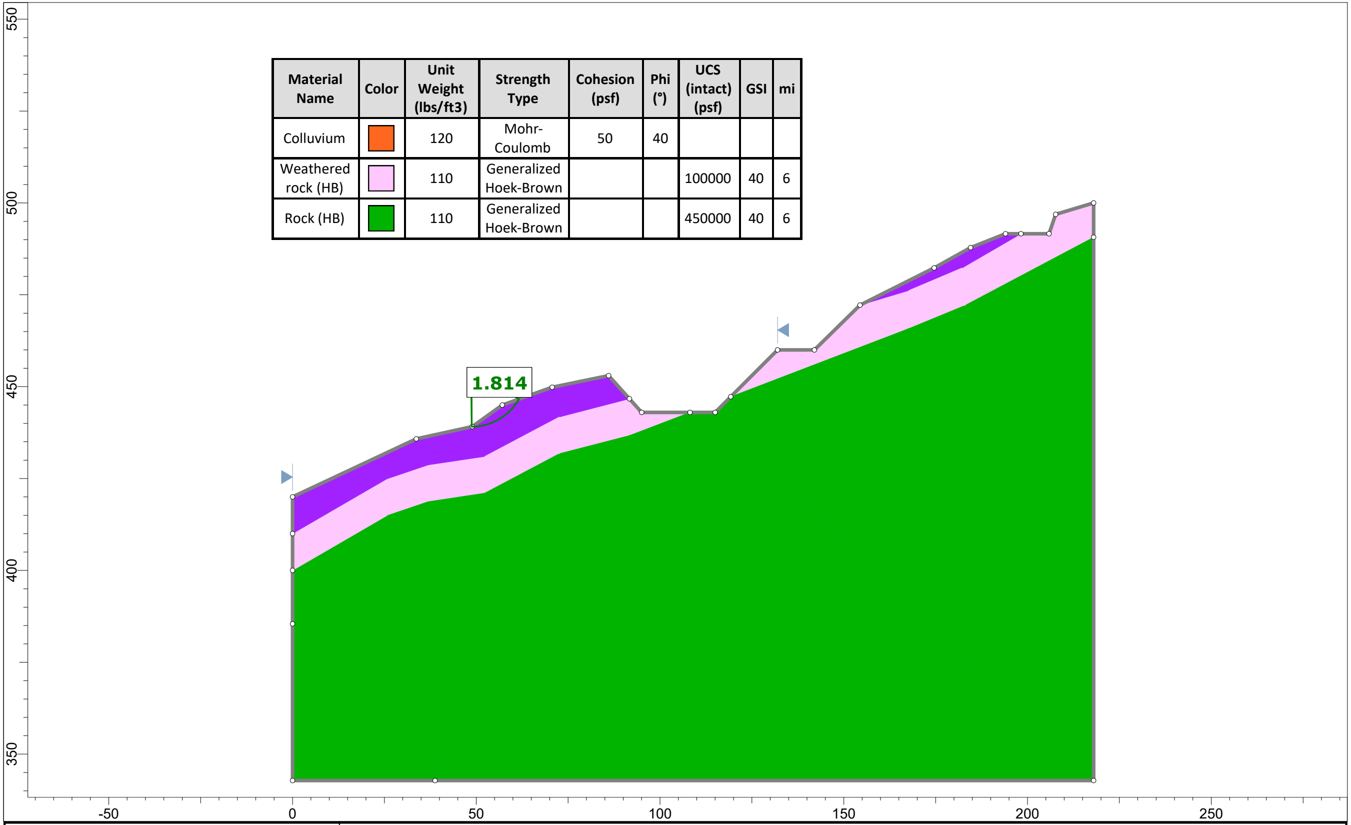

1.009
0.31
550
500
450
400
350
-50
0
50
100
150
200
250
300

Material Name	Color	Unit Weight (lbs/ ft3)	Strength Type	Cohesion (psf)	Phi (°)	UCS (intact) (psf)	GSI	mi
Colluvium	🟧	120	Mohr-Coulomb	0	31			
Weathered rock (HB)	🟪	110	Generalized Hoek-Brown			100000	40	6
Rock (HB)	🟩	110	Generalized Hoek-Brown			450000	40	6

rocscience

SLIDEINTERPRET 9.038

Project	Slide2 - An Interactive Slope Stability Program		
Group	Set back col	*Scenario*	Pseudo-static 15cm
Drawn By		*Company*	
Date	11/14/2024, 11:47:28 AM	*File Name*	Training Center section F-F'.slmd

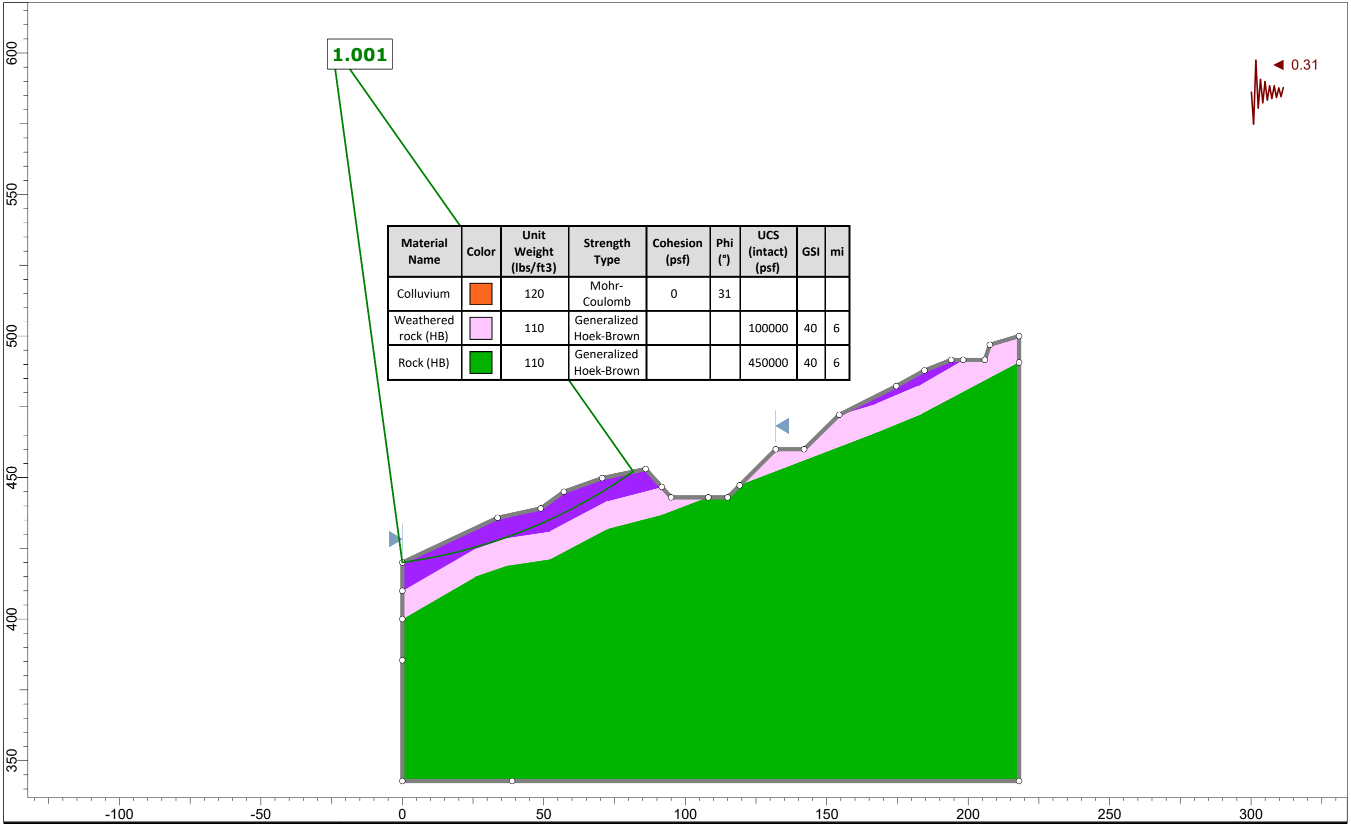


Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	UCS (intact) (psf)	GSI	mi
Colluvium	🟧	120	Mohr-Coulomb	50	40			
Weathered rock (HB)	🟪	110	Generalized Hoek-Brown			100000	40	6
Rock (HB)	🟩	110	Generalized Hoek-Brown			450000	40	6

rocscience

SLIDEINTERPRET 9.038

Project	Slide2 - An Interactive Slope Stability Program		
Group	Set back col	*Scenario*	Static - Lower Slope
Drawn By		*Company*	
Date	11/14/2024, 11:47:28 AM	*File Name*	Training Center section F-F'.slmd



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	UCS (intact) (psf)	GSI	mi
Colluvium	🟧	120	Mohr-Coulomb	0	31			
Weathered rock (HB)	🟪	110	Generalized Hoek-Brown			100000	40	6
Rock (HB)	🟩	110	Generalized Hoek-Brown			450000	40	6

rocscience

SLIDEINTERPRET 9.038

Project	Slide2 - An Interactive Slope Stability Program		
Group	Set back col	*Scenario*	Pseudo-static - Lower Slope
Drawn By		*Company*	
Date	11/14/2024, 11:47:28 AM	*File Name*	Training Center section F-F'.slmd

CORNERSTONE
EARTH GROUP

Date: September 20, 2023
Project No.: 1360-2-1

Prepared For: Mr. Michael Wilson
BOY SCOUTS OF AMERICA
970 West Julian Street
San Jose, California 95126

Re: Geotechnical Consultation
Chesebrough Power Pole Road Site & New Water Tank
26005 Big Basin Way, CA-9
Los Gatos, California

Dear Mr. Wilson:

As you know, we were requested to provide geotechnical investigation regarding the proposed new building at the Power Pole Road site, as well as a new water tank. Our geotechnical consultation and recommendations have been prepared for the sole use of the Boy Scouts of America for the Chesebrough Power Pole Site new structure and water tank project at 26005 Big Basin Way in Los Gatos, California. Our services were performed in accordance with our agreement dated July 3, 2023.

For our review and preparation of this letter, we were provided with the following documents.

- Preliminary architecture plans titled “BSA Chesebrough, Sheets A1.0X and A2.1P” prepared by TOPA Architecture, dated July 5, 2023.

The Project

The project will consist of construction of a new metal barn type structure at the Chesebrough Scout Camp in Los Gatos. We understand the proposed building will likely be a prefabricated structure with an approximate footprint of 3,600 square feet. We also understand that a new fire water tank will be required as part of the project development. Structural loads are not currently known for the proposed structure(s); however, structural loads are expected to be typical of similar type structures.

Based on review of the preliminary topographic plans and discussions with you, we understand that cuts and fills on the order of 2 to 6 feet will be required as part of the grading operations for the building and cuts on the order of 1 to 5 feet may be required for the water tank.

Site Conditions

Surface Description

The project site is located within the Chesebrough Scout reservation at a location currently identified as the power pole road site. The site is currently undeveloped and occupied by existing slopes, redwood and pine trees, and tree stumps. Grades fall approximately 4 to 6 feet from the west to the east across the proposed pad. Based on the provided plans, the side slopes surrounding the northern, southern, and western sections of the proposed building range from approximately 2:1 to 3:1 (horizontal:vertical). Based on our discussions with you, we understand that the proposed water tank will be in an area of cut near the existing water tanks and fire water equipment adjacent to the Main Road.

Subsurface Description

A site visit was performed on September 6, 2023 to observe existing site conditions and collect soil samples for laboratory testing. During our site visit, one shallow test pit was excavated by others using an excavator to a depth of 3 to 4 feet in the general vicinity of the proposed new fire water tank. Below the existing ground surface, test pits exposed surficial soils ranging from 1 to 3 feet in depth and consisting of sandy clay and clayey sand. Below the surficial soils, weathered bedrock consisting of interbedded sandstone, siltstone, and claystone was encountered to the terminal depth explored. As access did not allow for the excavator to get within the footprint of the proposed structure, two hand auger borings were performed to depths of 4 and 8 feet below existing grades. The hand augers encountered up to 3 feet of undocumented fill overlying stiff to hard lean clay with sand and gravel to the maximum depth explored of 8 feet.

Laboratory Testing

We performed one Plasticity Index (PI) test on a representative sample from our hand auger borings. Test results were used to evaluate the expansion potential of the surficial soils. The surficial PI test resulted in a PI of 20 indicating moderate expansion potential to wetting and drying cycles.

Laboratory testing indicated that the in-situ moisture contents within the upper 5½ feet range from 17 to 45 percent moisture content and is estimated to be 4 to 25 percent over the estimated optimum moisture content.

Conclusions

From a geotechnical viewpoint, the project is feasible provided the concerns listed below are addressed in the project design. Descriptions of each concern with brief outlines of our recommendations follow the listed concerns.

- Presence of moderately expansive soils and highly expansive bedrock
- Potential for differential settlement due to cut/fill transitions
- Building slope setback/deepened foundations

Presence of Moderately Expansive Soils and Highly Expansive Bedrock

Moderately expansive surficial soils generally blanket the proposed building site and highly expansive claystone at the proposed water tank location. Expansive soils and bedrock can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wetted. To reduce the potential for damage to the planned structures, slabs-on-grade should have sufficient reinforcement and be supported on a layer of non-expansive fill; footings should extend below the zone of seasonal moisture fluctuation. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as well as limiting landscaping watering. Detailed grading and foundation recommendations addressing this concern are presented in the following sections.

Differential Settlement Due to Cut/Fill Transitions

We understand that the exact location of the proposed structure has not yet been finalized at this time and may be subject to change. Based on our discussions, we understand that cut and fills on the order of a few to several feet may be required within the proposed building pad.

Foundations bearing on different material (soil/rock or cut/fill) can settle unevenly and may result in increased differential settlement between the different materials. On a preliminary basis, we recommend finished pads with differing foundation support conditions (i.e. overlying cuts vs overlying fill) be over excavated about 1 foot below the bottom of foundation elevations and replaced with engineered fill to provide a more uniform support of foundations. For pads that will bear on different material (soil/rock or cut/fill), the over-excavation should be performed beneath both the slab and bottom of footings. These estimates should be further evaluated once final building layout and topographic/grading plans are available. Additional recommendations addressing this concern are presented in the “Earthwork” and “Foundation” section of this report.

Building Slope Setback

As discussed above, the project building site is located on a small plateau with descending slopes to the south, west, and east ranging in steepness from 2:1 to 3:1 (horizontal:vertical). New structures can be supported on shallow footings provided they are set back at least 10 feet from the top of the nearest slope. This building setback may be reduced to 2 feet provided the footings along the descending slope edges are deepened to the minimum depths presented in the “Foundation” section of this report.

Exterior flatwork should be setback at least 5 to 10 feet, if possible, to reduce concrete cracks due to potential slope creep.

Earthwork Recommendations

SITE CLEARING AND PREPARATION

Site Stripping

The site should be stripped of all surface vegetation, and surface and subsurface improvements to be removed within the proposed development area. Surface vegetation and topsoil should be stripped to a sufficient depth to remove all material greater than 3 percent organic content by weight. Based on our site observations, surficial stripping should extend about 2 to 4 inches below existing grade in vegetated areas.

Tree and Shrub Removal

Trees and shrubs designated for removal should have the root balls and any roots greater than ½-inch diameter removed completely. Mature trees are estimated to have root balls extending to depths of 2 to 4 feet, depending on the tree size. Significant root zones are anticipated to extend to the diameter of the tree canopy. Grade depressions resulting from root ball removal should be cleaned of loose material and backfilled in accordance with the recommendations in the "Compaction" section of this report.

Non-Expansive Fill and Cut/Fill Transition Over-Excavation

As discussed above, to reduce the potential of the moderately expansive surficial soils we recommend the building slab-on-grade and foundations be supported on at least 9 inches of non-expansive fill. Non-expansive fill should also extend at least 2 feet horizontally outside of building footprint. Foundations bearing on different material (soil/rock or cut/fill) can settle unevenly and may result in increased differential settlement between the different materials. To reduce the potential for increased differential settlement due to differing foundation support conditions (cut/fill or soil/rock transitions), on a preliminary basis, we recommend that the finished building pad be over-excavated approximately 1 foot and replaced with engineered fill to provide a more uniform support of the foundations. This criteria will already be met as a result of the recommendation for non-expansive fill beneath slabs-on-grade to mitigate for the highly expansive soils/bedrock at the site. Transition between areas of deeper cut and fills should not transition at a rate faster than 3:1 (h:v). These estimates should be further evaluated once final building loading and grading plans are available. Additional recommendations addressing this concern are presented in the "Foundation" section of this report.

Temporary Cut and Fill Slopes

The contractor is responsible for maintaining all temporary slopes and providing temporary shoring where required. Temporary shoring, bracing, and cuts/fills should be performed in accordance with the strictest government safety standards. On a preliminary basis, the upper 5 feet at the site may be classified as OSHA Soil Type B materials. A Cornerstone representative should be retained to confirm the preliminary site classification. Excavations below building subgrade and excavations in pavement and flatwork areas should be sloped in accordance with OSHA soil classification requirements.

Subgrade Preparation

After site clearing and demolition is complete, and prior to backfilling any excavations resulting from fill removal or demolition, the excavation subgrade and subgrade within areas to receive additional site fills, slabs-on-grade and/or pavements should be scarified to a depth of at least 6 inches, moisture conditioned, and compacted in accordance with the "Compaction" section below.

MATERIAL FOR FILL

Re-Use of On-site Soils

On-site soils with an organic content less than 3 percent by weight may be reused as general fill. General fill should not have lumps, clods or cobble pieces larger than 6 inches in diameter;

85 percent of the fill should be smaller than 2½ inches in diameter. Minor amounts of oversize material (smaller than 12 inches in diameter) may be allowed provided the oversized pieces are not allowed to nest together and the compaction method will allow for loosely placed lifts not exceeding 12 inches.

Potential Import Sources

Non-expansive material should be inorganic with a Plasticity Index (PI) of 15 or less, and not contain recycled asphalt concrete where it will be used within the habitable building areas, unless otherwise approved by ownership. Imported soil for use as general fill material should be inorganic with a Plasticity Index (PI) of 20 or less, and not contain recycled asphalt concrete where it will be used within the habitable building areas, unless otherwise approved by ownership. To prevent significant caving during trenching or foundation construction, imported material should have sufficient fines. Samples of potential import sources should be delivered to our office at least 10 days prior to the desired import start date. Information regarding the import source should be provided, such as any site geotechnical reports. If the material will be derived from an excavation rather than a stockpile, potholes will likely be required to collect samples from throughout the depth of the planned cut that will be imported. At a minimum, laboratory testing will include PI tests. Material data sheets for select fill materials (Class 2 aggregate base, ¾-inch crushed rock, quarry fines, etc.) listing current laboratory testing data (not older than 6 months from the import date) may be provided for our review without providing a sample. If current data is not available, specification testing will need to be completed prior to approval.

Environmental and soil corrosion characterization should also be considered by the project team prior to acceptance. Suitable environmental laboratory data to the planned import quantity should be provided to the project environmental consultant; additional laboratory testing may be required based on the project environmental consultant’s review. The potential import source should also not be more corrosive than the on-site soils, based on pH, saturated resistivity, and soluble sulfate and chloride testing.

Compaction Requirements

All fills, and subgrade areas where fill, slabs-on-grade, and pavements are planned, should be placed in loose lifts 8 inches thick or less and compacted in accordance with ASTM D1557 (latest version) requirements as shown in the table below. In general, clayey soils should be compacted with sheepsfoot equipment and sandy/gravelly soils with vibratory equipment; open-graded materials such as crushed rock should be placed in lifts no thicker than 18 inches and consolidated in place with vibratory equipment. Each lift of fill and all subgrade should be firm and unyielding under construction equipment loading in addition to meeting the compaction requirements to be approved. The contractor (with input from a Cornerstone representative) should evaluate the in-situ moisture conditions, as the use of vibratory equipment on soils with high moistures can cause unstable conditions. General recommendations for soil stabilization are provided in the “Wet Soil Stabilization Guidelines” section of this report. Where the soil’s PI is 20 or greater, the expansive soil criteria should be used.

Table 1: Compaction Requirements

Description	Material Description	Minimum Relative[1] Compaction (percent)	Moisture[2] Content (percent)
General Fill (within upper 5 feet)	On-Site Expansive Soils	87 – 92	>3
	Low Expansion Soils	90	>1
Trench Backfill	On-Site Expansive Soils	87 – 92	>3
	Low Expansion Soils	90	>1
Crushed Rock Fill	¾-inch Clean Crushed Rock	Consolidate In-Place	NA
Non-Expansive Fill	Imported Non-Expansive Fill	90	Optimum
Flatwork Subgrade	On-Site Expansive Soils	87 - 92	>3
	Low Expansion Soils	90	>1
Flatwork Aggregate Base	Class 2 Aggregate Base[3]	90	Optimum
Pavement Subgrade	On-Site Expansive Soils	87 - 92	>3
	Low Expansion Soils	95	>1
Pavement Aggregate Base	Class 2 Aggregate Base[3]	95	Optimum
Asphalt Concrete	Asphalt Concrete	95 (Marshall)	NA

1 – Relative compaction based on maximum density determined by ASTM D1557 (latest version)
2 – Moisture content based on optimum moisture content determined by ASTM D1557 (latest version)
3 – Class 2 aggregate base shall conform to Caltrans Standard Specifications, latest edition, except that the relative compaction should be determined by ASTM D1557 (latest version)

Permanent Cut and Fill Slopes

All permanent cut and fill slopes in soil should have a maximum inclination of 2:1 (horizontal:vertical) for slopes up to 10 feet high. Fill slopes should be overbuilt and trimmed back, exposing engineered fill when complete. Refer to the “Erosion Control” section of this report for a discussion regarding protection of slope surfaces.

Keyways and Benches

Fill placed on existing ground inclined at 6:1 or greater should be benched into the existing slope and a bench keyway constructed at the toe of the fill. Benches should be angled slightly into the slope be spaced vertically at no greater than 4 feet between benches and be at least 8 feet wide. The benches and bench keyways should be angled slightly into the slope (minimum 2 percent inclination), extend at least 2 feet below grade, and be at least 8 to 10 feet wide. The recommended benching for fill placement on slopes is shown conceptually on the attached marked up grading permit plans.

