

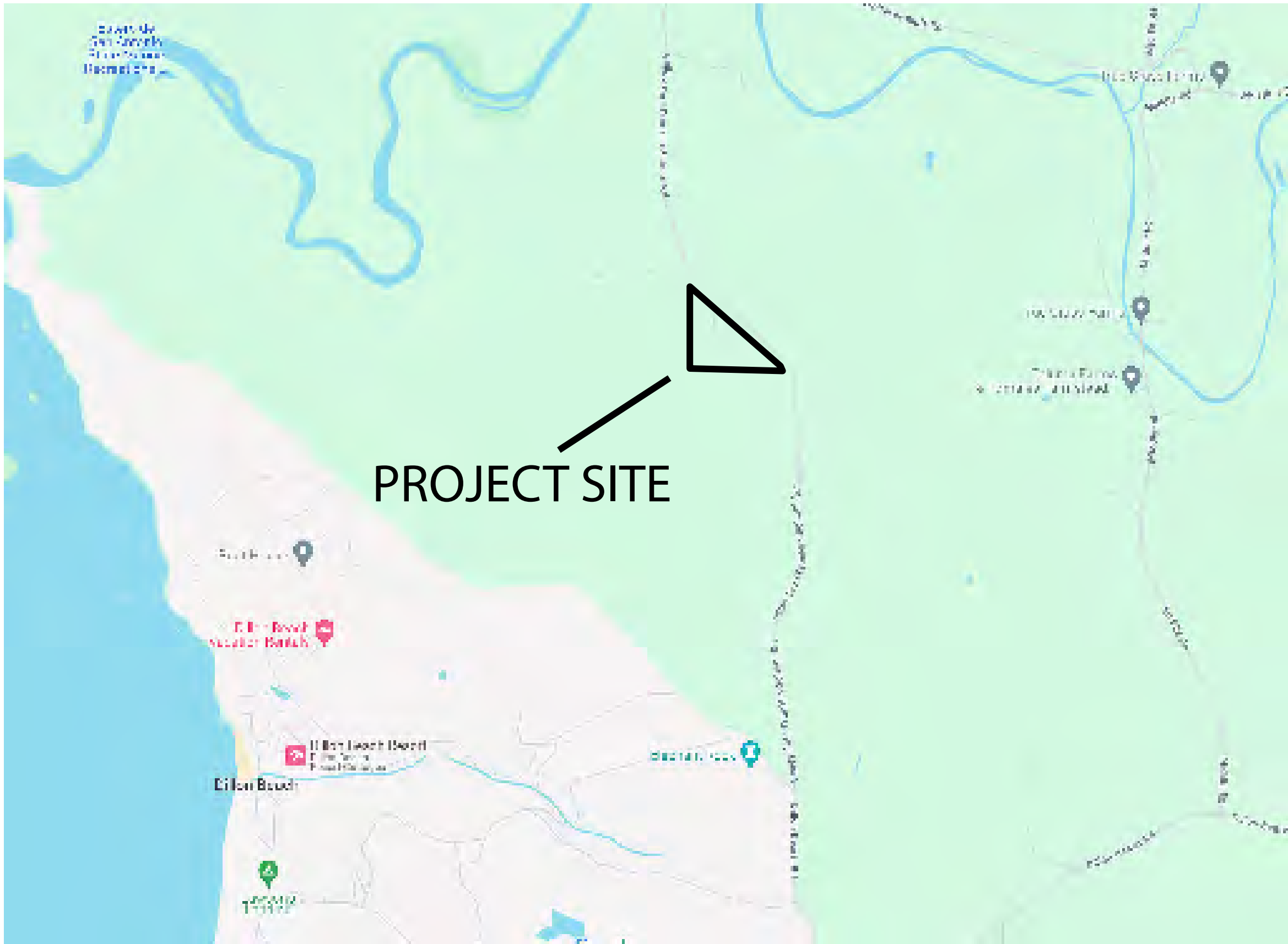
Farm LLC Coastal Permit

Worker Housing/Onsite Wastewater System

5500 Valley Ford Road, Tomales, CA 94971



VICINTY MAP



LOCATION MAP (NOT TO SCALE)

T1.	Title Sheet
S-1	Site Plan
C1.0	Overall Civil Site Plan
C2.0	Grading, Drainage, & Utility Plan
A0.1	Guest House As-Built's Title Sheet
A2.1	Guest House As-Built's Floor Plan
A3.1	Guest House As-Built's Elevations
W-1.	OWTS Cover Sheet
W-2.	OWTS Site Plan
W-3.	OWTS Details
W-4.	OWTS Tank Details

PROJECT DATA:

General Plan	C-AG1
Zoning	C-APZ-60

Lot Size	696,960 sq ft (16-acres)
----------	--------------------------

	Existing	Proposed
Lot Area:	696,960	No Change
Building Area:	7,074	No Change
Floor Area:	3,604	No Change
Main:	2,169	No Change
Second Unit:	1,435	1,435 (permitted)
Shed:	1,322	No Change
Barn:	2,830	No Change
Shed/Stable:	720	No Change

Existing Development Area:	7,074 sq ft
Proposed Development Area:	7,074 sq ft

Floor Area Ratio:	.005%	No Change
-------------------	-------	-----------

Lot Coverage:	24,944 SQ FT	N/A
---------------	--------------	-----

Impervious:	672,016 SQ FT	N/A
Pervious:	24,944 SQ FT	N/A

Grading (cu yds)		
Cut:	N/A	N/A
Fill:	N/A	N/A
Off-haul:	N/A	N/A

Parking:	3 (barn)	No Change
	1(FWH)	No Change

Setbacks		
North:	263'	>500' (drip field)
South:	539'	>75' (drip field)
West:	273'	126' (drip field)
East:	191.25'	>500' (drip field)

Max Height:	15'/25*	16' 9"
*accessory structures can be 25' if more than 40' from property boundaries		

Septic Tank Infrastructure

- 1,500 gallon septic tank
- 810 gallon pump tank
- 710 gallon holding tank

SCOPE OF WORK

AFTER THE FACT PERMITTING OF EXISTING
FARMWORKER HOUSING
ONSITE WASTEWATER TREATMENT STSYTEM
REPAIR OF EXISTING INFRASTRUCTURE

PROJECT ADDRESS:

5500 Valley Ford-Frank School Road
Tomales, CA 94971

APPLICANTS / PROPERTY OWNER:

FARM LLC
555 California St, Suite 4905
San Francisco, CA 94104

PROJECT TEAM:

Civil / OWTS Engineer

Steve Brown
Adobe Associates
1220 N. Dutton Ave.
Santa Rosa, CA 95401
P. (707) 541-2300
F. (707) 541-2301

Arch As-Built's

Jim Kavanuagh
n2k CAD Services
319 12th Street
Petaluma, CA 94952
707-778-6919
info@n2kCAD.com

Revision	Date
1/25/25	

--

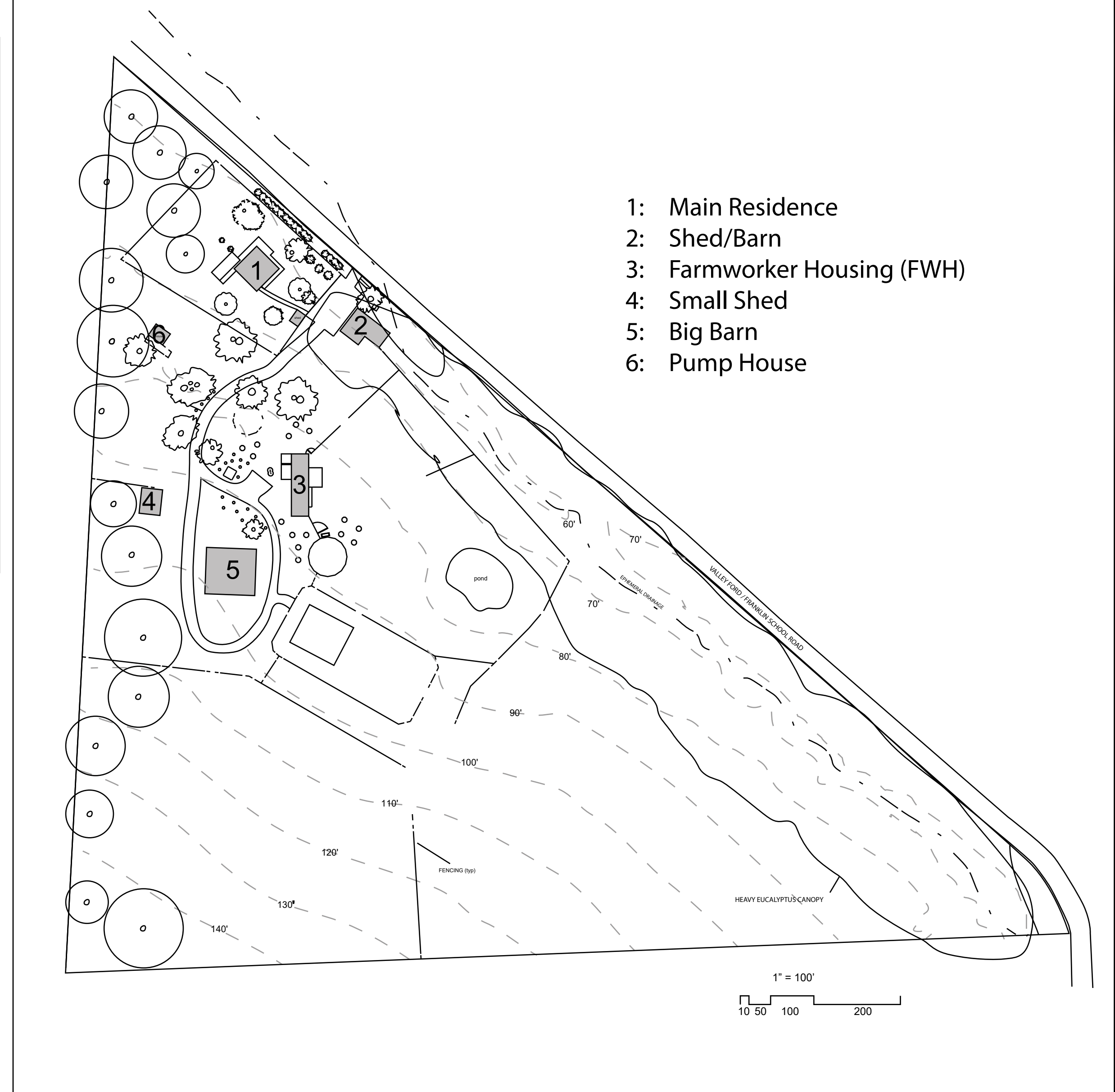
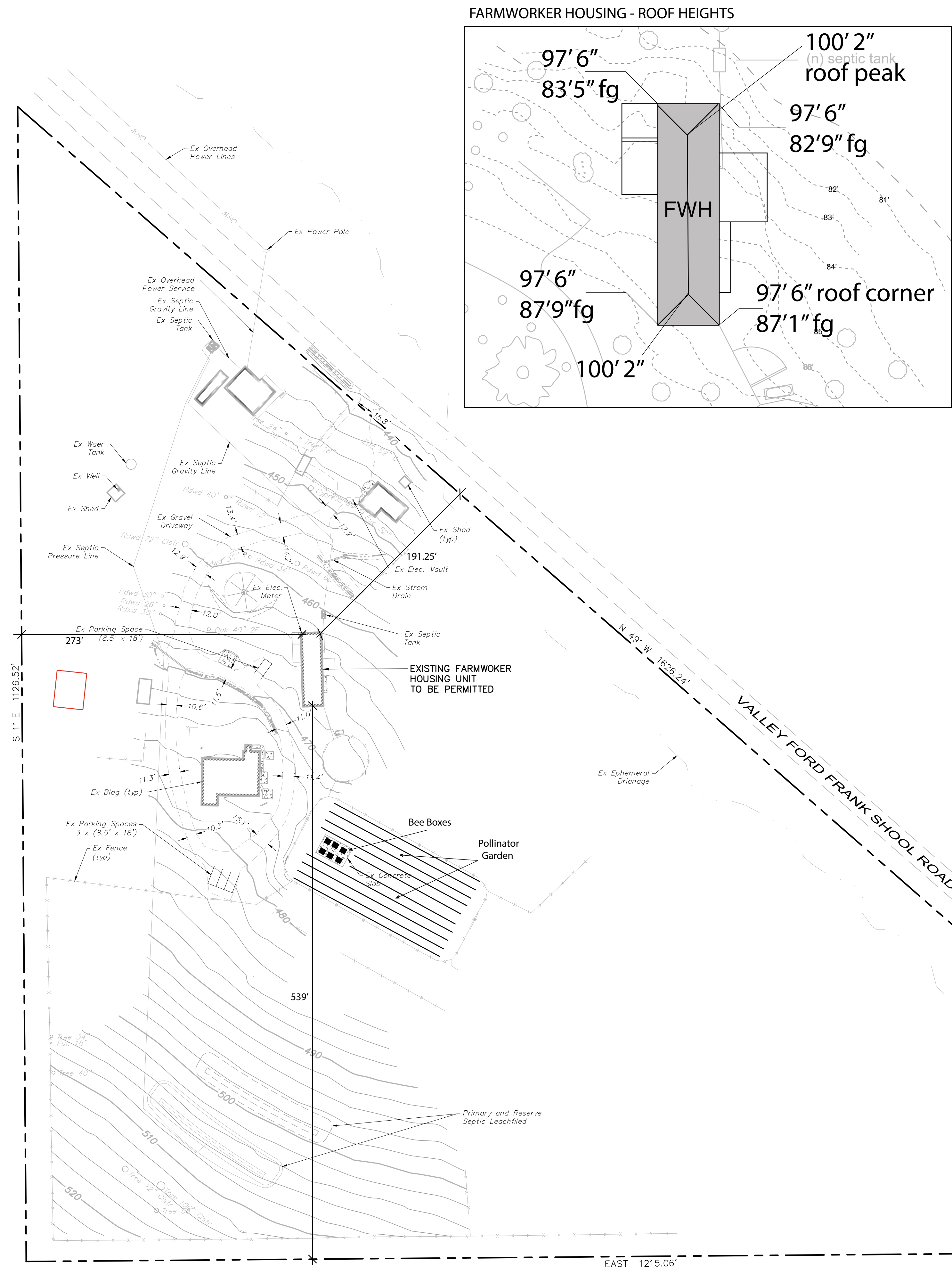
--

--

APN: 104-040-09

Drawings for: Willis Coastal Permit Onsite Wastewater System- Coastal Permit 25500 Shoreline Highway, Tomales, CA 94971
--

DRAWN
ISSUED As Built
DATE 08/28/2024
SCALE
SHEET T.1



Revision	Date
1/25/25	

--

--

--

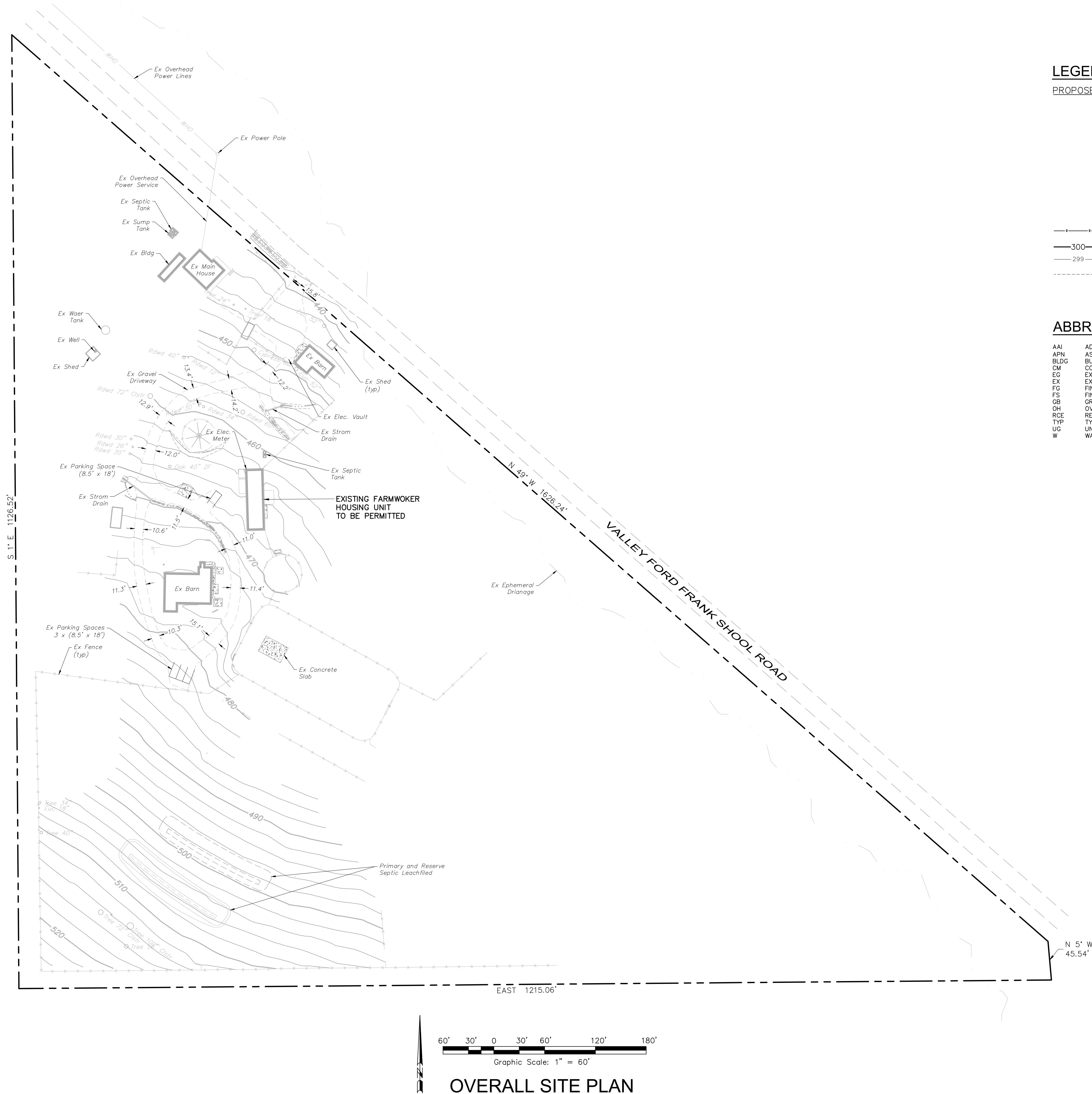
--

Drawings for:

DRAWN
ISSUED As Built
DATE
SCALE
SHEET

S1.0

T:\2021 PROJECTS\21272\dwg\Adobe-Design\Design\21272_C1.0_Overall Site Plan.dwg, Brendon Clymer, 1/30/2025 12:38:50 PM



IMPROVEMENT PLAN
FARM LLC
OVERALL SITE PLAN
5500 Valley Ford Frank School Road
Petaluma, California
APN 100-050-26

SCALE: AS SHOWN

Date: JANUARY 30, 2025
Design by: BC
Drawn by: BC
Checked by: TS

Sheet
C1.0
of 2 Sheets
Job 21272

Revisions

No.	Date	Description	Approved

adobe associates, inc.

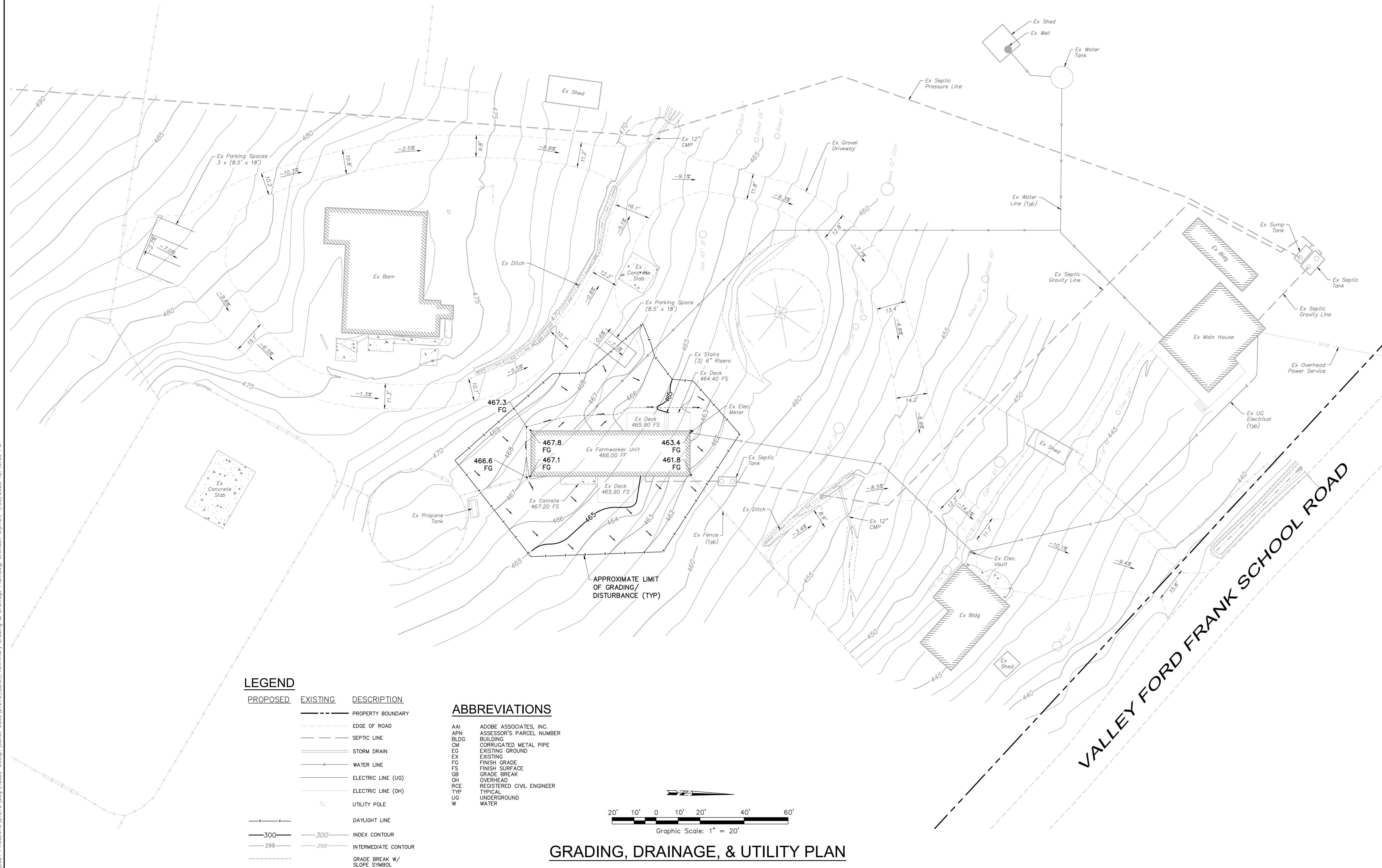
civil engineering | land surveying | wastewater

1220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com

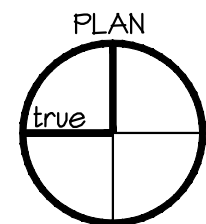
Timothy L. Schram, RCE 67890
My license expires 6/30/2025

REGISTERED PROFESSIONAL ENGINEER • CIVIL
TIMOTHY L. SCHRAM
No. 657890
Exp. 6/30/2025
CIVIL ENGINEER OF CALIF.

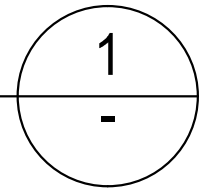
"A Service You Can Count On!"



SCALE: AS SHOWN Date: JANUARY 30, 2025 Design by: BC Drawn by: BC Checked by: TS		Sheet C2.0 of 2 Sheets Job 21272	
IMPROVEMENT PLAN FARM LLC GRADING, DRAINAGE, & UTILITY PLAN 5500 Valley Ford Frank School Road Petaluma, California APN 100-050-26			
		Timothy L. Schram, RCE 67890 My license expires 6/30/2025	



SITE PLAN
Scale: 1" = 40'-0"



SHEET INDEX RESIDENCE:

- Architectural
- A0.1 Sheet Index, Project Data, Vicinity Map, Site Plan
 - A2.1 Existing Floor Plans
 - A3.1 Existing Elevations

PROJECT ADDRESS:

5500 Valley Ford Franklin School Road
Petaluma, CA

APPLICANTS / PROPERTY OWNER:

Kate & Samuel Gibbs
5500 Valley Ford Franklin School Road
Petaluma, CA

SCOPE OF WORK:

AS BUILT DRAWINGS FOR EXISTING BUILDING

APPLICABLE BUILDING CODES:

- 2022 CALIFORNIA BUILDING ADMINISTRATIVE CODE
- 2022 CALIFORNIA BUILDING CODE (CBC)
- 2022 CALIFORNIA RESIDENTIAL BUILDING CODE
- 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC)
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
- 2022 CALIFORNIA MECHANICAL CODE (CMC)
- 2022 CALIFORNIA PLUMBING CODE (CPC)
- 2022 CALIFORNIA ELECTRICAL CODE (CEC)
- 2022 CALIFORNIA ENERGY CODE (CEC)
- 2022 CALIFORNIA GREEN CODE
- 2022 MARIN COUNTY CODE

- APN: 100-050-26
- OCCUPANCY: R3 Residential
- STORIES: 1 Story
- CONSTRUCTION: VB
- ZONE NAME: Coastal Agricultural Production Zone
- ZONE TYPE: Agricultural
- ZONE CODE: C-APZ-60

AREAS:

- MAIN HOUSE: 2,169 sf
- GUEST HOUSE: 1,435 sf
- LOT: 16 Acres



Rear view



West side view



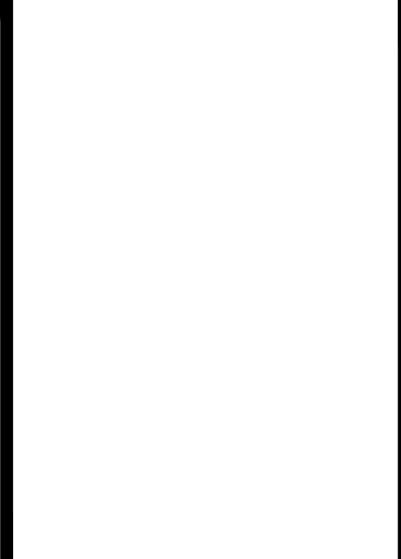
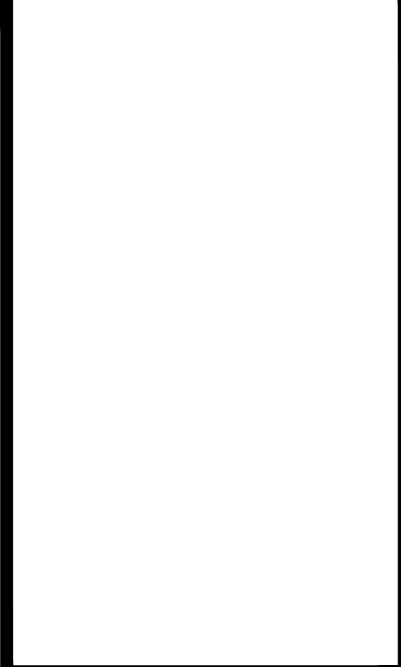
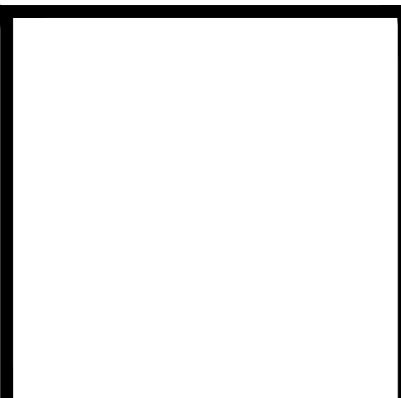
West/Rear view



East side view

EXISTING FARMWORKER HOUSING - PHOTOS

Revision	Date
1/25/25	



Architectural Drafting:
n2k CAD Services
319 12th Street
Petaluma, CA 94452
707.718.6419
info@n2kCAD.com

Drawings for:

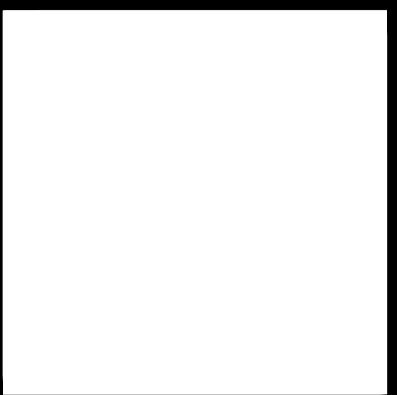
Kate & Samuel
Gibbs

5500 Valley Ford Rd.
Petaluma, CA

DRAWN n2k
ISSUED As Built Drawings
DATE December 21, 2023
SCALE AS NOTED
0 1/4" 1/2" 1"
SHEET

