

**GENERAL NOTES**

- ALL MATERIAL, WORKMANSHIP AND CONSTRUCTION SHALL CONFORM TO THE COUNTY OF SONOMA STANDARD SPECIFICATIONS AND STANDARD PLANS AND THE STATE OF CALIFORNIA D.O.T. STANDARD PLANS AND SPECIFICATIONS, LATEST EDITION.
- CONTRACTOR SHALL OBTAIN REQUIRED PERMITS FROM ALL AGENCIES AND PAY ALL FEES PRIOR TO COMMENCEMENT OF ANY WORK.
- CONTRACTOR SHALL GIVE THE COUNTY OF SONOMA 48 HOURS NOTICE BEFORE STARTING WORK.
- A PRE CONSTRUCTION MEETING IS REQUIRED PRIOR TO BEGINNING OF WORK. CONTACT THE COUNTY OF SONOMA TO SCHEDULE THE MEETING.
- WORK HOURS ARE LIMITED TO MONDAY THROUGH FRIDAY, 7:00 A.M. TO 6:00 P.M. INSPECTION WILL BE AVAILABLE MONDAY THROUGH FRIDAY FROM 8:00 A.M. TO 4:30 P.M. CONTRACTORS SHALL SCHEDULE INSPECTIONS 48 HOURS IN ADVANCE BY CALLING (707) 565-3551.
- ANY DISCREPANCY DISCOVERED BY CONTRACTOR IN THESE PLANS OR ANY FIELD CONDITIONS DISCOVERED BY CONTRACTOR THAT MAY DELAY OR OBSTRUCT THE PROPER COMPLETION OF THE WORK PER THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE CIVIL ENGINEER AND OWNER IMMEDIATELY UPON DISCOVERY. NOTIFICATION SHALL BE IN WRITING.
- ITEMS SPECIFIED ON THE STANDARD PLANS ARE APPROVED FOR USE BY THE COUNTY OF SONOMA. ALL SUBSTITUTES OR ALTERATIONS SHALL BE SUBMITTED TO THE COUNTY OF SONOMA FOR REVIEW AND APPROVAL.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING NOISE, ODORS, DUST AND DEBRIS TO MINIMIZE IMPACTS ON SURROUNDING PROPERTIES AND ROADWAYS. CONTRACTOR SHALL BE RESPONSIBLE TO ASSURE THAT ALL CONSTRUCTION EQUIPMENT IS EQUIPPED WITH MANUFACTURERS APPROVED MUFFLERS AND BAFFLES. FAILURE TO COMPLY MAY RESULT IN THE ISSUANCE OF A STOP WORK ORDER.
- IF PREHISTORIC ARCHAEOLOGICAL REMAINS SUCH AS BONE, SHELL, WORKED STONE OBJECTS, OR HUMAN GRAVES ARE UNEARTHED DURING PROJECT RELATED ACTIVITIES, WORK IN THE IMMEDIATE VICINITY OF THE FINDS SHALL HALT UNTIL A QUALIFIED PREHISTORIC ARCHAEOLOGIST HAS EVALUATED THE SITUATION AND MADE RECOMMENDATIONS FOR MITIGATION TO THE RESOURCE. IF HUMAN REMAINS ARE ENCOUNTERED THE SONOMA COUNTY CORONER MUST BE NOTIFIED IMMEDIATELY.
- IF HISTORIC-PERIOD MATERIALS SUCH AS STONE OR ADOBE FOUNDATIONS OR WALLS, STRUCTURAL REMAINS WITH SQUARE NAILS, BACKFILLED PRIVIES OR WELLS, OR REFUSE DEPOSITS ARE ENCOUNTERED, WORK IN THE IMMEDIATE VICINITY OF THE FINDS SHALL HALT UNTIL A QUALIFIED HISTORICAL ARCHAEOLOGIST HAS EVALUATED THE SITUATION AND MADE RECOMMENDATIONS FOR TREATMENT OF THE RESOURCE.
- IF HAZARDOUS MATERIALS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL HALT CONSTRUCTION IMMEDIATELY, NOTIFY THE CITY, AND IMPLEMENT REMEDIATION (AS DIRECTED BY THE CITY OR ITS AGENT) IN ACCORDANCE WITH ANY REQUIREMENTS OF THE SONOMA COUNTY ENVIRONMENTAL HEALTH DEPARTMENT AND THE NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD.
- THE CONTRACTOR/DEVELOPER SHALL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO THE COUNTY STREETS RESULTING FROM CONSTRUCTION AT NO COST TO COUNTY

**GENERAL UNDERGROUND NOTES**

- NO GUARANTEE IS INTENDED THAT UNDERGROUND OBSTRUCTIONS, NOT SHOWN ON THESE PLANS, WILL NOT BE ENCOUNTERED. THOSE SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE AND THE CONTRACTOR IS CAUTIONED THAT THE OWNER, THE ENGINEER, AND THE COUNTY OF SONOMA ASSUME NO RESPONSIBILITY FOR ANY OBSTRUCTIONS EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY COMPANIES WORKING WITHIN THE LIMITS OF THIS PROJECT.
- CONTRACTOR SHALL NOT BEGIN EXCAVATION UNTIL ALL EXISTING UTILITIES HAVE BEEN MARKED IN THE FIELD BY THE APPLICABLE ENTITY RESPONSIBLE FOR THAT PARTICULAR UTILITY. THE CONTRACTOR SHALL NOTIFY EACH APPLICABLE ENTITY AT LEAST 24 HOURS BEFORE STARTING WORK. HAND DIGGING IS REQUIRED IF TRENCH IS WITHIN 12" OF ANY EXISTING UTILITY.
- UNDERGROUND SERVICE ALERT: CALL TOLL FREE (800) 642-2444 AT LEAST 48 HOURS PRIOR TO EXCAVATION.
- THE CONTRACTOR SHALL OBTAIN A TRENCH PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY BEFORE EXCAVATION OF TRENCHES. A COPY OF THE PERMIT MUST BE ON FILE WITH THE CITY BEFORE TRENCH EXCAVATION MAY BEGIN.
- CONTRACTOR SHALL UNCOVER EXISTING BURIED UTILITIES WITH UTILITY OWNER TO VERIFY LOCATIONS AND ELEVATIONS OF UTILITIES. BURIED UTILITIES INCLUDE BUT ARE NOT LIMITED TO WATER MAINS AND LATERALS, SEWER MAINS AND LATERALS, STORM DRAINS, GAS MAINS AND LATERALS, ELECTRICAL DISTRIBUTION LINES, CABLE TELEVISION LINES, AND TELEPHONE LINES. ALL UTILITIES CONFLICTING WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BEFORE THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY EXISTING INVERTS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. THE PROJECT AND/OR DESIGN ENGINEER MAY ADJUST THE GRADE OF NEW SEWER AND STORM DRAIN CONSTRUCTION ACCORDINGLY WITH CONCURRENCE FROM THE CITY ENGINEER.
- DISTANCES AND INVERTS ARE TO AND AT THE CENTER OF THE MANHOLES, CLEANOUTS, DROP INLETS, CATCH BASINS, AND YARD DRAINS OR AS MARKED ON THE DRAWINGS.
- ALL UNDERGROUND IMPROVEMENTS SHALL BE INSTALLED AND APPROVED PRIOR TO PAVING.