Site Drainage – Surface Drainage

Surface runoff should not be allowed to flow over the top of or pond at the top or toe of engineered slopes. Ponding should also not be allowed on or adjacent to building foundations or slabs-on-grade. Hardscape surfaces should slope at least 2 percent towards suitable discharge facilities; landscape areas should slope at least 3 percent towards suitable discharge facilities. Roof runoff should be directed away from building areas in closed conduits, to approved infiltration facilities, or on to hardscaped surfaces that drain to suitable facilities.

Permanent Erosion Control Measures

Hillside grading will require periodic maintenance after construction to reduce the potential for erosion and sloughing. At a minimum all slopes should be vegetated by hydroseeding or other landscape ground cover. The establishment of vegetation will help reduce runoff velocities, allow some infiltration and transpiration, trap sediment within runoff, and protect the soil from raindrop impact. Depending on the exposed material type and the slope inclination, more aggressive erosion control measures may be needed to protect slopes for one or more winter seasons while vegetation is establishing. For cut or fill slopes with inclinations of 2:1 (horizontal:vertical), erosion control may also consist of jute netting, straw matting, or erosion control blankets used in combination with hydroseeding.

Landscape Considerations

Since the near-surface soils are highly expansive and due to the proximity of the nearby slopes, we recommend greatly reducing the amount of surface water infiltrating these soils near foundations and exterior slabs-on-grade. This can typically be achieved by:

- Using drip irrigation
- Avoiding open planting within 3 feet of the building perimeter or near the top of existing slopes
- Regulating the amount of water distributed to lawns or planter areas by using irrigation timers
- Selecting landscaping that requires little or no watering, especially near foundations.

We recommend that the landscape architect consider these items when developing landscaping plans.

Foundations

The proposed water tank and structure may be supported on shallow foundations provided the recommendations in the “Earthwork” section and the sections below are followed. As discussed above, the building should be set back a minimum of 2 feet from top of adjacent slope.

Conventional Shallow Footings

Conventional shallow footings should bear on natural, undisturbed soil or engineered fill, be at least 12 inches wide, and extend at least 18 inches below the lowest adjacent grade. The proposed building should have deepened footings extending a minimum of 4 feet below the lowest adjacent grade on the slope side of the building if the building is less than 10 feet from top of slope. Lowest adjacent grade is defined as the deeper of the following: 1) bottom of the adjacent interior slab-on-grade, or 2) finished exterior grade, excluding landscaping topsoil. The deepened footings should extend a minimum of 4 feet from the slope side wall line before being stepped up no steeper than 3:1 (horizontal to vertical).

The footings should be designed for allowable bearing pressures of 2,000 psf for dead loads, 3,000 psf for combined dead plus live loads, and 4,000 psf for all loads including wind and seismic. These pressures are based on factors of safety of 3.0, 2.0, and 1.5 applied to the ultimate bearing pressure for dead, dead plus live, and all loads, respectively. These pressures are net values; the weight of the footing may be neglected for the portion of the footing extending below grade (typically, the full footing depth). Top and bottom mats of reinforcing steel should be included in continuous footings to help span irregularities and differential settlement.

Footing Settlement

Structural loads were not provided to us at the time this report was prepared; therefore, we assumed a perimeter strip footing load of 2 to 3 kips per lineal foot. Based on an assumed perimeter strip footing load of 2 to 3 kips per lineal foot and the allowable bearing pressures presented above, we estimate that the total static footing settlement will be approximately ½-inch or less, with less than ¼-inch of post-construction differential settlement between adjacent foundation elements. As our footing loads were assumed, we recommend we be retained to review the final footing layout and loading and verify the settlement estimates above.

Lateral Loading

Lateral loads may be resisted by friction between the bottom of footing and the supporting subgrade, and also by passive pressures generated against footing sidewalls. An ultimate frictional resistance of 0.4 applied to the footing dead load, and an ultimate passive pressure based on an equivalent fluid pressure of 400 pcf may be used in design. The structural engineer should apply an appropriate factor of safety (such as 1.5) to the ultimate values above. Where footings are adjacent to landscape areas without hardscape, the upper 12 inches of soil should be neglected when determining passive pressure capacity.

Spread Footing Construction Considerations

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the "foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

Footing excavations should be filled as soon as possible or be kept moist until concrete placement by regular sprinkling to prevent desiccation. A Cornerstone representative should observe all footing excavations prior to placing reinforcing steel and concrete. If there is a significant schedule delay between our initial observation and concrete placement, we may need to re-observe the excavations.

Building Setback

As discussed in the "Conclusions" section, provided a minimum of a 10-foot setback of the proposed structure from top of adjacent slopes is maintained, no additional foundation work will be required. If the location of the proposed structure is modified and the setback is reduced, we should be retained to review and provide additional foundation recommendations, as needed.

SEISMIC DESIGN CRITERIA

We understand that the project structural design will be based on the 2022 California Building Code (CBC), which provides criteria for the seismic design of buildings in Chapter 16. The "Seismic Coefficients" used to design buildings are established based on a series of tables and figures addressing different site factors, including the mapped spectral acceleration parameters based on distance to the controlling seismic source/fault system.

Our explorations generally encountered surficial soil over shallow bedrock to a depth of 5½ feet, the maximum depth explored. Based on our borings and review of local geology, the site is underlain by shallow alluvial soils underlain by shallow rock with typical SPT "N" values above 50 blows per foot. Therefore, we have classified the site as Soil Classification C.

Table 2: CBC Site Categorization and Site Coefficients

Classification/Coefficient	Design Value
Site Class	C
Site Latitude	37.230963°
Site Longitude	-122.148149°
0.2-second Period Mapped Spectral Acceleration[1], S_S	2.261g
1-second Period Mapped Spectral Acceleration[1], S_1	0.841g
Short-Period Site Coefficient – Fa	1.2
Long-Period Site Coefficient – Fv	1.4
0.2-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects - S_{MS}	2.713g
1-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects – S_{M1}	1.177g
0.2-second Period, Design Earthquake Spectral Response Acceleration – S_{DS}	1.809g
1-second Period, Design Earthquake Spectral Response Acceleration – S_{D1}	0.785g
Site Amplification Factor at PGA – F_{PGA}	1.2
Site Modified Peak Ground Acceleration – PGA_M	1.111

Concrete Slabs and Exterior Flatwork

Interior Slabs-on-Grade

Due to the moderate to high expansion potential of the surficial soils, the proposed slabs-on-grade should be supported on at least 9 inches of non-expansive fill (NEF) to reduce the potential for slab damage due to soil heave. The NEF layer should be constructed over subgrade prepared in accordance with the recommendations in the “Earthwork” section of this report. If moisture-sensitive floor coverings are planned, the recommendations in the “Interior Slabs Moisture Protection Considerations” section below may be incorporated in the project design if desired. If significant time elapses between initial subgrade preparation and slab-on-grade NEF construction, the subgrade should be proof-rolled to confirm subgrade stability, and if the soil has been allowed to dry out, the subgrade should be re-moisture conditioned to at least 3 percent over the optimum moisture content.

The structural engineer should determine the appropriate slab reinforcement for the loading requirements and considering the expansion potential of the underlying soils. For unreinforced concrete slabs, ACI 302.1R recommends limiting control joint spacing to 24 to 36 times the slab thickness in each direction, or a maximum of 18 feet.

Interior Slabs Moisture Protection Considerations

The following general guidelines for concrete slab-on-grade construction where floor coverings are planned are presented for consideration by the developer, design team, and contractor. These guidelines are based on information obtained from a variety of sources, including the American Concrete Institute (ACI) and are intended to reduce the potential for moisture-related problems causing floor covering failures, and may be supplemented as necessary based on project-specific requirements. The application of these guidelines or not will not affect the geotechnical aspects of the slab-on-grade performance.

- Place a minimum 15-mil vapor retarder conforming to ASTM E 1745, Class C requirements or better directly below the concrete slab; the vapor retarder should extend to the slab edges and be sealed at all seams and penetrations in accordance with manufacturer’s recommendations and ASTM E 1643 requirements. A 4-inch-thick capillary break, consisting of crushed rock should be placed below the vapor retarder and consolidated in place with vibratory equipment. The mineral aggregate shall be of such size that the percentage composition by dry weight as determined by laboratory sieves will conform to the following gradation:

Sieve Size	Percentage Passing Sieve
1”	100
¾”	90 – 100
No. 4	0 – 10
No. 200	0 – 5

  The capillary break rock may be considered as the upper 4 inches of the non-expansive fill previously recommended.

- The concrete water:cement ratio should be 0.45 or less. Mid-range plasticizers may be used to increase concrete workability and facilitate pumping and placement.

- Water should not be added after initial batching unless the slump is less than specified and/or the resulting water:cement ratio will not exceed 0.45.
- Polishing the concrete surface with metal trowels is not recommended.
- Where floor coverings are planned, all concrete surfaces should be properly cured.
- Water vapor emission levels and concrete pH should be determined in accordance with ASTM F1869-98 and F710-98 requirements and evaluated against the floor covering manufacturer's requirements prior to installation.

Exterior Flatwork

Exterior concrete flatwork subject to pedestrian and/or occasional light pick up loading should be at least 4 inches thick and supported on at least 6 inches of Class 2 aggregate base overlying subgrade prepared in accordance with the "Earthwork" recommendations of this report. Flatwork that will be subject to heavier or frequent vehicular loading should be designed in accordance with the recommendations in the "Vehicular Pavements" section below. To help reduce the potential for uncontrolled shrinkage cracking, adequate expansion and control joints should be included. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness. Flatwork should be isolated from adjacent foundations or retaining walls except where limited sections of structural slabs are included to help span irregularities in retaining wall backfill at the transitions between at-grade and on-structure flatwork.

Vehicular Pavements

Portland Cement Concrete

The Portland Cement Concrete (PCC) pavement recommendations outlined below are based on methods presented in American Concrete Pavement Association (ACPA, 2006). We recommend PCC vehicular parking be at least 6 inches thick and underlain by 6 inches of Class 2 Aggregate Base overlying subgrade prepared in accordance with the "Earthwork" section of this report. The PCC thicknesses above are based on a concrete compressive strength of at least 3,500 psi. Adequate expansion and control joints should be included. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness. Due to the expansive surficial soils present, we recommend that the construction and expansion joints be dowelled.

Closure

We hope this provides the information you need at this time. Recommendations presented in this letter have been prepared for the sole use of Boy Scouts of America specifically for the Chesebrough Power Pole Site new structure and water tank project located at 26005 Big Basin Way, CA-9 in Los Gatos, California. Our professional services were performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices at this time and location. No warranties are either expressed or implied.

If you have any questions or need any additional information from us, please call and we will be glad to discuss them with you.

Sincerely,

Cornerstone Earth Group, Inc.

Stephen C. Ohlsen, P.E.
Project Engineer

REGISTERED PROFESSIONAL ENGINEER
STEPHEN C. OHLSEN
C 90614
CIVIL
STATE OF CALIFORNIA

SCO:JRD:ea

Attachments: Figure 1: Cut/Fill Transition Detail

Copies: Addressee (PDF by email)

CORNERSTONE
EARTH GROUP

Date: April 11, 2024
Project No.: 1360-2-1

Prepared For: Mr. Michael Wilson
BOY SCOUTS OF AMERICA
970 West Julian Street
San Jose, California 95126

Re: Geotechnical Review of Grading and Improvement Plans
Chesebrough Power Pole Road Site & New Water Tank
26005 Big Basin Way, CA-9
Los Gatos, California

Dear Mr. Wilson:

As requested, we reviewed the geotechnical aspects of the grading and improvement plans for the above-referenced project. We previously performed a geotechnical investigation for the project and presented our findings in our letter titled, “Geotechnical Consultation, Chesebrough Power Pole Road Site & New Water Tank, 26005 Big Basin Way, CA-9, Los Gatos, California,” dated September 20, 2023.

The documents reviewed include the following:

- Grading and utility plans, sheets C-2.0 and C-4.4, titled “BSA Chesebrough Scout Reservation, APN:088 05 137, 26005 Hwy 9, Los Gatos, CA, Santa Cruz County, California,” prepared by Sandis, dated April 3, 2024.

Geotechnical Review

Based on our review, the grading and improvement plans are in general conformance with the recommendations in our geotechnical report.

As recommended in our report, we should be retained to provide geotechnical observation and testing services during construction to complete our role as the Geotechnical Engineer-of-Record for the project.

Closure

This review of plans has been prepared for the sole use of Boy Scouts of America in accordance with generally accepted geotechnical engineering principles and practices in the San Francisco Bay Area at this time. No warranties are either expressed or implied.

Should you have any questions, or if we may be of further service, please contact us at your convenience.

Sincerely,

Cornerstone Earth Group, Inc.

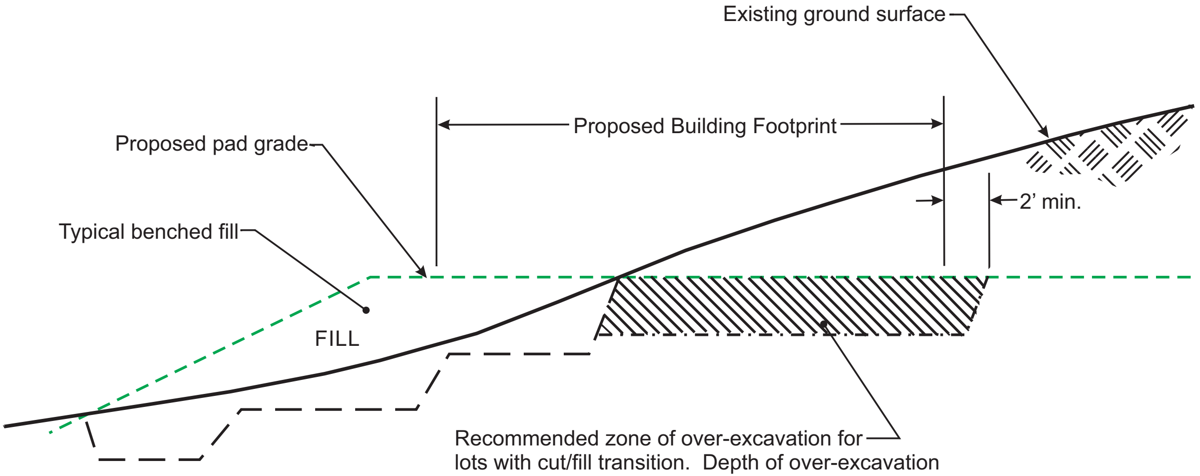
John R Dye

John R. Dye, P.E., G.E.
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
JOHN R. DYE
GE2582
GEOTECHNICAL
STATE OF CALIFORNIA

JRD:ea

Copies: Addressee (PDF by email)


Existing ground surface
Proposed Building Footprint
Proposed pad grade
Typical benched fill
2' min.
FILL

Recommended zone of over-excavation for lots with cut/fill transition. Depth of over-excavation below pad grade should be deep enough to limit the differential fill thickness to 5 feet across the building pad but not less than 1 foot. The depth of over-excavation should be reviewed by Geotechnical Engineer during construction and if needed, adjusted accordingly.

Detail 1 - Conceptual Cut / Fill Transition Over-Excavation

Not to scale

CORNERSTONE
EARTH GROUP

Cut/Fill Transition Over-Excavation Detail

Chesebrough Power Pole Site
26005 Big Basin Way Los
Gatos, CA

Project Number	1360-2-1
Figure Number	Figure 1
Date	July 2023
Drawn By	SCO

CORNERSTONE
EARTH GROUP

Date:	July 26, 2024
Project No.:	1360-3-2
Prepared For:	Mr. Michael Wilson **BOY SCOUTS OF AMERICA** 970 West Julian Street San Jose, California 95126
Re:	Engineering Geology Assessment Report Site Improvements at Chesebrough Camp 26005 Big Basin Way, CA-9 Los Gatos, California

Dear Mr. Wilson:

In accordance with the Cornerstone Earth Group (CEG) approved proposal dated June 7, 2024, this letter report presents our assessment of Engineering Geology and Geologic Hazards as they relate to proposed improvements for the project site, located at 26005 Big Basin Way, off of State Highway 9, in Los Gatos, California (Site), as shown on Figure 1, Location Map. The focus of this report is to address project requirements summarized in a letter received from the County of Santa Cruz (County) and dated May 20, 2024. One of the requirements for approval by the County Environmental Planning is to address their Geologic Hazards Ordinance as it relates to site grading, habitable structures and landslides. A geologic report is required for new water tanks in excess of 10,000 gallons and "development" in areas of significant potential hazards. Based on the County guidelines, the report is required to investigate potential geologic hazards and provide mitigation recommendations for the project to reduce risks to the proposed improvements. Our services were performed in accordance with an agreement dated June 7, 2024.

PROJECT INFORMATION

An initial project development was proposed in 2023 that included a new structure along Power Pole Road and a water tank near the entrance to the Site. Cornerstone provide geotechnical consultation for this work, as documented in a letter report dated September 20, 2023. That consultation included field subsurface exploration, and feasibility-level conclusions and recommendations. The project as it is currently envisioned includes the following components of a Master Plan as detailed in civil drawings prepared by Sandis, dated April 17, 2024:

The master plan includes a new 125,000 gallon Water tank, new recycling and trash facility, campsite improvements including several new cabins and canopies, and a new access road off of Power Pole Road leading to a new 3,200 square foot Training Center (TC) structure.

Other project-related site specific documentation available for the preparation of this report included a Nonindustrial Timber Management Plan, dated July 9, 2002 and prepared by Big

Creek Lumber Company; a Santa Cruz County Onsite Wastewater Treatment System Feasibility Study from November, 2023 prepared by Fox Onsite Solutions (FOS), and an Archeological Report of the Shingle Mill Point Archeological Site dated June 9, 2006 and prepared by Big Creek Lumber Company. Of importance to note, the proposed improvements and evaluation only include those areas south of Oil Creek as shown on Figure 1, Location Map. References are listed in the Reference section at the end of this report.

REGIONAL GEOLOGIC SETTING

The general geologic framework of the central and northern Santa Cruz Mountains region has been characterized by both the U.S. Geological Survey (USGS) and the California Geological Survey (CGS), as noted in the References section herein. In the Santa Cruz Mountains, the San Andreas fault has juxtaposed two major tectonic blocks with contrasting basement complexes and with differing stratigraphy. The block to the northeast of the San Andreas fault is characterized by heterogeneous rocks of the Franciscan assemblage. This assemblage of late Jurassic to late Cretaceous age is in faulted contact with upper Cretaceous clastic sedimentary rocks of the Great Valley sequence, which in turn are overlain by Cenozoic clastic sedimentary rocks (Chin, et al, 1993). Southwest of the San Andreas fault and northeast of the San Gregorio fault, crystalline rocks of the Salinian block form the basement complex. Cretaceous strata are absent and Cenozoic clastic sedimentary and volcanic rocks rest upon the crystalline basement. Southwest of the San Gregorio fault, typical crystalline rocks of the Salinian block are not exposed and upper Cretaceous clastic sedimentary strata crops out along the coast (Brabb, 1970, 1989, 1997). Resting unconformably upon these strata are Cenozoic clastic sedimentary and volcanic rocks that differ from those to the northeast (Clark, 1981).

Brabb et al (1997) on his geologic map of Santa Cruz County shows the project site situation within a northwest trending sequence of lower to mid-Miocene age rocks folded into synclines and anticlines. Rocks within this sequence include the Lambert Shale, a marine clastic shale which is semi-siliceous and locally fossiliferous and is located along the northern portion of the Chesebrough property. Another portion of the Chesebrough property lies within San Mateo County, with similar geology mapped by Brabb et al (1998). The Monterey Formation, consisting of marine shale, organic mudstone and siltstone is similar lithologically and stratigraphically to the Lambert Shale as it is semi-siliceous and middle Miocene in age. The Monterey Formation rocks are exposed and outcrop closer to Highway 9 and the central portion of the project site. We have adopted the regional geologic mapping by Brabb et al (1997) as shown on Figure 2, Vicinity Geologic Map.

Several faults associated with the San Andreas Fault System are within the general vicinity of the project site. These include faults considered capable of generating significant earthquakes and are generally associated with the well-defined areas of crustal movement, which trend northwesterly. Active or potentially active faults which may significantly affect the site include those listed in the table below.

Table 1: Faults in the Los Gatos Area

Fault Name	**Distance (miles)**	**Distance (km)**	**Direction from Site**	**Slip Rate* (mm/yr)**	**Slip Sense**	**M_wMax.***
Butano	0.21	0.33	SW	Unspecified	R Lat	6.4
San Andreas (Santa Cruz Mtn Segment)	2.72	4.38	NE	24	R Lat	7.9
Monte Vista - Shannon	6.55	10.55	NE	0.2 - 1	Rev	7.0
San Gregorio	10.96	17.64	W	3	R Lat	7.0
Sargent - Berrocal	13.34	21.47	SE	3	Rev	6.8
Zayante-Vergeles	18.35	29.53	SE	0.2 - 1	R Lat	6.8
Monterey Bay - Tularcitos	22.60	38.38	S	0.5	R Lat	7.3

A major seismic event on these and other Bay Area faults may cause significant ground shaking at the project sites. Regional faults and their relative activity level in the greater San Francisco Bay region and Santa Cruz area are shown on Figure 3, Regional Fault Activity Map.

GEOLOGIC SITE CHARACTERIZATION

In addition to a literature search of published and unpublished reports and maps, we performed a desktop review of available historical aerial imagery provided online by UC Santa Barbara (1941 to 1981), Google Earth (1952 to 2022), as well as historic USGS topographic maps (USGS, 1902, 11955, 1961, 1991 and 2021). This imagery is summarized in Table 2 below. Because of the heavy tree canopy, details of site development from aerial photographs are not available. Relatively recent (2020) LiDAR imagery found on the Santa Cruz County GIS portal provided reasonable shaded relief imagery, as shown on Figure 4, LiDAR Imagery Map. A summary of pertinent surface changes at and near the site is as follows:

- 1902: 1:250,000 scale topographic map indicates former route of Highway 9 (Big Basin Way) was further to the south, and not structures are shown on the project site. The 1955: 1:24,000 scale topographic map of Big Basin and Mindego Hill quadrangles shows the current alignment of Highway 9 but no other developments. By 1961 a road and ridgeline clearing extends from Highway 9 westward into the property, and later the 1991 indicates part of it is established as Castle Rock State Park

- 1956: The first indications of site development and clearing are evident as is Power Pole Road. In 1963 aerial photos show the current south entrance to the camp and series of roads and small clearings in the same area as the current camp, possibly to Shingle Mill Point. By 2002 some campground buildings are evident, and by 2004 the largest structure (Pole Barn/kitchen) is visible.

