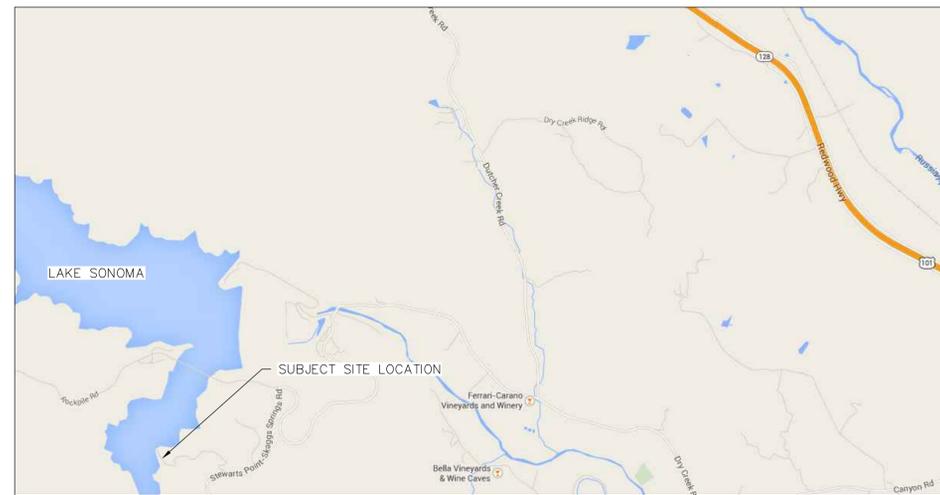


REPLACE ABOVE GROUND GASOLINE TANK LAKE SONOMA MARINA 4200 SKAGGS SPRINGS RD., GEYESERVILLE, CA APN: 139-230-009

OWNER:
UNITED STATES OF AMERICA
LAKE SONOMA RESORT AREA
104 WIKIUP DR, SANTA ROSA, CA 95403
707 481-8140



VICINITY MAP

Standard: ASCE/SEI 7-16
Latitude: 38.706771 Longitude: -123.018185
Risk Category: III
Elevation: 513.59 ft (NAVD 88)

Wind
Results:
Wind Speed 99 Vmph
10-year MRI 64 Vmph
25-year MRI 70 Vmph
50-year MRI 74 Vmph
100-year MRI 79 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1C and Figs. CC.2-1-CC.2-4, and Section 26.5.2
Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 3% probability of exceedance in 50 years (annual exceedance probability = 0.00508, MRI = 1,700 years). Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

Seismic
Site Soil Class: D - Default
S_s: 1.759
S_i: 0.683
F_a: 1.2
F_v: N/A
S_w: 2.11
S_w: N/A
S_{vs}: 1.407
S_{vs}: N/A
T_c: 12
PGA: 0.754
PGA_w: 0.905
I_e: 1.2
C_v: 1.452

Tsunami
Tsunami: Not in mapped tsunami design zone.

Flood
Zone D. Proposed tank location is 55-feet above Lake Sonoma's high water line.

STATEMENT OF SPECIAL INSPECTIONS:

1709.1 CONTRACTOR RESPONSIBILITY
EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTION.

CONCRETE

FOR THE CONCRETE FOUNDATIONS SHOWN ON SHEET S-1 STRUCTURAL:
1. INSPECTION OF REINFORCING STEEL AND PLACEMENT: PERIODIC
2. INSPECTION OF ANCHORS TO BE INSTALLED IN HARDENED CONCRETE: PERIODIC
3. VERIFYING USE OF REQUIRED DESIGN MIX: PERIODIC
4. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE: CONTINUOUS
5. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES: PERIODIC
6. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED: PERIODIC.

STATEMENT OF STRUCTURAL OBSERVATIONS:
NO STRUCTURAL OBSERVATIONS ARE PROPOSED.

INSPECTIONS
INSPECTOR MUST BE SCHEDULED 72 HOURS IN ADVANCE.

UNDERGROUND SERVICE ALERT
CONTRACTOR MUST PAINT OUTLINE EXCAVATION ON GROUND AND CONTACT USA NORTH AT 800-227-2600 PRIOR TO THE START OF ANY EXCAVATION.

SITE SECURITY
IF THE EXCAVATION IS TO REMAIN OPEN AFTER THE CONTRACTOR LEAVES THE SITE, THE EXCAVATION PERIMETER SHALL BE FENCED 6' HIGH OR OTHER MEANS TO PREVENT UNAUTHORIZED ENTRY.

