

June 23, 2021

Land Development Consultants, Inc.
3898 Maizeland Road
Colorado Springs, CO 80909



ENTECH
ENGINEERING, INC.

505 ELKTON DRIVE
COLORADO SPRINGS, CO 80907
PHONE (719) 531-5599
FAX (719) 531-5238

Attn: Dan Kupferer

Re: OWTS – Wastewater Study
Manley Subdivision Filing No. 2
Curtis Road and Jones Road
El Paso County, Colorado

Dear Mr. Kupferer:

GENERAL SITE CONDITIONS AND PROJECT DESCRIPTION

The project lies in the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 22, Township 13 South, Range 64 West of the 6th Principal Meridian in El Paso County, Colorado. The site is located northeast of the intersection of Curtis and Jones Roads, 3 miles southeast of Falcon, Colorado. The location of the site is as shown on the Vicinity Map, Figure 1.

The topography of the site is gradually to moderately sloping to the south-southeast. Minor drainage swales are located in the northern and southern portions of the property. Water was not observed in the drainages at the time of this investigation. The site boundaries are indicated on the USGS Map, Figure 2. Previous land uses have included undeveloped and rural residential/agricultural land. The site contains field grasses, weeds, and yuccas. An existing house with a water well and septic system is located on Lot 2 of the Manley Subdivision Filing No. 1. The house will remain and be replatted as Lot 1 of the Manley Subdivision Filing No. 2. An existing mobile home is located on proposed Lot 2, which will remain. Site photographs were taken and site mapping was completed on was June 16, 2021. Site photographs are included in appendix A. Test Borings and Test Pits were performed on April, 23, 2021.

Total acreage involved in the proposed second filing of the subdivision is 21.65-acres. Two rural residential lots are proposed as part of the subdivision. The proposed lot sizes range from 5.513-acres to 16.137-acres. The existing houses located on the lots will remain. The lots will be serviced by individual wells and on-site wastewater treatment systems. The Site Plan is presented in Figure 3.

SCOPE OF THE REPORT

The scope of the report will include the following:

- 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.
- The site will be evaluated for individual on-site wastewater treatment systems in accordance with El Paso County specifications.

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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 June 16, 2021.

Two test pits were excavated on the site to determine general suitability of the soil characteristics for residential construction. The locations of the test pits are indicated on the Site Plan/Test Boring Location Map, Figure 3. The 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 three soil types on the site. Complete descriptions of the soil type are presented in Appendix D. In general, the soils consist of sandy loam to gravelly loamy sand. The soils are described as follows:

<u>Type</u>	<u>Description</u>
8	Blakeland loamy sand, 1-9% slopes
83	Stapleton sandy loam, 3-8% slopes
95	Truckton loamy sand, 1-9% slopes

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The soils have generally been described to have moderately rapid to 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 consisted of silty sand. Bedrock was not encountered in the test pits. The upper sands were encountered at medium dense states and moderate moisture conditions. The samples of sand tested had 11 to 22 percent of the soil size particles passing the No. 200 sieve. The silty sand typically has low expansion potential.

Groundwater

Groundwater was not encountered in the test pits which were excavated to depths of 8 feet. Groundwater is not anticipated to affect shallow foundations on the majority of the site. 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 18 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. Overlying the Dawson Formation are younger deposits of sheetwash and alluvium.

The geology of the site was evaluated using the *Geologic Map of the Falcon Quadrangle*, by Morgan in 2012, (Reference 4, Figure 5). The Geology Map for the site is presented in Figure 6. Three mappable units were identified on this site which is described as follows:

- Qsw Sheetwash Deposits of Holocene to Late Pleistocene Age:** These materials consist of silty to clayey sands with some gravel. The material was deposited by the action of sheetwash derived from nearby deposits.
- Qb Broadway Alluvium (Alluvium Three) of Late Pleistocene Age:** These materials consist of middle stream terrace deposits. The materials typically consist of silty to clayey gravelly sands.
- Qg₂ Pediment Gravel Two of Middle Pleistocene Age:** These are stream terrace deposits that consist of reddish-brown silty sand and gravels and may contain some cobble and boulder-size materials. Much of the material contained in the Pediment Gravel Two has been derived from the Pikes Peak Granite to the west. The Pediment Gravel Two

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correlates to the Verdos Alluvium of Quaternary Age as mapped in US Geological Survey mappings (Reference 4).

The soils listed above were mapped from site-specific mapping, the *Geologic Map of the Falcon Quadrangle* distributed by the Colorado Geologic Survey in 2012 (Reference 4, Figure 5), and the *Geologic Map of the Pueblo 1° x 2° Quadrangle*, distributed by the US Geological Survey in 1978 (Reference 5). The test borings were used in evaluating the site and are included in Appendix B. The Geology Map prepared for the site is presented in Figure 6.

Drainage Areas

Minor drainage areas exist in the northeastern portion of Lot 1 and southern portion of Lot 2. No water was observed flowing in the drainages at the time of the investigation, however, these areas have the potential for seasonal shallow groundwater. These areas are indicated in the Geology/Engineering Geology Map (Figure 6) and are discussed below. Due to the size of the proposed lots these areas can be avoided or redirected around proposed structures or proposed soil treatment areas. The proposed building areas are not affected by these areas. The site does not lie within any floodplain zones according to the FEMA Map No. 08041CO568G dated December 7, 2018 (Figure 7, Reference 6). Exact locations of floodplain and specific drainage studies are beyond the scope of this report.

Potentially Seasonal Shallow Groundwater Area

In these areas, we would anticipate the potential for periodically high subsurface moisture conditions, frost heave potential and highly organic soils. These areas lie within defined minor drainages 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.**

ON-SITE WASTEWATER TREATMENT

The Natural Resource Conservation Service (Reference 1), previously the Soil Conservation Service (Reference 2) has been mapped with three soil descriptions. The Soil Survey Map (Reference 1) is presented in Figure 4, and the Soil Survey Descriptions (Reference 2) are presented in Appendix C. The soils are described as having moderate to rapid percolation rates. The existing septic system is located on Lot 1. Observations of the leach area indicated that the system is operating properly. Records for the existing septic systems located in the Manley Subdivision Filing No. 1 are included in Appendix E.

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Soils encountered in the tactile test pits consisted of sandy loam. The limiting layers encountered in the test pits are the sandy loam, which corresponds with USDA Soil Types 2A, with an LTAR values of 0.50 gallons per day per square foot.

Signs of seasonally occurring groundwater were not observed in the test pits. Absorption fields must be maintained a minimum of 4 feet above groundwater, bedrock, or confining layers. Should groundwater or bedrock be encountered within 6 feet of the surface, designed systems will be required. Conventional systems are anticipated on the lots. Testing will be required on each lot to determine the site characteristics prior to construction.

In summary, it is our opinion the site is suitable for individual on-site wastewater treatment systems (OWTS) and that contamination of surface and subsurface water resources should not occur provided the OWTS sites are evaluated and installed according to El Paso County and State Guidelines and properly maintained. Based on the testing performed designed systems are anticipated for the majority of the lots, depending on soils encountered. The Septic Suitability Map is presented in Figure 8. Potential house locations, water wells, and two septic sites for the new lots are indicated on Figure 8. Absorption fields must be located a minimum of 100 feet from any well, including those on adjacent properties. Absorption fields must also be located a minimum of 50 feet from any drainages, floodplains or ponded areas and 25 feet from dry gulches.

CLOSURE

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

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.
Geologist

LLL

Encl.

