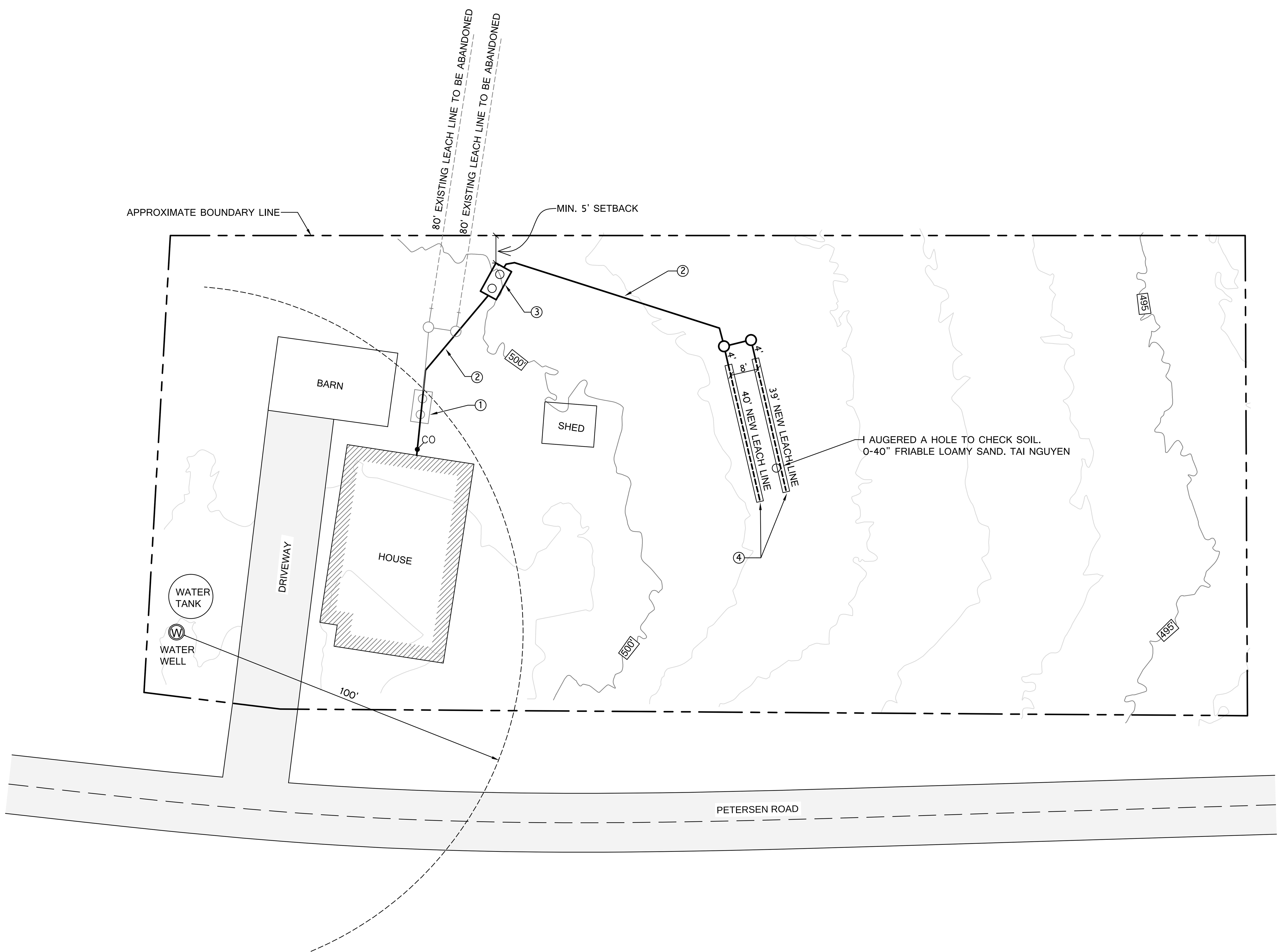
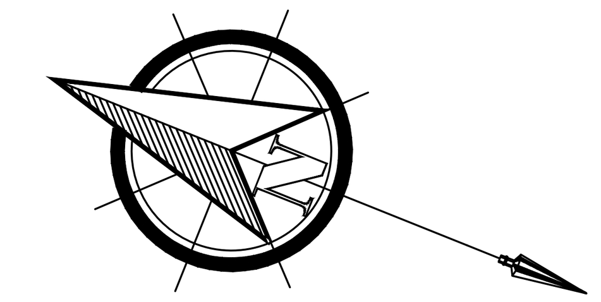
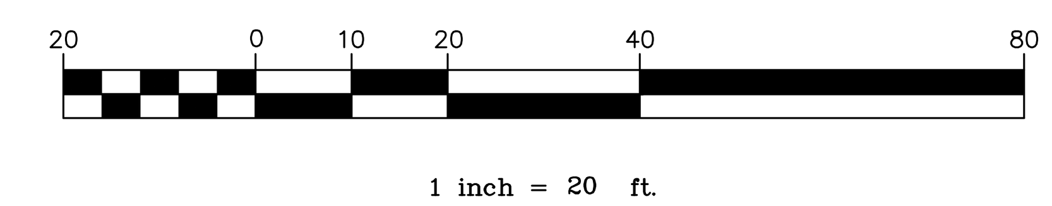


VICINITY MAP





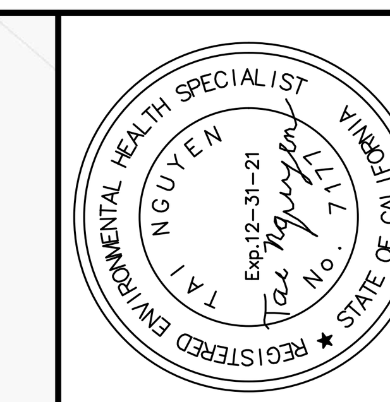
KEY NOTES:

① DESTROY EXISTING SEPTIC TANK PER SONOMA COUNTY CODES.

