Utah Division of Facilities Construction and Management (DCFM)

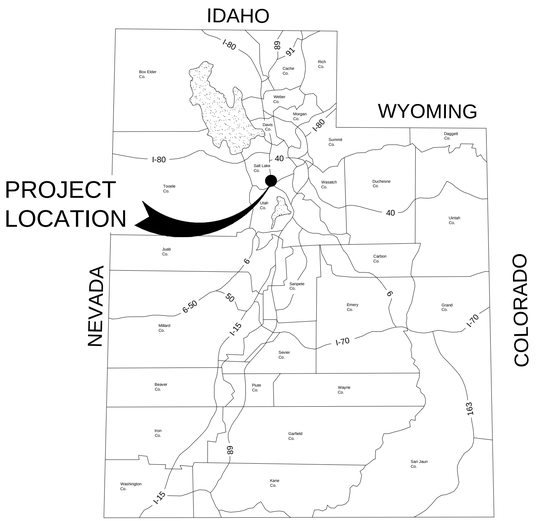
THE POINT REDEVELOPMENT

PACKAGE 01

3 MG CULINARY WATER RESERVOIR

DFCM Project # 25406300

AUGUST 2025



VICINITY MAP
NTS

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08/28/2025
STATE OF UTAH

PROJECT TITLE

THE POINT

3MG RESERVOIR

ISSUE TYPE:	CD
ISSUE DATE:	08/28/2025
DFCM PROJ No.	22427100
DRAWN BY:	DJ
CHK'D BY:	HORROCKS
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SHEET TITLE

COVER

SHEET NUMBER

G.1.0

C:\pw_work\dustin.jones\d0573491\G.0.0 Tank Site Cover.dwg - G1 - 8/25/2025 05:42am, dustin.jones

SEWER

EXISTING		PROPOSED
ss	UNKNOWN	SS
4" ss	4 INCH	4" SS
6" ss	6 INCH	6" SS
8" ss	8 INCH	8" SS
10" ss	10 INCH	10" SS
12" ss	12 INCH	12" SS
14" ss	14 INCH	14" SS
15" ss	15 INCH	15" SS
16" ss	16 INCH	16" SS
18" ss	18 INCH	18" SS
24" ss	24 INCH	24" SS
30" ss	30 INCH	30" SS
36" ss	36 INCH	36" SS
	SERVICE LATERAL	

POWER

EXISTING		PROPOSED
ohp	OVERHEAD	OHP
bel	UNDERGROUND	BEL
	2 INCH	2" BEL
	3 INCH	3" BEL
	4 INCH	4" BEL
	6 INCH	6" BEL
	8 INCH	8" BEL
	10 INCH	10" BEL
A-1/0	1 PH A 1/0	A-1/0
A-4/0	1 PH A 4/0	A-4/0
B-1/0	1 PH B 1/0	B-1/0
B-4/0	1 PH B 4/0	B-4/0
C-1/0	1 PH C 1/0	C-1/0
C-4/0	1 PH C 4/0	C-4/0
ABC-4/0	3 PH ABC 4/0	ABC-4/0
ABC-750	3 PH ABC 750A	ABC-750
SEC	SECONDARY	SEC
SL	STREET LIGHT	SL

HATCH PATTERNS

- BUILDING / PAD
- CONCRETE SIDEWALK / FLATWORK
- DECORATIVE BRICK / SIDEWALK / FLATWORK / LANDSCAPE AREAS
- POOL DECK
- XERISCAPE
- LANDSCAPE AREAS / GRASS
- HEAVY DUTY PAVEMENT SECTION
- LIGHT DUTY PAVEMENT SECTION
- ADA ACCESS RAMP TRUNCATED DOMES
- RIPRAP
- GRAVEL

