

January 11, 2023

C-4 Subdivision Engineering Report

Canyon County, Idaho
Single-Family Residential



T-O ENGINEERS

T-O Engineers

332 N Broadmore Way

Nampa, ID 83687

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C-4 Subdivision – Single-Family Residential

Canyon County, Idaho

Prepared for:

Dave Callister
2873 West Wind Drive
Eagle, Idaho 83616

Prepared by:

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Nampa, ID 83687

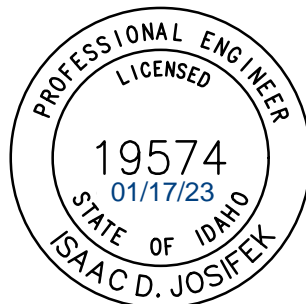


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Appendix

A. Individual Drainfield Specification Sheets

- | | |
|------------------------------------|------------------------------------|
| a. C-4 Subdivision Lot 1, Block 1 | n. C-4 Subdivision Lot 15, Block 1 |
| b. C-4 Subdivision Lot 2, Block 1 | o. C-4 Subdivision Lot 16, Block 1 |
| c. C-4 Subdivision Lot 3, Block 1 | p. C-4 Subdivision Lot 17, Block 1 |
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| i. C-4 Subdivision Lot 9, Block 1 | v. C-4 Subdivision Lot 23, Block 1 |
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| k. C-4 Subdivision Lot 11, Block 1 | x. C-4 Subdivision Lot 25, Block 1 |
| l. C-4 Subdivision Lot 12, Block 1 | |
| m. C-4 Subdivision Lot 13, Block 1 | |

B. Well and Septic Plan (18" X 27")

C. Proposed Subdivision Plan (8 ½" X 11")

D. C-3 Subdivision Well and Septic Plan (18" X 27")

E. NRCS Soil Map

I. INTRODUCTION AND SUBDIVISION APPLICATION

C-4 Subdivision is located near Middleton, Idaho in Canyon County on the northeast corner of Lansing Lane and Quail Haven Way. There are 24 buildable lots in the subdivision with an average lot size of +/-1.13 acres. Each lot will have individual septic systems and individual wells. This site is not in an NP area of concern based on the IDWR Wells and Groundwater Management map. This site contains a pond at the north boundary that holds water year-round. There is a private irrigation supply ditch that flows from south to north along the eastern property boundary and discharges into the pond. This supply ditch has been piped by the developer.

The existing topography is shown on the plan. The site generally slopes from southeast to north/northwest. All drainage from the current vacant agricultural field flows away from Quail Haven Way to the south and towards the pond at the north boundary. Septic areas are shown to allow for the natural topography of the site to maximize drainage away from structures and well areas. Well and septic systems will potentially be placed in areas of cut and fill based on the final grading plan.

SEPTIC SYSTEM DESIGN SUMMARY

Lot #	Test Pit #	Ground Slope	Acres	Unsuitable Layer Depth (ft)	Subsurface System	Receiving Soil Type
1	1	2.4%	0.884	1.0	In-Trench Sand Filter	A-2a
2	2	2.4%	0.895	3.0	In-Trench Sand Filter	A-2a
3	3	2.8%	0.895	1.5	In-Trench Sand Filter	A-2b
4	5	3.2%	0.924	3.0	In-Trench Sand Filter	A-2a
5	5	2.0%	1.055	3.0	In-Trench Sand Filter	A-2a
6	8	3.7%	1.379	1.5	In-Trench Sand Filter	A-2b
7	8	2.0%	1.125	1.5	In-Trench Sand Filter	A-2b
8	6	2.5%	1.263	1.5	In-Trench Sand Filter	A-2a
9	9	2.1%	1.306	1.5	In-Trench Sand Filter	A-2b
10	10	1.8%	1.368	2.0	In-Trench Sand Filter	A-2b

11	11	1.9%	1.520	2.0	In-Trench Sand Filter	A-2b
12	12	0.8%	1.638	2.0	In-Trench Sand Filter	A-2b
13	13	2.5%	1.715	1.5	In-Trench Sand Filter	A-2b
15	15	3.5%	1.382	4.5	In-Trench Sand Filter	A-2b
16	15	3.3%	1.004	4.5	In-Trench Sand Filter	A-2b
17	17	3.25%	0.968	5.0	In-Trench Sand Filter	A-2b
18	17	4.8%	0.987	5.0	In-Trench Sand Filter	A-2b
19	18	2.25%	1.004	4.0	In-Trench Sand Filter	B-2
20	21	3.8%	1.036	1.5	In-Trench Sand Filter	A-2b
21	22	2.2%	1.079	2.0	In-Trench Sand Filter	A-2b
22	24	1.9%	0.906	4.0	In-Trench Sand Filter	A-2b
23	20	1.85%	0.902	1.5	In-Trench Sand Filter	A-2b
24	20	2.0%	1.005	1.5	In-Trench Sand Filter	A-2b
25	19	2.8%	0.993	3.0	In-Trench Sand Filter	B-2

This engineering report provides septic installation requirements for this subdivision which meets the “Technical Guidance Manual for Individual and Subsurface Sewage Disposal Systems” published by Division of Environmental Quality, Department of Health and Welfare. This Engineering Report is attached with the Subdivision Application submitted to the Southwest District Health (SWDH) Department for approval.

SUBDIVISION APPLICATION (see front page)

II. SUBDIVISION PLAT MAP

An 18” x 27” Well and Septic Plan and an 8 ½” x 11” plan of the proposed subdivision is provided.

- A. Contours have been included at five (5') foot intervals on the Well and Septic Plan. There are no areas with grades greater than 25% in the vicinity of proposed drainfield locations.
- B. Proposed lot lines and dimensions within the proposed development have been shown on the Well and Septic Plan.
- C. The average residential lot size for this development is 1.13 acres. Minimum residential lot size is 0.88 acres and maximum residential lot size is 1.73 acres. Soil type varies per lot.
- D. Groundwater was not encountered in any of the test pit locations. Minimum test pit depth was ten (10) feet.
- E. No rock outcrops were found on this site in the vicinity of the proposed drainfield locations.
- F. Ground contour shown in the Well and Septic Plan.
 - 1. No steep slope drainfield systems will be required.
- G. There are no evident downslope cuts or scarps in the vicinity of proposed drainfield locations.
- H. Proposed underground irrigation and utility easements have been shown on the plat map.
- I. All easements and proposed encroachments have been shown on the Well and Septic Plan.
- J. Stormwater will be kept in lots and street runoff will be conveyed via borrow ditch on either side of each street (Bay Rum Way, Curly Red Drive, Bapple Place). There are no apparent class "V" wells on the site. There is one (1) detention swale in this project.
- K. All surface water sources (i.e., rivers, streams, lakes, ponds, spring discharges, irrigation ditches, drains, etc.) within 300 feet of the proposed development are shown in the Well and Septic Plan.
- L. The existing wires and utility power lines are shown on the Well and Septic Plan.
- M. Existing wells within 150 feet of the development have been shown. Existing wells have a minimum of 100 feet setback to drainfields of the proposed development. See Appendix C for the Well and Septic Plan from the C-3 Subdivision, the development on the south side of Quail Haven Way. This is the only area within 100' with wells and septic systems. Exact locations of wells and drainfields are unknown as homes are currently being built; however, approved areas for wells and septic systems are shown in the attached map for potential locations.
- N. Septic tanks shall be located 50 feet from private wells, and there are no community wells in the proposed development. Septic drainfields are located at least 100 feet from private wells.

- O. The Well and Septic Plan and Subdivision Engineering Report both contain the engineer's seal, date, and signature and are provided with this report.

III. SEWAGE DISPOSAL SYSTEM

A. Individual Sewage Disposal Area

1. Each lot has a soil test pit. The soil profile report and analysis show depths of at least ten feet (10'). Groundwater was not encountered in any of the test pits. A-2a, A-2b, B-1, B-2, and C-1 soils were found in the 24 proposed development lots.
2. Individual Drainfield Specification sheets show the test hole profiles at each lot.
3. I hereby certify that the soil in each buildable lot in this subdivision is capable of satisfactorily treating the sewage effluent from the drainfields, which are to be constructed in accordance with the details as shown on the Individual Drainfield Specifications sheets.

Signed: _____

Isaac Josifek, P.E.

4. Septic tank and drainfield system as shown on individual drainfield specification sheet comply with SWDH regulations and standards.
5. Groundwater was not encountered in any test pit locations.
6. There are no faults, sinkholes, or slides evident within this development.
7. The minimum area necessary for drainfields based on solids and other pertinent data is shown on the Individual Drainfield Specifications sheets. No trench length shall be longer than 100 feet.
8. Each lot in the proposed subdivision is provided a detailed drainfield specifications sheets (8 ½" x 11").
 - a. Specification sheets are provided for each lot with subdivision name, block and lot, parcel, etc.
 - b. 8 ½" x 11" sheet showing test pit location is provided.
 - c. Test pit profile for each lot is provided.
 - d. Excavation, backfill, and construction specifications including size, distances, and setback are provided.
 - e. Each lot's set of sheet numbers are provided.
9. The Well and Septic Plan and the Individual Drainfield Specification sheets depict the areas where drainfields may be installed. Adequate space is

available for the drainfields on each lot. There are 24-buildable lots with the average lot size being larger than 1.0 acres.

10. A Nutrient-Pathogen Study should not be required for this site.

B. Large Absorption System:

N/A

C. Central Sewage Disposal System

N/A

IV. WATER SYSTEMS

A. Central and/or Individual water systems must meet the certification requirements of Idaho Code 50-1334

1. Individual well water system meets the certification requirement of Idaho Code 50 – 1334.

a. Based upon more than adequate flow shown from existing well logs adjacent to the property, there should be an adequate supply of water to meet the needs of each lot in the subdivision.

b. Individual wells will serve each lot in the proposed development.

2. There are no apparent abandoned wells on site.

3. Refer to the plat map and the Individual Drainfield Specification sheets for the individual well location and acceptable well areas as well as the 100-foot radius in which drainfields are prohibited. There are no public wells in the proposed development.

B. All lots meet the recommended standards for individual water supplies.

C. There is no central water supply system in the proposed development.

V. WATER QUALITY

Due to the large lot sizes and the depth to groundwater, the development should have no adverse effect on the existing water quality. Storm water will also be kept on the surface as in existing conditions and should not encounter groundwater.

VI. HAZARDS TO SAFETY

There are no safety hazards within the proposed development.

VII. OTHER

This report meets all county ordinances and Planning & Zoning Commission requirements.

VIII. FINAL PLAT

- A. The final plat refers to restrictions on file with the County Recorder as set by the health authority.
- B. Lot configuration shall not be reduced in size, divided, or otherwise changed without prior approval from SWDH.

Appendix A
Individual Drainfield Specifications Sheets

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 1

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2a

TEST PIT: Pit No. 1 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *5.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides.

Installation of System: *3.5 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	200	250	300	350	400
Drainfield Trench Length – ft					
3.0' wide trench	67	83	100	117	133
2.5' wide trench	80	100	120	140	160
2.0' wide trench	100	125	150	175	200

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 1, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 1

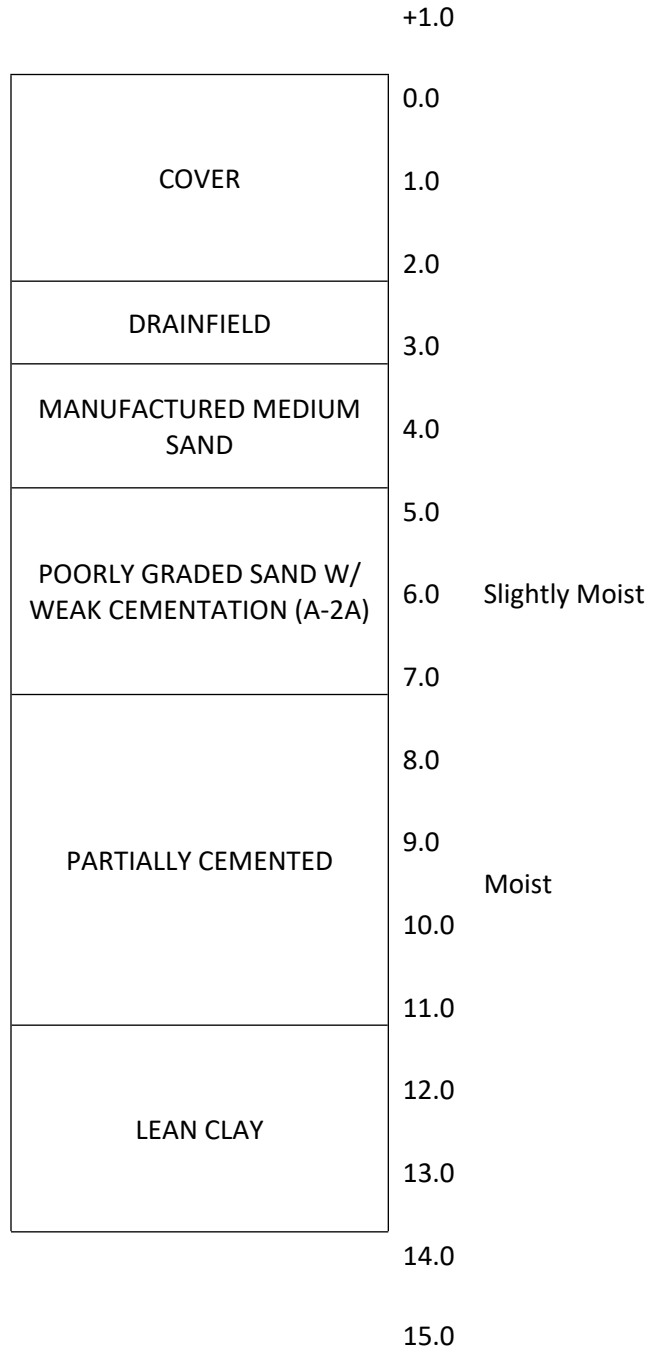
In-Trench Sand Filter System Typical Section

In Trench Sand Filter Notes:

*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

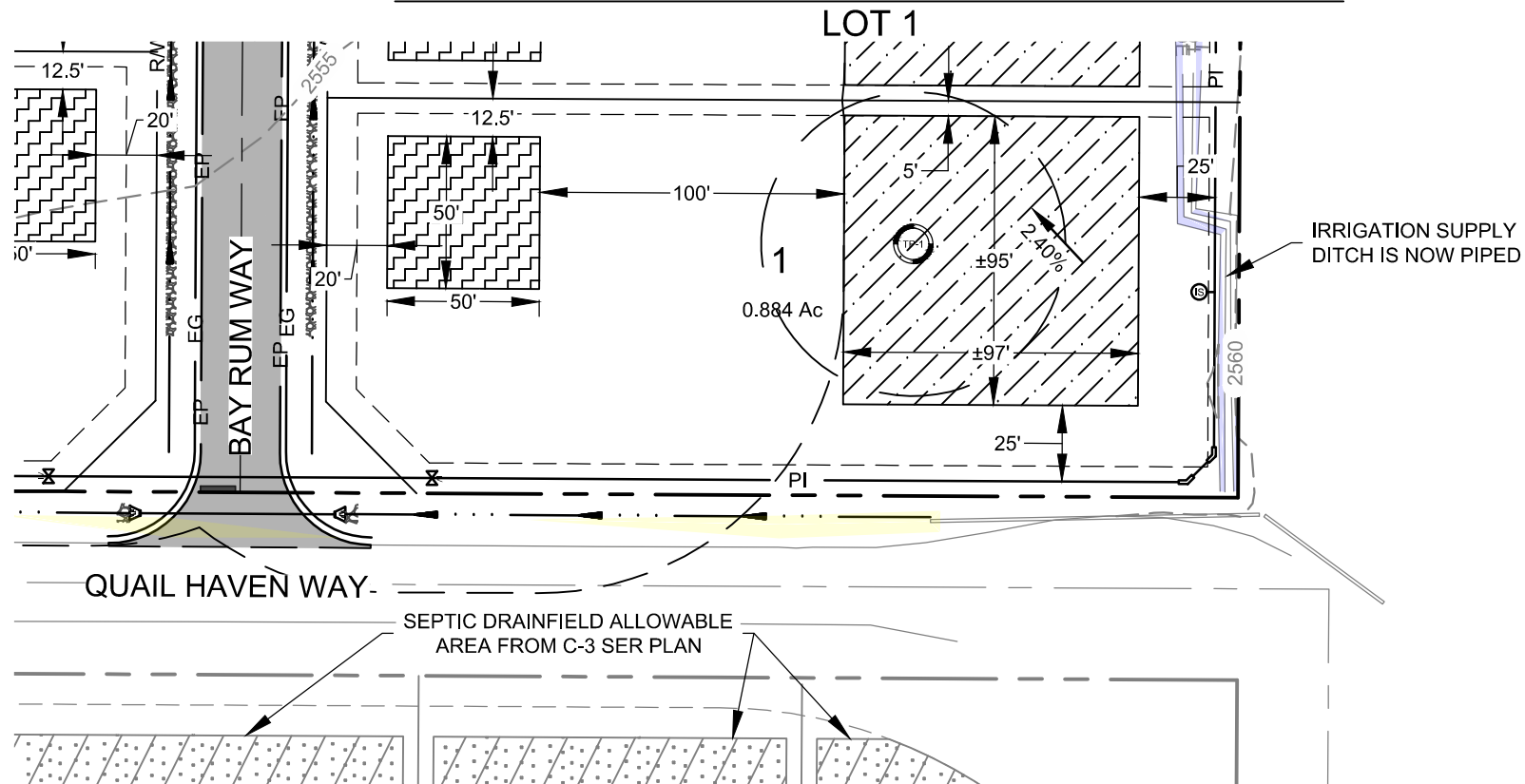
*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.



Lot 1, Sheet 2/4

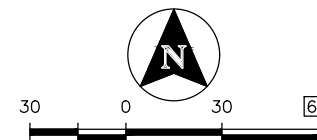
WELL AND SEPTIC PLAN



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	ROAD CENTERLINE
	EASEMENT LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE

	STORM WATER FLOW LINE
	EXISTING EDGE OF PAVEMENT
	TOE OF BANK
	TOP OF BANK
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 11/28/22 JOB: 200194

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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-1 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1				FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/Organics to 1.0' USDA Soil Class: C-1
2				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS
3							
4							
5				SP	Brown, Poorly graded SAND with weak cementation, Slightly Moist	D	USDA Soil Class: A-2a
6							
7							
8				PCEM	Brown, PARTIALLY CEMENTED, Moist	MH	USDA Soil Class: NS
9							
10							
11							
12				CL	Lt. Brown to Brown, Lean CLAY, Moist	F	USDA Soil Class: C-1
13							
14					END OF TEST PIT @ 14.0' NO GROUNDWATER ENCOUNTERED		
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 2

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2a

TEST PIT: Pit No. 2 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *9.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 5.0 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	200	250	300	350	400
Drainfield Trench Length – ft					
3.0' wide trench	67	83	100	117	133
2.5' wide trench	80	100	120	140	160
2.0' wide trench	100	125	150	175	200

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

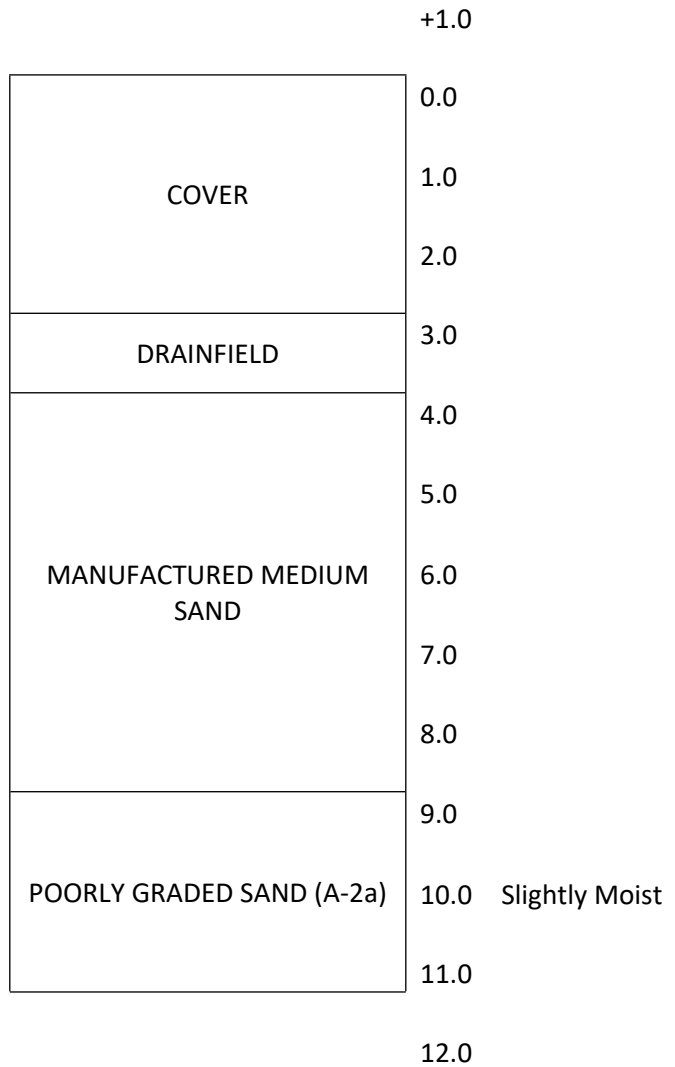
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 2, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 2

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

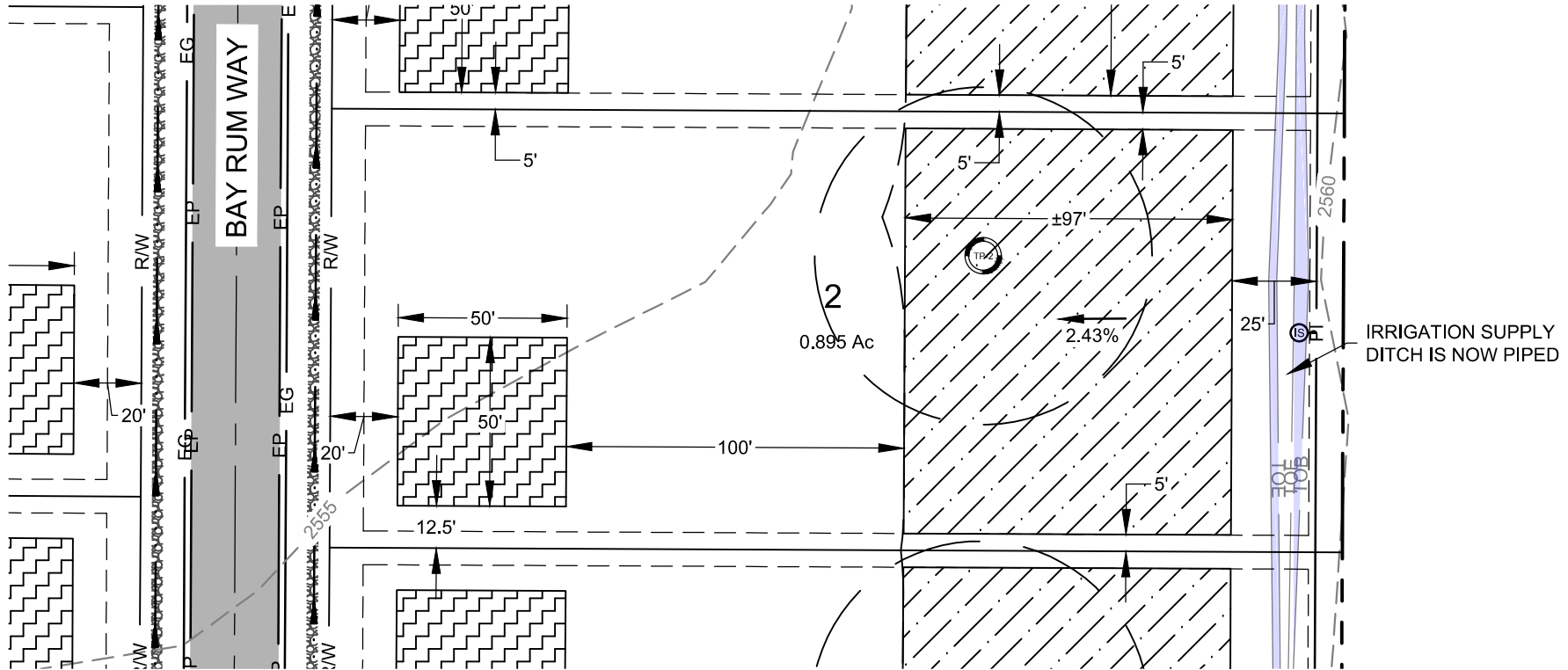
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

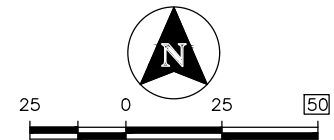
LOT 2



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	ROAD CENTERLINE
	EASEMENT LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE

