MARCH 4, 2024

OWTS FEASABILITY REPORT

PREPARED FOR: ALAN GREAVES

JOB #24-008
7030 SNOW MASS DRIVE,
LOT #13,
WILDWOOD RANCH ESTATES FILING #7
SCHEDULE NUMBER: 5205209004
EL PASO COUNTY,
COLORADO

PREPARED BY: D&D ENGINEERING, LLC

317 OAK PLACE
MANITOU SPRINGS, CO 80829

OFFICE PHONE #: (719) 375-1779
EMAIL: OFFICE@DDENGINEERINGLLC.COM

Sincerely,

Douglas J Pretzer

Douglas J. Pretzer, P.E.
Principal Engineer

COLORADO LICENSED
DOUGLAS J PRETZER
55147
3/4/24
Douglas J Pretzer
PROFESSIONAL ENGINEER

PROJECT DESCRIPTION

The project boundaries are described as Lot #13 of Wildwood Ranch Estates Filing No. 7 in El Paso County, Colorado. The property address is 7030 Snow Mass Drive. The El Paso County tax assessor, schedule number is 5205209004 (Reference 1). The proposed development is Greaves Subdivision Filing No. 1.

The address is currently vacant. The property was previously occupied by a single-family residence that was destroyed in the Black Forest Fire. The existing lot is 10.364 acres. The proposed development includes subdividing the property into 2 lots. The two new lots will be split between the front and back half. Lot 1 (front half) is 5.348 acres and Lot 2 (rear half) is 5.015 acres. Lot 1 is served by an existing well and On-Site Wastewater Treatment System (OWTS). Lot 2 will be served by new individual wells and OWTS. The proposed subdivision is shown in the attached Final Plat (Reference 2, Appendix A).

The property is not located within an organized or municipal sewage district. No municipal sewer mains exist within 400 feet of the project boundary. Therefore, the property is not subject to inclusion in a municipal sewage district and is not reasonable to tie to an existing municipal sewage main.

NRCS SOIL SURVEY

The NRCS soil survey mapped two soil types on the property (Reference 3, Appendix B). The front half of the property is Kettle gravelly loamy sand (type 41). The Kettle formation typically has slopes of 8 to 40 percent. The typical profile is gravelly loamy sand. The rear half of the property is Peyton-Pring complex (type 68). The Peyton-Pring complex formation has typical slopes of 3 to 8 percent. The typical profile is sandy clay loam and sandy loam.

SOIL INVESTIAGIONS

Profile Pit Evaluations were performed on both parcels by D&D Engineering, LLC. Each evaluation consisted of visual and tactile evaluation of two pits located on each of the proposed lots, in the vicinity of the proposed soil treatment areas (Reference 4, Appendix C).

Records for the existing OWTS for the previously burned 3-bedroom house were obtained from the health department records (Reference 1, Appendix D).

SOIL DESCRIPTIONS

Visual and tactile evaluation of two profile test pits were evaluated near the proposed Soil Treatment Areas (STA) for the two proposed lots.

For Lot 1, the test pits were located downhill of the existing STA. The profile evaluation for Lot 1 showed sandy loam overlying gravelly sandy clay in the first pit and sandy clay loam overlying gravelly sandy clay in the second pit. Groundwater evidence was encountered in both pits at 36” below grade and groundwater was encountered in the second pit at the same depth. A suitable LTAR of 0.30 GPD/SF should be used.

For Lot 2, the test pits were located in an area of the proposed STA. The profile evaluation for Lot 2 showed sandy clay in both pits. Groundwater evidence was encountered at 60” below grade in the “fourth” pit. A suitable LTAR of 0.15 GPD/SF should be used.

Shallow seasonal groundwater was encountered on both proposed lots. Seasonal groundwater depths may fluctuate depending on rainfall.

OWTS CONCLUSIONS

There is an existing OWTS located on Lot 1. This OWTS was designed for a 3-bedroom single family residence. It is our understanding that a new 5-bedroom single family residence is proposed for this lot. Therefore, the existing mound would require modifications and expansion to make it compliant with current OWTS regulations. In our opinion, it would be more economical to abandon the existing STA and build a new STA. Due to the shallow groundwater and groundwater evidence on Lot 1, an engineered OWTS is required. The new STA shall be constructed above grade (mounded) like the existing STA.

Lot 2 is currently undeveloped. It is our understanding that a new 5-bedroom single family residence is proposed for this lot. A new well shall be constructed a minimum of 100 feet away from the profile test pits. Due to groundwater evidence encountered in one test pit and the soil type 4A soil an engineered OWTS is required for this lot. The maximum depth of the STA must be limited as described in the attached Profile Pit Evaluation.

An OWTS Suitability Map is provided (Appendix E) that shows possible building sites on each lot, existing/proposed wells, and a primary and an alternate STA location. Building sites and well placements are subject to change. All new On-Site Wastewater Treatment Systems shall comply with any physical setback requirements in Table 7-1 of EPCPH regulations, Chapter 8. Soil treatment areas should be located a minimum of 100 feet from any well (existing or proposed) on the subject lot or adjacent lots.

It is our opinion that the proposed development can be completed in accordance with EPCPH Chapter 8 and there are no restrictions on the individual On-Site Wastewater Treatment Systems.

LIMITATIONS

This report is prepared in accordance with Colorado Department of Public Health and Environment, Regulation 43, El Paso County Board of Health, Chapter 8: OWTS regulations, and El Paso County Land Development Code section 8.4.8, as well as generally accepted engineering standards and methods. Soil conditions can vary between pits and beyond the location of the pits. Even with proper design and installation, there remain uncertainties in the function of the STA and difficulties may arise. D&D Engineering, LLC provides no warranty, express or implied, regarding the contents of this report or the designs or installation of the OWTS based on the recommendations of this report. The Limits of Liability extend only to the fee rendered for the professional services provided.

