El Paso County, CO
Public Health
Prevent • Promote • Protect

Environmental Health Division

1675 W. Garden of the Gods Rd., Suite 2044
Colorado Springs, CO 80907
(719) 578-3199 *phone*
(719) 575-8664 *fax*
www.elpasocountyhealth.org

CONVENTIONAL ON-SITE WASTEWATER TREATMENT SYSTEM
FINAL INSPECTION FORM

P

On-site ID: ON0050208 | Tax schedule(APN) #: 6121006021 | Permit Type: New
Environmental Health Specialist: Kevin Bolinsky | Final Inspection Date: 03.26.2020 | Approved: Yes

Residential Property Information:

Owner: Richard & Cassandra Ramsey | Address: 2065 Mahaffie Ct Monument,CO 80132 | Approved No. Bedrooms: 5
Water supply: Well | Well Installation verified: 03.26.2020 | Well Location GPS: 39° 4' 54" N, 104° 47' 21" W

Approval will be revoked if in the future any well is found to be within 50 feet of the septic tank and/or 100 feet of the soil treatment area.

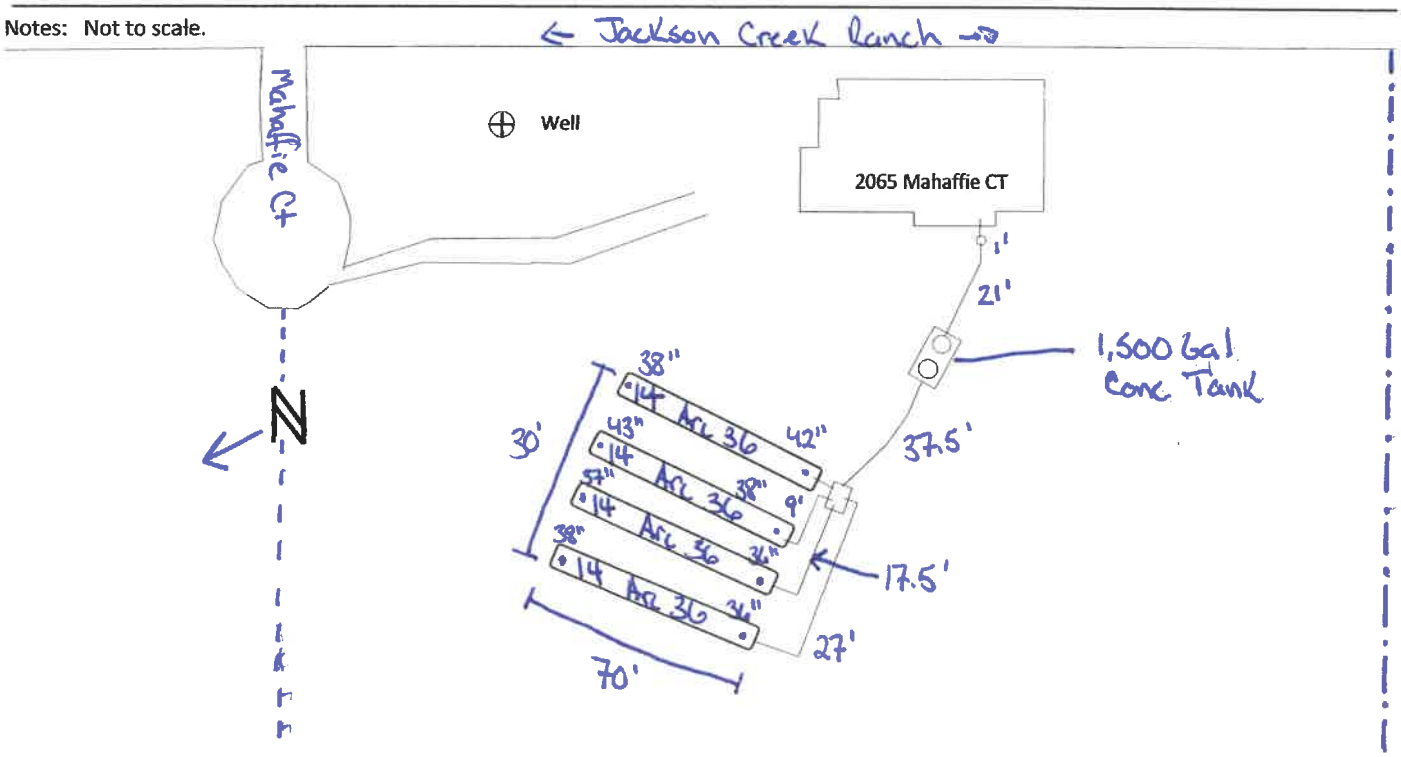
Minimum System Requirements:

Soil (in-situ) Type: 2A **LTAR (In-situ soil):** 0.5 **Limiting Layer:** Groundwater: None Bedrock: None
OWTS Tank: Capacity (gallons): 1500 **OWTS Pump Tank:** Capacity (gallons): N/A
Soil Treatment Area (STA): Sq. Ft. (10-1): 1200 Sq. Ft. (10-2): 1200 Sq. Ft. (10-3): 840 Sq. Ft. (with Diverter Valve): NA

Final system installation:

Licensesd Installer: Tier II Installer: High Mark Construction
Treatment Level: 1
OWTS Tank: GPS Location: 39° 4' 54" N, 104° 67' 23" W
Tank Type: New Concrete Capacity (gallon): 1500
OWTS Pump Tank:
Tank Type: NA Capacity (gallon): N/A Audio/Visual Alarm: NA
OWTS Pump: N/A
Soil Treatment Area (STA):
GPS Location: 39° 4' 54" N, 104° 47' 23" W
Configuration: Trench
Distribution Media: Chambers
Distribution Area Length: 70'
Media Type: Arc 36 Chambers (15 sq/ft)
Total Sq. Ft installed: 840
Distribution: Gravity
Inflitrative Surface Depth: 36-43"
Distribution Area Width: 30'
Total installed: 56

Notes: Not to scale.