A0.1

Revision	Date
1/25/25	



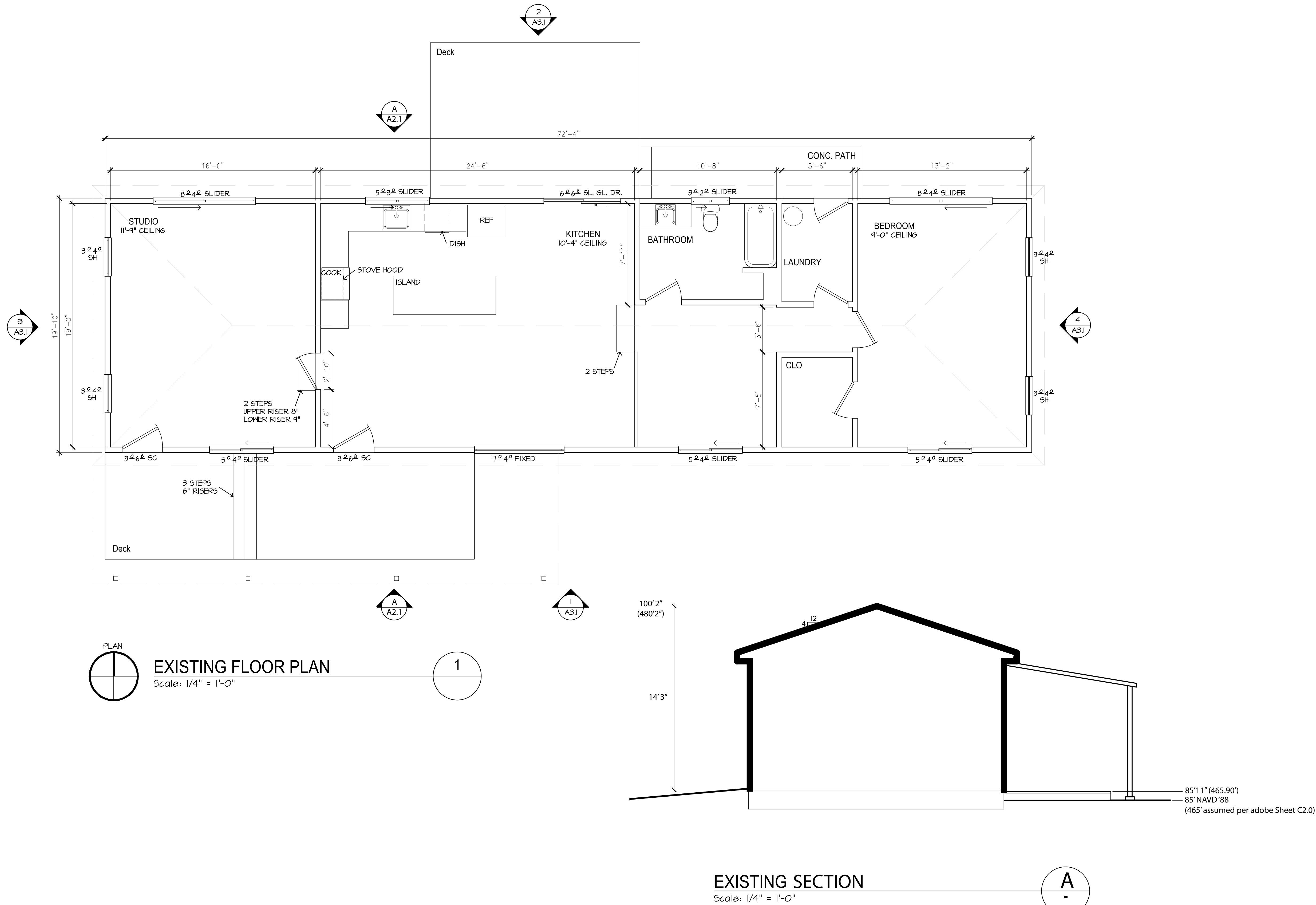
Architectural Drafting:
n2k CAD Services
314 12th Street
Petaluma, CA 94452
707.118.6414
info@n2kCAD.com

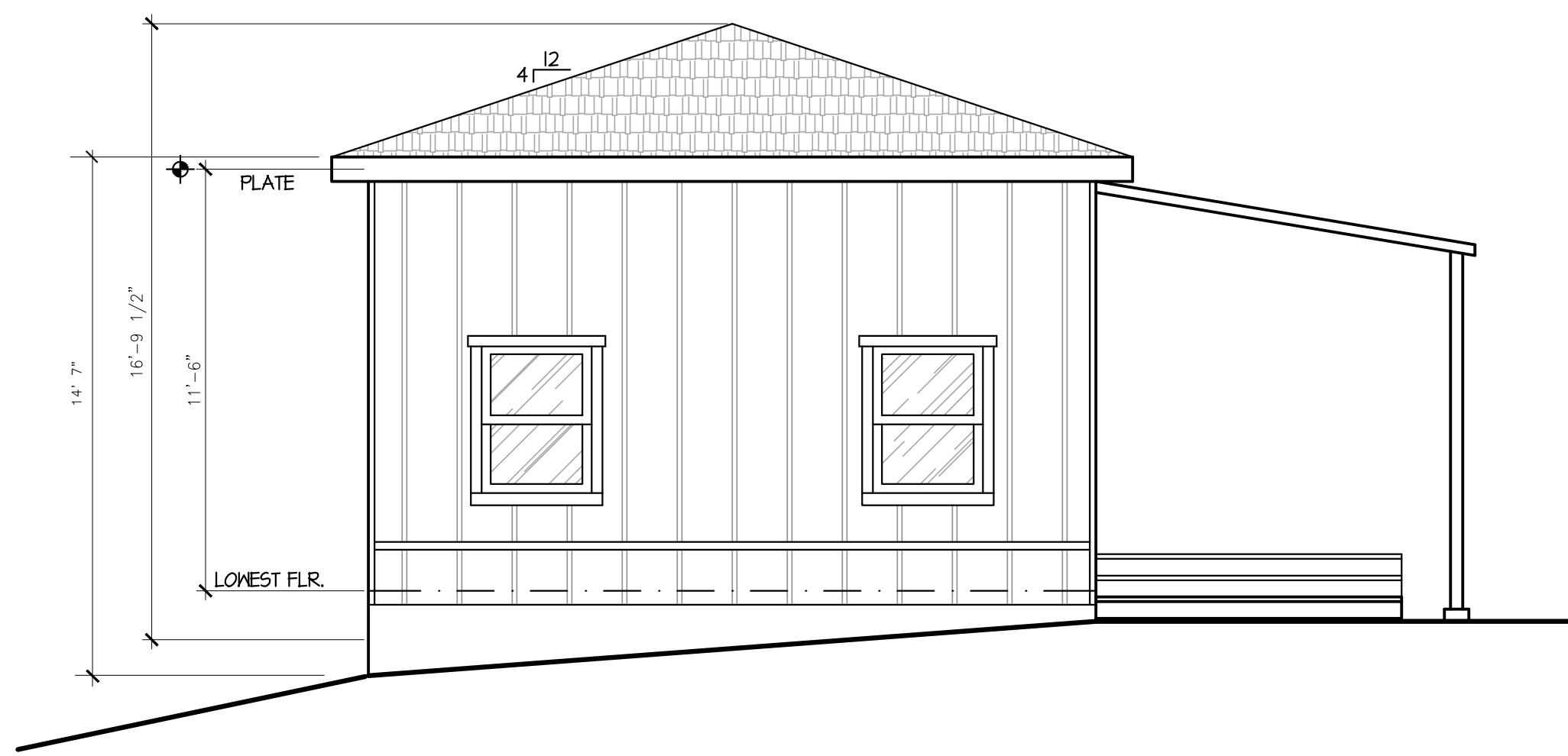
Drawings for:
Kate & Samuel Gibbs

5500 Valley Ford Rd.
Petaluma, CA

DRAWN n2k
ISSUED As Built Drawings
DATE December 21, 2023
SCALE AS NOTED
0" 1/4" 1/2" 1"
SHEET

A2.1

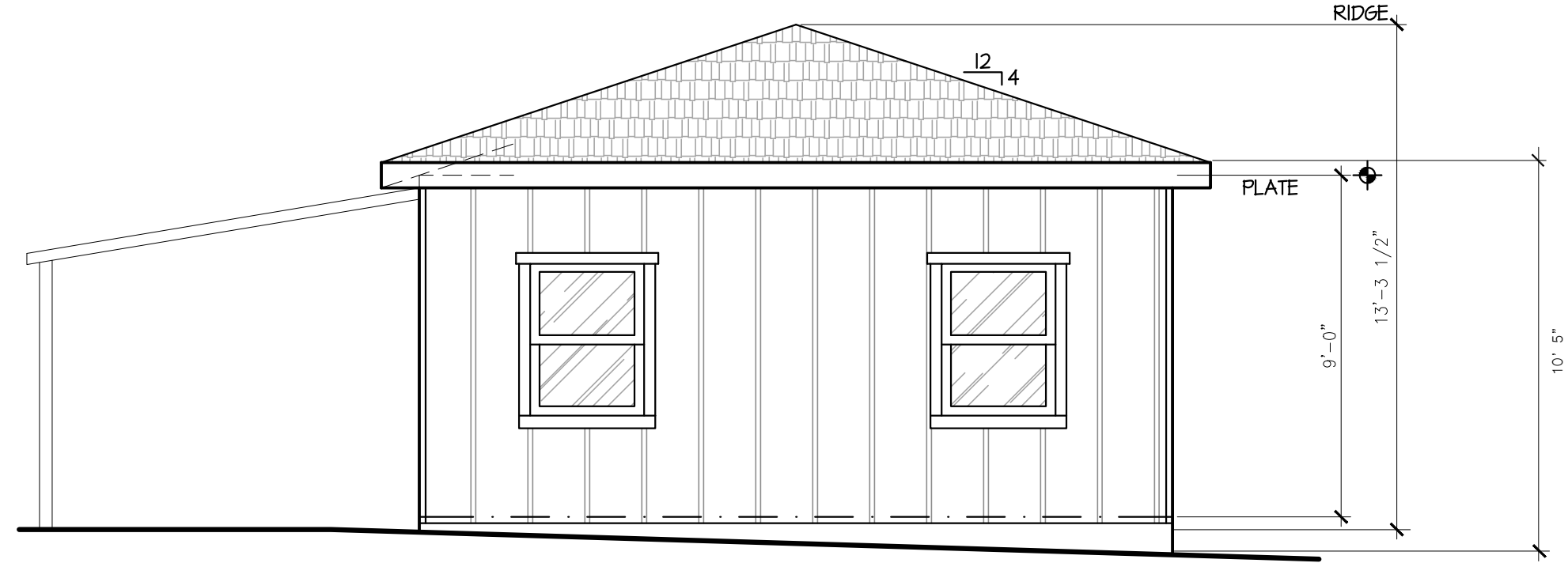




EXISTING SIDE ELEVATION

Scale: 1/4" = 1'-0"

3
-



EXISTING SIDE ELEVATION

Scale: 1/4" = 1'-0"

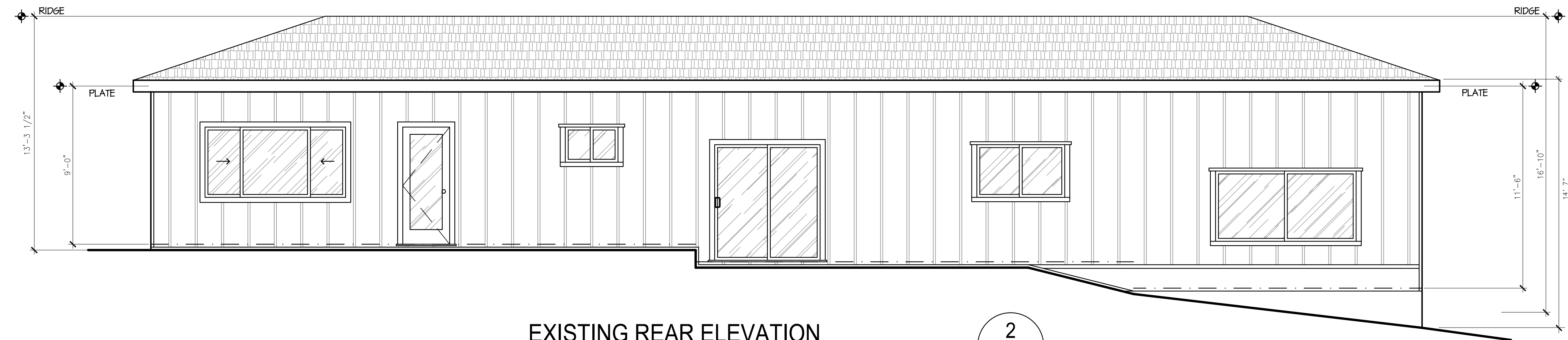
4
-



EXISTING FRONT ELEVATION

Scale: 1/4" = 1'-0"

1
-

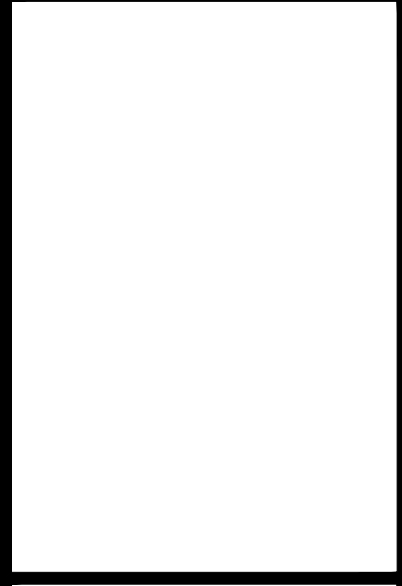
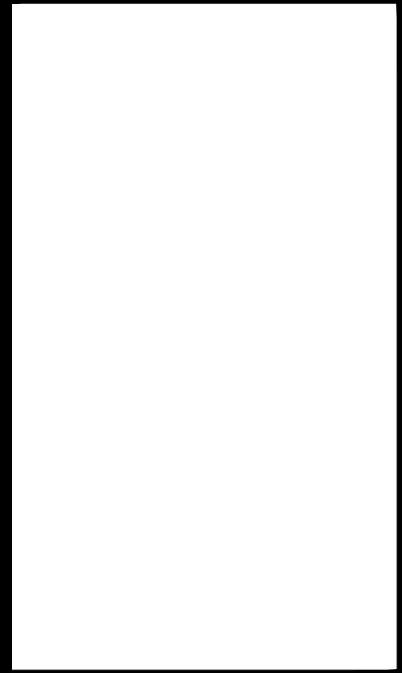
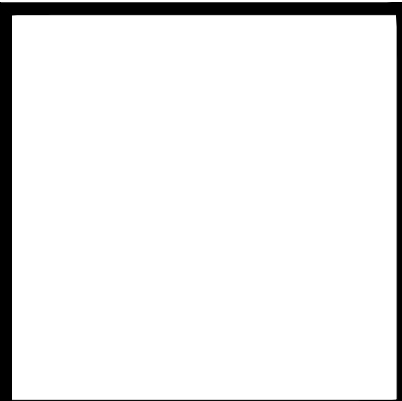


EXISTING REAR ELEVATION

Scale: 1/4" = 1'-0"

2
-

Revision	Date



Architectural Drafting:
n2k CAD Services
314 12th Street
Petaluma, CA 94452
707.718.6414
info@n2kCAD.com

Drawings for:
**Kate & Samuel
Gibbs**

5500 Valley Ford Rd.
Petaluma, CA

DRAWN n2k
ISSUED As Built Drawings
DATE December 21, 2023
SCALE AS NOTED
0 1/4" 1/2" 1" SHEET

A3.1

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES (E.H.S.), ALL MECHANICAL, PLUMBING, AND ELECTRICAL WORK SHALL CONFORM TO THE APPROPRIATE CODES ADOPTED BY THE COUNTY OF MARIN.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING AND AVOIDING UTILITY LINES IN THE WORK AREA.
3. THE INSTALLATION OF THIS SEWAGE DISPOSAL SYSTEM MAY BE RESTRICTED TO CERTAIN TIMES OF THE YEAR BASED ON SEASONAL GROUND WATER AND WEATHER CONDITIONS. CONTRACTOR TO VERIFY STARTING TIME WITH THE ENVIRONMENTAL HEALTH SERVICES (E.H.S.)
4. THE CONTRACTOR SHALL GIVE THE ENGINEER (1-707-541-2300) 48 HOURS NOTICE OF COMMENCEMENT OF CONSTRUCTION AND PRIOR TO REQUIRED INSPECTIONS. THE CONTRACTOR SHALL GIVE 48 HOURS MINIMUM NOTICE TO THE MARIN COUNTY E.H.S. PRIOR TO COMMENCEMENT OF WORK (1-415-499-6907).
5. DISTRIBUTION BED AND LATERALS SHALL BE LAID LEVEL AND PARALLEL WITH THE NATURAL GROUND CONTOURS SHOWN ON THE PLANS.
6. QUESTIONS REGARDING THE SUITABILITY OF ANY MATERIALS OR CONSTRUCTION PROCEDURES USED IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS SHALL BE DIRECTED TO THE DESIGNING ENGINEER PRIOR TO INSTALLATION OR USE.
7. MEDIUM SAND FILL: TOTAL SIEVE ANALYSIS CONTAINS 20% OR LESS MATERIAL LARGER THAN 2.0 MM AND CONTAINS 5% OR LESS MATERIAL FINER THAN 0.053MM PLUS ONE OF THE THREE ADDITIONAL SPECIFICATIONS LISTED IN THE SAND SPECIFICATIONS CHART INCLUDED WITH THE MOUND CONSTRUCTION NOTICES ATTACHED.
8. SEAL INTERIOR OF TANK AND SUMP WITH THOROSEAL OR EQUAL. SEAL ALL EXTERIOR JOINTS WITH MASTIC. SEAL PRECAST CONCRETE JOINTS WITH RAMNEX OR EQUAL. SEAL PIPES EXTERIOR THROUGH TANK WALLS WITH NON-SHRINK GROUT OR PRECAST CONCRETE. TANK/SEWER CONNECTION SHALL BE SEALED AND MADE WATER TIGHT WITH NON-SHRINK GROUT OVERLAID WITH XYPEX OR THOROSEAL.
9. THIS SEWAGE DISPOSAL SYSTEM HAS BEEN DESIGNED TO ACCOMMODATE A PEAK DAILY FLOW OF 120 GALLONS PER BEDROOM, AND A LONG TERM AVERAGE DAILY FLOW OF 60 GALLONS PER BEDROOM. WATER CONSERVATION MEASURES MAY BE NECESSARY TO MAINTAIN THESE WATER USAGE LIMITS. LOW FLOW TOILETS (1.6 GALLONS MAXIMUM PER FLUSH) ARE REQUIRED.
10. MINIMUM CLEARANCE FROM ANY EXISTING OR PROPOSED STRUCTURE TO ANY SEPTIC TANK SHALL BE 8' UNLESS GREATER CLEARANCE IS REQUIRED BY OTHERS.
11. MINIMUM CLEARANCE FROM ANY ROADWAY OR PARKING AREA TO ANY SEPTIC TANK SHALL BE 8' UNLESS GREATER CLEARANCE IS REQUIRED BY OTHERS.

**USE OF WHEEL TYPE VEHICLES IN ANY PHASE OF MOUND
CONSTRUCTION IS PROHIBITED**

1. ADOBE ASSOCIATES, INC. WILL STAKE OUT THE MOUND IN THE CONTRACTOR'S PRESENCE, VERIFYING MOUND DETAILS, NATURAL CONTOURS AND MOUND LOCATION.
2. MEASURE THE AVERAGE MOUND ELEVATION ALONG THE UPSLOPE EDGE OF BED. THIS IS NECESSARY TO DETERMINE THE BOTTOM ELEVATION OF THE BED.
3. DETERMINE WHERE THE PIPE FROM THE PUMPING CHAMBER CONNECTS TO THE DISTRIBUTION SYSTEM IN THE MOUND.
4. TRENCH AND LAY THE EFFLUENT PRESSURE LINE WITH 24" MINIMUM COVER FROM THE PUMP SUMP TO THE MOUND. CUT AND CAP THE PIPE ONE-FOOT BENEATH THE EXISTING SURFACE. AFTER THE TRENCH IS MADE, THE SOIL SHALL BE BACKFILLED BACK SEEPAGE OF EFFLUENT ALONG PRESSURE PIPE. THIS STEP MUST BE DONE BEFORE PLOWING TO AVOID COMPACTION AND DISTURBANCE OF THE SURFACE.
5. CHECK THE MOISTURE CONTENT OF THE SOIL AT 7"-8" DEEP. IF IT IS TOO WET, SMEARING AND COMPACTION WILL RESULT, THUS REDUCING THE INFILTRATION CAPACITY OF THE SOIL. SOIL MOISTURE CAN BE DETERMINED BY ROLLING A SOIL SAMPLE THROUGH THE HANDS. IF IT IS TOO WET, THE SITE IS TOO WET TO PREPARE. IF IT CRUMBLES, SOIL PREPARATION CAN PROCEED.
6. REMOVE SMALL DIAMETER TREES, BRUSH AND VEGETATION BY CUTTING AT THE LOWEST POSSIBLE ELEVATION. NATIVE GRASSES, ETC. SHALL BE MOWED AND THE CLIPPINGS ONLY SHALL BE REMOVED. DO NOT REMOVE THE TOP TWO INCHES OF NATIVE SOIL.
7. RIP OR PLOW THE SOIL TO A DEPTH OF 12" WITH THE RIPPERS SET 8"-10" APART. INITIAL RIPPING SHALL BE LIMITED TO THE AREA OF THE SAND BASE AND SHALL BE PARALLEL TO NATURAL CONTOURS. THE INTERFACE OF THE NATIVE SOIL WITH THE MOUND TOPSOIL COVER SHALL BE REMOVED. THERE SHALL HAVE BEEN PLACED AND JUST PRIOR TO PLACEMENT OF THE MOUND TOPSOIL COVER. IMMEDIATE CONSTRUCTION AFTER PLOWING IS DESIRABLE. NO TRAFFIC IS PERMITTED ON ANY PLOWED SURFACE UNTIL THE FULL DEPTH OF FILL OR COVER MATERIAL HAS BEEN PLACED.
8. EXTEND THE EFFLUENT PIPE TO SEVERAL FEET ABOVE GROUND SURFACE.
9. PLACE THE SAND FILL MATERIAL (SEE MOUND SYSTEM GENERAL NOTES #7) AROUND THE SIDE AND UPSLOPE SIDE OF THE PLOWED AREA, KEEPING WHEELS OF THE TRUCK OFF PLOWED AREAS.
10. THE SAND SHALL BE PLACED IN THE PLOWED OR RIPPED AREA USING A SMALL TRACK TYPE TRACTOR WITH A BLADE. FOLLOW CONTOURS AND WORK FROM THE UPSLOPE SIDE OF THE MOUND. TO AVOID COMPACTION OF THE SOIL, TRUCK OVER 6" MINIMUM OF SAND.
11. THE CONTRACTOR SHALL UNIFORMLY PLACE AND COMPRESS THE SAND FILL BY TRACK ROLLING TO A NEAT LINE AND TO SHAPE AS SPECIFIED IN THE PLANS. ADDITIONAL SAND WILL HAVE TO BE ADDED AS THE SAND FILL IS COMPRESSED.
12. FORM THE GRAVEL BED WITH THE TRACTOR BLADE. THE BED SHALL BE CONFORMED LEVEL AND FOLLOW NATURAL CONTOURS OF THE SITE. TEMPORARY FORM BOARDS ARE REQUIRED FOR PLACEMENT OF THE DISTRIBUTION BED GRAVEL. THE FORM BOARDS SHALL BE FULLY LAPPED BY THE SAND BED AND SHALL BE REMOVED PRIOR TO PLACEMENT OF COVER. PLACE THE COARSE AGGREGATE ROCK IN THE BED WITH A TRACK TYPE CRAWLER LOADER. THE GRAVEL SHALL BE 3/8" TO 2" DOUBLE RUN, DOUBLE WASHED NON-DETERIORATING AGGREGATE ROCK. LEVEL AGGREGATE ROCK TO THE DESIGN DEPTH.
13. PLACE THE DISTRIBUTION SYSTEM ON THE GRAVEL BED WITHOUT GLUING JOINTS, WITH THE SPECIFIC HOLES OF THE DISTRIBUTION LINES FACING UPWARD. CONNECT THE MANIFOLD TO THE PRESSURE PIPE FROM THE PUMP SUMP. SLOPE MANIFOLD TO THE EFFLUENT PIPE. LAY LATERALS LEVEL, REMOVING ALL RISERS AND DIPPS.
14. CALL THE MARIN COUNTY ENVIRONMENTAL HEALTH DEPARTMENT, WELL & SEPTIC DIVISION AT (714)-415-4991-6907 AND ADOBE ASSOCIATES, INC. AT (707)-541-2300. MINIMUM OF 48 HOURS PRIOR TO HYDRAULIC TESTING, WHEN PUMPING CLEAR WATER THROUGH THE DISTRIBUTION LATERALS, THE JETS OF WATER SHOULD ADJUSTED TO BE THE SAME H₂O (60" MINIMUM). AFTER P.R.M.D APPROVAL, GUE ON PURGE VALVES. PLACE 2" OF AGGREGATE ROCK OVER THE DISTRIBUTION LATERALS.
15. PLACE NON-BIODEGRADABLE GEOTEXTILE SYNTHETIC FABRIC (NOT BUILDING PAPER, BURLAP, HAY, OR STRAW) OVER AGGREGATE ROCK, OVERLAPPING SECTIONS 9" MINIMUM.
16. THE CONTRACTOR SHALL PLOW OR RIP THE EXISTING GROUND AREA AROUND THE MOUND PERIMETER WITH A TRACK TYPE VEHICLE, FOLLOWING NATURAL CONTOURS, JUST PRIOR TO PLACING TOPSOIL COVER.
17. PLACE THE SOIL COVER WITH TRACK TYPE EQUIPMENT TO CONFORM TO PLANS. SEE SECTION A-A AND B-B, SHEET 3. SOIL CAP SHALL BE USDA ZONE 2 TOPSOIL. SOIL COVER MATERIAL SHALL BE PROPERLY MOISTURE CONDITIONED TO PERMIT TRACK ROLLING TO A FIRM SURFACE.
18. THE FINISHED GRADE OF THE MOUND SHALL BE ESTABLISHED BY TRACK ROLLING AND CHECKED BY HYDRAULIC PROPER DRAINAGE WORK AND EROSION CONTROL MEASURES SHALL BE COMPLETED BEFORE FINAL INSPECTION CAN BE MADE. DRAINAGE WORK INCLUDES ELIMINATION OF POSSIBLE POUNDING OF WATER ON AND AROUND THE MOUND SYSTEM.
19. THE MONITORING WELLS SHALL BE INSTALLED AS SHOWN ON THE PLANS AND DETAILS.
20. LANDSCAPING THE MOUND BY PLANTING GRASS, USING THE BEST VEGETATION ADAPTABLE TO THE AREA. A MIXTURE OF 90% BIRDSPUR TREEOFOL, 10% TIMOTHY MAY BE USED AS THE VEGETATIVE COVER. A COMBINATION OF 60% BLUEGRASS, 30% CREEPING RUSSIAN RYEGRASS AND 10% PERENNIAL RYEGRASS MAY BE DESIRED. SHRUBS CAN BE PLANTED AROUND THE BASE AND UP SIDESLOPES. THEY SHOULD BE MOISTURE TOLERANT, SINCE THE TOE OF THE MOUND MAY BE MOIST DURING VARIOUS TIMES OF THE YEAR. PROTECT THE MOUND BY COVERING WITH STRAW PRIOR TO THE RAINY SEASON.
21. MOUND MAINTENANCE INVOLVES PUMPING THE SEPTIC TANK EVERY 3 TO 5 YEARS TO AVOID CARRY-OVER OF SOLIDS INTO THE MOUND. A GOOD WATER CONSERVATION PROGRAM TO MINIMIZE THE WATER DEMAND OF THE MOUND. THE MOUND SHALL BE PLOWED PERIODICALLY. AVOID EXCESS TRAFFIC IN MOUND AREA, ESPECIALLY WHEN WET. COMPACTION OF THE SOIL NEAR AND AROUND THE MOUND MUST BE MINIMIZED. ANIMAL CONFINEMENT OR GRAZING SHOULD NOT BE PERMITTED IN THE MOUND AREA.

