



HARRIS CREEK HEIGHTS PRELIMINARY STORM DRAINAGE REPORT

Prepared for:

Boise County

August 22, 2025

Prepared By:

Pat Colwell, P.E.

Colton Bunn, P.E.



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Introduction

This report is the description of the post development stormwater and drainage management plan for proposed Harris Creek Heights subdivision south of Placerville, Idaho. The project lies in the northwest quarter of Section 33, Township 7 North, Range 4 East, Boise Meridian, Boise County, Idaho.

Proposed Development

The proposed development of Harris Creek Heights Subdivision will be 34 buildable lots. There will be roadside swales with check dams to convey water to retention ponds. Any overflow from ponds during a flood event will flow to existing drainage systems along Harris Creek Rd.

Soil Conditions

A geotechnical investigation was conducted in 2021 by GeoTek, Inc on a neighboring property (Trail Creek Ranch Subdivision). Groundwater and soil conditions were evaluated and logged. An additional 8 test pits were evaluated October 2022 for a total of 37 site test pits. No infiltration testing has been done at this time. Ground water in the area varied between half a foot and 9 feet of depth based on proximity to Trail Creek. See Appendix D for the project Geotechnical Report dated June 25th, 2024.

Design Criteria

The following design criteria were used in the preparation of this report and corresponding design calculations:

- The Rational Method was used for calculating peak runoff flow.
- No freeboard on the retention ponds is to be used.
- Rainfall intensities are taken from the ITD Hydraulics Design Manual IDF curve – Zone C.
- Runoff Coefficients were taken from Idaho DEQ Catalog of Stormwater Practices.
- A Percolation Rate of 4 inches per hour was estimated based on test pit data in the geotechnical report.

Design Calculations

Drainage Basins

The project is split into 3 drainage basins. All 3 basins will have water sheet flowing to roadside swales with check dams. The swales will then convey the water to culverts, that will flow to retention ponds sized for the 100 year storm. These ponds will retain all storm water caused by improvements to the site. Existing storm water will be handled by existing drainage systems. The ponds were designed such that any overflow will flow to existing drainage systems rather than flooding. See appendix C for Sizing Calculations.

Conclusion

The proposed post development storm water management plan for Harris Creek Heights Subdivision is to convey all storm water to retention ponds through roadside swales and culverts. All storm water not retained in retention ponds will flow into existing drainage ditches per existing drainage patterns.

APPENDIX A

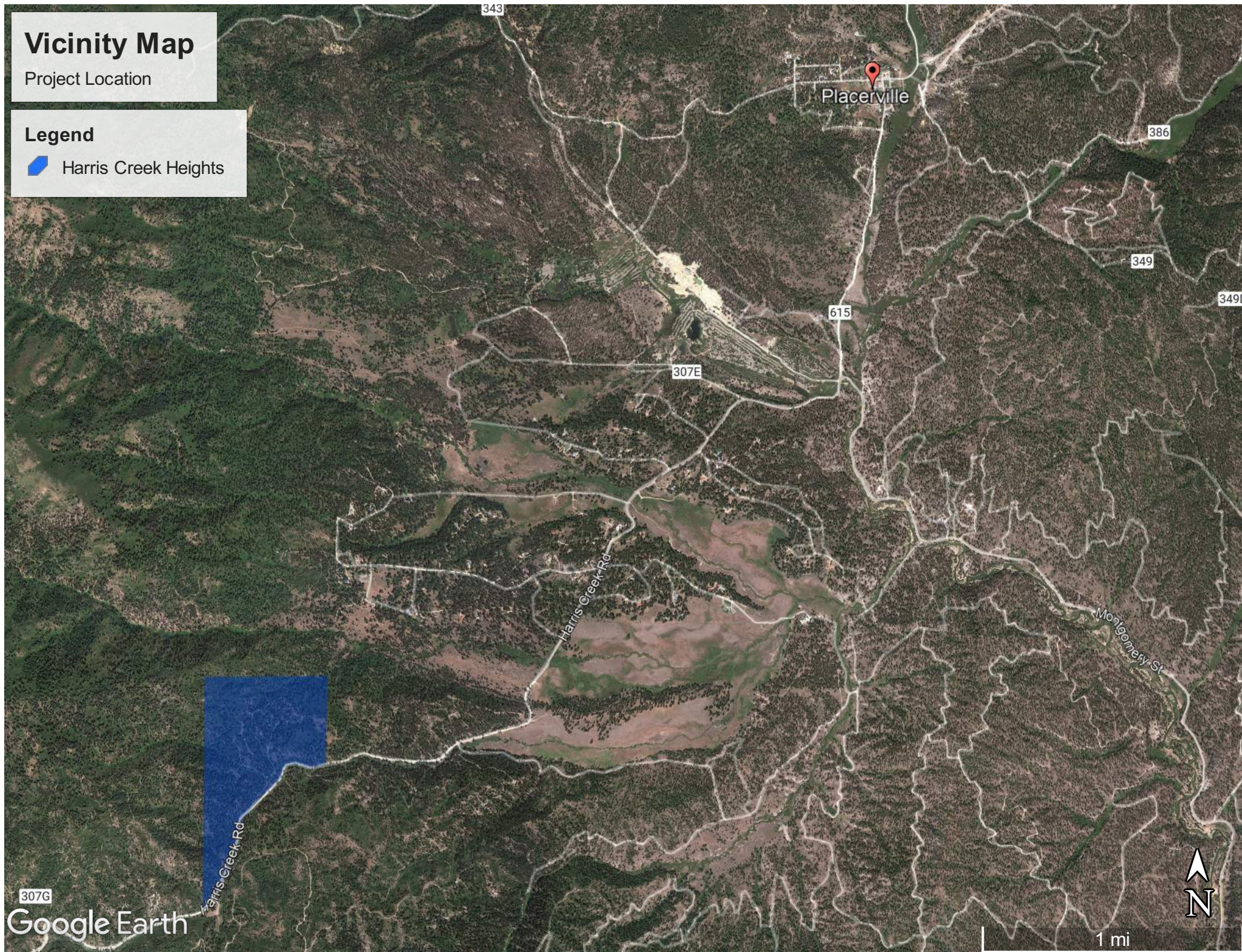
VICINITY MAP

Vicinity Map

Project Location

Legend

 Harris Creek Heights



APPENDIX B

DRAINAGE BASIN MAP





APPENDIX C

DRAINAGE CALCULATIONS

Design Criteria
$Q = C I A$
$Q_R = R * A_R$
$Q_P = (1.49 * A_P * R_h^{2/3} * S^{1/2}) / n$
$V_R = Q * \text{Duration}$
$T_P = V_R / Q_R$
$A_T = \text{Baffle Dist.} * \text{Inside Width}$
$V_{S\&G} = Q / A_T$
$R_h = D / 4$ (for full flow pipe)
$V_P = Q / A_P$

Abbreviations
A = Drainage Area (acres)
A_R = Percolation Area (sf)
C = Runoff Coefficient
I = Rainfall Intensity (in/hr)
Q = Peak Runoff (cfs)
Q_R = Percolation Flow Rate (in/hr)
r = Percolation Rate (in/hr)
S = Slope
T_P = Time to Percolate (hr)
V_R = Runoff Volume (cf)

Runoff Coefficients	
General Areas	C
Lanscaped	0.2
Asphalt/Concrete	0.9
Gravel	0.45
Gravel driveway	0.45
Roofs	0.95
Downtown	0.95
Urban Neighborhood	
Single-Family	0.5
Multi-Family	0.75
Residential (Rural)	
Apartment Dwelling	0.7
Industrial & Commercial Areas, Light	0.8
Industrial & Commercial Areas, Heavy	0.9
Parks & Cemeteries	0.2
Playgrounds	
Railroad yard	0.2
Unimproved	0.15

