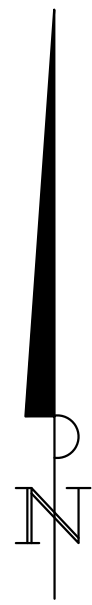
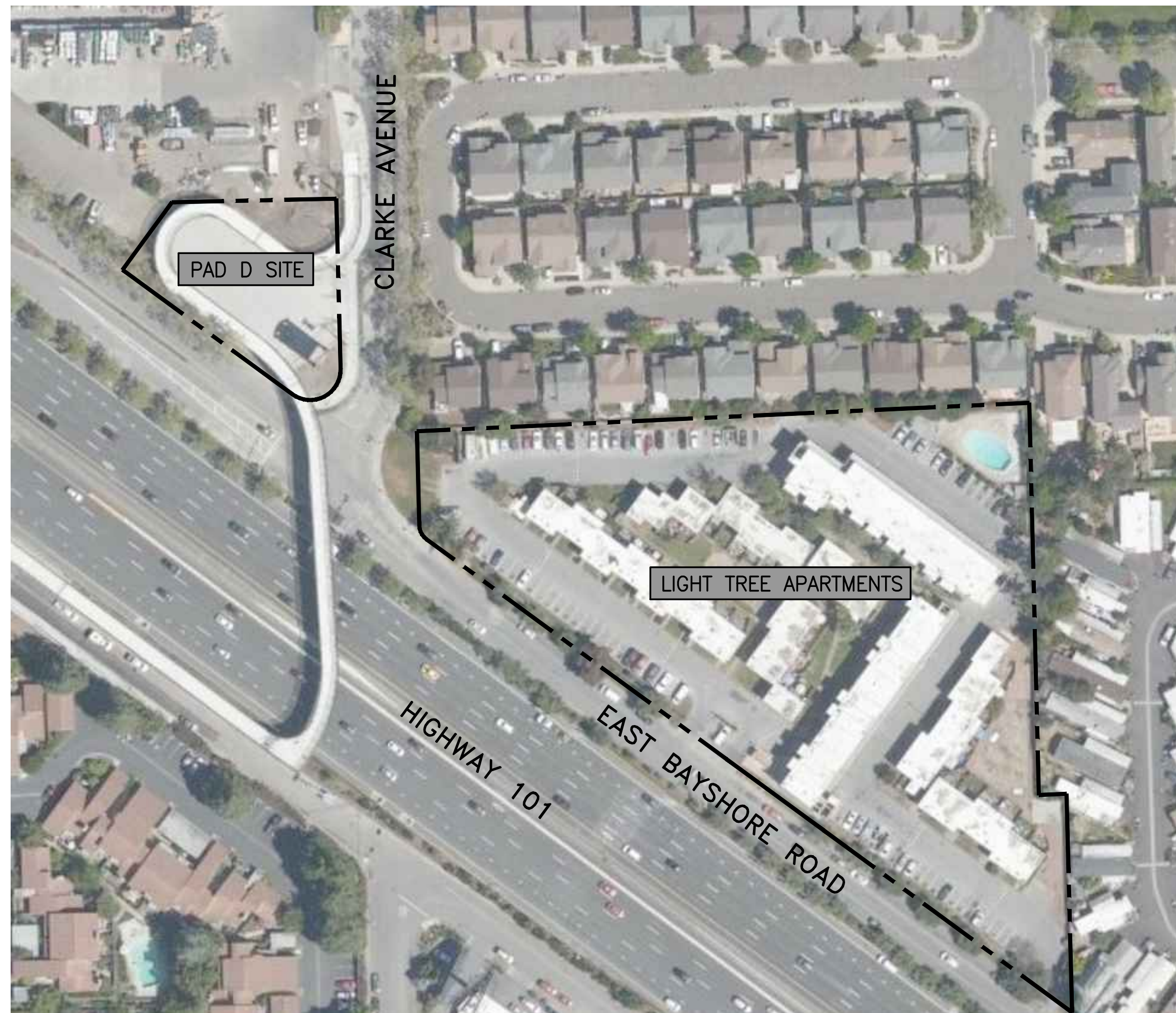


EDEN HOUSING LIGHT TREE APARTMENTS PAD D FIRE SUPPRESSION SYSTEM CITY OF EAST PALO ALTO 100% PLANS



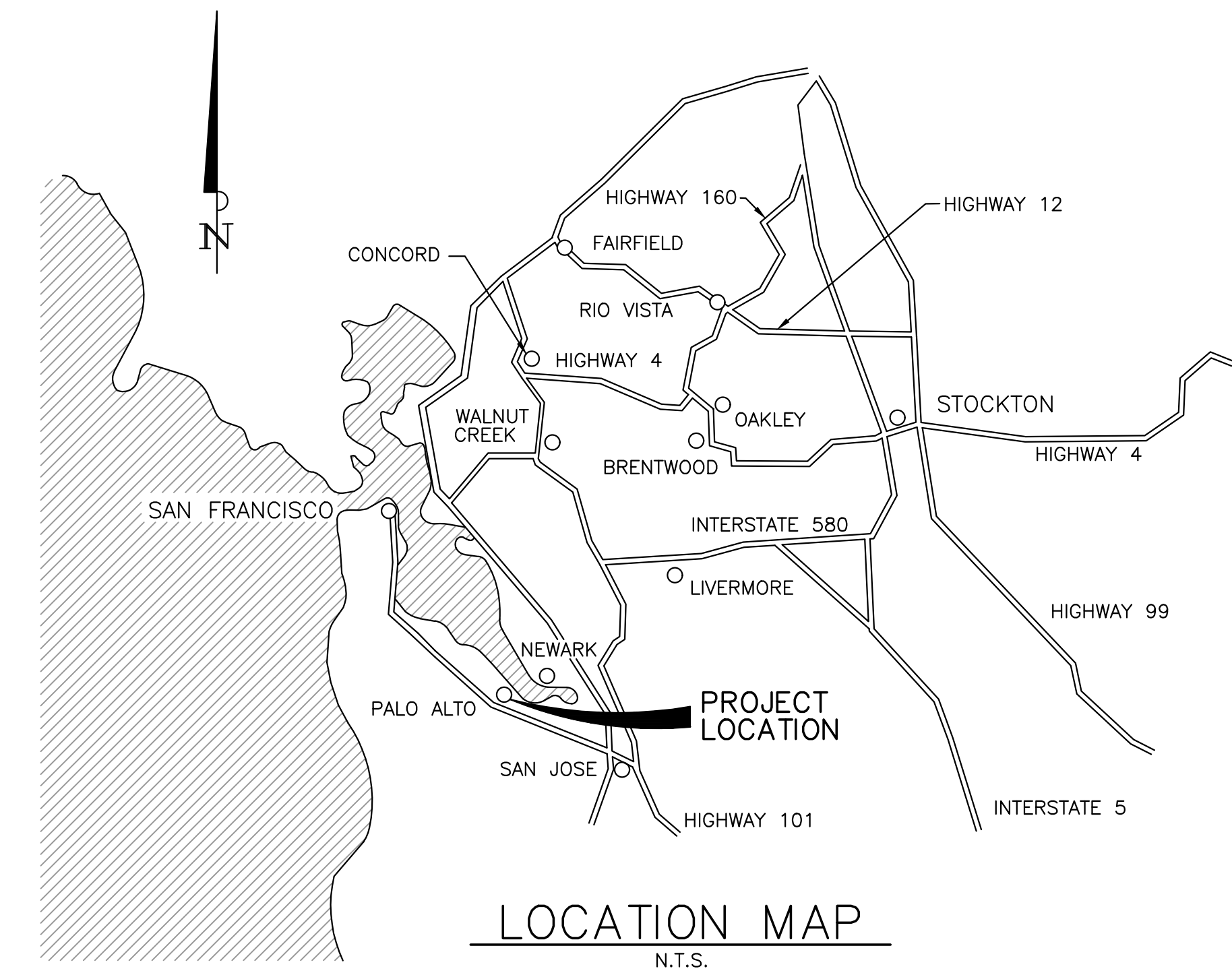
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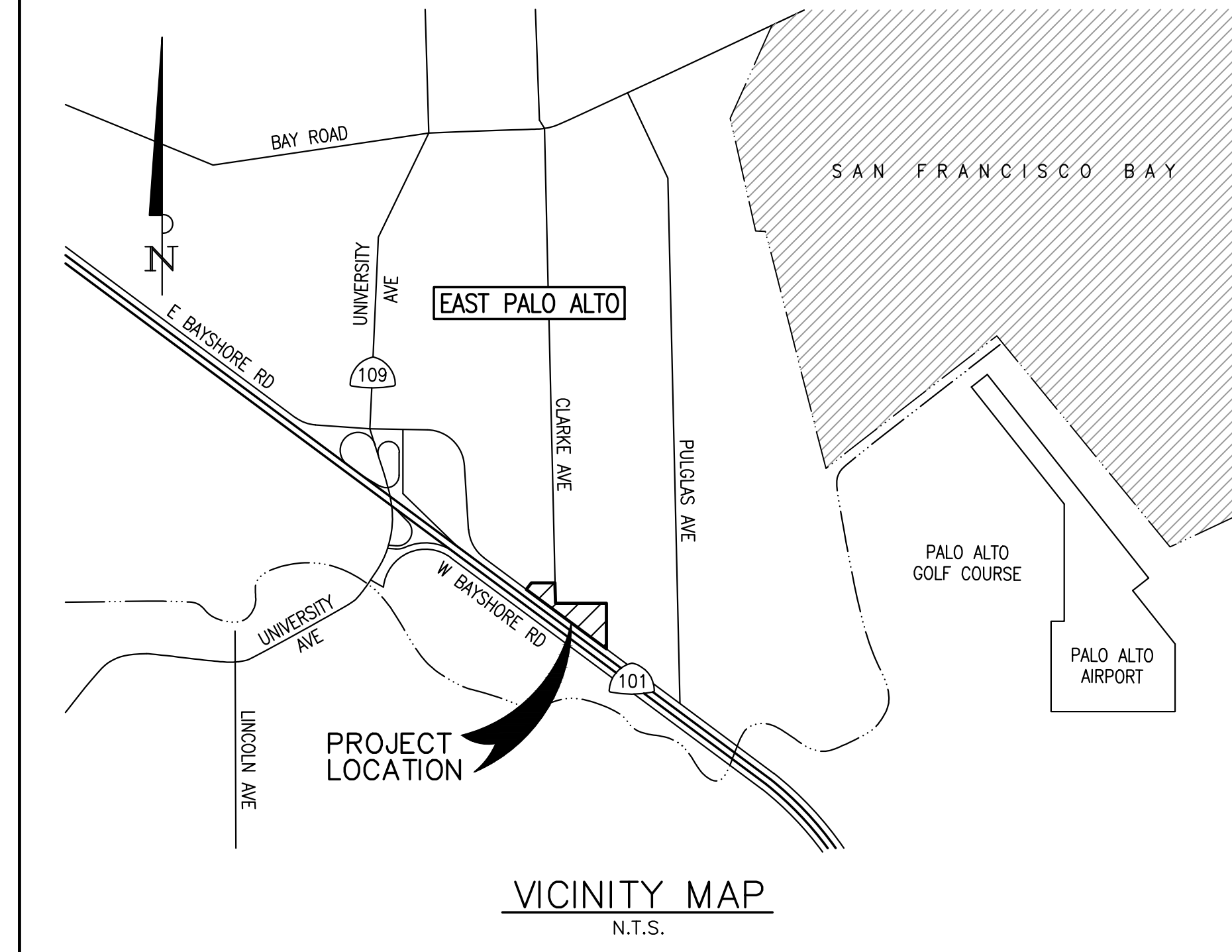
PROJECT MAP

SCALE: 1"=80'



LOCATION MAP

N.T.S.



VICINITY MAP

N.T.S.

CITY OF EAST PALO ALTO:

KAMAL FALLAHA, PUBLIC WORKS DIRECTOR
R.C.E. NO. C50843

DATE: _____

MENLO PARK FIRE PROTECTION DISTRICT:

JON JOHNSTON, FIRE MARSHAL

DATE: _____

BENCHMARK:
CITY OF EAST PALO ALTO BENCHMARK 1
BENCHMARK ID: NAVD88 ELEV=13.17

DRIVEN STAINLESS STEEL ROD IN SLEEVE
MONUMENT IN GRADE BOX IN THE LAWN IN
UNIVERSITY SQUARE PARK AT TATE AND
OAKES STREET. CITY OF EAST PALO ALTO.

CLIENT:
EDEN HOUSING
22645 GRAND STREET
HAYWARD, CA 94541

CONTACT:
MATT SCHREIBER, PROJECT DEVELOPER

NO.	REVISIONS	BY	APP	DATE

LIGHT TREE APARTMENTS

PAD D FIRE SYSTEM

COVER SHEET

CITY OF EAST PALO ALTO

CALIFORNIA

DESIGNED UNDER THE DIRECTION OF:
Jonathan W. Kaminsky
JONATHAN W. KAMINSKY
R.C.E. No. C82004 - REGISTRATION EXPIRES 03-31-22
DATE: 3-12-21

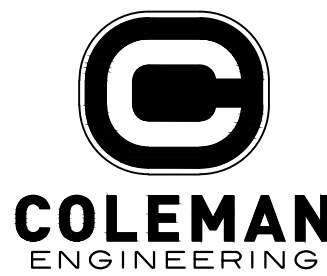
DESIGN: JWK DATE: 3-12-21
DRAWN: WCJ DATE: 3-12-21
CHECKED: JWK DATE: 3-12-21



SCALE
AS SHOWN

DRAWING NUMBER
G1

SHEET NUMBER
1 OF 28 SHEETS



COLEMAN ENGINEERING
1223 PLEASANT GROVE BLVD.
SUITE 100
ROSEVILLE, CA 95678
(916) 791-1188

BAR IS ONE INCH
AT FULL SCALE

0" — 1"

IF NOT ONE INCH
ON THIS SHEET
SCALE ACCORDINGLY

PROJECT NOTES

- THESE PROJECT NOTES APPLY TO ALL DRAWINGS.
- RESTORE ALL SURFACES TO THEIR ORIGINAL CONDITION.
- CONTRACTOR SHALL PROVIDE ALL REQUIRED TRAFFIC CONTROL DURING ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY.
- CONTRACTOR SHALL MINIMIZE TRENCHING ACTIVITIES IN THE PUBLIC RIGHT-OF-WAY DURING COMMUTE TIMES (7:00 AM – 9:00 AM AND 4:00 PM TO 6:00 PM).
- CONTRACTOR SHALL APPLY FOR AND OBTAIN ANY AND ALL REQUIRED PERMITS TO COMPLETE THE WORK. REQUIRED PERMITS INCLUDE A BUILDING PERMIT, GRADING PERMIT, AND ENCROACHMENT PERMIT FOR CLARKE AVENUE.
- CONTRACTOR SHALL COORDINATE WITH THE CITY OF EAST PALO ALTO TO APPLY FOR AND PROVIDE A WATER SERVICE CONNECTION AS INDICATED ON THE DRAWINGS.
- CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (DUST CONTROL, SOUND ATTENUATION, ETC.) IN ACCORDANCE WITH THE PROJECT'S ENVIRONMENTAL DOCUMENTATION.
- ENVIRONMENTAL DOCUMENTATION IS AVAILABLE AT [HTTPS://CEQANET.OPR.CA.GOV/2020090234/2](https://ceqanet.opr.ca.gov/2020090234/2).

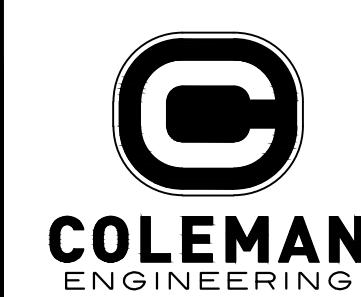
ABBREVIATIONS

AB	AGGREGATE BASE	IMPS	IMPROVEMENTS
AC	ASPHALTIC CONCRETE	INFO	INFORMATION
ADS	ADVANCED DRAINAGE SYSTEM	INV	INVERT
AGG	AGGREGATE	IPT	IRON PIPE THREAD
ALUM	ALUMINUM	IRRG	IRRIGATION
AMSL	ABOVE MEAN SEA LEVEL	L	LENGTH
ARV	AIR RELEASE VALVE	LF	LINEAL FEET
AVRV	AIR/VACUUM RELEASE VALVE	LT	LEFT
AUX	AUXILIARY	M	MOTOR
BOC	BOTTOM OF CONCRETE	MAX	MAXIMUM
BOV	BLOW OFF VALVE	MFR	MANUFACTURER
BTM	BOTTOM	MH	MANHOLE
B.O.	BOTTOM OF	MCC	MOTOR CONTROL CENTER
BLDG	BUILDING	MIN	MINIMUM
BFV	BUTTERFLY VALVE	MJ	MECHANICAL JOINT
C	CONDUIT	MSTR	MASTER
CI	CAST IRON	N	NORTHING
CJ	CONTROL JOINT	(N)	NEW
CLR	CLEAR	NPT	NATIONAL PIPE THREAD
CMP	CORRUGATED METAL PIPE	NTS	NOT TO SCALE
CMU	CONCRETE MASONRY UNIT	OC	ON CENTER
CNTRL	CONTROL	OD	OUTSIDE DIAMETER
CONC	CONCRETE	PH	PHASE (ELEC)/PUMP
CONN	CONNECTION	PL	PLATE
CONST	CONSTRUCTION	PE	PLAIN END
CONT	CONTINUOUS	P/P	POLE/UTILITY POLE
CIRC	CIRCULAR	PVC	POLYVINYL CHLORIDE
D	DRAIN	PCC	PORTLAND CEMENT CONCRETE
DDCV	DOUBLE DETECTOR CHECK VALVE	POLY	POLYETHYLENE
DET	DETAIL	PSF	POUNDS PER SQUARE FOOT
DG	DECOMPOSED GRANITE	PSI	POUNDS PER SQUARE INCH
Ø/DIA	DIAMETER	P	PRESSURE INDICATOR
DIP	DUCTILE IRON PIPE	PM	PRESSURE MAIN
DIST	DISTRIBUTION	PS	PRESSURE SEWER
DWG	DRAWING	PT	PRESSURE TRANSDUCER
E	EASTING	P/S	PUMPING STATION
EA	EACH	R	RADIUS
EFF	EFFLUENT	RR	RAILROAD
EL/ELEV	ELEVATION	RW	RAW WATER
ELEC	ELECTRICAL	RECIR	RECIRCULATION
ENGR	ENGINEER	RFBP	REDUCED PRESSURE BACKFLOW PREVENTION
ENGR'D	ENGINEERED	REIN	REINFORCING
EOP	EDGE OF PAVEMENT	REQ'D	REQUIRED
(E)	EXISTING	SS	SANITARY SEWER
EQUIP	EQUIPMENT	SCH	SCHEDULE
EF	EACH FACE	SD	STORM DRAIN
EW	EACH WAY	SEC	SECTION
FT	FEET	SST	STAINLESS STEEL
FRP	FIBERGLASS REINFORCED PLASTIC	STL	STEEL
FF/FIN FLR	FINISH FLOOR	SQ	SQUARE
FG	FINISHED GRADE	SF	SQUARE FEET
FCA	FLANGED COUPLING ADAPTOR	THK	THICK
FL	FLANGED/FLOWLINE	THD	THREADED
FD	FLOOR DRAIN	T&B	TOP AND BOTTOM
FE	FLOW ELEMENT	TOS	TOP OF SLAB
FTG	FOOTING	XFMR	TRANSFORMER
FM	FORCE MAIN	TYP	TYPICAL
GAL	GALLONS	UCE	UNDERGROUND ELECTRIC
GPD,H,M	GALLONS PER DAY, HOUR, MINUTE	UNC	UNIFIED COARSE THREADS
GALV	GALVANIZED	UNO	UNLESS NOTED OTHERWISE
GIP	GALVANIZED IRON PIPE	VCP	VITRIFIED CLAY PIPE
GSP	GALVANIZED STEEL PIPE	VERT	VERTICAL
GV	GATE VALVE	VFD	VARIABLE FREQUENCY DRIVE
GA	GAUGE	V	VOLTS
GR	GRATE	W	WATER
GND	GROUND (ELEC)	WL	WATER LEVEL
HSS	HOLLOW STRUCTURE SECTIONS	WSE	WATER SURFACE ELEVATION
HT	HEIGHT	WT	WATER TREATED
HORZ	HORIZONTAL	WSP	WELDED STEEL PIPE
HP	HORSEPOWER	WWM	WELDED WIRE MESH
ID	INNER DIAMETER	W/	WITH
IE	INVERT ELEVATION		

STANDARD SYMBOLS LEGEND

PROPOSED		EXISTING
	SD	
	SS	
	WWM	
	E	
	T	
	G	
	CATV	
	F0	
	10	
	2	
	x-ELEV	
	10.0	
	10.00	
	P=	
	FF=	
	FL=	
	A M1	N/A
	1 M1	N/A

12/30/20 S:\PROJECTS\2020-001 - LIGHT TREE APARTMENTS STORAGE TANK\CADD\PAD D OPTION\G2 - PROJECT NOTES, LEGEND AND ABBREVIATIONS.DWG



COLEMAN ENGINEERING
1223 PLEASANT GROVE BLVD.
SUITE 100
ROSEVILLE, CA 95678
(916) 791-1188

BAR IS ONE INCH AT FULL SCALE

IF NOT ONE INCH ON THIS SHEET SCALE ACCORDINGLY

NO.	REVISIONS	BY	APP	DATE
1				
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3				
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5				

LIGHT TREE APARTMENTS
PROJECT NOTES, LEGEND AND ABBREVIATIONS
CITY OF EAST PALO ALTO

PAD D FIRE SYSTEM
CALIFORNIA

DESIGNED UNDER THE DIRECTION OF: JONATHAN W. KAMINSKY R.C.E. No. C82004 - REGISTRATION EXPIRES 03-31-22		3-12-21 DATE
DESIGN: JWK	DATE: 3-12-21	
DRAWN: WCJ	DATE: 3-12-21	
CHECKED: JWK	DATE: 3-12-21	



SCALE
NO SCALE
DRAWING NUMBER
G2
SHEET NUMBER
2 OF 28 SHEETS

GENERAL NOTES

- THESE STANDARD NOTES APPLY TO ALL DRAWINGS.
- NO WORK SHALL BE STARTED WITHOUT FIRST NOTIFYING THE ENGINEER 48 HOURS PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BE IN RECEIPT OF APPROVED PLANS AND NOTICE TO PROCEED PRIOR TO BEGINNING ANY WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING REQUIRED INSPECTIONS AND SHALL GIVE 48 HOURS NOTIFICATION TO THE ENGINEER.
- CONSTRUCTION BIDS SHALL BE BASED ON THE WORK REQUIRED BY THIS PLAN SET, WHETHER OR NOT SPECIFICALLY ITEMIZED ON THE BID SHEET.
- THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED PRODUCT. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- ALL WORK SHALL CONFORM TO THE CONTRACT SPECIFICATIONS AND TO THE OWNER'S DESIGN STANDARDS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT AND TO APPLICABLE CODES. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED. IN CASE OF CONFLICT, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
- WORK DESCRIBED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT DESCRIBED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR DESCRIBED IN BOTH. IN CASE OF DIFFERENCES BETWEEN SPECIFICATIONS AND DRAWINGS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
- DIMENSIONS TAKE PRECEDENCE OVER SCALE OF PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INFORM THE DESIGN ENGINEER OF ANY SIGNIFICANT CONFLICTS WHICH MAY BECOME APPARENT DURING THE CONSTRUCTION AND TO SEE THAT THEY ARE RESOLVED PRIOR TO PROCEEDING ON THE AFFECTED CONSTRUCTION.
- NO CONSTRUCTION VEHICLES OR EQUIPMENT SHALL CROSS EXISTING BURIED IMPROVEMENTS EXCEPT AT LOCATIONS WHERE APPROVED PROTECTION FACILITIES ARE INSTALLED.
- CONTOURS ARE SHOWN IN ONE FOOT INCREMENTS UNLESS OTHERWISE NOTED.
- PIPELINES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS SHOWN ON PLANS AND PROFILES.
- SPOT ELEVATIONS SHOWN ARE TOP OF FINISHED GRADE UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL KEEP A DAILY RECORD OF AS-BUILT CONDITIONS ON A DESIGNATED PLAN SET. FOLLOWING COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT THE AS-BUILT PLAN SET TO THE ENGINEER.

REGULATIONS AND PERMITS

- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY CONSTRUCTION PERMITS, APPROVALS, AND LICENSES PRIOR TO BEGINNING THE WORK.
- WORKMANSHIP, MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE MOST CURRENT EDITIONS OF THE I.B.C., U.M.C., U.P.C., N.E.C., AND N.F.P.A. AS WELL AS APPLICABLE STATE AND LOCAL CODES, TRADE ASSOCIATION STANDARDS, AND MANUFACTURER'S STANDARDS.
- ALL WORK SHALL BE IN COMPLIANCE WITH APPLICABLE ORDINANCES AND REGULATIONS OF ANY AUTHORITY HAVING JURISDICTION. IF THE CONTRACT DOCUMENTS ARE IN VARIANCE THEREWITH, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PERFORMING SUCH WORK.
- CONTRACTOR SHALL COMPLY WITH ALL ENVIRONMENTAL MITIGATION AND MONITORING REQUIREMENTS IN ACCORDANCE WITH ALL APPLICABLE PROJECT ENVIRONMENTAL DOCUMENTATION.
- CONTRACTOR SHALL FULFILL ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PRIOR TO COMMENCEMENT OF AND DURING CONSTRUCTION. IF NO SWPPP IS INCLUDED IN THE DESIGN DOCUMENTS OR OTHERWISE PROVIDED TO THE CONTRACTOR, THE CONTRACTOR IS REQUIRED TO APPLY FOR AND OBTAIN A SWPPP PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL OBTAIN ANY ENCROACHMENT PERMITS REQUIRED FOR WORK WITHIN PUBLIC RIGHT OF WAY.
- CONTRACTOR SHALL COORDINATE UTILITY RELATED REQUIREMENTS, INCLUDING APPLICATION FOR SERVICE, WITH UTILITY COMPANIES.

EXISTING CONDITIONS

- THE CONTRACTOR SHALL EXAMINE THE PROJECT WORK AREA PRIOR TO BIDDING TO SATISFY HIMSELF AS TO THE NATURE AND EXTENT OF EXISTING SITE CONDITIONS THAT WILL BE ENCOUNTERED.
- ALL MEASUREMENTS OF EXISTING TOPOGRAPHY, STRUCTURES AND UTILITIES ARE SUBJECT TO VERIFICATION IN THE FIELD BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE DRAWINGS PRIOR TO FABRICATION OR CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ERRORS WHICH MAY HAVE BEEN AVOIDED BY FIELD VERIFICATION.
- THE CONTRACTOR SHALL REMOVE EXISTING STRUCTURES, INCLUDING PAVING, SIDEWALKS, CURBS, GUTTERS, PIPELINES, AND RIP RAP, AS MAY BE NECESSARY FOR THE PERFORMANCE OF THE WORK AND SHALL REBUILD THE STRUCTURES THUS REMOVED IN AS GOOD A CONDITION AS FOUND WITH THE REQUIREMENTS SPECIFIED. CONCRETE STRUCTURES SUCH AS CURBS AND GUTTERS SHALL BE REPLACED FROM JOINT TO JOINT OR AS DIRECTED BY THE CONSTRUCTION MANAGER. THE CONTRACTOR SHALL ALSO REPAIR EXISTING STRUCTURES THAT MAY BE DAMAGED AS A RESULT OF THE WORK UNDER THIS CONTRACT.

- DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN AUTHORIZED BY THE ENGINEER. THE CONTRACTOR WILL PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES AS REQUIRED.
- THE CONTRACTOR SHALL RESTORE THE EXISTING GROUND, REPLACE IN KIND ALL EXISTING STRUCTURES, PAVING, LANDSCAPING, AND FINISH SURFACE DISTURBED BY CONSTRUCTION TO THE ORIGINAL CONTOURS AND ELEVATION UNLESS OTHERWISE NOTED ON THE PLANS.
- THE CONTRACTOR SHALL NOT DISTURB ANY PERMANENT SURVEY MONUMENT WITHOUT THE CONSENT OF THE ENGINEER. A LICENSED SURVEYOR SHALL REPLACE ALL MONUMENTS DISTURBED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL REESTABLISH ANY PROPERTY MARKER, BENCHMARK, ETC. DISTURBED DURING CONSTRUCTION TO ITS ORIGINAL LOCATION.
- ALL AREAS OF CONSTRUCTION DISTURBANCE WHERE NATURAL COVER AND VEGETATION HAVE BEEN REMOVED SHALL BE HYDRO-SEEDED FOR EROSION CONTROL IN ACCORDANCE WITH THE SPECIFICATIONS.

SAFETY

- THE CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY.
- NOTIFY UNDERGROUND SERVICE ALERT (U.S.A.) AT (800) 227-2600 AT LEAST TWO WORKING DAYS PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDER.
- THE CONTRACTOR SHALL COMPLY WITH ALL OSHA SAFETY REQUIREMENTS.
- SHEETING, SHORING, AND BRACING OF TRENCHES GREATER THAN 5-FEET IN DEPTH IS REQUIRED. THE CONTRACTOR SHALL DESIGN SHEETING, SHORING, AND BRACING IN ACCORDANCE WITH ARTICLE 6 OF THE CAL/OSHA AND THE CALIFORNIA LABOR CODE.
- ALL EXCAVATION SHALL BE COMPLETE OR BACKFILLED AT THE END OF THE DAY OR COVERED WITH PLATING, UNLESS ALTERNATIVE PROTECTION MEASURES ARE APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG PERSONS, OR OTHER DEVICES NECESSARY TO PROVIDE PUBLIC SAFETY AND TO MAINTAIN TRAFFIC CONTROL AT ALL TIMES.
- CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, ORDINANCES, AND REGULATIONS REGARDING NOISE GENERATED BY CONSTRUCTION OPERATIONS. CONSTRUCTION EQUIPMENT THAT OPERATES AT A NOISE LEVEL IN EXCESS OF 85 DECIBELS (MEASURED ON THE A-WEIGHTED SCALE DEFINED IN ANSI-1.4), AT A DISTANCE OF 100 FEET FROM THE EQUIPMENT, IS PROHIBITED UNLESS AUTHORIZED BY THE ENGINEER.
- THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL UTILITY COMPANIES FOR THE LOCATION AND PLACEMENT OF UTILITIES DURING CONSTRUCTION. NO EXCAVATION IS PERMITTED WITHIN 24 INCHES OF A GAS MAIN WITHOUT A REPRESENTATIVE OF THE GAS UTILITY PRESENT.

CIVIL, PIPELINES AND OTHER UTILITIES

- THE TYPE, SIZE, LOCATION, AND DEPTH OF EXISTING UNDERGROUND UTILITIES SHOWN ON THESE DRAWINGS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THE DELINEATION OF SUCH UNDERGROUND UTILITIES, WHICH MAY BE ENCOUNTERED, IS ASSUMED BY THE ENGINEER OR OWNER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ANY EXISTING UTILITIES SHALL BE EXPOSED USING APPROPRIATE MEANS AND METHODS REQUIRED TO PREVENT DAMAGE. EXPOSED UTILITIES AND STRUCTURES SHALL BE PROTECTED AND/OR SUPPORTED TO PREVENT DAMAGE OR DEFLECTION FROM ORIGINAL CONDITION. ANY DAMAGE OR LOSS OF SERVICE RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE CORRECTED IMMEDIATELY TO PRE-CONSTRUCTION CONDITION AT CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON INFORMATION FURNISHED BY THE OWNER OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, AND FOR THE SAFETY AND PROTECTION THEREOF AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST FOR POTHOLING TO LOCATE EXISTING UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS SHALL BE INCLUDED IN THE ASSOCIATED BID ITEMS IN THE CONTRACTOR'S BID. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING PIPE FITTINGS (WHETHER OR NOT SHOWN ON THE DRAWINGS) TO PLACE THE ALIGNMENT OF THE PIPELINES AS CLOSE AS PRACTICABLE TO THAT SHOWN ON THE DRAWINGS.
- PROVIDE 12 INCHES MINIMUM VERTICAL CLEARANCE BETWEEN PIPELINE AND EXISTING UTILITIES, UNLESS NOTED OTHERWISE.
- ALL BURIED PIPELINES SHALL HAVE A MINIMUM SOIL COVER OF 30 INCHES, UNLESS NOTED OTHERWISE.