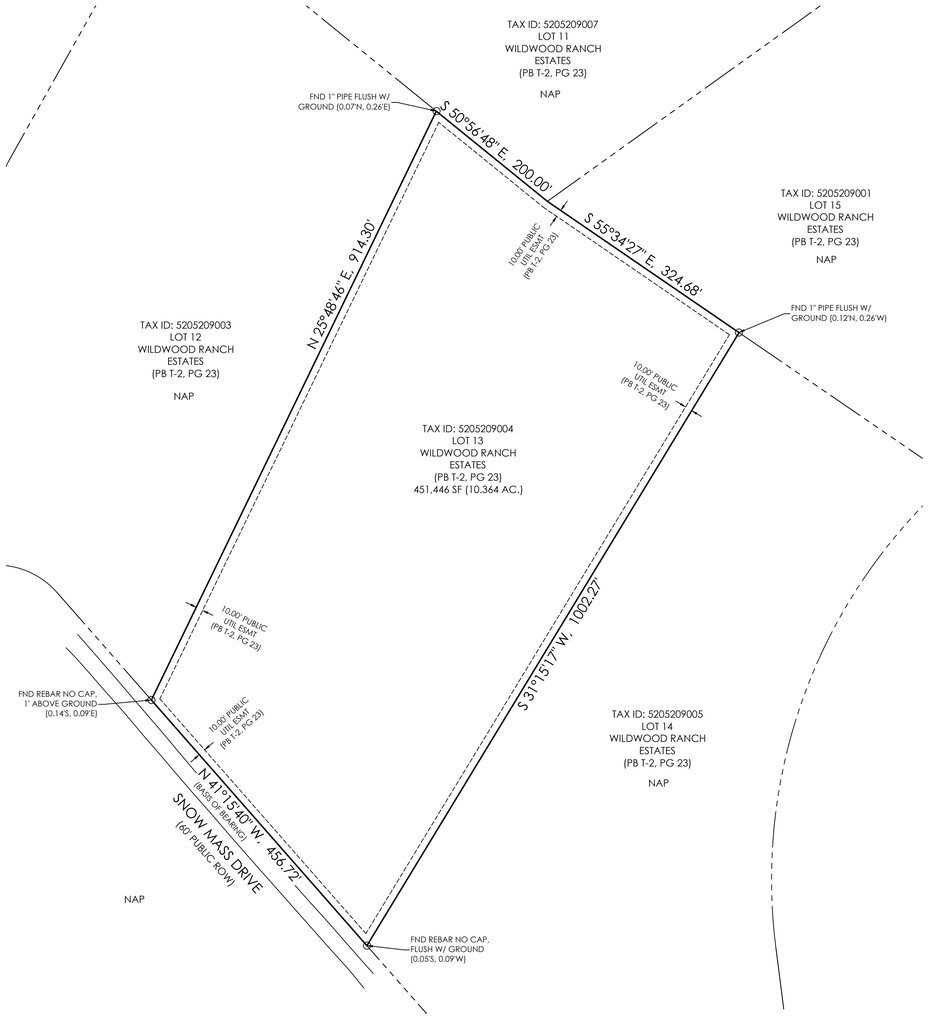
References

1. El Paso County Assessor, https://property.spatialest.com/co/elpaso/#/property/5205209004
2. Greaves Subdivision Final Plat, Polaris Surveying Inc, DWG No. 231102_PLAT, dated 12/27/2023.
3. Custom Soil Resource Report, USDA Web Soil Survey, https://websoilsurvey.nrcs.usda.gov/app/
4. Profile Pit Evaluation, D&D Engineering LLC, Job #24-008, dated 2/13/2024.

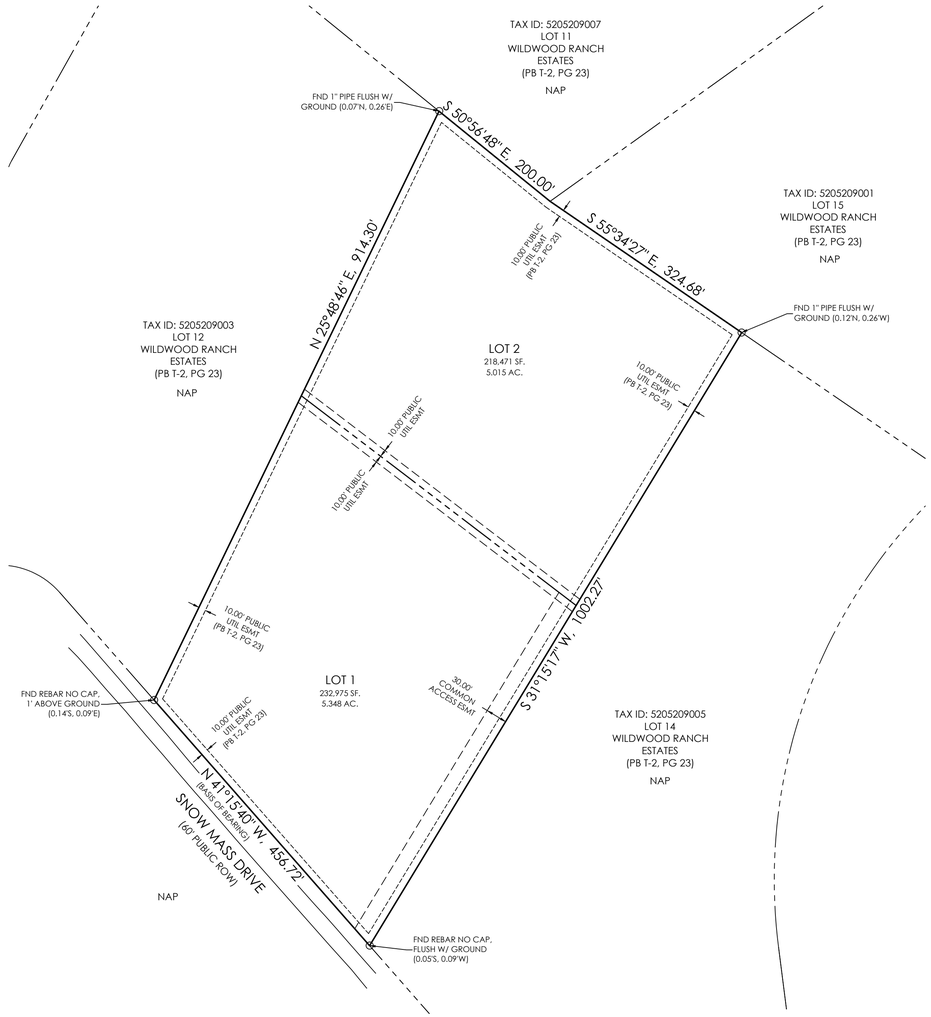
APPENDIX A: FINAL PLAT

GREAVES SUBDIVISION FILING NO. 1

A REPLAT OF LOT 13, WILDWOOD RANCH ESTATES FILING 7
NORTHWEST QUARTER OF SECTION 5, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M.
EL PASO COUNTY, COLORADO



"AS PLATTED"
(PLAT NO. _____)



"AS REPLATTED"

LEGEND

———	PROPOSED BOUNDARY LINE
—— – – ——	PROPOSED LOT LINE
– – – – – –	PROPOSED EASEMENT
– – – – – –	SECTION LINE
○	FOUND CORNER AS SHOWN
●	SET #5 REBAR W/ ALUMINUM CAP MARKED "POLARIS, PLS 27605" FLUSH WITH THE GROUND
(15980)	ADDRESS NUMBER
PUDE	PUBLIC UTILITY AND DRAINAGE EASEMENT
NAP	NOT A PART OF THIS SUBDIVISION (NO AREAS OUTSIDE OF THE SHOWN BOUNDARY ARE A PART OF THIS SUBDIVISION)

N

SCALE : 1" = 100'

100 50 0 100 200

PCD FILE NO:

REGISTERED LAND SURVEYOR IN THE STATE OF COLORADO, NO 27605 FOR AND ON BEHALF OF POLARIS SURVEYING, INC. NOTICE: ACCORDING TO COLORADO LAW, YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT, MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

GREAVES SUBDIVISION FILING NO. 1
A REPLAT OF LOT 13, WILDWOOD RANCH ESTATES FILING 7
NORTHWEST QUARTER OF SECTION 5, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M.
EL PASO COUNTY, COLORADO

SCALE 1" =100'

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

DRAWN BY: TJW
CHECKED BY: RDH
JOB NO: 231102

DATE: 12/27/2023
DRAWING NO: 231102_PLAT
SHEET: 2 OF 2

POLARIS SURVEYING, INC.
1903 Lelaray Street, Suite 102
COLORADO SPRINGS, CO 80909
(719)448-0844 FAX (719)448-9225

GREAVES SUBDIVISION
FINAL PLAT

For:
ALAN & JUDITH GREAVES

APPENDIX B: USDA WEB SOIL SURVEY

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for El Paso County Area, Colorado