Storm Frequency Table						
Duration (minutes)	2-year Intensity (in/hr)	5-year Intensity (in/hr)	10-year Intensity (in/hr)	25-year Intensity (in/hr)	50-year Intensity (in/hr)	100-year Intensity (in/hr)
10	0.85	1.30	1.80	2.10	2.40	2.70
15	0.72	1.30	1.40	1.70	2.00	2.30
30	0.55	0.76	0.95	1.20	1.30	1.50
60	0.40	0.54	0.65	0.79	0.89	1.00
120	0.30	0.37	0.44	0.51	0.56	0.77
180	0.24	0.30	0.35	0.40	0.45	0.52
360	0.16	0.20	0.23	0.27	0.29	0.34
720	0.11	0.13	0.14	0.17	0.18	0.21
1440	0.07	0.08	0.09	0.10	0.12	0.13

Pond 1

Total Area (A)= 28.22 Acres
Run-off Coefficient (C)= 0.18
Historic Flow Rate= 0 cfs
Percolation Rate= 4 in/hr
Side Slope (S)= 2 :1
Free Board= 0 ft

Sand Depth= 1.5 ft
Pond Depth= 3 ft
Pond Bottom Width= 13 ft
Pond Bottom Length= 61 ft
Pond Top Width= 25.0 ft

Water Depth= 3 ft
Water Top Width= 25 ft
Water Top Length= 73 ft
Percolation Area (Ar)= 793 SF
Above Ground
Storage Volume= 3855 CF

Duration (min)	100-year Intensity (in/hr)	Area (acres)	Flow Rate Q = CIA (cfs)	Historical Flow Rate (cfs)	Perc Rate (r)(in/hr)	Perc Flow Rate (Q _p) (cfs)	Net Flow Rate (cfs)	Existing Runoff Volume (V _a) (cf)	Total Runoff Volume (V _t) (cf)	Improvement Runoff Volume (V _i) (cf)	Available Storage (cf)	Req'd Above Ground Storage (cf)	Time to Percolate (T _p) (hr)
10	2.70	28.22	13.40	0.00	4.00	0.07	13.33	6857	7997	1140	3855	-2715	4
15	2.30	28.22	11.42	0.00	4.00	0.07	11.34	8762	10209	1447	3855	-2408	5
30	1.50	28.22	7.45	0.00	4.00	0.07	7.37	11428	13270	1842	3855	-2013	7
60	1.00	28.22	4.96	0.00	4.00	0.07	4.89	15238	17605	2368	3855	-1487	9
120	0.77	28.22	3.82	0.00	4.00	0.07	3.75	23466	26991	3524	3855	-331	13
180	0.52	28.22	2.58	0.00	4.00	0.07	2.51	23771	27084	3313	3855	-542	13
360	0.34	28.22	1.69	0.00	4.00	0.07	1.61	31085	34868	3783	3855	-72	14
720	0.21	28.22	1.04	0.00	4.00	0.07	0.97	38399	41860	3460	3855	-395	13
1440	0.13	28.22	0.65	0.00	4.00	0.07	0.57	47542	49410	1867	3855	-1988	7

Design Criteria
$Q = C I A$
$Q_R = R * A_R$
$Q_P = (1.49 * A_P * R_h^{2/3} * S^{1/2}) / n$
$V_R = Q * Duration$
$T_P = V_R / Q_R$
$A_T = Baffle Dist. * Inside Width$
$V_{S&G} = Q / A_T$
$R_h = D / 4$ (for full flow pipe)
$V_P = Q / A_P$

Abbreviations
A = Drainage Area (acres)
A_R = Percolation Area (sf)
C = Runoff Coefficient
I = Rainfall Intensity (in/hr)
Q = Peak Runoff (cfs)
Q_R = Percolation Flow Rate (in/hr)
r = Percolation Rate (in/hr)
S = Slope
T_P = Time to Percolate (hr)
V_R = Runoff Volume (cf)

Runoff Coefficients
General Areas C
Lanscaped 0.2
Asphalt/Concrete 0.9
Gravel 0.45
Gravel driveway 0.45
Roofs 0.95
Downtown 0.95
Urban Neighborhood
Single-Family 0.5
Multi-Family 0.75
Residential (Rural)
Apartment Dwelling 0.7
Industrial & Commercial Areas, Light 0.8
Industrial & Commercial Areas, Heavy 0.9
Parks & Cemeteries 0.2
Playgrounds
Railroad yard 0.2
Unimproved 0.15

Storm Frequency Table						
Duration (minutes)	2-year Intensity (in/hr)	5-year Intensity (in/hr)	10-year Intensity (in/hr)	25-year Intensity (in/hr)	50-year Intensity (in/hr)	100-year Intensity (in/hr)
10	0.85	1.30	1.80	2.10	2.40	2.70
15	0.72	1.30	1.40	1.70	2.00	2.30
30	0.55	0.76	0.95	1.20	1.30	1.50
60	0.40	0.54	0.65	0.79	0.89	1.00
120	0.30	0.37	0.44	0.51	0.56	0.77
180	0.24	0.30	0.35	0.40	0.45	0.52
360	0.16	0.20	0.23	0.27	0.29	0.34
720	0.11	0.13	0.14	0.17	0.18	0.21
1440	0.07	0.08	0.09	0.10	0.12	0.13

Pond 2

Total Area (A)= 43.87 Acres
Run-off Coefficient (C)= 0.18
Historic Flow Rate= 0 cfs
Percolation Rate= 4 in/hr
Side Slope (S)= 2 :1
Free Board= 0 ft

Sand Depth= 1.5 ft
Pond Depth= 4 ft
Pond Bottom Width= 9 ft
Pond Bottom Length= 95 ft
Pond Top Width= 25.0 ft

Water Depth= 4 ft
Water Top Width= 25 ft
Water Top Length= 111 ft
Percolation Area (Ar)= 855 SF
Above Ground
Storage Volume= 7089 CF

Duration (min)	100-year Intensity (in/hr)	Area (acres)	Flow Rate Q = CIA (cfs)	Historical Flow Rate (cfs)	Perc Rate (r)(in/hr)	Perc Flow Rate (Q _p) (cfs)	Net Flow Rate (cfs)	Existing Runoff Volume (V _e) (cf)	Total Runoff Volume (V _t) (cf)	Improvement Runoff Volume (V _a) (cf)	Available Storage (cf)	Req'd Above Ground Storage (cf)	Time to Percolate (T _p) (hr)
10	2.70	43.87	20.84	0.00	4.00	0.08	20.76	10660	12454	1794	7089	-5296	6
15	2.30	43.87	17.75	0.00	4.00	0.08	17.67	13621	15903	2281	7089	-4808	8
30	1.50	43.87	11.58	0.00	4.00	0.08	11.50	17767	20693	2926	7089	-4163	10
60	1.00	43.87	7.72	0.00	4.00	0.08	7.64	23689	27496	3807	7089	-3283	13
120	0.77	43.87	5.94	0.00	4.00	0.08	5.86	36481	42212	5731	7089	-1358	20
180	0.52	43.87	4.01	0.00	4.00	0.08	3.93	36955	42483	5528	7089	-1562	19
360	0.34	43.87	2.62	0.00	4.00	0.08	2.54	48326	54962	6637	7089	-453	23
720	0.21	43.87	1.62	0.00	4.00	0.08	1.54	59696	66587	6891	7089	-199	24
1440	0.13	43.87	1.00	0.00	4.00	0.08	0.92	73910	79836	5926	7089	-1164	21