**STANDARD SYSTEM MATERIAL NOTES**

- GRAVEL SHALL BE 3/4" TO 2-1/2" DOUBLE WASHED GRAVEL.
- THE FINES IN THE WASHED GRAVEL SHALL NOT EXCEED 1% BY WEIGHT.
- THE PIPE FROM THE TANK TO THE DRAIN FIELD SHALL BE SDR 35 PVC AND HAVE A MINIMUM SLOPE OF 2%.
- ASBESTOS CEMENT (A.C.P.) PIPE SHALL NOT BE ALLOWED UNDER ANY CIRCUMSTANCES.
- THE CONTRACTOR SHALL OBTAIN CERTIFICATIONS FROM THE SUPPLIER FOR THE MATERIALS, STATING THAT THEY MEET THE SPECIFIED CRITERIA ON THE PLANS. THE CONTRACTOR SHALL PROVIDE SAMPLES OF GRAVEL AND TOPSOIL (IF NON-NATIVE) PRIOR TO IMPORTING FROM THE SUPPLIER.
- ALL CONSTRUCTION MATERIALS AND WORK SHALL CONFORM TO THE SONOMA COUNTY ENVIRONMENTAL HEALTH DEPARTMENT STANDARDS.

**SEPTIC TANK NOTES**

- ALL SEPTIC TANKS MUST BE IAPMO CERTIFIED AND WATER TIGHT.
  - ALL SEPTIC TANKS SHALL BE WATER TIGHT.
  - METAL OR WOODEN TANKS ARE PROHIBITED.
  - ALL SEPTIC TANKS SHALL BE OF TWO COMPARTMENT CONSTRUCTION. THE FIRST SHALL BE TWICE THE CAPACITY OF THE SECOND AND SEPARATED BY A BAFFLE.
- PLACEMENT
  - SEPTIC TANKS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATION.
  - THE TANK SHALL BE INSTALLED ON A SOLID LEVEL BED.
  - SOIL AROUND THE TANK MUST BE COMPACTED; SAND MUST BE JETTED.
  - SEPTIC TANKS SHALL BE INSTALLED SO THAT THE MANHOLE OPENING ARE WITHIN 12 INCHES OF THE GROUND SURFACE.
- TANKS MUST HAVE A STRENGTH CAPABLE OF WITHSTANDING ANTICIPATED LOADS. THE TANK TOP MUST BE CAPABLE OF SUPPORTING AN EARTH LOAD OF NOT LESS THAN 300 POUNDS PER SQUARE FOOT WHEN MAXIMUM COVER DOES NOT EXCEED THREE FEET. THE MINIMUM COMPRESSIVE STRENGTH OF ANY CONCRETE TANK WALL SHALL BE 2,500 POUNDS PER SQUARE INCH.
- ACCESS RISERS
  - A RISER SHALL EXTEND FROM EACH MANHOLE COVER THE SURFACE OF THE GROUND TO ALLOW ACCESS FOR INSPECTION AND MAINTENANCE OF THE TANK. THE RISER SHALL BE OF SUFFICIENT SIZE FOR REMOVAL OF THE MANHOLE COVER.
  - RISERS SHALL BE WATERTIGHT CONCRETE, PVC OR FIBERGLASS, AND SHALL BE CAPABLE OF WITHSTANDING ANTICIPATED LOADS FROM SOIL BACKFILL.
  - ALL RISERS SHALL BE FITTED WITH AIRTIGHT DURABLE LIDS THAT HAVE A LOCKING MECHANISM TO PREVENT UNWANTED ENTRY AND PREVENT INSECT/RODENT ACCESS.
- ALL CONNECTIONS FROM BUILDINGS TO SEPTIC TANKS SHALL BE MADE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE UNIFORM PLUMBING CODE.
- EFFLUENT FILTERS SHALL BE EQUIVALENT TO ZABEL A100, OR THE ORENCO 4" BIOTUBE EFFLUENT FILTER. BOTH HAVE 1/8" FILTRATION.
- ALL JOINTS SHALL BE PROPERLY SEALED WITH A SEALANT AND/OR AN INTERLOCKING MECHANISM APPROVED BY THE PERMIT AUTHORITY.

**SEPTIC INSPECTION NOTES**

- THE FOLLOWING CONSTRUCTION INSPECTIONS SHALL BE CONDUCTED BY THE DESIGNER, CONTRACTOR, AND AGENCY STAFF:
- PRE-CONSTRUCTION INSPECTION TO APPROVE SITE LAYOUT AND CONDITIONS (CONTRACTOR SHALL GIVE THE COUNTY OF SONOMA 48 HOURS NOTICE BEFORE STARTING WORK.)
  - FINAL INSPECTION OF THE SYSTEM MUST BE CONDUCTED PRIOR TO COVERING ANY ELEMENTS OF THE SYSTEM SHALL INCLUDE WATER TIGHTNESS TEST OF TANK(S). THE WATER-TIGHT PROCEDURE IS AS FOLLOWS: FILL TANKS TO AT LEAST 2" ABOVE RISER CONNECTION, MARK THE WATER LEVEL, WAIT 30 MINUTES AND MEASURE THE WATER LEVEL AGAIN. IF THE LEVEL HAS DROPPED BY 1/8" OR GREATER, THE TEST FAILS.
  - NO PORTION OF THE OWTS MAY BE COVERED UNTIL IT IS INSPECTED BY THE PERMIT AUTHORITY STAFF OR THE PERMIT AUTHORITY STAFF HAS AUTHORIZED COVERAGE PRIOR TO INSPECTION. APPROVAL AS A RESULT OF AN INSPECTION SHALL NOT BE CONSTRUED TO BE AN APPROVAL OF A VIOLATION OF THE PROVISIONS OF THIS OWTS MANUAL. INSPECTIONS PRESUMING TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISIONS OF THIS OWTS MANUAL SHALL NOT BE VALID. THE FOLLOWING CONSTRUCTION INSPECTIONS ARE REQUIRED. THE PERMIT AUTHORITY MAY WAIVE ATTENDANCE.
 

FINAL APPROVAL OF THE PERMIT SHALL BE GRANTED ONLY AFTER THE WELL AND SEPTIC TANK STAFF HAS COMPLETED ALL NECESSARY SYSTEM INSPECTIONS. FINAL APPROVAL OF THE PERMIT FOR STANDARD OWTS SHALL BE GRANTED ONLY UPON COMPLETION OF THE NECESSARY INSPECTIONS AND RECEIPT OF A SIGNED AND STAMPED LETTER FROM THE DESIGNER CERTIFYING THE INSTALLATION OF THE SYSTEM AS DESIGNED.