March 4, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

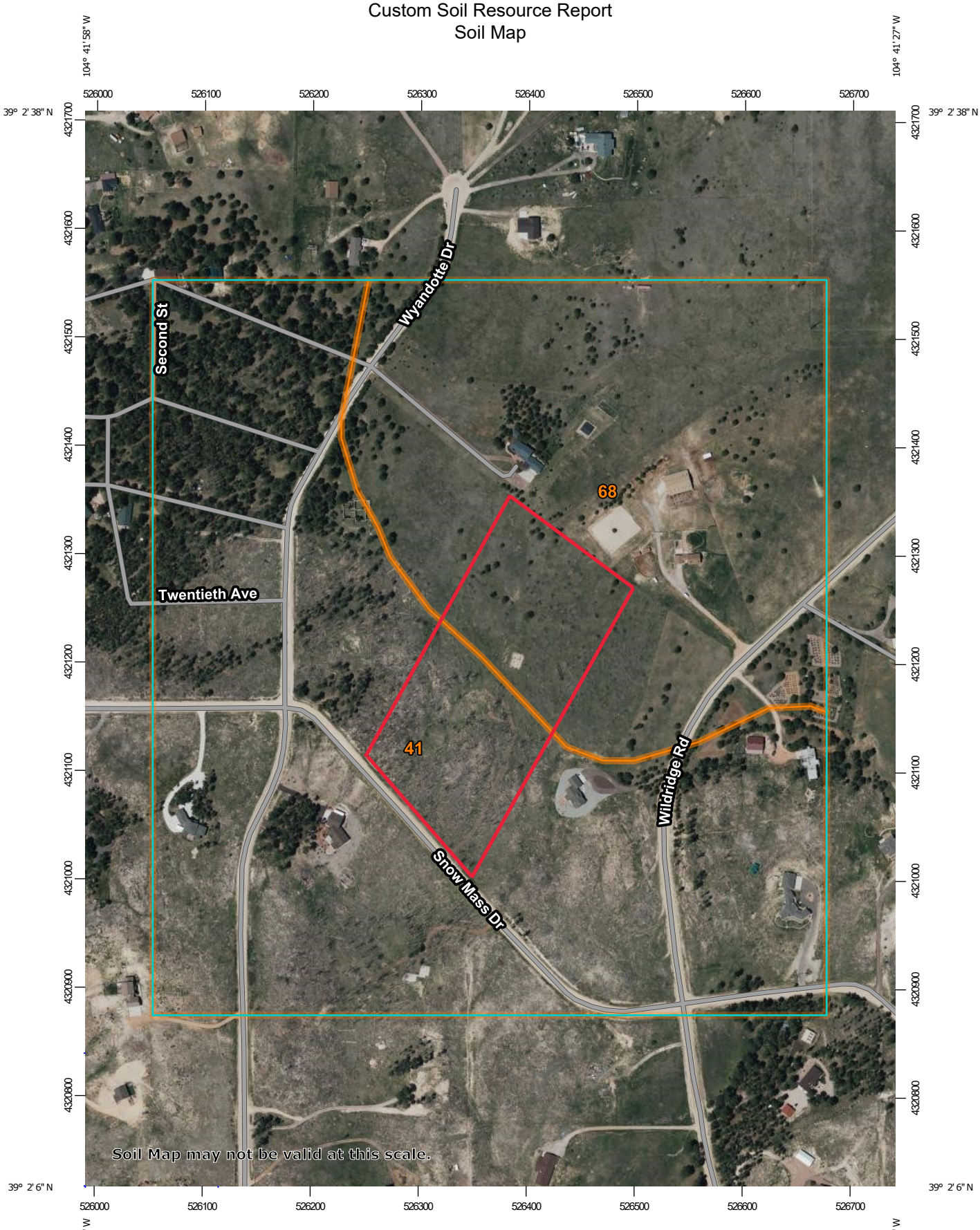
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:4,840 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Paso County Area, Colorado
Survey Area Data: Version 21, Aug 24, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 9, 2021—Jun 12, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
41	Kettle gravelly loamy sand, 8 to 40 percent slopes	63.9	60.9%
68	Peyton-Pring complex, 3 to 8 percent slopes	41.1	39.1%
Totals for Area of Interest		**105.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

El Paso County Area, Colorado

41—Kettle gravelly loamy sand, 8 to 40 percent slopes

Map Unit Setting

National map unit symbol: 368h
Elevation: 7,000 to 7,700 feet
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Kettle

Setting

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

Typical profile

E - 0 to 16 inches: gravelly loamy sand
Bt - 16 to 40 inches: gravelly sandy loam
C - 40 to 60 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 8 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Medium
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 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F048AY908CO - Mixed Conifer
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

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

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

APPENDIX C: PROFILE PIT EVALUATION

FEBRUARY 13, 2024

OWTS PROFILE PIT EVALUATION

PREPARED FOR: PAUL CLIFFORD

JOB #24-008
7030 SNOW MASS DRIVE,
LOT #13, FILING #7,
WILDWOOD RANCH ESTATES SUBDIVISION
SCHEDULE NUMBER: 5205209004
EL PASO COUNTY,
COLORADO

PREPARED BY: D&D ENGINEERING, LLC

317 OAK PLACE
MANITOU SPRINGS, CO 80829

OFFICE PHONE #: (719) 375-1779
EMAIL: OFFICE@DDENGINEERINGLLC.COM

Sincerely,

Douglas J Pretzer

Douglas J. Pretzer, P.E.
Principal Engineer

SITE CONDITIONS

D&D Engineering, LLC performed a visual and tactile soil evaluation at the stated address for the purpose of installing an On-Site Wastewater Treatment System (OWTS). The location of the test pits was determined by Paul Clifford. The proposed residence will be served by a proposed well. The natural slope of the property, across the proposed soil treatment area (STA) is variable. All applicable setbacks, as noted in Table 7-1 of the OWTS Regulations must be maintained. Weather conditions at the time of the test consisted of clear skies with moderate temperatures.

PROFILE PIT FINDINGS

The inspection was performed on February 1, 2024, in accordance with Table 10-1 of the **E.P.C.P.H. OWTS Regulations.** Two sets of profile pits were performed. The first two pits were located near the existing STA, to evaluate expanding the STA. The second two pits were located in a proposed location for a second residence.

Soil Profile #1:

0 to 6" - Topsoil - loam, organic composition.

6" to 36" - USDA soil texture sandy loam, soil type 2A, structure shape granular, structure grade 1, non-cemented, LTAR 0.50, brown in color, 10 YR 5/3, 14% rock.

36" to 54” - USDA soil texture sandy clay, soil type R1, structure shape massive, structure grade 0, weakly cemented, LTAR 0.15, olive brown in color, 2.5 Y 4/3, soil type 4A with 38% rock, gleying encountered throughout layer.

Groundwater: Not Encountered
Groundwater Evidence: Encountered 36” Below Existing Grade
Bedrock: Not Encountered

Soil Profile #2:

0 to 6" - Topsoil - loam, organic composition.

6" to 36" - USDA soil texture sandy clay loam, soil type 3A, structure shape granular, structure grade 1, non-cemented, LTAR 0.30, dark brown in color, 10 YR 3/3, 19% rock.

36" to 60” - USDA soil texture sandy clay, soil type 4A, structure shape massive, structure grade 0, weakly cemented, LTAR 0.15, olive brown in color, 2.5 Y 4/3, 31% rock, gleying and redoximorphic features encountered throughout layer, groundwater encountered 36 inches below grade.

Groundwater: Encountered 36” Below Existing Grade
Groundwater Evidence: Encountered 36” Below Existing Grade
Bedrock: Not Encountered

Soil Profile #3:

0 to 8" - Topsoil - loam, organic composition.

8" to 8' - USDA soil texture sandy clay, soil type 4A, structure shape massive, structure grade 0, non-cemented, LTAR 0.15, dark yellowish brown in color, 10 YR 4/6, less than 10% rock.