Design Criteria
$Q = C I A$
$Q_R = R * A_R$
$Q_P = (1.49 * A_P * R_h^{2/3} * S^{1/2}) / n$
$V_R = Q * \text{Duration}$
$T_P = V_R / Q_R$
$A_T = \text{Baffle Dist.} * \text{Inside Width}$
$V_{SAG} = Q / A_T$
$R_h = D / 4$ (for full flow pipe)
$V_P = Q / A_P$

Abbreviations
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Q_R = Percolation Flow Rate (in/hr)
r = Percolation Rate (in/hr)
S = Slope
T_P = Time to Percolate (hr)
V_R = Runoff Volume (cf)

Runoff Coefficients
General Areas C
Lanscaped 0.2
Asphalt/Concrete 0.9
Gravel 0.45
Gravel driveway 0.45
Roofs 0.95
Downtown 0.95
Urban Neighborhood
Single-Family 0.5
Multi-Family 0.75
Residential (Rural)
Apartment Dwelling 0.7
Industrial & Commercial Areas, Light 0.8
Industrial & Commercial Areas, Heavy 0.9
Parks & Cemeteries 0.2
Playgrounds
Railroad yard 0.2
Unimproved 0.15

Storm Frequency Table						
Duration (minutes)	2-year Intensity (in/hr)	5-year Intensity (in/hr)	10-year Intensity (in/hr)	25-year Intensity (in/hr)	50-year Intensity (in/hr)	100-year Intensity (in/hr)
10	0.85	1.30	1.80	2.10	2.40	2.70
15	0.72	1.30	1.40	1.70	2.00	2.30
30	0.55	0.76	0.95	1.20	1.30	1.50
60	0.40	0.54	0.65	0.79	0.89	1.00
120	0.30	0.37	0.44	0.51	0.56	0.77
180	0.24	0.30	0.35	0.40	0.45	0.52
360	0.16	0.20	0.23	0.27	0.29	0.34
720	0.11	0.13	0.14	0.17	0.18	0.21
1440	0.07	0.08	0.09	0.10	0.12	0.13

Pond 3

Total Area (A)= 53.76 Acres
Run-off Coefficient (C)= 0.20
Historic Flow Rate= 0 cfs
Percolation Rate= 4 in/hr
Side Slope (S)= 2 :1
Free Board= 0 ft

Sand Depth= 1.5 ft
Pond Depth= 3 ft
Pond Bottom Width= 13 ft
Pond Bottom Length= 121 ft
Pond Top Width= 25.0 ft

Water Depth= 3 ft
Water Top Width= 25 ft
Water Top Length= 133 ft
Percolation Area (Ar)= 3146 SF
Above Ground Storage Volume= 14550 CF

Duration (min)	100-year Intensity (in/hr)	Area (acres)	Flow Rate Q = CIA (cfs)	Historical Flow Rate (cfs)	Perc Rate (in/hr)	Perc Flow Rate (Q _p) (cfs)	Net Flow Rate (cfs)	Existing Runoff Volume (V _p) (cf)	Total Runoff Volume (V _a) (cf)	Runoff Volume Increase (V _a) (cf)	Available Storage (cf)	Req'd Above Ground Storage (cf)	Time to Percolate (T _p) (hr)
10	2.70	53.76	29.43	0.00	4.00	0.29	29.14	13063	17485	4422	14550	-10128	4
15	2.30	53.76	25.07	0.00	4.00	0.29	24.78	16692	22304	5612	14550	-8938	5
30	1.50	53.76	16.35	0.00	4.00	0.29	16.06	21772	28909	7137	14550	-7413	7
60	1.00	53.76	10.90	0.00	4.00	0.29	10.61	29029	38196	9167	14550	-5383	9
120	0.77	53.76	8.39	0.00	4.00	0.29	8.10	44705	58339	13635	14550	-915	13
180	0.52	53.76	5.67	0.00	4.00	0.29	5.38	45285	58076	12790	14550	-1760	12
360	0.34	53.76	3.71	0.00	4.00	0.29	3.42	59219	73767	14548	14550	-2	14
720	0.21	53.76	2.29	0.00	4.00	0.29	2.00	73153	86313	13159	14550	-1391	13
1440	0.13	53.76	1.42	0.00	4.00	0.29	1.13	90570	97275	6705	14550	-7845	6

APPENDIX D

GEOTECHNICAL REPORT

**PRELIMINARY GEOTECHNICAL EVALUATION FOR THE
“TRAIL CREEK RANCH” –
LOCATED SOUTH OF THE CITY OF PLACERVILLE
NEAR HARRIS CREEK ROAD
BOISE COUNTY, IDAHO**

Revised June 25, 2024
January 21, 2022

GTI-Project No. 2386-ID

Prepared For:

ARDURRA
332 N Broadmore Way
Nampa, Idaho 83687



GeoTek, Inc.
320 East Corporate Drive Suite 300 Meridian, ID 83642-3511
(208) 888-7010 Office (208) 888-7924 Fax www.geotekusa.com

Revised June 25, 2024
January 21, 2022
Project No. 2386-ID

ARDURRA

332 N. Broadmore Way
Nampa, Idaho 83687

Attention: Mr. Pat Colwell

Subject: **Preliminary Geotechnical Evaluation** for “Trail Creek Ranch” – Located South of the City of Placerville Near Harris Creek Road, Boise County, Idaho

In accordance with your request, GeoTek, Inc. (GTI) has completed a preliminary geotechnical evaluation of the subject property for the construction of a(n) asphalt roadway and other associated improvements for future construction of single-family residential structures.

SCOPE OF SERVICES

The scope of our services has included the following:

1. Review of soils and geologic reports and maps for the site.
2. Excavating and logging of thirty-seven (37) exploratory test pits (Appendix A).
3. Laboratory testing results (Appendix B).
4. Preparation of this draft report.

PROPOSED DEVELOPMENT

It is our understanding that site development would consist of performing typical cut and fill earthwork to attain the desired graded configuration(s) for the construction of a(n) asphalt roadway and other associated improvements for future construction of single-family residential structures.

FIELD STUDIES

Subsurface conditions at the site were explored by using a rubber-tired backhoe. Thirty-seven (37) exploratory test pits were advanced onsite. A log of each exploration is included within this report in Appendix A. Field studies were completed during November of 2021 and October of 2022 by GTI field personnel who conducted field excavation location mapping, logged the excavations, and obtained samples of representative soils for laboratory testing. The approximate locations of the explorations are indicated on the enclosed Site Exploration Plan (Figure 2). The Unified Soil Classification System (USCS) Classification was used to visually classify the subgrade soils during the field evaluation.

PRELIMINARY PAVEMENT SECTIONS

Pavement sections presented in the following table are based on an estimated R-value of 15 and pre-assigned traffic index(s) for residential construction and estimated traffic index(s) for commercial construction. These pavement sections are presented for planning purposes only and should be verified based on specific laboratory testing performed subsequent to rough grading of the site.

Pavement Construction and Maintenance

All section changes should be properly transitioned. If adverse conditions are encountered during the preparation of subgrade materials, special construction methods may need to be employed. All subgrade materials should be processed to a minimum depth of 12 inches and compacted to a minimum relative compaction of 90 percent near optimum moisture content. All aggregate base should be compacted to a minimum relative compaction of 95 percent at optimum moisture content.