TRAINING
ALL PERSONNEL HANDLING HAZARDOUS MATERIALS OR HAZARDOUS WASTE AND WORKING AT CONSTRUCTION ACTIVITY SITES MUST BE PROPERLY TRAINED WHICH MAY INCLUDE EXCAVATION, SHORING, CONFINED SPACE ENTRY, HOT WORK, HAZARDOUS WASTE MANAGEMENT, HAZARDOUS COMMUNICATION, INJURY ILLNESS PREVENTION, ETC.

SITE SAFETY PLAN
MUST BE PROVIDED BY CONTRACTOR AND AVAILABLE ON-SITE PRIOR TO THE START OF WORK.

FIRE EXTINGUISHER DURING CONSTRUCTION
PROVIDE AT LEAST ONE 40BC-RATED PORTABLE FIRE EXTINGUISHER ONSITE AND READILY ACCESSIBLE WITHIN 50 FEET OF EACH WORK AREA.

TERMINATE AND LOCK OUT ALL ELECTRICAL SERVICE
TO FUELING SYSTEM WHEN NECESSARY PRIOR TO STARTING WORK.

ABOVEGROUND PIPING
FOR COMBUSTIBLE LIQUIDS SHALL BE GALV. SCH. 40 ASTM A-53.

EXCAVATION, SHORING AND SLOPING
SHALL BE CONDUCTED IN ACCORDANCE WITH THE SITE SAFETY PLAN. DURING EXCAVATION ALL EXPOSED SOIL SURFACES SHALL BE KEPT VISIBLY MOIST BY WATER SPRAY.

PIPING
ALL PIPING SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. PROTECT PIPING SYSTEMS AT ALL TIMES DURING INSTALLATION FROM ENTRY OF FOREIGN MATERIALS BY TEMPORARY COVERS. BEFORE ACTIVATING THE SYSTEM PERFORM THESE STEPS: 1. FLUSH SYSTEM PIPING WITH PRESSURIZED AIR TO REMOVE ANY DEBRIS AND FOREIGN MATTER IN PIPING PRIOR TO FILLING TANK FOR THE FIRST TIME. RELIEF AREA OF THE PIPING SECTION WILL BE CHECKED WITH A WHITE RAG TO VERIFY THE SYSTEM HAS BEEN BLOWN PROPERLY. SERVICE ALL SYSTEM FILTERS AND SCREENS AND DISPOSE OF FUEL IN ACCORDANCE WITH EPA AND NFPA REGULATIONS AFTER FLUSHING.

TESTING
FILL/VAPOR RECOVERY PIPING SHALL BE CAPABLE OF MAINTAINING 50 PSI FOR A MINIMUM OF ONE (1) HOUR. ALLOWED MONITORING METHODS ARE BY AIR PRESSURE. USE SOAPY WATER TO CHECK FOR LEAKS AT ALL JOINTS. THERE SHALL NOT BE ANY LEAKAGE (TEST PRESSURE REDUCTION) OR PERMANENT DISTORTION FOR A MINIMUM OF 30 MINUTES. CARE SHALL BE EXERCISED TO ENSURE THAT THESE PRESSURES ARE NOT APPLIED TO THE TANK. CONDUCT ALL PRESSURE TESTING WITH DUAL GLYCERIN-FILLED GAUGES.

RECORD KEEPING
AFTER THE INSPECTION, SUBMIT FOLLOWING DOCUMENTS TO LAKE SONOMA RESORT AREA:
MANUFACTURER'S TANK CHECKLIST; AND PIPING INTEGRITY TESTING RESULTS, AND WARRANTIES; AND MONITORING EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS MUST BE MAINTAINED ON-SITE FOR AT LEAST 3 YEARS; AND MANUFACTURER'S RECOMMENDED MAINTENANCE SCHEDULES AND WRITTEN PERFORMANCE CLAIMS MUST BE MAINTAINED ON-SITE FOR AT LEAST 5 YEARS

PROJECT INFORMATION		
ENGINEER OF RECORD:	MATTHEW E. DONOHUE	707 837-8408
SEISMIC DESIGN CATEGORY:	D	
OCCUPANCY GROUP:	M	
CONSTRUCTION TYPE:	XB	

DRAWING INDEX:	
1	COVER SHEET
2	PETROLEUM EQUIPMENT LIST
3	AREA MAP
4	SITE PLAN
5	DIKE PLAN
6	ELECTRICAL PLAN
7	TANK ELEVATION
8	PIPING DETAILS
S-1	TANK FOUNDATION PLAN

- SCOPE OF WORK:**
1. INERT AND REMOVE EXISTING 10,000-GALLON GASOLINE ABOVE GROUND STORAGE TANK (AST).
 2. INSTALL NEW 8,000-GALLON GASOLINE AST AND CONNECT TO EXISTING UNDERGROUND PIPING AT EXISTING TRANSITION SUMP.
 3. INSTALL NEW FILL AND VAPOR RECOVERY CONNECTIONS AT SIDE OF EXISTING DIKE.
 4. INSTALL NEW TANK GAGE AND LEAK DETECTION SYSTEM.