1. THE DESIGNING ENGINEER SHALL INSPECT THE SITE AND WEATHER CONDITIONS PRIOR TO CONSTRUCTION OF THE SYSTEM. HE/SHE MUST VERIFY DRY AND ACCEPTABLE SOIL AND WEATHER CONDITIONS PRIOR TO CONSTRUCTION AND DECIDE IF CONDITIONS ARE SUITABLE TO BEGIN CONSTRUCTION.
2. THE DESIGNING ENGINEER SHALL VERIFY (WITH THE CONTRACTOR) THE PROPER STAKING OF THE SYSTEM PRIOR TO ANY CONSTRUCTION. THE SYSTEM DETAILS, CONFIGURATION, LOCATION, CONTOUR, PERCOLATION AREA, EXPANSION AREA, ETC. SHALL BE VERIFIED.
3. THE DESIGNING ENGINEER OR CONTRACTOR SHALL NOTIFY THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES A MINIMUM OF 48 HOURS IN ADVANCE WHEN CONSTRUCTION IS TO TAKE PLACE. HE/CHE MUST CERTIFY THAT THE SOIL CONDITIONS ARE ACCEPTABLE FOR CONSTRUCTION PURPOSES AND THAT THE STAKING OF THE SYSTEM HAS BEEN ACCOMPLISHED AND CERTIFIED.
4. AT THE PRE-CONSTRUCTION CONFERENCE, THE FOLLOWING ITEMS SHALL BE REVIEWED. CONSTRUCTION MAY PROCEED IF THE DESIGNING ENGINEER NOTIFIES THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES HEALTH OFFICER VERBALLY THAT ALL ELEMENTS APPEAR TO CONFORM TO THE FOLLOWING REQUIREMENTS:
 - A) SOIL MOISTURE AT THE APPROPRIATE DEPTHS ARE NOT SO HIGH AS TO HAVE THE SOIL SMEAR OR COMPACT DUE TO CONSTRUCTION ACTIVITIES.
 - B) IMMINENT WEATHER CONDITIONS APPPEAR THAT THEY WILL NOT CREATE UNSUITABLE SOIL MOISTURE CONDITIONS DURING THE CONSTRUCTION.
 - C) THE SOURCE OF THE SOIL COVER MATERIAL SHALL BE DESIGNATED, AND A SAMPLE SHALL BE MADE AVAILABLE AND APPROVED BY THE DESIGN CONSULTANT PRIOR TO PLACEMENT.
5. AT THE INTERIM INSPECTION, THE FOLLOWING ELEMENTS, (WHEN REQUIRED), SHALL BE VERIFIED:
 - A) INSPECT FILL SOIL FOR QUALITY AND PROPER PLACEMENT.
 - B) LAYOUT AND STAKING OF THE PRIMARY LEACH FIELD AREA AND THE RESERVE BOUNDARY(ES) SUBSTANTIALLY CONFORM TO THE APPROVED CONSTRUCTION DOCUMENTS .
7. AT THE INTERIM INSPECTION, THE FOLLOWING ELEMENTS, (WHEN REQUIRED), SHALL BE VERIFIED BY THE DESIGNING ENGINEER AND ENVIRONMENTAL HEALTH SERVICE HEALTH OFFICER BY VISUAL INSPECTION AND OPERATION OF THE SYSTEM. WHEN ALL REQUIRED ITEMS ARE COMPLETELY AND APPROVED, THE DISPOSAL FIELD, AND TANKS MAY BE COVERED OR BACKFILLED:
 - A) LINE AND GRADE OF ALL EXCAVATIONS AND FILLS AS APPLICABLE.
 - B) FUNCTION AND SETTING OF THE CONTROL DEVICES, INCLUDING BUT NOT LIMITED TO VALVES, SWITCHES AND ALARMS.
 - C) HYDRAULIC TESTING OF ANY PUMP AND DISTRIBUTION SYSTEM TO ASSURE THAT THE PUMP IS ADEQUATE FOR DESIGN FLOW.
8. THE REMAINING ELEMENTS REQUIRED TO COMPLETE THE SYSTEM SHALL BE ON SITE AT THE TIME FOR VERIFICATION AND APPROVAL BY THE DESIGNER FOR CONFORMANCE WITH THE PLANS AND SPECIFICATIONS.
8. AT THE FINAL INSPECTION, THE DESIGNING ENGINEER SHALL VERIFY THAT ALL CONSTRUCTION IS IN GENERAL CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. THE SEPTIC TANK SHALL BE IAPMO APPROVED. THE SEPTIC TANK AND PUMP SUMP MAY BE SUBJECTED TO A WATER TIGHTNESS TEST BY MARIN COUNTY E.H.S. THE WATER TEST SHALL BE PERFORMED BY THE CONTRACTOR AND CONSISTS OF FILLING THE TANKS "2" INTO THE RISERS WITH CLEAR WATER. THE TANKS MAY BE TESTED SEPARATELY AND SHALL BE CONSIDERED ADEQUATELY WATER TIGHT IF THERE IS NO MEASURABLE DROP IN WATER LEVEL IN 1/2 HOUR.
9. A FINAL LETTER FROM THE DESIGNING ENGINEER TO THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES SHALL STATE THAT ALL CONSTRUCTION HAS BEEN COMPLETED, APPROVED, AND IS IN CONFORMANCE WITH ALL SPECIFICATIONS.
10. **NOTE:**
THE E.H.S HEALTH OFFICER WILL PERFORM A FINAL INSPECTION OF THE SYSTEM FOLLOWING RECEIPT OF THE DESIGNING ENGINEER'S APPROVAL LETTER. THE E.H.S WILL NOT SIGN OFF THE PERMIT OR JOB CARD UNTIL THE HOUSE OR STRUCTURE IS READY FOR OCCUPANCY. AT THAT TIME THE OPERATIONAL PERMIT WILL BE ISSUED AND THE ANNIVERSARY DATE ESTABLISHED.

- SEAL INTERIOR OF SEPTIC TANK WITH THOROSEAL OR EQUAL. SEAL ALL JOINTS WITH MASTIC. SEAL PRECAST CONCRETE JOINTS WITH RAMNEK OR EQUAL.
- PENETRATIONS IN THE SEPTIC TANK OR RISER MUST BE SEALED WITH GAS-TIGHT COMPRESSION CONNECTORS OR WATERPROOF SEALANT OR PRECAST INTO SEPTIC TANK.
- TANK AND RISER JOINT MUST BE SEALED AND MADE WATER TIGHT WITH NON-SHRINK GROUT OVERLAID WITH XYPEX OR THOROSEAL.
- THE SEPTIC TANK SHALL BE IAPMO APPROVED. WATER TIGHTNESS TEST MAY BE REQUIRED BY MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES. THE WATER TIGHTNESS TEST CONSISTS OF FILLING THE TANK TO 2 INCHES INTO THE RISERS WITH CLEAR WATER.
- THE TANK SHALL BE CONSIDERED ADEQUATELY WATER TIGHT IF THERE IS NO MEASUREABLE DROP OF WATER IN THE TANK IN 1/2 HOUR.

ELEVATION VIEW

ROCK RIP RAP ENERGY DISSIPATER

1. SEAL INTERIOR OF PUMP SUMP WITH THOROSEAL OR EQUAL. SEAL ALL JOINTS WITH MASTIC. SEAL PRECAST CONCRETE JOINTS WITH RAMMEK OR EQUAL.
2. PENETRATIONS IN THE PUMP SUMP OR RISER MUST BE SEALED WITH GAS-TIGHT COMPRESSION CONNECTORS OR WATERPROOF SEALANT OR PRECAST INTO PUMP SUMP.
3. TANK AND RISER JOINT SHALL BE SEALED AND MADE WATER TIGHT WITH NON-SHRINK GROUT OVERLAD WITH XYPEX OR THOROSEAL.
4. THE PUMP SUMP SHALL BE IPAMO LISTED. WATER TIGHTNESS TEST MAY BE REQUIRED BY MARIN COUNTY ENVIRONMENT HEALTH SERVICES. THE WATER TIGHTNESS TEST CONSISTS OF FILLING THE TANK FULL TO 2 INCHES INTO THE RISERS WITH CLEAR WATER.
5. THE TANK SHALL BE CONSIDERED ADEQUATELY WATER TIGHT IF THERE IS NO MEASURABLE FALL OF WATER IN THE TANK IN 1/2 HOUR.

CONCRETE TANK DEMOLITION NO

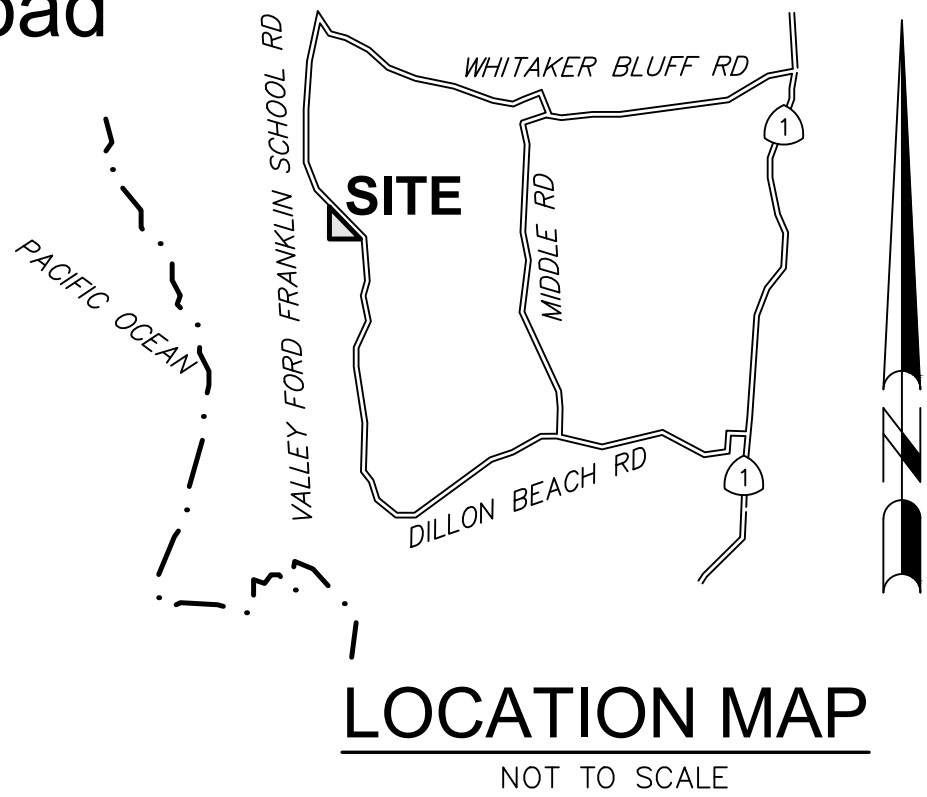
1. THE TANK SHALL BE PUMPED BY A LICENSED SEPTIC TANK PUMPER.
2. THE ENTIRE LID IS TO BE BROKEN IN AND DISPOSED OF INSIDE THE TANK.
3. BREAK A HOLE INTO THE BOTTOM OF EACH SECTION OF THE TANK TO PROVIDE FOR DRAINAGE.
4. BACKFILL THE TANK WITH A SAND/PEA GRAVEL MIX OR RIVER RUN MATERIAL TO A DEPTH OF APPROXIMATELY ONE FOOT BELOW FINISH GRADE. BACKFILL WITH NATIVE SOIL COMPACTED TO NATIVE DENSITY.

1. LOW FLOW TOILETS (1.6 GAL. MAX.) ARE REQUIRED IN ALL BATHROOMS AND LAVATORIES.
2. WATER SERVICE LINES TO OBSERVE ALL SETBACKS REQUIRED BY THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICE.
3. CONTOURS SHOWN ARE BASED ON FIELD WORK PERFORMED BY ADOBE ASSOCIATES, INC. IN APRIL 1, 2022. CONTOUR INTERVAL IS TWO (2) FOOT, DATUM ASSUMED.
4. NO FOUNDATION AND/OR DRIVEWAY CUTS, AND NO SURFACE OR SUB-SURFACE DRAINS ARE TO BE LOCATED WITHIN 50 FEET DOWNSLOPE OR Laterally OF THE PRIMARY OR EXPANSION/REPAIR AREA OF ANY LEACHFIELD. DIRECT DOWNSPOUTS AWAY FROM LEACH FIELD.
5. THE BOUNDARY INFORMATION SHOWN IS PER RECORD INFORMATION AND IS NOT THE RESULT OF A SURVEY BY ADOBE ASSOCIATES, INC.
6. ANY PROPOSED CHANGE TO HOUSE DESIGN OR LOCATION IS TO BE APPROVED BY ADOBE ASSOCIATES, INC. AND THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES HEALTH OFFICER FOR COMPATIBILITY WITH THE SEPTIC SYSTEM.
7. REMOVAL OF TREES WITHIN ANY PROPOSED FILL AREA IS REQUIRED. TREES ALLOWED TO REMAIN IN THE FILL AREA MAY BE DAMAGED OR DESTROYED BY THE DELETERIOUS EFFECTS OF THE FILL SOIL.

APN 100-050-26

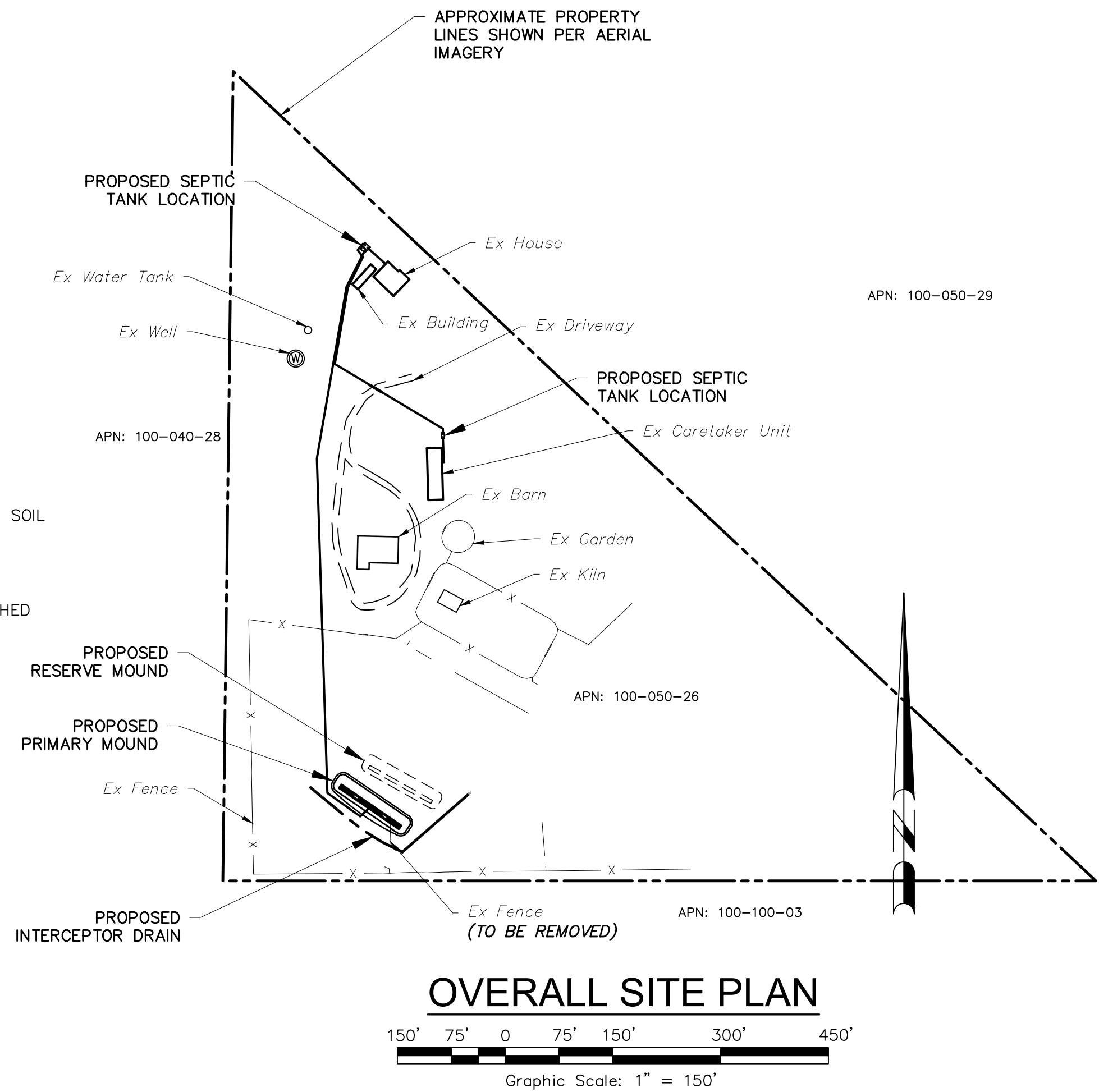
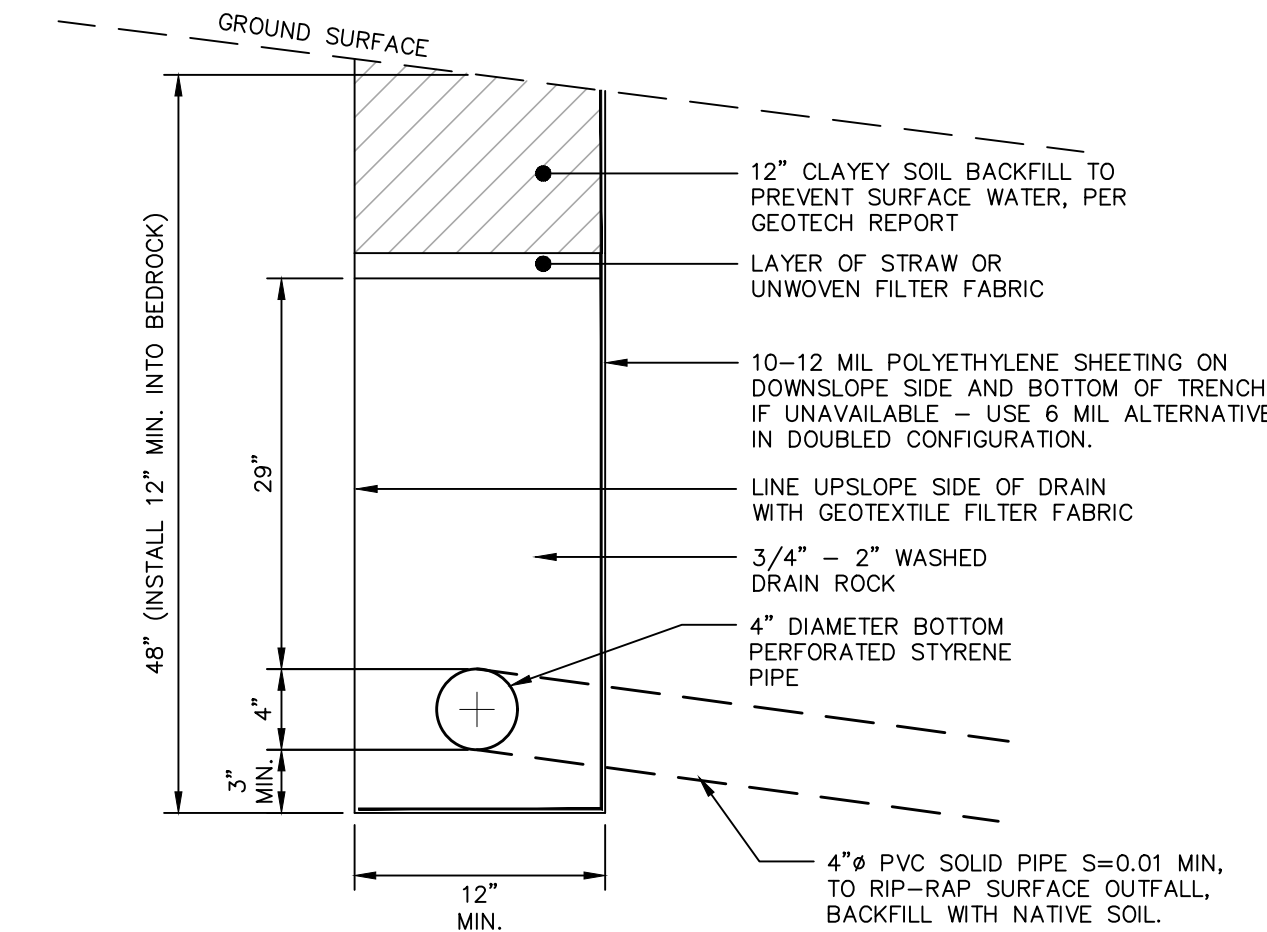
OWNER INFO

THE FARM, LLC
555 CALIFORNIA STREET, SUITE 4905
SAN FRANCISCO, CA 94104
LOQWILSON@GMAIL.COM



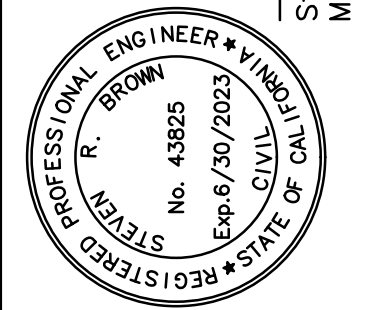
Pretreatment Device	N/A
Disinfection Unit	N/A
Tank Size	1,500 & 810 GAL
Sump	810 GAL
Gravel Bed Width	5'
Gravel Bed Length	100'
Soil Upslope	3'
Soil Downslope	3'
Soil End Slope	3'
Gal/Dose	110
Gal/Day	600
Number of bedrooms	4

1. TITLE SHEET
2. SEPTIC SYSTEM PLAN SHEET
3. DETAIL SHEET

[illegible]

adobe associates, inc.
civil engineering / land surveying / wastewater
2220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com


R. Brown, RCE 43825
License Expires 6/30/2023



**MOUND TYPE PRIVATE
SEWAGE DISPOSAL SYSTEM
TITLE SHEET**
5500 Valley Ford Franklin School Road
Petaluma, California
APN 100-050-26

SCALE: AS NOTED

Date: June 8, 2023

Design by: SRB

Drawn by: JMO

Checked by: SRB

Sheet
W1
of 4 Sheets
Job 21272

DESIGN CRITERIA:

DESIGN PURPOSE
THE PURPOSE OF THIS PROJECT IS TO PROVIDE SEPTIC DISPOSAL CAPACITY FOR AN EXISTING 3-BEDROOM RESIDENCE AND 1-BEDROOM CARETAKER UNIT ON THE PARCEL LOCATED AT 5500 VALLEY FORD FRANKLIN SCHOOL ROAD IN PETALUMA (APN 100-050-26). THE PROPOSED SYSTEM IS A NONSTANDARD MOUND SYSTEM. THE PROPOSED DESIGN MEETS CLASS TWO MARIN COUNTY OWTS STANDARDS.

SITE REVIEW:
A SITE REVIEW WAS CONDUCTED BY ADOBE ASSOCIATES INC. WITH A REPRESENTATIVE FROM THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES DEPARTMENT ON SEPTEMBER 29, 2021 (P1601).

SOIL APPLICATION RATE (SAR): 0.6 GAL./SQ. FT/DAY
LINEAR LOADING RATE (LLR): 6 GAL./LINEAR FOOT/DAY
AVERAGE SLOPE: 12%

4 BEDROOM RESIDENCE

DESIGN CALCULATIONS/FLOWS:
(4 BEDROOMS)(150 GALLONS PER BEDROOM PER DAY) =600 (TOTAL) GALLONS PER DAY.

PRIMARY SYSTEM DESIGN:
1,000 SQUARE FEET (100%) PRIMARY DISPOSAL SYSTEM BASAL AREA REQUIRED.
1,500 SQUARE FEET PRIMARY DISPOSAL SYSTEM BASAL AREA SHOWN.
(TO BE CONSTRUCTED)

RESERVE SYSTEM DESIGN:
1,000 SQUARE FEET (100%) RESERVE DISPOSAL SYSTEM BASAL AREA REQUIRED.
1,500 SQUARE FEET RESERVE DISPOSAL SYSTEM BASAL AREA SHOWN.
(NOT TO BE CONSTRUCTED)

LEGEND

- 1 1,500 GALLON (IAPMO APPROVED) CONCRETE SEPTIC TANK WITH 24"Ø RISERS OVER BOTH PORTS; INSTALL EFFLUENT FILTER AT OUTLET (SEE DETAIL, SHEET W4)
- 2 810 GALLON (IAPMO LISTED) CONCRETE PUMP SUMP AND SUMP PUMP WITH 24"Ø RISER OVER SUMP PUMP PORT (SEE DETAIL, SHEET W4)
- 3 DISTRIBUTION MANIFOLD IN CHRISTY BOX (OR EQUAL) (SEE DETAIL, SHEET W3)
- 4 (2) 47 LF 1-1/4"Ø SCH 40 PVC DISTRIBUTION LATERAL SECTION WITH (16) 3/16"Ø ORIFICE HOLES SPACED 36" O.C.; STAGGER ORIFICE HOLES WITH ADJACENT LATERALS TO MAXIMIZE EFFLUENT DISTRIBUTION. HOLES TO BE POINTED UP & COVERED WITH ORIFICE SHIELDS. (SEE DETAIL, SHEET W3)
- 5 PURGE VALVE IN CHRISTY BOX (OR EQUAL) (SEE DETAIL, SHEET W3)
- 6 PRIMARY MOUND DISTRIBUTION GRAVEL BED (LENGTH = 100 LINEAL FEET) INSTALLED ON CONTOUR AND SET LEVEL (SEE DETAIL, SHEET W3)
- 7 PRIMARY MOUND TOE OF SAND BED
- 8 PRIMARY MOUND TOE OF TOPSOIL COVER
- 9 MONITORING WELL, TYP (6 MINIMUM) (SEE DETAIL, THIS SHEET)
- 10 STRAW WATTLE CHECK DAM (SEE DETAIL, SHEET W3)
- 11 INTERCEPTOR DRAIN AND 4"Ø SCH 40 SOLID OUTFALL PIPE (SEE TRENCH DETAIL, SHEET W1)
- 12 ROCK RIP-RAP ENERGY DISSIPATER (SEE DETAIL, SHEET W1)
- 13 RESERVE MOUND TOE OF SAND BED (NOT TO BE CONSTRUCTED)
- 14 INTERCEPTOR DRAIN CLEANOUT; INSTALL AT ANGLE POINTS AND 100' MAX INTERVALS (SEE DETAIL, SHEET W1)
- 15 TWO-WAY GRAVITY TYPE SANITARY SEWER CLEANOUT; INSTALL 2' FROM BUILDING EXTERIOR WALL (SEE DETAIL, SHEET W3)
- 16 ONE-WAY GRAVITY TYPE CLEANOUT; INSTALL AT ANGLE POINTS AND AT 100' MAX INTERVALS ON GRAVITY LINE (SEE DETAIL, SHEET W3)
- 17 710 GALLON (IAPMO APPROVED) CONCRETE SEPTIC TANK WITH 24"Ø RISERS OVER BOTH PORTS; INSTALL EFFLUENT FILTER AT OUTLET (SEE DETAIL, SHEET W4)
- X/X SOIL PROFILE HOLE
- △ SURVEY CONTROL POINT

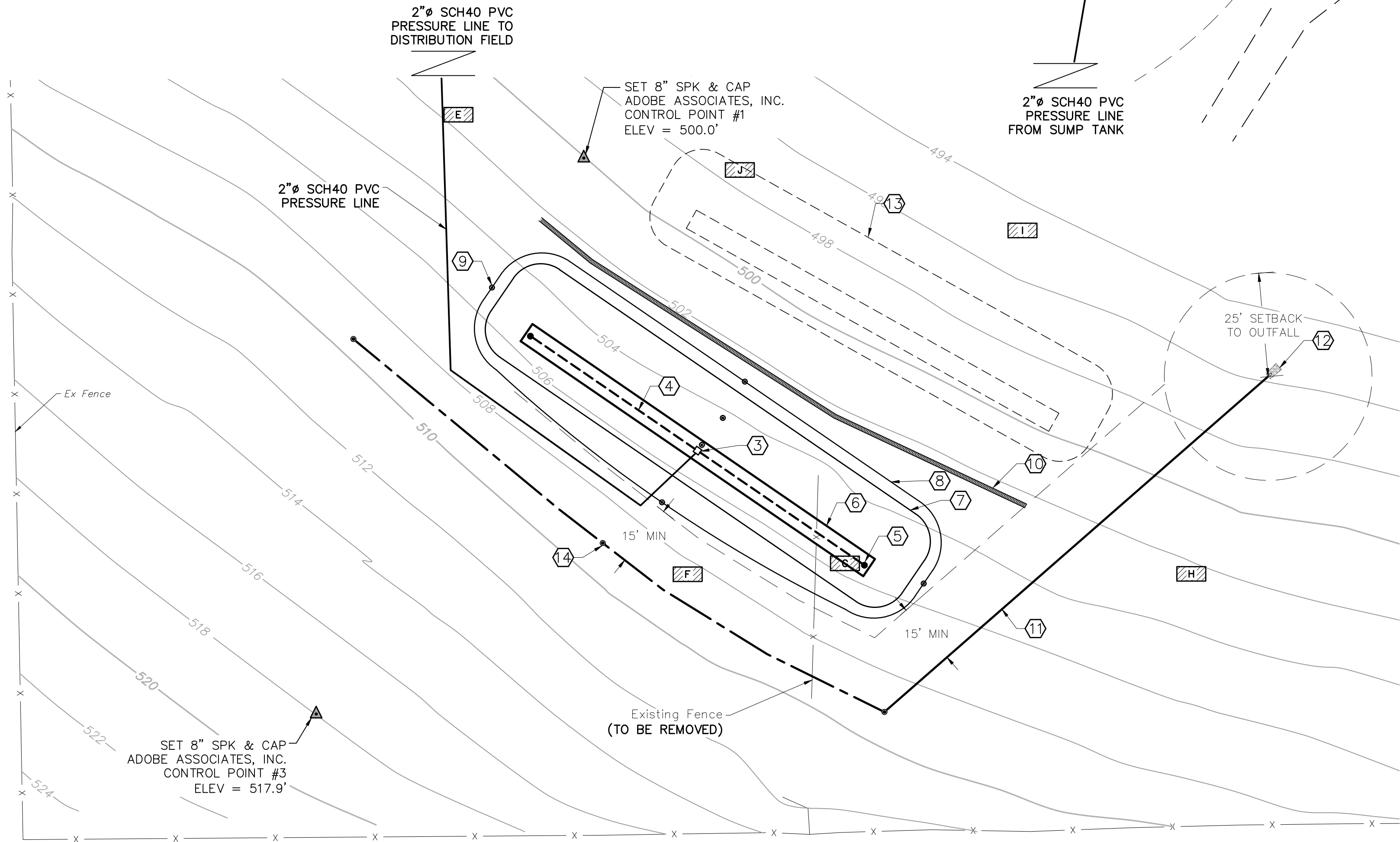
NOTES

- NO FOUNDATION AND/OR DRIVEWAY CUTS, AND NO SURFACE OR SUB-SURFACE DRAINS ARE TO BE LOCATED WITHIN 50 FEET DOWNSLOPE OR Laterally OF THE PRIMARY OR EXPANSION/REPAIR AREA OF ANY LEACH FIELD. DIRECT DOWNSPOUTS AWAY FROM LEACH FIELD.
- PLACE THE UPSLOPE TOPSOIL TO ALLOW FOR POSITIVE DRAINAGE AWAY FROM THE MOUND SYSTEM.
- ALL UNDERGROUND BOXES REQUIRE INSTALLATION OF GOPHER-RESISTANT BARRIERS.
- THE ENGINEER, INSTALLER, AND SERVICE PROVIDER WILL BE PRESENT WITH ENVIRONMENTAL HEALTH STAFF AT THE START UP INSPECTION AFTER FINAL ELECTRICAL SERVICE IS INSTALLED.