② INSTALL NEW 4" ABS SCH 40 GRAVITY SEWER LINE WITH TWO-WAY CLEANOUT. CONNECT NEW SEWER LINE TO EXISTING SEWER LINE.

③ INSTALL NEW 1200-GALLON CONCRETE SEPTIC TANK (IAPMO APPROVED) WITH RISERS.

④ INSTALL 79 FEET NEW LEACH LINE. LEACH TRENCH IS 36 INCHES DEEP, 24 INCHES WIDE AND HAS 18 INCHES OF ROCKS BELOW LEACH PIPE. NEW LEACH LINE SHALL BE INSTALLED ALONG SAME ELEVATION/CONTOUR.



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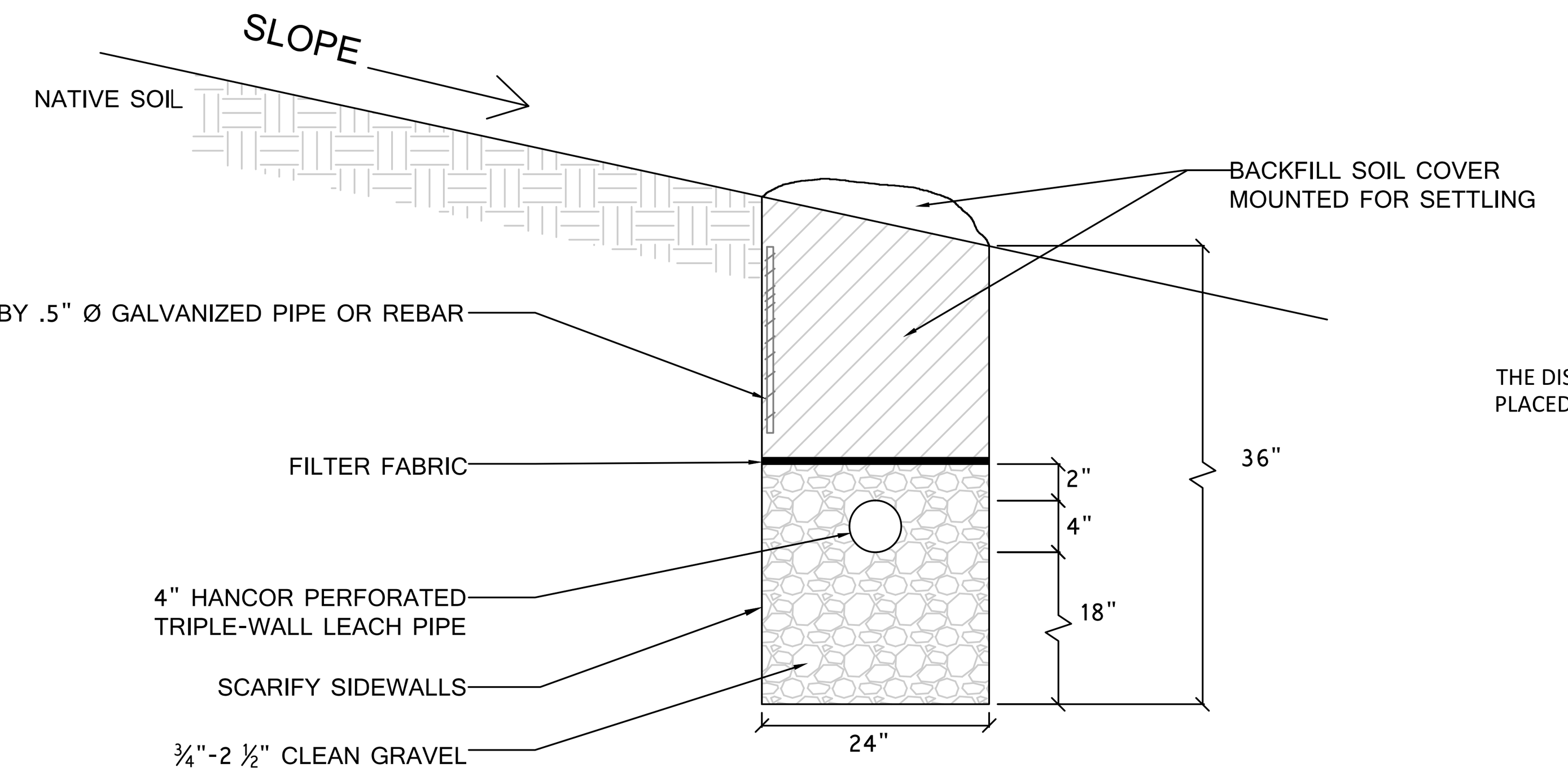
REPAIR STANDARD SEPTIC SYSTEM DESIGN