ASSUMED TRAFFIC RIGHT-OF-AWAY	SUBGRADE R-VALUE	MINIMUM ASPHALT CONCRETE THICKNESS (in.)	MINIMUM AGGREGATE THICKNESS (in.)	
			Aggregate Base (3/4" minus)*	Subbase (Pitrun)*
Residential Normal Traffic TI = 6.0	15	2.5	4.0	11.0
Collector Normal Traffic TI = 8.0	15	3.0	6.0	14.0

*Aggregate Base and Subbase gradation specification requirement per the current edition of the Idaho Standards for Public Works Construction (ISPWC) Manual. Asphalt mix design shall meet the requirements of ISPWC, Section 810 Class III Plant mix. Materials shall be placed in accordance with ISPWC Standard Specifications for Highway Construction.

The recommended pavement sections provided are meant as minimums. If thinner or highly variable pavement sections are constructed, increased maintenance and repair should be expected. If the ADT (average daily traffic) or ADTT (average daily truck traffic) increases beyond that intended, as reflected by the traffic index(s) used for design, increased maintenance and repair could be required for the pavement section. Positive site drainage should be maintained at all times. Water should not be allowed to pond or seep into the ground. If planters or landscaping are adjacent to paved areas, measures should be taken to minimize the potential for water to enter the pavement section.

PLAN REVIEW

Final grading, foundation, and improvement plans should be submitted to this office for review and comment as they become available, to minimize any misunderstandings between the plans and recommendations presented herein. In addition, foundation excavations and earthwork construction performed on the site should be observed and tested by this office. If conditions are found to differ substantially from those stated, appropriate recommendations would be offered at that time.

LIMITATIONS

The materials encountered on the project site and utilized in our laboratory study are believed representative of the area; however, soil materials vary in character between excavations and conditions exposed during mass grading. Site conditions may vary due to seasonal changes or other factors. GeoTek, Inc. assumes no responsibility or liability for work, testing, or recommendations performed or provided by others. Since our study is based upon the site materials observed, selective laboratory testing and engineering analysis, the conclusions and recommendations are professional opinions. These opinions have been derived in accordance with current standards of practice and no warranty is expressed or implied. Standards of practice are subject to change with time.

The opportunity to be of service is greatly appreciated. If you have any questions concerning this report or if we may be of further assistance, please do not hesitate to contact the undersigned.

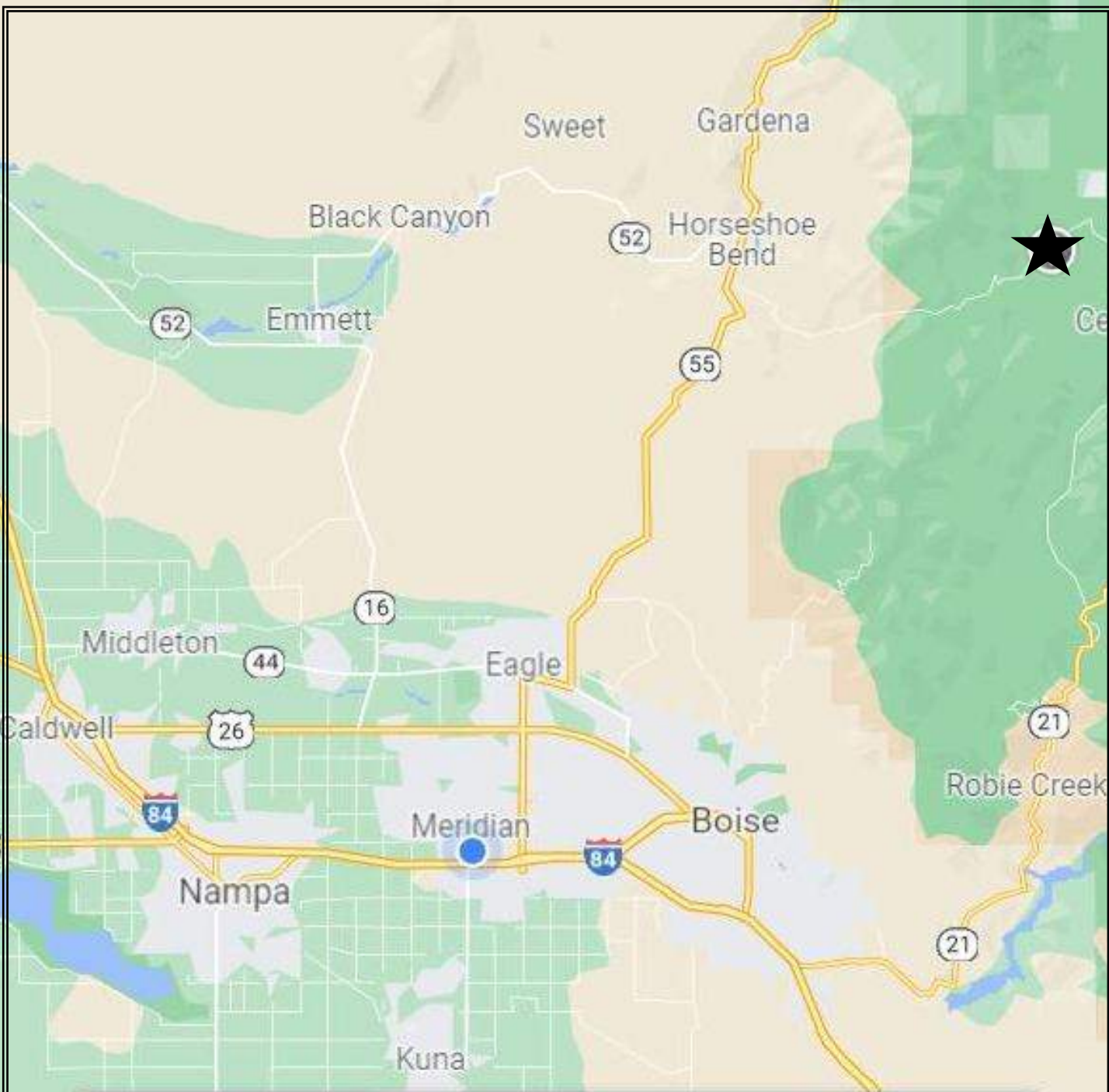
Respectfully submitted,
GeoTek, Inc.



Kyle C. Miley, PE
Staff Professional



David C. Waite, PE
Branch Manager - Senior Engineer



★ **APPROXIMATE SITE LOCATION**



Source: Google Maps, 2022. GeoTek Field Observations, 2021 and 2022.
Not to Scale



GEOTECHNICAL | ENVIRONMENTAL | MATERIALS

320 E. Corporate Dr, Suite 300, Meridian, ID 83642
(208) 888-7010 (phone) / (208) 888-7924 (FAX)

FIGURE I
SITE VICINITY MAP
Trail Creek
Near Harris Creek Road
Placerville, Idaho
Prepared for: ARDURRA

Project No.:

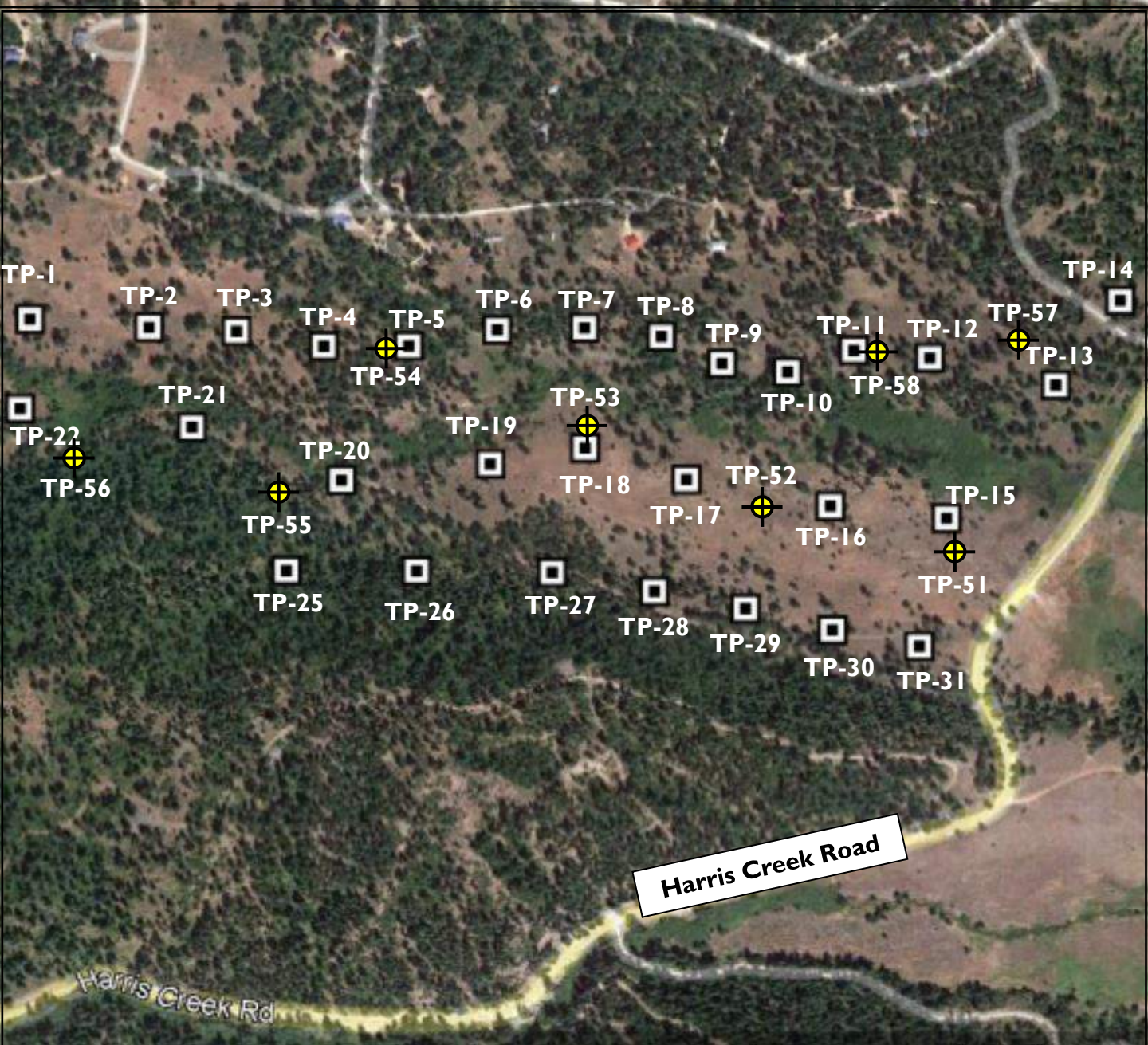
2386-ID

Report Date:

June 2024

Drawn By:

KCM



APPROXIMATE ADDITIONAL TEST PIT LOCATIONS



Source: Google Earth, 2022. GeoTek Field Observations, 2021 and 2022.
Not to Scale



GEOTECHNICAL | ENVIRONMENTAL | MATERIALS

320 E. Corporate Dr, Suite 300, Meridian, ID 83642
(208) 888-7010 (phone) / (208) 888-7924 (FAX)

FIGURE 2
SITE EXPLORATION PLAN
Trail Creek
Near Harris Creek Road
Placerville, Idaho
Prepared for: ARDURRA

Project No.:

2386-ID

Report Date:

June 2024

Drawn By:

KCM

APPENDIX A

LOG GENERAL NOTES

CONSISTENCY OF FINE-GRAINED SOILS		
Unconfined Compressive Strength, Q_u , psf	Standard Penetration or N-Value (SS) Blows/Ft	Consistency
< 500	<2	Very Soft
500 - 1,000	2 - 3	Soft
1,001 - 2,000	4 - 7	Firm
2,001 - 4,000	8 - 16	Stiff
4,001 - 8,000	17 - 32	Very Stiff
> 8,001	32+	Hard

RELATIVE DENSITY OF COARSE-GRAINED SOILS	
Standard Penetration (SPT) or N-Value (SS) Blows/Ft	Relative Density
0 - 3	Very Loose
4 - 9	Loose
10 - 29	Medium Dense
30 - 49	Dense
50+	Very Dense

SPT penetration test using 140 pound hammer, with 30 inch free fall on 2 inch outside diameter(1-3/8 ID) sampler

For ring sampler using 140 lb hammer, with a 30 inch free fall on 3 inch outside diameter (2-1/2 ID) sample,

use N-value x 0.7 to get Standard N-value

For fine grained soil consistency, thumb penetration used per ASTM D-2488

RELATIVE PROPORTIONS OF SAND & GRAVEL	
Descriptive Term of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY	
Major Component of Sample	Particle Size
Boulders	Over 12 inches
Cobbles	3 inches to 12 inches
Gravel	#4 Sieve to 3 inches
Sand	#200 Sieve to #4 Sieve
Silt or Clay	Passing #200 Sieve

RELATIVE HARDNESS OF CEMENTED SOILS (CALICHE)	
Description	General Characteristics
Very Dense to Moderately Hard	Partially Cemented Granular Soil - Can be carved with a knife and broken with force by hand.
Very Stiff to Moderately Hard	Partially Cemented Fine-Grained Soil - Can be carved with a knife and broken with force by hand.
Moderately Hard	Moderate hammer blow required to break a sample
Hard	Heavy hammer blow required to break a sample
Very Hard	Repeated heavy hammer blow required to break a sample

LOG LEGEND

MATERIAL DESCRIPTION		
Soil Pattern	USCS Symbol	USCS Classification
	FILL	Artificial Fill
	GP or GW	Poorly/Well graded GRAVEL
	GM	Silty GRAVEL
	GC	Clayey GRAVEL
	GP-GM or GW-GM	Poorly/Well graded GRAVEL with Silt
	GP-GC or GW-GC	Poorly/Well graded GRAVEL with Clay
	SP or SW	Poorly/Well graded SAND
	SM	Silty SAND
	SC	Clayey SAND
	SP-SM or SW-SM	Poorly/Well graded SAND with Silt
	SP-SC or SW-SC	Poorly/Well graded SAND with Clay
	SC-SM	Silty Clayey SAND
	ML	SILT
	MH	Elastic SILT
	CL-ML	Silty CLAY
	CL	Lean CLAY
	CH	Fat CLAY
	PCEM	PARTIALLY CEMENTED
	CEM	CEMENTED
	BDR	BEDROCK

SAMPLING	
	SPT
	Ring Sample
	No Recovery
	Bulk Sample
	Water Table

CONSISTENCY					
Cohesionless Soils		Cohesive Soils		Cementation	
VL	Very Loose	So	Soft	MH	Moderately Hard
L	Loose	F	Firm	H	Hard
MD	Medium Dense	S	Stiff	VH	Very Hard
D	Dense	VS	Very Stiff		
VD	Very Dense				