Groundwater: Not Encountered
Groundwater Evidence: Not Encountered
Bedrock: Not Encountered

Soil Profile #4:

0 to 8" - Topsoil - loam, organic composition.

8" to 6' - USDA soil texture sandy clay, soil type 4A, structure shape massive, structure grade 0, non-cemented, LTAR 0.15, dark yellowish brown in color, 10 YR 4/6, less than 10% rock, 32% rock between 48 inches and 60 inches below grade, redoximorphic features encountered 60 inches below grade.

Groundwater: Not Encountered
Groundwater Evidence: Encountered 60" Below Existing Grade.
Bedrock: Not Encountered

RECOMMENDATIONS

<u>Profile Pits #1 and #2</u>

An Engineered OWTS will be required for this site due to: USDA Soil Type 3A and groundwater evidence.

An above-grade uniformly pressure dosed soil treatment area is required.

Based on the observed conditions, we feel a design based on an LTAR of 0.30 GPD/SF (USDA 3A, treatment soil, treatment level 1) is reasonable.

<u>Profile Pits #3 and #4</u>

An Engineered OWTS will be required for this site due to: USDA Soil Type 4A and groundwater evidence.

The maximum depth of the installation shall not be deeper than 12 inches below the existing grade for a gravy-fed STA. The maximum depth of the installation shall not be deeper than 24 inches for a pressure dosed STA.

Based on the observed conditions, we feel a design based on an LTAR of 0.15 GPD/SF (USDA 4A, treatment soil, treatment level 1) is reasonable.

If during construction of the field itself, subsurface conditions change considerably or if the location of the proposed field changes, this office shall be notified to determine whether the conditions are adequate for the system as designed or whether a new system needs to be designed.

LIMITATIONS

This report is prepared in accordance with Colorado Department of Public Health and Environment, Regulation 43, and the local board of health OWTS regulations as well as generally accepted engineering standards and methods. Soil conditions can vary between pits and beyond the location of the pits. Even with proper design and installation, there remain uncertainties in the function of the STA and difficulties may arise. D&D Engineering, LLC provides no warranty, express or implied, regarding the contents of this report or the designs or installation of the OWTS based on the recommendations of this report. The Limits of Liability extend only to the fee rendered for the professional services provided.

Homeowners should understand proper OWTS operation and maintenance. Once the OWTS is installed, the homeowners are responsible for the continued operation and maintenance. Visit your local health department website or the EPA's "How to Care for Your Septic System."

This report is valid for 1 year from the date issued unless land use changes, code changes and/or changes in the generally accepted engineering standards dictate otherwise.

PROFILE PIT LOG #1

JOB #: 24-008
EQUIPMENT USED: BACKHOE

DATE EVALUATED: 2/1/2024
EVALUATED BY: RAH

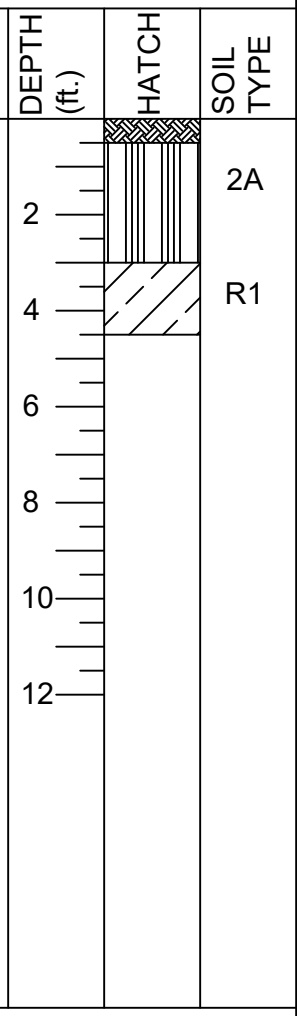
0"-6" TOPSOIL
Loam
Organic Composition

6"-36" SAND

Fine-Coarse Grained	USDA Soil Texture: Sandy Loam
Low-Moderate Density	USDA Soil Type: 2A
Low Moisture Content	USDA Soil Structure: Granular
Low-Moderate Clay Content	USDA Soil Grade: 1
Low-Moderate Cohesion	Cementation Class: Non-cemented
Low-Moderate Plasticity	LTAR: 0.50
Brown Color	14% Rock
10YR5/3	

36"-54" CLAY

Fine-Very Coarse Grained	USDA Soil Texture: Sandy Clay
High Density	USDA Soil Type: R1
Moderate-High Moisture Content	USDA Soil Structure: Massive
High Clay Content	USDA Soil Grade: 0
High Cohesion	Cementation Class: Weakly
High Plasticity	LTAR: 0.15
Olive Brown Color	Soil Type 4A w/ 38% Rock
2.5Y4/3	Gleying Throughout



LTAR to be Used for OWTS Sizing: **0.30 GPD/SF (USDA Type 3A, Treatment soil, Treatment Level 1)**
Depth to Groundwater (Permanent or Seasonal): Seasonal @ 36"
Depth to Bedrock and Type: Not Encountered
Depth to Proposed Infiltrative Surface from Ground Surface: Above Grade (Uniformly Pressure Dosed)
Soil Treatment Area Slope and Direction: Southwest @ 13%

Note: See El Paso County Board of Health Regulation Chapter 8: On-Site Wastewater Treatments Systems (OWTS) Regulations for Additional Information. Refer to Table 10-1 for Corresponding LTAR if Treatment Level 2, 2N, 3, or 3N will be Implemented in the Design of the OWTS. System Sizing Depends on a Number of Factors (i.e. LTAR, # of Bedrooms, Type of Soil Treatment Area (STA), Method of Transfer to the STA (Gravity, Dosed, or Pressure Dosed), and Type of Storage / Distribution Media Used in the STA)

Project: 24-008
Sheet: 1 of 5
Date: 7 Feb 2024
Revised:
Drawn by: rah
Checked by: djp

Project Address

Paul Clifford
7030 Snow Mass Drive,
Lot #13, Filing #7,
Wildwood Ranch Estates S/D,
Sch. No.5205209004
El Paso County, Colorado

D & D ENGINEERING
(719) 375-1779

PROFILE PIT LOG #2

JOB #: 24-008
EQUIPMENT USED: BACKHOE

DATE EVALUATED: 2/1/2024
EVALUATED BY: RAH

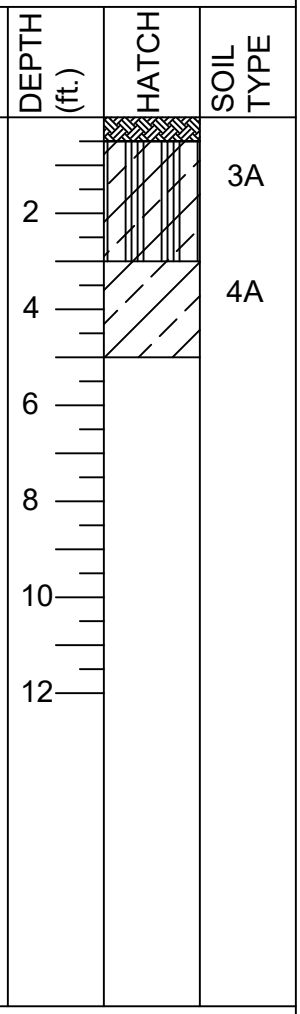
0"-6" TOPSOIL
Loam
Organic Composition

6"-36" CLAYEY SAND

Fine-Coarse Grained	USDA Soil Texture: Sandy Clay Loam
Low-Moderate Density	USDA Soil Type: 3A
Low-Moderate Moisture Content	USDA Soil Structure: Granular
Moderate Clay Content	USDA Soil Grade: 1
Moderate Cohesion	Cementation Class: Non-cemented
Moderate Plasticity	LTAR: 0.30
Dark Brown Color	19% Rock
10YR3/3	

