BLACKPINE GROUP & GARDNER GROUP

PROMONTORY TANK & BOOSTER

100% DESIGN | ISSUED: 13 MARCH 2025

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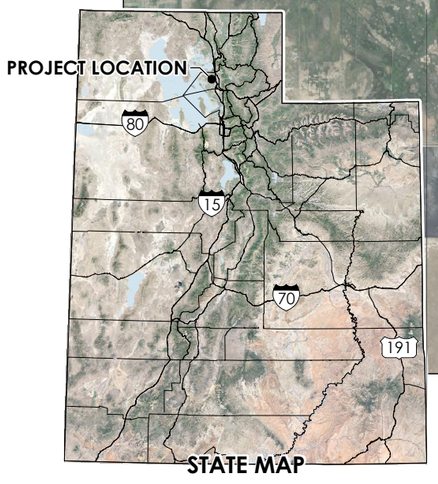
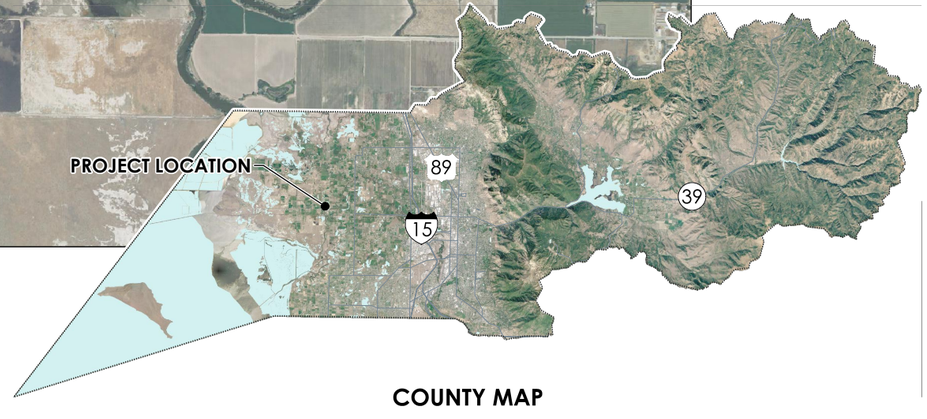
VICINITY MAP



STATE MAP



COUNTY MAP

CONTACT INFORMATION

Horrocks.

4246 S RIVERBOAT RD., STE 200
SALT LAKE CITY, UT 84123
P: 801.359.5565

BlackPine

Gardner

REVISIONS

DESIGN

REGISTERED PROFESSIONAL ENGINEER
#5571005-2202
KATHLEEN W. JONES
STATE OF UTAH

PRINCIPAL : J. PRETTYMAN
MANAGER: K. JONES
REVIEWER : S. WOODRUFF
DRAFTER : T. MARTINEZ

PROJECT

UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

790 SOUTH 6150 WEST OGDEN, UT 84404

COVER SHEET

01 OF 36

G001

UT83-NF | 02:45 PM THURSDAY 13 MARCH 2025 | Q:\2024\UT-10127-24 PROMONTORY TANK AND BOOSTER\PROJECT DATA\02 CAD\2.03 SHEET FILES\CONSTRUCTION DRAWINGS\01 G001.DWG

CONTACT INFORMATION

OWNER:	BLACKPINE GROUP CONTACT: DALLIN CURRIDEN GARDNER GROUP CONTACT: RYAN BEVAN
ENGINEER:	HORROCKS 4246 RIVERBOAT RD #200 SALT LAKE CITY, UTAH 84123 PHONE: 801-359-5565 CONTACT: KATIE JONES
WEST WARREN - WARREN WATER IMPROVEMENT DISTRICT:	PHONE: 385-566-3927
ROCKY MOUNTAIN POWER:	PHONE: 1-800-469-3981
ENBRIDGE GAS UTAH:	PHONE: 1-800-323-5517
CENTURYLINK:	PHONE: 800-244-1111
WEBER COUNTY:	PHONE: 801-399-8374
ROMTEC UTILITY BUILDINGS:	ANDREW CRANDALL PHONE: 541-496-9678 EMAIL: ACRANDALL@ROMTEC.COM COORDINATION ON THE DESIGN OF THIS PROJECT HAS BEEN THROUGH ROMTEC, BUT OTHER MANUFACTURERS MAY BE USED.

LEGEND

EXISTING	NEW	DESCRIPTION
BP	BP	BURIED POWER
CM	CM	COMMUNICATIONS
W	W	CULINARY WATER
DL	DL	DRAIN LINE
FO	FO	FIBER OPTIC
G	G	GAS
OP	OP	OVERHEAD POWER
PI	PI	PRESSURIZED IRRIGATION
SS	SS	SANITARY SEWER
SD	SD	STORM DRAIN
FD	FD	FOUNDATION DRAIN
	LD	LAND DRAIN
		SURVEY CONTROL POINT
		SURVEY SECTION CORNER

ABBREVIATIONS

APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
AWWA	AMERICAN WATER WORKS ASSOCIATION
BF	BLIND FLANGE
BFV	BUTTERFLY VALVE
BLDG	BUILDING
C	CHORD LENGTH
C TO C	CENTER TO CENTER
CB	CHORD BEARING
CI	CAST IRON
CL	CLASS
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
COMM	COMMUNICATION
CONC	CONCRETE
DI	DUCTILE IRON
DIM	DIMENSION
E	EAST
EA	EDGE OF ASPHALT
EG	EXISTING GRADE
EL	ELEVATION
ELEV	ELEVATION
EL/MC	EPOXY LINED MORTAR COATED
EOC	EDGE OF CONCRETE
EP	EDGE OF PAVEMENT
EW	EACH WAY
EX	EXISTING
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FLG	FLANGE
FND	FOUND
FT	FEET
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HP	HIGH POINT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INV	INVERT
IR	IRON ROD
IRR	IRRIGATION
L	LENGTH
LBS	POUNDS
L.F.	LINEAR FEET
LP	LOW POINT
MAX	MAXIMUM
MDD	MAXIMUM DRY DENSITY
MIN	MINIMUM
ML/MC	MORTAR LINED/MORTAR COATED
MJ	MECHANICAL JOINT
N	NORTH
N/A	NOT APPLICABLE
NIC	NOT IN CONTACT
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
PE	PLAIN END
PERF	PERFORATED
PG	PAGE
PI	POINT OF INTERSECTION
PJDI	PUSH-ON JOINT DUCTILE IRON
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
R	RADIUS
RT	RIGHT
RJ	RESTRAINED JOINT
RWC	REBAR WITH CAP
S	SOUTH
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SEC	SECTION
SS	SANITARY SEWER OR STAINLESS STEEL
STA	STATION
STN STL	STAINLESS STEEL
T	TOP
TB	THRUST BLOCK
TBA	TO BE ABANDONED
TBC	TOP BACK CURB
TOC	TOP OF CONCRETE
TYP	TYPICAL
UDOT	UTAH DEPARTMENT OF TRANSPORTATION
VERT	VERTICAL
W	WATER
W	WEST
W/	WITH
WWF	WELDED WIRE FABRIC

CONTACT INFORMATION

Horrocks.

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BlackPine

Gardner

REVISIONS

DESIGN

REGISTERED PROFESSIONAL ENGINEER #5571005-2202 KATHLEEN W. JONES STATE OF UTAH

PRINCIPAL : J. PRETTYMAN
MANAGER: K. JONES
REVIEWER : S. WOODRUFF
DRAFTER : T. MARTINEZ

PROJECT

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PROMONTORY TANK & BOOSTER

790 SOUTH 6150 WEST OGDEN, UT 84404

GENERAL NOTES

02 OF 36

G002

POINTS				
ID	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	3616122.21	1467890.78	4224.32	CP 100 BASE
104	3617988.86	1469173.67	4219.79	FND E 1/4 SEC 13
116	3615420.80	1463872.72	4224.05	FND COR SEC 13
117	3618104.06	1463910.17	4228.77	FND W 1/4 SEC 13
118	3615343.18	1469321.69	4216.98	FND WIT COR
119	3614938.20	1469161.19	4217.20	FND WIT COR

NOTES:

HORIZONTAL DATUM - NAD83 STATE PLANE, NORTH ZONE, SURVEY FEET
VERTICAL DATUM - NAVD88

1) FIELD SURVEY WAS COLLECTED BY HORROCKS ON THE SITE ON OCTOBER 16, 2024
2) CONTRACTOR IS RESPONSIBLE FOR PROTECTING SURVEY MONUMENTS OR RESTORING TO ORIGINAL CONDITION IF DISTURBED.

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SURVEY CONTROL

03 OF 36

V001

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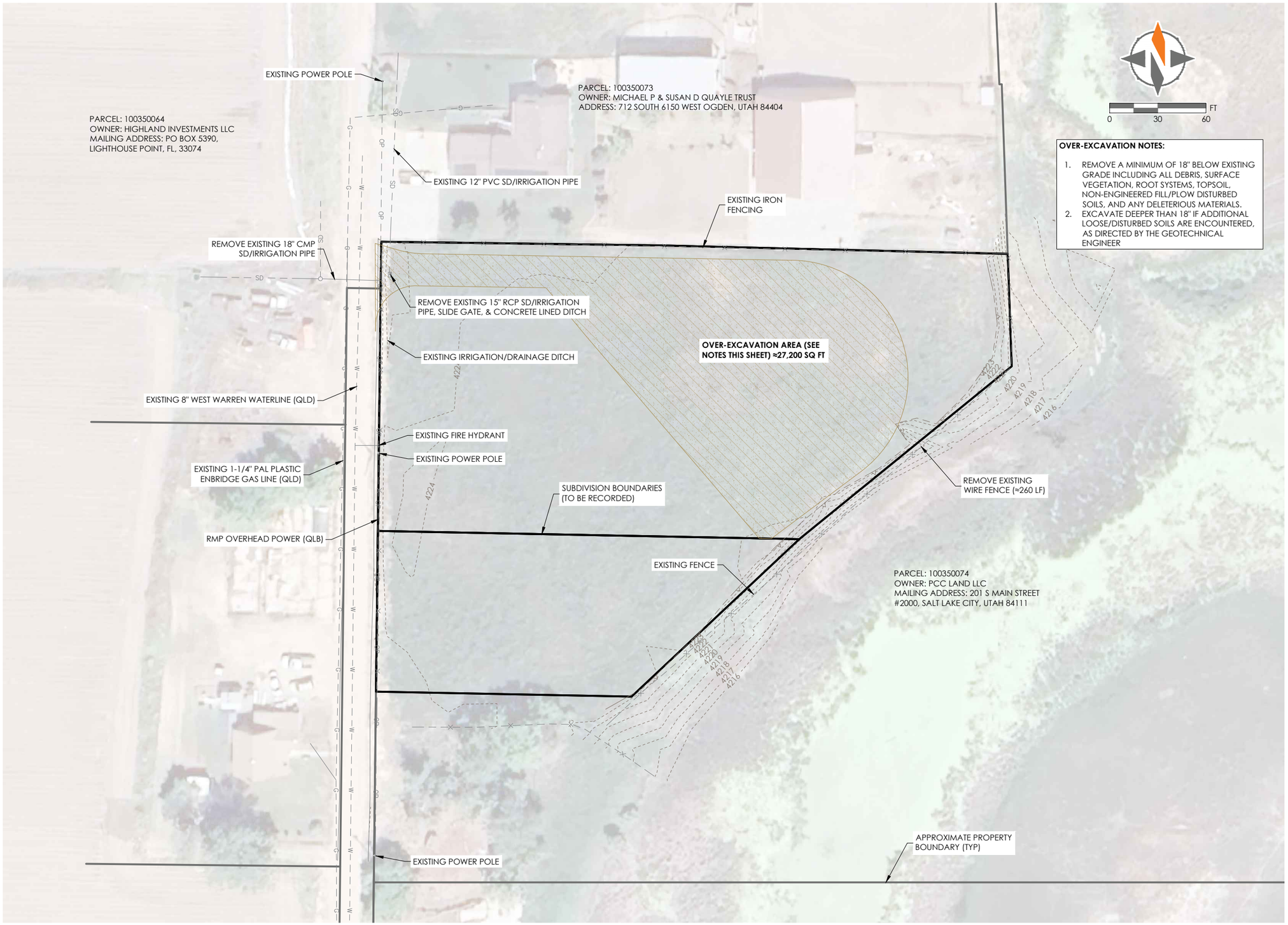

OVER-EXCAVATION NOTES:

1. REMOVE A MINIMUM OF 18" BELOW EXISTING GRADE INCLUDING ALL DEBRIS, SURFACE VEGETATION, ROOT SYSTEMS, TOPSOIL, NON-ENGINEERED FILL/PLOW DISTURBED SOILS, AND ANY DELETERIOUS MATERIALS.
2. EXCAVATE DEEPER THAN 18" IF ADDITIONAL LOOSE/DISTURBED SOILS ARE ENCOUNTERED, AS DIRECTED BY THE GEOTECHNICAL ENGINEER

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PROMONTORY TANK & BOOSTER

EXISTING CONDITIONS & DEMOLITION PLAN

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CD101

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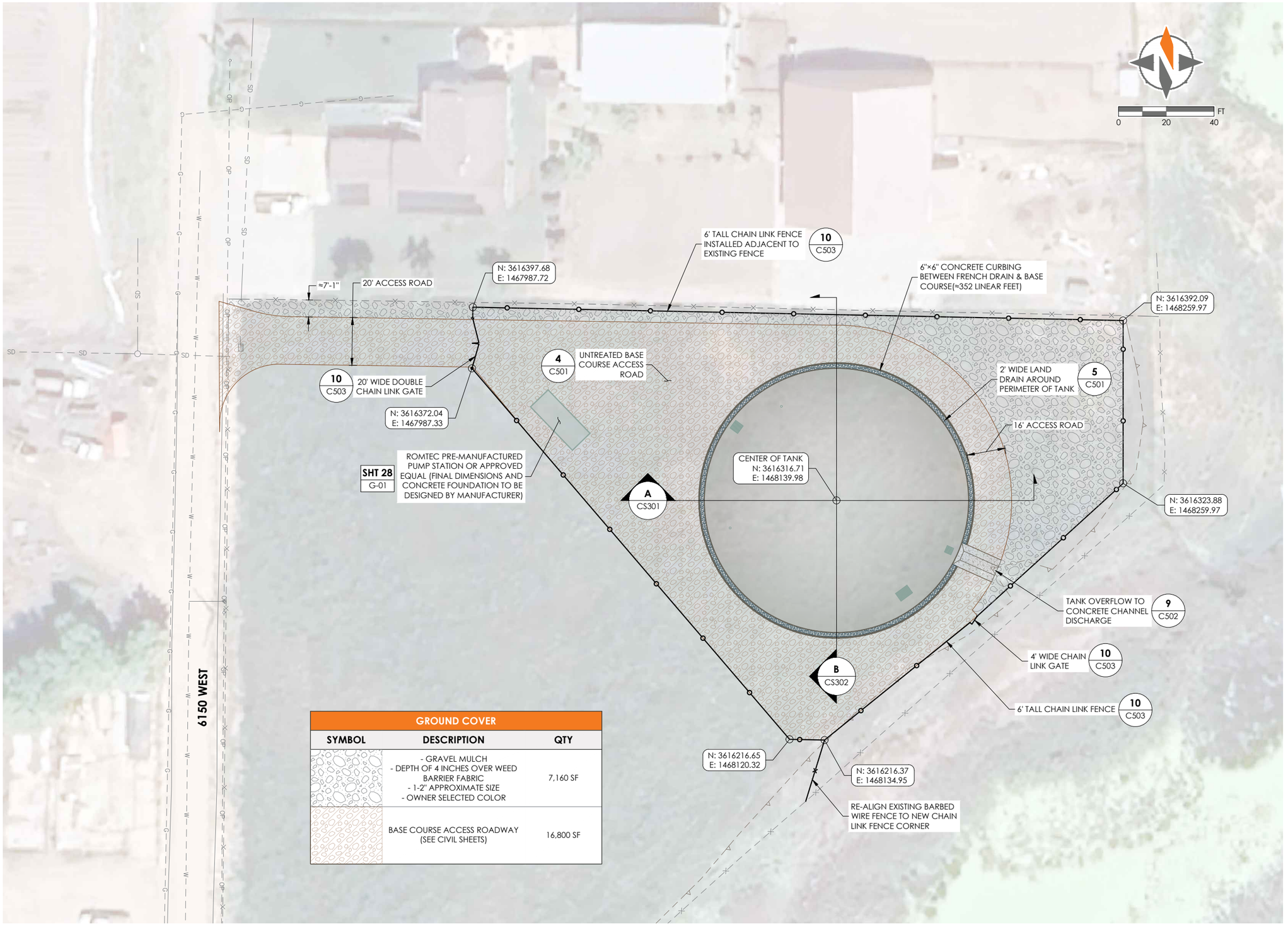

GROUND COVER		
SYMBOL	DESCRIPTION	QTY
	- GRAVEL MULCH - DEPTH OF 4 INCHES OVER WEED BARRIER FABRIC - 1-2" APPROXIMATE SIZE - OWNER SELECTED COLOR	7,160 SF
	BASE COURSE ACCESS ROADWAY (SEE CIVIL SHEETS)	16,800 SF

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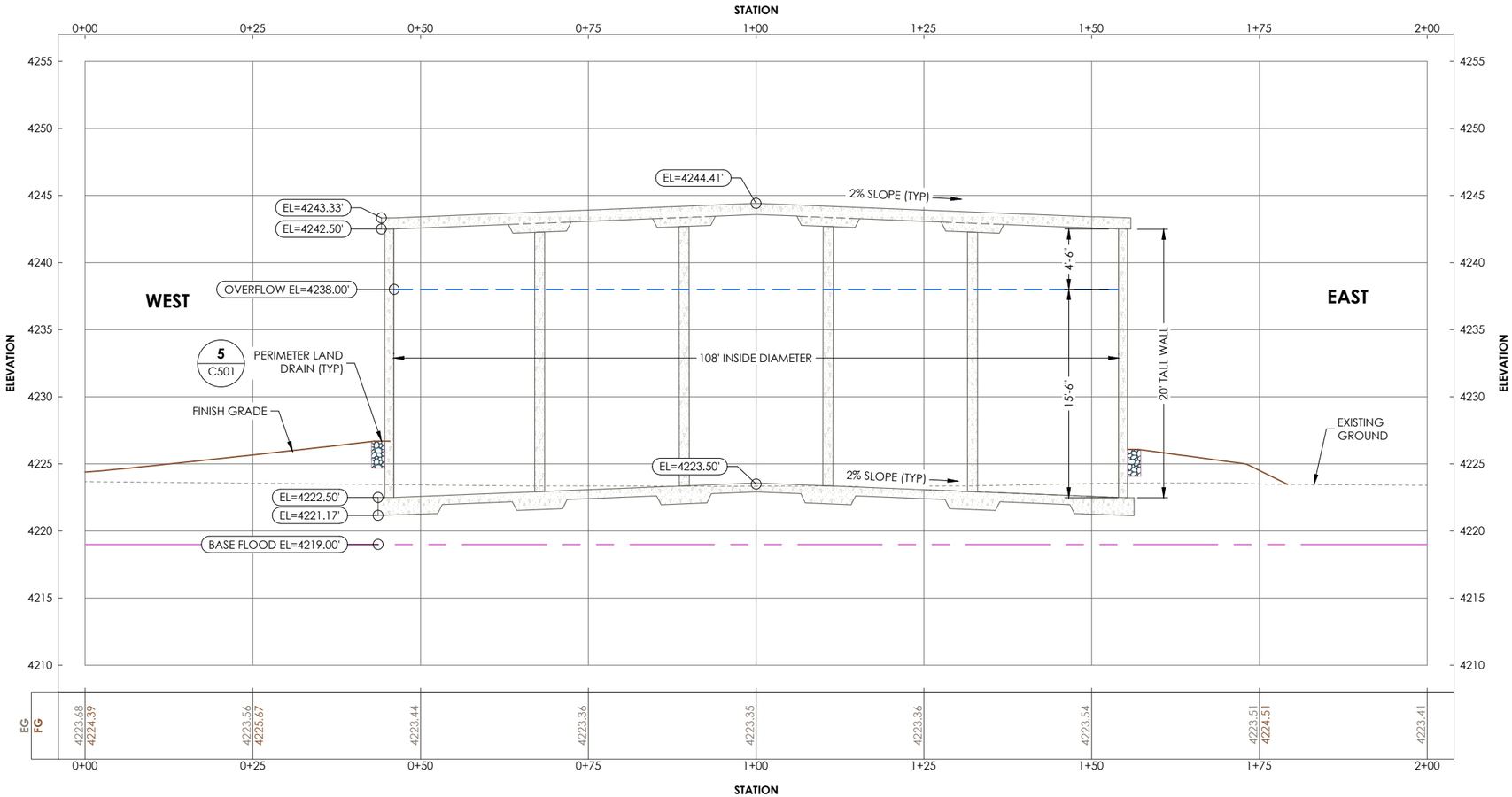
13 MARCH 2025

PROMONTORY TANK & BOOSTER

SITE PLAN

05 OF 36

CS101



A **WEST-EAST CENTERLINE SECTION**
1" = 10'-0"

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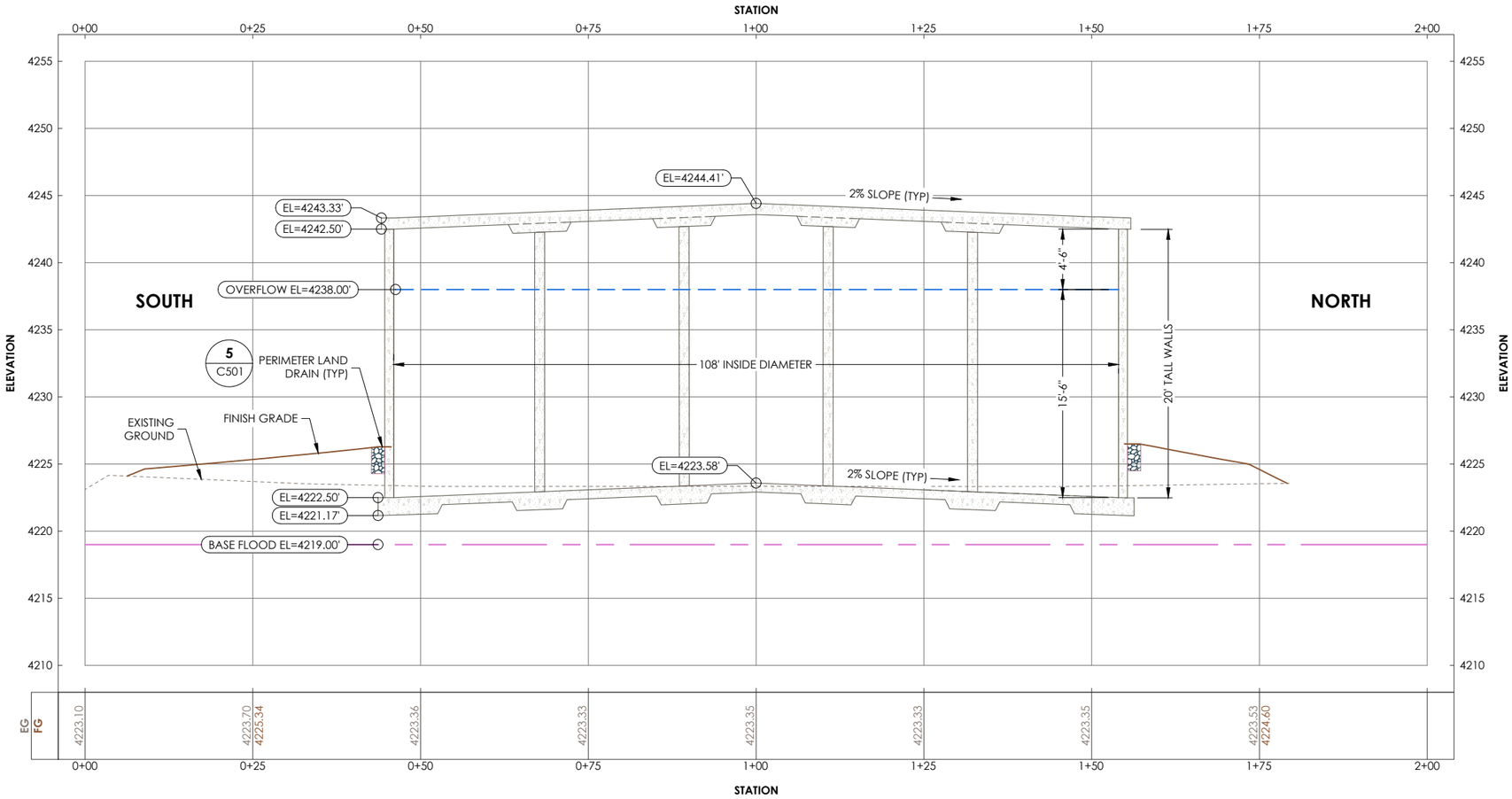
UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

WEST-EAST TANK SECTION

06 OF 36

CS301



B SOUTH-NORTH TANK SECTION
1" = 10'-0"

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UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

SOUTH-NORTH TANK SECTION

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CS302

UTILITY SHEET NOTES		
NO.	DESCRIPTION	DETAIL
1.	SEE GENERAL NOTES PAGE FOR UTILITY NOTES	
2.	PIPE TRENCH, INSTALL, AND BACKFILL	6/7 C501
3.	ALL PRESSURE PIPING TO BE THRUST BLOCKED	8 C502
4.	NORTHING & EASTING LOCATIONS ARE GIVEN FOR REFERENCE AND MAY VARY BASED ON FINAL PUMP STATION LAYOUT. FIELD VERIFY COMPATIBILITY PRIOR TO INSTALLATION.	

0 20 40 FT

SHT 09 CU301 MODIFY EXISTING IRRIGATION SYSTEM

CONNECT TO STUBBED 10" TEE BRANCH AND VALVE. COORDINATE CONNECTION WITH OWNER.