**GEOTEK**

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-1	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown to Dk. Brown, Sandy SILT, Slightly Moist to Moist	So	USDA Soil Class: B-I
2				SM	Brown, Silty SAND with Gravel, Slightly Moist to Moist	L	USDA Soil Class: B-I
3				GP-GM	Lt. Brown, Poorly graded GRAVEL with Silt, Slightly Moist to Moist -Large Boulders Throughout	MD	USDA Soil Class: B-I
4							
5							
6							
7							
8					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-2	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown, SILT with Sand, Slightly Moist to Moist	So	USDA Soil Class: B-1
2				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to Moist -Several Boulders Throughout	MD	USDA Soil Class: B-2
3							
4					-Light Cementation		
5							
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-3	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown, Sandy SILT, Slightly Moist to Moist	So	USDA Soil Class: B-1
2				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
3				SP-SM	Orangish-Brown Poorly graded SAND with Silt, Trace Gravel, Slightly Moist to Moist	MD	USDA Soil Class: A-1
4				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
5							
6							
7							
8							
9					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-4	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown to Dk. Brown, Sandy SILT, Slightly Moist to Moist	So	USDA Soil Class: B-I Roots to Approx. 4.0'
2						F	
3				GP-GM	Tan to Lt. Brown, Poorly graded GRAVEL with Silt and Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-I
4							
5							
6							
7							
8					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-5	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown, Sandy SILT, Slightly Moist to Moist	So	USDA Soil Class: B-I
2				SM	Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-I
3				GP-GM	Tan to Lt. Brown, Poorly graded GRAVEL with Silt and Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-I
4							
5							
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-6	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown to Dk. Brown, Sandy SILT, Slightly Moist to Moist	So	USDA Soil Class: B-I
2						F	
3							
4							
5				SM	Tan to Lt. Brown, Silty SAND with Gravel, Slightly Moist to Moist	MD	USDA Soil Class: B-I
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-7	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown to Dk. Brown, SILT with Sand, Slightly Moist to Moist	So	USDA Soil Class: B-I
2				SM	Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-I
3							
4							Thin Layer of Partially Cemented Sands/Gravels
5				SP-SM	Brown, Poorly graded SAND with Silt, Trace Gravel, Slightly Moist	MD	USDA Soil Class: A-I
6							
7							
8					END OF TEST PIT @ 8.0'		
9					NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-8	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown to Dk. Brown, Sandy SILT, Slightly Moist to Moist	So	USDA Soil Class: B-1
2				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
3							
4							
5							
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-9	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown to Dk. Brown, Sandy SILT, Slightly Moist to Moist	So	USDA Soil Class: B-I
2				SM	Tan to Lt. Brown, Silty SAND with Gravel, Slightly Moist to Moist	MD	USDA Soil Class: B-I
3							
4							
5							
6							No Gravel
7							
8					END OF TEST PIT @ 8.0'		
9					NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-10	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown, SILT with Sand, Slightly Moist to Moist	So	USDA Soil Class: B-1
2				SP-SM	Tan to Lt. Brown, Poorly graded SAND with Silt and Gravel, Slightly Moist to Moist	MD	USDA Soil Class: A-1
3							
4				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
5							
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-11	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown to Dk. Brown, Sandy SILT, Slightly Moist to Moist	So	USDA Soil Class: B-1
2				SP-SM	Orangeish-Tan, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	USDA Soil Class: A-1
3							
4							
5				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-12	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown to Dk. Brown, Sandy SILT, Slightly Moist to Moist	So	USDA Soil Class: B-1
2				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
3							
4							
5							Boulders
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-13	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SM	Brown, Silty SAND, Slightly Moist to Moist	L	USDA Soil Class: B-1
2				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
3							
4							
5							
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					GROUNDWATER ENCOUNTERED AT 7.5'		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-14	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				CL	Dk. Brown, Lean CLAY with Sand, Slightly Moist	So	USDA Soil Class: N/A (Clay)
2				SM	Tan, Silty SAND, Trace Gravel, Slightly Moist to Moist	MD	USDA Soil Class: B-I
3							
4							
5							
6				SM	Lt. Brown, Silty SAND with Gravel, Slightly Moist to Moist		USDA Soil Class: B-I
7							
8					END OF TEST PIT @ 8.0'		
9					NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-15	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	L	USDA Soil Class: B-2
2						MD	
3				SM	Tan to Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-1
4							
5							
6							
7				SP-SM	Lt. Brown to Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	USDA Soil Class: A-1
8					END OF TEST PIT @ 8.0'		
9					NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-16	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	L	USDA Soil Class: B-2
2						MD	
3				SM	Tan to Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-1
4							
5							
6				GP-GM	Tan to Lt. Brown, Poorly graded GRAVEL with Silt and Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-1
7							
8					END OF TEST PIT @ 8.0'		
9					NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

**GEOTEK**

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-17	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	L	USDA Soil Class: B-2
2				SM	Tan to Lt. Brown, Silty SAND with Gravel, Slightly Moist to Moist	MD	USDA Soil Class: B-1
3				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
4							
5				SP-SM	Tan to Lt. Brown, Poorly graded SAND with Silt and Gravel, Slightly Moist	MD	USDA Soil Class: A-1 Cobbles
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-18	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown, Clayey SAND, Slightly Moist to Moist	L	USDA Soil Class: B-2
2				SM	Lt. Brown to Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-1
3							
4				GP-GM	Tan to Lt. Brown, Poorly graded GRAVEL with Silt and Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-1
5							
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-19	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	L	USDA Soil Class: B-2
2				GM	Lt. Brown to Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
3							Large Boulders Throughout
4							
5							
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-20	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	L	USDA Soil Class: B-2
2				GM	Lt. Brown to Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
3							
4							
5							
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-21	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	L	USDA Soil Class: B-2
2				GM	Lt. Brown to Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
3							
4							
5							
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-22	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				CL	Dk. Brown to Black, Sandy Lean CLAY, Slightly Moist to Moist	So	USDA Soil Class: N/A (Clay)
2				CL	Brown, Lean CLAY with Sand, Slightly Moist to Moist	F	USDA Soil Class: N/A (Clay)
3							
4							
5				SP-SM	Tan to Lt. Brown, Poorly graded SAND with Silt, Slightly Moist to Moist		USDA Soil Class: A-I
6							
7				SP-SM	Lt. Gray to Gray, Poorly graded SAND with Silt, Slightly Moist to Moist		USDA Soil Class: A-I
8					END OF TEST PIT @ 8.0'		
9					NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-25	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil Class: B-2
2				ML	Lt. Brown to Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-I
3				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-I
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		

**GEOTEK**

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-26	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil Class: B-2
2				ML	Lt. Brown to Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-I
3				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-I
4							
5							
6							
7							
8					END OF TEST PIT @ 7.0' NO GROUNDWATER ENCOUNTERED		
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-27	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil Class: B-2
2				ML	Lt. Brown to Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-I
3				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-I
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-28	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil Class: B-2
				ML	Lt. Brown to Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-I
2							
3							
4				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-I
5				PCEM	Lt. Brown to Brown, PARTIALLY CEMENTED, Slightly Moist to Moist	MH	USDA Soil Class: N/A
6							
7							
8							
9					END OF TEST PIT @ 8.0'		
10					NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-29	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil Class: B-2
2				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-1
3							
4							
5							
6							
7							
8							Light Cementation
9					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-30	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil Class: B-2
				ML	Lt. Brown to Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-I
2				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-I
3							
4							
5							
6							
7				PCEM	Lt. Brown, PARTIALLY CEMENTED, Slightly Moist to Moist	MH	USDA Soil Class: N/A
8					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