- DEFLECT JOINTS ON STANDARD FITTINGS OR ADJACENT HDPE PIPE TO OBTAIN VERTICAL AND HORIZONTAL CURVES SHOWN ON THE DRAWINGS. DO NOT DEFLECT HDPE PIPE WITHIN 10 FEET OF ANY FABRICATED FITTING OR HDPE FLANGE CONNECTION.
- LINE VALVES SHALL BE SHOP TESTED TO SEAT IN BOTH DIRECTIONS TO FACILITATE FIELD PRESSURE TESTING.
- ALL CONCRETE VAULTS AND COVERS IN TRAFFIC OR PARKING AREAS SHALL BE DESIGNED FOR H-20 LOADINGS UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS.
- ALL PIPES SHALL BE CONSTRUCTED TO RESIST THRUST FORCES DEVELOPED DURING PRESSURE TESTING AND OPERATION. THRUST FORCES ARE DEVELOPED AT CHANGES IN HORIZONTAL AND VERTICAL DIRECTIONS, CHANGES IN PIPELINE DIAMETER, CLOSED VALVES, AND DEAD ENDS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE DUE TO DUST OR EROSION RESULTING FROM THE WORK DONE BY THE CONTRACTOR.
- IF SAW CUT IS WITHIN 2 FEET OF AN EXISTING PAVEMENT EDGE OR EXISTING PAVEMENT PATCH, REMOVE EXISTING PAVEMENT TO THAT EDGE AND REPLACE THE ENTIRE PAVEMENT.
- ALL PIPE PENETRATIONS THROUGH WALLS AND SLABS SHALL BE PROVIDED WITH SLEEVES IN ACCORDANCE WITH THE TYPICAL DETAILS, UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL KEEP EXCAVATIONS FREE FROM WATER DURING CONSTRUCTION. STATIC WATER LEVEL SHALL BE DRAWN DOWN A MINIMUM OF 4 FEET BELOW BOTTOM OF EXCAVATIONS. DISPOSAL OF WATER SHALL NOT DAMAGE PROPERTY OR CREATE A PUBLIC NUISANCE. DISPOSAL OF WATER SHALL BE IN ACCORDANCE WITH PROJECT ENVIRONMENTAL DOCUMENTATION.
- ALL SOIL FILLING OR DISPOSAL ONSITE WILL BE COMPACTED TO 95% RELATIVE COMPACTION UNLESS NOTED OTHERWISE.

MECHANICAL EQUIPMENT AND PIPING

- EQUIPMENT LAYOUT SHOWN ON THE DRAWINGS IS FOR A SINGLE AND SPECIFIC MANUFACTURER. CONTRACTOR SHALL MAKE ALL NECESSARY STRUCTURAL, MECHANICAL, ELECTRICAL, AND BUILDING MODIFICATIONS NECESSARY TO ACCOMMODATE ALTERNATIVE EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL PROVIDE ALL APPURTENANCES REQUIRED FOR PROPER OPERATION OF EQUIPMENT, IN ACCORDANCE WITH THE SPECIFICATIONS, WHETHER OR NOT THEY ARE SHOWN ON THE DRAWINGS.
- NOT ALL PIPE FITTINGS OR SUPPORTS ARE SHOWN ON THE DRAWINGS. FURNISH AND INSTALL ALL FITTINGS AND SUPPORTS, AS REQUIRED FOR THE EQUIPMENT FURNISHED IN ACCORDANCE WITH THE SPECIFICATIONS AND TYPICAL DETAILS AND AT NO ADDITIONAL COST TO THE OWNER.
- PIPING CONNECTIONS TO EQUIPMENT SHALL BE VERIFIED AND ADJUSTED TO MATCH ACTUAL EQUIPMENT FURNISHED AT NO ADDITIONAL COST TO THE OWNER.
- SUCTION AND DISCHARGE PIPING FOR PUMPS, BLOWERS, ETC. SHALL BE SUPPORTED SO THAT THE WEIGHT OF THE PIPING IS NOT DISTRIBUTED TO THE EQUIPMENT.
- PROVIDE WARNING SIGNS IN ACCORDANCE WITH THE SPECIFICATIONS FOR ALL REMOTELY CONTROLLED EQUIPMENT.
- DUCTILE IRON PIPE SHALL COMPLY WITH ANSI A21.51 (AWWA C151). PIPE WALL THICKNESS FOR PUSH-ON JOINT AND MECHANICAL JOINT PIPE SHALL BE CLASS 51 FOR PIPE 4-INCHES AND SMALLER, AND CLASS 50 FOR LARGER PIPE.
- PVC WATER PIPE SHALL MEET THE REQUIREMENTS OF AWWA C-900 FOR PIPE SIZES 4" THROUGH 12". PIPE SIZES GREATER THAN 12" PVC PIPE SHALL MEET REQUIREMENTS OF AWWA C-905.
- PROVIDE CATHODIC PROTECTION ON ALL DUCTILE IRON FITTINGS, VALVES AND OTHER METALLIC FITTINGS OR APPURTENANCES IN ACCORDANCE WITH THE OWNERS STANDARDS, CATHODIC PROTECTION ENGINEER RECOMMENDATIONS, OR PLANS.
- ALL DIFFERING PIPE MATERIAL SHALL BE DIELECTRICALLY SEPARATED.
- ALL BURIED DUCTILE IRON PRESSURE PIPE AND FITTINGS SHALL BE ENCASED IN 8-MIL POLYETHYLENE IN ACCORDANCE WITH AWWA C-105.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCURATE VERTICAL AND HORIZONTAL CONTROL THROUGHOUT THE PROJECT.

MATERIALS AND PRODUCTS

- IT IS INTENDED THAT THESE PLANS REQUIRE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH ITS TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY REGARDING ANY DISCREPANCIES OR AMBIGUITIES WHICH MAY EXIST IN THE PLANS. THE ENGINEERS INTERPRETATION THEREOF SHALL BE CONCLUSIVE.
- ALL PRODUCTS AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. IF CONTRACT DOCUMENTS ARE IN VARIANCE THEREWITH, NOTIFY ENGINEER PRIOR TO BEGINNING WORK.
- ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND FREE FROM DEFECTS. MATERIALS USED MUST HAVE THE MANUFACTURER'S WARRANTED SUPPORT.
- MATERIALS, EQUIPMENT, ETC. NOT INDICATED ON THE DRAWINGS OR SPECIFIED, WHICH ARE MANIFESTLY OR REASONABLY REQUIRED, OR NECESSARY FOR A SUCCESSFUL, EFFICIENT AND COMPLETE INSTALLATION, SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH WORK. THEY SHALL BE HELD TO BE IMPLIED, AND SHALL BE FURNISHED AND INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
- WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS AND MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.

- ALL BUILDING COMPONENTS, BUILDING SYSTEMS, AND BUILDING PRODUCTS ARE TO BE LOCATED, FURNISHED, PROVIDED, AND INSTALLED WITH NECESSARY ACCESSORIES INCLUDING BUT NOT LIMITED TO EXPANSION/CONTRACTION CONTROL, BRACING, FLASHING, ELECTRONIC DEVICES, VALVES, ACCESSORIES, SUPPORTS, CONNECTIONS, DRAINAGE, VENTILATION, ETC. FOR A COMPLETE AND WORKING ASSEMBLY, PER CODES, DRAWINGS, AND SPECIFICATIONS, AND PER THE RECOMMENDATIONS OF ALL MANUFACTURERS, INCLUDING THOSE DIRECTLY INVOLVED AND THOSE RELATED OR INTERFACING.
- CONTRACTOR SHALL VERIFY ALL CONTROLLING DIMENSIONS PRIOR TO PREPARATION OF SHOP DRAWINGS AND ORDERING OF MATERIALS.
- CONTRACTOR SHALL BE REQUIRED TO ARRANGE FOR ALL STORAGE/STAGING AREAS, WHICH MAY NOT BE SHOWN ON THE DRAWINGS, AND PROVIDE SECURITY AT NO ADDITIONAL COST TO THE OWNER.
- ALL STAINLESS STEEL SHALL BE TYPE 304 OR 316, UNLESS NOTED OTHERWISE.
- ALL NUTS AND BOLTS TO BE INSTALLED UNDERGROUND, ENCASED, BURIED, AND INSIDE MANHOLES SHALL BE STAINLESS STEEL TYPE 316, UNLESS NOTED OTHERWISE.
- ISOLATE ALL COPPER PIPE FROM OTHER MATERIALS WITH PVC TAPE.
- SEPARATE DISSIMILAR METALS AND ALUMINUM IN CONTACT WITH CONCRETE, WITH BITUMINOUS PAINT OR AN ALTERNATIVE PRODUCT APPROVED BY THE ENGINEER.
- ALL MATERIALS AND PRODUCTS TO BE INSTALLED IN A DRINKING WATER SYSTEM SHALL BE NSF 61 CERTIFIED.

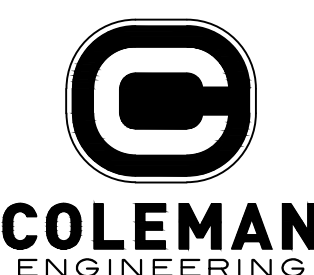
WORKMANSHIP

- CONTRACTOR DAMAGED WORK MUST BE REPLACED AT NO ADDITIONAL COST TO THE OWNER. REPAIRED OR REPLACED CONSTRUCTION DAMAGE TO EXISTING FACILITIES AND UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY.
- THE ENGINEER RESERVES THE RIGHT TO DIRECT THE CONTRACTOR TO REMOVE AND REINSTALL WORK, WHICH IN THE ENGINEER'S OPINION DOES NOT MAINTAIN WORKMANSHIP AND CRAFTSMANSHIP STANDARDS.
- THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT BUILDINGS AND STRUCTURES DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING AND SHORING. OBSERVATION VISITS TO THE SITE BY THE DESIGN ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
- CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMING FLOORS OR ROOF. TEMPORARY LOADING OF CONSTRUCTION MATERIAL SHALL NOT EXCEED THE DESIGN LIVE LOAD.
- CONTRACTOR SHALL MAINTAIN THE JOB SITE IN CLEAN, SAFE AND USABLE CONDITION THROUGHOUT THE COURSE OF CONSTRUCTION. ALL SPILLS OF SOIL, ROCK, CONSTRUCTION DEBRIS, ETC. SHALL BE REMOVED IMMEDIATELY FROM PUBLIC ACCESS AREAS. ALL TRASH, CONSTRUCTION DEBRIS AND MATERIALS SHALL BE CONTAINED WITHIN THE CONSTRUCTION AREA UNTIL OFF-SITE DISPOSAL CAN BE ARRANGED.

SURVEY

-

12/30/20 S:\PROJECTS\EBEN20-001 - LIGHT TREE APARTMENTS STORAGE TANK\CAD\DWG D. OPTI\DWG G3 - GENERAL NOTES.DWG



COLEMAN ENGINEERING
1223 PLEASANT GROVE BLVD.
SUITE 100
ROSEVILLE, CA 95678
(916) 791-1188

BAR IS ONE INCH
AT FULL SCALE

0 1"

IF NOT ONE INCH
ON THIS SHEET
SCALE ACCORDINGLY

NO.	REVISIONS	BY	APP	DATE
1				
2				
3				
4				
5				
6				

LIGHT TREE APARTMENTS

PAD D FIRE SYSTEM

CITY OF EAST PALO ALTO

CALIFORNIA

GENERAL NOTES

DESIGNED UNDER THE DIRECTION OF:

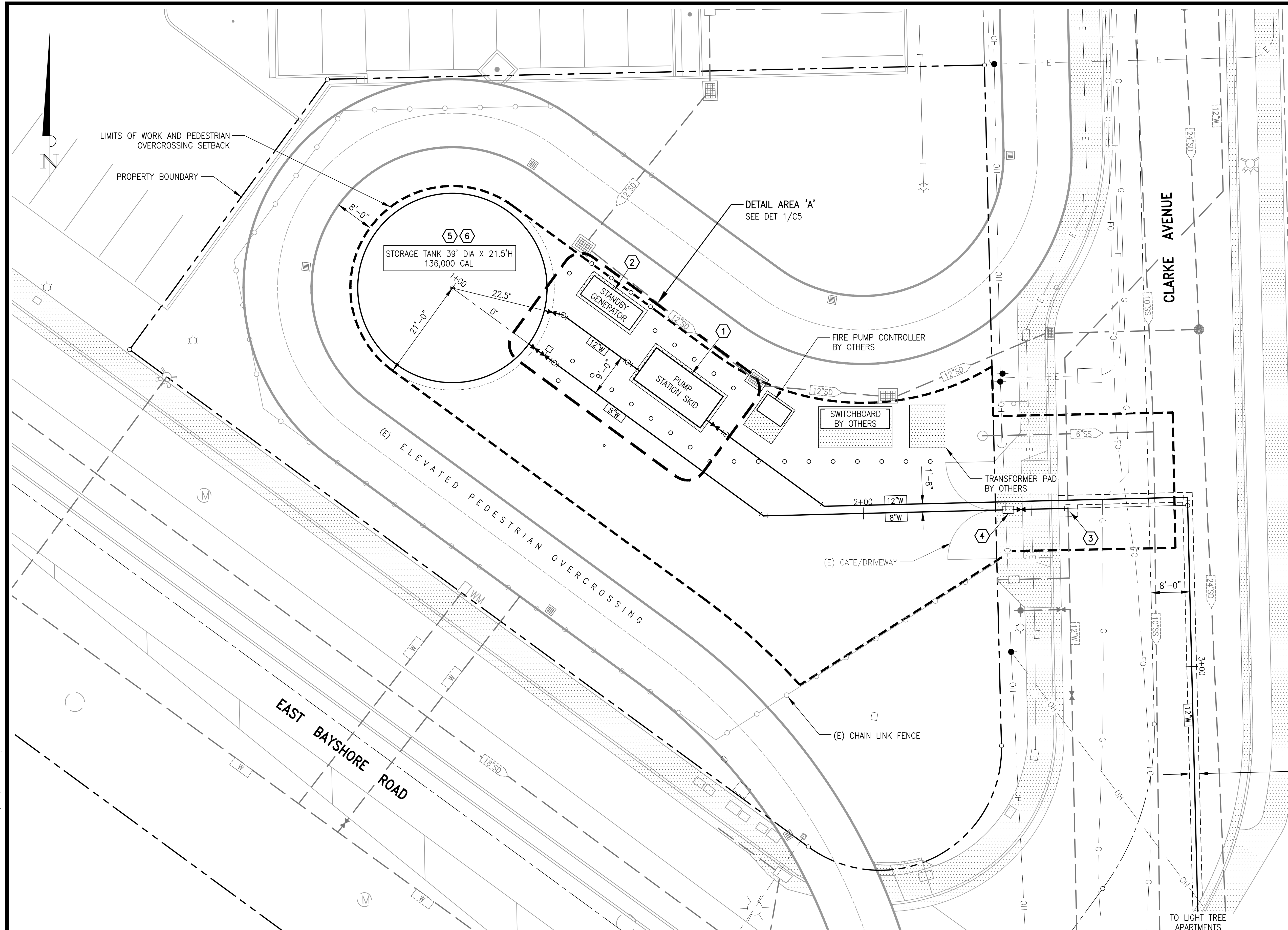
<i>Jonathan W. Kaminsky</i>	3-12-21
JONATHAN W. KAMINSKY R.C.E. No. C82004 - REGISTRATION EXPIRES 03-31-22	DATE
DESIGN: JWK	DATE: 3-12-21
DRAWN: WCJ	DATE: 3-12-21
CHECKED: JWK	DATE: 3-12-21



SCALE NO SCALE
DRAWING NUMBER G3
SHEET NUMBER 3 OF 28 SHEETS

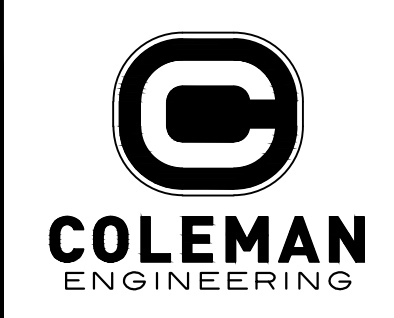
CONSTRUCTION NOTES:

- 1 PROVIDE AND INSTALL TIGERFLOW PUMP STATION SKID PACKAGE WITH AUTOMATIC TRANSFER SWITCH: SERIES FPS-7000-PEC MODEL: FP-1500-HSC-ELHO-HV-FM, ETL/C-ETL.
- 2 PROVIDE AND INSTALL EMERGENCY BACKUP GENERATOR. SEE DRAWING E1.
- 3 HOT TAP. INSTALL CONNECTION WHILE MAINTAINING SERVICE. GIVE NOTICE TO 300 FEET IN EACH DIRECTION. CONTRACTOR SHALL COORDINATE WITH THE CITY'S PUBLIC WORKS DEPARTMENT TO PROVIDE AND INSTALL SERVICE CONNECTION PER CITY STANDARDS.
- 4 CONTRACTOR SHALL COORDINATE WITH THE CITY'S PUBLIC WORKS DEPARTMENT TO PROVIDE AND INSTALL WATER METER PER CITY STANDARDS, SEE DETAIL 3/C3.
- 5 PROVIDE AND INSTALL PAX UWMSD TANK MIXER, OR EQUAL, SEE SPECIFICATIONS. CONTRACTOR SHALL PROVIDE AND INSTALL ELECTRICAL COMPONENTS PER ELECTRICAL PLANS.
- 6 ALL TANK COMPONENTS AND INTERIOR APPURTENANCES IN CONTACT WITH WATER SHALL BE NSF-61 CERTIFIED.



PAVEMENT REMOVAL AND REPLACEMENT, SEE CONSTRUCTION NOTE 2, DRAWING C2

12/30/20 8:11 PM PROJECTS\LEDER20-001 - LIGHT TREE APARTMENTS STORAGE TANK\CAD\PAD D OPTION\C1 - PAD D SITE PLANNING



COLEMAN ENGINEERING
1223 PLEASANT GROVE BLVD.
SUITE 100
ROSEVILLE, CA 95678
(916) 791-1188

BAR IS ONE INCH AT FULL SCALE
0" — 1"
IF NOT ONE INCH ON THIS SHEET SCALE ACCORDINGLY

NO.	REVISIONS	BY	APP	DATE
1				
2				
3				
4				
5				

LIGHT TREE APARTMENTS
PAD D FIRE SYSTEM
PAD D SITE PLAN
CITY OF EAST PALO ALTO
CALIFORNIA

PAD D SITE PLAN

DESIGNED UNDER THE DIRECTION OF:
Jonathan W. Kaminsky
JONATHAN W. KAMINSKY
R.C.E. No. C82004 - REGISTRATION EXPIRES 03-31-22
DESIGN: JWK
DRAWN: WCJ
CHECKED: JWK

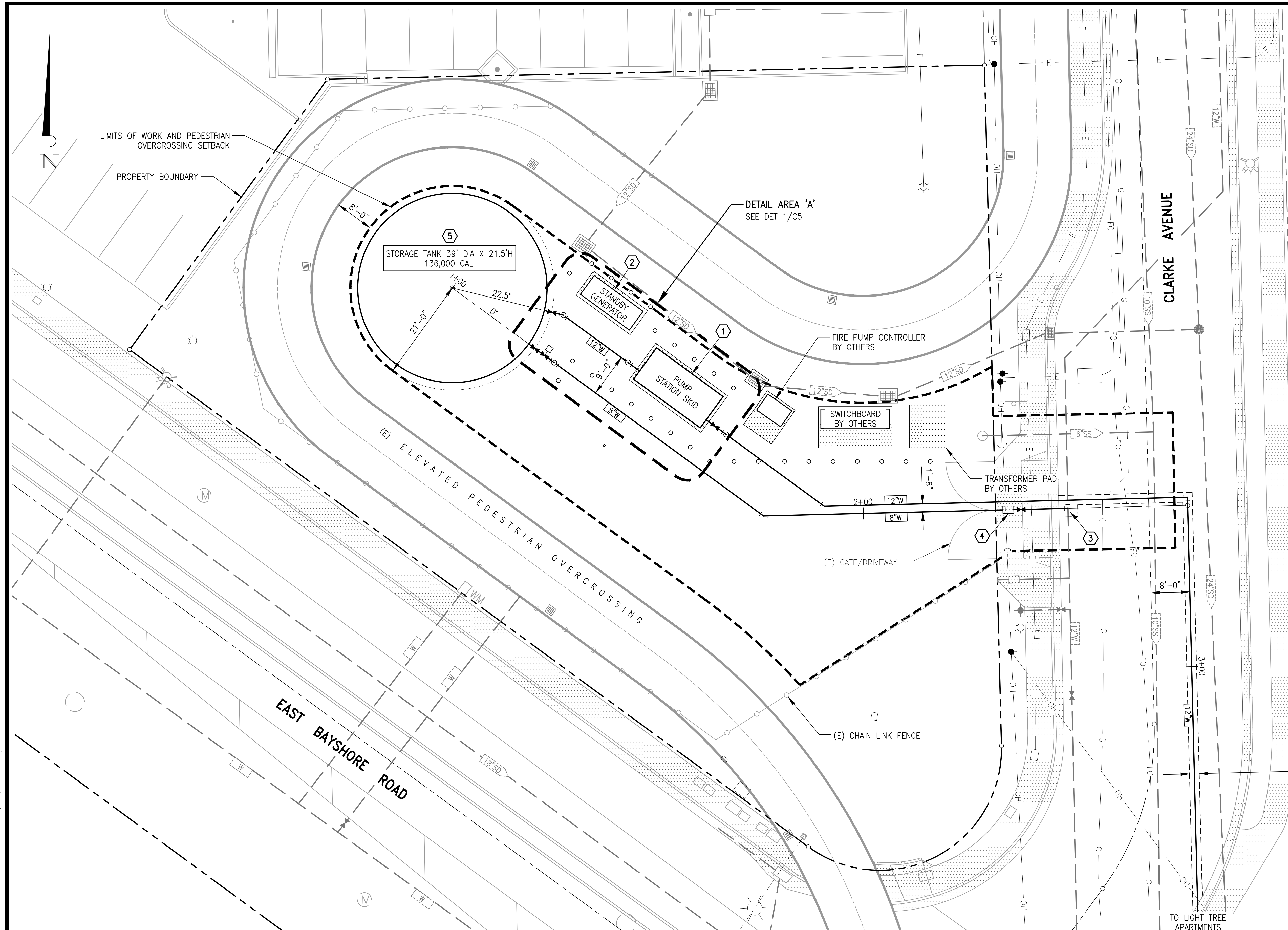
3-12-21	DATE
3-12-21	DATE
3-12-21	DATE
3-12-21	DATE



SCALE
1"=10'
DRAWING NUMBER
C1
SHEET NUMBER
4 OF 28 SHEETS

CONSTRUCTION NOTES:

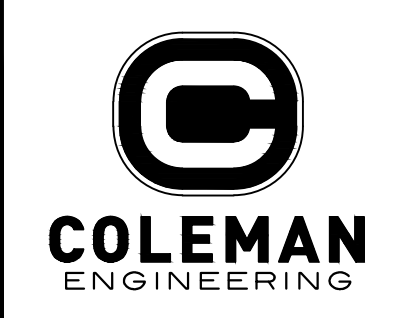
- 1 PROVIDE AND INSTALL TIGERFLOW PUMP STATION SKID PACKAGE WITH AUTOMATIC TRANSFER SWITCH: SERIES FPS-7000-PEC MODEL: FP-1500-HSC-ELHO-HV-FM, ETL/C-ETL.
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- 6 ALL TANK COMPONENTS AND INTERIOR APPURTENANCES IN CONTACT WITH WATER SHALL BE NSF-61 CERTIFIED.



PAVEMENT REMOVAL AND REPLACEMENT, SEE CONSTRUCTION NOTE 2, DRAWING C2

TO LIGHT TREE APARTMENTS

12/20/20 8:11 PM PROJECTS\LEDER20-001 - LIGHT TREE APARTMENTS STORAGE TANK\CAD\PAD D OPTION C2 - PAD D GRADING PLAN.DWG



COLEMAN ENGINEERING
1223 PLEASANT GROVE BLVD.
SUITE 100
ROSEVILLE, CA 95678
(916) 791-1188

BAR IS ONE INCH AT FULL SCALE
0 1" IF NOT ONE INCH ON THIS SHEET SCALE ACCORDINGLY

NO.	REVISIONS	BY	APP	DATE
1				
2				
3				
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LIGHT TREE APARTMENTS
PAD D GRADING PLAN
CITY OF EAST PALO ALTO

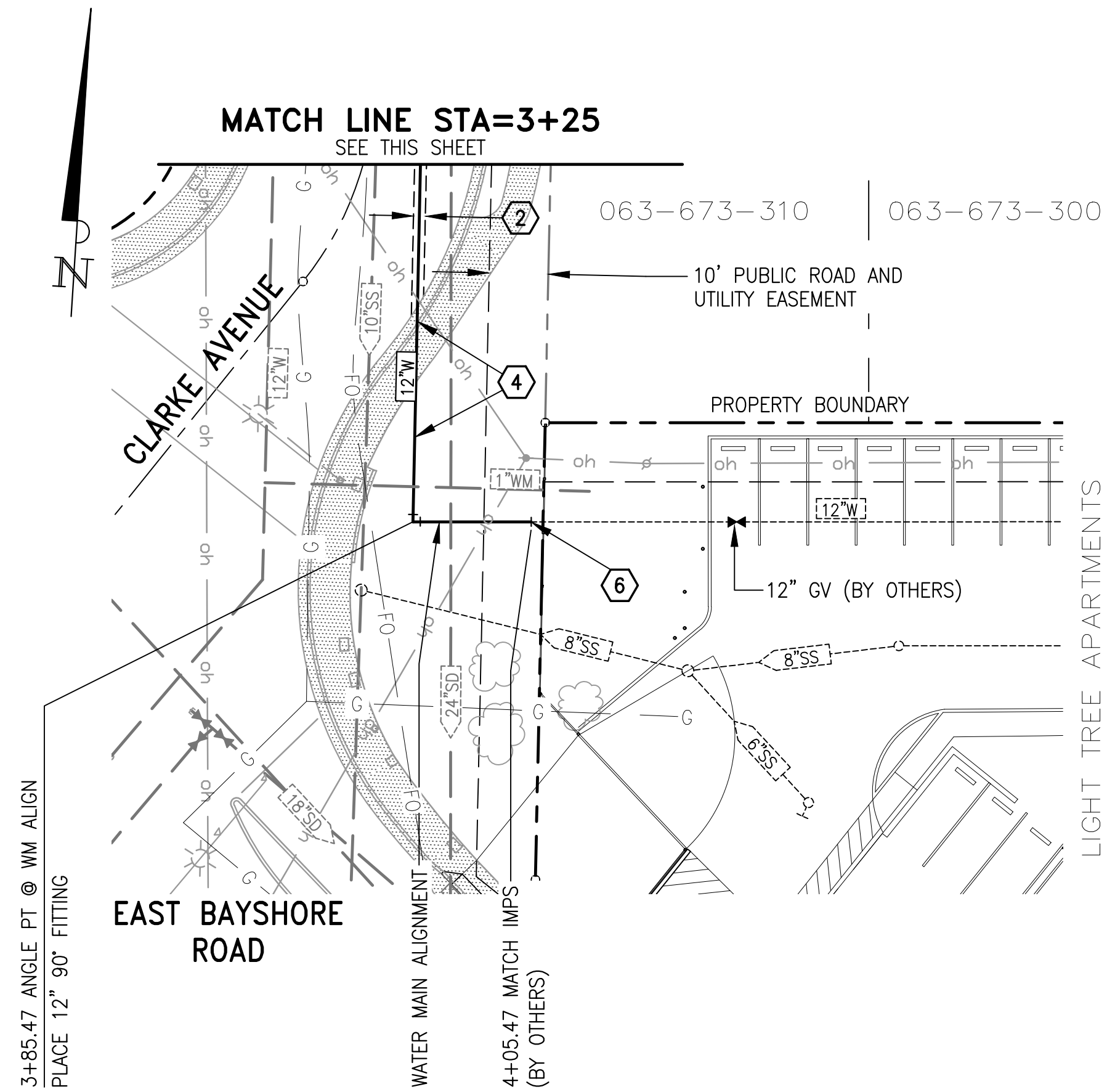
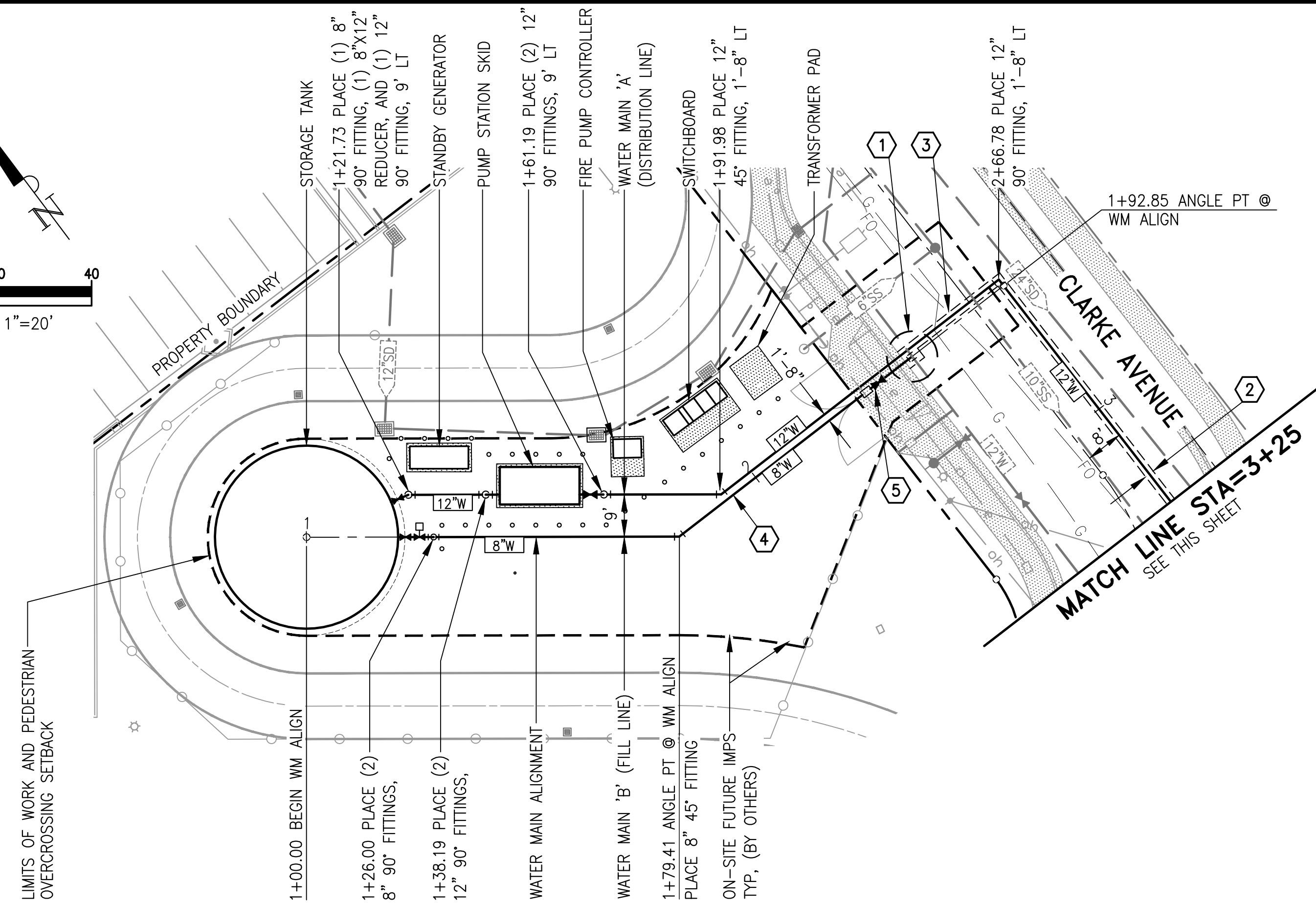
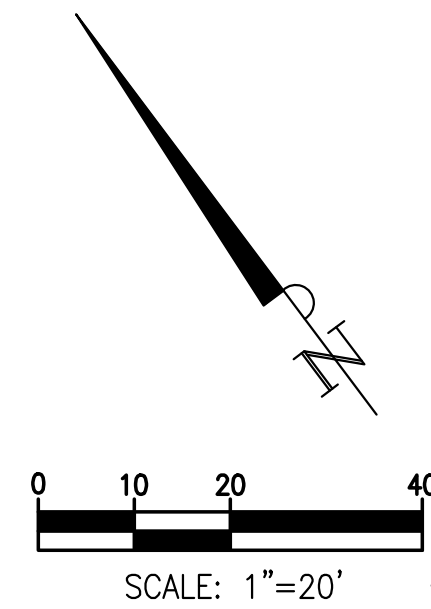
PAD D FIRE SYSTEM
CALIFORNIA

DESIGNED UNDER THE DIRECTION OF:
Jonathan W. Kaminsky
JONATHAN W. KAMINSKY
R.C.E. No. C82004 - REGISTRATION EXPIRES 03-31-22
DATE: 3-12-21
DESIGN: JWK DATE: 3-12-21
DRAWN: WCJ DATE: 3-12-21
CHECKED: JWK DATE: 3-12-21

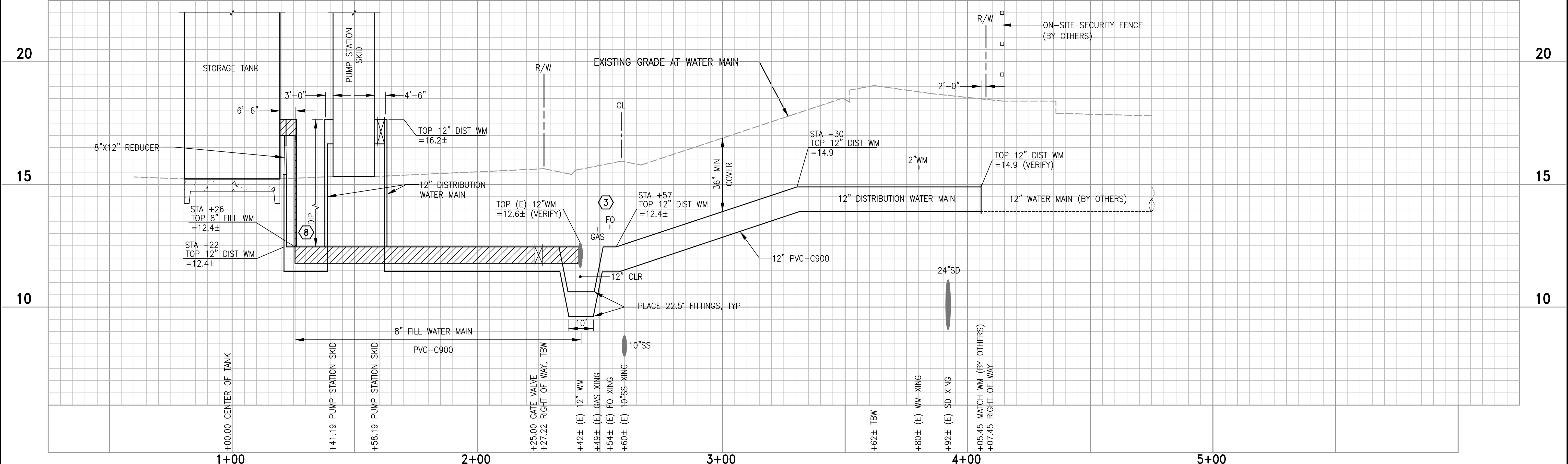


SCALE
1"=10'
DRAWING NUMBER
C2
SHEET NUMBER
5 OF 28 SHEETS

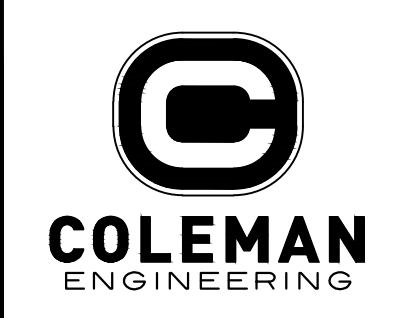
WATER MAIN A AND B



- CONSTRUCTION NOTES:**
- ① 8" WATER MAIN CONNECTION POINT. CONTRACTOR TO LOCATE, EXPOSE, AND INSTALL 12" X 12" X 8" TEE ON CITY'S WATER SYSTEM.
 - ② SAWCUT, REMOVE AND REPLACE ASPHALT, SEE TRENCH DETAIL ON DRAWING C3. CONTRACTOR TO REESTABLISH ROADWAY STRIPING WHERE APPLICABLE.
 - ③ CAUTION: APPROXIMATE LOCATION OF GAS AND FIBER OPTIC UTILITIES. CONTRACTOR TO CONTACT USA PRIOR TO BEGINNING TRENCHING OPERATIONS IN THIS AREA.
 - ④ RESTORE EXISTING SURFACE AFTER INSTALLATION OF BURIED PIPE, TYP.
 - ⑤ CONTRACTOR SHALL PROVIDE AND INSTALL SERVICE METER, METER BOX, AND ASSOCIATED APPURTENANCES PER CITY STANDARDS. SEE DETAIL 3/C3.
 - ⑥ CONTRACTOR TO LOCATE, EXPOSE, AND CONNECT TO EXISTING 12" PIPE. SEE DETAIL 4/C4.
 - ⑦ ALL PIPE JOINTS AND ELBOWS SHALL HAVE JOINT RESTRAINTS.
 - ⑧ ALL VERTICAL WATER MAIN PIPING SHALL BE DUCTILE IRON PIPE TO BURIED FITTINGS.