10" COMBINED WATERLINE INLET/OUTLET SHT 09 CU301

10" WATERLINE INLET SHT 09 CU301

45° BEND N: 3616380.48 E: 1467997.47

45° BEND N: 3616356.68 E: 1468038.03

SHT 28 G-01 ROMTEC PRE-MANUFACTURED BOOSTER PUMP STATION OR APPROVED EQUAL

SHT 10 CU302 TANK OUTLET/ PUMP SUCTION WATERLINE

45° BEND N: 3616305.34 E: 1468066.98

4" PERFORATED LAND DRAIN HIGH POINT (INV ELEV: 4225.00')

4" PERFORATED FOUNDATION DRAIN HIGH POINT (INV ELEV: 4220.00')

4" PERFORATED FOUNDATION DRAIN LOW POINT @ TEE (INV ELEV: 4219.10')

4" PERFORATED LAND DRAIN LOW POINT @ TEE (INV ELEV: 4224.18')

4" SCH80 PVC PERFORATED FOUNDATION DRAIN - SLOPED AT 0.5% TOWARDS DRAIN DISCHARGE 11 C503

4" SCH80 PVC PERFORATED LAND DRAIN - SLOPED AT 0.5% TOWARDS DRAIN DISCHARGE 5 C501

4" FOUNDATION DRAIN DISCHARGE (INV ELEV: 4218.92')

4" LAND DRAIN DISCHARGE (INV ELEV: 4218.58')

6150 WEST

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PROJECT

UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

UTILITY PLAN

08 OF 36

CU101

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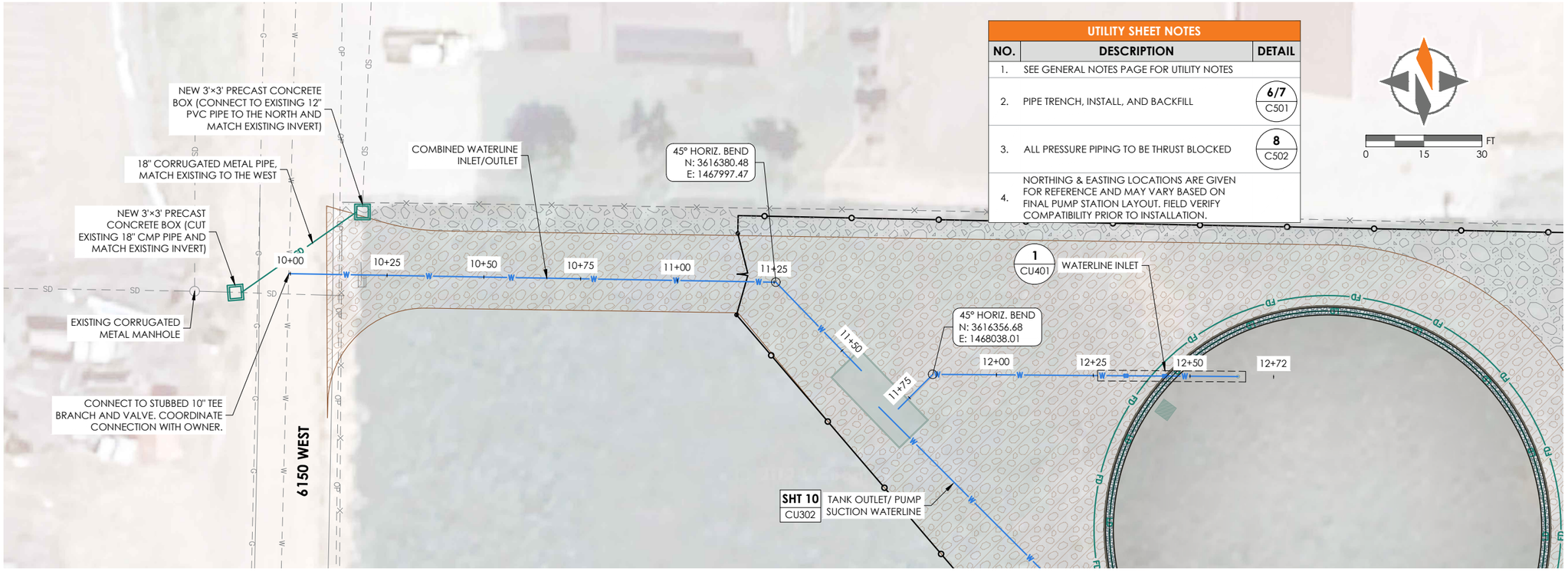

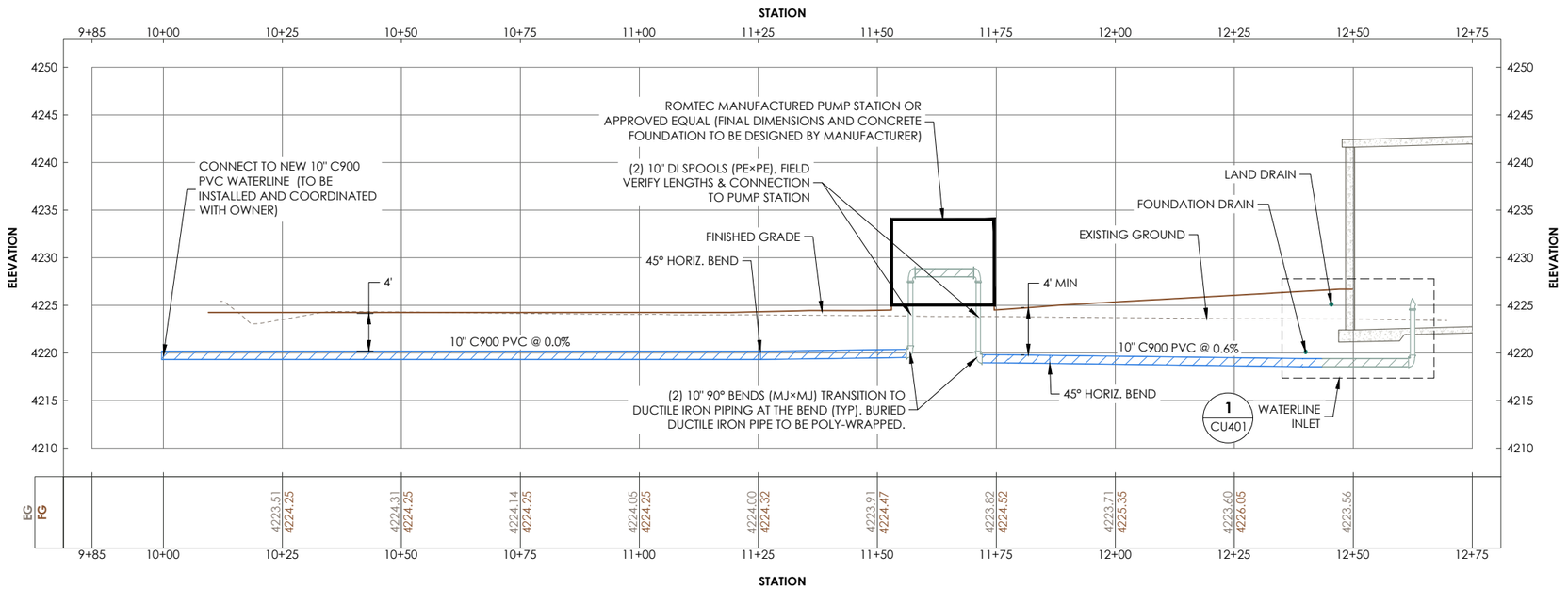

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PROJECT
UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

WATERLINE PLAN & PROFILE
09 OF 36
CU301

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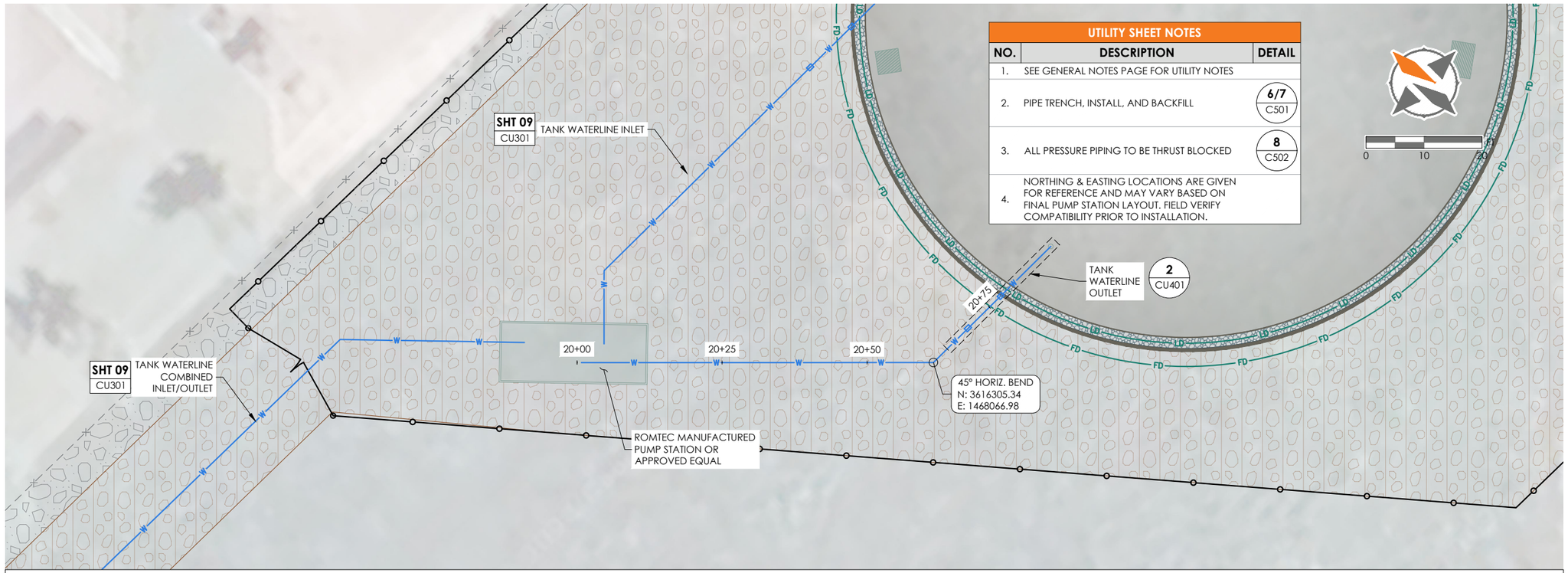
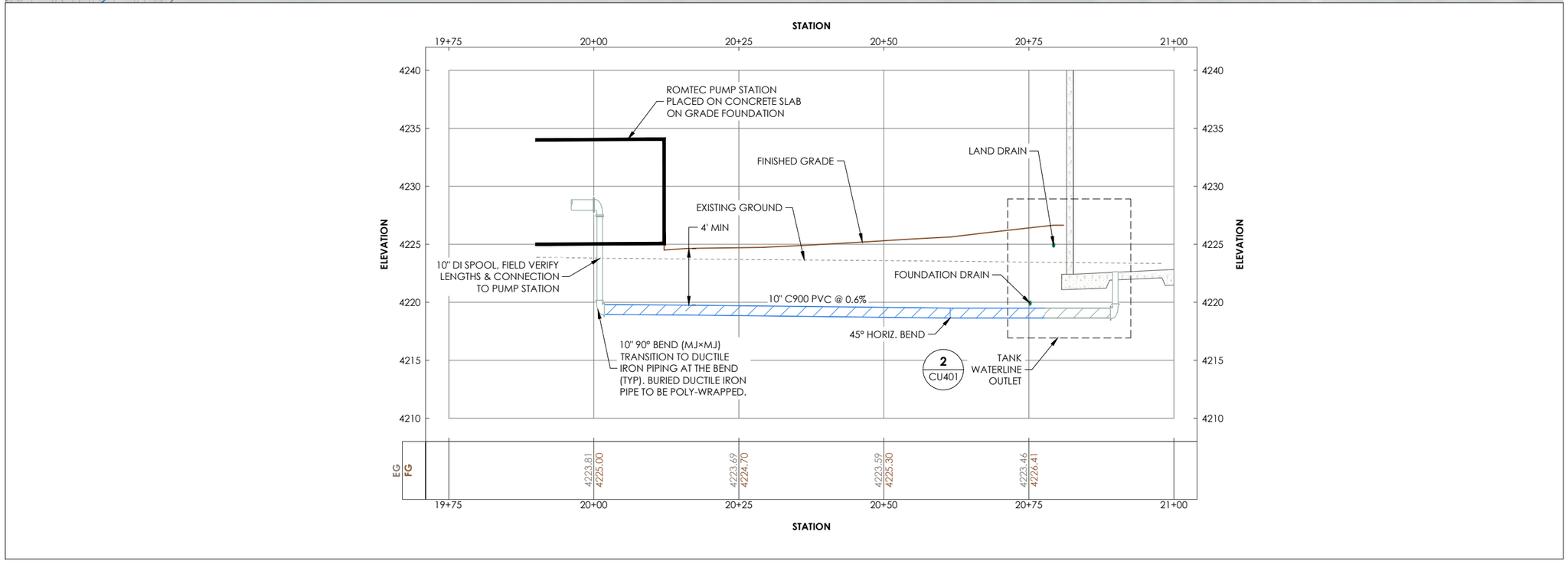


UTILITY SHEET NOTES		
NO.	DESCRIPTION	DETAIL
1.	SEE GENERAL NOTES PAGE FOR UTILITY NOTES	
2.	PIPE TRENCH, INSTALL, AND BACKFILL	6/7 C501
3.	ALL PRESSURE PIPING TO BE THRUST BLOCKED	8 C502
4.	NORTHING & EASTING LOCATIONS ARE GIVEN FOR REFERENCE AND MAY VARY BASED ON FINAL PUMP STATION LAYOUT. FIELD VERIFY COMPATIBILITY PRIOR TO INSTALLATION.	



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PROJECT

UT-10127-24
13 MARCH 2025

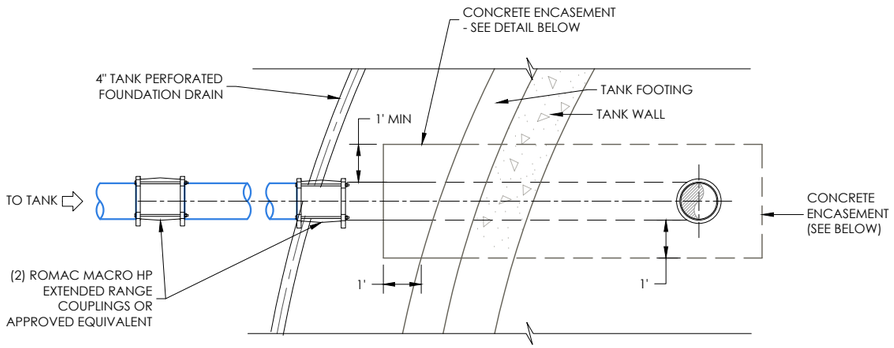
PROMONTORY TANK & BOOSTER

WATERLINE PLAN & PROFILE

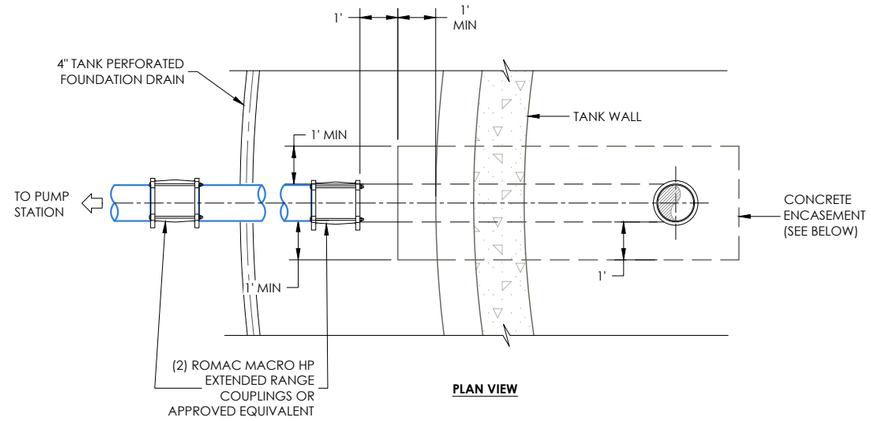
10 OF 36

CU302

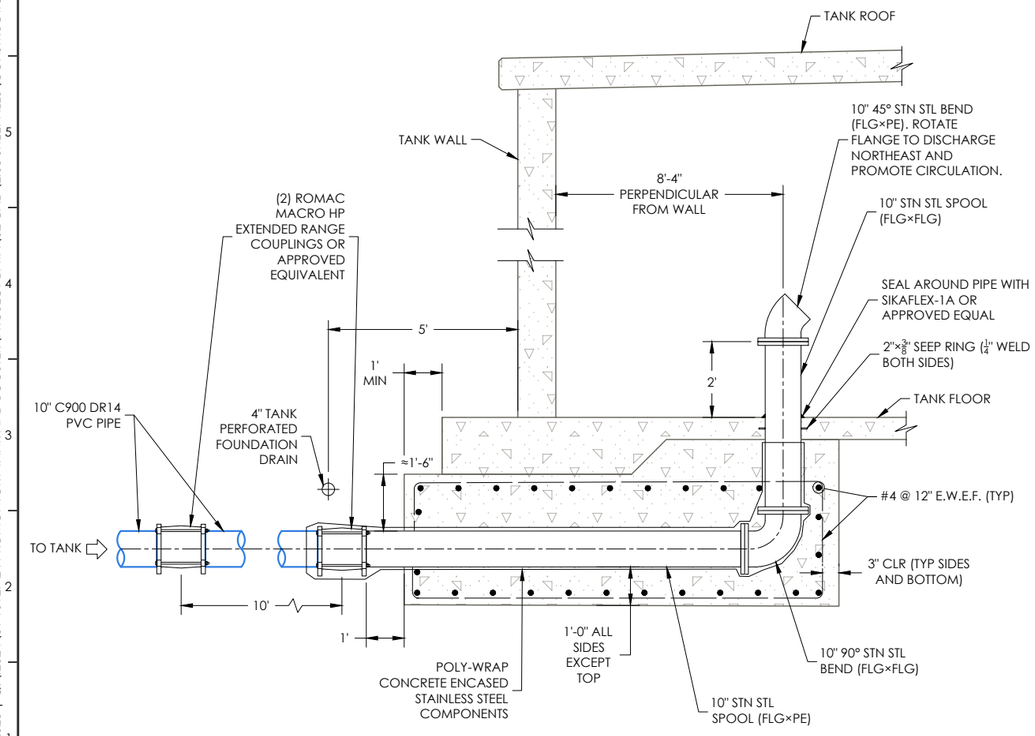
UT83-NF | 02:47 PM THURSDAY 13 MARCH 2025 | Q:\2024\UT-10127-24 PROMONTORY TANK AND BOOSTER\PROJECT DATA\02 CAD\2.03 SHEET FILES\CONSTRUCTION DRAWINGS\10 CU302.DWG



PLAN VIEW

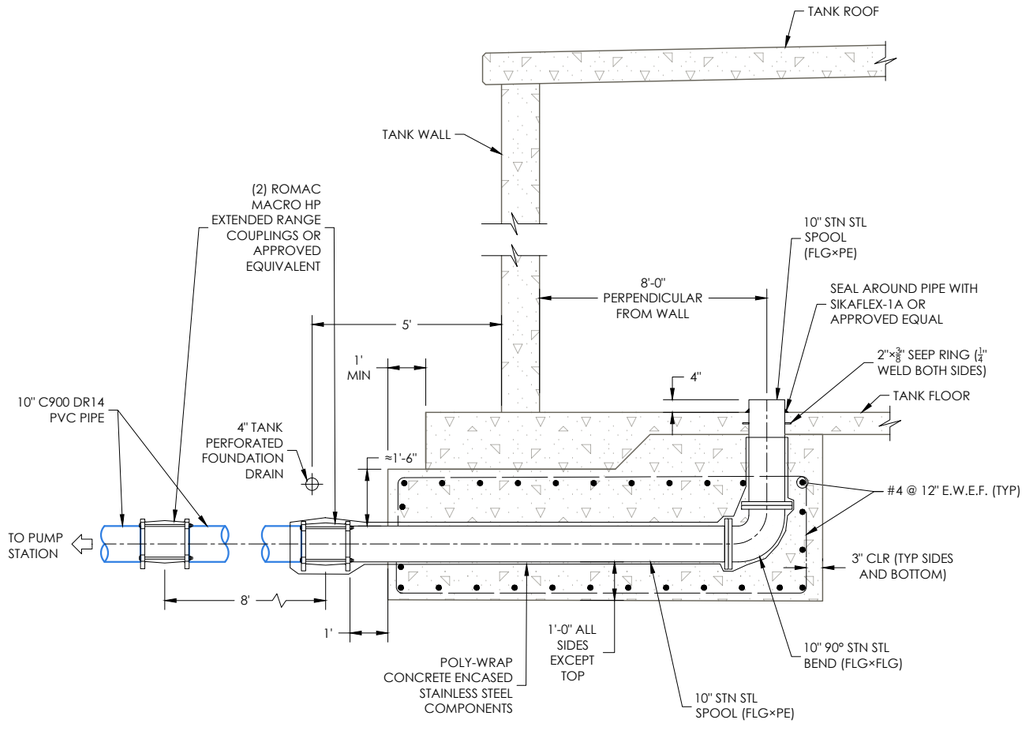


PLAN VIEW



SECTION VIEW

1 TANK WATERLINE INLET
NOT TO SCALE



SECTION VIEW

2 TANK WATERLINE OUTLET
NOT TO SCALE

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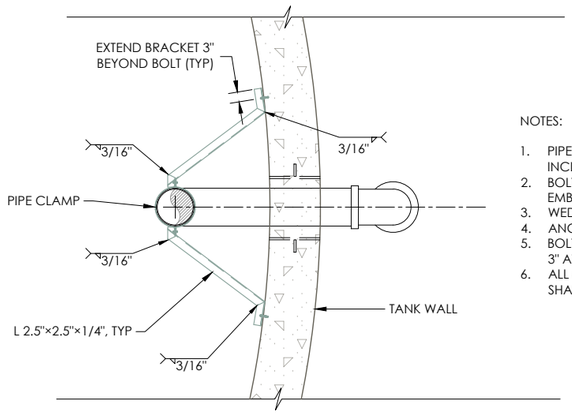
PROMONTORY TANK & BOOSTER

790 SOUTH 6150 WEST OGDEN, UT 84404

TANK PIPE PENETRATIONS

11 OF 36

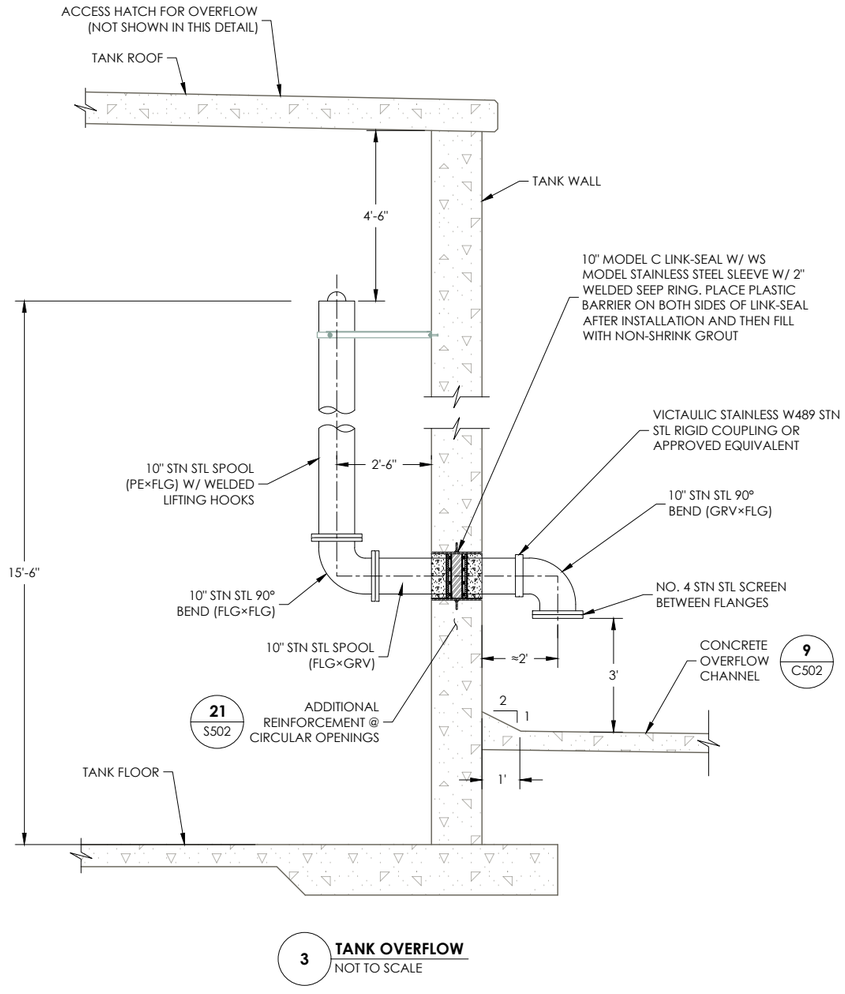
CU401



NOTES:

1. PIPE SUPPORTS SHALL BE CONSTRUCTED PER INCLUDED DETAILS.
2. BOLTS SHALL BE 1/2"Ø ALL THREAD, 5" MIN. BOLT EMBEDMENT.
3. WEDGE ANCHORS WILL NOT BE ALLOWED.
4. ANCHORS TO BE EPOXIED PER PLAN
5. BOLTS SHALL HAVE A MIN. EDGE DISTANCE OF 3" AT 2 PERP. SIDES ONLY.
6. ALL METAL (INCLUDING BOLTS) INSIDE THE TANK SHALL BE STAINLESS STEEL.

OVERFLOW PLAN



3 TANK OVERFLOW
NOT TO SCALE

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BlackPine

Gardner

REVISIONS

DESIGN

REGISTERED PROFESSIONAL ENGINEER #5571005-2202 KATHLEEN W. JONES STATE OF UTAH

PRINCIPAL : J. PRETTYMAN
MANAGER: K. JONES
REVIEWER : S. WOODRUFF
DRAFTER : T. MARTINEZ

PROJECT

UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

790 SOUTH 6150 WEST OGDEN, UT 84404

TANK PIPE PENETRATIONS

12 OF 36

CU402

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UT-10127-24
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PROMONTORY TANK & BOOSTER

GRADING PLAN

13 OF 36

CG101

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Trench backfill

1. GENERAL
A. The drawing applies to backfilling a trench (and embankment) above the pipe zone.

2. PRODUCTS
A. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 3-inches.
B. Flowable Fill: APWA Section 31 05 15. Target is 60 psi in 28 days with 90 psi maximum in 28 days, It must flow easily requiring no vibration for consolidation.

3. EXECUTION
A. Trench Backfill Above the Pipe Zone: Follow requirement indicated in APWA Section 33 05 20 and the following provisions. See Standard Plan 382 for backfilling the pipe zone.
1) DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate as trench backfill.
2) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.
3) Water jetting is NOT allowed.
B. Flowable Fill: If controlled low strength material is placed in the trench. Cure the material before placing surface restorations.
C. Embankment Backfill: When trench sides are sloped proceed as follows.
1) Maximum lift thickness is 8-inches before compaction.
2) Compact per APWA Section 31 23 26 to 95 percent or greater relative to a standard proctor density.
3) Submission of quality control compaction test result data may be requested by ENGINEER at any time. Provide results of tests immediately upon request.
D. Surface Restoration:
1) Landscaped Surface: Follow APWA Section 32 92 00 (turf or grass) or APWA Section 32 93 13 (ground cover) requirements. Rake to match existing grade. Replace vegetation to match pre-construction conditions.
2) Paved Surface: Follow APWA Section 33 05 25 (bituminous pavement surfacing), or APWA Section 33 05 25 (concrete pavement surfacing). Do not install surfacing until compaction density is acceptable to ENGINEER. .

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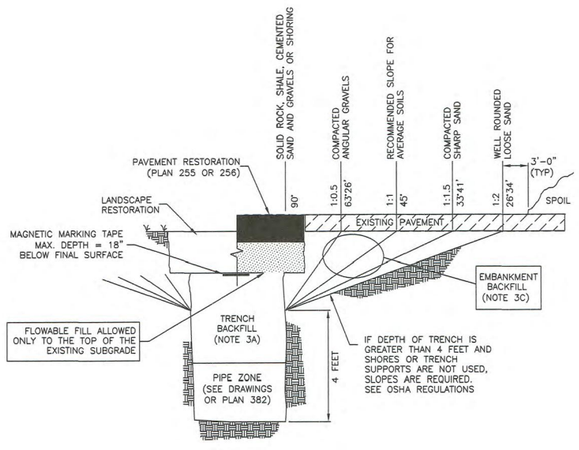
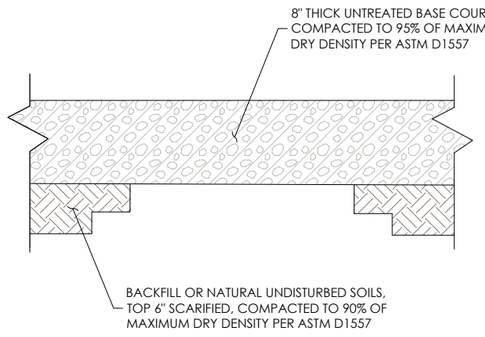
NARRATIVE: THIS PLAN SHOWS VARIOUS SLOPES RECOMMENDED FOR VARIOUS TYPES OF SLOPE STABILITY PROBLEMS. THE VERTICAL TEXT INDICATES VARIOUS MATERIALS THAT MAY BE ENCOUNTERED. THE SERVICES OF A PROFESSIONAL SOILS ENGINEER SHOULD BE USED TO VERIFY SLOPE STABILITY.

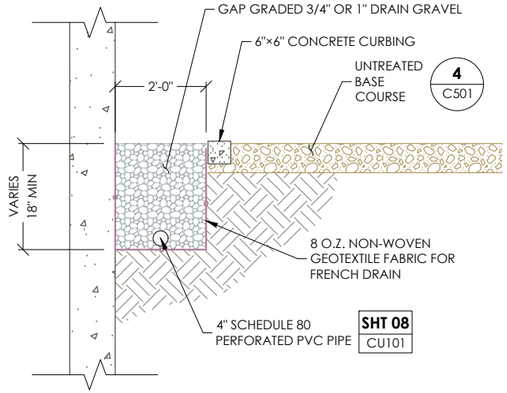


APWA Utah Chapter — *Trench backfill* — Plan 381 July 2016

6 TRENCH BACKFILL
NOT TO SCALE



4 UNTREATED BASE COURSE ACCESS ROAD
NOT TO SCALE



5 LAND DRAIN
NOT TO SCALE

Pipe zone backfill

1. GENERAL
A. Install the pipe in the center of the trench or no closer than 6-inches from the wall of the pipe to the wall of the trench.