**SURVEY NOTES**

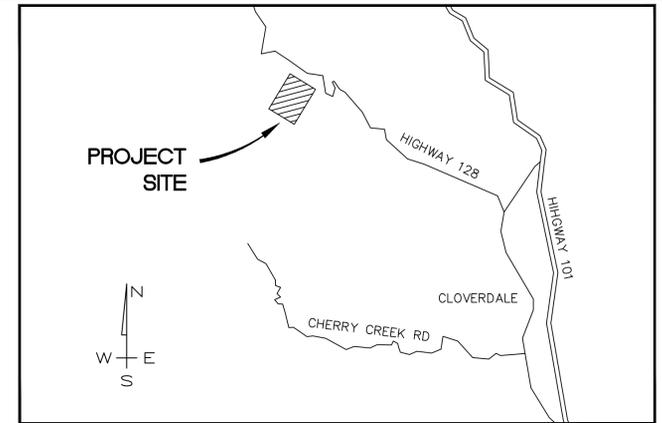
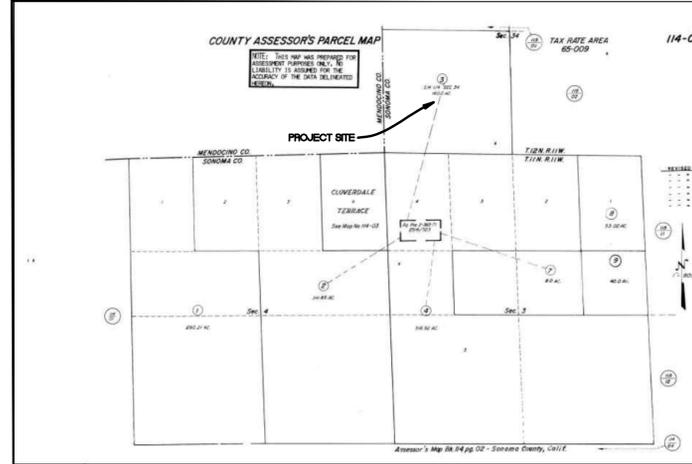
- TOPOGRAPHIC INFORMATION SHOWN HERE IS BASED SONOMA COUNTY LIDAR CONTOUR DATA AND SITE FEATURES DRAWN BY MUNSELLE CIVIL ENGINEERING, DATED AUGUST 27, 2018.
- THE LOCATION OF UNDERGROUND STRUCTURES AND UTILITIES SHOWN HEREON HAS BEEN DETERMINED FROM SURFACE EVIDENCE OF THEIR EXISTENCE AND/OR FROM INFORMATION OBTAINED FROM PUBLIC AND/OR UTILITY AGENCIES. THE SURVEYOR ACCEPTS NO LIABILITY FOR THE LOCATION, EXISTENCE OR NON-EXISTENCE OF THOSE UNDERGROUND STRUCTURES, UTILITY LINES AND RELATED APPURTENANCES, ANY INDIVIDUAL, COMPANY OR AGENCY USING THIS MAP MUST CONFIRM THE LOCATION OF ALL UNDERGROUND LINES OR STRUCTURES PRIOR TO COMMENCING ANY EXCAVATION.
  - THE CONTENT OF THIS MAP WAS DEFINED BY CONTRACT AT THE SPECIFIC REQUEST OF THE CLIENT(S) AND/OR THEIR CONSULTANT(S). THE SURVEYOR ACCEPTS NO LIABILITY FOR USE OF THIS MAP BY ANY ONE OTHER THAN THE CLIENT(S) AND/OR CONSULTANTS FOR WHOM IT WAS PREPARED.
  - APPROXIMATE ASSESSOR'S PARCEL LINES SHOWN HEREON ARE BASED ON BEST FIT TO EVIDENCE AND DO NOT CONSTITUTE A BOUNDARY SURVEY. THE PERFORMANCE OF A BOUNDARY SURVEY AND THE ANALYSIS OF LEGAL DESCRIPTIONS PERTAINING TO THE LANDS DEPICTED HEREIN WOULD BE REQUIRED IF PRECISE PROPERTY LOCATION AND BOUNDARY LIMITS ARE NEEDED OR DESIRED. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE PROPERTY DATA DELINEATED HEREON.
  - ELEVATIONS SHOWN HEREON ARE BASED ON LIDAR TOPOGRAPHIC CONTOUR DATA FROM THE COUNTY OF SONOMA. DATUM: NAVD88
 

CONTOURS SHOWN ARE BASED ON SONOMA COUNTY LIDAR DATA.

(LIDAR DATA AND ORTHOPHOTOGRAHY WERE PROVIDED BY THE UNIVERSITY OF MARYLAND UNDER GRANT NNX13AP69G FROM NASA'S CARBON MONITORING SYSTEM.)

BOUNDARY LINES SHOWN HEREON ARE DELINEATED FROM RECORD AND ASSESSOR'S PARCEL MAP DATA ONLY AND DO NOT CONSTITUTE A BOUNDARY SURVEY.

**STANDARD SEPTIC SYSTEM PLANS**  
FOR  
**MAZZINI RANCH**  
APN 114-020-003  
34201 HWY 128  
CLOVERDALE, CA



**LOCATION MAP**

NO SCALE

**OWNER**

CHRIS FANINI  
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SAN FRANCISCO, CA 94133  
CHRIS.FANINI@GMAIL.COM

**CONTACT**

MUNSELLE CIVIL ENGINEERING  
CORT MUNSELLE  
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HEALDSBURG, CA 95448  
(707) 395-0968

**DRAWING INDEX**

- COVER SHEET, NOTES, CALCULATIONS
- OVERALL SITE PLAN, SETBACK TABLE
- SEPTIC SYSTEM PLAN
- BARN SEPTIC PLAN & DETAILS

**AP MAPS**

**PROJECT DESCRIPTION:**

THE PROJECT PROPOSES A NEW 8-BEDROOM HOME AND BARN WITH BATHROOM. THE DESIGN IS BASED ON PERCOLATION TESTS WSR21-0062 (AVG. 0.523 GALLON/SF/DAY FROM TABLE 7.2a OWTS MANUAL) AND PRE PERC WSR20-0623.

**SEPTIC SYSTEM:**

NEW 8-BDRM RESIDENCE:  
STANDARD SYSTEM - 42" TRENCH W/ 18" ROCK  
TOTAL WASTE FLOW = 780 GALLONS PER DAY

**SEPTIC TANK:**

PROPOSED 2000-GALLON SEPTIC TANK FOR RESIDENCE AND 810-GALLON TANK FOR BARN. IAPMO APPROVED AND PER COUNTY OF SONOMA STANDARDS.