DRAWN:
TN

CHECKED:
TN

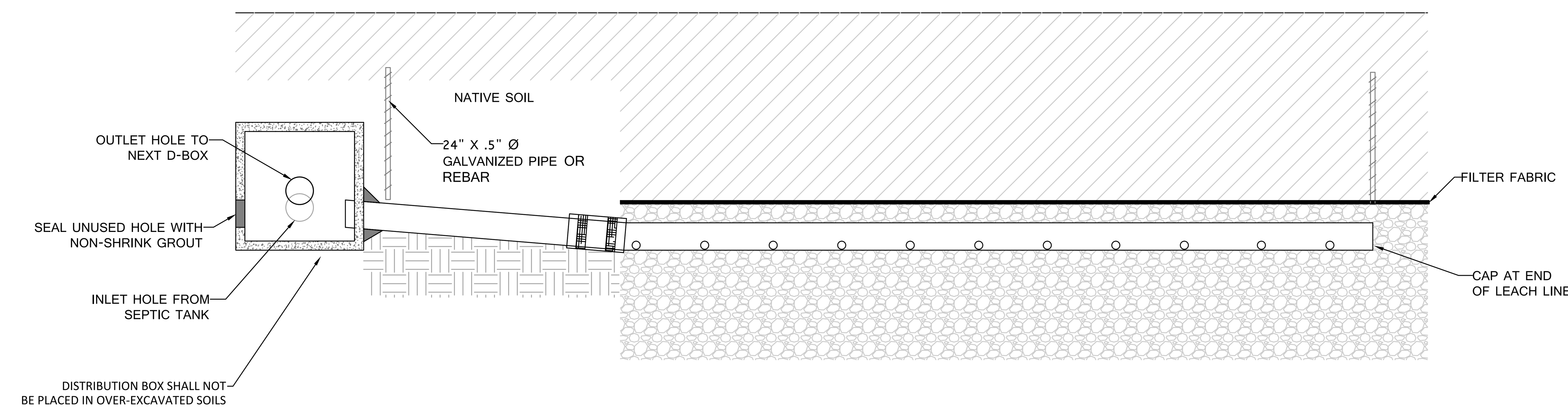
JOB NO:

No.	Revision

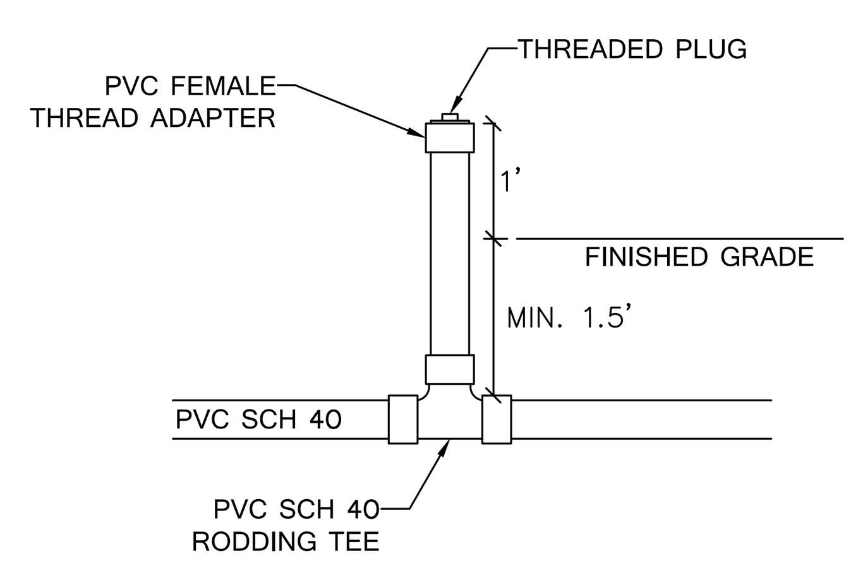


THE DISTRIBUTION BOX SHALL NOT BE PLACED IN OVER-EXCAVATED SOILS

LEACH TRENCH CROSS-SECTION

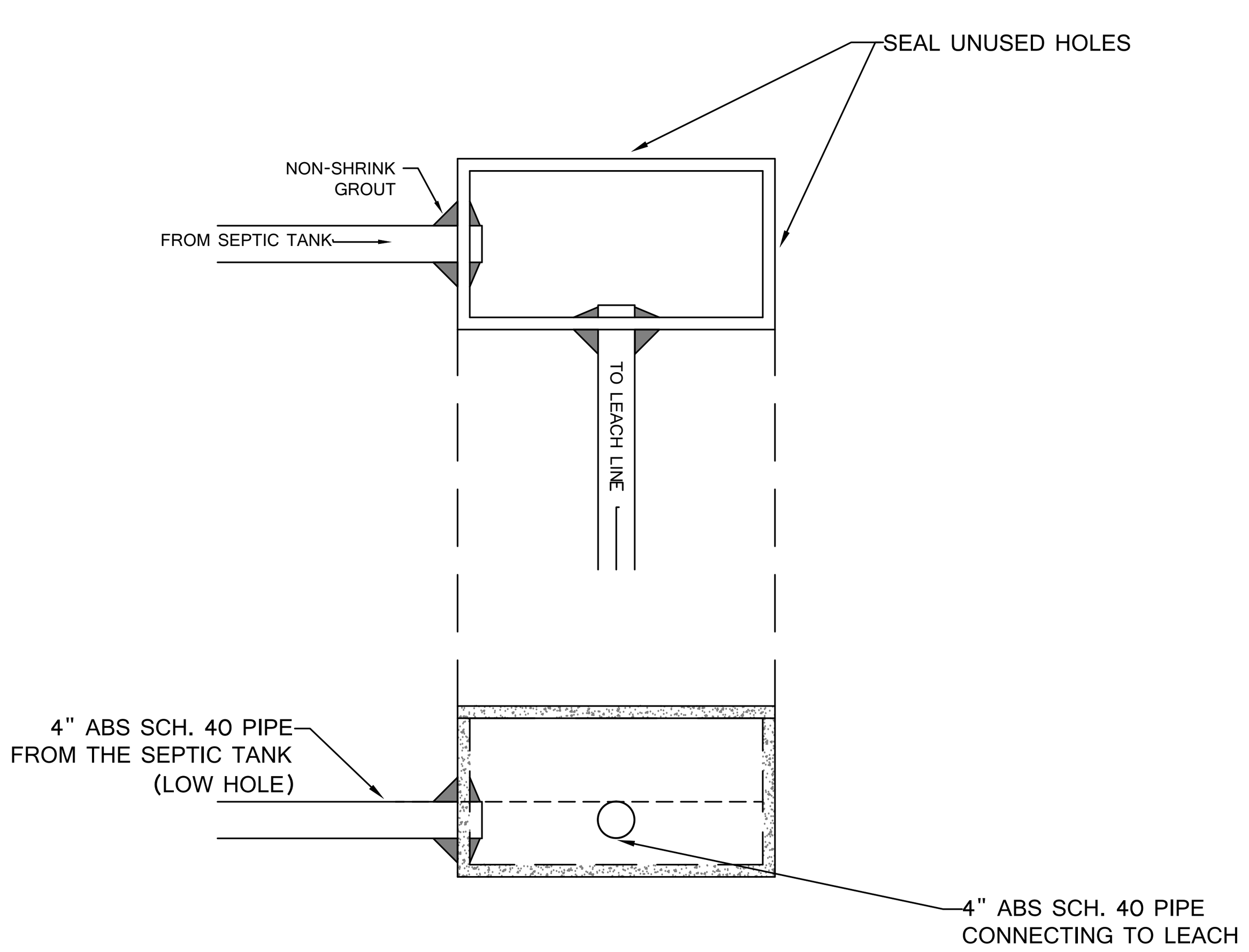


D-BOX AND LEACH TRENCH SIDE VIEW

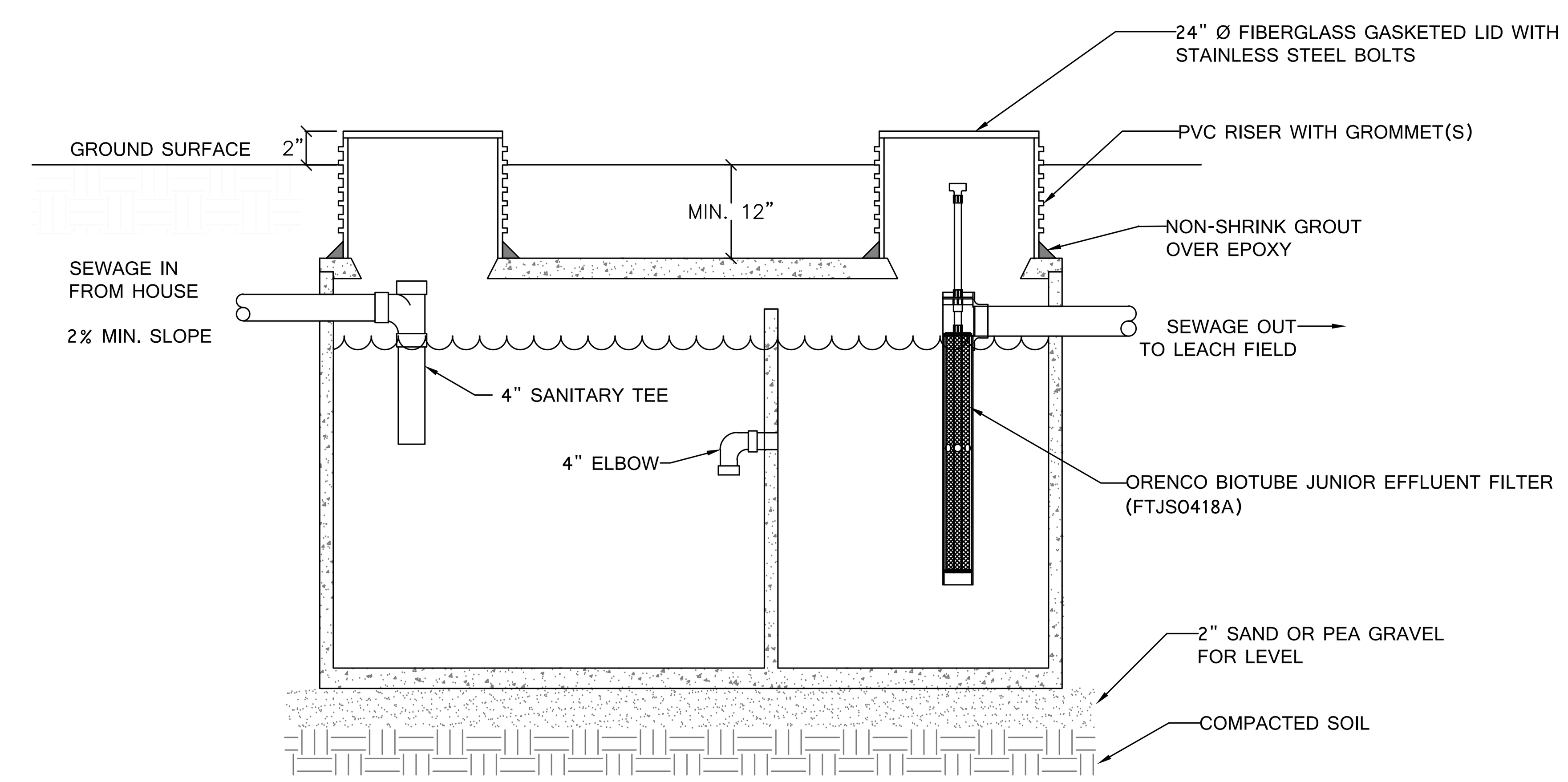


CLEAN-OUT CROSS-SECTION

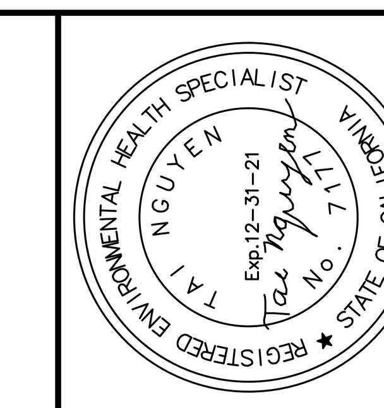
D-BOX PLAN VIEW



D-BOX SIDEVIEW



1200-GAL. SEPTIC TANK DETAIL



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GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES. UNDERGROUND SERVICE ALERT (U.S.A.) SHALL BE CALLED AT (800) 227-2600 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.

2. ALL OF THE LOCATIONS OF THE EXISTING UTILITIES SHOWN IN THE PLANS HAVE BEEN ESTABLISHED BY SITE VISIT, FILED SURVEY, OR OBTAINED FROM AVAILABLE RECORDS AND SHALL THEREFORE BE CONSIDERED APPROXIMATE AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS.

3. LEACH LINES CAN BE CONSTRUCTED IF THE SOIL MOISTURE AT THE APPROPRIATE DEPTHS IS NOT SO HIGH AS TO HAVE THE SOIL SMEAR OR COMPACT DUE TO CONSTRUCTION ACTIVITIES. THE FOLLOWING IS PROCEDURE TO DETERMINE IF CONSTRUCTION CAN BEGIN:
   A. SELECT A HANDFUL OF SOIL FOR TESTING (ANY NON-SOIL MATERIAL, ROCKS, ROOTS, ETC. SHOULD BE REMOVED). DO NOT ADD MOISTURE OR LET DRY-OUT. SAMPLE SHOULD BE TAKEN AT THE DEPTH OF EXCAVATION (ABSORPTION AREA).
