

ONSITE WASTEWATER TREATMENT SYSTEM

SITE 66, TROUT LAKE LAND COMPANY

SAN MIGUEL COUNTY, COLORADO

GENERAL NOTES:

1. A RECORD PLAN IS REQUIRED BY SAN MIGUEL COUNTY AND THE CONTRACTOR IS TO COORDINATE WITH THE ENGINEER AND SAN MIGUEL COUNTY ENVIRONMENTAL HEALTH DEPARTMENT (970-728-0447) FOR ONSITE INSPECTION OF SUB-SURFACE DISPOSAL FIELD, TANK AND PIPES BEFORE ANY BACKFILL IS PLACED; BOTH THE ENGINEER AND THE SAN MIGUEL COUNTY ENVIRONMENTAL HEALTH DEPARTMENT MUST INSPECT BEFORE BACKFILL IS PLACED. SAN MIGUEL COUNTY MUST BE NOTIFIED 72 HOURS IN ADVANCE OF ANY REQUESTED ONSITE OBSERVATION.
2. CAUTION: LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO DATE OF START OF CONSTRUCTION, FOR INFORMATION CONTACT: UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) 1-800-922-1987 OR 811. THE CONTRACTOR SHALL FIELD VERIFY SIZE, HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING FACILITIES PRIOR TO START OF ANY CONSTRUCTION ACTIVITIES AND NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCIES THAT WILL EFFECT THE DESIGN AND/OR CONSTRUCTION.
3. AT LEAST TWO (2) FULL WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO @ 1-800-922-1987, OR 811 TO OBTAIN AN INQUIRY IDENTIFICATION NUMBER AND TO REQUEST THE UTILITY OWNERS TO MARK OR OTHERWISE INDICATE THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES, INCLUDING SERVICE CONNECTIONS, WHICH MAY BE AFFECTED BY ITS OPERATIONS. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ALL UTILITIES AND ALL STRUCTURES FOUND AT THE SITE.
4. IF ANY OF THE EXISTING UNDERGROUND UTILITIES AND SERVICES ARE IN CONFLICT WITH THE CONSTRUCTION PLANS THE CONTRACTOR SHALL NOTIFY AND WORK WITH THE ENGINEER OF RECORD TO FIND A SOLUTION BEFORE THE START OF CONSTRUCTION.
5. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES ALL NECESSARY PERMITS SHALL BE OBTAINED BY THE OWNER(S) AND/OR CONTRACTOR.
6. ALL MATERIAL AND CONSTRUCTIONS SHALL BE IN CONFORMANCE WITH SAN MIGUEL COUNTY DESIGN STANDARDS AND LAND USE CODES ALONG WITH THE REQUIREMENTS OF THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION.
7. ALL TRENCHES SHALL BE ADEQUATELY SUPPORTED AND THE SAFETY OF WORKERS PROVIDED FOR AS REQUIRED BY THE MOST RECENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION." THESE REGULATIONS ARE DESCRIBED IN SUBPART P, PART 1926 OF THE CODE OF FEDERAL REGULATIONS. SHEETING AND SHORING SHALL BE UTILIZED WHERE NECESSARY TO PREVENT ANY EXCESSIVE WIDENING OR SLOUGHING OF THE TRENCH WHICH MAY BE DETRIMENTAL TO HUMAN SAFETY, TO THE PIPE BEING PLACED, TO TREES OR TO ANY EXISTING STRUCTURE WHERE EXCAVATIONS ARE MADE UNDER SEVERE WATER CONDITIONS. THE CONTRACTOR MAY BE REQUIRED TO USE AN APPROVED PILING INSTEAD OF SHEETING AND SHORING.
8. THE CONTRACTOR SHALL HAVE ONE SIGNED COPY OF THE PLANS APPROVED BY SAN MIGUEL COUNTY AND ONE COPY OF THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS ON THE JOB SITE AT ALL TIMES.
9. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES AT ALL TIMES DURING CONSTRUCTION. THE ADJOINING ROADWAYS AND ALLEYS SHALL BE FREE OF DEBRIS AT THE END OF CONSTRUCTION ACTIVITIES EACH DAY.
10. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN PROPER TRAFFIC CONTROL DEVICES UNTIL THE SITE IS OPEN TO TRAFFIC. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN TO THE ENGINEER BEFORE THE START OF ANY CONSTRUCTION.
11. ALL DAMAGE TO PUBLIC STREETS AND ROADS, INCLUDING HAUL ROUTES, ALLEYS, TRAILS, SIDEWALKS, CURBS OR STREET IMPROVEMENTS, OR TO PRIVATE PROPERTY, SHALL BE REPAIRED AT THE SOLE EXPENSE OF THE CONTRACTOR TO THE ORIGINAL CONDITIONS.
12. ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE STATE OF COLORADO PERMITTING PROCESS FOR "STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY." FOR INFORMATION, PLEASE CONTACT COLORADO DEPARTMENT OF HEALTH, WATER QUALITY CONTROL DIVISION, WQCD-PE-B2, 4300 CHERRY DRIVE SOUTH, DENVER, COLORADO 80222-1530. ATTENTION: PERMITS AND ENFORCEMENT SECTION. PHONE (303) 692-3500.
13. IF DEWATERING IS REQUIRED, A STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT IS REQUIRED FOR DISCHARGES TO A STORM SEWER, CHANNEL, IRRIGATION DITCH, ANY STREET, OR ANY WATERS OF THE UNITED STATES.
14. CONTRACTOR SHALL NOTIFY ALL RESIDENTS IN WRITING 24 HOURS PRIOR TO ANY SHUT-OFF IN SERVICE. THE NOTICES MUST HAVE CONTRACTOR'S PHONE NUMBER AND NAME OF CONTACT PERSON, AND EMERGENCY PHONE NUMBER FOR AFTER HOURS CALLS.
15. WATER CAN BE USED AS A DUST PALLIATIVE.
16. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATION AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME.
17. TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE REVEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSION ELEMENTS.
18. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL DUST ABATEMENT AND EROSION CONTROL MEASURES DEEMED NECESSARY BY THE ENGINEER OR SAN MIGUEL COUNTY, SHOULD CONDITIONS MERIT THEM.
19. ALL NON PRESSURIZED SOLID PIPES SHALL BE A MINIMUM OF ASTM D-3034 SDR 35 AND SHALL HAVE CLASS "B" BEDDING UNLESS OTHERWISE SHOWN. BEDDING MATERIAL SHALL CONFORM TO ASTM C-33 OR D-448, GRADATION NO. 67, 4" MINIMUM BELOW AND 12" MINIMUM ABOVE PIPE.
20. CURVILINEAR PIPE SECTIONS, IF NEEDED, TO BE CONSTRUCTED BY DEFLECTIONS IN PIPE JOINTS PER THE MANUFACTURERS RECOMMENDATIONS AND/OR REQUIREMENTS.
21. IN ALL CASES, MAINTAIN MINIMUM SEPARATION DISTANCE AS LISTED ON TABLE BELOW. CROSSINGS OR ENCROACHMENTS MAY BE PERMITTED AT THE POINTS AS NOTED IN THE TABLE BELOW PROVIDED THAT THE WATER OR WASTEWATER CONVEYANCE PIPE IS ENCASED FOR THE MINIMUM SETBACK DISTANCE ON EACH SIDE OF THE CROSSING. A LENGTH OF PIPE SHALL BE USED WITH A MINIMUM SCHEDULE 40 RATING OF SUFFICIENT DIAMETER TO EASILY SLIDE OVER AND COMPLETELY ENCASE THE CONVEYANCE. RIGID END CAPS OF AT LEAST SCHEDULE 40 RATING MUST BE GLUED OR SECURED IN A WATERTIGHT FASHION TO THE ENDS OF THE ENCASEMENT PIPE. A HOLE OF SUFFICIENT SIZE TO ACCOMMODATE THE PIPE SHALL BE DRILLED IN THE LOWEST SECTION OF THE RIGID CAP SO THAT THE CONVEYANCE PIPE RESTS ON THE BOTTOM OF THE ENCASEMENT PIPE. THE AREA IN WHICH THE PIPE PASSES THROUGH THE END CAPS SHALL BE SEALED WITH AN APPROVED UNDERGROUND SEALANT COMPATIBLE WITH THE PIPING USED.
22. ALL EXISTING TOPOGRAPHIC, BOUNDARY, AND UTILITY INFORMATION PROVIDED BY BACKCOUNTRY SURVEYING INC. BENCHMARK; NO. 5 REBAR AND 1.5" ALUMINUM CAP MONUMENT AT THE OLD BUILDING SITE CENTERPOINT FOR SITE 65, TROUT LAKE LAND COMPANY WITH A NAVD ELEVATION OF 9795.74 FEET. CONTACT DAVE FOLEY AT (970) 728-9998 FOR MORE BENCHMARK INFORMATION.
23. SEPTIC TANK MUST BE WATER TIGHT AND NOT LEAK INTO ADJACENT SOILS AND MEET CURRENT SAN MIGUEL COUNTY ONSITE WASTEWATER TREATMENT SYSTEMS REGULATIONS AND BE FROM THE CDPHE APPROVED LIST.
24. THE SUB-SURFACE DISPOSAL SYSTEM (FIELD) MUST BE SEEDED IMMEDIATELY UPON COMPLETION. EROSION CONTROL MUST BE PRACTICED DURING AND AFTER CONSTRUCTION
25. LEAKY FIXTURES MAY DISCHARGE EXCESSIVE WATER INTO DRAIN FIELD AND MAY PERMANENTLY HARM DRAIN FIELD. IT IS RECOMMENDED THAT THE HOME OWNER REGULARLY CHECK FOR LEAKS.
26. ACCESS TO ALL SEPTIC COMPONENTS IS REQUIRED; ALL RISERS MUST BE BROUGHT TO GRADE FOR ACCESS. NO ONE MAY ENTER SEPTIC TANKS; A POLYLOK SAFETY SCREEN OR EQUIVALENT IS REQUIRED FOR TODDLER AND KID SAFETY. LOCKABLE, OR SPECIAL SCREW TYPE LIDS COULD BE USED AS ALTERNATIVES.
27. SEPTIC TANK SHOULD BE PUMPED, AND EFFLUENT FILTERS CLEANED AS NEEDED. A TYPICAL RESIDENCE SHOULD PUMP THE SEPTIC TANK EVERY THREE YEARS, OR AS NEEDED.
28. GARBAGE DISPOSALS USE SHOULD BE MINIMIZED OR ELIMINATED, AND NON-BIODEGRADABLE MATERIALS SHOULD NOT BE PLACED INTO THE OWTS SYSTEM.