GEOTEK

TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 11/9/21
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-31	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil Class: B-2
2				SM	Tan to Lt. Brown, Silty SAND, Slightly Moist to Moist	F	USDA Soil Class: B-1
3							
4							
5							
6				SP-SM	Tan to Lt. Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	USDA Soil Class: A-1
7					END OF TEST PIT @ 7.0'		
8					NO GROUNDWATER ENCOUNTERED		
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 10/3/22
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-51	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown, SILT, Slightly Moist to Moist	F	USDA Soil Class: B-I
2				SM	Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-I
3				SP-SM	Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	USDA Soil Class: B-I
4				SM	Brown, Silty SAND with Gravel, Slightly Moist to Moist	MD	USDA Soil Class: B-I
5							
6							
7				GP-GC	Brown, Poorly graded GRAVEL with Clay, Moist	MD	USDA Soil Class: B-2
8					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 10/3/22
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-52	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SM	Lt. Brown to Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-I Organics Top 1.5'
2				GP	Lt. Brown, Poorly graded GRAVEL, Slightly Moist to Moist	MD	USDA Soil Class: B-I
3							
4				SP-SM	Lt. Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	USDA Soil Class: B-I
5							
6							
7				SP-SC	Lt. Brown, Poorly graded SAND with Clay, Moist	MD	USDA Soil Class: B-2
8					END OF TEST PIT @ 7.5' NO GROUNDWATER ENCOUNTERED		
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 10/3/22
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-53	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				GM	Brown, Silty GRAVEL wuth Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-I
2				SC	Lt. Brown, Clayey SAND with Gravel, Slightly Moist to Moist	F	USDA Soil Class B-I (2.0'-3.0')
3							USDA Soil Class: C-I (3.0'-6.0')
4							
5							
6				GP-GM	Brown, Poorly graded GRAVEL with Silt, Moist	MD	USDA Soil Class: B-I
7							
8					END OF TEST PIT @ 8.0'		
9					NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 10/3/22
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-54	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown, SILT, Slightly Moist to Moist	F	USDA Soil Class: B-2
2							
3				GP	Lt. Brown to Brown, Poorly graded GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-1
4							
5							
6							
7							
8							
9							
10					END OF TEST PIT @ 9.0'		
11					NO GROUNDWATER ENCOUNTERED		
12							
13							
14							
15							
16							
17							
18							
19							
20							



TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 10/3/22
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-55	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown, SILT, Slightly Moist to Moist	F	USDA Soil Class: B-2
2							
3				ML	Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-2
4	X						
5							
6				SP-SM	Lt. Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	USDA Soil Class: B-1
7							
8				ML	Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-2
9					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 10/3/22
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-56	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-2
2				ML	Lt. Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-2
3							
4							
5							Roots to 5.0'
6	X			CL	Brown, Sandy Lean CLAY, Slightly Moist to Moist	F	USDA Soil Class: Unsuitable
7							
8					END OF TEST PIT @ 7.5' NO GROUNDWATER ENCOUNTERED		
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 10/3/22
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-57	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown, SILT, Slightly Moist to Moist	F	USDA Soil Class: B-2
2							
3							
4							
5				SP-SM	Orangish-Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	USDA Soil Class: B-1
6							
7							
8							
9					END OF TEST PIT @ 8.5' NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



TEST PIT LOG

PROJECT #: 2386-ID
PROJECT: Trail Creek
CLIENT: TO Engineers
LOCATION: Placerville, Idaho

LOGGED BY: KCM
METHOD: Backhoe
EXCAVATOR:
DATE: 10/3/22
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-58	Consistency	REMARKS
	Sample Type	Blows / 6 in.			MATERIAL DESCRIPTION AND COMMENTS		
1				ML	Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-2
2							
3				SP-SM	Orangish-Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	USDA Soil Class: B-1
4							
5							
6							
7							
8					END OF TEST PIT @ 7.0'		
9					NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

APPENDIX B

GeoTek - Idaho

320 Corporate Drive, Ste #300 7950 Meadowlark Way, Ste E
 Meridian, ID 83642 Coeur d'Alene, ID 83815
 Phone: (208) 888-7010 (208) 888-7924
 Fax: (208) 904-2980 (208) 904-2981

**Report No: MAT:21-00995-S01**

Material Test Report

Client: T-O Engineers
 332 N Broadmore Way
 Nampa ID 83687

CC:

Project: 2386-ID
 Trail Creek Subdivision

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

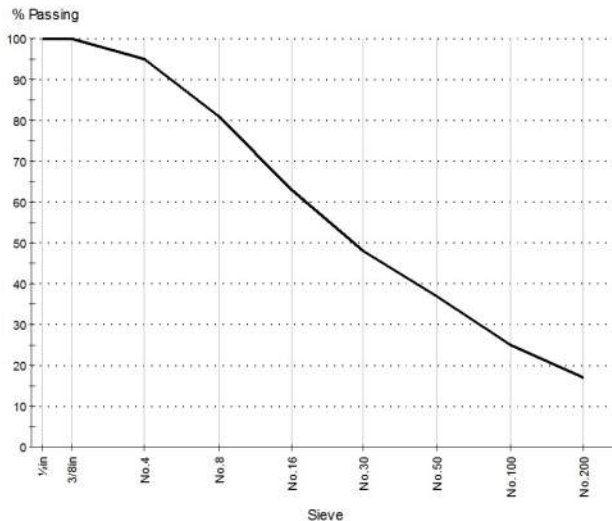
Sample ID 21-00995-S01
Date Sampled 11/9/2021
Specification General Sieve Set
Location TP-16, 3.0'-4.0'

Sample Description:

SM, Silty sand

Atterberg Limit:

Liquid Limit: N/A
Plastic Limit: NP
Plasticity Index: NP

Grading: ASTM C 136, ASTM C 117**Particle Size Distribution****Date Tested:****Tested By:**

Sieve Size	% Passing	Limits
1/2 in	100	
3/8 in	100	
No. 4	95	
No. 8	81	
No. 16	63	
No. 30	48	
No. 50	37	
No. 100	25	
No. 200	17	

COBBLES	GRAVEL		SAND			FINES (17.1%)	
(0.0%)	Coarse (0.0%)	Fine (5.0%)	Coarse (18.0%)	Medium (34.6%)	Fine (25.4%)	Silt	Clay

D85: 2.8821 **D60:** 1.0307 **D50:** 0.6566
D30: 0.2002 **D15:** N/A **D10:** N/A

GeoTek - Idaho

320 Corporate Drive, Ste #300 7950 Meadowlark Way, Ste E
Meridian, ID 83642 Coeur d'Alene, ID 83815
Phone: (208) 888-7010 (208) 888-7924
Fax: (208) 904-2980 (208) 904-2981

**Report No: MAT:21-00995-S01**

Material Test Report

Client: T-O Engineers
332 N Broadmore Way
Nampa ID 83687

CC:

Project: 2386-ID
Trail Creek Subdivision

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample ID 21-00995-S01
Date Sampled 11/9/2021
Specification General Sieve Set
Location TP-16, 3.0'-4.0'

Other Test Results

Description	Method	Result	Limits
Group Symbol	ASTM D 2487	SM	
Group Name		Silty sand	
Approximate maximum grain size	ASTM D 4318		
Material retained on 425µm (No. 40) (%)			
Method of Removal			
Grooving Tool Type			
Specimen preparation method			
Drying Method			
Special selection process			
Rolling Method for PL		Hand	
As Received Water Content (%)			
Liquid Limit Device Type		Manual	
Liquid Limit		N/A	
Plastic Limit		NP	
Plasticity Index		NP	
Liquid Limit Procedure		Multipoint (A)	

