ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, CO 80907
PHONE (719) 531-5599

October 28, 2022
Revised Novemeber 3, 2023

Doug Hill
13985 Silverton Road
Colorado Springs, CO 80921

Re: Soil, Geology, and Geologic Hazard Study
Hill Subdivision
Parcel Nos. 51290-04-018 and 51290-09-002
Alpaca Heights and Black Forest Road
El Paso County, Colorado
Entech Job No. 221947

Dear Mr. Hill:

The project consists of subdividing 16.49-acres; four rural residential lots are proposed as part of the subdivision. An existing home on Lot 1 will remain, and two new lots are proposed. The site is located southeast of the intersection of Hodgen Road and Black Forest Road, in El Paso County. The Black Forest Road right-of-way the for future road realignment is located in the western portion of the site between Lot 1 and Tract A.

GENERAL SITE CONDITIONS AND PROJECT DESCRIPTION

The site is located in a portion of the NW¼ of Section 29 Township 11 South, Range 65 West of the 6th Principal Meridian in El Paso County, Colorado. The site is located approximately 7 miles east of the town of Monument, southeast of the intersection of Hodgen Road and Black Forest Road, in El Paso County, Colorado. The location of the site is as shown on the Vicinity Map, Figure 1.

The topography of the site is gradually sloping to the northeast for Lots 1 through 3 and gradually sloping to the west on Tract A. A minor drainage swale is located in the northeastern portion of the property on Lot 2. Water was not observed in the drainage at the time of this investigation. The site boundaries are indicated on the USGS Map, Figure 2. Previous land uses have included undeveloped agricultural and rural residential. The site contains field grasses, weeds, and ponderosa pines. The existing house with a water well and septic system located on Lot 1, will remain. Site photographs were taken and site mapping was completed on was September 21 and 28, 2022. Site photographs are included in appendix A. Test Borings and Test Pits were performed on September 28 and 29, 2022.

Total acreage involved in the proposed subdivision is 16.49-acres. Three rural residential lots are proposed. The proposed lot sizes range from 4.8-acres to 5.0-acres. The existing house and barns located on Lot 1 will remain. The new lots will be serviced by individual wells and on-site wastewater treatment systems. The Site Plan is presented in Figure 3.

LAND USE AND ENGINEERING GEOLOGY

This site was found to be suitable for the proposed development. Areas were encountered where the geologic conditions will impose some constraints on development and land use. These include areas of artificial fill, potentially expansive soils, potentially seasonal shallow groundwater. Based on the proposed development plan, it appears that these areas will have minor impacts on the development. These conditions will be discussed in greater detail in the report.

In general, it is our opinion that the development can be achieved if the observed geologic conditions on site are either avoided or properly mitigated. All recommendations are subject to the limitations discussed in the report.

SCOPE OF THE REPORT

A general geologic analysis utilizing published geologic data. Detailed site-specific mapping will be conducted to obtain general information in respect to major geographic and geologic features, geologic descriptions and their effects on the development of the property.

FIELD INVESTIGATION

Our field investigation consisted of the preparation of a geologic map of bedrock features and significant surficial deposits. The Natural Resource Conservation Service (NRCS), previously the Soil Conservation Service (SCS) survey was also reviewed to evaluate the site. The position of mappable units within the subject property are shown on the Geologic Map. Our mapping procedures involved both field reconnaissance and measurements, and aerial photo reconnaissance and interpretation. The same mapping procedures have also been utilized to produce the Geology/Engineering Geology Map which identified pertinent geologic conditions affecting development. The field mapping was performed by personnel of Entech Engineering, Inc. on September 21, 2022.

Three test borings were drilled, and two test pits were excavated on the site to determine general suitability of the soil characteristics for residential construction. The locations of the test borings/pits are indicated on the Site Plan/Test Boring Location Map, Figure 3. The Test Boring and Test Pit Logs are presented in Appendix B. Results of this testing will be discussed later in this report.

Laboratory testing was also performed on some of the soils to classify and determine the soils engineering characteristics. Laboratory tests included grain-size analysis, ASTM D-422. Results of the laboratory testing are included in Appendix C.

SOIL AND GEOLOGIC CONDITIONS

Soil Survey

The Natural Resource Conservation Service (NRCS) (Reference 1, Figure 4), previously the Soil Conservation Service (Reference 2) has mapped one soil type on the site. Complete descriptions of the soil type are presented in Appendix D. In general, the soils consist of sandy loam to loam. The soils are described as follows:

Type	Description
15	Brussett Loam, 3 – 5% Slopes
68	Peyton-Pring Complex, 3 – 8% Slopes

The soils have been described to have rapid permeabilities. The soils are described as well suited for use as home sites. Possible hazards with soils erosion are present on the site. The erosion potential can be controlled with vegetation. The soils have been described to have moderate erosion hazards (Reference 2).

Soils

The soils encountered in the Test Borings and Test Pits can be grouped into three general soil and rock types. The soils were classified using the Unified Soil Classification System (USCS). The test pit soils were also classified using the USDA Textural Soil Classification.

Soil Type 1 is a slightly silty to silty sand (SM-SW, SM). The sand soils were encountered in all of the test borings at depths ranging from the existing surface grade to 3 feet, and extending to a depth of 12 feet in Test Boring No. 1 or to the termination of Test Boring Nos. 2 and 3 (20 feet). These soils were encountered at medium dense to dense states and at dry to moist conditions. Samples tested had approximately 8 percent of the soil size particles passing the No. 200 Sieve. Atterberg Limits Testing resulted in a liquid limit of 19 and a plastic index of 2.

Soil Type 2 is a sandy clay to very sandy clay (CL). The clay soils were encountered in Test Boring No. 3, and in Test Pit Nos. 1 and 2. The clays were encountered at the existing ground surface and extended to depths of 3 feet bgs in Test Boring No. 3, and to the termination of the test pits (6 to 8 feet). The clay was encountered at firm to stiff consistencies and dry to moist conditions. The samples tested had 57 to 77 percent of the soil size particles passing the No. 200 sieve. Expansion pressure of 580 psf was determined by laboratory tests on samples of the clay soils. This magnitude of expansion is in the low expansion range.

Soil Type 3 is a silty sandstone (SM). The sandstone was encountered in Test Boring No. 1 at an approximate depth of 12 feet bgs and extended to the termination of the boring (20 feet). The sandstone was encountered at dense states and moist conditions. The sandstone had approximately 60 percent of the soil sized particles passing the No. 200 sieve. Atterberg Limits Testing resulted in liquid limit of no value and plastic indexes of non-plastic. Expansive claystone and siltstone is commonly interbedded in the Dawson Formation in the area.

Groundwater

Groundwater was not encountered in the test borings which were drilled to depths of 20 feet, or in the test pits which were excavated to depths of 6 to 8 feet. Groundwater is not anticipated to affect shallow foundations on the majority of the site. An area in the northern portion of Lot 2 has been identified as a potentially seasonal shallow groundwater area, and is discussed further later in this report. Fluctuations in groundwater conditions may occur due to variations in rainfall or other factors not readily apparent at this time. Isolated sand layers within the soil profile can carry water in the subsurface. Contractors should be cognizant of the potential for the occurrence of subsurface water features during construction.

Geology

Approximately 12 miles west of the site is a major structural feature known as the Rampart Range Fault. This fault marks the boundary between the Great Plains Physiographic Province and the Southern Rocky Mountain Province. The site exists within a large structural feature known as the Denver Basin. Bedrock in the area is typically gently dipping in a northerly direction (Reference 3). The bedrock underlying the site consists of the Dawson Formation of Tertiary to Cretaceous Age. The Dawson Formation typically consists of coarse-grained arkosic sandstone with interbedded layers of claystone or siltstone.

The geology of the site was evaluated using the *Geologic Map of the Black Forest Quadrangle,* by Thorson in 2003, (Reference 4, Figure 5). The Geology Map for the site is presented in Figure 6. Two mappable units were identified on this site which are described as follows:

Qaf **Artificial Fill of Holocene Age:** These are man-made fill deposits associated with a small embankment in the western portion of Lot 1.

Qc/Tkd **Colluvium of Quaternary Age overlying Dawson Formation of Tertiary to Cretaceous Age:** The materials consist of colluvial or residual soils overlying the bedrock materials on-site. The colluvial soils were deposited by the action of sheetwash and gravity. The residual soils were derived from the in-situ weathering of the bedrock on site. These materials typically consist of silty to clayey sand with potential areas of sandy clays. The bedrock consists of the Dawson Formation. The Dawson Formation typically consists of coarse-grained, arkosic sandstone with interbedded lenses of fine-grained sandstone, siltstone and claystone.

The soils listed above were mapped from site-specific mapping, the *Geologic Map of the Black Forest Quadrangle* distributed by the Colorado Geologic Survey in 2003 (Reference 4, Figure 5), the *Geologic Map of the Colorado Springs-Castle Rock Area,* distributed by the US Geological Survey in 1979 (Reference 5), and the *Geologic Map of the Pueblo 1° x 2° Quadrangle,* distributed by the US Geological Survey in 1978 (Reference 6). The test borings and test pits logs used in evaluating the site and are included in Appendix B. The Geology Map prepared for the site is presented in Figure 6.