GENERAL NOTES CONT.:

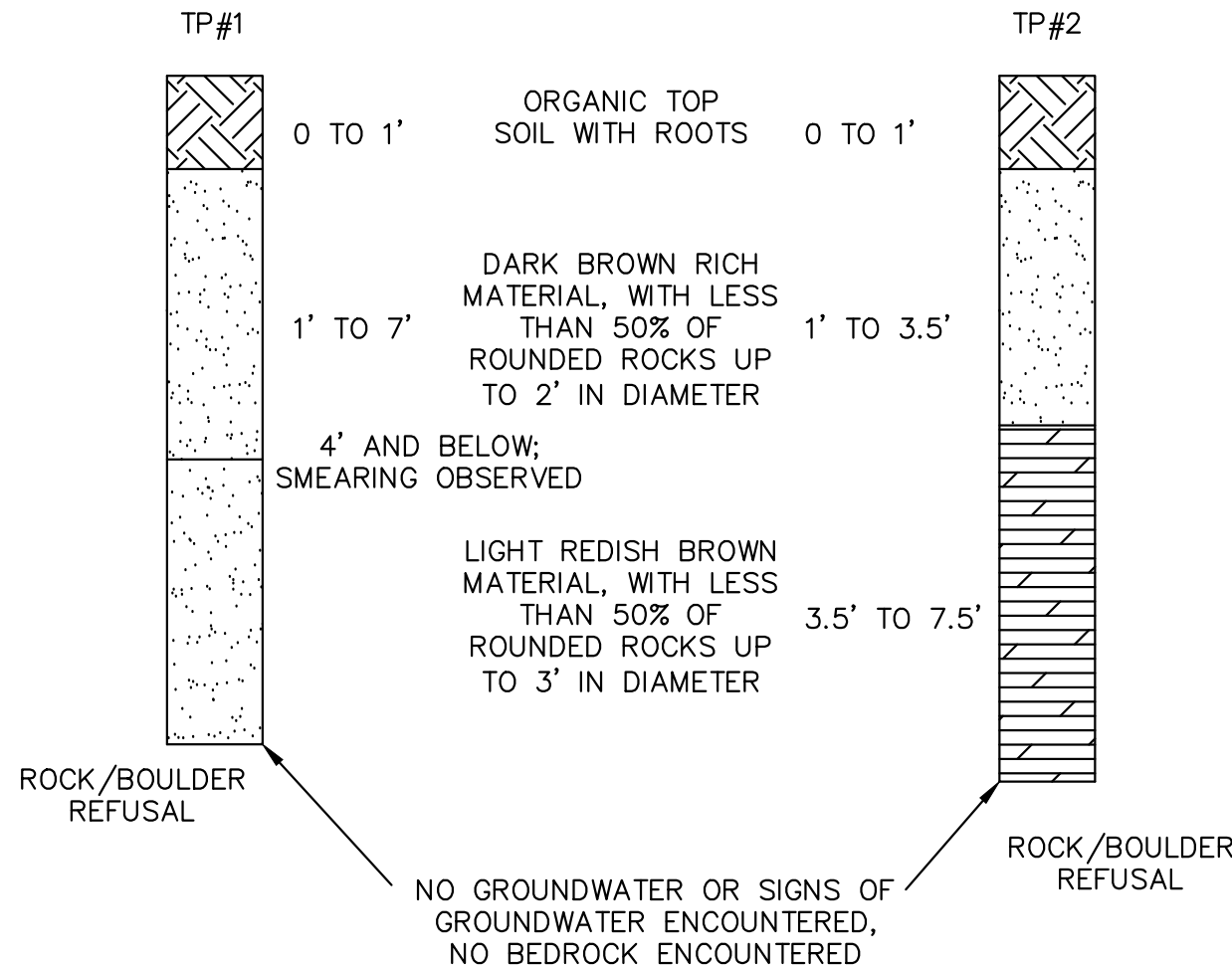
GENERAL NOTES CONT.:

29. ONLY HOUSEHOLD WASTE MAY BE DISCHARGED.
30. GREASE SHOULD NOT BE PLACED IN HOUSEHOLD DRAINS.
31. WATER SOFTENER WASTE MUST NOT BE DISCHARGED INTO OWTS.
32. NO HAZARDOUS WASTES SHOULD BE DIRECTED INTO THE OWTS.
33. LABORATORY MATERIALS AND WASTE MUST NOT DISCHARGE INTO OWTS.
34. THIS OWTS IS NOT DESIGNED TO ACCEPT DISCHARGE FROM A JACUZZI OR SPA. THE OWNER IS RESPONSIBLE FOR PROPER DISPOSAL OF JACUZZI/SPA DISCHARGE ACCORDING TO THE LOCAL HEALTH ORGANIZATION.
35. SEPTIC TANK ADDITIVES ARE NOT RECOMMENDED AS THEY DO NOT ENHANCE EFFLUENT AND DO NOT ALLOW FOR A REDUCED PUMPING FREQUENCY.
36. NO HEAVY TRAFFIC OR MACHINERY MAY DRIVE ON DRAIN FIELD. NO LIVESTOCK MAY GRAZE ON DRAIN FIELD. AN ORANGE CONSTRUCTION FENCE OR EQUIVALENT TO BE PLACED AROUND STA BEFORE AND DURING CONSTRUCTION IN ORDER TO PROTECT IT DURING CONSTRUCTION.
37. NO STOCKPILING OF EARTHEN OR CONSTRUCTION MATERIALS ON SOIL TREATMENT AREA (STA) BEFORE, AFTER, OR DURING CONSTRUCTION.
38. ONLY LOW FLOW FIXTURES MAY BE USED IN PROPOSED HOME.
39. THIS OWTS DESIGN IS VALID FOR A PERIOD OF 12 MONTHS FROM ISSUE DATE.
40. ALL APPROPRIATE APPROVALS FROM THE TROUT LAKE HOMEOWNERS ASSOCIATION MUST BE ACQUIRED PRIOR TO CONSTRUCTION OF THIS OWTS DESIGN.

REPORT OF PRELIMINARY INVESTIGATION, RECONNAISSANCE, AND DETAILED SOIL EVALUATION:

- a. SEE TITLE-BLOCK AND SIGNATURE BLOCK FOR CONTACT AND QUALIFICATIONS OF INDIVIDUAL CONDUCTING SITE EVALUATION.
- b. SEE THE "SOIL PROFILE TEST PITS" ON COVER SHEET FOR EXISTING SOILS ASSESSMENT INFORMATION.
- c. PRELIMINARY AND DETAILED SITE AND SOIL EVALUATIONS WERE COMPLETED ON SITE, AT SITE 66, TROUT LAKE, SAN MIGUEL COUNTY, STATE OF COLORADO, AROUND 8:45 AM, APRIL 26, 2018. IT WAS SUNNY WITH TEMPERATURE AT APPROXIMATELY 35 DEGREES FAHRENHEIT.
- d. SEE "SOIL PROFILE TEST PITS" FOR GRAPHICAL LOGS; A BACKHOE WAS UTILIZED TO DIG THE TWO (2) SOIL PROFILE TEST PITS; VISUAL AND TACTILE EVALUATIONS WERE COMPLETED BY AMIE MARTELL, OF ALPINE LAND CONSULTING, LLC., AMIE IS CERTIFIED FOR VISUAL AND TACTILE EVALUATION PER CPW AND THE SOILS TYPE WAS DETERMINED TO BE SANDY LOAM TO A SANDY CLAY LOAM (TYPE 3) WITH A LONG TERM ACCEPTANCE RATE OF 0.35; GROUNDWATER WAS NOT OBSERVED IN EITHER TEST PIT.
- e. SETBACK DISTANCE REQUIREMENTS ARE LISTED IN THE "MINIMUM SEPARATION REQUIREMENTS" TABLE; ALL MINIMUM SETBACKS WILL BE MET OR EXCEEDED BY THE PROPOSED ONSITE WASTEWATER TREATMENT SYSTEM; ALL SEPARATION REQUIREMENTS FROM TABLE 7-1 OF THE SAN MIGUEL COUNTY ONSITE WASTEWATER TREATMENT SYSTEM REGULATIONS, EFFECTIVE 7-5-14 WILL BE MET OR EXCEEDED FOR THE PROPOSED SYSTEM.
- f. ALL SEPARATION REQUIREMENTS FROM TABLE 7-2 OF THE SAN MIGUEL COUNTY ONSITE WASTEWATER TREATMENT SYSTEM REGULATIONS, EFFECTIVE 7-5-14 WILL BE MET OR EXCEEDED.
- g. THE PROPOSED APPROXIMATE ELEVATION OF THE INFILTRATIVE SURFACE OF THE SOIL TREATMENT AREA WILL BE APPROXIMATELY 2 TO 4 FEET BELOW THE EXISTING OR MODIFIED GROUND SURFACE; SEE SHEET 2 FOR A LAYOUT OF ALL TEST PITS AND ONSITE WASTEWATER TREATMENT SYSTEMS LAYOUT.
- h. ONSITE WELL LOCATION IS TO BE LOCATED A MINIMUM OF 100' AWAY FROM THE SOIL TREATMENT AREA (AND ADJOINING PROPERTIES SOIL TREATMENT AREAS) (SEE SHEET 2); THIS OWTS IS DESIGNED FOR A FOUR (4) BEDROOM HOME, ANY FUTURE ADDITIONS OF BEDROOMS OR WATER FACILITIES WOULD CAUSE THE REDESIGN OF THIS PROPOSED OWTS.
- i. THERE WERE NO DIFFICULTIES ENCOUNTERED DURING THE SOIL TESTING.

SOIL PROFILE TEST PITS:



SIZING CALCULATIONS:

LOADING:
1 SINGLE FAMILY 4 BEDROOM HOME
PERSONS PER BEDROOM = 2
GALLONS PER PERSON = 75
DESIGN LOADING = (4 BEDS x 2 PERSONS x 75 GPD)
= 600 GPD

ABSORPTION FIELD DESIGN CALCULATIONS:

DESIGN LOADING = Q = 600 GPD

LTAR = 0.35 FOR SOIL TYPE SANDY CLAY LOAM FROM TABLE 10-1

SOIL TREATMENT AREA = DESIGN FLOW(GPD)/LTAR(GPD/SQ.FT.)

STA = (600/0.35) = 1714.28 SQ.FT.