- No large fires appear to have crossed into the subject property. According to the Archeological Report, Single Mill Campground had been used historically as a campground and as recently as 1992 as landing location for timber harvest.

- A Non-industrial Timber Harvest Plan (TMP) was prepared by Big Creek Lumber in 2002 to support planned logging operations over 4 management units (MU). It is unclear whether timber harvesting was accomplished in all of the MU, other than a small area currently proposed for the Training Center and access road off of Power Pole Road as shown on Figure 5D, Enlarged Site Map – Training Center Area. Detailed analysis of road construction, sediment management, watercourse crossing as well as topography, geology and soils are provided in the THP.

Table 2: Table of Historic Aerial Imagery

Flight No.	Frame	Date	Scale	Composition
Google Earth	N/A	6-10-2022	variable	Color
Google Earth	N/A	4-27-2006	variable	Color
Google Earth	N/A	9-30-2002	variable	Color (partial)
GSV-EZR	4-79	4-8-1981	1:24,000	B/W
CAS-65-130	207, 208	5-12-1965	1:12,000	B/W
CAS-SCR	1-74, 1-75	6-27-1963	1:12,000	B/W
CJA-9R	42	8-13-1956	1:20,000	B/W
Google Earth	N/A	5-2-1953	variable	B/W (partial)
CDF5	2-45	5-5-1948	1:24,000	B/W
C-6660	434, 435	4-11-1941	1:24,000	B/W

We performed a geologic site reconnaissance on June 20, 2024 to map the geology and confirm the earth materials described previously in the THP (2002), CEG (2023), and Fox Onsite Solutions (2013) and to observe our current test pit exploration program. The purpose of the field program was to identify site features that may be impacted by faulting or landsliding and to refine the feasibility-level conclusions provided in the earlier Cornerstone report. Project civil drawings that provided limited topography and building (existing and future) were prepared by Sandis in April of 2024 at scale 1 inch = 40ft. We have supplemented those drawings with topography derived from Lidar on the Santa Cruz County website.

We observed and mapped surficial deposits which included thin residual soils from the underlying bedrock, deposits of historic fill (map symbol af) found mostly in the established campground areas and colluvium (map symbol Qcol), situated in the hollows and sloping areas. Obvious landslide deposits and rubble (symbol Qls) were not observed in any high concentration within the building areas during the reconnaissance. This may be due to timber canopies and or large and older landslide deposits that do not show scarps or movement. Older Cretaceous rocks of the Lambert Shale (map symbol Tla) and Monterey Formation (Tm) and to a lesser extent Monterey Formation shale were observed in our test pits and in road cuts.

The current subsurface exploration conducted at the project site was widely spaced to capture lateral variability and achieve the specific objectives. In 2023, Cornerstone observed the excavation of one test pit by others and advanced two hand auger borings in Shingle Mill area for the purpose of looking at another site for the Training Facility. The test pit extended three to four feet beneath the ground surface and exposed one to three feet of soil consisting of sandy clay and clayey sand overlying weathered bedrock consisting of interbedded sandstone, siltstone, and claystone to the terminal depth of four feet. The hand auger borings extended four to eight feet beneath the ground surface and encountered up to three feet of fill overlying surficial soil. We have not included the logs as they are outside of the current study area, however we use them for reference. Four additional test pits borings were excavated in July of 2023 in the current location of the Training Center area to depths of three to five and one half feet after site after clearing of the underbrush but before logging activities. Also in 2023, Fox Onsite Solutions (FOS) used an excavator to dig a deep test pit to a depth of 13ft for the purposes of soil profile identification to support OWTS design. This test pit was outside of the footprint of the Visitor Center but did encounter bedrock at a depth of two feet.

The current program included the excavation of 10 test pits (TP-1 to TP-9, and TP-10A) and observation of one road cut TP-10B) at locations shown on Figures 5A through 5D. Our field geologist logged these test pits that extended to depths ranging from 4 to 6½ feet. The logs are presented in Appendix A of this report.

From the surface mapping and test pits we have prepared site geologic maps for four specific study areas. Figure 5A shows the site geology around the proposed new water tanks. Figure 5B depicts the geologic conditions surrounding the new trash collection facility, while 5C depicts the geologic conditions near the surrounding campsites. Lastly the geology around the proposed Visitor Center is shown on Figure 5D.

Below is a brief description of the current setting and geologic conditions in each of these four areas.

Water Tank Area

Currently four Poly-design water tanks are situated in a row and are supported on shallow pads as shown on Figure 5A. Test pits TP-1 and TP-2, excavated in the general location of two new water tanks indicate the surficial soils are relatively undisturbed with near horizontal organic horizon overlying an A and B horizon lean clay to depths of 4 to at least 4½ ft. These clays are stiff to very still and contain some gravel and sand with low plasticity. Test Pit TP-2 encountered a moderately weathered sandstone at 4 feet. This sandstone is typical of an interbedded sequence of sandstone, siltstone and shale rocks of the Monterey Formation (map symbol Tm) These rocks seldom outcrop on the site, but are found in road cuts as shown in Figure 5A. Elsewhere a recent fill was graded to compact loose spoils around the tank site. The ground surface to the north of the tank sites drops off significantly towards the campsite area. Even so, indications of landsliding or slope instability was not observed in the immediate area. It is conceivable that the new tanks may eventually bear on a subgrade of undisturbed clay or weathered bedrock.

Campsites

The central campsite area contains two existing large structures (Pole barn and a 2008-era renovated Multiuse building) and some smaller cabin sites situated on a multi-level graded pad that appears to have been was constructed recently. Future improvements in the area include pavilions, latrine and additional campsite amenities. The central campsite area occupies a bowl-shaped depression that may be related to an ancient landslide as there is no alluvial explanation as to its geomorphology. The area slopes gently to the north and northeast with colluvium deposits overlying siltstone along the flanks near Test Pits TP-7 and TP-8 and transitioning into colluvium that may be mixed with some fill as evidenced by ash deposits in and around TP-6 and TP-9, as shown by the dual af/Qcol designation on Figure 5C. Currently a new restroom (latrine) is under construction at the south end of this area and with stiff native soils exposed in footing and trench excavations. and based on geologic observations of the four test pits excavated, some potential fill material may overly colluvium. Above the area and west of the access road, road cuts expose colluvium that contain variable amounts of rock fragments in a sandy clay matrix. Subtle concavities in the slope above TP-8 suggest an old landslide feature but evidence does not indicate recent movement, certainly in the near 60 years that the road and campsites have been in existence. It is conceivable that the new improvements may eventually bear on a subgrade of undisturbed clay or weathered bedrock, with little required grading.

Trash Collection Facility

This area occupies a high point at the intersection of several unpaved roads and has three subareas of future development, as shown on Figure 5B. Based on conversations with the BSA site manager, grading was conducted along the top and flanks of the area with engineered fill placed. This engineered fill was placed, compacted, and tested under observation of Cornerstone personnel during the construction of the expansion of the existing corporation yard, taking place between November 2022 and April 2023. The ridgeline area will eventually include a Caretakers house, a storage and maintenance building and surrounding parking, all presumably on shall foundations bearing on fill or native soil. The trash collection site is adjacent to an area of dumped (undocumented fill) and drops off to the east and west. Test Pit TP-3 encountered a uniform fill section overlying silty and sandy clay soils that were hard to very stiff. Subareas to the south will include teaching pavilions, a pumphouse building and more parking. Test Pit TP-4 appeared to be excavated in an area that is relatively undisturbed as evidenced by intact A- and B-horizon soils which were of a hard consistency. We envision future level building pads with slab-on-grade foundations. The last subarea to the southwest had Test Pit TP-5 which exposed a dense, clayey gravel, consisting of mostly subangular siltstone cobbles in a clast-supported structure that exhibited bedrock qualities however the test pit was unstable, possibly either due to the low fines content or the potential for either fill or landslide debris. A steep, two level slope behind the existing metal shop exposed the same material in a 2:1 (H:V) inclination that did not exhibit raveling or instability. This last area contains future athletic facility amenities which could be post-type foundation supported.

Training Center and Access Road

Power Pole Road leads from the Trash Collection Facility along contour to the southwest and west. Part of the alignment follows the mapped contact between the Monterey Formation to the south and Lambert Shale to the north. The Training Center (TC) is a standalone facility that will be serviced by an access road leading off from Power Pole Road to the northwest, then making a tight radius turn to the east, across a ravine and connect to the TC parking area. Existing slopes exceed 30° in some places and cuts for the access road will be a maximum of 20 ft. Some filling on the order of 5 to 6 feet will be required to build the road across the ravine (Figure 5D). Bedding attitudes were measured along Power Pole Road of Monterey Formation shale and siltstone. Some moderately dipping beds (between 40 and 60 degrees) to the northeast were observed. While this represents adverse bedding, the shale and siltstone of the Lambert Shale on the north side of Power Pole Road was mostly massive or showed no preferential bedding. Test pits TP-10A and the road cut TP-10B encountered silty clay soils with siltstone bedrock and/or boulders that were hard and strong. Neither of the test pits extended down to the base of the cut due to equipment limitations and access. Geologic cross-sections were prepared for the proposed access road off of Power Pole Road to the future Visitor Center and are included in as Figure 6 - Geologic Cross-sections A-A; and B-B'.

The TC occupies a divide between a subtle ravine to the west and a prominent ravine to the east. The head of the easterner ravine extends towards and just beyond Power Pole Road. It exhibited some concave topographic expression and a noticeable bulge that suggests a potential landslide feature. At this location the road cut exposes shale that appears somewhat chaotic. No seepage was observed nor to the roadbed appear distressed or exhibited tension cracks or slumping. The surficial soils in the area, where not covered by logging slash debris appears to be colluvium. The TC will be built on a cut pad with material generated by the cut eventually placed in an adjacent area to the west to construct a parking area, as shown on Figure 5D. A test pit was excavated with the use of a full sized excavator by Fox Solutions. Bedrock in this test pit was encountered at 2½ feet and consisted of a “fractured brown mudstone”. Due to access limitations of other equipment available at the time of our site reconnaissance, no new test pits were excavated. Two hand augers were performed within the vicinity of the future TC as part of the previous geotechnical investigation. The hand augers were terminated in the surficial soils, with no bedrock encountered at either location to depths of 4 to 8 feet. Observations of the sidehill flanks of both ravines do not indicate sloughing or slumping that could impact the TC.

GEOLOGIC HAZARDS & CONSTRAINTS ANALYSIS

The most significant geologic hazard in the general vicinity that could most affect the project site are landslides. Lesser hazards include surface fault rupture, erosion and secondary effects from earthquake ground shaking. Below is a discussion of each.

Landslides are common in the Santa Cruz Mountains. A thorough evaluation of landslide hazard for this site included three steps - review of published geologic and seismic hazard maps, site reconnaissance and analysis of lidar imagery as previously discussed.

Regional mapping by the USGS of Santa Cruz County (County) by Brabb et al (1997) and San Mateo County (Brabb et al (1998) does not indicate active or dormant landslides in the general vicinity. A review of the Santa Cruz County GIS website (2021) showed geologic mapping via photo interpretation by Cooper-Clark Consultants (1997) of historic landslides and debris flows that indicates relatively little active landsliding in the immediate area. The Santa Cruz County website includes themed maps of landslide certainty as shown on Figure 7 - Landslide Hazards

Map. The figure shows the entire area of the TC and access road as being Questionable (map symbol Q?). Areas to the north of the project site in the Shingle Mill area are labeled as Unattributable (UA) a term which is somewhat vague but conveys very low certainty. Another area that is Questionable covers the Campsite area. The tank site area is not included in a landslide hazard zone, instead as being underlain by Monterey Shale (map symbol Tm).

As was previously mentioned, our site geologic reconnaissance mapping noted bedrock along road cuts of the main access road from Highway 9, and along Power Pole Road. Landslides features, although not indicative of active movement were observed in the slope of the road adjacent to TP-8 and in the slope above the large ravine south of the TC. Potential landslide debris was encountered in TP-5, but it may possibly be a granular fill. Bedding, where present, was adverse however translational slope movement, typically seen in the Monterey Formation shale was not observed.

Several large wildfires have occurred in the region over the years which have contributed to active and potential debris flows. Chief among these was the 2020 CZU Lightning Complex, to the west which encompassed a large portion of central to coastal Santa Cruz and southern San Mateo Counties. Within its burn perimeter, are areas described as high debris flow potential. Spatial Informatics Group (2020) have prepared hazard maps showing the areas that have potential debris flows, which do not include the project site. No debris flow hazards extend towards the project site, as the fire perimeter extended only to west side of the ridgeline upslope of the project site.

A final evaluation step included the use of recent (2020) Lidar Imagery provided by the County of Santa Cruz. The Lidar imagery, presented in Figure 4 shows ground conditions without interference from tree cover. It reflects the two Q landside features from the County website. Smaller features observed during our reconnaissance mapping are not obvious on the Lidar imagery. A key measure of risk due to landslides is to evaluate historic ground disturbance from grading and logging. Even though the site has been logged with skid roads, access roads and minor fills placed there was little observed active landsliding observed on maps, imagery or in the field. This does not mean that reactivation of pre-existing landslides could not occur or that slope angle and surface runoff could not contribute to new landslides, in particular the TC access road.

Surface Fault Rupture is common within the greater San Francisco Bay Area (Figure 4). Following passage of the Alquist-Priolo (AP) Act in 1972, faults considered active were designated as being within a Special Study Zones (SSZ) that required a thorough investigation by geologists to address fault rupture hazard. The California Geologic Survey has not included the project site in their Fault Rupture Hazard Zone, nor in their seismic hazards evaluation of landslides and liquefaction. The nearby Butano Fault is not considered active and the closest fault considered capable of surface rupture is the San Andreas Fault Zone, 2.7 miles to the east.

Our interpretation of fault rupture potential initially included an aerial photo review and Lidar evaluation of topographic lineaments such as some aligned ridges, linear troughs and deflected drainages. Our site reconnaissance looked at breaks in slope, scarps, and juxtaposed bedrock lithologies (faulted) at contacts and or zones of gouge. While we cannot preclude the possibility of fault rupture near the site it is our opinion that fault rupture hazard at the site is generally low.

Erosion can result as a by-product of poor site grading practices and drainage design and is affected mostly by rainfall frequency and intensity. Certain site characteristics such as bare ground, steep slopes, cohesionless soils and concentrated surface and point source discharges intuitively would result in severe erosion. Maintaining good tree canopy cover and mulch, constructing water bars, properly designed and placed drainage culverts are all best practices that minimize erosion. Our review of the site conditions, requirements of the timber harvest plans all indicate that erosion is not an ongoing problem however it is always a concern as the Santa Cruz mountains are generally steep, are subject to high rainfall and the study area has been subjected to timber harvesting.

Earthquake Ground Shaking can be caused by moderate to severe (design-level) earthquakes, which is the case for most sites within the greater Bay Area. Further, the duration and intensity of the shaking are a function of the distance to the causative fault, the ground conditions beneath the structure and the type of construction. The most recent large earthquake in the Santa Cruz Mountains was the October 17, 1989 6.9 Mw Loma Prieta Earthquake which had an epicenter 20 miles to the southeast of the project site. While later analysis of ground motion records determined it occurred on unnamed oblique fault segments of the San Andreas Fault Zone, there was no appreciable surface fault rupture near the epicenter. What did occur was ground deformation associated with pre-existing landslides or planes of weakness. Post-earthquake research by Noland and Weber (USGS, 1998) focused mostly in the epicentral area and along Summit Road in the Santa Cruz Mountains. They did not observe ridgetop cracking outside of the greater epicentral region which tend to be focused in more ridgetop settings. Work by Ponti and Wells (1991) looked at off fault ground disturbance and noted extensional fissures formed a left-stepping, crudely en echelon pattern along ridges of the hanging-wall block southwest of the San Andreas fault. Other types of ground disturbance of significance are liquefaction, and lateral spreading which all tend to occur in areas of more granular soils (cohesionless), which in general are not present on the project site. A peak ground acceleration (PGA) can be estimated for analysis using a value equal to F_{PGA} x PGA, as allowed in the 2022 edition of the California Building Code , which can be developed during a design level geotechnical investigation. Given the proximity to the San Andreas Fault and other regional faults listed in Table 1, there will be significant ground shaking.

A key to evaluating the proposed developments in the context of landslide risk is to develop a potential constraints map for the hazard with the highest risk. We believe that is the access road leading to the TC. We have prepared Figure 8, Geologic Constraints Map to show where site development is in areas exceeding 30 degrees. As can be seen only the TC and access road fall into this category. The constraints will require implementation of mitigating design, as discussed below.

CONCLUSION AND RECOMMENDATIONS

We have based our evaluation of geologic and seismic hazards at the Site using regional and site observations, published studies and standard of practice. The three significant hazards to the proposed site include landslides, erosion and ground shaking. We conclude that landsliding and ground shaking are a moderate risk to the site and proposed facilities and that acceptable design measures should be taken to address foundations, subsurface drainage, retaining walls and internal structural integrity. Risk due to erosion we conclude is low however a temporal application of risk is relevant for storm intensity which can accelerate runoff and erosion that can lead to landslides and localized flooding.

We recommend that earthwork be performed in during the dry season. Onsite earth materials tend to be highly cohesive silty, sandy and gravelly clay mixtures which are sensitive to water content and are difficult to work with in wet conditions (over optimum moisture content). Erosion control measures for short term construction-related storm runoff should be implemented as well as Best Management Practices (BMP). The use of a licensed civil engineer are prudent in the design of surface drainage infrastructure. Foundation design for new structures (Water Tanks, Training Center, Cabins and other facilities) should follow current building codes.

DEVELOPMENT OF MITIGATING DESIGN

Mitigation of landslide disturbance, whether reactivation of pre-existing or newly developed landslides due to grading are best achieved by collection and analysis of subsurface data, laboratory material testing and slope stability analysis. Several steps are needed and can be implemented, focused on the access road to the Training Facility.

1. Conduct slope stability analysis of the cut slope portion of the access road at the two locations shown on Section A-A' and B-B.' Collect bedrock data from a deeper test pit and assign material strengths base on laboratory test data.
2. From the analysis, revise (if supported) the inclination of the cut slopes, benches and grades, in conjunction with the project civil engineer.
3. Consider a mitigating design for retaining walls, soil nail walls or similar to stabilize cut slopes.
4. Consider another location or different geometries for the access road that do not put the slope stability at risk
5. Observe and monitor grading activities

CLOSURE

We hope this provides the information you need at this time. Conclusions presented in this letter have been prepared for the sole use of the Boy Scouts of America and its design consultants specifically for the proposed project in Los Gatos, California. Our professional services were performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices at this time and location. No warranties are either expressed or implied.

If you have any questions or need any additional information from us, please call and we will be glad to discuss them with you.

Sincerely,

Cornerstone Earth Group, Inc.

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References
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Copies: Addressee (by email)

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Websites and Guidelines

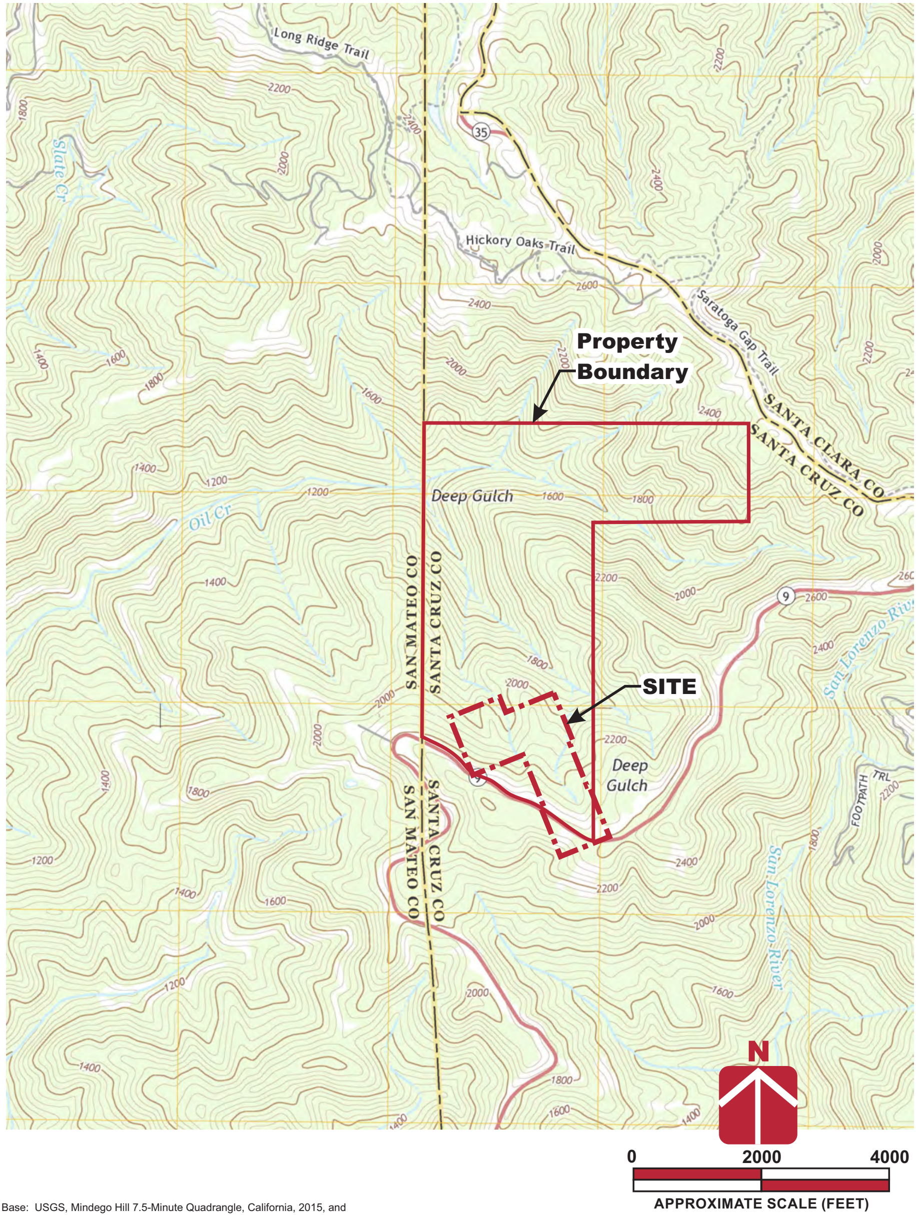
California Division of Mines and Geology (2008), “Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication 117A, September.