ENGINEERING GEOLOGIC HAZARDS

Mapping has been performed on this site to identify areas where various geologic conditions exist of which developers should be cognizant during the planning, design and construction stages where new construction is proposed. The engineering geologic constraints identified on this site include artificial fill, potentially expansive soils, and potentially seasonal shallow groundwater, as indicated on the Engineering Geology Map, Figure 6. Potential Hazards including expansive soils and minor drainage swales, have also been addressed below. These hazards and recommended mitigation techniques are discussed as follows:

Artificial Fill - Constraint

These are areas of man-made fill associated with an embankment located in the western portion of Lot 1. Areas of fill other than those mapped may exist on the site.

Mitigation: It is anticipated these would be avoided by development or regraded. Should any uncontrolled fill be encountered beneath foundations, removal and recompaction at a minimum of 95% of its maximum Modified Proctor Dry Density, ASTM D-1557 will be required.

Expansive Soils - Constraint

Expansive soils were encountered in the upper portion of Test Boring No. 3 and in the test pits. Additionally, the Dawson Formation typically consists of coarse-grained arkosic sandstone with interbedded layers of claystone or siltstone. Expansive clays or claystone, if encountered beneath foundations, can cause differential movement in the structure foundation.

Mitigation: Should expansive soils be encountered beneath the foundation; mitigation will be necessary. Mitigation of expansive soils will require special foundation design. Overexcavation and replacement with non-expansive soils at a minimum of 95% of its maximum Modified Proctor Dry Density, ASTM D-1557 is a suitable mitigation, which is common in the area. Floor slabs on expansive soils should be expected to experience movement. Overexcavation and replacement has been successful in minimizing slab movements.

Drainage Areas

A minor drainage areas exist in the northeastern portion of proposed Lot 2. No water was observed flowing in the drainage, however, this area has the potential for seasonal shallow groundwater. This area is indicated in the Geology/Engineering Geology Map (Figure 6) and are discussed below. Due to the size of the proposed lot this area can be avoided or redirected around proposed structures or proposed soil treatment areas. The site does not lie within any floodplain zones according to the FEMA Map No. 08041CO305G dated December 7, 2018 (Figure 7, Reference 7). Exact locations of floodplain and specific drainage studies are beyond the scope of this report.

Potentially Seasonal Shallow Groundwater Area - Constraint

The minor drainage area in the northeastern portion of proposed Lot 2 has been identified as a potentially seasonal shallow groundwater area. In this area we would anticipate the potential for periodically high subsurface moisture conditions, frost heave potential and highly organic soils. This area lies within defined minor drainage and can be avoided by the proposed development. Construction in any portions of these areas, if required, or immediately adjacent to these areas should follow these precautions.

Mitigation: Foundations must have a minimum 30-inch depth for frost protection. In areas where high subsurface moisture conditions are anticipated periodically, subsurface perimeter drains are recommended to help prevent the intrusion of water into areas below grade. Typical drain details are presented in Figure 8. Any grading in these areas should be done to direct surface flow around construction to avoid areas of ponded water. All organic material would be completely removed prior to any fill placement. **Specific drainage studies are beyond the scope of this report.**

RELEVANCE OF GEOLOGIC CONDITIONS TO LAND USE PLANNING

The proposed development will be rural-residential utilizing individual on-site wastewater treatment systems and water wells. Three rural residential lots are proposed. The lot sizes range from 4.8-acres to 5.0-acres. The existing house and barns located on Lot 1 will remain. The new lots will be serviced by individual wells and on-site wastewater treatment systems. The existing geologic and engineering geologic conditions will impose minor constraints on development and construction. The geologic constraints on the site include artificial fill, potentially expansive soils, and potentially seasonal shallow groundwater areas which can be satisfactorily mitigated through avoidance or proper engineering design and construction practices.

The upper granular soils encountered in the test borings on the site were encountered at medium dense to dense states, and the sandstone was encountered at dense states. Sandstone bedrock was encountered at 12 feet in Test Boring No. 1. High allowable bearing capacities should be expected in areas of shallow bedrock. Difficult excavation of the very dense sandstone should be expected.

The sands and sandstone encountered in the test borings are considered to have low expansion potential, however, highly expansive claystone and siltstone are commonly interbedded in the sandstone of the Dawson Formation. Mitigation of expansive soils if encountered will be required. Overexcavation and replacement with non-expansive soils at a minimum of 95% of its maximum Modified Proctor Dry Density, ASTM D-1557 is a suitable mitigation, which is common in the area. Overexcavation depths of 3 to 4 feet are typical from the expansive soils encountered in the area. Floor slabs on expansive soils should be expected to experience movement. Overexcavation and replacement has been successful in minimizing slab movements. These soils will not prohibit development.

A Minor drainage exist in the northeastern portion of the site on proposed Lot 2. No water was observed flowing in the drainage, however, the potential for seasonal shallow groundwater exists in this areas during periods of high runoff. Based on the lot size, these areas can be avoided by the structures. Structures should not block drainages. Grading should direct surface waters around structures and roadways to prevent areas of ponded water.

In summary, the granular soils will likely provide good support for shallow foundations. The geologic conditions encountered on site can be mitigated with avoidance or proper engineering and construction practices.

ECONOMIC MINERAL RESOURCES

Some of the sandy materials on-site could be considered a low-grade sand resource. According to the *El Paso County Aggregate Resource Evaluation Map* (Reference 8), of the area of the site is not mapped with any potential aggregate resources. According to the *Atlas of Sand, Gravel and Quarry Aggregate Resources, Colorado Front Range Counties* distributed by the Colorado Geological Survey (Reference 9), the site is not mapped with any resources. According to the *Evaluation of Mineral and Mineral Fuel Potential* (Reference 10), the area of the site has been mapped as “little or no potential” for industrial minerals.

According to *the Evaluation of Mineral and Mineral Fuel Potential of El Paso County State Mineral Lands* (Reference 10), the site is mapped within the Denver Basin Coal Region. However, the area of the site has been mapped as “Poor” for coal resources. No active or inactive mines have been mapped in the area of the site. No metallic mineral resources have been mapped on the site (Reference 10).

The site has been mapped as “Fair” for oil and gas resources (Reference 10). No oil or gas fields have been discovered in the area of the site. The sedimentary rocks in the area may lack the geologic structure for trapping oil or gas; therefore, it may not be considered a significant resource. Hydraulic fracturing is a new method that is being used to extract oil and gas from rocks. It utilizes pressurized fluid to extract oil and gas from rocks that would not normally be productive. The area of the site has not been explored to determine if the rocks underlying the site would be commercially viable utilizing hydraulic fracturing. The practice of hydraulic fracturing has come under review due to concerns about environmental impacts, health and safety.

EROSION CONTROL

The soil types observed on the site are mildly to highly susceptible to wind erosion, and moderately to highly susceptible to water erosion. A minor wind erosion and dust problem may be created for a short time during and immediately after construction. Should the problem be considered severe enough during this time, watering of the cut areas or the use of chemical palliative may be required to control dust. However, once construction has been completed and vegetation re-established, the potential for wind erosion should be considerably reduced.

With regard to water erosion, loosely compacted soils will be the most susceptible to water erosion, residually weathered soils and weathered bedrock materials become increasingly less susceptible to water erosion. For the typical soils observed on site, allowable velocities or unvegetated and unlined earth channels would be on the order of 3 to 4 feet/second, depending upon the sediment load carried by the water. Permissible velocities may be increased through the use of vegetation to something on the order of 4 to 7 feet/second, depending upon the type of vegetation established. Should the anticipated velocities exceed these values, some form of channel lining material may be required to reduce erosion potential. These might consist of some of the synthetic channel lining materials on the market or conventional riprap. In cases where ditch-lining materials are still insufficient to control erosion, small check dams or sediment traps may be required. The check dams will serve to reduce flow velocities, as well as provide small traps for containing sediment. The determination of the amount, location and placement of ditch linings, check dams and of the special erosion control features should be performed by or in conjunction with the drainage engineer who is more familiar with the flow quantities and velocities.

Cut and fill slope areas will be subjected primarily to sheetwash and rill erosion. Unchecked rill erosion can eventually lead to concentrated flows of water and gully erosion. The best means to combat this type of erosion is, where possible, the adequate re-vegetation of cut and fill slopes. Cut and fill slopes having gradients more than three (3) horizontal to one (1) vertical become increasingly more difficult to revegetate successfully. Therefore, recommendations pertaining to the vegetation of the cut and fill slopes may require input from a qualified landscape architect and/or the Soil Conservation Service.

CLOSURE

It is our opinion that the existing geologic engineering and geologic conditions will impose some minor constraints on development and construction of the site. The majority of these conditions can be avoided by construction. Others can be mitigated through proper engineering design and construction practices. The proposed development and use are consistent with anticipated geologic and engineering geologic conditions.

It should be pointed out that because of the nature of data obtained by random sampling of such variable and non-homogeneous materials as soil and rock, it is important that we be informed of any differences observed between surface and subsurface conditions encountered in construction and those assumed in the body of this report. Individual investigations for new building sites and septic systems will be required prior to construction. Construction and design personnel should be made familiar with the contents of this report. Reporting such discrepancies to Entech Engineering, Inc. soon after they are discovered would be greatly appreciated and could possibly help avoid construction and development problems.

This report has been prepared for Doug Hill, for application to the proposed project in accordance with generally accepted geologic soil and engineering practices. No other warranty expressed or implied is made.