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.

Attn: RICHARD AND CASSANDRA RAMSEY
2065 MAHAFFIE CT
MONUMENT, CO 80132

El Paso County, CO
Public Health
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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

NEW SYSTEM PERMIT - OWTS

Valid From 9/24/2019 To 9/24/2020

PERMITEE : RICHARD AND CASSANDRA RAMSEY
2065 MAHAFFIE CT
MONUMENT, CO 80132

OWNER NAME : RICHARD AND CASSANDRA RAMSEY

Onsite ID: ON0050208
Tax Schedule # : 6121006021
Permit Issue Date: 09/24/2019
Dwelling Type: RESIDENTIAL
# of Bedrooms (if Res): 5
Proposed Use (if Comm):
Designed Gallons/Day:
Water Source: PRIVATE WELL

System Installation Requirements:

- A Conventional non-engineered OWTS system to be installed on site, requiring a minimum of Tier I licensed installer.
- System installation includes gravity fed system with d-box to chamber in trenches, max installation depth of 48". Minimum tank requirements 1500 gallon and 840 sq ft of soil treatment area (70 Q4 / 56 Arc 36 chambers required).
- The system must be installed per approved design document signed and dated 09.23.2019, changes to the approved design document must be submitted and approved by Public Health prior to installation.
- All horizontal setbacks must be maintained through system installation. In addition system must remain completely uncovered, including the tank size, for final inspection.
- The well must be installed at time of final inspection, or final approval will not be given until well installation is verified.
- Ensure that all work is completed prior to contacting and requesting final line for inspection, otherwise additional fees may be incurred.

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. The Onsite Wastewater Treatment System must be installed by an El Paso County Licensed System Contractor, or the property owner.

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).

Inspection request line: Call (719) 575-8699 before 3:30 p.m. the business day prior to the requested inspection date.

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SB00125 74 AB0016602 ON0050208

APPLICATION FOR AN ON-SITE WASTEWATER TREATMENT SYSTEM PERMIT

Property Information:

Property Address: 2065 Mahaffie Ct. City and Zip: Monument, CO 80132

Legal Description: LOT 2 JACKSON RANCH FIL NO 3

Tax Schedule #: 6121006021 Lot size: 2.51 acres

Is the property gated: ☐ Yes ☒ No Please provide a gate code if necessary: _____

Site Located Inside City Limits: ☐ Yes ☒ No Proposed Use: ☒ Residential ☐ Commercial

Water Supply: ☒ Well ☐ Cistern ☐ Municipal *Potential* Number of Bedrooms: 5

Has a Conditional Acceptance Document been issued for this property: ☐ Yes ☐ No ☒ Unsure

Owner Information: ☒ Primary Contact

Owner: Rich and Cassandra Ramsey Daytime Phone: 719-650-3279

Owners Mailing Address: 8259 Radcliff Dr, Colorado Springs, CO 80920

Email Address: rich.ramsey2@gmail.com Fax #: 719-488-9600

General Contractor: Custom Design Builders (Ben Woody, Selah Lodge Phone/Email: 719-488-9600
selah@customdesignbuilders.net

OWTS Installer Information: ☐ Primary Contact

System Installer: Kunau Drilling Daytime Phone: 719-683-3720

Email Address: kunaudrilling@aol.com Licensed installer: ☐ Tier 1 ☒ Tier 2

All engineer-design systems *must* be installed by a Tier 2 licensed installer

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

All Payments are due at the time of application submittal; by cash, check or major credit card (Visa / MC)

- ☒ **New Permit:** $750.00 (EPCPH Charge) + $147.00 (EPC Planning Dept. Surcharge) + $23.00 (CDPHE Surcharge) = **$920.00**
- ☐ **Modification Permit:** $675.00 (EPCPH Charge) + $23.00 (CDPHE Surcharge) = **$698.00**
- ☐ **Major Repair Permit:** $535.00 (EPCPH Charge) + $23.00 (CDPHE Surcharge) = **$558.00**
- ☐ **Minor Repair Permit:** $245.00 (EPCPH Charge) + $23.00 (CDPHE Surcharge) = **$268.00**

Permits expire one year from date of issuance, unless otherwise noted

***REQUIRED:* Provide a complete written scope of work to be performed on the property.**

new home construction - 5 bedroom house

The following documents MUST be included with your application.

- A soils report: including at least 1 soil profile excavation pit, in accordance with section 8.5 A-F of OWTS regulations
- A clear and legible design document: including the proposed and alternate locations, as well as system layout, labeled with all setbacks to pertinent structures and features in table 7-1.
- Provide directions to property, from a main highway, on the backside of application.

Failure to provide the above listed documents may result in denial of the permit application

I certify that the information provided on this application is in compliance with Section 8.3, Chapter 8 of the Onsite 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: Ben Woody Date: 9/16/2019

Reviewed 2017 approved fee (12/30/2015)

Chelsea

- Property address or lot number must be clearly marked and visible from the road.
- Profile excavation test pit and/or soil profile holes must be clearly marked
- Proposed and alternate soil treatment areas must be protected from compaction and disturbance
- Locked gates require the gate code or lock combination be provided on front of application
- Please provide directions to the property from a main highway, by text or picture, below.