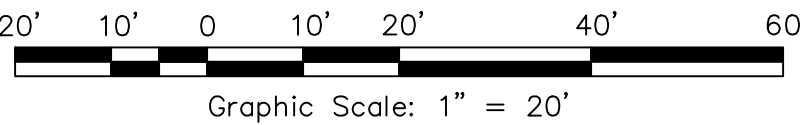
NOTE:
MONITORING WELLS ARE TO BE INSTALLED TO THE FOLLOWING DEPTHS:
1 CENTER OF GRAVEL BED, TO BOTTOM OF BED.
2 CENTER OF DOWNSLOPE SAND AT DEPTH OF 6".
3-6 MIDWAY ON EACH FOUR SIDES NEAR SLOPE OF SOIL TOE AT DEPTH OF 60".
(SEE PRIMARY DISTRIBUTION DETAIL SHEET W3)

MONITORING WELL
CAP
GROUND OR SOIL COVER SURFACE
CONCRETE CHRISTY F8 BOX WITH F80 LID
12" ANNULAR CONCRETE SEAL (NOT TO EXTEND BELOW TOPSOIL COVER ON WELLS #1-4)
NUMBER 3 MONTEREY SAND, WELLS WITHIN GRAVEL BED(S) TO CONTAIN PEA GRAVEL
4" DIAMETER F480 CL200 PVC SCREENED WELL CASING WITH 1/16" OR 3/32" MACHINED SLOTS

MONITORING WELL



SEPTIC SYSTEM PLAN



adobe associates, inc.
civil engineering | land surveying | wastewater
1220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com
"A Service You Can Count On!"

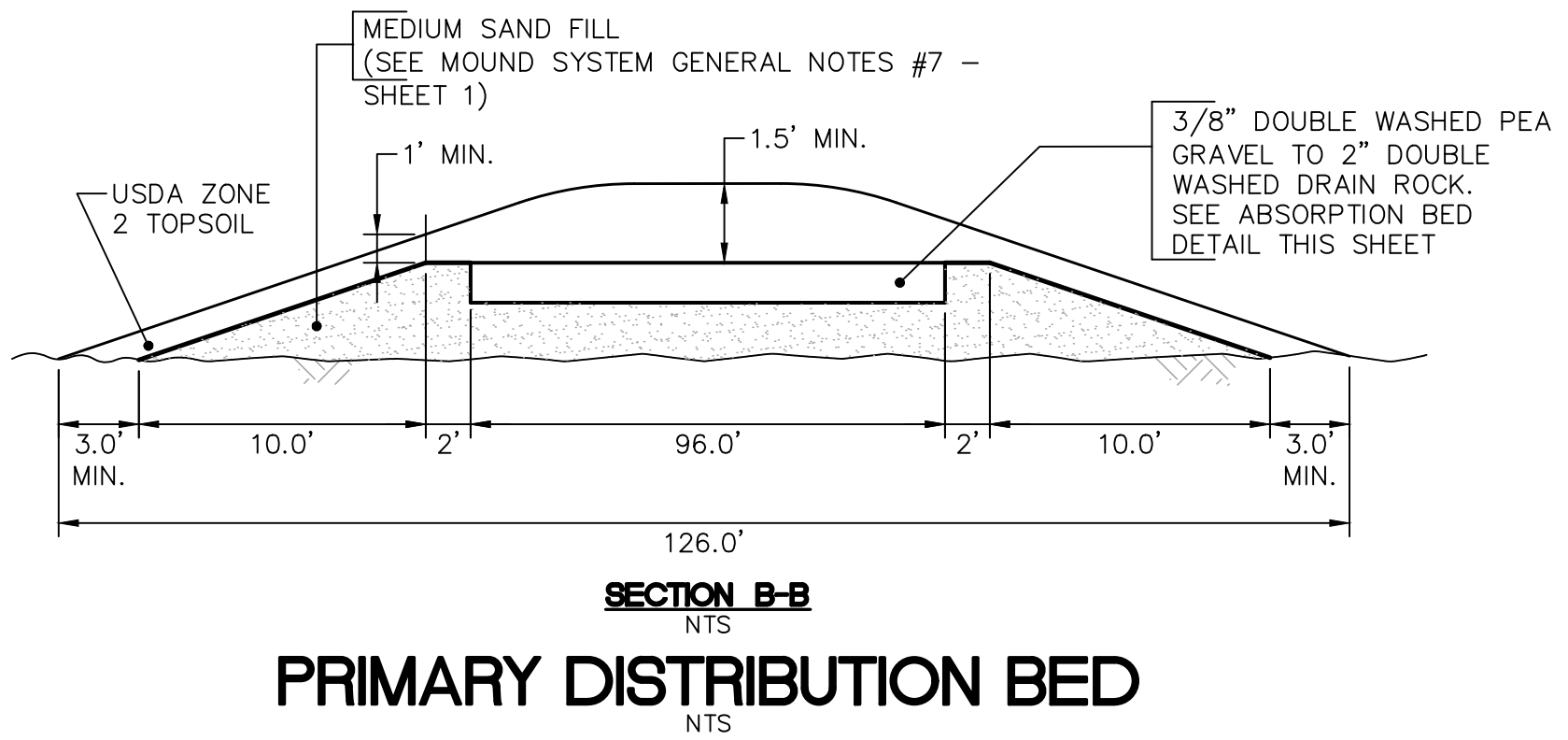
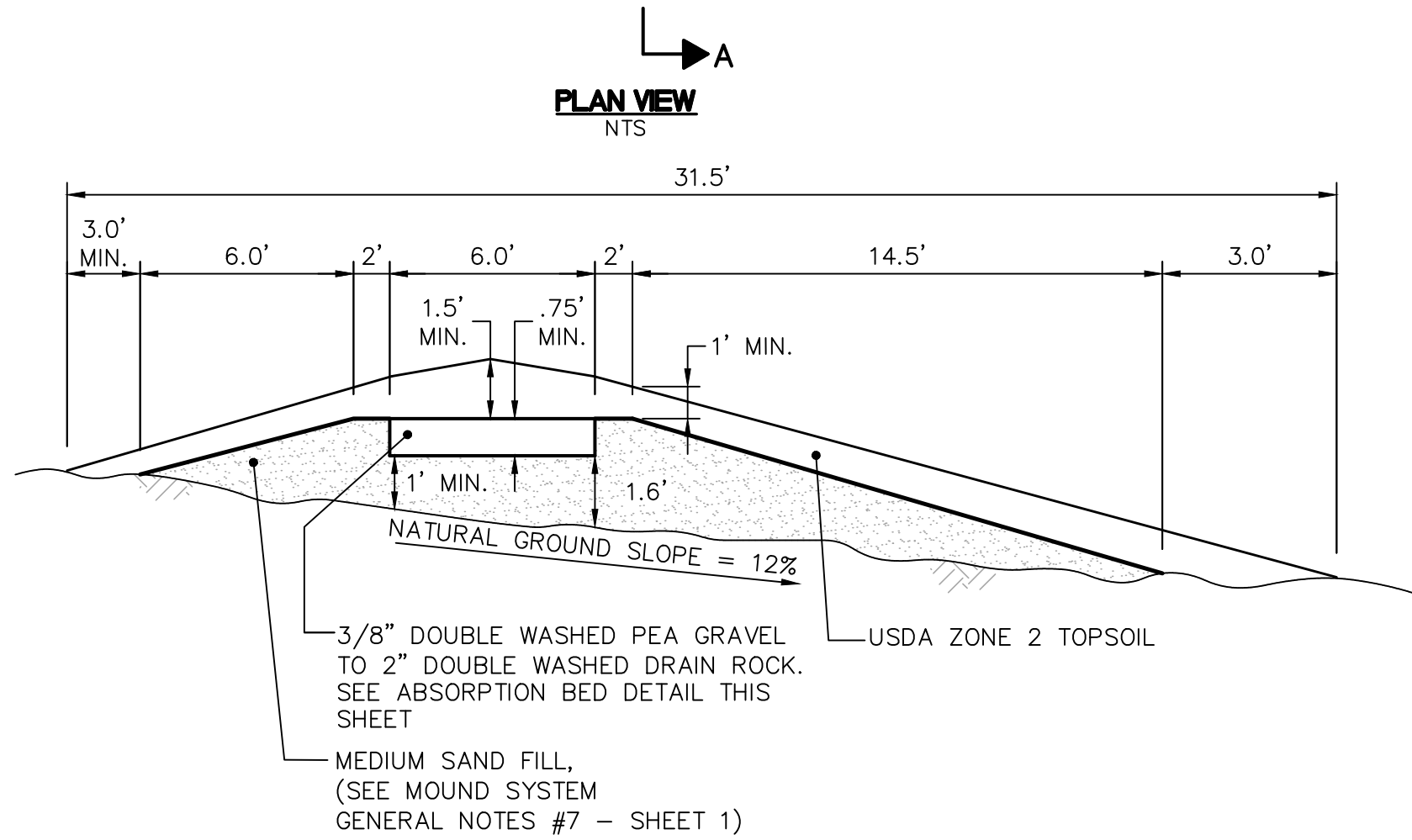
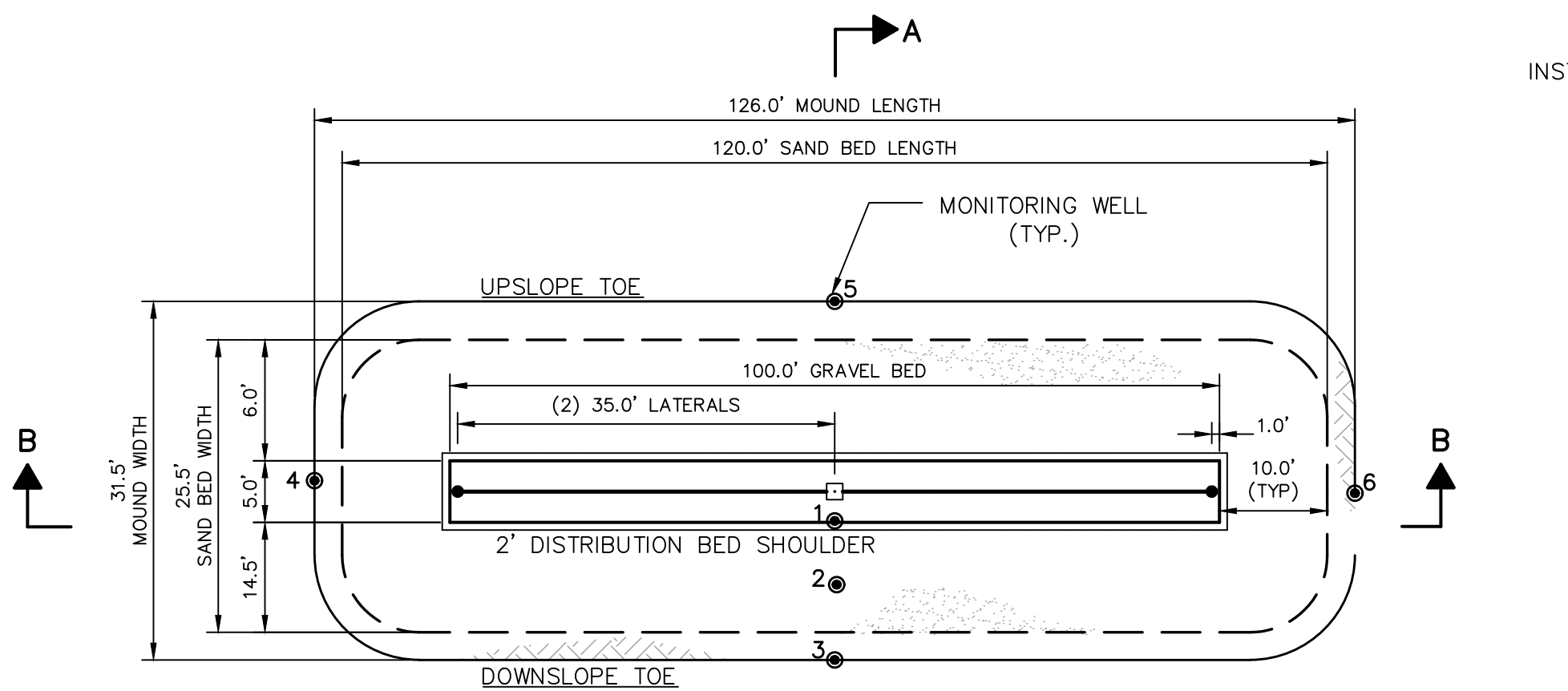
STEVEN R. BROWN
REGISTERED PROFESSIONAL ENGINEER - CIVIL
No. 43825
Exp. 6/30/2023
My License Expires 6/30/2023

MOUND TYPE PRIVATE
SEWAGE DISPOSAL SYSTEM
SEPTIC SYSTEM PLAN
5500 Valley Ford Franklin School Road
Petaluma, California
APN 100-050-26

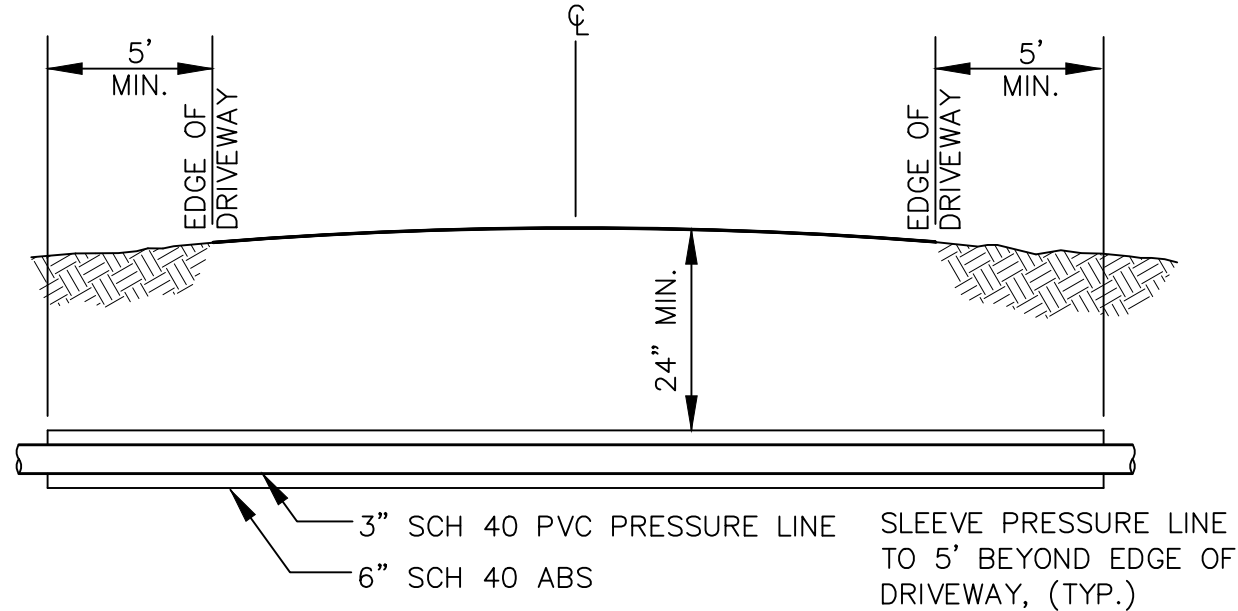
SCALE: AS NOTED
Date: June 8, 2023
Design by: SRB
Drawn by: JMO
Checked by: SRB

Sheet
W2
of 4 Sheets
Job 21272

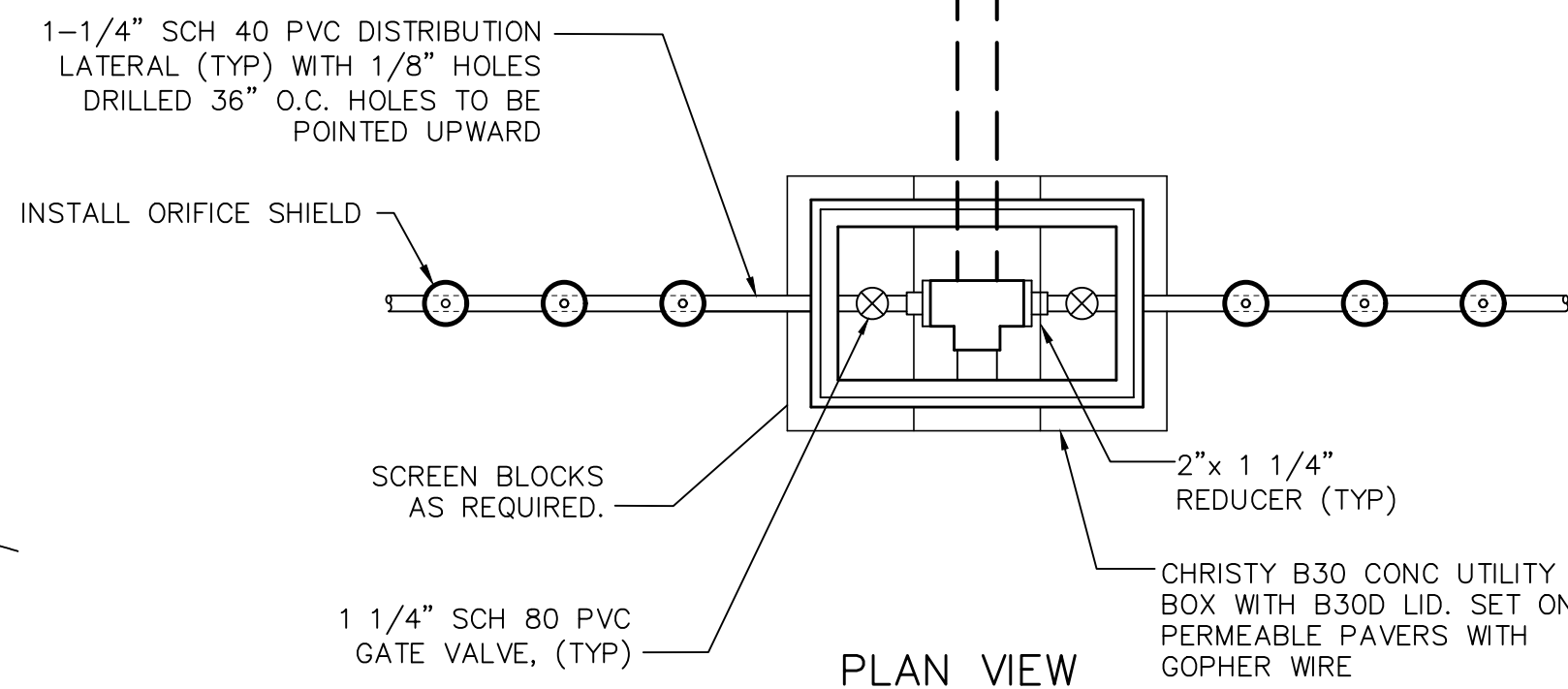
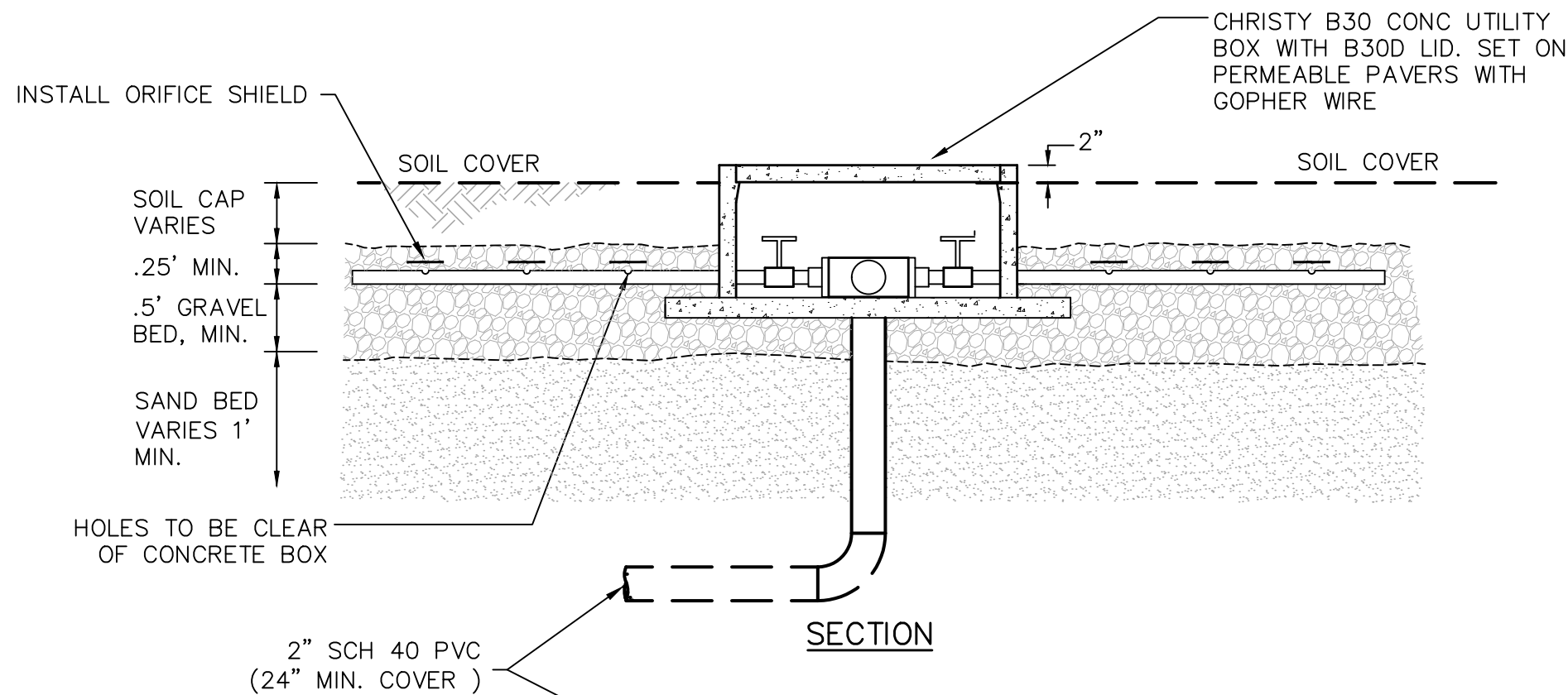
File 11, 2021 PROJECTS\21272\DWG\MOUND- WASTEWATER\21272-MOUND.DWG 6/8/2023 2:55:59 PM User: Or