Doug Hill
Soil, Geology, and Geologic Hazard Study
Hill Subdivision
Parcel Nos. 51290-04-018 and 51290-09-002
Alpaca Heights and Black Forest Road
El Paso County, Colorado
Entech Job No. 221947

We trust that this report has provided you with all the information that you required. Should you require additional information, please do not hesitate to contact Entech Engineering, Inc.

Respectfully Submitted,

ENTECH ENGINEERING, INC.

Logan L. Langford, P.G.
Senior Geologist

Reviewed by:

Joseph C Goode Jr. Digitally signed by Joseph C Goode Jr.
Date: 2023.11.03 13:35:44 -06'00'

Joseph C. Goode, Jr., P.E.
President

LLL

Encl.

Entech Job No. 221947
AAprojects/2022/221947 sg&ghs

TABLES

TABLE 1

SUMMARY OF LABORATORY TEST RESULTS

CLIENT DOUG HILL
PROJECT ALPACA HTS. & BLACK FOREST
JOB NO. 221947

SOIL TYPE	TEST BORING/ TEST PIT NO.	DEPTH (FT)	WATER (%)	DRY DENSITY (PCF)	PASSING NO. 200 SIEVE (%)	LIQUID LIMIT (%)	PLASTIC INDEX (%)	SULFATE (WT %)	FHA SWELL (PSF)	SWELL/ CONSOL (%)	UNIFIED CLASSIFICATION	SOIL DESCRIPTION
1	TB-2	5			7.8	NV	NP				SM-SW	SAND, SLIGHTLY SILTY
2	TB-3	2-3			57.2				580		CL	CLAY, VERY SANDY
2	TP-1	2			77.4						CL	CLAY, SANDY
2	TP2	4			67.6						CL	CLAY, SANDY
3	TB-1	15			29.8	NV	NP				SM	SANDSTONE, SILTY

Table 2: Summary Test Boring Results

Test Boring No.	Depth to Bedrock (ft.)	Depth to Groundwater (ft.)
1	12	>20
2	>20	>20
3	>20	>20

Table 3: Summary Test Pit Results

Test Pit No.	Depth to Bedrock (ft.)	Depth to Groundwater (ft.)	USDA Soil Type	LTAR Value
1	>8	>8	4*	0.20*
2	>6	>6	4*	0.20*

*- Conditions that will require an engineered OWTS

FIGURES

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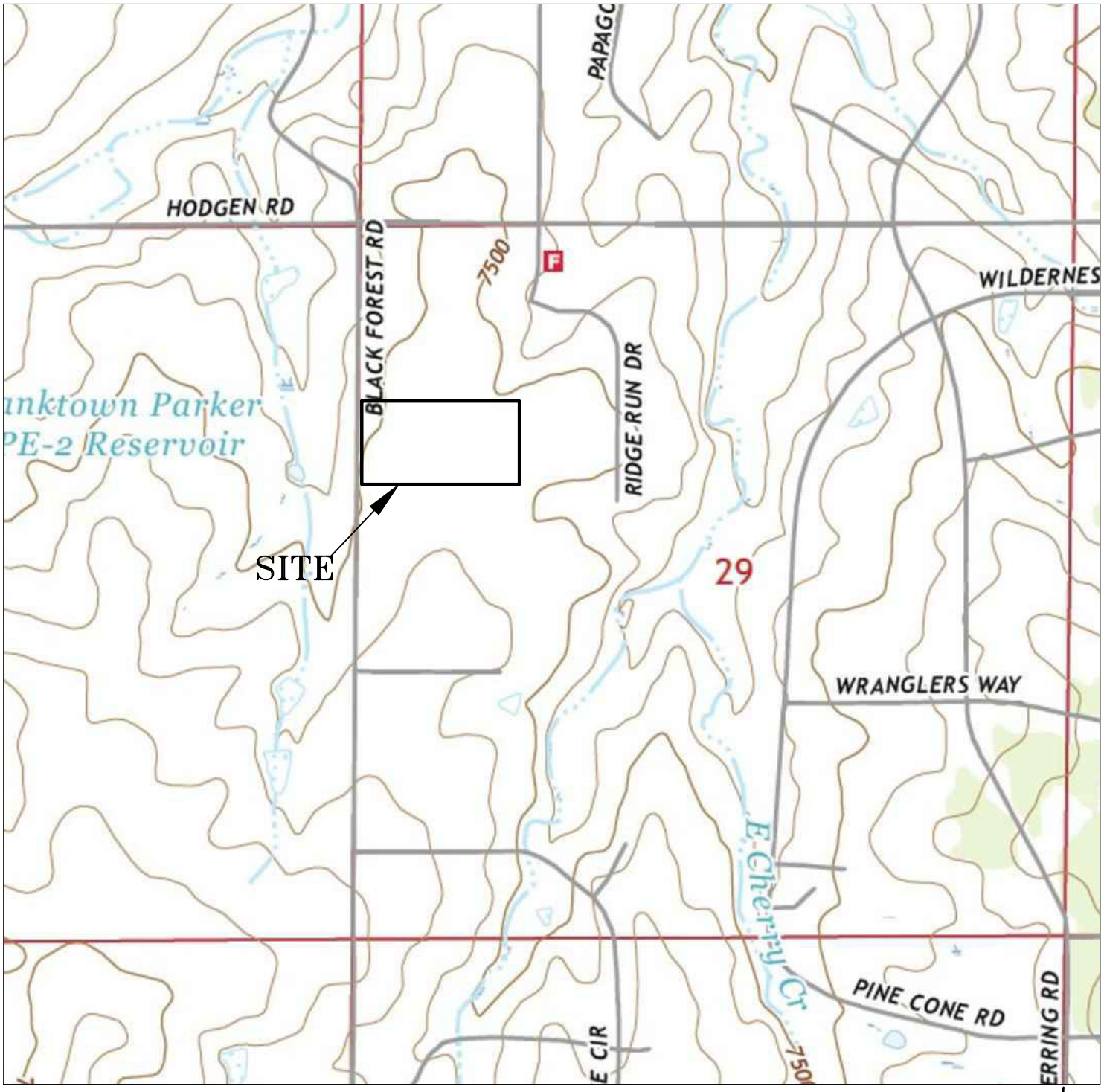
VICINITY MAP
HILL SUBDIVISION
ALPACA HEIGHTS & BLACK FOREST ROAD
EL PASO COUNTY, CO.
FOR: DOUG HILL

DRAWN:	DATE:	CHECKED:	DATE:
LLL	10/12/22		

JOB NO.: 221947

FIG NO.: 1



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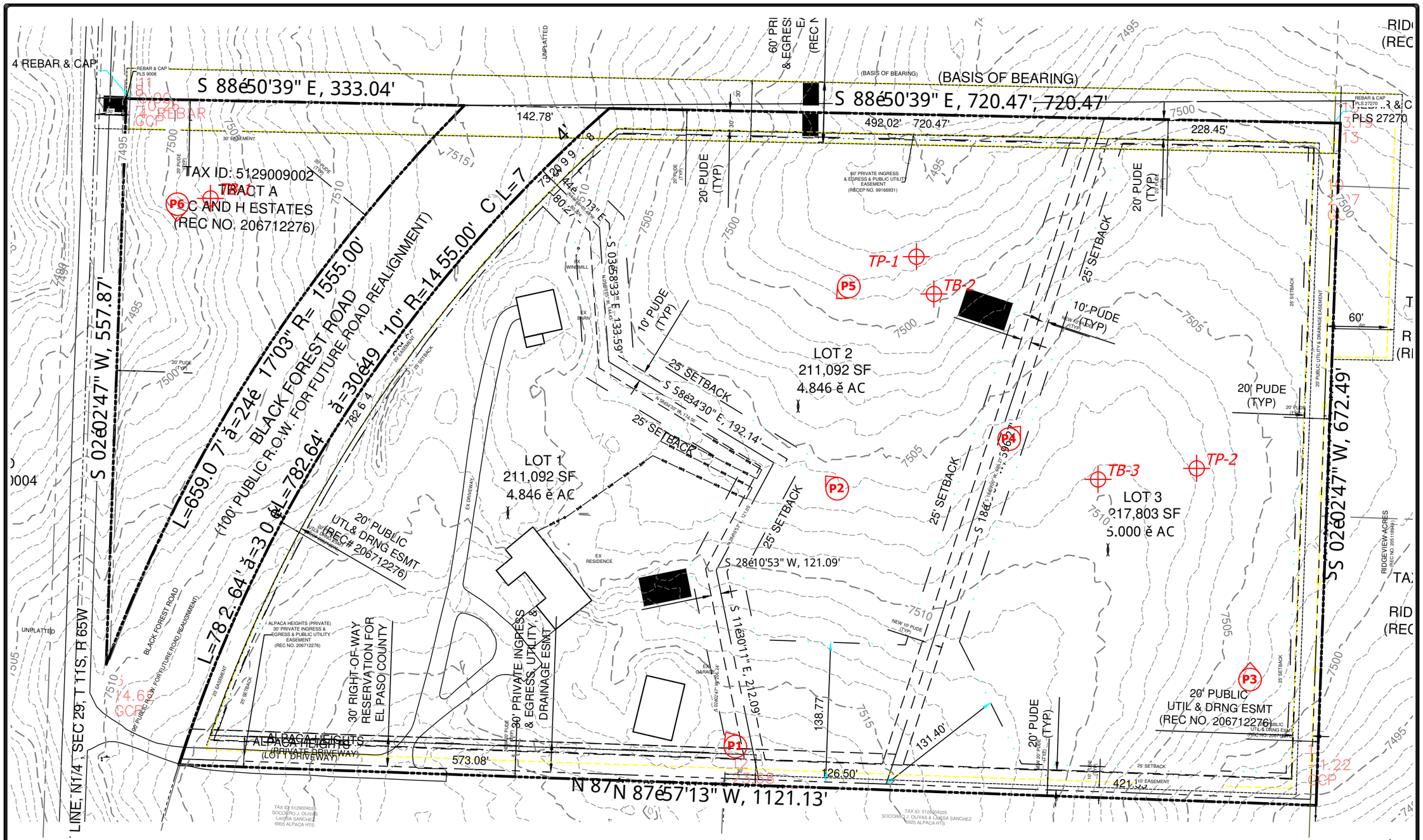
USGS TOPOGRAPHY MAP
HILL SUBDIVISION
ALPACA HEIGHTS & BLACK FOREST ROAD
EL PASO COUNTY, CO.
FOR: DOUG HILL