	STORM WATER FLOW LINE
	EXISTING EDGE OF PAVEMENT
	TOE OF BANK
	TOP OF BANK
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-2 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1			[Soil Pattern]	FILL	Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/Organics to 1.0' USDA Soil Class: C-1
				ML	Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
2				ML	Lt. Brown to Brown, Sandy SILT, Moist	F	USDA Soil Class: B-2
3			[Soil Pattern]	PCEM	Tan to Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS
4							
5							
6							
7							
8			[Soil Pattern]	SP	Tan, Poorly graded SAND, Slightly Moist	D	USDA Soil Class: A-2a
9							
10							
11					END OF TEST PIT @ 10.5' NO GROUNDWATER ENCOUNTERED		
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 3

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 3 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *5.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 1.0 foot of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

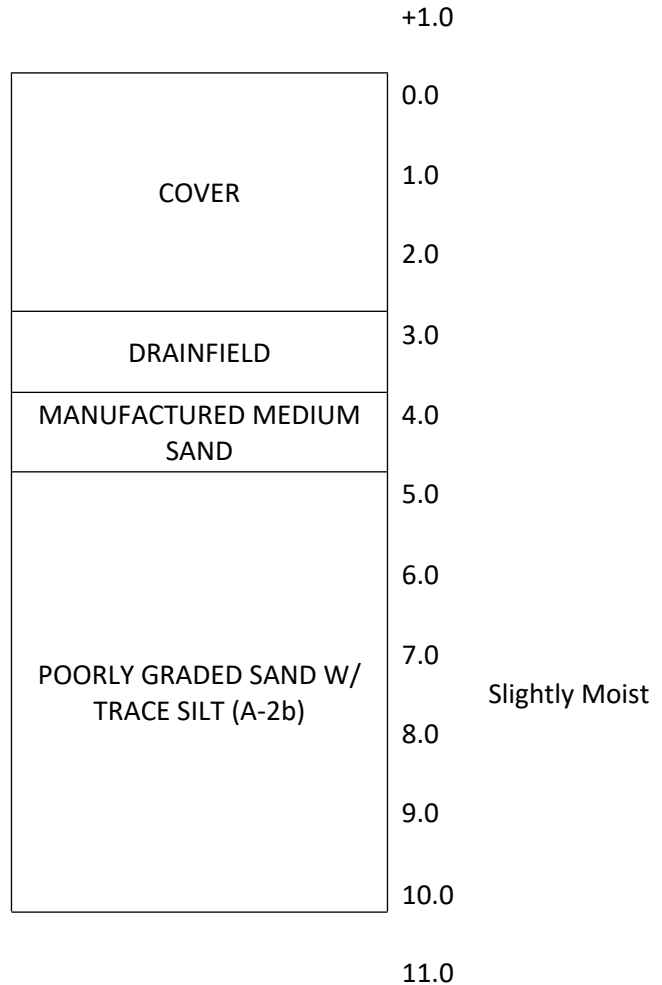
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 3, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-3 SUBDIVISION – LOT 3

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

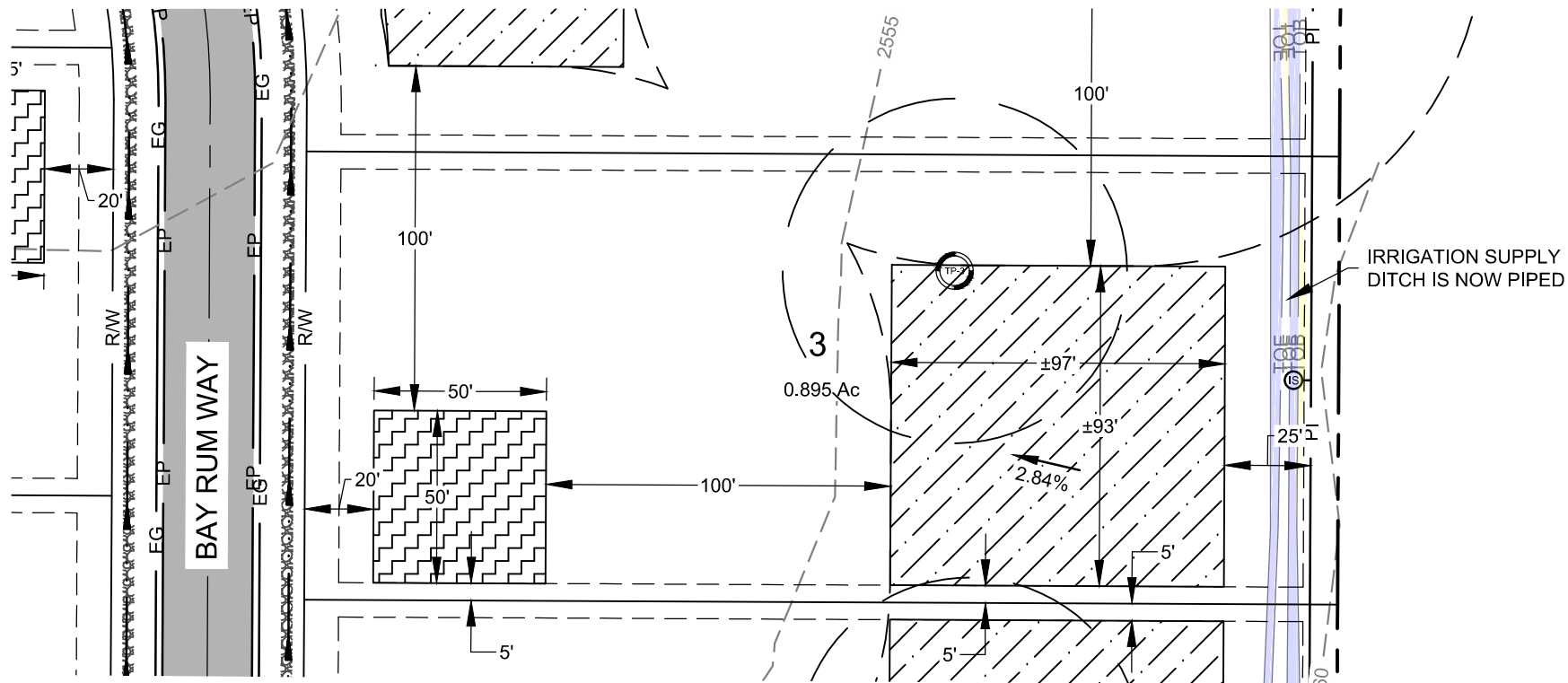
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

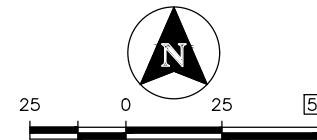
LOT 3



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	ROAD CENTERLINE
	EASEMENT LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE

	STORM WATER FLOW LINE
	EXISTING EDGE OF PAVEMENT
	TOE OF BANK
	TOP OF BANK
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 11/28/22 JOB: 200194

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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-3 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1	X			FILL	Dk. Brown, Artificial Fill Silty SAND, Moist	L	Roots/Organics to 1.0' USDA Soil Class: B-1
2				SM	Dk. Brown, Silty SAND, Moist	D	USDA Soil Class: B-1
3				SM	Lt. Brown to Brown, Silty SAND with weak cementation, Moist	D	USDA Soil Class: NS
4							
5				SP	Tan, Poorly graded SAND with trace silt, Slightly Moist	D	USDA Soil Class: A-2b
6							
7							
8							
9							
10							
11					END OF TEST PIT @ 10.5' NO GROUNDWATER ENCOUNTERED		
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 4

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2a

TEST PIT: Pit No. 5 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *10 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 1.5 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	200	250	300	350	400
Drainfield Trench Length – ft					
3.0' wide trench	67	83	100	117	133
2.5' wide trench	80	100	120	140	160
2.0' wide trench	100	125	150	175	200

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 4, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 4

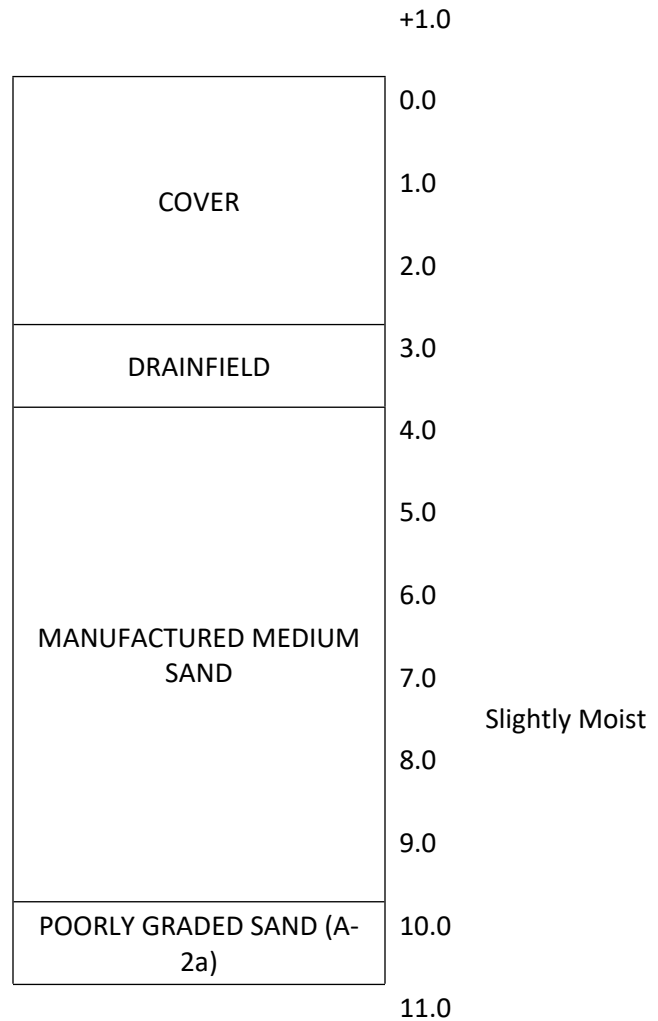
In-Trench Sand Filter System
Typical Section

In Trench Sand Filter Notes:

*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

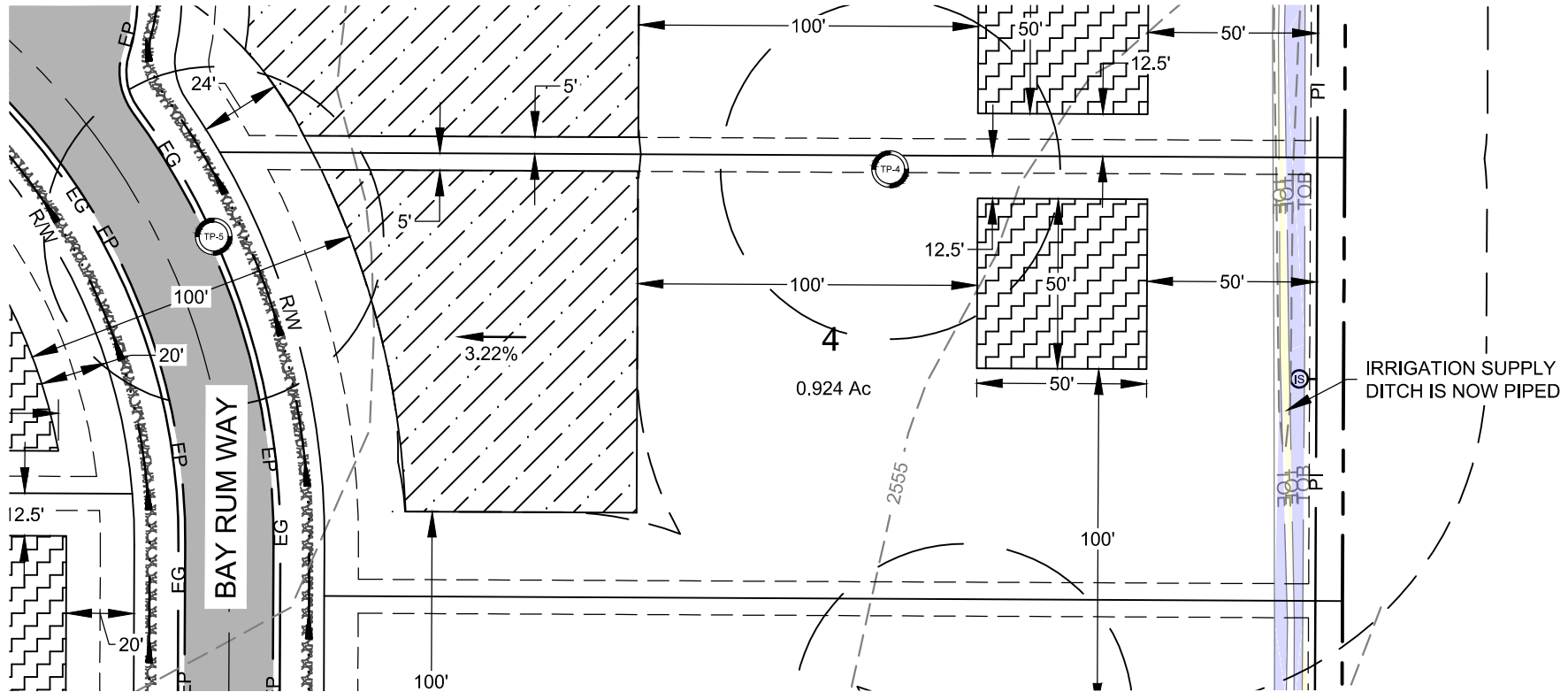
*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.



WELL AND SEPTIC PLAN

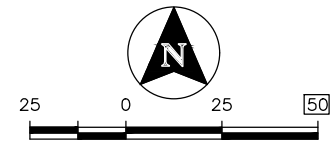
LOT 4



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	ROAD CENTERLINE
	EASEMENT LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE

	STORM WATER FLOW LINE
	EXISTING EDGE OF PAVEMENT
	TOE OF BANK
	TOP OF BANK
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 11/28/22 JOB: 200194

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 NAMPA, IDAHO 83687
 208-442-6300 | WWW.TO-ENGINEERS.COM



TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-5 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS	
	Sample Type	Blows / 6 in.						
1			[Hatched Pattern]	FILL	Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1	
2				ML	Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1	
3			[Hatched Pattern]	PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS Percolation Test Conducted at 10.0'	
4								
5								
6								
7			[Hatched Pattern]	SP	Tan to Lt. Brown, Poorly graded SAND with Silt & Gravel, Slightly Moist	D	USDA Soil Class: A-2a Piezometer Installed at 10.0'	
8								
9								
10								
11			END OF TEST PIT @ 11.0' NO GROUNDWATER ENCOUNTERED					
12								
13								
14								
15								
16								
17								
18								
19								
20								

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 5

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2a

TEST PIT: Pit No. 5 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *10 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 1.5 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	200	250	300	350	400
Drainfield Trench Length – ft					
3.0' wide trench	67	83	100	117	133
2.5' wide trench	80	100	120	140	160
2.0' wide trench	100	125	150	175	200

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 5, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 5

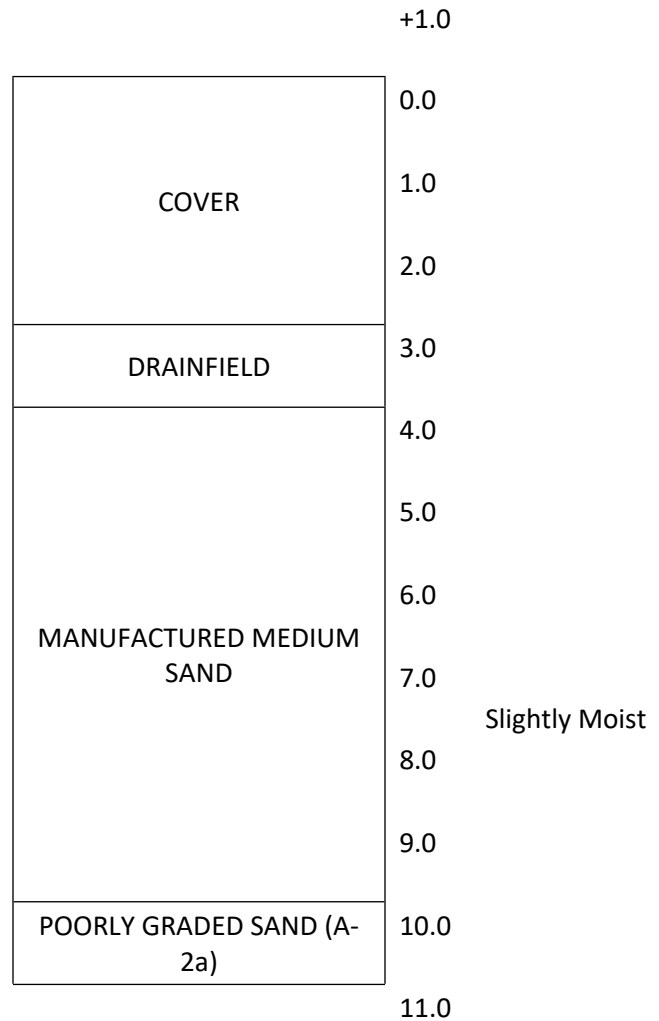
In-Trench Sand Filter System
Typical Section

In Trench Sand Filter Notes:

*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

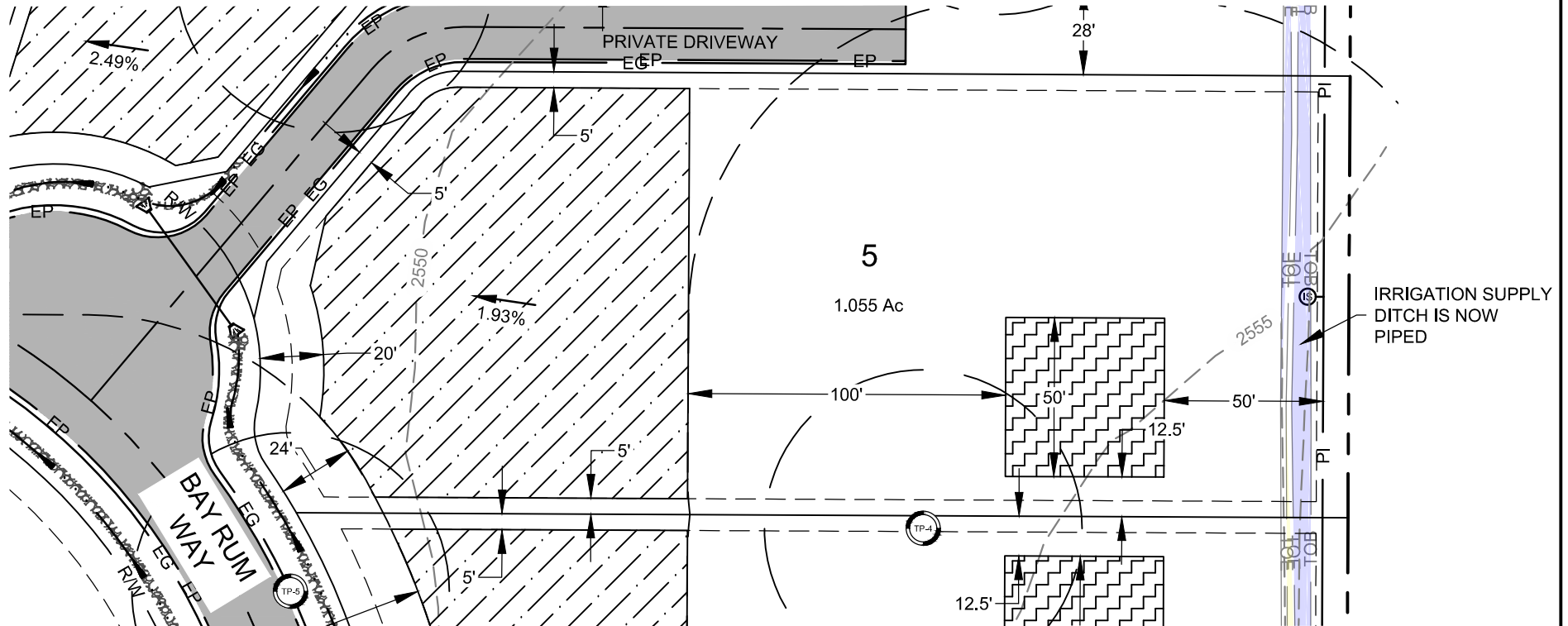
*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.



WELL AND SEPTIC PLAN

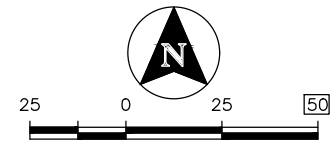
LOT 5



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	ROAD CENTERLINE
	EASEMENT LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE

	STORM WATER FLOW LINE
	EXISTING EDGE OF PAVEMENT
	TOE OF BANK
	TOP OF BANK
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 11/28/22 JOB: 200194

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 NAMPA, IDAHO 83687
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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-5 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS	
	Sample Type	Blows / 6 in.						
1			[Pattern]	FILL	Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1	
2				ML	Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1	
3			[Pattern]	PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS	
4								
5								
6								
7			[Pattern]	SP	Tan to Lt. Brown, Poorly graded SAND with Silt & Gravel, Slightly Moist	D	USDA Soil Class: A-2a Piezometer Installed at 10.0'	
8								
9								
10								
11			END OF TEST PIT @ 11.0' NO GROUNDWATER ENCOUNTERED					
12								
13								
14								
15								
16								
17								
18								
19								
20								

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 6

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 8 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *6.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 2.0 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

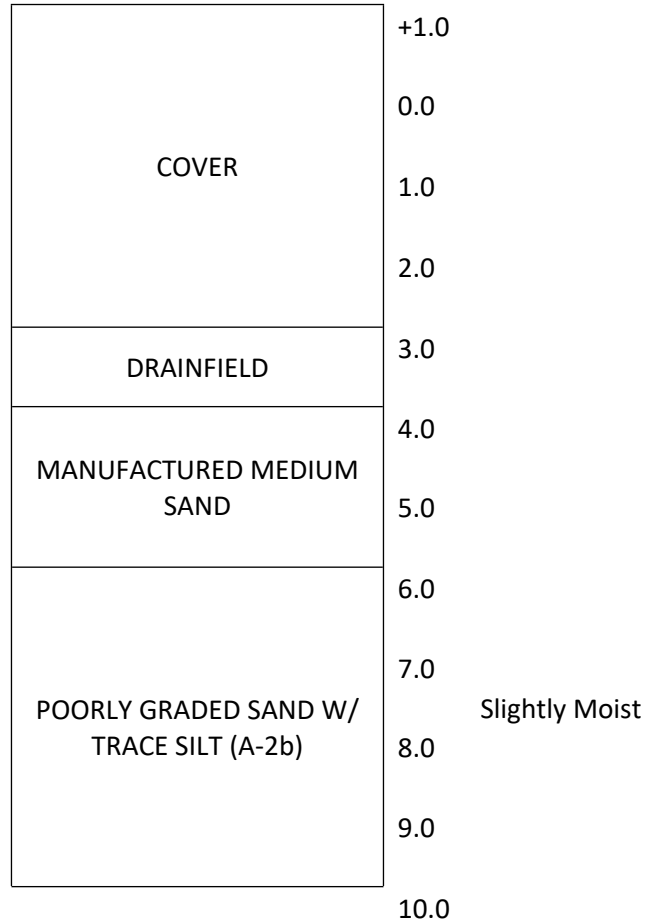
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 6, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 6