NO.	DATE	DESCRIPTION

APPROVED BY: *Matthew E. Donohue* MATTHEW E. DONOHUE
R.C.E. CS7219
midoehue@transtechconsultants.com

REGISTERED PROFESSIONAL ENGINEER
MATTHEW E. DONOHUE
NO. CS7219
CIVIL
STATE OF CALIFORNIA

TRANS TECH CONSULTANTS
930 SHILOH RD., BLDG 44, SUITE J
WINDSOR, CA 95492
PHONE: 707-837-8408 FAX: 707-837-7334

REPLACE ABOVE GROUND GASOLINE TANK LAKE SONOMA MARINA FUELING SYSTEM 4200 SKAGGS SPRINGS RD., GEYESERVILLE, CA APN: 139-230-009
DATE: 11/04/2024
DRAWN: MED
JOB#: 2469.03
SHEET
1

\\black_server\TransTech\projects\2469.01_4200 SKAGGS SPRINGS RD. GEYESERVILLE CALDWING DIKE FLOOR PLAN-1_2469.dwg, CIVIL, 11/04/2024, 1:26:16 PM

LAKE SONOMA 8K - MODERN FIREGUARD

<u>Item #</u>	<u>Qty.</u>	<u>Manuf.</u>	<u>Model #</u>	<u>Item Description</u>
8K FIREGUARD TANK				
1	1	Modern Welding	MO-8000 GAL	8,000 GALLON MODERN FIREGUARD U.L. 2085
TANK DECALS				
2	2	United Sign Co.	SE-TD-30-1	DECAL 0-2-1 GAS - 10-3/4h
3	4	United Sign Co.	SE-U-PD108B-12	12 x 3 Gasoline Black on White Decal
4	4	United Sign Co.	SE-U-PD168R-12	12 X 3 No Smoking Red on White Decal
5	4	United Sign Co.	SE-U-PD169R-12	12 x 3 Flammable Red on White Decal
6	4	United Sign Co.	SE-U-PD177R-12	12 x 3 Combustible Red on White Decal
TANK TOP TRIM				
10	1	Husky	HU-5885	2" P/V Vent Thread w/3 WCP & 8 WCV
11	2	Morrison Bros.	MB-244OM-0700AVEVR	8" 16 Oz Emergency Vent Male Thread w/o-ring EVR
12	1	Morrison Bros.	MB-918-0000AGEVR	2" Clock Gauge Less Alarm Box, EVR Approved, Male Threads, Standard Float
13	1	Morrison Bros.	MB-305XPA2400AKEVR	2" EVR Approved Tank Monitor Cap/Adapter CC 1/2 Hole
FILL CONTAINMENT BOX				
20	1	Morrison Bros.	MB-715	3" 10Gal Bottom Connention w/3" AL Dry Disconnect Adaptor, BR Ball Valve, Hand Pump
21	1	Morrison Bros.	MB-715-P060 AK	3" x 60" Post Mount Kit, Post w/clamps & Base
22	1	Morrison Bros.	MB-715-VR30 AK	3" Vapor Recovery Kit, Includes Cap, adapter & 2 Clamps
23	1	Morrison Bros.	MB-246A-0800 AV	3" Swing Check Valve
24	1	Morrison Bros.	MB-9095AA3300AVEVR	3" Pressure Fill Overfill prevention Valve
25	1	Morrison Bros.	MB-9095AF3301 AAPW	3" Flange Adaptors F/9095AA Remote Valve
26	1	Morrison Bros.	MB-419-03081TEVR	3" x 7'9" Carb EVR DROP TUBE
MORRISON ALARM BOX				
30	1	Morrison Bros.	MB-918D-1100 AA	Dual Channel Tank Alarm Box
31	1	Morrison Bros.	MB-924LS-0150 AS	Liquid Level Sensor with 15' Lead Wire

NO.	DATE	DESCRIPTION	BY

APPROVED BY: *Matthew E. Donghue*
 MATTHEW E. DONGHUE
 R.C.E. C57219
 mdonghue@transtechconsultants.com



TRANS TECH CONSULTANTS
 930 SHILOH RD., BLDG 44, SUITE J
 WINDSOR, CA 95492
 PHONE: 707-837-8408 FAX: 707-837-7334

REPLACE ABOVE GROUND GASOLINE TANK
 LAKE SONOMA MARINA FUELING SYSTEM
 4200 SKAGGS SPRINGS RD., GEYSERVILLE, CA
 APN: 139-230-009