Comments

N/A

GeoTek - Idaho

320 Corporate Drive, Ste #300 Meridian, ID 83642
 Phone: (208) 888-7010 Fax: (208) 904-2980

7950 Meadowlark Way, Ste E
 Coeur d'Alene, ID 83815
 (208) 888-7924
 (208) 904-2981

**Report No: MAT:21-00995-S02**

Material Test Report

Client: T-O Engineers
 332 N Broadmore Way
 Nampa ID 83687

CC:

Project: 2386-ID
 Trail Creek Subdivision

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

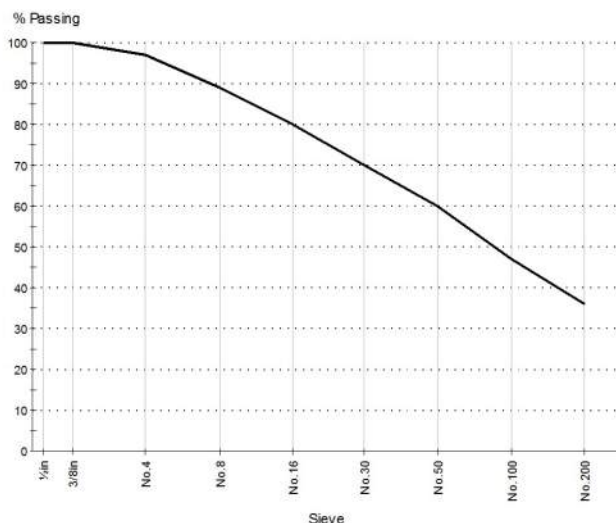
Sample ID 21-00995-S02
Date Sampled 11/9/2021
Specification General Sieve Set
Location TP-31, 3.0'-4.0'

Sample Description:

SM, Silty sand

Atterberg Limit:

Liquid Limit: N/A
Plastic Limit: NP
Plasticity Index: NP

Grading: ASTM C 136, ASTM C 117**Particle Size Distribution****Date Tested:****Tested By:**

Sieve Size	% Passing	Limits
1/2 in	100	
3/8 in	100	
No. 4	97	
No. 8	89	
No. 16	80	
No. 30	70	
No. 50	60	
No. 100	47	
No. 200	36	

COBBLES	GRAVEL		SAND			FINES (36.0%)	
(0.0%)	Coarse (0.0%)	Fine (2.9%)	Coarse (10.0%)	Medium (22.1%)	Fine (28.9%)	Silt	Clay

D85: 1.7343 **D60:** 0.3000 **D50:** 0.1760
D30: N/A **D15:** N/A **D10:** N/A

GeoTek - Idaho

320 Corporate Drive, Ste #300 7950 Meadowlark Way, Ste E
Meridian, ID 83642 Coeur d'Alene, ID 83815
Phone: (208) 888-7010 (208) 888-7924
Fax: (208) 904-2980 (208) 904-2981

**Report No: MAT:21-00995-S02**

Material Test Report

Client: T-O Engineers
332 N Broadmore Way
Nampa ID 83687

CC:

Project: 2386-ID
Trail Creek Subdivision

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample ID 21-00995-S02
Date Sampled 11/9/2021
Specification General Sieve Set
Location TP-31, 3.0'-4.0'

Other Test Results

Description	Method	Result	Limits
Group Symbol	ASTM D 2487	SM	
Group Name		Silty sand	
Approximate maximum grain size	ASTM D 4318		
Material retained on 425µm (No. 40) (%)			
Method of Removal			
Grooving Tool Type			
Specimen preparation method			
Drying Method			
Special selection process			
Rolling Method for PL		Hand	
As Received Water Content (%)			
Liquid Limit Device Type		Manual	
Liquid Limit		N/A	
Plastic Limit		NP	
Plasticity Index		NP	
Liquid Limit Procedure		Multipoint (A)	

Comments

N/A

GeoTek - Idaho

320 Corporate Drive, Ste #300 7950 Meadowlark Way, Ste E
 Meridian, ID 83642 Coeur d'Alene, ID 83815
 Phone: (208) 888-7010 (208) 888-7924
 Fax: (208) 904-2980 (208) 904-2981

**Report No: MAT:21-00995-S03**

Material Test Report

Client: T-O Engineers
 332 N Broadmore Way
 Nampa ID 83687

CC:

Project: 2386-ID
 Trail Creek Subdivision

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

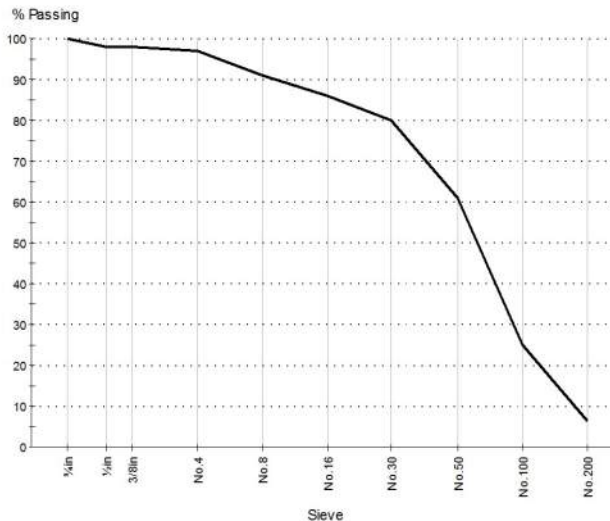
Sample ID 21-00995-S03
Date Sampled 11/9/2021
Specification General Sieve Set
Location TP-22, 7.0'-8.0'

Sample Description:

SP-SM, Poorly graded sand with silt

Atterberg Limit:

Liquid Limit: N/A
Plastic Limit: NP
Plasticity Index: NP

Grading: ASTM C 136, ASTM C 117**Particle Size Distribution****Date Tested:****Tested By:**

Sieve Size	% Passing	Limits
3/4in	100	
1/2in	98	
3/8in	98	
No.4	97	
No.8	91	
No.16	86	
No.30	80	
No.50	61	
No.100	25	
No.200	6.3	

COBBLES	GRAVEL		SAND			FINES (6.3%)	
(0.0%)	Coarse (0.0%)	Fine (3.1%)	Coarse (6.8%)	Medium (19.5%)	Fine (64.4%)	Silt	Clay

D85: 1.0542 **D60:** 0.2943 **D50:** 0.2427
D30: 0.1652 **D15:** 0.1035 **D10:** 0.0860
Cu: 3.42 **Cc:** 1.08

GeoTek - Idaho

320 Corporate Drive, Ste #300 7950 Meadowlark Way, Ste E
Meridian, ID 83642 Coeur d'Alene, ID 83815
Phone: (208) 888-7010 (208) 888-7924
Fax: (208) 904-2980 (208) 904-2981

**Report No: MAT:21-00995-S03**

Material Test Report

Client: T-O Engineers
332 N Broadmore Way
Nampa ID 83687

CC:

Project: 2386-ID
Trail Creek Subdivision

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample ID 21-00995-S03
Date Sampled 11/9/2021
Specification General Sieve Set
Location TP-22, 7.0'-8.0'

Other Test Results

Description	Method	Result	Limits
Group Symbol	ASTM D 2487	SP-SM	
Group Name		Poorly graded sand with silt	
Approximate maximum grain size	ASTM D 4318		
Material retained on 425µm (No. 40) (%)			
Method of Removal			
Grooving Tool Type			
Specimen preparation method			
Drying Method			
Special selection process			
Rolling Method for PL		Hand	
As Received Water Content (%)			
Liquid Limit Device Type		Manual	
Liquid Limit		N/A	
Plastic Limit		NP	
Plasticity Index		NP	
Liquid Limit Procedure		Multipoint (A)	

Comments

N/A