Entech Job No. 210545
AAprojects/2021/210545 wws

Reviewed by



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

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OWTS – Wastewater Study
Manley Subdivision Filing No. 2
Curtis Road and Jones Road
El Paso County, Colorado

BIBLIOGRAPHY

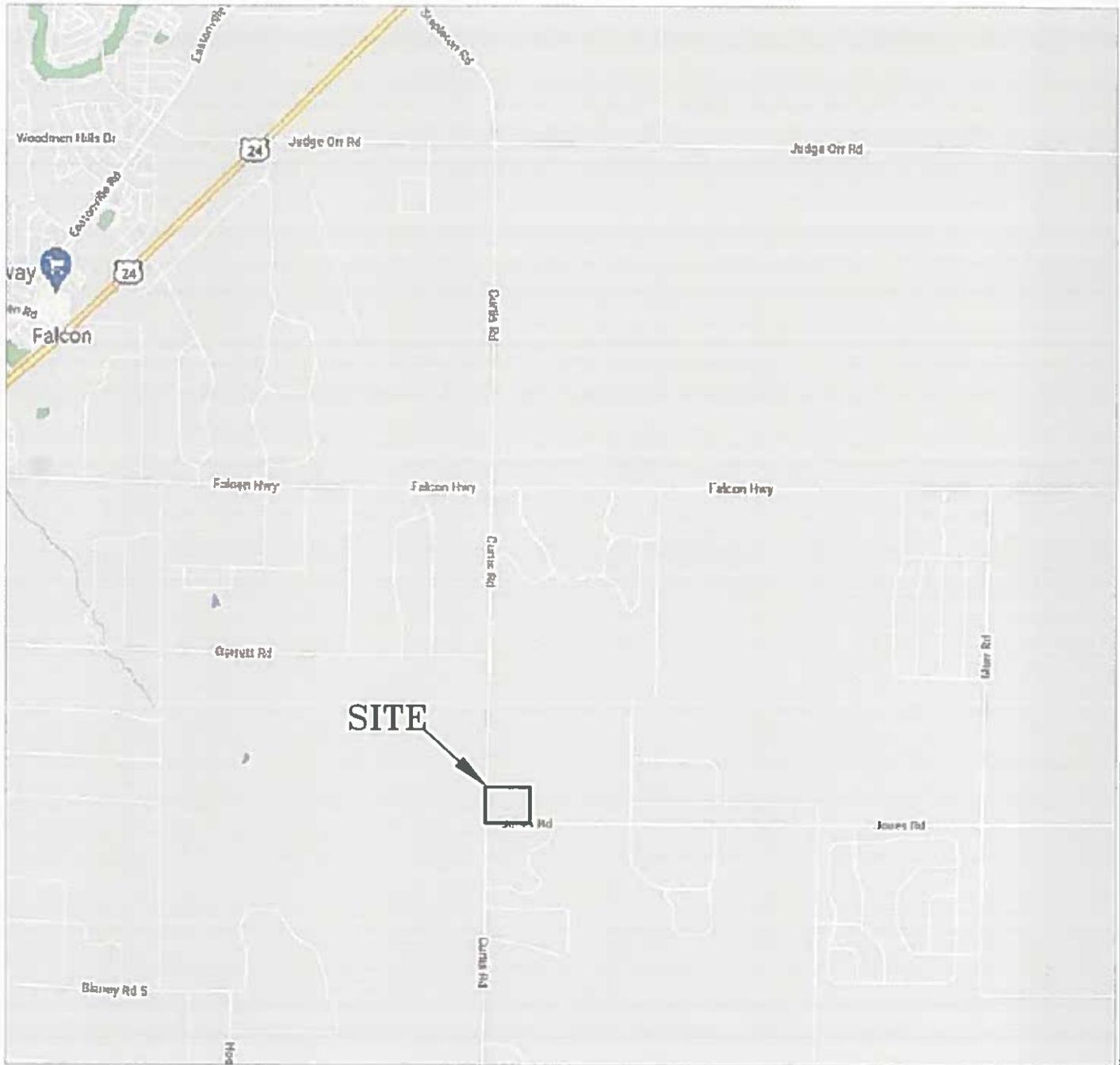
1. Natural Resource Conservation *Service*, September 13, 2019. *Web Soil Survey*. United States Department Agriculture, <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
2. United States Department of Agriculture Soil Conservation Service. June 1981. *Soil Survey of El Paso County Area, Colorado*.
3. Scott, Glen R.; Taylor Richard B.; Epis, Rudy C; and Wobus, Reinhard A. 1978. *Geologic Structure Map of the Pueblo 1° x 2° Quadrangle, South-Central Colorado*. Sheet 2. U.S. Geologic Survey. Map I-1022, Sheet 2.
4. Morgan, Matthew, L., and White, Jonathan, L., 2012. *Geologic Map of the Falcon Quadrangle, El Paso County, Colorado*. Colorado Geological Survey. Open-File Report 12-05.
5. Scott, Glen R.; Taylor Richard B.; Epis, Rudy C; and Wobus, Reinhard A. 1978. *Geologic Structure Map of the Pueblo 1° x 2° Quadrangle, South-Central Colorado*. Sheet 2. U.S. Geologic Survey. Map I-1022.
6. Federal Emergency Management Agency. December 7, 2018. *Flood Insurance Rate Maps for the City of Colorado Springs, Colorado*. Map Number 08041CO568G

TABLE

Table 1: Summary Test Pit Results

Test Pit No.	Depth to Bedrock (ft.)	Depth to Groundwater (ft.)	USDA Soil Type	LTAR Value
1	>8	>8	2A	0.50
2	>8	>8	2	0.60