DATE: 11/04/2024
 DRAWN: MED
 JOB#: 2469.03
 SHEET
 2

\\black_serv\trans\tech\projects\2469.01_4200 SKAGGS SPRINGS RD. GEYSERVILLE CAD\DWG\LINE FLOOR PLAN-1_2469.dwg, EQ, 11/04/2024, 1:26:16 PM

ELECTRICAL SITE PLAN NOTES:

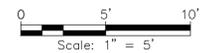
1. WIRE SHALL BE TYPE THWN OR APPROVED EQUAL.
2. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE A #12 INSULATED COPPER CONDUCTOR WITH A CONTINUOUS OUTER FINISH THAT IS EITHER GREEN OR GREEN WITH ONE OR MORE YELLOW STRIPES.
3. PRIOR TO WORK THE LICENSED ELECTRICIAN SHALL PERFORM A LOAD SURVEY TO VERIFY THAT ADEQUATE CAPACITY IS AVAILABLE IN EXISTING PANELS.
4. USE RIGID STEEL GALVANIZED STEEL (RMC) CONDUIT ABOVE GROUND IN HAZARDOUS AREAS.
5. USE RIGID STEEL GALVANIZED PVC COATED CONDUIT FOR RISERS AND LAST 24" OF UNDERGROUND RUNS. RIGID PVC OK FOR CONDUIT EMBEDDED IN DOCK, BURY 6" MINIMUM, SCHEDULE 40 OR HEAVIER.
6. NO CONDUIT SHALL EXCEED 4 QUARTER BENDS OR 360 DEGREES TOTAL BETWEEN PULLING POINTS.
7. EMBEDDED CONDUIT TO BE PROVIDED WITH SEAL OFFS AT THE POINT OF ORIGIN AS WELL AS POINT OF TERMINATION. PROVIDE METAL TAGS ON EACH INDICATING ORIGIN.
8. CONDUITS TO BE PROVIDED WITH SEAL-OFFS WITHIN 18" OF A CLASSIFIED AREA BOUNDARY.
9. ANY ELECTRICAL WIRING OR EQUIPMENT BELOW THE SURFACE OF A CLASS 1 LOCATION SHALL BE CONSIDERED TO BE IN A CLASS I, DIVISION 1 LOCATION AT LEAST UNTIL THE POINT OF EMERGENCE.
10. EMERGENCY SHUT-OFF SWITCH SHALL DISCONNECT CONDUCTORS INCLUDED GROUNDED CONDUCTOR FOR DISPENSERS AND PUMPS.
11. ELECTRICAL WORK TO BE DONE BY A LICENSED ELECTRICAL CONTRACTOR.
12. VERIFY CONDUCTOR NUMBER, SIZE, AND TYPE WITH EQUIPMENT INSTALLATION INSTRUCTIONS PRIOR TO WORK.
13. ELECTRICAL CONDUIT LOCATIONS SHOWN ON THIS PLAN ARE DIAGRAMMATIC AND MAY BE ADJUSTED OR CHANGED BY THE INSTALLER.

CEC. ARTICLE 500, 501, 514 HAZARDOUS AREAS:

- ◆ CLASS 1 LOCATION TANK – ABOVEGROUND:
EXTENT OF CLASS 1, GROUP D, DIVISION 1 LOCATIONS: INSIDE TANK.
- ◆ CLASS 1 LOCATION TANK – ABOVEGROUND:
EXTENT OF CLASS 1, GROUP D, DIVISION 2 LOCATIONS: WITHIN 10' FROM SHELL, ENDS, OR ROOF OF TANK EXTENDING IN ALL DIRECTIONS.
- ◆ CLASS 1 LOCATION TANK – ABOVEGROUND:
EXTENT OF CLASS 1 GROUP D, DIVISION 1 LOCATION: WITHIN 5' OF OPEN END OF VENT EXTENDING IN ALL DIRECTIONS. EXTENT OF CLASS 1, GROUP D, DIVISION 2 LOCATIONS: SPACE BETWEEN 5' AND 10' FROM OPEN END OF VENT, EXTENDING IN ALL DIRECTIONS.
- ◆ CLASS 1 LOCATION TANK – ABOVEGROUND:
EXTENT OF CLASS 1, GROUP D, DIVISION 2 LOCATIONS: WITHIN 3' OF PUMP EXTENDING IN ALL DIRECTIONS, WITHIN 10' FROM PUMP, TO 18" ABOVE GRADE.
- ◆ CLASS 1 LOCATION TANK – EXTENT OF CLASS 1 GROUP D, DIVISION 2 LOCATION: WITHIN 3' OF FILL/EMPTY CONNECTION AND UP TO 18" ABOVE GROUND WITH A HORIZONTAL RADIUS OF 10'.
- ◆ VAULT – INTERIOR SPACE IF CLASS 1 LIQUIDS ARE STORED WITHIN SHALL BE A CLASS I, DIVISION 1.
- ◆ DIKE – ENTIRE SPACE WITHIN DIKE WHERE DIKE HEIGHT DOES NOT EXCEED DISTANCE OF TANK SHELL TO DIKE WALL FOR MORE THAN 50% OF TANK CIRCUMFERENCE SHALL BE A CLASS I, DIVISION 2.