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

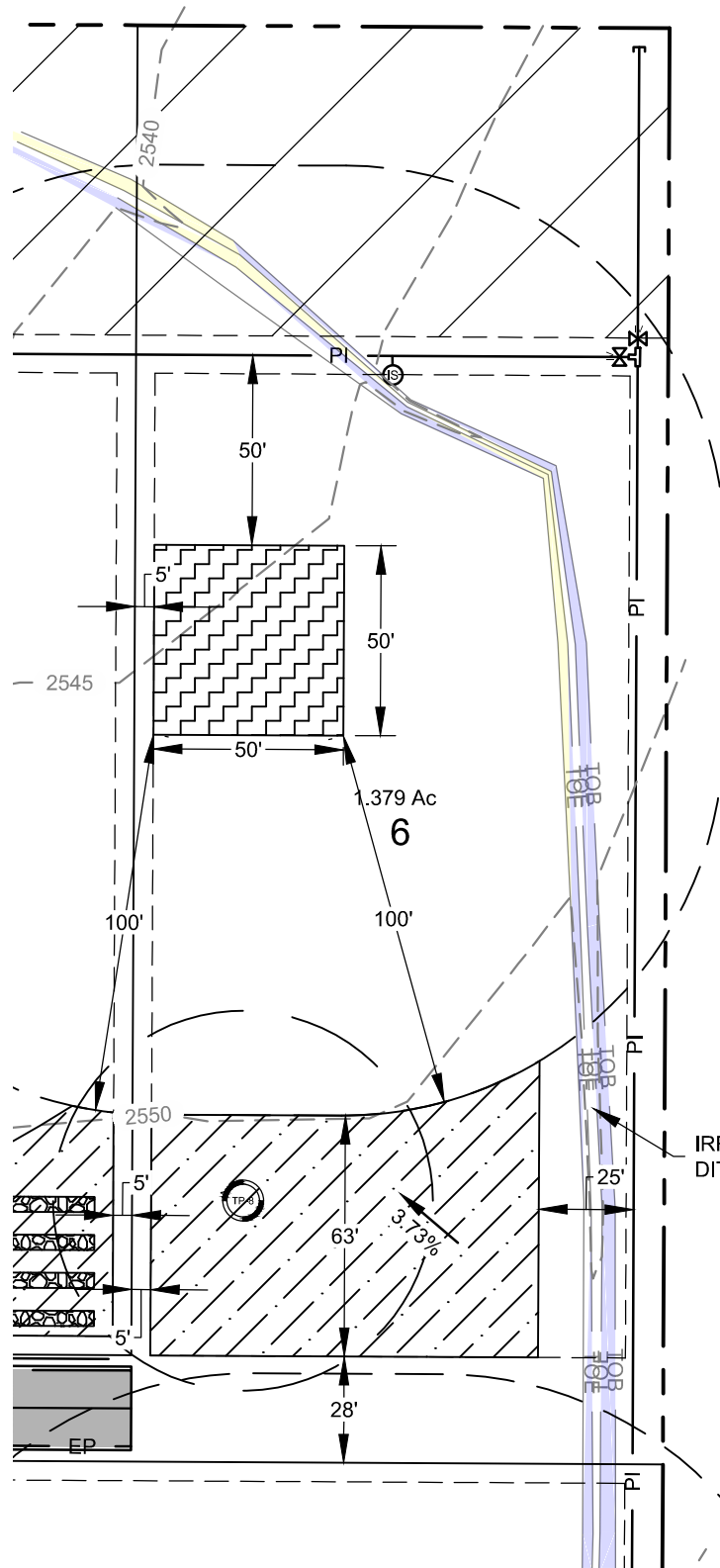
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

LOT 6



LEGEND	
	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE
	TOE OF BANK
	TOP OF BANK
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS

*NOTE:
A-2 SOIL TYPE SEPARATION DISTANCE
REDUCTION OF 25' APPLIED TO THIS AREA PER
IDAHO DEQ TECHNICAL GUIDANCE MANUAL
SECTION 2.2.4.1

IRRIGATION SUPPLY
DITCH IS NOW PIPED



DATE: 1/11/23 JOB: 200194

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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-8 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1				FILL	Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
				ML	Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
2				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Sandy SILT, Slightly Moist	MH	USDA Soil Class: NS
3							
4							
5							
6				SP	Tan to Lt. Brown, Poorly graded SAND with trace Silt, Slightly Moist	D	USDA Soil Class: A-2b
7							
8							
9							
10					END OF TEST PIT @ 10.0' NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 7

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 8 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *6.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 2.0 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

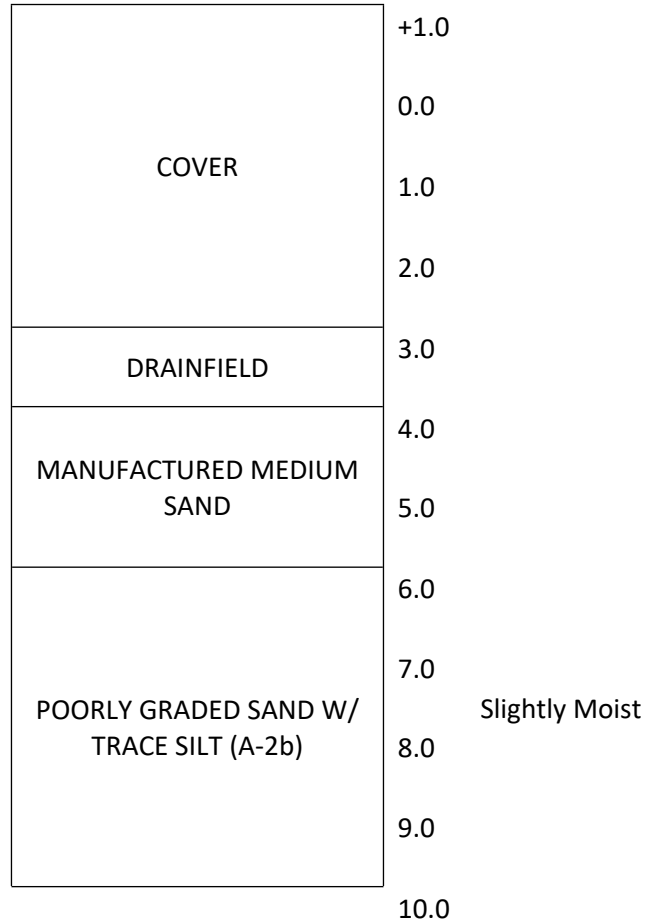
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 7, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 7

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

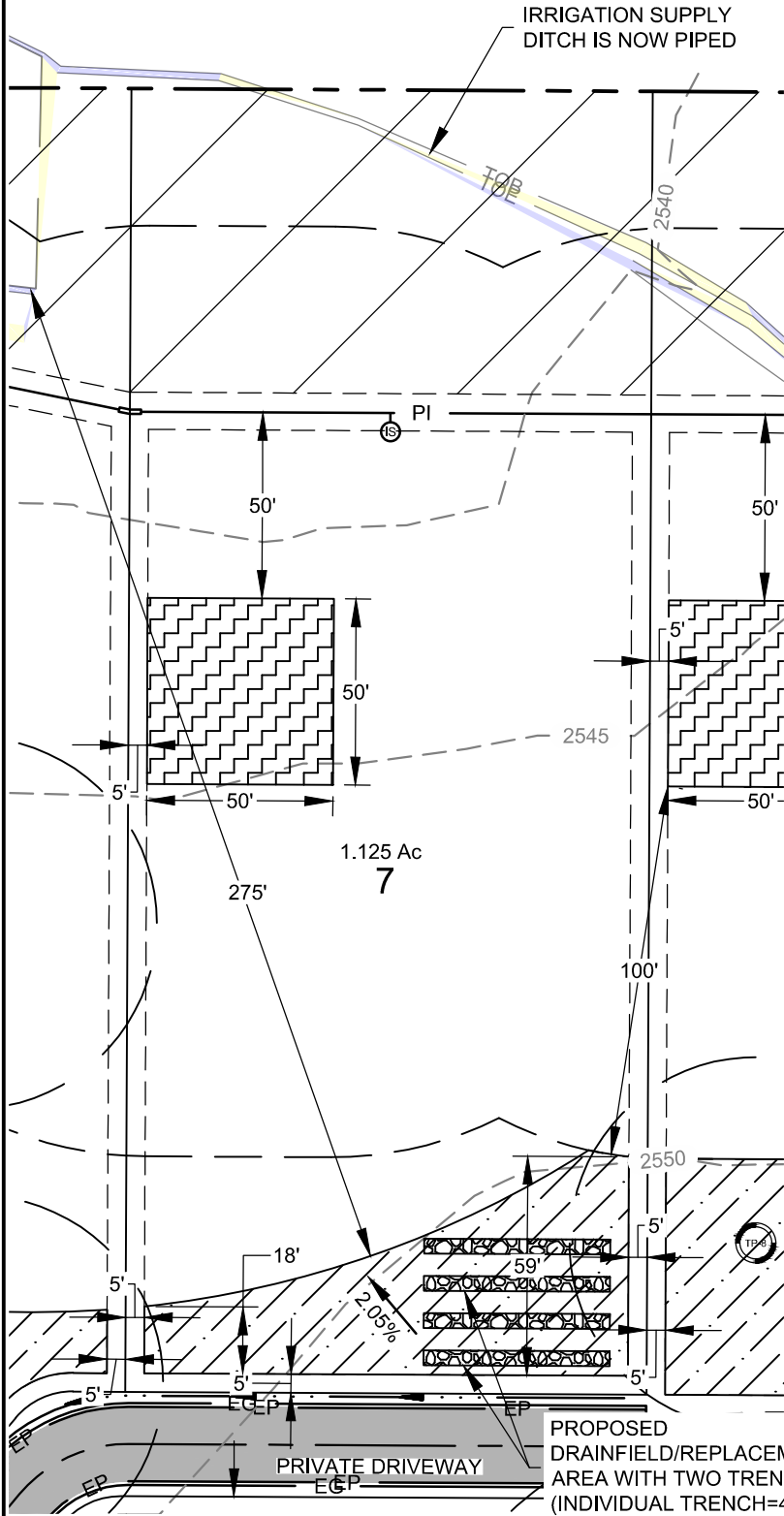
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

LOT 7



LEGEND	
	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE
	TOE OF BANK
	TOP OF BANK
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS

*NOTE:
SURFACE WATER ELEVATION SHOWN MEASURED AT TIME OF SURVEY (JUNE 2020). POTENTIAL FOR SEPARATION DISTANCE TO VARY WITH CHANGING WATER LEVELS.

A-2 SOIL TYPE SEPARATION DISTANCE REDUCTION OF 25' APPLIED TO THIS AREA PER IDAHO DEQ TECHNICAL GUIDANCE MANUAL SECTION 2.2.4.1



DATE: 1/11/23 JOB: 200194

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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-8 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1				FILL	Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
2				ML	Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
3				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Sandy SILT, Slightly Moist	MH	USDA Soil Class: NS
4							
5							
6				SP	Tan to Lt. Brown, Poorly graded SAND with trace Silt, Slightly Moist	D	USDA Soil Class: A-2b
7							
8							
9							
10					END OF TEST PIT @ 10.0' NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 8

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2a

TEST PIT: Pit No. 6 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *8.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 4.0 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	200	250	300	350	400
Drainfield Trench Length – ft					
3.0' wide trench	67	83	100	117	133
2.5' wide trench	80	100	120	140	160
2.0' wide trench	100	125	150	175	200

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

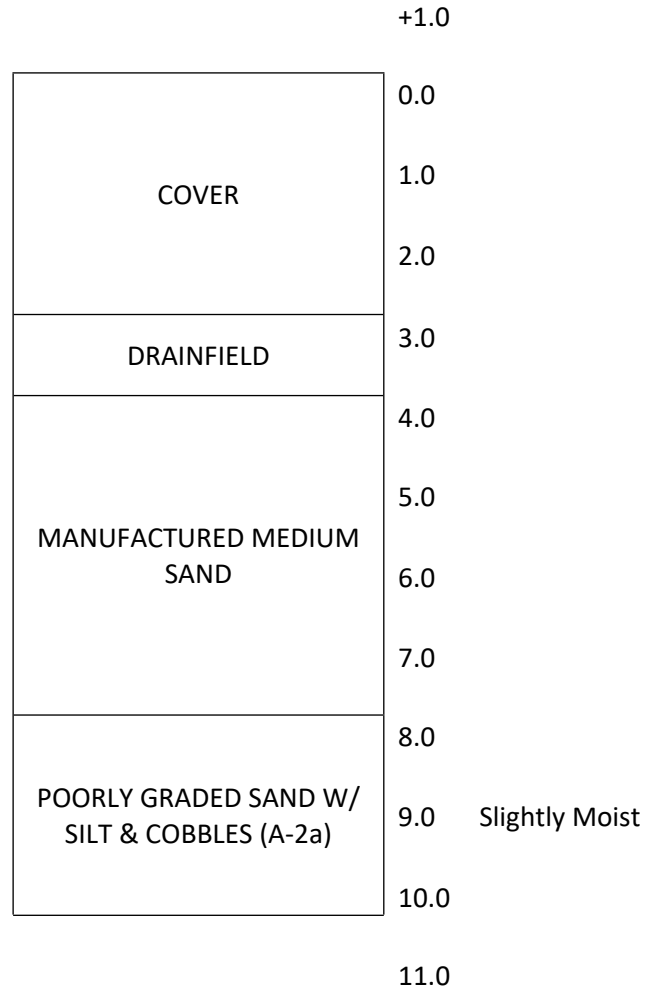
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 8, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 8

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

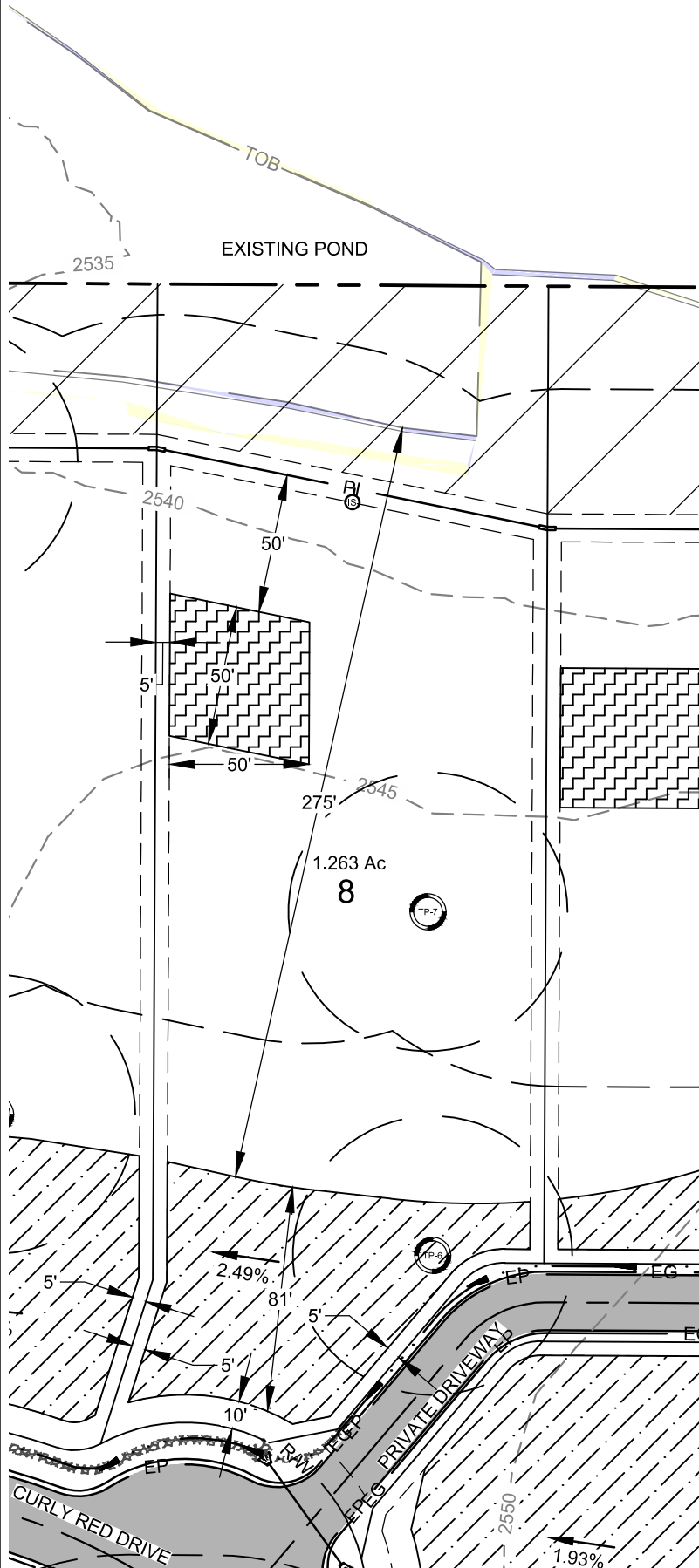
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

LOT 8



LEGEND	
	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE
	EXISTING EDGE OF WATER*
	TOP OF BANK
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS

*NOTE:
SURFACE WATER ELEVATION SHOWN MEASURED AT TIME OF SURVEY (JUNE 2020). POTENTIAL FOR SEPARATION DISTANCE TO VARY WITH CHANGING WATER LEVELS.

A-2 SOIL TYPE SEPARATION DISTANCE REDUCTION OF 25' APPLIED TO THIS AREA PER IDAHO DEQ TECHNICAL GUIDANCE MANUAL SECTION 2.2.4.1



DATE: 11/28/22 JOB: 200194

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 NAMPA, IDAHO 83687
 208-442-6300 | WWW.TO-ENGINEERS.COM



TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-6 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1				FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
				ML	Lt. Brown to Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
2				PCEM	Lt. Brown to Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist to Moist	MH	USDA Soil Class: NS
3							
4							
5							
6				PCEM	Brown to Dk. Brown, PARTIALLY CEMENTED Poorly graded SAND with Silt, Slightly Moist to Moist	MH	USDA Soil Class: NS
7							
8				SP	Tan to Brown, Poorly graded SAND with Silt & Cobbles, Slightly Moist	D	USDA Soil Class: A-2a
9							
10							
11					END OF TEST PIT @ 10.5' NO GROUNDWATER ENCOUNTERED		
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 9

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 9 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *7.5 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 3.5 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

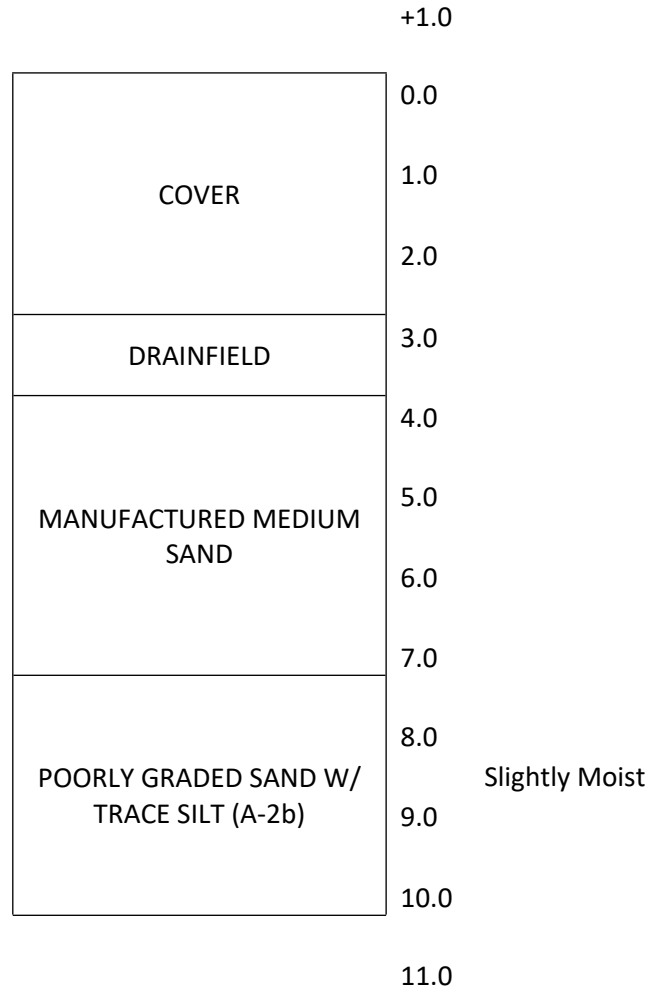
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 9, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 9

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

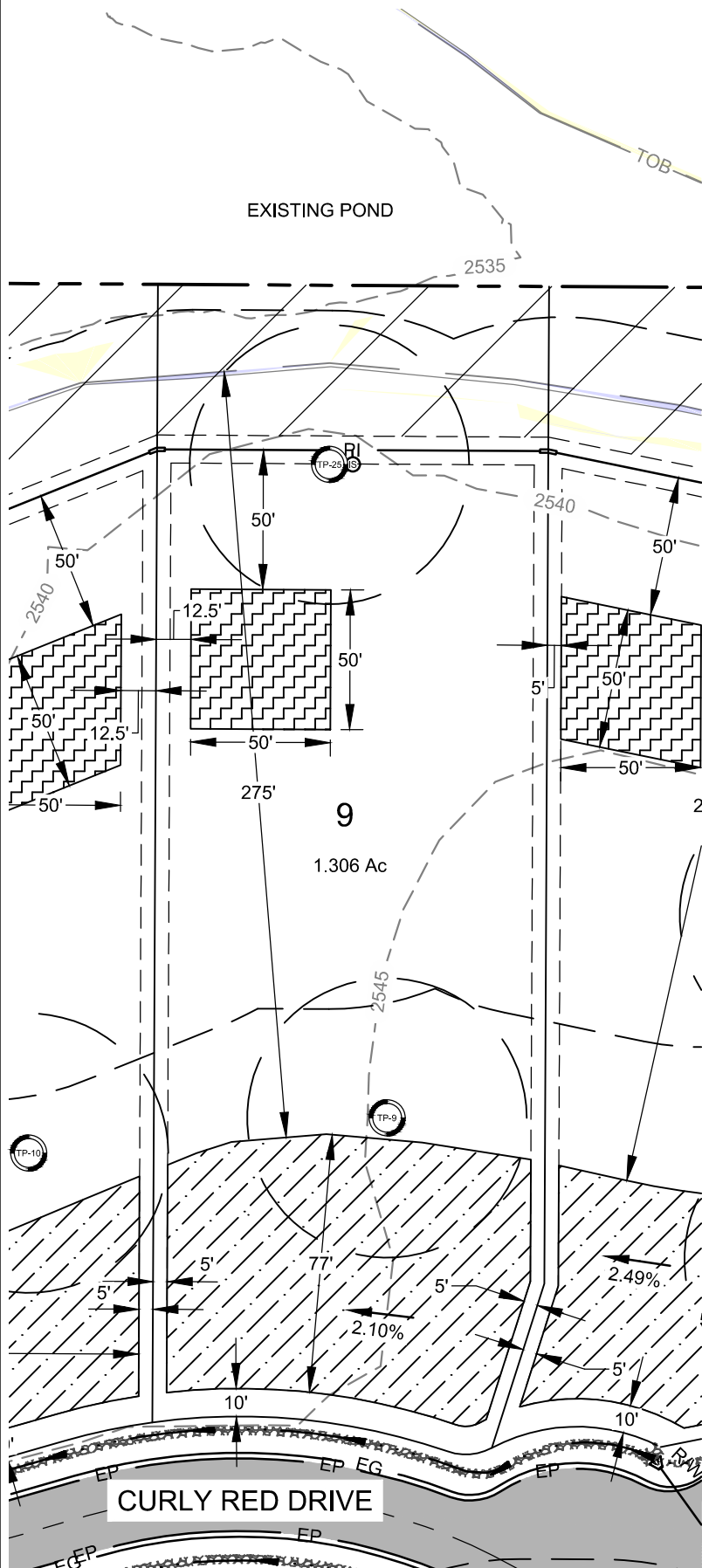
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

LOT 9



LEGEND	
	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE
	EXISTING EDGE OF WATER*
	TOP OF BANK
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS

*NOTE:
SURFACE WATER ELEVATION SHOWN MEASURED AT TIME OF SURVEY (JUNE 2020). POTENTIAL FOR SEPARATION DISTANCE TO VARY WITH CHANGING WATER LEVELS.