12/30/20 S:\PROJECTS\2020-001 - LIGHT TREE APARTMENTS STORAGE TANK\CAD\PAD D OPTIONS\C3 - WATER MAIN A AND B.DWG



COLEMAN ENGINEERING
1223 PLEASANT GROVE BLVD.
SUITE 100
ROSEVILLE, CA 95678
(916) 791-1188

BAR IS ONE INCH AT FULL SCALE
0 1"
IF NOT ONE INCH ON THIS SHEET SCALE ACCORDINGLY

NO.	REVISIONS	BY	APP	DATE

LIGHT TREE APARTMENTS
WATER MAIN A AND B
CITY OF EAST PALO ALTO

PAD D FIRE SYSTEM
CALIFORNIA

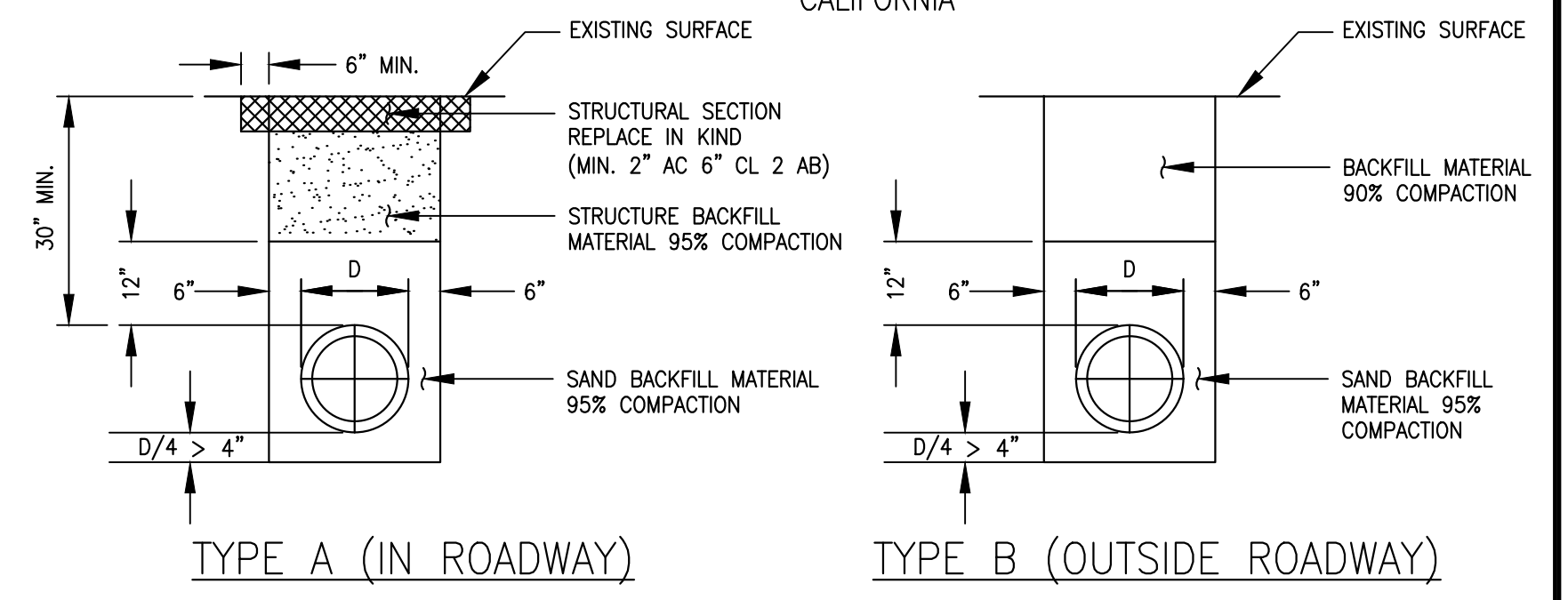
DESIGNED UNDER THE DIRECTION OF:
Jonathan W. Kaminsky
JONATHAN W. KAMINSKY
R.C.E. No. C82004 - REGISTRATION EXPIRES 03-31-22
DATE: 3-12-21
DESIGN: JWK DATE: 3-12-21
DRAWN: WCJ DATE: 3-12-21
CHECKED: JWK DATE: 3-12-21



SCALE
HORZ. 1"=20'
VERT. 1"=2'
DRAWING NUMBER
C3
SHEET NUMBER
6 OF 28 SHEETS

DRAWN BY: M.L.
CHECKED BY: D.M.W.
APPROVED BY: N.R.C.

SCALE: NONE
DATE: 6/95
REVISED: 7/97



NOTES

- SAND.... MATERIAL FREE FROM ORGANIC MATTER AND CLAY WITH SIEVE GRADATION BY WEIGHT AS FOLLOWS:

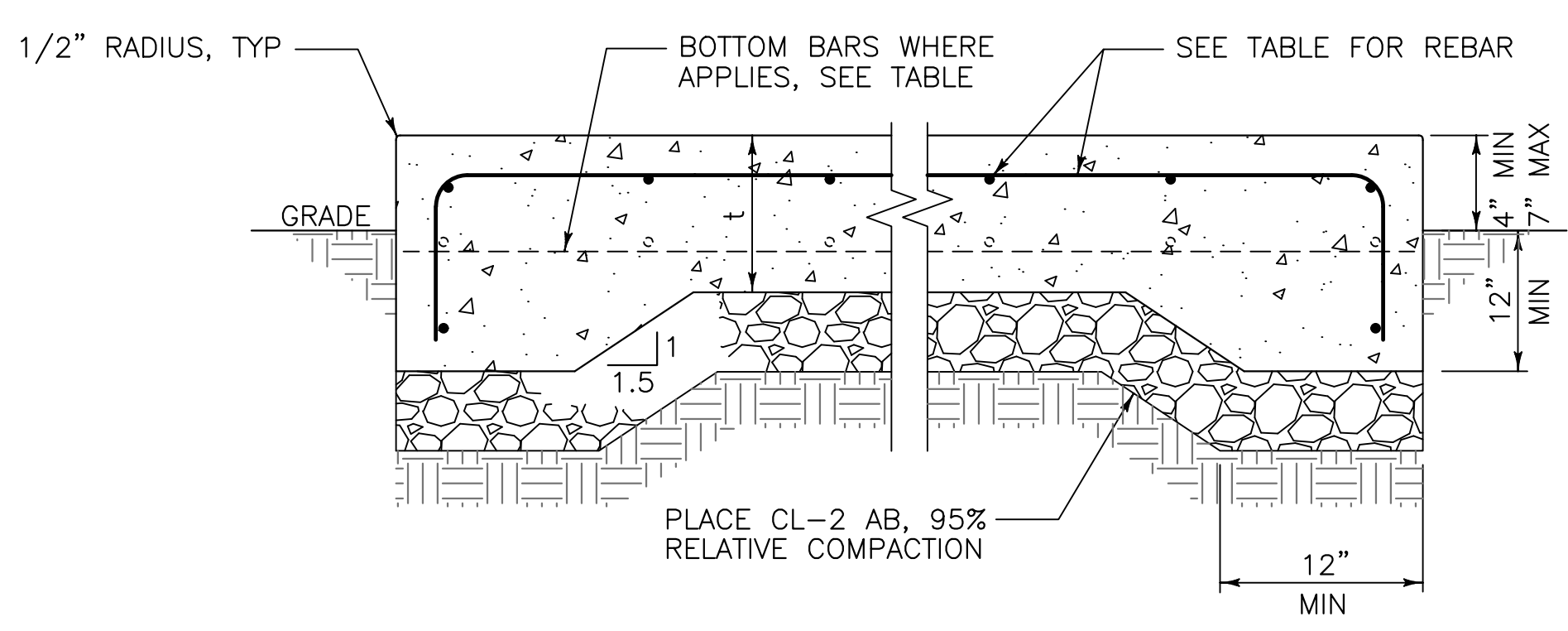
SIEVE SIZE	% PASSING SIEVE
No. 4	100
No. 200	0-5
- STRUCTURE BACKFILL MATERIAL.... MATERIAL WITH SAND EQUIVALENT NOT LESS THAN 20 AND SIEVE GRADATION BY WEIGHT AS FOLLOWS:

SIEVE SIZE	% PASSING SIEVE
3"	100
No. 4	35-100
No. 30	20-100
- BACKFILL MATERIAL.... MATERIAL FROM EXCAVATION. FREE FROM STONES OR LUMPS EXCEEDING 3 INCHES GREATEST DIMENSION. ORGANIC MATTER, OR OTHER UNSATISFACTORY MATERIAL.

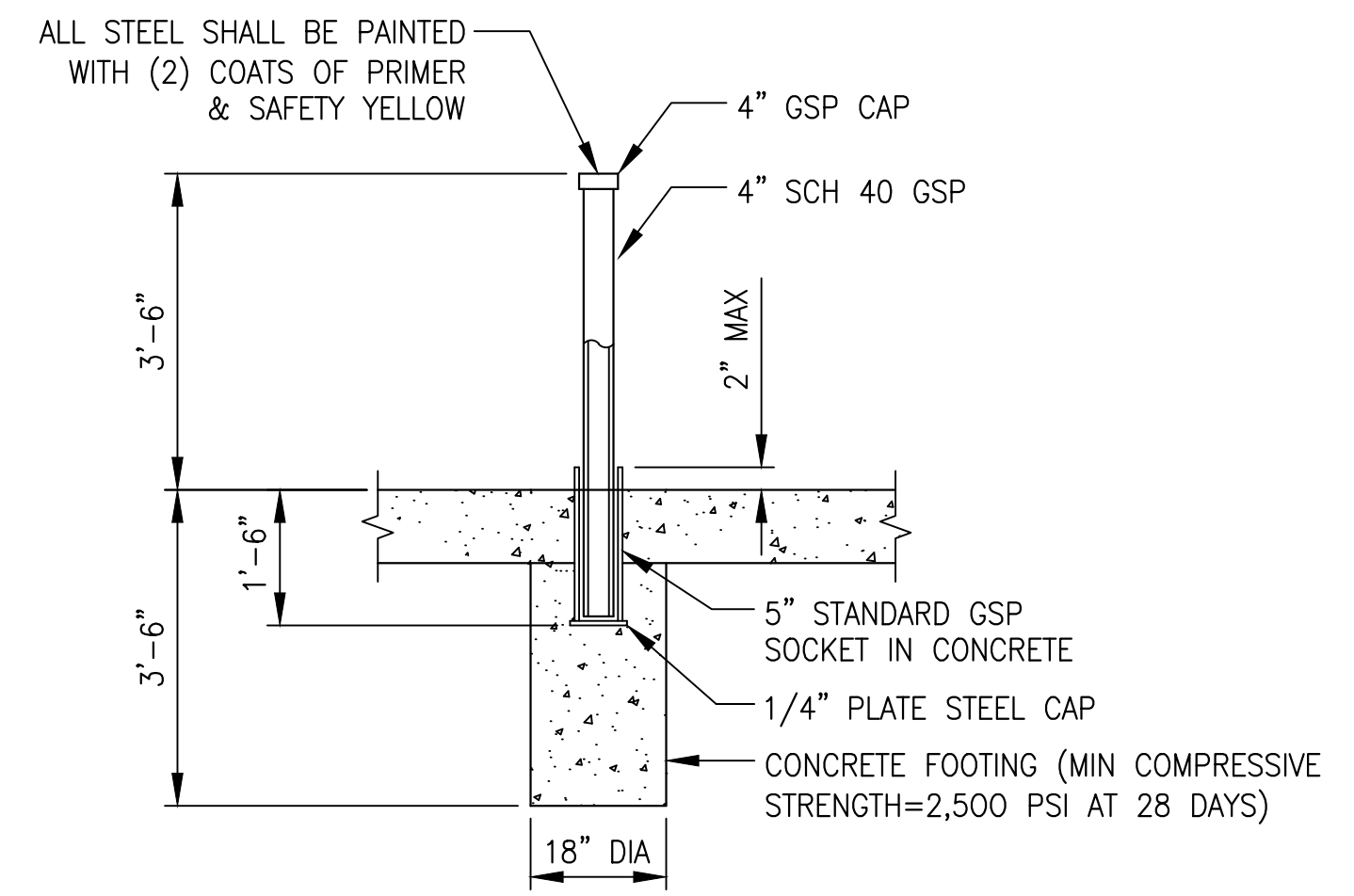
STANDARD TRENCH BACKFILL AND BEDDING DETAIL

W-10

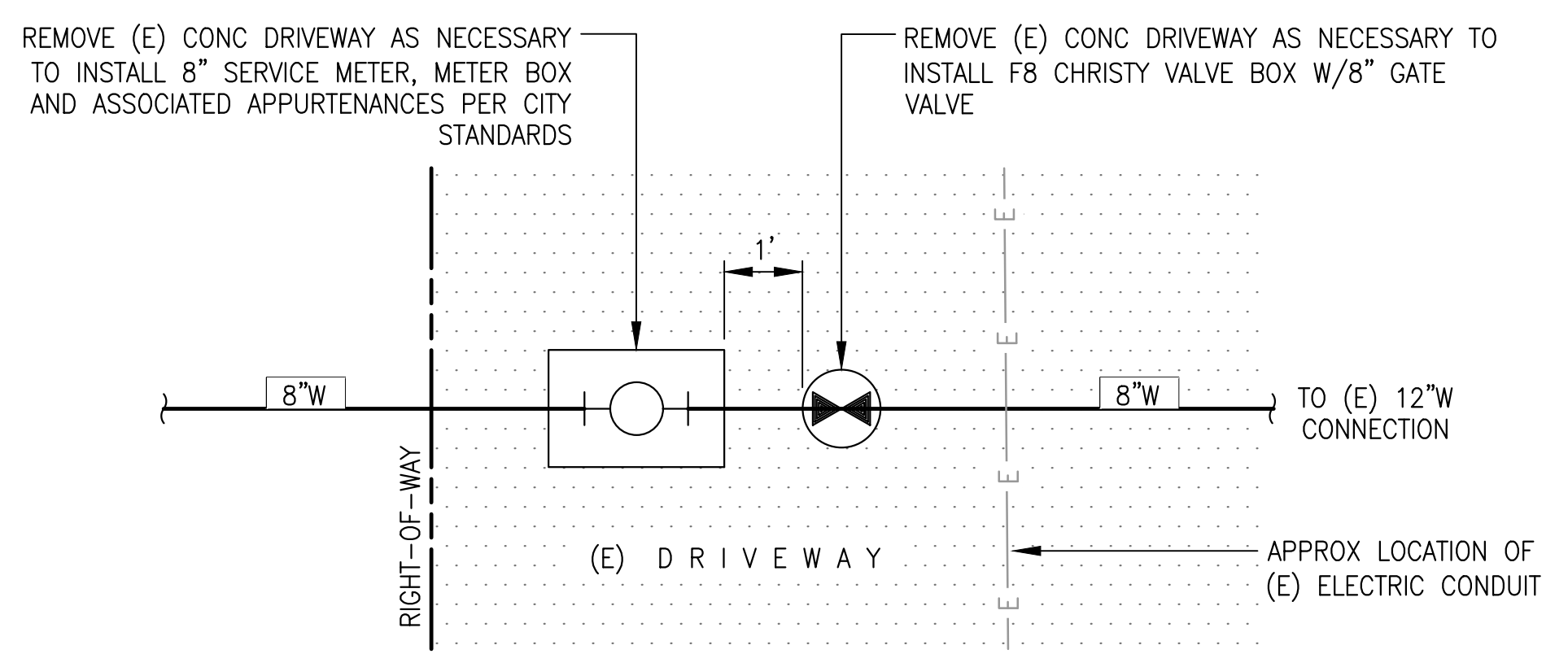
t	REBAR
4"	#4 @ 18" CC EW
6"	#5 @ 18" CC EW
8"	#5 @ 12" CC EW
12"	#5 @ 12" CC EWEF
18"	#6 @ 12" CC EWEF



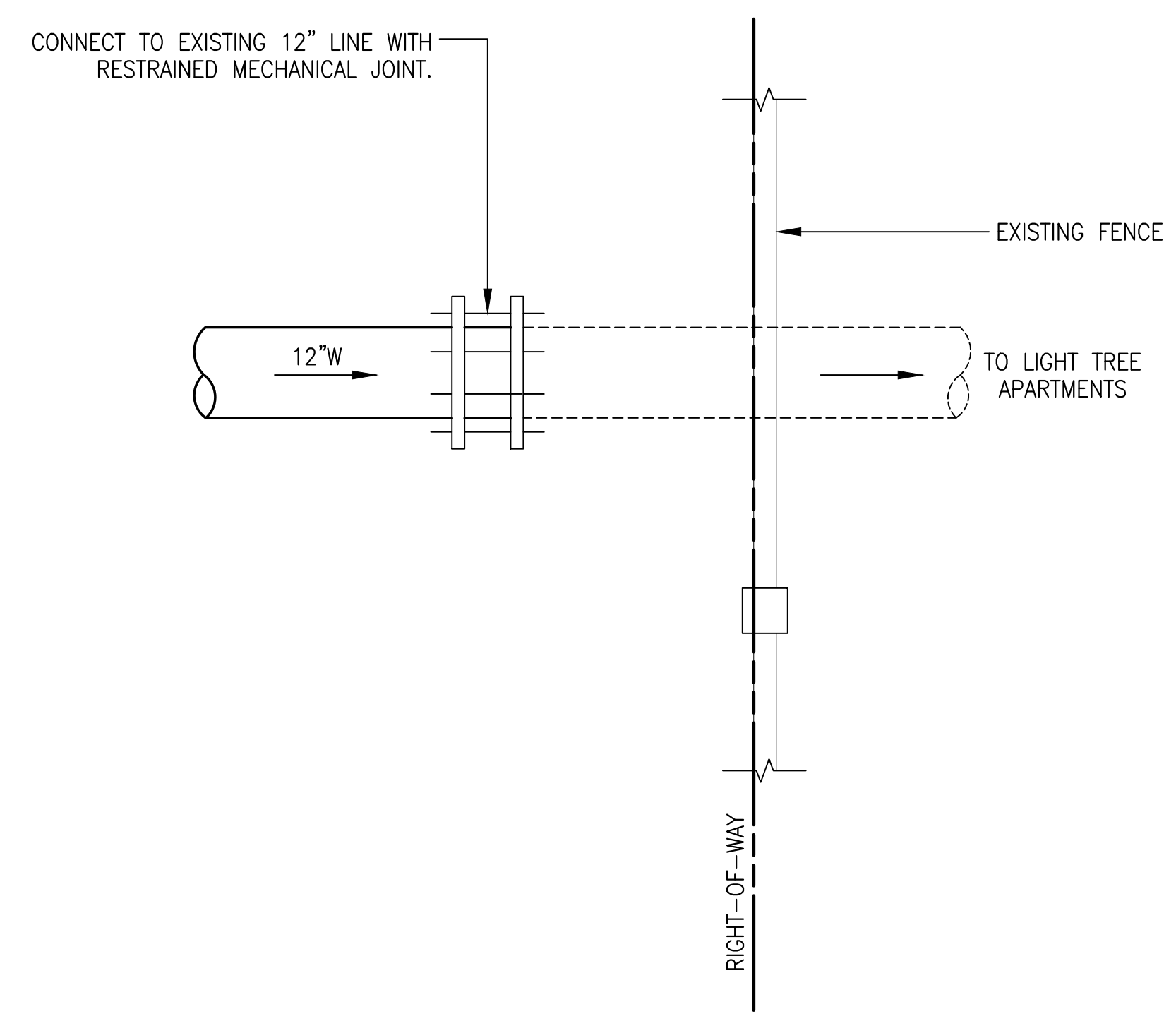
CONCRETE SLAB DETAIL
NO SCALE



1 REMOVABLE BOLLARD
NO SCALE

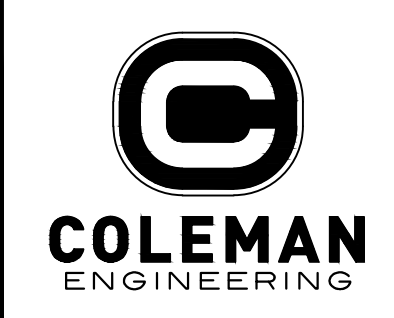


3 SERVICE METER CONNECTION DETAIL
NO SCALE



4 CONNECTION TO EXISTING 8-INCH PIPE DETAIL
NO SCALE

12/30/20 S:\PROJECTS\EDEN20-001 - LIGHT TREE APARTMENTS STORAGE TANK\CADD\PAD D_OPTION\C4 - CIVIL DETAILS 1.DWG



COLEMAN ENGINEERING
1223 PLEASANT GROVE BLVD.
SUITE 100
ROSEVILLE, CA 95678
(916) 791-1188

BAR IS ONE INCH AT FULL SCALE
0 1"
IF NOT ONE INCH ON THIS SHEET SCALE ACCORDINGLY

NO.	REVISIONS	BY	APP	DATE
1				
2				
3				
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LIGHT TREE APARTMENTS
CITY OF EAST PALO ALTO

CIVIL DETAILS 1

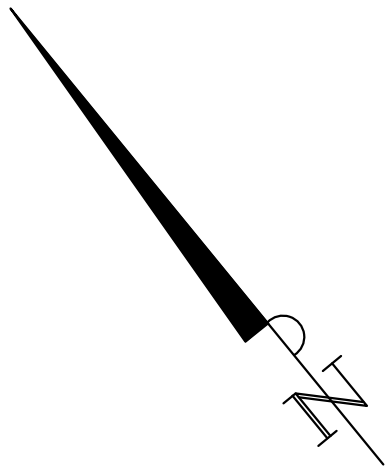
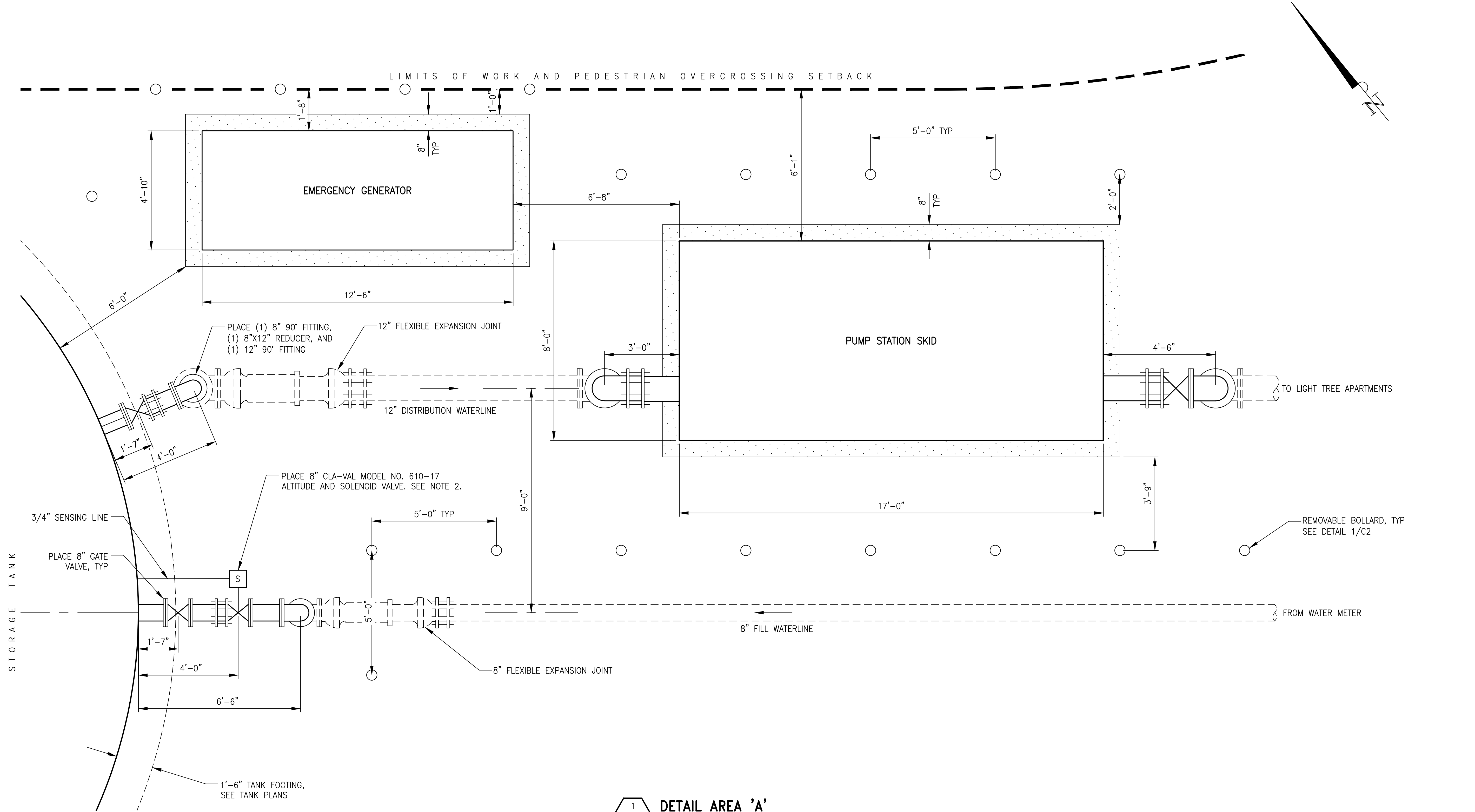
PAD D FIRE SYSTEM
CALIFORNIA

DESIGNED UNDER THE DIRECTION OF:	
<i>Jonathan W. Kaminsky</i>	3-12-21
JONATHAN W. KAMINSKY R.C.E. No. C82004 - REGISTRATION EXPIRES 03-31-22	DATE
DESIGN: JWK	DATE: 3-12-21
DRAWN: WCJ	DATE: 3-12-21
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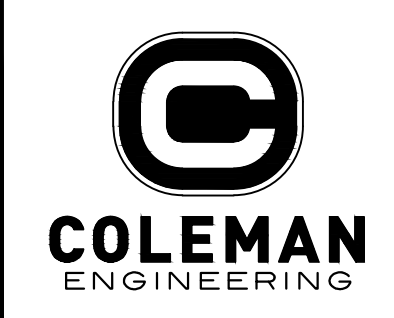
SCALE AS SHOWN
DRAWING NUMBER C4
SHEET NUMBER 7 OF 28 SHEETS

12/30/20 S:\PROJECTS\EDEN20-001 - LIGHT TREE APARTMENTS STORAGE TANK\CADD\PAD D OPTIONS\C5 - CIVIL DETAILS 2.DWG



1
-
DETAIL AREA 'A'
SCALE: 1"=2'

- NOTE:
1. ALL ABOVE GROUND PIPE SHALL BE DUCTILE IRON. UNDERGROUND PIPE SHALL BE PVC-C900. PIPE MATERIAL TYPE TRANSITION SHALL OCCUR AT UNDERGROUND ELBOW. ELBOW SHALL BE DIP.
 2. LEVEL TO BE SET DURING START-UP TO FULL TANK LEVEL.