ACCESS ROAD
ASPHALT PAVING

EXISTING PANELBOARD, SOURCE
OF POWER FOR (EXISTING AND)
PROPOSED PUMP AT PROPOSED
GASOLINE TANK



LEGEND

- ② EQUIPMENT ITEM NO. PER SHEET 2 PETROLEUM EQUIPMENT LIST



ELECTRICAL PLAN

NO.	DATE	DESCRIPTION

APPROVED BY:
Matthew E. Donohue
MATTHEW E. DONOHUE
R.C.E. C57219
mehonue@transtechconsultants.com



TRANS TECH CONSULTANTS
930 SHILOH RD., BLDG 44, SUITE J
WINDSOR, CA 95492
PHONE: 707-837-8408 FAX: 707-837-7334

REPLACE ABOVE GROUND GASOLINE TANK
LAKE SONOMA MARINA FUELING SYSTEM
4200 SKAGGS SPRINGS RD., GEYSERVILLE, CA
APN: 139-230-009

DATE: 11/04/2024
DRAWN: MED
JOB#: 2469.03
SHEET
6

MEETS 2022 CBC
MEETS 2021 IBC

INNER TANK: PER U.L.
OUTER TANK: PER U.L.

INTERIOR: BARE, CLEAN OF DEBRIS

EXTERIOR: WHITE POLYURETHANE

MATERIAL AND CONSTRUCTION
CONFORM TO UNDERWRITERS
LABORATORIES STANDARD U.L. 2085.
SECONDARY CONTAINMENT
PROTECTED ABOVEGROUND TANK.

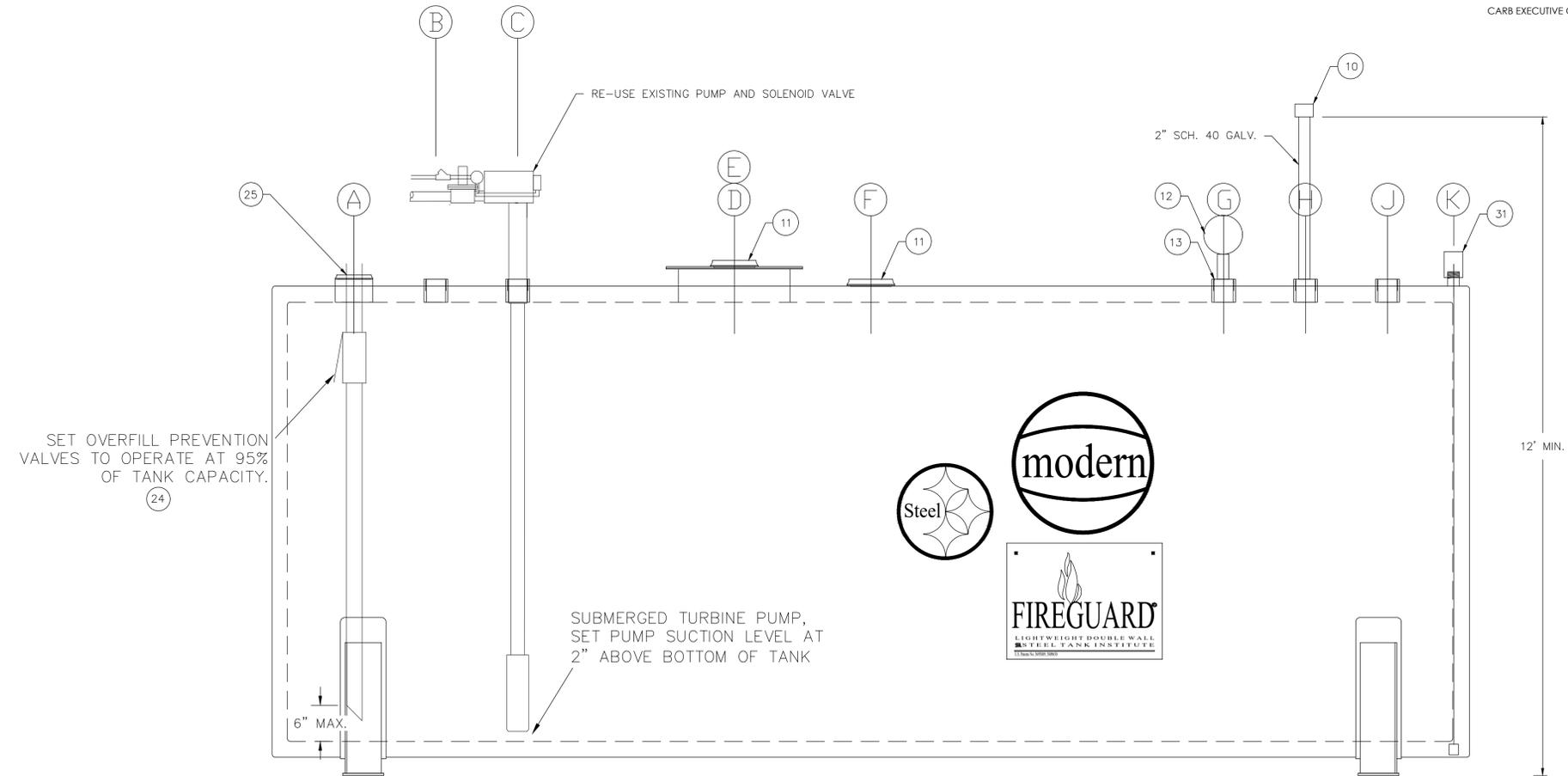
FIRE RESISTANT PER U.L. 2085.