FIGURES



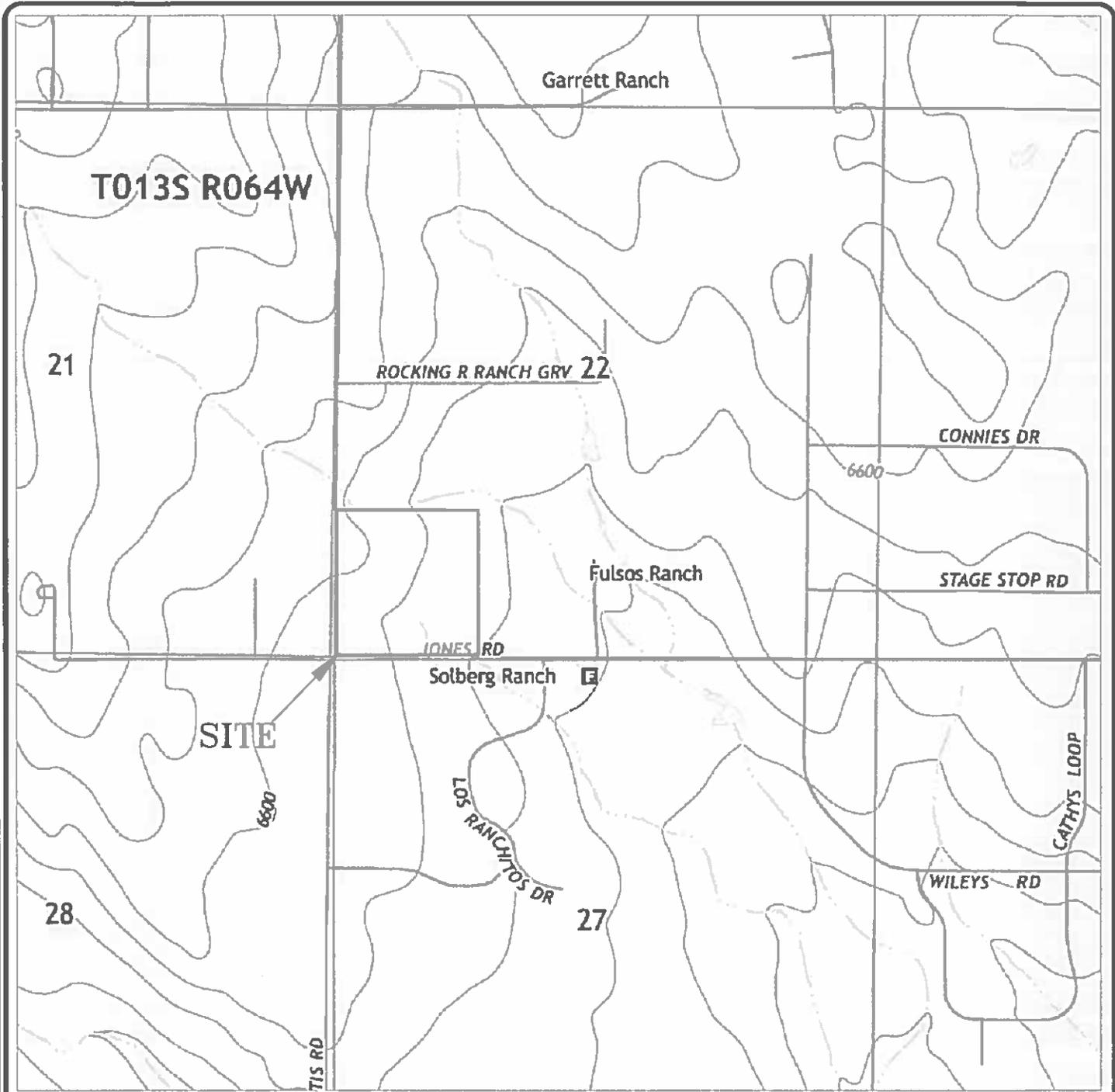
ENTECH
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305 ELKTON DRIVE
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VICINITY MAP
MANLEY SUBDIVISION, FILING NO. 2
CURTIS ROAD & JONES ROAD
EL PASO COUNTY, CO.
FOR: LAND DEVELOPMENT CONSULTANTS, INC

DRAWN: LLL	DATE: 6/14/21	CHECKED:	DATE:
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JOB NO.:
210545

FIG NO.:
1



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USGS TOPOGRAPHY MAP
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 EL PASO COUNTY, CO.
 FOR: LAND DEVELOPMENT CONSULTANTS, INC

DRAWN:
 LLL

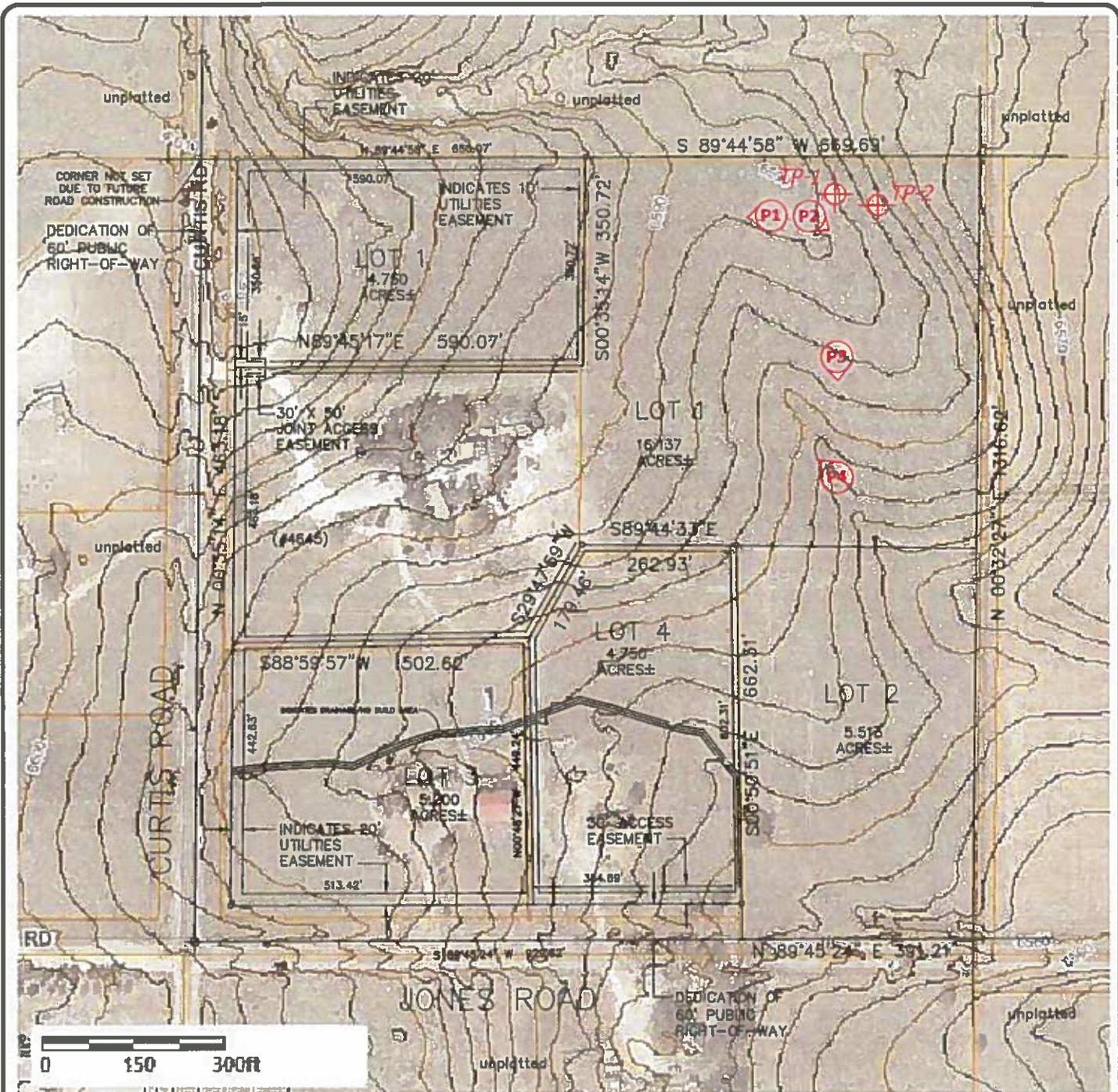
DATE:
 6/14/21

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JOB NO.:
 210545

FIG NO.:
 2



-  TP- APPROXIMATE TEST PIT LOCATION AND NUMBER
-  - APPROXIMATE PHOTOGRAPH LOCATION AND NUMBER



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SITE PLAN/TESTING LOCATION MAP
MANLEY SUBDIVISION, FILING NO. 2
CURTIS ROAD & JONES ROAD
EL PASO COUNTY, CO.
FOR: LAND DEVELOPMENT CONSULTANTS, INC