STANDARD SYMBOLS

EXISTING		PROPOSED
e	ELECTRICAL MANHOLE	E
fo	FIBER OPTIC MANHOLE	FO
t	TELEPHONE MANHOLE	T
tv	CABLE TV MANHOLE	TV
pp	ELECTRICAL POWER POLE	PP
	SIGNAL POLE	
e	ELECTRICAL BOX	E
fo	FIBER OPTIC BOX	FO
jb	JUNCTION BOX	JB
t	TELEPHONE BOX	T
td	TELEPHONE PEDESTAL	TD
tv	CABLE TV BOX	TV
	LIGHT POLE	
	LIGHT POLE OPT 2	
	LIGHT POLE OPT 3	
g	GAS MANHOLE	G
gm	GAS METER	GM
co	CLEANOUT	CO
s	SEWER MANHOLE	S
ir	IRRIGATION MANHOLE	IR
ir	IRRIGATION BOX	IR
w	WATER MANHOLE	W
wm	WATER METER	WM
	FIRE HYDRANT	
	FIRE HYDRANT OPT 2	
	GATE VALVE	
	GATE VALVE OPT 2	
	CROSS	
	TEE	
	90 BEND	
	45 BEND	
	22.5 BEND	
	11.25 BEND	
	WYE	
	REDUCER	
	CAP & PLUG	
sd	STORM DRAIN MANHOLE	SD
	AREA DRAIN ROUND	
	AREA DRAIN SQUARE	
	DROP INLET	
	CURB INLET	
	CURB INLET OPT 2	
	CURB INLET OPT 3	
	CURB DOUBLE INLET	
	CURB DOUBLE INLET OPT 2	
	COMBO BOX	SD
	OIL/WATER SAND/GREASE	
	OIL/WATER SAND/GREASE OPT 2	
	FLARED END LARGE	
	FLARED END SMALL	
	SIGN	
	BOLLARD	
	BORE HOLE	
	TEST PIT	

ABBREVIATIONS

ABC	AGGREGATE BASE COURSE
AC	ASPHALTIC CEMENT OR CONCRETE
BC	BUILDING CORNER
BCR	BACK OF CURB RETURN
BFE	BASE FLOOD ELEVATION
BFF	BASEMENT FINISH FLOOR ELEVATION
BLDG	BUILDING
BM	BENCHMARK
BV	BUTTERFLY VALVE
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
BVW	BOTTOM OF VISIBLE WALL
C&G	CURB & GUTTER
CL	CENTERLINE
CB	CATCH BASIN
CLR	CLEAR
CO	CLEANOUT
CONC	CONCRETE
Cu	COPPER
C.Y.	CYCUBIC YARD
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWG	DRAWING
E	EAST OR EASTING
EA	EACH
EL	ELEVATION
EOP	EDGE OF PAVEMENT
ESMT	EASEMENT
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EX	EXISTING
FF	FINISHED FLOOR ELEVATION
FE	FLANGE END
FG	FINISHED GRADE ELEVATION
FL	FLOW LINE
FJ	FLANGE JOINT
FM	FORCE MAIN
FPS	FEET PER SECOND
FT	FOOT OR FEET
FUT	FUTURE
G	GAS LINE
GB	GRADE BREAK
GFF	GARAGE FINISHED FLOOR ELEVATION
GV	GATE VALVE
HGL	HYDRAULIC GRADE LINE
HRZ	HORIZONTAL
HP	HIGH POINT
HWM	HIGH WATER MARK
ID	INSIDE DIAMETER
IN	INCH(ES)
LF	LINEAR FEET
L/S	LANDSCAPE
LP	LOW POINT
L	LEFT
MAX	MAXIMUM
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
N	NORTH OR NORTHING, FRICTION FACTOR
N/A	NOT APPLICABLE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PH	PHASE
PI	PRESSURED IRRIGATION / NON-POTABLE
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
Q	RATE OF FLOW
R/W	RIGHT OF WAY
REV	REVISION
R	RIGHT
S	SLOPE
S/W	SIDEWALK
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SEC	SECTION
SPEC	SPECIFICATIONS
SSMH	SANITARY SEWER MANHOLE
SS	SANITARY SEWER
S/L	STREETLIGHT
STA	STATION
STD	STANDARD
SVE	SIGHT VISIBILITY EASEMENT
TBM	TEMPORARY BENCH MARK
TC	TOP OF CONCRETE
TBC	TOP BACK OF CURB
TEMP	TEMPORARY
TA	TOP OF ASPHALT
TF	TOP OF FOOTING
TG	TOP OF GRATE
TRW	TOP OF RETAINING WALL
TW	TOP OF WALL
TYP	TYPICAL
UTC	UNTREATED BASE COURSE
V	VELOCITY
VC	VERTICAL CURVE
VRT	VERTICAL
WTR	WATER
W/	WITH