BALLISTIC RESISTANT PER U.L. 2085.

VEHICLE IMPACT RESISTANT PER U.L.
2085.

U.L. LABEL FOR PROTECTED SECONDARY
CONTAINMENT ABOVEGROUND TANK IS
REQUIRED.

CARB EXECUTIVE ORDER VR-302-C.



SET OVERFILL PREVENTION
VALVES TO OPERATE AT 95%
OF TANK CAPACITY.

SUBMERGED TURBINE PUMP,
SET PUMP SUCTION LEVEL AT
2" ABOVE BOTTOM OF TANK

LEGEND

② EQUIPMENT ITEM NO. PER SHEET 2 PETROLEUM
EQUIPMENT LIST

MARK	QTY.	SIZE	TYPE	REMARKS
A	1	6"	FNPT	FILL
B	1	4"	FNPT	
C	1	4"	FNPT	
D	1	24"		MANWAY
E	1	8"	FNPT	PRI. E-VENT
F	1	8"	FNPT	SEC. E-VENT
G	1	4"	FNPT	
H	1	4"	FNPT	
J	1	4"	FNPT	
K	1	2"	MNPT	MONITOR

SIZE	O.D.	LENGTH	WEIGHT
8,000	103"	21'-11"	22,700#

SCHEDULE OF OPENINGS

AIR TEST AT NOT LESS THAN 3 PSI
NOR MORE THAN 5 PSI. PRIMARY
TANK TO BE TESTED ALONE.
SECONDARY TANK TO BE PRESSURE
TESTED WITH PRESSURE IN PRIMARY
TANK. THIS SHALL BE
ACCOMPLISHED BY BLEEDING AIR
FROM THE PRIMARY TANK INTO THE
SECONDARY TANK.

AT NO TIME SHALL THE
PRESSURE IN THE
SECONDARY TANK
EXCEED THE PRESSURE IN
THE PRIMARY TANK.



NO.	DATE	DESCRIPTION

APPROVED BY:
Matthew E. Donohue
MATTHEW E. DONOHUE
R.C.E. C57219
mdonohue@transtechconsultants.com



TRANS TECH CONSULTANTS
930 SHILOH RD., BLDG 44, SUITE J
WINDSOR, CA 95492
PHONE: 707-837-8408 FAX: 707-837-7334

REPLACE ABOVE GROUND GASOLINE TANK
LAKE SONOMA MARINA FUELING SYSTEM
4200 SKAGGS SPRINGS RD., GEYSERVILLE, CA
APN: 139-230-009

DATE: 11/04/2024
DRAWN: MED
JOB#: 2469.03
SHEET
7

TANK ELEVATION

\\back_server\TransTech\projects\246901_4200 SKAGGS SPRINGS RD. GEYSERVILLE, CALIFORNIA\FLOOR PLAN-1_2469.dwg, TANK ELEVATION, 11/4/2024, 1:33:20 PM

NO.	DATE	DESCRIPTION	BY

APPROVED BY: *Matthew E. Donohue*
 MATTHEW E. DONOHUE
 R.C.E. C57219
 mrdonohue@transtechconsultants.com