36"-60" CLAY

Fine-Very Coarse Grained	USDA Soil Texture: Sandy Clay
Low-Moderate Density	USDA Soil Type: 4A
High Moisture Content	USDA Soil Structure: Massive
High Clay Content	USDA Soil Grade: 0
High Cohesion	Cementation Class: Weakly
High Plasticity	LTAR: 0.15
Olive Brown Color	31% Rock
2.5Y4/3	Gleying and Redox Throughout
	GW @ 36"



LTAR to be Used for OWTS Sizing: **0.30 GPD/SF (USDA Type 3A, Treatment soil, Treatment Level 1)**
Depth to Groundwater (Permanent or Seasonal): Seasonal and Permanent @ 36"
Depth to Bedrock and Type: Not Encountered
Depth to Proposed Infiltrative Surface from Ground Surface: Above Grade (Uniformly Pressure Dosed)
Soil Treatment Area Slope and Direction: Southwest @ 13%

Note: See El Paso County Board of Health Regulation Chapter 8: On-Site Wastewater Treatments Systems (OWTS) Regulations for Additional Information. Refer to Table 10-1 for Corresponding LTAR if Treatment Level 2, 2N, 3, or 3N will be Implemented in the Design of the OWTS. System Sizing Depends on a Number of Factors (i.e. LTAR, # of Bedrooms, Type of Soil Treatment Area (STA), Method of Transfer to the STA (Gravity, Dosed, or Pressure Dosed), and Type of Storage / Distribution Media Used in the STA)

Project: 24-008
Sheet: 2 of 5
Date: 7 Feb 2024
Revised:
Drawn by: rah
Checked by: djp

Project Address

Paul Clifford
7030 Snow Mass Drive,
Lot #13, Filing #7,
Wildwood Ranch Estates S/D,
Sch. No.5205209004
El Paso County, Colorado

D & D ENGINEERING
(719) 375-1779

PROFILE PIT LOG #3

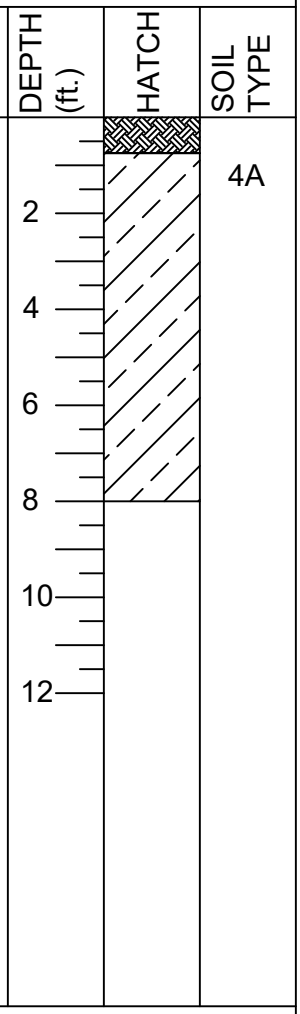
JOB #: 24-008
EQUIPMENT USED: BACKHOE

DATE EVALUATED: 2/1/2024
EVALUATED BY: RAH

0"-8" TOPSOIL
Loam
Organic Composition

8"-8' CLAY
Fine-Coarse Grained
Moderate-High Density
Low-Moderate Moisture Content
High Clay Content
High Cohesion
High Plasticity
Dark Yellowish Brown Color
10YR4/6

USDA Soil Texture: Sandy Clay
USDA Soil Type: 4A
USDA Soil Structure: Blocky
USDA Soil Grade: 1
Cementation Class: Non-cemented
LTAR: 0.15
<10% Rock



LTAR to be Used for OWTS Sizing: **0.15 GPD/SF (USDA Type 4A, Treatment soil, Treatment Level 1)**
Depth to Groundwater (Permanent or Seasonal): Not Encountered
Depth to Bedrock and Type: Not Encountered
Depth to Proposed Infiltrative Surface from Ground Surface: Max 24" Deep (Uniformly Pressure Dosed)
Soil Treatment Area Slope and Direction: East @ 5%

Note: See El Paso County Board of Health Regulation Chapter 8: On-Site Wastewater Treatments Systems (OWTS) Regulations for Additional Information. Refer to Table 10-1 for Corresponding LTAR if Treatment Level 2, 2N, 3, or 3N will be Implemented in the Design of the OWTS. System Sizing Depends on a Number of Factors (i.e. LTAR, # of Bedrooms, Type of Soil Treatment Area (STA), Method of Transfer to the STA (Gravity, Dosed, or Pressure Dosed), and Type of Storage / Distribution Media Used in the STA)

Project: 24-008
Sheet: 3 of 5
Date: 7 Feb 2024
Revised:
Drawn by: rah
Checked by: djp

Project Address

Paul Clifford
7030 Snow Mass Drive,
Lot #13, Filing #7,
Wildwood Ranch Estates S/D,
Sch. No.5205209004
El Paso County, Colorado

D & D ENGINEERING
(719) 375-1779

PROFILE PIT LOG #4

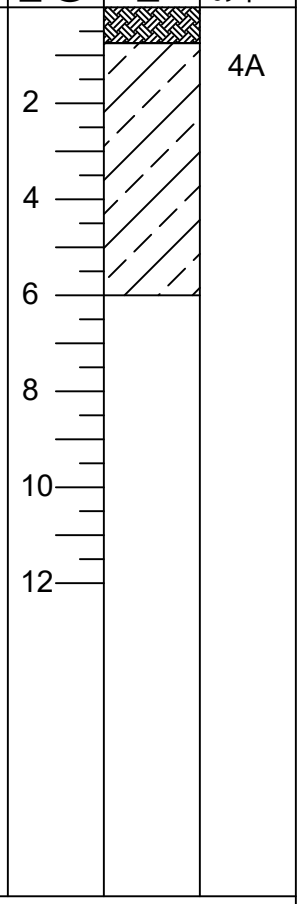
JOB #: 24-008
EQUIPMENT USED: BACKHOE

DATE EVALUATED: 2/1/2024
EVALUATED BY: RAH

0"-8" TOPSOIL
Loam
Organic Composition

8"-6' CLAY
Fine-Coarse Grained
High Density
Low-Moderate Moisture Content
High Clay Content
High Cohesion
High Plasticity
Dark Yellowish Brown Color
10YR4/6

USDA Soil Texture: Sandy Clay
USDA Soil Type: 4A
USDA Soil Structure: Massive
USDA Soil Grade: 0
Cementation Class: Non-cemented
LTAR: 0.15
<10% Rock
32% Rock Content Between 48"-60"
Redox @ 60"



LTAR to be Used for OWTS Sizing: **0.15 GPD/SF (USDA Type 4A, Treatment soil, Treatment Level 1)**
Depth to Groundwater (Permanent or Seasonal): Seasonal @ 60"
Depth to Bedrock and Type: Not Encountered
Depth to Proposed Infiltrative Surface from Ground Surface: Max 24" Deep (Uniformly Pressure Dosed)
Soil Treatment Area Slope and Direction: East @ 5%

Note: See El Paso County Board of Health Regulation Chapter 8: On-Site Wastewater Treatments Systems (OWTS) Regulations for Additional Information. Refer to Table 10-1 for Corresponding LTAR if Treatment Level 2, 2N, 3, or 3N will be Implemented in the Design of the OWTS. System Sizing Depends on a Number of Factors (i.e. LTAR, # of Bedrooms, Type of Soil Treatment Area (STA), Method of Transfer to the STA (Gravity, Dosed, or Pressure Dosed), and Type of Storage / Distribution Media Used in the STA)