JOB NO.:
210545

FIG NO.:
3

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Jones Rd

8

83

95

SITE

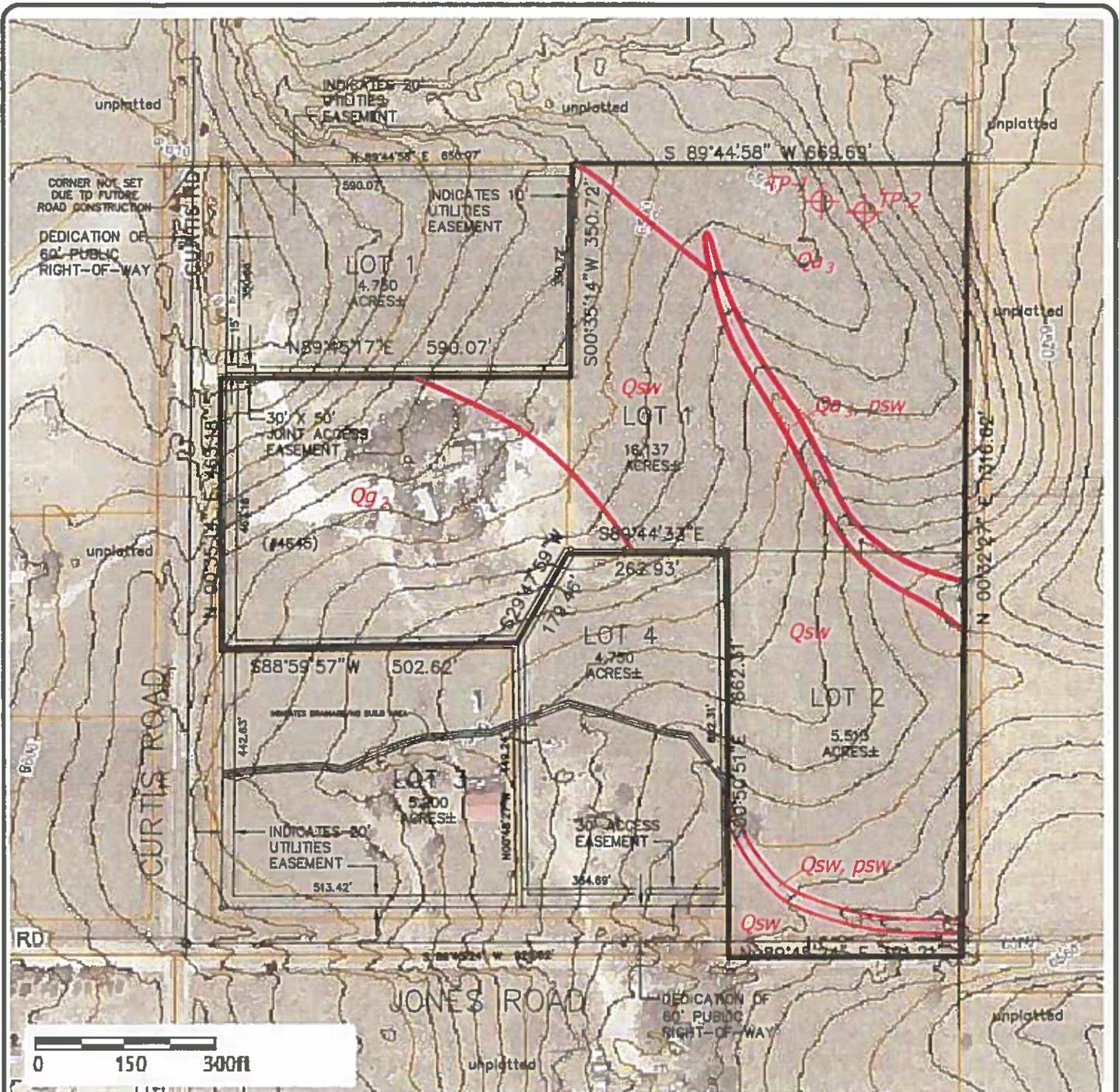


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SOIL SURVEY MAP
MANLEY SUBDIVISION, FILING NO. 2
CURTIS ROAD & JONES ROAD
EL PASO COUNTY, CO.
FOR: LAND DEVELOPMENT CONSULTANTS, INC

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JOB NO.:
210545
FIG NO.:
4



Legend:

- Qsw - Sheetwash Deposits of Holocene to late Pleistocene Age.
silty to clayey sands deposited by the action of sheetwash and gravity
- Qa₃ - Alluvium Three of late Pleistocene Age
Stream terrace deposited sands correlated to the Broadway Alluvium
- Qg₂ - Piedmont Gravel Two of middle Pleistocene Age.
Red brown sandy stream terrace deposits
- psw - potentially shallow groundwater area



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GEOLOGY/ENGINEERING GEOLOGY MAP
MANLEY SUBDIVISION, FILING NO. 2
CURTIS ROAD & JONES ROAD
EL PASO COUNTY, CO.
FOR: LAND DEVELOPMENT CONSULTANTS, INC

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DATE:
6/16/21

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DATE:

JOB NO.:
210545

FIG NO.:
6



SITE

08041C0568G
eff. 12/7/2018



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FEMA FLOODPLAIN MAP
MANLEY SUBDIVISION, FILING NO. 2
CURTIS ROAD & JONES ROAD
EL PASO COUNTY, CO.
FOR: LAND DEVELOPMENT CONSULTANTS, INC

DRAWN:
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DATE:
6/4/21

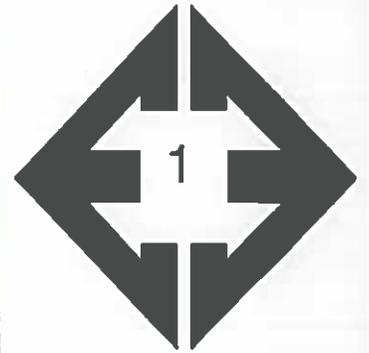
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210545

FIG NO.:
7

APPENDIX A: Photographs



Looking west from the northeastern portion of the property.

June 16, 2021



Looking southeast from the northeastern portion of the property.

June 16, 2021



**Looking south from
the central portion of
the property.**

June 16, 2021



**Looking northwest
along minor drainage
swale in the east
central portion of the
property.**

June 16, 2021

APPENDIX B: Test Pit Logs

TEST PIT NO. 1
 DATE EXCAVATED 5/4/2021
 Job # 210545

TEST PIT NO. 2
 DATE EXCAVATED 5/4/2021
 CLIENT NANCY MANLEY
 LOCATION MANLEY SUBDIVISION

REMARKS	Depth (ft)	Symbol	Samples	Soil Structure Shape	Soil Structure Grade	USDA Soil Type	REMARKS	Depth (ft)	Symbol	Samples	Soil Structure Shape	Soil Structure Grade	USDA Soil Type
topsoil, sandy clay loam, brown, moist	1						topsoil, sandy clay loam, brown, moist	1					
sandy loam, fine to coarse grained, pale brown, moist	2			ma		2A	sandy loam, fine to coarse grained, pale brown, moist	2			ma		2A
sandy loam, fine to very coarse grained, pale brown, moist	3							3					
	4							4					
	5							5					
	6			gr	m	2		6					
	7							7					
	8							8					
	9							9					
	10							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