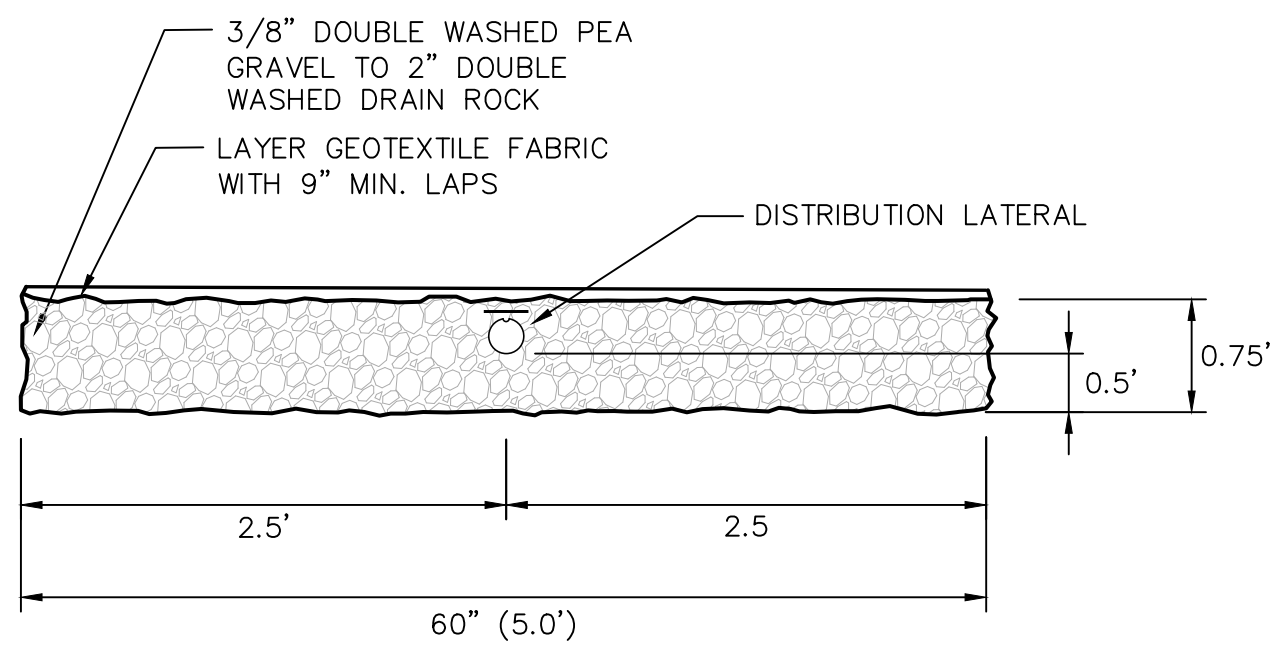
PRIMARY DISTRIBUTION BED



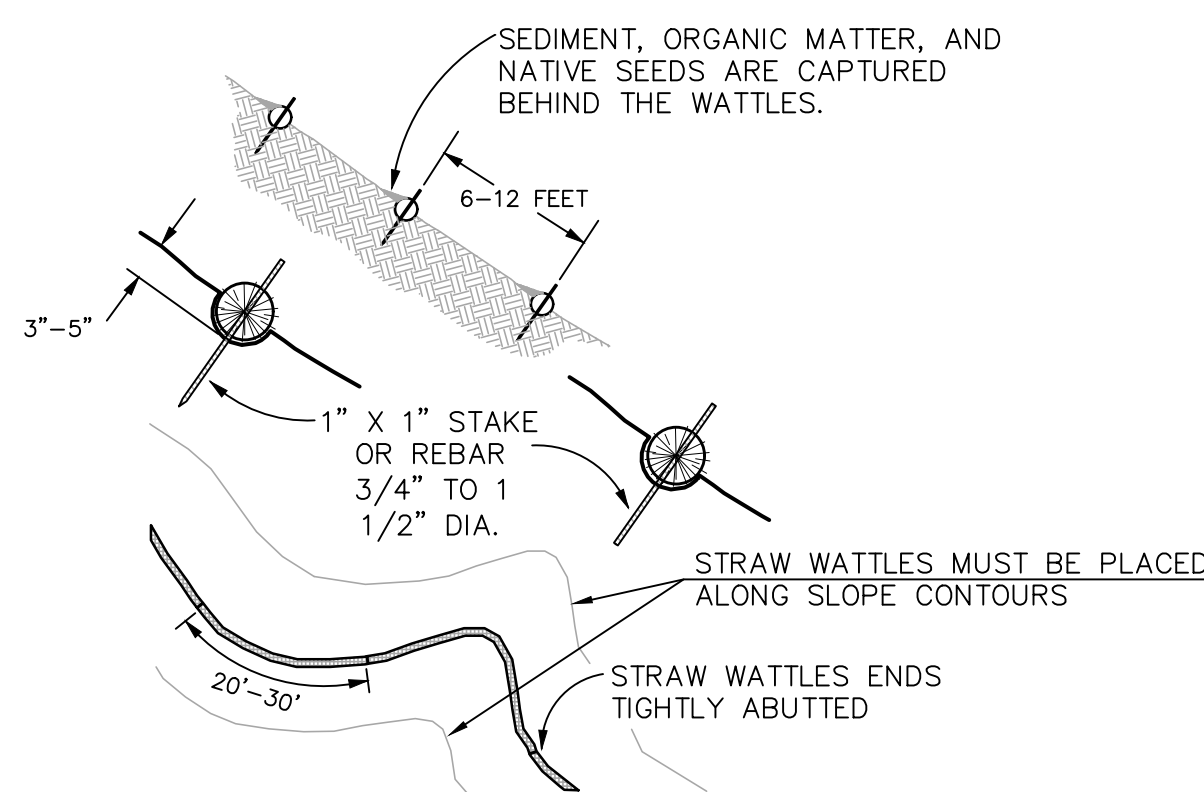
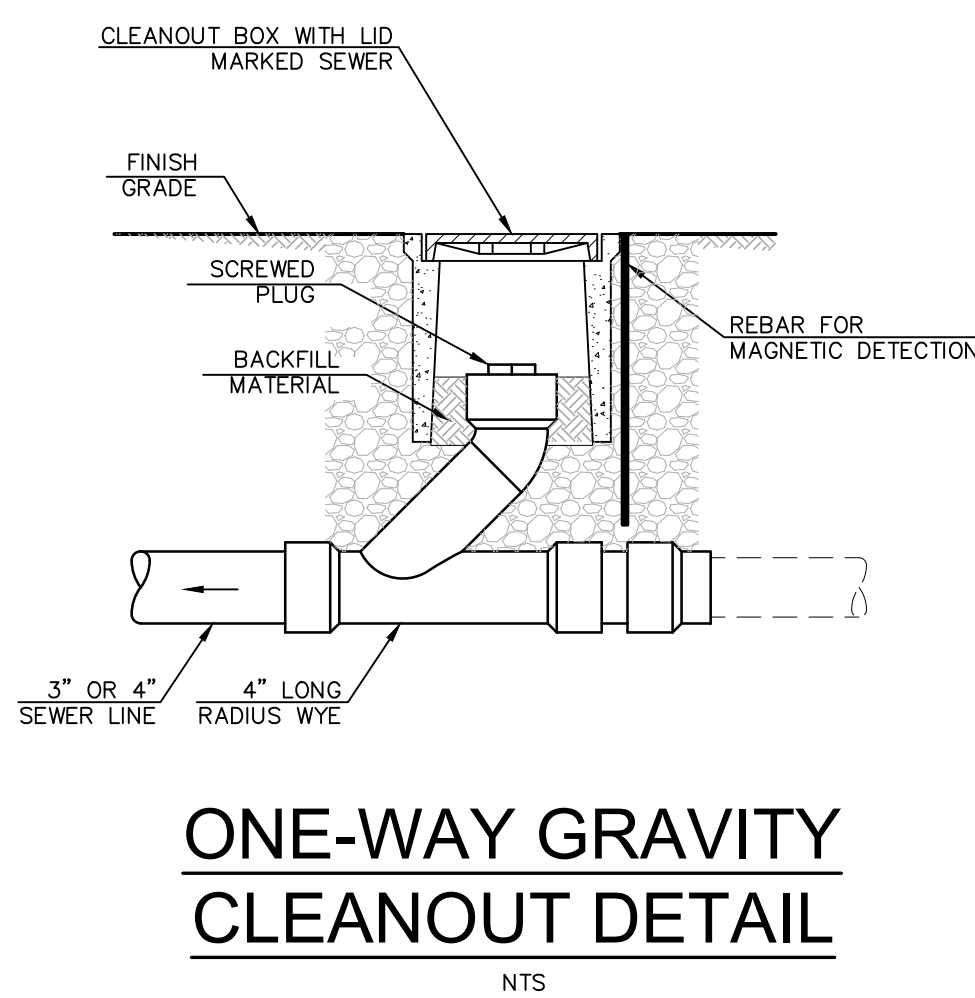
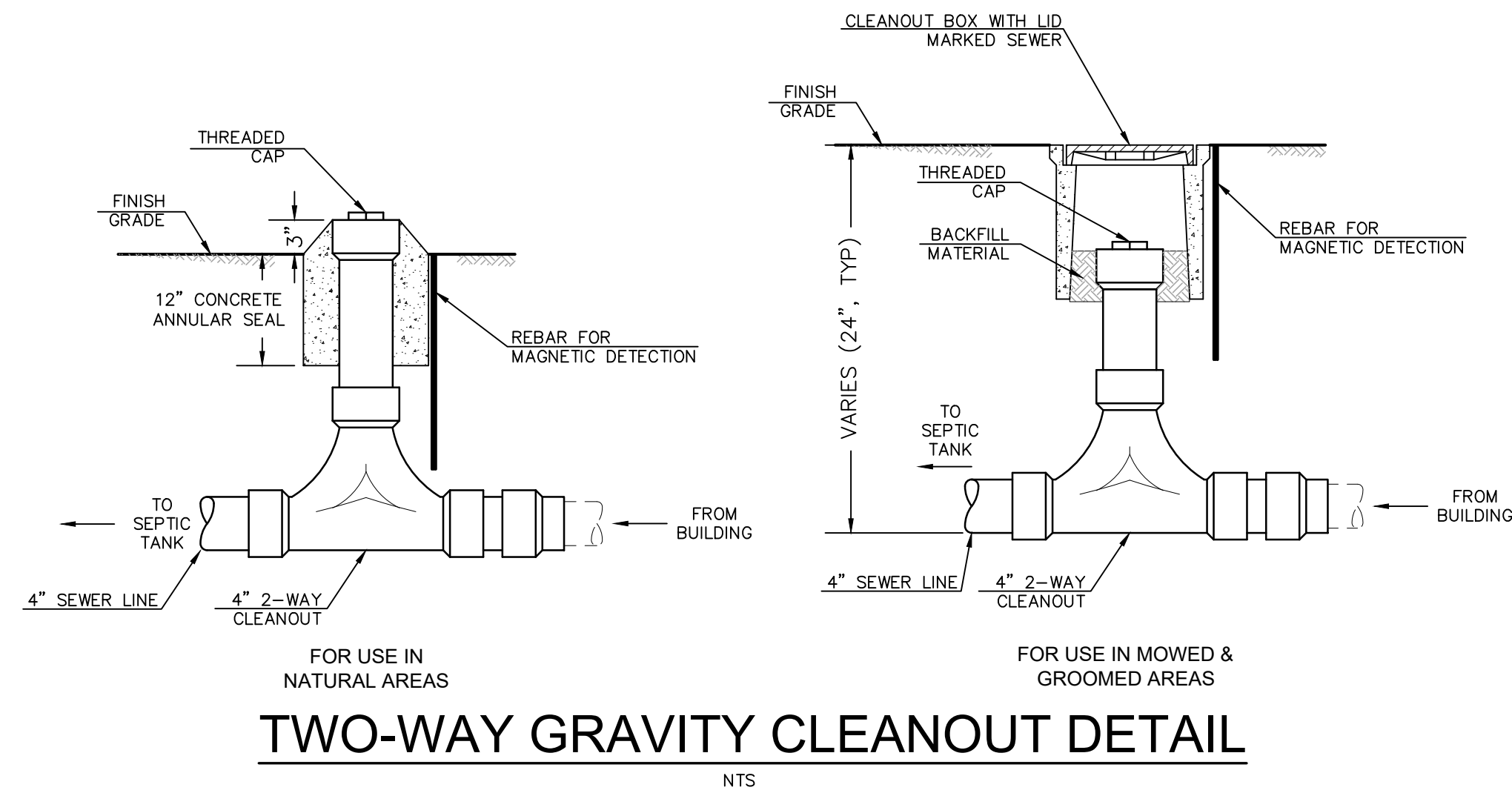
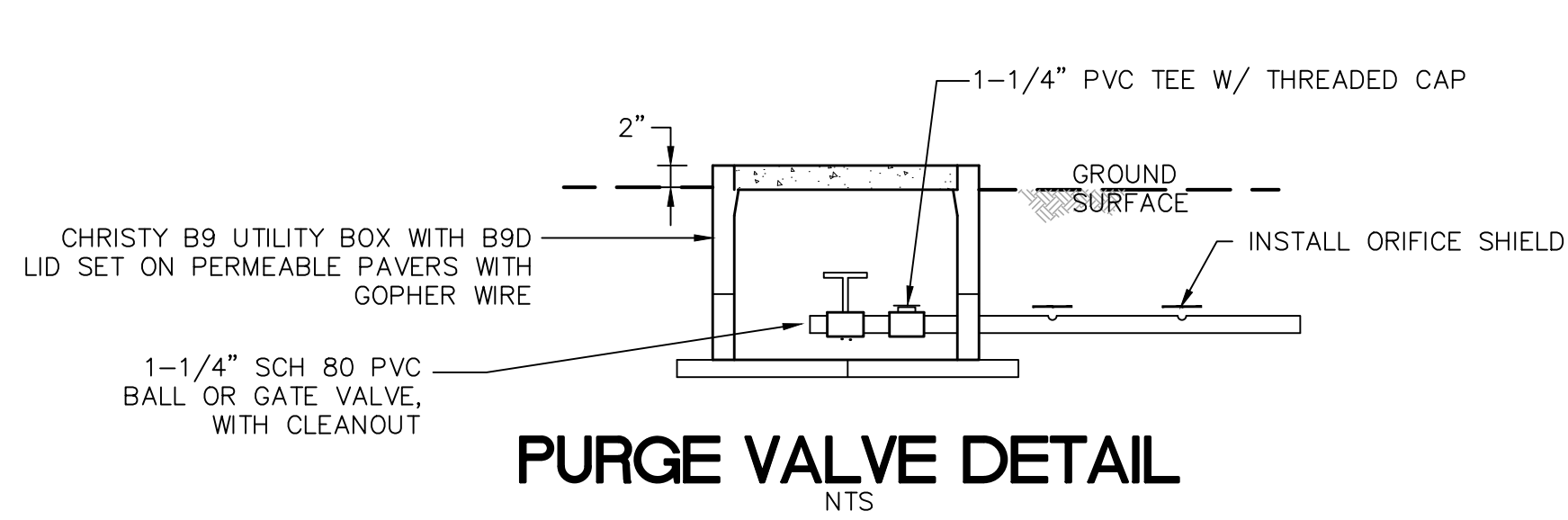
DRIVEWAY CROSSING DETAIL



DISTRIBUTION MANIFOLD DETAIL



ABSORPTION BED DETAIL



- NOTES:
1. STRAW WATTLES ARE TUBES MADE FROM STRAW BOUND W/ PLASTIC NETTING. THEY ARE APPROX. 8" DIA. AND 20 - 30 FT. LONG.
 2. STRAW WATTLES TRAP SEDIMENT AND REDUCE SHEET & RILL EROSION BY REDUCING SLOPE GRADIENT, INCREASING INFILTRATION RATES AND BY PRODUCING A FAVORABLE ENVIRONMENT FOR PLANT ESTABLISHMENT.
 3. STRAW WATTLE INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE WATTLE IN A TRENCH, 3" - 5" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND WATTLE.

STRAW WATTLE CHECK DAM

Revisions	Description	Approved
No.	Date	

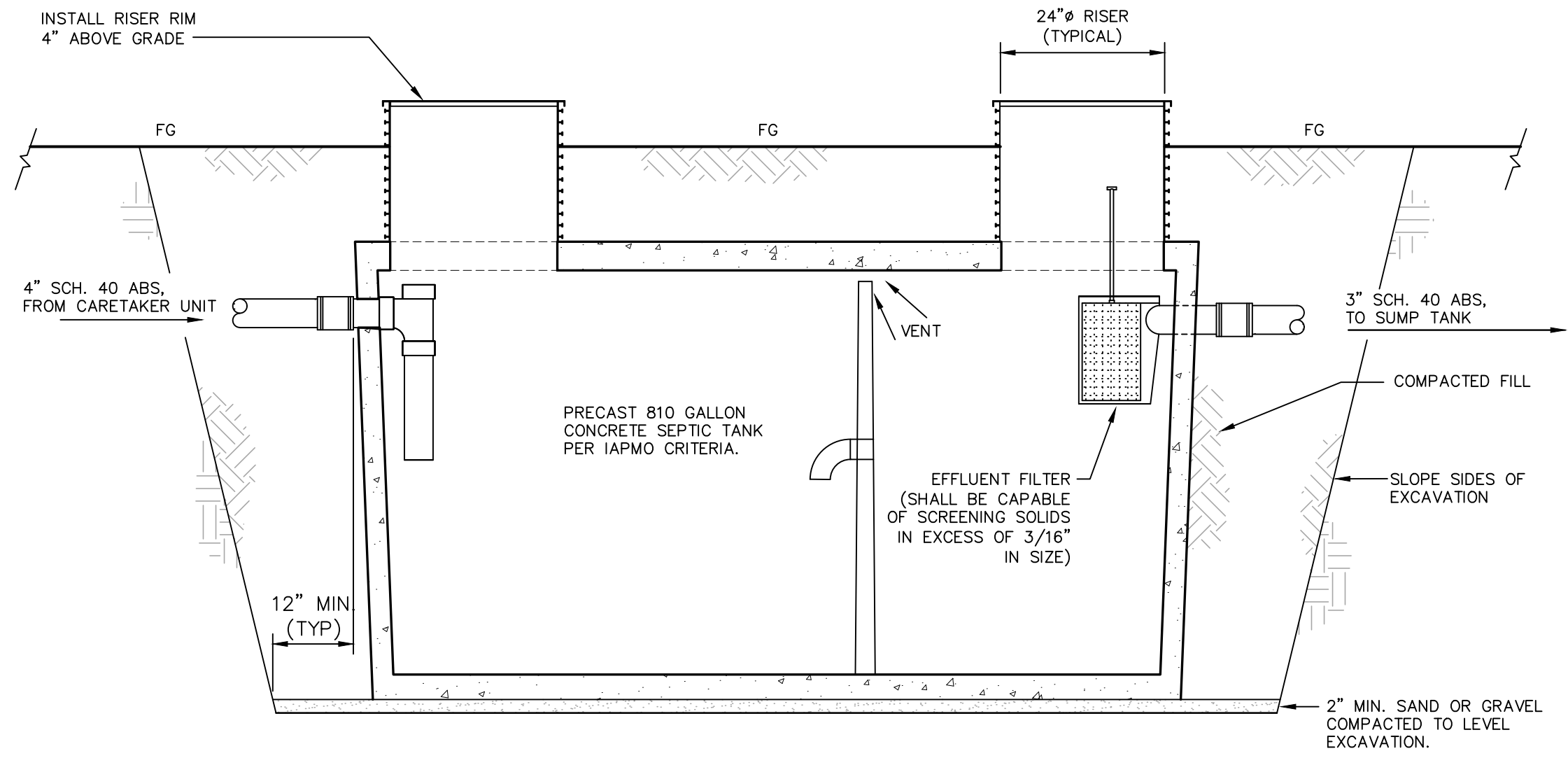
adobe associates, inc.
civil engineering / land surveying / wastewater
1220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com
"A Service You Can Count On!"

Steven R. Brown, RCE 43825
My License Expires 6/30/2023

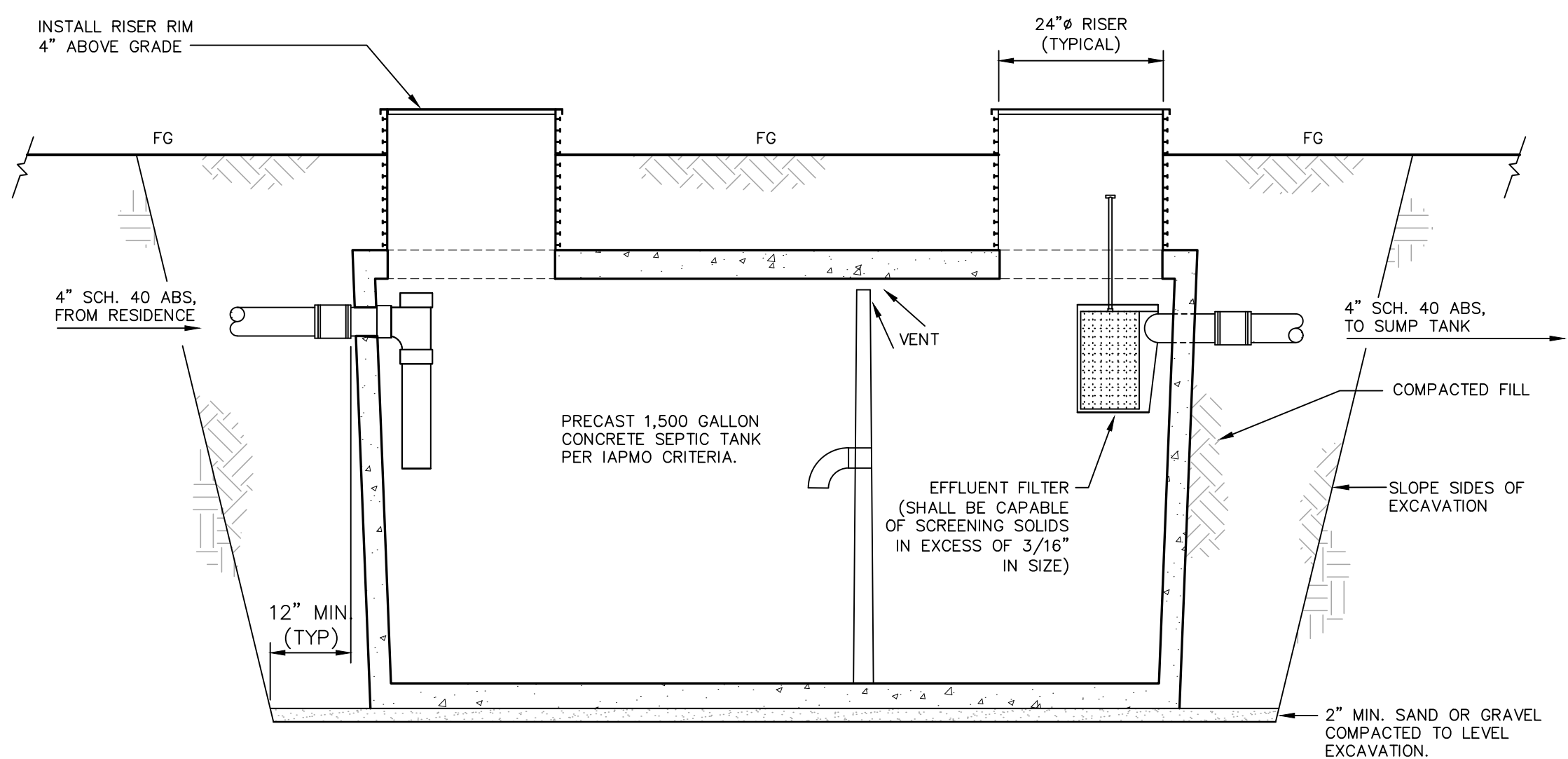
MOUND TYPE PRIVATE
SEWAGE DISPOSAL SYSTEM
DETAIL SHEET
5500 Valley Ford Franklin School Road
Petaluma, California
APN 100-050-26

SCALE: AS NOTED
Date: June 8, 2023
Design by: SRB
Drawn by: JMO
Checked by: SRB

Sheet
W3
of 4 Sheets
Job 21272



810 GALLON CONCRETE SEPTIC TANK
NTS



1,500 GALLON CONCRETE SEPTIC TANK
NTS

NOTES:

A MANUAL SWITCH FOR THE PUMP SHALL BE LOCATED WITHIN 25' AND IN CLEAR VIEW OF THE SUMP. MOUNT CONTROL PANEL ON HOUSE OR ON A POST WITHIN 25' OF THE SUMP AND IN CLEAR VIEW OF THE SUMP. IF CONTROL PANEL IS MORE THAN 75' FROM HOUSE, PROVIDE A REMOTE ALARM WITH AN ADDITIONAL LIGHT AND HORN AT THE HOUSE.

CONTROL/ALARM BOX - NEMA TYPE 4X WITH FUSED DISCONNECT & MOTOR PROTECTION SWITCH, HOA SWITCH, ALARM, ALARM ON/OFF TEST SWITCH, DISPLAY LIGHT, NON-RESETTABLE DOSE COUNTER, AND SONOMA COUNTY PLEXIGLASS SHIELD.

PROVIDE SEPARATE ELEC. CIRCUITS FOR PUMP AND ALARM.

NOTE: A PHONE LINE IS REQUIRED TO THE CONTROL PANEL AND WILL BE ACTIVATED PRIOR TO THE FINAL/STARTUP INSPECTION.

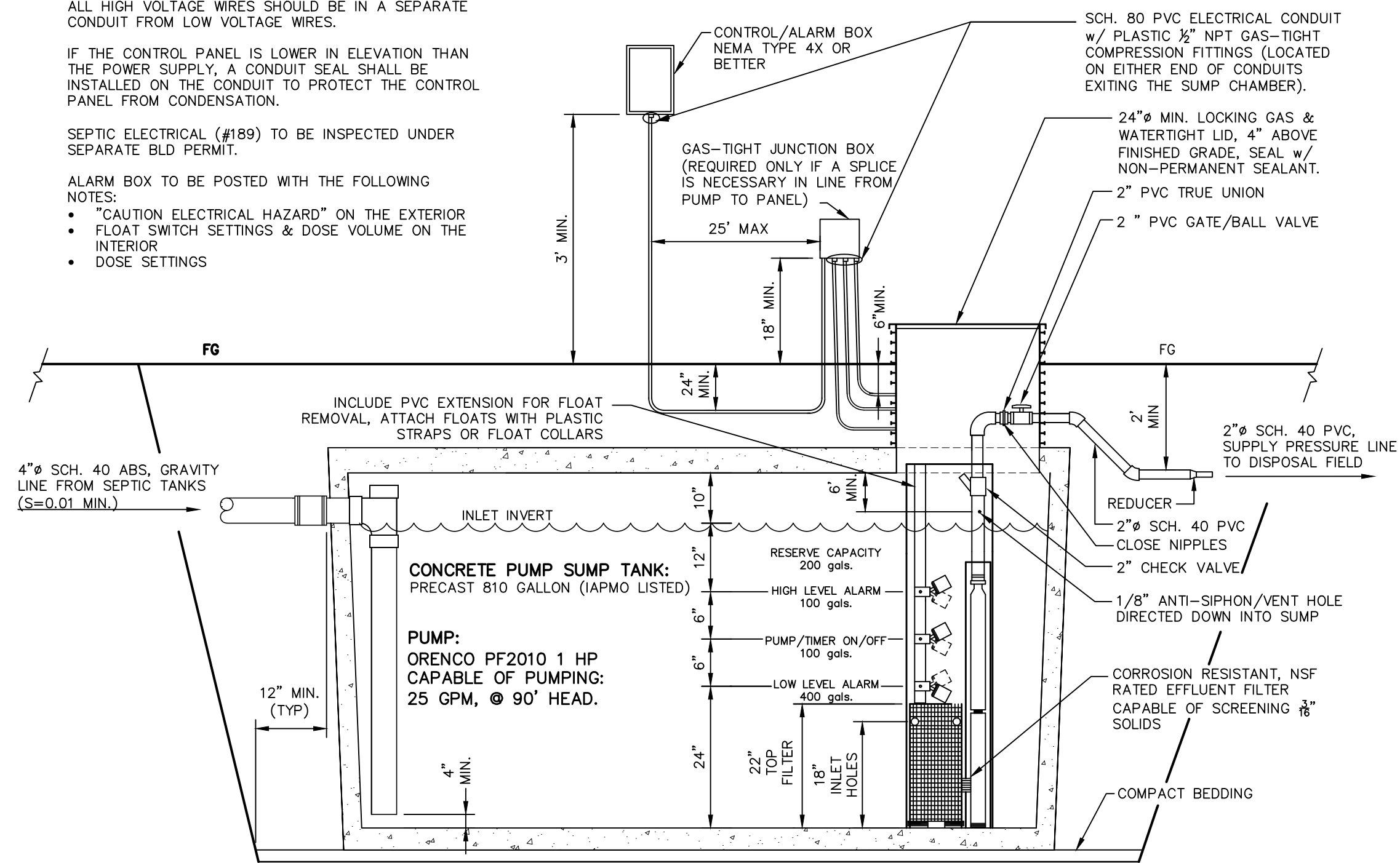
ALL HIGH VOLTAGE WIRES SHOULD BE IN A SEPARATE CONDUIT FROM LOW VOLTAGE WIRES.

IF THE CONTROL PANEL IS LOWER IN ELEVATION THAN THE POWER SUPPLY, A CONDUIT SEAL SHALL BE INSTALLED ON THE CONDUIT TO PROTECT THE CONTROL PANEL FROM CONDENSATION.

SEPTIC ELECTRICAL (#189) TO BE INSPECTED UNDER SEPARATE BLD PERMIT.

ALARM BOX TO BE POSTED WITH THE FOLLOWING NOTES:

- "CAUTION ELECTRICAL HAZARD" ON THE EXTERIOR
- FLOAT SWITCH SETTINGS & DOSE VOLUME ON THE INTERIOR
- DOSE SETTINGS

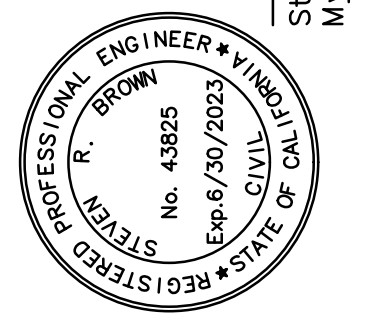


**810 GALLON CONCRETE PUMP SUMP
TANK DETAIL**
NTS

Revisions	No.	Date	Description	Approved

adobe associates, inc.
civil engineering / land surveying / wastewater
1220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com
"A Service You Can Count On!"

Signature
Steven R. Brown, RCE 43825
My License Expires 6/30/2023



**MOUND TYPE PRIVATE
SEWAGE DISPOSAL SYSTEM
SEPTIC SYSTEM PLAN**
5500 Valley Ford Franklin School Road
Petaluma, California
APN 100-050-26

SCALE: AS NOTED
Date: June 8, 2023
Design by: SRB
Drawn by: JMO
Checked by: SRB

Sheet
W4
of 4 Sheets
Job 21272

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES (E.H.S.). ALL MECHANICAL, PLUMBING AND ELECTRICAL WORK SHALL CONFORM TO THE APPROPRIATE CODES ADOPTED BY THE COUNTY OF MARIN.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING AND AVOIDING UTILITY LINES IN THE WORK AREA.
3. THE INSTALLATION OF THIS SEWAGE DISPOSAL SYSTEM MAY BE RESTRICTED TO CERTAIN TIMES OF THE YEAR BASED ON SEASONAL GROUND WATER AND WEATHER CONDITIONS. CONTRACTOR TO VERIFY STARTING TIME WITH THE ENVIRONMENTAL HEALTH SERVICES (E.H.S.).
4. THE CONTRACTOR SHALL GIVE THE ENGINEER (1-707-541-2300) 48 HOURS NOTICE OF COMMENCEMENT OF CONSTRUCTION AND PRIOR TO REQUIRED INSPECTIONS. THE CONTRACTOR SHALL GIVE 48 HOURS MINIMUM NOTICE TO THE MARIN COUNTY E.H.S. PRIOR TO COMMENCEMENT OF WORK (1-415-499-6907).
5. DISTRIBUTION BED AND LATERALS SHALL BE LAID LEVEL AND PARALLEL WITH THE NATURAL GROUND CONTOURS SHOWN ON THE PLANS.
6. QUESTIONS REGARDING THE SUITABILITY OF ANY MATERIALS OR CONSTRUCTION PROCEDURES USED IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS SHALL BE DIRECTED TO THE DESIGNING ENGINEER PRIOR TO INSTALLATION OR USE.
7. MEDIUM SAND FILL: TOTAL SIEVE ANALYSIS CONTAINS 20% OR LESS MATERIAL LARGER THAN 2.0 MM AND CONTAINS 5% OR LESS MATERIAL FINER THAN 0.075MM PLUS ONE OF THE THREE ADDITIONAL SPECIFICATIONS LISTED IN THE SAND SPECIFICATIONS CHART INCLUDED WITH THE MOUND CONSTRUCTION NOTES ATTACHED.
8. SEAL INTERIOR OF TANK AND SUMP WITH THOROSEAL OR EQUAL. SEAL ALL EXTERIOR JOINTS WITH MASTIC. SEAL PRECAST CONCRETE JOINTS WITH RAMNEK OR EQUAL. SEAL PIPES EXTENDING THROUGH TANK WALLS WITH NON-SHRINK GROUT OR PRECAST CONCRETE. TANK AND SUMP CONNECTION SHALL BE SEALED AND MADE WATER TIGHT WITH NON-SHRINK GROUT OVERLAID WITH XYPEX OR THOROSEAL.
9. THIS SEWAGE DISPOSAL SYSTEM HAS BEEN DESIGNED TO ACCOMMODATE A PEAK DAILY FLOW OF 120 GALLONS PER BEDROOM AND A LONG TERM AVERAGE DAILY FLOW OF 50 GALLONS PER BEDROOM. WATER CONSERVATION MEASURES MAY BE NECESSARY TO MAINTAIN THESE WATER USAGE LIMITS. LOW FLOW TOILETS (1.6 GALLONS MAXIMUM PER FLUSH) ARE REQUIRED.
10. MINIMUM CLEARANCE FROM ANY EXISTING OR PROPOSED STRUCTURE TO ANY SEPTIC TANK SHALL BE 8' UNLESS GREATER CLEARANCE IS REQUIRED BY OTHERS.
11. MINIMUM CLEARANCE FROM ANY ROADWAY OR PARKING AREA TO ANY SEPTIC TANK SHALL BE 8' UNLESS GREATER CLEARANCE IS REQUIRED BY OTHERS.