DRAWN:	DATE:	CHECKED:	DATE:
LLL	10/12/22		

JOB NO.: 221947

FIG NO.: 2



LEGEND:

- TB- APPROXIMATE TEST BORING LOCATION AND NUMBER
- TP- APPROXIMATE TEST PIT LOCATION AND NUMBER
- P2 - APPROXIMATE PHOTOGRAPH LOCATION AND NUMBER

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SITE PLAN/TEST PIT LOCATION MAP
HILL SUBDIVISION
ALPACA HEIGHTS & BLACK FOREST ROAD
EL PASO COUNTY, CO.
FOR: DOUG HILL

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DATE	10/20/22
SCALE	AS SHOWN
JOB NO.	221947
FIGURE No.	3

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SOIL SURVEY MAP
HILL SUBDIVISION
ALPACA HEIGHTS & BLACK FOREST ROAD
EL PASO COUNTY, CO.
FOR: DOUG HILL

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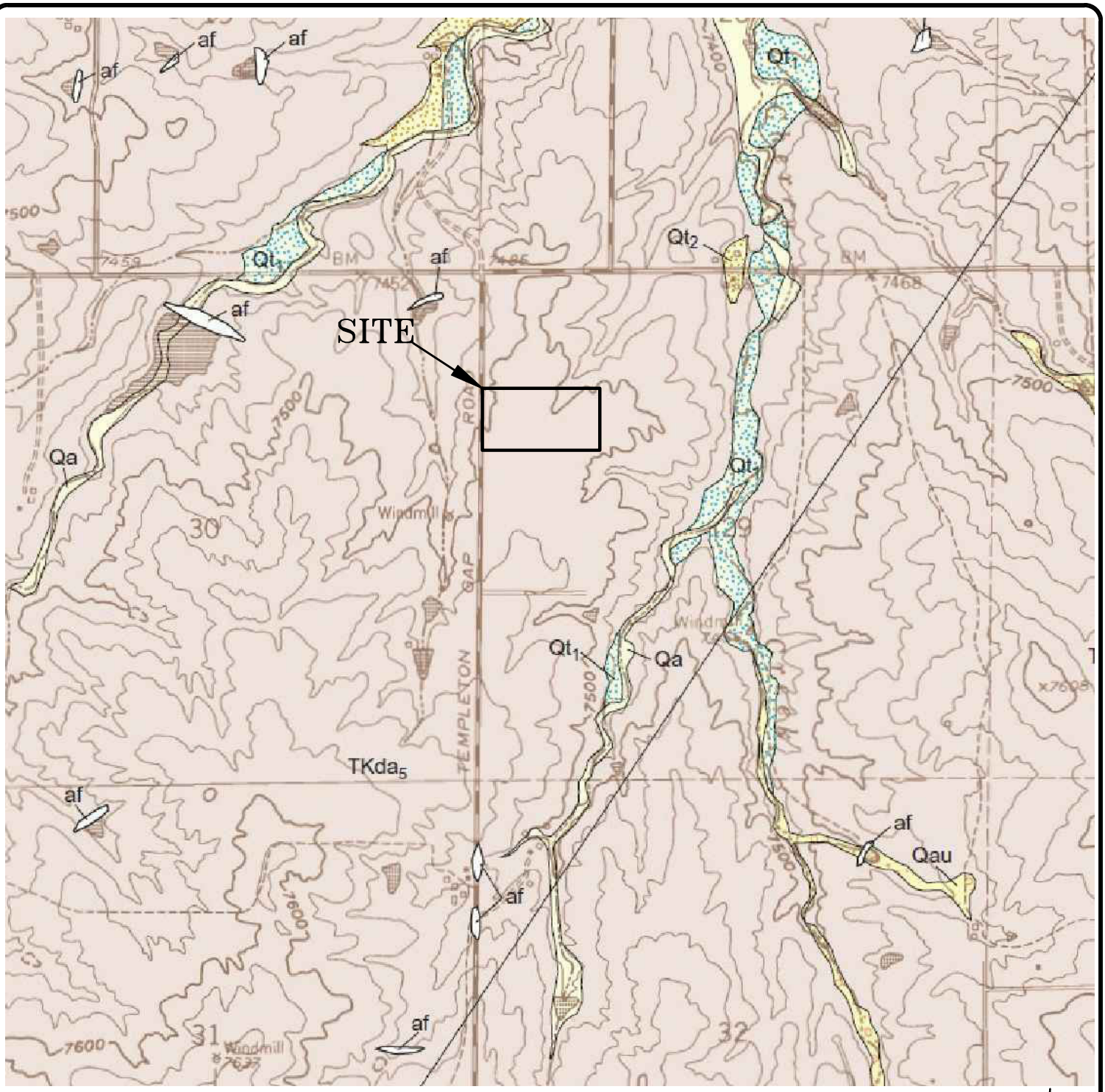
LLL	10/12/22		

JOB NO.: 221947

FIG NO.: 4



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BLACK FOREST QUADRANGLE GEOLOGIC MAP
HILL SUBDIVISION
ALPACA HEIGHTS & BLACK FOREST ROAD
EL PASO COUNTY, CO.
FOR: DOUG HILL

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JOB NO.: 221947

FIG NO.: 5

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GEOLOGY/ENGINEERING GEOLOGY MAP
HILL SUBDIVISION
ALPACA HEIGHTS & BLACK FOREST ROAD
EL PASO COUNTY, CO.
FOR: DOUG HILL

DRAWN	LLL
CHECKED	
DATE	11/3/23
SCALE	AS SHOWN
JOB NO.	221947
FIGURE No.	6

Legend:

Qaf - Artificial Fill of Holocene Age
man-made fill deposits associated with fill along the pipeline easement

Qc/TKd - Colluvium of Quaternary Age overlying Dawson Formation of Tertiary to Cretaceous Age:
colluvial and residual soils overlying arkosic sandstone with interbedded fine-grained sandstone, siltstone and claystone

psw - potentially shallow groundwater area

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FEMA FLOODPLAIN MAP
HILL SUBDIVISION
ALPACA HEIGHTS & BLACK FOREST ROAD
EL PASO COUNTY, CO.
FOR: DOUG HILL

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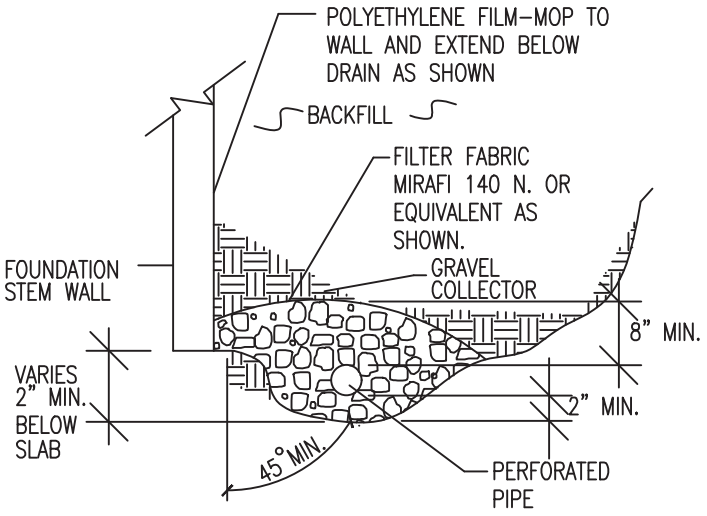
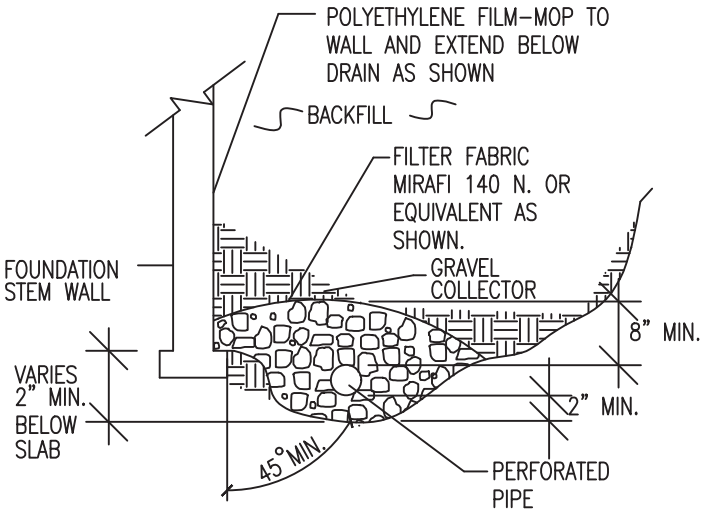
LLL	10/12/22		

JOB NO.: 221947

FIG NO.: 7





NOTES:

–GRAVEL SIZE IS RELATED TO DIAMETER OF PIPE PERFORATIONS–85% GRAVEL GREATER THAN 2x PERFORATION DIAMETER.