   B. ROLL THE SAMPLE BETWEEN THE PALMS (IN THE SHAPE OF A PENCIL/WORM SHAPE).
   C. CONTINUE ROLLING THE THREAD UNTIL IT REACHES AN UNIFORM DIAMETER OF 1/8 INCH IF POSSIBLE.
   D. IF THE SAMPLE DOES NOT REACH A DIAMETER OF 1/8 INCH, THE SOIL IS ABOVE THE PLASTIC LIMIT AND CONSTRUCTION CAN PROCEED.
   E. IF THE SAMPLE IS ROLLED INTO A DIAMETER EQUAL TO 1/8 INCH BEFORE BREAKING, THE SOIL IS TOO WET AND CONSTRUCTION SHOULD NOT OCCUR.

4. SEPTIC SYSTEM CANNOT BE CONSTRUCTED DURING OR AFTER A HEAVY RAIN.

5. THE CONTRACTOR SHALL CALL AT LEAST 48 HOURS IN ADVANCE TO SCHEDULE AN INSPECTION FROM THE COUNTY DISTRICT SEPTIC INSPECTOR AND SEPTIC CONSULTANT. THE SEPTIC TANK, SEWER LINE, D-BOXES, LEACH LINES, AND ANY OTHER WORKS SHALL BE LEFT OPEN (NO SOIL COVER) FOR THE INSPECTION. A TRANSIT SHOULD BE AT THE SITE TO CHECK THE LEVEL OF THE LEACH LINES.

6. THE DESIGNER SHALL BE NOTIFIED IMMEDIATELY OF ANY ADVERSE CONDITIONS DISCOVERED DURING CONSTRUCTION.

7. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING THE SAFETY OF PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL HOLD HARMLESS, INDEMNIFY, AND DEFEND THE COUNTY OF SONOMA AND THE DESIGNER WITH HER ASSISTANT OF ALL LIABILITY CLAIMS, LOSSES, OR DAMAGE ARISING OR ALLEGED TO ARISE FROM THE PERFORMANCE OF THE WORK DESCRIBED HEREIN, BUT NOT INCLUDING THE SOLE NEGLIGENCE OF THE SONOMA COUNTY STAFF, AND THE DESIGNER.