(see attached map photo)

headed north on Roller Coaster Road, turn right (east) on Higby Road. Turn Left (north) on Jackson Ranch Ct.
Mahaffie Court is poorly marked, but it is the second culdesac on the left on Jackson Ranch Ct.
2065 Mahaffie Ct is the second lot on the left in the culdesac (it is marked)

Failure to comply with the above information may result in an additional charge for a return trip.

Permit #: _____ Site Inspection date: 9-23-19

Date Approvals Rcvd: Development Services: 9-18-19 Floodplain/enumerations: 9-18-19

Design: ☒ Conventional ☐ Engineer Design Engineer: _____

Engineer Job #: _____ Engineer Date Stamped: 9-23-19

LTAR/Soil Type: 0.5 / 2A Groundwater: / PP1/ / PP2 Bedrock: / PP1/ / PP2

Minimum Requirements: Tank Capacity: 1500 Soil Treatment Area: 840

System Feed: ☒ Gravity ☐ Pump to Gravity ☐ Pressure Dosed ☐ Other: _____

System Media: ☒ Chambers ☐ Rock and Pipe ☐ Other Soil Treatment Area: ☒ Trenches ☐ Bed

Pump specs: Tank capacity: _____ gal Gal/dose: _____ Flow: _____ gpm Total Dynamic Head: _____'

Additional Comments: 600/0.5=1200(1.0)=1200(0.7)= 840. 70 Q4 or 56 Arc 36

E.H. Specialist: Chris Keen Date: 9-23-19 ☒ Approved ☐ Denied

E

ON: 6050208
TAX: 6121006021
Final: 3/20/2020

GEOQUEST, INC.
6825 Silver Ponds Heights #101
Colorado Springs, CO 80908
(719) 481-4560

PROFILE PIT EVALUATION

FOR

CUSTOM DESIGN BUILDERS INC

JOB #19-0350

Lot #2, Filing #3,
Jackson Ranch Subdivision,
2065 Mahaffie Court,
El Paso County,
Colorado

Sincerely,

Charles E. Milligan, P.E.
Civil Engineer

COLORADO REGISTERED
CHARLES E. MILLIGAN
34608
PROFESSIONAL ENGINEER

PROFILE PIT FINDINGS

Enclosed are the results of the profile pit for the septic system to be installed at **Lot #2, Filing #3, Jackson Ranch Subdivision, 2065 Mahaffie Court, El Paso County, Colorado.** The location of the test pit was determined by Custom Design Builders Inc. The residence will not be on a public water system. The number of bedrooms in the design for the residence is unknown. Due to the natural slope of the property, the entire system will feed to the northwest at approximately 9% at least 20 feet. All applicable portions of the El Paso County Health Department Onsite Wastewater Treatment System Regulations (OWTS) must be complied with for the installation of the treatment system.

The inspection was performed on June 6, 2019, in accordance with Table 10-1 of the **E.P.C.P.H. OWTS Regulations.**

Soil Profile #1:

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

8" to 8' - USDA soil texture sandy loam, soil type 2A, structure shape granular, structure grade 1, non-cemented, LTAR 0.50, reddish yellow in color, 7.5 YR 7/6.

Soil Profile #2:

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

8" to 8' - USDA soil texture sandy loam, soil type 2A, structure shape granular, structure grade 1, non-cemented, LTAR 0.50, reddish yellow in color, 5 YR 6/8.

Groundwater was not encountered during the inspection. Bedrock was not encountered during the inspection. No known wells were observed within 100 feet of the proposed system. **All setbacks shall conform to county regulations.**

Due to encountering USDA soil type 2A, the septic system to be installed on this site need not be designed by a Colorado Licensed Engineer. A conventional septic system is approved for this site. Based on the observed conditions, we feel a design based on an LTAR of 0.50 GPD/SF (USDA 2A, treatment soil, treatment level 1) is reasonable. Maximum depth of the installation shall not be deeper than 4 feet below the existing grade.

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.

Weather conditions at the time of the test consisted of partly cloudy skies with hot temperatures.

9-23-19 CB.

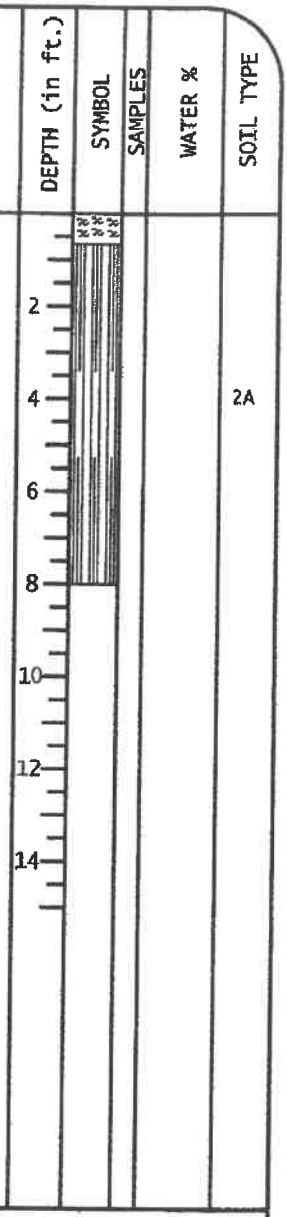
PROFILE PIT LOG - Profile Pit #1

JOB#: 19-0350
DATE EVALUATED: 06 Jun 2019
EQUIPMENT USED: MINI-EXCAVATOR

0"-8" **TOPSOIL**
Loam
Organic Composition

8"- 8' **Sand**
Fine-coarse Grained
Moderate-high Density
Low-moderate Moisture Content
Low-moderate Clay Content
Low Cohesion
Low Plasticity
Reddish Yellow Color
7.5YR 7/6