PROFESSIONAL ENGINEER
 MATTHEW E. DONOHUE
 NO. C57219
 CIVIL
 STATE OF CALIFORNIA

TRANS TECH CONSULTANTS
 930 SHILOH RD., BLDG 44, SUITE J
 WINDSOR, CA 95492
 PHONE: 707-837-8408 FAX: 707-837-7334

REPLACE ABOVE GROUND GASOLINE TANK
 LAKE SONOMA MARINA FUELING SYSTEM
 4200 SKAGGS SPRINGS RD., GEYSERVILLE, CA
 APN: 139-230-009

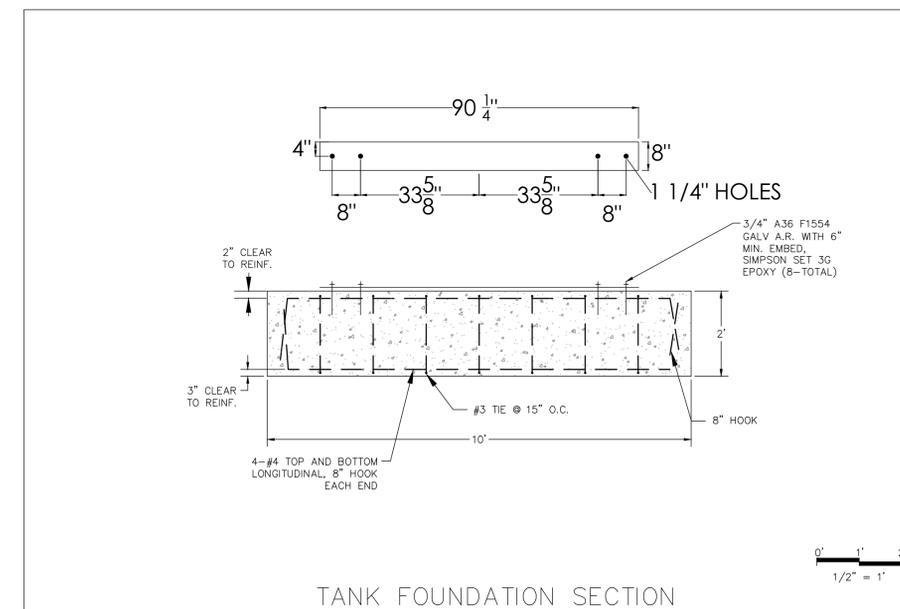
DATE: 11/04/2024
 DRAWN: MED
 JOB#: 2469.03
 SHEET
 S-1

STRUCTURAL SPECIFICATIONS

CONCRETE CONSTRUCTION

- CONCRETE SHALL BE HARD ROCK CONCRETE (5-1/2 SACK CEMENT PER CU YD MIN. UON) AND MEET THE FOLLOWING MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS.
- CONCRETE MIX DESIGN SHALL MEET THE REQUIREMENTS OF THE CHAPTER 19 AND SECTION 1701 OF THE CBC, AND THESE SPECIFICATIONS. CEMENT TO BE IN ACCORDANCE WITH ASTM 150 TYPE 1.
- REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 40. STEEL SHALL BE KEPT CLEAN AND FREE OF RUST.

LOCATION	MIN. STRENGTH 28 DAYS PSI	AGGREGATE SIZE-INCHES	SUMP INCHES	TOLERANCE
ALL	3,000	3" x #4	2"-3"	+1/2"



TANK FOUNDATION SECTION

TYPICAL REINFORCING DETAILS

24" MINIMUM BAR LAPS FOR REINFORCING STEEL #4 AND GREATER (STAGGER SPLICES). 16" LAP FOR #3.

ALL REINFORCING BARS SHALL EXTEND AS FAR AS POSSIBLE AND END IN A STANDARD 90° OR 180° HOOK UNLESS DETAILED OTHERWISE

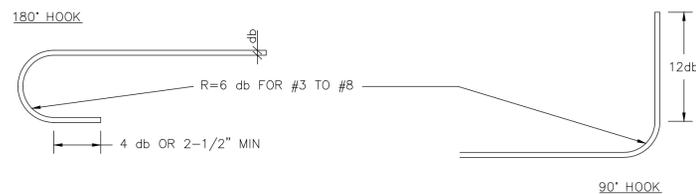
MINIMUM BAR SPACING GREATER OF 4x BAR DIAMETER & 4" MIN.