**USE OF WHEEL TYPE VEHICLES IN ANY PHASE OF MOUND
CONSTRUCTION IS PROHIBITED!**

1. ADOBE ASSOCIATES, INC. WILL STAKE OUT THE MOUND IN THE CONTRACTOR'S PRESENCE, VERIFYING MOUND DETAILS, NATURAL CONTOURS AND MOUND LOCATION.
2. MEASURE THE AVERAGE MOUND ELEVATION ALONG THE UPSLOPE EDGE OF BED. THIS IS NECESSARY TO DETERMINE THE BOTTOM ELEVATION OF THE BED.
3. DETERMINE WHERE THE PIPE FROM THE PUMPING CHAMBER CONNECTS TO THE DISTRIBUTION SYSTEM IN THE MOUND.
4. TRENCH AND LAY THE EFFLUENT PRESSURE LINE WITH 24" MINIMUM COVER FROM THE PUMP SUMP TO THE MOUND. OUT AND CAP THE PIPE ONE FOOT BENEATH THE EXISTING SURFACE. BACKFILL AND COMPACT SOIL AROUND THE PIPE TO PREVENT BACK FLOW OF EFFLUENT ALONG PRESSURE PIPE. THIS STEP MUST BE DONE BEFORE PLOWING TO AVOID COMPACTION AND DISTURBANCE OF THE SURFACE.
5. CHECK THE MOISTURE CONTENT OF THE SOIL AT 7"-8" DEEP. IF IT IS TOO WET, SMEARING AND COMPACTION WILL RESULT, THUS REDUCING THE INFILTRATION CAPACITY OF THE SOIL. SOIL MOISTURE CAN BE DETERMINED BY ROLLING A SOIL SAMPLE BETWEEN THE HANDS. IF IT ROLLS INTO A RIBBON, THE SITE IS TOO WET TO PREPARE. IF IT CRUMBLES, SOIL PREPARATION CAN PROCEED.
6. REMOVE SMALL DIAMETER TREES, BRUSH AND VEGETATION BY CUTTING AT THE LOWEST BRANCHES. EXCESSIVE BRUSH AND TREES MUST BE MOVED AND THE CLIPPINGS ONLY SHALL BE REMOVED. DO NOT REMOVE THE TOP TWO INCHES OF NATIVE SOIL.
7. RIP OR PLOW THE SOIL TO A DEPTH OF 12" WITH THE RIPPERS SET 8"-10" APART. INITIAL RIPPING SHALL BE LIMITED TO THE AREA OF THE SAND BANE AND SHALL BE PARALLEL TO NATURAL CONTOURS. THE INTERFACE OF THE NATIVE SOIL WITH THE MOUND TOPSOIL COVER SHALL BE RIPPED AFTER ALL THE SAND HAS BEEN PLACED AROUND THE PUMP. THE REMOVAL OF NATURAL TOPSOIL COVER IS IMMEDIATE. CONSTRUCTION AFTER PLOWING IS DESIRABLE. NO TRAFFIC IS PERMITTED ON ANY PLOWED SURFACE UNTIL THE FULL DEPTH OF FILL OR COVER MATERIAL HAS BEEN PLACED.
8. EXTEND THE EFFLUENT PIPE TO SEVERAL FEET ABOVE GROUND SURFACE.
9. PLACE THE SAND FILL MATERIAL (SEE MOUND SYSTEM GENERAL NOTES #7) AROUND THE SIDE AND UPSLOPE SIDE OF THE PLOWED AREA, KEEPING WHEELS OF THE TRUCK OFF PLOWED AREAS.
10. THE SAND SHALL BE PLACED IN THE PLOWED OR RIPPED AREA USING A SMALL TRACK TYPE TRACTOR WITH A BLADE. FOLLOW CONTOURS AND WORK FROM THE UPSLOPE SIDE OF THE MOUND. TO AVOID COMPACTION OF THE SOIL, TRACK OVER 6" MINIMUM OF SAND.
11. THE CONTRACTOR SHALL UNIFORMLY PLACE AND COMPRESS THE SAND FILL BY TRACK ROLLING TO A NEAT LINE AND TO SHAPE AS SPECIFIED IN THE PLANS. ADDITIONAL SAND WILL HAVE TO BE ADDED AS THE SAND FILL IS COMPRESSED.
12. FORM THE GRAVEL BED WITH THE TRACTOR BLADE. THE BED SHALL BE CONSTRUCTED LEVEL AND FOLLOW NATURAL CONTOURS OF THE SITE. TEMPORARY FORM BOARDS ARE REQUIRED FOR PLACEMENT OF THE DISTRIBUTION BED GRAVEL. THE FORM BOARDS SHALL BE FULLY DEVELOPED BY THE SAND BED AND SHALL BE REMOVED PRIOR TO PLACEMENT OF COARSE. PLACE THE COARSE AGGREGATE RUN IN THE BED WITH A TRACK TYPE CRAWLER LOADER. THE GRAVEL SHALL BE 3/8" TO 2" DOUBLE RUN, DOUBLE WASHED NON-DETERIORATING AGGREGATE ROCK. LEVEL AGGREGATE ROCK TO THE DESIGN DEPTH.
13. PLACE THE DISTRIBUTION SYSTEM ON THE GRAVEL BED WITHOUT GLUING JOINTS, WITH THE BRIDGE HOLES OF THE DISTRIBUTION LINES FACING UPWARD. CONNECT THE MANIFOLD TO THE PRESSURE PIPE FROM THE PUMP SUMP. SLOPE MANIFOLD TO THE EFFLUENT PIPE. LAY LATERALS LEVEL, REMOVING ALL RISKS AND DIPS.
14. CALL THE MARIN COUNTY ENVIRONMENTAL HEALTH DEPARTMENT, WELL & SEPTIC DIVISION AT (1-415-499-6907) AND ADOBE ASSOCIATES, INC. AT (707-541-2300) FOR 48 HOURS PRIOR TO HYDRAULIC TESTING. WHEN PUMPING CLEAR WATER THROUGH THE DISTRIBUTION MATERIALS, THE FLOW OF WATER SHOULD ADJUSTED TO BE THE SAME H₂O (60" MINIMUM). AFTER P.R.M.D APPROVAL, GLUE ON PURGE VALVES. PLACE 2" OF AGGREGATE ROCK AROUND THE DISTRIBUTION LATERALS.
15. PLACE NON-BIODEGRADABLE GEOTEXTILE SYNTHETIC FABRIC (NOT BUILDING PAPER, BURLAP, HAY, OR STRAW) OVER AGGREGATE ROCK, OVERLAPPING SECTIONS 9" MINIMUM.
16. THE CONTRACTOR SHALL PLOW OR RIP THE EXISTING GROUND AREA AROUND THE MOUND PERIMETER WITH A TRACK TYPE VEHICLE, FOLLOWING NATURAL CONTOURS, JUST PRIOR TO PLACING TOPSOIL COVER.
17. PLACE THE SOIL COVER WITH TRACK TYPE EQUIPMENT TO CONFORM TO PLANS. SEE SECTION A-A AND B-B, SHEET 3. SOIL CAP SHALL BE USDA ZONE 2 TOPSOIL. SOIL COVER MATERIAL SHALL BE PROPERLY MOISTURE CONDITIONED TO PERMIT TRACK ROLLING TO A FIRM SURFACE.
18. THE FINISHED GRADE OF THE MOUND SHALL BE ESTABLISHED BY TRACK ROLLING AND GROOMING BY HAND. AFTER DRAINAGE OF THE MOUND AND EROSION CONTROL MEASURES HAVE BEEN COMPLETED, BEFORE FINAL INSPECTION CAN BE MADE. DRAINAGE WORK INCLUDES ELIMINATION OF POSSIBLE POUNDING OF WATER ON AND AROUND THE MOUND SYSTEM.
19. THE MONITORING WELLS SHALL BE INSTALLED AS SHOWN ON THE PLANS AND DETAILS.
20. LANDSCAPING THE MOUND BY PLANTING GRASS, USING THE BEST VEGETATION ADAPTABLE TO THE AREA. A MIXTURE OF 90% BIRDFOOT TREFOIL AND 10% TIMOTHY MAY BE USED AS THE VEGETATIVE COVER. A COMBINATION OF 60% BLUEGRASS, 30% CREEPING BERMUDA AND 10% TIMOTHY MAY BE DESIRED. GRASS CAN BE PLANTED AROUND THE BASE AND UP SIDESLOPES. THEY SHOULD BE MOISTURE TOLERANT, SINCE THE TOE OF THE MOUND MAY BE MOIST DURING VARIOUS TIMES OF THE YEAR. PROTECT THE MOUND BY COVERING WITH STRAW PRIOR TO THE RAINY SEASON.
21. MOUND MAINTENANCE INVOLVES PUMPING THE SEPTIC TANK EVERY 3 TO 5 YEARS TO AVOID CARRY-OVER OF SOLIDS INTO THE MOUND. A GOOD WATER CONSERVATION PROGRAM WITHIN THE HOME PROLONGS THE LIFE OF THE MOUND SYSTEM. THE MOUND SHALL BE PLOWED PERIODICALLY. AVOID EXCESS TRAFFIC IN MOUND AREA, ESPECIALLY WHEN WET. COMPACTION OF THE SOIL NEAR AND AROUND THE MOUND MUST BE AVOIDED. ANIMAL CONFINEMENT OR GRAZING SHOULD NOT BE PERMITTED IN THE MOUND AREA.

1. THE DESIGNING ENGINEER SHALL INSPECT THE SITE AND WEATHER CONDITIONS PRIOR TO CONSTRUCTION OF THE SYSTEM. HE/SHE MUST VERIFY DRY AND ACCEPTABLE SOIL AND WEATHER CONDITIONS FOR CONSTRUCTION AND DECIDE IF CONDITIONS ARE SUITABLE TO BEGIN CONSTRUCTION.
2. THE DESIGNING ENGINEER SHALL VERIFY (WITH THE CONTRACTOR) THE PROPER STAKING OF THE SYSTEM PRIOR TO ANY CONSTRUCTION. THE SYSTEM DETAILS, CONFIGURATION, LOCATION, CONTOUR, PERCOLATION AREA, EXPANSION AREA, ETC. SHALL BE VERIFIED.
3. THE DESIGNING ENGINEER OR CONTRACTOR SHALL NOTIFY THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES A MINIMUM OF 48 HOURS IN ADVANCE WHEN CONSTRUCTION IS TO TAKE PLACE AND CERTIFY THAT THE SOIL CONDITIONS ARE ACCEPTABLE FOR CONSTRUCTION PURPOSES AND THAT THE STAKING OF THE SYSTEM HAS BEEN ACCOMPLISHED AND CERTIFIED.
4. AT THE PRE-CONSTRUCTION CONFERENCE, THE FOLLOWING ITEMS SHALL BE REVIEWED. CONSTRUCTION MAY PROCEED IF THE DESIGNING ENGINEER NOTIFIES THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES HEALTH OFFICER VERBALLY THAT ALL ELEMENTS ARE ABLE TO CONFORM TO THE FOLLOWING REQUIREMENTS:
 - A) SOIL MOISTURE AT THE APPROPRIATE DEPTH IS NOT SO HIGH AS TO HAVE THE SOIL SMEAR OR COMPACT DUE TO CONSTRUCTION ACTIVITIES.
 - B) IMMINENT WEATHER CONDITIONS APPRAISE THAT THEY WILL NOT CREATE UNSUITABLE SOIL MOISTURE CONDITIONS DURING THE PERIOD OF CONSTRUCTION.
 - C) THE SOURCE OF SOIL COVER MATERIAL SHALL BE DESIGNATED, AND A SAMPLE SHALL BE MADE AVAILABLE AND APPROVED BY THE DESIGN CONSULTANT PRIOR TO PLACEMENT.
5. AT THE INTERIM INSPECTION, THE FOLLOWING ELEMENTS, (WHEN REQUIRED), SHALL BE VERIFIED.
 - A) INSPECT FILL SOIL FOR QUALITY AND PROPER PLACEMENT.
 - B) ROUT AND STAKING OF THE PRIMARY LEACH FIELD AREA AND THE RESERVE BOUNDARY(ES) SUBSTANTIALLY CONFORM TO THE APPROVED CONSTRUCTION DOCUMENTS .
6. AT THE INTERIM INSPECTION, THE FOLLOWING ELEMENTS, (WHEN REQUIRED), SHALL BE VERIFIED BY THE DESIGNING ENGINEER AND ENVIRONMENTAL HEALTH SERVICE HEALTH OFFICER BY VISUAL INSPECTION AND OPERATION OF THE SYSTEM. WHEN ALL REQUIRED ELEMENTS ARE COMPLETELY AND APPROVED, THE DISPOSAL FIELD, AND TANKS MAY BE COVERED OR BACKFILLED.
 - A) LINE AND GRADE OF ALL EXCAVATIONS AND FILLS AS APPLICABLE.
 - B) FUNCTION AND SETTING OF THE CONTROL DEVICES, INCLUDING BUT NOT LIMITED TO VALVES, SWITCHES AND ALARMS.
 - C) HYDRAULIC TESTING OF ANY PUMP AND DISTRIBUTION SYSTEM TO ASSURE THAT THE PUMP IS ADEQUATE FOR DESIGN FLOW.
 - D) ALL THE REMAINING ELEMENTS REQUIRED TO COMPLETE THE SYSTEM SHALL BE ON SITE AT THE TIME OF INSPECTION AND APPROVAL BY THE DESIGNER FOR CONFORMANCE WITH THE PLANS AND SPECIFICATIONS.
7. AT THE FINAL INSPECTION, THE DESIGNING ENGINEER SHALL VERIFY THAT ALL CONSTRUCTION IS IN GENERAL CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. THE SEPTIC TANK SHALL BE IAPMO APPROVED. THE SEPTIC TANK AND PUMP SUMP MAY BE SUBJECT TO A WATER TIGHTNESS TEST BY MARIN COUNTY P.E.'S. THE WATER TEST SHALL BE PERFORMED BY THE CONTRACTOR AND CONSISTS OF FILLING THE TANKS 2" INTO THE RISERS WITH CLEAR WATER. THE TANKS MAY BE TESTED SEPARATELY AND SHALL BE CONSIDERED ADEQUATELY WATER TIGHT IF THERE IS NO MEASURABLE DROP IN WATER LEVEL IN 1/2 HOUR.
9. A FINAL LETTER FROM THE DESIGNING ENGINEER TO THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES SHALL STATE THAT ALL CONSTRUCTION HAS BEEN COMPLETED, APPROVED, AND IS IN CONFORMANCE WITH ALL SPECIFICATIONS.
10. NOTE:

THE E.H.S HEALTH OFFICER WILL PERFORM A FINAL INSPECTION OF THE SYSTEM FOLLOWING THE RECEIPT OF THE DESIGNING ENGINEER'S APPROVAL LETTER. THE E.H.S WILL NOT SIGN OFF THE PERMIT OR JOB CARD UNTIL THE HOUSE OR STRUCTURE IS READY FOR OCCUPANCY. AT THAT TIME, THE OPERATIONAL PERMIT WILL BE ISSUED AND THE ANNIVERSARY DATE ESTABLISHED.

SEAL INTERIOR OF SEPTIC TANK OR RISER ON EQUAL. SEAL ALL JOINTS WITH MASTIC. SEAL PRECAST CONCRETE JOINTS WITH RAMNEK OR EQUAL.

2. PENETRATIONS IN THE SEPTIC TANK OR RISER MUST BE SEALED WITH GAS-TIGHT COMPRESSION CONNECTORS OR WATERPROOF SEALANT OR PRECAST INTO SEPTIC TANK.

3. TANK AND RISER JOINT SHALL BE SEALED AND MADE WATER TIGHT WITH NON-SHRINK GROUT OVERLAID WITH XYPEX OR THOROSEAL.

4. THE SEPTIC TANK SHALL BE IAPMO APPROVED. WATER TIGHTNESS TEST MAY BE REQUIRED BY MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES. THE WATER TIGHTNESS TEST CONSISTS OF FILLING THE TANK TO 2 INCHES INTO THE RISERS WITH CLEAR WATER.

5. THE TANK SHALL BE CONSIDERED ADEQUATELY WATER TIGHT IF THERE IS NO MEASURABLE DROP OF WATER IN THE TANK IN 1/2 HOUR.

The diagram illustrates the elevation view of a septic tank riser. It features a vertical pipe section on the right labeled "RIP R MAIN". This pipe has three distinct sections, each with a height dimension of d . The top section is filled with rock rip rap. Below it is a horizontal section of length $1d$, also containing rock rip rap. At the bottom is another vertical section of height d . To the left of the main riser is a sloped inlet/outlet pipe with a slope of 1:1 MAX. The vertical distance from the centerline of this pipe to the top of the rock rip rap area is $d/4$. The horizontal distance from the vertical centerline of the main riser to the start of the sloped pipe is $d/2$. The sloped pipe is labeled "CUT PIPE TO CONFORM TO SLOPE". Above the rock rip rap area, there are two labels: "PLACE ROCK PER CALTRANS SECTION 72 METHOD B (4\"

ELEVATION VIEW

ROCK RIP RAP ENERGY DISSIPAT

- SEAL INTERIOR OF PUMP SUMP WITH THOROSEAL OR EQUAL. SEAL ALL JOINTS WITH MASTIC. PRECAST CONCRETE JOINTS WITH RAMMEN OR EQUAL.
2. PENETRATIONS IN THE PUMP SUMP OR RISER MUST BE SEALED WITH GAS-TIGHT COMPRESSION CONNECTORS OR WATERPROOF SEALANT OR PRECAST INTO PUMP SUMP.
3. TANK AND RISER JOINT SHALL BE SEALED AND MADE WATER TIGHT WITH NON-SHRINK GROUT OVERLAP WITH YXPEX OR THOROSEAL.
4. THE PUMP SUMP SHALL BE IPOMO LISTED. WATER TIGHTNESS TEST MAY BE REQUIRED BY MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES. THE WATER TIGHTNESS TEST CONSISTS OF FILLING THE TANK FULL TO 2 INCHES INTO THE RISERS WITH CLEAR WATER.
5. THE TANK SHALL BE CONSIDERED ADEQUATELY WATER TIGHT IF THERE IS NO MEASURABLE FALL OF WATER IN THE TANK IN 1/2 HOUR.

CONCRETE TANK DEMOLITION NO

1. THE TANK SHALL BE PUMPED BY A LICENSED SEPTIC TANK PUMPER.
2. THE ENTIRE LID IS TO BE BROKEN IN AND DISPOSED OF INSIDE THE TANK.
3. BREAK A HOLE INTO THE BOTTOM OF EACH SECTION OF THE TANK TO PROVIDE FOR DRAINAGE.
4. BACKFILL THE TANK WITH A SAND/PEA GRAVEL MIX OR RIVER RUN MATERIAL TO A DEPTH OF APPROXIMATELY ONE FOOT BELOW FINISH GRADE. BACKFILL WITH NATIVE SOIL COMPACTED TO NATIVE DENSITY.

GENERAL NOTES:

1. LOW FLOW TOILETS (1.6 GAL. MAX.) ARE REQUIRED IN ALL BATHROOMS AND LAVATORIES.
2. WATER SERVICE LINES TO OBSERVE ALL SETBACKS REQUIRED BY THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICE.
3. CONTOURS SHOWN ARE BASED ON FIELD WORK PERFORMED BY ADOBE ASSOCIATES, INC. IN APRIL 1, 2022. CONTOUR INTERVAL IS TWO (2) FOOT, DATUM ASSUMED.
4. NO FOUNDATION AND/OR DRIVEWAY CUTS, AND NO SURFACE OR SUB-SURFACE DRAINS ARE TO BE LOCATED WITHIN 50 FEET DOWNSLOPE OR LATEROALLY OF THE PRIMARY OR EXHAUST/REPAIR AREA OF ANY LEACHFIELD. DIRECT DOWNSPOUTS AWAY FROM LEACH FIELD.
5. THE BOUNDARY INFORMATION SHOWN IS PER RECORD INFORMATION AND IS NOT THE RESULT OF A SURVEY BY ADOBE ASSOCIATES, INC.
6. ANY PROPOSED CHANGE TO HOUSE DESIGN OR LOCATION IS TO BE APPROVED BY ADOBE ASSOCIATES, INC. AND THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES HEALTH OFFICER FOR COMPATIBILITY WITH THE SEPTIC SYSTEM.
7. REMOVAL OF TREES WITHIN ANY PROPOSED FILL AREA IS REQUIRED. TREES ALLOWED TO REMAIN IN THE FILL AREA MAY BE DAMAGED OR DESTROYED BY THE DELETERIOUS EFFECTS OF THE FILL SOIL.

1. LOW FLOW TOILETS (1.6 GAL. MAX.) ARE REQUIRED IN ALL BATHROOMS AND LAVATORIES.
2. WATER SERVICE LINES TO OBSERVE ALL SETBACKS REQUIRED BY THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICE.
3. CONTOURS SHOWN ARE BASED ON FIELD WORK PERFORMED BY ADOBE ASSOCIATES, INC. IN APRIL 1, 2022. CONTOUR INTERVAL IS TWO (2) FOOT, DATUM ASSUMED.
4. NO FOUNDATION AND/OR DRIVEWAY CUTS, AND NO SURFACE OR SUB-SURFACE DRAINS ARE TO BE LOCATED WITHIN 50 FEET DOWNSLOPE OR Laterally OF THE PRIMARY OR EXPANSION/REPAIR AREA OF ANY LEACHFIELD. DIRECT DOWNSPOUTS AWAY FROM LEACH FIELD.
5. THE BOUNDARY INFORMATION SHOWN IS PER RECORD INFORMATION AND IS NOT THE RESULT OF A SURVEY BY ADOBE ASSOCIATES, INC.
6. ANY PROPOSED CHANGE TO HOUSE DESIGN OR LOCATION IS TO BE APPROVED BY ADOBE ASSOCIATES, INC. AND THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES HEALTH OFFICER FOR COMPATIBILITY WITH THE SEPTIC SYSTEM.
7. REMOVAL OF TREES WITHIN ANY PROPOSED FILL AREA IS REQUIRED. TREES ALLOWED TO REMAIN IN THE FILL AREA MAY BE DAMAGED OR DESTROYED BY THE DELETERIOUS EFFECTS OF THE FILL SOIL.

PLAN VIEW

1:1 MAX.

1:1 MAX.

1:1 MAX.

CLEANOUT BOX WITH LID
MARKED SEWER

FINISH
GRADE

SCREWED
PLUG

BACKFILL
MATERIAL

4" MIN.

4" DIAMETER BOTTOM
PERFORATED STYRENE
PIPE

**INTERCEPTOR DRAIN
CLEANOUT DETAIL**

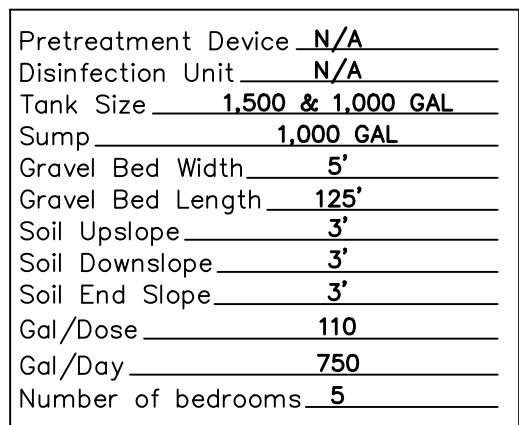
NTS

ES: APN 100-050-26

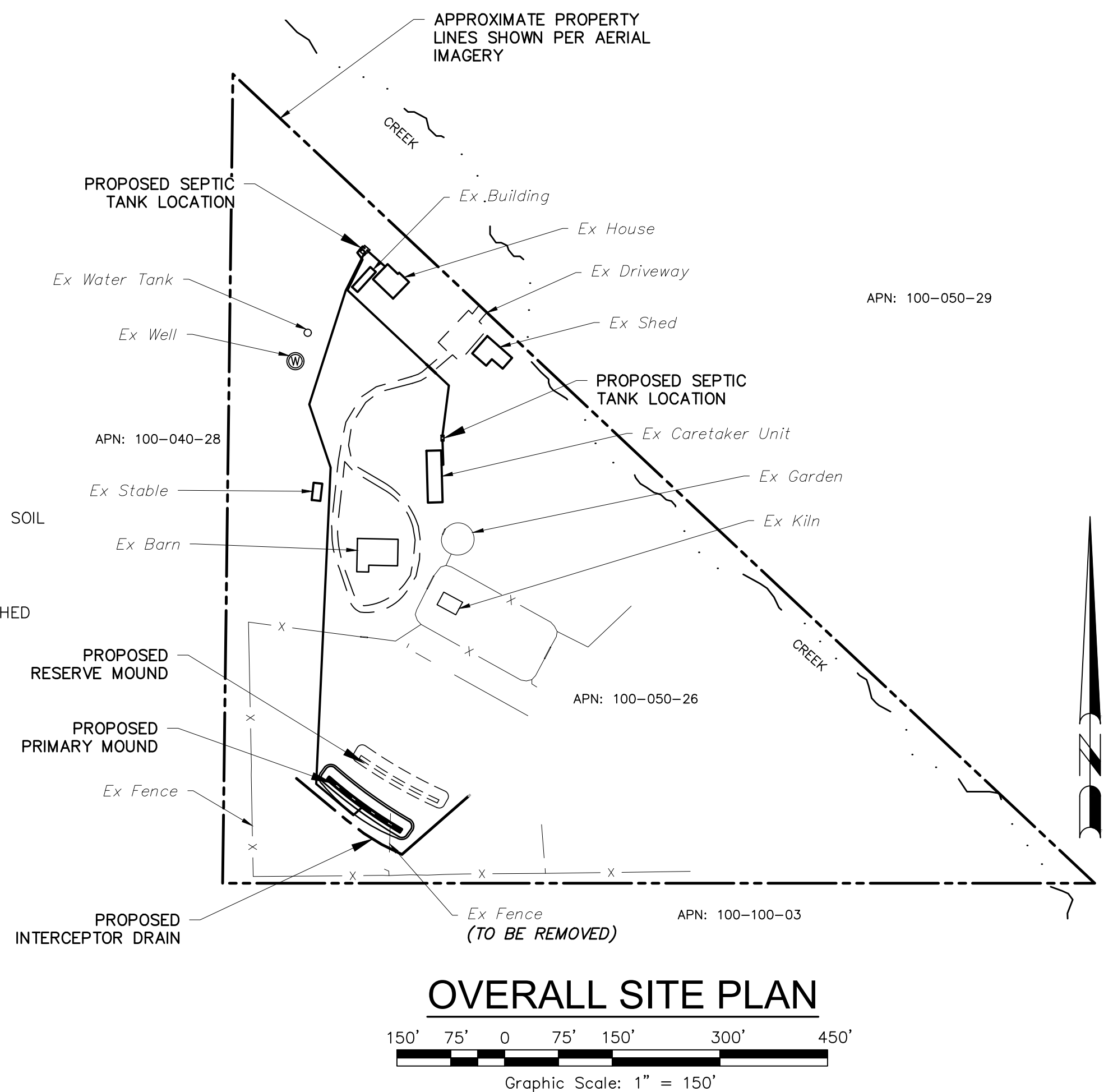
PACIFIC OCEAN

OWNER INFO

THE FARM, LLC
555 CALIFORNIA STREET, SUITE 4905
SAN FRANCISCO, CA 94104



1. TITLE SHEET
2. SEPTIC SYSTEM PLAN SHEET
3. DETAIL SHEET
4. TANK DETAIL SHEET

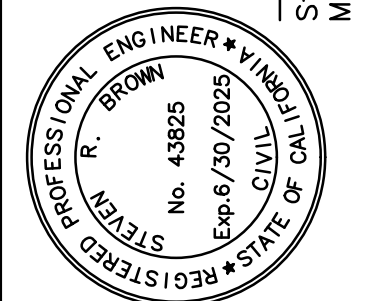
[illegible]

adobe associates, inc.
civil engineering / land surveying / wastewater

12220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com

"A Service You Can Count On!"

John R. Brown, RCE 43825
License Expires 6/30/2025



**MOUND TYPE PRIVATE
SEWAGE DISPOSAL SYSTEM
TITLE SHEET**
5500 Valley Ford Franklin School Road
Petaluma, California
APN 100-050-26

SCALE: AS NOTED

Date: June 26, 2024

Design by: SRB

Drawn by: JMO

Checked by: SRB

Sheet
W1
of 4 Sheets
Job 21272

DESIGN CRITERIA:

DESIGN PURPOSE
THE PURPOSE OF THIS PROJECT IS TO PROVIDE SEPTIC DISPOSAL CAPACITY FOR AN EXISTING 4-BEDROOM RESIDENCE AND 1-BEDROOM CARETAKER UNIT ON THE PARCEL LOCATED AT 5500 VALLEY FORD FRANKLIN SCHOOL ROAD IN PETALUMA (APN 100-050-26). THE PROPOSED SYSTEM IS A NONSTANDARD MOUND SYSTEM. THE PROPOSED DESIGN MEETS CLASS TWO MARIN COUNTY OWTS STANDARDS.

SITE REVIEW:
A SITE REVIEW WAS CONDUCTED BY ADOBE ASSOCIATES INC. WITH A REPRESENTATIVE FROM THE MARIN COUNTY ENVIRONMENTAL HEALTH SERVICES DEPARTMENT ON SEPTEMBER 29, 2021 (P1601).

PERCOLATION TEST:
A PERCOLATION TEST WAS CONDUCTED BY ADOBE ASSOCIATES INC ON JUNE 18, 2024 (P2005).

PERCOLATION TEST RATE: = 31 (MPI) MINUTES PER INCH @ 24" DEPTHS
HYDRAULIC LOADING RATE (HLR): = 0.83 GAL/SF/DAY
LINEAR LOADING RATE (LLR): = 6 GAL./LINEAR FOOT/DAY
AVERAGE GROUND SLOPE: = 12%

5 BEDROOM SYSTEM

DESIGN CALCULATIONS/FLOWS:
(5 BEDROOMS)(150 GALLONS PER BEDROOM PER DAY) =750 (TOTAL) GALLONS PER DAY.