NOT TO SCALE

**CALCULATIONS:**

NEW 8-BDRM RESIDENCE:  
TP-4, TP-5 AND TP-6  
PRIMARY:  
42" DEEP TRENCHES, 18" ROCK -> 3.0 SF/LF  
120 GPD / (0.523 G/SF/D \* 3.0 SF/LF) = 76.5 LF/BR  
8 BEDROOMS \* 73.4 LF/BR = 612 LF  
  
PER OWTS SECTION 4.5, OVER 500 LF REQUIRES ALTERNATING 75% LEACHFIELDS  
612 \* 0.75 = 459 LF (2-PRIMARY FIELDS)  
  
RESERVE 50% REPLACEMENT AS PARCELS WERE CREATED IN 1943:  
42" DEEP TRENCHES, 18" ROCK -> 3.0 SF/LF  
120 GPD / (0.523 G/SF/D \* 3 SF/LF) = 76.5 LF/BR  
8 BEDROOMS = 587 LF \* 50% = 306 LF

**ABBREVIATIONS/LEGEND**

AB	AGGREGATE BASE	PSE	PRIVATE SEWER EASEMENT	---	PROPERTY LINE
AC	ASPHALT CONCRETE	PT	POINT OF TANGENCY	---	NEIGHBORING PROPERTY LINE
ANG	ANGLE	PUE	PUBLIC UTILITY EASEMENT	---	LINE
BC	BEGIN CURVE	PVC	POLYVINYLCHLORIDE PIPE	---	CENTERLINE STRIPPING
BO	BLOW-OFF	PVT	PRIVATE	---	BUILDING LINE
BSL	BUILDING SETBACK LINE	R=	RADIUS	---	BUILDING LINE
BSW	BACK OF SIDEWALK	R/W	RIGHT OF WAY	---	GRAVEL DRIVEWAY
BVC	BEGIN VERTICAL CURVE	RCP	REINFORCED CONCRETE PIPE	---	EDGE OF PAVING
BW	BOTTOM OF WALL	RET	RETAINING WALL	---	CONCRETE CURB & GUTTER
CB	CATCH BASIN	RFBP	REDUCED PRESSURE BACK FLOW PREVENTER	---	A.C. DIKE SANITARY
CONC	CONCRETE	S=	SLOPE	---	SEWER LINE & SIZE
CPP	CORRUGATED PLASTIC PIPE	SD	STORM DRAIN	---	OVER HEAD WIRES
CR	CURB RETURN	SDDI	STORM DRAIN DROP INLET	---	EXISTING FENCE LINE (TYPE VARIES)
DI	DROP INLET	SDE	PUBLIC STORM DRAIN EASEMENT	---	UNDERGROUND GAS LINE
DIP	DUCTILE IRON PIPE	SDMH	STORM DRAIN MANHOLE	---	DRIP LINE OF TREE OR BRUSH LINE
DWY	DRIVEWAY	SS	SANITARY SEWER	---	SURFACE FLOW DIRECTION
EC	END CURVE	SSCO	SANITARY SEWER CLEANOUT	---	STORM DRAIN CULVERT
EG	EXISTING GROUND	SSMH	SANITARY SEWER MANHOLE	---	WATERBAR PER DETAIL
ELEV	ELEVATION	SSE	PUBLIC SANITARY SEWER EASEMENT	---	ROCK RIPRAP DISSIPATER PER DETAIL
EP	EDGE OF PAVEMENT	STA	STATION	---	STORM DRAIN DROP INLET PER DETAIL (SDDI)
ESMT	EASEMENT	STD	STANDARD	---	
EVC	END VERTICAL CURVE	SW	SIDEWALK	---	
(E), EX.	EXISTING	SWE	SIDEWALK EASEMENT	---	
FC	FACE OF CURB	TC	TOP OF CURB	---	
FG	FINISH GRADE	TOG	TOP OF GRATE	---	
GB	GRADE BREAK	TW	TOP OF WALL	---	
HDPE	HIGH DENSITY POLYETHYLENE	TYP	TYPICAL	---	
IM	IRRIGATION METER	W	WATER	---	
MON	STANDARD CITY MONUMENT	WL	WATER LINE	---	
PAE	PRIVATE ACCESS, MAINTENANCE, DRAINAGE, SIDEWALK, AND UTILITY EASEMENT	WM	WATER METER	---	
PC	POINT OF CURVATURE	WS	WATER SERVICE	---	
PCC	PORTLAND CEMENT CONCRETE	VC	VERTICAL CURVE	---	
PDE	PRIVATE STORM DRAIN EASEMENT			---	

**APPROVED**  
**PERMIT SONOMA**  
**WELL AND SEPTIC SECTION**  
APPROVED BY **JOHN ANDERSON**  
DATE **August 4, 2022**  
**PERMIT # SEP21-0209**

P:\MCE\_JOBS\2020\188-20 MAZZINI RANCH\DWGS\188-20 SEPTIC-PLAN-003.DWG 2/24/2022 11:20 AM

DATE		BY		REVISION		DESCRIPTION	

**MUNSELLE CIVIL ENGINEERING**  
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**PROFESSIONAL ENGINEER - CIVIL**  
CORT L. MUNSELLE  
No. 69941  
Exp. 9-30-22