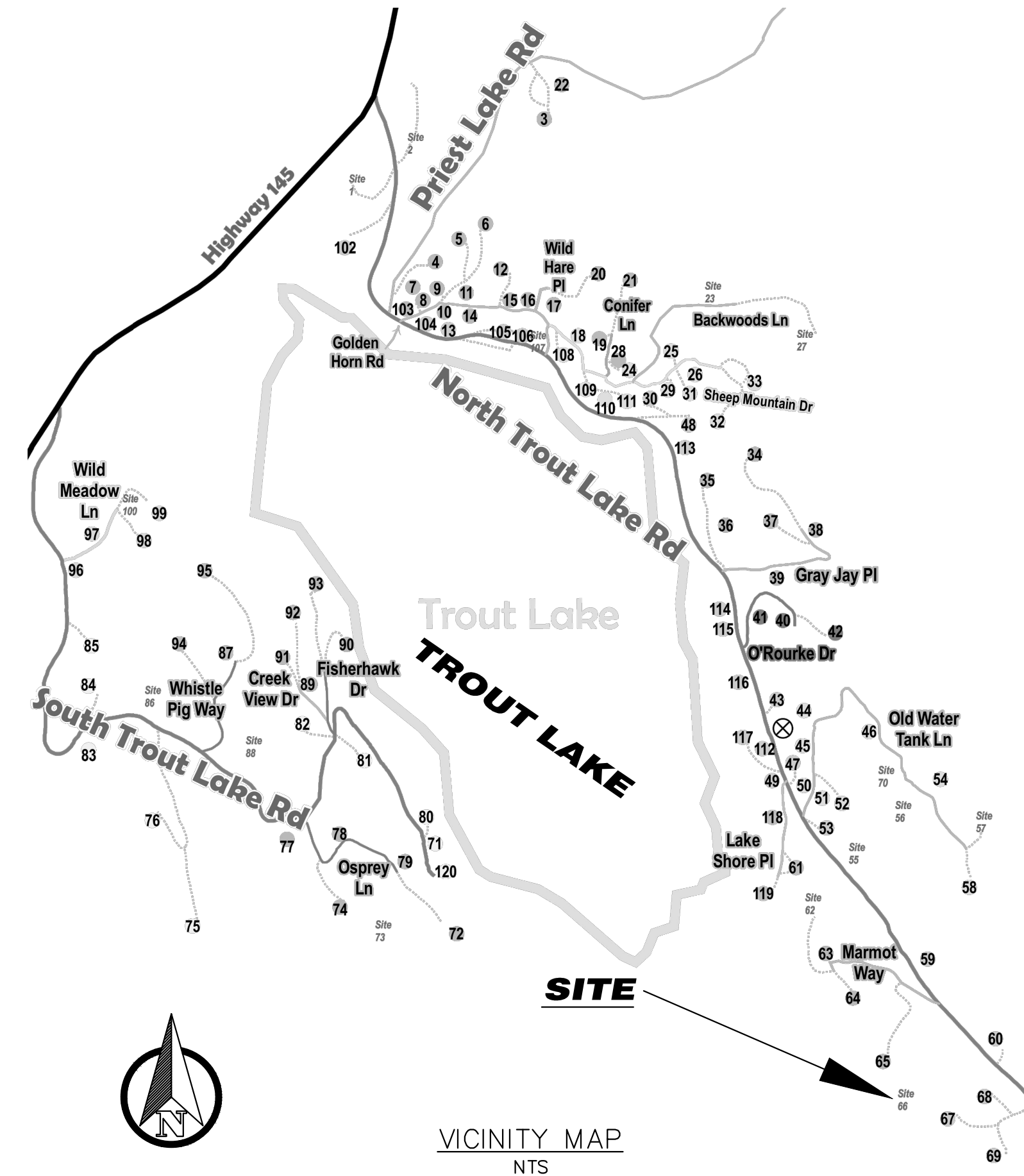
SIZE ADJUSTMENT FACTOR FOR GRAVITY TRENCHES WITH CHAMBERS FROM TABLE 10-2 AND 10-3:
STA = (1.0)(0.7)(1714.3 SQ.FT.) = 1200 SQ.FT.

4 TRENCHES WITH 25 CHAMBERS EACH:
CHAMBER = 4' X 3' = 12 SQ.FT. EACH
TOTAL OF 100 CHAMBERS = 100 X 12 SQ.FT. = 1200 SQ.FT.
1200 SQ.FT. PROVIDED = 1200 SQ.FT. REQUIRED

TANK SIZING:
4 BEDROOM HOME REQUIRES A 1,250 GALLON OR LARGER
TANK PER TABLE 9-1

MINIMUM SEPARATION REQUIREMENTS:

SUB-SURFACE DISPERSAL SYSTEM TO POTABLE WATER SUPPLY LINE 25 LF
SUB-SURFACE DISPERSAL SYSTEM TO POTABLE WATER SUPPLY CISTERN 25 LF
SUB-SURFACE DISPERSAL SYSTEM TO DWELLING/OCCUPIED BUILDING 20 LF
SUB-SURFACE DISPERSAL SYSTEM TO IRRIGATION DITCH/WATER COURSE 50 LF
SUB-SURFACE DISPERSAL SYSTEM TO DRY GULCHES 25 LF
SUB-SURFACE DISPERSAL SYSTEM TO PROPERTY LINE 10 LF
SUB-SURFACE DISPERSAL SYSTEM TO WELL 100 LF
SEPTIC TANK TO SUB-SURFACE DISPERSAL SYSTEM 5 LF
SEPTIC TANK TO PROPERTY LINE 10 LF
SEPTIC TANK TO DWELLING/OCCUPIED BUILDING 5 LF
SEPTIC TANK TO POTABLE WATER SUPPLY LINE 10 LF
SEPTIC TANK TO POTABLE WATER SUPPLY CISTERN 25 LF
SEPTIC TANK TO WELL 50 LF



SHEET INDEX:

1. COVER SHEET
2. OWTS PLAN
3. DETAILS

CALL UTILITY NOTIFICATION
CENTER OF COLORADO
1-800-922-1987
OR
811
CALL 2-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR
EXCAVATE FOR THE MARKING OF
UNDERGROUND MEMBER UTILITIES.

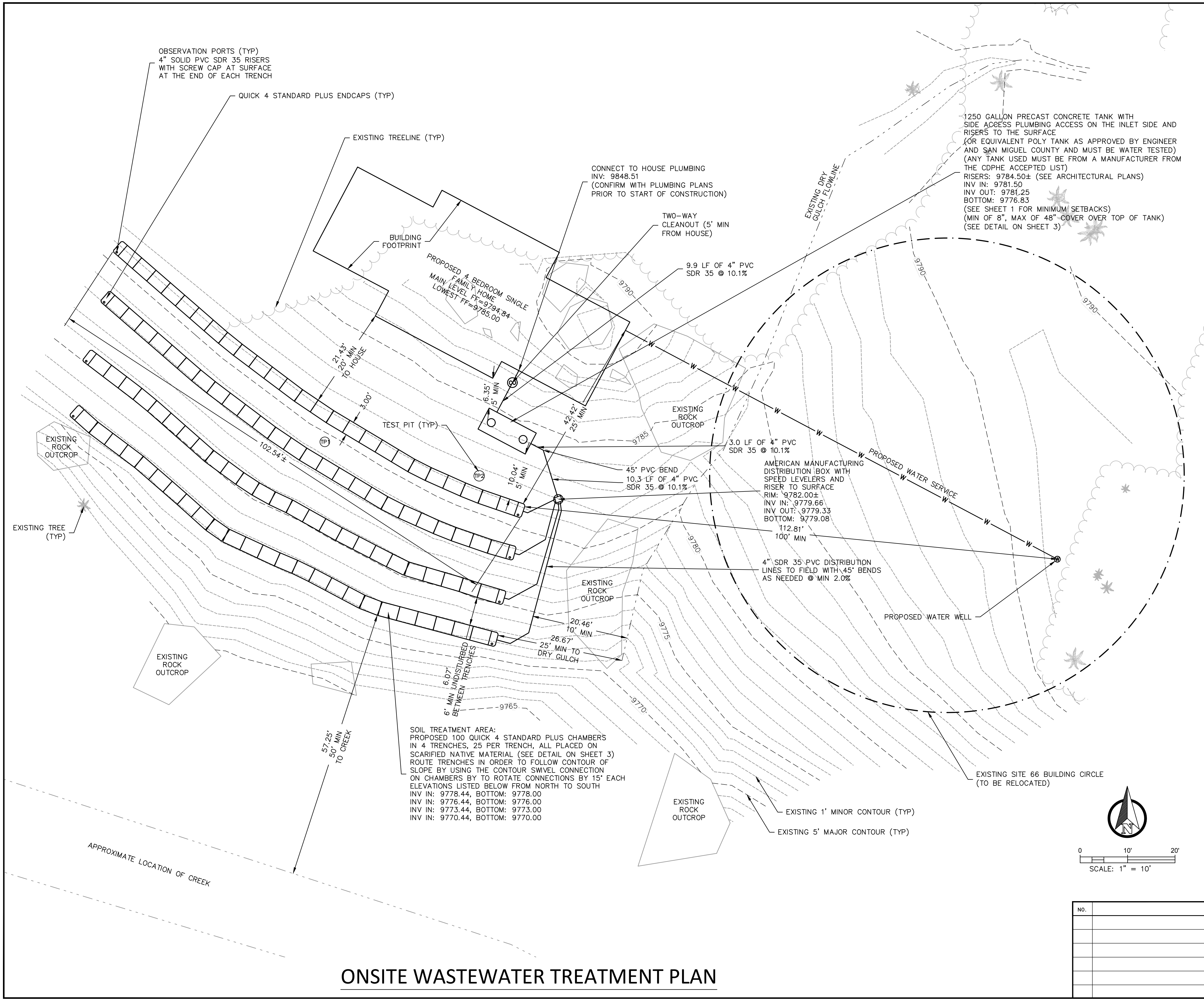
THESE OWTS CONSTRUCTION DOCUMENTS WERE PREPARED BY ME AND UNDER MY DIRECT SUPERVISION ON BEHALF OF ALPINE LAND CONSULTING, LLC FOR JUSTIN MEYER AND INCLUDES OWTS DESIGN ONLY, AND DOES NOT INCLUDE ANY OTHER PLANNING OR ENGINEERING.