COLEMAN ENGINEERING
1223 PLEASANT GROVE BLVD.
SUITE 100
ROSEVILLE, CA 95678
(916) 791-1188

BAR IS ONE INCH AT FULL SCALE
0 1"
IF NOT ONE INCH ON THIS SHEET SCALE ACCORDINGLY

NO.	REVISIONS	BY	APP	DATE
1				
2				
3				
4				
5				

LIGHT TREE APARTMENTS
CIVIL DETAILS 2
CITY OF EAST PALO ALTO

PAD D FIRE SYSTEM
CALIFORNIA

DESIGNED UNDER THE DIRECTION OF: <i>Jonathan W. Kaminsky</i> JONATHAN W. KAMINSKY R.C.E. No. C82004 - REGISTRATION EXPIRES 03-31-22		3-12-21 DATE
DESIGN: JWK	DATE: 3-12-21	
DRAWN: WCJ	DATE: 3-12-21	
CHECKED: JWK	DATE: 3-12-21	



SCALE
AS SHOWN
DRAWING NUMBER
C5
SHEET NUMBER
8 OF 28 SHEETS

DESIGN NOTES:

MATERIALS OF CONSTRUCTION:

1. JOB SITE LOCATION (East Palo Alto, CA)

2. REFERENCES:

2.1 AWWA D103 2019 NFPA-22

3. WIND LOADS:

- 3.1 WIND CODE = ASCE 7- 10
- 3.2 WIND VELOCITY = 115 MPH
- 3.3 IMPORTANCE FACTOR (Iw) = 1.00
- 3.4 EXPOSURE = C

4. SEISMIC LOADS:

- 4.1 IBC/ASCE 7 RISK CATEGORY IV
- 4.2 SEISMIC IMPORTANCE FACTOR (Ie) = 1.50
- 4.3 SITE CLASS = D
- 4.4 Ss = 150.0%
- 4.5 S1 = 61.3%

5. DESIGN LOADS:

- 5.1 ROOF LIVE LOAD = 25 psf
- 5.2 GROUND SNOW LOAD = 0 psf

6. CORROSION ALLOWANCE

- 6.1 SHELL CORROSION ALLOWANCE = 0.0000 in
- 6.2 BOTTOM PL CORROSION ALLOWANCE = 0.0000 in
- 6.3 DECK SHEET CORROSION ALLOWANCE = 0.0000 in

7. MATERIAL STORED: WATER

8. PURPOSE = FIRE PROTECTION

9. SPECIFIC GRAVITY = 1.00

10. FREEBOARD = 66.00 INCHES

11. WORKING CAPACITY = 137,625 US GALLONS

12. MIN. OPERATING LEVEL = 6 INCHES (outlet/vortex plate to overflow)

1. The calculation provide for the structural design of all major tank components. Please contact AST Storage for design of any structural component not specifically included within the calculations.
2. AST Storage is not responsible for the design of any portion or component of tank that is not specifically included in the calculations and or drawings.
3. AST Storage shall be provided written notice and shall approve any modifications to the original tank including but not limited to (a) installation of additional openings; (b) modifications to openings; (c) attachments of equipment; (d) application of external or internal forces not included in the original calculations; (e) any other deviations from the original design intent.
4. Tank foundations shall be level, within $\frac{1}{8}$ " in any 30' circumference under the shell. levelness on the circumference shall not vary more than $\frac{1}{4}$ " from the established plane.
5. It is the customer's responsibility to ensure that proper tank ventilation is provided and maintained at all times.
6. Tank is to be supported on one of the foundation types described in AWWA D103.

1. W BEAMS = ASTM A992
2. C CHANNEL = ASTM A992
3. ANGLE = A36
4. PLATE = ASTM A572
5. BOLTS = GRADE 8 NZF3000
COATING Fy = 130,000 psi Fu = 150,000 psi
UNLESS OTHER WISE NOTED
6. GASKETS = EPDM
7. SEALANT = MANUS BOND 75AM
8. SIDEWALL SHEET THICKNESS SEE PAGE S-02
9. DECK ANGLE TO BE (13) L3 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " LLV
DECK SHEETS TO BE 12 GA. GR40
DECK RAFTERS TO BE (26) C6 x 8.2# GR50
DECK ANGLE SPLICE PLATES HORIZONTAL (13) TO BE $\frac{1}{4}$ " GR36
DECK ANGLE SPLICE PLATES VERTICAL (13) TO BE $\frac{1}{4}$ " GR36
ALUMINUM 3003 GAP SPLICE (13) .032"
10. CENTER POLE TO BE PIPE 5 STD
OD OF COLUMN TO BE 5.560"
OD TOP PLATE TO BE 24"
THICKNESS OF TOP PLAT TO BE $\frac{1}{4}$ "
THICKNESS OF (8) GUSSETS TO BE $\frac{3}{8}$ "
OD OF BASE PLATE TO BE 24"
THICKNESS OF BASE PLATE TO BE $\frac{1}{2}$ "
11. BOTTOM ANGLE TO BE (13) L3 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " LLV
FLOOR SHEETS TO BE 12 GA. GR40
BOTTOM ANGLE SPLICE PLATES (13) TO BE $\frac{1}{4}$ " GR36
ALUMINUM 3003 BASE ANGLE LEAK SPLICE PLATE (13) .032"
ALUMINUM 3003 GAP SPLICE (13) .032"

SUBMITTAL REVISIONS	
REVISION NUMBER	R1
DATE REVISED	1/27/2021
PAGE REVISED	S-01
PAGE REVISED	S-02
PAGE REVISED	S-03
PAGE REVISED	S-04
PAGE REVISED	S-05
PAGE REPLACED	S-06
REVISION NUMBER	R2
DATE REVISED	2/5/2021
PAGE REVISED	S-01
PAGE REVISED	S-03
PAGE REVISED	S-04
PAGE REVISED	S-06
REVISION NUMBER	R3
DATE REVISED	2/16/2021
PAGE REVISED	S-01
PAGE REVISED	S-02
PAGE REVISED	S-03
PAGE REVISED	S-04
PAGE REVISED	S-05
PAGE REVISED	S-06

GENERAL NOTE:

1. HORIZONTAL SHELL BOLT SPACING = 2.33"
2. VERTICAL SHELL BOLT SPACING = 2.32"
3. ALL FLANGES TO BE FACTORY LOCATED
UNLESS SPECIFIED OTHERWISE
4. ALL SHOP AND FIELD WELDING TO BE PER AWS D1.1,
AWS D1.2, AWS D1.6 MINIMUM: PER AWWA D103-09
5. ALL NOZZLES TO STRADDLE CENTER LINE
UNLESS SPECIFIED OTHERWISE
6. NOZZLE PROJECTION IS MEASURED FROM TANK SIDEWALL TO
FACE OF FLANGE
DECK NOZZLE PROJECTION IS MEASURED FROM DECK SHEET TO
FACE OF FLANGE
7. TANK FREEBOARD IS MEASURED FROM TOP OF ROLLED TOP ANGLE
TO TOP OF WATER LINE

NOTES:

AST STORAGE submittal drawing process is to help eliminate the need for costly corrective measures in the design phase. This information will be submitted to the design team after the submittals are approved.
AST STORAGE submittals - Materials of construction, Appurtenance location, Engineering design information, Design codes & General information.
Customer to be notified if anything changes in the design phase.

SUBMITTAL PAGE INDEX	
DRAWINGS	PAGE NUMBER
LIQUID TANK DESIGN NOTES	S-01
ELEVATION VIEW	S-02
PLAN VIEW	S-03
FLAT LAYOUT	S-04
FLOOR VIEW	S-05
NOZZLE DETAILS	S-06
SIDEWALL ASSEMBLY	S-07
DECK AND DECK ANGLE	S-08
FLOOR AND BOTTOM ANGLE	S-09
LADDER & GUARDRAIL	S-10
GENERAL DETAILS	S-11



NO:	DATE:	BY:	REVISION:
3	2/16/2021	MPH	REVISED LOCATION
2	2/4/2021	MPH	REVISED LOCATION PER NEW ENGINEERING
1	1/27/2021	MPH	REVISED LOCATION PER NEW ENGINEERING



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UNLESS OTHERWISE SPECIFIED	ISSUED FOR SUBMITTAL:	1/13/2021
TOLERANCES:	ISSUED FOR MANUFACTURING:	-
FRACTIONAL ± $\frac{1}{16}$	ISSUED FOR CONSTRUCTION:	-
ONE PLACE DECIMAL ± 0.060	PROJECT MANAGER:	TB
TWO PLACE DECIMAL ± 0.030		
THREE PLACE DECIMAL ± 0.010		

SUBMITTAL DRAWING			
LIQUID TANK DESIGN NOTES			
CUSTOMER:	National Storage Tank, INC.	FINISH:	-
LOCATION:	East Palo Alto, CA	SCALE:	
DRAWN BY:	MPH 1/14/2021	SHEET 1 OF 1	DO NOT SCALE THIS DRAWING
CHECKED BY:	-		
APPROVED BY:	-		
S-01			REV. 3

AST STANDARD TANK COLORS

INTERIOR OF TANK SHALL BE INTERIOR WHITE
 TANK DECK SHEETS TO BE WHITE
 DECK APPURTENANCES TO BE WHITE

COLOR MATCH

TANK SIDEWALLS SHEETS AND
 SIDEWALL APPURTENANCES TO BE

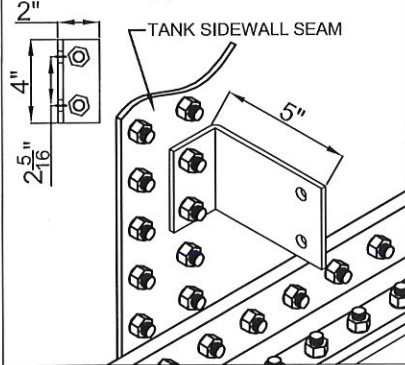
- AST TAN
- AST BLUE
- WHITE
- AST GREEN
- COBALT BLUE
- NON STANDARD COLOR

EXTERIOR LADDER

- TANK COLOR
- GALVANIZED
- SAFETY YELLOW
- GALVANIZED GUARDRAIL
- SAFETY YELLOW SAFETY SWING GATE

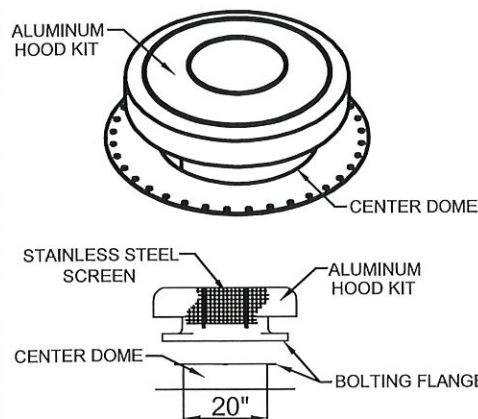
GROUNDING PLATE

2" x 5" x 1/4" STAINLESS STEEL
 GROUND LUG FOR
 LIGHTNING PROTECTION
 (2) PLACES



20" MUSHROOM VENT

MESH 18 x 14 304 STAINLESS STEEL INSECT SCREEN

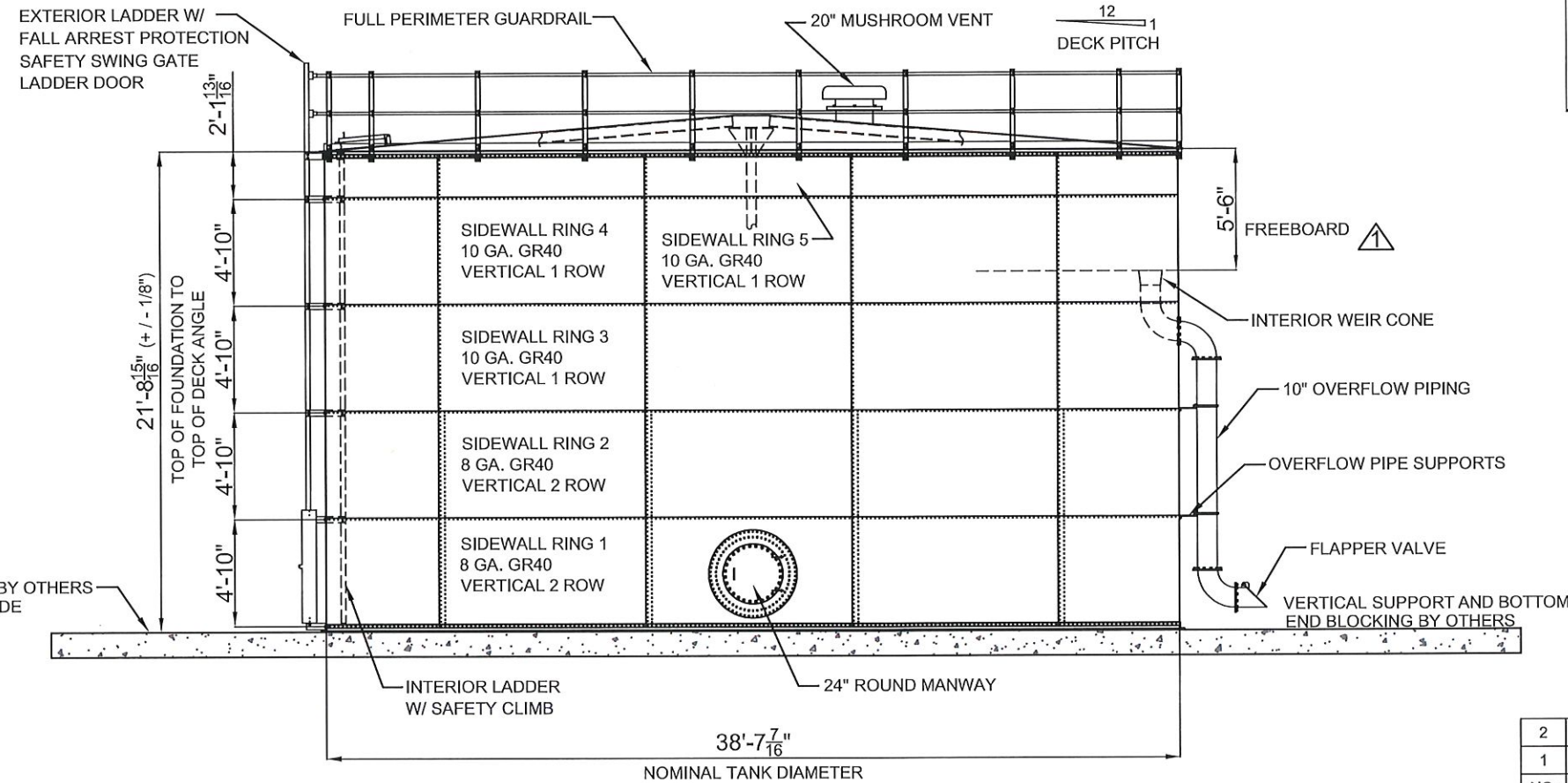
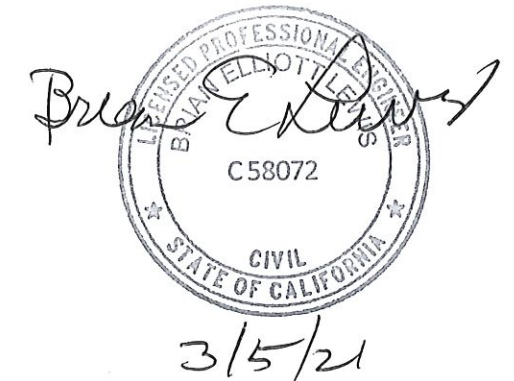


APPROVAL DRAWINGS

- APPROVED - PROCEED TO DESIGN
- APPROVED - COMMENTS NOTED
PROCEED TO DESIGN
- COMMENTS NOTED - REVISE AND RESUBMIT

 SIGNATURE DATE

PLEASE MARK AND RETURN TO
 AST STORAGE & SILO MANUFACTURING



ELEVATION VIEW

APPURTENANCES ROTATED FOR CLARITY ONLY
 SEE PLAN VIEW FOR CORRECT ORIENTATION
 CONCRETE FOUNDATION SHOWN FOR REFERENCE ONLY

2	2/16/2021	MPH	REVISED LOCATION
1	1/27/2021	MPH	REVISED FREEBOARD PER NEW ENGINEERING
NO:	DATE:	BY:	REVISION:



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UNLESS OTHERWISE SPECIFIED TOLERANCES:	ISSUED FOR SUBMITAL:	1/13/2021
FRACTIONAL ± 1/16	ISSUED FOR MANUFACTURING:	-
ONE PLACE DECIMAL ± 0.060	ISSUED FOR CONSTRUCTION:	-
TWO PLACE DECIMAL ± 0.030	PROJECT MANAGER:	TB
THREE PLACE DECIMAL ± 0.010		

SUBMITTAL DRAWING ELEVATION VIEW		JOB #:	20-0075
		COVERAGE:	13 @ 112
		TANK SIZE:	38.62' x 21.70'

CUSTOMER:	National Storage Tank, INC.	FINISH:	-
LOCATION:	East Palo Alto, CA	SCALE:	
DRAWN BY:	MPH 1/14/2021	SHEET 1 OF 1	DO NOT SCALE THIS DRAWING
CHECKED BY:	-	S-02	
APPROVED BY:	-		

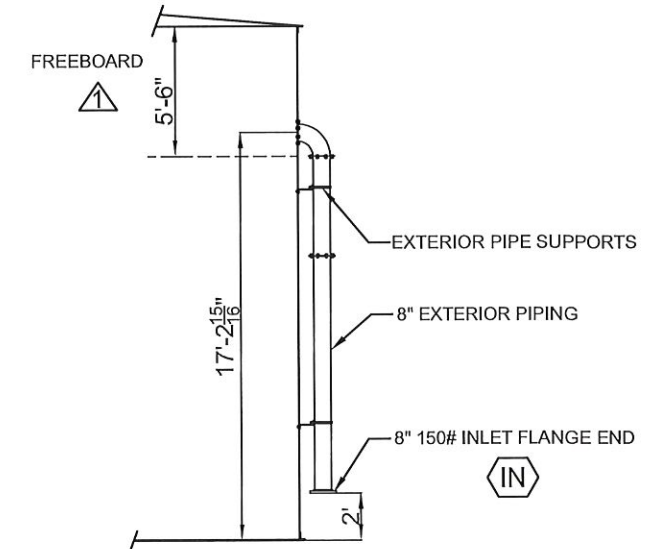
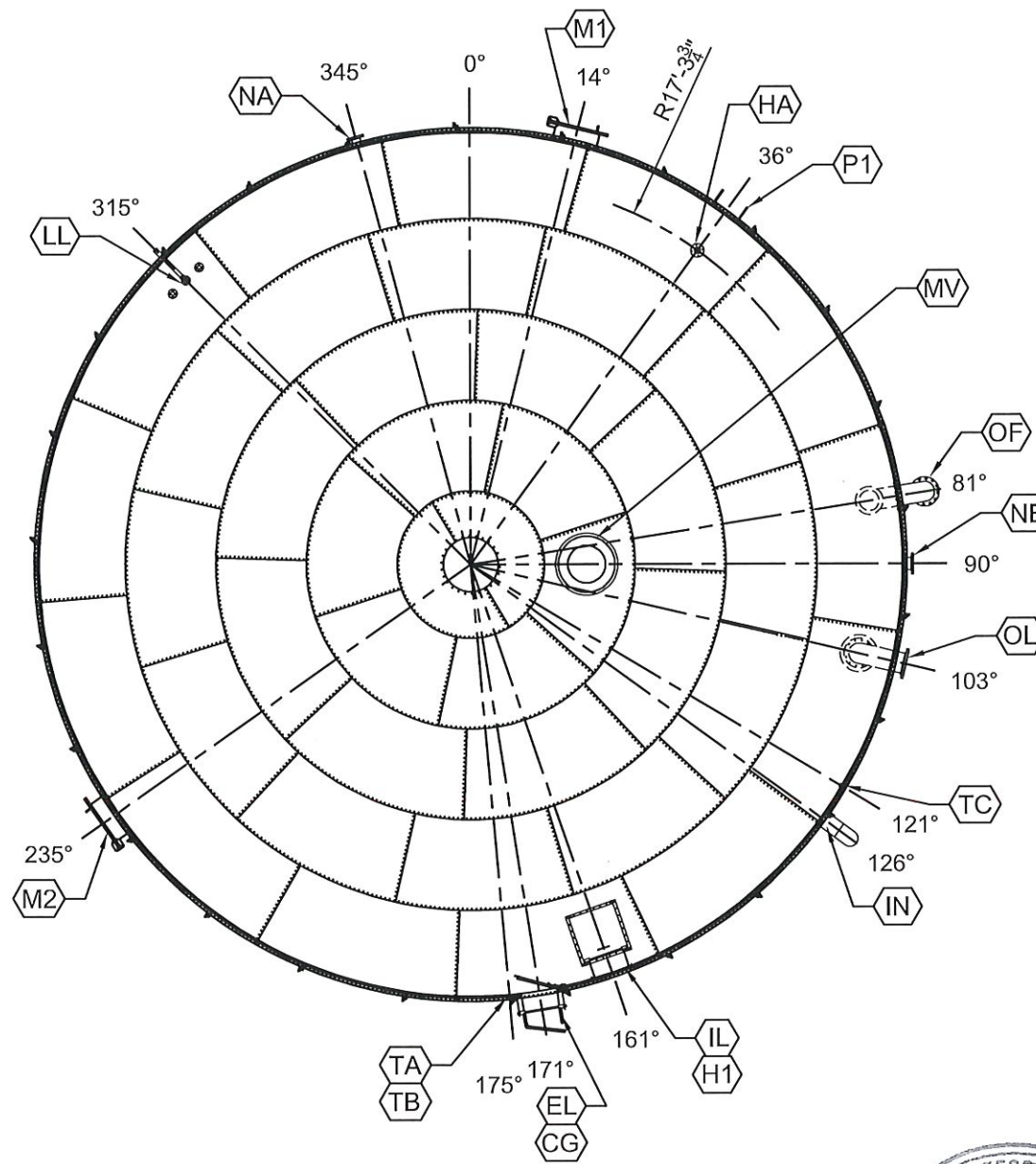
REV. 2

APPROVAL DRAWINGS

- APPROVED - PROCEED TO DESIGN
- APPROVED - COMMENTS NOTED
PROCEED TO DESIGN
- COMMENTS NOTED - REVISE AND RESUBMIT

SIGNATURE DATE

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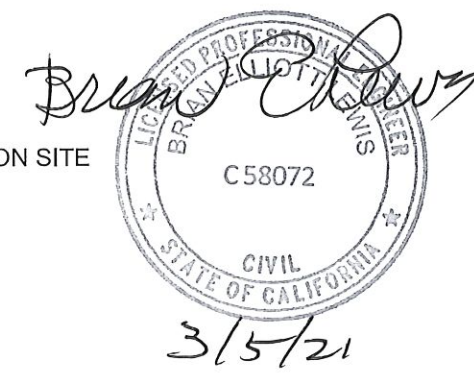
8" INLET PIPING

APPURTENANCES

ITEM	SIZE	DESCRIPTION	ORIENTATION	ELEVATION
LADDERS & PLATFORMS				
EL	STANDARD	EXTERIOR LADDER	171°	
CG	STANDARD	COMPLETE PERIMETER GUARDRAIL	171°	
IL	STANDARD	INTERIOR LADDER	161°	
				RADIUS
DECK APPURTENANCES				
LL	STANDARD	LIQUID LEVEL INDICATOR	315°	
MV	20"	MUSHROOM VENT	90°	
H1	24" x 24"	SQUARE ACCESS HATCH	161°	
HA	3"	150# HILLSIDE NOZZLE / TRANSDUCER	36°	R17'-3 3/8"
				ELEVATION
SIDEWALL APPURTENANCES				
M1	24"	ROUND MANWAY	14°	2'-6 1/4"
M2	24"	ROUND MANWAY	235°	2'-6 1/4"
OL	10"	SUCTION OUTLET W/ ANTI-VORTEX	103°	1'-9 15/16" 2'
IN	8"	150# NOZZLE /W INLET PIPING	126°	
OF	10"	OVERFLOW / WEIR CONE	81°	
NA	4"	150# NOZZLE	345°	8 3/4"
NB	6"	150# NOZZLE	90°	2'
TA	1"	HALF THREADED COUPLER / LOW	175°	15'-2 15/16"
TB	1"	HALF THREADED COUPLER / LOW LOW	175°	14'-2 15/16"
TC	1"	FULL THREADED COUPLER / ALTITUDE	121°	4'
GP	2" x 5" x 1/4"	(2) GROUNDING PLATE	FIELD	LOCATED
P1	10" x 3 1/2"	(4) LADDER CLIPS FOR CONDUITS	FIELD	LOCATED

PLAN VIEW

ERECTION CREW TO VERIFY ZERO DEGREES ON SITE



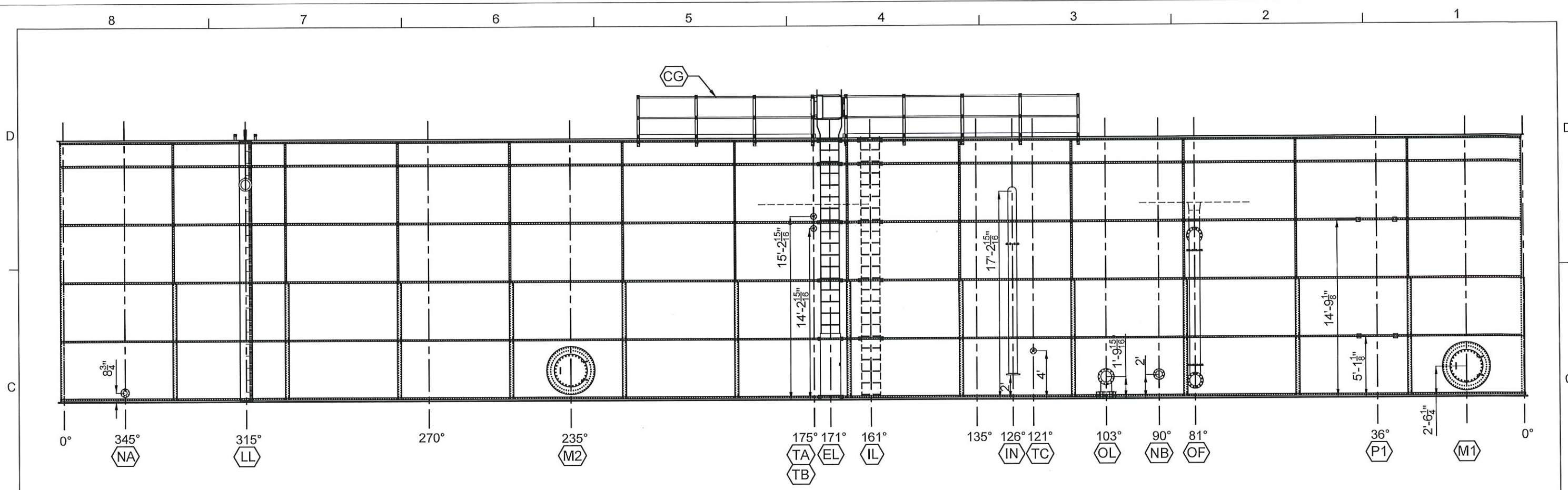
3	2/16/2021	MPH	REVISED LOCATION
2	2/4/2021	MPH	MOVED APPURTENANCES
1	1/27/2021	MPH	REVISED HEIGHT LEVEL COUPLERS /NEW ENGINEERING
NO:	DATE:	BY:	REVISION:



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TOLERANCES:	ISSUED FOR MANUFACTURING:	-
FRACTIONAL ± 1/16	ISSUED FOR CONSTRUCTION:	-
ONE PLACE DECIMAL ± 0.060	PROJECT MANAGER:	TB
TWO PLACE DECIMAL ± 0.030		
THREE PLACE DECIMAL ± 0.010		

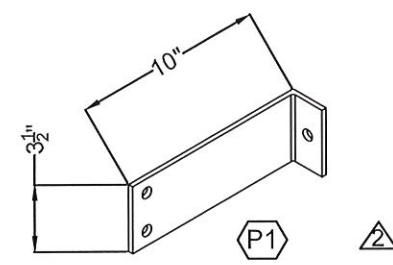
SUBMITTAL DRAWING		JOB #:	20-0075
PLAN VIEW		COVERAGE:	13 @ 112
		TANK SIZE:	38.62' x 21.70'
CUSTOMER:	National Storage Tank, INC.	FINISH:	-
LOCATION:	East Palo Alto, CA	SCALE:	
DRAWN BY:	MPH 1/14/2021	SHEET 1 OF 1	DO NOT SCALE THIS DRAWING
CHECKED BY:	-	S-03	
APPROVED BY:	-	REV. 3	



FLAT LAYOUT

NOTES:
THIS VIEW IS FROM OUTSIDE OF TANK
ALL DIMENSIONS FROM TOP OF FOUNDATION

David E. Lewis
C58072
CIVIL
STATE OF CALIFORNIA
3/5/21



CLIPS FOR MIXER AND SENSOR CABLE

NOTES:
(4) CLIPS TO BE FIELD LOCATED IN SIDEWALL SEAMS

APPURTENANCES				
ITEM	SIZE	DESCRIPTION	ORIENTATION	ELEVATION
LADDERS & PLATFORMS				
EL	STANDARD	EXTERIOR LADDER	171°	
CG	STANDARD	COMPLETE PERIMETER GUARDRAIL	171°	
IL	STANDARD	INTERIOR LADDER	161°	
DECK APPURTENANCES				
				RADIUS
LL	STANDARD	LIQUID LEVEL INDICATOR	315°	
MV	20"	MUSHROOM VENT	90°	
H1	24" x 24"	SQUARE ACCESS HATCH	161°	
HA	3"	150# HILLSIDE NOZZLE / TRANSDUCER	36°	R17'-3 3/4"
SIDEWALL APPURTENANCES				
				ELEVATION
M1	24"	ROUND MANWAY	14°	2'-6 1/4"
M2	24"	ROUND MANWAY	235°	2'-6 1/4"
OL	10"	SUCTION OUTLET W/ ANTI- VORTEX	103°	1'-9 15/16"
IN	8"	150# NOZZLE /W INLET PIPING	126°	2'
OF	10"	OVERFLOW / WEIR CONE	81°	
NA	4"	150# NOZZLE	345°	8 3/4"
NB	6"	150# NOZZLE	90°	2'
TA	1"	HALF THREADED COUPLER / LOW	175°	15'-2 15/16"
TB	1"	HALF THREADED COUPLER / LOW LOW	175°	14'-2 15/16"
TC	1"	FULL THREADED COUPLER / ALTITUDE	121°	4'
GP	2" x 5" x 1/4"	(2) GROUNDING PLATE	FIELD	LOCATED
P1	10" x 3 1/2"	(4) LADDER CLIPS FOR CONDUITS	FIELD	LOCATED

APPROVAL DRAWINGS

APPROVED - PROCEED TO DESIGN

APPROVED - COMMENTS NOTED
PROCEED TO DESIGN

COMMENTS NOTED - REVISE AND RESUBMIT

SIGNATURE

DATE

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AST STORAGE & SILO MANUFACTURING

2	2/4/2021	MPH	MOVED APPURTENANCES
1	1/27/2021	MPH	REVISED HEIGHT LEVEL COUPLERS /NEW ENGINEERING
NO:	DATE:	BY:	REVISION:

NATIONAL STORAGE TANK, INC.
WE HOLD THE SOLUTION

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TOLERANCES:	ISSUED FOR MANUFACTURING:	-
FRACTIONAL ± 1/16	ISSUED FOR CONSTRUCTION:	-
ONE PLACE DECIMAL ± 0.060	PROJECT MANAGER:	TB
TWO PLACE DECIMAL ± 0.030		
THREE PLACE DECIMAL ± 0.010		

SUBMITTAL DRAWING
FLAT LAYOUT VIEW

CUSTOMER:	National Storage Tank, INC.	JOB #:	20-0075
LOCATION:	Palo Alto, CA	COVERAGE:	13 @ 112
		TANK SIZE:	38.62' x 21.70'
		FINISH:	-
		SCALE:	

DRAWN BY:	MPH	1/14/2021	SHEET 1 OF 1	DO NOT SCALE THIS DRAWING
CHECKED BY:	-	-		
APPROVED BY:	-	-		

S-04

REV. 2

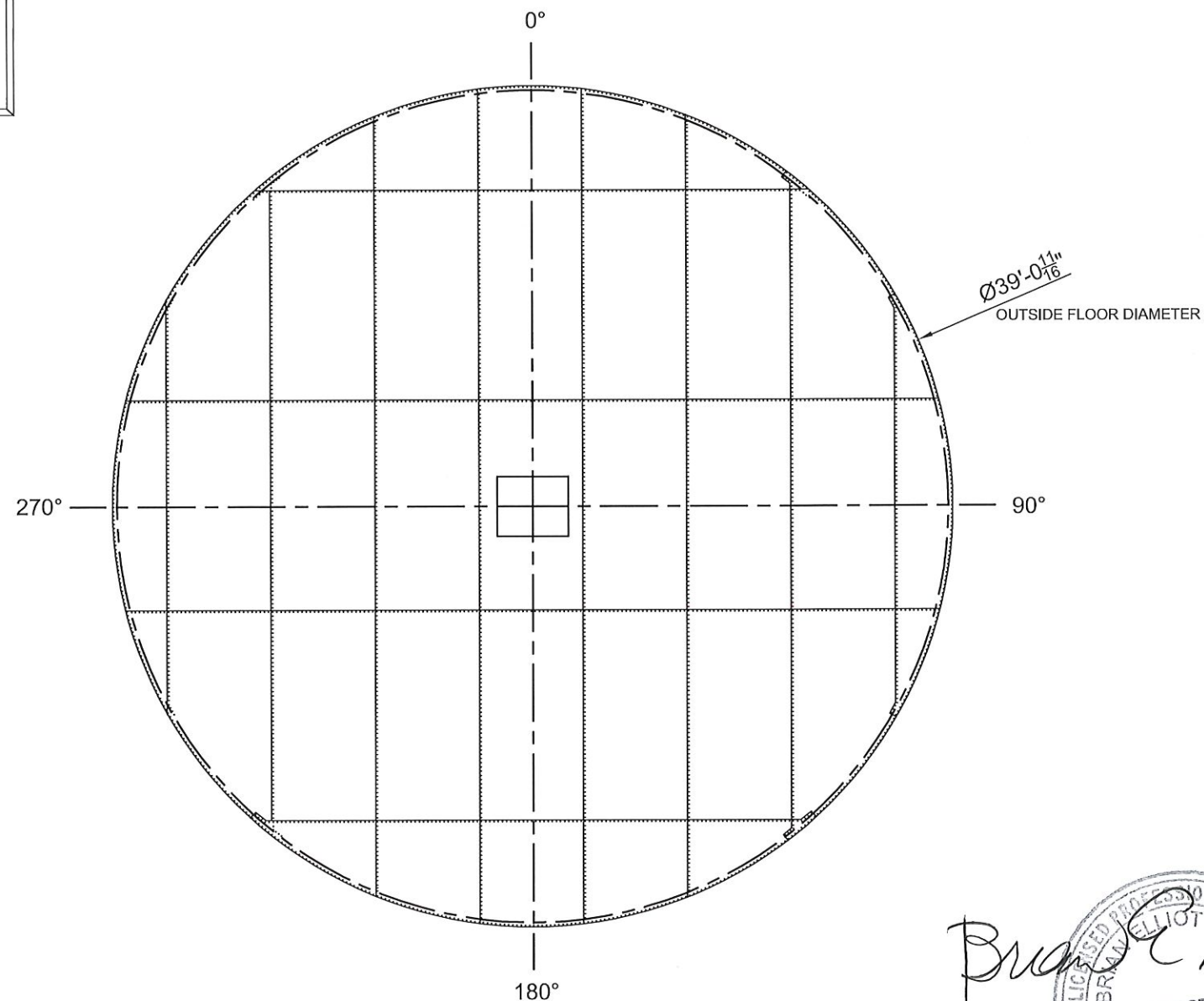
8 7 6 5 4 3 2 1

APPROVAL DRAWINGS

- APPROVED - PROCEED TO DESIGN
- APPROVED - COMMENTS NOTED
PROCEED TO DESIGN
- COMMENTS NOTED - REVISE AND RESUBMIT

SIGNATURE DATE

PLEASE MARK AND RETURN TO
AST STORAGE & SILO MANUFACTURING



FLOOR LAYOUT

NOTES:
OUTSIDE FLOOR DIAMETER IS LARGER THAN TANK SIDEWALL DIAMETER.