**STANDARD SEPTIC SYSTEM**  
**COVER SHEET, NOTES, CALCULATIONS**  
APN 114-020-003  
34201 HWY 128  
CLOVERDALE, CA

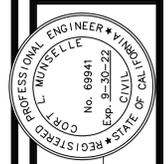
FEBRUARY 24, 2022

JOB NO. 188-20

SHEET NO. 1 OF 4 SHEETS

REVISION	DESCRIPTION	BY	DATE

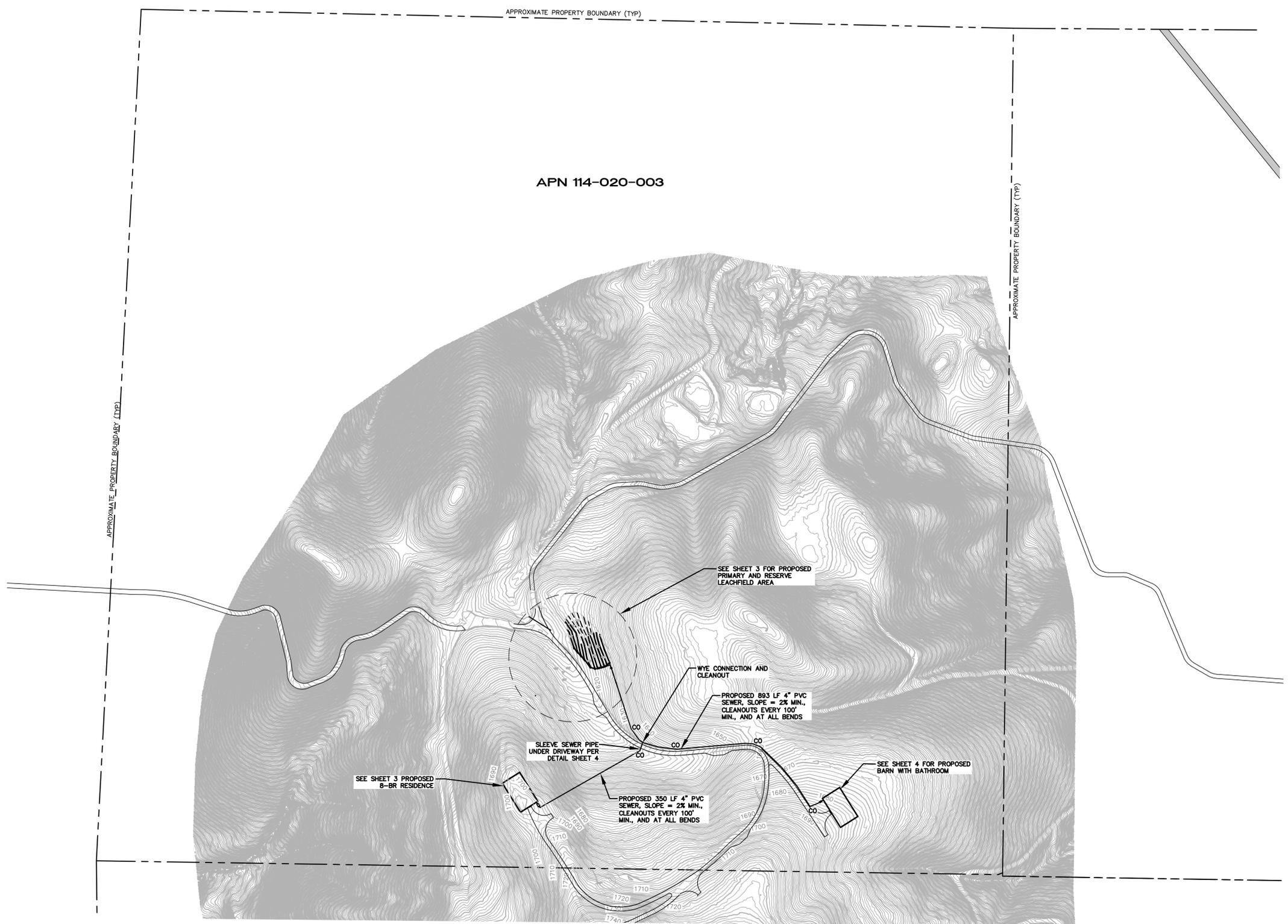
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*Cort L. Munselle*  
 COURT L. MUNSELLE  
 P.C.E. 69941

**STANDARD SEPTIC SYSTEM**  
**OVERALL SITE PLAN, SETBACK TABLE**  
 APN 114-020-003  
 34021 HWY 128  
 CLOVERDALE, CA

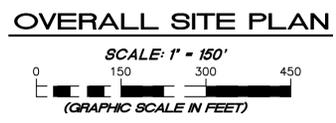
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 JOB NO. 188-20  
 SHEET NO. **2**  
 OF 4 SHEETS