Santa Cruz County, 2023. Guidelines for Engineering Geologic Reports. June 13
Geology Report Requirements & Guidelines (santacruzcountyca.gov)

Santa Cruz County, 2021. Geographic Information Systems (GIS) Cooper-Clark Landslide Map, Quad Series: 04 Big Basin Flood and Landslides.
https://gis.santacruzcounty.us/arcserver/rest/services/opendata/MapServer/138.

Santa Cruz County, 2024. Geographic Information Systems (GIS) Potential Debris Flow Hazard Map.
https://gis.santacruzcounty.us/mapgallery/Emergency%20Management/PotentialDebrisFlowHazardAreas/Potential%20Debris%20Flow%20Hazard%20Areas_LOWRES.pdf

Spatial Informatics Group 2020. CZU Lightning Complex – Preliminary Vegetation Burn Severity. https://sig-gis.com/czu-lightning-complex-map/


Long Ridge Trail
Hickory Oaks Trail
Saratoga Gap Trail
35
9
Slate Cr
Oil Cr
Deep Gulch
Deep Gulch
San Lorenzo River
San Lorenzo River
FOOTPATH
TRL
SAN MATEO CO
SANTA CRUZ CO
SANTA CLARA CO
SANTA CRUZ CO
Property Boundary
SITE
1200
1400
1600
1800
2000
2200
2400
2600
N
0
2000
4000
APPROXIMATE SCALE (FEET)

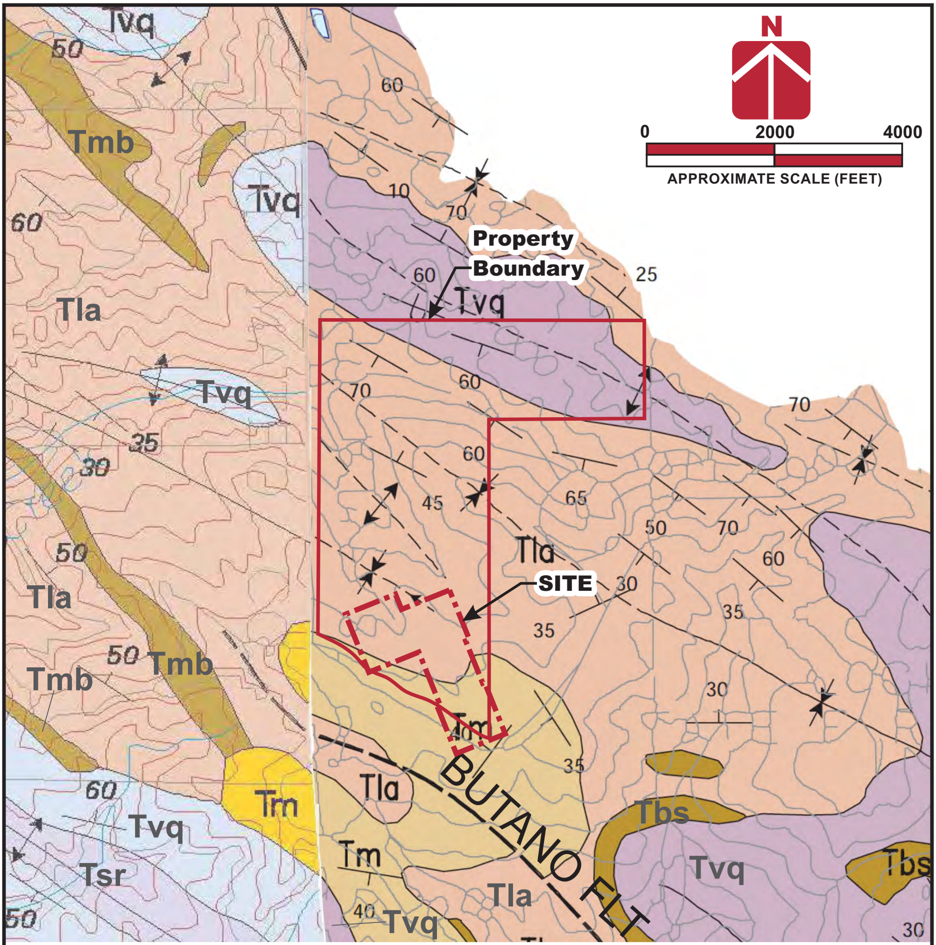
Base: USGS, Mindego Hill 7.5-Minute Quadrangle, California, 2015, and
USGS, Big Basin 7.5-Minute Quadrangle, California, 2015.

CORNERSTONE EARTH GROUP

Vicinity Map

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number	1360-2-3
Figure Number	Figure 1
Date	July 2024
Drawn By	RRN


N
0
2000
4000
APPROXIMATE SCALE (FEET)
Tvq
50
Tmb
Tvq
60
Tla
Tvq
35
30
50
Tla
50
Tmb
Tmb
60
Tvq
Tsr
Tm
50
60
10
70
Property
Boundary
25
60
Tvq
70
60
60
45
65
50
70
60
Tla
SITE
30
35
35
70
30
Tm
40
35
Tla
BUTANO FLT
Tbs
Tm
Tvq
Tbs
Tla
40
Tvq
30

Base: Geologic Map of Santa Cruz County, California, by Brabb, 1997, and
Geology of the Onshore Part of San Mateo County, California, by Brabb, 1998.

Geologic Units

Tm	Monterey Formation (middle Miocene)
Tla	Lambert Shale (Oligocene and lower Miocene)
Tmb	Mindego Basalt and related volcanic rocks (Miocene and/or Oligocene)
Tvq	Vaqueros Sandstone (lower Miocene and Oligocene)
Tsr	Rices Mudstone Member (Oligocene and upper Eocene)
Tbs	Shale in Butano Sandstone (lower Eocene)

Symbols

Contact - dashed where approximate, dotted where concealed

Fault - dashed where approximate, dotted where concealed

35 Strike and dip of bedding

Anticline, arrow on axial trace of fold indicates direction of plunge

Syncline, arrow on axial trace of fold indicates direction of plunge

CORNERSTONE EARTH GROUP

Vicinity Geologic Map

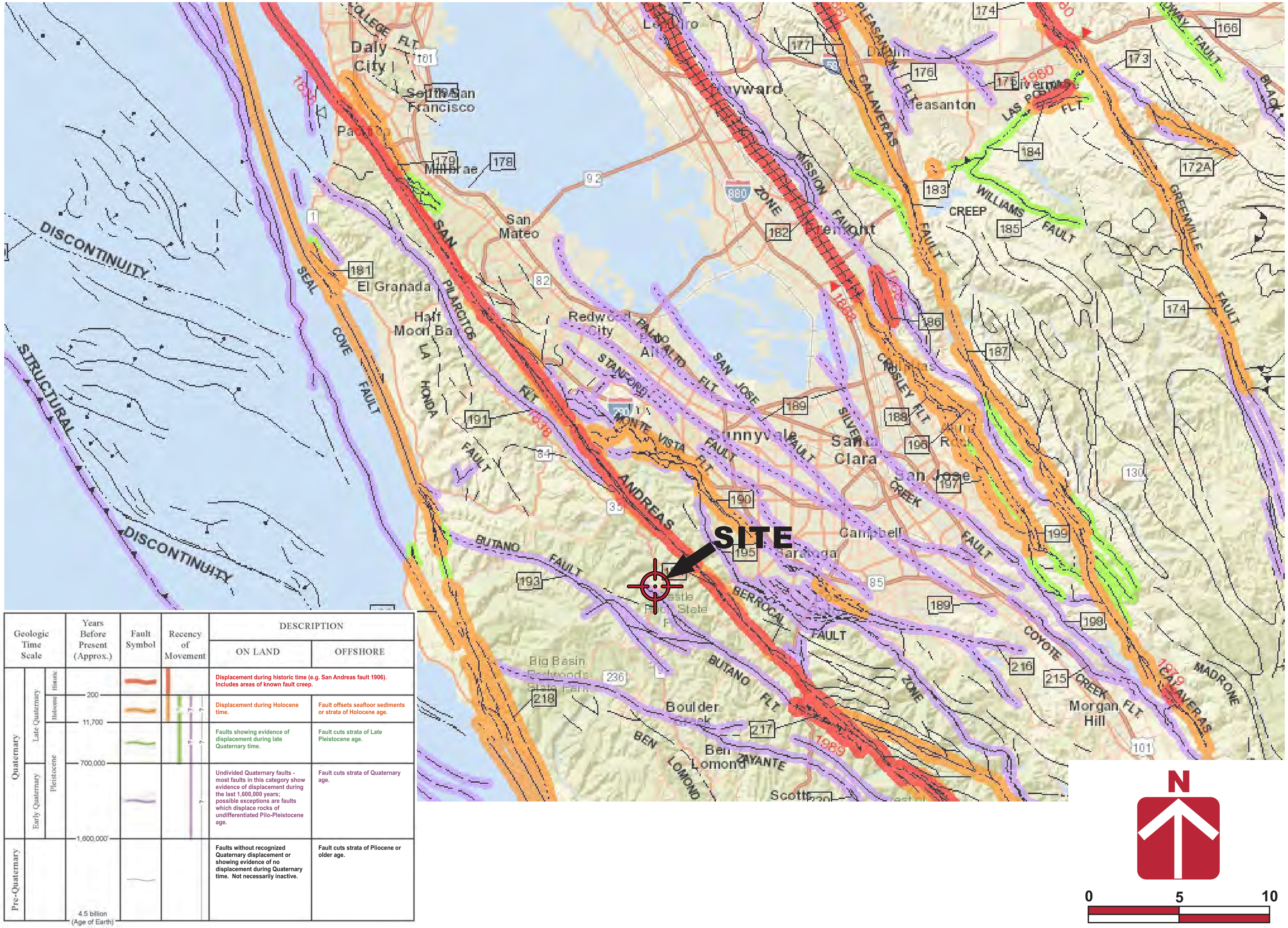
Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3

Figure Number Figure 2

Date July 2024

Drawn By RRN


Daly City
South San Francisco
Pacifica
Millbrae
San Mateo
El Granada
Half Moon Bay
Redwood City
Palo Alto
Sunnyvale
Santa Clara
San Jose
Campbell
Saratoga
Hayward
Dublin
Pleasanton
Livermore
Fremont
Big Basin Redwoods State Park
Boulder Creek
Ben Lomond
Scotts
Morgan Hill
SITE
SAN ANDREAS FLT
PILARCITOS
SEAL COVE FAULT
LA HONDA FAULT
DISCONTINUITY
STRUCTURAL DISCONTINUITY
BUTANO FAULT
BERROCAL FAULT
ZAYANTE
BEN LOMOND
MONTE VISTA FLT
STANFORD
PALO ALTO FLT
SAN JOSE FAULT
SILVER CREEK FAULT
HAYWARD ZONE
MISSION FAULT
CALAVERAS FAULT
PLEASANTON FLT
LAS POSITAS FLT
WILLIAMS FAULT
CREEP
GREENVILLE FAULT
COYOTE CREEK FLT
MADRONE
CALAVERAS
1906
1868
1989
1980
1979
N
0
5
10
APPROXIMATE SCALE (MILES)

Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION ON LAND	DESCRIPTION OFFSHORE
Quaternary	Late Quaternary	Historic		🟥		Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
		Holocene	200	🟧	? ?	Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
		Pleistocene	11,700	🟩	? ?	Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
	Early Quaternary		700,000	🟪	?	Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Pilo-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary			1,600,000 4.5 billion (Age of Earth)	—		Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.

Base by California Geological Survey - 2010 Fault Activity Map of California (Jennings and Bryant, 2010)

Regional Fault Map

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

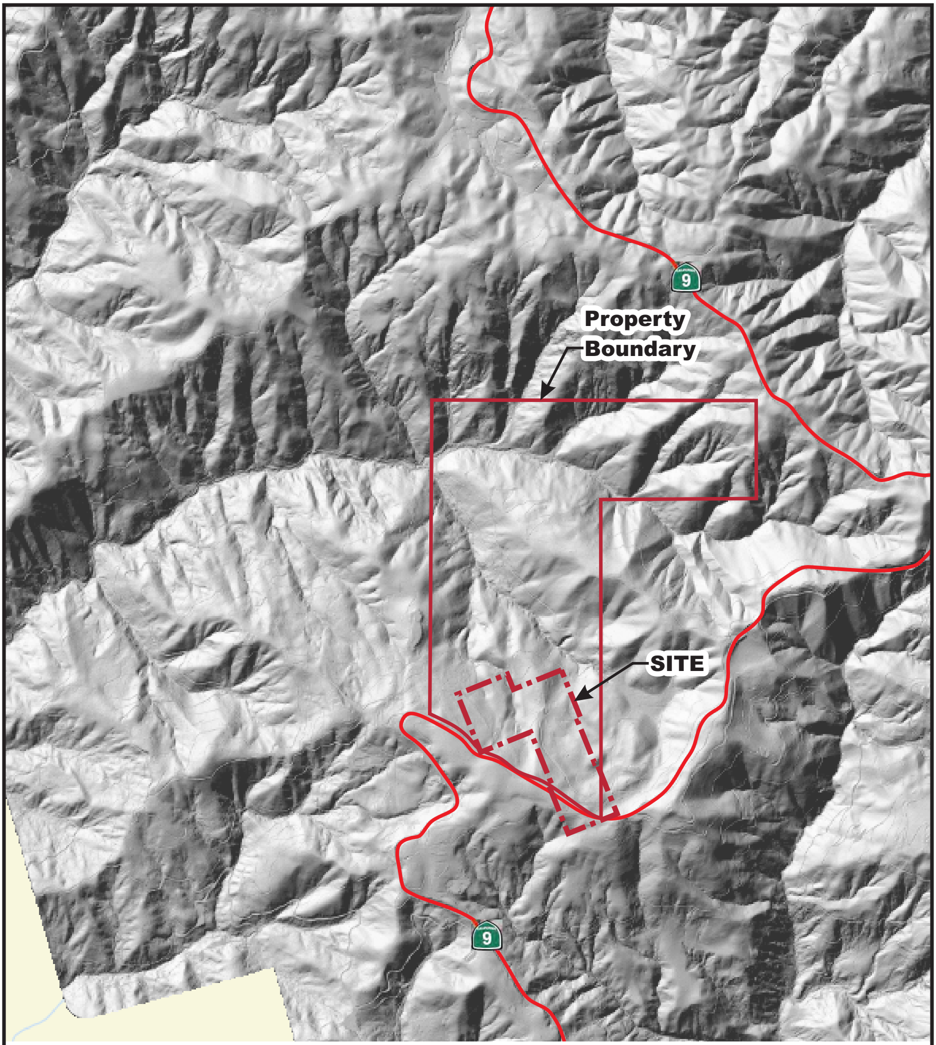
Project Number
1360-2-3

Figure Number
Figure 3

Date
July 2024

Drawn By
RRN

CORNERSTONE
EARTH GROUP


9
Property Boundary
SITE
9
N
0
2000
4000
APPROXIMATE SCALE (FEET)

Base: Esri Community Maps Contributors, County of Santa Clara, California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

CORNERSTONE
EARTH GROUP

Lidar Imagery Map

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number	1360-2-3
Figure Number	Figure 4
Date	July 2024
Drawn By	RRN

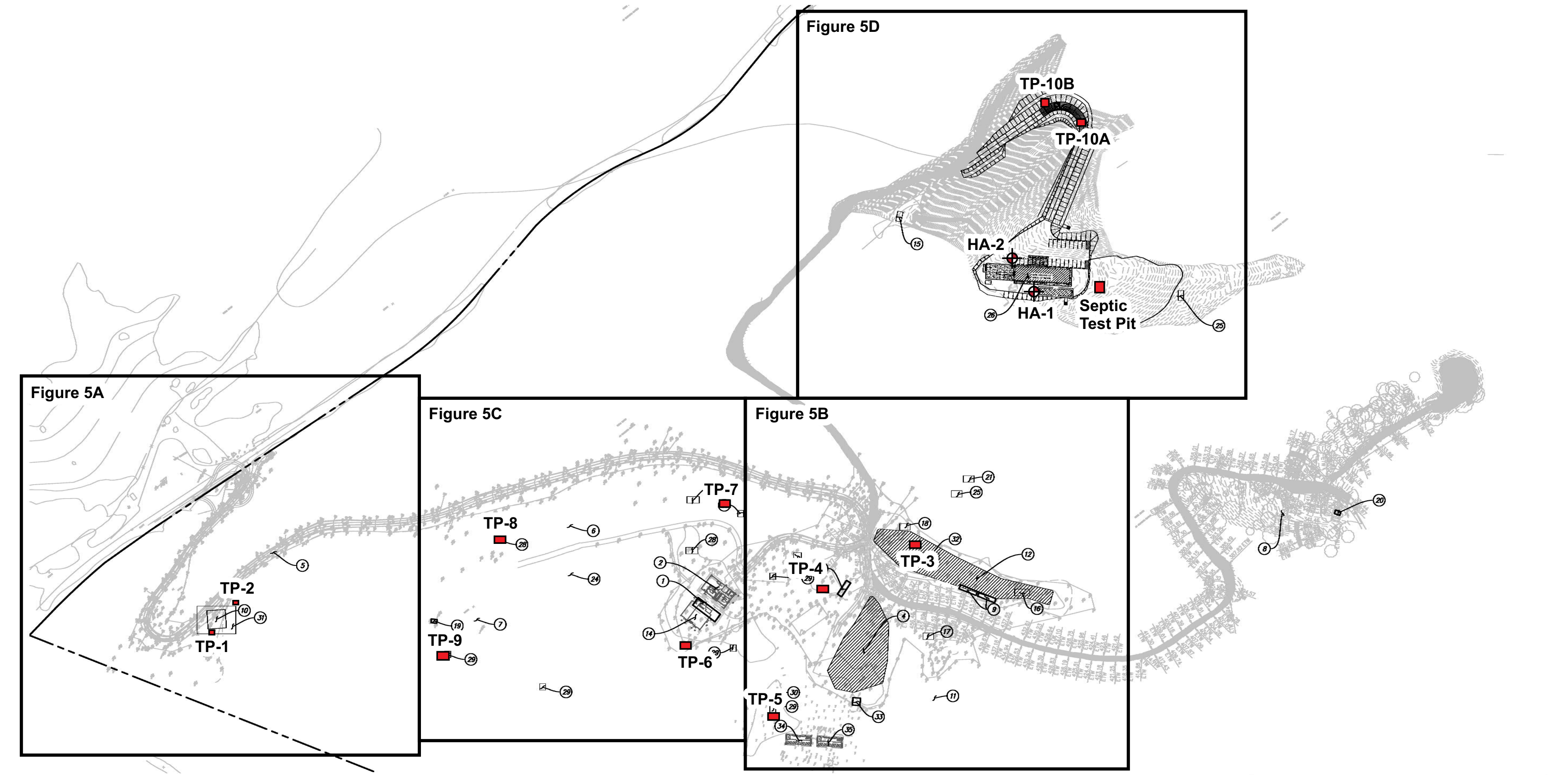


Figure 5D
TP-10B
TP-10A
HA-2
HA-1
Septic Test Pit
Figure 5A
TP-2
TP-1
Figure 5C
TP-7
TP-8
TP-9
TP-6
Figure 5B
TP-4
TP-3
TP-5
1
2
4
5
6
7
8
9
10
11
12
14
15
16
17
18
19
20
21
24
25
26
28
29
30
31
32
33
34
35

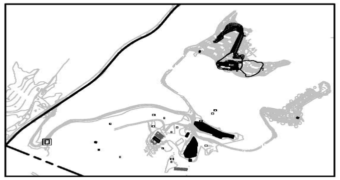
BUILDING LIST

①	POLE BARN	⑪	CAMPFIRE CIRCLE	㉑	CAMPSITE LATRINE #3	㉛	REPLACEMENT FOR EXISTING WATER TANKS
②	MULTI-USE BUILDING/KITCHEN	⑫	SERVICE YARD	㉒	CAMPSITE LATRINE #4 (REMOVED)	㉜	RECYCLING AND TRASH ENCLOSURE
③	PUMP HOUSE BUILDING	⑬	POWER POLE	㉓	SMALL GROUP SLEEPING SHELTERS (REMOVED)	㉝	RESTROOM – PARKING LOT
④	PARKING LOT (GRAVEL)	⑭	MULTI-PURPOSE BUILDING (VALLEY FOUNDATION LODGE)	㉔	NEW CAMPSITE	㉞	BB GUN INSTRUCTIONAL AREA
⑤	GRAVEL ENTRANCE ROAD	⑮	CAMP OFFICE & FIRST AID CENTER	㉕	NEW CAMPSITE	㉟	ARCHERY INSTRUCTIONAL AREA
⑥	TENT CAMPSITE #1 UPPER CAMPSITE	⑯	STORAGE AND MAINTENANCE BUILDING	㉖	VALLEY FOUNDATION TRAINING CENTER		
⑦	TENT CAMPSITE #2 UPPER CAMPSITE	⑰	NATURE LODGE	㉗	SHOWER AND RESTROOM BUILDING		
⑧	TENT CAMPSITE #3 LOWER CAMPSITES	⑱	CARETAKER'S HOUSE	㉘	CABINS FOR SHORT TERM CAMPING		
⑨	STORAGE TRAILERS (REMOVED IN 2021)	⑲	CAMPSITE LATRINE #1	㉙	TEACHING COVERED PAVILIONS		
⑩	WATER TANKS	⑳	CAMPSITE LATRINE #2	㉚	CLIMBING AND RAPPELLING TOWER		

Base by Sandis, CSR Buildings - C-1.0, dated 04/17/2024

Legend

🟥	Approximate location of test pit (TP) (Cornerstone, 2024)
⌖	Approximate location of hand auger boring (HA) (Cornerstone, 2023)