GREGORY E. ANDERSON
COLORADO PROFESSIONAL ENGINEER
REGISTRATION NO. 35736

NO.	REVISIONS	DATE

 ALPINE LAND CONSULTING, LLC P.O. BOX 234 RICO, COLORADO 81352 970-708-0326 GREGG@ALPINELANDCONSULTING.COM	
SITE 66 TROUT LAKE OWTS COVER SHEET	
CLIENT: JUSTIN MEYER JUSTIN@ROCKETSCIENCE.CC	
DATE:	JUNE 18, 2018
PROJECT #:	2018008
PROJECT MANAGER:	GEA
DRAWN BY:	ADM
SHEET #:	1 OF 3

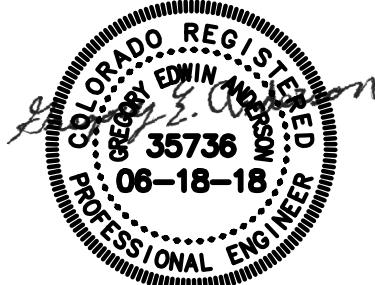


NOTES

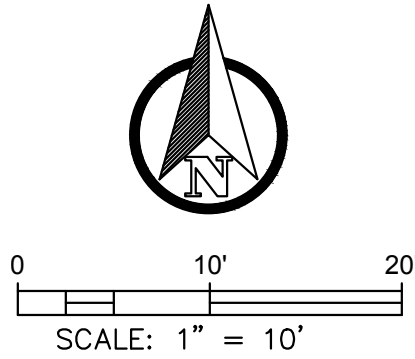
- 1. SEE NOTES ON SHEET 1.
- 2. THIS OWTS IS DESIGNED FOR A FOUR (4) BEDROOM HOME WITH 8 PEOPLE TOTAL OCCUPYING THE HOME.
- 3. ALL EXISTING TOPOGRAPHIC SURVEY INFORMATION PROVIDED BY BACKCOUNTRY SURVEYING INC. SEE SHEET 1 (NOTE 22) FOR BENCHMARK INFORMATION.
- 4. CONTRACTOR SHALL VERIFY SIZE, HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITY FACILITIES AND NOTIFY THE ENGINEER OF ALL DISCREPANCIES BEFORE THE START OF ANY CONSTRUCTION ACTIVITIES.
- 5. CONTRACTOR TO RE-GRADE OVER THE SOIL TREATMENT FIELD, PIPES, TANK, AND DISTRIBUTION BOX TO MEET MINIMUM AND MAXIMUM COVER AS SHOWN ON THE DETAILS PER SHEET 3.
- 6. CONTRACTOR TO SEED ALL DISTURBED AREAS WITH SAN MIGUEL COUNTY APPROVED SEED MIX.
- 7. SEE CIVIL DRIVEWAY PLANS FOR SITE GRADING.

CALL UTILITY NOTIFICATION
CENTER OF COLORADO
1-800-922-1987
OR
811
CALL 2-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR
EXCAVATE FOR THE MARKING OF
UNDERGROUND MEMBER UTILITIES.

THESE OWTS CONSTRUCTION DOCUMENTS WERE PREPARED BY ME AND UNDER MY DIRECT SUPERVISION ON BEHALF OF ALPINE LAND CONSULTING, LLC FOR JUSTIN MEYER AND INCLUDES OWTS DESIGN ONLY, AND DOES NOT INCLUDE ANY OTHER PLANNING OR ENGINEERING.



GREGORY E. ANDERSON
COLORADO PROFESSIONAL ENGINEER
REGISTRATION NO. 35736



ALPINE LAND
CONSULTING, LLC

P.O. BOX 234
RICO, COLORADO 81352
970-708-0326
GREGG@ALPINELANDCONSULTING.COM

SITE 66 TROUT LAKE
OWTS

COVER SHEET

CLIENT:

JUSTIN MEYER
JUSTIN@ROCKETSCIENCE.CC

DATE: JUNE 18, 2018

PROJECT #: 2018008

PROJECT MANAGER: GEA
DRAWN BY: ADM

SHEET #:

2 OF 3

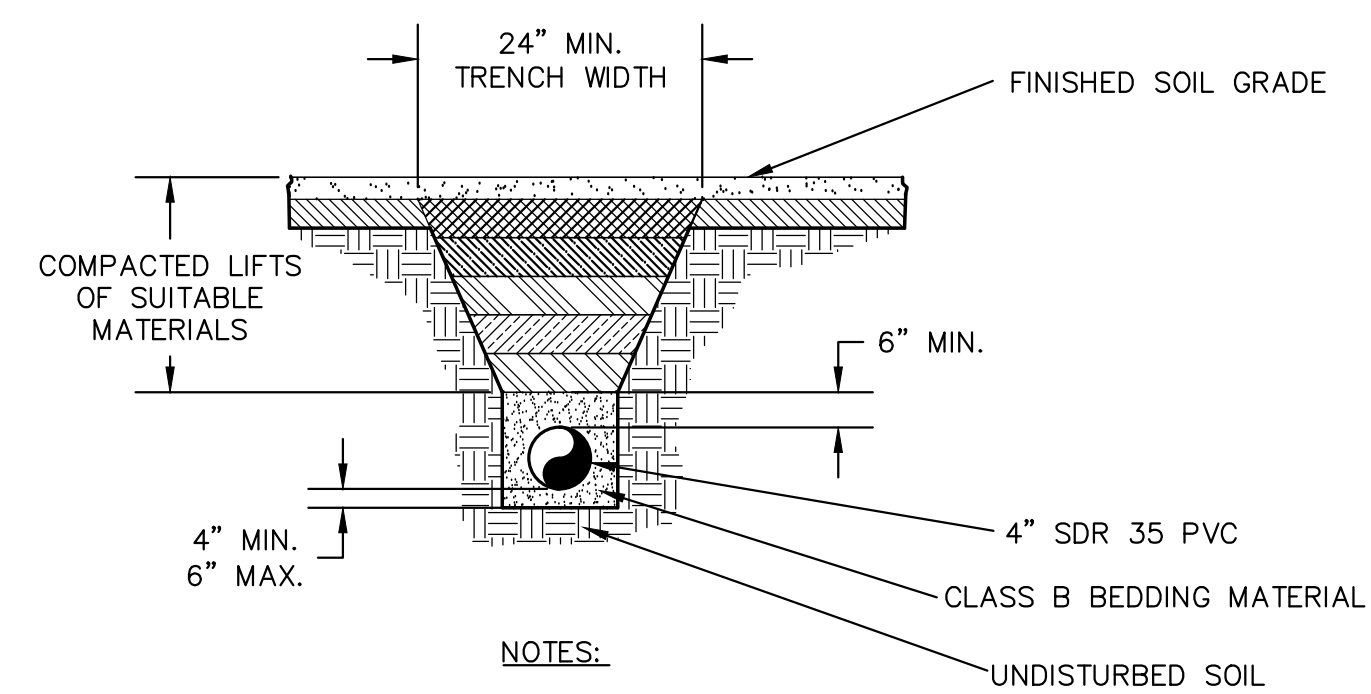
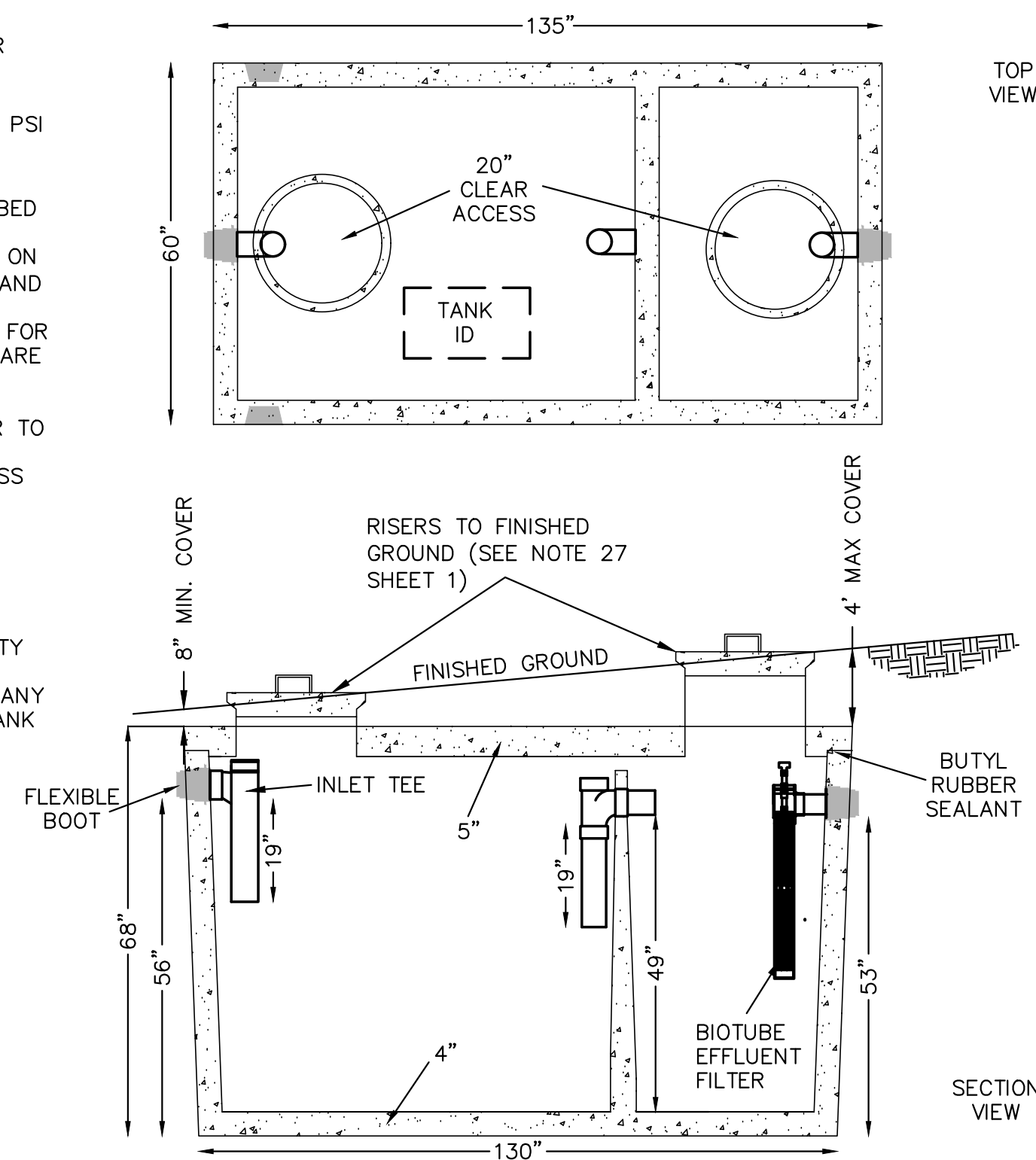
NO.	REVISIONS	DATE

ONSITE WASTEWATER TREATMENT PLAN

- DESIGN PER PERFORMANCE TEST PER ASTM C1227
- TOP SURFACE AREA 56.25 FT²
- F'C @ 28 DAYS; CONCRETE = 6,000 PSI MIN.

- TANK TO BE SET ON 5" MIN. SAND BED OR PEA GRAVEL
- TANK TO BE BACKFILLED UNIFORMLY ON ALL SIDES IN LIFTS LESS THAN 24" AND MECHANICALLY COMPACTED
- EXCAVATED MATERIAL MAY BE USED FOR BACKFILL, PROVIDED LARGE STONES ARE REMOVED
- EXCAVATION SHOULD BE DEWATERED AND TANK FILLED WITH WATER PRIOR TO BEING PUT IN SERVICE FOR INSTALLATION WITH WATER TABLE LESS THAN 2' BELOW GRADE
- MEETS C114-46 FOR RESILIENT CONNECTORS
- INLET AND OUTLET IDENTIFIED ABOVE PIPE DELIVERED COMPLETE WITH INTERNAL PIPING PVC OR CONCRETE RISERS AVAILABLE SECONDARY SAFETY SCREEN AVAILABLE WITH PVC RISER
- ALL PRECAST TANK SHOWN BUT ANY CDPHE ACCEPTED MANUFACTURED TANK MAY BE INSTALLED