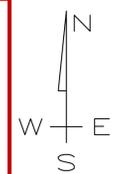
**SETBACK NOTES**

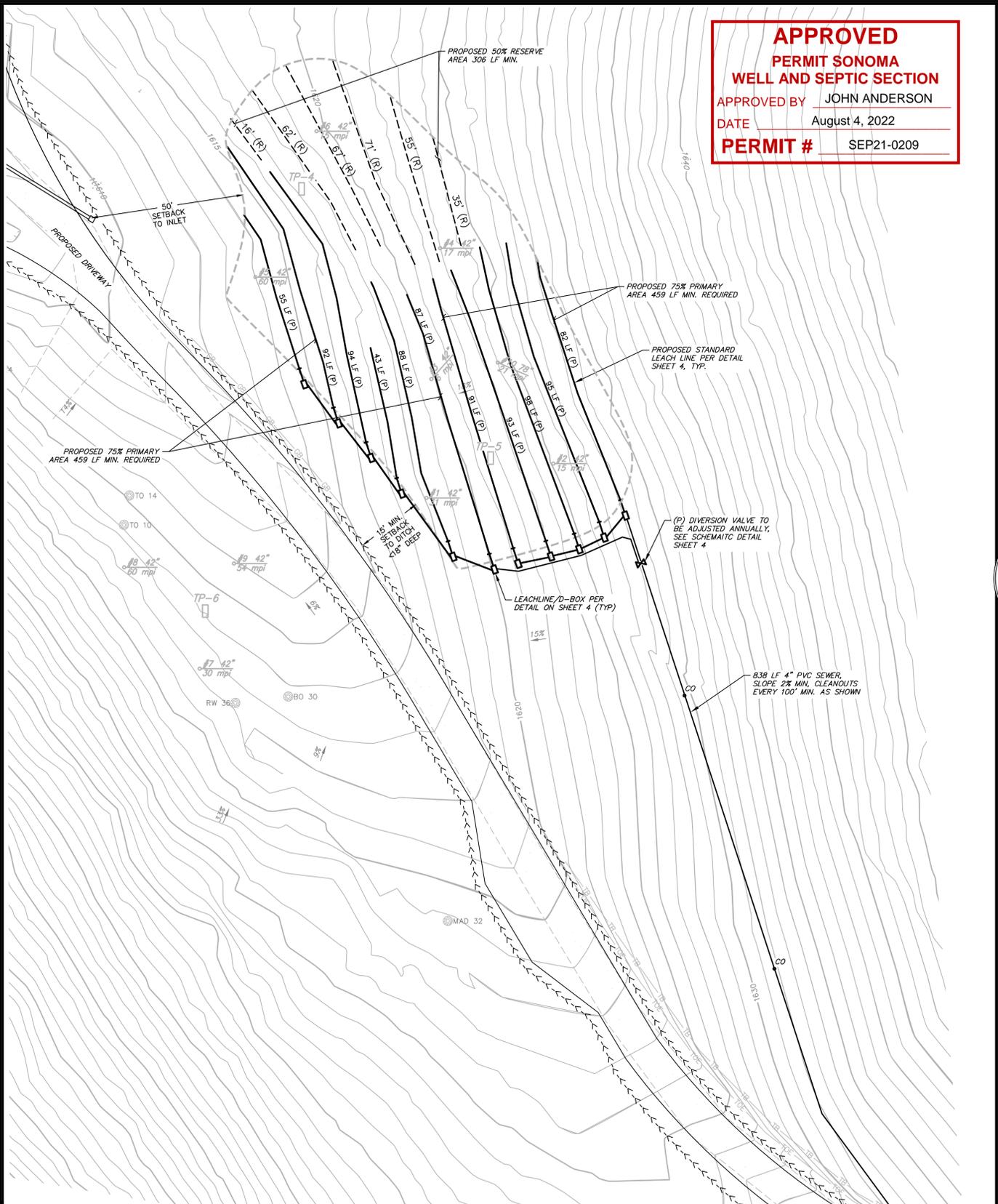
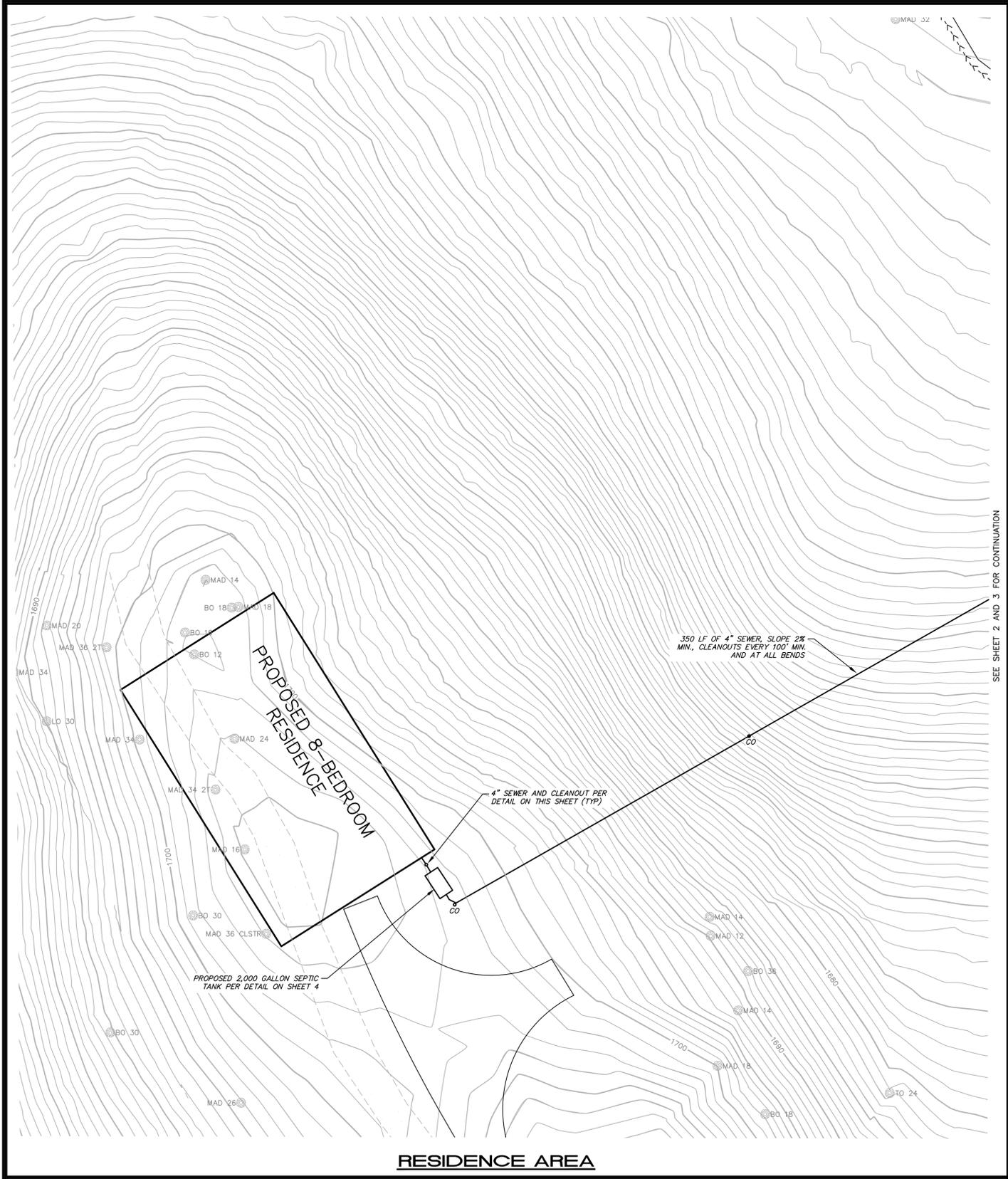
Table 7.2c - Setback Requirements

Minimum horizontal distance required from:	Septic Tank (All Systems) (feet)	Dispersal Area (Standard) (feet)	Dispersal Area (Non Standard) (feet)
Building or structures (including driveways, parking areas and paved areas):			
Upgradient	5	8	10
Laterally	5	8	10
Downgradient	5	8	25
Property line and/or easements:			
Upgradient	5	5	10
Laterally	5	5	10
Downgradient	5	5	25
Water supply wells and springs	50 (Note 1)	100	100
Public water Supply Wells:			
Dispersal depth less than or equal to 10 feet	50 (Note 1)	150	150
Dispersal depth greater than 10 feet	50 (Note 1)	200	200
Public Water Supply Surface Intake:			
Less than 1200 feet to OWTs	50 (Note 1)	400	400
Less than 2500 feet to OWTs	50 (Note 1)	200	200
Perennially flowing streams (as measured from the edge of the waterbody's natural or levied bank)	50	100	100
Ephemeral streams (as measured from the edge of the watercourse) and ephemeral water bodies	25	50	50
Drainage ways greater than 18 inches in depth	25	50	50
Drainage ways less than or equal to 18 inches in depth	15	15	25
Intercept Drains - Perforated:			
Upgradient	15	15	15
Laterally	25	50	50
Downgradient	25	50	50
Non-Perforated / Solid Drain Pipes:			
Upgradient	5	10	10
Laterally	10	15	15
Downgradient	10	15	15
Ocean, lakes, ponds or reservoir (as measured from the high waterline)	50	100	100
Large trees	10	Considered on a case by case basis	Considered on a case by case basis
Dispersal field	5	—	—
Domestic water pipe*	5	5	5
Pressure Public Water Main*	5	10	10
Distribution box	5	4	—
Fill areas	—	15	15



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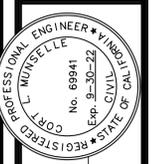




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*Cort L. Munselle*  
 CORT L. MUNSELLE  
 PCE 69941

DATE

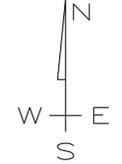
**STANDARD SEPTIC SYSTEM**  
**DETAILED SITE PLAN**  
 APN 14-020-003  
 34021 HWY 128  
 CLOVERDALE, CA

FEBRUARY 24, 2022  
 JOB NO. 188-20  
 SHEET NO. **3**  
 OF 4 SHEETS

**NOTES**

1. NO WATER SUPPLY WELLS OR SPRINGS ARE LOCATED WITHIN 100-FT OF PROPOSED SYSTEM
2. APPROXIMATE ASSESSOR'S PARCEL LINES SHOWN HEREON ARE BASED ON BEST FIT TO EVIDENCE COLLECTED IN THE FIELD AND DO NOT CONSTITUTE A BOUNDARY SURVEY.
3. NO FOUNDATION AND/OR DRIVEWAY CUTS AND NO SURFACE OR SUB-SURFACE DRAINS ARE TO BE LOCATED WITHIN 50-FT DOWNSLOPE OR LATERALLY OF THE PRIMARY OR EXPANSION/REPAIR AREA OF ANY LEACH FIELD. DIRECT DOWNSPOUTS AWAY FROM LEACH FIELD.
4. LEACHLINES TO BE INSTALLED WITHIN A TOLERANCE OF 0.25 FT VERTICALLY PER 100 FT HORIZONTALLY.