KEY MAP

N

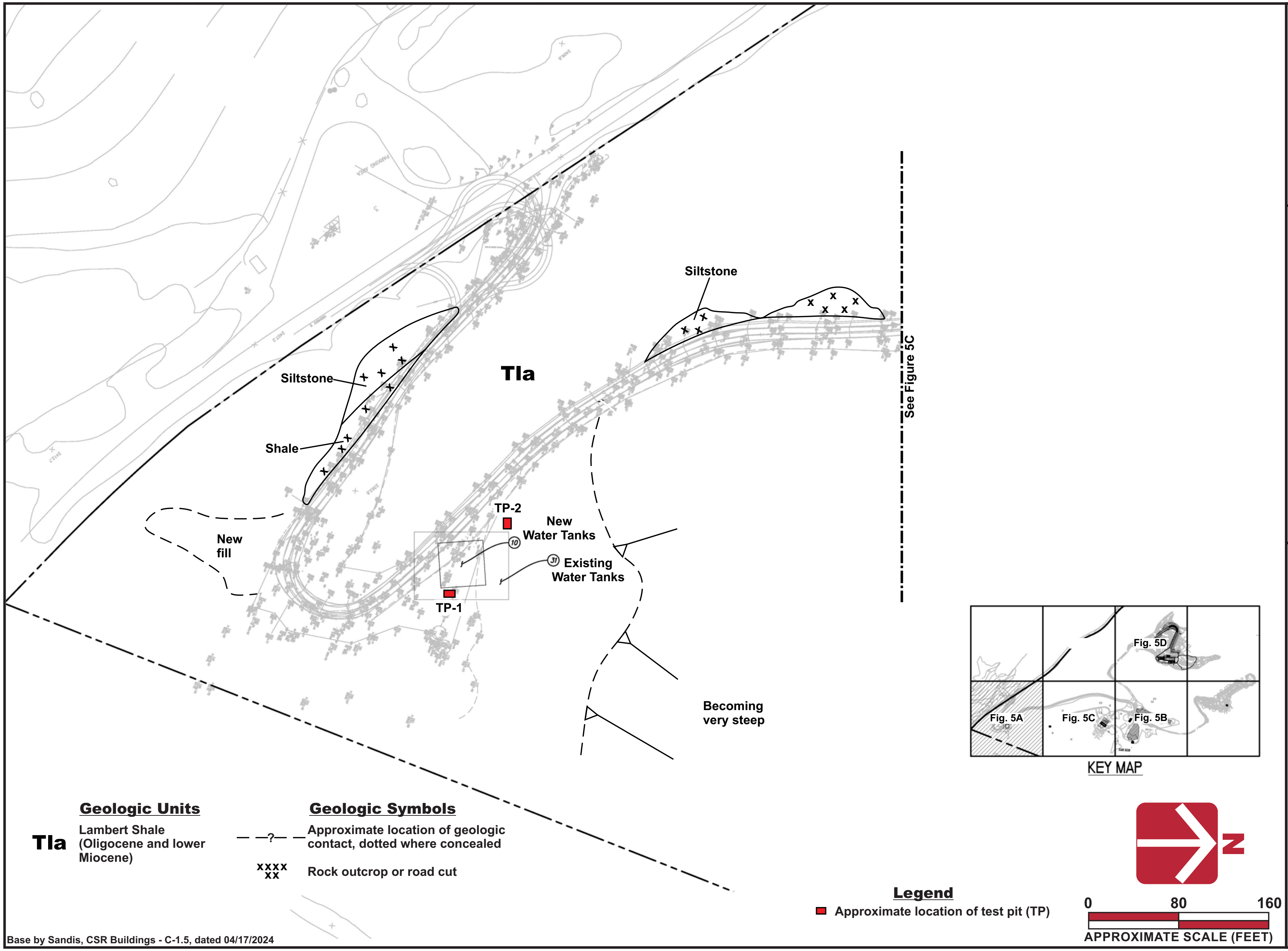
0 250 500
APPROXIMATE SCALE (FEET)

Overall Site and Geologic Map

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3
Figure Number Figure 5
Drawn By RRN
Date July 2024

CORNERSTONE EARTH GROUP


Siltstone
Siltstone
Shale
Tla
New fill
TP-2
New Water Tanks
10
31
Existing Water Tanks
TP-1
See Figure 5C
Becoming very steep
Fig. 5D
Fig. 5A
Fig. 5C
Fig. 5B
KEY MAP
N
0
80
160
APPROXIMATE SCALE (FEET)

Geologic Units

Tla Lambert Shale (Oligocene and lower Miocene)

Geologic Symbols

— —?— — Approximate location of geologic contact, dotted where concealed

xxxx
xx Rock outcrop or road cut

Legend

🟥 Approximate location of test pit (TP)

Base by Sandis, CSR Buildings - C-1.5, dated 04/17/2024

Project Number 1360-2-3

Figure Number Figure 5A

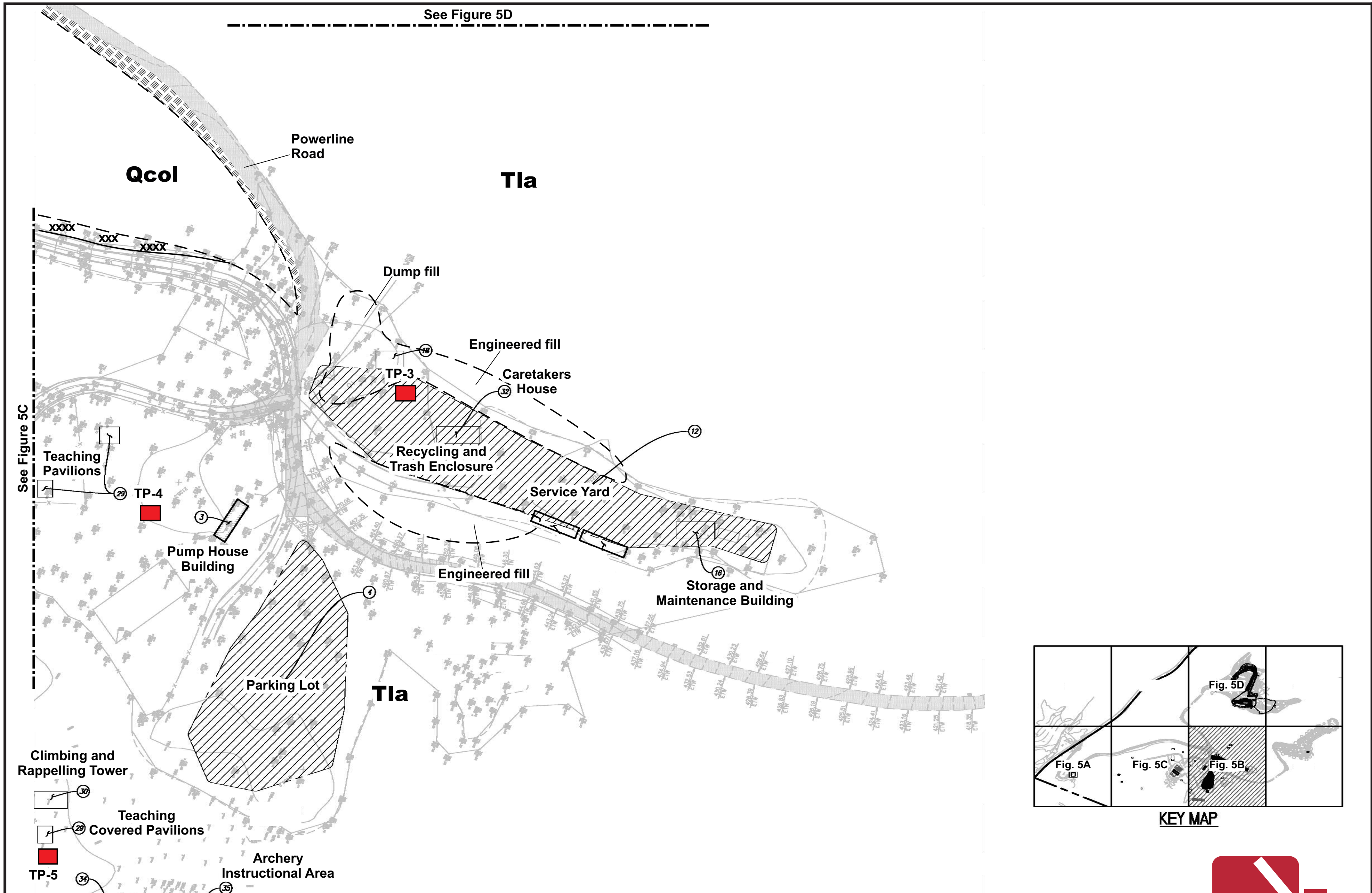
Drawn By RRN

Date July 2024

Enlarged Site Map - Water Tank Area

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE
EARTH GROUP


See Figure 5D
Powerline Road
Qcol
Tla
xxxx
xxx
xxxx
Dump fill
Engineered fill
18
TP-3
Caretakers House
32
12
See Figure 5C
Teaching Pavilions
29
TP-4
3
Recycling and Trash Enclosure
Service Yard
Pump House Building
Engineered fill
16
Storage and Maintenance Building
4
Parking Lot
Tla
Climbing and Rappelling Tower
30
Teaching Covered Pavilions
29
TP-5
34
35
Archery Instructional Area
BB Gun Instructional Area
Fig. 5D
Fig. 5A
Fig. 5C
Fig. 5B
KEY MAP
N

Geologic Units

Qcol	Colluvium
Tla	Lambert Shale (Oligocene and lower Miocene)

Geologic Symbols

— —?— —	Approximate location of geologic contact, dotted where concealed
xxxx xx	Rock outcrop or road cut

Legend

🟥 Approximate location of test pit (TP)

0 80 160
APPROXIMATE SCALE (FEET)

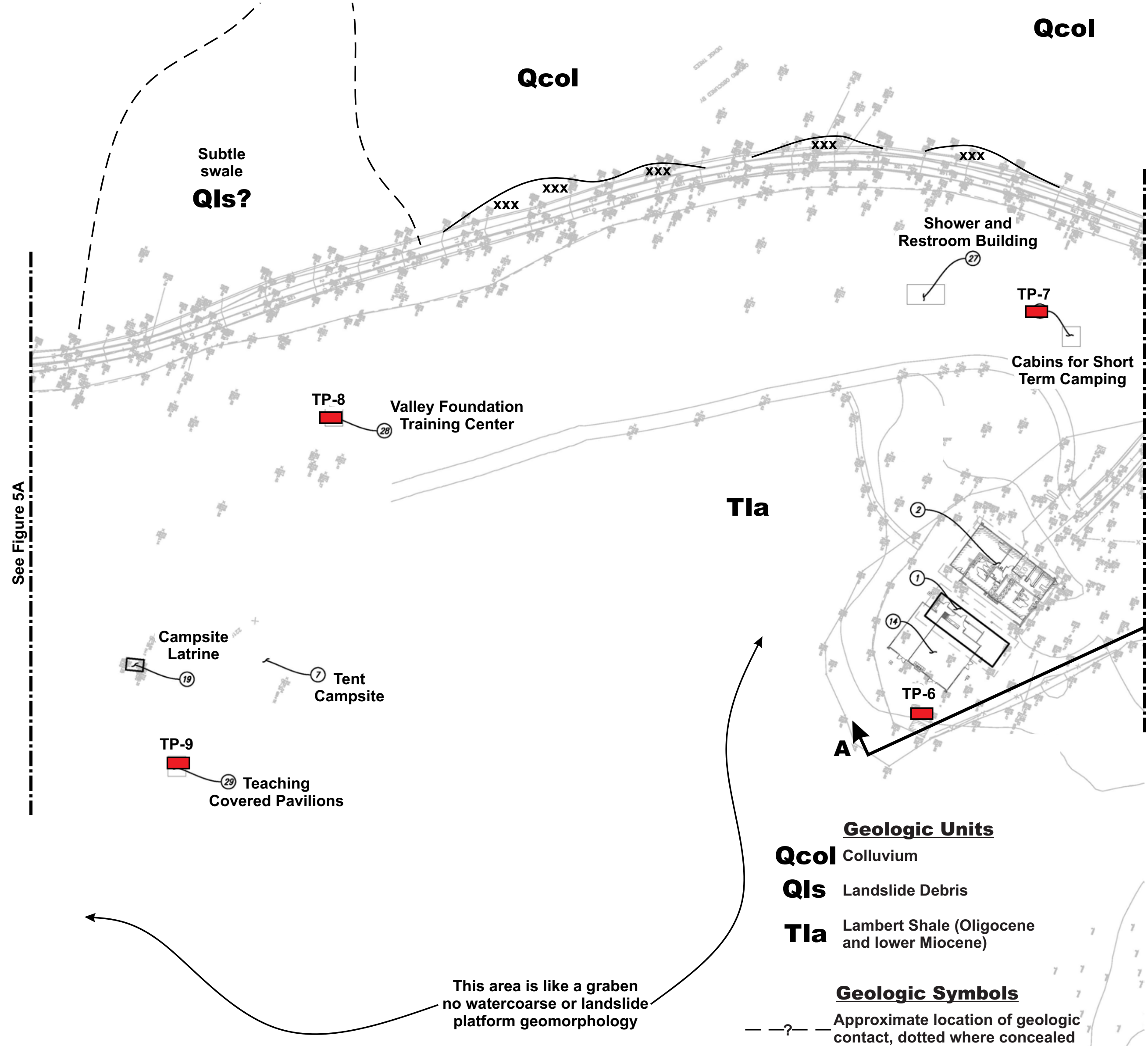
Base by Sandis, CSR Buildings - C-1.7, dated 04/17/2024

Enlarged Site Map - Trash Enclosure Area

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number: 1360-2-3
Figure Number: Figure 5B
Date: July 2024
Drawn By: RRN

CORNERSTONE
EARTH GROUP


Qcol
Qcol
Subtle swale
Qls?
xxx
xxx
xxx
xxx
xxx
Shower and Restroom Building
27
TP-7
Cabins for Short Term Camping
TP-8
Valley Foundation Training Center
28
See Figure 5A
See Figure 5B
Tla
2
1
14
Campsite Latrine
19
7
Tent Campsite
TP-6
A
TP-9
29
Teaching Covered Pavilions
This area is like a graben no watercoarse or landslide platform geomorphology

Geologic Units

Qcol	Colluvium
Qls	Landslide Debris
Tla	Lambert Shale (Oligocene and lower Miocene)

Geologic Symbols

— —?— — Approximate location of geologic contact, dotted where concealed

xxxx xx Rock outcrop or road cut

Legend

🟥 Approximate location of test pit (TP)

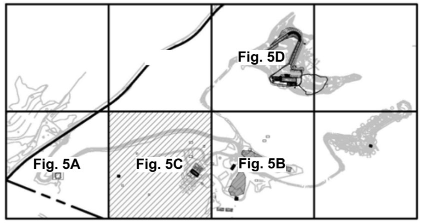


Fig. 5D
Fig. 5A
Fig. 5C
Fig. 5B

KEY MAP

N

0 80 160

APPROXIMATE SCALE (FEET)

Base by Sandis, CSR Buildings - C-1.6, dated 04/17/2024

Project Number 1360-2-3

Figure Number Figure 5C

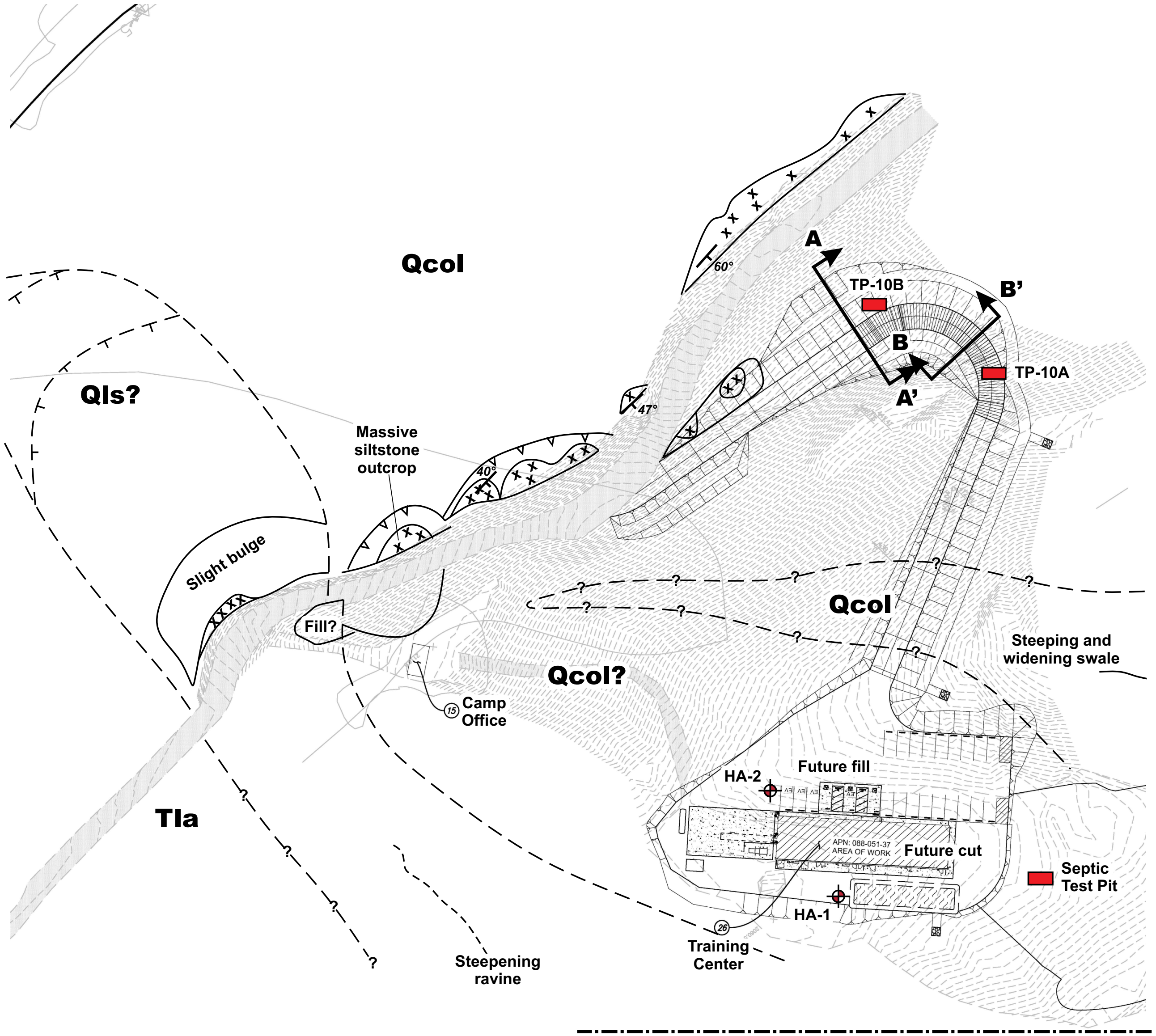
Date July 2024

Drawn By RRN

Enlarged Site Map - Cabin Area

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE
EARTH GROUP


Qcol
Qls?
Massive siltstone outcrop
Slight bulge
Fill?
Qcol?
Camp Office
15
Tla
Steepening ravine
Training Center
26
60°
47°
40°
A
A'
B
B'
TP-10B
TP-10A
Qcol
Steeping and widening swale
HA-2
HA-1
Future fill
Future cut
APN: 088-051-37
AREA OF WORK
Septic Test Pit
?

See Figure 5B

Geologic Units

Qcol Colluvium

Qls Landslide Debris

Tla Lambert Shale (Oligocene and lower Miocene)

Geologic Symbols

— —?— — Approximate location of geologic contact, dotted where concealed

xxxx xx Rock outcrop or road cut

Landslide scarp

40 Strike and dip of bedding

Legend

🟥 Approximate location of test pit (TP) (Cornerstone, 2024)

⌖ Approximate location of hand auger boring (HA) (Cornerstone, 2023)

A A' Approximate location of cross section

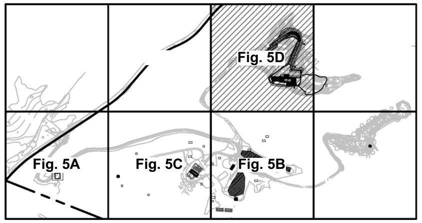


Fig. 5D
Fig. 5A
Fig. 5C
Fig. 5B

KEY MAP

N

0 80 160

APPROXIMATE SCALE (FEET)

Base by Sandis, CSR Buildings - C-1.3, dated 04/17/2024

Project Number 1360-2-3

Figure Number Figure 5D

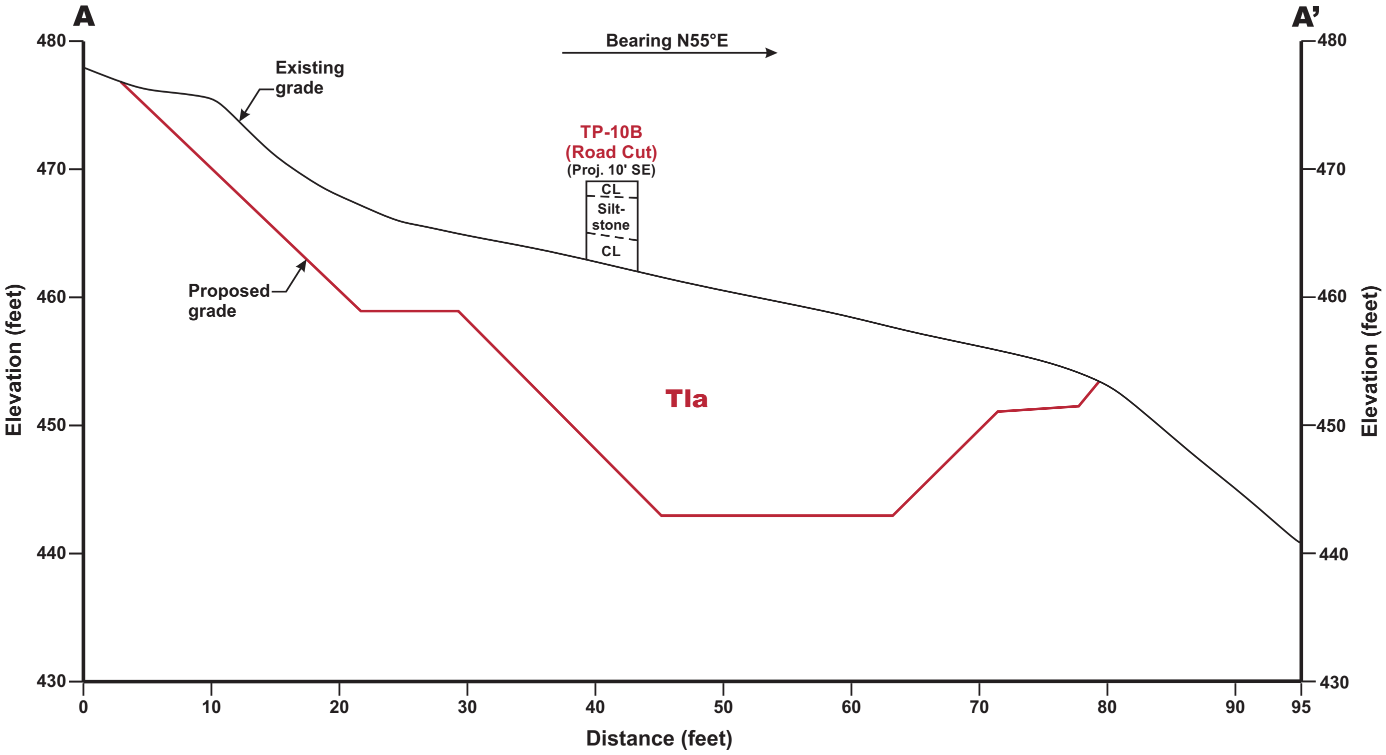
Drawn By RRN

Date July 2024

Enlarged Site Map - Training Center Area

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE
EARTH GROUP


A
A'
Bearing N55°E
480
470
460
450
440
430
Elevation (feet)
Existing grade
Proposed grade
TP-10B
(Road Cut)
(Proj. 10' SE)
CL
Silt-stone
CL
Tla
0
10
20
30
40
50
60
70
80
90
95
Distance (feet)

Section A-A'

(View Looking Northwest)
1"=10' H:V

Explanation

Geologic Units

Tla	Lambert Shale (Oligocene and lower Miocene)

Symbols

CL	Lean Clay
TP-10B	Approximate location of test pit (TP)

Notes:
1) Surficial fills associated with existing pavements, landscaping or utilities are not shown.
2) The subsurface profile is conceptual and is based on limited subsurface data obtained from widely spaced borings. Actual subsurface conditions may vary significantly between borings.
3) See Figure 5D for location of cross section.