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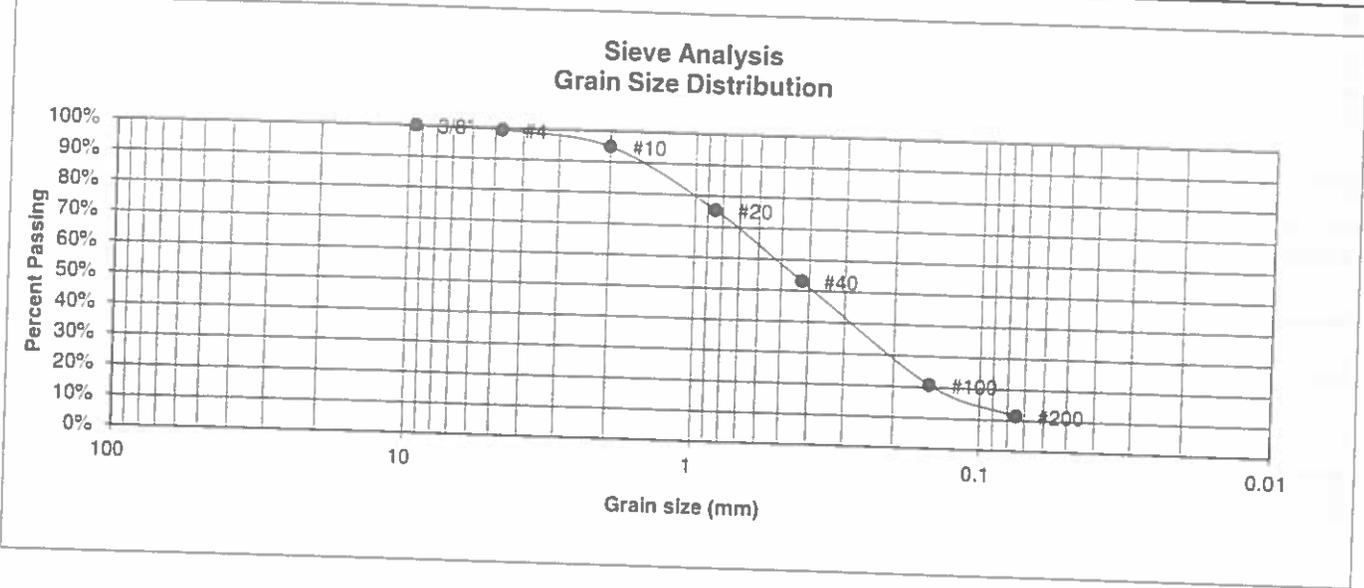
TEST PIT LOG

DRAWN: jhr	DATE: 5/4/2021	CHECKED: LLL	DATE: 5/13/21
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JOB NO.
210545
 FIG NO.
B-1

APPENDIX C: Laboratory Test Results

BORING NO.	TP-1	UNIFIED CLASSIFICATION	SM-SW	TEST BY	BL
DEPTH(ft)	2	AASHTO CLASSIFICATION		JOB NO.	210545
CLIENT	NANCY MANLEY				
PROJECT	MANLEY SUBDIVISION				



U.S. Sieve #	Percent Finer	Atterberg Limits	Swell
3"		Plastic Limit	Moisture at start
1 1/2"		Liquid Limit	Moisture at finish
3/4"		Plastic Index	Moisture increase
1/2"			Initial dry density (pcf)
3/8"	100.0%		Swell (psf)
4	99.4%		
10	94.9%		
20	75.4%		
40	53.1%		
100	20.7%		
200	11.4%		

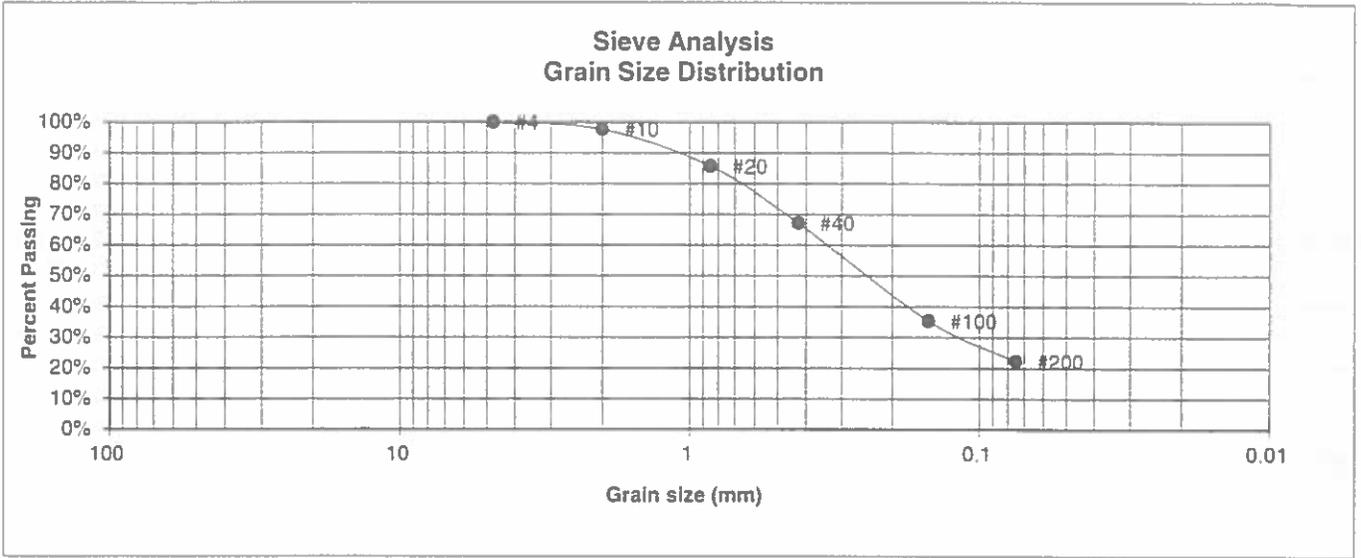
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COLORADO SPRINGS COLORADO 80907

LABORATORY TEST RESULTS

DRAWN	DATE	CHECKED	DATE
		LLC	5/23/10

JOB NO.: 210545
FIG NO.: C-1

BORING NO.	TP-2	UNIFIED CLASSIFICATION	SM	TEST BY	BL
DEPTH(ft)	2	AASHTO CLASSIFICATION		JOB NO.	210545
CLIENT	NANCY MANLEY				
PROJECT	MANLEY SUBDIVISION				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	
4	100.0%
10	97.7%
20	85.7%
40	67.2%
100	35.4%
200	22.3%

Atterberg Limits
 Plastic Limit
 Liquid Limit
 Plastic Index

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



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**LABORATORY TEST
RESULTS**

DRAWN

DATE:

CHECKED

DATE:

LL

5/22/21

JOB NO.
210545

FIG NO.

1-2

APPENDIX D: Soil Survey Descriptions

El Paso County Area, Colorado

8—Blakeland loamy sand, 1 to 9 percent slopes

Map Unit Setting

National map unit symbol: 369v
Elevation: 4,600 to 5,800 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 125 to 145 days
Farmland classification: Not prime farmland

Map Unit Composition

Blakeland and similar soils: 98 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Blakeland

Setting

Landform: Hills, flats
Landform position (three-dimensional): Side slope, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock and/or eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 11 inches: loamy sand
AC - 11 to 27 inches: loamy sand
C - 27 to 60 inches: sand

Properties and qualities

Slope: 1 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: R049XB210CO - Sandy Foothill
Hydric soil rating: No

Minor Components

Pleasant

Percent of map unit: 1 percent

Landform: Depressions

Hydric soil rating: Yes

Other soils

Percent of map unit: 1 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: El Paso County Area, Colorado

Survey Area Data: Version 18, Jun 5, 2020

El Paso County Area, Colorado

83—Stapleton sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 369z
Elevation: 6,500 to 7,300 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 125 to 145 days
Farmland classification: Not prime farmland

Map Unit Composition

Stapleton and similar soils: 97 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Stapleton

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

A - 0 to 11 inches: sandy loam
Bw - 11 to 17 inches: gravelly sandy loam
C - 17 to 60 inches: gravelly loamy sand