–PIPE DIAMETER DEPENDS UPON EXPECTED SEEPAGE. 4–INCH DIAMETER IS MOST OFTEN USED.

–ALL PIPE SHALL BE PERFORATED PLASTIC. THE DISCHARGE PORTION OF THE PIPE SHOULD BE NON–PERFORATED PIPE.

–FLEXIBLE PIPE MAY BE USED UP TO 8 FEET IN DEPTH, IF SUCH PIPE IS DESIGNED TO WITHSTAND THE PRESSURES. RIGID PLASTIC PIPE WOULD OTHERWISE BE REQUIRED.

–MINIMUM GRADE FOR DRAIN PIPE TO BE 1% OR 3 INCHES OF FALL IN 25 FEET.

–DRAIN TO BE PROVIDED WITH A FREE GRAVITY OUTFALL, IF POSSIBLE. A SUMP AND PUMP MAY BE USED IF GRAVITY OUT FALL IS NOT AVAILABLE.

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COLORADO SPRINGS, CO. 80907 (719) 531-5599

PERIMETER DRAIN DETAIL

DRAWN:	DATE:	DESIGNED:	CHECKED:

JOB NO.: 221947

FIG NO.: 8

APPENDIX A: Photographs

1

Looking northwest from the southern portion of the site.

September 21, 2022

2

Looking northwest from the central portion of the site.

September 21, 2022

Job No. 221947

3

Looking north along from the southeastern portion of the site.

September 21, 2022

4

Looking northeast from the southern portion of the site.

September 21, 2022

Job No. 221947

5

Looking southwest from the northeastern portion of the site.

September 21, 2022

6

Looking south from the northwestern portion of the site.

September 28, 2022

Job No. 221947

APPENDIX B: Test Boring & Test Pit Logs

TEST BORING NO. 1
DATE DRILLED 9/28/2022
Job # 221947

REMARKS

DRY TO 17', 9/29/22

Depth (ft)	Symbol	Samples	Blows per foot	Watercontent %	Soil Type
SAND, SLIGHTLY SILTY, FINE TO COARSE GRAINED, TAN, MEDIUM DENSE, MOIST			28	5.1	1
5			20	9.1	1
10			18	9.6	1
SANDSTONE, SILTY, FINE TO COARSE GRAINED, TAN, VERY DENSE, MOIST					
15			50/6"	6.4	3
20			50/6"	7.5	3

TEST BORING NO. 2
DATE DRILLED 9/28/2022
CLIENT DOUG HILL
LOCATION ALPACA HTS. & BLACK FOREST

REMARKS

DRY TO 19', 9/29/22

Depth (ft)	Symbol	Samples	Blows per foot	Watercontent %	Soil Type
SAND, SLIGHTLY SILTY, FINE TO COARSE GRAINED, TAN, MEDIUM DENSE, DRY TO MOIST			27	2.3	1
5			18	1.0	1
10			20	5.1	1
15			18	6.8	1
20			24	4.0	1

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ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

TEST BORING LOG

DRAWN:	DATE:	CHECKED: LLL	DATE: 10/4/22

JOB NO.: 221947

FIG NO.: B-1

TEST BORING NO. 3
DATE DRILLED 9/28/2022
Job # 221947

TEST BORING NO.
DATE DRILLED
CLIENT DOUG HILL
LOCATION ALPACA HTS. & BLACK FOREST

REMARKS	Depth (ft)	Symbol	Samples	Blows per foot	Watercontent %	Soil Type
DRY TO 18', 9/29/22						
CLAY, VERY SANDY, TAN, STIFF, MOIST				18	8.0	2
SAND, SILTY, FINE TO COARSE GRAINED, TAN, MEDIUM DENSE TO DENSE, MOIST TO DRY	5			20	5.6	1
	10			33	2.5	1
	15			27	4.2	1
	20			18	3.8	1

REMARKS	Depth (ft)	Symbol	Samples	Blows per foot	Watercontent %	Soil Type
	5					
	10					
	15					
	20					

ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

TEST BORING LOG

DRAWN:	DATE:	CHECKED: LLL	DATE: 10/4/22

JOB NO.: 221947

FIG NO.: B-2

TEST PIT NO. 1
DATE EXCAVATED 9/29/2022
Job # 221947

REMARKS	Depth (ft)	Symbol	Samples	Soil Structure Shape	Soil Structure Grade	USDA Soil Type
topsoil (0-4 inches)						
sandy clay, fine to medium grained, brown, moist	1					
	2			bl	m	4
	3					
	4					
	5			bl	m	4
	6					
	7					
	8					
	9					
	10					

TEST PIT NO. 2
DATE EXCAVATED 9/29/2022
CLIENT DOUG HILL
LOCATION ALPACA HTS & BLACK FOREST RD

REMARKS	Depth (ft)	Symbol	Samples	Soil Structure Shape	Soil Structure Grade	USDA Soil Type
topsoil (0-4 inches)						
sandy clay, fine to medium grained, brown, moist	1					
	2			bl	m	4
	3					
	4			bl	m	4
	5					
refusal @ 6-feet 0-inches	6			bl	m	4
	7					
	8					
	9					
	10					

Soil Structure Shape
granular - gr
platy - pl
blocky - bl
prismatic - pr
single grain - sg
massive - ma

Soil Structure Grade
weak - w
moderate - m
strong - s
loose - l

ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

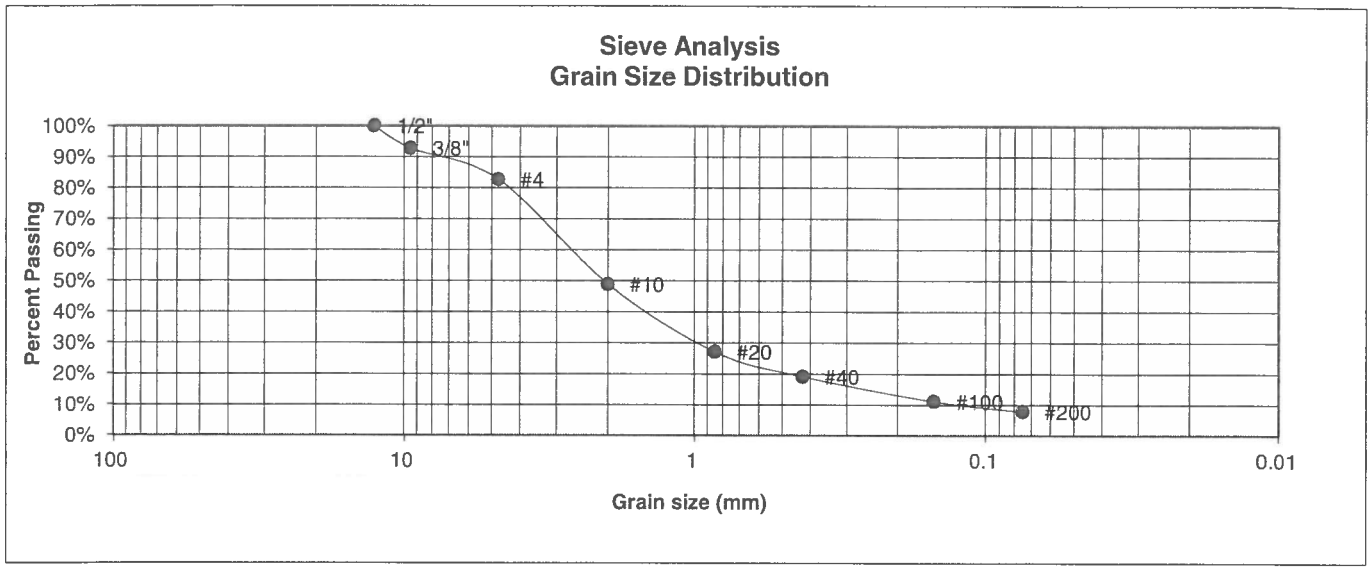
TEST PIT LOG

DRAWN:	DATE:	CHECKED:	DATE:
jhr	10/3/2022	LLL	10/4/22

JOB NO.: 221947
FIG NO.: B-3

APPENDIX C: Laboratory Test Results

BORING NO.	2	UNIFIED CLASSIFICATION	SM-SW	TEST BY	BL
DEPTH(ft)	5	AASHTO CLASSIFICATION		JOB NO.	221947
CLIENT	DOUG HILL				
PROJECT	ALPACA HTS. & BLACK FOREST				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	100.0%
3/8"	92.7%
4	82.7%
10	48.9%
20	27.1%
40	19.1%
100	11.1%
200	7.8%