Project Number
1360-2-3

Figure Number
Figure 6A

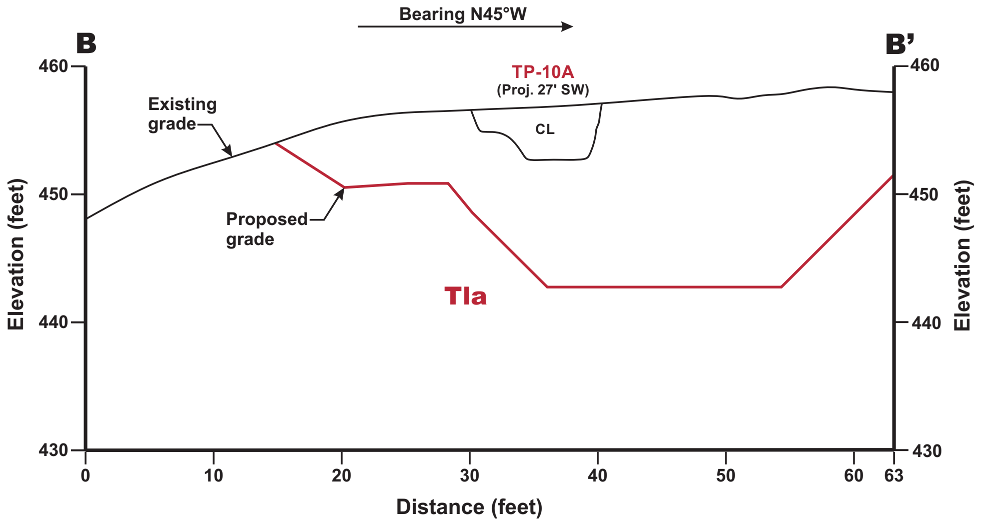
Date
July 2024

Drawn By
RRN

Geologic Cross Section A-A'

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE
EARTH GROUP


Bearing N45°W
B
B'
TP-10A
(Proj. 27' SW)
CL
Existing grade
Proposed grade
Tla
460
450
440
430
Elevation (feet)
0
10
20
30
40
50
60
63
Distance (feet)

Section B-B'

(View Looking Southwest)
1"=10' H:V

Explanation

Geologic Units	
Tla	Lambert Shale (Oligocene and lower Miocene)

Symbols	
CL	Silty Clay/Sandy Clay
TP-10A	Approximate location of test pit (TP)

Notes:
1) Surficial fills associated with existing pavements, landscaping or utilities are not shown.
2) The subsurface profile is conceptual and is based on limited subsurface data obtained from widely spaced borings. Actual subsurface conditions may vary significantly between borings.
3) See Figure 5D for location of cross section.

Project Number
1360-2-3

Figure Number
Figure 6B

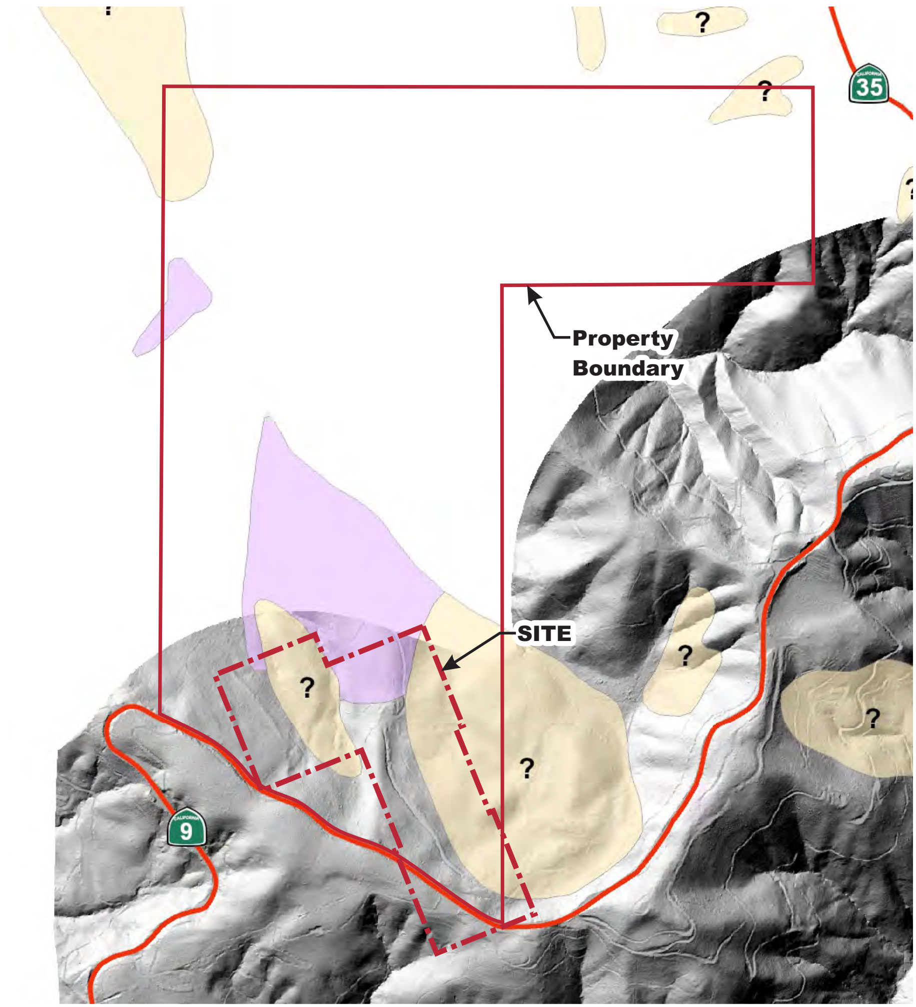
Drawn By
RRN

Date
July 2024

Geologic Cross Section B-B'

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE
EARTH GROUP



State Highways

🟥 State Highways

Major Roads

— Major Roads

County Landslide Map

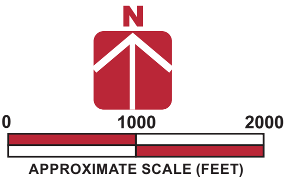
🟫 D- Definite Landslide Deposit

🟩 DR- Definite Rapid Landslide Deposit

🟧 P - Probable Landslide Deposit

🟨 ? - Questionable Landslide Deposit

🟪 Unattributed Landslide Deposit



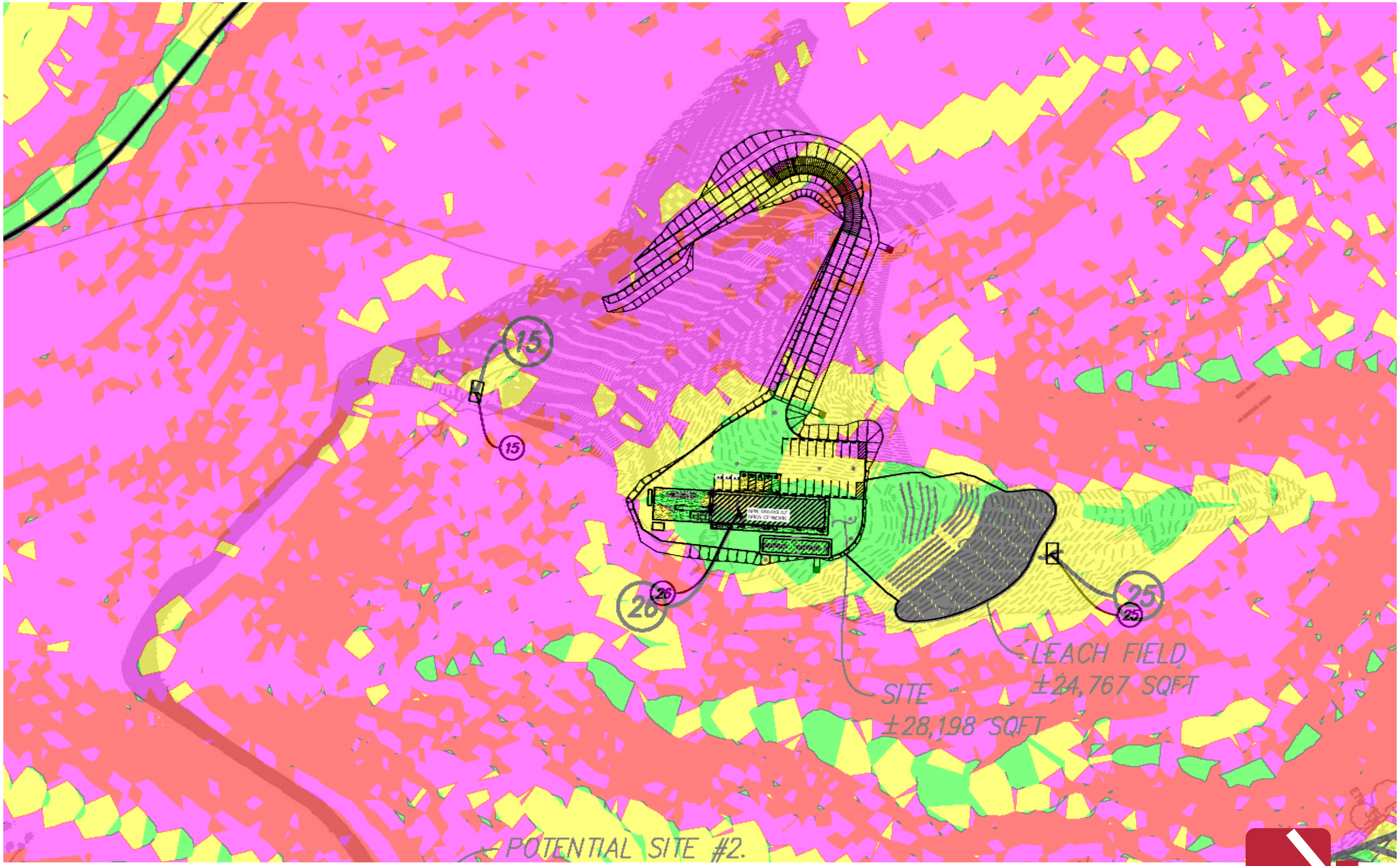
Base: County of Santa Cruz, San Mateo County Resource Conservation District,
Cal Fire, California Department of Parks and Recreation, Tukman Geospatial
LLC, MidPeninsula Regional Open SpaceDistrict.

CORNERSTONE
EARTH GROUP

Landslide Hazard Map

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number	1360-2-3
Figure Number	Figure 7
Date	July 2024
Drawn By	RRN


15
15
26
26
25
25
APN: 088-05-037
AREA OF WORK
SITE
±28,198 SQFT
LEACH FIELD
±24,767 SQFT
POTENTIAL SITE #2.

SLOPES TABLE (EQUATOR DATA)			
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	COLOR
1	0.00%	15.00%	🟩
2	15.00%	30.00%	🟨
3	30.00%	50.00%	🟪
4	50.00%	> 50.00%	🟥

N

0 100 200
APPROXIMATE SCALE (FEET)

Base by Sandis, Site Slope Map - C-0.0, 04/17/24
Overlay by Sandis, CSR Buildings - C-1.3, dated 04/17/2024

Project Number
1360-2-3

Figure Number
Figure 8

Drawn By
RRN

Date
July 2024

Geologic Constraints

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

CORNERSTONE
EARTH GROUP

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-10)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND	
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE	CLEAN GRAVELS <5% FINES	Cu>4 AND 1<Cc<3	GW	WELL-GRADED GRAVEL	▨
			Cu>4 AND 1>Cc>3	GP	POORLY-GRADED GRAVEL	▨
		GRAVELS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL	▨
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL	▨
	SANDS >50% OF COARSE FRACTION PASSES ON NO 4. SIEVE	CLEAN SANDS <5% FINES	Cu>6 AND 1<Cc<3	SW	WELL-GRADED SAND	▨
			Cu>6 AND 1>Cc>3	SP	POORLY-GRADED SAND	▨
		SANDS AND FINES >12% FINES	FINES CLASSIFY AS ML OR CL	SM	SILTY SAND	▨
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND	▨
FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT<50	INORGANIC	PI>7 AND PLOTS>"A" LINE	CL	LEAN CLAY	▨
			PI>4 AND PLOTS<"A" LINE	ML	SILT	▥
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OL	ORGANIC CLAY OR SILT	▤
	SILTS AND CLAYS LIQUID LIMIT>50	INORGANIC	PI PLOTS >"A" LINE	CH	FAT CLAY	▨
			PI PLOTS <"A" LINE	MH	ELASTIC SILT	▥
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OH	ORGANIC CLAY OR SILT	▨
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR		PT	PEAT	▨

OTHER MATERIAL SYMBOLS

▨	Poorly-Graded Sand with Clay	▨	Sand
▨	Clayey Sand	▥	Silt
▥	Sandy Silt	▨	Well Graded Gravelly Sand
▩	Artificial/Undocumented Fill	▨	Gravelly Silt
▨	Poorly-Graded Gravelly Sand	■	Asphalt
▨	Topsoil	▨	Boulders and Cobble
▨	Well-Graded Gravel with Clay		
▨	Well-Graded Gravel with Silt		

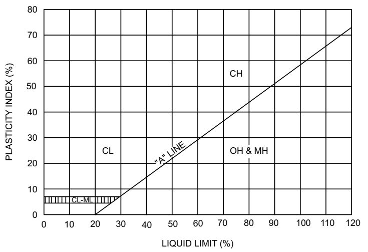
SAMPLER TYPES

☒	SPT	■	Shelby Tube
⧗	Modified California (2.5" I.D.)	○	No Recovery
▯	Rock Core	✋	Grab Sample

ADDITIONAL TESTS

CA	CHEMICAL ANALYSIS (CORROSIVITY)	PI	PLASTICITY INDEX
CD	CONSOLIDATED DRAINED TRIAXIAL	SW	SWELL TEST
CN	CONSOLIDATION	TC	CYCLIC TRIAXIAL
CU	CONSOLIDATED UNDRAINED TRIAXIAL	TV	TORVANE SHEAR
DS	DIRECT SHEAR	UC	UNCONFINED COMPRESSION
PP	POCKET PENETROMETER (TSF)	(1.5)	(WITH SHEAR STRENGTH IN KSF)
(3.0)	(WITH SHEAR STRENGTH IN KSF)		
RV	R-VALUE	UU	UNCONSOLIDATED UNDRAINED TRIAXIAL
SA	SIEVE ANALYSIS: % PASSING #200 SIEVE		
▼	WATER LEVEL		

PLASTICITY CHART



PENETRATION RESISTANCE
(RECORDED AS BLOWS / FOOT)

SAND & GRAVEL		SILT & CLAY		
RELATIVE DENSITY	BLOWS/FOOT*	CONSISTENCY	BLOWS/FOOT*	STRENGTH** (KSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.5
MEDIUM DENSE	10 - 30	MEDIUM STIFF	4 - 8	0.5-1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

* NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

** UNDRAINED SHEAR STRENGTH IN KIPS/SQ. FT. AS DETERMINED BY LABORATORY TESTING OR APPROXIMATED BY THE STANDARD PENETRATION TEST, POCKET PENETROMETER, TORVANE, OR VISUAL OBSERVATION.

CORNERSTONE
EARTH GROUP

LEGEND TO SOIL DESCRIPTIONS

Figure Number
A-1

HARDNESS

Soft – Reserved for plastic material alone.
Low hardness – Can be gouged deeply or carved easily with a knife blade.
Moderately hard – Can be readily scratched by a knife blade: scratch leaves a heavy trace of dust and is readily visible after the powder has been blown away.
Hard – Can be scratched with difficulty: scratch produces little powder and is often faintly visible.
Very hard – Cannot be scratched with knife blade: leaves a metallic streak.

STRENGTH

Plastic or very low strength.
Friable – Crumbles easily by rubbing with fingers.
Weak – An unfractured specimen of such material will crumble under light hammer blows.
Moderately strong – Specimen will withstand a few heavy hammer blows before breaking.
Strong – Specimen will withstand a few heavy ringing blows and will yield with difficulty only dust and small flying fragments.
Very strong – Specimen will resist heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments.

WEATHERING – The physical and chemical disintegration and decomposition of rocks and minerals by natural processes such as oxidation, reduction, hydration, solution, carbonation, and freezing and thawing.

Deep – Moderate to complete mineral decomposition: extensive disintegration: deep and thorough discoloration: many fractures, all extensively coated or filled with oxides, carbonates and/or clay or silt.
Moderate – Slight change or partial decomposition of minerals: little disintegration: cementation little to unaffected. Moderate to occasionally intense discoloration. Moderately coated fractures.
Little – No megascopic decomposition of minerals: little or no effect on normal cementation. Slight and intermittent, or localized discoloration. Few stains or fracture surfaces.
Fresh – Unaffected by weathering agents. No disintegration or discoloration. Fractures usually less numerous than joints.

FRACTURING

Intensity	Size of Pieces in Feet
Very little fractured	Greater than 4.0
Occasionally fractured	1.0 to 4.0
Moderately fractured	0.5 to 1.0
Closely fractured	0.1 to 0.5
Intensely fractured	0.05 to 0.1
Crushed	Less than 0.05

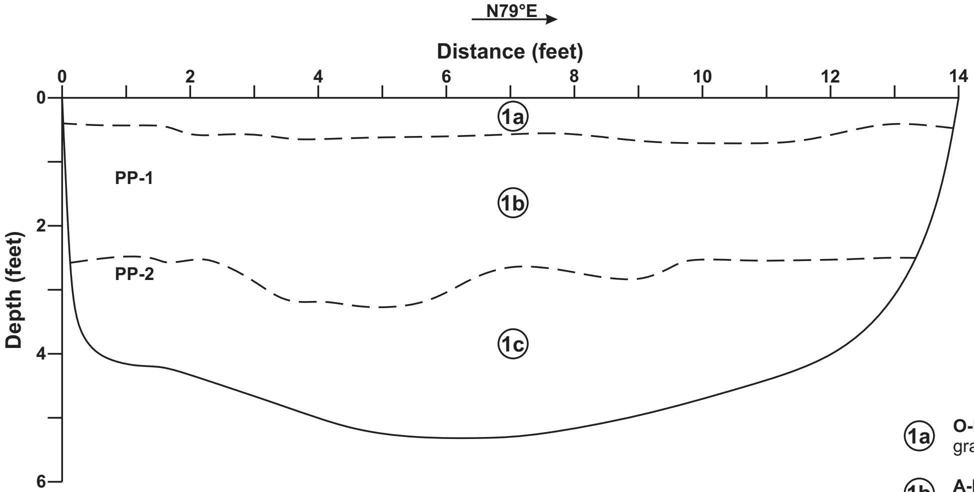
BEDDING OF SEDIMENTARY ROCKS

Splitting Property	Thickness	Stratification
Massive	Greater than 4.0 feet	very thick-bedded
Blocky	2.0 to 4.0 feet	thick-bedded
Slabby	0.2 to 2.0 feet	thin-bedded
Flaggy	0.05 to 0.2 feet	very thin-bedded
Shaly or Platy	0.01 to 0.05 feet	laminated
Papery	less than 0.01 feet	thinly laminated

CORNERSTONE
EARTH GROUP

Physical Properties of Rock Descriptions

Figure Number
A-2


N79°E
Distance (feet)
0
2
4
6
8
10
12
14
0
2
4
6
Depth (feet)
1a
1b
1c
PP-1
PP-2

TP-1

(Northwest wall)

Pocket Pen (tsf)

PP-1	**---**
PP-2	**---**

①a	**O-Horizon:** gray-brown, duff, wood chips, silt.
①b	**A-Horizon: Silty Lean Clay (CL):** stiff, moist, dark brown, moderate plasticity.
①c	**B-Horizon: Silty Lean Clay (CL):** very stiff, moist, brown, moderate to low plasticity, trace coarse sand.
PP	Pocket penetrometer reading

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 1

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

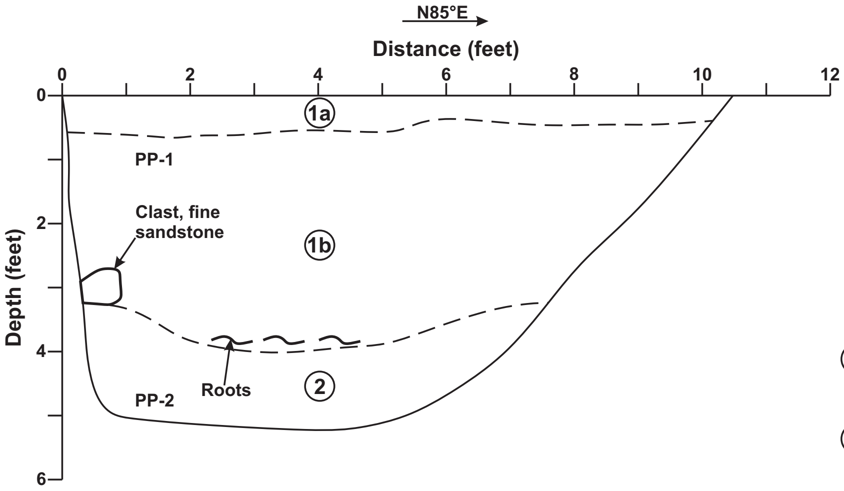
Figure Number
Figure TP-1

Date
July 2024

Drawn By
RRN

TP-2

(Northwest wall)