A-2 SOIL TYPE SEPARATION DISTANCE REDUCTION OF 25' APPLIED TO THIS AREA PER IDAHO DEQ TECHNICAL GUIDANCE MANUAL SECTION 2.2.4.1



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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-9 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1				FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
2				ML	Brown to Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
3				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Sandy SILT, Slightly Moist	MH	USDA Soil Class: NS
4							
5							
6							
7							
8				SP	Tan to Lt. Brown, Poorly graded SAND with trace Silt, Slightly Moist	D	USDA Soil Class: A-2b
9							Percolation Test Conducted at 9.0' with a rate of 3.6 in/hr
10					END OF TEST PIT @ 10.0' NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 10

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 10 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *7.5 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 3.5 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 10, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 10

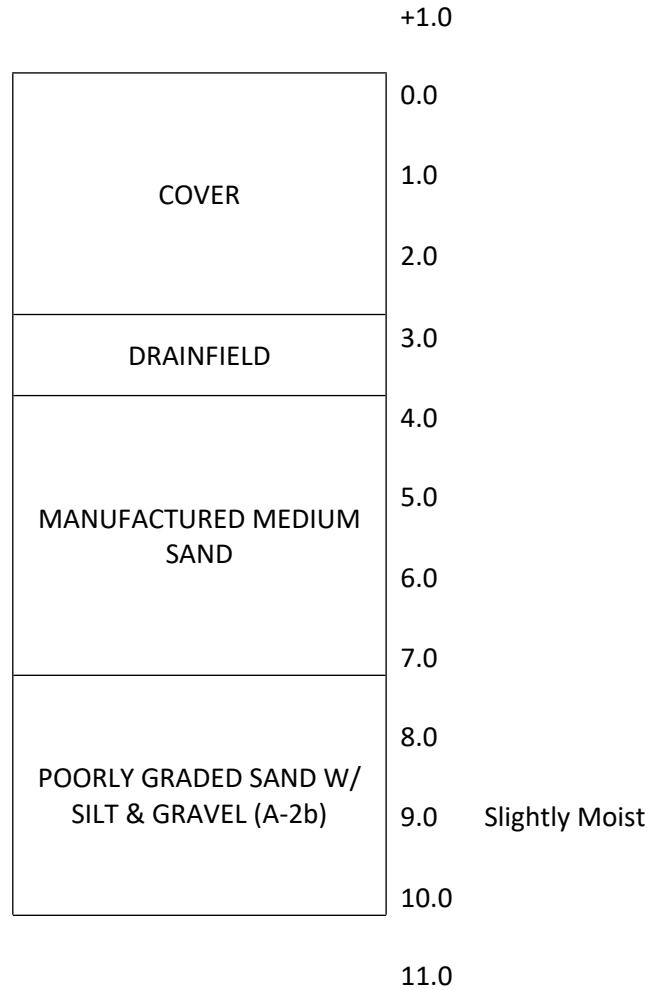
In-Trench Sand Filter System Typical Section

In Trench Sand Filter Notes:

*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

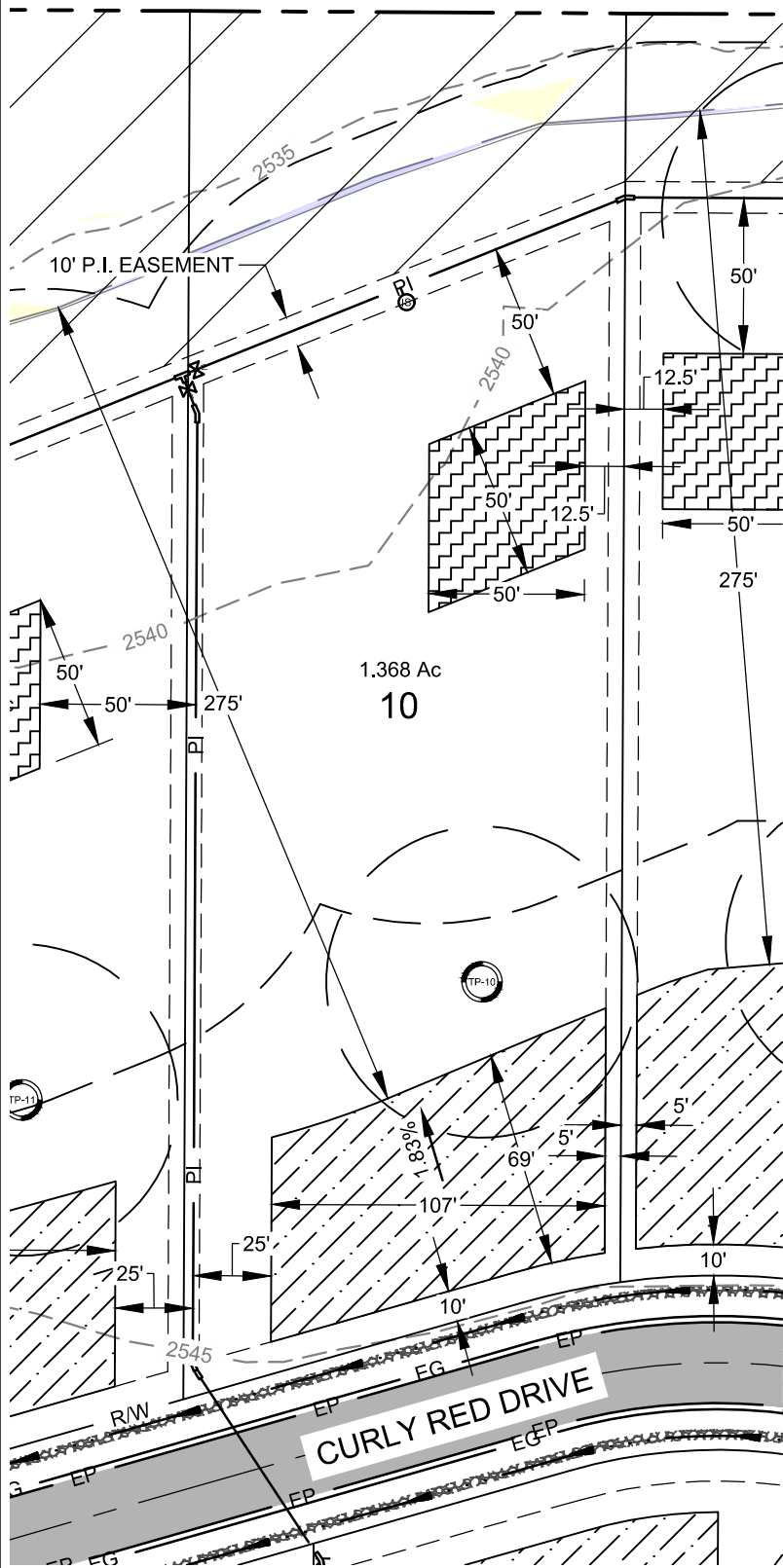
*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.



WELL AND SEPTIC PLAN

LOT 10

EXISTING POND



LEGEND	
	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE
	EXISTING EDGE OF WATER*
	TOP OF BANK
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS

*NOTE:
SURFACE WATER ELEVATION SHOWN MEASURED AT TIME OF SURVEY (JUNE 2020). POTENTIAL FOR SEPARATION DISTANCE TO VARY WITH CHANGING WATER LEVELS.

A-2 SOIL TYPE SEPARATION DISTANCE REDUCTION OF 25' APPLIED TO THIS AREA PER IDAHO DEQ TECHNICAL GUIDANCE MANUAL SECTION 2.2.4.1



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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-10 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1			[Pattern: Horizontal lines]	FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
2				ML	Brown to Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
3			[Pattern: Vertical lines]	PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Sandy SILT, Slightly Moist	MH	USDA Soil Class: NS
4							
5							
6							
7							
8			[Pattern: Dotted]	SP	Tan to Lt. Brown, Poorly graded SAND with Silt & Gravel, Slightly Moist	D	USDA Soil Class: A-2b
9							
10							
11					END OF TEST PIT @ 10.5' NO GROUNDWATER ENCOUNTERED		
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 11

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 11– See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *7.5 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 3.5 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

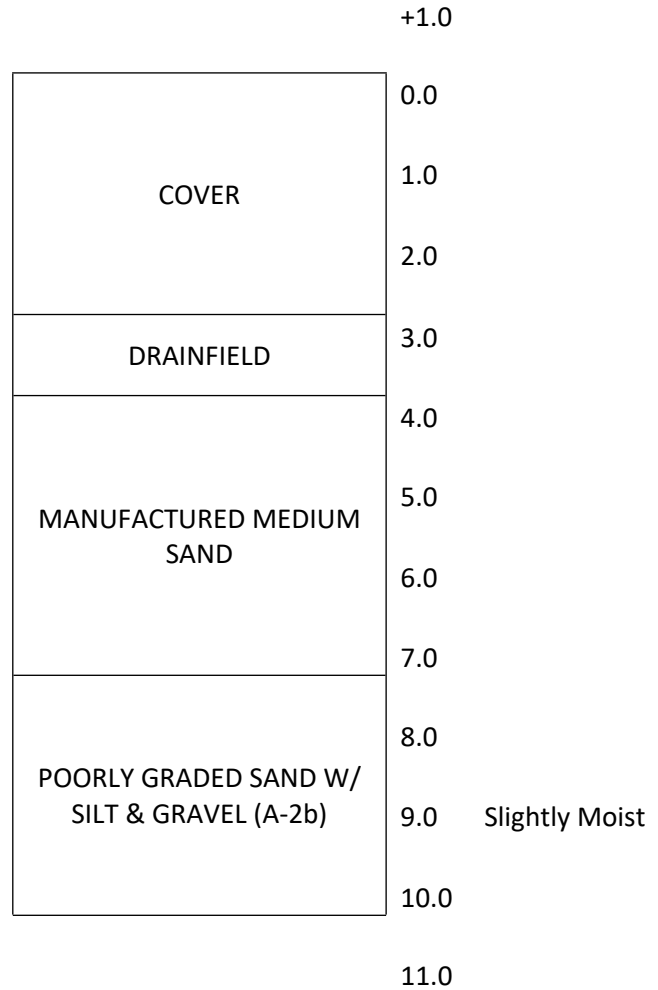
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 11, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 11

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.



TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-11 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1			[Pattern: Horizontal lines]	FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
2				ML	Brown to Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
3			[Pattern: Vertical lines]	PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Sandy SILT, Slightly Moist	MH	USDA Soil Class: NS
4							
5							
6							
7							
8				SP	Tan to Lt. Brown, Poorly graded SAND with Silt & Gravel, Slightly Moist	D	USDA Soil Class: A-2b
9					END OF TEST PIT @ 10.5' NO GROUNDWATER ENCOUNTERED		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 12

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 12 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, soil moist below system

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *5.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 1.0 foot of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

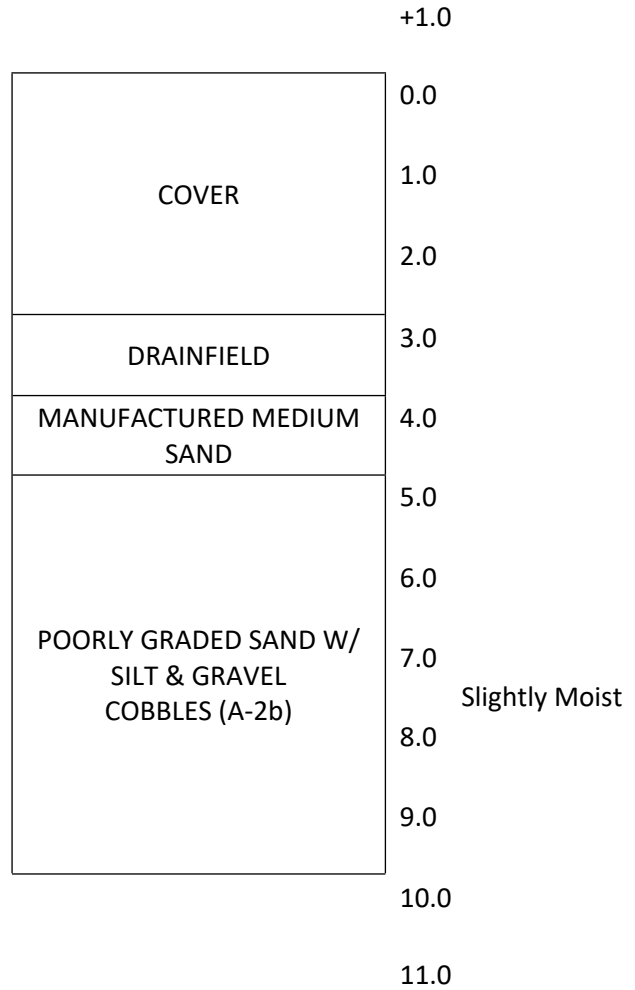
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 12, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 12

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

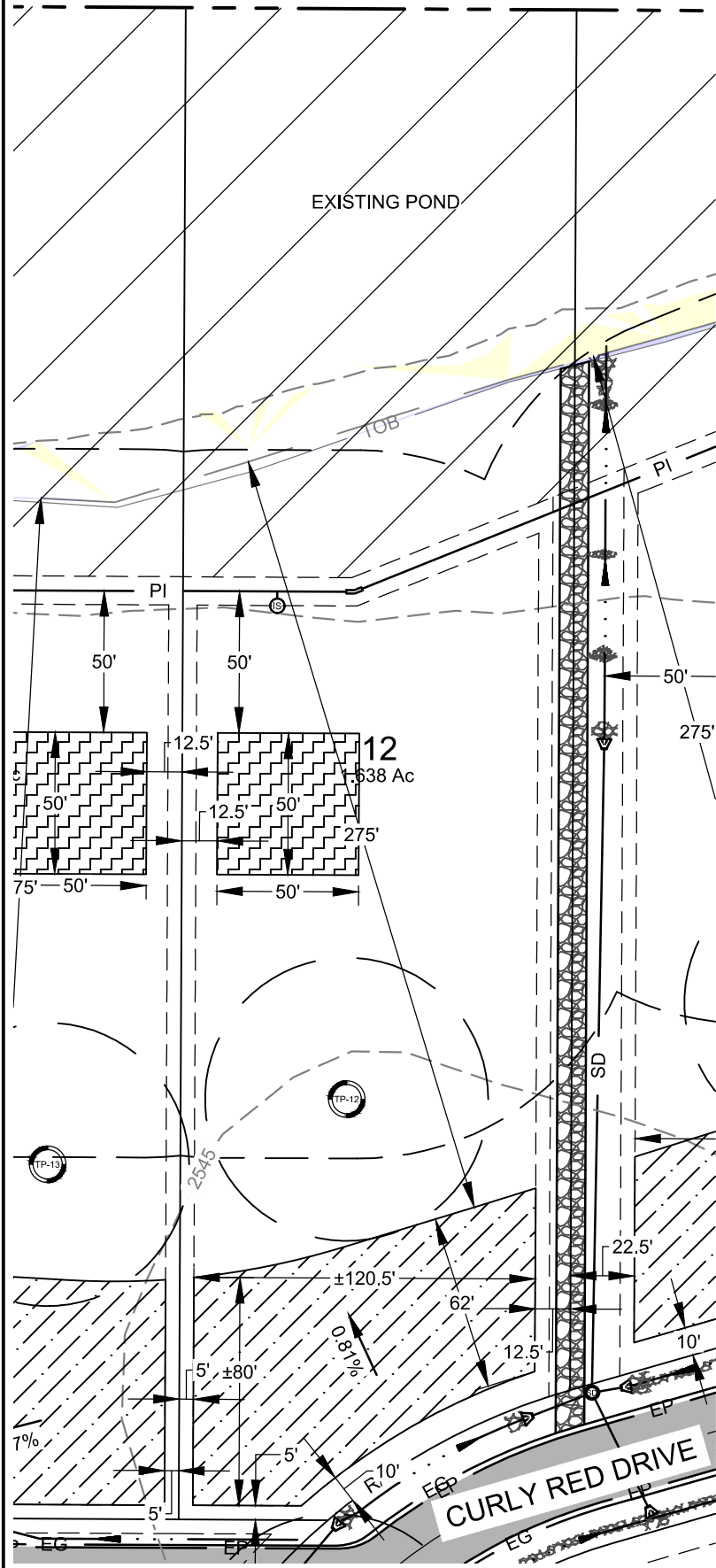
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

LOT 12



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	ROAD CENTERLINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE
	STORM DRAIN LINE
	EXISTING EDGE OF WATER*
	TOP OF BANK
	STORM DRAIN MANHOLE
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS

*NOTE:
SURFACE WATER ELEVATION SHOWN MEASURED AT TIME OF SURVEY (JUNE 2020). POTENTIAL FOR SEPARATION DISTANCE TO VARY WITH CHANGING WATER LEVELS.

A-2 SOIL TYPE SEPARATION DISTANCE REDUCTION OF 25' APPLIED TO THIS AREA PER IDAHO DEQ TECHNICAL GUIDANCE MANUAL SECTION 2.2.4.1



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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-12 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS	
	Sample Type	Blows / 6 in.						
1			[Pattern]	FILL	Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1	
2				ML	Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1	
3			[Pattern]	PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS	
4								
5								
6			[Pattern]	SP	Tan to Lt. Brown, Poorly graded SAND with Silt & Gravel, Slightly Moist Cobbles	D	USDA Soil Class: A-2b	
7								
8								
9								
10								
11			END OF TEST PIT @ 10.0' NO GROUNDWATER ENCOUNTERED					
12								
13								
14								
15								
16								
17								
18								
19								
20								

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 13

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 13 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *8.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 4.0 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

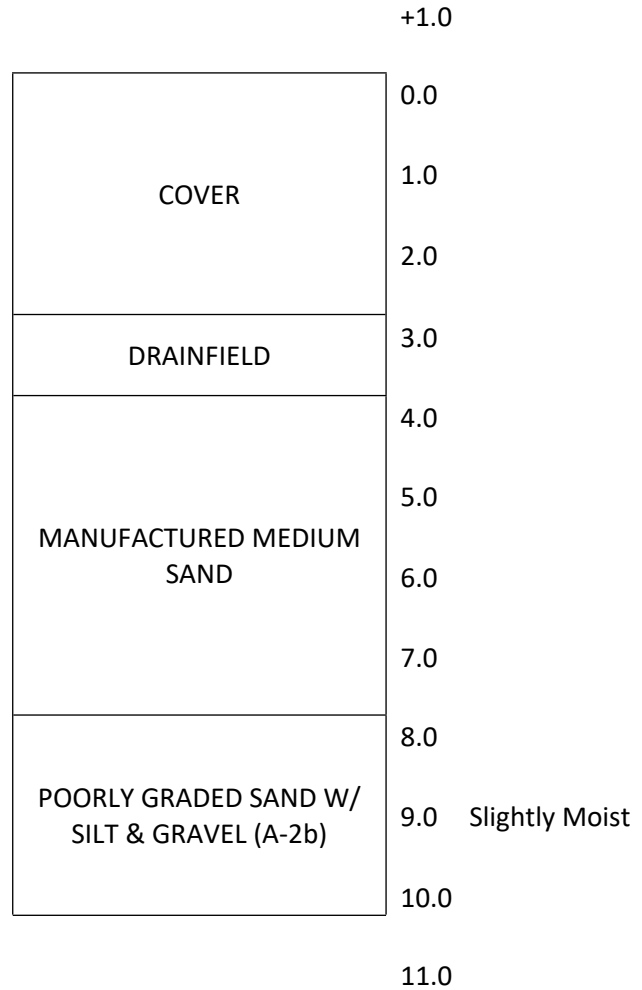
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 13, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 13

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

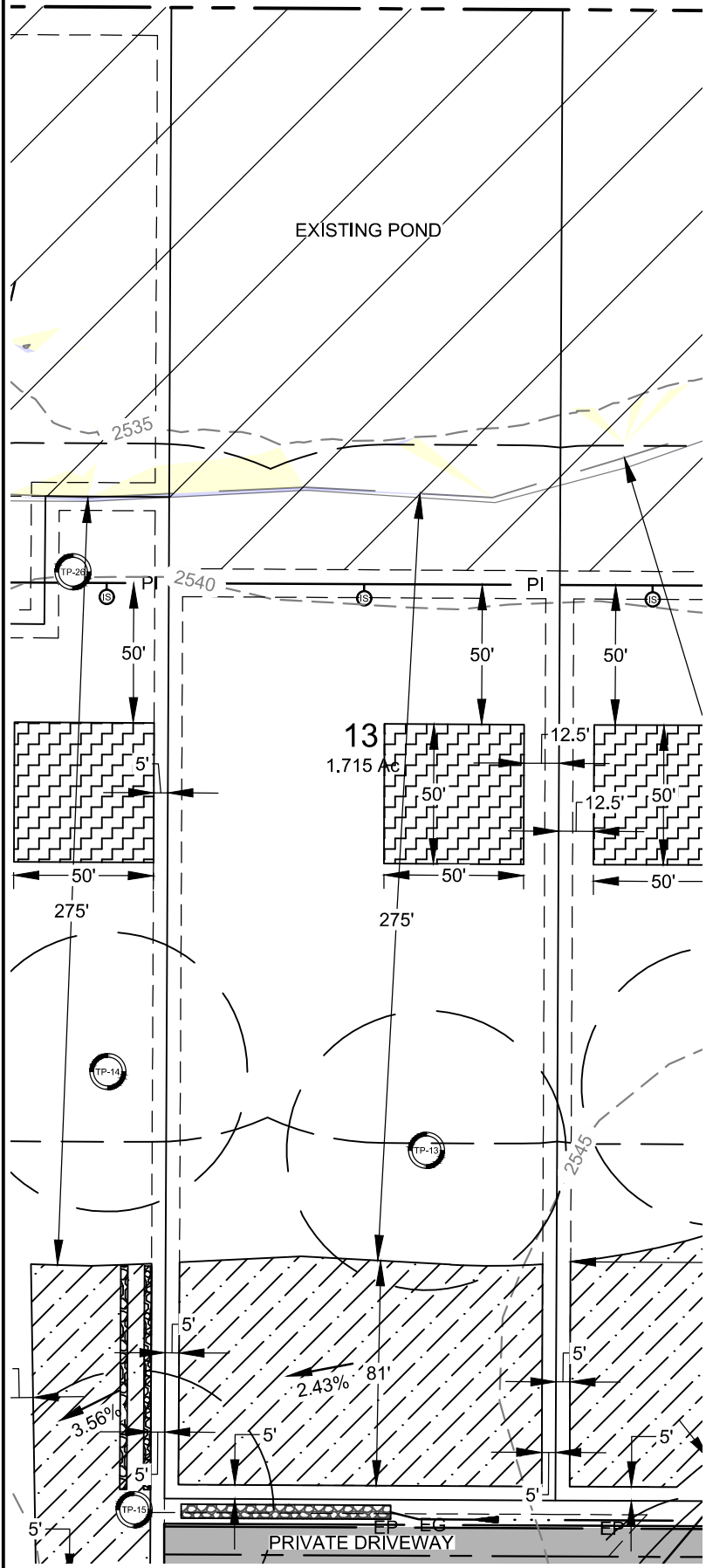
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

LOT 13



LEGEND	
	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE
	EXISTING EDGE OF WATER*
	TOP OF BANK
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS

*NOTE:
SURFACE WATER ELEVATION SHOWN MEASURED AT TIME OF SURVEY (JUNE 2020). POTENTIAL FOR SEPARATION DISTANCE TO VARY WITH CHANGING WATER LEVELS.

A-2 SOIL TYPE SEPARATION DISTANCE REDUCTION OF 25' APPLIED TO THIS AREA PER IDAHO DEQ TECHNICAL GUIDANCE MANUAL SECTION 2.2.4.1



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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-13 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1			[Soil Pattern]	FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
2				ML	Brown to Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
3				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS
4							
5							
6							
7							
8				SP	Tan to Lt. Brown, Poorly graded SAND with Silt & Gravel, Slightly Moist	D	USDA Soil Class: A-2b
9							
10							
11					END OF TEST PIT @ 10.5' NO GROUNDWATER ENCOUNTERED		
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 15

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 15 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *8.5 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 4.5 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

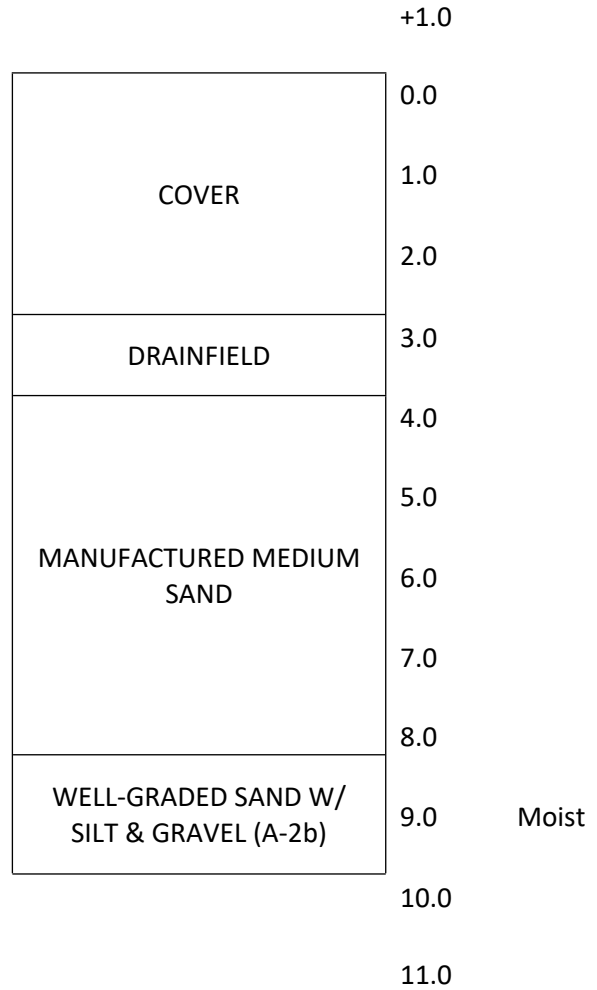
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 15, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 15

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

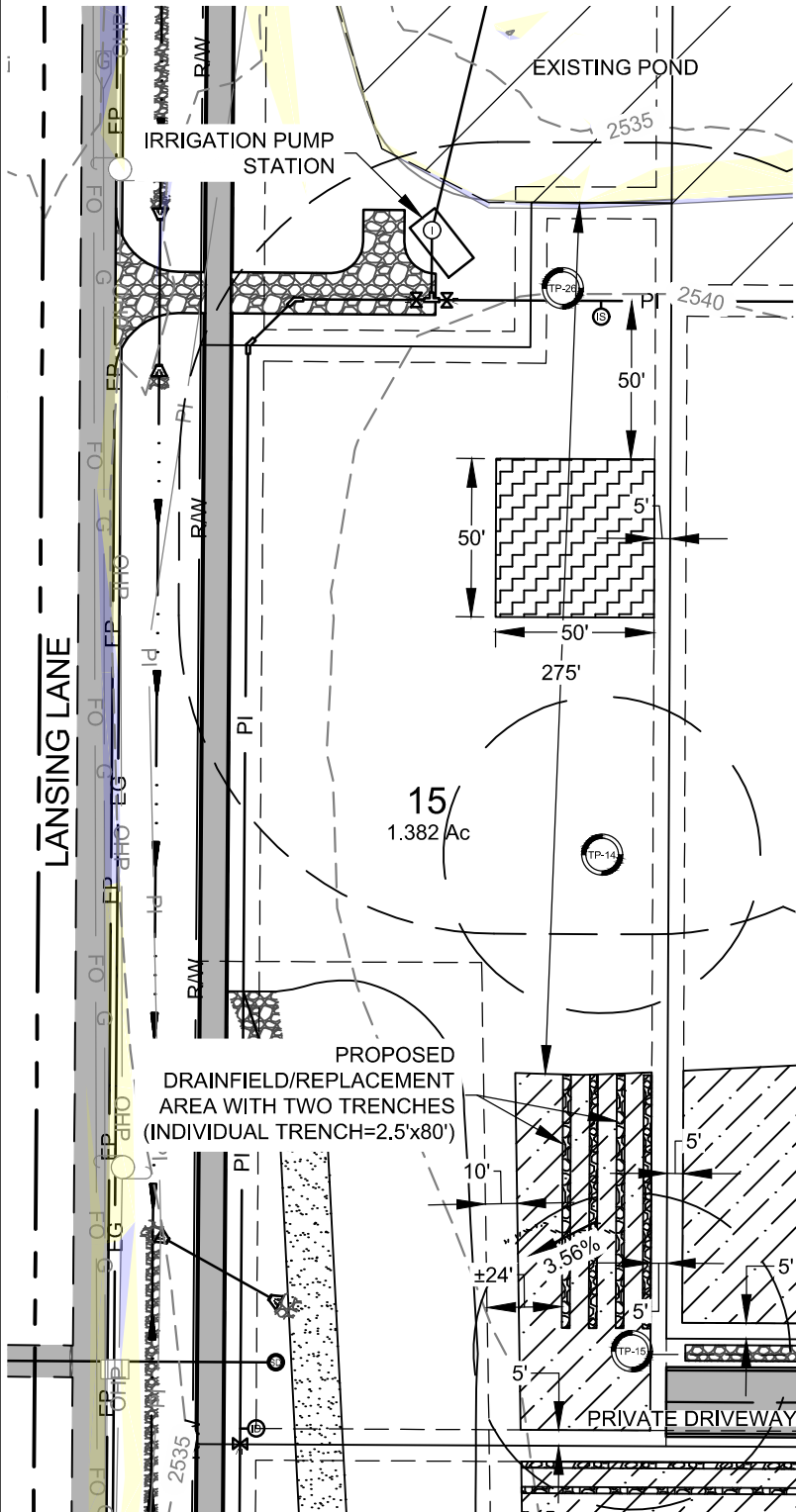
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

LOT 15



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	ROAD CENTERLINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE
	STORM DRAIN LINE
	EXISTING EDGE OF WATER*
	TOP OF BANK
	EXISTING EDGE OF PAVEMENT
	EXISTING GAS LINE
	EXISTING CABLE LINE
	OVERHEAD POWER LINE
	EXISTING PI LINE
	STORM DRAIN MANHOLE
	GAS MARKER
	POWER POLE
	EXISTING CATCH BASIN
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS

*NOTE:
SURFACE WATER ELEVATION SHOWN MEASURED AT TIME OF SURVEY (JUNE 2020). POTENTIAL FOR SEPARATION DISTANCE TO VARY WITH CHANGING WATER LEVELS.