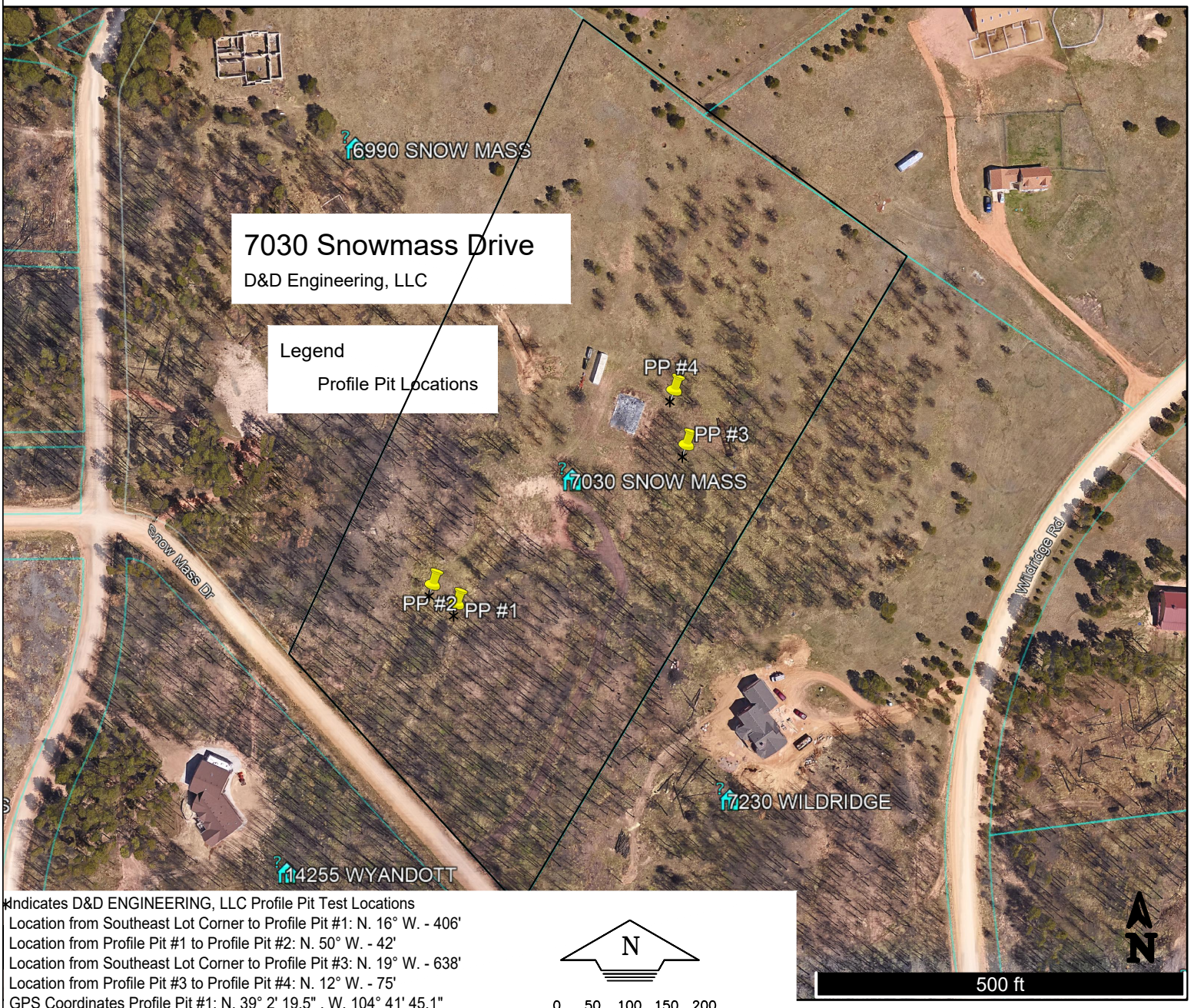
Project: 24-008
Sheet: 4 of 5
Date: 7 Feb 2024
Revised:
Drawn by: rah
Checked by: djp

Project Address

Paul Clifford
7030 Snow Mass Drive,
Lot #13, Filing #7,
Wildwood Ranch Estates S/D,
Sch. No.5205209004
El Paso County, Colorado

D & D ENGINEERING
(719) 375-1779

PROFILE PIT MAP



*Indicates D&D ENGINEERING, LLC Profile Pit Test Locations
Location from Southeast Lot Corner to Profile Pit #1: N. 16° W. - 406'
Location from Profile Pit #1 to Profile Pit #2: N. 50° W. - 42'
Location from Southeast Lot Corner to Profile Pit #3: N. 19° W. - 638'
Location from Profile Pit #3 to Profile Pit #4: N. 12° W. - 75'
GPS Coordinates Profile Pit #1: N. 39° 2' 19.5" , W. 104° 41' 45.1"
GPS Coordinates Profile Pit #2: N. 39° 2' 19.8" , W. 104° 41' 45.5"
GPS Coordinates Profile Pit #3: N. 39° 2' 21.6" , W. 104° 41' 41.3"
GPS Coordinates Profile Pit #4: N. 39° 2' 22.3" , W. 104° 41' 41.5"

N

0 50 100 150 200
GRAPHIC SCALE IN FEET
SCALE: 1" = 200'

Project: 24-008	**Project Address**
Sheet: 5 of 5	Paul Clifford
Date: 7 Feb 2024	7030 Snow Mass Drive,
Revised:	Lot #13, Filing #7,
Drawn by: rah	Wildwood Ranch Estates S/D,
Checked by: djp	Sch. No.5205209004
	El Paso County, Colorado