2. PRODUCTS
A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
C. Concrete: APWA Section 03 30 04.
D. Flowable Fill: Target is 60 psi in 28 days with 90 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation.
E. Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR's choice, APWA Section 31 05 19.

3. EXECUTION
A. Excavate the Pipe Zone: Width is measured at the pipe spring line and includes any necessary sheathing. Provide width recommended by pipe manufacturer. Follow manufacturer's recommendations when using trench boxes.
B. Foundation Stabilization: Get ENGINEER's permission before installing common fill. Vibrate to stabilize. Installation of stabilization-separation geotextile will be required to separate backfill material and native subgrade materials if common fill cannot provide a working surface or prevent soils migration.
C. Bedding: Follow APWA Section 33 05 20 requirements and the following provisions.
1) Furnish untreated base course material unless specified otherwise by pipe manufacturer.
2) Maximum lift thickness is 8-inches.
3) Bedding immediately under the pipe should not be compacted, but loosely placed.
4) Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
5) When using concrete, provide at least Class 2,000, APWA Section 03 30 04.
D. Pipe Zone: DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate in the pipe zone. Water jetting is NOT allowed.
1) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26 unless pipe manufacturer requires more stringent installation.
2) Submission of quality control compaction test result data developed for the haunch zone may be requested by ENGINEER at any time. CONTRACTOR is to provide results of tests immediately upon request.
E. Flowable Fill (when required and if allowed by pipe manufacturer):
1) Place the controlled low strength material, APWA Section 31 05 15.
2) Prevent pipe flotation by installing in lifts and providing pipe restraints as required by pipe manufacturer.
3) Reset pipe to line and grade if pipe "floats" out of position.

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ELEVATION VIEW

SECTION A-A

INSTALLATION

CONCRETE PIPE: FOLLOW ASTM C 1479
"STANDARD PRACTICE FOR INSTALLATION OF PRECAST CONCRETE SEWER, STORM DRAIN, AND CULVERT PIPE USING STANDARD INSTALLATIONS.

PLASTIC PIPE: FOLLOW ASTM D 2321
"STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS"

CORRUGATED METAL PIPE: FOLLOW ASTM A 798
"STANDARD PRACTICE FOR INSTALLING FACOTRY-MADE CORRUGATED STEEL PIPE FOR SEWERS AND OTHER APPLICATIONS.

VITRIFIED CLAY PIPE: FOLLOW ASTM C 12.
"STANDARD RECOMMENDED PRACTICE FOR INSTALLING VITRIFIED CLAY PIPE LINES.

APWA Utah Chapter — *Pipe zone backfill* — Plan 382 January 2011

7 PIPE ZONE BACKFILL
NOT TO SCALE

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PROJECT
UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

CIVIL DETAILS
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C501

Direct bearing thrust block

1. GENERAL

A. Thrust design for pipe sizes or configurations not shown require special design.
B. Bearing areas, volumes, and special thrust blocking details shown on Drawings take precedence over this plan.
C. Restraint sizing is based upon a maximum operating pressure of 150 psi and a test pressure of 200 psi, and a minimum soil bearing strength of 2,000 psf. Operating pressures in excess of 150 psi or soils with less than 2,000 pound bearing strength will require special design.
D. Before backfilling around thrust block, secure inspection of installation by ENGINEER.

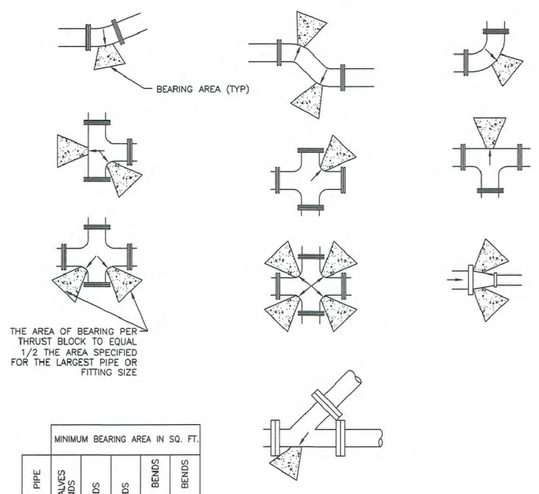
2. PRODUCTS

A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
C. Thrust Bocks: Concrete Class 4000, APWA Section 03 30 04.
D. Grease: Non-oxide poly-FM.

3. EXECUTION

A. Pour concrete against undisturbed soil.
B. Pipe Joints: Do not cover with concrete. Leave completely accessible.
C. Grease: Apply grease to all buried metal surfaces. Wrap with polyethylene sheet and tape wrap.
D. Locking restraint devices may be used in conjunction with concrete thrust blocking (at discretion of ENGINEER).
E. Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.

561



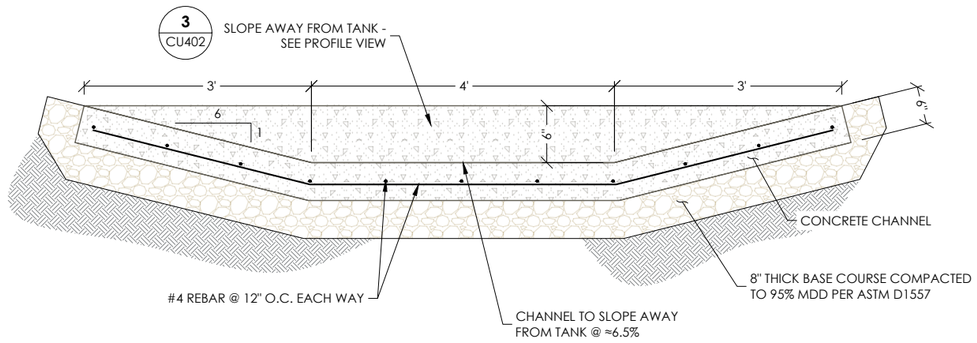
SIZE OF PIPE	MINIMUM BEARING AREA IN SQ. FT.				
	TEES, VALVES DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS	11 1/4° BENDS
4"	2	3	2	2	2
6"	4	5.5	3	2.5	2
8"	6.5	9.5	5	2.75	2.5
12"	14	20	11	5.5	3
14"	19	26.5	14.5	7.5	4
16"	24	34	18.5	9.5	6
20"	27	52	28.5	14.5	9
24"	53	74	41	21	12
30"	81	114	62	32	16

APWA Utah Chapter

Direct bearing thrust block

Plan
561
August 2010

8 DIRECT BEARING THRUST BLOCK
NOT TO SCALE



9 OVERFLOW CHANNEL
NOT TO SCALE

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PROJECT

UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

CIVIL DETAILS

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C502

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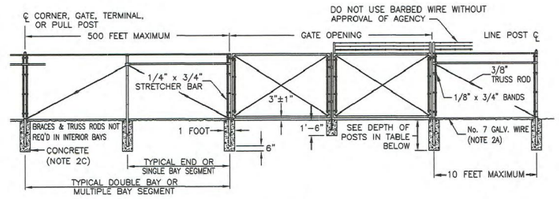
Chain link fence

1. GENERAL
A. Additional chain link fence requirements are specified in APWA Section 32 31 13.

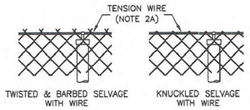
2. PRODUCTS
A. Tension Wire: Zinc coated, galvanized, No. 7 gage spring coil steel.
B. Posts: Schedule 40 hot dipped zinc coated steel pipe, ASTM A120.
C. Concrete: Class 4000, APWA Section 03 30 04.

3. EXECUTION
A. Fence Fabric 5 Feet High or Higher: Use twisted and barbed selvage, top and bottom.
B. Fences Fabric Lower than 5 Feet: Use knuckled selvage on top, and twisted and barbed selvage on bottom.
C. Truss rods and Braces: Not required for fabric heights less than 5 feet high.
D. Tension Wire: Set wire at 1-inch over natural ground or 6-inches over concrete structures.
E. Post Spacing: Locate posts at equal spacing for each segment with maximum spacing specified in standard specifications.
F. Barb Wire Arm: Face arm towards exterior of fenced area.
G. Concrete Placement: APWA Section 03 30 10. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.

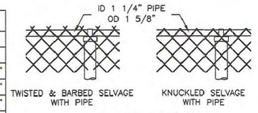


FENCE

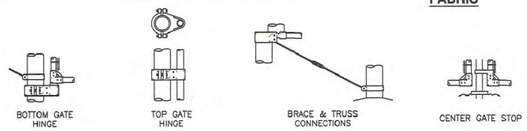
FENCE POSTS					
HEIGHT OF FABRIC	DEPTH OF POSTS	LENGTH OF END CORNER, OR PULL POST	LENGTH OF LINE POST	MINIMUM DIAMETER END, CORNER PULL POST	MINIMUM DIAMETER LINE POST
7'	3'	10'	9'-8"	2 1/2"	2"
6'	3'	9'	8'-8"	2 1/2"	2"
5'	3'	8'	7'-8"	2"	1 1/2"
4'	2'	6'	5'-8"	2"	1 1/2"



GATE POTS AND GATE FRAMES			
HEIGHT	FRAME	GATE OPENING	POST
UNDER 6 FEET	1 1/2"	SINGLE TO 6' OR DOUBLE TO 12'	2"
	1 1/2"	SINGLE OVER 6' TO 8' OR DOUBLE OVER 12' TO 16'	2 1/2"
	1 1/2"	SINGLE OVER 8' TO 12' OR DOUBLE OVER 16' TO 24'	3 1/2"
6 FEET AND OVER	1 1/2"	SINGLE TO 6' OR DOUBLE TO 12'	2 1/2"
	1 1/2"	SINGLE OVER 6' TO 13' OR DOUBLE OVER 12' TO 26'	3 1/2"
	1 1/2"	SINGLE OVER 13' TO 18' OR DOUBLE OVER 26' TO 36'	6"
	1 1/2"	SINGLE OVER 18' OR DOUBLE OVER 36'	8"



FABRIC



DETAILS

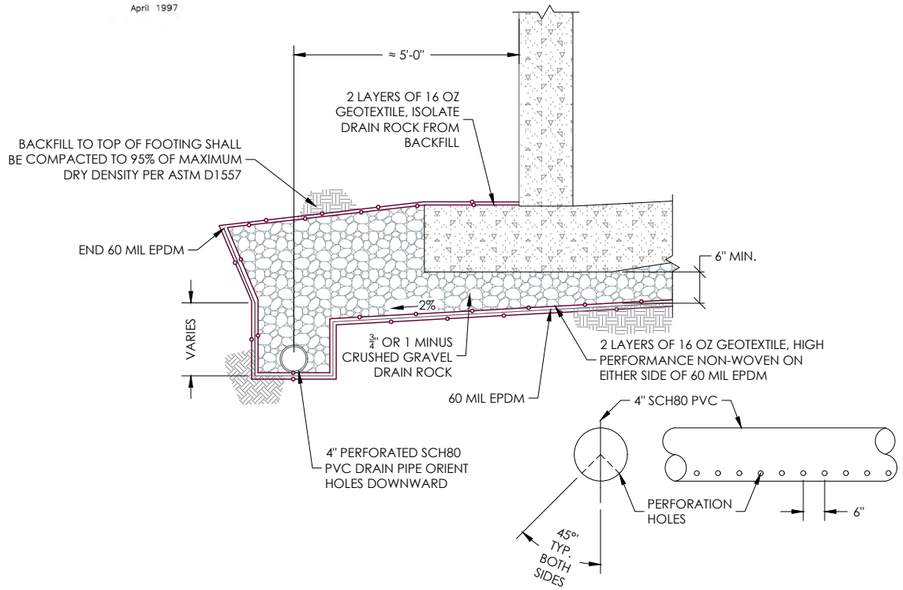
831

APWA Utah Chapter

Chain link fence

Plan 831 April 1997

10 CHAIN LINK FENCE
NOT TO SCALE



11 FOUNDATION DRAIN
NOT TO SCALE

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UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

CIVIL DETAILS
16 OF 36
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GENERAL REQUIREMENTS

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK AND SHALL NOTIFY THE STRUCTURAL ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. ANY OMISSION OR CONFLICT BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK SO AFFECTED.
2. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS ON THIS SHEET IN CASE OF CONFLICT.
3. ALL CONSTRUCTION AND QUALITY OF MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE BUILDING CODE, AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES.
4. WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWINGS. WHERE SUFFICIENTLY SIMILAR WORK IS NOT SHOWN, THE ENGINEER SHALL BE CONSULTED FOR CLARIFICATION.
5. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROTECT ANY UNDERGROUND OR CONCEALED CONDUIT, PLUMBING OR OTHER UTILITIES WHERE NEW WORK IS BEING PERFORMED, PRIOR TO BEGINNING EXCAVATIONS.
6. PIPES, DUCTS, SLEEVES, CHASES, ETC., SHALL NOT BE PLACED IN SLABS, BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. STRUCTURAL MEMBERS SHALL NOT BE CUT FOR PIPES, DUCTS, ETC., UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.
7. FOR ALL MECHANICAL AND ELECTRICAL EQUIPMENT IN EXCESS OF 250 LBS., THE CONTRACTOR SHALL COORDINATE EXACT WEIGHTS AND LOCATIONS WITH STRUCTURAL SUPPORTS. IN THE EVENT THAT THE EQUIPMENT DEVIATES IN WEIGHT OR LOCATION FROM THOSE INDICATED ON THE STRUCTURAL PLANS, THE ENGINEER MUST BE NOTIFIED AND APPROVAL GIVEN PRIOR TO INSTALLATION.
8. TEMPORARY BRACING SHALL BE PROVIDED WHEREVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING WIND. SUCH BRACING SHALL BE LEFT IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY, OR UNTIL ALL THE STRUCTURAL ELEMENTS ARE COMPLETE.
9. DURING AND AFTER CONSTRUCTION THE CONTRACTOR AND/OR OWNER SHALL KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN LOAD.
10. NEITHER THE OWNER NOR THE STRUCTURAL ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
11. ANY OPTIONS OR SUBSTITUTIONS ARE FOR THE CONTRACTOR'S CONVENIENCE. NO STRUCTURAL CHANGES OR SUBSTITUTIONS SHALL BE MADE IN THE FIELD FROM THE APPROVED CONSTRUCTION DOCUMENTS UNLESS WRITTEN APPROVAL OF SUCH CHANGES OR SUBSTITUTIONS IS OBTAINED FROM THE STRUCTURAL ENGINEER. IF CHANGES ARE MADE WITHOUT WRITTEN APPROVAL, SUCH CHANGES, ALONG WITH ANY ADDITIONAL COSTS, REPAIRS AND COORDINATION WITH OTHER AFFECTED ITEMS SHALL BE THE LEGAL AND FINANCIAL RESPONSIBILITY OF THE CONTRACTOR AND/OR SUBCONTRACTORS INVOLVED.
12. A REGISTERED CIVIL ENGINEER SHALL DESIGN AND BE RESPONSIBLE FOR ANY SUPPLEMENTAL FABRICATION DESIGNS OF BUILDING COMPONENTS. IT SHALL BE THE RESPONSIBILITY OF THE COMPONENT FABRICATOR TO COMPLY WITH ALL APPLICABLE REGULATIONS AND TO OBTAIN APPROVAL FROM THE NECESSARY GOVERNING AGENCIES ON SUCH DESIGNS. PRIOR TO CONSTRUCTION AND/OR FABRICATION OF THE ALTERNATE COMPONENTS, THE DESIGN SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER OF RECORD FOR CONFORMANCE WITH THE STRUCTURAL DESIGN AS APPROVED FOR BUILDING PERMIT.

BUILDING CRITERIA

GOVERNING CODE	2021 INTERNATIONAL BUILDING
STATE OF REGISTERED ENGINEER STAMP	UT
OCCUPANCY CATEGORY	TANK - III
GRAVITY DESIGN DATA	
	TANK
	ROOF LL = 20 PSF
SNOW DESIGN DATA	
	pg = 34 PSF
	Ce = 1.2
	Ct = 1.2
	TANK
	Is = 1.1
	pf = 34 PSF
SEISMIC DESIGN INFO	
	TANK: PARTIALLY BURIED
	I = 1.25
	R = 3
	Soil Site Class = D
	Ss = 1.049 and S1 = 0.38
	Fa = 1.2 and Fv = 1.925
	Sds = 0.839 and Sd1 = 0.481
	Design Category = D
FLOOD DESIGN DATA	NONE
SOILS DESIGN DATA	
	ALLOWABLE BEARING PRESSURE = 2,500 PSF
	⅓ INCREASE FOR LATERAL
	MINIMUM FROST DEPTH (COVER OVER FOOTINGS) = 36 in
	COEFFICIENT OF FRICTION = 0.4
	ALLOWABLE PASSIVE PRESSURE = 477 PSF
	ACTIVE EQUIVALENT FLUID PRESSURE = 28 PCF
	EQUIVALENT FLUID PRESSURE FOR RESTRAINED CONDITION = 52 PCF
SOILS REPORT	
GSH GEOTECHNICAL (WEST WEBER PROMONTORY COMMERCE CENTER WATER TANK) DATED 11/8/2024	
GSH JOB NO. 3523-015-24	

REINFORCED CONCRETE

1. UNLESS NOTED OTHERWISE, THE SPECIFIED CONCRETE STRENGTH SHOWN IN THE FOLLOWING TABLE IS THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS. THE AGGREGATE SHOWN IS THE MAXIMUM SIZE. THE SLUMP SHOWN IS THE MAXIMUM IN INCHES (REGULAR WEIGHT - 145 PCF).

CONSTRUCTION	STRENGTH (PSI)	AGGREGATE	H2O/CEMENT RATIO	TYPE
FOUNDATION	5,000	1 ½"	0.45	V OR IL10(HS)
SLAB ON GRADE	5,000	1"	0.45	V OR IL10(HS)

2. DRY PACK SHALL BE COMPOSED OF 1 PART PORTLAND CEMENT AND NO MORE THAN 3 PARTS SAND.
3. PORTLAND CEMENT SHALL CONFORM TO A.S.T.M. C 595. STRUCTURAL CONCRETE AGGREGATE SHALL CONFORM TO A.S.T.M. C 33-07 FOR STANDARD WEIGHT OR C 330-05 FOR LIGHTWEIGHT.
4. ADMIXTURES MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER. ADMIXTURES USED TO INCREASE THE WORKABILITY OF THE CONCRETE SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT (CALCIUM CHLORIDE SHALL NOT BE USED). CONCRETE SHALL NOT COME IN CONTACT WITH ALUMINUM.
5. ALL CONCRETE WORK SHALL BE PLACED, CURED, STRIPPED, AND PROTECTED AS DIRECTED BY THE SPECIFICATIONS AND ACI STANDARDS AND PRACTICES.
6. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING AND FORMWORK.
7. NO CONDUIT PLACED IN A CONCRETE SLAB SHALL HAVE AN OUTSIDE DIAMETER GREATER THAN 1/3 THE THICKNESS OF THE SLAB. NO CONDUIT SHALL BE EMBEDDED IN A SLAB THAT IS LESS THAN 4 IN. THICK, WITH THE EXCEPTION OF LOCAL OFFSETS, MINIMUM CLEAR DISTANCE BETWEEN CONDUITS SHALL BE 6 IN.
8. BEFORE CONCRETE IS POURED CHECK WITH ALL TRADES TO INSURE PROPER PLACEMENT OF ALL PIPES, CONDUITS, ETC. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE FOOTINGS UNLESS SPECIFICALLY DETAILED IN THE STRUCTURAL PLANS OR AS DIRECTED BY THE ENGINEER.
9. TIE ALL INSERTS, ANCHOR BOLTS OR OTHER EMBEDDED ELEMENTS SECURELY IN PLACE PRIOR TO PLACEMENT OF CONCRETE.
10. REFER TO MECHANICAL DRAWINGS FOR ALL MOLDS, GROOVES, ORNAMENT, CLIPS OR GROUNDS, REQUIRED TO BE ENCASED IN CONCRETE AND FLOOR LOCATION OF FLOOR FINISHES AND SLAB DEPRESSIONS.
11. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED.

STRUCTURAL STEEL

1. MATERIAL AND WORKMANSHIP SHALL CONFORM TO A.I.S.C. SPECIFICATIONS FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST EDITION.
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING A.S.T.M. DESIGNATION:

MEMBER	ASTM DESIGNATION
STRUCTURAL TUBES	A500-07, GRADE B (Fy=46 KSI)
PIPE COLUMNS	A53-07, TYPE E OR S, GRADE B
W ROLLED SHAPES	A992-06A (Fy=50 KSI)
COMMON BOLTS	A307-07b
THREADED ROD	A36-05, U.N.O.
HIGH STRENGTH BOLTS	A325-07A, U.N.O.
OTHER STRUCTURAL STEEL	A36-05
	A-572, GRADE B (Fy=50 KSI WHERE NOTED)
ANCHOR BOLTS	F1554-07A

3. PROVIDE FULL BEARING ON UNTHREADED PORTION OF SHANK FOR BOLTS AT ALL STEEL MEMBER CONNECTIONS UNLESS NOTED OTHERWISE.
4. WELDS SHALL BE MADE ONLY BY CERTIFIED WELDERS AS PRESCRIBED IN THE STANDARD CODE FOR WELDING IN BUILDING CONSTRUCTION OF THE AMERICAN WELDING SOCIETY.
5. WELDING ELECTRODES: LOW HYDROGEN E70XX SERIES PER A.W.S. D1-1, UNLESS NOTED OTHERWISE.
8. THE CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL MEMBERS SHOWN ON HORROCKS DRAWINGS, INCLUDING SPECIAL FABRICATED STEEL WOOD-TO-WOOD CONNECTORS. REQUIRED SHOP DRAWINGS SHALL SHOW MEMBER LAYOUT, SIZE, LENGTH, BOLT HOLE SIZES AND LOCATIONS, CONNECTION DETAILS, GRADE AND ERECTION PROCEDURES.
9. ALL WELDS USED IN PRIMARY MEMBERS AND CONNECTIONS IN THE SEISMIC LOAD RESISTING SYSTEM (SLRS) SHALL BE MADE WITH A FILLER METAL THAT HAS A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS AT MINUS 20° F, AS DETERMINED BY A.W.S. CLASSIFICATION OR MANUFACTURER CERTIFICATION.
10. WHERE "DEMAND CRITICAL" WELDS ARE NOTED ON THE DRAWINGS THE FILLER MATERIAL USED SHALL HAVE A MINIMUM CHARPY V-NOTCH (CVN) TOUGHNESS OF 20 FT-LBS AT MINUS 20° F, AND A (CVN) TOUGHNESS OF 40 FT-LBS AT 70°.
11. THE CONTRACTOR MUST PREPARE AND SUBMIT FOR REVIEW A QUALITY ASSURANCE PLAN FOR THE CONSTRUCTION OF THE SEISMIC LOAD RESISTING SYSTEM (SLRS) OF THE BUILDING. THIS SHALL BE PREPARED IN COMPLIANCE WITH AISC 341-05, APPENDIX Q.

REINFORCING STEEL

1. REINFORCING STEEL - A.S.T.M. A-615-07 WITH GRADES AS LISTED BELOW:

MATERIAL	SIZE	GRADE
CONCRETE	ALL SIZES	60

2. ALL WELDED REINFORCING BARS SHALL BE A.S.T.M. A-706-06. USE LOW HYDROGEN ELECTRODES AS FOLLOWS:

WELDED MEMBER	ELECTRODE
REBAR TO REBAR	E80XX
REBAR TO A36 BASE METAL	E70XX

3. WELDED WIRE FABRIC - A.S.T.M. A-185-07. MINIMUM FABRIC SPLICE SHALL BE THE WIRE SPACING PLUS 2".
4. UNLESS NOTED OTHERWISE, MINIMUM PROTECTIVE COVER AS FOLLOWS:

CONDITION	CLEAR DISTANCE
ON EARTH SIDE - PLACED AGAINST EARTH	3"
ON EARTH SIDE WHEN FORMED	2"
STEEL IN SLAB ON GRADE	℄ SLAB

5. CONCRETE REINFORCING LAP SPLICES SHALL BE AS FOLLOWS:

LOCATION	f'c (PSI)	BAR SIZE (1) #3	#4	#5	#6	#7	#8	#9
REBAR WITH A MIN 2" CLR COVER: FOUNDATION, SLAB-ON-GRADE, BEAMS, COLUMNS AND WALLS (2)	2,500	19	25	31	37	54	61	76
	3,000	17	23	28	34	49	56	69
	4,000	15	20	25	29	43	49	60
	4,500	14	19	23	28	40	46	56

NOTES:
(1) LENGTHS ARE IN INCHES
(2) BAR SPACING SHALL BE GREATER THAN 4 INCHES PLUS ONE BAR DIAMETER.

6. REINFORCING DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE'S MANUAL OF STANDARD PRACTICE, LATEST EDITION AND A.C.I. 315.
   - INDICATES A BAR WITH A BEND TURNED TOWARDS THE OBSERVER
   - INDICATES A BAR WITH A BEND TURNED AWAY FROM THE OBSERVER
   - INDICATES A LAPPED SPLICE IN THE SAME PLANE, NOT A BEND IN THE BAR
7. ALL REINFORCING STEEL, WELDED WIRE FABRIC, ANCHOR BOLTS, DOWELS AND INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO AND WHILE PLACING CONCRETE OR GROUT.
8. UNLESS OTHERWISE NOTED OR SHOWN, SPACER TIES SHALL BE #3 TIES AT 72 IN. IN ALL BEAMS AND REINFORCED FOOTINGS.