Brandon R. Kelly

 3/5/21

2	2/16/2021	MPH	REVISED LOCATION
1	1/27/2021	MPH	REVISED FREEBOARD PER NEW ENGINEERING
NO:	DATE:	BY:	REVISION:



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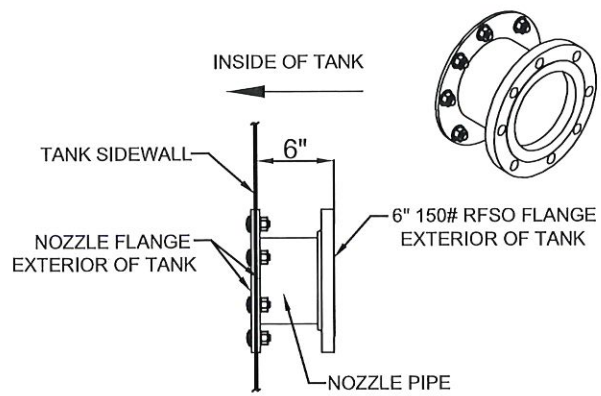
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TOLERANCES:	ISSUED FOR MANUFACTURING:	-
FRACTIONAL $\pm \frac{1}{16}$	ISSUED FOR CONSTRUCTION:	-
ONE PLACE DECIMAL ± 0.060	PROJECT MANAGER:	TB
TWO PLACE DECIMAL ± 0.030		
THREE PLACE DECIMAL ± 0.010		

SUBMITTAL DRAWING FLOOR LAYOUT VIEW	JOB #:	20-0075
	COVERAGE:	13 @ 112
	TANK SIZE:	38.62' x 21.70'

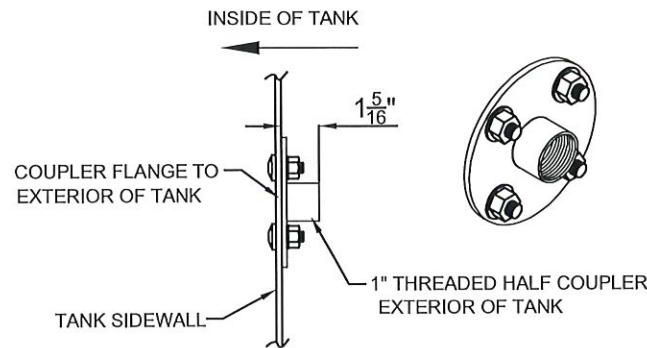
CUSTOMER:	National Storage Tank, INC.	FINISH:	-
LOCATION:	East Palo Alto, CA	SCALE:	

DRAWN BY:	MPH	1/14/2021	SHEET 1 OF 1	DO NOT SCALE THIS DRAWING
CHECKED BY:	-	-	S-05	
APPROVED BY:	-	-		

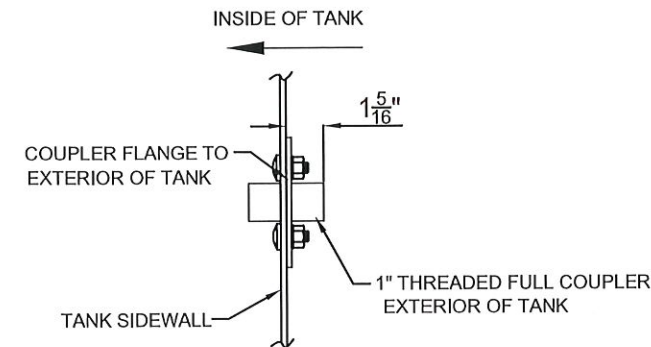
8 7 6 5 4 3 2 1



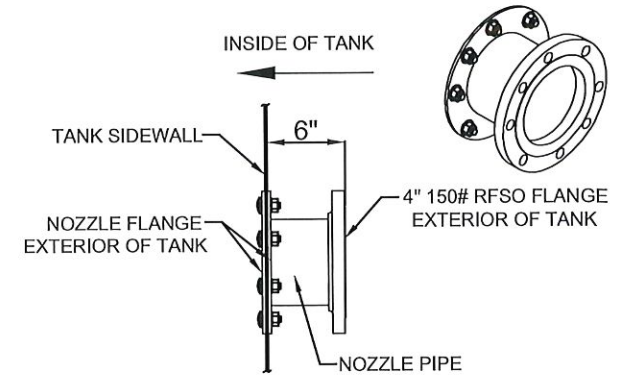
NB 6" 150# NOZZLE
 6" CARBON STEEL NOZZLE
 150# RFSO ANSI / ASME B16.5 FLANGE FACE
 6" SCHEDULE 40 PIPE
 6" NOZZLE PROJECTION
 FLANGE 3/4" THICK 150# BOLT PATTERN
 (8) 1/2" POLYCAP BOLTS IN SIDEWALL Ø 9 1/2" BOLT CIRCLE
 INTERIOR BACKING FLANGE 3/4" THICK 150# BOLT PATTERN



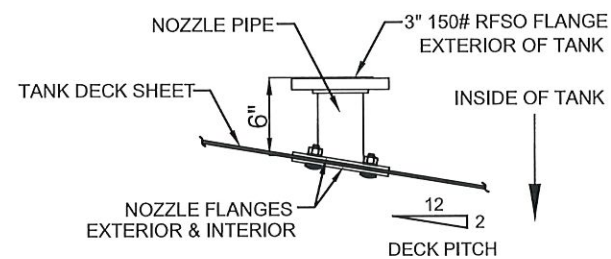
TA 1" THREADED HALF COUPLER
TB 1" NPT 304 3000# STAINLESS STEEL HALF COUPLER
 1 5/16" COUPLER PROJECTION
 FLANGE 3/4" THICK (4) HOLE BOLT PATTERN
 (4) 1/2" POLYCAP BOLTS IN SIDEWALL Ø 4 1/2" BOLT CIRCLE



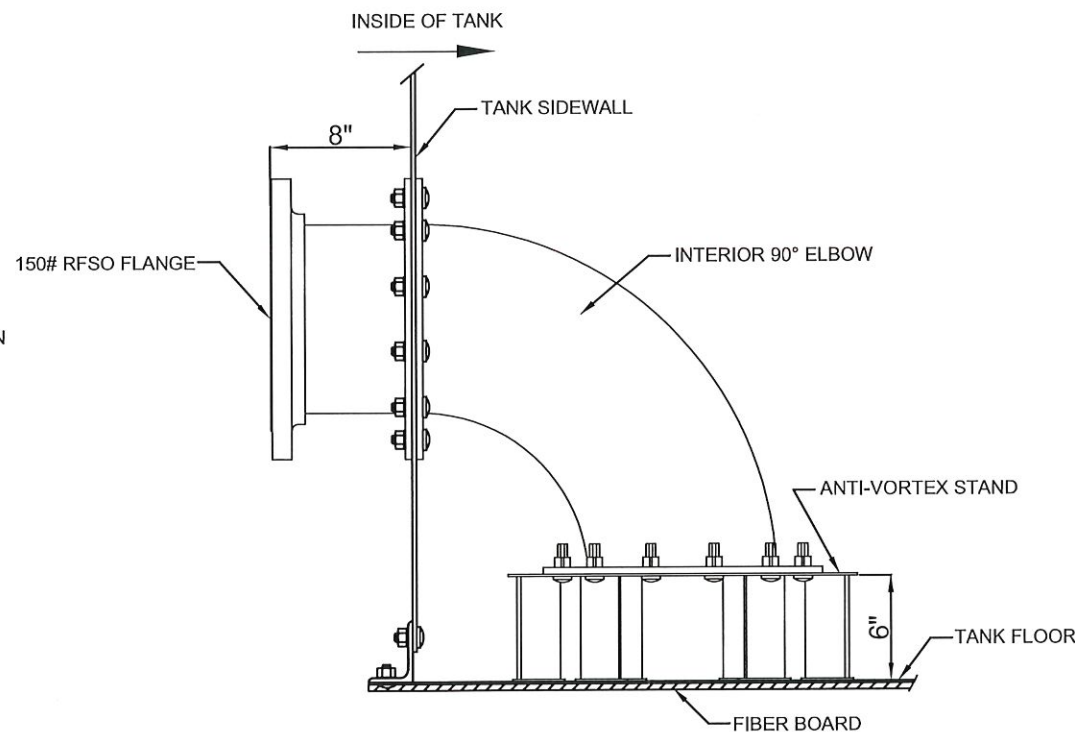
TC 1" THREADED FULL COUPLER
 1" NPT 304 3000# STAINLESS STEEL FULL COUPLER
 1 5/16" COUPLER PROJECTION
 FLANGE 3/4" THICK (4) HOLE BOLT PATTERN
 (4) 1/2" POLYCAP BOLTS IN SIDEWALL Ø 4 1/2" BOLT CIRCLE



NA 4" 150# NOZZLE
 4" CARBON STEEL NOZZLE
 150# RFSO ANSI / ASME B16.5 FLANGE FACE
 4" SCHEDULE 40 PIPE
 6" NOZZLE PROJECTION
 FLANGE 3/4" THICK 150# BOLT PATTERN
 (8) 1/2" POLYCAP BOLTS IN SIDEWALL Ø 7 1/2" BOLT CIRCLE
 INTERIOR BACKING FLANGE 3/4" THICK 150# BOLT PATTERN

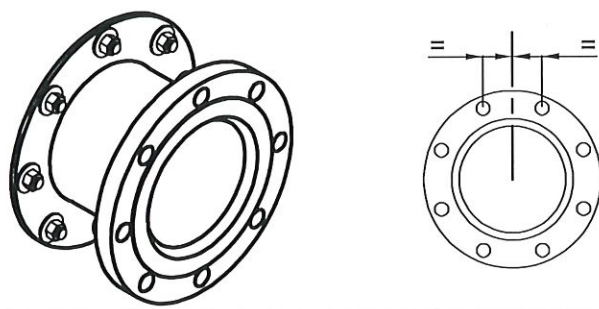


HA 3" 150# HILLSIDE NOZZLE
 3" CARBON STEEL NOZZLE
 150# RFSO ANSI / ASME B16.5 FLANGE FACE
 3" SCHEDULE 40 PIPE
 6" NOZZLE PROJECTION
 FLANGE 3/4" THICK 150# BOLT PATTERN
 (4) 1/2" POLYCAP BOLTS IN DECK Ø 6" BOLT CIRCLE
 INTERIOR BACKING FLANGE 3/4" THICK 150# BOLT PATTERN



OL 10" 150# NOZZLE W/ ANTI-VORTEX
 10" CARBON STEEL NOZZLE
 150# RFSO ANSI / ASME B16.5 FLANGE FACE
 10" SCHEDULE 40 PIPE
 8" NOZZLE PROJECTION
 BACKING FLANGE 3/8" THICK 150# BOLT PATTERN
 (12) 1/2" POLYCAP BOLTS IN SIDEWALL Ø 14 1/4" BOLT CIRCLE
 INTERIOR 90° CARBON STEEL LONG RADIUS ELBOW / SCH 40 PIPE
 20"Ø x 3/8" THICK TOP PLATE TO INTERIOR ELBOW
 (6) 2 1/2" x 2 1/2" x 1/4" ANGLE LEGS EQUALLY SPACED

ALL NOZZLES TO STRADDLE CENTER LINE



NOTES:
 For nozzle location on tank see plan view or flat layout view in the appurtenances box.
 All nozzles to straddle center line unless specified otherwise.
 Nozzle projection is measured from tank sidewall to face of flange.
 Piping is measured from tank sidewall to center of pipe.

Brian Elliott
 LICENSED PROFESSIONAL ENGINEER
 BRIAN ELLIOTT
 C58072
 CIVIL
 STATE OF CALIFORNIA
 3/5/21

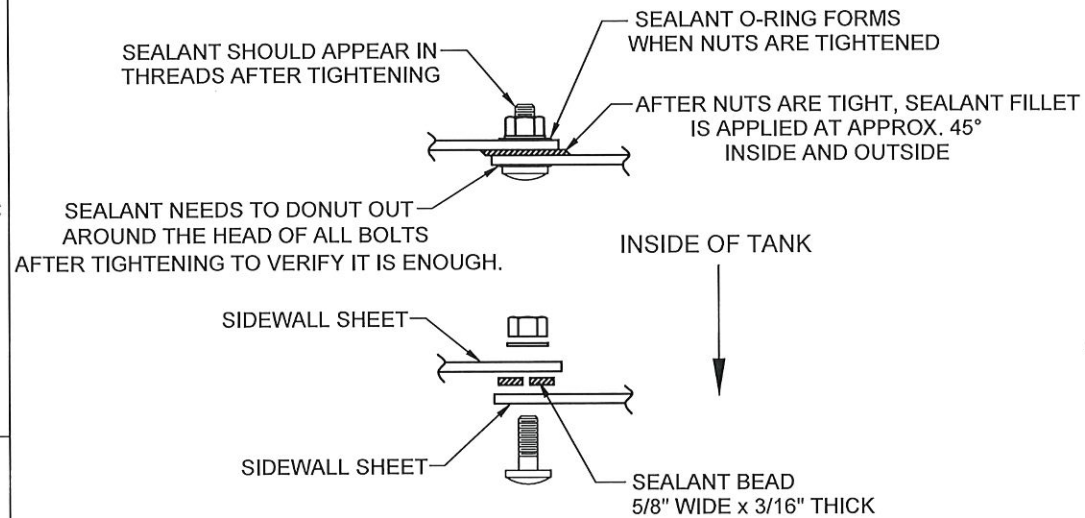
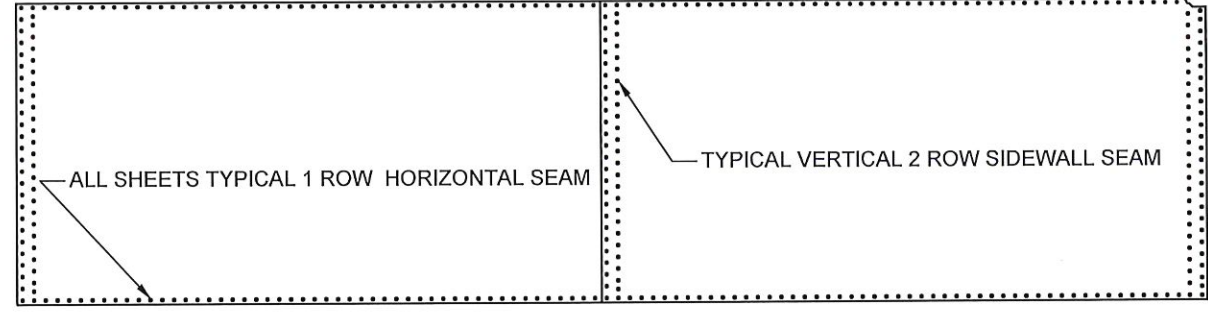
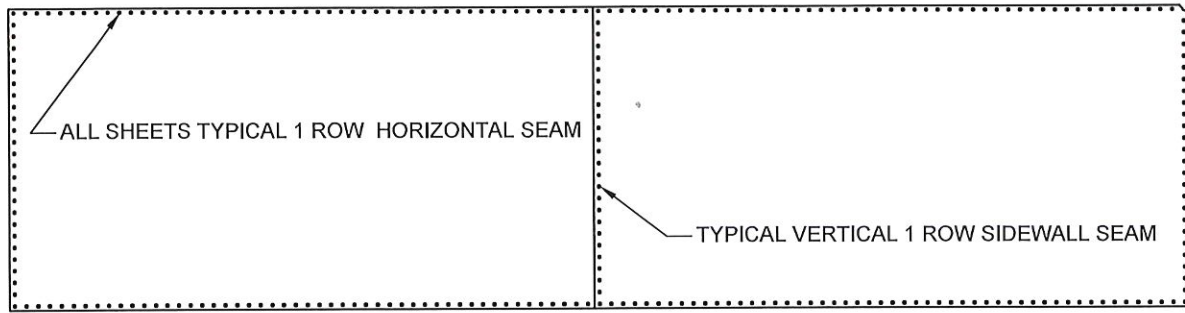
2	2/16/2021	MPH	REVISED LOCATION
1	2/4/2021	MPH	ADDED NOZZLE & COUPLER
NO:	DATE:	BY:	REVISION:



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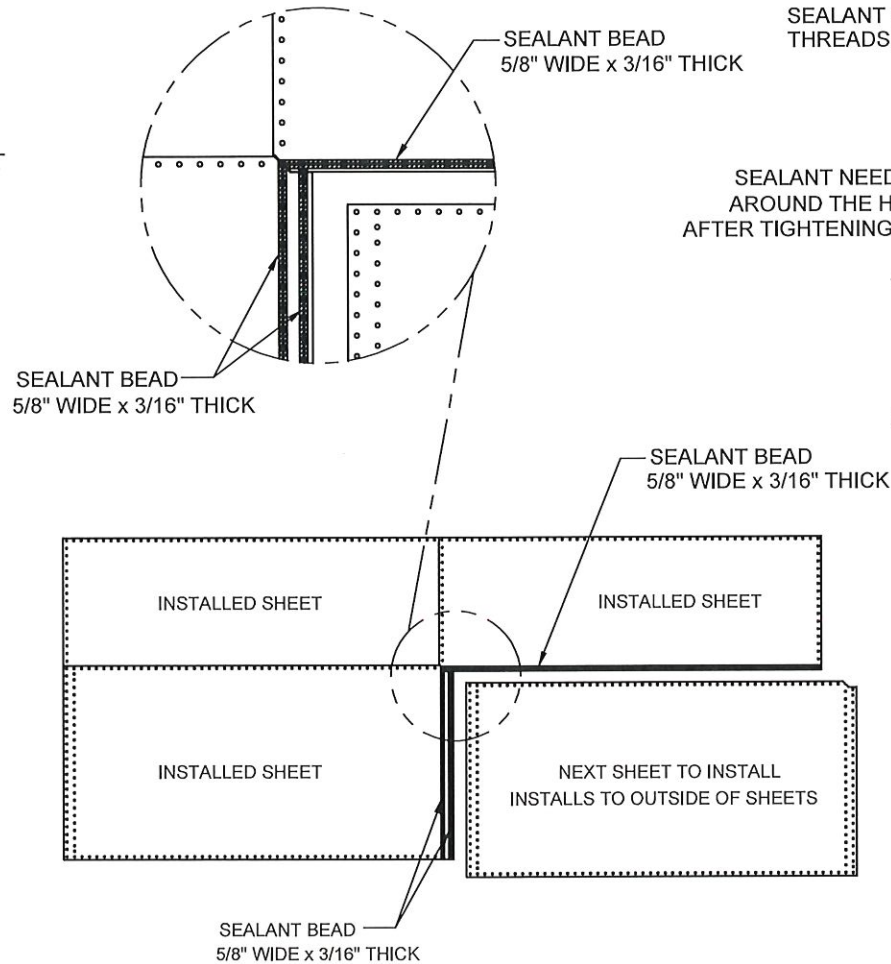
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TOLERANCES:	ISSUED FOR MANUFACTURING:	-
FRACTIONAL ± 1/16	ISSUED FOR CONSTRUCTION:	-
ONE PLACE DECIMAL ± 0.060	PROJECT MANAGER:	TB
TWO PLACE DECIMAL ± 0.030		
THREE PLACE DECIMAL ± 0.010		

SUBMITTAL DETAILS		JOB #:	20-0075
NOZZLES		COVERAGE:	13 @ 112
		TANK SIZE:	38.62' x 21.70'
CUSTOMER:	National Storage Tank, INC.	FINISH:	-
LOCATION:	East Palo Alto, CA	SCALE:	
DRAWN BY:	MPH 1/14/2021	SHEET 1 OF 1	DO NOT SCALE THIS DRAWING
CHECKED BY:	-	S-06	
APPROVED BY:	-		
			REV. 2



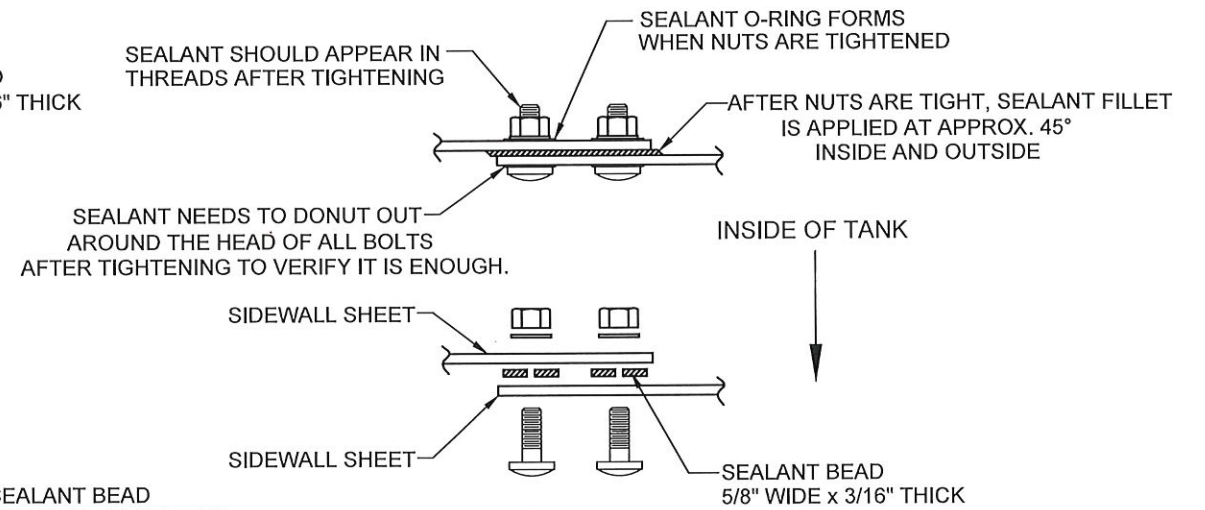
VERTICAL & HORIZONTAL SIDEWALL CONNECTION

SIDEWALLS TO HAVE 1/2" Ø POLYCAP SAE J429 GRADE 8 BOLT- NZF3000 WITH 1/2" HEX NUT AND 1/2" FLAT WASHER



TYPICAL SIDEWALL CONNECTION

INSTALLATION PROCEDURE WHEN TANK IS ERECTED WITH JACKING SYSTEM
VIEW FROM OUTSIDE OF TANK



VERTICAL SIDEWALL CONNECTION

2 ROW VERTICAL CONNECTION SHOWN
NUMBER OF ROWS RANGE FROM 1 ROW TO 4 ROW

NOTES:
Vertical bolt rows and sidewall sheet height vary per tank. See page S-02 for job specific sidewalls.
Sidewall seams to have sealant & gasket in accordance with AST STORAGE erection manual.
Sidewall seams to have 1/2" Ø polycap fin neck SAE J429 grade 8 bolt NZF3000 with 1/2" hex nut and 1/2" flat washer.
Appurtenances that bolt to the tank sidewall to have 1/2" Ø polycap fin neck SAE J429 grade 8 bolts NZF3000 with 1/2" hex nut and flat washer.
All nozzles and manways shall be moved clear of all horizontal & vertical sidewall seams. To avoid any potential leaks.



3/5/21

NO:	DATE:	BY:	REVISION:
NO:	DATE:	BY:	REVISION:

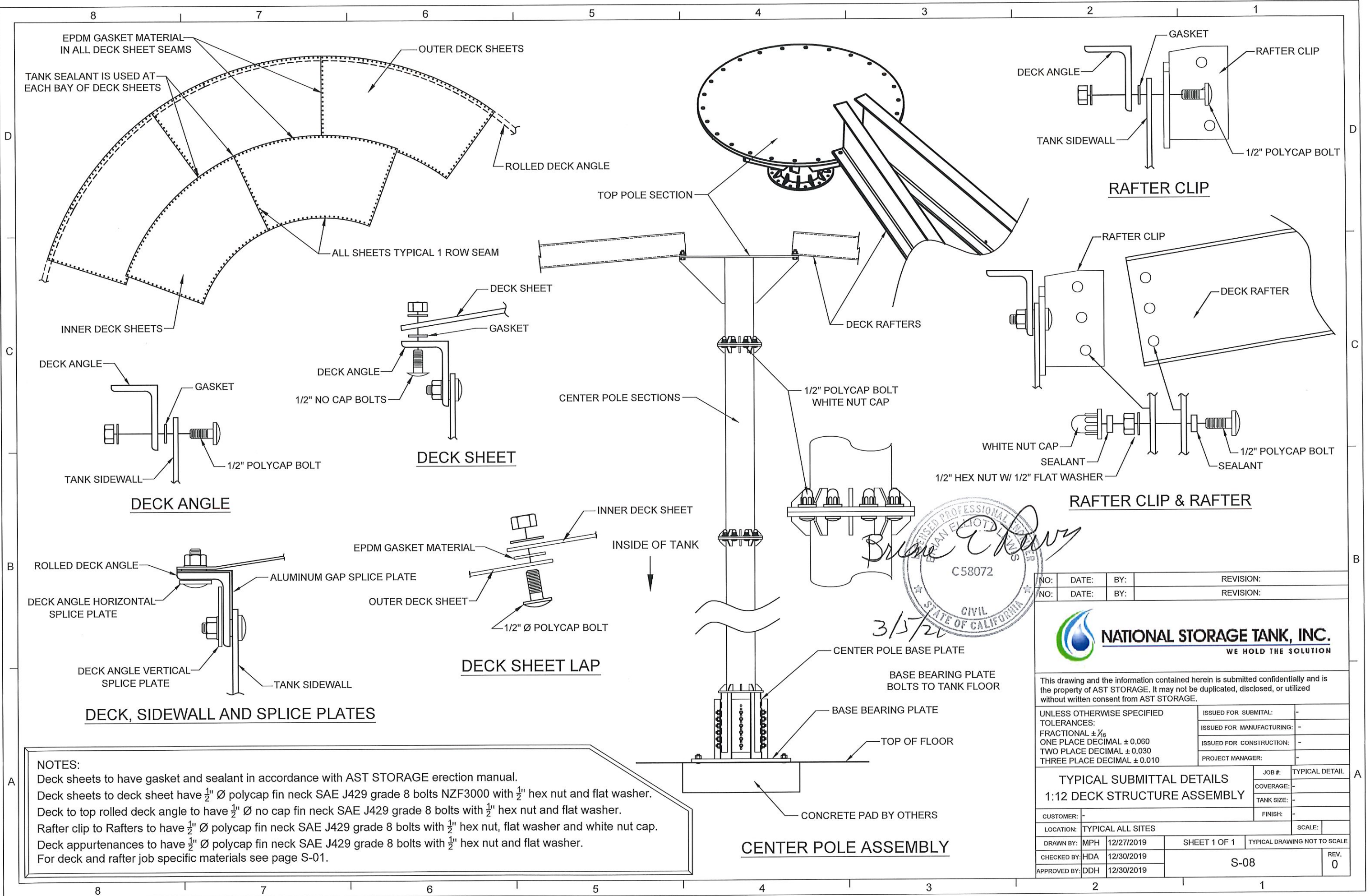


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ONE PLACE DECIMAL ± 0.060	ISSUED FOR CONSTRUCTION:	-
TWO PLACE DECIMAL ± 0.030	PROJECT MANAGER:	-
THREE PLACE DECIMAL ± 0.010		

TYPICAL SUBMITTAL DETAILS		JOB #:	TYPICAL DETAIL
SIDEWALL ASSEMBLY		COVERAGE:	-
		TANK SIZE:	-
		FINISH:	-

CUSTOMER:	-			SCALE:	
LOCATION:	TYPICAL ALL SITES				
DRAWN BY:	MPH	12/27/2019	SHEET 1 OF 1	TYPICAL DRAWING NOT TO SCALE	
CHECKED BY:	HDA	12/30/2019			
APPROVED BY:	DDH	12/30/2019	S-07	REV. 0	



NOTES:
 Deck sheets to have gasket and sealant in accordance with AST STORAGE erection manual.
 Deck sheets to deck sheet have 1/2" Ø polycap fin neck SAE J429 grade 8 bolts NZF3000 with 1/2" hex nut and flat washer.
 Deck to top rolled deck angle to have 1/2" Ø no cap fin neck SAE J429 grade 8 bolts with 1/2" hex nut and flat washer.
 Rafter clip to Rafters to have 1/2" Ø polycap fin neck SAE J429 grade 8 bolts with 1/2" hex nut, flat washer and white nut cap.
 Deck appurtenances to have 1/2" Ø polycap fin neck SAE J429 grade 8 bolts with 1/2" hex nut and flat washer.
 For deck and rafter job specific materials see page S-01.