Atterberg Limits

Plastic Limit	NP
Liquid Limit	NV
Plastic Index	NP

Swell

Moisture at start	
Moisture at finish	
Moisture increase	
Initial dry density (pcf)	
Swell (psf)	

ENTECH ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

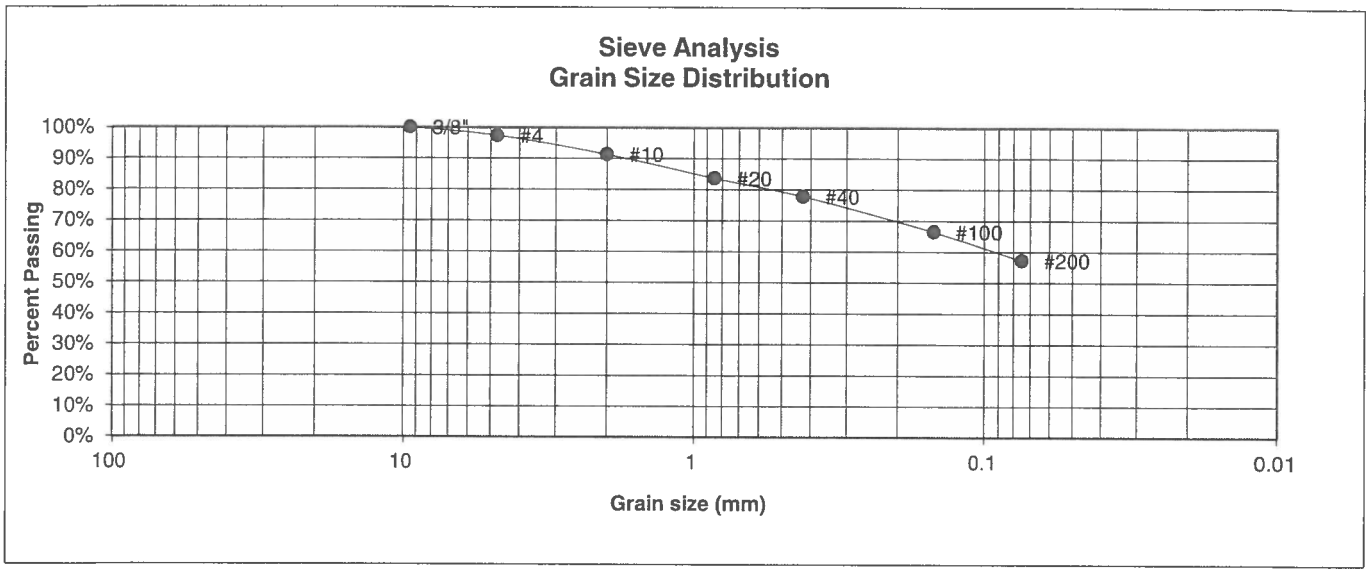
LABORATORY TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		LLL	10/4/22

JOB NO.: 221947

FIG NO.: C-1

BORING NO.	3	UNIFIED CLASSIFICATION	CL	TEST BY	BL
DEPTH(ft)	2-3	AASHTO CLASSIFICATION		JOB NO.	221947
CLIENT	DOUG HILL				
PROJECT	ALPACA HTS. & BLACK FOREST				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	97.3%
10	91.3%
20	83.7%
40	77.8%
100	66.5%
200	57.2%

Atterberg Limits

Plastic Limit	
Liquid Limit	
Plastic Index	

Swell

Moisture at start	7.9%
Moisture at finish	20.9%
Moisture increase	13.0%
Initial dry density (pcf)	103
Swell (psf)	580

ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

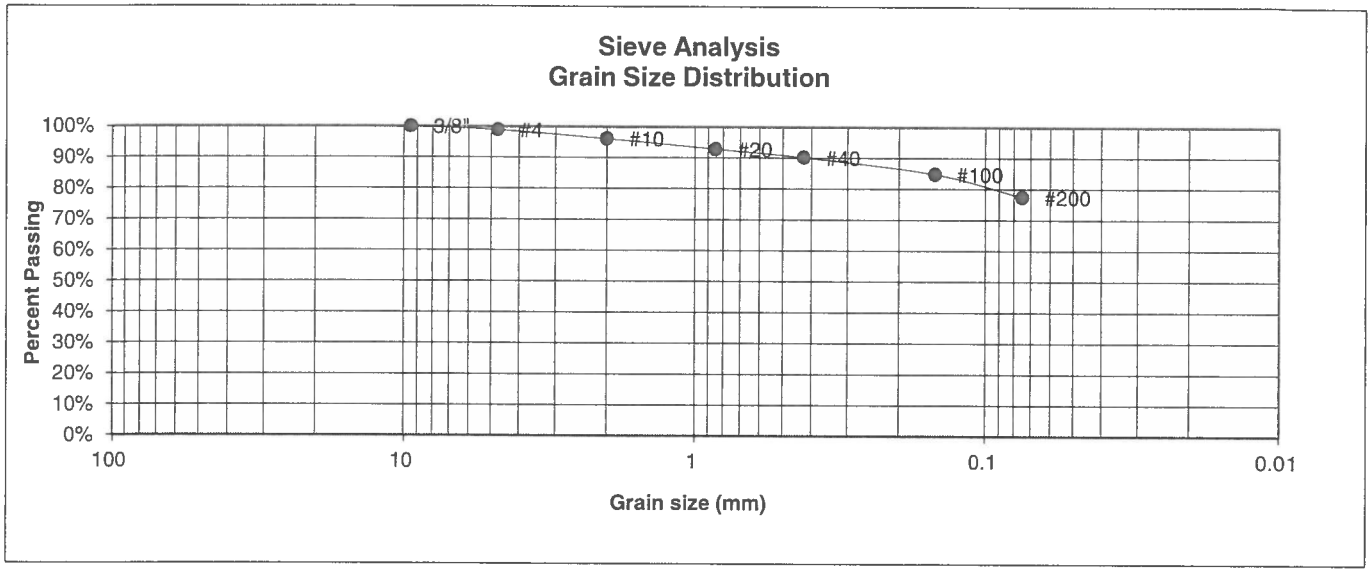
LABORATORY TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		LLL	10/4/22

JOB NO.: 221947

FIG NO.: C-2

BORING NO.	TP-1	UNIFIED CLASSIFICATION	CL	TEST BY	BL
DEPTH(ft)	2	AASHTO CLASSIFICATION		JOB NO.	221947
CLIENT	DOUG HILL				
PROJECT	ALPACA HEIGHTS AND BLACK FOREST				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	98.9%
10	96.0%
20	92.8%
40	90.1%
100	84.8%
200	77.4%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

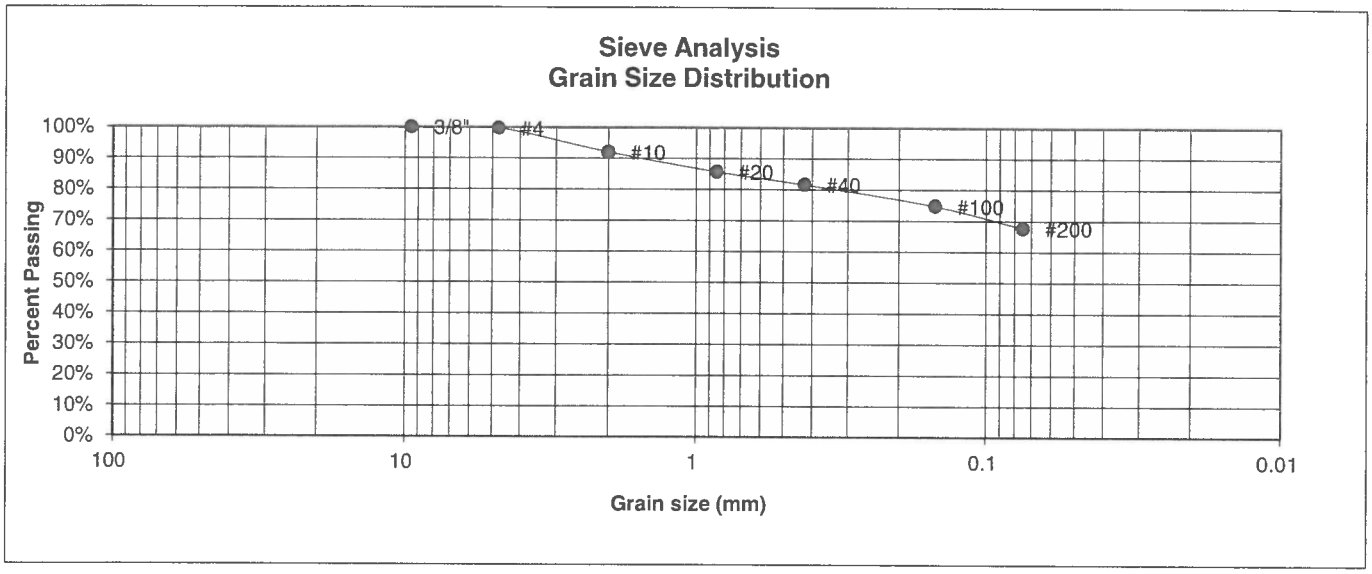
LABORATORY TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		LLL	10/4/22