8. THE CONTRACTOR IS RESPONSIBLE FOR INSURING ALL CONSTRUCTION MEETS CODES.

9. THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR, MATERIALS, SUPPLIES, AND EQUIPMENTS FOR THE CONSTRUCTION ON THIS PLAN.

10. THE BOUNDARY LINES ON THIS PARCEL ARE APPROXIMATE AND FOR INFORMATIONAL PURPOSES ONLY. THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY.

11. IT IS THE SOLE RESPONSIBILITY OF THE DEVELOPER OR CONTRACTOR OR OWNER TO OBTAIN ANY NECESSARY PERMIT TO START THE CONSTRUCTION.

12. ALL SITE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS, STAMPED BY THE COUNTY. ANY DEVIATION FROM THE APPROVED PLANS WILL REQUIRE WRITTEN OR VERBAL APPROVAL FROM THE DESIGNER.

13. THE DRAWING WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR WILL REVIEW THE DRAWING AND BRING ANY DISCREPANCIES TO THE DESIGNER PRIOR TO COMMENCING CONSTRUCTION WORK.

14. THE HOUSE AND ANY BUILDING WITH BATHROOM SHALL HAVE AN 1.6 GALLONS LOW FLUSH TOILET IN ALL BATHROOMS. WE RECOMMEND LOW FLOW FIXTURES IN THE HOUSE TO REDUCE SEWAGE WASTE FLOW.

15. HOMEOWNERS AND CONTRACTORS ARE PROHIBITED FROM PLACING UNACCEPTABLE PLANTS, SHRUBS TREES, ORNAMENTS, VEGETATIVE COVER, AND IRRIGATION SYSTEMS OVER THE SYSTEM.

16. DOWNSPOUT OF THE HOUSE'S ROOF DRAINAGE SHALL BE DIRECTED AWAY FROM THE SEPTIC TANK AND LEACH FIELD.

17. NO FOUNDATION, GRADE CUT OR FILL SHALL BE LOCATED WITHIN 50 FEET DOWNSLOPE OR LATERALLY TO THE LEACH FIELD AND RESERVE AREA AND 25 FEET TO THE SEPTIC TANK.

18. PROPOSED SEPTIC TANK, LEACH FIELD, AND RESERVE AREAS SHALL BE LEFT UNDISTURBED BEFORE AND AFTER THE SEPTIC SYSTEM INSTALLATION.

SEPTIC TANK INSTALLATION

1. THE SEPTIC TANK SIZE IS DETERMINED BY THE NUMBER OF BEDROOMS. SEPTIC TANK MUST BE ACCEPTED BY IAPMO AS MEETING STANDARD PS-1.

   1-2 BEDROOMS.....MIN. 810-GALLON SEPTIC TANK

   3-4 BEROOMS.....MIN. 1200-GALLON SEPTIC TANK

   5-6 BEROOMS.....MIN. 1500-GALLON SEPTIC TANK

2. THE SEPTIC TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.

3. THE SEPTIC TANK IS TO BE SET LEVEL IN THE EXCAVATION WITH A MINIMUM SOIL COVER OF 12".

4. THE INSIDE OF A SEPTIC TANK SHALL BE COATED WITH EITHER THOROSEAL OR ASPHALT EMULSION.

5. WATER TIGHTNESS TEST SHALL BE CONDUCTED FOR THE SEPTIC TANK AS WELL AS SUMP TANK (IF DESIGNED). THE INLET AND OUTLET HOLES SHALL BE PLUGGED BY PIGS (MECHANICAL PLUGS). CLEAR WATER IS ADDED TO 2 INCHES ABOVE THE TANK/RISER SEAM. MEASURE AND RECORD THE LEVEL OF THE WATER. THE TEST DURATION SHALL BE 30 MINUTES. A WATER LEVEL DECLINE OF 1/8 INCH OR MORE INDICATES A FAILED WATER TIGHTNESS TEST.

6. RISERS SHALL BE CONSTRUCTED OVER THE MANHOLES TO AT LEAST 2 INCHES ABOVE THE GROUND SURFACE. PVC RISERS SHALL BE SEALED BY EPOXY OVERLAID WITH NON-SHRINK GROUT.

7. ALL RISERS SHALL BE FITTED WITH DURABLE, AIRTIGHT LIDS THAT HAVE A LOCKING MECHANISM TO PREVENT UNWANTED ENTRY AND INSECT AND RODENT ACCESS.

8. THE SANITARY TEE SHALL BE INSTALLED AT THE INLET HOLE, AND EFFLUENT FILTER SHALL BE INSTALLED AT THE OUTLET HOLE OF THE SEPTIC TANK.

9. APPLY THOROSEAL OR EQUIVALENT INSIDE SEPTIC TANK.

10. TRAFFIC RATED SEPTIC TANK IS REQUIRED WITHIN THE PARKING AREA OR DRIVE WAY WITH TRAFFIC RATED CONCRETE RISERS. CONCRETE RISERS SHALL BE SEALED BY XYPEX OVERLAID WITH NON-SHRINK GROUT.