PRIMARY SYSTEM DESIGN:
904 SQUARE FEET (100%) PRIMARY DISPOSAL SYSTEM BASAL AREA REQUIRED.
1,563 SQUARE FEET PRIMARY DISPOSAL SYSTEM BASAL AREA SHOWN.
(TO BE CONSTRUCTED)

RESERVE SYSTEM DESIGN:
904 SQUARE FEET (100%) RESERVE DISPOSAL SYSTEM BASAL AREA REQUIRED.
1,563 SQUARE FEET RESERVE DISPOSAL SYSTEM BASAL AREA SHOWN.
(NOT TO BE CONSTRUCTED)

LEGEND

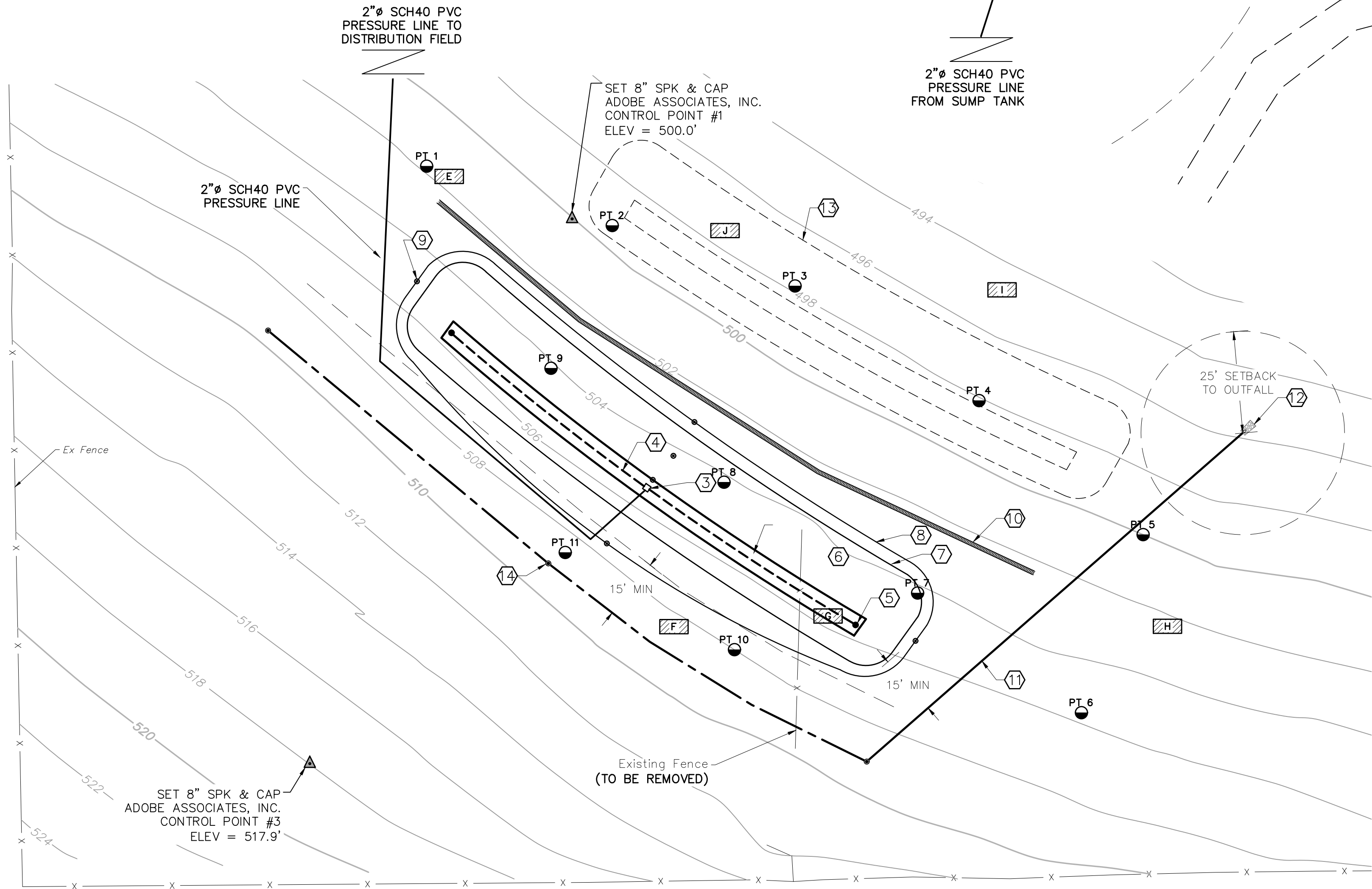
- 1,500 GALLON (IAPMO APPROVED) CONCRETE SEPTIC TANK WITH 24"Ø RISERS OVER BOTH PORTS; INSTALL EFFLUENT FILTER AT OUTLET (SEE DETAIL, SHEET W4)
- 1,000 GALLON (IAPMO LISTED) CONCRETE PUMP SUMP AND SUMP PUMP WITH 24"Ø RISER OVER SUMP PUMP PORT (SEE DETAIL, SHEET W4)
- DISTRIBUTION MANIFOLD IN CHRISTY BOX (OR EQUAL) (SEE DETAIL, SHEET W3)
- (2) 60 LF 1-1/4"Ø SCH 40 PVC DISTRIBUTION LATERAL SECTION WITH (20) 1/8"Ø ORIFICE HOLES SPACED 36" O.C.; STAGGER ORIFICE HOLES WITH ADJACENT LATERALS TO MAXIMIZE EFFLUENT DISTRIBUTION. HOLES TO BE POINTED UP & COVERED WITH ORIFICE SHIELDS. (SEE DETAIL, SHEET W3)
- PURGE VALVE IN CHRISTY BOX (OR EQUAL) (SEE DETAIL, SHEET W3)
- PRIMARY MOUND DISTRIBUTION GRAVEL BED (LENGTH = 125 LINEAL FEET) INSTALLED ON CONTOUR AND SET LEVEL (SEE DETAIL, SHEET W3)
- PRIMARY MOUND TOE OF SAND BED
- PRIMARY MOUND TOE OF TOPSOIL COVER
- MONITORING WELL, TYP (6 MINIMUM) (SEE DETAIL, THIS SHEET)
- STRAW WATTLE CHECK DAM (SEE DETAIL, SHEET W3)
- INTERCEPTOR DRAIN AND 4"Ø SCH 40 SOLID OUTFALL PIPE (SEE TRENCH DETAIL, SHEET W1)
- ROCK RIP-RAP ENERGY DISSIPATER (SEE DETAIL, SHEET W1)
- RESERVE MOUND TOE OF SAND BED (NOT TO BE CONSTRUCTED)
- INTERCEPTOR DRAIN CLEANOUT; INSTALL AT ANGLE POINTS AND 100' MAX INTERVALS (SEE DETAIL, SHEET W1)
- TWO-WAY GRAVITY TYPE SANITARY SEWER CLEANOUT; INSTALL 2' FROM BUILDING EXTERIOR WALL (SEE DETAIL, SHEET W3)
- ONE-WAY GRAVITY TYPE CLEANOUT; INSTALL AT ANGLE POINTS AND AT 100' MAX INTERVALS ON GRAVITY LINE (SEE DETAIL, SHEET W3)
- 1,000 GALLON (IAPMO APPROVED) CONCRETE SEPTIC TANK WITH 24"Ø RISERS OVER BOTH PORTS; INSTALL EFFLUENT FILTER AT OUTLET (SEE DETAIL, SHEET W4)
- SOIL PROFILE HOLE
- PERCOLATION TEST PIT
- SURVEY CONTROL POINT

NOTE:
MONITORING WELLS ARE TO BE INSTALLED TO THE FOLLOWING DEPTHS:
1 CENTER OF GRAVEL BED, TO BOTTOM OF BED
2 CENTER OF DOWNSLOPE SAND AT DEPTH OF 6".
3-6 MIDWAY ON EACH FOUR SIDES NEAR SLOPE OF SOIL TOE AT DEPTH OF 60".
(SEE PRIMARY DISTRIBUTION DETAIL SHEET W3)

MONITORING WELL
CAP
GROUND OR SOIL COVER SURFACE
CONCRETE CHRISTY F8 BOX WITH F80 LID
12" ANNULAR CONCRETE SEAL (NOT TO EXTEND BELOW TOPSOIL COVER ON WELLS #1-4)
NUMBER 3 MONTEREY SAND, WELLS WITHIN GRAVEL BED(S) TO CONTAIN PEA GRAVEL
4" DIAMETER F480 CL200 PVC SCREENED WELL CASING WITH 1/16" OR 3/32" MACHINED SLOTS

NOTES

- NO FOUNDATION AND/OR DRIVEWAY CUTS, AND NO SURFACE OR SUB-SURFACE DRAINS ARE TO BE LOCATED WITHIN 50 FEET DOWNSLOPE OR Laterally OF THE PRIMARY OR EXPANSION/REPAIR AREA OF ANY LEACH FIELD. DIRECT DOWNSPOUTS AWAY FROM LEACH FIELD.
- PLACE THE UPSLOPE TOPSOIL TO ALLOW FOR POSITIVE DRAINAGE AWAY FROM THE MOUND SYSTEM.
- ALL UNDERGROUND BOXES REQUIRE INSTALLATION OF GOPHER-RESISTANT BARRIERS.
- THE ENGINEER AND INSTALLER WILL BE PRESENT WITH ENVIRONMENTAL HEALTH STAFF AT THE START UP INSPECTION AFTER FINAL ELECTRICAL SERVICE IS INSTALLED.



SEPTIC SYSTEM PLAN

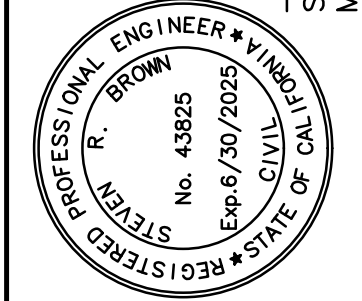


MONITORING WELL

NTS

adobe associates, inc.
civil engineering / land surveying / wastewater
1220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com
"A Service You Can Count On!"

Steven R. Brown, RCE 43825
My License Expires 6/30/2025

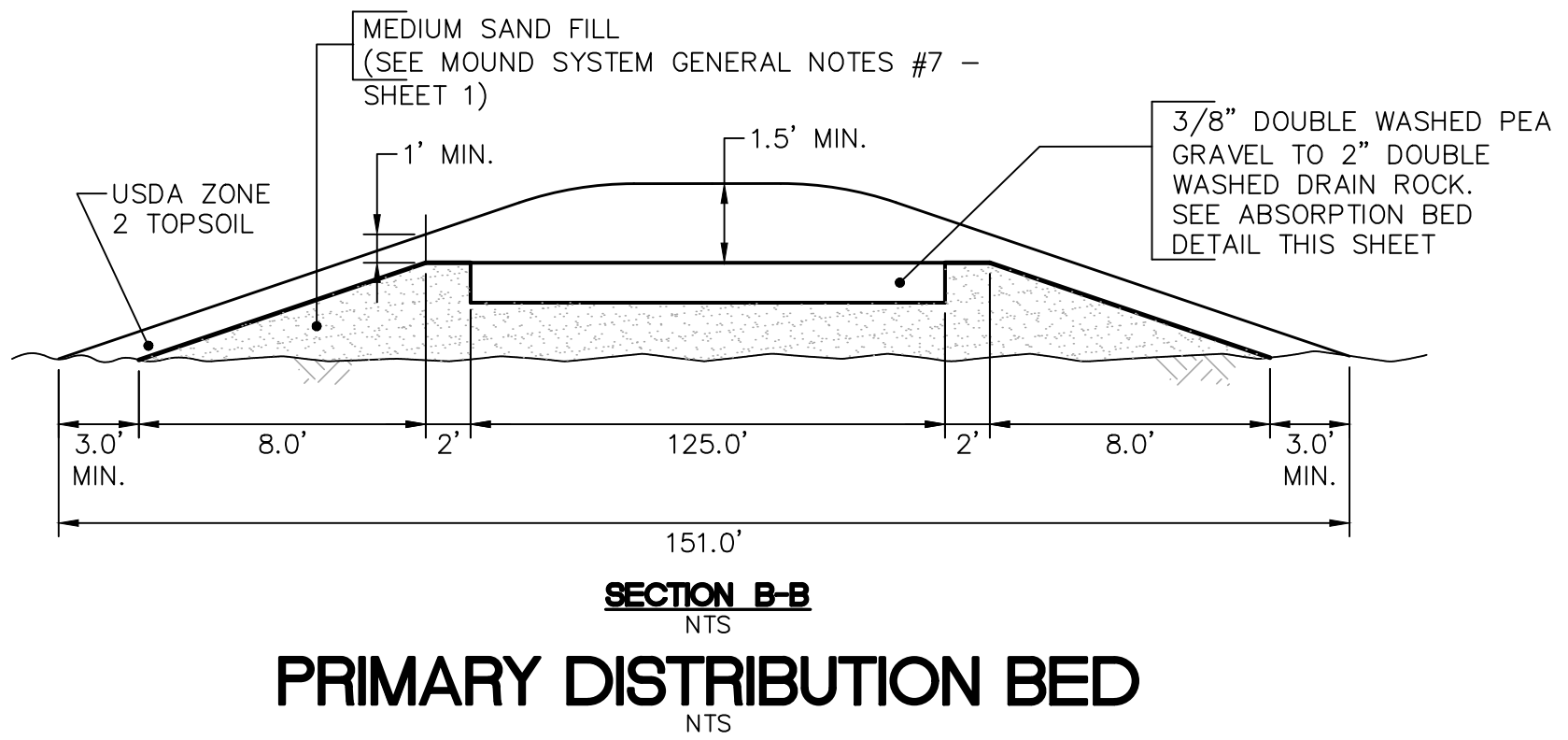
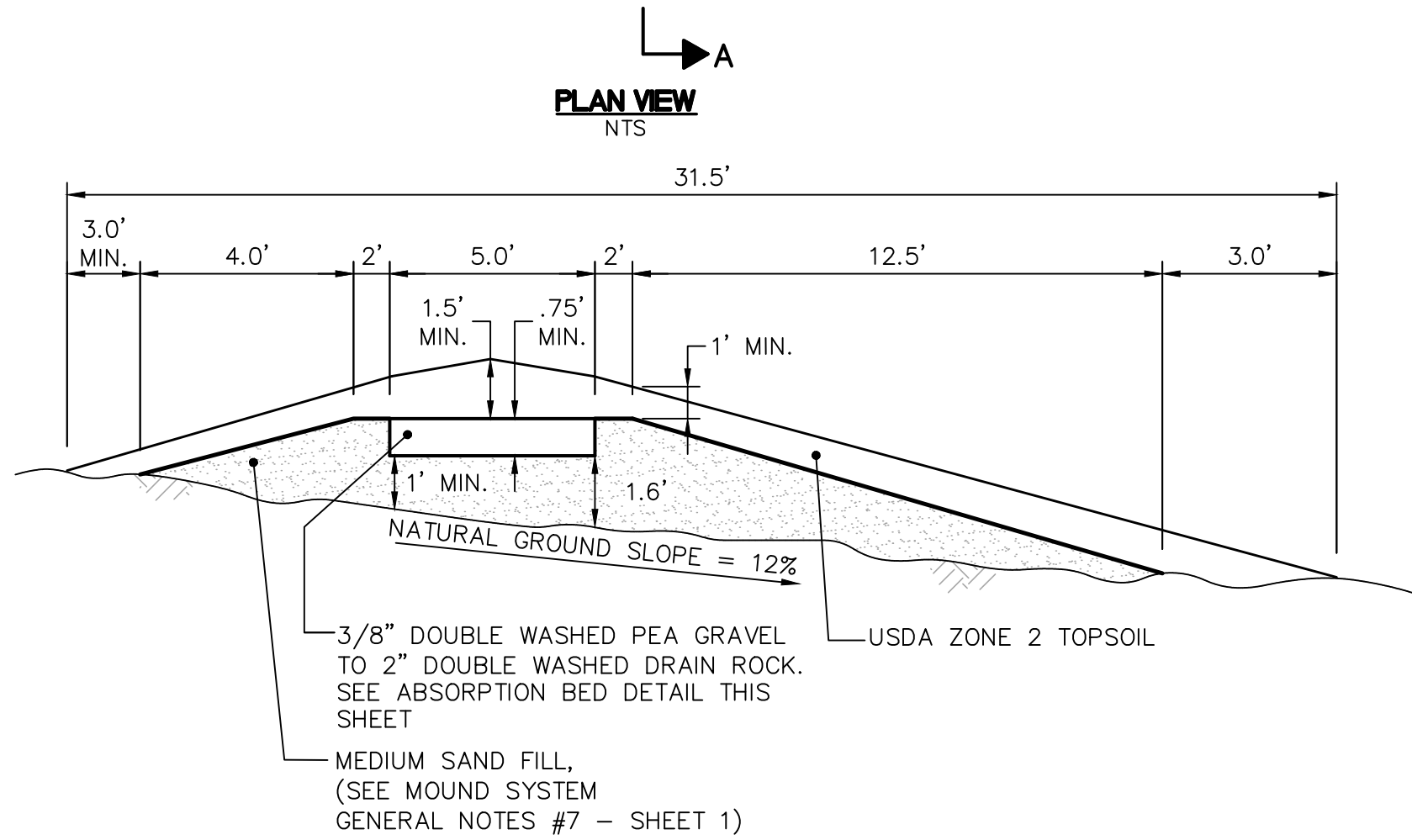
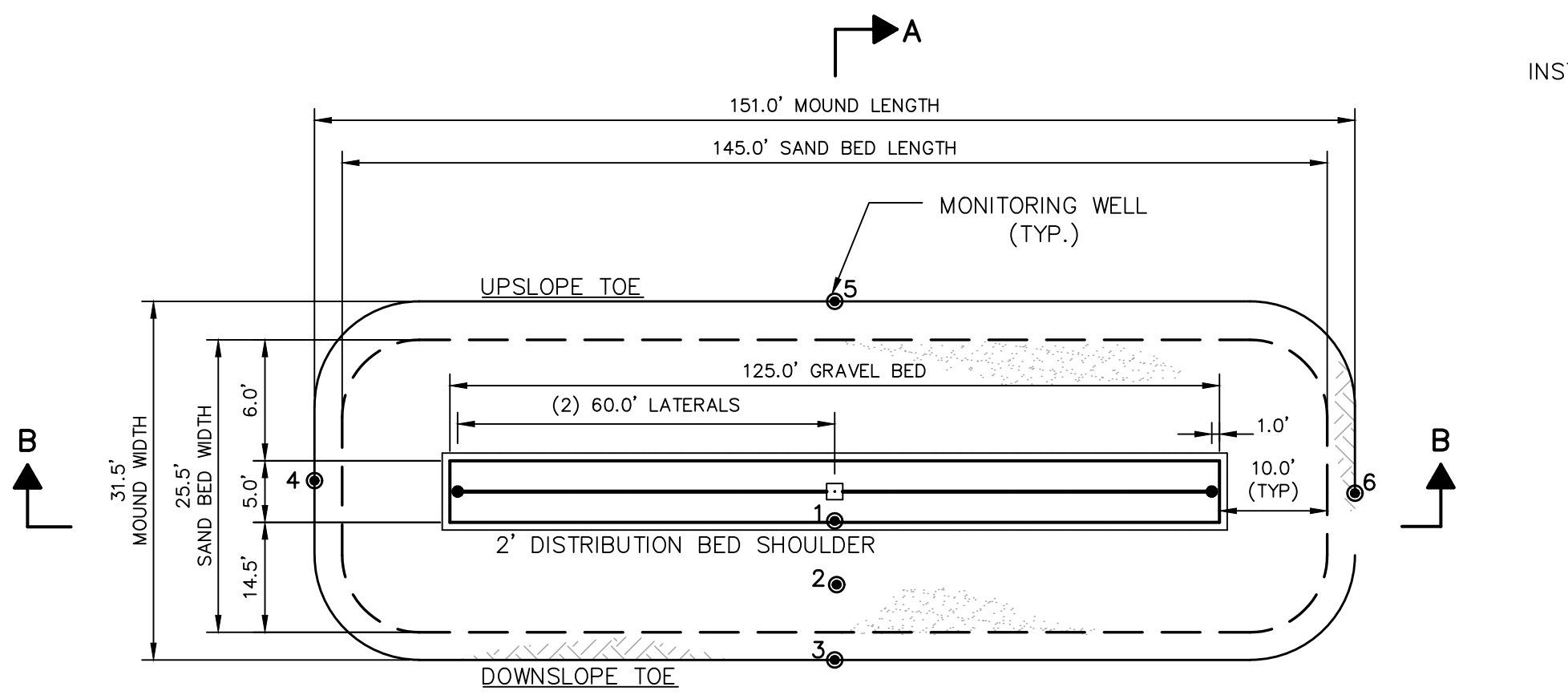


MOUND TYPE PRIVATE
SEWAGE DISPOSAL SYSTEM
SEPTIC SYSTEM PLAN
5500 Valley Ford Franklin School Road
Petaluma, California
APN 100-050-26

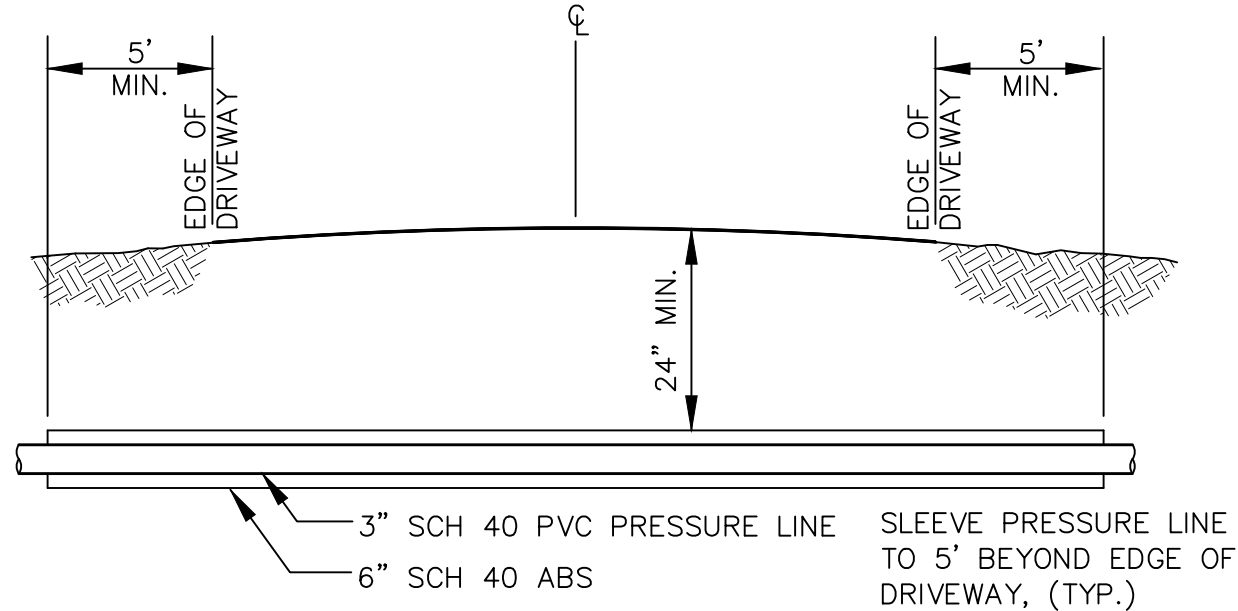
SCALE: AS NOTED
Date: June 26, 2024
Design by: SRB
Drawn by: JMO
Checked by: SRB

Sheet
W2
of 4 Sheets
Job 21272

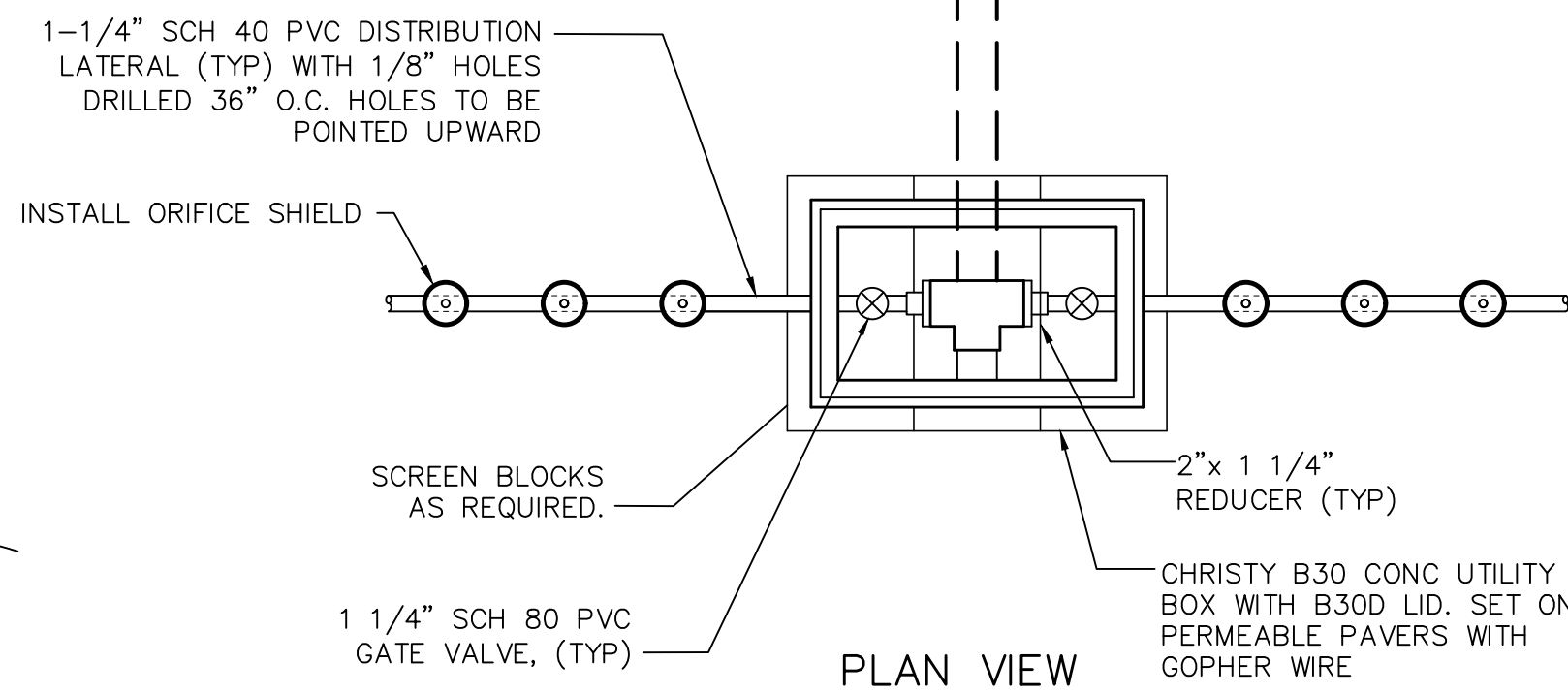
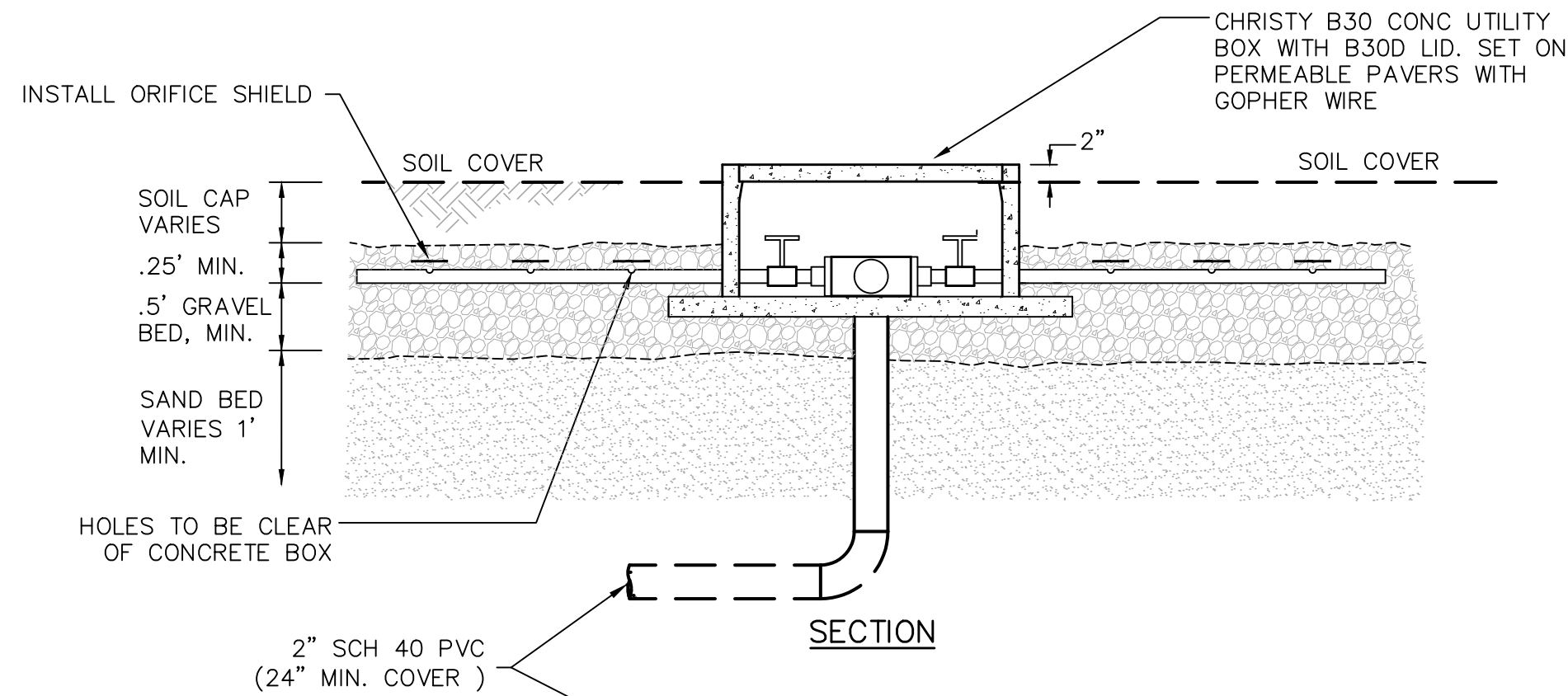
File 11, 2021 PROJECTS\21272\DWG\MOBSE-WASTEWATER\21272-MOUND.DWG, 6/26/2024, 9:12:50 AM, user: oty