N85°E
Distance (feet)
0
2
4
6
8
10
12
Depth (feet)
0
2
4
6
1a
1b
2
PP-1
Clast, fine sandstone
Roots
PP-2

Pocket Pen (tsf)

PP-1	2.25
PP-2	1.5

(1a)	**O-Horizon:** gray-brown, duff, organics, silt.
(1b)	**A-Horizon: Silty Lean Clay (CL):** very stiff, moist, dark brown, moderate plasticity, trace coarse sand and fine angular gravels.
(2)	**Weathered sandstone:** low hardness, moist, weak, moderately weathered.
PP	Pocket penetrometer reading

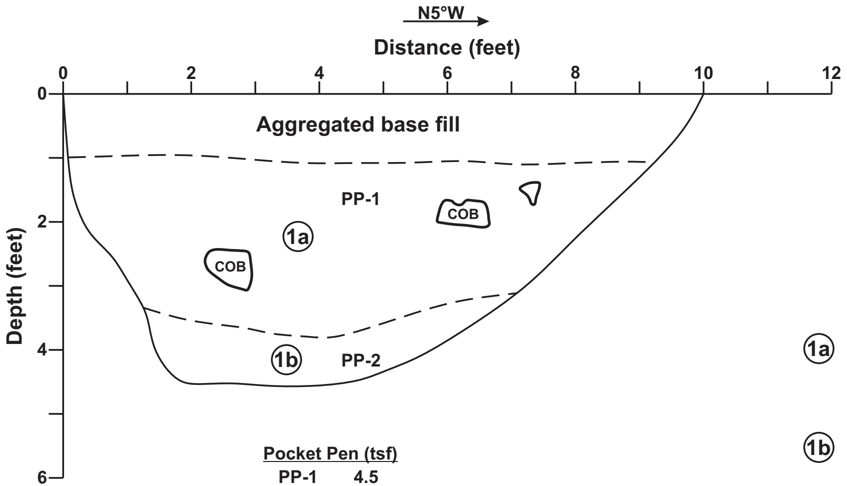
Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 2

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number	1360-2-3
Figure Number	Figure TP-2
Date	July 2024
Drawn By	RRN


N5°W
Distance (feet)
0
2
4
6
8
10
12
Depth (feet)
0
2
4
6
Aggregated base fill
PP-1
COB
1a
COB
1b
PP-2

TP-3

(Southwest wall)

Pocket Pen (tsf)

PP-1	**4.5**
PP-2	**3.0**

1a	**Sandy Clay (CL/CH):** hard, moist, dark brown to brown, fine to coarse sand, some fine to coarse gravel, trace cobbles.
1b	**Silty Clay (CL):** very stiff, moist, light brown and brown mottled, moderate plasticity, fine to coarse sand and silt.
PP	Pocket penetrometer reading

Scale: 1" = 2'

CORNERSTONE
EARTH GROUP

Test Pit 3

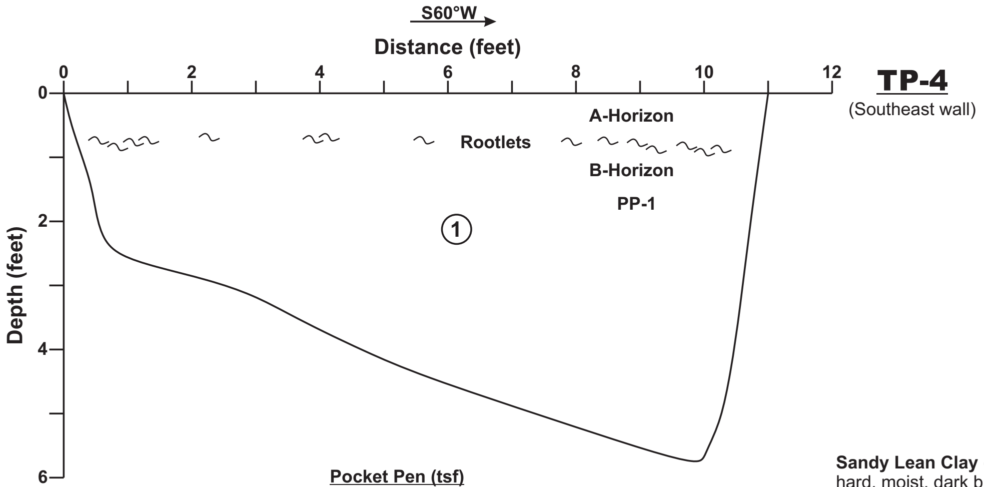
Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3

Figure Number Figure TP-3

Date July 2024

Drawn By RRN


S60°W
Distance (feet)
0
2
4
6
8
10
12
Depth (feet)
0
2
4
6
TP-4
(Southeast wall)
A-Horizon
Rootlets
B-Horizon
PP-1
①

Pocket Pen (tsf)	
PP-1	4.5+

① **Sandy Lean Clay (CL):** hard, moist, dark brown to brown, verigated, low plasticity, fine sand and silt, trace fine angular to subangular gravels.

PP Pocket penetrometer reading

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 4

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

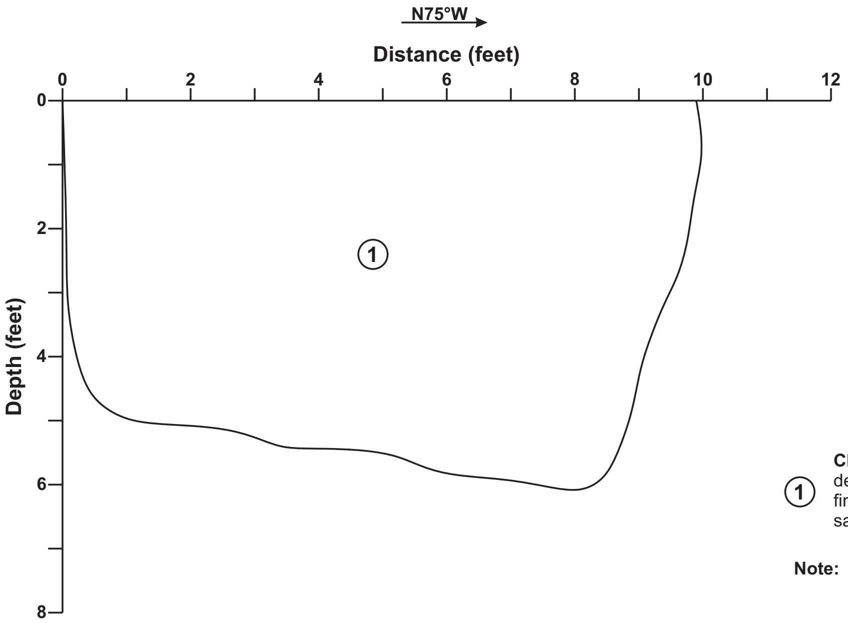
Figure Number
Figure TP-4

Date
July 2024

Drawn By
RRN

TP-5

(Southern wall)


N75°W
Distance (feet)
0
2
4
6
8
10
12
Depth (feet)
0
2
4
6
8
①

① **Clayey Gravel (GC):**
dense, moist, brown to light brown, fine to coarse cobbles, fine to coarse sand, (potentially clast supported).

Note: Sidewall collapsed.

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

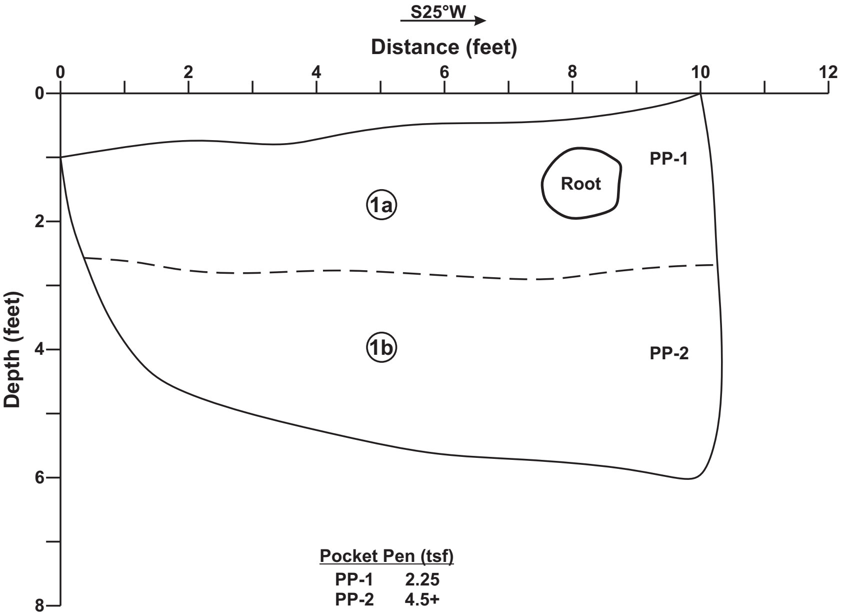
Test Pit 5

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number	1360-2-3
Figure Number	Figure TP-5
Date	July 2024
Drawn By	RRN

TP-6

(Eastern wall)


S25°W
Distance (feet)
0
2
4
6
8
10
12
0
2
4
6
8
Depth (feet)
Root
PP-1
1a
1b
PP-2

Pocket Pen (tsf)

PP-1	2.25
PP-2	4.5+

1a	**Silty Clay (CL):** very stiff, moist, dark brown, low plasticity, trace coarse sand.
1b	**Silty Clay (CL):** hard, moist, brown, fine sand, trace moderate to coarse sand.
PP	Pocket penetrometer reading

Scale: 1" = 2'

CORNERSTONE
EARTH GROUP

Test Pit 6

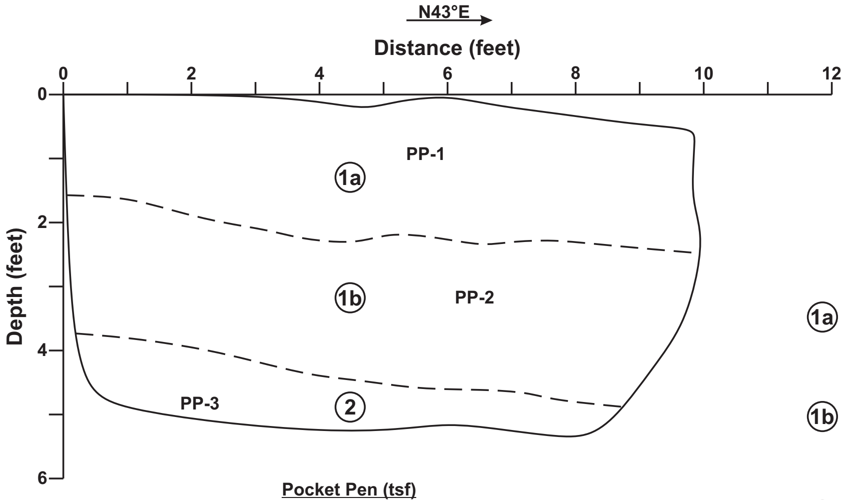
Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

Figure Number
Figure TP-6

Date July 2024

Drawn By RRN



TP-7

(Northwest wall)

Pocket Pen (tsf)

PP-1	1.0
PP-2	2.25
PP-3	1.5

(1a)	**Sandy Fat Clay (CH):** stiff, moist, dark gray, moderate plasticity, fine sand and silt, trace coarse sand.
(1b)	**Sandy Clay (CL):** very stiff, moist, brown, low plasticity, fine to coarse sand and silt, trace coarse sand.
②	**Wearthered Rock:** Siltstone cobbles (GW), Clayey matrix, matrix supported (GC), cobbles are angular, matrix supported Breccia.
PP	Pocket penetrometer reading

Scale: 1" = 2'

CORNERSTONE
EARTH GROUP

Test Pit 7

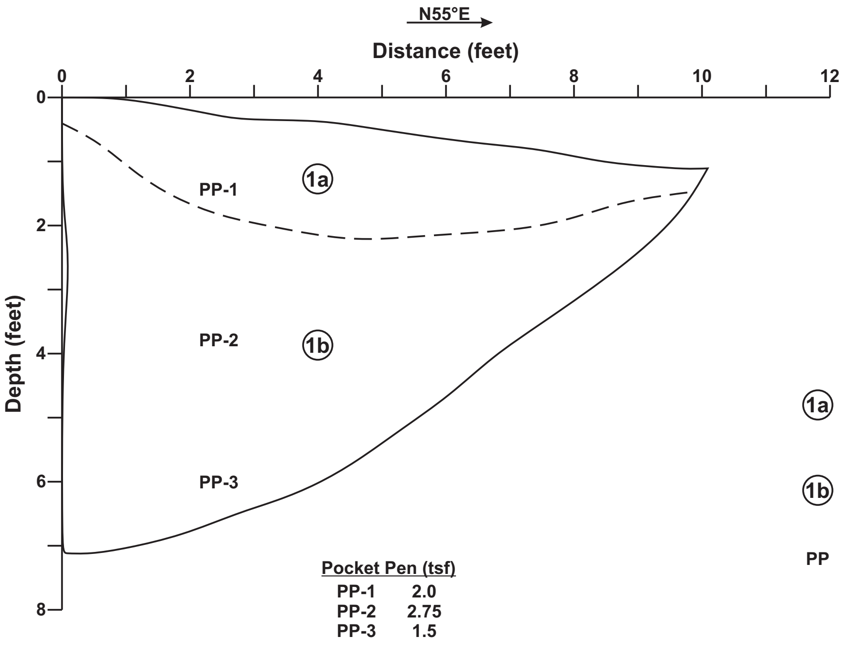
Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number 1360-2-3

Figure Number Figure TP-7

Date July 2024

Drawn By RRN


N55°E
Distance (feet)
0
2
4
6
8
10
12
Depth (feet)
0
2
4
6
8
PP-1
PP-2
PP-3
1a
1b

Pocket Pen (tsf)

PP-1	**2.0**
PP-2	**2.75**
PP-3	**1.5**

TP-8

(Northwest wall)

1a	**Silty Clay (CL):** very stiff, moist, brown, low plasticity, fine sand and silt.
1b	**Sandy Clay (CL):** stiff to very stiff, moist, light brown, low plasticity, coarse sand.
PP	Pocket penetrometer reading

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 8

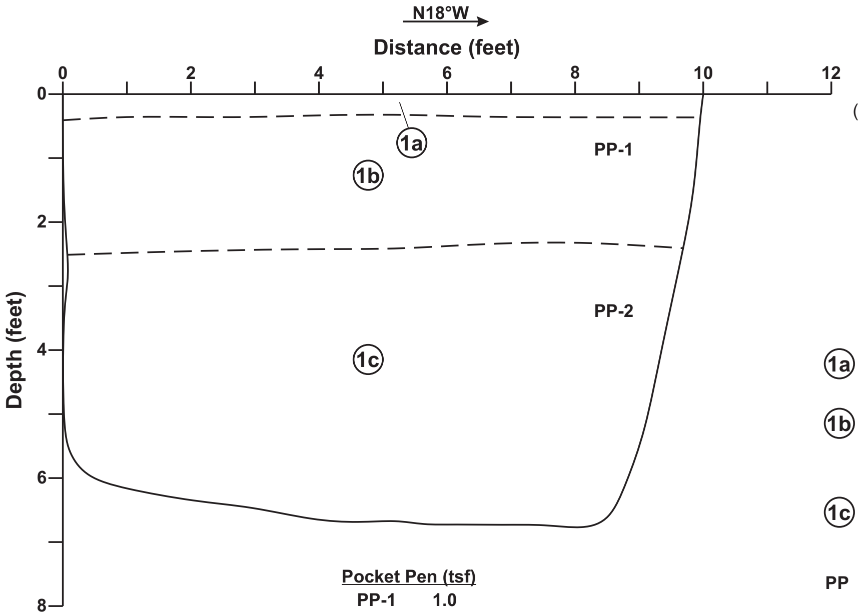
Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

Figure Number
Figure TP-8

Date
July 2024

Drawn By
RRN


N18°W
Distance (feet)
0
2
4
6
8
10
12
0
2
4
6
8
Depth (feet)
1a
1b
1c
PP-1
PP-2

TP-9

(Southwest wall)

Pocket Pen (tsf)

PP-1	**1.0**
PP-2	**2.25**

1a	Duff, gray, organics, silt.
1b	**Silty Clay (CH):** stiff, moist, dark gray, fine sand, low plasticity.
1c	**Sandy Clay (CL/CH):** very stiff, moist, brown, fine sand and silt, moderate to low plasticity, trace fine gravels.
PP	Pocket penetrometer reading

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 9

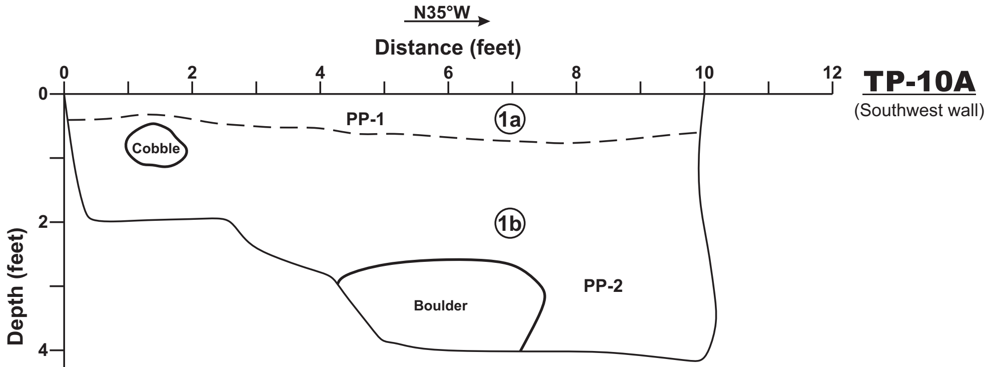
Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number
1360-2-3

Figure Number
Figure TP-9

Date July 2024

Drawn By RRN


N35°W
Distance (feet)
0
2
4
6
8
10
12
TP-10A
(Southwest wall)
Depth (feet)
0
2
4
6
PP-1
1a
Cobble
1b
Boulder
PP-2

Pocket Pen (tsf)

PP-1	**4.5+**
PP-2	**4.5+**

Silty Clay (CL):
① a hard, moist, dark brown, moderate plasticity, silt, some fine to medium sand.

Sandy Clay (CL):
① b hard, moist, yellowish brown, moderate plasticity, silt, trace fine to medium sand.

PP Pocket penetrometer reading

Note: Observed siltstone boulder, backhoe broke a tooth.

Scale: 1” = 2’

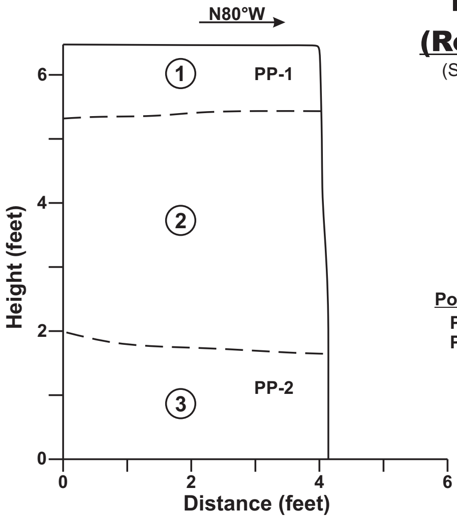
CORNERSTONE
EARTH GROUP

Test Pit 10A

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number	1360-2-3
Figure Number	Figure TP-10A
Date	July 2024
Drawn By	RRN

TP-10B
(Road Cut)
(Southern wall)



N80°W
6
4
2
0
1
PP-1
2
3
PP-2
Height (feet)
0
2
4
6
Distance (feet)

Pocket Pen (tsf)	
PP-1	**4.5+**
PP-2	**4.5+**

① **Sandy Clay (CL):** hard, moist, pinkish gray, fine to coarse sand and silt.

② **Siltstone:** hard, moist, tan, strong, little weaken.

③ **Lean Clay (CL):** hard, moist, light brown, moderate plasticity, some silt.

PP Pocket penetrometer reading

Scale: 1” = 2’

CORNERSTONE
EARTH GROUP

Test Pit 10B

Chesbrough Boy Scout Camp
Geologic Evaluation
Los Gatos, CA

Project Number	1360-2-3
Figure Number	Figure TP-10B
Date	July 2024
Drawn By	RRN

Attachment 11

Grading Plan Acceptance Letter (January 2026)

THE COUNTY OF SANTA CRUZ
1850

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County of Santa Cruz

Department of Community Development and Infrastructure
701 Ocean Street, Fourth Floor, Santa Cruz, CA 95060
Planning (831) 454-2580 Public Works (831) 454-2160
cdi.santacruzcountyca.gov

21 January 2026

Boy Scouts of America
Attn: Michael Wilson
970 West Julian Street
San Jose, CA 95126

Subject: Review of the Camp Chesebrough Site Improvements, 26005 Big Basin Way, CA-9 project plan set dated 11 December 2025 by Sandis Civil Engineers - Drawing No. 217084

Project Site: BSA Chesebrough Scout Reservation
26005 Big Basin Way, CA-9
APN 088-051-37
Application No. 231473

Dear Applicant(s):

The Planning Division has reviewed and accepted the project civil engineering plan set titled Camp Chesebrough Site Improvements, 26005 Big Basin Way, CA-9 dated 11 December 2025 by Sandis Civil Engineers - Drawing No. 217084.

Please contact Rick Parks at (831) 454-3168/email: Rick.Parks@santacruzcountyca.gov if we can be of any further assistance.