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 capacity: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R049XB215CO - Gravelly Foothill
Hydric soil rating: No

Minor Components

Pleasant

Percent of map unit: 1 percent

Landform: Depressions

Hydric soil rating: Yes

Other soils

Percent of map unit: 1 percent

Hydric soil rating: No

Fluvaquentic haplaquolls

Percent of map unit: 1 percent

Landform: Swales

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: El Paso County Area, Colorado

Survey Area Data: Version 18, Jun 5, 2020

El Paso County Area, Colorado

95—Truckton loamy sand, 1 to 9 percent slopes

Map Unit Setting

National map unit symbol: 36bd
Elevation: 6,000 to 7,000 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 125 to 145 days
Farmland classification: Not prime farmland

Map Unit Composition

Truckton and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Truckton

Setting

Landform: Hills, flats
Landform position (three-dimensional): Side slope, tal
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 8 inches: loamy sand
Bt - 8 to 24 inches: sandy loam
C - 24 to 60 inches: coarse sandy loam

Properties and qualities

Slope: 1 to 9 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
(1.98 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: R049XB210CO - Sandy Foothill
Hydric soil rating: No

Minor Components

Other soils

Percent of map unit: 4 percent

Hydric soil rating: No

Pleasant

Percent of map unit: 1 percent

Landform: Depressions

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: El Paso County Area, Colorado

Survey Area Data: Version 18, Jun 5, 2020

APPENDIX E: El Paso County Health Department Septic Records

P

APPROVED: YES NO

#4322005003

ENVIRONMENTALIST Larry Schaad

Address 14810 Jones Road

Owner Jerry & Nancy Manloy

Legal Description SW4, SW4 Sec 22-13-64

Residence , # of bedrooms 3; Commercial ; System Installer Firebaugh

SEPTIC TANK:

Commercial ; Noncommercial ; L , W , WD
Construction Material Precast 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 Bio diffusers, number of chambers 19, bed , trench
sq. ft./section 19, reduction allowed 50%, sq. ft. required 331

total sq. ft. installed 684 with reduction, depth of installation 30-45"

Engineer Design Y or (N), Designing Engineer

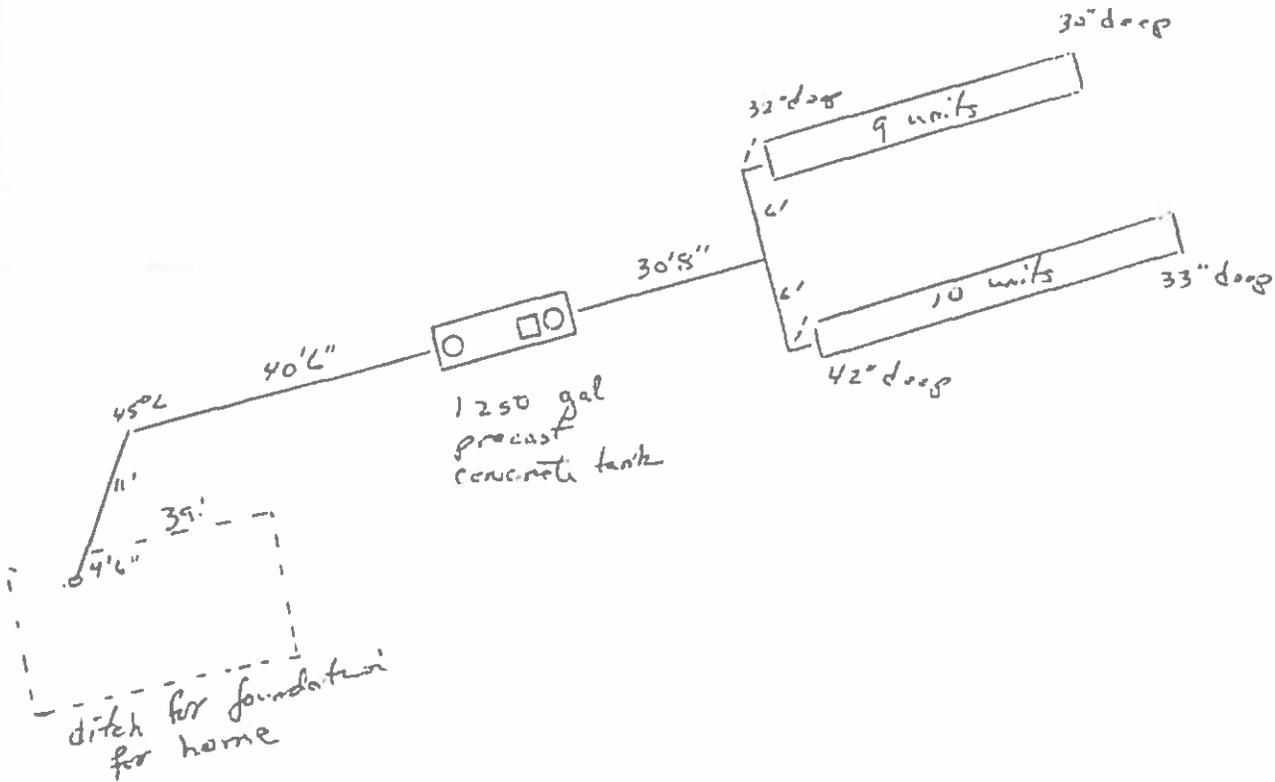
Approval letter provided? Y or N

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: Well at 4645 Curtis several hundred feet to north.
Pipes SDR 35
Chambers set in trenches 3 1/2-4' wide with 3/4" rock -10" deep on sides of ch



Acres 40 EL PASO COUNTY • DEPARTMENT OF HEALTH AND ENVIRONMENT
301 South Union Blvd. • Colorado Springs, Colorado • 578-3125

Water Supply WELL Permit 9777

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

Issued to JERRY AND NANCY MANLEY Date 1-03-96
Address of Property 14810 JONES ROAD, SWA, SW4, SEC: 22-13-64 DAUGHTER: SHARON EAXTER
(Permit valid at this address only) Phone 633 2856

Sewage-Disposal System work to be performed by FIREBAUGH LIC: 22 Phone 596-1469
This Permit is issued in accordance with 25-10-106 Colorado Revised Statutes 1973, as amended. PERMIT EXPIRES upon completion of 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 -

PERMIT FEE (NOT REFUNDABLE) _____
1-03-97
DATE OF EXPIRATION

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

SEPTIC TANK:	TRENCH SYSTEM:	BED SYSTEM:
total square feet <u>1250</u>	total square feet <u>331</u>	total square feet _____
_____ ft. of trench	_____ inches wide	_____ rings or _____ diam. x _____ w/d
_____ ft. of trench	_____ inches wide	

NOTES: **INSTALL LEACH FIELD IN AREA AND DEPTH (36 INCHES) OF PERC. TEST. STRONGLY RECOMMEND AN INCREASE OF 60 PER CENT IN LEACH FIELD AREA (OR NOT TAKING THE REDUCTION IF CHAMBERS ARE USED) IF CLOTHES WASHER AND GARBAGE DISPOSAL WILL BE INSTALLED IN HOME. BE SURE TO MAINTAIN MINIMUM DISTANCES FROM WATER COURSES. PERMIT 6491 IS VOID.**
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.