STRUCTURAL SHOP DRAWINGS

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR THE ITEMS CHECKED BELOW.
2. ALL SHOP DRAWINGS SUBMITTED TO THE ENGINEER FOR REVIEW SHALL BE STAMPED AND SIGNED BY THE CONTRACTOR INDICATING THAT HE HAS FOUND THEM TO BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THAT PROPER PROVISION HAS BEEN MADE TO ACCOMMODATE ALL ABUTTING WORK. FABRICATION SHALL NOT BEGIN UNTIL THE CONTRACTOR HAS RECEIVED SHOP DRAWINGS THAT HAVE BEEN REVIEWED, STAMPED AND SIGNED BY THE ENGINEER.
3. THE ENGINEER WILL REVIEW THE SHOP DRAWING SUBMITTALS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND CONTRACT DOCUMENTS.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING HIS WORK AND THAT OF OTHER TRADES AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.
5. UPON RECEIPT, THE ENGINEER WILL REVIEW THE SUBMITTALS WITH REASONABLE PROMPTNESS. THE CONTRACTOR SHALL NOT ASSUME A TURNAROUND TIME BASED ON A DATE OF RECEIPT BY THE ENGINEER OF LESS THAN 10 WORKING DAYS.
6. SHOP DRAWING SUBMITTALS SHALL INCLUDE THREE SETS OF PRINTS.
7. STRUCTURAL SHOP DRAWING SUBMITTALS REQUIRED:
   - [ ] STEEL JOIST AND GIRDER
   - [ ] PREFABRICATED TRUSSES OR JOISTS
   - [ ] GLU-LAMINATED TIMBER
   - [X] STRUCTURAL STEEL
   - [ ] MISCELLANEOUS STEEL (WHERE PARTS ARE SHOP WELDED)
   - [ ] FIRE SPRINKLER SYSTEM (WITH WEIGHTS)
   - [ ] STOREFRONT SYSTEMS/SKYLITES
   - [ ] ANCHOR BOLT LAYOUTS
   - [X] REINFORCING STEEL PLACEMENT DRAWINGS
   - [X] CONCRETE MIX

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PROFESSIONAL ENGINEER
3/14/2025
No. 9206167-2202
KIRK WINEGAR
STATE OF UTAH

PRINCIPAL : J. PRETTYMAN
MANAGER: K. JONES
REVIEWER : S. WOODRUFF
DRAFTER : T. MARTINEZ

PROJECT

UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

790 SOUTH 6150 WEST OGDEN, UT 84404

GENERAL STRUCTURAL NOTES I

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FOUNDATION

1. THE SOILS REPORT IS TO BE CONSIDERED A PART OF THESE PLANS AND SHALL BE COMPLIED WITH BY THE CONTRACTOR. IF THE CONTRACTOR ENCOUNTERS CONDITIONS OTHER THAN THOSE DESCRIBED IN THE SOILS REPORT, THEY SHALL NOTIFY THE GEOTECHNICAL ENGINEER IMMEDIATELY BEFORE PROCEEDING WITH WORK.
2. IN THE EVENT THAT THE FOUNDATION EXCAVATIONS ARE CARRIED TO A DEPTH GREATER THAN THAT REQUIRED, THE ADDITIONAL DEPTH SHALL BE FILLED WITH THE SAME CONCRETE AS THAT USED FOR THAT FOOTING AT NO ADDITIONAL EXPENSE TO THE OWNER. NO UNCONTROLLED FILL WILL BE PERMITTED.
3. ALL EXCAVATIONS ADJACENT TO AND BELOW FOOTING ELEVATION FOR OTHER TRADES SHALL BE ACCOMPLISHED PRIOR TO POURING ANY FOOTINGS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR LATERALLY SUPPORTING ALL RETAINING TYPE FOUNDATION WALLS WHILE COMPACTING BEHIND WALLS AND UNTIL ALL SUPPORTING MEMBERS HAVE BEEN PLACED (SUCH AS FLOOR SLABS). ALL OPEN EXCAVATIONS AND TRENCHES SHALL BE SUPPORTED AND BARRICADED BY CONTRACTOR TO CONFORM WITH OSHA SAFETY STANDARDS.
5. THE FOOTING EXCAVATIONS SHALL BE KEPT FREE FROM LOOSE MATERIAL AND NO FOOTINGS SHALL BE PLACED IN WATER OR ON FROZEN GROUND.
6. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE.
7. UNLESS NOTED OTHERWISE BY THE SOILS REPORT, ALL REQUIRED BACKFILL AND ALL UTILITY TRENCHES SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DENSITY OBTAINABLE BY THE A.S.T.M. DESIGNATION D-1557 (LATEST EDITION) METHOD OF COMPACTION.
8. A COMPACTION REPORT MUST BE SUBMITTED TO AND APPROVED BY THE GOVERNING JURISDICTION PRIOR TO PLACEMENT OF ANY CONCRETE ON FILL.
9. IT IS REQUIRED THAT THE SOILS ENGINEER SUBMITS VERIFICATION TO THE GOVERNING JURISDICTION THAT FOUNDATION CONSTRUCTION IS IN ACCORDANCE WITH THE RECOMMENDATIONS AND CONCLUSIONS OF HIS REPORT.
10. PRIOR TO REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION, THE GEOTECHNICAL ENGINEER SHALL CERTIFY THAT:
    - THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOILS REPORT.
    - THE ACTUAL SOIL CONDITIONS ARE CONSISTENT WITH THE ASSUMPTIONS MADE IN THE SOIL REPORT.
    - THE FOUNDATION EXCAVATIONS ARE TO THE PROPER DEPTH OR BEARING STRATA.

STATEMENT OF SPECIAL INSPECTION

1. PROVIDE SPECIAL INSPECTIONS IN ACCORDANCE WITH THE APPROPRIATE SECTIONS OF CHAPTER 17 OF THE BUILDING CODE FOR THE ITEMS SHOWN IN THE TABLE BELOW ALONG WITH ANY ADDITIONAL INSPECTIONS AS REQUIRED BY THE OWNER, BUILDING OFFICIAL, OR ENGINEER AS THEY SEE FIT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL.
3. WHERE SPECIAL INSPECTION IS REQUIRED, IT MUST BE PERFORMED BY A CERTIFIED SPECIAL INSPECTOR EMPLOYED BY THE OWNER & APPROVED BY THE BUILDING OFFICIAL. THE SPECIAL INSPECTOR SHALL DEMONSTRATE COMPETENCE FOR THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION TO THE BUILDING OFFICIAL AND STRUCTURAL ENGINEER, PER SECTION 1704.2 OF THE BUILDING CODE. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE GOVERNING JURISDICTION TO PERFORM THE TYPES OF INSPECTIONS SPECIFIED.

   PROVIDE SPECIAL INSPECTION REPORTS TO THE STRUCTURAL ENGINEER WITHIN 7 DAYS FROM THE DAY OF INSPECTION.
4. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE SPECIAL INSPECTOR SHALL FURNISH COPIES OF INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO HORROCKS FOR REVIEW WITHIN SEVEN (7) DAYS OF THE WORK. EACH REPORT SHALL BE SIGNED BY A LICENSED ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED TO THE BUILDING OFFICIAL AND HORROCKS. HORROCKS SHALL BE NOTIFIED IMMEDIATELY OF ANY TEST WHICH INDICATES NON-COMPLIANCE WITH APPLICABLE CODES OR REQUIREMENTS OF THESE PLANS, PER SECTION 1704.2.4 OF THE BUILDING CODE.
5. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE, TO THE BUILDING OFFICIAL AND TO HORROCKS ENGINEERS, PER SECTION 1704.2.4 OF THE BUILDING CODE.
6. AN APPLICATION OF OFF-SITE FABRICATION MUST BE SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO FABRICATION.
7. A CERTIFICATE OF COMPLIANCE FOR OFF-SITE FABRICATION MUST BE COMPLETED AND SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO ERECTION OF PREFABRICATED COMPONENTS. SPECIAL INSPECTION REQUIRED PER SECTION 1704.2.5 OF THE BUILDING CODE.
8. SPECIAL INSPECTION OF SHOP FABRICATION AND SHOP WELDING IS NOT REQUIRED FOR CERTIFIED FABRICATOR AS REQUIRED BY THE STRUCTURAL STEEL SECTION OF THE GENERAL STRUCTURAL NOTES.
9. THE CONSTRUCTION INSPECTIONS LISTED ARE IN ADDITION TO THE CALLED INSPECTIONS REQUIRED BY SECTION 110 OF THE BUILDING CODE. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY A CITY INSPECTOR. SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR COVERED WITHOUT APPROVAL OF THE CITY INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE.
10. SEISMIC FORCE RESISTING SYSTEM (SFRS). FOR TANK IS CONTROLLED BY ACI 350.03 FOR PARTIALLY BURIED FIXED OR HINGED BASE. FOR BUILDING SPECIAL REINFORCED MASONRY/CONCRETE WALLS.
11. SPECIAL INSPECTION (INSP) AND MATERIAL TESTING (TEST) MATRIX:

CONSTRUCTION OBSERVATIONS

AS SPECIFIED IN SECTION 1702 OF THE BUILDING CODE THE ENGINEER OF RECORD IS REQUIRED TO OBSERVE THE FOLLOWING ITEMS DURING THE CONSTRUCTION PROCESS. CONSTRUCTION OBSERVATION IS NOT AND DOES NOT WAIVE THE RESPONSIBILITY OF SPECIAL INSPECTION REQUIRED AS SPECIFIED IN SECTION 109 AND SECTION 1704 OF THE BUILDING CODE AND AS LISTED IN 'STATEMENT OF SPECIAL INSPECTIONS' SECTION OF THESE GENERAL NOTES.

1. HORROCKS ENGINEERS MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO EACH INDIVIDUAL CONCRETE PLACEMENT (POUR) OF THE CONCRETE FOUNDATION.
2. HORROCKS ENGINEERS MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE PLACEMENT OF ANY FLOORING AND/OR ROOFING MATERIAL OR CONCRETE FILL OVER THE HORIZONTAL DIAPHRAGMS. THE FOLLOWING ITEMS SHALL BE COMPLETE WITHIN 48 HOURS OF THE TIME OF NOTIFICATION:

   A. ATTACHMENT OF THE HORIZONTAL DIAPHRAGM MATERIAL TO THE SUPPORTING MEMBERS.

APPROVED EPOXY ANCHORING SYSTEMS

1. SIMPSON 'SET-3G' INSTALLED PER I.C.C. ESR-4057
2. ALL EPOXY ANCHOR INSTALLATIONS SHALL COMPLY WITH THE SPECIFIED I.C.C. REPORT AND THE MANUFACTURERS RECOMMENDATIONS.
3. ALL EPOXY ANCHOR INSTALLATIONS REQUIRE SPECIAL INSPECTION.
4. ANY ALTERNATIVE TO THE ABOVE ANCHORING SYSTEMS SHALL HAVE A CURRENT I.C.C. REPORT AND BE SUBMITTED TO THE GOVERNING JURISDICTION AND THE ENGINEER OF RECORD PRIOR TO ANY INSTALLATION.

SPECIAL INSPECTOR: / PHONE NUMBER:		FREQUENCY		
MATERIAL	TASK	CONTINUOUS	PERIODIC	SPECIAL INSPECTOR APPROVED (INITIAL & DATE)
SOIL	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	TEST	
	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	INSP	
	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	TEST	
	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	INSP	-	
	PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUB-GRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	-	INSP	
CAST-IN-PLACE AND SITE PRE-CAST CONCRETE	INSPECT ANCHORS CAST IN CONCRETE	-	INSP	
	INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:			
	-ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	INSP		
	-MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE.		INSP	
	VERIFY USE OF REQUIRED DESIGN MIX.	-	INSP	
	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS OR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	INSP	-	
	INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	INSP	-	
	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	INSP	
	INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	-	INSP	
	VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORE AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	INSP	
	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	INSP	
POST INSTALLED ANCHORS IN CONCRETE & MASONRY	VERIFY MATERIALS AND INSTALLATION OF EPOXY, DRILLED, AND/OR EXPANSION ANCHORS PER THE APPROPRIATE ICC REPORTS	INSP	-	

STRUCTURAL STEEL AND STEEL DECK	PRIOR WELDING			
	VERIFY WELDING PROCEDURES (WPS) AND CONSUMABLE CERTIFICATES	INSP	-	
	MATERIAL IDENTIFICATION	-	INSP	
	WELDER IDENTIFICATION	-	INSP	
	FIT-UP GROOVE WELDS	-	INSP	
	ACCESS HOLES	-	INSP	
	FIT-UP OF FILLET WELDS	-	INSP	
	DURING WELDING:			
	USE OF QUALIFIED WELDERS	-	INSP	
	CONTROL & HANDLING OF WELDING CONSUMABLES	-	INSP	
	CRACKED TACK WELDS	-	INSP	
	ENVIRONMENTAL CONDITIONS	-	INSP	
	WPS FOLLOWED	-	INSP	
	WELDING TECHNIQUES	-	INSP	
	WELDS CLEANED	-	INSP	
	SIZE, LENGTH, AND LOCATION OF WELDS	INSP	-	
	WELDS MEET VISUAL ACCEPTANCE CRITERIA	INSP	-	
	ARC STRIKES	INSP	-	
	K-AREA	INSP	-	
	BACKING & WELD TABS REMOVED	INSP	-	
	REPAIR ACTIVITIES	INSP	-	
	DOCUMENT ACCEPTANCE PR REJECTION OF WELDED JOINT/MEMEBER	INSP	-	
	NONDESTRUCTIVE TESTING:			
	CJP WELDS (RISK CAT. II)	-	INSP	
	CJP WELDS (RISK CAT. III OR IV)	INSP	-	
	ACCESS HOLES (FLANGE > 2")	INSP	-	
	WELDED JOINTS SUBJECT TO FATIGUE	INSP	-	
	PRIOR TO BOLTING:			
	CERTIFICATIONS OF FASTENERS	INSP	-	
	FASTENERS MARKED	-	INSP	
	PROPER FASTENER FOR JOINT	-	INSP	
	PROPER BOLTING PROCEDURE	-	INSP	
	CONNECTING ELEMENTS	-	INSP	
	PRE-INSTALLATION VERIFICATION TESTING	-	INSP	
	PROPER STORAGE	-	INSP	
	DURING BOLTING:			
	FASTENER ASSEMBLIES	-	INSP	
	SNUG-TIGHT PRIOR TO PRETENSIONING	-	INSP	
	FASTENER COMPONENT	-	INSP	
	PRETENSIONED FASTENERS	-	INSP	
	AFTER BOLTING:			
	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	INSP	-	
	OTHER STEEL INSPECTIONS:			
	STRUCTURAL STEEL DETAILS	-	INSP	
	ANCHOR RODS & OTHER EMBODIMENTS SUPPORTING STRUCTURAL STEEL	-	INSP	
	STEEL ELEMENT OR COMPOSITE CONSTRUCTION:			
	PLACEMENT & INSTALLATION OF STEEL DECK	INSP	-	
	PLACEMENT & INSTALLATION OF STEEL HEADED STUD ANCHORS	INSP	-	
	DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	INSP	-	
	REINFORCING STEEL	-	INSP	
	COMPOSITE MEMBER SIZE	-	INSP	

ABBREVIATIONS

ARCH'L	ARCHITECTURAL	D.L.	DEAD LOAD	FTG	FOOTING	MIN	MINIMUM	SIM	SIMILAR
A.B.	ANCHOR BOLT	DN	DOWN	GA	GAUGE	MJ	MECHANICAL JOINT	SLRS	SEISMIC LOAD RESISTING SYSTEM
ADD'L	ADDITIONAL	DO	DITTO	GALV	GALVANIZED	N.S.	NEAR SIDE		
A.F.F.	ABOVE FINISHED FLOOR	DWG	DRAWING	GLB	GLUED LAMINATED BEAM	NM WT	NORMAL WEIGHT	S.M.S.	SHEET METAL SCREW
BD	BOARD	DWL	DOWEL	GRD	GRADE	NOM	NOMINAL	SQ	SQUARE
BLDG	BUILDING	EA	EACH	GYP	GYPSUM	N.T.S.	NOT TO SCALE	SS	SELECT STRUCTURAL
BLK(G)	BLOCK(ING)	E.F.	EACH FACE	HD	HOLDOWN	O.C.	ON CENTER	S.S.	STAINLESS STEEL
BM	BEAM	E.F.O.	EXTERIOR FACE OF	HDR	HEADER	O.H.	OPPOSITE HAND	STAGG	STAGGERED
B.N.	BOUNDARY NAIL	EL(ELEV)	ELEVATION	HGR	HANGER	OPNG	OPENING	STD	STANDARD
BOT	BOTTOM	ELECT	ELECTRICAL	HORIZ(H)	HORIZONTAL	P/C	PRECAST CONCRETE	STIFF	STIFFENER
BRG	BEARING	E.N.	EDGE NAIL	H.S.B.	HIGH STRENGTH BOLT	PL ℄	PLATE	STL	STEEL
BTWN	BETWEEN	EQ	EQUAL	HSS	HOLLOW STRUCTURAL SECTION	PLY	PLYWOOD	STRUCT	STRUCTURAL
C.I.P.	CAST-IN-PLACE	EQUIP	EQUIPMENT			PNL	PANEL	SYM	SYMMETRICAL
CL ℄	CENTER LINE	E.S.	EACH SIDE	I.F.O.	INTERIOR FACE OF	PLF	POUNDS PER LINEAL FOOT	T&B	TOP AND BOTTOM
C.J.	CONSTRUCTION JOINT	E.W.	EACH WAY	INT	INTERIOR	PSF	POUNDS PER SQUARE FOOT	T&G	TONGUE AND GROOVE
CLG	CEILING	EXIST(E)	EXISTING	INV	INVERT	PSI	POUNDS PER SQUARE INCH	THK	THICK
CLR	CLEAR(ANCE)	EXP	EXPANSION	JST	JOIST	P.T.	PRESSURE TREATED	THKND	THICKENED
C.M.U.	CONCRETE MASONRY UNIT	EXT	EXTERIOR	JNT	JOINT	P/T	POST-TENSIONED	THRD	THREADED
COL	COLUMN	F.D.	FLOOR DRAIN	K	KIPS (1,000 LB.)	RBS	REDUCED BEAM SECTION	THRU	THROUGH
CONC	CONCRETE	FDN	FOUNDATION	K.O.	KNOCK OUT	R.D.	ROOF DRAIN	T.O.	TOP OF
CONN	CONNECTION	F.F.	FINISH FLOOR	LL	LIVE LOAD	REF	REFERENCE	TYP	TYPICAL
CONT	CONTINUOUS	FLG	FLANGE	LLH	LONG LEG HORIZONTAL	REINF	REINFORCED/REINFORCING	U.N.O.	UNLESS NOTED OTHERWISE
CNTR	CENTER(ED)	FLR	FLOOR	LLV	LONG LEG VERTICAL	REQ'D	REQUIRED	VERT(V)	VERTICAL
CNTRSNK	COUNTERSINK	F.N.	FIELD NAIL	LT WT	LIGHT WEIGHT	RF	ROOF	W/	WITH
D	PENNY	F.O.	FACE OF	MAS	MASONRY	R.S.	ROUGH SAWN	W/O	WITHOUT
DBL	DOUBLE	F.O.C.	FACE OF CONCRETE	MAX	MAXIMUM	SCHED	SCHEDULE	WD	WOOD
DFL	DOUGLAS FIR/LARCH	FRMG	FRAMING	MB	MACHINE BOLT	SECT	SECTION	W.O.	WORK POINT
DIAG	DIAGONAL	F.S.	FAR SIDE	MECH'L	MECHANICAL	SHT	SHEET	WT	WEIGHT
DIA / Ø	DIAMETER	FT	FEET(FOOT)	MFR	MANUFACTURER	SHTG	SHEATHING	W.W.F.	WELDED WIRE FABRIC

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LEGAL NOTICE

DESIGN

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3/14/2025
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KIRK WINEGAR
STATE OF UTAH

PRINCIPAL : J. PRETTYMAN
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DRAFTER : T. MARTINEZ

PROJECT

UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

790 SOUTH 6150 WEST OGDEN, UT 84404

GENERAL STRUCTURAL NOTES II

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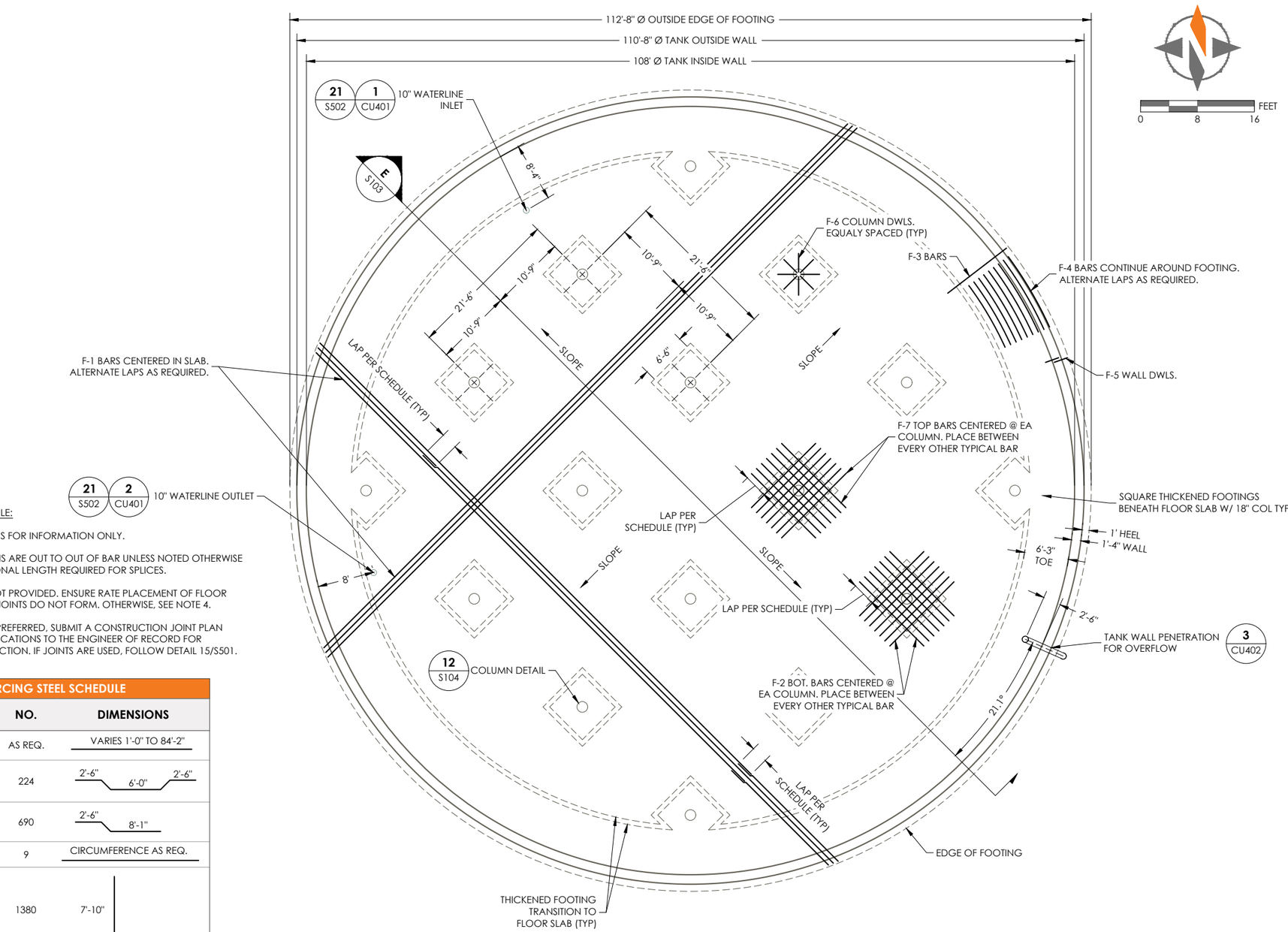

NOTES & REINFORCING STEEL SCHEDULE:

1. REINFORCING STEEL SCHEDULE IS FOR INFORMATION ONLY.
2. REINFORCING STEEL DIMENSIONS ARE OUT TO OUT OF BAR UNLESS NOTED OTHERWISE AND DO NOT INCLUDE ADDITIONAL LENGTH REQUIRED FOR SPLICES.
3. CONSTRUCTION JOINTS ARE NOT PROVIDED. ENSURE RATE PLACEMENT OF FLOOR SLAB CONCRETE IS SUCH THAT JOINTS DO NOT FORM. OTHERWISE, SEE NOTE 4.
4. IF CONSTRUCTION JOINTS ARE PREFERRED, SUBMIT A CONSTRUCTION JOINT PLAN SHOWING PROPOSED JOINT LOCATIONS TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO CONSTRUCTION. IF JOINTS ARE USED, FOLLOW DETAIL 15/S501.

FLOOR REINFORCING STEEL SCHEDULE

BAR	SIZE	SPACING	NO.	DIMENSIONS
F-1	#5	12"	AS REQ.	VARIES 1'-0" TO 84'-2"
F-2	#6	12"	224	2'-6" / 6'-0" / 2'-6"
F-3	#6	6"	690	2'-6" / 8'-1"
F-4	#6	12"	9	CIRCUMFERENCE AS REQ.
F-5	#6	6"	1380	7'-10" / 2'-4"
F-6	#7	EQ	128	4'-7" / 3'-4"
F-7	#5	12"	224	12'-0"

C **TANK FOUNDATION PLAN**
1/8" = 1'-0"

CONTACT INFORMATION

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BlackPine

Gardner

REVISIONS

DESIGN

PROFESSIONAL ENGINEER
3/14/2025
No. 9206167-2202
KIRK WINEGAR
STATE OF UTAH

PRINCIPAL : J. PRETTYMAN
MANAGER: K. JONES
REVIEWER : S. WOODRUFF
DRAFTER : T. MARTINEZ

PROJECT

UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

790 SOUTH 6150 WEST OGDEN, UT 84404

TANK FOUNDATION PLAN

19 OF 36

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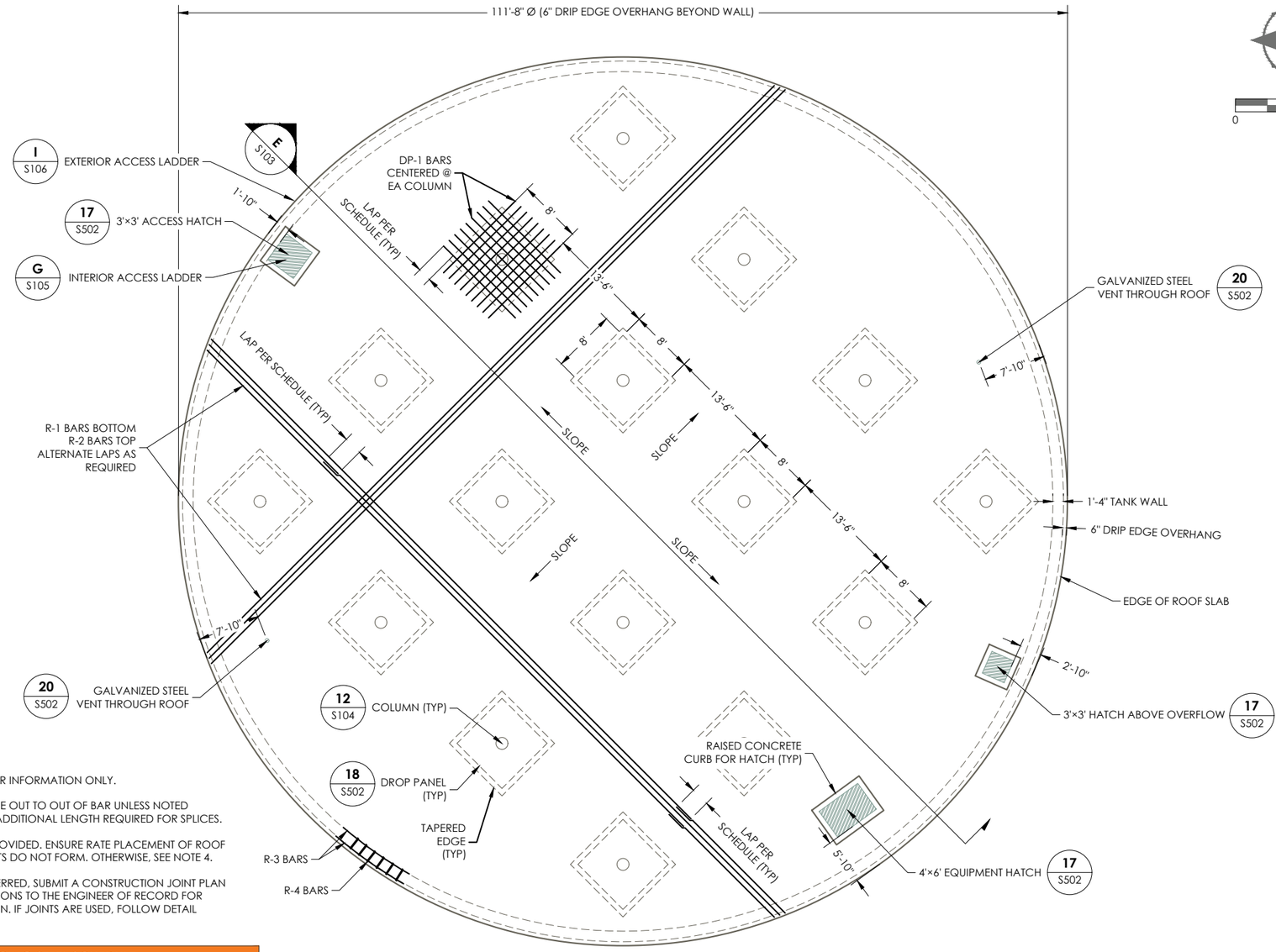

NOTES & REINFORCING STEEL SCHEDULE:

1. REINFORCING STEEL SCHEDULE IS FOR INFORMATION ONLY.
2. REINFORCING STEEL DIMENSIONS ARE OUT TO OUT OF BAR UNLESS NOTED OTHERWISE AND DO NOT INCLUDE ADDITIONAL LENGTH REQUIRED FOR SPLICES.
3. CONSTRUCTION JOINTS ARE NOT PROVIDED. ENSURE RATE PLACEMENT OF ROOF SLAB CONCRETE IS SUCH THAT JOINTS DO NOT FORM. OTHERWISE, SEE NOTE 4.
4. IF CONSTRUCTION JOINTS ARE PREFERRED, SUBMIT A CONSTRUCTION JOINT PLAN SHOWING PROPOSED JOINT LOCATIONS TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO CONSTRUCTION. IF JOINTS ARE USED, FOLLOW DETAIL 15/S501.