A-2 SOIL TYPE SEPARATION DISTANCE REDUCTION OF 25' APPLIED TO THIS AREA PER IDAHO DEQ TECHNICAL GUIDANCE MANUAL SECTION 2.2.4.1

DATE: 1/11/23 JOB: 200194

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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-15 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS	
	Sample Type	Blows / 6 in.						
1				FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1	
2				ML	Brown to Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1	
3				ML	Tan to Lt. Brown, Sandy SILT, Slightly Moist	F	USDA Soil Class: B-2	
4				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND with Gravel, Slightly Moist	MH	USDA Soil Class: NS	
5								
6								
7				SW-SM	Tan to Lt. Brown, Well-graded SAND with Silt & Gravel, Moist	D	USDA Soil Class: A-2b	
8								
9								
10			END OF TEST PIT @ 10.0' NO GROUNDWATER ENCOUNTERED					
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 16

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 15 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *8.5 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 4.5 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

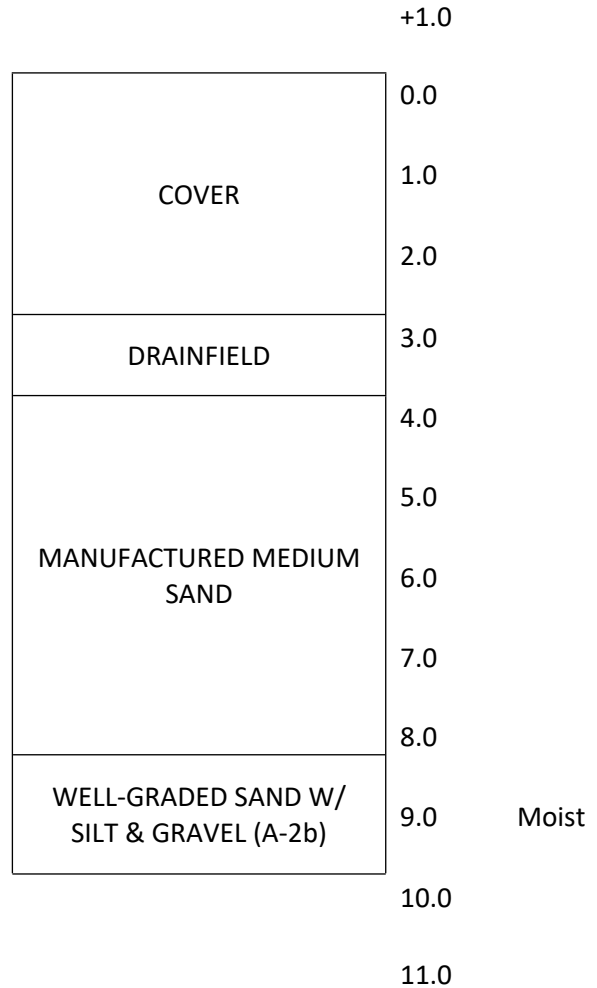
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 16, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 16

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

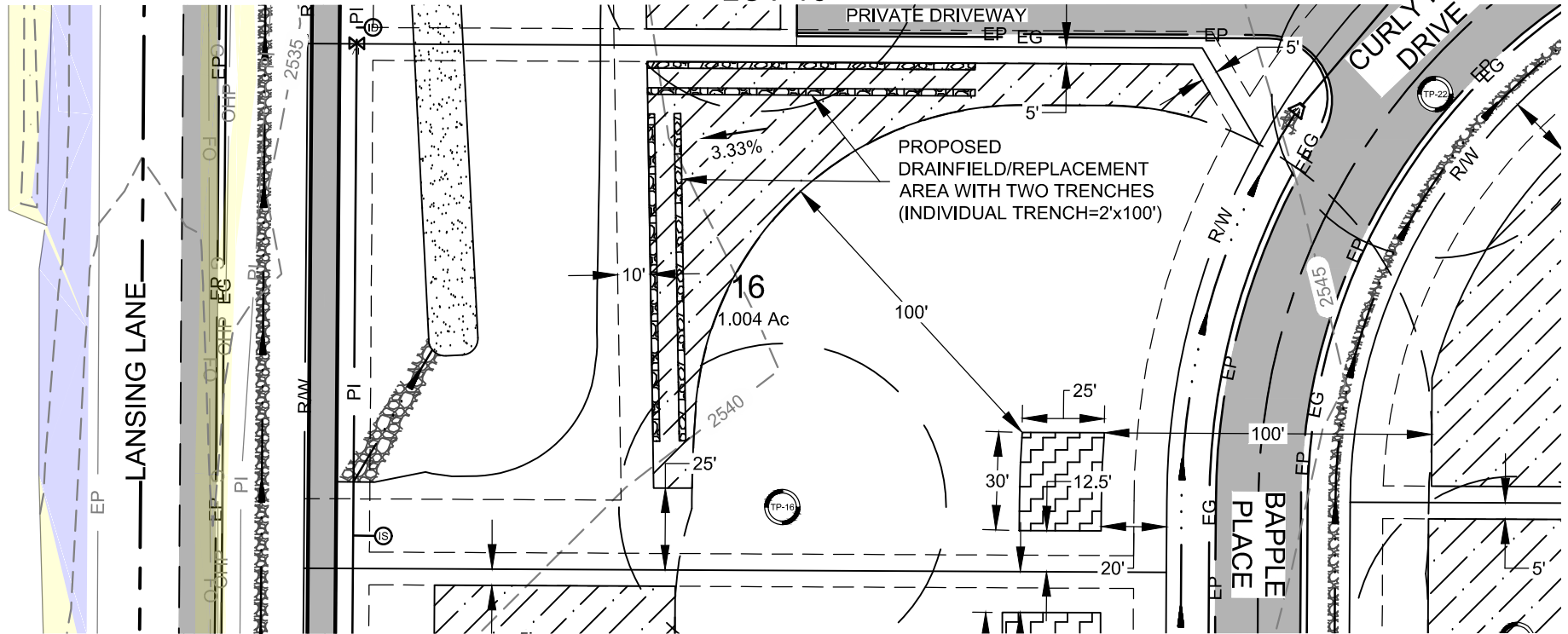
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

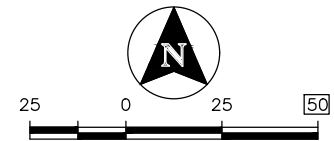
LOT 16



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	ROAD CENTERLINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE
	STORM WATER FLOW LINE

	EXISTING EDGE OF PAVEMENT
	GAS LINE
	FIBER OPTIC LINE
	OVERHEAD POWER LINE
	EXISTING PI LINE
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 1/11/23 JOB: 200194

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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-15 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1				FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
2				ML	Brown to Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
3				ML	Tan to Lt. Brown, Sandy SILT, Slightly Moist	F	USDA Soil Class: B-2
4							
5				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND with Gravel, Slightly Moist	MH	USDA Soil Class: NS
6							
7							
8							
9				SW-SM	Tan to Lt. Brown, Well-graded SAND with Silt & Gravel, Moist	D	USDA Soil Class: A-2b
10							
11					END OF TEST PIT @ 10.0' NO GROUNDWATER ENCOUNTERED		
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 17

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 17 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *8.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 4.0 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12” of 1-1/2” – 2” washed drain rock shall be placed. Place 6” of drain rock under and 2” of drain rock over the 4” perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0’ wide trench	89	111	133	156	178
2.5’ wide trench	107	133	160	187	213
2.0’ wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

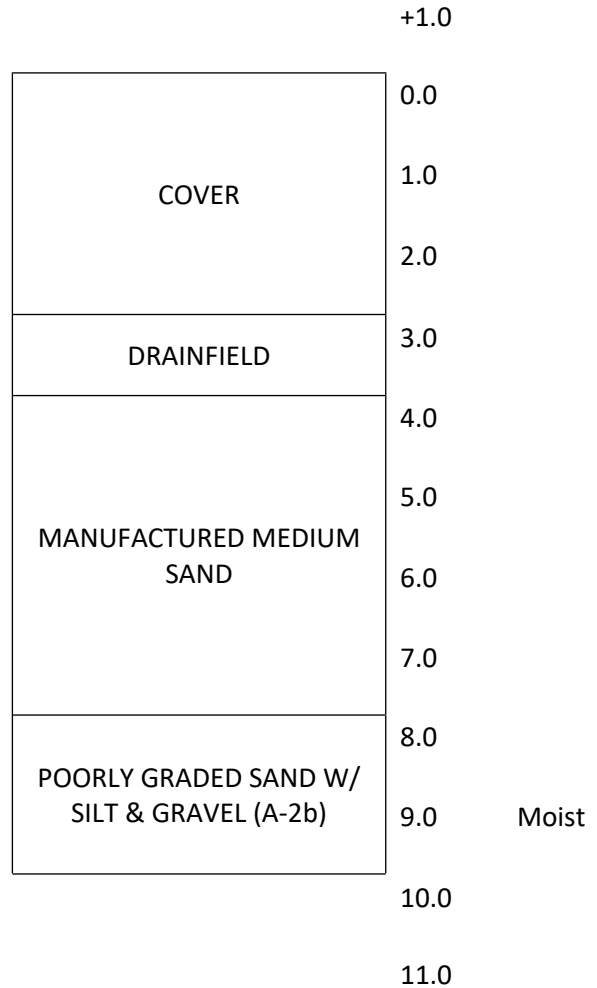
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 17, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 17

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

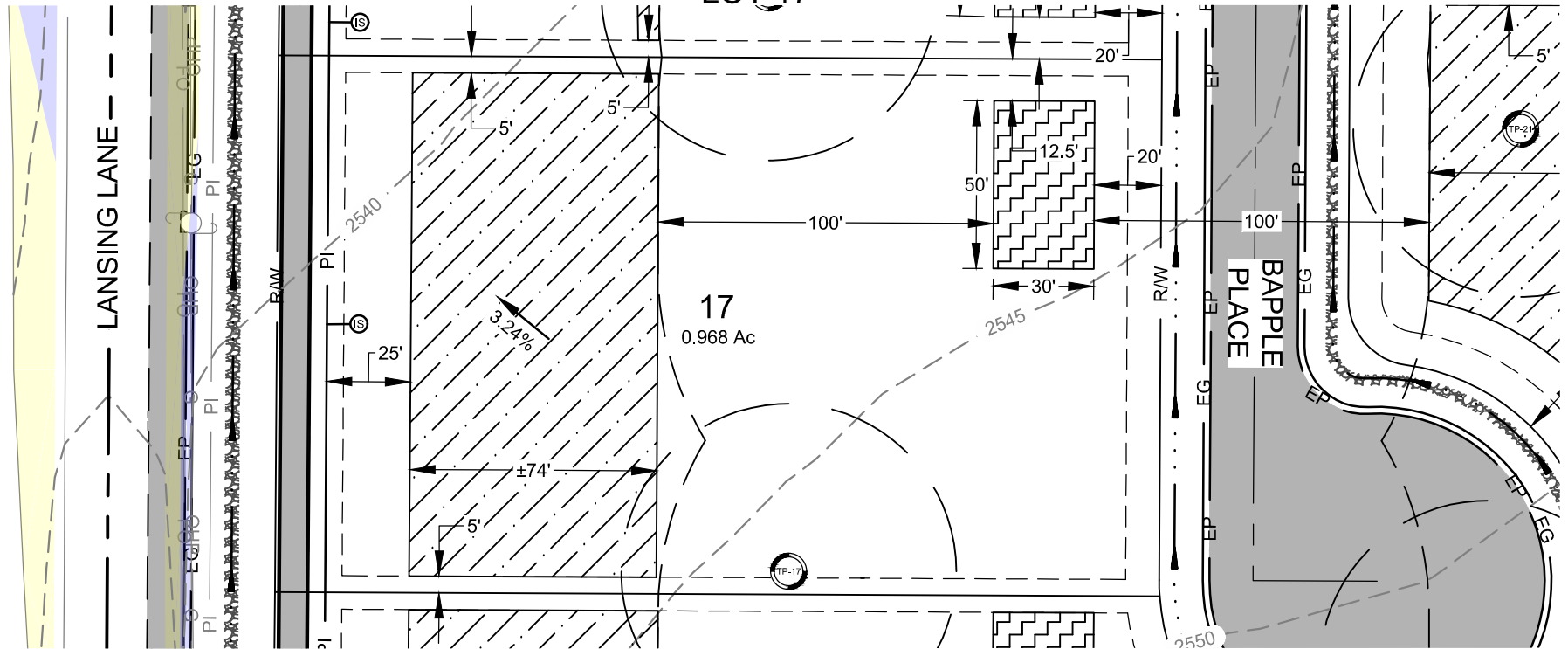
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

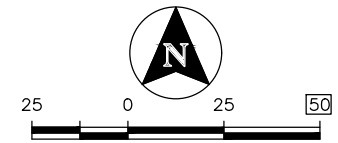
LOT 17



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	ROAD CENTERLINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE
	STORM WATER FLOW LINE

	EXISTING EDGE OF PAVEMENT
	GAS LINE
	FIBER OPTIC LINE
	OVERHEAD POWER LINE
	EXISTING PI LINE
	POWER POLE
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 11/28/22 JOB: 200194

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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-17 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1				FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
2	X			ML	Lt. Brown to Brown, SILT with Sand, Slightly Moist	F	USDA Soil Class: C-1
3							
4							
5				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Sandy SILT, Slightly Moist	MH	USDA Soil Class: NS
6							
7							
8				SP	Tan to Lt. Brown, Poorly graded SAND with Silt & Gravel, Moist	D	USDA Soil Class: A-2b
9							
10					END OF TEST PIT @ 10.0' NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 18

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 17 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *8.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 4.0 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12” of 1-1/2” – 2” washed drain rock shall be placed. Place 6” of drain rock under and 2” of drain rock over the 4” perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0’ wide trench	89	111	133	156	178
2.5’ wide trench	107	133	160	187	213
2.0’ wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

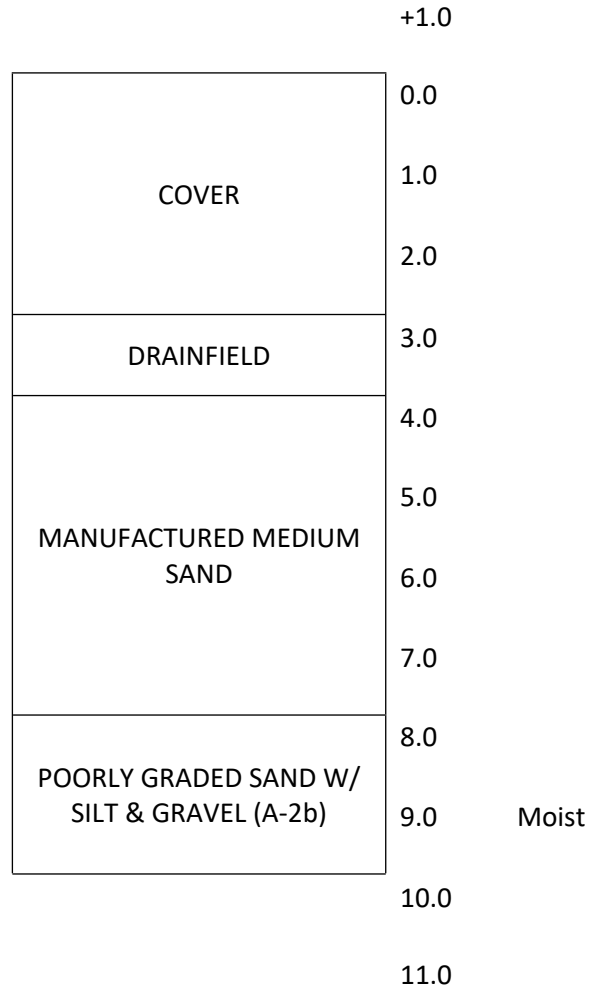
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 18, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 18

In-Trench Sand Filter System
Typical Section



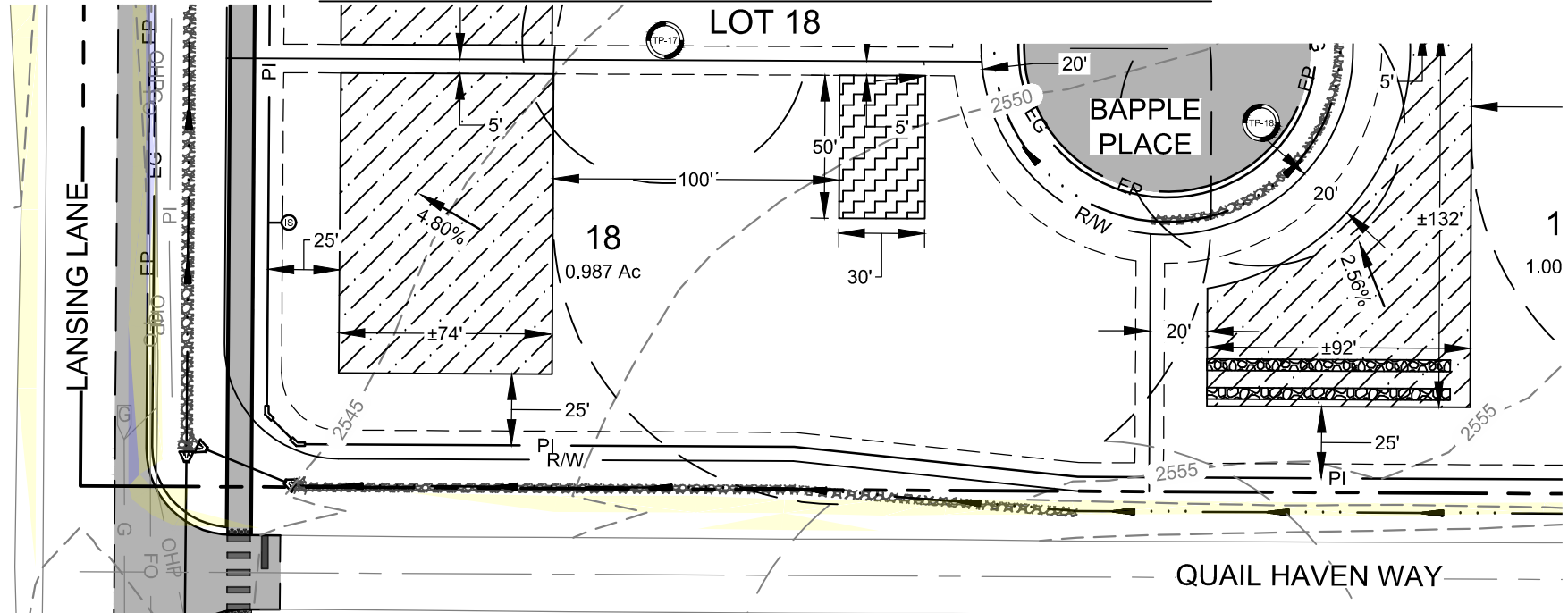
In Trench Sand Filter Notes:

*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN



SEPTIC DRAINFIELD ALLOWABLE AREA FROM C-3 SER PLAN

WELL ALLOWABLE AREA FROM C-3 SER PLAN

LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE

	STORM WATER FLOW LINE
	EXISTING EDGE OF PAVEMENT
	GAS LINE
	FIBER OPTIC LINE
	OVERHEAD POWER LINE
	EXISTING PI LINE
	GAS MARKER
	APPROXIMATE TEST PIT LOCATION

	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS

DATE: 11/28/22 JOB: 200194

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 NAMPA, IDAHO 83687
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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-17 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1				FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
2	X			ML	Lt. Brown to Brown, SILT with Sand, Slightly Moist	F	USDA Soil Class: C-1
3							
4							
5				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Sandy SILT, Slightly Moist	MH	USDA Soil Class: NS
6							
7							
8				SP	Tan to Lt. Brown, Poorly graded SAND with Silt & Gravel, Moist	D	USDA Soil Class: A-2b
9							
10							
11					END OF TEST PIT @ 10.0'		
12					NO GROUNDWATER ENCOUNTERED		
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 19

SUBSURFACE SYSTEM TYPE: In-Trench Sand Filter System

SOIL DESIGN SUBGROUP: B-2

TEST PIT: Pit No. 18 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *11.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides. Backfill with 7.0 feet of manufactured medium sand.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	444	556	667	778	889
Drainfield Trench Length – ft					
3.0' wide trench	148	185	222	259	296
2.5' wide trench	178	222	267	311	356
2.0' wide trench	222	278	333	389	444