USDA Soil Texture: Sandy Loam
USDA Soil Type: 2A
USDA Structure Shape: Granular
USDA Structure Grade: 1
Cementation Class: Non-cemented
Long Term Acceptance Rate (LTAR, Treatment Level 1):0.50



LTAR to be Used for OWTS Sizing: **0.50GPD/SF (USDA Type 2A, 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: Unknown (Maximum 4 ft Below Existing Ground Surface)
Soil Treatment Area Slope and Direction: NW @ 9%

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: 19-0350	Project Name and Address
Sheet: 1 of 2	Custom Design Builders
Date: 13 Jun 2019	2065 Mahaffie Court Lot 2, Filing 3 Jackson Rnach Sch. No. 6121006021 El Paso County, Colorado
Scale: 1/4" = 1'	
Drawn by: mtj	
Checked by: cem	

GEOQUEST, LLC.
6825 SILVER PONDS HEIGHTS
SUITE 101
COLORADO SPRINGS, CO
80908

OFFICE: (719) 481-4560
FAX: (719) 481-9204

9-23-19

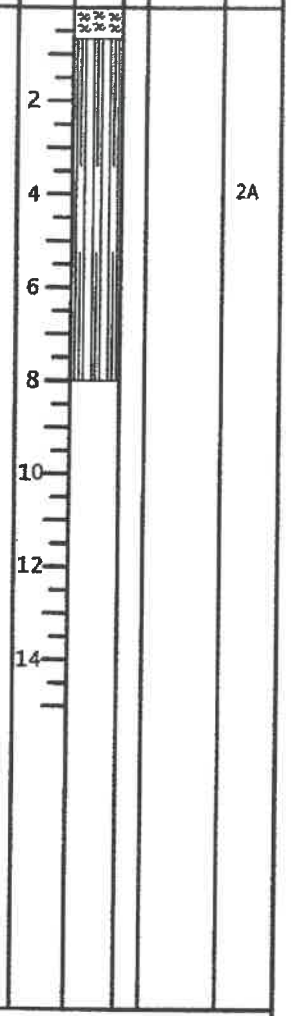
PROFILE PIT LOG - Profile Pit #2

JOB#: 19-0350
DATE EVALUATED: 06 Jun 2019
EQUIPMENT USED: MINI-EXCAVATOR

0"-8" **TOPSOIL**
Loam
Organic Composition

8"- 8' **Sand**
Fine-coarse Grained
Moderate-high Density
Low-moderate Moisture Content
Low-moderate Clay Content
Low Cohesion
Low Plasticity
Reddish Yellow Color
5YR 6/8

USDA Soil Texture: Sandy Loam
USDA Soil Type: 2A
USDA Structure Shape: Granular
USDA Structure Grade: 1
Cementation Class: Non-cemented
Long Term Acceptance Rate (LTAR, Treatment Level 1):0.50



LTAR to be Used for OWTS Sizing: **0.50GPD/SF (USDA Type 2A, 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: Unknown (Maximum 4 ft Below Existing Ground Surface)
Soil Treatment Area Slope and Direction: NW @ 9%

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: 19-0350	Project Name and Address
Sheet: 2 of 2	Custom Design Builders
Date: 13 Jun 2019	2065 Mahaffie Court
	Lot 2, Filing 3
	Jackson Rnach
Scale: 1/4" = 1'	Sch. No. 6121006021
Drawn by: mtj	El Paso County, Colorado
Checked by: cem	

GEOQUEST, LLC.
6825 SILVER PONDS HEIGHTS
SUITE 101
COLORADO SPRINGS, CO
80908

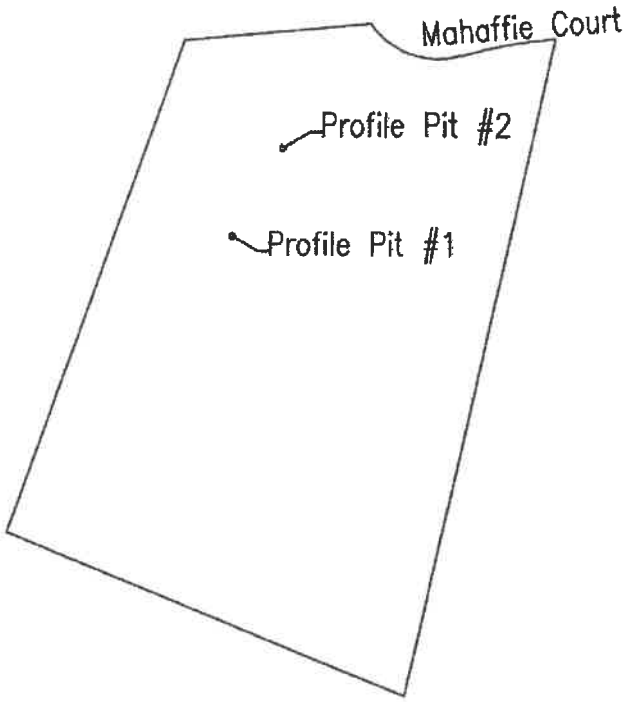
OFFICE: (719) 481-4560
FAX: (719) 481-9204