ROOF REINFORCING STEEL SCHEDULE

BAR	SIZE	SPACING	NO.	DIMENSIONS
DP-1	#6	12"	288	2'-6" / 7'-9" / 2'-6"
R-1	#6	8"	AS REQ.	VARIES 1'-0" TO 83-4"
R-2	#6	8"	AS REQ.	VARIES 1'-0" TO 83-4"
R-3	#6	AS REQ.	2	CIRCUMFERENCE AS REQ.
R-4	#3	16"	522	2-½" / 2'-0" / 2'-0"

D TANK ROOF PLAN
1/8" = 1'-0"

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13 MARCH 2025

PROMONTORY TANK & BOOSTER

790 SOUTH 6150 WEST OGDEN, UT 84404

TANK ROOF PLAN
20 OF 36
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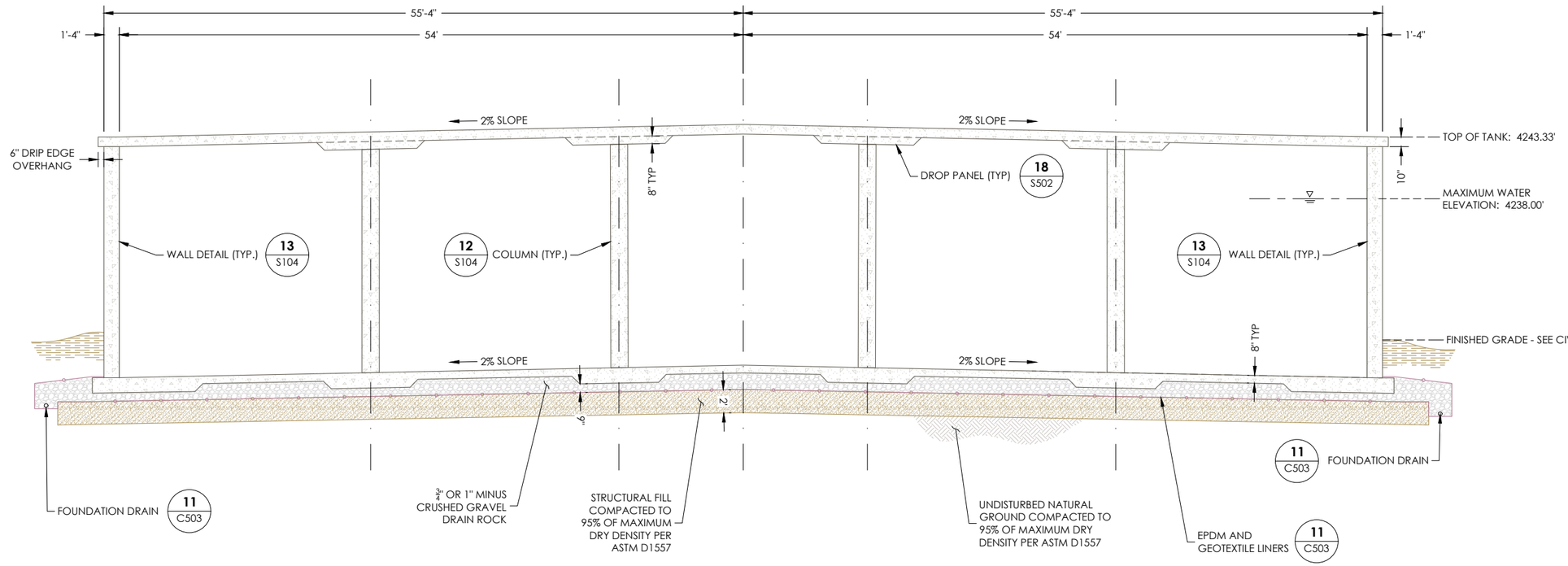
02:49 PM THURSDAY 13 MARCH 2025 | Q:\2024\UT-10127-24 PROMONTORY TANK AND BOOSTER\PROJECT DATA\02 CAD\2.03 SHEET FILES\CONSTRUCTION DRAWINGS\20 S102.DWG



NOTE: STRUCTURAL FILL CONSISTS OF A WELL GRADED SAND A GRAVEL MIXTURE WITH LESS THAN 30% RETAINED ON THE ¾" SIEVE AND LESS THAN 20% PASSING THE NO. 200 SIEVE.

E **TANK SECTION**
3/16" = 1'-0"

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PROMONTORY TANK & BOOSTER

790 SOUTH 6150 WEST OGDEN, UT 84404

TANK SECTION

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NOTES:

1. STAGGER HORIZONTAL SPLICES IN CIRCULAR REINFORCING STEEL 5'-0" MINIMUM. SPLICES SHALL NOT COINCIDE IN VERTICAL ARRAYS MORE FREQUENTLY THAN EVERY FOURTH BAR ROW.
2. WHEN PLACING CONCRETE, ENSURE THAT ALL VOIDS ARE ELIMINATED AND ENSURE THAT THE REINFORCING STEEL DOES NOT CAUSE SEGREGATION OF AGGREGATES.
3. USE ASTM A706 STEEL FOR #8 DOWELS. (W-5 BARS) HOT DIPPED GALVANIZED AFTER FABRICATION.
4. ROUGHEN SURFACE UNDER WALL. SANDBLAST & APPLY BONDING AGENT BEFORE PLACING CONCRETE.
5. TURN UP WATERSTOP IN FLOOR CONSTRUCTION JOINT INTO WALL FOOTING AT CENTER OF FOOTING.
6. SEALANT AT WALL BASE AND ON VERTICAL WALL JOINT TO BE SIKAFLEX 2c NS EZ.

COLUMN REINFORCING STEEL SCHEDULE

BAR	SIZE	SPACING	NO.	DIMENSIONS
C-1	#7	EQ	128	STD HOOK 21'-0"
SPIRAL	#4	3" PITCH	16	20'-8"

REINFORCING STEEL SCHEDULE NOTES:

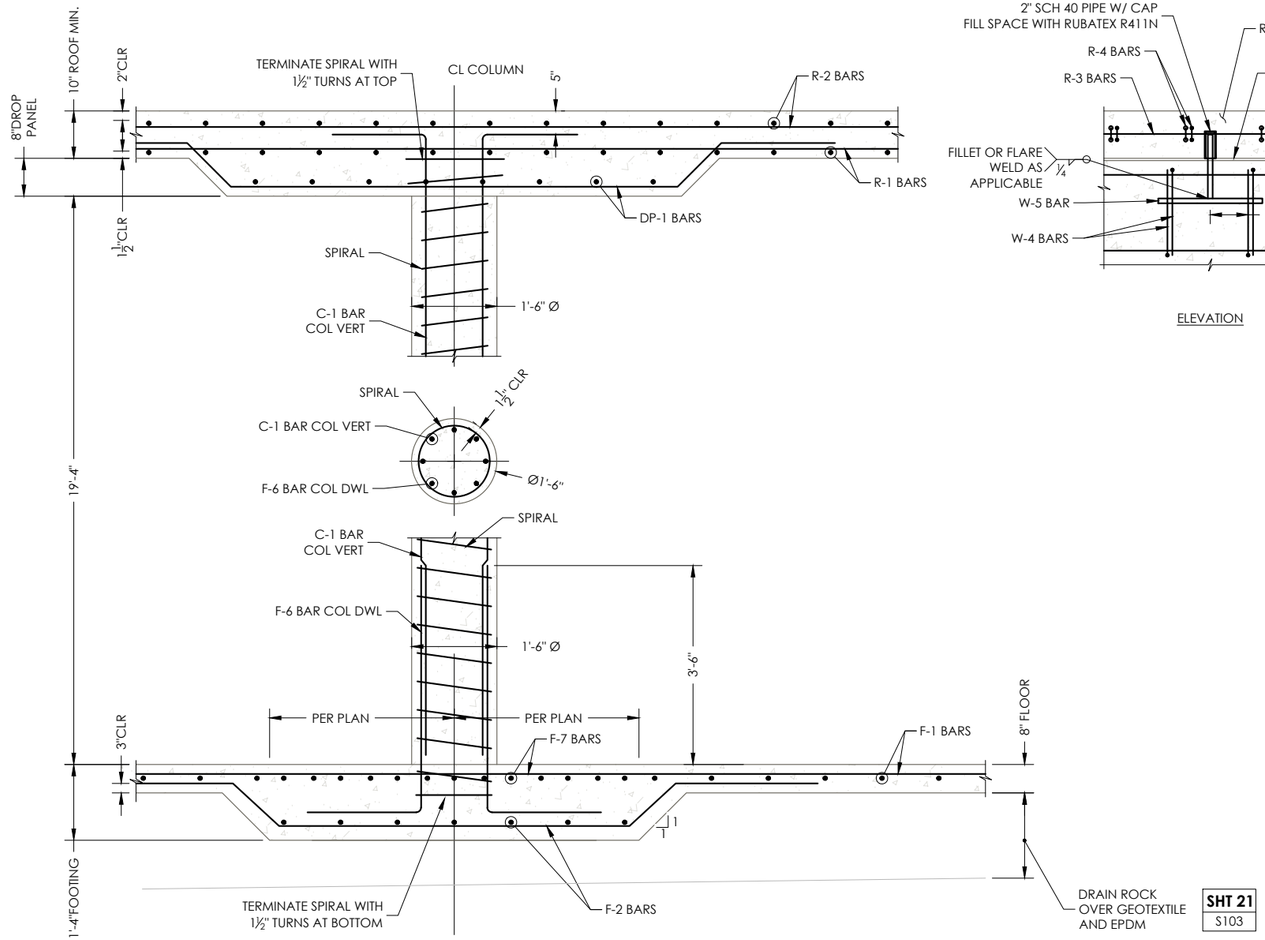
1. REINFORCING STEEL SCHEDULE IS FOR INFORMATION ONLY.
2. REINFORCING STEEL DIMENSIONS ARE OUT TO OUT OF BAR UNLESS NOTED OTHERWISE AND DO NOT INCLUDE ADDITIONAL LENGTH REQUIRED FOR SPLICES.

WALL REINFORCING STEEL SCHEDULE

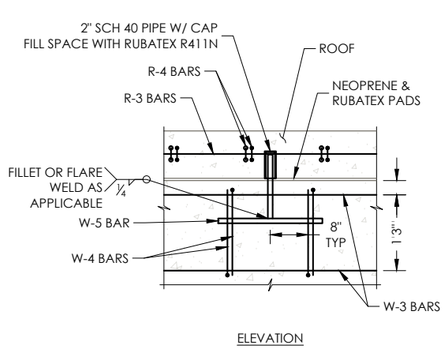
BAR	SIZE	SPACING	NO.	DIMENSIONS
W-1	#5	12"	688	21'-10"
W-2	#6	VARIES	76	CIRCUMFERENCE AS REQUIRED
W-3	#4	EQ	4	CIRCUMFERENCE AS REQUIRED
W-4	#4	EQ	680	1'-6" / 1'-6" 5"
W-5	#8	2'-0"	170	1'-2" / 1'-10" (GRADE A706 & GALVANIZED

REINFORCING STEEL SCHEDULE NOTES:

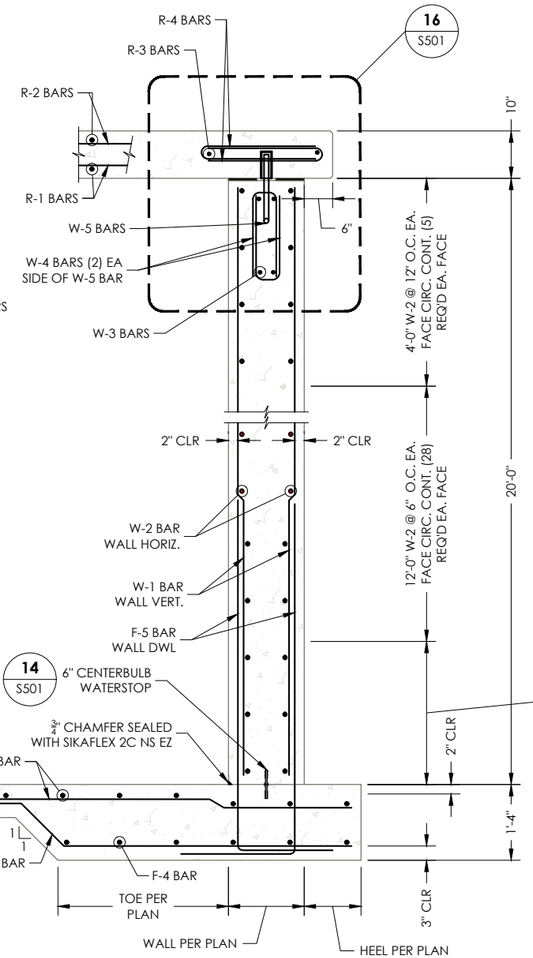
1. REINFORCING STEEL SCHEDULE IS FOR INFORMATION ONLY.
2. REINFORCING STEEL DIMENSIONS ARE OUT TO OUT OF BAR UNLESS NOTED OTHERWISE AND DO NOT INCLUDE ADDITIONAL LENGTH REQUIRED FOR SPLICES.
3. W-4 BAR PLACEMENT IS SHOWN ON ELEVATION THIS SHEET.



12 **TYPICAL COLUMN DETAIL**
3/4" = 1'-0"



ELEVATION



13 **TYPICAL WALL SECTION**
3/4" = 1'-0"

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PROMONTORY TANK & BOOSTER

790 SOUTH 6150 WEST OGDEN, UT 84404

TANK ENLARGED SECTIONS

22 OF 36

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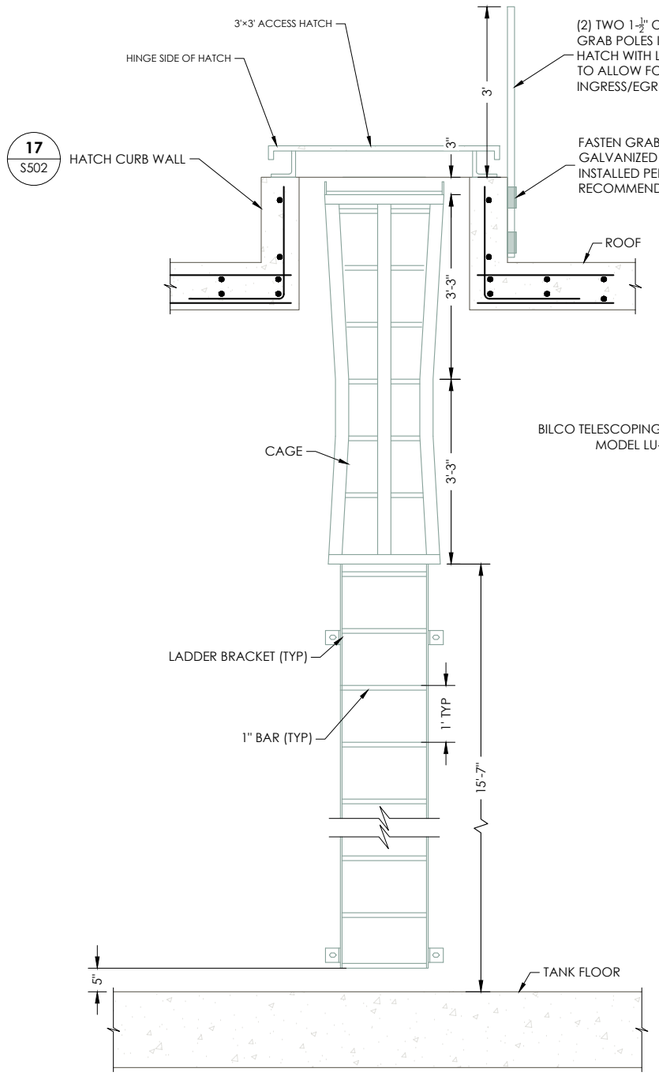
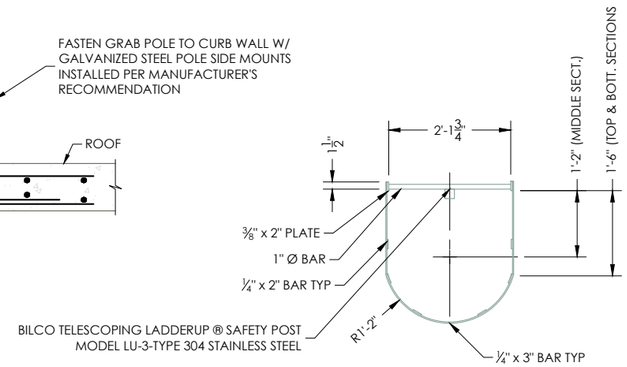
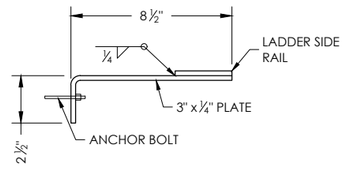




F **LADDER CROSS SECTION**
3/4" = 1'-0"

LADDER NOTES:

1. ALL MATERIAL FOR PIPE SIDE RAILS, RUNGS, BRACKETS, AND BASE PLATES TO BE GALVANIZED OR STAINLESS STEEL.
2. GRATING TO BE GALVANIZED OR STAINLESS STEEL.
3. LADDER RUNGS TO BE 1" Ø BAR.
4. ALL WELDS TO BE ¼" MINIMUM.
5. SEE DETAIL FOR HATCH
6. ALL ALUMINUM IN CONTACT WITH CONCRETE MUST BE COATED WITH A HEAVY BITUMASTIC COATING OR EPOXY PAINT.
7. USE S.S. 316 FOR ALL BOLTS UNLESS NOTED OTHERWISE.
8. WHERE S.S. BOLTS ARE IN CONTACT WITH DISSIMILAR METALS, USE INSULATING SLEEVES AND PHENOLIC WASHERS TO ELECTRICALLY ISOLATE THE BOLTS.

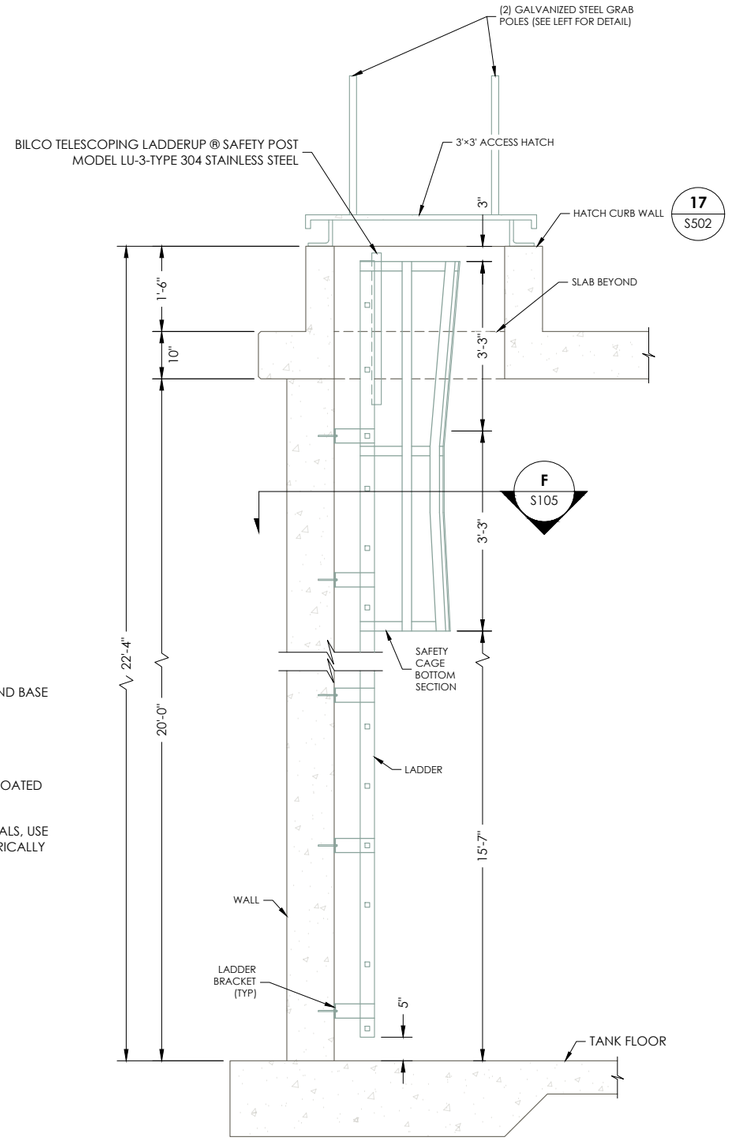


LADDER BRACKET DETAIL
SCALE: NTS

NOTES:

1. ALL METALS TO BE STAINLESS STEEL.
2. WELD ALL JOINTS.
3. USE ½" Ø STAINLESS STEEL EPOXY ANCHOR BOLTS w/ 6" MIN. EMBEDMENT.

G **INTERIOR ACCESS LADDER**
NOT TO SCALE



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UT-10127-24
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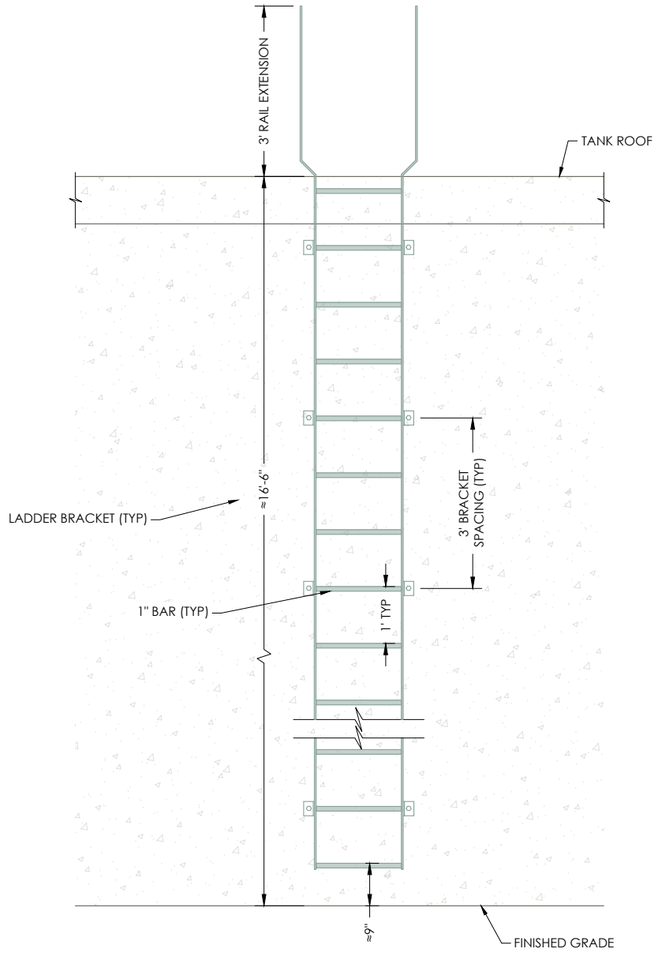
PROMONTORY TANK & BOOSTER

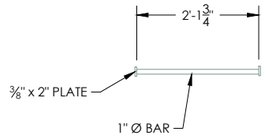
790 SOUTH 6150 WEST OGDEN, UT 84404

INTERIOR ACCESS LADDER DETAILS

23 OF 36

S105

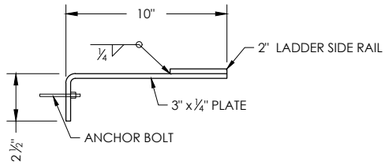




H **LADDER CROSS SECTION**
3/4" = 1'-0"

LADDER NOTES:

1. ALL MATERIAL FOR PIPE SIDE RAILS, RUNGS, BRACKETS, AND BASE PLATES TO BE GALVANIZED OR STAINLESS STEEL.
2. GRATING TO BE GALVANIZED OR STAINLESS STEEL.
3. LADDER RUNGS TO BE 1" Ø BAR.
4. ALL WELDS TO BE ¼" MINIMUM.
5. SEE DETAIL FOR HATCH
6. ALL ALUMINUM IN CONTACT WITH CONCRETE MUST BE COATED WITH A HEAVY BITUMASTIC COATING OR EPOXY PAINT.
7. USE S.S. 316 FOR ALL BOLTS UNLESS NOTED OTHERWISE.
8. WHERE S.S. BOLTS ARE IN CONTACT WITH DISSIMILAR METALS, USE INSULATING SLEEVES AND PHENOLIC WASHERS TO ELECTRICALLY ISOLATE THE BOLTS.

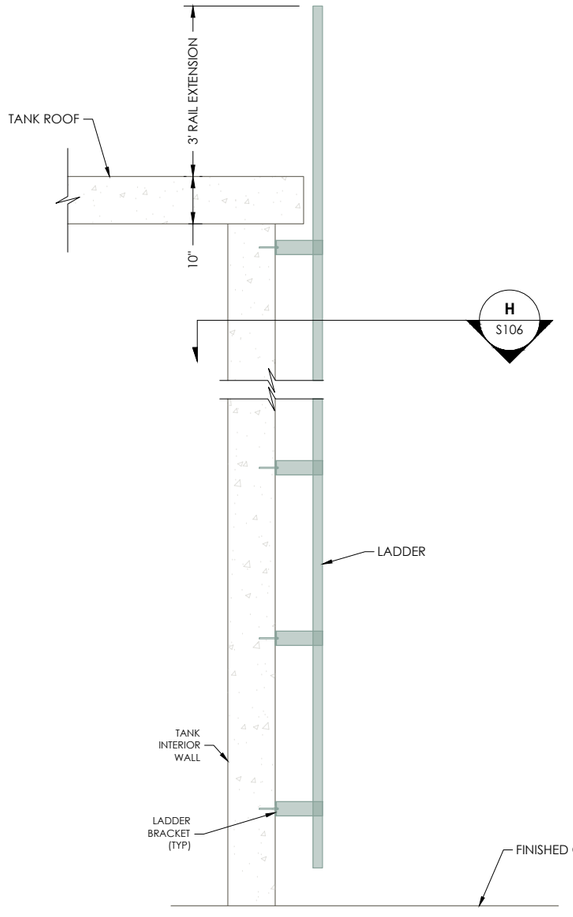


LADDER BRACKET DETAIL
SCALE: NTS

NOTES:

1. ALL METALS TO BE STAINLESS STEEL.
2. WELD ALL JOINTS.
3. USE ½" Ø STAINLESS STEEL EPOXY ANCHOR BOLTS w/ 6" MIN. EMBEDMENT.