SEPTIC TANK DESTRUCTION

1. THE SEPTIC TANK SHALL BE PUMPED BY A LICENSED SEPTIC TANK PUMPER. KEEP THE RECEIPT.

2. THE LID SHOULD BE REMOVED FROM THE SITE, OR DISPOSED OF AS IN #5 BELOW.

3. BREAK A COUPLE OF HOLES IN THE BOTTOM OF EACH SECTION OF THE SEPTIC TANK TO PROVIDE FOR DRAINAGE.

4. CALL THE DISTRICT SEPTIC INSPECTOR FOR AN INSPECTION.

5. BACKFILL THE TANK WITH A SAND OR PEA GRAVEL MIX OR RIVER RUN MATERIAL TO A DEPTH OF APPROXIMATELY ONE FOOT BELOW FINISH GRADE. (THE TANK'S LIDS MAY BE BROKEN INTO SMALL PIECES AND PLACED INTO THE TANK WITH THE GRAVEL, BEING CAREFUL NOT TO CREATE ANY HOLLOW VOIDS.) THE REMAINING FILL TO SURFACE LEVEL MAY BE OF ANY SUITABLE MATERIAL AND SHOULD BE GRADED TO DRAIN.

6. AN OPTION IS TO REMOVE THE ENTIRE TANK FROM THE SITE AFTER PUMPING, AND FILL AND COMPACT THE HOLE WITH A SUITABLE MATERIAL. IF THIS OPTION IS CHOSEN, THE APPLICANT SHOULD CONTACT THE COUNTY LANDFILL AHEAD OF TIME TO SEE IF DISPOSAL OF THE TANK IS CURRENTLY ALLOWED.

DISTRIBUTION-BOXES (D-BOXES) AND LEACH LINES INSTALLATION

1. THE SEWER LINE BETWEEN THE HOUSE TO THE SEPTIC TANK AND SEPTIC TANK TO DISTRIBUTION BOX SHALL BE 4 INCHES DIAMETER ABS SCHEDULE 40 PIPE WITH A MINIMUM FALL OF 1/8" PER FOOT (1% SLOPE).

2. THERE SHALL BE ONE CONCRETE OR PLASTIC DISTRIBUTION BOX PER EACH LEACH LINE. THE DISTRIBUTION BOX SHALL NOT BE PLACED IN OVER-EXCAVATED SOILS.

3. DISTRIBUTION BOXES SHALL BE PLACED FOR SERIAL DISTRIBUTION OF WASTEWATER ON SLOPING GROUND.

4. DISTRIBUTION BOXES SHALL BE PLACED FOR EQUAL DISTRIBUTION OF WASTEWATER ON FLAT TERRAIN.

5. THE SEWER LINE BETWEEN THE D-BOX AND LEACH LINE IS A 4 LINEAL FEET, 4 INCHES DIAMETER ABS SCHEDULE 40 PIPE.

6. THE TRENCH BOTTOM AND TOTAL LENGTH OF LEACH LINE SHALL BE LEVEL AND INSTALLED WITH THE AID OF A TRANSIT. LEACH LINES MUST FOLLOW THE SURFACE CONTOURS WITH MINOR VARIATION IN TRENCH DEPTH OF 3 INCHES PER 100 LINEAL FEET.

7. COMPACTED TRENCH SIDES ARE TO BE SCARIFIED TO A DEPTH OF 1 INCH AND THE LOOSE MATERIAL REMOVED BEFORE PLACING THE DRAIN ROCK IN THE TRENCH. SYSTEM INSTALLATION SHALL NOT BE ATTEMPTED DURING WINTER MONTHS WHEN THE POTENTIAL FOR SIDEWALL COMPACTION AND SMEARING CAN OCCUR.

8. THE DRAIN ROCK USED IN THE LEACH LINES SHALL BE CLEAN, DOUBLE WASHED, 3/4" TO 2 1/2" IN SIZE, AND EITHER COARSE AGGREGATE, CRUSHED ROCK, OR WASHED RIVER GRAVEL FROM AN APPROVAL SOURCE.

9. THE PERFORATED PIPE (LEACH LINE) IS TO BE 4 INCHES (INSIDE DIAMETER) APPROVED PLASTIC OR OTHER APPROVED MATERIAL. PERFORATIONS SHALL BE 5/8" Ï IN SIZE AND THE PIPE PLACED PERFORATIONS DOWN IN THE TRENCH WITH THE PIPE LAID LEVEL WITH THE AID OF A TRANSIT.

10. 2 INCHES OF LEVELED DRAIN ROCK SHALL BE PLACED OVER THE TOP OF THE PERFORATED PIPE.

11. METAL DETECTION MARKINGS, A 2 FOOT X 1/2 INCH GALVANIZED PIPE OR REBAR, SHALL BE INSTALLED FLUSH AND VERTICAL AT EACH DISTRIBUTION BOX AND IN A VERTICAL POSITION AGAINST THE TRENCH WALL AT THE END OF THE LEACH LINE, AND ALSO IN THE MIDDLE OF LEACH LINE THAT IS LONGER THAN 50 FEET. THE PIPE OR REBAR SHALL NOT BE PLACED AT A DEPTH GREATER THAN 24 INCHES.

12. THE DISTRIBUTION BOX SHALL BE PLACED IN NATIVE SOILS AT THE APPROPRIATE DEPTH. A MINIMUM OF TWELVE (12) INCHES OF BACKFILL SHALL BE PLACED ABOVE THE DISTRIBUTION BOX OR EXTENDED TO GRADE WITH A RISER. THE DISTRIBUTION BOX SHALL NOT BE PLACED IN OVER-EXCAVATED SOILS.