9-23-19 CB

GEOQUEST LLC

SITE MAP

Lot 2, Filing 3
Jackson Ranch
2065 Mahaffie Court
El Paso County
Colorado
Job #19-0350



Location from Northeast Lot Corner to Profile Pit #1:
S. 58° W. – 253'
Location from Profile Pit #1 to Profile Pit #2:
N. 29° E. – 68'
GPS Coordinates:
Pit 1; N. 39° 04' 53.10" W. 104° 47' 23.10"
Pit 2; N. 39° 04' 53.70" W. 104° 47' 22.07"

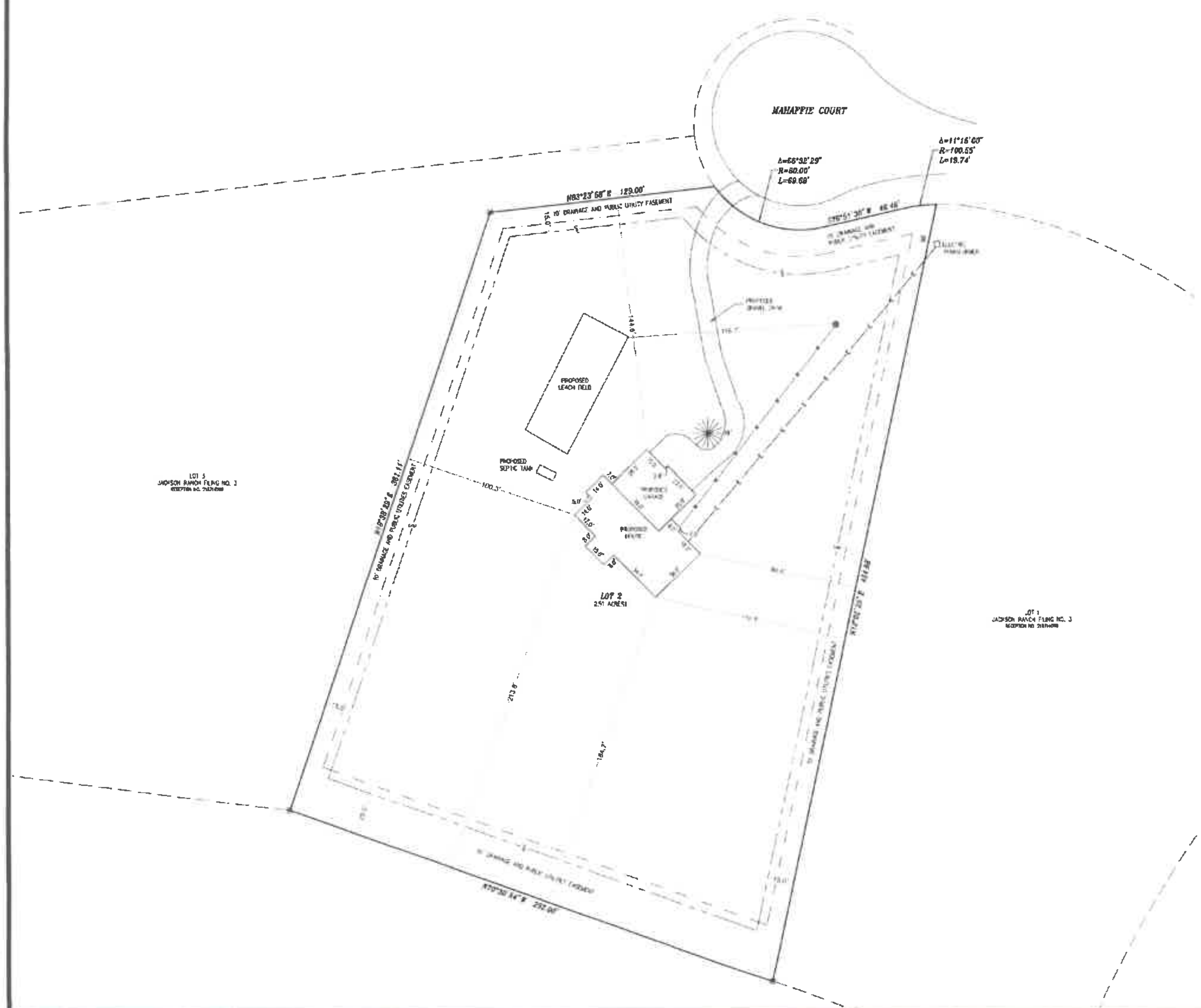
N

0 25 50 75 100 125
GRAPHIC SCALE IN FEET
SCALE: 1" = 125'

a-23-19 Q2

SITE PLAN

LOT 2, JACKSON RANCH FILING NO. 3, LOCATED IN THE NW1/4 OF SEC. 21, T. 11 S., R. 66 W. OF THE 6th P.M., EL PASO COUNTY, COLORADO



LEGEND:

- FOUND PROPERTY CORNER
- WELL
- CATV PEDESTAL
- CONIFEROUS TREE (SIZE VARIES)
- SETBACK LINE
- EASEMENT
- PROPOSED WATER LINE
- PROPOSED ELECTRIC LINE
- ASPHALT
- GRAVEL