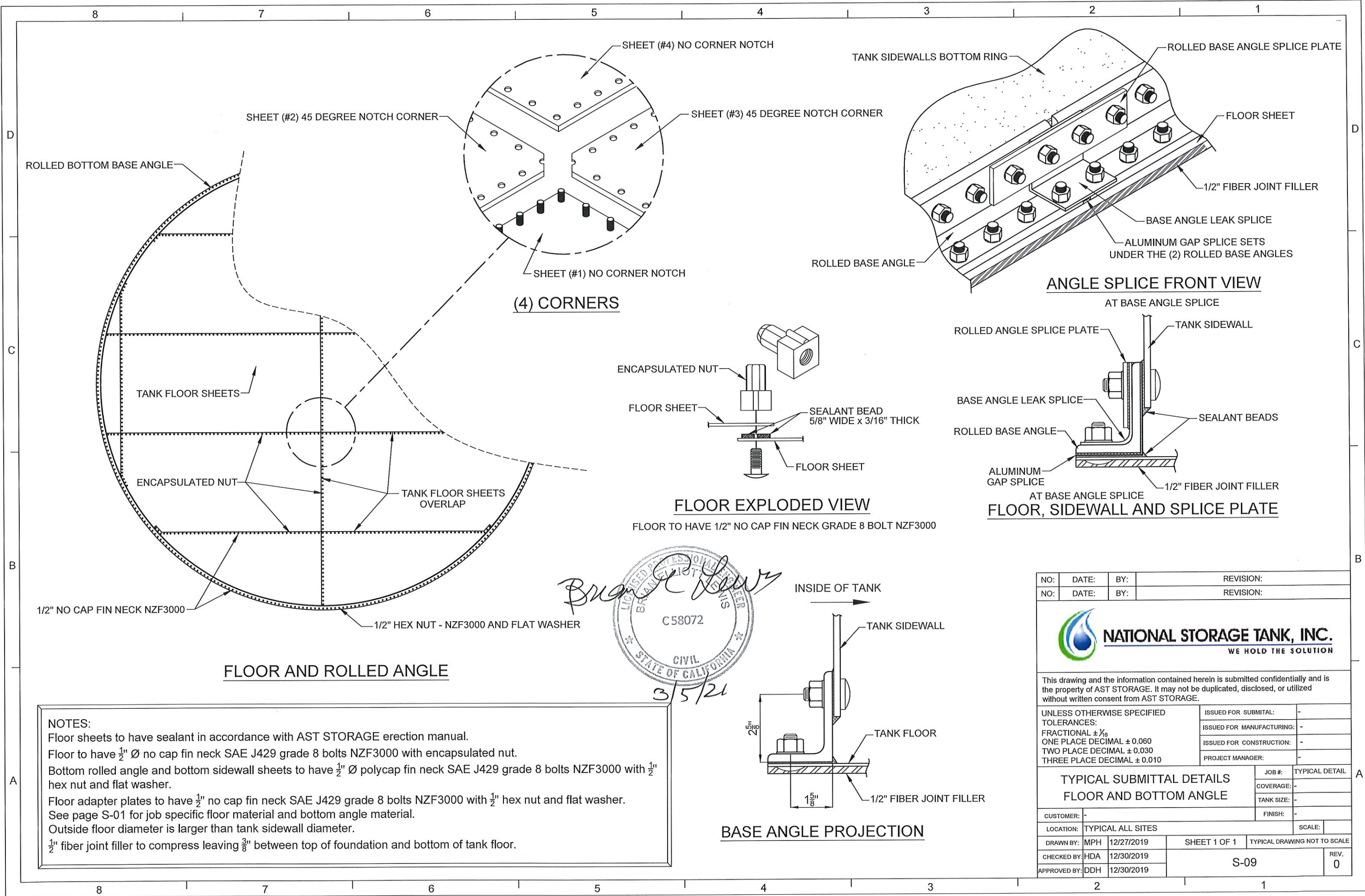
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NO:	DATE:	BY:	REVISION:

NATIONAL STORAGE TANK, INC.
 WE HOLD THE SOLUTION

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UNLESS OTHERWISE SPECIFIED TOLERANCES:	ISSUED FOR SUBMITTAL: -
FRACTIONAL ± 1/8	ISSUED FOR MANUFACTURING: -
ONE PLACE DECIMAL ± 0.060	ISSUED FOR CONSTRUCTION: -
TWO PLACE DECIMAL ± 0.030	PROJECT MANAGER: -
THREE PLACE DECIMAL ± 0.010	

TYPICAL SUBMITTAL DETAILS		1:12 DECK STRUCTURE ASSEMBLY		TYPICAL DETAIL	
CUSTOMER: -	LOCATION: TYPICAL ALL SITES	JOB #:	FINISH:	COVERAGE: -	TANK SIZE: -
DRAWN BY: MPH	12/27/2019	SHEET 1 OF 1	TYPICAL DRAWING NOT TO SCALE	SCALE:	
CHECKED BY: HDA	12/30/2019	S-08		REV. 0	
APPROVED BY: DDH	12/30/2019				



(4) CORNERS

ANGLE SPICE FRONT VIEW

FLOOR EXPLODED VIEW

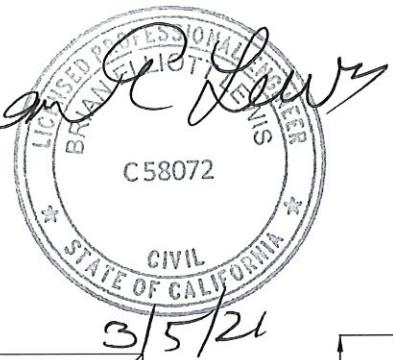
FLOOR TO HAVE 1/2" NO CAP FIN NECK GRADE 8 BOLT NZF3000

FLOOR, SIDEWALL AND SPICE PLATE

FLOOR AND ROLLED ANGLE

BASE ANGLE PROJECTION

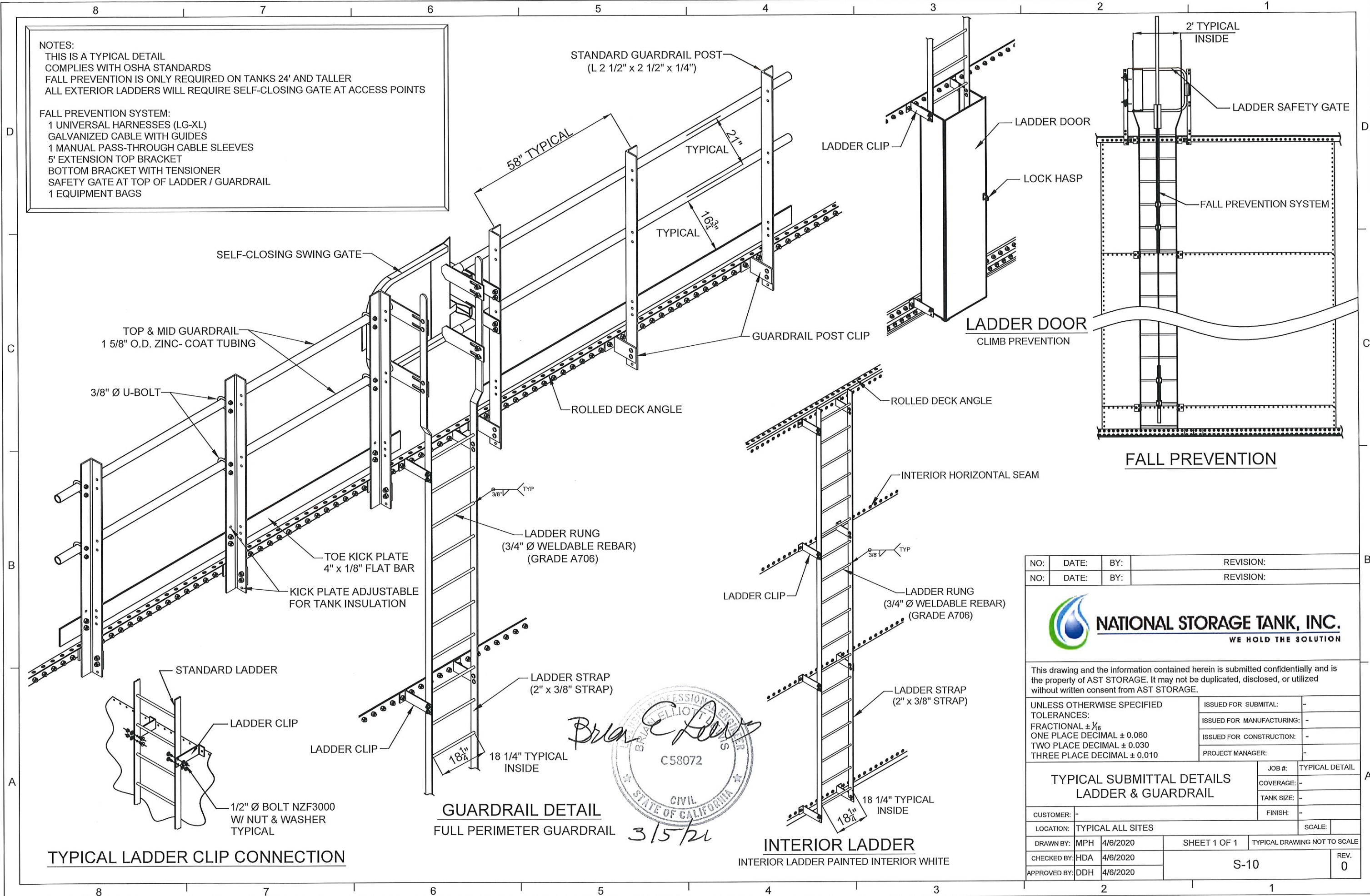
NOTES:
 Floor sheets to have sealant in accordance with AST STORAGE erection manual.
 Floor to have 1/2" Ø no cap fin neck SAE J429 grade 8 bolts NZF3000 with encapsulated nut.
 Bottom rolled angle and bottom sidewall sheets to have 1/2" Ø polycap fin neck SAE J429 grade 8 bolts NZF3000 with 1/2" hex nut and flat washer.
 Floor adapter plates to have 1/2" no cap fin neck SAE J429 grade 8 bolts NZF3000 with 1/2" hex nut and flat washer.
 See page S-01 for job specific floor material and bottom angle material.
 Outside floor diameter is larger than tank sidewall diameter.
 1/2" fiber joint filler to compress leaving 3/8" between top of foundation and bottom of tank floor.



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UNLESS OTHERWISE SPECIFIED TOLERANCES: FRACTIONAL ± 1/16 ONE PLACE DECIMAL ± 0.060 TWO PLACE DECIMAL ± 0.030 THREE PLACE DECIMAL ± 0.010		ISSUED FOR SUBMITTAL: - ISSUED FOR MANUFACTURING: - ISSUED FOR CONSTRUCTION: - PROJECT MANAGER: -	
TYPICAL SUBMITTAL DETAILS FLOOR AND BOTTOM ANGLE		JOB #: - TYPICAL DETAIL COVERAGE: - TANK SIZE: - FINISH: -	
CUSTOMER:	-		
LOCATION:	TYPICAL ALL SITES		
DRAWN BY:	MPH 12/27/2019	SHEET 1 OF 1	TYPICAL DRAWING NOT TO SCALE
CHECKED BY:	HDA 12/30/2019	S-09	
APPROVED BY:	DDH 12/30/2019	REV. 0	

NOTES:
 THIS IS A TYPICAL DETAIL
 COMPLIES WITH OSHA STANDARDS
 FALL PREVENTION IS ONLY REQUIRED ON TANKS 24' AND TALLER
 ALL EXTERIOR LADDERS WILL REQUIRE SELF-CLOSING GATE AT ACCESS POINTS

FALL PREVENTION SYSTEM:
 1 UNIVERSAL HARNESSES (LG-XL)
 GALVANIZED CABLE WITH GUIDES
 1 MANUAL PASS-THROUGH CABLE SLEEVES
 5' EXTENSION TOP BRACKET
 BOTTOM BRACKET WITH TENSIONER
 SAFETY GATE AT TOP OF LADDER / GUARDRAIL
 1 EQUIPMENT BAGS



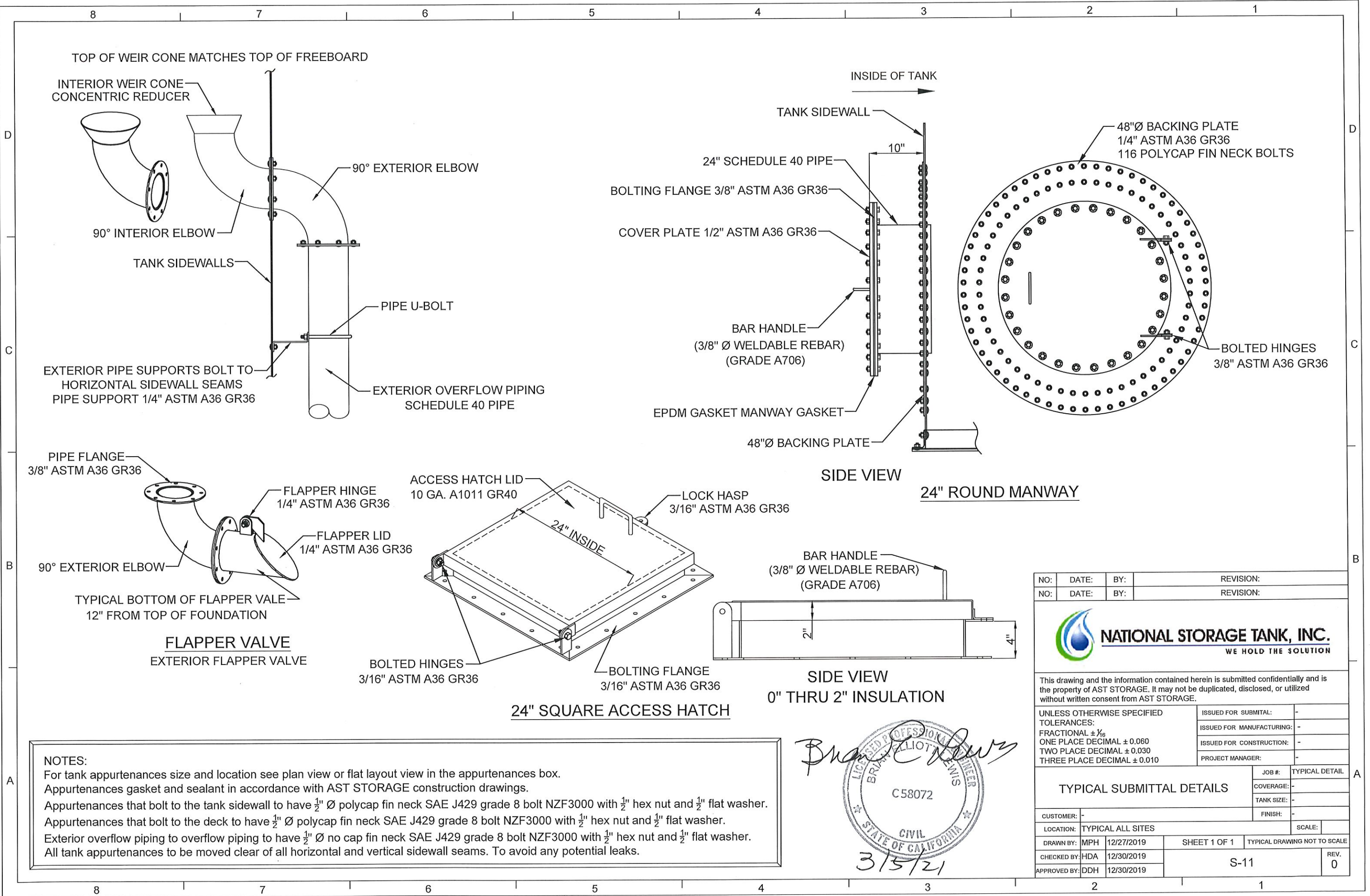
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ONE PLACE DECIMAL ± 0.060	ISSUED FOR CONSTRUCTION:	-
TWO PLACE DECIMAL ± 0.030	PROJECT MANAGER:	-
THREE PLACE DECIMAL ± 0.010		

TYPICAL SUBMITTAL DETAILS		JOB #:	TYPICAL DETAIL
LADDER & GUARDRAIL		COVERAGE:	-
		TANK SIZE:	-
		FINISH:	-
CUSTOMER:			SCALE:
LOCATION:	TYPICAL ALL SITES		
DRAWN BY:	MPH 4/6/2020	SHEET 1 OF 1	TYPICAL DRAWING NOT TO SCALE
CHECKED BY:	HDA 4/6/2020	S-10	
APPROVED BY:	DDH 4/6/2020		
			REV. 0



NOTES:
 For tank appurtenances size and location see plan view or flat layout view in the appurtenances box.
 Appurtenances gasket and sealant in accordance with AST STORAGE construction drawings.
 Appurtenances that bolt to the tank sidewall to have 1/2" Ø polycap fin neck SAE J429 grade 8 bolt NZF3000 with 1/2" hex nut and 1/2" flat washer.
 Appurtenances that bolt to the deck to have 1/2" Ø polycap fin neck SAE J429 grade 8 bolt NZF3000 with 1/2" hex nut and 1/2" flat washer.
 Exterior overflow piping to overflow piping to have 1/2" Ø no cap fin neck SAE J429 grade 8 bolt NZF3000 with 1/2" hex nut and 1/2" flat washer.
 All tank appurtenances to be moved clear of all horizontal and vertical sidewall seams. To avoid any potential leaks.

Brian E. Lewis
 LICENSED PROFESSIONAL ENGINEER
 BRIAN E. LEWIS
 C 58072
 CIVIL
 STATE OF CALIFORNIA
 3/5/21

NO:	DATE:	BY:	REVISION:
NO:	DATE:	BY:	REVISION:
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ONE PLACE DECIMAL ± 0.060		ISSUED FOR CONSTRUCTION: -	
TWO PLACE DECIMAL ± 0.030		PROJECT MANAGER: -	
THREE PLACE DECIMAL ± 0.010		JOB #: -	
TYPICAL SUBMITTAL DETAILS			TYPICAL DETAIL
CUSTOMER: -	LOCATION: TYPICAL ALL SITES		SCALE: -
DRAWN BY: MPH	12/27/2019	SHEET 1 OF 1	TYPICAL DRAWING NOT TO SCALE
CHECKED BY: HDA	12/30/2019	S-11	
APPROVED BY: DDH	12/30/2019		
			REV. 0



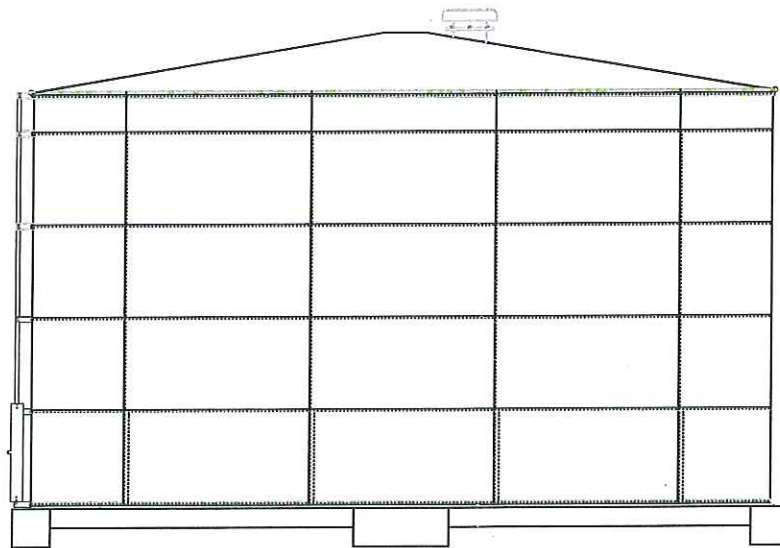
NATIONAL STORAGE TANK, INC.

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**LIGHT TREE APARTMENTS
1805 E BAYSHORE ROAD
WATER TANK
EAST PALO ALTO, CA
TANK FOUNDATION & ANCHORAGE**

INDEX:

- SHEET S/1 COVER PAGE
- SHEET S/2 TANK LAYOUT
- SHEET S/3 FOUNDATION PLAN
- SHEET S/4 CONCRETE DETAILS
- SHEET S/5 CENTER POLE DETAIL
- SHEET S/6 NOTES



TANK SIZE: 38.62' DIAMETER x 21.70' TALL



REVISIONS	BY

LIGHT TREE APARTMENTS
1805 E BAYSHORE ROAD
WATER TANK
EAST PALO ALTO, CA
TANK FOUNDATION & ANCHORAGE



J.M. TURNER ENGINEERING, INC.
CONSULTING ENGINEERS
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(707) 528-4603 FAX (707) 528-4505

DATE: 02/10/21
DRAWN BY: A.B.B.
CHECKED BY: A.J.V.
DRAWING NO: 18327-1/ S1
SHEET: 1 OF 6

**LIGHT TREE APARTMENTS
1805 E BAYSHORE ROAD
WATER TANK
EAST PALO ALTO, CA
TANK FOUNDATION & ANCHORAGE**

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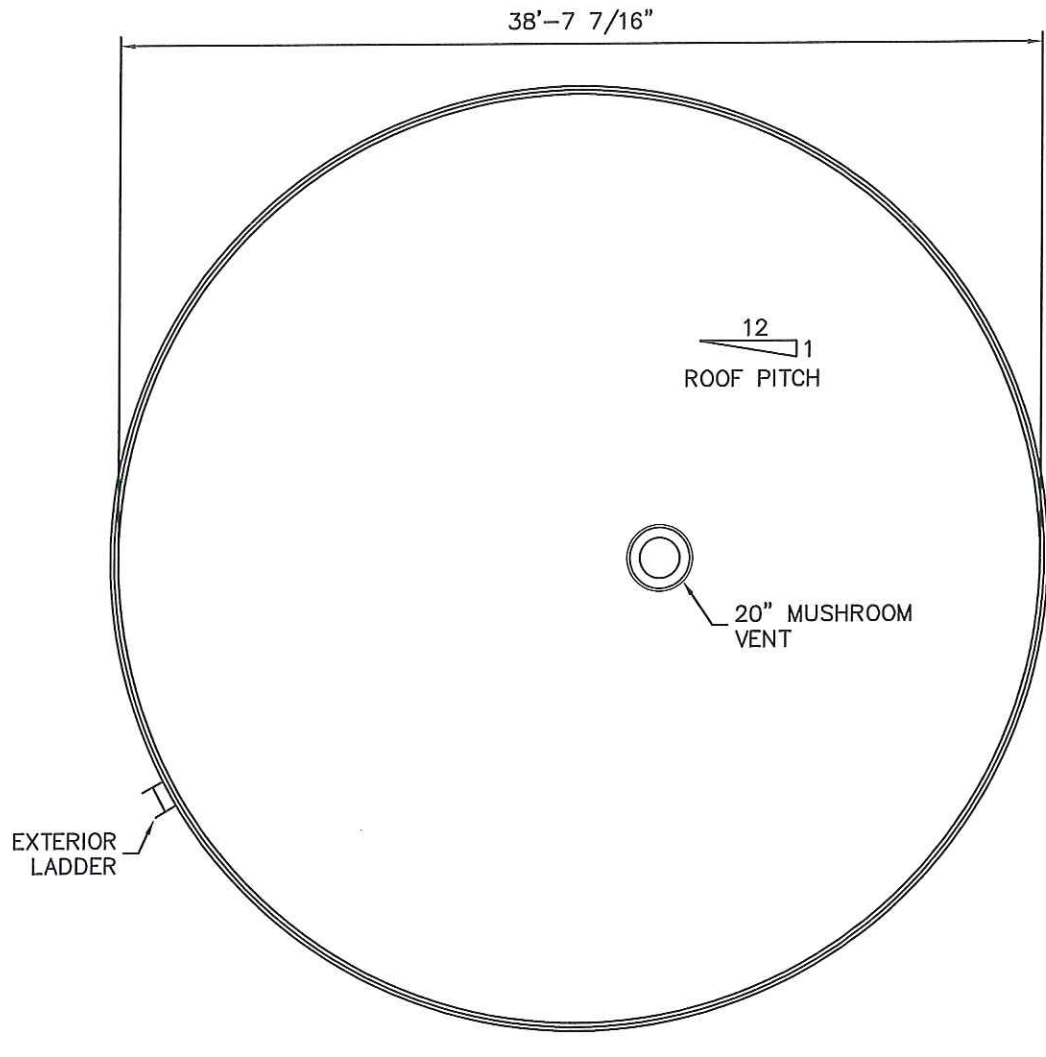
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WATER TANK
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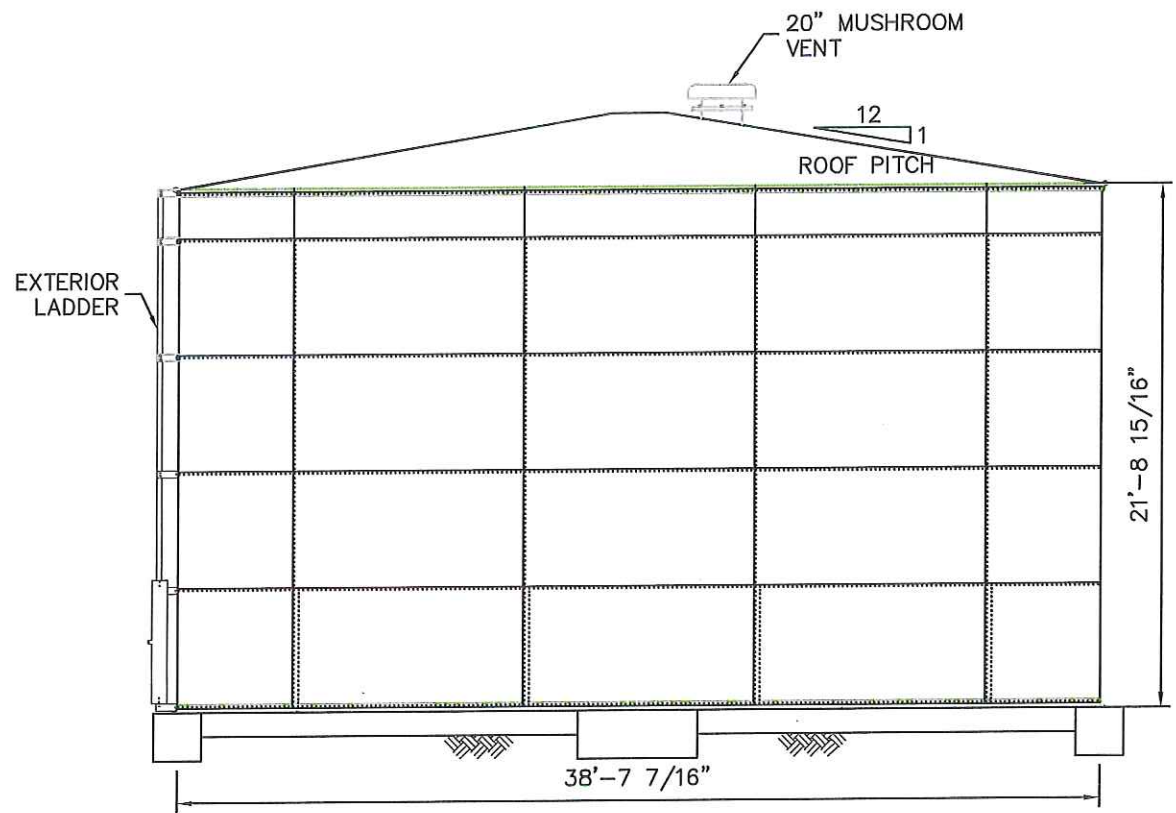


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DRAWN BY: A.B.B.
CHECKED BY: A.J.V.
DRAWING NO: 18327-1/ S2
SHEET: 2 OF 6



PLAN VIEW
SCALE 1/8"=1'-0"

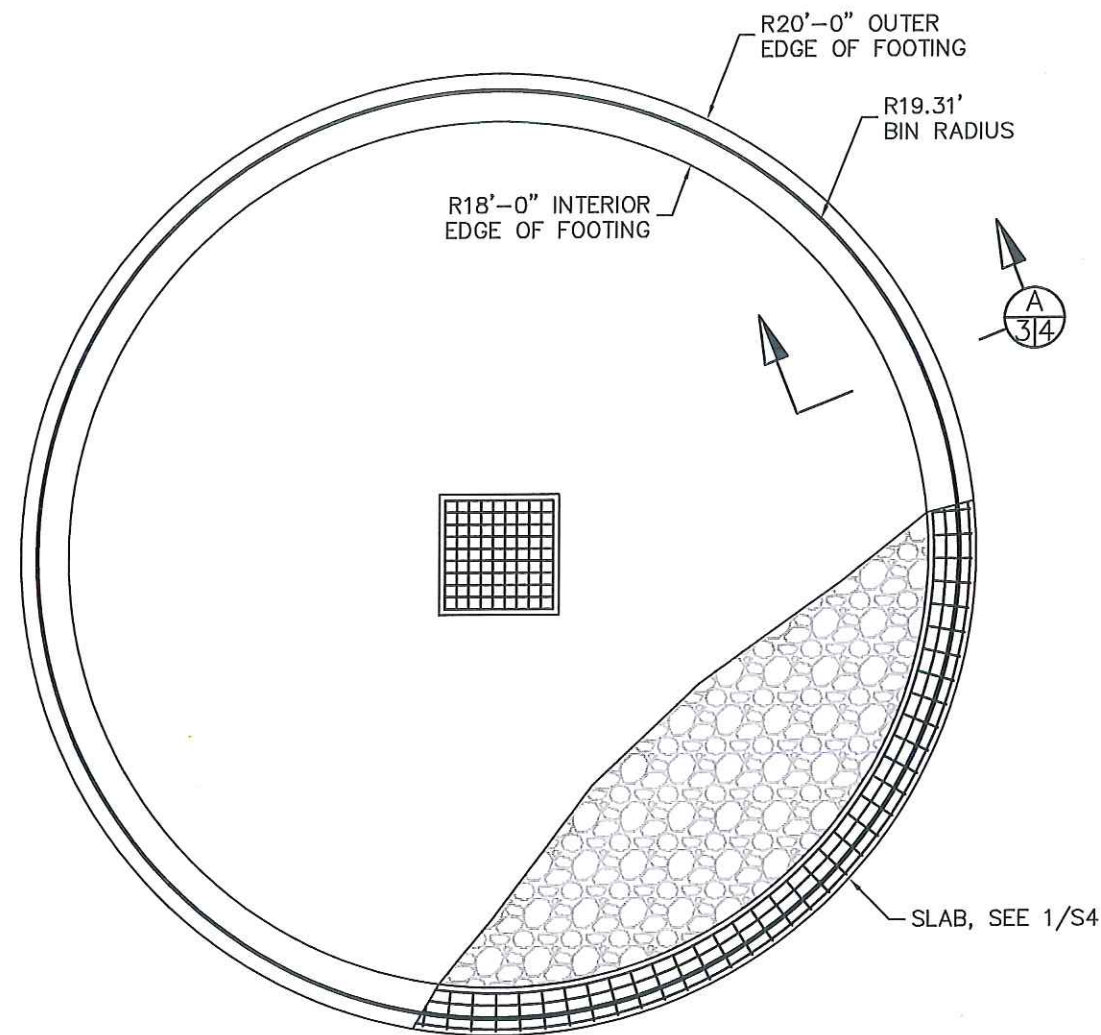


TANK SIZE: 38.62' DIAMETER x 21.70' TALL
PLANS ARE FOR ONE TANK
ELEVATION
SCALE 1/8"=1'-0"



**LIGHT TREE APARTMENTS
1805 E BAYSHORE ROAD
WATER TANK
EAST PALO ALTO, CA
TANK FOUNDATION & ANCHORAGE**

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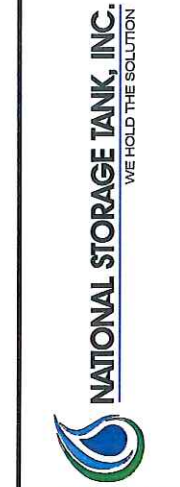
FOUNDATION PLAN
SCALE 1/8"=1'-0"

- NOTES:
1. FOUNDATION DESIGNED IN COMPLIANCE WITH AWWA D103-19 AND ACI 318.
 2. TYPE 2 FOUNDATION PER SECTION 13.4.2 OF AWWA D103-19.
 3. ALL APPLICABLE SECTIONS OF AWWA D103-19 AND ACI 318 SHALL BE FOLLOWED DURING CONSTRUCTION OF THIS FOUNDATION.
 4. ALL ANCHOR BOLTS SHALL BE GALVANIZED PER AWWA D103.19 SECTION 5.9.4, PART 2. ANCHORS INSTALLED USING HILTI EPOXY SHALL BE GALVANIZED OR ZINC COATED WITH A MAXIMUM THICKNESS OF 5 μ .
 5. AT THE TOP OF ANCHOR BOLTS, LOCK NUTS SHALL BE PROVIDED OR THE THREADS SHALL BE PEENED TO PREVENT LOOSENING OF THE NUTS, PER AWWA SECTION 5.9.4, PART 4.
 6. ALL CONCRETE SHALL BE 4,000-PSI MINIMUM COMPRESSIVE STRENGTH.
 7. FOUNDATION SHALL BE LEVEL WITHIN $\pm 1/8$ " IN ANY 30 FT CIRCUMFERENCE UNDER THE TANK SHELL. THE LEVELNESS ON THE CIRCUMFERENCE SHALL NOT VARY BY MORE THAN $\pm 1/4$ " FROM AN ESTABLISHED PLANE. (REFERENCE AWWA D103).
 8. ALL REINFORCING STEEL TO BE 60 KSI MINIMUM YIELD STRENGTH.
 9. REINFORCING STEEL MINIMUM LAPS (REFER TO TABLE ON SHEET S4).
 10. TANK MANUFACTURED BY CHIEF INDUSTRIES, INC.
 11. FOUNDATION SHALL BEAR ON APPROVED SUBGRADE PER THE PROJECT GEOTECHNICAL REPORT. IT IS THE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR TO COORDINATE APPROVAL OF THESE DRAWINGS BY THE APPROPRIATE CITY/COUNTY AGENCY.