13. CONSTRUCTION AND PAVING OVER LEACHING SYSTEM AND REPLACEMENT AREA IS PROHIBITED.

14. FILTER FABRIC (MIRAFI 140N), OR OTHER APPROVED MATERIAL MUST BE PLACED OVER THE DRAIN ROCK PRIOR TO BACKFILL TO PREVENT INFILTRATION OF SOIL.

15. LEACH LINES AND GRAVEL SHALL BE COVERED WITH SOIL AND MOUNTED FOR SETTLING.

16. THE LEACH FIELD SHALL BE SEEDED AND STRAWED FOR EROSION CONTROL.

17. CONSTRUCTION AND PAVING OVER LEACH FIELDS AND REPLACEMENT AREAS IS PROHIBITED.

18. HOMEOWNERS AND CONTRACTORS ARE PROHIBITED FROM PLACING UNACCEPTABLE PLANTS, SHRUBS TREES, ORNAMENTS, VEGETATIVE COVER, AND IRRIGATION SYSTEMS OVER THE SEPTIC SYSTEM.

SETBACK REQUIREMENTS FOR STANDARD DISPOSAL SYSTEM

HORIZONTAL MINIMUM DISTANCE FROM:	SEPTIC TANK	STANDARD SYSTEM
1. BUILDINGS OR STRUCTURES:		
UPGRADIENT	5 FEET	8 FEET
LATERALLY	5 FEET	8 FEET
DOWNGRADIENT	5 FEET	8 FEET
2. PROPERTY LINES AND/OR EASEMENT:		
UPGRADIENT	5 FEET	5 FEET
LATERALLY	5 FEET	5 FEET
DOWNGRADIENT	5 FEET	5 FEET
3. WATER SUPPLY WELLS AND SPRINGS	50 FEET (NOTE 1)	100 FEET
4. PUBLIC WATER SUPPLY WELLS:		
DISPERSAL DEPTH LESS THAN OR EQUAL TO 10 FT.	50 FEET (NOTE 1)	150 FEET
DISPERSAL DEPTH GREATER THAN TO 10 FT.	50 FEET (NOTE 1)	200 FEET
5. PUBLIC WATER SUPPLY SURFACE INTAKE:		
LESS THAN 1200 FEET TO OWTS	50 FEET (NOTE 1)	400 FEET
LESS THAN 2500 FEET TO OWTS	50 FEET (NOTE 1)	200 FEET
6. PERENNIALLY FLOWING STREAMS (AS MEASURED FROM EDGE OF WATERBODY'S NATURAL OR LEVIED BANK)	50 FEET	100 FEET
7. EPHEMERAL STEAMS/WATER BODIES (AS MEASURED FROM THE EDGE OF WATERCOURSE) AND	25 FEET	50 FEET
8. DRAINAGE WAYS GREATER THAN 18 INCHES IN DEPTH	25 FEET	50 FEET
9. DRAINAGE WAYS LESS THAN OR EQUAL TO 18 INCHES IN DEPTH	15 FEET	15 FEET
10. INTERCEPT DRAIN - PERFORATED:		
UPGRADIENT	15 FEET	15 FEET
LATERALLY	25 FEET	50 FEET
DOWNGRADIENT	25 FEET	50 FEET
11. NON-PERFORATED / SOLID DRAIN PIPES:		
UPGRADIENT	5 FEET	10 FEET
LATERALLY	10 FEET	15 FEET
DOWNGRADIENT	10 FEET	15 FEET
12. OCEAN, LAKE, POND, RESERVOIR (AS MEASURED FROM THE HIGH WATERLINE)	50 FEET	100 FEET
13. LARGE TREES	10 FEET	CONSIDERED ON A CASE BY CASE BASIS
14. DISPOSAL FIELD	5 FEET	------
15. DOMESTIC WATER PIPE*	5 FEET	5 FEET
16. PRESSURE PUBLIC WATER MAIN	5 FEET	10 FEET
17. DISTRIBUTION BOX	5 FEET	4 FEET
18. FILL AREAS	------	15 FEET
19. CUT BANKS (MANMADE EXCAVATION OF THE NATURAL TERRAIN GREATER THAN 3 FEET) NATURAL BLUFFS, SHARP CHANGE IN SLOPE		
SOIL OR GROUNDWATER DEPTH BELOW DISPOSAL AREA IS GREATER THAN OR EQUAL TO 5 FEET	25 FEET	25 FEET
SOIL OR GROUNDWATER DEPTH BELOW DISPERSAL AREA IS LESS THAN 5 FEET	25 FEET	50 FEET
20. TITLE 22 RECYCLED WATER DISPERSAL AREA	5 FEET	PER RWQCB REQUIREMENTS
21. SWIMMING POOLS (DOWNGRADIENT)	5 FEET	8 FEET

NOTE 1: SEPTIC TANK AND SUMP TANK SHALL BE WATERTIGHT.

NOTE * : BOTTOM OF WATER PIPE SHALL BE GREATER THAN OR EQUAL TO 12 INCHES ABOVE TOP OF SEWER/DRAIN LINE. WATER PIPE PLACED ON A SOLID SHELF EXCAVATED AT ONE SIDE OF THE COMMON TRENCH WITH A MINIMUM HORIZONTAL DISTANCE OF GREATER THAN OR EQUAL TO 12 INCHES (2007 CA PLUMBING CODE TABLE K-1)

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
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SHEET 3
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