1 **EXTERIOR LADDER DETAIL**
NOT TO SCALE



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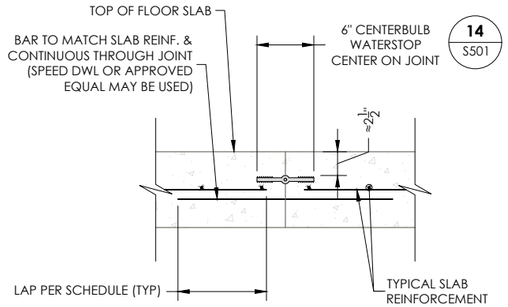
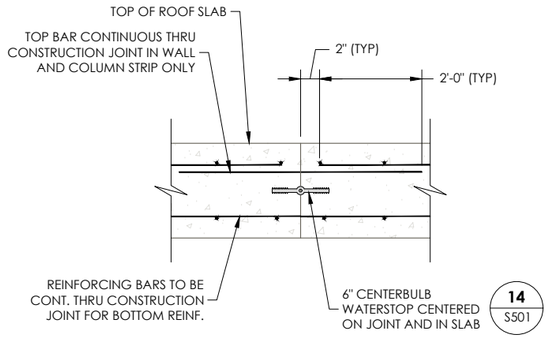
790 SOUTH 6150 WEST OGDEN, UT 84404

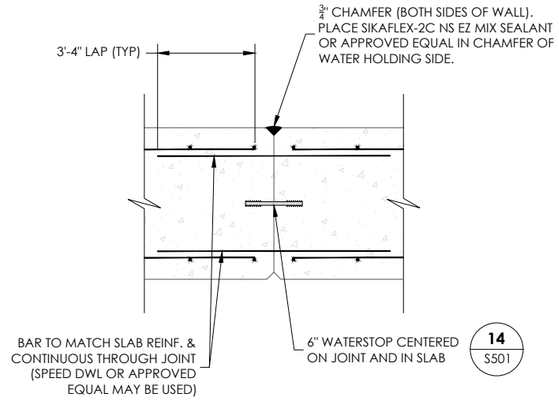
EXTERIOR ACCESS LADDER DETAILS
24 OF 36
S106



TANK FLOOR



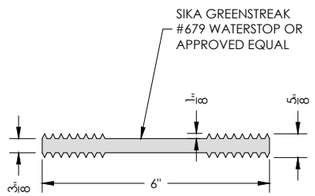
TANK ROOF



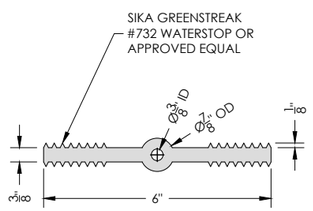
TANK WALL (VERTICAL)

NOTE:
1. **CONSTRUCTION JOINTS AT FLOOR AND ROOF SLABS MAY BE USED AT CONTRACTOR'S DISCRETION. SEE NOTES ON TANK FOUNDATION PLAN AND ROOF PLAN.**

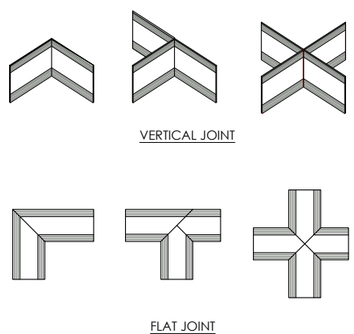
15 CONSTRUCTION JOINTS
NOT TO SCALE



6" WATERSTOP



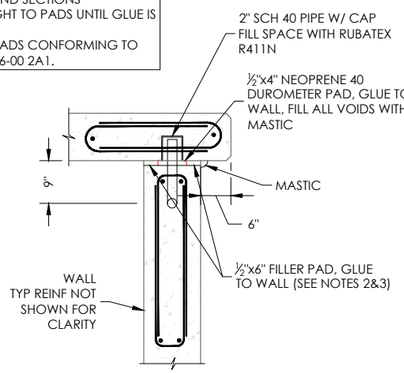
6" CENTERBULB WATERSTOP



TYPICAL WATERSTOP JOINT SEAMS

14 WATERSTOPS
NOT TO SCALE

NOTE:
1. FOR REBAR SIZE AND SPACING, REFER TO PLANS AND SECTIONS
2. APPLY WEIGHT TO PADS UNTIL GLUE IS SET.
3. USE FILLER PADS CONFORMING TO ASTM D 1056-00 2A1.



16 TOP OF WALL
NOT TO SCALE

CONTACT INFORMATION

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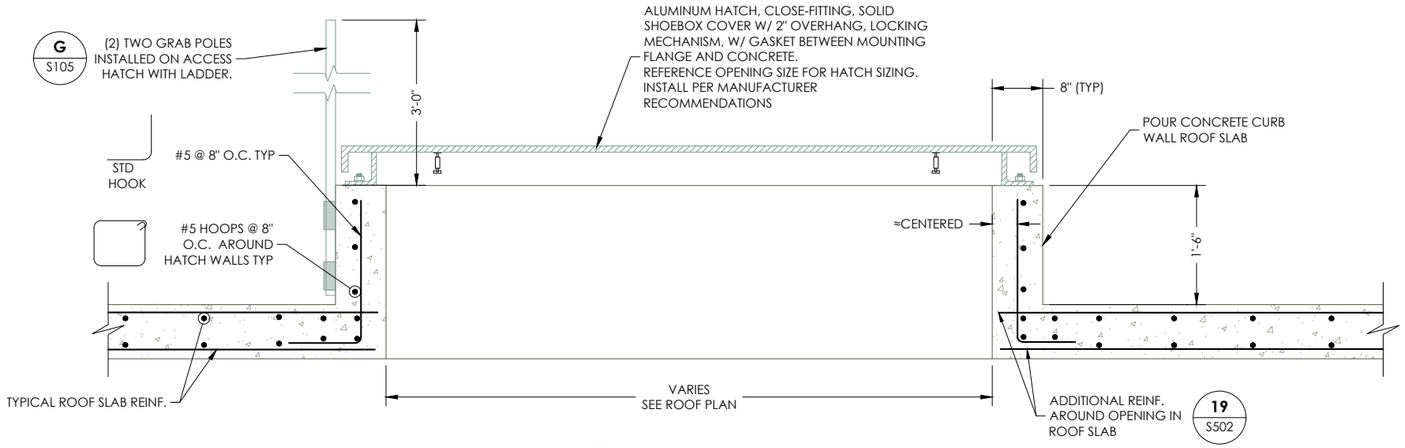
STRUCTURAL DETAILS

25 OF 36

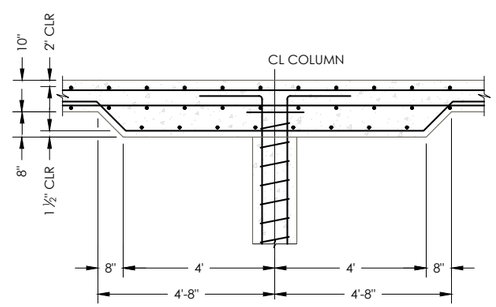
S501



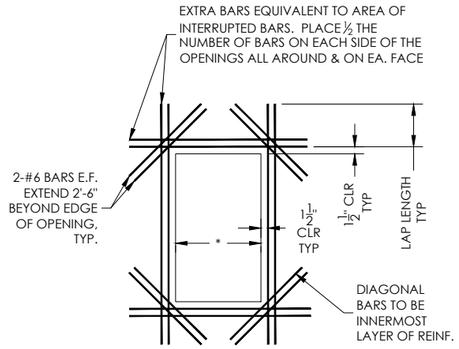
17 HATCH SECTION
NOT TO SCALE

NOTE:
1. VENT PIPING SHALL BE HOT DIPPED GALVANIZED (INTERIOR AND EXTERIOR).
2. SLAB REINFORCEMENT NOT SHOWN FOR CLARITY, REFER TO OTHER DETAILS FOR REINFORCEMENT REQUIREMENTS.
3. REFER TO ROOF PLAN FOR VENT LOCATIONS.
4. STEEL PIPE SHALL BE 8" STANDARD SCHEDULE 40 PIPE.
5. FLANGES SHALL BE WELD NECK & SLIP-ON FLANGES RATED TO 150 LB AS SHOWN ON DETAIL. USE SST BOLTS A182 TP304.
6. CONCRETE CURB AROUND VENTS TO BE POURED IN SINGLE POUR WITH ROOF DECK PER STATE CODE R309-545-9.

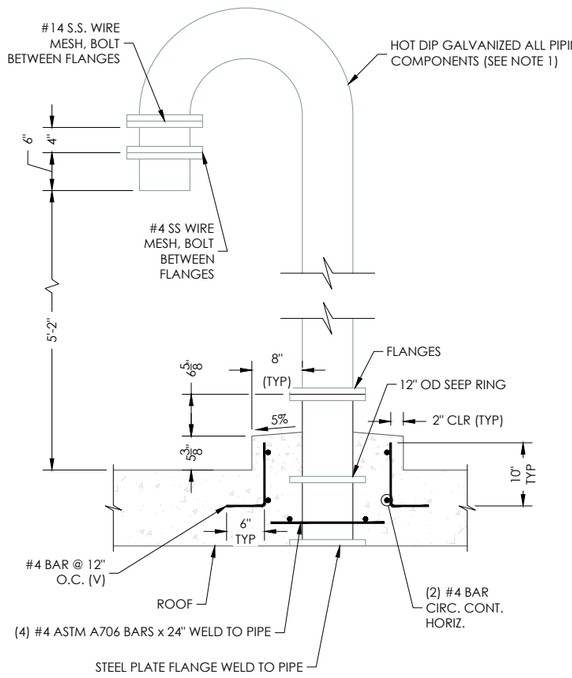
NOTE:
FOR REBAR SIZE AND SPACING, REFER TO PLANS AND SECTIONS



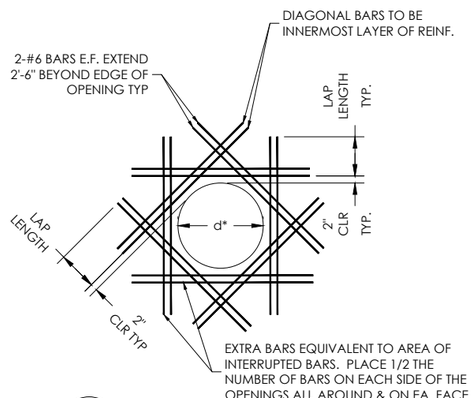
18 DROP PANEL
1/2" = 1'-0"



19 ADDITIONAL REINF. @ RECTANGULAR OPENINGS
NOT TO SCALE



20 GALVANIZED STEEL VENT
1" = 1'-0"



21 ADDITIONAL REINF. @ CIRCULAR OPENINGS

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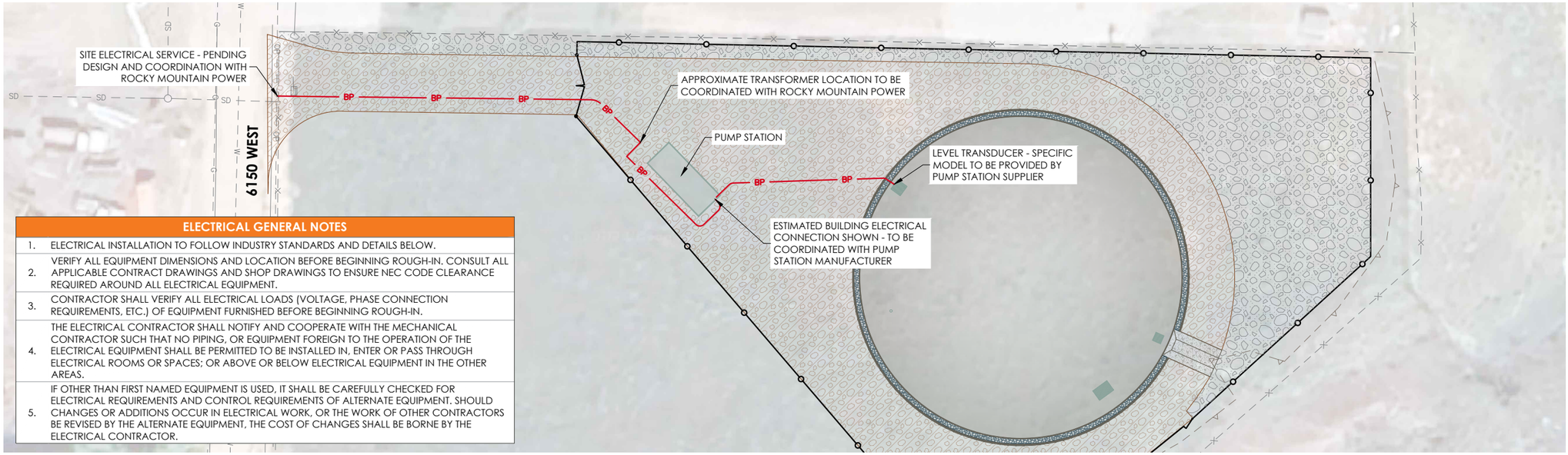
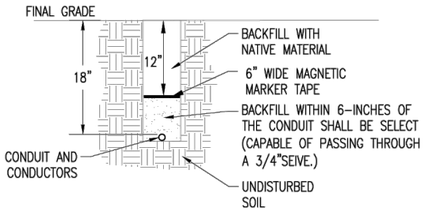
STRUCTURAL DETAILS
26 OF 36
S502

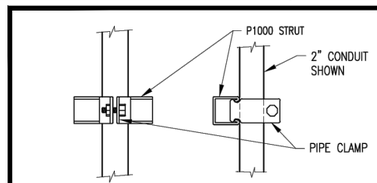


ELECTRICAL GENERAL NOTES

1. ELECTRICAL INSTALLATION TO FOLLOW INDUSTRY STANDARDS AND DETAILS BELOW.
2. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATION BEFORE BEGINNING ROUGH-IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO ENSURE NEC CODE CLEARANCE REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
3. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED BEFORE BEGINNING ROUGH-IN.
4. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THROUGH ELECTRICAL ROOMS OR SPACES; OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN THE OTHER AREAS.
5. IF OTHER THAN FIRST NAMED EQUIPMENT IS USED, IT SHALL BE CAREFULLY CHECKED FOR ELECTRICAL REQUIREMENTS AND CONTROL REQUIREMENTS OF ALTERNATE EQUIPMENT. SHOULD CHANGES OR ADDITIONS OCCUR IN ELECTRICAL WORK, OR THE WORK OF OTHER CONTRACTORS BE REVISED BY THE ALTERNATE EQUIPMENT, THE COST OF CHANGES SHALL BE BORNE BY THE ELECTRICAL CONTRACTOR.

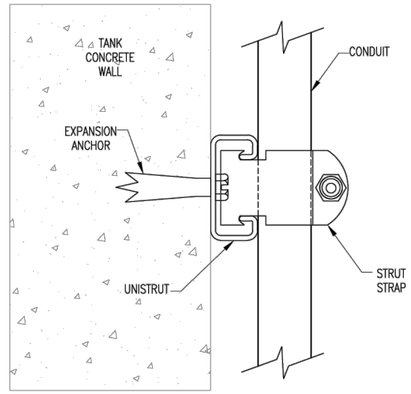


22 TYPICAL ELECTRICAL TRENCH
NOT TO SCALE

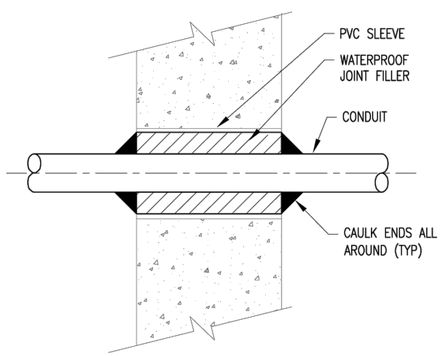


CONDUIT PIPE CLAMPS*			
SIZE	EMT	RGS	EMT/GRS
1/2"	P1426	P1111	–
3/4"	P1427	P1112	P1212
1"	P1428	P1113	P1213
1-1/4"	P1429	P1114	P1214
1-1/2"	P1430	P1115	P1215
2"	P1431	P1117	P1217
2-1/2"	P1118	P1118	–
3"	P1119	P1119	–
3-1/2"	P1120	P1120	–
4"	P1121	P1121	–

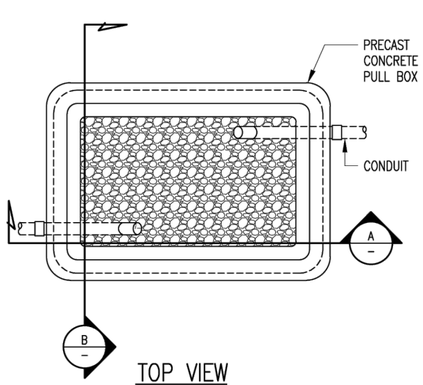
* = SUPPLIED WITH SLOTTED HEAD SCREW AND NUT

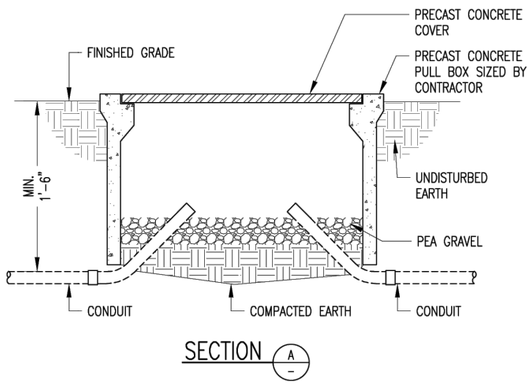


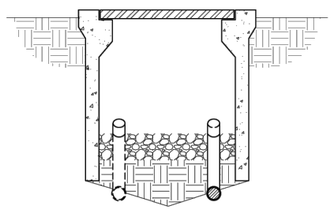
23 CONDUIT STRUT & ATTACHMENT
NOT TO SCALE



24 CONDUIT THROUGH NEW CONCRETE
NOT TO SCALE







25 TYPICAL PRECAST CONCRETE PULL BOX
NOT TO SCALE

CONTACT INFORMATION
Horrocks.
4246 S RIVERBOAT RD., STE 200
SALT LAKE CITY, UT 84123
P: 801.359.5565
BlackPine
Gardner

REVISIONS

DESIGN

PRINCIPAL : J. PRETTYMAN
MANAGER: K. JONES
REVIEWER : S. WOODRUFF
DRAFTER : T. MARTINEZ

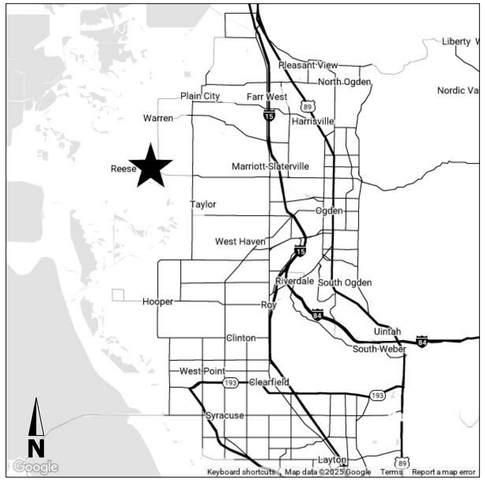
PROJECT
UT-10127-24
13 MARCH 2025

PROMONTORY TANK & BOOSTER

ELECTRICAL SITE PLAN
27 OF 36
E101

FOR BID

PROMONTORY BOOSTER
WEST OGDEN, UTAH



VICINITY MAP

LOCATION MAP

SITE ADDRESS

790 SOUTH 6150
WEST OGDEN, UT 84404

SHEET INDEX

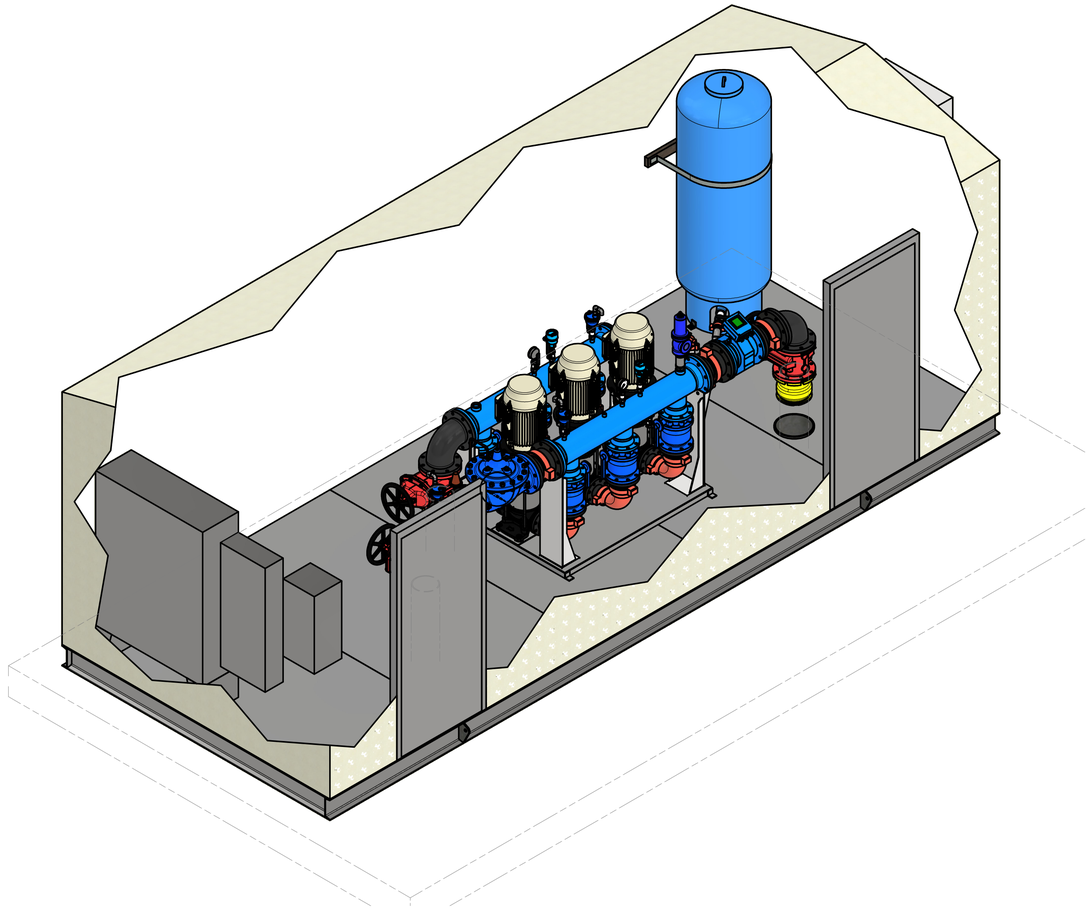
SHEET	DESCRIPTION
G-01	TITLE SHEET
C-01	SITE LAYOUT
M-01	SYSTEM DRAWING

PUMP STATION CONFIGURATION

CONFIGURATION	DUTY PUMPS	STANDBY PUMPS	PUMP MODEL	PUMP HP	RATED FLOW (GPM)	RATED TDH (FT)	SYSTEM CAPACITY (GPM)
TRIPLEX	2	1	GRUNDFOS CR 95-2-1	30	400 GPM	200	800

ELECTRICAL INFORMATION

SYSTEM VOLTAGE	FLA	CONTROLLER	ENCLOSURE	TERMINATION	BACKUP SYSTEMS
480V / 3PH	141	COMPACT LOGIXS	NEMA 12	DIRECT	N/A



FOR BID

REVISION HISTORY

BY	DESCRIPTION	DATE	REV

VERIFY SCALE
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY
0 1"

DSN: KB
DRN: KB
CKD:
DATE: 1-15-25

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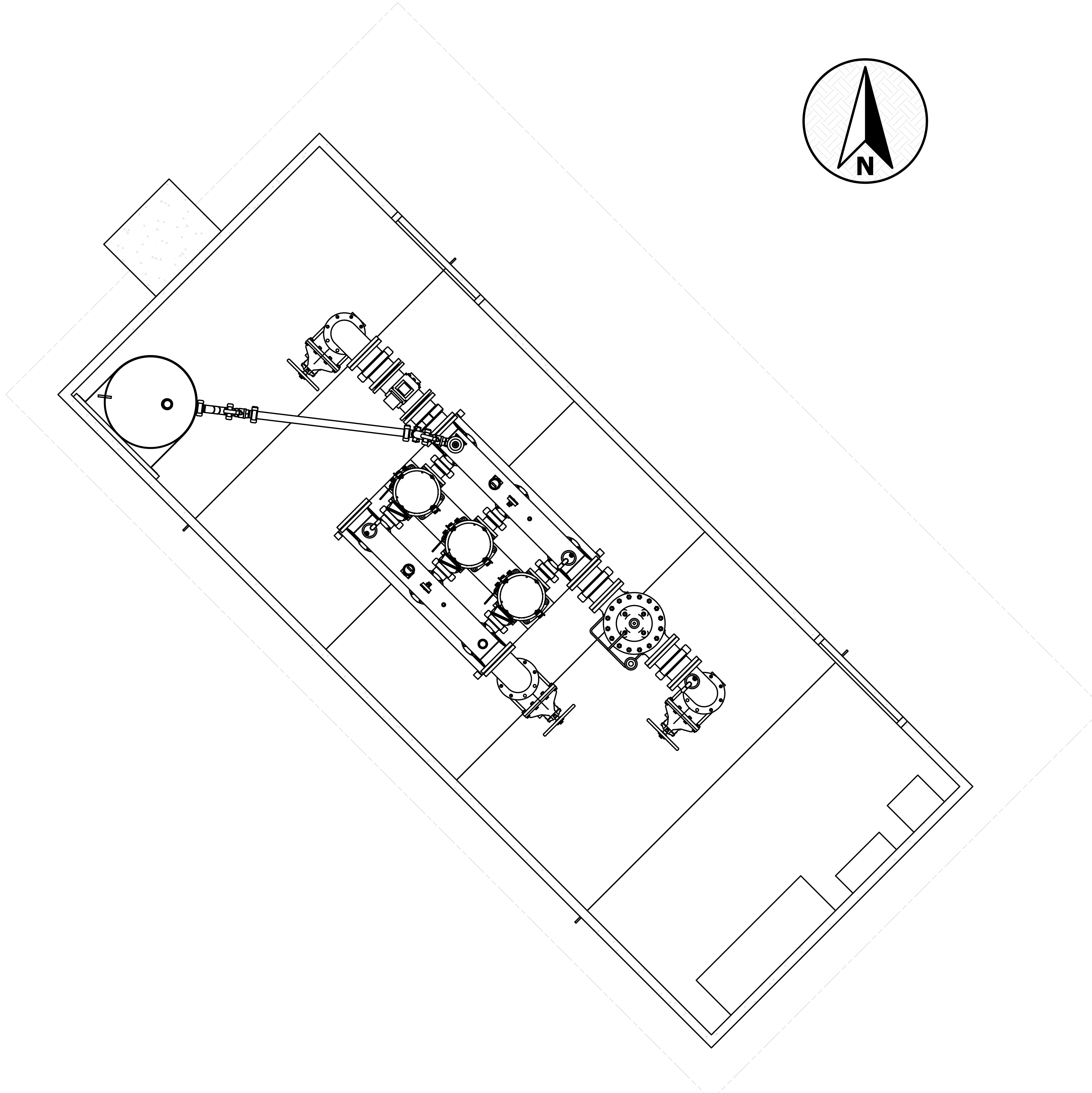
18240 NORTH BANK ROAD
ROSEBURG, OREGON 97470
PHONE: (541) 496-9678
WWW.ROMTECUTILITIES.COM

PROMONTORY BOOSTER
WEST OGDEN, UTAH
POTABLE BOOSTER STATION
TITLE SHEET

SHEET
G-01

FOR BID



NOTE: ALL DIMENSIONS AND ELEVATIONS SHOWN ARE NOMINAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE ON-SITE CONTRACTOR OR ROMTEC UTILITIES CUSTOMER (NOT ROMTEC UTILITIES) TO VERIFY THE ACCURACY OF ANY CRITICAL DIMENSIONS OR ELEVATIONS PRIOR TO SETTING OR INSTALLING ANY EQUIPMENT.