REVISIONS	BY

LIGHT TREE APARTMENTS
1805 E BAYSHORE ROAD
WATER TANK
EAST PALO ALTO, CA
TANK FOUNDATION & ANCHORAGE

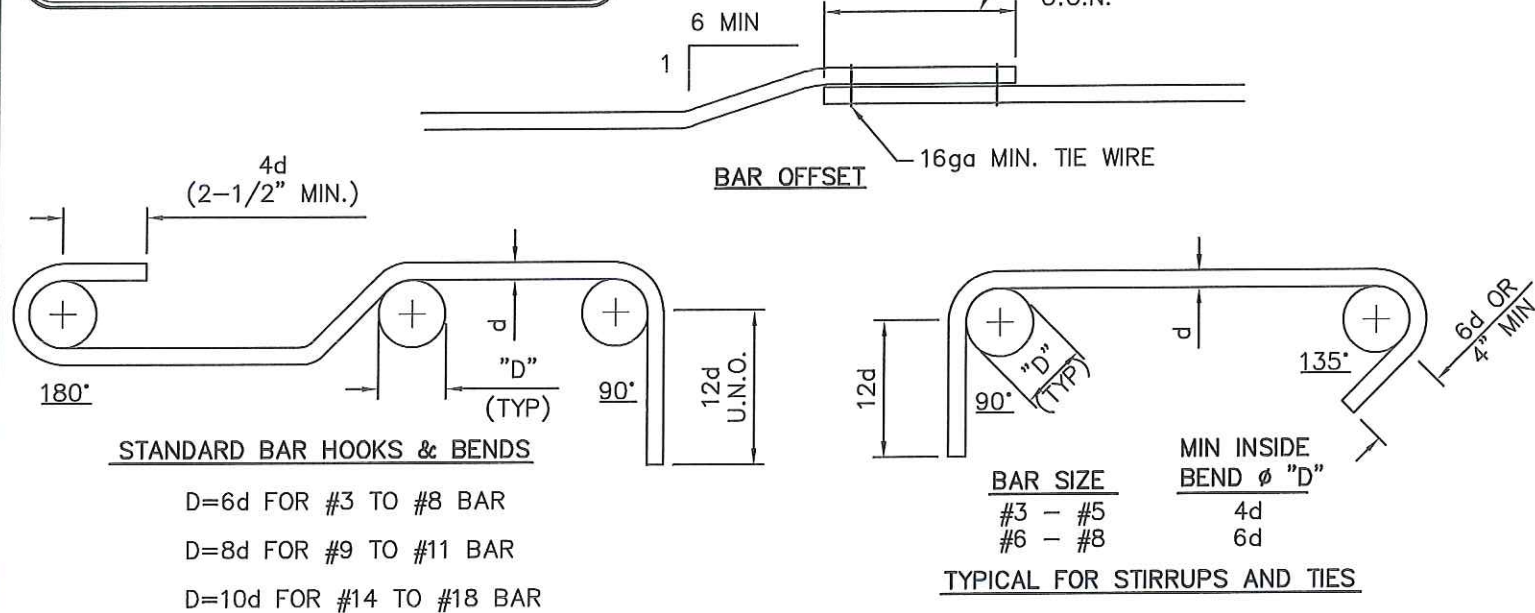


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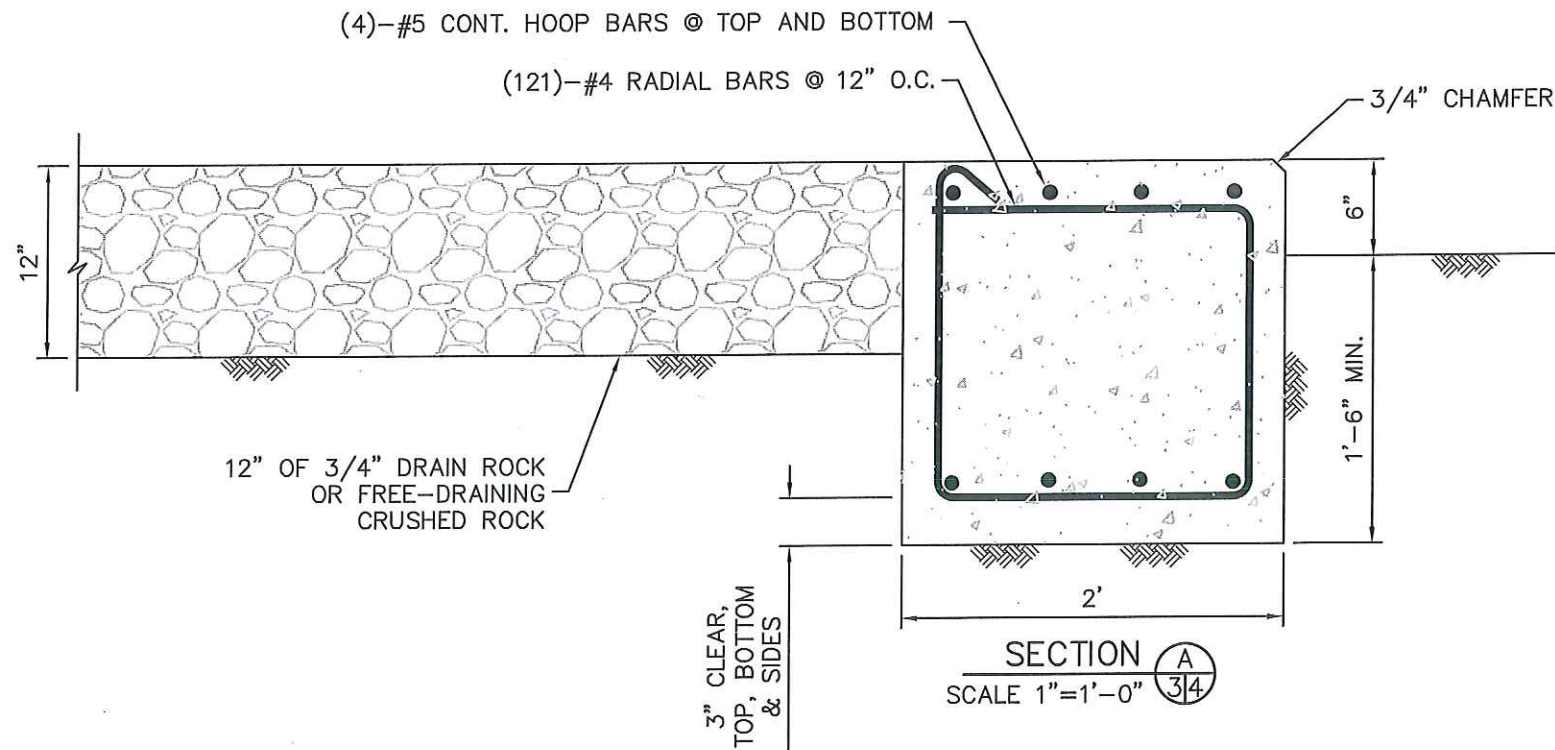
DATE: 02/10/21
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CHECKED BY: A.J.V.
DRAWING NO: 18327-1/S3
SHEET: 3 OF 6

LIGHT TREE APARTMENTS
1805 E BAYSHORE ROAD
WATER TANK
EAST PALO ALTO, CA
TANK FOUNDATION & ANCHORAGE

FOR CONCRETE:
 SEE REBAR LAP
 SCHED. U.O.N.
 FOR C.M.U.:
 LAP 48 BAR ϕ
 U.O.N.



REBAR, HOOKS & BENDS



TYP REBAR LAP LENGTHS, U.O.N.

BAR SIZE	2,500		3,000		4,000		5,000	
	40	60	40	60	40	60	40	60
#3	24	36	22	33	19	28	17	25
#4	32	47	29	43	25	37	23	34
#5	24	36	22	33	19	29	17	26
#5	39	59	36	54	31	47	28	42
#5	30	45	28	42	24	36	22	32
#6	47	71	43	65	37	56	34	50
#6	36	54	33	50	29	43	26	39
#7	69	103	63	94	54	81	49	73
#7	53	79	48	72	42	63	38	56
#8	78	117	72	107	62	93	56	83
#8	60	90	55	83	48	72	43	64

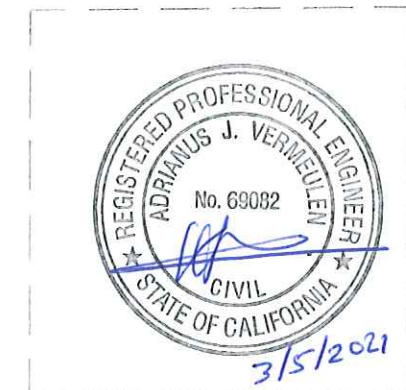
CONCRETE f'_c (PSI)
 BAR GRADE (KSI)
 TOP BAR LAP LENGTH (IN)
 OTHER BAR LAP LENGTH (IN)

NOTES:

1. INCREASE LAP LENGTHS 33% FOR LIGHT WEIGHT CONCRETE, AND AT FOUR BAR BUNDLES (WHERE 2 BARS LAP WITH 2 OTHER BARS).
2. TOP BARS - HORIZONTAL BARS PLACED WITH MORE THAN 12" OF FRESH CONCRETE CAST IN THE MEMBER BELOW THE BARS.
3. INCREASE LAP LENGTHS 20% FOR EPOXY COATED BARS.

REBAR LAP SCHEDULE

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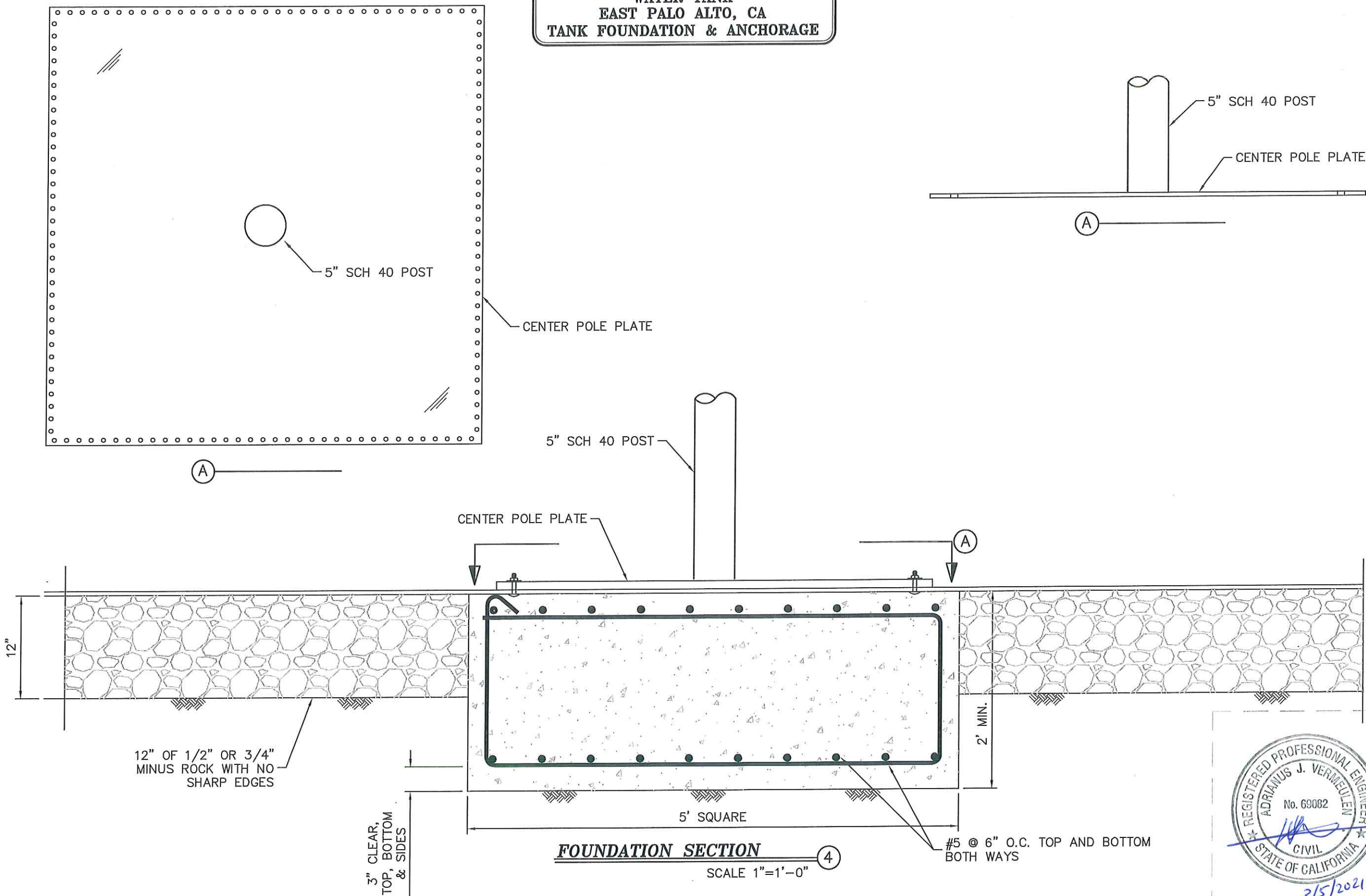
LIGHT TREE APARTMENTS
 1805 E BAYSHORE ROAD
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 TANK FOUNDATION & ANCHORAGE

NATIONAL STORAGE TANK, INC.
 WE HOLD THE SOLUTION

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DATE: 02/10/21
 DRAWN BY: A.B.B.
 CHECKED BY: A.J.V.
 DRAWING NO: 18327-1/54
 SHEET: 4 OF 6

**LIGHT TREE APARTMENTS
1805 E BAYSHORE ROAD
WATER TANK
EAST PALO ALTO, CA
TANK FOUNDATION & ANCHORAGE**



REVISIONS	BY

LIGHT TREE APARTMENTS
1805 E BAYSHORE ROAD
WATER TANK
EAST PALO ALTO, CA
TANK FOUNDATION & ANCHORAGE



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DATE: 02/10/21
DRAWN BY: A.B.B.
CHECKED BY: A.J.V.
DRAWING NO: 18327-1/S5
SHEET: 5 OF 6

GENERAL

1. ALL PHASES OF THE WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE 2019 EDITION OF THE CALIFORNIA BUILDING CODE, AWWA D103, ASCE 7, UNIFORM PLUMBING, UNIFORM MECHANICAL & 2011 EDITION OF THE NATIONAL ELECTRICAL CODE PER CURRENT JURISDICTION REQUIREMENTS.
2. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE INDICATED, THEY DO NOT SPECIFY METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS AND PRECAUTIONS TO MAINTAIN THE STABILITY OF THE STRUCTURE AND PROTECT WORKMEN AND OTHER PERSONS DURING CONSTRUCTION. SPECIFIC ITEMS TO BE CONSIDERED SHALL INCLUDE, BUT NOT BE LIMITED TO, THE ADEQUACY OF ALL FORMS, SCAFFOLDING, AND SHORING FOR CONSTRUCTION EQUIPMENT, SHORING OF RETAINING WALLS AND TEMPORARY LATERAL BRACING OF THE STRUCTURE.
3. ASTM SPECIFICATIONS AND CBC STANDARDS REFERENCED IN THESE DRAWINGS SHALL BE OF THE LATEST EDITION.
4. A QUALIFIED PERSON WHO IS ACCEPTABLE TO THE ENGINEER AND BUILDING DEPARTMENT SHALL PROVIDE SPECIAL INSPECTION, PER SECTION 1703 OF THE CALIFORNIA BUILDING CODE FOR THE SPECIAL INSPECTION REQUIREMENTS INDICATED BELOW. THE SPECIAL INSPECTION SHALL BE PERFORMED BY A QUALIFIED FIRM UNDER CONTRACT WITH THE OWNER. DISCREPANCIES OR SIGNIFICANT DEVIATIONS FROM THE APPROVED PLANS WILL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF UNCORRECTED, THESE ITEMS WILL BE REPORTED IN WRITING TO THE DESIGN AUTHORITY AND TO THE BUILDING OFFICIAL WITHIN 24 HOURS. ROUTINE REPORTS, DETAILING SATISFACTORY WORK, WILL BE PREPARED AND SUBMITTED TO THE BUILDING OFFICIAL WITHIN FIVE WORKING DAYS.
5. GENERAL
 - 5.1. IN ADDITION TO THE INSPECTIONS REQUIRED BY SECTION 1703 OF THE CBC, THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR DURING CONSTRUCTION ON THE TYPES OF WORK INDICATED BELOW. ALL SPECIAL INSPECTION SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 1704 OF THE CBC.
 - 5.2. INSPECTIONS: SPECIAL INSPECTIONS THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR THESE PLANS SHALL BE DONE BY AN INSPECTION AGENCY APPROVED BY THE LOCAL JURISDICTION.
 - 5.3. SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED SPECIAL INSPECTION FIRM APPROVED BY THE COR, BUT RETAINED BY THE CONTRACTOR.
6. TESTING LABORATORY/SPECIAL INSPECTOR DUTIES.
 - 6.1. PROVIDE QUALIFIED PERSONNEL AFTER DUE NOTICE, FROM THE OWNER, ARCHITECT AND/OR THE CONTRACTOR.
 - 6.2. PERFORM INSPECTIONS AS FOLLOWS:
 - 6.2.1. PERFORM SPECIFIED REVIEWS, INSPECTIONS, SAMPLING AND TESTING OF MATERIALS AS INDICATED BELOW.
 - 6.2.2. VERIFY CONFORMANCES OF ALL SPECIAL INSPECTED WORK WITH THE APPROVED PLANS.
 - 6.2.3. VERIFY THAT THE WORK COMPLIES WITH SPECIFIED STANDARDS.
 - 6.2.4. ASCERTAIN COMPLIANCE OF MATERIALS WITH REQUIREMENTS OF THE APPROVED PLANS.
 - 6.3. PROMPTLY NOTIFY ARCHITECT, STRUCTURAL ENGINEER AND CONTRACTOR OF OBSERVATION IRREGULARITIES OR DEFICIENCIES WITHIN ONE WORKING DAY. IF IRREGULARITIES OR DEFICIENCIES ARE UNCORRECTED, THE SPECIAL INSPECTOR SHALL NOTIFY THE ARCHITECT AND THE GOVERNING AGENCY.
 - 6.4. PROMPTLY SUBMIT WRITTEN REPORT OF EACH TEST AND INSPECTION WITH A COPY OF EACH LEFT ON SITE FOR THE GOVERNING AGENCY. EACH REPORT SHALL INCLUDE:
 - 6.4.1. DATE ISSUED.
 - 6.4.2. PROJECT TITLE AND/OR NUMBER.
 - 6.4.3. TESTING LABORATORY NAME, ADDRESS AND TELEPHONE NUMBER.
 - 6.4.4. NAME AND SIGNATURE OF LABORATORY TECHNICIAN OR INSPECTOR.
 - 6.4.5. DATE AND TIME OF SAMPLING, TEST OR INSPECTION.
 - 6.4.6. TYPE OF INSPECTION OR TEST.
 - 6.4.7. LOCATION OF SAMPLE OR TEST IN THE PROJECT.

- 6.4.8. TEST RESULTS. REPORT SHALL INDICATE COMPLIANCE OR NONCOMPLIANCE WITH APPROVED DETAILS AND PLANS.
- 6.5. IN ADDITION TO THE ABOVE REQUIRED REPORTS, THE SPECIAL INSPECTOR OR AGENCY SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF HIS/HER KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND THE APPLICABLE PROVISIONS OF THE CALIFORNIA BUILDING CODE (CBC).
7. SCOPE OF WORK
 - 7.0.1. CONCRETE, 4,000-PSI, (REBAR, SAMPLING AND PLACEMENT)
8. IF CERTAIN MINOR DETAILS OF CONSTRUCTION ARE NOT FULLY DESCRIBED ON THE DRAWINGS OR CALLED FOR IN NOTES OR SPECIFICATIONS THEIR CONSTRUCTION SHALL RESEMBLE SIMILAR CONDITIONS THAT ARE FULLY SHOWN AND SHALL BE REVIEWED BY THE ENGINEER.
9. GENERAL DESIGN DATA:
 - 9.1. ROOF LIVE LOAD: 25 PSF
 - 9.2. ROOF DEAD LOAD: 5.2 PSF
 - 9.3. PRODUCT LOAD: 62.4 PCF (WATER)
 - 9.4. WIND:
 - 9.4.1. WIND CODE = ASCE7-16
 - 9.4.2. WIND VELOCITY = 115 MPH
 - 9.4.3. WIND IMPORTANCE FACTOR (I_w) = 1.00
 - 9.4.4. WIND EXPOSURE = C
 - 9.4.5. WIND RISK CATEGORY = I
 - 9.4.6. PER CBC 1603.1.4
 - 9.4.7. INTERNAL PRESSURE COEFFICIENT = 0.18
 - 9.4.8. EXTERNAL PRESSURE COEFFICIENT = -0.8 (ZONE 1)
 - 9.4.9. EXTERNAL PRESSURE COEFFICIENT = -0.5 (ZONE 2)
 - 9.4.10. VELOCITY PRESSURE = 18.0 PSF
 - 9.5. SEISMIC:
 - 9.5.1. SEISMIC USE GROUP = III
 - 9.5.2. SEISMIC IMPORTANCE FACTOR (I_e) = 1.5
 - 9.5.3. SEISMIC DESIGN CATEGORY = D
 - 9.5.4. SITE CLASS = D
 - 9.5.5. RISK CATEGORY N
 - 9.5.6. SEISMIC FORCE RESISTING SYSTEM = TANK SELF WEIGHT
 - 9.5.7. IMPULSIVE RESPONSE MOD FACTOR = 2.5
 - 9.5.8. CONVECTIVE RESPONSE MOD FACTOR = 1.5
 - 9.5.9. REDUNDANCY FACTOR = 1.0
 - 9.5.10. DESIGN BASE SHEAR = 386,286 LBS
 - 9.5.11. TANK & CONTENT WEIGHT = 1,184,575 LBS
 - 9.5.12. SEISMIC RESPONSE COEFFICIENT = 0.179

$S_s = 1.5g$	$S_1 = 0.613g$
$S_{Ms} = 1.5g$	$S_{M1} = 0.92g$
$S_{Ds} = 1.0g$	$S_{D1} = 0.613g$
- 9.6. SITE LOCATION: EAST PALO ALTO, CA
10. FOR CALCULATIONS IN REGARDS TO THE TANK REFER TO THE STRUCTURAL CALCULATIONS BY CHUBB ENGINEERING, LLC, INC. DATED FEBRUARY 02, 2021 WITH PROJECT NUMBER: AST #20-0075 CE20359 r2.



FOUNDATION

1. THE FOUNDATION DESIGN HAS BEEN BASED UPON AN ALLOWABLE SOIL BEARING CAPACITY OF 2,500 PSF (DEAD + LIVE) AND 3,325 psf FOR WIND/SEISMIC BASED ON THE GEOTECHNICAL REPORT DATED JUNE 22, 2016 WITH REPORT No. 2016.0060 BY:
GEO-LOGIC ASSOCIATES
16055 CAPUTO DRIVE, SUITE D
MORGANHILL, CA 95037
PH: (408) 778-2818
2. CONTRACTOR SHALL PROVIDE FOR ALL EXCAVATION, FILLING AND GRADING IN ACCORDANCE WITH THE DRAWINGS. DISTRIBUTE ALL EXCAVATED MATERIALS ON THE SITE AS INDICATED ON THE GRADING PLAN. ALL FILL WITHIN THE BUILDING SITE SHALL ACHIEVE COMPACTION AS RECOMMENDED IN THE GEOTECHNICAL REPORT. COMPACTION FOR THE FOOTING AND SLAB MUST BE VERIFIED BY SPECIAL INSPECTION. ALL GRADES SHOWN ARE APPROXIMATE AND SITE CONDITIONS WILL GOVERN THE FINAL GRADES. ALL PORTIONS OF THE LOT ABOUT THE BUILDING SHALL BE PROPERLY GRADED TO CARRY WATER AWAY FROM THE BUILDING AT 1/4" IN 12" MINIMUM SLOPE.
3. CONTRACTOR SHALL COORDINATE AN EXCAVATION INSPECTION BY THE CITY/COUNTY INSPECTOR PRIOR TO PLACEMENT OF REINFORCING.

CONCRETE

1. PORTLAND CEMENT SHALL CONFORM TO ASTM C 150, TYPE II OR II-LOW ALKALI. AGGREGATE FOR STONE CONCRETE SHALL CONFORM TO ASTM C 33, AND GRADE A PER THE CALIFORNIA BUILDING CODE. MAXIMUM AGGREGATE SIZE FOR FOOTINGS, SLABS-ON GRADE AND MASS CONCRETE SHALL NOT EXCEED 1-1/2" / MAXIMUM AGGREGATE SIZE FOR ALL OTHER CONCRETE SHALL NOT EXCEED 3/4".
2. SHRINKAGE AT 28 DAYS SHALL NOT EXCEED 0.055% FOR DRY CURING AS DETERMINED BY ASTM C 157.
3. REINFORCING BARS, ANCHOR BOLTS, AND CONCRETE INSERTS SHALL BE PROPERLY LOCATED AND SECURELY FASTENED IN POSITION PRIOR TO PLACING CONCRETE.
4. MINIMUM ULTIMATE COMPRESSIVE STRENGTH SHALL BE 4,000 PSI AT 28 DAYS (MINIMUM 6 SACKS OF CEMENT PER CUBIC YARD). THE MAXIMUM W/C RATIO WITH WRA SHALL NOT EXCEED 0.50.
5. PROJECTING CORNERS OF ALL CONCRETE MEMBERS SHALL BE FORMED WITH 3/4" CHAMFER UNLESS DETAILED OTHERWISE.
6. THE OUTSIDE DIAMETER (OD) OF CONDUIT OF PIPE PLACED IN THE PLANE OF A SLAB SHALL NOT EXCEED 30% OF SLAB THICKNESS UNLESS SPECIFICALLY DETAILED OTHERWISE AND SHALL BE LOCATED IN MIDDLE 1/3 OF SLAB. CLEAR SPACING BETWEEN ADJACENT CONDUITS OR PIPES SHALL BE TWICE THE LARGER OD MINIMUM, UNLESS OTHERWISE NOTES ON PLANS.
7. REINFORCING STEEL:
 - 7.1. REINFORCING STEEL SHALL CONFORM TO A-615 GRADE 60 IN MASONRY, AND A 615 GRADE 60 IN ALL OTHER CONCRETE, UNLESS NOTED OTHERWISE ON THE PLANS. REINFORCING STEEL THAT IS TO BE WELDED SHALL CONFORM TO ASTM A706. GRADE 60 REBAR SHALL BE WELDED PER THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE.
 - 7.2. CLEAR COVERAGE OF CONCRETE OVER OUTER REINFORCING BARS SHALL BE 2" ON TOP AND 3" ELSEWHERE (UNLESS OTHERWISE NOTED).
 - 7.3. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
 - 7.4. REINFORCING BARS SHALL BE SPLICED AS SHOWN ON DRAWINGS. ANY ADDITIONAL SPLICING SHALL REQUIRE REVIEW FROM THE ENGINEER.
8. SPECIAL INSPECTIONS:
 - 8.1. CONCRETE INSPECTIONS ARE TO BE PERFORMED BY OTHERS.

REVISIONS	BY

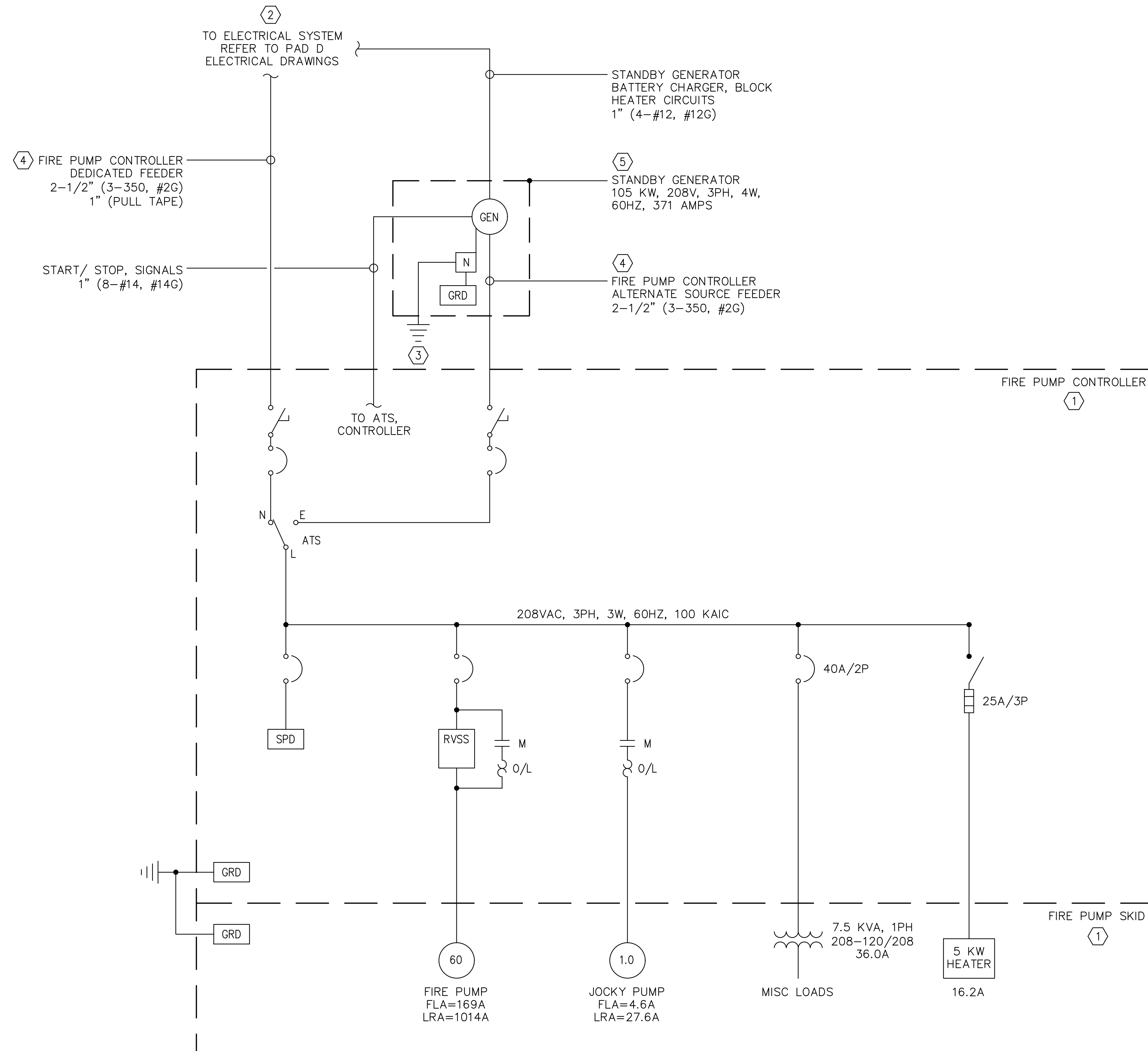
LIGHT TREE APARTMENTS
1805 E BAYSHORE ROAD
WATER TANK
EAST PALO ALTO, CA
TANK FOUNDATION & ANCHORAGE

NATIONAL STORAGE TANK, INC.
WE HOLD THE SOLUTION

J.M. TURNER ENGINEERING, INC.
CONSULTING ENGINEERS
1325 COLLEGE AVE., SANTA ROSA, CA 95404
(707) 528-4503 FAX (707) 528-4505

DATE:	02/10/21
DRAWN BY:	A.B.B.
CHECKED BY:	A.J.V.
DRAWING NO:	18327-1/S6
SHEET:	6 OF 6

2/1/21 S:\PROJECTS\LEDEN20-001 - LIGHT TREE APARTMENTS STORAGE TANK\CAD\PAD D OPTION\E1 - PAD D SINGLE LINE DIAGRAM.DWG



GENERAL NOTES:

1. CONTRACTOR SHALL PROVIDE ALL WIRING AND POWER SUPPLY TO THE FIRE PUMP PER 2019 NFPA 20 CHAPTER 9 AND 2019 CEC ARTICLE 695. CONTRACTOR REQUIRED TO CONFIRM WITH LOCAL AUTHORITY HAVING JURISDICTION THAT THE WIRING FOR ALL FIRE PUMP POWER, INCLUDING GENERATOR INTERFACE FOR NON- INTERRUPTIBLE POWER SUPPLY FOR THIS EMERGENCY SYSTEM, AND POWER SUPPLIES, IS IN COMPLIANCE WITH UL 2200 AND 2019 CFC SECTION 604 FOR EMERGENCY POWER SYSTEMS. WORK TO BE PER 2019 CFC SECTION 604, SECTION 913, 2019 NFPA 20 CHAPTER 9, AND 2019 CEC ARTICLE 695. WORK REQUIREMENTS, MATERIALS, AND INSTALLATION SHALL MEET LOCAL AUTHORITY HAVING JURISDICTION. CONTRACTOR IS RESPONSIBLE TO SUBMIT AND OBTAIN APPROVAL OF SUBJECT MATERIALS, AND FINAL INSTALLATION OF SYSTEMS FROM THE LOCAL AUTHORITY HAVING JURISDICTION.