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

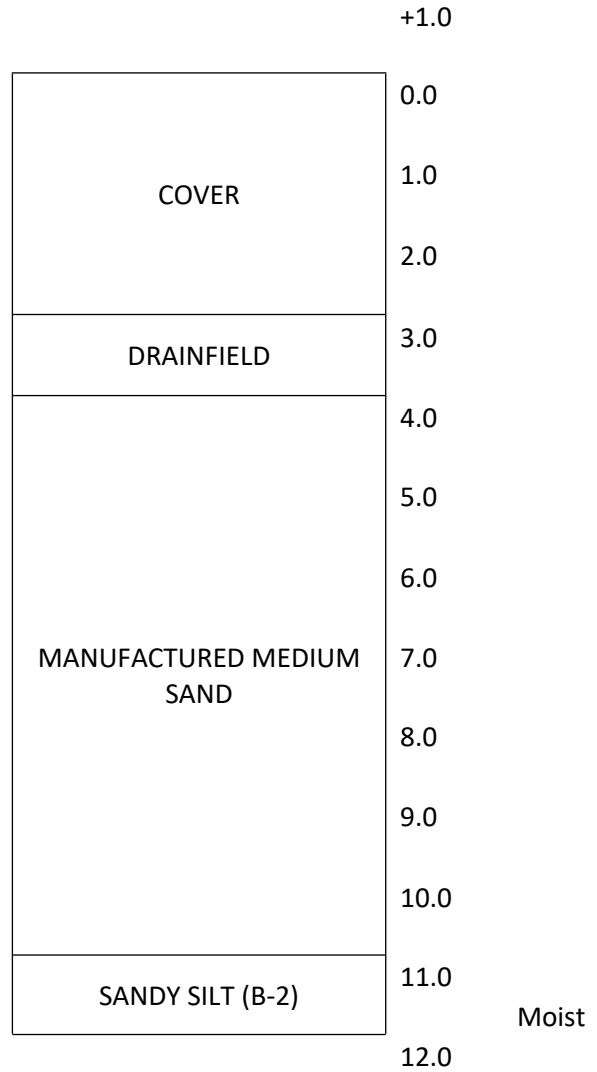
If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

Lot 19, Sheet 1/4

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 19

In-Trench Sand Filter System
Typical Section



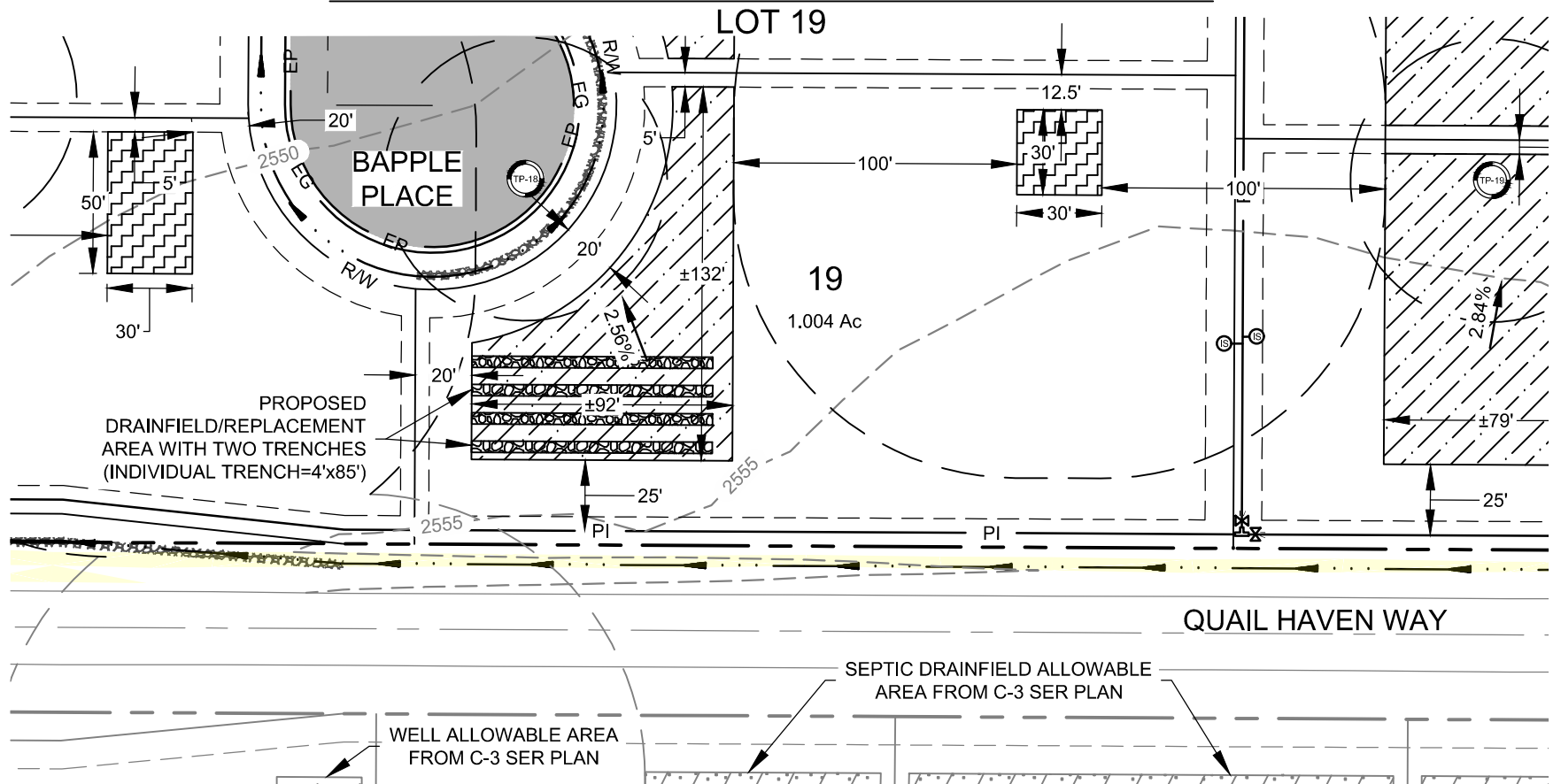
In Trench Sand Filter Notes:

*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

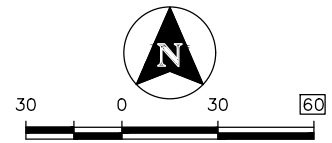
*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN



LEGEND	
	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	ROAD CENTERLINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT

	PRESSURE IRRIGATION LINE
	STORM WATER FLOW LINE
	EXISTING EDGE OF PAVEMENT
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 1/11/23 JOB: 200194

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 NAMPA, IDAHO 83687
 208-442-6300 | WWW.TO-ENGINEERS.COM



TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-18 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1				FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
2				ML	Brown to Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
3							
4				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS
5							
6							
7				ML	Tan to Lt. Brown, SILT with weak cementation, Moist	S	USDA Soil Class: NS
8							
9							Percolation Test Conducted at 8.5' with a rate of 2.2 in/hr
10							
11				ML	Lt. Brown to Brown, Sandy SILT, Moist	F	USDA Soil Class: B-2
12					END OF TEST PIT @ 12.0' NO GROUNDWATER ENCOUNTERED		
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 20

SUBSURFACE SYSTEM TYPE: In Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 21 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *6.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

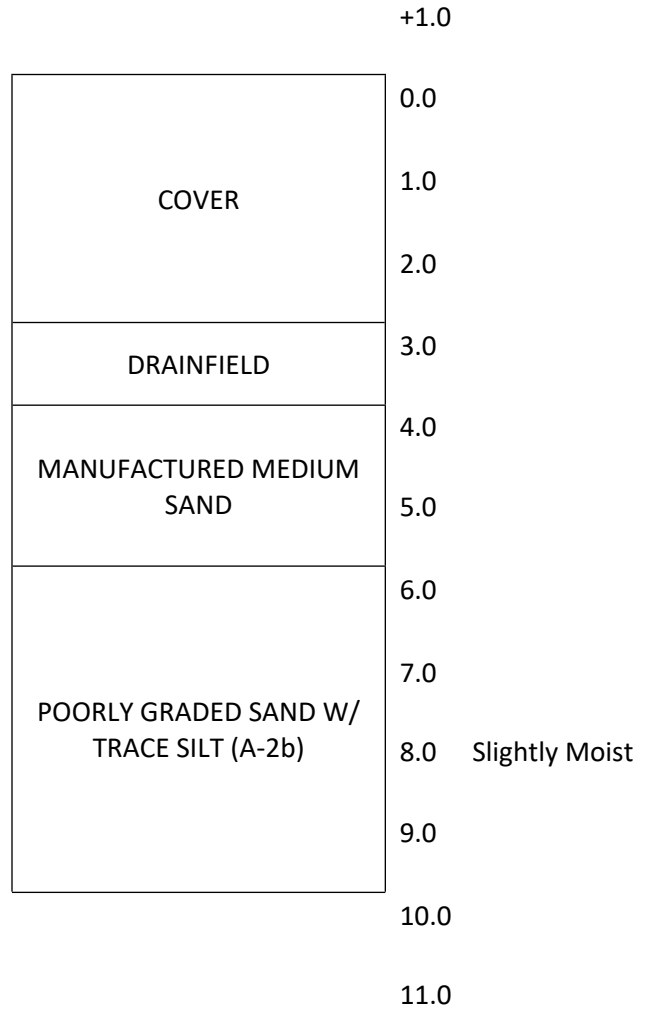
Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 20

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

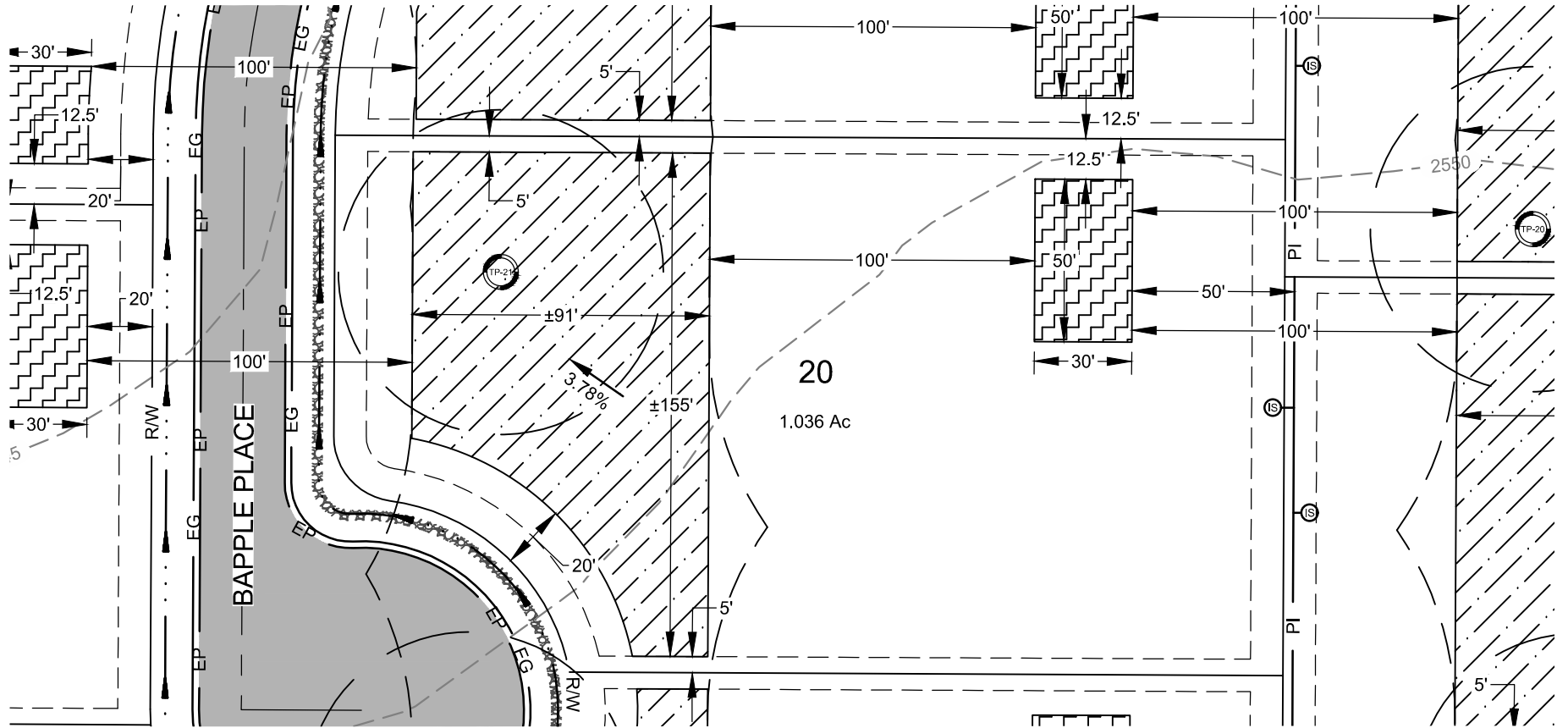
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

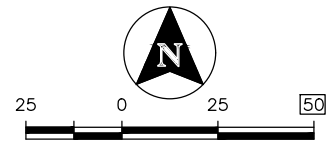
LOT 20



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	ROAD CENTERLINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT

	PRESSURE IRRIGATION LINE
	STORM WATER FLOW LINE
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 11/28/22 JOB: 200194

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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-21 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1			Soil Pattern	FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
				ML	Tan to Lt. Brown, SILT with Sand, Slightly Moist	F	USDA Soil Class: C-1
2				ML	Tan to Lt. Brown, Sandy SILT with weak cementation, Slightly Moist	MH	USDA Soil Class: NS
3				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS
4							
5							
6			SP	Tan to Brown, Poorly graded SAND with trace Silt, Slightly Moist	D	USDA Soil Class: A-2b	
7							
8							
9							
10							
11					END OF TEST PIT @ 10.0' NO GROUNDWATER ENCOUNTERED		
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 21

SUBSURFACE SYSTEM TYPE: In Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 22 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *7.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 21

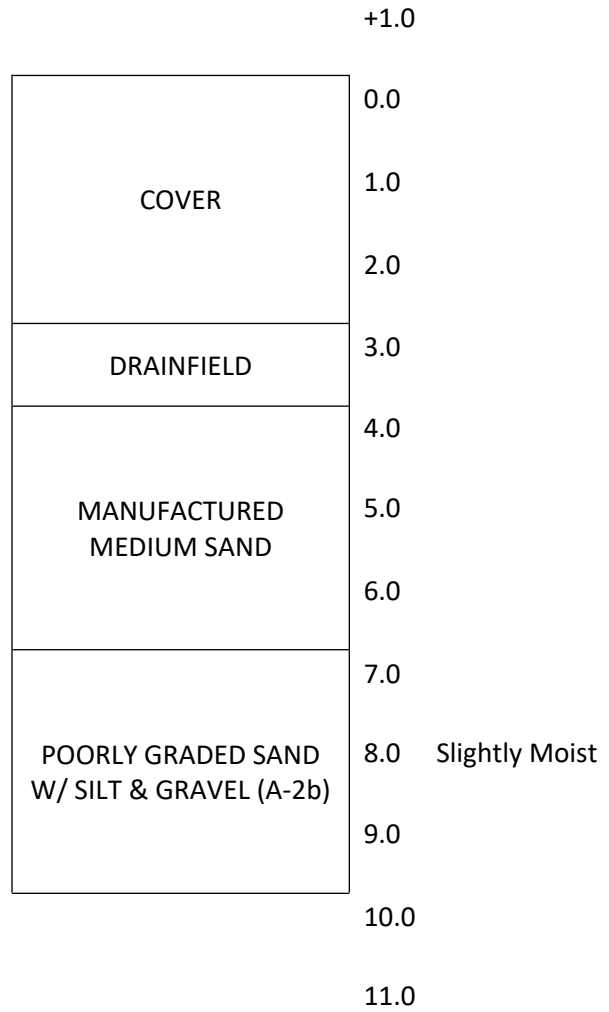
In-Trench Sand Filter System Typical Section

In Trench Sand Filter Notes:

*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

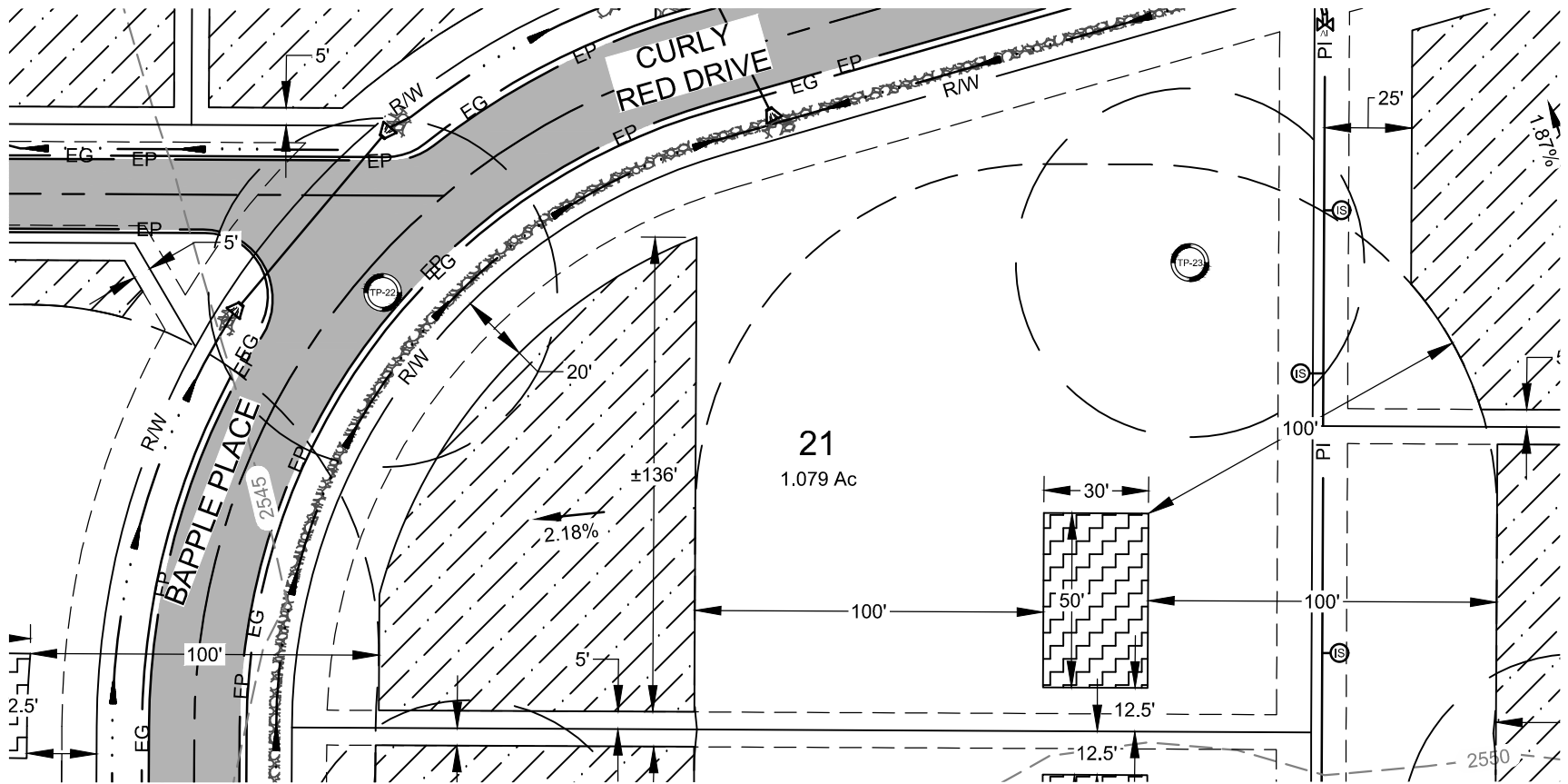
*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.



WELL AND SEPTIC PLAN

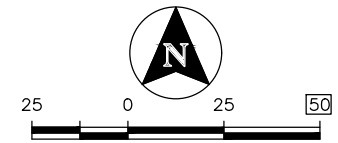
LOT 21



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	ROAD CENTERLINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT

	PRESSURE IRRIGATION LINE
	STORM WATER FLOW LINE
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 11/28/22 JOB: 200194

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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-22 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS	
	Sample Type	Blows / 6 in.						
1			[Pattern]	FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1	
2				ML	Brown to Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1	
3			[Pattern]	PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS	
4								
5								
6								
7			[Pattern]	SP	Tan to Brown, Poorly graded SAND with Silt & Gravel, Slightly Moist	D	USDA Soil Class: A-2b	
8								
9								
10								
11			END OF TEST PIT @ 10.0' NO GROUNDWATER ENCOUNTERED					
12								
13								
14								
15								
16								
17								
18								
19								
20								

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 22

SUBSURFACE SYSTEM TYPE: In Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 24 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *10.5 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 22

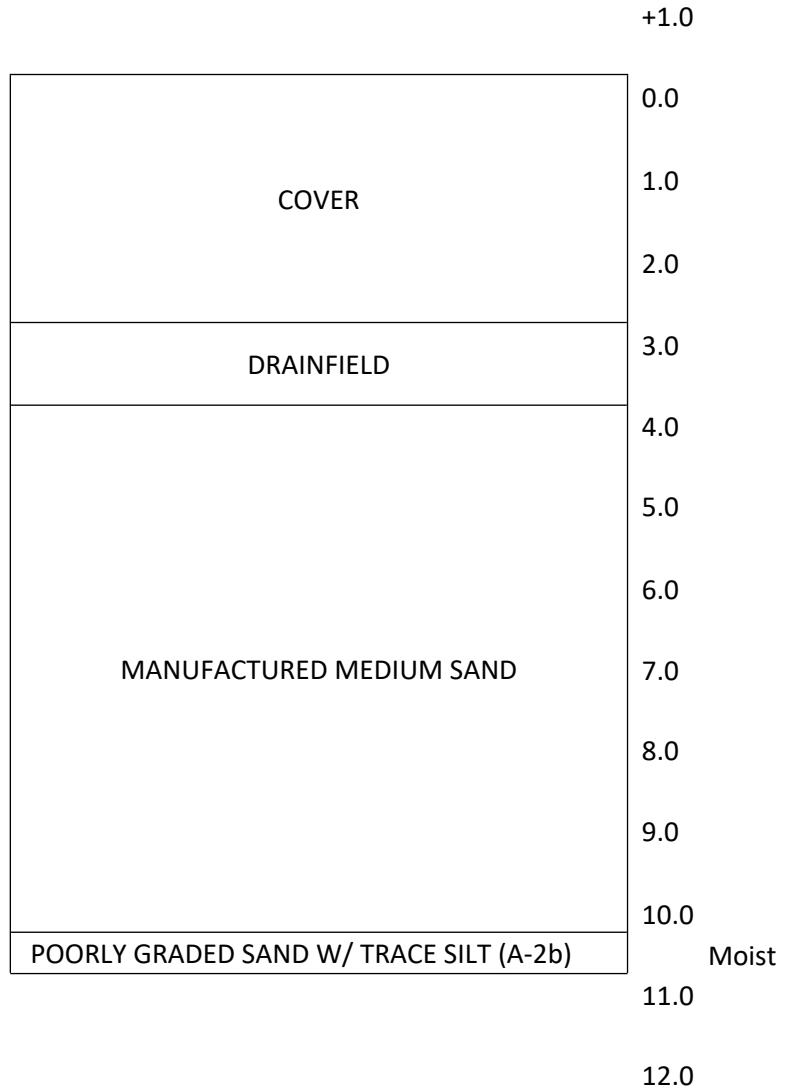
In-Trench Sand Filter System Typical Section

In Trench Sand Filter Notes:

*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

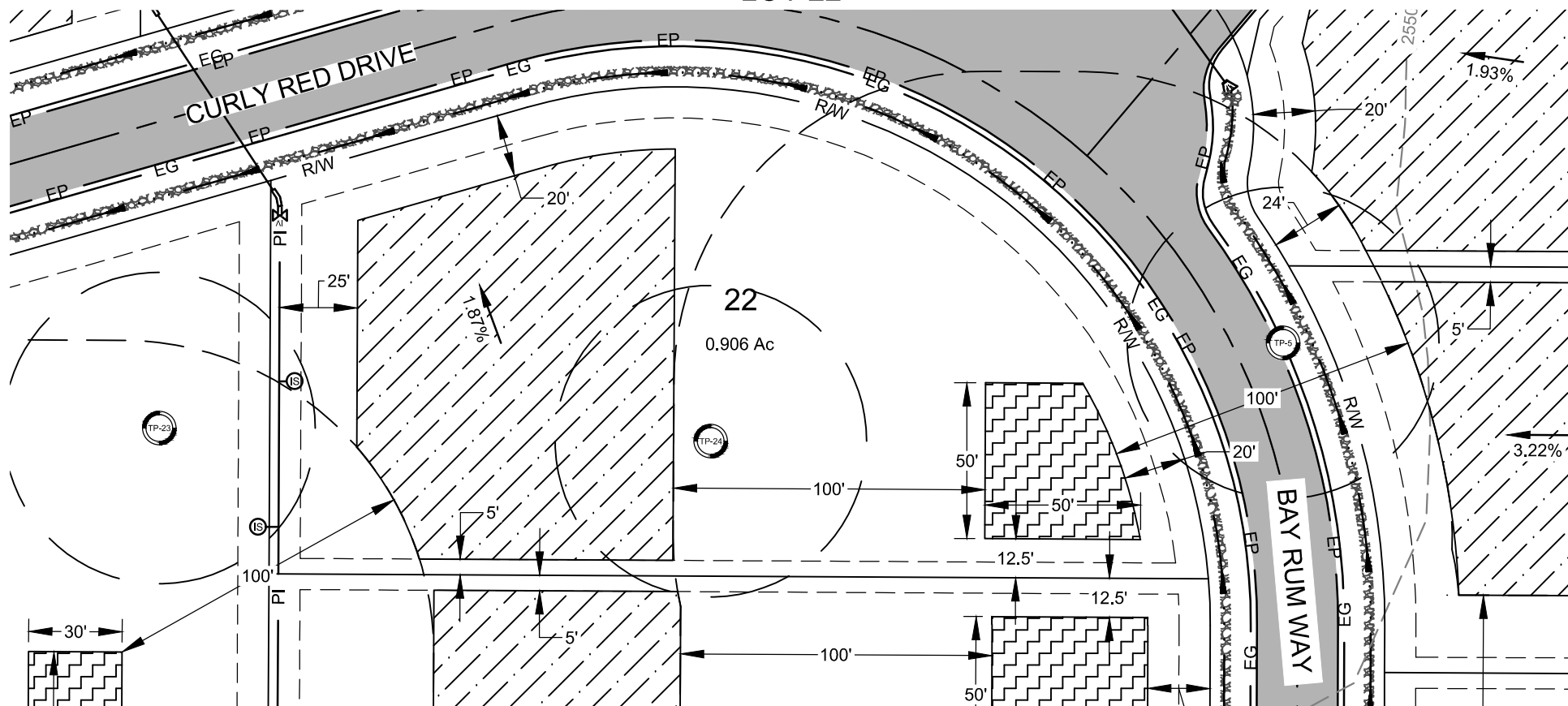
*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48”

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.