FOR BID

REVISION HISTORY

REV	DATE	DESCRIPTION	BY

VERIFY SCALE
DRAWING HAS BEEN FORMATTED FOR 34 x 22 SHEET. BAR EQUALS ONE INCH
0 — 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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PHONE: (541) 496-9678
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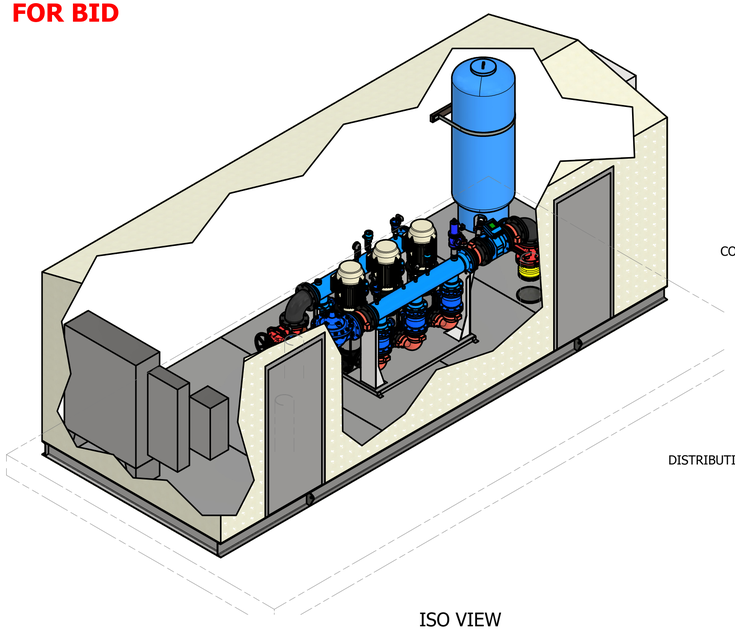
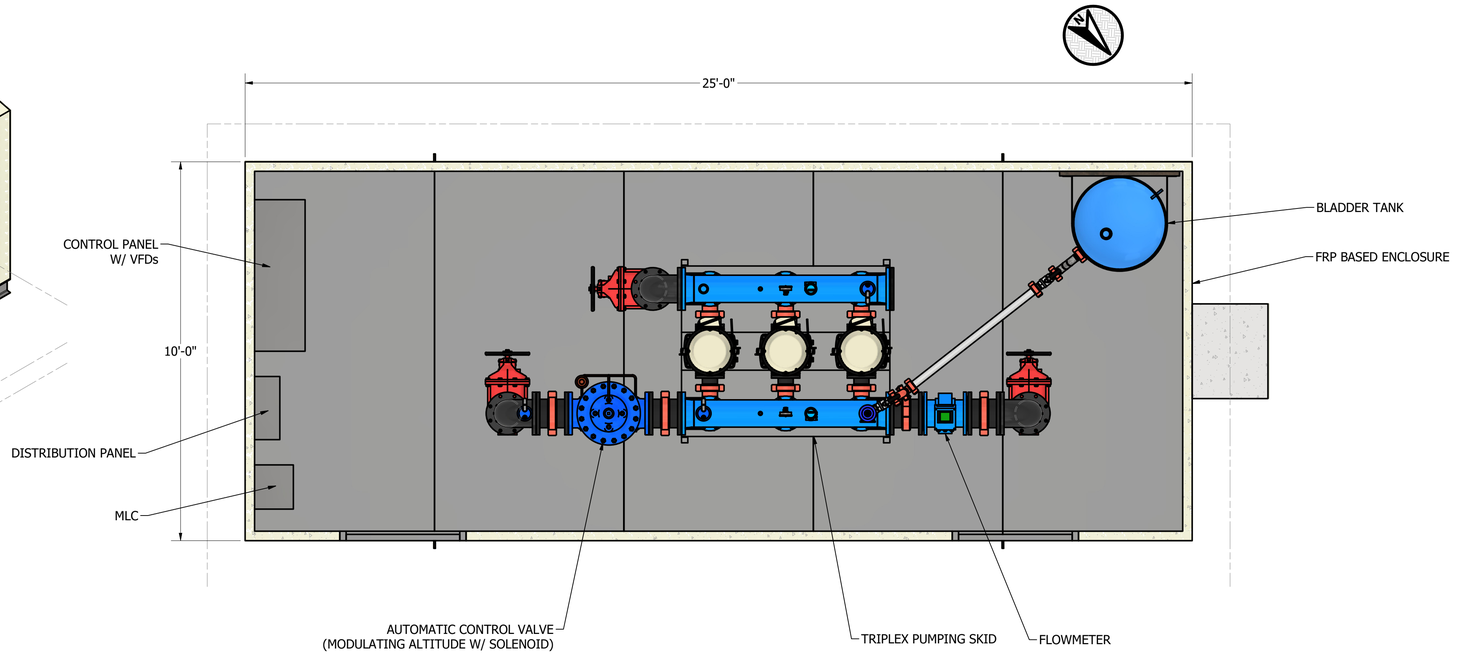
PROMONTORY BOOSTER
WEST OGDEN, UTAH
POTABLE WATER BOOSTER STATION
LAYOUT DRAWING

SHEET
C-01

FOR BID



ISO VIEW
SCALE 1 / 36

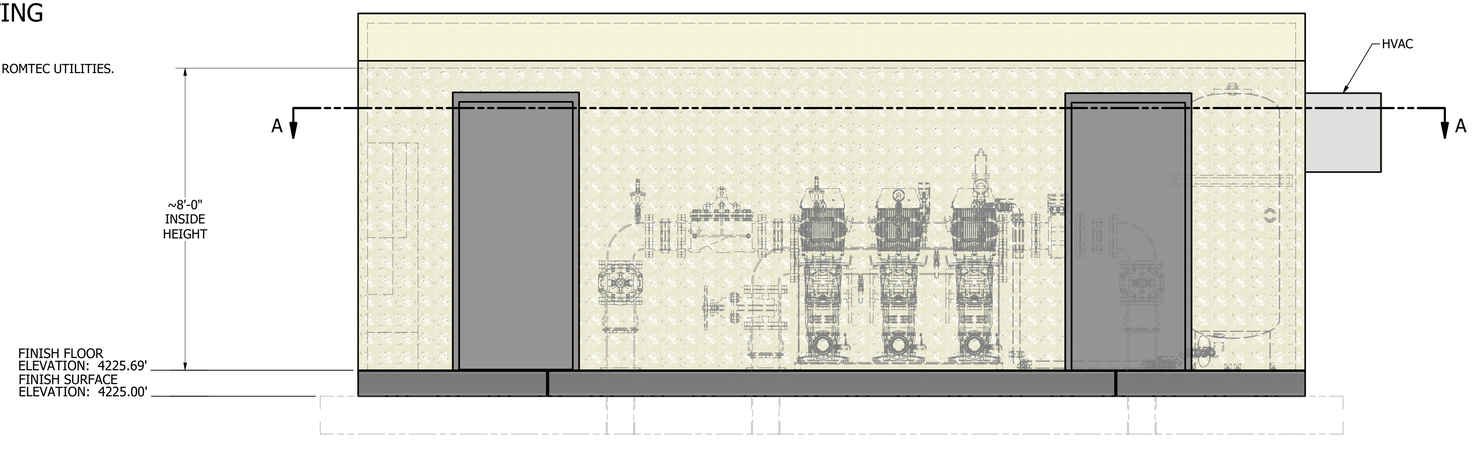


SECTION A-A
SCALE 1 / 24

CONFIGURATION: TRIPLEX
MODEL: GRUNDFOS CR 95-2-1 30HP
DUTY POINT: 400 GPM AT 200 TDH (EACH)
FEATURES: FLOWMETER, BLADDER TANK
AUTOMATIC CONTROL VALVE
PRESSURE GAUGES, TRANSMITTERS, & SWITCHES
FIBERGLASS ENCLOSURE W/ LIGHTING & HEATING

NOTE REGARDING SCOPE DELINEATION.
COMPONENTS SHOWN WITHIN THE ENCLOSURE WILL BE PRE-INSTALLED AND PRE-WIRED BY ROMTEC UTILITIES.

BIDDING CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING:
- OFFLOADING & INSTALLATION OF COMPLETED ENCLOSURE
- EXTERNAL ELECTRICAL WORK (ELECTRIC SERVICE, METER BASE, ETC)
- UNDERGROUND PIPE AND WORK (TO BE STUBBED UP PER FINAL DRAWINGS)
- SLAB ON GRADE CONCRETE PAD (DIMENSIONS TBD PER FINAL DRAWINGS)



FRONT VIEW
SCALE 1 / 24

NOTE: ALL DIMENSIONS AND ELEVATIONS SHOWN ARE NOMINAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE ON-SITE CONTRACTOR OR ROMTEC UTILITIES CUSTOMER (NOT ROMTEC UTILITIES) TO VERIFY THE ACCURACY OF ANY CRITICAL DIMENSIONS OR ELEVATIONS PRIOR TO SETTING OR INSTALLING ANY EQUIPMENT.

ROMTEC UTILITIES

FOR BID

REV	DATE	DESCRIPTION	BY
		REVISION HISTORY	

VERIFY SCALE
DRAWINGS MAY HAVE BEEN REDUCED OR ENLARGED FROM ORIGINAL SIZE. BAR EQUALS ONE INCH
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ROSEBURG, OREGON 97470
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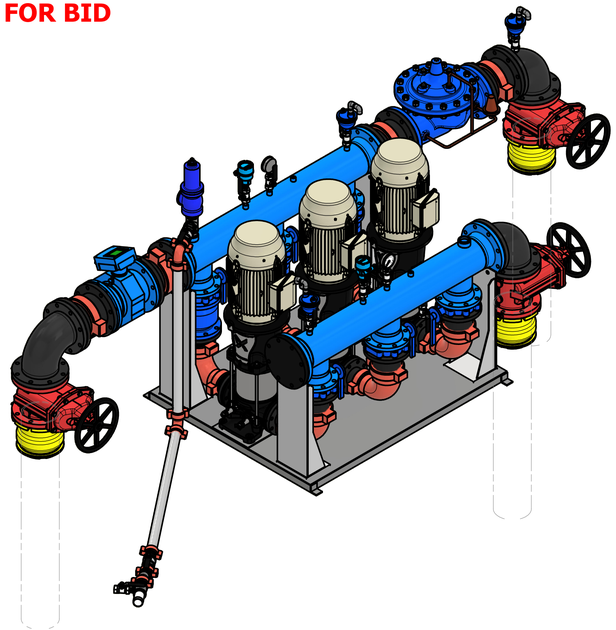
WWW.ROMTECUTILITIES.COM

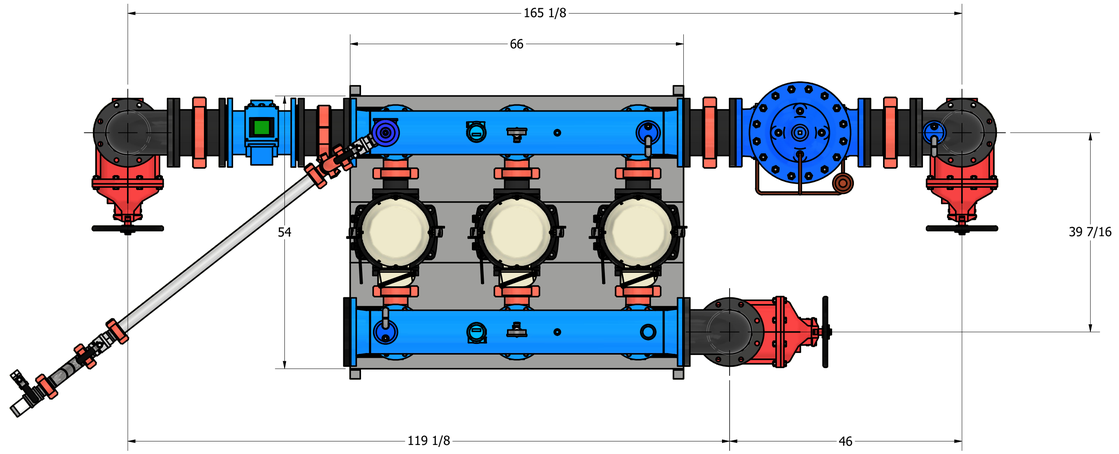
PROMONTORY BOOSTER
WEST OGDEN, UTAH
POTABLE WATER BOOSTER STATION
SYSTEM DRAWING

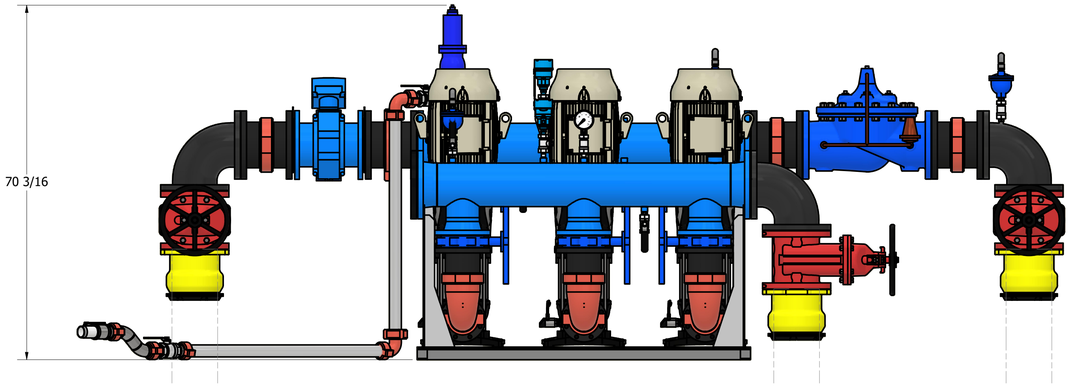
SHEET
M-01

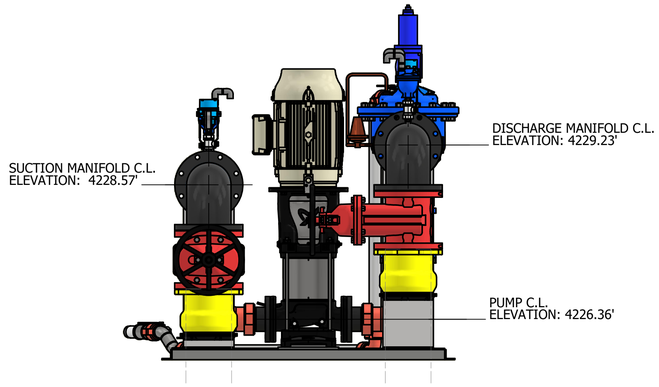
FOR BID



CONFIGURATION: TRIPLEX
MODEL: GRUNDFOS CR 95-2-1 30HP
DUTY POINT: 400 GPM AT 200 TDH (EACH)
FEATURES: FLOWMETER, BLADDER TANK
AUTOMATIC CONTROL VALVE
PRESSURE GAUGES, TRANSMITTERS, & SWITCHES
FIBERGLASS ENCLOSURE W/ LIGHTING & HEATING







NOTE: ALL DIMENSIONS AND ELEVATIONS SHOWN ARE NOMINAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE ON-SITE CONTRACTOR OR ROMTEC UTILITIES CUSTOMER (NOT ROMTEC UTILITIES) TO VERIFY THE ACCURACY OF ANY CRITICAL DIMENSIONS OR ELEVATIONS PRIOR TO SETTING OR INSTALLING ANY EQUIPMENT.

FOR BID

ROMTEC UTILITIES

REVISION HISTORY

REV	DATE	DESCRIPTION	BY

VERIFY SCALE
BAR MEASURES 1" ON ORIGINAL DRAWING WHEN PRINTED FOR ACCURATE SCALE
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

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DRN: KB
CK'D:
DATE: 1-15-24

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PROMONTORY BOOSTER
WEST OGDEN, UTAH
BOOSTER PUMP SYSTEM
SYSTEM DRAWING

SHEET
M-02

GENERAL INFORMATION
- ELECTRICAL SERVICE - 480V, 3PH
- MAIN PUMPS - (2) 30HP, 460V, 3PH, 40 FLA, TRIPLEX CONFIGURATION
- MAIN PUMP MODEL - GRUNDFOS, CR 95-2-1
- PRIMARY CONTROLLER - ALLEN-BRADLEY COMPACTLOGIX PLC CONFIGURED FOR TRIPLEX
- DEVICE MOUNTING - INNER DEADFRONT DOOR
- PANEL MOUNTING - WALL MOUNT

INSTRUMENTATION
- INLET PRESSURE SENSOR - (1) E&H PMP51
- OUTLET PRESSURE SENSOR - (1) E&H PMP51
- FLOW SENSOR - (1) E&W W400, 8"
- SUCTION/DISCHARGE PRESSURE SENSING - (6) PROSENSE EPS25 SERIES

PUMP CONFIGURATION
- MANUFACTURER - GRUNDFOS
- MODEL - CR 95-2-1
- HP - 30
- FLA - 40
- TRIPLEX

CONTROL PANEL
- POWER 480V,3PH, 3W
- NEMA 12 PAINTED STEEL, 60"H X 60"W X 18"D, 3 POINT LOCKING LATCH
- MAIN DISCONNECT CIRCUIT BREAKER W/LOCKOUT PROVISIONS
- PHASE MONITOR RELAY
- TRANSIENT VOLTAGE SURGE PROTECTION
- HOA SELECTOR SWITCHES
- RUN & FAULT INDICATOR LIGHTS
- ELAPSED TIME METERS
- VARIABLE FREQUENCY DRIVES
- INNER DEADFRONT DOOR MOUNTED DEVICES
- UL LISTED

COMMUNICATIONS
- TELEMETRY CONTACTS; DRY TYPE, FORM-C

CONTROL OPTIONS
- HYDRORANGER LEVEL CONTROLLER FOR MONITORING TANK LEVEL
- AUTOMATIC CONTROL VALVE FOR TANK FILL

LOAD SUMMARY TABLE			
	QTY	DESCRIPTION	LOAD
MOTOR LOADS:			
30HP (40FLA)	3	PUMP	120A
NON-MOTOR LOADS:			
MINI POWER CENTER (15KVA)	1	XFMR	18.1A
SUB TOTAL			138.1A
LARGEST MOTOR X 25%			10A
NON MOTOR LOADS X 25%			4.5A
TOTAL			152.6A

NOTE: MOTOR FLA BASED OFF OF TABLE 430.250 PER NEC ARTICLE 430.6(A)(1).

REV	DATE	DESCRIPTION	BY

REVISION HISTORY

PROJECT #: E0106D10
DSN:
DRN:
CKD:
DATE: 1/17/25

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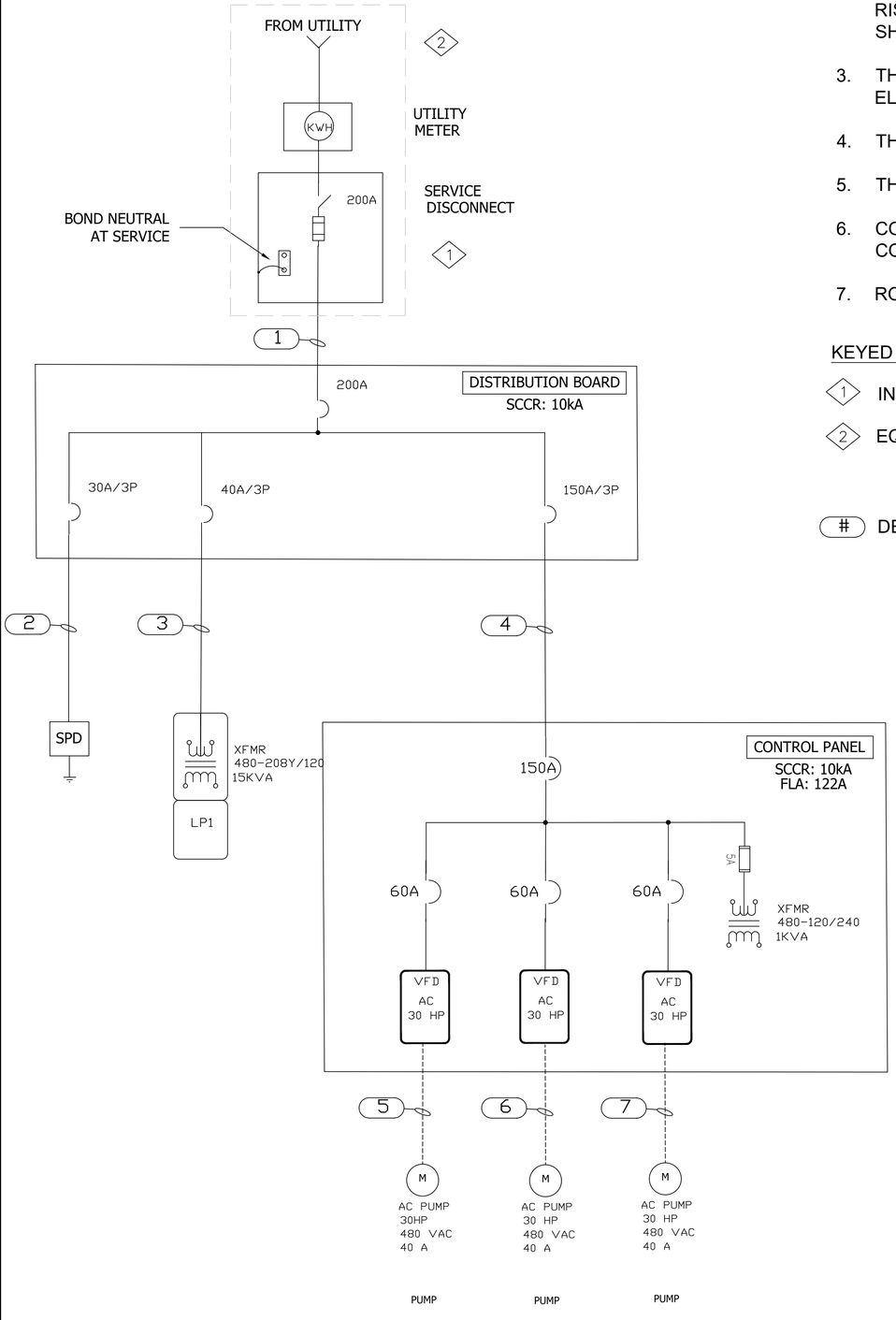
PROMONTORY BOOSTER
WEST WEBER, UT
ELECTICAL SYSTEM OVERVIEW
BOOSTER PUMP SYSTEM

ELECTRICAL SHEET
E1



GENERAL NOTES:

1. PRELIMINARY DRAWINGS AND NOTES PROVIDED FOR ESTIMATING PURPOSES ONLY. NOT FOR CONSTRUCTION.
2. ALL ITEMS RELATED TO THE ELECTRICAL SERVICE SUCH AS SERVICE CONDUIT, CONDUCTORS, DUCT, PAD MOUNT, RISERS, PULL BOXES, FITTINGS, PERMITS, FEES, AND PROTECTIVE COVERING FROM THE SERVICE POINT LOCATION SHALL BE VERIFIED WITH THE SERVING UTILITY.
3. THE ELECTRICAL CONTRACTOR SHALL INSTALL THE SERVICE IN COMPLIANCE WITH THE SERVING UTILITY, NATIONAL ELECTRICAL CODE, STATE AND LOCAL CODES.
4. THE ELECTRICAL CONTRACTOR SHALL SUPPLY ALL ELECTRICAL CONDUIT, WIRE, FASTENERS AND FITTINGS.
5. THE ELECTRICAL CONTRACTOR SHALL SUPPLY THE UTILITY METER BASE AND METHOD OF MAIN SERVICE DISCONNECT.
6. CONNECTIONS TO THE EQUIPMENT, INCLUDING BUT NOT LIMITED TO CONDUIT, WIRING, OTHER ELECTRICAL SERVICES OR OTHER CONNECTIONS, ARE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR AND BEYOND THE SCOPE OF THIS DOCUMENT.
7. ROUTE CONTROL WIRING SEPARATE FROM POWER WIRING.

KEYED NOTES:

1. INSTALL A MAIN SERVICE DISCONNECT OR A FEEDER WITH OVERCURRENT PROTECTION FROM AN EXISTING SOURCE.
2. EQUIPMENT SHOWN WITH DASHED LINES IS SUPPLIED BY OTHERS.

(#) DENOTES CIRCUIT NUMBER.

REV	DATE	DESCRIPTION BY

REVISION HISTORY

PROJECT #: EO106D10
DSN:
DRN:
CKD:
DATE: 1/17/25

ROMTEC UTILITIES
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ROSEBURG, OREGON 97470
PHONE: (541) 496-9678
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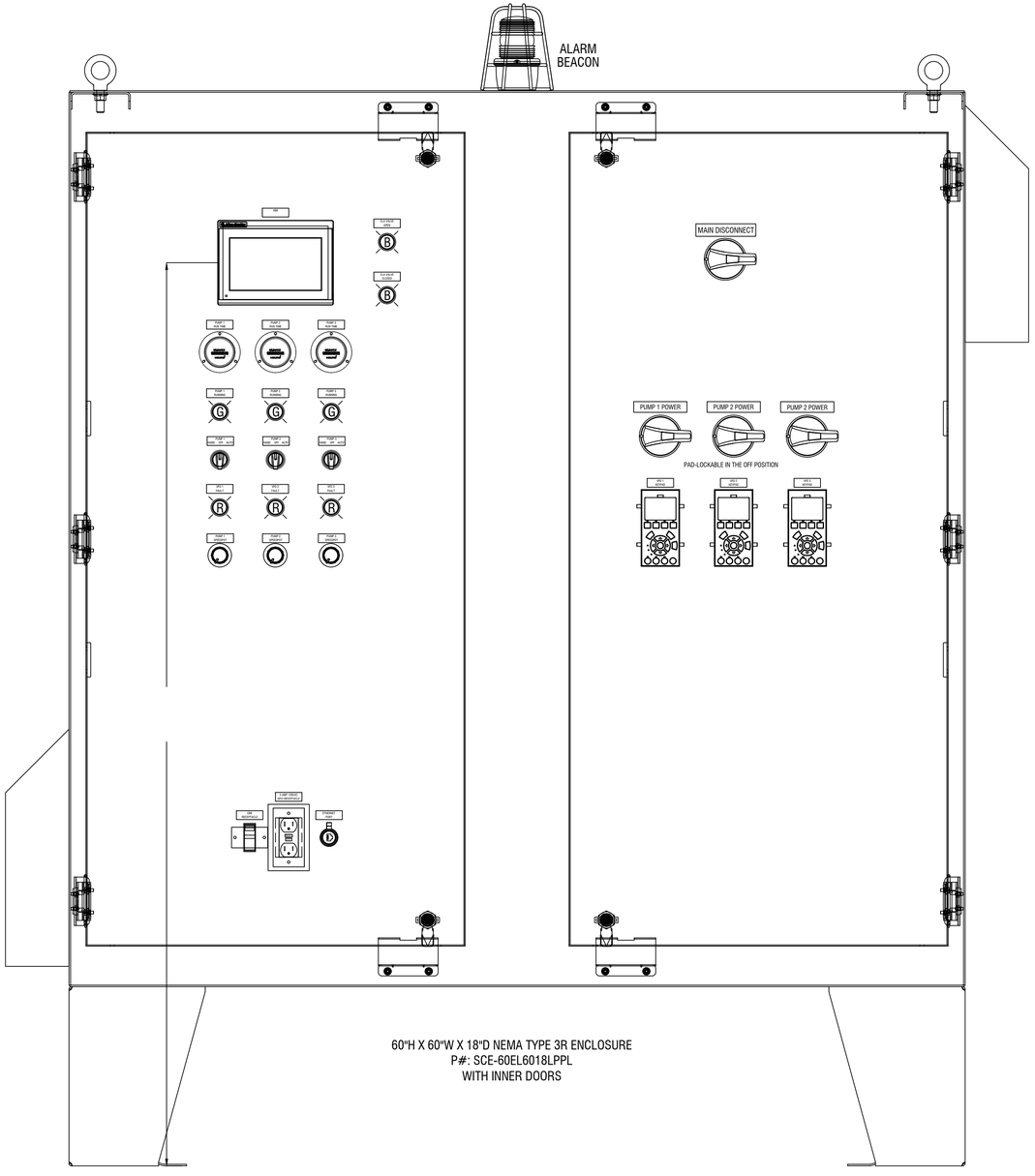
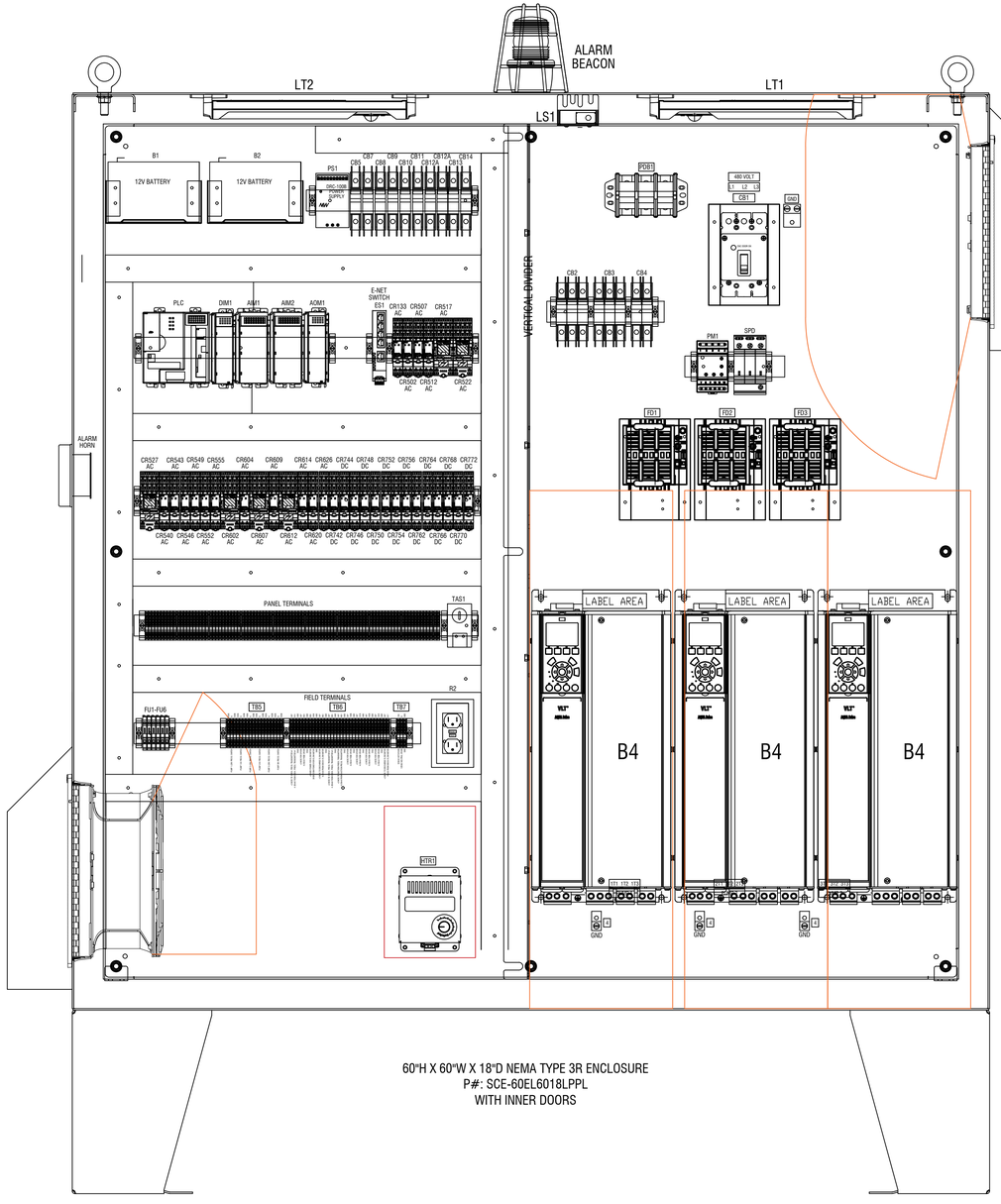
PROMONTORY BOOSTER
WEST WEBER, UT
ONE LINE DIAGRAM
BOOSTER PUMP SYSTEM

ELECTRICAL SHEET
E2



60"H X 60"W X 18"D NEMA TYPE 3R ENCLOSURE
P#: SCE-60EL6018LPPL
WITH INNER DOORS

INNER DOOR VIEW



60"H X 60"W X 18"D NEMA TYPE 3R ENCLOSURE
P#: SCE-60EL6018LPPL
WITH INNER DOORS

BACK PLATE VIEW

THE ENCLOSURE SHOWN REPRESENTS THE INTENT OF THE DESIGN. OFTEN THE ENCLOSURE SIZE AND LAYOUT MUST CHANGE TO ACCOMMODATE THE REQUIRED COMPONENTS AND FINAL DESIGN. PLEASE CONTACT ROMTEC UTILITIES TO OBTAIN ACTUAL AS-BUILT DRAWINGS BEFORE INSTALLATION.