LEGAL DESCRIPTION:
LOT 2, JACKSON RANCH FILING NO. 3

ADDRESS:
2065 MAHAFFIE COURT
MONUMENT, COLORADO 80132

BUILDER:
CUSTOM DESIGN BUILDERS
719-488-9500

OWNER:
RICHARD AND CASSANDRA RAMSEY

BUILDING PLAN:
CUSTOM HOME

PROPOSED BUILDING AREA:
2,759 SQUARE FEET

LOT AREA:
109,161 SQUARE FEET

TOTAL LOT COVERAGE:
2.5%

ZONING:
RR-2.5

MAXIMUM BUILDING HEIGHT:
30 FEET

FRONT MINIMUM SETBACK:
25 FEET

BACK MINIMUM SETBACK:
25 FEET

SIDE MINIMUM SETBACK:
15 FEET

TAX SCHEDULE NO.:
6121006021

NORTH

0' 30' 60'
SCALE: 1" = 30'
JOB NO.: 19276
AUGUST 28, 2019

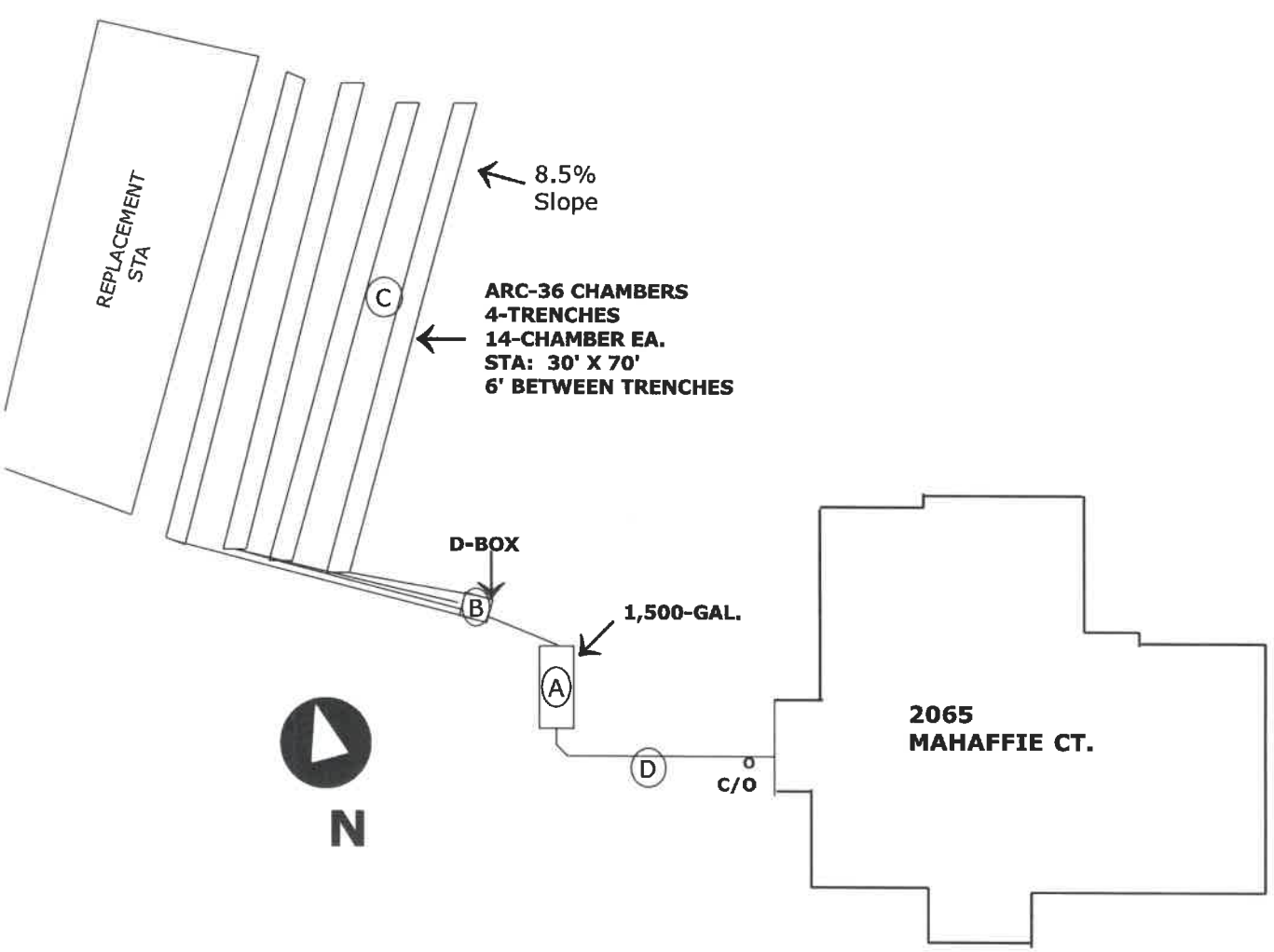
SITE PLAN - LOT 2, JACKSON RANCH FILING NO. 3, NW1/4 SEC. 21, T11S, R66W OF THE 6th P.M., EL PASO COUNTY, CO

RAMPART SURVEYS, LLC
P.O. Box 5101 Woodland Park, CO. 80866 (719) 687-0920

DRAWING: 19276SP.DWG

PAGE 1 OF 1

9-23-19 B.