WELL AND SEPTIC PLAN

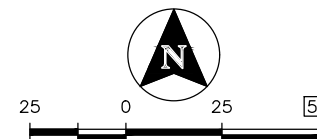
LOT 22



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	ROAD CENTERLINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT

	PRESSURE IRRIGATION LINE
	STORM WATER FLOW LINE
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 11/28/22 JOB: 200194

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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-24 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1				FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
2				ML	Brown to Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
3							
4				PCEM	Lt. Brown to Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS
5							
6							
7				PCEM	Brown, PARTIALLY CEMENTED Poorly graded SAND with Silt, Moist	MH	USDA Soil Class: NS
8							
9							
10							
11				SP	Brown, Poorly graded SAND with trace Silt, Moist	D	USDA Soil Class: A-2b
12				END OF TEST PIT @ 11.0' NO GROUNDWATER ENCOUNTERED			
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 23

SUBSURFACE SYSTEM TYPE: In Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 20 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *7.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides.

Installation of System: *4 feet below existing surface.* A minimum of 12” of 1-1/2” – 2” washed drain rock shall be placed. Place 6” of drain rock under and 2” of drain rock over the 4” perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: *1.0 foot.* Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0’ wide trench	89	111	133	156	178
2.5’ wide trench	107	133	160	187	213
2.0’ wide trench	133	167	200	233	267

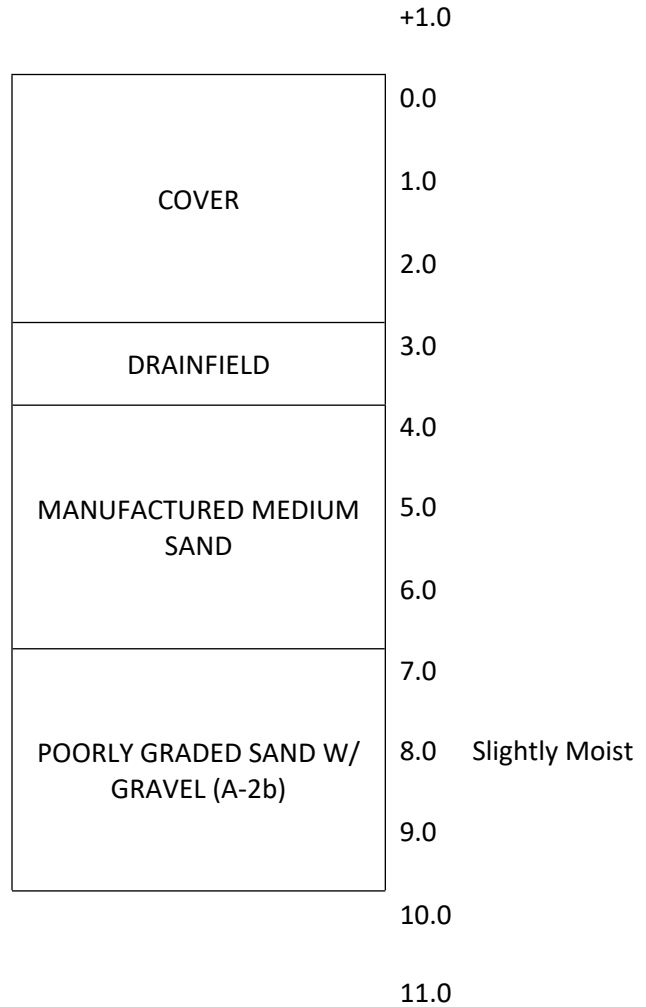
Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 23

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

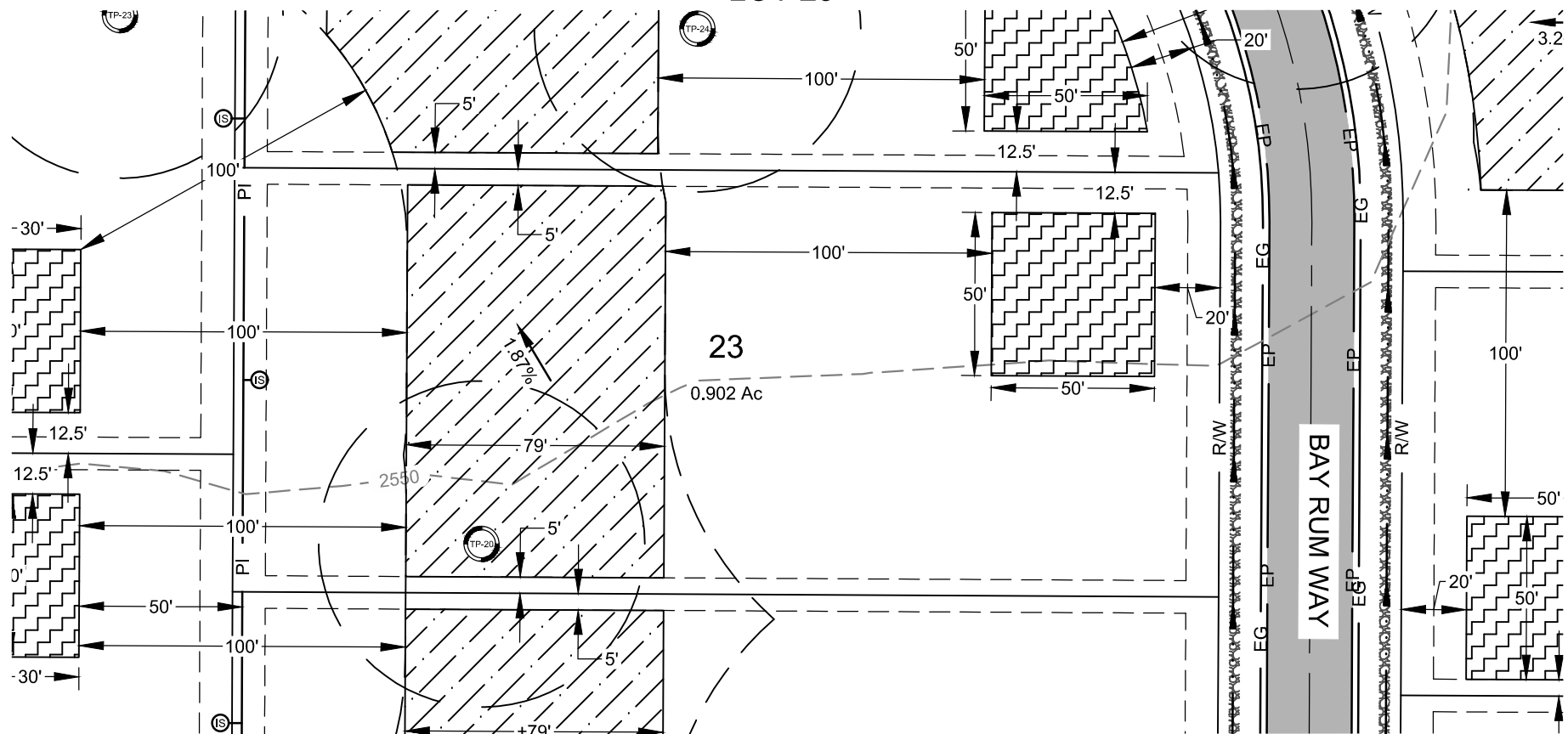
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

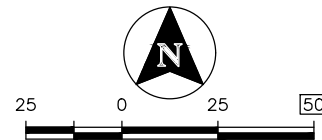
LOT 23



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	ROAD CENTERLINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT

	PRESSURE IRRIGATION LINE
	STORM WATER FLOW LINE
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 11/28/22 JOB: 200194

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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-20 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1				FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
2				CL	Brown to Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
3				ML	Tan to Lt. Brown, Sandy SILT with weak cementation, Slightly Moist	S	USDA Soil Class: NS
4							
5				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS
6							
7				SP	Tan to Brown, Poorly graded SAND with Gravel, Slightly Moist	D	USDA Soil Class: A-2b
8							
9							
10					END OF TEST PIT @ 10.0' NO GROUNDWATER ENCOUNTERED		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 24

SUBSURFACE SYSTEM TYPE: In Trench Sand Filter System

SOIL DESIGN SUBGROUP: A-2b

TEST PIT: Pit No. 20 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *7.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	267	333	400	467	533
Drainfield Trench Length – ft					
3.0' wide trench	89	111	133	156	178
2.5' wide trench	107	133	160	187	213
2.0' wide trench	133	167	200	233	267

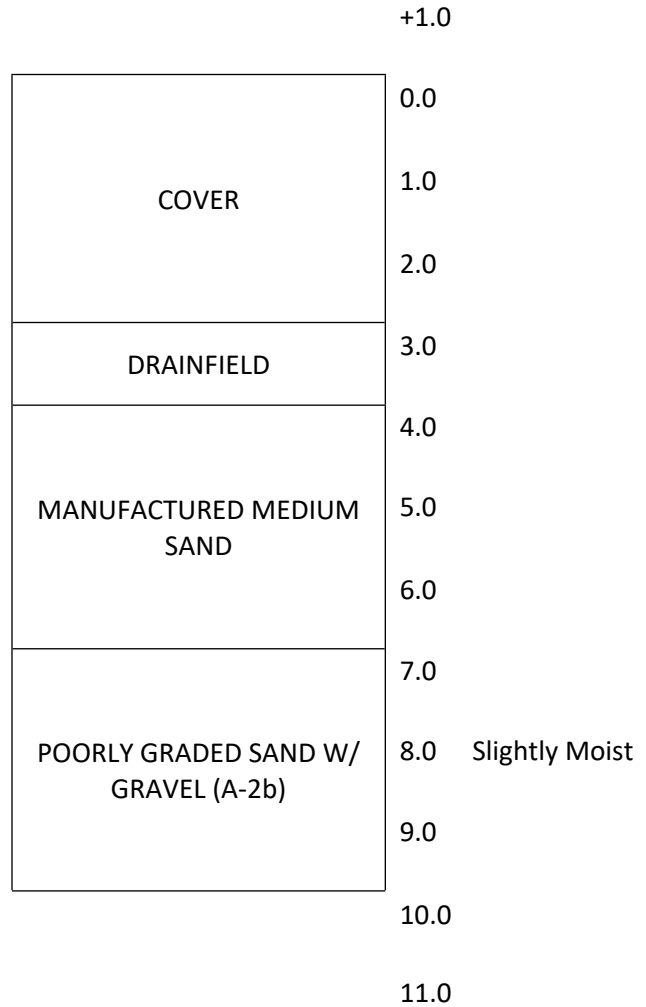
Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 24

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

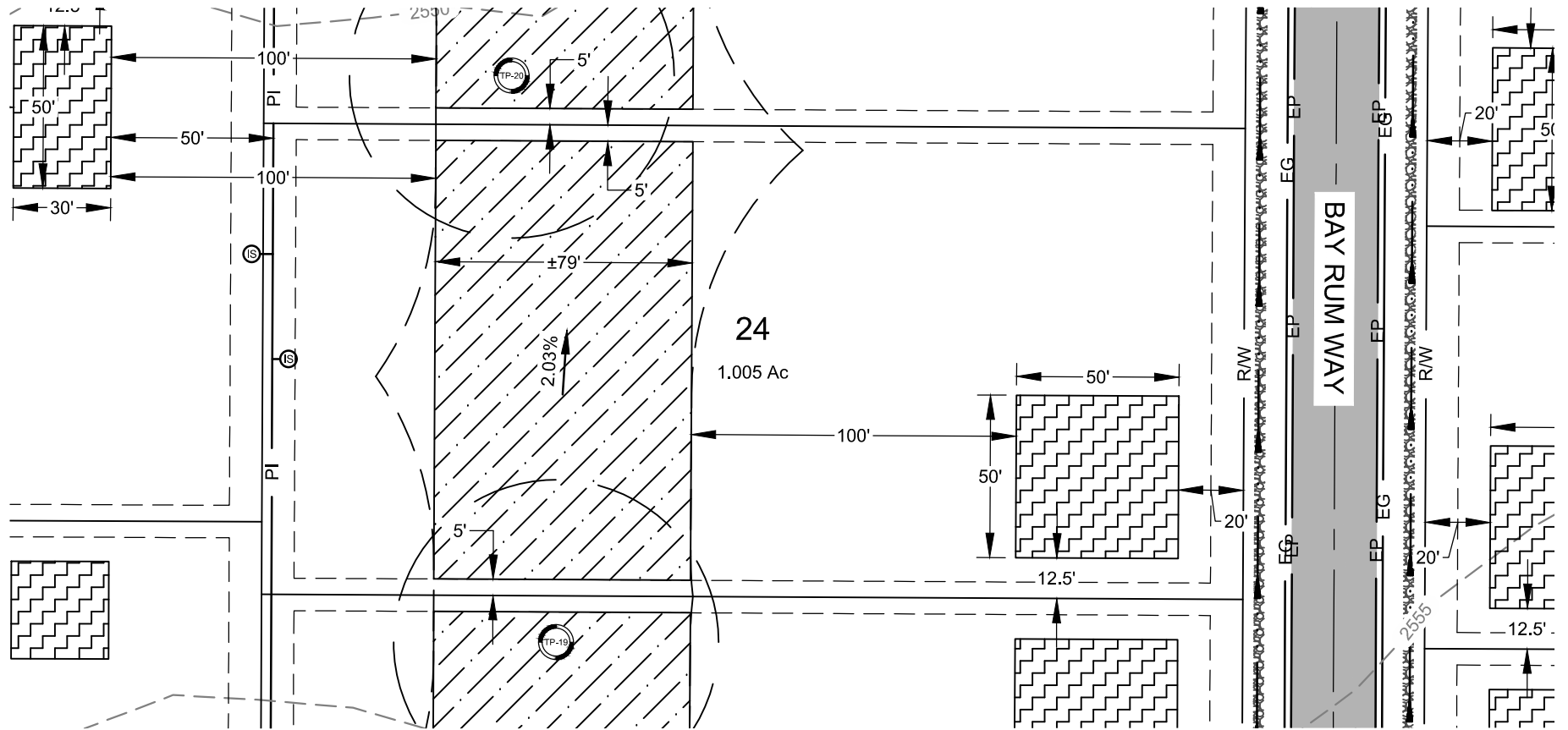
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

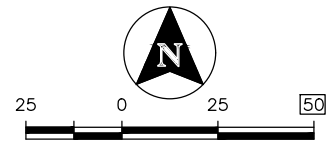
LOT 24



LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	ROAD CENTERLINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT

	PRESSURE IRRIGATION LINE
	STORM WATER FLOW LINE
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 11/28/22 JOB: 200194

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 NAMPA, IDAHO 83687
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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-20 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1				FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
				CL	Brown to Dk. Brown, SILT with Sand, Moist	F	USDA Soil Class: C-1
2				ML	Tan to Lt. Brown, Sandy SILT with weak cementation, Slightly Moist	S	USDA Soil Class: NS
3							
4							
5				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS
6							
7				SP	Tan to Brown, Poorly graded SAND with Gravel, Slightly Moist	D	USDA Soil Class: A-2b
8							
9							
10							
11					END OF TEST PIT @ 10.0' NO GROUNDWATER ENCOUNTERED		
12							
13							
14							
15							
16							
17							
18							
19							
20							

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 25

SUBSURFACE SYSTEM TYPE: In Trench Sand Filter System

SOIL DESIGN SUBGROUP: B-2

TEST PIT: Pit No. 19 – See Sheet 3 of 4

EFFECTIVE DEPTH TO HIGH GROUNDWATER: None encountered, *soil moist below system*

****NOTE**** Groundwater was not encountered at any point on site. Re-engineering is required if actual conditions vary significantly from the design. Lot owner should retain a qualified installer and review the soils and groundwater in the planned location prior to construction the system.

Drainfield Requirements

Excavation Depth: *7.0 feet below existing surface.* Excavation shall be to free draining materials. Scarify trench bottom and sides.

Installation of System: *4 feet below existing surface.* A minimum of 12" of 1-1/2" – 2" washed drain rock shall be placed. Place 6" of drain rock under and 2" of drain rock over the 4" perforated drainpipe (ADS N-12 or equivalent). Top of drain rock shall be covered with geotextile (4 oz. or equivalent).

Topsoil Depth: Topsoil cover shall be minimum 1.0 foot, maximum 3.0 feet.

System Sizes and Total Trench Lengths

Number of Bedrooms per Lot	2	3	4	5	6
Effluent – Gallons per day	200	250	300	350	400
Min. Septic Tank Capacity – Gallons	900	1000	1000	1250	1500
Total Absorption Area	444	556	667	778	889
Drainfield Trench Length – ft					
3.0' wide trench	148	185	222	259	296
2.5' wide trench	178	222	267	311	356
2.0' wide trench	222	278	333	389	444

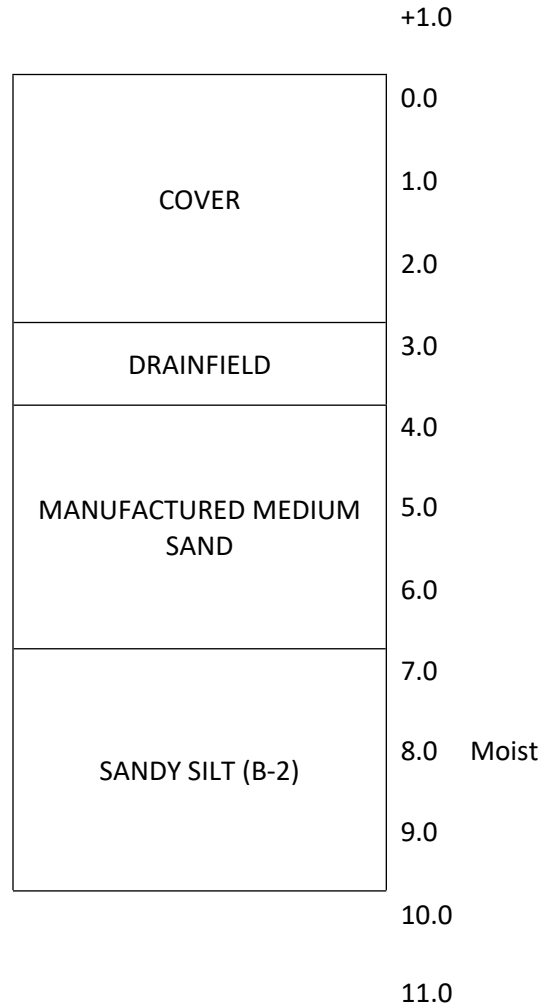
Notes: Drainfield shall be constructed parallel to the contour of the land and shall not exceed 100 feet in length.

If actual conditions vary from test pit locations, the sewer system shall meet the minimum trench requirements as laid out and be constructed per the requirements as listed under Standard Subsurface Disposal System Design of the Technical Guidance Manual.

SEPTIC SYSTEM INSTALLATION

C-4 SUBDIVISION – LOT 25

In-Trench Sand Filter System
Typical Section



In Trench Sand Filter Notes:

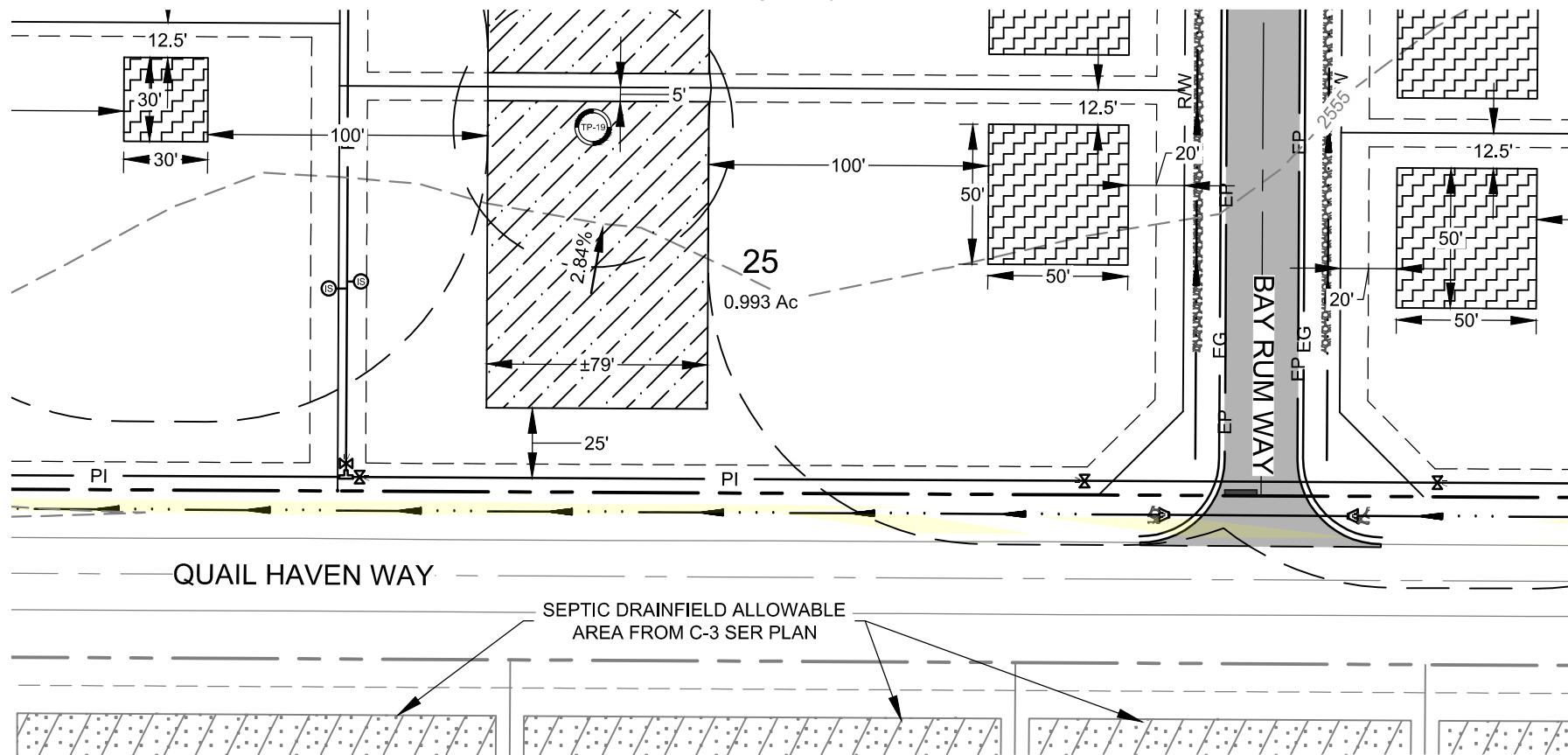
*Since there is no groundwater present, there is no minimum manufactured medium sand depth. It may be installed at any depth necessary to reach suitable soils.

*Manufactured medium sand must be backfilled to maintain maximum drainfield depth of 48"

*See TGM Section 3.2.8.1.2 and Table 3-4 for manufactured medium sand requirements.