CONCRETE COVER FOR REINFORCING STEEL.....'MIN. CLEAR DISTANCE'

CAST AGAINST EARTH OR GRADE.....3"

EXPOSED TO EARTH (FORMED) OR WEATHER
 #5 & SMALLER.....1-1/2"
 #6 & LARGER.....2"

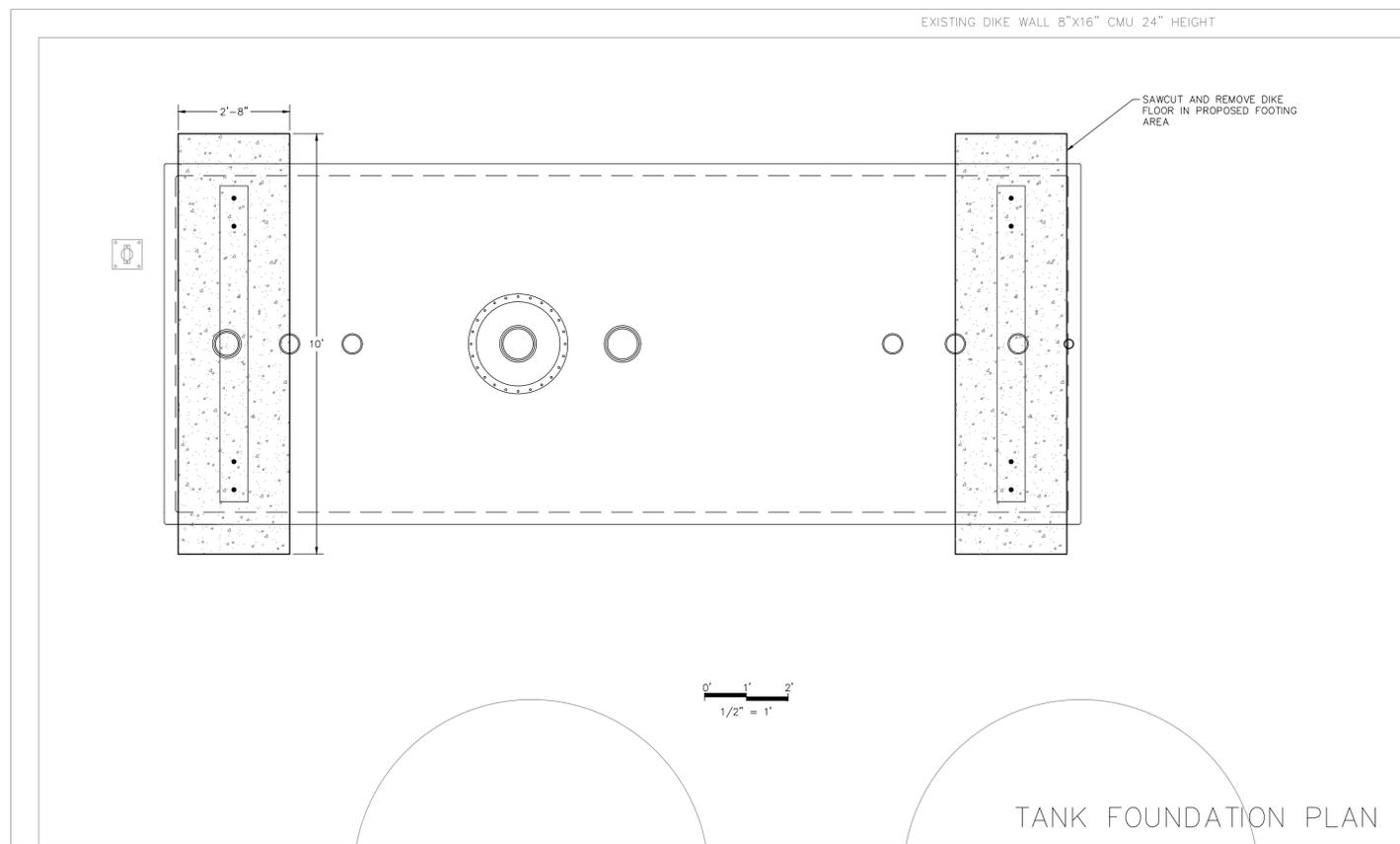
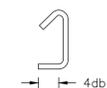
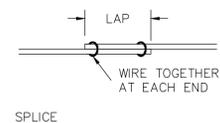
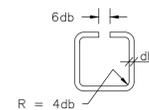
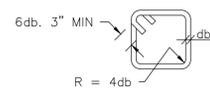
NOT EXPOSED TO EARTH OR WEATHER
 #5 & SMALLER.....1"
 #6 & LARGER, & ALL BM STIRRUPS, COL TIES, & SPIRALS.....1-1/2"



STANDARD HOOKS & BENDS



COL. BAR & STRUCT. OFFSET



TANK FOUNDATION PLAN