Sharon Eaxter

Jerry School 575-8638

ENVIRONMENTALIST

DIRECTOR, DEPARTMENT OF HEALTH AND ENVIRONMENT

New

APPLICATION FOR A PERMIT TO CONSTRUCT, REMODEL, OR INSTALL A SEWAGE DISPOSAL SYSTEM

NAME OF OWNER JERRY AND Nancy MANLEY HOME PHONE 719-683-2173 WORK PHONE Nancy 634-1129

ADDRESS OF PROPERTY 14810 Jones Rd. 4645 N. Cullis Rd. Peyton, CO 80831 DATE 5-6-92

LEGAL DESCRIPTION OF PROPERTY SW $\frac{1}{4}$, SW $\frac{1}{4}$, SEC 22-13-64

TAX SCHEDULE NUMBER 43220-00-009 SYSTEM CONTRACTOR D&B Trenching PHONE 683-2400

OWNER'S ADDRESS IF DIFFERENT

TYPE OF HOUSE CONSTRUCTION Mobile Home SOURCE AND TYPE OF WATER SUPPLY Well

SIZE OF LOT 40 acres MAXIMUM POTENTIAL NUMBER OF BEDROOMS 3 EASEMENT (yes or no) No

PERCOLATION TEST RESULTS ATTACHED (yes or no) yes

A plot plan and accompanying information are essential; it may be drawn on the back of this application or be attached. Please include by measured distance the location of wells including neighbors' wells, springs, water supply lines, cisterns, buildings, proposed structures, property lines, property dimensions, subsoll drains, tiles, ponds, water courses, streams, and dry gulches. Please show the location of the proposed septic system by directions and distances from actual and/or proposed dwellings, structures, or fixed reference objects. Give complete directions to the property from major highways. (ANSWER QUESTIONS ON BACK OF FORM).

Applicant acknowledges that the completeness of the application is conditional upon such further mandatory and optional tests and reports as may be required by the department to be made and furnished by the applicant for purposes of evaluation of 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 under Article 10, Title 25, C.R.S. 1972 as amended. The undersigned hereby certifies that all statements made, information and reports submitted by the applicant are or will be 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 Health Dept. in evaluating the same for purposes of issuing the permit applied for herein. I further understand that 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.

Permit # 9777
1/5/90
1-3-96
9777

SIGNATURE Jerry & Nancy Manley
HEALTH DEPARTMENT USE ONLY

1250 gal 331 ft² 15250 Jones Rd
Sandy School 1-3-96

Install leach field in area and depth (36') of perc test. Strongly recommend an increase of 60% in leach field area (or not taking the reduction if chambers are used) if a clothes washer and garbage disposal will be installed in home. Be sure to maintain minimum distances from water courses.

ANSWER THE FOLLOWING ITEMS AND/OR INCLUDE ON PLOT PLAN.

SEE ATTACHED

PROPERTY LINES _____

PROPERTY DIMENSIONS _____

LOCATION OF PROPOSED SEPTIC SYSTEM _____

LOCATION OF WELL _____

LOCATION OF ADJACENT WELLS _____

BUILDINGS _____

PROPOSED BUILDINGS _____

WATER SUPPLY LINE _____

CISTERNS _____

SPRINGS _____

LAKES _____

PONDS _____

WATER COURSES _____

STREAMS _____

DRY GULCHES _____

SUBSOIL DRAINS _____

DIRECTIONS TO PROPERTY FROM MAIN HIGHWAYS:

Hwy. 94 east from Peterson Road to Curtis Road (mile marker 8)
Turn left to go north on Curtis Rd. , approximately 4 miles to
the North-East corner of Curtis and Jones Roads.

Hwy. 24 east from Peterson Rd. to Garrett Rd. turn right
and stay on pavement to Dead End (Stop Sign) on Garrett and Curtis
Roads about 5-6 miles. Turn south on Curtis Rd. (right) and
travel just over 1 mile to the North-East corner of Curtis and Jones R

P
[Handwritten signature]

ON-SITE WASTEWATER SYSTEM INSPECTION FORM

PERMIT # ON0033065

DATE 9/04/2013

APPROVED YES NO Environmental Health Specialist: Neil Maves

Address: 14920 Jones Rd Peyton, CO 80831 Owner: Jocelyn Strebig

Residence #Bedrooms 3 Commercial System Installer: Triple T Excavation

SEPTIC TANK: Construction Material Concrete Capacity Gallon 1250

DISPOSAL FIELD:

Trench: Depth (Range) _____ Width _____ Total Length _____ Sq. Ft. _____

Bed: Depth (Range) _____ Width _____ Total Length _____ 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 Quick 4 Plus STD #Chambers 29 Sq. Ft./Chamber 1155 Bed _____ Trench

High Profile Units: Type _____ #Chambers _____ Sq. Ft./Chamber _____ Bed _____ Trench _____

Reduction Allowed _____ % Sq. Ft. Required 286 Depth (Range) 14" - 30"

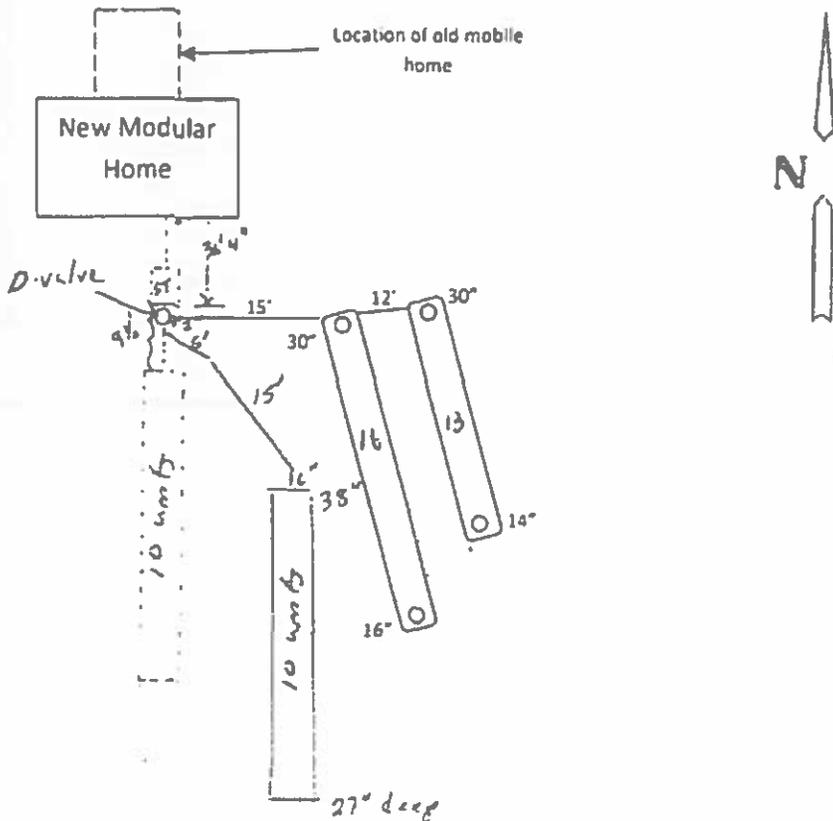
Sq. Ft. Installed 335 Equivalent Sq. Ft. Installed with Reduction _____

Engineer Design: Y N Engineering Firm _____ Approval Letter Provided: Y N

Well installed at time of septic inspection: Y N Public Water: Y N

* 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: Well is at the 4645 N. Curtis address, several hundred feet to the NW of house.



Attn: JOCELYN STREBIG
14920 JONES RD
PEYTON CO 80831

Notify Environmental Health of any change of ownership, type of business activity, business name, or billing address by calling (719) 578-3199. Failure to notify Environmental Health may result in late penalties, Permit/License denial or revocation, and business closure. PERMITS/LICENSES TO OPERATE AND ANNUAL FEE PAYMENTS ARE NOT TRANSFERABLE. Permits become void on change of ownership. New owners must apply and pay for a new Permit(s)/License(s) prior to beginning operation.