Sincerely,

RICK L. PARKS
No. 2603

Rick Parks GE 2603
Civil Engineer
County of Santa Cruz
CDI - Planning Division

Cc: Environmental Planning, Attn: Kathleen McLaughlin
Zoning, Attn: Randall Adams

Attachment 12

Geotechnical Review of Plans Letter (December 2025)

THE COUNTY OF SANTA CRUZ
SINE PRAEJUDICIO
1850

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CORNERSTONE
EARTH GROUP

Date: December 12, 2025
Project No.: 1360-2-3

Prepared For: Mr. Michael Wilson
BOY SCOUTS OF AMERICA
1900 The Alameda, Suite 100
San Jose, California 95126

Re: Geotechnical Review of Plans
CSR Master Plan and Training Center
26005 Big Basin Way
Los Gatos, California

Dear Mr. Wilson:

As requested, we reviewed the geotechnical aspects of the civil plans for the above-referenced project. We previously performed a geotechnical investigation for the project and presented our findings in our report titled, "Geotechnical Investigation and Geologic Hazards Evaluation, CSR Master Plan and Training Center, 26005 Big Basin Way, Los Gatos, California," dated March 19, 2025.

The documents reviewed include the following:

- Project civil plan set titled, "BSA Chesebrough Scout Reservation, 26005 Hwy 9, Los Gatos, CA, Sheets C-0.0, C-1.0, C-3.0, C-3.1, C-4.0, C-5.0, C-5.1, C-5.2, C-5.3, C-5.4, C-6.0, and C-6.1," prepared by Sandis dated December 11, 2025.

Geotechnical Review

Based on our review, the civil plans are in general conformance with the recommendations in our geotechnical report. As recommended in our report, we should be retained to provide geotechnical observation and testing services during construction to complete our role as the Geotechnical Engineer-of-Record for the project.

Closure

This review of plans has been prepared for the sole use of Boy Scouts of America in accordance with generally accepted geotechnical engineering principles and practices in the San Francisco Bay Area at this time. No warranties are either expressed or implied.

Should you have any questions, or if we may be of further service, please contact us at your convenience.

Sincerely,

Cornerstone Earth Group, Inc.

Stephen Ohlsen, P.E., G.E.
Senior Project Engineer

REGISTERED PROFESSIONAL ENGINEER
STEPHEN C. OHLSEN
GE3250
GEOTECHNICAL
STATE OF CALIFORNIA

Copies: Addressee (1 by email)

Attachment 13

Geotechnical Investigation and Geologic Hazards Evaluation County Review Letter (May 2025)

THE COUNTY OF SANTA CRUZ
1850

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County of Santa Cruz

Department of Community Development and Infrastructure
701 Ocean Street, Fourth Floor, Santa Cruz, CA 95060
Planning (831) 454-2580 Public Works (831) 454-2160
cdi.santacruzcountyca.gov

22 May 2025

Boy Scouts of America
Attn: Michael Wilson
970 West Julian Street
San Jose, CA 95126

Subject: Review of the Geotechnical Investigation and Geologic Hazards Evaluation
dated 19 March 2025 by Cornerstone Earth Group, Inc.
Project No. 1360-2-3

Project Site: 26005 Big Basin Way, CA-9
APN 088-051-37
Application Nos. REV231206 (related to 231473)

Dear Applicant(s):

In our review letter dated 26 August 2024 of a limited Engineering Geology Assessment Report dated 26 July 2024, we noted that a design-level geologic and geotechnical report was required. Cornerstone Earth Group has advanced a supplemental investigation concluding that the risk of slope instability as well as other geologic hazards to the proposed improvements is low or can be mitigated through incorporation of their recommendations. Consequently, the Planning Division has accepted the subject report in reference to the proposed Training Center and new Access Road improvements at 26005 Big Basin Way. Please note that our review is limited to the aspects of the project noted above, and that the proposed Water Tank improvements were reviewed in a separate letter dated 17 January 2025. Our acceptance is provided with the following conditions:

1. The subject report dated 19 March 2025 provides recommendations for either reduced final slopes or a debris catchment fence given an identified potential for instability of the proposed cut-slope, which currently includes slopes of 1H:1V to establish the proposed access road. County grading regulations require that these cut-slopes remain structurally stable. Consequently, the catchment wall alternative for the proposed access road is not accepted. Site grading shall comply with the recommendations of the subject report. Alternatively, supplemental geotechnical recommendations may be prepared to support other designs (e.g., retention of material, etc.) for a stable slope configuration. [SCCC 16.20.140]

2. All project design and construction shall comply with the recommendations of the report. [SCCC 16.10.070]

3. Final plans shall reference the subject report by title, authors, and date. Final Plans should also include a statement that the project shall conform to the report's recommendations. [SCCC 16.10.070]

4. After plans are prepared that are acceptable to all reviewing agencies, please request both your project geologist and project geotechnical engineer submit a completed Consultant Plan Review Form (PLG-300) to Environmental Planning. The authors of the geology and geotechnical report shall sign and stamp their completed forms. Please note that the plan review forms must reference the final plan set by the last revision date.

As part of the plan review for the anticipated Building Permit application(s), the project geologic and geotechnical consultant should confirm that the proposed design results in structurally stable slopes per County grading regulations and Item 1 above. [SCCC 16.10.070 & 16.20.140]

5. A Declaration of Geologic Hazards shall be recorded prior to issuance of building permit(s) for the proposed project. Please find the declaration form attached along with instructions for recording. [SCCC 16.10.070]

Any updates to report recommendations necessary to address conflicts between the report and plans must be provided via a separate addendum to the subject report.

We note that the current scope of the project, and our technical review, does not include improvements to the existing Power Pole Road alignment. If fire access improvements to Power Pole Road exceed 100 cubic yards of grading per 500 feet; then the Power Pole Road alignment will need to be evaluated as a new road (SCCC 16.22) and meet current grading regulations. As a result, supplemental technical reports and review may be required.

Electronic copies of all forms required to be completed by the Engineering Geologist and/or Geotechnical Engineer may be found on our website:
https://cdi.santacruzcountyca.gov/UPC/EnvironmentalPermitsTechnicalReviews/GeologyandSoils/AssistanceandForms.aspx

After building permit issuance the geotechnical engineer and engineering geologist *must remain involved with the project* during construction. Please review the Notice to Permits Holders (attached).

Our acceptance of the report is limited to its technical content only. Compliance with other resource protection requirements set forth in Chapter 16 of the Santa Cruz County Code, as well as other planning related regulations governing zoning, fire safety, septic or sewer are subject to approval by other agencies.

Please contact Rick Parks at (831) 454-3168/email: Rick.Parks@santacruzcountyca.gov or Craig Stewart at (831) 454-3175/email: Craig.Stewart@santacruzcountyca.gov if we can be of any further assistance.

Sincerely,

Registered Professional Engineer
Rick L. Parks
No. 2603
Geotechnical
State of California

Certified Engineering Geologist
Craig Allen Stewart
2779
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Rick Parks GE 2603
Civil Engineer
County of Santa Cruz
CDI - Planning Division

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County Geologist
County of Santa Cruz
CDI - Planning Division

Cc: Environmental Planning, Attn: Kathleen McLaughlin
Zoning, Attn: Randall Adams
Cornerstone Earth Group, Inc., Attn: William Godwin CEG
Cornerstone Earth Group, Inc., Attn: Stephen Ohlsen GE
Topa Architecture, Inc., Attn: Jared Casto

Attachments: Notice to Permit Holders
Declaration of Geologic Hazards
Steps for Recording

NOTICE TO PERMIT HOLDERS WHEN SOILS AND GEOLOGY REPORTS HAVE BEEN PREPARED, REVIEWED AND ACCEPTED FOR THE PROJECT

After issuance of the building permit, the County requires your geotechnical engineer and engineering geologist to be involved during construction.

1. **At the completion of construction,** a *Soils (Geotechnical) Engineer Final Inspection Form* and a *Geologist Final Inspection Form* are required to be submitted to Environmental Planning that includes copies of all observations made during construction and is stamped and signed, certifying that the project was constructed in conformance with the recommendations of the geologic and geotechnical reports.

   If the *Final Inspection Form* identifies any portions of the project that were not observed by the geotechnical engineer and/or geologist, you may be required to perform destructive testing in order for your permit to obtain a final inspection. The geotechnical engineer and/or geologist then must complete and initial an *Exceptions Addendum Form* that certifies that the features not observed will not pose a life safety risk to occupants.

Attachment 14

On-site Wastewater Treatment System Report

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Santa Cruz County
Onsite Wastewater Treatment System
Feasibility Study

APN	APN 088-051-37
Address	26005 Hwy 9, Los Gatos, CA 95033
For Applicant	Boy Scouts of America
Prepared by	Sterling Scott, R.E.H.S.#9469

Project Description:

Onsite Wastewater Treatment System (OWTS) site evaluation testing for an upgrade of an existing commercial campground property, Boy Scouts of America Camp Chesebrough. A new facility will serve as a classroom and dining hall. (Total Occupancy and Gallons Per Day to be determined).

Site Notes:

- Size: 444.26 Acres
- Topography: Majority of the property is over <30% Slope. The area that is being tested meets slopes under 30% and relatively flat.
- An entirely new OWTS is to be designed. There is no other nearby infrastructure in the proposed location.

Site Variables:

1. Commercial Use (High GPD Use)

SOIL PROFILE

Test Date: 10/31/23

Overview:

Soil profile conducted with full size excavator to locate ideal material and verify any potential groundwater. A total of four trenches were excavated and witnessed by EH Inspector Sean Basalyga.

T-1 Soil Profile:

From	to	Description, texture, and structure notes
0′	2′	Top Soil w/ Roots
2′	6′	Fractured Brown Mudstone
6′	8′	Fractured Brown Mudstone
8′	13′	Fractured Brown Mudstone
Notes	-Location: Northwest of Proposed Structure -No Groundwater Encountered -Test Trench Remained Very Consistent	

Soil Profile Findings:

Soil profiles from T-1 exhibited a fractured mudstone that contained a loamy/silty consistency although compact and compressed. Due to the lack of Groundwater and soil consistency it was decided that percolation throughout the area north of the test trench would be ideal to test for a potential leachfield.

PERCOLATION TESTING

Test Date: 11/1/23

Overview:

A total of six percolation pipes were installed throughout the area north of T-1. Four pipes were placed at 3’ depths and two pipes were placed at 6’ depths, to observe rates in the mudstone material. The testing was witnessed by inspector Sean Basalyga.

Percolation Rates:

Hole P#	Pipe Depth (FT)	MPI
1	6	29.9
2	3	1.18
3	3	28
4	3	5.24
5	6	6.67
6	3	1.01

Infiltratative Zone Average: **8.85 (~9) MPI**
Deep Depths Average: **18.285 MPI**

Application Rate:

- Conventional: **0.8**
- Alt. Tx: **1.32**

OWTS TESTING SUMMARY

Summary and Suggested Upgrade:

OWTS testing indicates that the parcel has favorable soils at the 3′ depth range (fractured mudstone). The property passed percolation testing within a medium range (9 MPI Average). The setback for groundwater separation would be 8′ below the 3′ depth and no groundwater or signs of groundwater was encountered at 11′.

Consultant suggests upgrade with a new conventional system. Because of the potential use of a kitchen, given design should account for a grease trap for kitchen wastes that will be separate from wastewater flowing from bathrooms/sinks. This will all be verified at a later date closer to the design phase.

With these parameters in place an Onsite Wastewater Treatment System (OWTS) with conventional leachfield is adequate to meet Santa Cruz County LAMP standards. Contact me with any questions or concerns.

Sincerely,

Sterling Scott, Associate Environmental Consultant
sterling@foxonsite.com
REHS #9469
Fox Onsite Solutions

Attachments:

1. Testing Site Map
2. Soil Profile Log
3. Percolation Data Sheet
4. OWTS Feasibility Report

Fox Onsite Solutions LLC
Ryan Fox REHS #8605
ryan@foxonsite.com

SOIL PERCOLATION TESTS

FOX ONSITE SOLUTIONS

APN: 088-051-37
DATE: 11/1/23
LOCATION: CAMP CHESEBROUGH
OWNER: BOY SCOUTS OF AMERICA

30 MIN RDS

HOLE #: P1 **DEPTH:** 6'

	TIME		WATER LEVEL				
	START	FINISH	START	FINISH	ΔMIN	ΔINCH	MPI
1	1102	1132	38	34.5	30	3.5	8.6
2	1133	1203	37.5	33.75	30	3.75	8
3	1263	1233	37.25	34	30	3.25	9.23
4	1233	103	37.25	34.5	30	2.75	10.9
5	103	133	37.5	35	30	2.5	12
6	133	203	37.5	34.5	30	3	10
7	204	234	37.25	34.5	30	2.75	10.9
8							
9							
10							

EMPTY: 31 **REFILL:** 37 **MPI AVG:** 29.9

NOTES:

LESS THA 10 m

HOLE #: P2 **DEPTH:** 3'

	TIME		WATER LEVEL				
	START	FINISH	START	FINISH	ΔMIN	ΔINCH	MPI
1	1103		104	BOTTOMED			
2	1119	1127	104	110	6	6	1
3	1128	1133	104	108.75	5	4.75	1.05
4	1134	1139	104	108.25	5	4.25	1.18
5	1139	1144	104	108.75	5	4.75	1.19
6	1145	1150	104	108.25	5	4.25	1.18
7	1150	1155	104	108.25	5	4.25	1.18
8	1155	1200	104	108.25	5	4.25	1.18
9							
10							

EMPTY: 110 **REFILL:** 104 **MPI AVG:** 1.18

NOTES:

30 MIN RDS

HOLE #: P3 **DEPTH:** 3'

	TIME		WATER LEVEL				
	START	FINISH	START	FINISH	ΔMIN	ΔINCH	MPI
1	1105	1135	236.25	238.5	30	2.25	13
2	1136	1206	235	237	30	2	15
3	1206	1236	235	236.75	30	1.75	17
4	1237	107	235	236.25	30	1.25	24
5	107	137	235	236.25	30	1.25	24
6	137	207	235	236	30	1	30
7	208	238	235	236	30	1	30
8					30		
9							
10							

EMPTY: 242.25 **REFILL:** 236.25 **MPI AVG:** 28

NOTES:

10 m RD

HOLE #: P4 **DEPTH:** 3'

	TIME		WATER LEVEL				
	START	FINISH	START	FINISH	ΔMIN	ΔINCH	MPI
1	11:04	1129	279.75	273.75	21	6	3.5
2	11:30	1140	280	276.5	10	3.5	2.9
3	1141	1151	280	277.5	10	2.5	4
4	1151	1201	280	277.75	10	2.25	4.44
5	1201	1211	280	277.75	10	2.25	4.44
6	1211	1221	280	278	10	2	5
7	1221	1231	280.25	278.25	10	2	5
8	1231	1241	280.25	278.5	10	1.75	5.7
9	115	125	280	278.5	10	1.5	6
10							

EMPTY: 273.75 **REFILL:** 279.75 **MPI AVG:**

NOTES: 5.24

10 min RDS

HOLE #: P5 **DEPTH:** 6'

	TIME		WATER LEVEL				
	START	FINISH	START	FINISH	ΔMIN	ΔINCH	MPI
1	1110	1140	148	142.25	30	5.75	5.2
2	1209	1218	149	146	10	3	3.3
3	1218	1228	149	146.5	10	2.5	8
4	1228	1238	149	146.5	10	2.5	8
5	1239	1249	149.25	146.75	10	2.5	8
6	1249	1259	149	146.5	10	2.5	8
7	1259	109	149	146.5	10	2.5	8
8	1:10	120	149	146.75	10	2.25	4
9							
10							

EMPTY: 142.25 **REFILL:** 147 **MPI AVG:**

NOTES: OFF 1/4 INCH (TIME READING) 6.67

5 m R

HOLE #: P6 **DEPTH:** 3'

	TIME		WATER LEVEL				
	START	FINISH	START	FINISH	ΔMIN	ΔINCH	MPI
1	1112	1122	23	30.25	10	7.25	1.38
2	1123	1131	23	30.25	8	7.25	1.10
3	1132	1137	23	28.75	5	5.75	.87
4	1138	1141	23	28	5	5	1
5	1142	1147	23	28 7/8	5	5.875	.85
6	1148	1153	23	28	5	5	1
7	1153	1158	23	27 7/8	5	4.875	1.03
8	1159	1204	23	28	5	5	1
9							
10							

EMPTY: 30.25 **REFILL:** 23 **MPI AVG:**

NOTES: 1.01

Infiltrative Zone Average MPI: 8.85
Deep MPI (<120mpi): 18.285
Application Rate: 0.8
Nitrate concern area?:

Notes:
OUTSIDE OF NITRATE CONCERN AREA.

Fox Onsite Solutions LLC
Ryan Fox REHS #8605
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SOIL PROFILE

FOX ONSITE SOLUTIONS

APN: 088 - 051 - 37	DATE: 10/31/23
LOCATION: 26003 HWY 9, 95033	OWNER: BOY SCOUTS OF AMERICA

SOIL PROFILE #: T1

FROM	TO	SOIL TYPE	NOTES
0	2'	TOP SOIL w/ ROOTS	
2'	6'	FRACTURED MUDSTONE	NO GW
6'	8'	BROWN " "	
8'	13'	" " "	ENCOUNTERED

DEPTH TO GROUNDWATER: NO GW

SOIL PROFILE #:

FROM	TO	SOIL TYPE	NOTES

DEPTH TO GROUNDWATER: ______

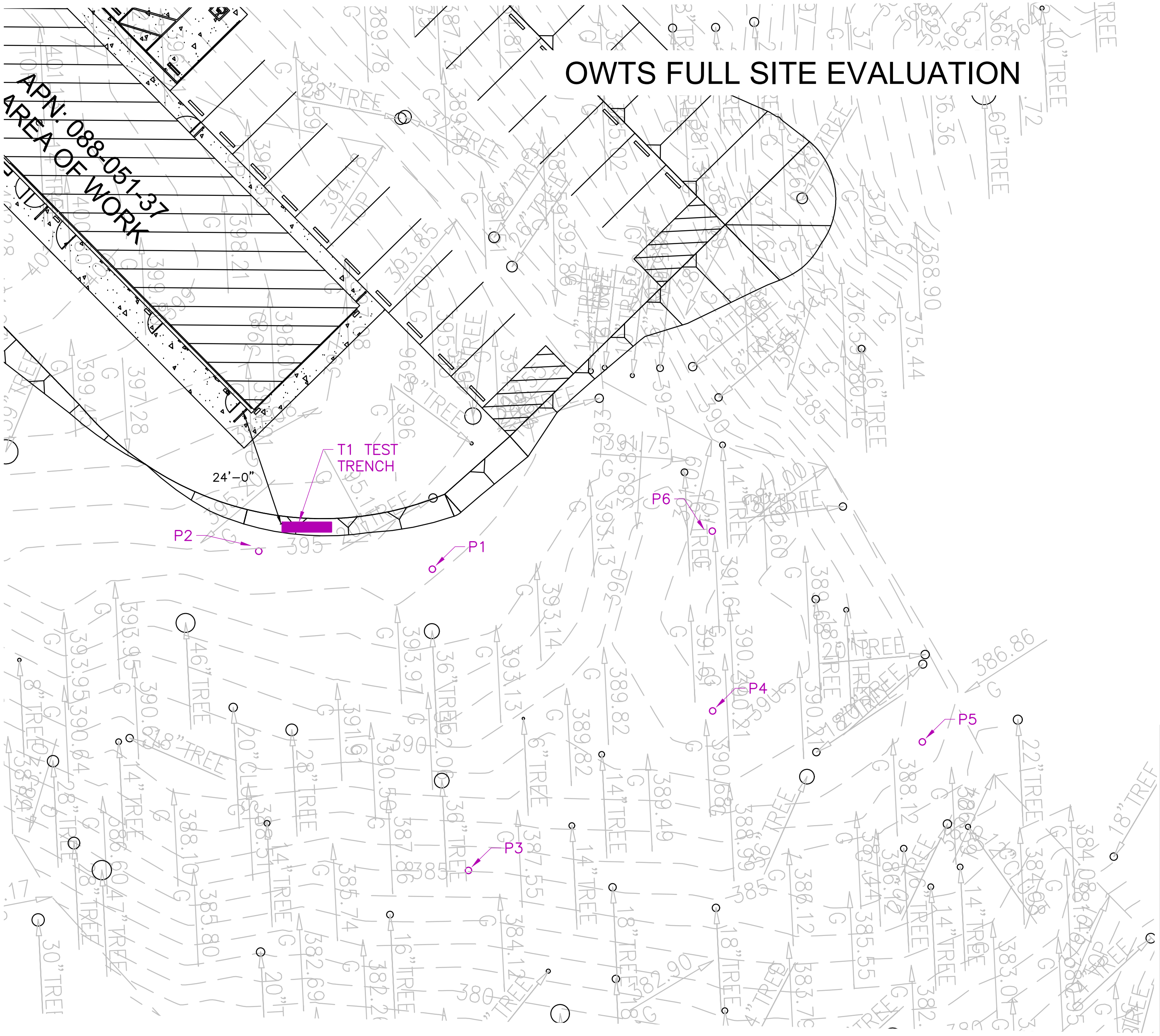
SOIL PROFILE #:

FROM	TO	SOIL TYPE	NOTES

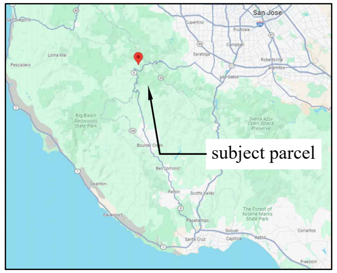
DEPTH TO GROUNDWATER: ______

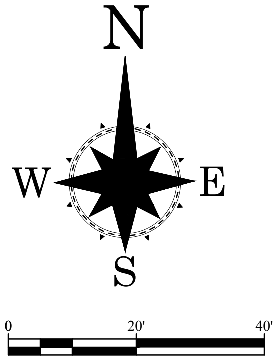
NOTES:

OWTS FULL SITE EVALUATION


APN: 088-051-37
AREA OF WORK
T1 TEST TRENCH
24'–0"
P1
P2
P3
P4
P5
P6

LOCATION


subject parcel



FOX ONSITE SOLUTIONS

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APN:	088-051-37	Date:	1/25/24
Project Location:	26005 HWY 9, LOS GATOS, CA 95033		
Property Owner:	BOY SCOUTS OF AMERICA		
Mailing Address:	26005 HWY 9, LOS GATOS, CA 95033		
Owner Contact Info:			
Scale:	1" = 20'	Revision:	1

BOYSCOUTCAMPCHESBOUGH_OWTSTESTING_1.25.24.DWG