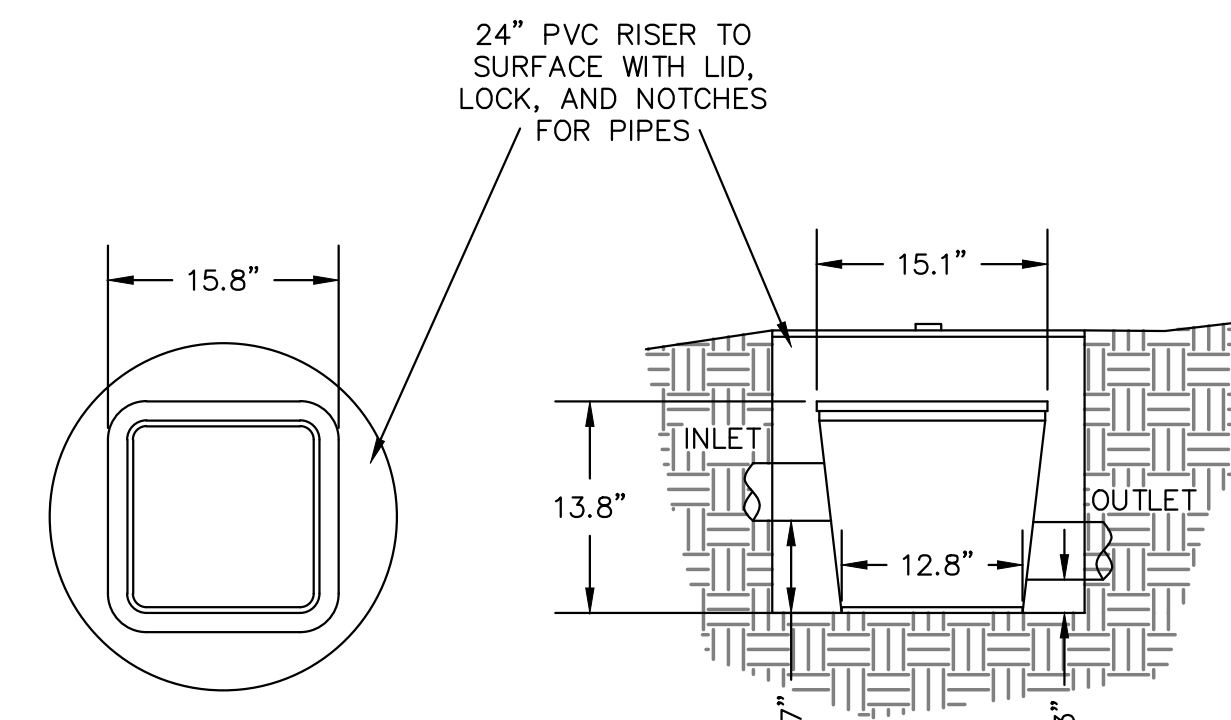
ALLOWABLE BURY (BASED ON WATER TABLE)	
WATER TABLE	ALLOWABLE EARTH FILL
0' - 0"	2' - 0"
1' - 0"	3' - 0"
2' - 0"	3' - 0"
3' - 0"	4' - 0"
DRY	4' - 0"



- NOTES:
1. ALL TRENCHES SHALL BE BACKFILLED IN ACCORDANCE WITH THE ABOVE DETAIL UNLESS OTHERWISE SPECIFIED BY THE COUNTY.
 2. TRENCH WIDTH SHALL NOT BE LESS THAN 24" WIDE.
 3. 95% COMPACTION IS REQUIRED ON ALL TRENCHING ZONES, BOTH IMPROVED & UNIMPROVED AREAS.
 4. IN UNIMPROVED AREAS, ALL DISTURBED AREAS SHALL BE RE-GRADED, SEEDED & MULCHED.
 5. WHEN INSTALLING SLEEVE BEDDING MATERIAL DEPTH SHALL BE 6" ABOVE SLEEVE.
 6. SEWER LINES MUST BE LAPPED WITHIN 10 FEET OF WATER LINE WITH SCHED 40 PVC PIPE.

PIPE BACKFILL DETAIL

NTS



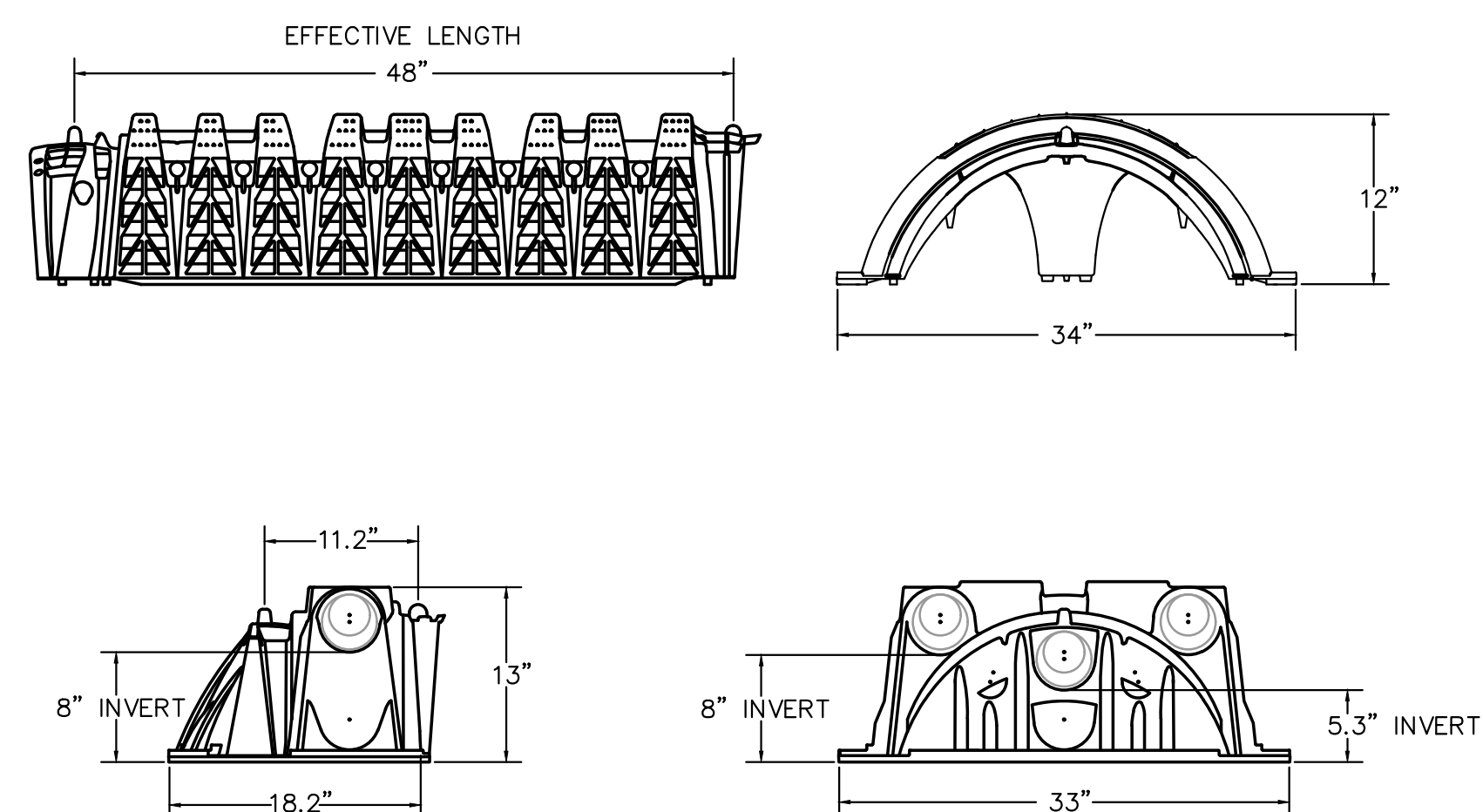
DISTRIBUTION BOX DETAIL

NTS

DIGGING SPECS		INVERT		DIMENSIONS			NET CAPACITY			NET WEIGHT		
13' LONG X 8' WIDE	INLET	OUTLET	LENGTH	WIDTH	HEIGHT	INLET SIDE	OUTLET	TOTAL	LID	TANK	TOTAL	
56" BELOW INLET	56"	53"	135"	60"	68"	843 gal	416 gal	1259 gal	3120 lbs	10880 lbs	14000 lbs	