REVISION HISTORY			
REV	DATE	DESCRIPTION	BY

PROJECT #: EO106D10
DSN:
DRN:
CKD:
DATE: 1/17/25

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ROSEBURG, OREGON 97470
PHONE: (541) 496-9678
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PROMONTORY BOOSTER
WEST WEBER, UT
CONTROL PANEL ENCLOSURE LAYOUT
BOOSTER PUMP SYSTEM

ELECTRICAL SHEET
E3

GENERAL NOTES

A. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR REVIEW OF ALL DRAWINGS FOR THE LOCATION AND SIZE OF EQUIPMENT. THE ELECTRICAL CONTRACTOR IS ALSO REQUIRED TO BE COMPLETELY FAMILIAR WITH THE PLANS AND SPECIFICATIONS PRIOR TO BEGINNING INSTALLATION. IF ANY CLARIFICATION IS REQUIRED, THE ELECTRICAL CONTRACTOR SHOULD CONTACT THE APPROPRIATE AUTHORITY PRIOR TO BEGINNING INSTALLATION.

B. THE ELECTRICAL CONTRACTOR OR OWNER IS RESPONSIBLE FOR COORDINATING THE SUPPLY OF INCOMING UTILITY POWER.

C. THE SERVING UTILITY MUST VERIFY ALL ITEMS RELATED TO ELECTRICAL SERVICE, SUCH AS SERVICE CONDUIT, CONDUCTORS, DUCTS, PAD MOUNT(S), RISERS, PULL BOXES, PERMITS, FEES, AND PROTECTIVE COVERING(S).

D. THE ELECTRICAL CONTRACTOR MUST INSTALL THE ELECTRICAL SERVICE IN COMPLIANCE WITH THE SERVING UTILITY, THE NATIONAL ELECTRICAL CODE (NEC), AND ALL APPLICABLE STATE AND LOCAL CODES.

E. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE SUPPLY AND INSTALLATION METHOD OF MAIN SERVICE DISCONNECT OR FEEDER WITH OVERCURRENT PROTECTION FROM EXISTING SOURCE.

F. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR SUPPLY AND INSTALLATION OF ALL REQUIRED CONDUIT AND WIRE TO CONNECT TO THE ROMTEC UTILITIES SUPPLIED EQUIPMENT. ALL CONDUIT AND CONDUCTORS MUST BE SIZED AND INSTALLED PER THE NEC AND ANY APPLICABLE STATE AND LOCAL CODES.

G. INSTALLATION OF EQUIPMENT INCLUDING ANY GROUNDING ARRANGEMENT TO BE IN ACCORDANCE WITH NEC ARTICLES 501, 502 AND ANSI/ISA-RP12.06.01-2003 RECOMMENDED PRACTICE FOR WIRING METHODS FOR HAZARDOUS (CLASSIFIED) LOCATIONS INSTRUMENTATION WHEN APPLICABLE.

H. SEE SEPARATE CONTROL SCHEMATICS (PROVIDED BY THE CONTROL PANEL MANUFACTURER) FOR FURTHER WIRING AND CABLING DETAILS.

I. MINIMUM SPACING REQUIREMENTS ARE PER UL698A INTRINSICALLY SAFE BARRIER INSTALLATION:
- I.A. 2" SPACING BETWEEN NON-INTRINSICALLY SAFE CIRCUIT/WIRING AND INTRINSICALLY SAFE INTERNAL WIRING.
- I.B. 5" SPACING BETWEEN NON-INTRINSICALLY SAFE CIRCUIT/WIRING AND INTRINSICALLY SAFE TERMINALS
- I.C. 8" SPACING BETWEEN NON-INTRINSICALLY SAFE FIELD TERMINALS AND INTRINSICALLY SAFE FIELD TERMINALS.

NOTE : INTRINSICALLY SAFE FIELD WIRING AND NON-INTRINSICALLY SAFE

FIELD WIRING CANNOT BE RAN IN THE SAME RACEWAY.

SPECIAL NOTES

A. THE PROJECT'S SITE ENGINEER AND/OR ELECTRICAL ENGINEER ARE RESPONSIBLE FOR ALL ASPECTS OF THE PROJECT. ROMTEC UTILITIES OFFERS ELECTRICAL INFORMATION ONLY AS A WAY TO CLARIFY THE PRODUCT OFFERING. PLEASE REFER TO THE SITE ENGINEER'S SITE PLANS FOR SPECIFIC DETAILS. THE SITE ENGINEER'S PLANS, SPECIFICATIONS, AND THE APPROVED SUBMITTAL DOCUMENTS GOVERN ALL ASPECTS OF THE WORK.

B. ROMTEC UTILITIES DOES NOT PROVIDE CORED HOLES IN CONCRETE STRUCTURES FOR ELECTRICAL CONDUIT RUNS. ALL ELECTRICALLY RELATED CORED HOLES ARE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR AND/OR ELECTRICAL CONTRACTOR.

C. ROMTEC UTILITIES WILL ONLY PROVIDE THOSE CONNECTION POINTS REQUIRED FOR SUPPLIED EQUIPMENT, INCLUDING DEFINED TIE POINTS OR AS-PURCHASED. THE CUSTOMER IS RESPONSIBLE FOR ALL OTHER CONNECTIONS.

D. THE OWNER OR INSTALLING CONTRACTOR IS RESPONSIBLE FOR SUPPLYING AND INSTALLING A LOAD CENTER FOR ALL AUXILIARY LOADS. ROMTEC UTILITIES DOES NOT RECOMMEND SUPPLYING GENERAL PURPOSE RECEPTACLES OR INDUCTIVE TYPE LOADS FROM THE SUPPLIED CONTROL PANEL.

E. PLEASE SEE THE LINK FOR TYPICAL ELECTRICAL INSTALLATION RECOMMENDATIONS: HTTP://ROMTECUTILITIES.COM/WP-CONTENT/UPLOADS/2022/06/LIFT-STATION-ELECTRICAL-INSTALL-RECOMMENDATIONS-6-20-22.PDF

F. PLEASE SEE THE LINK BELOW FOR STANDARD STARTUP/TESTING INFORMATION: HTTP://ROMTECUTILITIES.COM/WP-CONTENT/UPLOADS/2022/06/LIFT-STATION-STARTUP-TESTING-TRAINING-SERVICES-6-20-22.PDF

COMMUNICATIONS

A. ALL COMMUNICATION DEVICES FOR REMOTE ANNUNCIATION OR SYSTEM CONTROL AND DATA ACQUISITION (SCADA) ARE TO BE CONFIGURED, TESTED, AND MAINTAINED BY THE OWNER OR OWNER'S REPRESENTATIVE UNLESS SPECIFICALLY NOTED OTHERWISE. ROMTEC UTILITIES CAN INSTALL CUSTOMER-SPECIFIED COMMUNICATION DEVICES IN THE CONTROL PANEL IF REQUESTED.

B. A FULLY DOCUMENTED LIST OF ALL REQUIRED SIGNALS NEEDED FOR SCADA COMMUNICATIONS MUST BE PROVIDED TO ROMTEC UTILITIES FOR PROPER INTEGRATION OF SCADA EQUIPMENT.

C. IF THE OWNER HAS A DESIGNATED SCADA INTEGRATOR, THAT INDIVIDUAL MUST BE AVAILABLE DURING THE SCHEDULED SYSTEM STARTUP FOR FINAL TESTING, TRAINING, AND CONFIGURATION.

D. RADIO/CELLULAR SITE SURVEYS, ANTENNAS MAST(S), AND ANTENNA MOUNTING ARE THE RESPONSIBILITY OF THE OWNER OR INSTALLING CONTRACTOR, NOT ROMTEC UTILITIES. IN OTHER WORDS, VERIFICATION OF SIGNAL RECEPTION BY THE ANTENNA/COMMUNICATION DEVICE IS NOT PROVIDED BY ROMTEC UTILITIES.

E. ALL APPLICABLE COMMUNICATION SERVICE LINES MUST BE INSTALLED AND READY TO USE PRIOR TO SYSTEM STARTUP. FOR EXAMPLE, IF AN AUTODIALER REQUIRES DSL SERVICE, IT IS THE RESPONSIBILITY OF THE OWNER OR INSTALLING CONTRACTOR TO ENSURE THAT DSL SERVICE IS INSTALLED AND READY TO USE PRIOR TO SYSTEM STARTUP. SIMILARLY, ENSURING THAT A RADIO MODEM HAS SUFFICIENT RECEPTION AT THE ANTENNA/MOUNTING LOCATION DURING SYSTEM STARTUP IS THE RESPONSIBILITY OF THE OWNER OR INSTALLING CONTRACTOR, NOT ROMTEC UTILITIES.

F. IF THE ROMTEC UTILITIES STARTUP TECHNICIAN DISCOVERS UPON ARRIVAL THAT THE APPLICABLE COMMUNICATION SERVICE IS NOT READY TO USE DURING SYSTEM STARTUP, ANY ADDITIONAL TIME OR TRAVEL REQUIRED FOR SYSTEM STARTUP ACTIVITIES WILL BE QUOTED AND PROVIDED UNDER A SEPARATE SERVICE ORDER.

G. IF THE COMMUNICATION SYSTEM REQUIRES A SERVICE CONTRACT IT IS THE RESPONSIBILITY OF THE OWNER OR END USER TO OBTAIN AND COMPLETE ALL SERVICE AGREEMENT INFORMATION PRIOR TO START-UP. IF NEEDED, CONTACT THE ROMTEC UTILITIES PROJECT MANAGER FOR ACCOUNT SETUP ASSISTANCE PRIOR TO SYSTEM STARTUP.

SOFTWARE PROGRAMMING

A. ANY SOFTWARE PROGRAMMING DEVELOPED AND PROVIDED BY ROMTEC UTILITIES IS PROPERTY OF THE OWNER.

B. OWNERS ASSUME ALL RESPONSIBILITY FOR CHANGES THAT ARE MADE TO THE APPROVED SYSTEM DESIGN AND OPERATION THAT REQUIRE SOFTWARE MODIFICATIONS.

C. UNLESS EXPLICITLY STATED, ROMTEC DOES NOT FURNISH ANY SOFTWARE LICENSES THAT MAY BE REQUIRED TO PROGRAM ROMTEC UTILITIES SUPPLIED COMPONENTS.

SIZE AND MOUNTING STYLE OF THE CONTROL PANEL ENCLOSURE

A. THE SIZE AND/OR MOUNTING STYLE OF THE FINAL, AS-BUILT CONTROL PANEL ENCLOSURE MAY NOT EXACTLY MATCH THE SIZE OR MOUNTING STYLE OF THE ENCLOSURE AS DESCRIBED IN THE SUBMITTAL. THE PANEL MANUFACTURER MAY ALTER DIMENSIONS AS NEEDED DURING PRODUCTION TO ACCOMMODATE ALL OF THE REQUIRED EQUIPMENT.

B. THE FINAL AS-BUILT DRAWINGS OF THE CONTROL PANEL WILL BE AVAILABLE APPROXIMATELY 6-8 WEEKS AFTER ROMTEC UTILITIES RECEIVES FORMAL NOTICE TO PROCEED ON PRODUCTION OF THE SYSTEM. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO ENSURE THEY HAVE THE AS-BUILT DRAWINGS PRIOR TO INSTALLATION OF THE CONTROL PANEL ENCLOSURE.

INSTRUCTIONS FOR CONDUIT ENTRY

A. FOR **TOP** OF ENCLOSURE CONDUIT ENTRY:
- A.A. USE ONLY UL LISTED, RAIN-TIGHT OR LIQUID-TIGHT CONDUIT HUBS.
- A.B. INSTALL HUBS AND CONDUIT ACCORDING TO THE HUB MANUFACTURER'S INSTRUCTIONS.
- A.C. PUNCH OR DRILL THE CORRECT HOLE SIZE FOR THE HUB.
- A.D. CAPTURE **ALL** DRILLING FINES TO PREVENT INTERIOR COMPONENT DAMAGE.

B. FOR **BOTTOM** OF ENCLOSURE CONDUIT ENTRY:
- B.A. PUNCH OR DRILL THE CORRECT HOLE SIZE FOR THE CONDUIT.
- B.B. USE ONLY UL LISTED, RAIN-TIGHT OR LIQUID-TIGHT CONDUIT, HUBS, OR SEALING LOCKNUTS ON THE OUTSIDE ENTRY POINT.
- B.C. INSTALL CONDUIT, HUBS, OR SEALING LOCKNUTS PER THE MANUFACTURER'S INSTRUCTIONS.
- B.D. SECURE CONDUITS ON THE INSIDE WITH LOCKNUTS.
- B.E. USE PLASTIC BUSHING OR GROUNDING BUSHING WHERE APPLICABLE.

C. CONDUIT HOLE SEALING:
- C.A. SEAL ALL UNUSED HOLES WITH HOLE SEALS THAT ARE RECOGNIZED FOR USE WITH THE ENCLOSURE'S NEMA RATING.
- C.B. INSTALL SEALS ACCORDING TO THE SEAL MANUFACTURER'S INSTRUCTIONS.

CONDUITS AND RACEWAYS

A. ALL CONDUITS OR RACEWAYS ROUTED FROM INDOORS TO OUTDOORS OR AS DESCRIBED IN NEC 300.7(A) SHALL BE SEALED WITH A PLIABLE SEALING COMPOUND AT A CONDUIT BODY OR JUNCTION BOX BEFORE THE CONDUIT ENTERS THE COLDER ENVIRONMENT.

B. ALL CONDUITS OR RACEWAYS INSTALLED IN AREAS WHERE ELEVATION CHANGES MAY CAUSE WATER OR MOISTURE TO ENTER THE ELECTRICAL EQUIPMENT THROUGH THE CONDUIT SHALL BE EFFECTIVELY SEALED AT BOTH ENDS OF THE CONDUIT.

C. ALL BELOW GRADE CONDUITS OR RACEWAYS FEEDING INSTRUMENTATION EQUIPMENT SHALL HAVE A DRIP LOOP INSTALLED PRIOR TO THE FINAL TERMINATION AT THE INSTRUMENT.

D. ALL BELOW GRADE CONDUITS OR RACEWAYS INCLUDING BOXES AND FITTINGS USED SHALL BE INSTALLED AND EQUIPPED SO AS TO PREVENT WATER FROM ENTERING THE CONDUIT.

E. ALL CONDUITS RUNS SHOWN ON THIS PLAN ARE DIAGRAMMATIC IN NATURE. THE CONTRACTOR IS RESPONSIBLE FOR ROUTING AND INSTALLATION PER SITE CONDITIONS AND NEC REQUIREMENTS.

REVISION HISTORY

REV	DATE	DESCRIPTION	BY

PROJECT #: E0106D10
DSN:
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PROMONTORY BOOSTER
WEST WEBER, UT
ELECTICAL NOTES
BOOSTER PUMP SYSTEM

ELECTRICAL SHEET
E4

POWER QUALITY

A. ROMTEC UTILITIES RECOMMENDS THAT SUPPLY VOLTAGE TO THE ROMTEC UTILITIES SUPPLIED CONTROL PANEL COMPLY WITH THE NATIONAL EQUIPMENT MANUFACTURERS ASSOCIATION (NEMA) STANDARD MB1-1987 SECTION 14.34B. ANY PERFORMANCE ISSUES THAT ARISE AS A RESULT OF NON-COMPLIANCE WITH THIS STANDARD ARE THE RESPONSIBILITY OF THE OWNER/INSTALLER. ROMTEC UTILITIES IS NOT RESPONSIBLE FOR IDENTIFYING OR MITIGATING ANY POWER QUALITY ISSUES THAT ARE A RESULT OF POOR POWER QUALITY ASSOCIATED WITH THE UTILITY SUPPLY VOLTAGE.

B. POOR POWER QUALITY CAN HAVE AN ADVERSE EFFECT ON CONTROL SYSTEM OPERATION AND RELIABILITY. EXTREME ELECTRICAL STRESS OR INTERFERENCE, FLUCTUATIONS OR SURGES OF ELECTRICAL POWER, LIGHTNING, STATIC ELECTRICITY, OR OTHER EXTERNAL FACTORS CAN CAUSE PERMANENT DAMAGE AND OR ERRATIC OPERATION THAT IS NOT COVERED UNDER WARRANTY. ADDITIONALLY, PUMP MOTORS CAN BE DAMAGED BY SUSTAINED APPLICATION OF UNBALANCED PHASE VOLTAGES AND/OR VOLTAGES ABOVE OR BELOW NORMAL NAMEPLATE RATINGS.

C. NEMA PUBLISHED TOLERANCES ARE AS FOLLOWS:
- C.A. VOLTAGE IMBALANCE NOT TO EXCEED 1% MEASURED AT THE MOTOR TERMINALS.
- C.B. CURRENT IMBALANCE NOT TO EXCEED 5% MEASURED AT THE MOTOR TERMINALS.
- C.C. VOLTAGE LEVELS NOT TO EXCEED +/-10% OF THE MOTOR NAMEPLATE RATING.

PUMP CABLE INSPECTION AND INSTALLATION

A. INSPECT THE FULL LENGTH OF ALL PUMP CABLES FOR SIGNS OF DAMAGE, INCLUDING ABRASIONS, CUTS, CRUSHED INSULATION, AND SIGNS OF MOISTURE ENTRY. IF CABLE DAMAGE IS FOUND, THE CABLE WILL REQUIRE TESTING OF THE CABLE AND ITS OVERALL INTEGRITY BY A QUALIFIED TECHNICIAN.

B. A HIGH PERCENTAGE OF CABLE FAILURES ARE DUE TO MECHANICAL DAMAGE, WHICH TYPICALLY OCCURS DURING TRANSPORTATION, HANDLING, AND INSTALLATION.

C. WHEN CABLES ARE INSTALLED IN A RACEWAY, UNDERGROUND ELECTRICAL DUCT, OR CABLE TRAY, THE FOLLOWING MUST BE CONSIDERED:
- C.A. CABLE CONFIGURATION
- C.B. RACEWAY OR CABLE TRAY FILL
- C.C. PHYSICAL LIMITATIONS OF THE CABLES
- C.D. INSTALLATION EQUIPMENT
- C.E. AMBIENT TEMPERATURE AND CONDITIONS (LOW TEMPERATURES ARE CAUSE FOR CONCERN)

D. PRIOR TO INSTALLING PUMP CABLES IN COLD TEMPERATURES (BELOW 10 °F), CABLES MUST BE PRE-CONDITIONED BY STORING THEM FOR A MINIMUM OF 24 HOURS AT A MINIMUM TEMPERATURE OF 55°F. DO NOT DROP (OR OTHERWISE SHARPLY IMPACT), KINK, OR SHARPLY BEND PUMP CABLES THAT HAVE BEEN STORED IN LOW TEMPERATURES.

E. ALL CABLES INSTALLED IN A RACEWAY MUST BE PULLED TOGETHER. CABLES SHOULD BE TRAINED AND GUIDED INTO THE RACEWAY USING AN APPROVED PULLING COMPOUND OR LUBRICANT WHEN NECESSARY.

F. CONDUITS MUST BE CLEANED AND FREE OF DEBRIS PRIOR TO CABLE INSTALLATION TO PREVENT DAMAGE TO THE OUTER CABLE JACKET.

G. CABLES MUST BE VERTICALLY SUPPORTED IN THE WET WELL BY STAINLESS STEEL WIRE MESH CABLE SUPPORT GRIPS THAT ARE APPROPRIATELY SIZED FOR THE APPLICATION.

H. ALL HARDWARE, INCLUDING FITTINGS, HANGERS, SUPPORTS, AND FASTENERS, MUST HAVE CORROSION PROTECTION SUITABLE FOR THE SURROUNDING ATMOSPHERE.

I. CONDUIT BUSHINGS MUST BE INSTALLED AS REQUIRED TO PREVENT CABLE DAMAGE.

J. PUMP CABLES MUST BE INSTALLED IN THE WET WELL WITH ADEQUATE LENGTH TO ALLOW FOR PUMP REMOVAL WITHOUT DISCONNECTING THE CABLES.

K. EXTRA CABLE LENGTH MUST BE PROPERLY SECURED SO AS NOT TO INTERFERE WITH PUMP INTAKE. PROPER SECURING OF EXTRA CABLE REQUIRES USING A HEAVY DUTY, NON-RELEASABLE UV-RESISTANT CABLE TIE SECURED TO A SUITABLE SUPPORTING DEVICE.

L. IF THE PUMPS INCLUDE EXCESSIVE CABLE LENGTH THAT MAY STILL INTERFERE WITH PUMP INTAKE, THE EXCESS CABLE LENGTH MUST BE TRIMMED TO LENGTH.

RECOMMENDATIONS FOR EXTENDED CONTROL PANEL STORAGE

A. STORE THE CONTROL PANEL IN THE UPRIGHT POSITION IN A CLEAN, DRY LOCATION FREE FROM EXTREME TEMPERATURES AND DIRECT SUNLIGHT.

B. WHEN STORING THE CONTROL PANEL FOR A PERIOD LONGER THAN 30 DAYS, SEAL ALL CONDUIT ENTRIES AND PLACE DESICCANT PACKS WITHIN THE ENCLOSURE TO PREVENT MOISTURE BUILDUP.

C. THE CONTROL PANEL IS DESIGNED BASED ON THE ASSUMPTION THAT THE PANEL WILL GENERALLY REMAIN ENERGIZED, WHICH WILL PRODUCE A CERTAIN AMOUNT OF INTERNAL HEAT THAT HELPS REPEL THE BUILDUP OF CONDENSATION. CONDENSATION MAY EVENTUALLY LEAD TO CORROSION.

D. IF THE CONTROL PANEL IS INSTALLED WITHOUT BEING ENERGIZED, PROTECTIVE MEASURES MUST BE TAKEN TO PROTECT THE CONTROL PANEL FROM THE ELEMENTS.

E. FAILURE TO FOLLOW THESE RECOMMENDATIONS MAY VOID THE ROMTEC UTILITIES WARRANTY FOR THE CONTROL PANEL.

RECOMMENDATIONS FOR PRESSURE TRANSDUCER STORAGE

A. UPON RECEIVING A PRESSURE TRANSDUCER, INSPECT THE TRANSMITTER FOR ANY DAMAGE THAT MAY HAVE OCCURRED DURING SHIPPING.

B. CHECK THE PACKAGING FOR ANY ACCESSORIES.

C. DURING INTERMEDIATE STORAGE PERIODS OR DURING TRANSPORTATION OF THE PRESSURE TRANSDUCER, STORE THE TRANSDUCER IN THE ORIGINAL PACKAGING IN A WARM, DRY ATMOSPHERE.

D. MOST SUBMERSIBLE PRESSURE TRANSMITTERS RELY ON A VENTED CABLE TO PROPERLY REFERENCE THE SENSOR TO ATMOSPHERIC PRESSURE. CARE MUST BE TAKEN TO PREVENT MOISTURE INTRUSION OF THE CABLE THROUGH THE VENT TUBE, INCLUDING ATMOSPHERIC HUMIDITY. IN SOME CASES, CARE MUST ALSO BE TAKEN TO PREVENT MOISTURE INTRUSION VIA WICKING INTO THE CABLE BETWEEN THE CONDUCTORS. ANY FAILURE TO FOLLOW THESE RECOMMENDATIONS MAY SEVERELY AFFECT THE RELIABILITY AND SERVICE LIFE OF THE PRESSURE TRANSDUCER.

E. PRIOR TO INSTALLATION OF A PRESSURE TRANSDUCER, INSPECT THE FULL LENGTH OF THE CABLE FOR SIGNS OF DAMAGE, INCLUDING ABRASIONS, CUTS, CRUSHED INSULATION, AND SIGNS OF MOISTURE ENTRY.

F. WHENEVER POSSIBLE, THE PROCESS OF TRIMMING AND TERMINATING THE CABLE SHOULD BE PERFORMED IN DRY CONDITIONS. WHEN CABLE TERMINATION MUST BE PERFORMED DURING RAINY OR WET CONDITIONS, CARE MUST BE TAKEN TO KEEP THE END OF THE CABLE SEALED AND DRY UNTIL IT IS PLACED IN A PROTECTIVE ENCLOSURE.

G. CONDUITS MUST BE CLEANED PRIOR TO INSTALLING THE TRANSDUCER CABLE TO PREVENT DAMAGE TO THE OUTER JACKET.

H. ALL HARDWARE, INCLUDING HANGERS, SUPPORTS, AND FASTENERS MUST HAVE CORROSION PROTECTION SUITABLE FOR THE LOCAL ATMOSPHERE.

I. CONDUIT BUSHINGS MUST BE USED AS NEEDED TO PREVENT CABLE DAMAGE.

J. DO NOT KINK THE CABLE DURING INSTALLATION. ANY KINKS WILL CAUSE A BLOCKAGE TO THE BREATHER TUBE.

K. INSTALL A PROTECTIVE BARRIER THAT GUARDS AGAINST MOISTURE BUILDUP IN THE CABLE VENT TUBE. THIS PROTECTIVE BARRIER MAY INCLUDE A DESICCANT FILTER, ANEROID BELLOW, OR OTHER SIMILAR DEVICE. THE PROTECTIVE BARRIER WILL ENSURE RELIABLE OPERATION AND LONG SERVICE LIFE BY PROTECTING THE SENSITIVE ELECTRICAL COMPONENTS FROM MILDEW OR THE FORMATION OF A COLUMN OF LIQUID IN THE BREATHER TUBE. ANY SUCH OBSTRUCTION DIRECTLY AFFECTS THE TRANSDUCER CALIBRATION AND MAY RENDER THE TRANSDUCER UNUSABLE.

L. ROMTEC UTILITIES RECOMMENDS AVOIDING INSTALLATION OF THE TRANSMITTER OR ROUTING OF THE CABLE IN CLOSE PROXIMITY TO A SOURCE OF ELECTRICAL NOISE, SUCH AS A VARIABLE SPEED DRIVE OR OTHER HIGH-POWERED ELECTRICAL DEVICE.

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