JOB NO.: 221947

FIG NO.: L-3

BORING NO.	TP-2	UNIFIED CLASSIFICATION	CL	TEST BY	BL
DEPTH(ft)	4	AASHTO CLASSIFICATION		JOB NO.	221947
CLIENT	DOUG HILL				
PROJECT	ALPACA HEIGHTS AND BLACK FOREST				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	99.6%
10	92.0%
20	85.7%
40	81.6%
100	74.7%
200	67.6%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

ENTECH ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

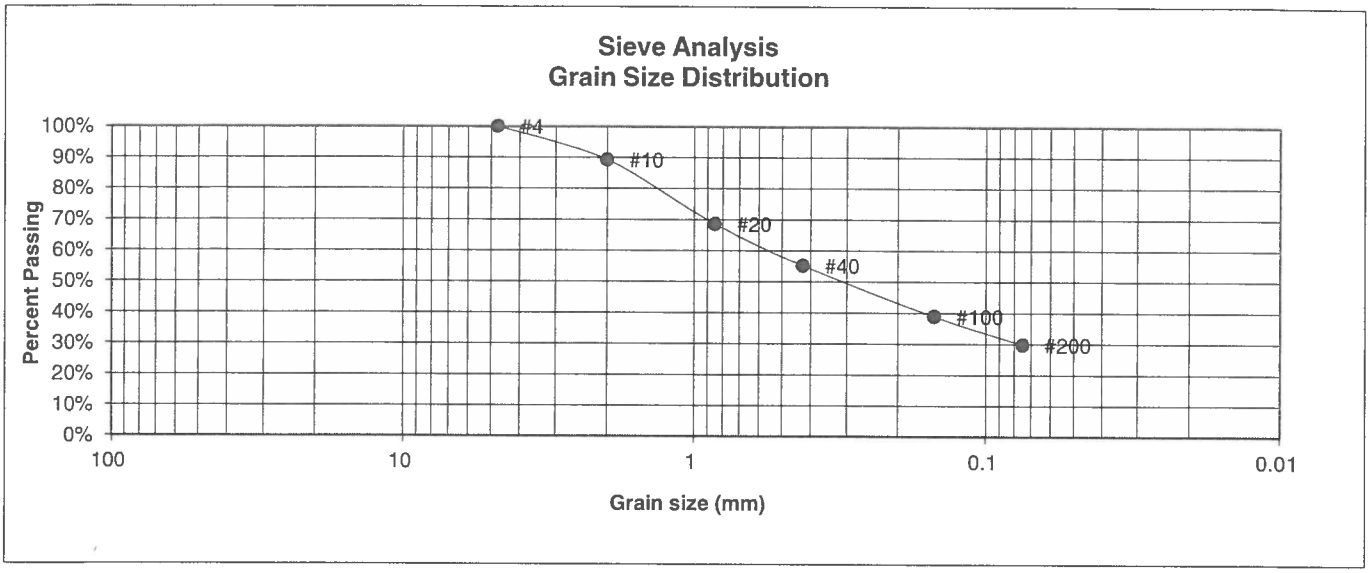
LABORATORY TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		LLL	10/4/22

JOB NO.: 221947

FIG NO.: C-4

BORING NO.	1	UNIFIED CLASSIFICATION	SM	TEST BY	BL
DEPTH(ft)	15	AASHTO CLASSIFICATION		JOB NO.	221947
CLIENT	DOUG HILL				
PROJECT	ALPACA HTS. & BLACK FOREST				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	
4	100.0%
10	89.2%
20	68.6%
40	55.2%
100	38.9%
200	29.8%

Atterberg Limits

Plastic Limit	NP
Liquid Limit	NV
Plastic Index	NP

Swell

Moisture at start	
Moisture at finish	
Moisture increase	
Initial dry density (pcf)	
Swell (psf)	

ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

LABORATORY TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		LLL	10/4/22

JOB NO.: 221947

FIG NO.: C-5

APPENDIX D: Soil Survey Descriptions

El Paso County Area, Colorado

15—Brussett loam, 3 to 5 percent slopes

Map Unit Setting

National map unit symbol: 367k
Elevation: 7,200 to 7,500 feet
Frost-free period: 115 to 125 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Brussett and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Brussett

Setting

Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits

Typical profile

A - 0 to 8 inches: loam
BA - 8 to 12 inches: loam
Bt - 12 to 26 inches: clay loam
Bk - 26 to 60 inches: silt loam

Properties and qualities

Slope: 3 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: R048AY222CO - Loamy Park
Hydric soil rating: No

Minor Components

Other soils

Percent of map unit:
Hydric soil rating: No

Data Source Information

Soil Survey Area: El Paso County Area, Colorado
Survey Area Data: Version 20, Sep 2, 2022

El Paso County Area, Colorado

68—Peyton-Pring complex, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 369f
Elevation: 6,800 to 7,600 feet
Farmland classification: Not prime farmland

Map Unit Composition

Peyton and similar soils: 40 percent
Pring and similar soils: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Peyton

Setting

Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Arkosic alluvium derived from sedimentary rock and/or arkosic residuum weathered from sedimentary rock

Typical profile

A - 0 to 12 inches: sandy loam
Bt - 12 to 25 inches: sandy clay loam
BC - 25 to 35 inches: sandy loam
C - 35 to 60 inches: sandy loam

Properties and qualities

Slope: 3 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: B
Ecological site: R049XY216CO - Sandy Divide
Hydric soil rating: No

Description of Pring

Setting

Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Arkosic alluvium derived from sedimentary rock

Typical profile

A - 0 to 14 inches: coarse sandy loam
C - 14 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R048AY222CO - Loamy Park
Hydric soil rating: No

Minor Components

Other soils

Percent of map unit:
Hydric soil rating: No

Pleasant

Percent of map unit:
Landform: Depressions
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: El Paso County Area, Colorado
Survey Area Data: Version 20, Sep 2, 2022

APPENDIX E: El Paso County Health Department Septic Records

ON 0032229

EL PASO COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT
INDIVIDUAL SEWAGE DISPOSAL SYSTEM INSPECTION FORM

Permit # 222 P
Date May 13, 2005

APN 5129004018

APPROVED: Yes ✓ No ____ Environmental Health Specialist: Brad Wallace

Address 6910 Alpaca Heights Owner Stewart
Legal Description TR 1 in NW4 Sec. 29-11-65
Residence ✓ # Bedrooms 4 Commercial ___ System Installer J+K Excavating

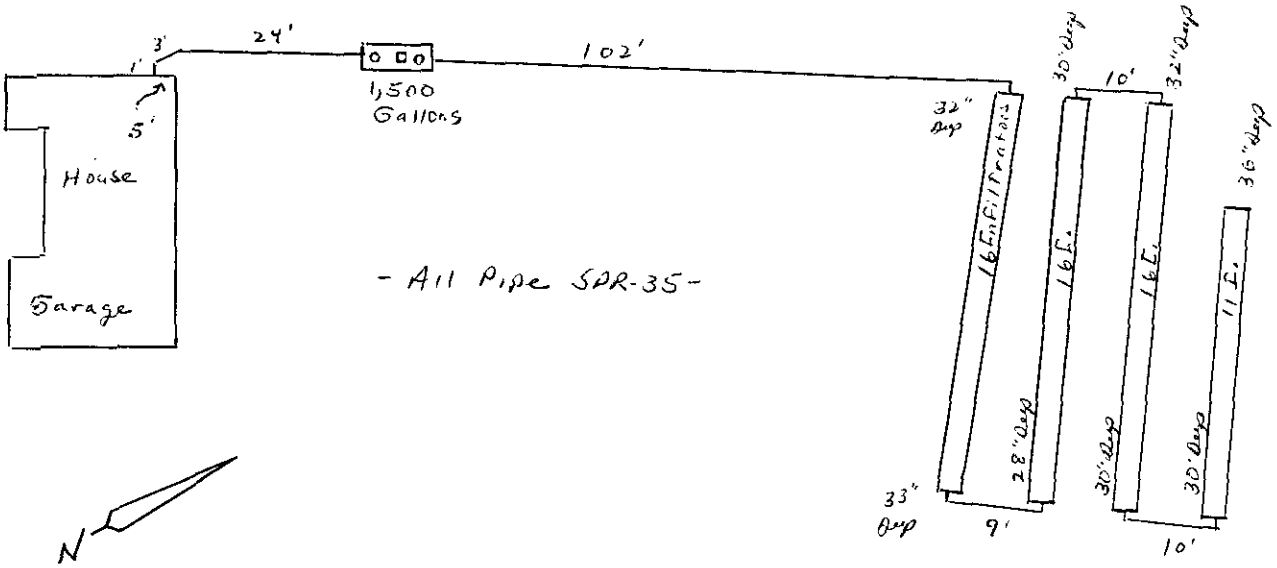
SEPTIC TANK:
Commercial ✓ Noncommercial ____ Construction Material Concrete Capacity Gallon 1,500

DISPOSAL FIELD:
Trench: Depth (Range) _____ Width _____ Total Length _____ Sq. Ft. _____
Bed: Depth (Range) _____ Length _____ Width _____ Sq. Ft. _____
Depth of Rock _____ Under PVC _____ Type of cover on Rock _____

DRYWELLS: # of Pits _____ Rings (Pit 1) _____ Rings (Pit 2) _____ Working Depth #1 _____ #2 _____
Size (L x W) #1 _____ #2 _____ Total Sq. Ft. _____

ROCKLESS SYSTEMS:
Standard Chamber: Type Infiltrators #Chambers 59 Sq. Ft./Chamber 15.5 Bed _____ Trench X
High Profile Units: Type Chamber _____ #Chambers _____ Sq. Ft./Chamber _____ Bed ___ Trench ___
Reduction Allowed 40 % Sq. Ft. Required 1,524 Depth (Range) 30" - 36"
Sq. Ft. Installed _____ Equivalent Sq. Ft. Installed with Reduction 1,524 FT²
Engineer Design: Y (N) Engineering Firm _____
Approval letter provided? Y N
Well installed at time of septic system inspection? Y (N) Public Water? _____
*Approval will be revoked if in the future the well is found to be within 50 feet of the septic tank and/or 100 feet of the disposal field.