D & D ENGINEERING
(719) 375-1779

APPENDIX D: EXISTING OWTS RECORDS

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

Permit # 8113
Date 10/11/94

5205209004

APPROVED: YES ✓ NO ____ ENVIRONMENTALIST KRUEGER

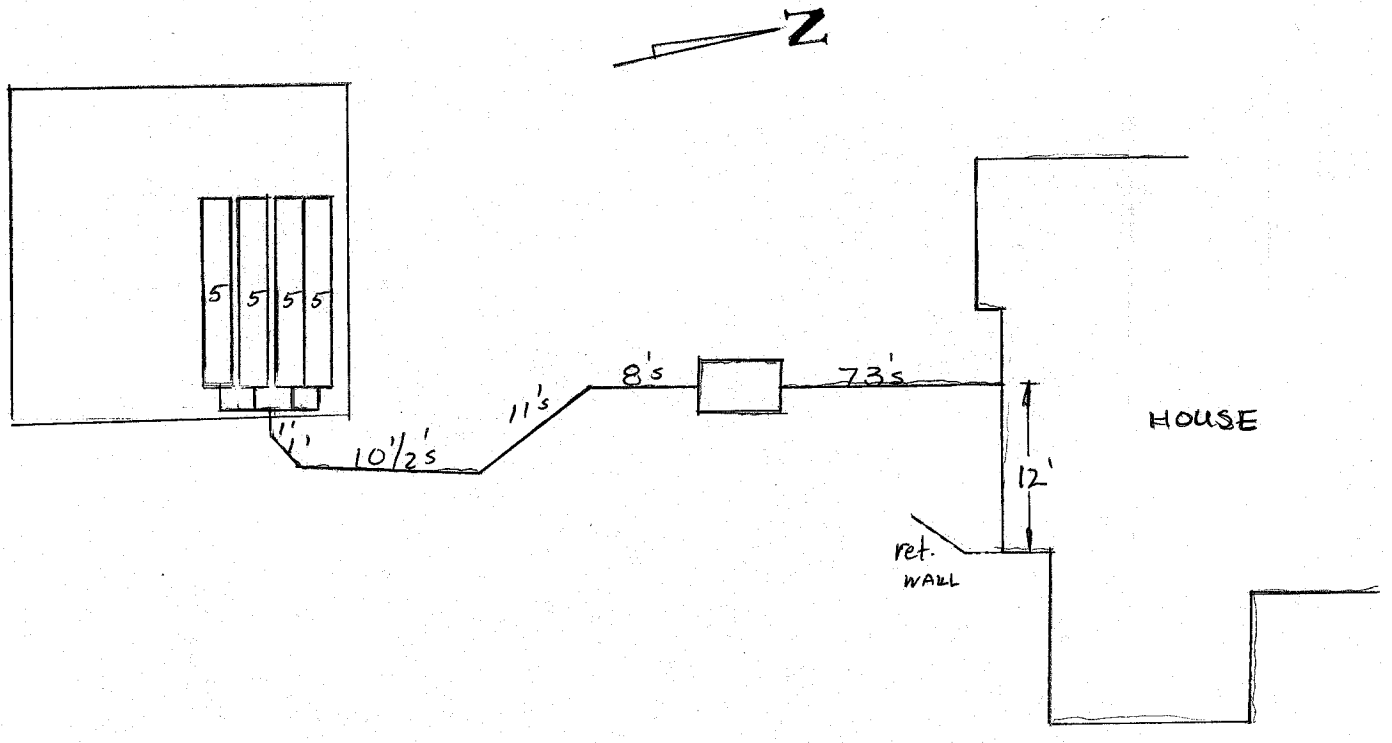
Address 7030 SNOWMASS DR. Owner Crawford

Legal Description LOT 13 WILDWOOD RANCH #7
Residence ✓, # of bedrooms 3; Commercial ____; System Installer RAMPART RANGE

SEPTIC TANK:
Commercial ✓; Noncommercial ____, L ____, W ____, WD ____
Construction Material CONCRETE, capacity 1250 gallons.

DISPOSAL FIELD:
Rock Systems:
Trench: depth ____, width ____, total length ____, sq. feet ____
Bed: depth ____, length ____, width ____, sq. feet ____
Rock type ____, depth ____, under PVC ____, over PVC ____
Seepage Pits: # of pits ____, total # of rings ____, working depth(s) ____
size of pit(s) L X W ____, lining material ____, total sq. feet ____
Rockless Systems:
Chamber: Type INFILTRATOR, number of chambers 20, bed ✓, trench ____
sq. ft./section 18, reduction allowed 40 %, sq. ft required 563
total sq. ft. installed 600, depth of installation ____
Engineer Design (Y) or N, Designing Engineer HENRY DANLEY,
Approval letter provided? (Y) or N
Well 50 feet from tank (Y) or N 100 feet from leach field (Y) or N
Well installed at time of septic system inspection (Y) or 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:



Acres 10 **EL PASO COUNTY • DEPARTMENT OF HEALTH AND ENVIRONMENT** Permit 8113

301 South Union Blvd. • Colorado Springs, Colorado • 578-3125

Water Supply WELL Receipt No. 5788

PERMIT

TO CONSTRUCT, ALTER, REPAIR OR MODIFY ANY INDIVIDUAL SEWAGE DISPOSAL SYSTEM

Issued to MICHA Date 5-25-94

Address of Property 7030 SNOWMASS DRIVE, LOT 13, FILING 7 Phone 574-5905

(Permit valid at this address only)

Sewage-Disposal System work to be performed by RAMPART RANGE Phone 481-2655

This Permit is issued in accordance with 25-10-106 Colorado Revised Statutes 1973, as amended. 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). This permit is revokable if all stated requirements are not met.

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

$150.00

PERMIT FEE (NOT REFUNDABLE)

John B. Krueger, M.D.

DIRECTOR, DEPARTMENT OF HEALTH AND ENVIRONMENT

5-25-95

DATE OF EXPIRATION

Krueger

ENVIRONMENTALIST

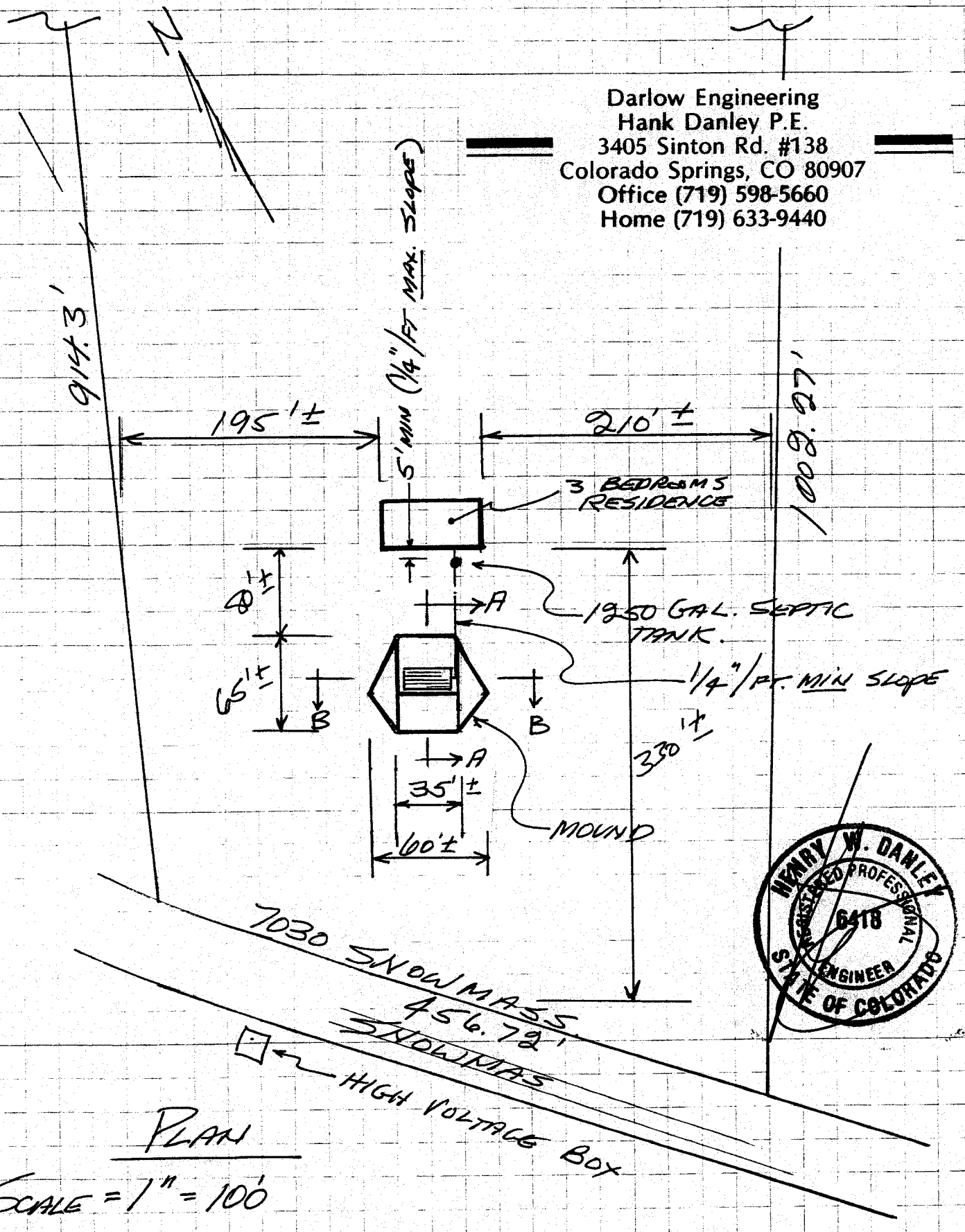
NOTE: LEAVE ENTIRE SEWAGE-DISPOSAL SYSTEM UNCOVERED FOR FINAL INSPECTION. 48 HOUR ADVANCE NOTICE REQUIRED.