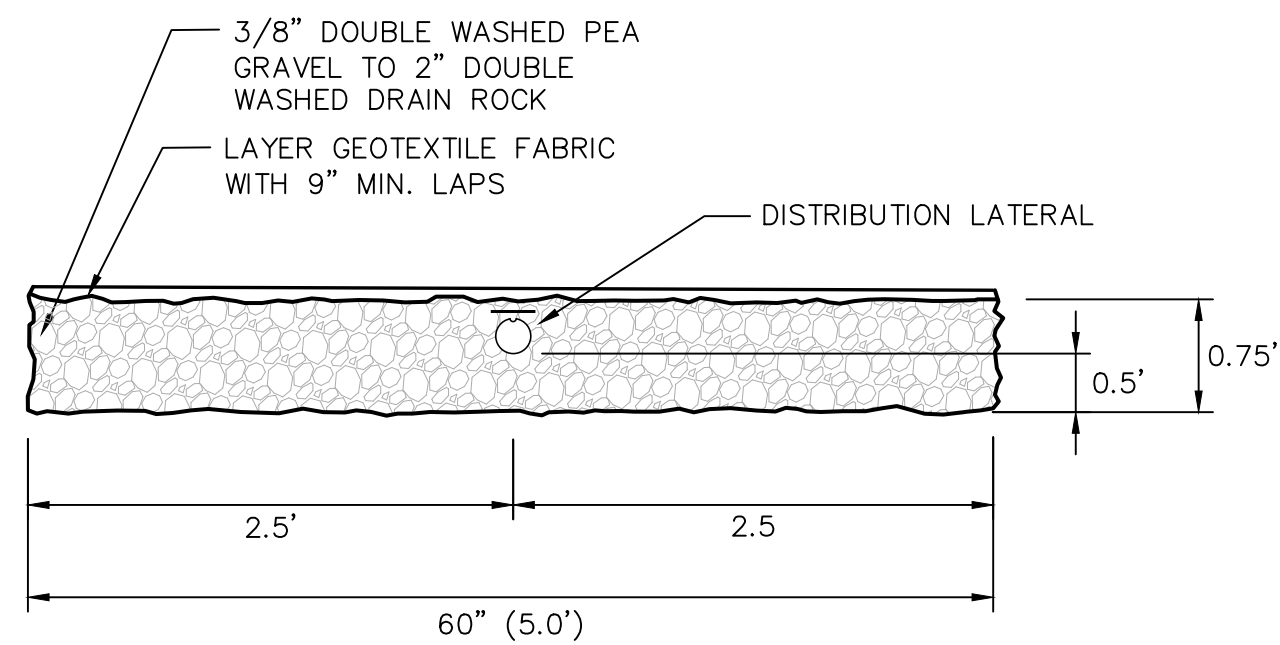
PRIMARY DISTRIBUTION BED



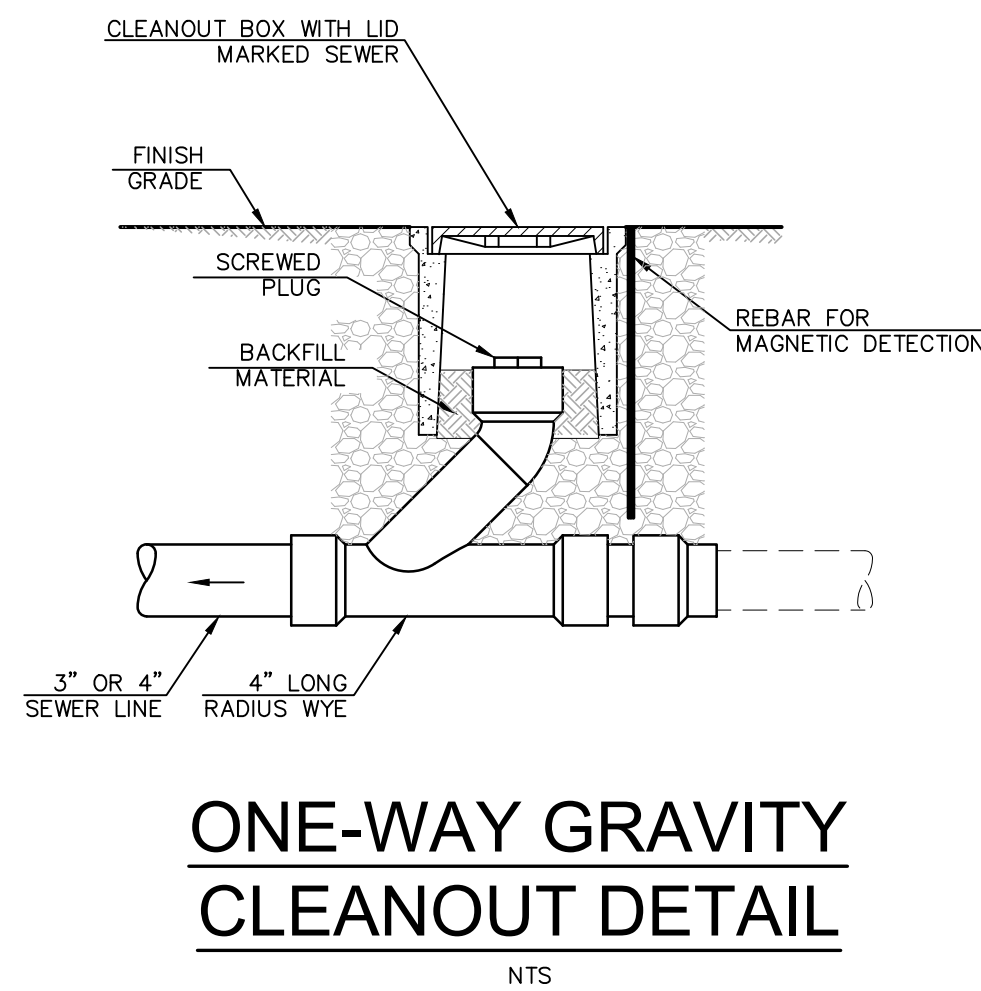
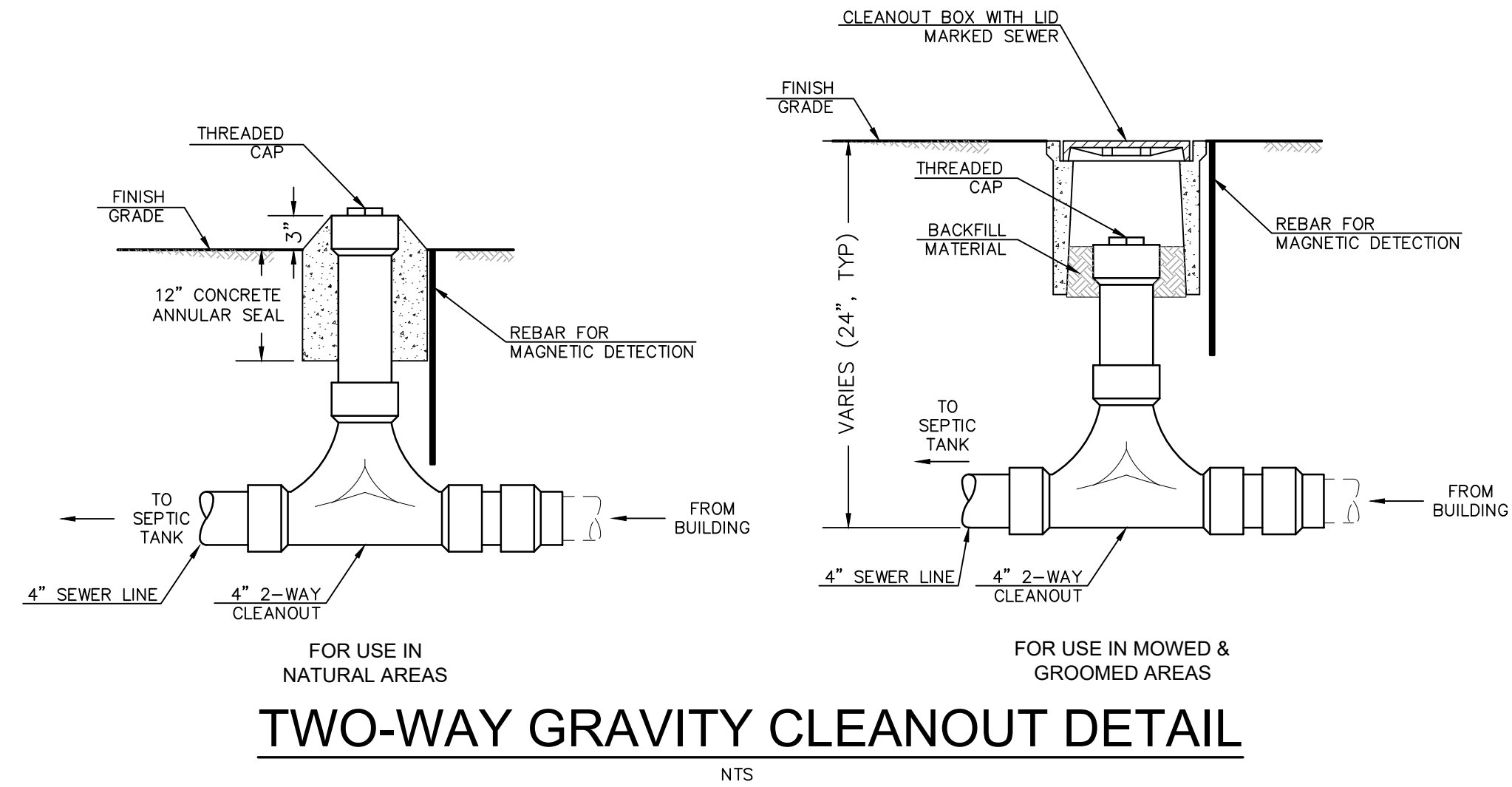
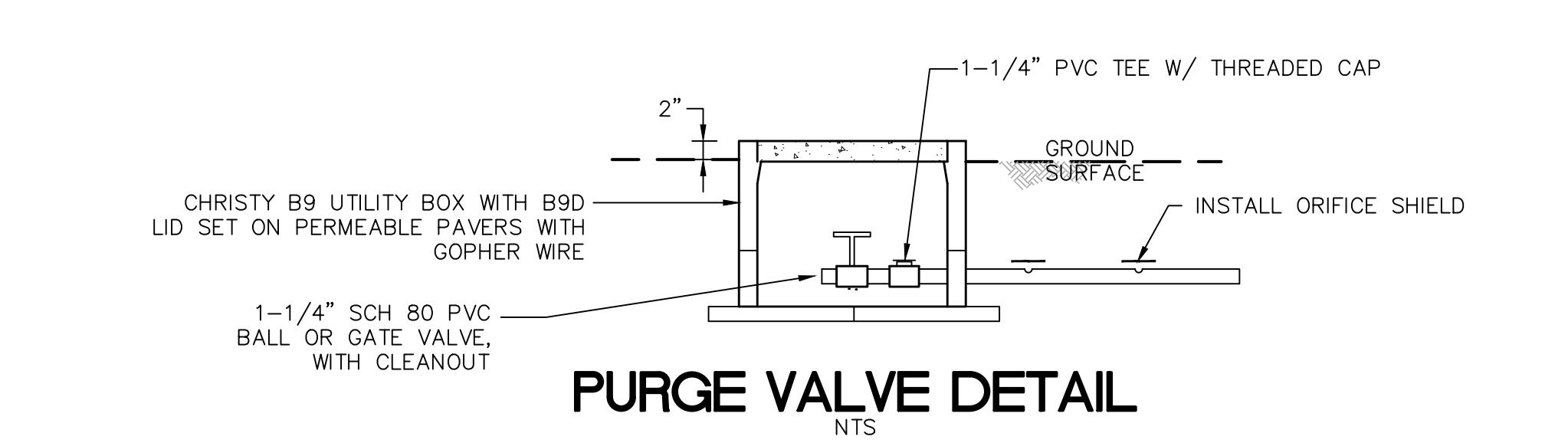
DRIVEWAY CROSSING DETAIL



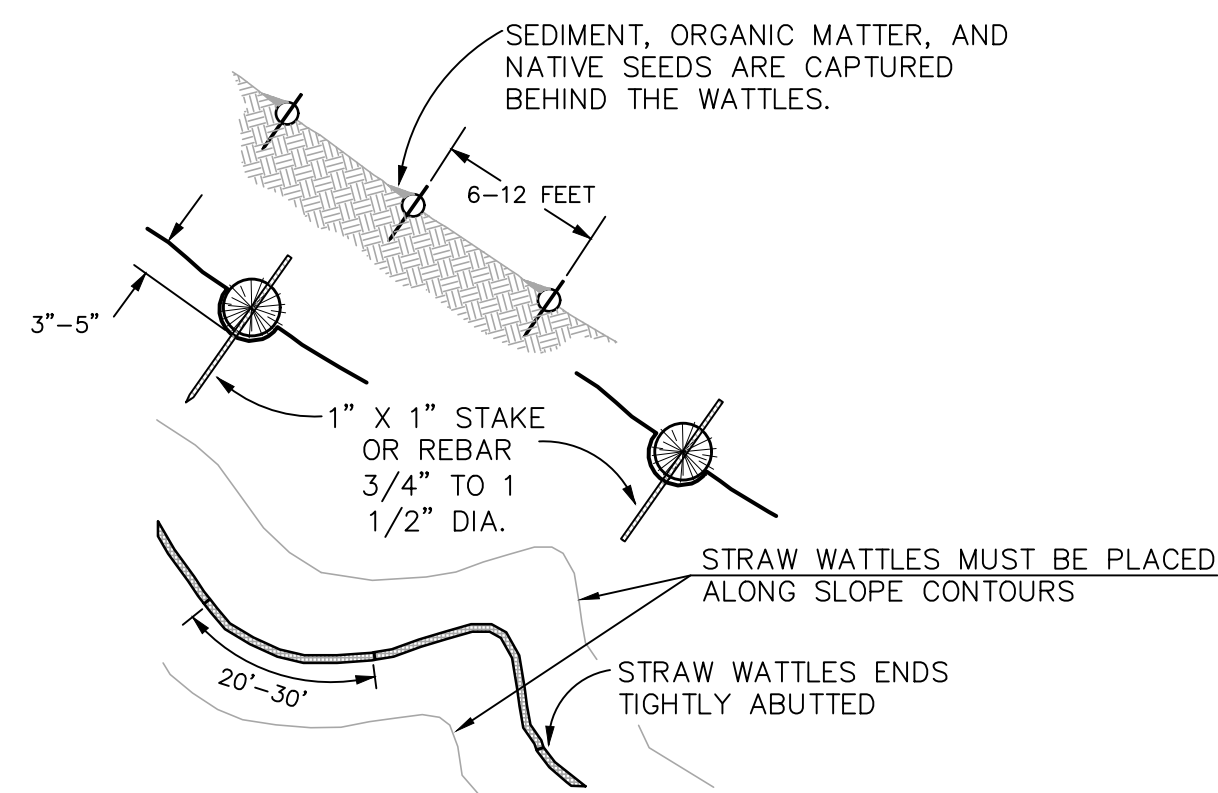
DISTRIBUTION MANIFOLD DETAIL



ABSORPTION BED DETAIL



ONE-WAY GRAVITY CLEANOUT DETAIL



- NOTES:
1. STRAW WATTLES ARE TUBES MADE FROM STRAW BOUND W/ PLASTIC NETTING. THEY ARE APPROX. 8" DIA. AND 20 - 30 FT. LONG.
 2. STRAW WATTLES TRAP SEDIMENT AND REDUCE SHEET & RILL EROSION BY REDUCING SLOPE GRADIENT, INCREASING INFILTRATION RATES AND BY PRODUCING A FAVORABLE ENVIRONMENT FOR PLANT ESTABLISHMENT.
 3. STRAW WATTLE INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE WATTLE IN A TRENCH, 3" - 5" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND WATTLE.

STRAW WATTLE CHECK DAM

Revisions	Description	Approved
No.	Date	

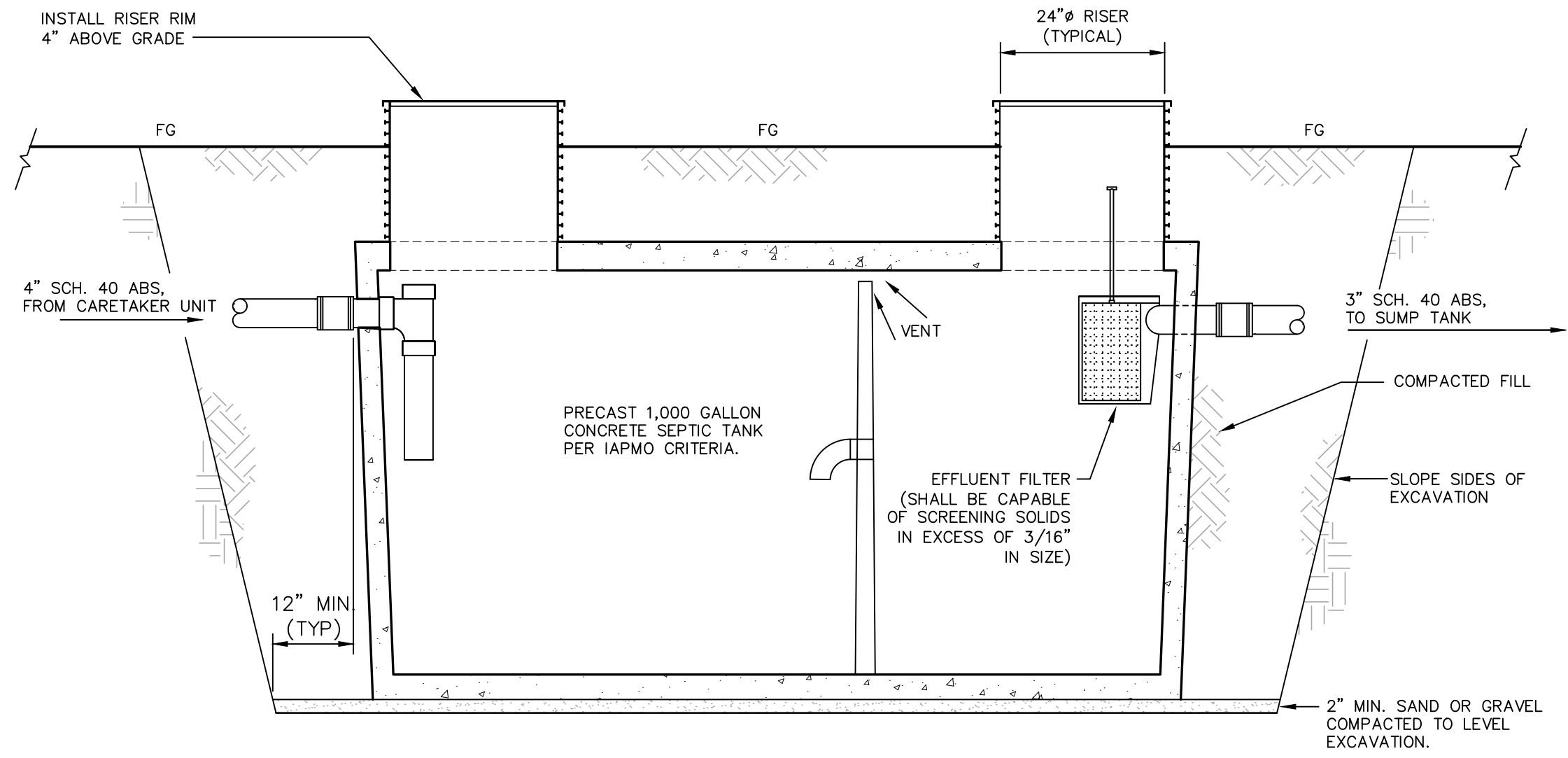
adobe associates, inc.
civil engineering | land surveying | wastewater
1220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com
"A Service You Can Count On!"

Signature
STEVEN R. BROWN
REGISTERED PROFESSIONAL ENGINEER
No. 43825
Exp. 6/30/2025
STATE OF CALIFORNIA
My License Expires 6/30/2025

**MOUND TYPE PRIVATE
SEWAGE DISPOSAL SYSTEM
DETAIL SHEET**
5500 Valley Ford Franklin School Road
Petaluma, California
APN 100-050-26

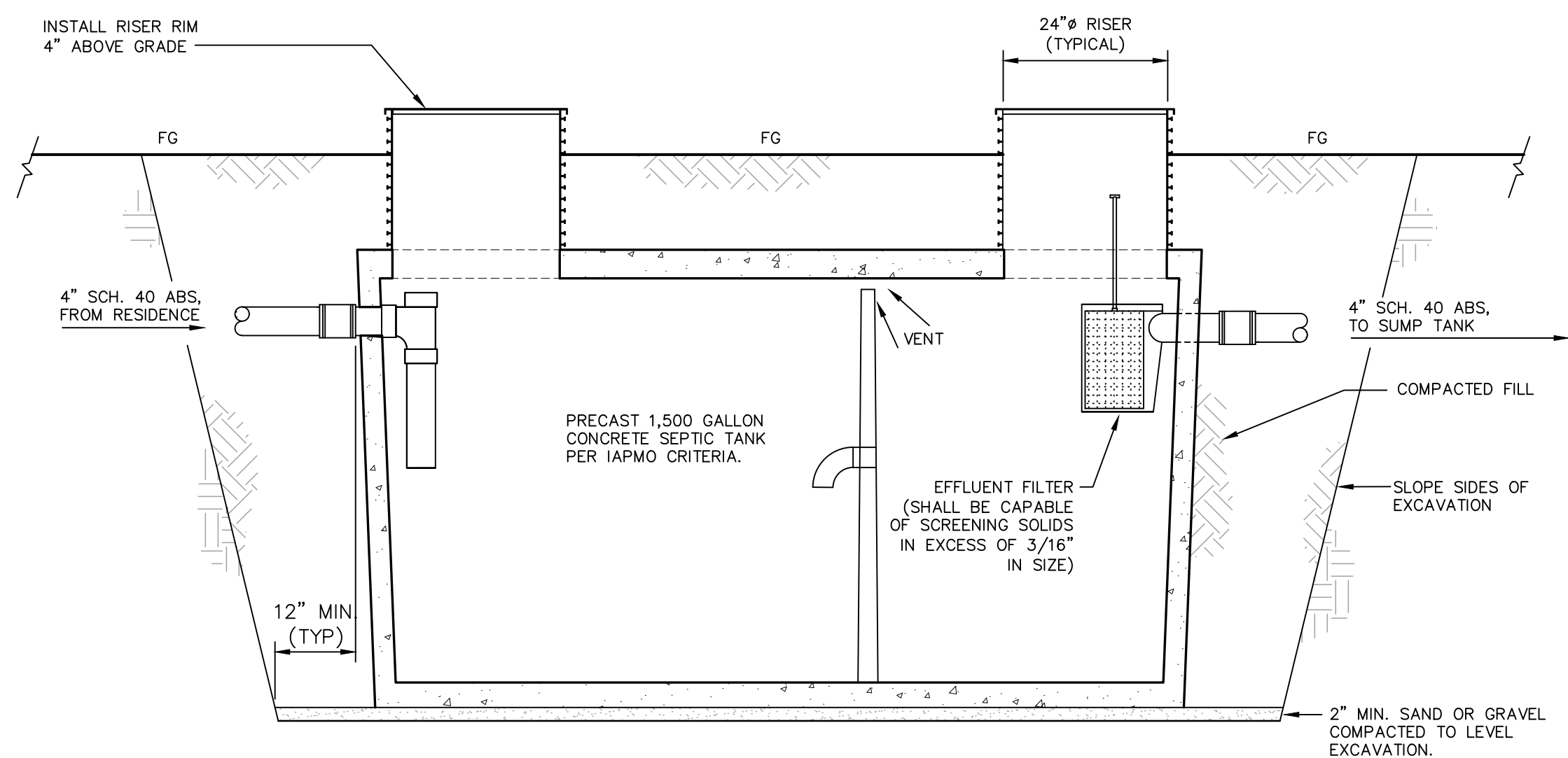
SCALE: AS NOTED
Date: June 26, 2024
Design by: SRB
Drawn by: JMO
Checked by: SRB

Sheet
W3
of 4 Sheets
Job 21272



1,000 GALLON CONCRETE SEPTIC TANK

NTS



1,500 GALLON CONCRETE SEPTIC TANK

NTS

NOTES:

A MANUAL SWITCH FOR THE PUMP SHALL BE LOCATED WITHIN 25' AND IN CLEAR VIEW OF THE SUMP. MOUNT CONTROL PANEL ON HOUSE OR ON A POST WITHIN 25' OF THE SUMP AND IN CLEAR VIEW OF THE SUMP. IF CONTROL PANEL IS MORE THAN 75' FROM HOUSE, PROVIDE A REMOTE ALARM WITH AN ADDITIONAL LIGHT AND HORN AT THE HOUSE.

CONTROL/ALARM BOX - NEMA TYPE 4X WITH FUSED DISCONNECT & MOTOR PROTECTION SWITCH, HOA SWITCH, ALARM, ALARM ON/OFF TEST SWITCH, DISPLAY LIGHT, NON-RESETTABLE DOSE COUNTER, AND SONOMA COUNTY PLEXIGLASS SHIELD.

PROVIDE SEPARATE ELEC. CIRCUITS FOR PUMP AND ALARM.

NOTE: A PHONE LINE IS REQUIRED TO THE CONTROL PANEL AND WILL BE ACTIVATED PRIOR TO THE FINAL/STARTUP INSPECTION.

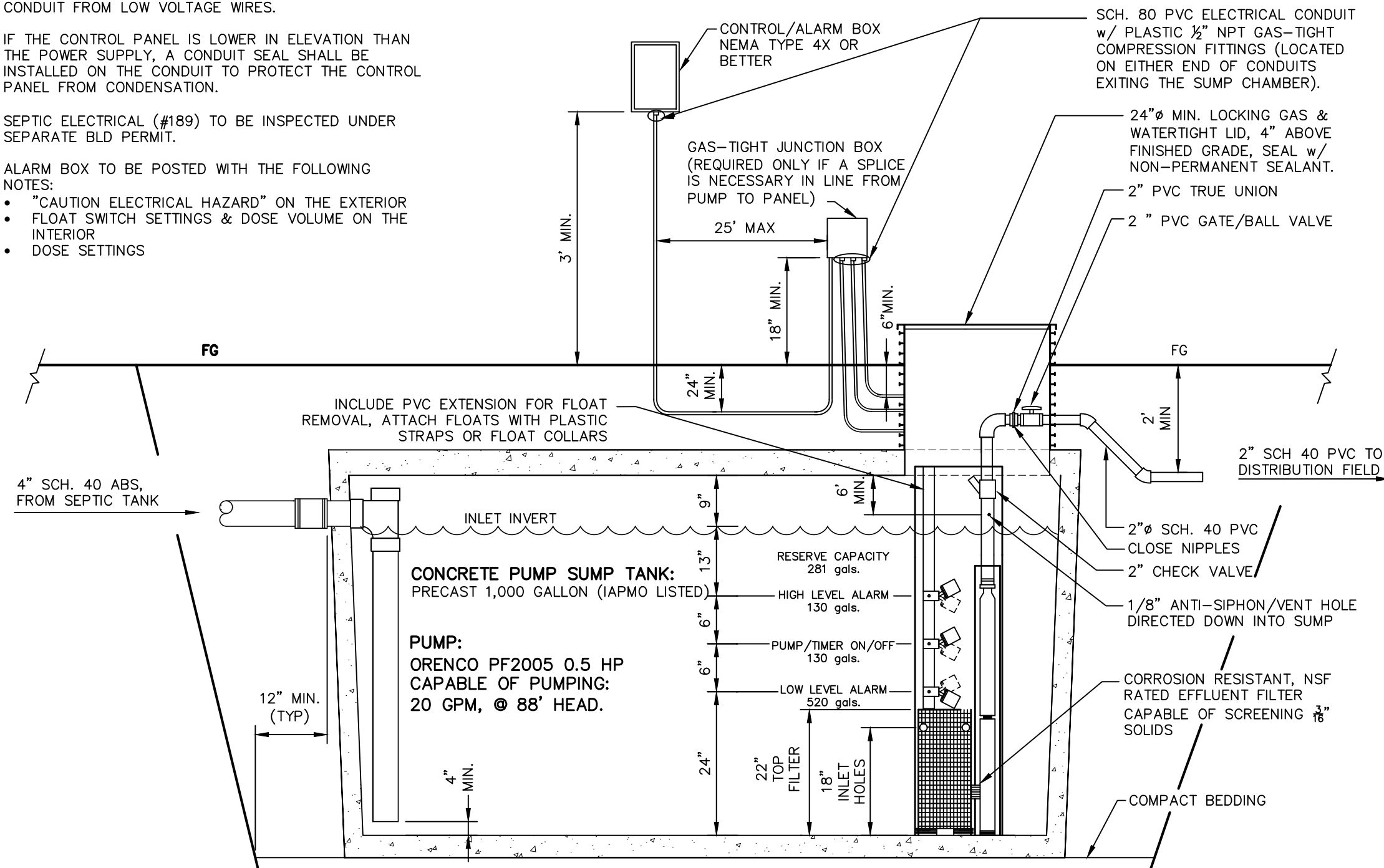
ALL HIGH VOLTAGE WIRES SHOULD BE IN A SEPARATE CONDUIT FROM LOW VOLTAGE WIRES.

IF THE CONTROL PANEL IS LOWER IN ELEVATION THAN THE POWER SUPPLY, A CONDUIT SEAL SHALL BE INSTALLED ON THE CONDUIT TO PROTECT THE CONTROL PANEL FROM CONDENSATION.

SEPTIC ELECTRICAL (#189) TO BE INSPECTED UNDER SEPARATE BLD PERMIT.

ALARM BOX TO BE POSTED WITH THE FOLLOWING NOTES:

- "CAUTION ELECTRICAL HAZARD" ON THE EXTERIOR
- FLOAT SWITCH SETTINGS & DOSE VOLUME ON THE INTERIOR
- DOSE SETTINGS



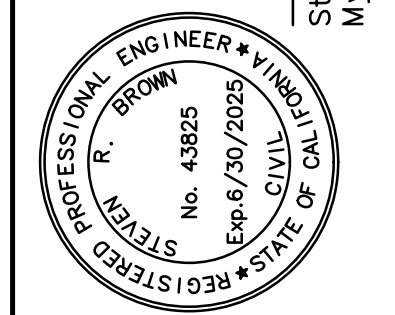
1,000 GALLON CONCRETE PUMP SUMP TANK DETAIL

NTS

Revisions			Approved
No.	Date	Description	

adobe associates, inc.
civil engineering / land surveying / wastewater
1220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com
"A Service You Can Count On!"

Signature



MOUND TYPE PRIVATE SEWAGE DISPOSAL SYSTEM TANK DETAILS
5500 Valley Ford Franklin School Road
Petaluma, California
APN 100-050-26

SCALE: AS NOTED
Date: June 26, 2024
Design by: SRB
Drawn by: JMO
Checked by: SRB

Sheet
W4
of 4 Sheets
Job 21272