NOTES:



EL PASO COUNTY

DEPARTMENT OF HEALTH AND ENVIRONMENT

301 S Union Blvd, Colorado Springs, Colorado 719-575-8636

INDIVIDUAL SEWAGE DISPOSAL SYSTEM PERMIT

222

OWNER NAME:	CHARLES AND HELEN STEWART			**PERMIT NUMBER:**	ON0006324
ADDRESS:	6910 ALPACA HEIGHTS				
CITY,STATE,ZIP:	COLORADO SPRINGS	CO	80908	**DATE PERMITTED:**	4/7/2005
INSTALLED BY:				**PHONE NUMBER:**	7194885594

This permit is issued in accordance with 25-10-107 Colorado Revised Statues. PERMIT EXPIRES upon completion-installation of sewage-disposal system or at the end of twelve (12) months from date of issue- whichever occurs first-(unless work is in progress). If both a building and an ISDS permit are issued for the same property and construction has not commenced prior to the expiration date of the building permit, the ISDS permit shall expire at the same time as the building permit. This permit is revokable if all stated requirements are not met.
Sewage disposal system to be installed by an El Paso County Licensed System Contractor or the property owner.

THIS PERMIT DOES NOT DENOTE APPROVAL OF ZONING AND ACREAGE REQUIREMENTS.

Rosemary C. Bakes-Martin

DIRECTOR, EL PASO COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT

PERMIT EXPIRATION DATE :
Expires twelve months from date of issue

Brad Wallace 578-3127

ENVIRONMENTALIST / PHONE NUMBER*

* NOTE: FOR INSPECTIONS CALL 575-8699 BEFORE 8:30 A.M. OF THE DAY TO BE INSPECTED.
(WEEKENDS & HOLIDAYS EXCLUDED)
LEAVE THE ENTIRE SEWAGE DISPOSAL SYSTEM UNCOVERED FOR FINAL INSPECTION.

WATER SOURCE: WELL

MINIMUM SEPTIC TANK SIZE : 1,500 **GALLONS** **MINIMUM ABSORPTION AREA REQUIRED** 1,524 **SQ FT**

PLANNING DEPARTMENT ☑ **ENUMERATION** ☑ **FLOOD PLAIN** ☑ **WASTEWATER** N.A.

COMMENTS:

INSTALL LEACH FIELD IN AREA AND AVERAGE DEPTH (34 INCHES) OF PERCOLATION TEST. RUNOFF FROM HOUSE MUST NOT FLOW INTO LEACH FIELD AREA. LEACH FIELD AREA MUST NOT BE COMPACTED BY VEHICLE OR LIVESTOCK TRAFFIC, A BARRIER IS RECOMMENDED.

The Health Office shall assume no responsibility in case of failure or inadequacy of a sewage-disposal system, beyond consulting in good faith with the property owner or representative. Free access to the property shall be authorized at reasonable time for the purpose of making such inspections as are necessary to determine compliance with requirements of this law.

FOR ADMINISTRATIVE USE ONLY

Permit Ready: ✓ 4-7-05 MW Called _____ Mailed

Final Inspection Requested: BY: John - JHK Date Called In: 5/13/05 7:56

Phone # 331-4321 481-2417 Septic Site will be ready: afternoon

Inspector _____ Record I.D. [redacted]624 / 722

EL PASO COUNTY ENVIRONMENTAL HEALTH SERVICES

301 South Union Boulevard • Colorado Springs, CO • 80910-3123 • (719) 578-3125 • Fax: (719) 578-3188

**ALL PAYMENTS ARE DUE AT TIME OF SUBMITTAL IN CASH OR CHECK*

APPLICATION FOR AN ON-SITE WASTEWATER TREATMENT SYSTEM PERMIT

☒ NEW CONSTRUCTION ☐ MINOR REPAIR ☐ MAJOR REPAIR/ADD

Owner's Name Charles & Helen Stewart Daytime Phone (719) 488-1594

Address of Property 6910 Alpaca Hts City & Zip Colorado Springs 80908

Legal Description TR IN NW4 SEC 29-11-65 DES

Owner's MAILING Address 2207 Twilby Rd. City, State & Zip Larkspur, CO 80118

Lot Size 36.29 Tax Schedule # 5329000005

Type of Building: ☒ Frame ☐ Modular ☐ Mobile ☐ Commercial ☐ Manufactured ☐ Other _____

Water Supply: ☒ Well or Spring ☐ Cistern ☐ Public **Inside City Limits:** ☒ No ☐ Yes-City _____

☐ MAIL PERMIT OR ☒ PICK UP PERMIT ☐ THERE IS AN ADDITIONAL RESIDENCE ON THIS PROPERTY

MAXIMUM POTENTIAL NUMBER OF BEDROOMS 4

Percolation Test Attached (Y) N Basement (Y) N Garbage Disposal (Y) N Clothes Washer (Y) N

I have supplied a plot plan as described on the back of this form. I acknowledge the completeness of the application is conditional upon such further mandatory and additional tests and reports as may be required by the Department to be made and furnished by an applicant for purposes of evaluating the application, and issuance of the permit is subject to such terms and conditions as deemed necessary to ensure compliance with rules and regulations adopted pursuant to C.R.S. 25-10-107 et. seq. I hereby certify all represented to be true and correct to the best of my knowledge and belief, and are designed to be relied on by the El Paso County Department of Health and Environment in evaluating the same for purposes of issuing the permit applied for herein. I further understand any falsification or misrepresentation may result in the denial of the application or revocation of any permit granted based upon said application and in legal action for perjury as provided by law.

OWNER'S SIGNATURE Charles E Stewart **Date** 3/29/05

You will be notified by telephone when your permit is ready for pick up. Please allow a minimum of 10 days for new septics.

DEPARTMENT OF HEALTH USE ONLY

1,500 Gallons	1524 FTL	4-6-05
Minimum Tank Capacity	Minimum Absorption Area	Date of Site Inspection

REMARKS Install leach field in area and average depth (34") of perc test. Runoff from house must NOT flow into leach field area. leach field area must not be compacted by vechile or Livestock traffic, a barrier is recommended.

EHS INSPECTOR Brad Wallace DATE 4-6-05 (APPROVED) DENIED

FEES AS OF 01/01/04:

NEW CONSTRUCTION **$483.00 + Planning Department Surcharge of $30. = $513.00** CK # 1007

MAJOR REPAIR/ADDITION **$489.00**

MINOR REPAIR/ADDITION **$263.00**

DATE TO PLANNING / WASTEWATER: 4/04/05

DATE TO FLOODPLAIN/ENUMERATIONS 4/04/05

PLEASE COMPLETE THE BACK OF THIS FORM

1) We require an original of your **PERCOLATION (PERC) TEST** with an original professional engineer's (PE) stamp and signature as well as a plot of the percolation test hole locations with measurements from a fixed reference point.

2) **PROP** **OT NUMBER MUST BE POSTED AND CLEARLY VISIBLE FROM ROAD** **BE CLEARLY MARKED OR AN ADDITIONAL CHARGE FOR A** **RETU** **MAY BE ASSESSED.**

COUNTY HEALTH DEPARTMENT

3) A **PLO** not to scale) on an **8 ½ x 11** sheet of paper. The plot plan must include:

1) a no ll buildings (proposed or existing) 7) driveway (proposed or
2) prop roposed septic system site existing and name of
3) prop lternate septic system site adjoining street)

04-01-2004 FRI

$1007
OWS NEW 407.00
OWS CNTY SURCH. 118.00
SUBTL 525.00
TOTAL 525.00
CHEC 525.00
CATEND 25.00
CHANGE 0.00

4) Initial a ires that apply to your property and **INCLUDE** them on your **PLOT PLAN.**

___ W Adjacent property well(s) ___ Subsoil drain
___ Ci Water line

5) Initial an within 100 feet of your proposed septic system and **INCLUDE** on your **PLOT P**

ITEM
DSC

___ Lake(s)
___ Stream(s)
___ Dry Gulch(es) ___ Natural drainage course(s)

6) GIVE COMPLETE DIRECTIONS TO THE PROPERTY FROM A MAIN HIGHWAY

I-25 north to the monument / Hwy 105 Exit
to ~~EAST~~ on Hwy 105 to Hwy 83
Take 83 South to Hodgen Rd.
Turn left (east) on Hodgen to Black Forest Rd.
Turn Right (South) on Black Forest Road
Property located on left hand side.
Turn left onto Alpaca Heights.

01/01/04