SEPTIC TANK:	TRENCH SYSTEM:	BED SYSTEM:	SEEPAGE PIT SYSTEM:
1250 gallons	total square feet *563 ____ ft. of trench ____ inches wide ____ ft. of trench ____ inches wide	total square feet ____	total square feet ____ ____ rings or ____ diam.x ____ w/d

NOTES: ENGINEER DESIGN. ENGINEER TO SUBMIT APPROVAL LETTER TO EL PASO COUNTY HEALTH DEPT.

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.

Darlow Engineering
Hank Danley P.E.
3405 Sinton Rd. #138
Colorado Springs, CO 80907
Office (719) 598-5660
Home (719) 633-9440

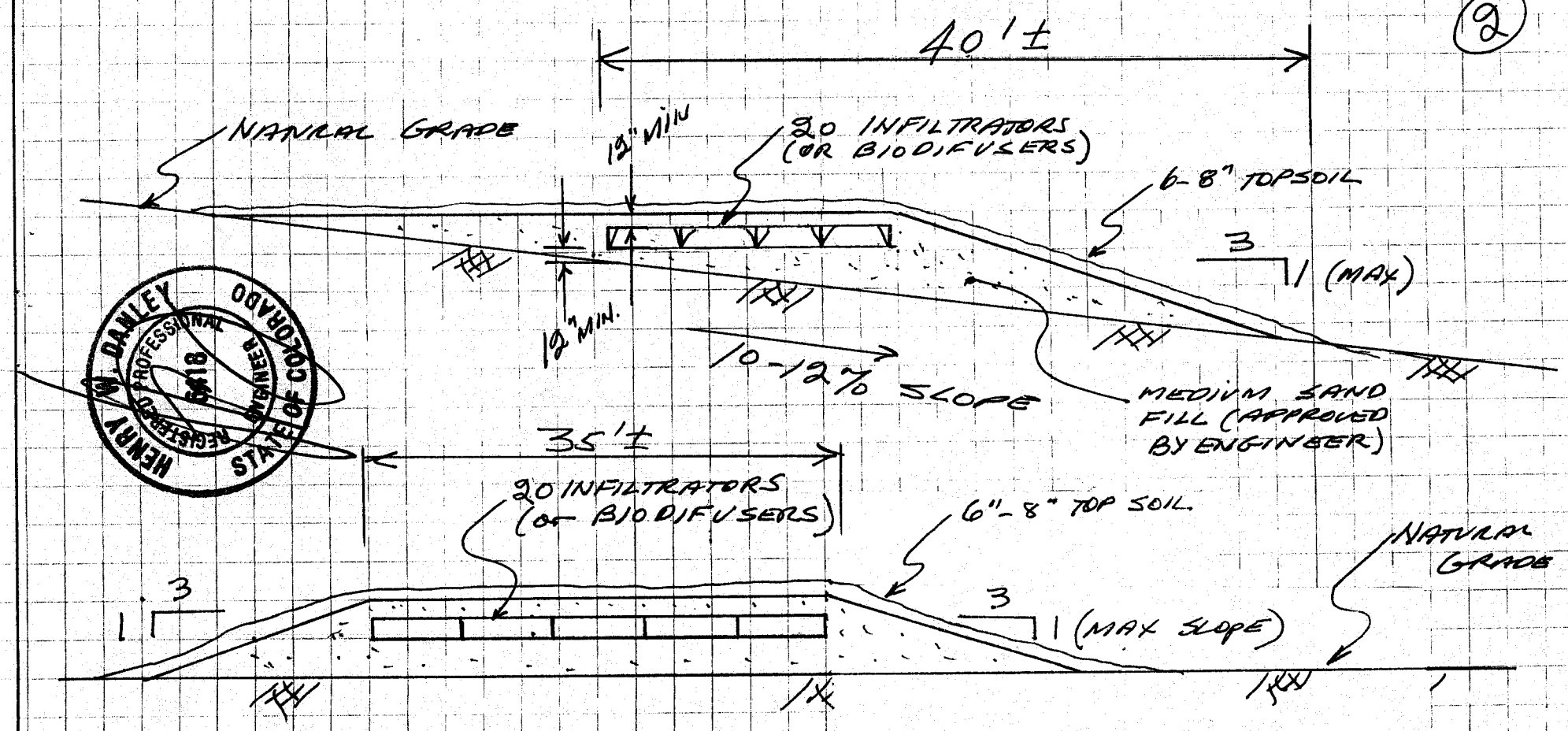


HENRY W. DANLEY
REGISTERED PROFESSIONAL ENGINEER
6418
STATE OF COLORADO

PLAN

SCALE = 1" = 100'

* VERIFY LOCATION IN FIELD



HENRY W. DANLEY
REGISTERED PROFESSIONAL ENGINEER
STATE OF COLORADO
9818

ACTUAL BASE AREA = 35 × 40' = 1400 □' > 1380 □' ok
" BED AREA = 12' × 30' = 360 □' > 338 □' ok.

Darlow Engineering
Hank Danley P.E.
3405 Sinton Rd. #138
Colorado Springs, CO 80907
Office (719) 598-5660
Home (719) 633-9440

Darlow Engineering
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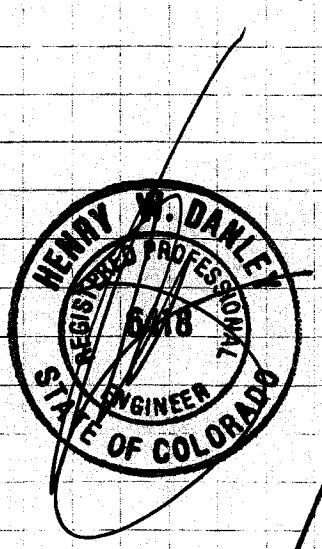

PLAN 1"=10'

APPENDIX E: OWTS SUITABILITY MAP

OWTS SUITABILITY MAP

∗Indicates D&D ENGINEERING, LLC Profile Pit Test Locations
Location from Southeast Lot Corner to Profile Pit #1: N. 16° W. - 406'
Location from Profile Pit #1 to Profile Pit #2: N. 50° W. - 42'
Location from Southeast Lot Corner to Profile Pit #3: N. 19° W. - 638'
Location from Profile Pit #3 to Profile Pit #4: N. 12° W. - 75'
GPS Coordinates Profile Pit #1: N. 39° 2' 19.5" , W. 104° 41' 45.1"
GPS Coordinates Profile Pit #2: N. 39° 2' 19.8" , W. 104° 41' 45.5"
GPS Coordinates Profile Pit #3: N. 39° 2' 21.6" , W. 104° 41' 41.3"
GPS Coordinates Profile Pit #4: N. 39° 2' 22.3" , W. 104° 41' 41.5"

Project: 24-008
Sheet: 1 of 1
Date: 4 Mar 2024
Revised:
Drawn by: djp
Checked by: djp

Project Address

Alan Greaves
7030 Snow Mass Drive,
Lot #1 and 2,
Greaves Subdivision Filing #1,
Sch. No. 5205209004
El Paso County, Colorado

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