WELL AND SEPTIC PLAN

LOT 25



QUAIL HAVEN WAY

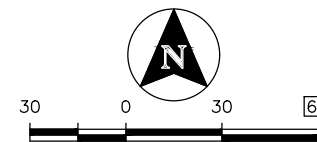
BAY RUM WAY

SEPTIC DRAINFIELD ALLOWABLE AREA FROM C-3 SER PLAN

LEGEND

	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	ROAD CENTERLINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT

	PRESSURE IRRIGATION LINE
	STORM WATER FLOW LINE
	APPROXIMATE TEST PIT LOCATION
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	100' WELL RADIUS



DATE: 11/28/22 JOB: 200194

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TEST PIT LOG

PROJECT #: 2199-ID
PROJECT: C-4 Subdivision
CLIENT: Dave Callister
LOCATION: NEC of South Lansing Lane and Quail Haven Drive

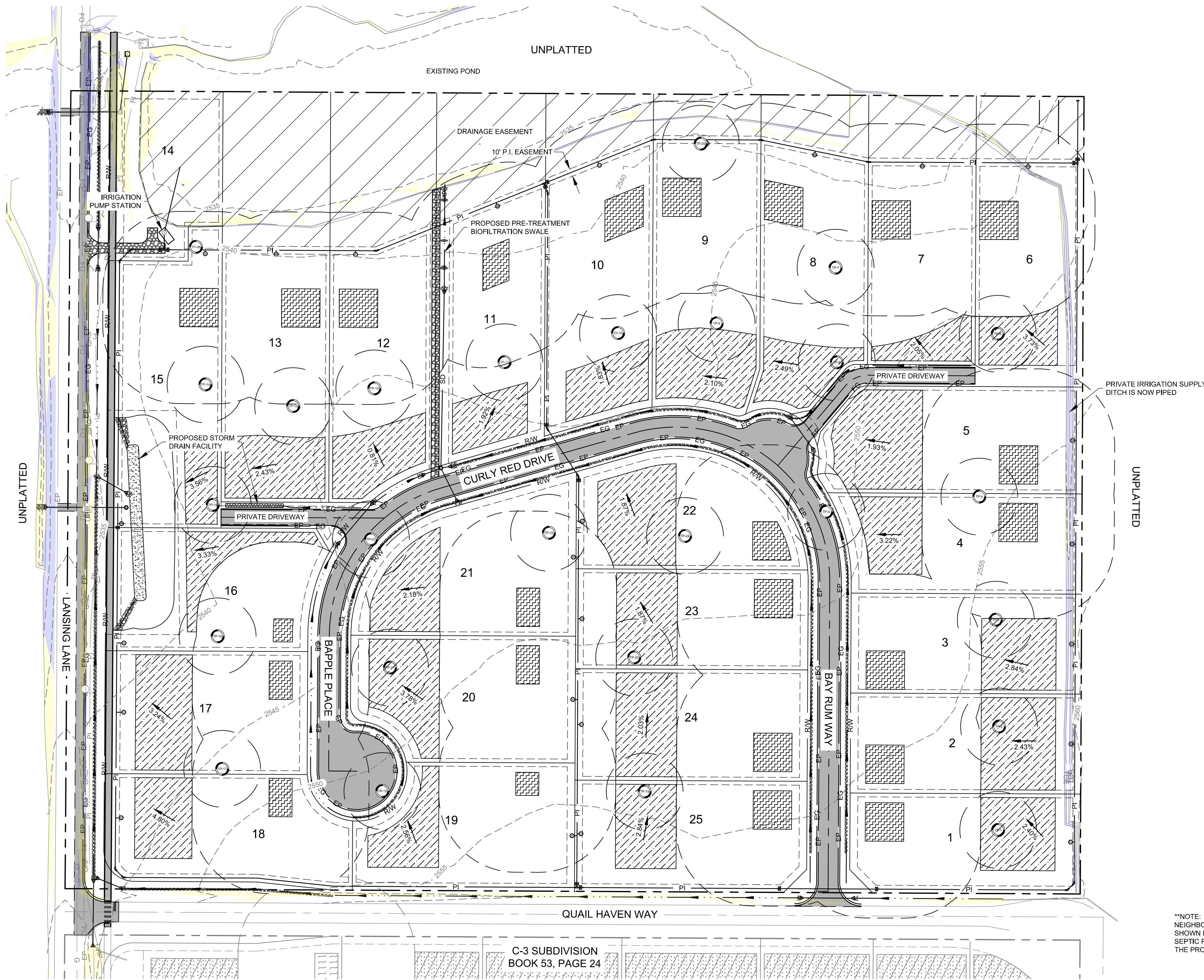
LOGGED BY: TSL
METHOD: Trackhoe
EXCAVATOR: Dave Callister
DATE: 11/19/20
ELEVATION:

Depth (ft)	SAMPLES		Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-19 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	Sample Type	Blows / 6 in.					
1			[Hatched Pattern]	FILL	Brown to Dk. Brown, Artificial Fill SILT with Sand, Moist	So	Roots/ Organics to 1.0' USDA Soil Class: C-1
2				ML	Brown to Dk. Brown, SILT with Sand, Slightly Moist	F	USDA Soil Class: C-1
3				PCEM	Tan to Lt. Brown, PARTIALLY CEMENTED Silty SAND, Slightly Moist	MH	USDA Soil Class: NS
4							
5							
6							
7				ML	Lt. Brown to Brown, Sandy SILT, Moist	S	USDA Soil Class: B-2
8							
9							
10							
11					END OF TEST PIT @ 10.0' NO GROUNDWATER ENCOUNTERED		
12							
13							
14							
15							
16							
17							
18							
19							
20							

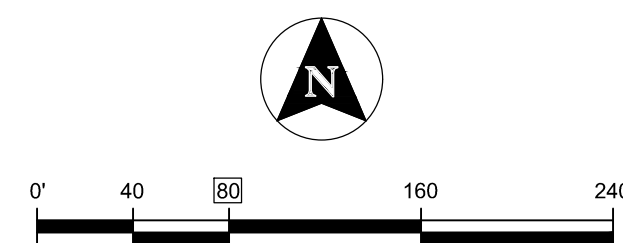
Appendix B
Well and Septic Plan

WELL AND SEPTIC PLAN

C-4 SUBDIVISION



LEGEND	
	SUBDIVISION BOUNDARY LINE
	SECTION LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	EASEMENT LINE
	EDGE OF GRAVEL ROAD
	EDGE OF PAVEMENT
	PRESSURE IRRIGATION LINE
	STORM DRAIN LINE
	EXISTING EDGE OF WATER
	TOP OF BANK
	EXISTING EDGE OF PAVEMENT
	EXISTING GAS LINE
	EXISTING CABLE LINE
	OVERHEAD POWER LINE
	EXISTING PI LINE
	STORM DRAIN MANHOLE
	PRESSURE IRRIGATION SERVICE
	PRESSURE IRRIGATION VALVE
	GAS MARKER
	POWER POLE
	EXISTING CATCH BASIN
	ASPHALT PAVEMENT
	APPROXIMATE TEST PIT LOCATION
	50' TEST PIT RADIUS
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WELL PERMITTED
	AREA OF 20%-45% NATURAL SLOPE
	AREA OF 45%-100% NATURAL SLOPE
	100' WELL RADIUS
	SEPTIC DRAINFIELD ALLOWABLE AREA PER C-3 PLAN**
	WELL ALLOWABLE AREA PER C-3 PLAN**
	EXISTING WELL 100' RADIUS



**NOTE:
NEIGHBORING SEPTIC DRAINFIELD AND WELL ALLOWABLE AREAS SHOWN PER C-3 SUBDIVISION ENGINEERING REPORT WELL AND SEPTIC PLAN. THE AREAS SHOWN ARE LOCATED WITHIN 100' OF THE PROPOSED DEVELOPMENT BOUNDARY.

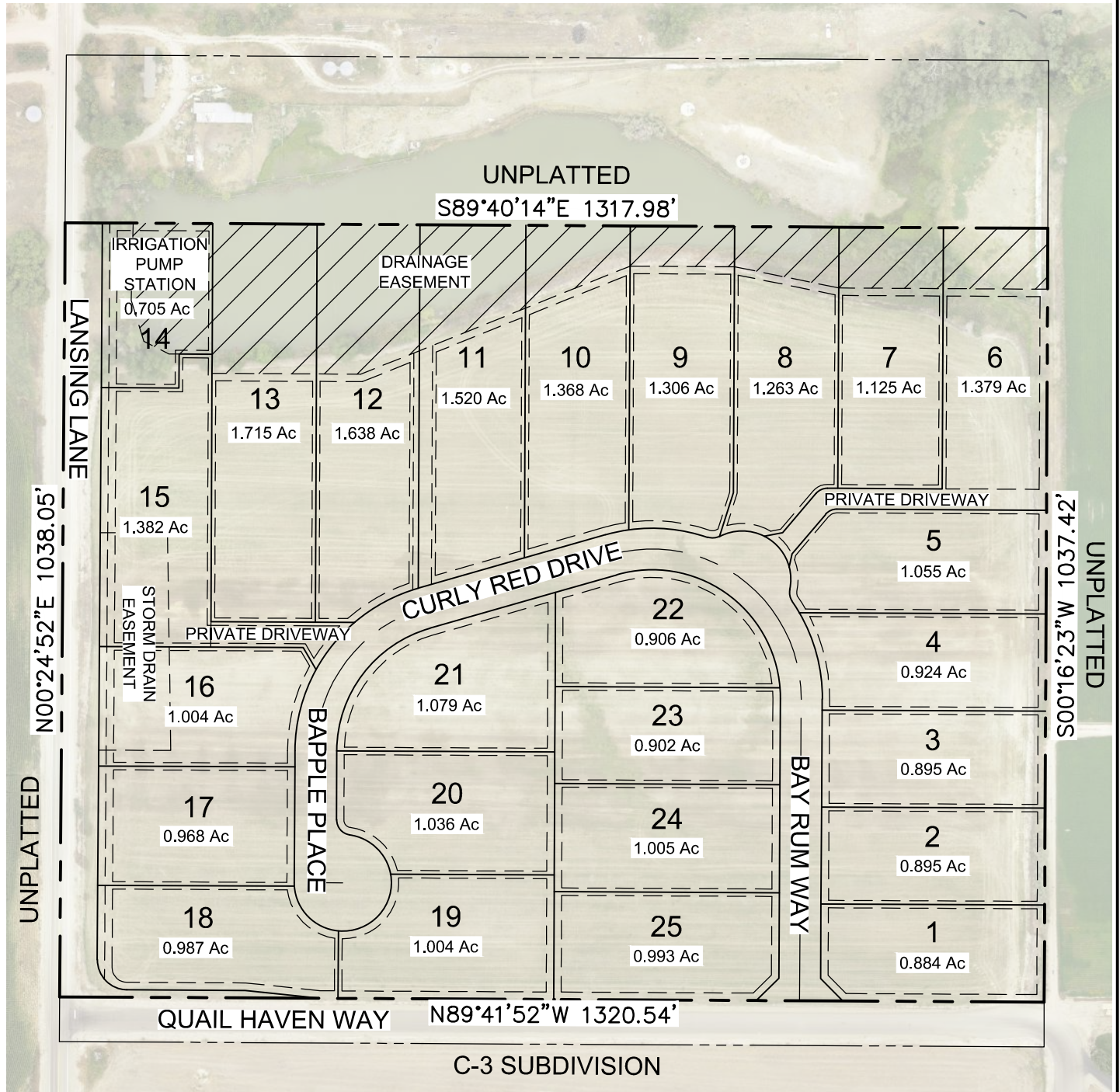
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C-3 SUBDIVISION
 BOOK 53, PAGE 24

Appendix C
Proposed Subdivision Plan

PROPOSED SUBDIVISION PLAN

C-4 SUBDIVISION



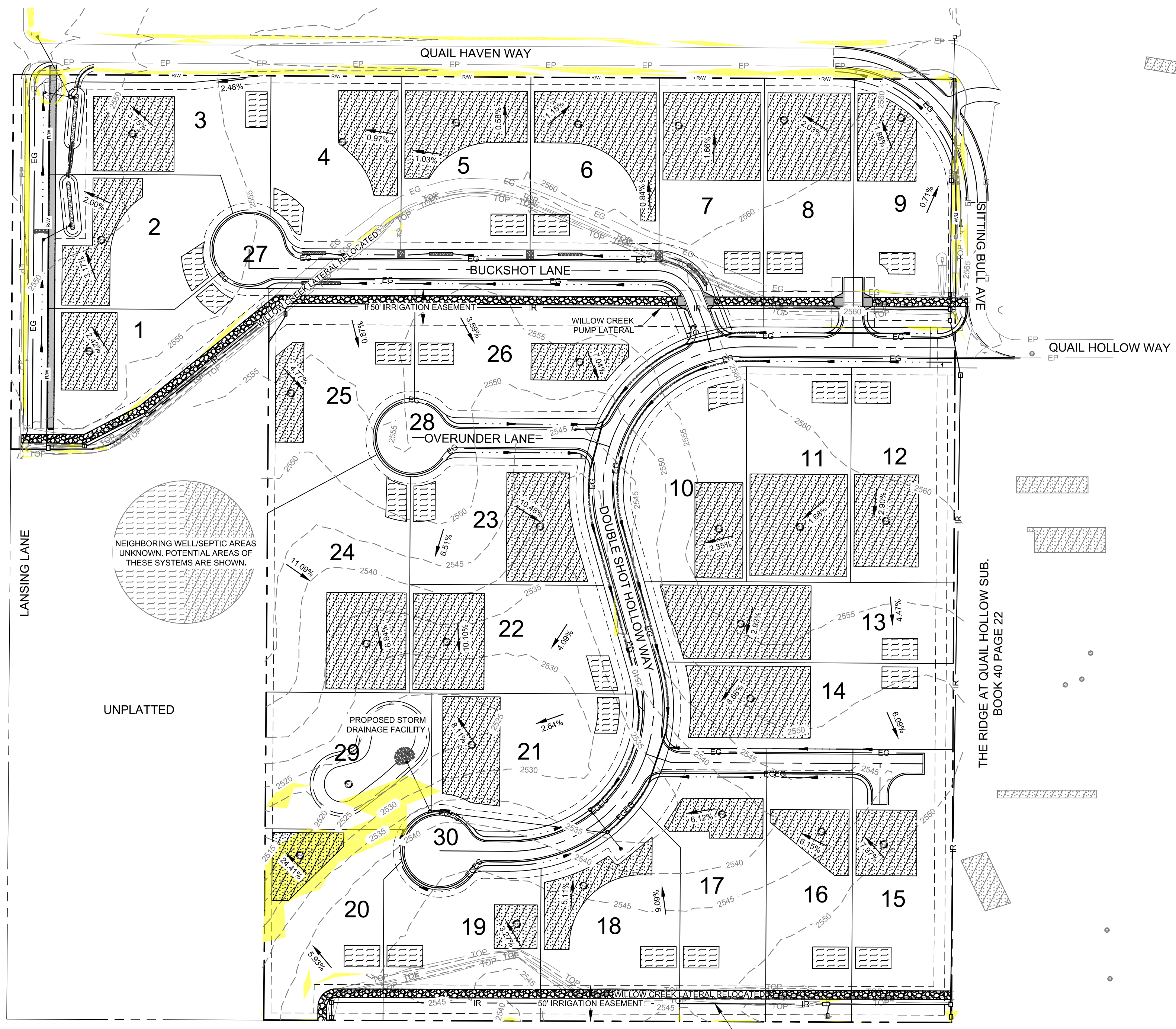
L:\200194\3_Acad\dwg\Sheets\Exhibits\SER\200194-EX-PROPOSED SUBDIVISION.dwg, 10/3/2022 3:30:06 PM, JD Lyle, DWG To PDF, pc3

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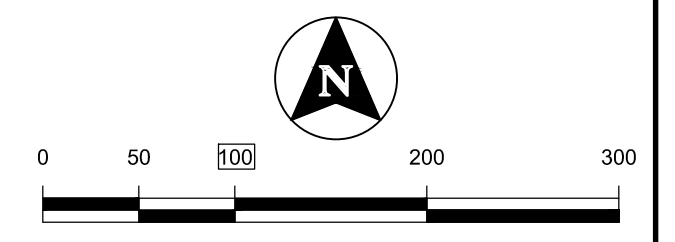
DATE: 10/3/22 JOB: 200194

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Appendix D
C-3 Subdivision Well and Septic Plan



LEGEND	
	SUBDIVISION BOUNDARY LINE
	ROAD RIGHT-OF-WAY
	LOT LINE
	ROAD CENTERLINE
	PUDI EASEMENT LINE
	PROPOSED GRAVITY IRRIGATION
	PROPOSED STORM DRAIN LINE
	EDGE OF PAVEMENT
	EDGE OF GRAVEL ROAD
	EXISTING EDGE OF GRAVEL ROAD
	EXISTING EDGE OF PAVEMENT
	EXISTING STORM DRAIN LINE
	TOE OF BANK
	TOP OF BANK
	TEST PIT LOCATION
	GRAVITY IRRIGATION BOX
	CATCH BASIN/AREA INLET
	SAND AND GREASE TRAP
	AREA OF SEPTIC DRAINFIELD PERMITTED
	AREA OF WATER WELL PERMITTED
	PROPOSED GRAVEL ROAD
	AREA OF 20%-45% NATURAL SLOPE
	EXISTING SEPTIC DRAINFIELD AREA
	APPROXIMATE LOCATION OF EXISTING WELL



WELL AND SEPTIC PLAN
C-3 SUBDIVISION

T-O ENGINEERS
 332 N. BROADMORE WAY
 NAMPA, IDAHO 83687-5123
 PHONE: (208) 442-6300 WWW.T-O-ENGINEERS.COM
 E-FILE: 190572-C-WELL AND SEPTIC DATE: 7/7/21 JOB: 190572

HUNTERS RIDGE SUB.
BOOK 17 PAGE 27

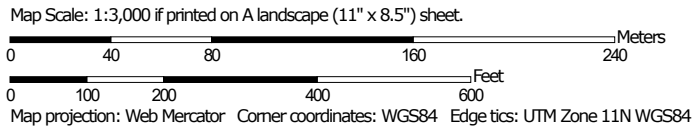
THE RIDGE AT QUAIL HOLLOW SUB.
BOOK 40 PAGE 22

Appendix E
NRCS Soil Map

Soil Map—Canyon Area, Idaho
(C-4 Subdivision)



Soil Map may not be valid at this scale.



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 1:20,000.

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: Canyon Area, Idaho
Survey Area Data: Version 18, Sep 9, 2021

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

Date(s) aerial images were photographed: Apr 19, 2021—Apr 21, 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
EsB	Elijah-Chilcott silt loams, 1 to 3 percent slopes	17.8	55.7%
LkC	Lankbush-Elijah-Vickery silt loams, 3 to 7 percent slopes	13.3	41.8%
LkD	Lankbush-Elijah-Vickery silt loams, 7 to 12 percent slopes	0.8	2.5%
Totals for Area of Interest		31.9	100.0%

Report—Engineering Properties

Absence of an entry indicates that the data were not estimated. The asterisk "*" denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(<http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba>). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Engineering Properties--Canyon Area, Idaho														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
EsB--Elijah-Chilcott silt loams, 1 to 3 percent slopes														
Elijah	55	C	0-9	Silt loam	CL-ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	95-98-100	75-83-90	26-32-38	7-11-15
			9-19	Silty clay loam, silt loam	CL	A-6, A-7	0- 0- 0	0- 0- 0	95-98-100	95-98-100	95-98-100	75-85-95	37-42-47	18-21-25
			19-22	Silt loam, loam	CL-ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	95-98-100	75-83-90	23-27-31	7-9 -12
			22-40	Cemented material	—	—	—	—	—	—	—	—	—	—
			40-65	Very gravelly loamy sand, very gravelly sand, extremely gravelly sand	GP-GC, GW-GM, GP, GW	A-1	0- 0- 0	0- 5- 10	25-35-45	15-28-40	10-20-30	0- 5- 10	0-17 -20	NP-2 -4
Chilcott	25	D	0-10	Silt loam	CL-ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	90-95-100	65-78-90	24-29-33	7-9 -12
			10-26	Silty clay loam, clay, silty clay	CH, CL	A-7	0- 0- 0	0- 0- 0	95-98-100	95-98-100	85-93-100	70-83-95	45-57-69	25-35-44
			26-31	Silt loam, clay loam, loam	CL-ML, CL	A-4, A-6, A-7	0- 0- 0	0- 0- 0	90-95-100	90-95-100	85-93-100	70-80-90	24-35-46	7-16-25
			31-46	Cemented material	—	—	—	—	—	—	—	—	—	—
			46-60	Very gravelly sand, sandy loam	GP-GM, SC-SM, SM	A-1	0- 0- 0	0- 3- 5	50-58-65	35-43-50	20-28-35	5-13- 20	0-18 -23	NP-3 -6

Engineering Properties--Canyon Area, Idaho														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
LkC--Lankbush-Elijah-Vickery silt loams, 3 to 7 percent slopes														
Lankbush	40	C	0-14	Silt loam	CL-ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	85-93-100	85-93-100	75-88-100	55-73-90	24-31-37	7-10-13
			14-50	Sandy clay loam, clay loam, loam	CL, SC	A-2, A-6, A-7	0- 0- 0	0- 0- 0	85-93-100	85-93-100	70-85-100	30-55-80	31-36-42	13-17-21
			50-60	Sand, sandy loam, loamy coarse sand	SC-SM, SP-SM, SM	A-1, A-2, A-3	0- 0- 0	0- 0- 0	85-93-100	85-93-100	45-58-70	5-18-30	0-16-21	NP-1-4
Elijah	35	C	0-9	Silt loam	CL-ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	95-98-100	75-83-90	26-32-38	7-11-15
			9-19	Silty clay loam, silt loam	CL	A-6, A-7	0- 0- 0	0- 0- 0	95-98-100	95-98-100	95-98-100	75-85-95	37-42-47	18-21-25
			19-22	Silt loam, loam	CL-ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	95-98-100	75-83-90	23-27-31	7-9-12
			22-40	Cemented material	—	—	—	—	—	—	—	—	—	—
			40-60	Very gravelly loamy sand, very gravelly sand, extremely gravelly sand	GP-GC, GW-GM, GP, GW	A-1	0- 0- 0	0- 5- 10	25-35-45	15-28-40	10-20-30	0- 5- 10	0-17-20	NP-2-4
Vickery	20	C	0-4	Silt loam	CL	A-4, A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	90-95-100	70-80-90	27-31-35	9-11-13
			4-17	Silt loam, loam	CL	A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	90-95-100	70-78-85	28-33-39	12-15-19
			17-34	Loam, silt loam, very fine sandy loam	CL	A-6	0- 0- 0	0- 0- 0	95-98-100	85-93-100	75-83-90	50-65-80	28-31-34	12-13-15
			34-47	Cemented material	—	—	—	—	—	—	—	—	—	—

Engineering Properties--Canyon Area, Idaho														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			47-60	Sand, coarse sand, gravelly loamy coarse sand	SC-SM, SP-SM	A-1, A-2	0- 0- 0	0- 0- 0	95-98-100	70-85-100	30-40-50	5-15- 25	0-20 -26	NP-4 -7

Engineering Properties--Canyon Area, Idaho														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
LkD--Lankbush-Elijah-Vickery silt loams, 7 to 12 percent slopes														
Lankbush	55	C	0-14	Silt loam	CL-ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	85-93-100	85-93-100	75-88-100	55-73-90	24-31-37	7-10-13
			14-50	Sandy clay loam, clay loam, loam	CL, SC	A-2, A-6, A-7	0- 0- 0	0- 0- 0	85-93-100	85-93-100	70-85-100	30-55-80	31-36-42	13-17-21
			50-60	Sand, sandy loam, loamy coarse sand	SC-SM, SP-SM, SM	A-1, A-2, A-3	0- 0- 0	0- 0- 0	85-93-100	85-93-100	45-58-70	5-18-30	0-16-21	NP-1-4
Elijah	20	C	0-9	Silt loam	CL-ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	95-98-100	75-83-90	26-32-38	7-11-15
			9-19	Silty clay loam, silt loam	CL	A-6, A-7	0- 0- 0	0- 0- 0	95-98-100	95-98-100	95-98-100	75-85-95	37-42-47	18-21-25
			19-22	Silt loam, loam	CL-ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	95-98-100	75-83-90	23-27-31	7-9-12
			22-40	Cemented material	—	—	—	—	—	—	—	—	—	—
			40-60	Extremely gravelly sand, very gravelly sand, very gravelly loamy sand	GP-GC, GW-GM, GP, GW	A-1	0- 0- 0	0- 5- 10	25-35-45	15-28-40	10-20-30	0- 5- 10	0-17-20	NP-2-4
Vickery	20	C	0-4	Silt loam	CL	A-4, A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	90-95-100	70-80-90	27-31-35	9-11-13
			4-17	Silt loam, loam	CL	A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	90-95-100	70-78-85	28-33-39	12-15-19
			17-34	Loam, silt loam, very fine sandy loam	CL	A-6	0- 0- 0	0- 0- 0	95-98-100	85-93-100	75-83-90	50-65-80	28-31-34	12-13-15
			34-47	Cemented material	—	—	—	—	—	—	—	—	—	—

Engineering Properties--Canyon Area, Idaho														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			47-60	Sand, coarse sand, gravelly loamy coarse sand	SC-SM, SP-SM	A-1, A-2	0- 0- 0	0- 0- 0	95-98-100	70-85-100	30-40-50	5-15- 25	0-20 -26	NP-4 -7

Data Source Information

Soil Survey Area: Canyon Area, Idaho
 Survey Area Data: Version 18, Sep 9, 2021