1250 GALLON TWO (2)
COMPARTMENT CONCRETE TANK

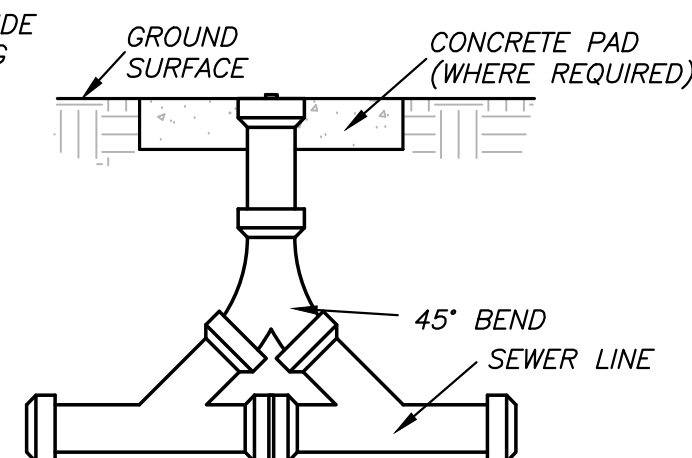
N.T.S



TYPICAL CHAMBER DETAIL

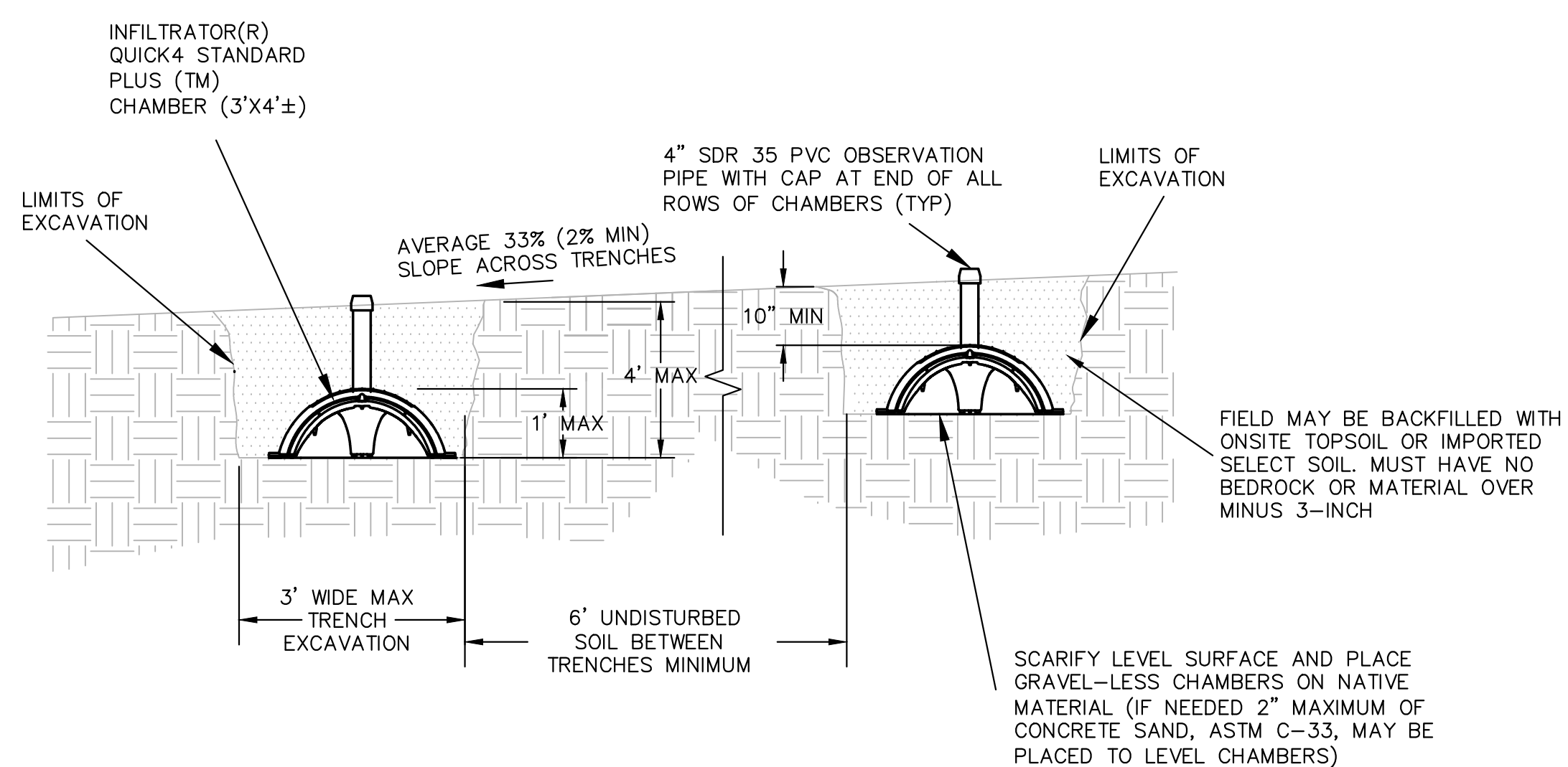
NTS

1. CLEANOUT REQUIRED AT OUTSIDE OF HOUSE PER THE PLUMBING CODE
2. CLEANOUT REQUIRED AT 100' MAX. SPACING AND AT CHANGE IN DIRECTION, WHERE TOTAL AGGREGATE CHANGE EXCEEDS 135°



TWO-WAY SANITARY CLEANOUT

NTS

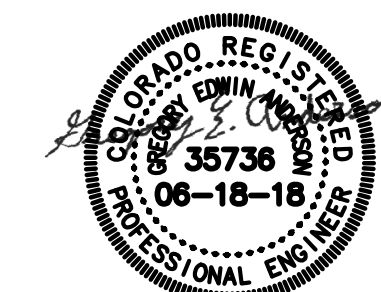


TYPICAL TRENCH DETAIL

NTS

CALL UTILITY NOTIFICATION
CENTER OF COLORADO
1-800-922-1987
OR
811
CALL 2-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR
EXCAVATE FOR THE MARKING OF
UNDERGROUND MEMBER UTILITIES.

THESE OWTS CONSTRUCTION DOCUMENTS WERE
PREPARED BY ME AND UNDER MY DIRECT
SUPERVISION ON BEHALF OF ALPINE LAND
CONSULTING, LLC FOR JUSTIN MEYER AND
INCLUDES OWTS DESIGN ONLY, AND DOES NOT
INCLUDE ANY OTHER PLANNING OR ENGINEERING.



GREGORY E. ANDERSON
COLORADO PROFESSIONAL ENGINEER
REGISTRATION NO. 35736

NO.	REVISIONS	DATE



ALPINE LAND
CONSULTING, LLC

P.O. BOX 234
RICO, COLORADO 81332
970-708-0326
GREGG@ALPINELANDCONSULTING.COM

SITE 66 TROUT LAKE
OWTS

DETAILS

CLIENT:

JUSTIN MEYER
JUSTIN@ROCKETSCIENCE.CC

DATE: JUNE 18, 2018

PROJECT #: 2018008

PROJECT MANAGER:	GEA
DRAWN BY:	ADM

SHEET #:

3 OF 3