**SEPTIC SYSTEM PLAN**

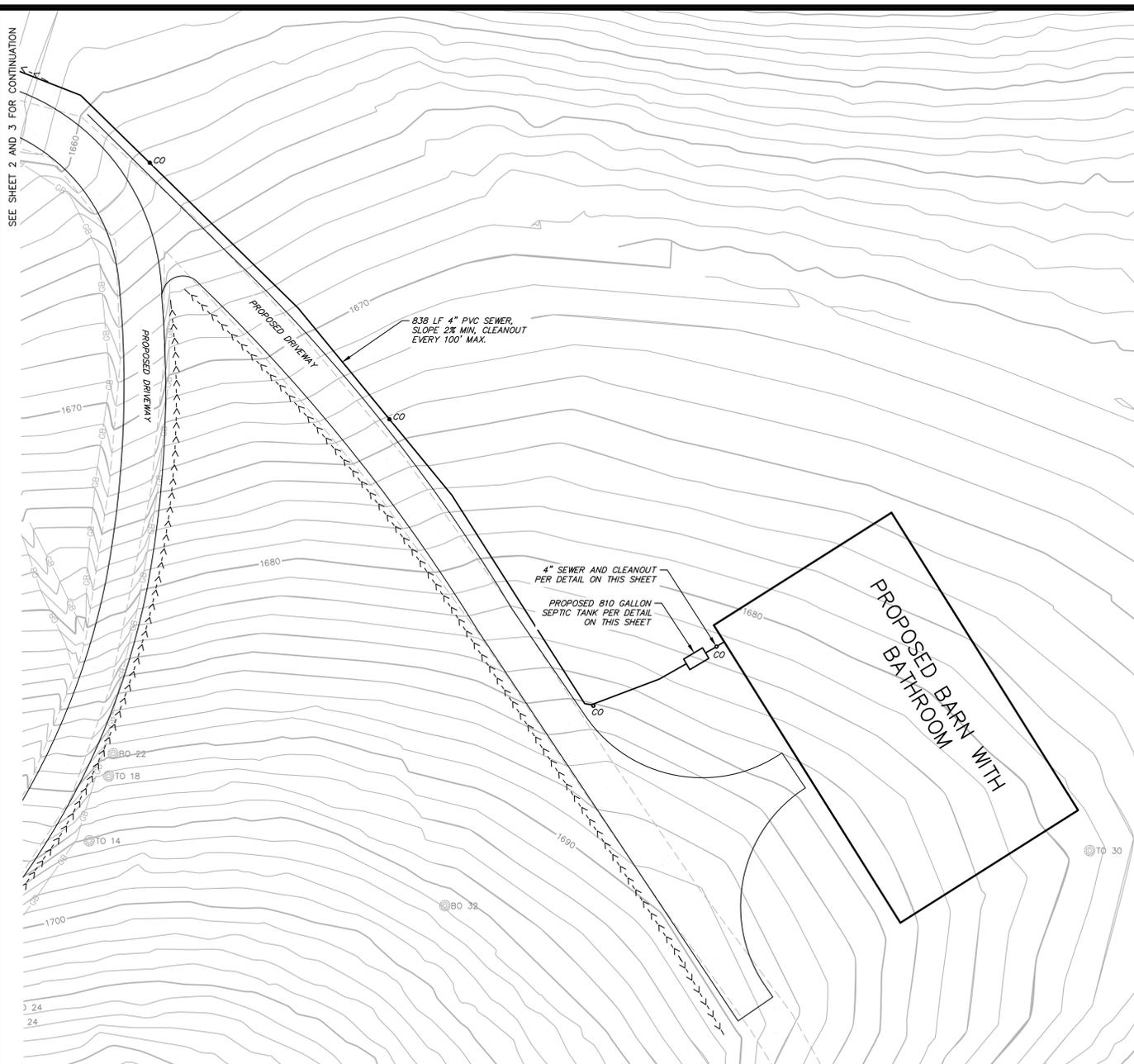


**LEGEND**

- TP-1 TEST PIT FROM PRE-PERC SITE REVIEW PERFORMED BY MCE UNDER PERMIT WSR20-0623
- 10.78" 21 mpi PERC TESTS WSR21-0062 APN 114-020-003

**LEACHFIELD AREA**

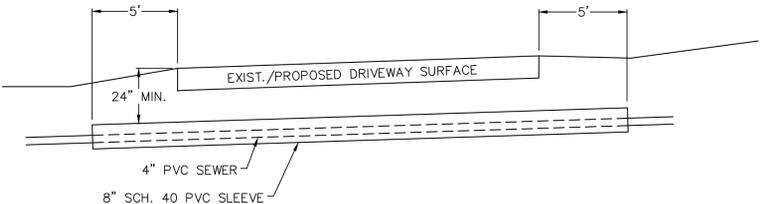
SEE SHEET 4 FOR CONTINUATION



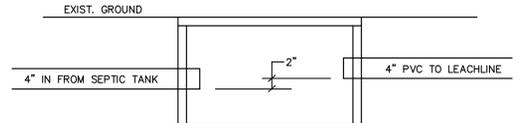
**SEPTIC SYSTEM PLAN**  
SCALE: 1" = 20'  
(GRAPHIC SCALE IN FEET)



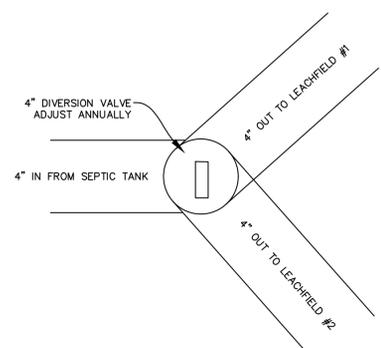
**APPROVED**  
**PERMIT SONOMA**  
**WELL AND SEPTIC SECTION**  
APPROVED BY JOHN ANDERSON  
DATE August 4, 2022  
**PERMIT #** SEP21-0209