KEY NOTES:

1. NOT ALL FIRE PUMP CONTROLLER COMPONENTS AND SKID EQUIPMENT IS SHOWN. COORDINATE WITH FIRE PUMP SYSTEM SUPPLIER FOR DETAILS, EQUIPMENT SIZE AND CAPACITY.
2. REFER TO APARTMENT COMPLEX SINGLE LINE DRAWINGS, PANELBOARD SCHEDULES, AND SITE PLANS FOR CONTINUATION.
3. ROUTE #4/0 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR FROM GROUND ROD DIRECTLY TO GENERATOR NEUTRAL. CONFIRM BONDING JUMPER FROM NEUTRAL TO GROUND IS PROVIDED.
4. CONDUCTORS SHALL BE SIZED SUCH THAT VOLTAGE DROP AT LINE SIDE OF FIRE PUMP CONTROLLER DOES NOT EXCEED 15% UNDER FIRE PUMP MOTOR STARTING CONDITIONS. MINIMUM SIZE CABLE SHOWN.
5. STANDBY GENERATOR SHALL HAVE SUFFICIENT CAPACITY TO ALL NORMAL STARTING AND RUNNING OF THE MOTORS DRIVING THE FIRE PUMPS WHILE SUPPLYING ALL OTHER OPERATING LOADS. MINIMUM GENERATOR CAPACITY IS SHOWN.

LOAD CALCULATIONS PER NEC ARTICLE 695 LOADS SHOWN FOR 208 VAC, THREE PHASE		
LOAD DESCRIPTION	FULL LOAD AMPS	LOCKED ROTOR AMPS
FIRE PUMP (60 HP)	169.0	1014.0
JOCKEY PUMP (1.0 HP)	4.6	27.6
HEATER (5 KW)	16.2	16.2
TRANSFORMER (7.5 KVA, 1 PHASE)	36.0	36.0
25% CONTINUOUS LOADS	56.5	N/A
TOTALS	282.3	1093.8
MINIMUM FEEDER AMPACITY (KEY NOTE 4)	282.3	N/A
OVERCURRENT DEVICE RATING	N/A	2500

J Calton Engineering

J CALTON ENGINEERING
5723 OAK CREEK PLACE
GRANITE BAY, CA 95746

BAR IS ONE INCH
AT FULL SCALE

IF NOT ONE INCH
ON THIS SHEET
SCALE ACCORDINGLY

NO.	REVISIONS	BY	APP	DATE
1				
2				
3				
4				
5				

LIGHT TREE APARTMENTS

SINGLE LINE DIAGRAM

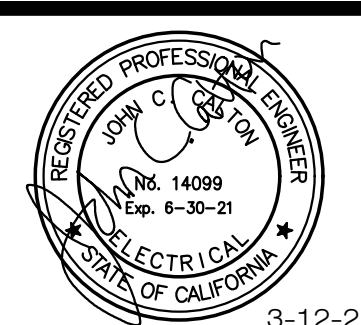
CITY OF EAST PALO ALTO

PAD D FIRE SYSTEM

CALIFORNIA

DESIGNED UNDER THE DIRECTION OF:

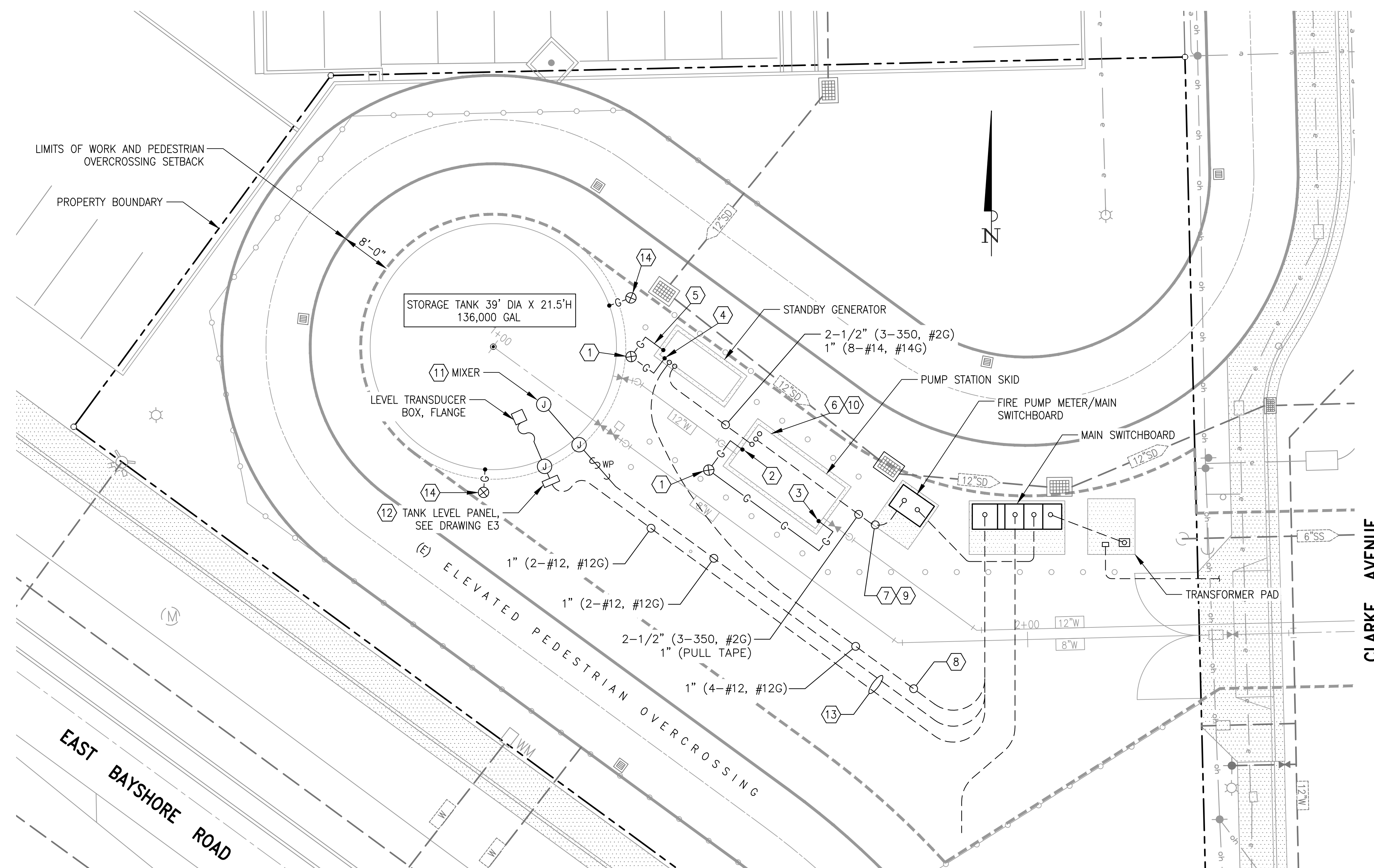
John C. Calton
JOHN C. CALTON
No. 14099 - REGISTRATION EXPIRES 03-31-21
DATE: 3-12-21
DESIGN: JCC DATE: 3-12-21
DRAWN: WCJ DATE: 3-12-21
CHECKED: JCC DATE: 3-12-21



SCALE
NO SCALE
DRAWING NUMBER
E1
SHEET NUMBER
26 OF 28 SHEETS

GENERAL NOTES:

- CONTRACTOR IS REQUIRED TO PROVIDE ALL WORK BASED ON REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION. CONTRACT DRAWINGS DO NOT REPRESENT ALL REQUIRED WORK IN PLAN; CONTRACTOR SHALL REFER TO DRAWING NOTES, LOCAL AUTHORITY HAVING JURISDICTION, AND SUBJECT CODE REFERENCES FOR COMPLETE WORK REQUIREMENTS. WORK TO BE PROVIDED INCLUDES COMPLIANCE OF WIRING AND POWER SUPPLIES TO FIRE PUMP TO BE PER 2019 NFPA 20 CHAPTER 9, 2019 CEC ARTICLE 695, 2019 CFC SECTION 604, SECTION 913, AND UL 2200. WORK TO BE PROVIDED INCLUDES IDENTIFICATION, LABELING, AND BREAKER LOCK OUT DEVICES. CONTRACTOR IS RESPONSIBLE TO SUBMIT AND OBTAIN APPROVAL OF SUBJECT DESIGN AND MATERIALS, AND FINAL INSTALLATION OF SYSTEMS FROM THE LOCAL AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL ALSO SUBMIT SAME TO ENGINEER, INCLUDING THE LOCAL AUTHORITY HAVING JURISDICTION, WRITTEN APPROVALS OF DESIGNS, MATERIALS, AND FINAL INSTALLATION. WHERE A CONFLICT EXISTS BETWEEN THE LOCAL AUTHORITY HAVING JURISDICTION AND APPLICABLE CODES, AND THE CONTRACT DOCUMENTS, THE LOCAL AUTHORITY AND APPLICABLE CODES SHALL GOVERN.
- CONTRACTOR SHALL PROVIDE ALL WIRING AND POWER SUPPLY TO THE FIRE PUMP PER 2019 NFPA 20 CHAPTER 9 AND 2019 CEC ARTICLE 695. CONTRACTOR REQUIRED TO CONFIRM WITH LOCAL AUTHORITY HAVING JURISDICTION THAT THE WIRING FOR ALL FIRE PUMP POWER, INCLUDING GENERATOR INTERFACE FOR NON- INTERRUPTIBLE POWER SUPPLY FOR THIS EMERGENCY SYSTEM, AND POWER SUPPLIES, IS IN COMPLIANCE WITH UL 2200 AND 2019 CFC SECTION 604 FOR EMERGENCY POWER SYSTEMS. WORK TO BE PER 2019 CFC SECTION 604, SECTION 913, 2019 NFPA 20 CHAPTER 9, AND 2019 CEC ARTICLE 695. WORK REQUIREMENTS, MATERIALS, AND INSTALLATION SHALL MEET LOCAL AUTHORITY HAVING JURISDICTION. CONTRACTOR IS RESPONSIBLE TO SUBMIT AND OBTAIN APPROVAL OF SUBJECT MATERIALS, AND FINAL INSTALLATION OF SYSTEMS FROM THE LOCAL AUTHORITY HAVING JURISDICTION.
- ALL ELECTRICAL EQUIPMENT SHALL BE UL LISTED. MANUFACTURER NAMES AND MODELS LISTED HEREIN PROVIDE QUALITY AND SPECIFICATIONS REQUIRED; CONTRACTOR MAY PROVIDE APPROVED EQUAL.
- ALL EXPOSED CONDUITS TO BE GALVANIZED RIGID STEEL (WESTERN TUBE) UNLESS SHOWN OTHERWISE.
- ALL HARDWARE, STRUT, STRAPS AND ANCHORS SHALL BE 316 STAINLESS STEEL.
- ALL CONDUCTORS SHALL BE 600 VAC, 90 DEGREE C, STRANDED COPPER, WITH XHHW-2 INSULATION (SOUTHWIRE SIMPULL XHHW-2). PROVIDE LUGS AT CABLE TERMINATIONS AS REQUIRED.
- UNDERGROUND CONDUITS SHALL HAVE MINIMUM 24" COVER. PROVIDE 4" ENVELOPE OF SAND BACKFILL ALL AROUND CONDUITS. PROVIDE WARNING TAPE (ELECTRO-TAPE #84562) 12" ABOVE CONDUITS. RESTORE SURFACE TO ORIGINAL CONDITION OR PER CIVIL DRAWINGS.
- GROUNDING ELECTRODE CONDUCTORS SHALL BE #4/0 AWG, SOFT DRAWN, STRANDED, BARE COPPER CONDUCTOR, ASTM B-3 (SOUTHWIRE BARE COPPER CONDUCTOR). GROUNDING ELECTRODE CONDUCTORS SHALL BE BURIED 36" BELOW GRADE.

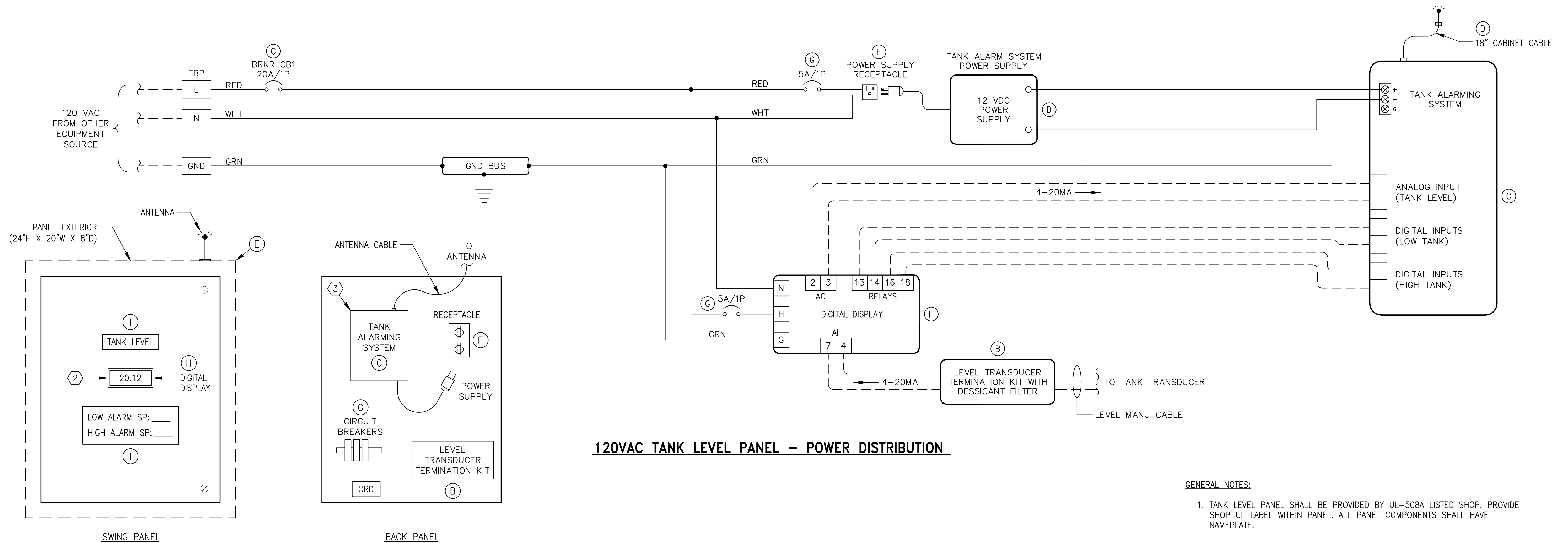


KEY NOTES:

- | | | | |
|---|--|--|--|
| <p>① GROUND ROD SHALL BE 3/4" X 10' COPPER CLAD (BLACKBURN #7510) INSTALLED IN PRECAST GROUND WELL WITH CAST IRON COVER MARKED "GROUND" (CHRISTY #G03). PROVIDE EXOTHERMIC WELD FOR ROD TO CONDUCTOR CONNECTION.</p> <p>② ROUTE #4/0 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR FROM GROUND ROD TO FIRE PUMP CONTROLLER GROUND BUS.</p> <p>③ ROUTE #4/0 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR FROM GROUND ROD TO FIRE PUMP SKID GROUNDING PADS. PROVIDE MECHANICAL LUG ON CONDUCTOR, AND CONNECT TO SKID GROUNDING PADS.</p> <p>④ ROUTE #4/0 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR FROM GROUND ROD AND CONNECT DIRECTLY TO GENERATOR NEUTRAL. CONFIRM BONDING JUMPER FROM NEUTRAL TO GENERATOR GROUND BUS IS PROVIDED.</p> <p>⑤ ROUTE #4/0 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR FROM GROUND ROD TO STANDBY GENERATOR FRAME. PROVIDE MECHANICAL LUG ON CONDUCTOR, AND BOLT TO FRAME.</p> | <p>⑥ COORDINATE FIRE PUMP CONTROLLER PANEL'S CONDUIT WINDOWS AND CONDUCTOR TERMINATION LOCATIONS WITH FIRE PUMP SYSTEM SUPPLIER.</p> <p>⑦ ROUTE CONDUITS AND CABLES FOR FIRE PUMP CONTROLLER DEDICATED FEEDER TO SOURCE, FIRE PUMP SWITCHBOARD, PER PAD D ELECTRICAL PLANS.</p> <p>⑧ ROUTE CONDUITS AND CABLES FOR STANDBY GENERATOR'S BATTERY CHARGER (600 VA) AND BLOCK HEATER (1250 VA) CIRCUITS TO 120VAC SOURCE, PANEL 'A', PER PAD D ELECTRICAL PLANS.</p> <p>⑨ PROVIDE TRAFFIC RATED HANDHOLES (OLDCASTLE CHRISTY #B2436) WITH GALVANIZED STEEL COVERS MARKED "ELECTRICAL", AS REQUIRED FOR PULLING FIRE PUMP CONTROLLER DEDICATED FEEDERS AND STANDBY GENERATOR CIRCUITS, OR PROVIDE HANDHOLE EVERY 300 FEET. HANDHOLES SHALL BE SIZED PER NEC ARTICLE 314.28, MINIMUM 24"x36". INSTALL PER CHRISTY TRAFFIC RATED INSTALLATION GUIDE.</p> <p>⑩ PROVIDE RED PHENOLIC NAMEPLATE ON EXTERIOR OF FIRE PUMP CONTROLLER ENGRAVED WITH 1/2" LETTERING "208 VAC, 3 PH, 3 W, FED FROM FIRE PUMP SWITCHBOARD".</p> | <p>⑪ ROUTE 1" (2-#12, #12G) GRS CONDUIT UP SIDE OF TANK NEAR LADDER. INSTALL MIXER SUPPLIED DISCONNECT SWITCH AT 48" ABOVE GRADE WITH LABEL "TANK MIXER". PROVIDE CONDULET AT CROWN OF TANK AND CONTINUE CONDUIT TO HATCH. NEAR THE HATCH, PROVIDE CONDULET AND TANK PENETRATION FOR 1" CONDUIT SLEEVE. PROVIDE CORD GRIP FITTING ON 1" CONDUIT SLEEVE FOR MIXER CABLE WITHIN TANK, ACCESSIBLE FROM HATCH. PROVIDE HOOK NEAR HATCH TO HANG AND SUPPORT MIXER CABLE. SPLICE MIXER CABLE WITHIN CONDULET TO #12 AWG CONDUCTORS.</p> <p>⑫ PROVIDE 3" GRS POST, BURIED 24" IN 8" DIAMETER REINFORCED CONCRETE BASE. MOUNT SS STRUTS TO POST TO SECURE TANK LEVEL PANEL, DWG E3.</p> <p>⑬ ROUTE CONDUITS AND CABLES FOR TANK MIXER (1/3 HP) AND TANK LEVEL PANEL (100VA) TO 120VAC SOURCE, PANEL 'A', PER PAD D ELECTRICAL PLANS.</p> | <p>⑭ PROVIDE GROUND ROD, 3/4" X 10' COPPER CLAD (BLACKBURN #7510) INSTALLED IN PRECAST GROUND WELL WITH CAST IRON COVER MARKED "GROUND" (CHRISTY #G03). PROVIDE EXOTHERMIC WELD FOR ROD TO CONDUCTOR CONNECTION. ROUTE #4/0 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR FROM GROUND ROD TO TANK FIELD MOUNTED GROUND PLATE. STAINLESS STEEL GROUND PLATE SUPPLIED WITH TANK.</p> |
|---|--|--|--|

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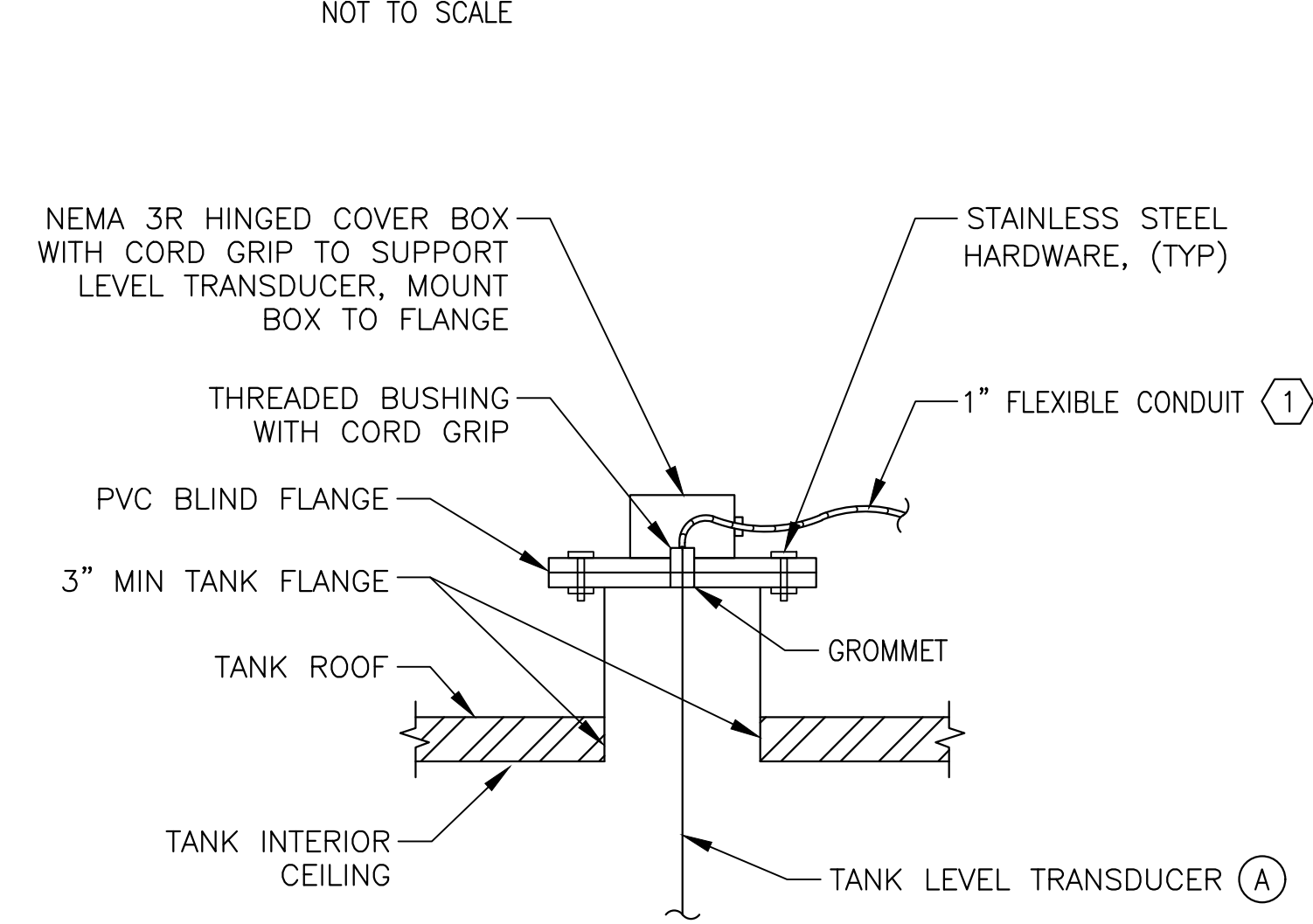
	<p>J CALTON ENGINEERING 5723 OAK CREEK PLACE GRANITE BAY, CA 95746</p>	<p>BAR IS ONE INCH AT FULL SCALE</p> <p>0" 1"</p> <p>IF NOT ONE INCH ON THIS SHEET SCALE ACCORDINGLY</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>REVISIONS</th> <th>BY</th> <th>APP</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	REVISIONS	BY	APP	DATE																					<p>LIGHT TREE APARTMENTS</p> <p>ELECTRICAL SITE PLAN</p> <p>CITY OF EAST PALO ALTO</p>	<p>PAD D FIRE SYSTEM</p> <p>CALIFORNIA</p>	<p>DESIGNED UNDER THE DIRECTION OF:</p> <p></p> <p>JOHN C. CALTON No. 14099 - REGISTRATION EXPIRES 03-31-21</p> <p>DESIGN: JCC DATE: 3-12-21 DRAWN: WCJ DATE: 3-12-21 CHECKED: JCC DATE: 3-12-21</p>	<p>SCALE 1"=10'</p> <p>DRAWING NUMBER E2</p> <p>SHEET NUMBER 27 OF 28 SHEETS</p>
NO.	REVISIONS	BY	APP	DATE																												



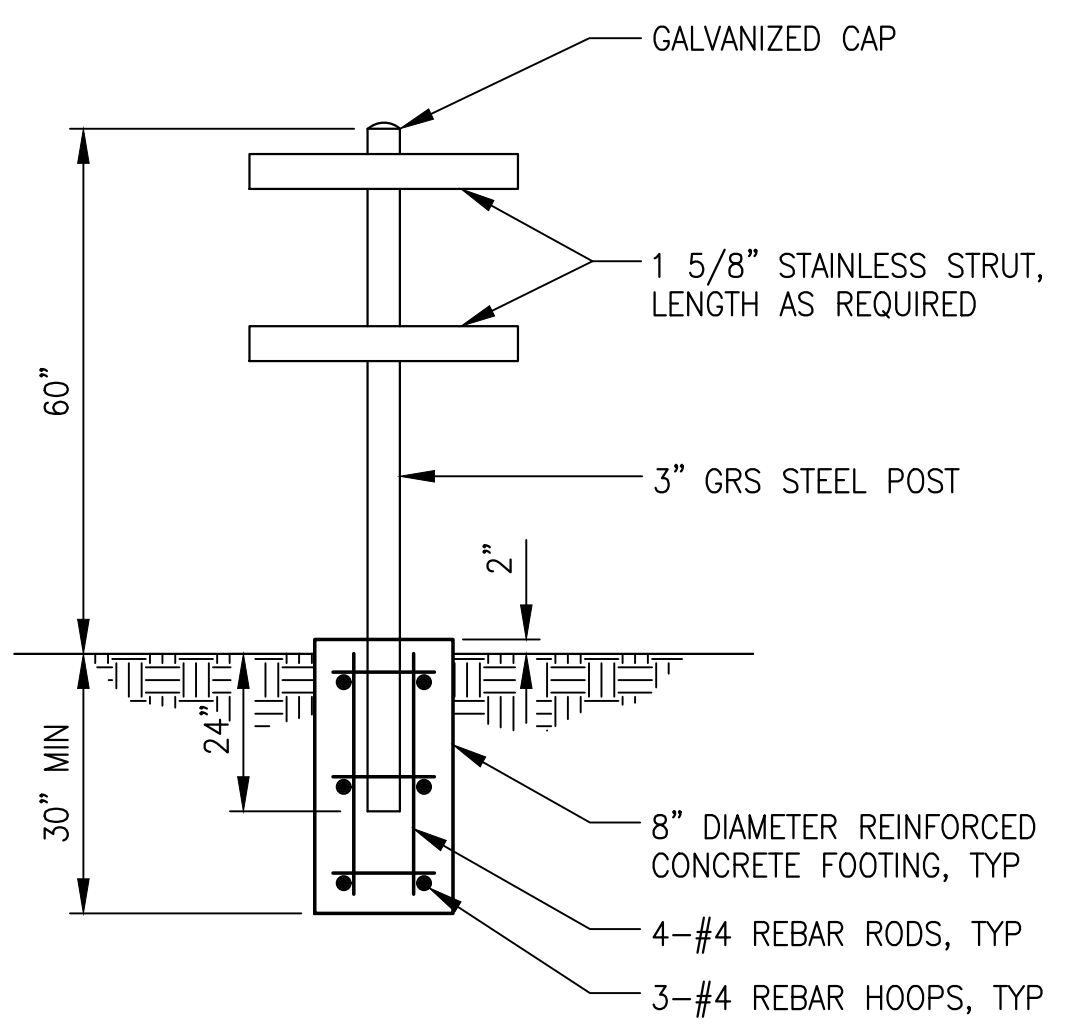
120VAC TANK LEVEL PANEL – POWER DISTRIBUTION

- GENERAL NOTES:**
- TANK LEVEL PANEL SHALL BE PROVIDED BY UL-508A LISTED SHOP. PROVIDE SHOP UL LABEL WITHIN PANEL. ALL PANEL COMPONENTS SHALL HAVE NAMEPLATE.

TANK LEVEL PANEL – ELEVATIONS



TANK LEVEL TRANSDUCER DETAIL



STANCHION DETAIL

- NOTES:**
- ALL STRUT AND HARDWARE SHALL BE TYPE 316 STAINLESS STEEL.

- KEY NOTES:**
- ROUTE 1" (LEVEL TRANSDUCER CABLE, #12G) GRS CONDUIT UP SIDE OF TANK. PROVIDE CONDULET AT CROWN OF TANK AND CONTINUE CONDUIT TO FLANGE. NEAR THE FLANGE, PROVIDE 18" OF LIQUIDTIGHT FLEXIBLE CONDUIT TO HINGED BOX MOUNTED ON PVC FLANGE. SET LEVEL TRANSDUCER 6" OFF BOTTOM OF TANK. SECURE CABLE WITH GROMMET AND MARK CABLE WITH ZIP TIE. GROUND BOX.
 - CONFIGURE DIGITAL DISPLAY BASED ON RANGE OF INSTALLED LEVEL TRANSDUCER. CONFIGURE LOW LEVEL ALARM AND HIGH LEVEL ALARMS PER OWNER.
 - PROGRAM TANK LEVEL ALARMING SYSTEM. COORDINATE WITH OWNER FOR PHONE NUMBERS AND EMAILS AS APPLICABLE. ALARMING SYSTEM SHALL HAVE ONE ANALOG INPUT, EIGHT DIGITAL INPUTS, BATTERY BACK UP, ANTENNA, ETC. FOR A COMPLETE AND OPERABLE TANK LEVEL ALARMING SYSTEM. PROVIDE ONE YEAR OF SERVICE FOR ALARMING SYSTEM WITH INSTALL.

MATERIAL LIST	
ITEM	DESCRIPTION WITH MAKE AND MODEL, OR EQUAL
(A)	LEVEL TRANSDUCER, 0-25' H2O (4-20MA), NSF61 APPROVED. ENDRESS+HAUSER FMX21.
(B)	LEVEL TRANSDUCER TERMINATION KIT WITH DESSICANT FILTER. PROVIDE 80' TRANSDUCER CABLE.
(C)	TANK ALARMING SYSTEM, OPEN CHASSIS. RACO ALARMAGENT
(D)	TANK ALARMING POWER SUPPLY AND CABINET CABLE. RACO ALARMAGENT ACCESSORIES
(E)	NEMA 3R/4, PADLOCKABLE PANEL, PAINTED WHITE, WITH INTERNAL SWING AND BACK PANELS
(F)	125VAC, 20 AMP, DUPLEX RECEPTACLE AND BOX. HUBBELL 5362.
(G)	120VAC CIRCUIT BREAKERS. ALLEN BRADLEY 1489-M.
(H)	DIGITAL DISPLAY WITH ANALOG INPUT AND OUTPUT AND RELAYS. KEP INT69PM2A2A.
(I)	ENGRAVED PHENOLIC NAMEPLATE, WHITE WITH BLACK 1/2" LETTERS. INSCRIBE AS SHOWN.

Z:\1\21 S:\PROJECTS\EDR20-001 - LIGHT TREE APARTMENTS STORAGE TANK\CAD\IPAD D OPTION\E3 - PAD D TANK LEVEL PANEL.DWG

	J CALTON ENGINEERING 5723 OAK CREEK PLACE GRANITE BAY, CA 95746	BAR IS ONE INCH AT FULL SCALE IF NOT ONE INCH ON THIS SHEET SCALE ACCORDINGLY	NO.	REVISIONS	BY	APP	DATE	LIGHT TREE APARTMENTS TANK LEVEL PANEL CITY OF EAST PALO ALTO	PAD D FIRE SYSTEM CALIFORNIA	DESIGNED UNDER THE DIRECTION OF: JOHN C. CALTON No. 14099 - REGISTRATION EXPIRES 03-31-21 DATE: 3-12-21		SCALE NO SCALE DRAWING NUMBER E3 SHEET NUMBER 28 OF 28 SHEETS
			DESIGN: JCC	DATE: 3-12-21	DRAWN: WCJ	DATE: 3-12-21	CHECKED: JCC	DATE: 3-12-21				