2065 MAHAFFIE CT., MONUMENT **OWTS DESIGN**	DRAWN BY UNDERGROUND SOLUTIONS, INC.		DATE 9/ 11/ 2019
	CHECKED	SCALE 1" = 20'	SHEET NO. 1 0F 3

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Conventional (Non-Engineered) On-site Wastewater Treatment System (OWTS)
Design Worksheet for a New System, Modification, or Major Repair

Property Address: 2065 MAHAFFIE CT. City and Zip: MONUMENT 80132

Number of bedrooms: 5 Wastewater Design Flow (Table 6-1) 600 GPD

Work will be done by: ☐ Owner ☒ Installer _____

Note: If not completed by the owner of the property, a minimum of a Tier 1 installer is required to do the work.

Water source

☒ Well ☐ Municipal ☐ Cistern

Note: Wells must be located 50' from septic tank and 100' from STA. The well must be installed and verified before final signoff will occur. An additional trip fee will be charged if EPCPH must return to verify the well location.

Professional Engineered Stamped Soils Report Included in Application? ☒ Yes ☐ No
Enter information found from soils report. Date of soils report: 6/6/2019

Soil Type: 2A Treatment Level: TL I LTAR: .50

Was a limiting layer of Bedrock or Groundwater found within 8 feet? ☐ Yes ☒ No

Groundwater found at N/A inches. Bedrock found at N/A inches.

Septic Tank Requirements

Note: Tank depth can be a max of 48 inches.

Septic Tank Material: ☒ Concrete ☐ Plastic

Septic Tank Size (Table 9-1): 1,500

Inlet side will have a sanitary "T" that extends 5" above and 8" below inlet or a baffle. ☒ Yes

Outlet side will have an effluent filter. ☒ Yes

Tank lids will have risers to grade. ☒ Yes

Clean out

Will be located within 5' from the building. ☒ Yes

Note: There must also be a cleanout at least every 100' from structure to the septic tank.

STA Size

Calculate the size of the STA by using your Wastewater flow number and reductions found on table 10-2 and 10-3.

Soil Treatment Area in square feet required = Design Flow (in gallons per day) / LTAR (in gallons per day per square foot)
Soil Treatment area X (Reduction from table 10-2) X (Reduction from table 10-3) = Final STA size

Show calculations here: D.FLOW: 600 GPD. LTAR: .50
600/.5 = 1,200 SQ. FT
1,200 SQ.FT. X .7 (CHAMBERS) = 840 SQ FT. X 1 (GRAVITY TRENCH) = 840 SQ FT

Sample calculation:
3 bedroom, LTAR of .6, to chambers = (450/.6) x .7 (chamber reduction) = 525 ft² of STA req.

840 SQ FT / 15 FT² = 56 CHAMBERS / 4 TRENCHES = 14 CH. PER TRENCH

For Chamber systems:

Type: ☐ Quick4 (12 ft²) ☒ Arc36 (15 ft²)

Number of rows: _____ Number of Chambers per row: 14

Note:
Trenches must be 3' wide or less. Separating distance between trenches must be a minimum of 4' sidewall to sidewall.
Beds maximum width must be 12' unless effluent is Treatment Level 2 or better. Separating distance between beds must be a minimum of 6' sidewall to sidewall.

For Rock and Pipe Systems:

Width: _____ Type of cover on Rock: _____

Total Length: _____ Depth of Rock (under pipe): _____

Note: The perforated pipe must be surrounded by clean, graded gravel, rock, or other material of equal efficiency which may range in size from ½ inch to 2 ½ inches. AASHTO M 43 size No. 3 coarse aggregate meets this specification. At least 6 inches of gravel, rock, etc. must be placed below the pipe. Then the material must fill around the pipe and be at least 2 inches above the top of the distribution pipe. Top of the placed material must be covered with non-woven permeable geotexile meeting a maximum thickness rating of 2.0 ounces per square yard or equivalent previous material.

Note: For all distribution materials, the maximum length of distribution laterals is 100'.

Proposed Soil Treatment Area (STA)

What is the installation depth range for the STA? 24-48 inches.

Note: Depth of STA cannot exceed 48", there must be a minimum of 48" of suitable soil beneath the system before reaching a limiting layer, and no less than 12" of soil to cover the system.
Example: Bedrock was found at 72". Allowable installation depth range would be no greater than 24".

Flow of wastewater:	☒ Gravity fed	☐ Pump
Distribution:	☒ Trench	☐ Bed
Media:	☒ Chambers	☐ Rock and Pipe
Distribution box used?	☒ Yes	☐ No

Inspection ports must be installed at the beginning and end of each trench, and all four corners of a bed.
INSPECTION PORTS TO BE AT PROXIMAL AND DISTAL ENDS OF CHAMBERS

Design Document

A legible drawing *shall* be provided with each design document (see attached example design documents), showing:

- Layout of soil treatment area, dimensions of trenches or beds, distribution method and equipment, distribution boxes, drop boxes, valves, or other components used.
- A legible drawing showing location of each OWTS component and distances to all applicable physical features, on both the subject and adjacent properties requiring setbacks (Table 7-1).
- Elevation or depth of infiltrative surface of the soil treatment area, the septic tank invert, and all other components of the OWTS.
- Location of the soil profile test pit excavations. (Must be clearly marked on site).
- Location of the alternate STA site.
- Reference locations including street names, building structures, and any other permanent physical features.
- North direction arrow.
- Contours, OR slope direction and % slope.
- Location of proposed well or existing well.

Note: It is recommended that the design document is completed by a professional in the OWTS industry. EPCPH does not complete, or alter design documents. Contact EPCPH with any questions.