EL PASO COUNTY PUBLIC HEALTH
ENVIRONMENTAL HEALTH DIVISION
1675 W. GARDEN OF THE GODS ROAD, SUITE 2044
COLORADO SPRINGS, CO 80907
PHONE: (719) 578-3199 FAX: (719) 578-3188
www.elpasocountyhealth.org

MAJOR REPAIR PERMIT - OWTS

Valid From 8/28/2013 To 8/28/2014

PERMITEE : JOCELYN STREBIG
14920 JONES RD
PEYTON, CO 80831

Onsite ID: ON0033085
Tax Schedule #: 4322003004
Permit Issue Date: 08/28/2013
Dwelling Type: RESIDENTIAL
of Bedrooms (if Res): 3
Proposed Use (if Comm):
Designed Gallons/Day:
Water Source: PRIVATE WELL

OWNER NAME : JOCELYN STREBIG

System Installation Requirements :

1. Install STA in area of percolation test that was performed on April 29, 1992 with a maximum cover over chambers of 36 inches.
2. If existing system is completely abandoned, then an absorption area of 571 sq ft is required.
3. If the existing system continues to be used, then an absorption area of 286 sq ft is required on the new side along with a diverter valve and no reduction will be given.
4. A trench system is preferred but if a bed system is installed, it shall not exceed a maximum width of 12 ft.

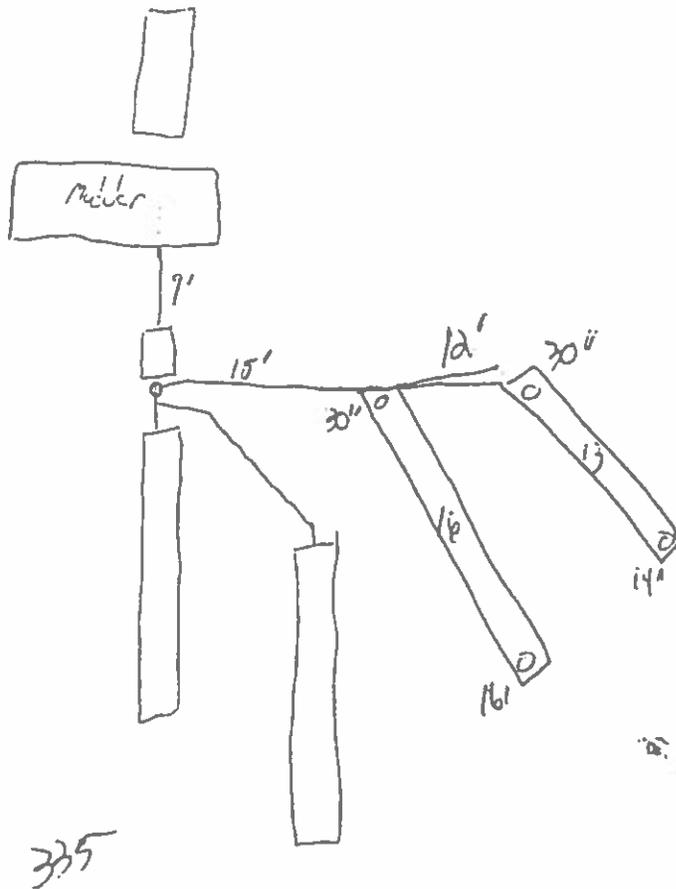
Septic Tank Capacity Required: *1250* (Gallons) Soil Treatment Area Required: *286* (SQ. Feet)

The Health Officer shall assume no responsibility in case of failure or inadequacy of an Onsite Wastewater Treatment System, beyond consulting in good faith with the property owner or representative. Access to the property shall be authorized at reasonable time for the purpose of making such inspections as are necessary to determine compliance with the requirements of this Law (permit).

Installer inspection request line: Call (719) 575-8699 before 8:30 a.m. of the day that the inspection is requested
Weekends & Holidays excluded.

This permit is issued in accordance with 25-10-106 Colorado Revised Statutes. The PERMIT EXPIRES upon completion/installation of the Onsite Wastewater Treatment System, or at the end of twelve (12) months from date of issue, whichever occurs first. If both a Building Permit and an Onsite Wastewater Treatment System Permit are issued for the same property and construction has not commenced prior to the expiration date of the Building Permit, the Onsite Wastewater Permit shall expire at the same time as the Building Permit. This permit is revocable if all stated requirements are not met. Onsite Wastewater Treatment Systems to be installed by an El Paso County Licensed System Contractor or the property owner.

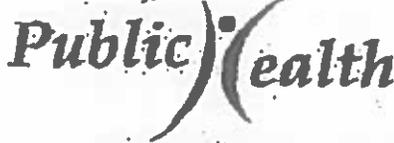
Neil May 8/28/13
Authorized By: Environmental Health Specialist



29'

Quick 4 Plus SDD
11.55

El Paso County, CO



Prevent • Promote • Protect

Environmental Health Division

1675 W. Garden of the Gods Rd., Suite 2044
Colorado Springs, CO 80907
(719) 578-3199 phone
(719) 575-3188 fax
www.elpasocountyhealth.org

AK 4647

APPLICATION FOR AN ON-SITE WASTEWATER TREATMENT SYSTEM PERMIT

NEW PERMIT MAJOR REPAIR PERMIT MINOR REPAIR PERMIT

Owner JOCELYN STREBIG Daytime Phone 683-8805

Contractor TRIPLE T EXC. Daytime Phone 749-2881

Property Address 15260 Jones Rd. 14920

Owners Mailing Address SAME

Email Address TRIDET EXCAVATING@YIP.COM Phone # 749-2881

Tax Schedule # 4322005004 Lot Size 4.75 ACRES

Site Located Inside City Limits Yes No Primary Contact Owner Contractor

Proposed Use: Single Family Multi-Family Commercial

Water Supply: Well Cistern Municipal Number of Bedrooms 3

[Redacted] [Redacted] [Redacted] Triple T Exc.

15260 Jones

CURRENT FEES AS APPROVED BY THE EL PASO COUNTY BOARD OF HEALTH

New Permit: \$440.00 (EPCPH Charge) + \$147.00 (EPC Planning Dept. Surcharge) + \$23.00 (CDPHE Surcharge) = \$610.00

Major Repair Permit: \$494.00 (EPCPH Charge) + \$23.00 (CDPHE Surcharge) = \$517.00

Minor Repair Permit: \$188.00 (EPCPH Charge) + \$23.00 (CDPHE Surcharge) = \$211.00

- All payments are due at the time of application submittal; by cash, check or major credit card (Visa / MC)
- This permit will expire one year from the date of issuance

I certify that the information provided on this application is in compliance with Section 8.3, Chapter 8 of the On-site Wastewater System (OWS) Regulations of the El Paso County Board of Health. I also authorize the assigned representative of El Paso County Public Health to enter onto this property in order to obtain information necessary for the issuance of a permit.

Applicants Signature: [Signature] Date: 8/26/13

Site Insp. Date: 8/27/13 Perc. Rate: 7 Permit # DN0032005

E.H.S. Review Notes: _____

Date to: E.P.C. Development Services N/A Flood Plain and Enumerations N/A

Permit Requirements: _____

1390
Min. Septic Tank Capacity

286
Min. Absorption Area

E.H. Specialist [Signature] Date 8/28/13 Approved Denied

NM
AS