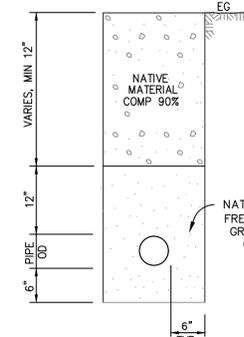
**DRIVEWAY SLEEVE CROSSING DETAIL**  
NOT TO SCALE



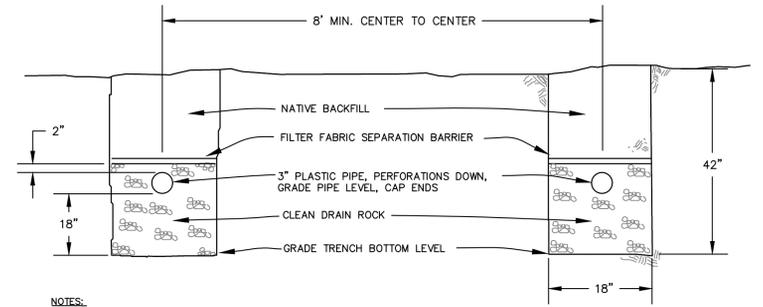
**SERIAL D-BOX PROFILE**  
NOT TO SCALE



**DIVERSION VALVE**  
NOT TO SCALE

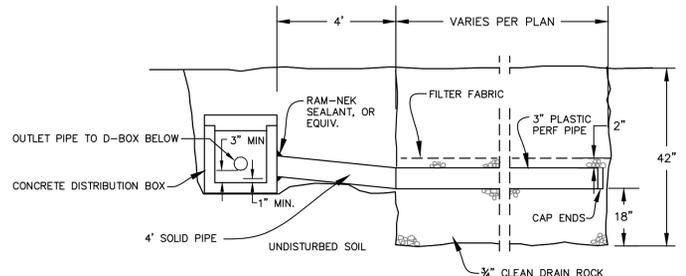


**SEWER TRENCH DETAIL (TYP.)**  
NOT TO SCALE



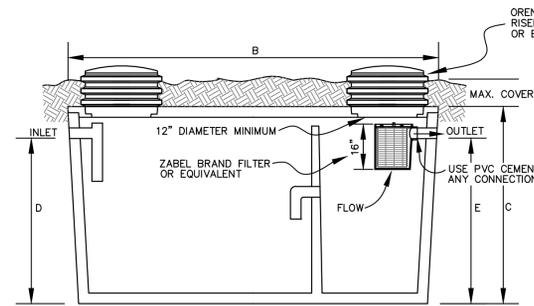
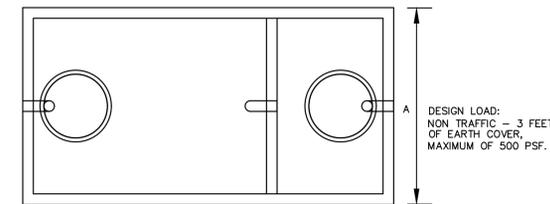
- NOTES:**
- MARK LEACHLINE ENDS AND MIDPOINTS W/ #4 REBAR x 24" LONG. ORIENT VERTICALLY IN TRENCHES
  - DRAIN ROCK SHALL BE CLEAN, 3/4" TO 2-1/2" IN SIZE, AND EITHER COARSE AGGREGATE, CRUSHED ROCK, OR WASHED RIVER GRAVEL FROM AN APPROVED SOURCE. UNCLEAN DRAIN ROCK SHALL BE REJECTED AND SHALL BE REPLACED AT THE CONTRACTOR'S COST.

**TYPICAL LEACHLINE SECTION**  
NOT TO SCALE



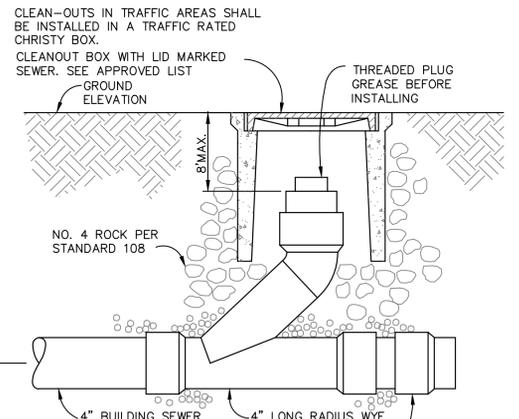
- NOTES:**
- MARK LEACHLINE ENDS AND MIDPOINTS W/ #4 REBAR x 24" LONG. ORIENT VERTICALLY IN TRENCHES
  - DRAIN ROCK SHALL BE CLEAN, 3/4" TO 2-1/2" IN SIZE, AND EITHER COARSE AGGREGATE, CRUSHED ROCK, OR WASHED RIVER GRAVEL FROM AN APPROVED SOURCE. UNCLEAN DRAIN ROCK SHALL BE REJECTED AND SHALL BE REPLACED AT THE CONTRACTOR'S COST.
  - GRADE LEVEL ALL JUNCTION BOXES, LEACHLINES, AND TRENCH BOTTOMS.
  - LEACHLINES TO BE SET LEVEL WITH A TOLERANCE OF 3" PER 100 FEET.

**LEACHLINE PROFILE**  
NOT TO SCALE



**SEPTIC TANK DETAIL**  
NOT TO SCALE

LIQUID CAPACITY - GALLONS	DIMENSION A	DIMENSION B	DIMENSION C	DIMENSION D	DIMENSION E	MINIMUM EXCAVATION WIDTH	MINIMUM EXCAVATION LENGTH
2000	6'-3"	12'-6"	5'-6"	5'-6"	4'-7"	7'-3"	13'-6"
810	4'-4"	8'-8"	5'-6"	4'-5"	4'-2"	5'-4"	9'-8"



- INSTALL PIPE FITTING WHERE NECESSARY TO INCREASE PIPE SIZE OF BUILDING DRAIN TO BUILDING SEWER (WHERE TWO PIPES OF DISSIMILAR MATERIALS ARE TO BE JOINED. THEY SHALL BE JOINED WITH A "COLLAR" OR EQUAL COUPLING. SEE APPROVED LIST)**

**CLEANOUT DETAIL**  
NOT TO SCALE

**STANDARD SEPTIC SYSTEM**  
**BARN SEPTIC PLAN + DETAILS**

APN 14-020-003  
34021 HWY 128  
CLOVERDALE, CA

FEBRUARY 24, 2022  
JOB NO. 188-20  
SHEET NO. **4**  
OF 4 SHEETS

**MUNSELLE CIVIL ENGINEERING**  
CIVIL ENGINEERING • LAND PLANNING  
519 CENTER STREET  
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(707) 395-0968

**COURT L. MUNSELLE**  
REGISTERED PROFESSIONAL ENGINEER - VIRGIL  
No. 69941  
Exp. 3-30-22  
STATE OF CALIFORNIA

REVISION	DESCRIPTION	BY	DATE