Certification

Signature	Company Name
Print Name	Address
Date	Phone
Property Address	Email

(See attached Tables and Design Document examples)

Table 6-1 Single-Family Residential Design Flows

# Bedrooms	Occupancy (# of Persons)	Wastewater Flow Per Person (gallons/day)	Design Flow (gallons/day)
2	4	75	300
3	6	75	450
4	7	75	525
5	8	75	600
6	9	75	675

Table 7-1 **Minimum Horizontal Distances in Feet between Components of an On-Site Wastewater Treatment System Installed After November 15, 1973 and Water, Physical and Health Impact Features**

	Spring, Well,[1] Suction Line, Potable Water Supply Cistern[4]	Potable Water Supply Line[2]	Structure w/basement, crawl space or footing drains	Structure without basement, crawl space or footing drains	Property Lines, Piped or Lined Irrigation Ditch, upslope curtain drain	Subsurface Drain, Intermittent Irrigation Lateral, Drywell, Stormwater Structure	Lake, Water Course, Irrigation Ditch, Stream, Wetland	Dry Gulch, Cut Bank, Fill Area (from Crest)	Septic Tank, Higher level treatment Unit, Dosing Tank, Vault or Privy
Septic Tank, Higher Level Treatment Unit, Dosing Tank, Vault or Vault Privy	50 [2]	10 [2]	5	5	10	10	50	10	--
Building Sewer or Effluent Lines	50 [2]	5 [6]	0	0	10 [2]	10 [2]	50 [2]	10 [2]	--
STA Trench, STA Bed, Unlined Sand Filter, Sub-surface Dispersal System, Seepage Pit	100 [3]	25 [2]	20	10	10	25	50 [3]	25	5
Lined Sand Filter	60	10 [2]	15	10	10	10	25	10	5
Lined Evapo-transpiration Field or Outside of Berm of Lined Wastewater	60	10 [2]	15	15	10	10	25	10	5

Pond									
Unlined Sand Filter in Soil With a Percolation Rate Slower than 60 Minutes per Inch, Unlined or Partially Lined Evapotrans-piration System, Outside of Berm of Unlined Wastewater Pond, or System Not Relying on STA for Treatment Other than Aerosol	100	25 [2]	15	15	10	25	25	15	10
Slit Trench Latrine, Pit Privy	100	50 [2]	25	25	25	25	100	25	N/A
System Not Relying on STA for Dispersal	100 [3]	10 [2]	125	25 [5]	10	0	25 [3]	10	10

Table 9-1 Minimum Septic Tank Size Based on Number of Bedrooms

Number of Bedrooms	Tank Capacity (gallons)
2 or 3	1,000
4	1,250
Each Additional	250

Table 10-1 Soil Treatment Area Long-term Acceptance Rates by Soil Texture, Soil Structure, Percolation Rate and Treatment Level

Soil Type, Texture, Structure and Percolation Rate Range					Long-term Acceptance Rate (LTAR); Gallons per day per square foot				
Soil Type	USDA Soil Texture	USDA Soil Structure-type	USDA Soil Structure-Grade	Percolation Rate (MPI)	Treatment Level 1[1]	Treatment Level 2[1]	Treatment Level 2N[1]	Treatment Level 3[1]	Treatment Level 3N[1,e]
R	>35% Rock (>2mm); See Table 10-1A					>35% Rock (>2mm); See Table 10-1A			
1	Sand, Loamy Sand	-Single Grain	0 (Structureless)	5-15	0.80	1.40	1.40	1.55	1.55
2	Sandy Loam, Loam, Silt Loam	PR (Prismatic) BK (Blocky) GR (Granular)	2 (Moderate) 3 (Strong)	16-25	0.60	1.0	1.0	1.1	1.1
2A	Sandy Loam, Loam, Silt Loam	PR, BK, GR 0 Massive	1 (Weak) (Structureless)	26-40	0.50	0.80	0.80	0.90	0.90
3	Sandy Clay Loam, Clay Loam, Silty Clay Loam	PR, BK, GR	2, 3	41-60	0.35	0.55	0.55	0.65	0.65
3A	Sandy Clay Loam, Clay Loam, Silty Clay Loam	PR, BK, GR 0 Massive	1 (Structureless)	61-75	0.30	0.45	0.45	0.55	0.55
4	Sandy Clay, Clay, Silty Clay	PR, BK, GR	2, 3	76-90	0.20	0.30	0.30	0.30	0.30
4A	Sandy Clay, Clay, Silty Clay	PR, BK, GR 0 Massive	1 (Structureless)	91-120	0.15	0.20	0.20	0.20	0.20
5	Soil Types 2-4A	Platy	1, 2, 3	121+	0.10	0.15	0.15	0.15	0.15

NOTE: Shaded areas require system design by a professional engineer.

Table 10-2 **Size Adjustment Factors for Methods of Application in Soil Treatment Areas Accepting Treatment Levels 1, 2, 2N, 3 and 3N Effluent**

Type of Soil Treatment Area	Method of Effluent Application from Treatment Unit Preceding Soil Treatment Area		
	Gravity	Dosed (Siphon or Pump)	Pressure Dosed
Trench	1.0	0.9	0.8
Bed	1.2	1.1	1.0

Table 10-3 **Size Adjustment Factors for Types of Distribution Media in Soil Treatment Areas for Treatment Level 1 Systems**

Type of Soil Treatment Area	Type of Distribution Media Used in Soil Treatment Area[1]		
	Category 1	Category 2	Category 3
	Rock or Tire Chips	Other Manufactured Media	Chambers or Enhanced Manufactured Media
Trench or Bed	1.0	0.9	0.7