STORM

EXISTING		PROPOSED
sd	UNKNOWN	SD
4" sd	4 INCH	4" SD
6" sd	6 INCH	6" SD
8" sd	8 INCH	8" SD
10" sd	10 INCH	10" SD
12" sd	12 INCH	12" SD
15" sd	15 INCH	15" SD
16" sd	16 INCH	16" SD
18" sd	18 INCH	18" SD
24" sd	24 INCH	24" SD
30" sd	30 INCH	30" SD
36" sd	36 INCH	36" SD
42" sd	42 INCH	42" SD
48" sd	48 INCH	48" SD
54" sd	54 INCH	54" SD
60" sd	60 INCH	60" SD
66" sd	66 INCH	66" SD
72" sd	72 INCH	72" SD
ld	LAND DRAIN	LD

GAS

EXISTING		PROPOSED
g	UNKNOWN	G
	1 INCH	1" G
2" g	2 INCH	2" G
3" g	3 INCH	
4" g	4 INCH	4" G
6" g	6 INCH	6" G
8" g	8 INCH	8" G
12" g	12 INCH	12" G
hpg	HIGH PRESSURE	HPG

SURFACE FEATURES

EXISTING/PROPOSED

- CUT LINE
- FILL LINE
- LIMITS OF DISTURBANCE
- DITCH
- GRADE BREAK
- HIGH WATER MARK
- HIGH WATER MARK - 1 YEAR EVENT
- HIGH WATER MARK - 5 YEAR EVENT
- HIGH WATER MARK - 10 YEAR EVENT
- HIGH WATER MARK - 25 YEAR EVENT
- HIGH WATER MARK - 50 YEAR EVENT
- HIGH WATER MARK - 100 YEAR EVENT
- FENCE - BARBED
- FENCE - CHAIN LINK
- FENCE - DECORATIVE
- FENCE - WOOD
- WALL - BLOCK
- WALL - CONCRETE
- WALL - PANEL
- WALL - ROCK
- RIGHT OF WAY
- CENTERLINE (ROAD/ENTITY)
- CURB & GUTTER
- PARCEL LINE
- PROPERTY BOUNDARY
- 10' PUBLIC UTILITY & DRAINAGE EASEMENT (P.U.E.)
- PAINT STRIPE - SOLID
- PAINT STRIPE - DOUBLE SOLID
- PAINT STRIPE - BROKEN
- PAINT STRIPE - BIKE LANE INTERSECTION
- PAINT STRIPE - LANE DROP
- PAINT STRIPE - LANE LINE EXTENSION
- TRAFFIC SIGNAL - DETECTION CONDUIT
- TRAFFIC SIGNAL - FUTURE CONDUIT
- TRAFFIC SIGNAL - LIGHTING CONDUIT
- TRAFFIC SIGNAL - PEDESTRIAN CONDUIT
- TRAFFIC SIGNAL - POWER SOURCE CONDUIT
- TRAFFIC SIGNAL - SIGNAL CONDUIT

WATER

EXISTING		PROPOSED
w	UNKNOWN	W
3/4" w	3/4 INCH	3/4" W
1" w	1 INCH	1" W
1-1/2" w	1-1/2 INCH	1-1/2" W
2" w	2 INCH	2" W
3" w	3 INCH	3" W
4" w	4 INCH	4" W
6" w	6 INCH	6" W
8" w	8 INCH	8" W
10" w	10 INCH	10" W
12" w	12 INCH	12" W
14" w	14 INCH	14" W
16" w	16 INCH	16" W
18" w	18 INCH	18" W
24" w	24 INCH	24" W
30" w	30 INCH	30" W
36" w	36 INCH	36" W
48" w	48 INCH	48" W
60" w	60 INCH	60" W
72" w	72 INCH	72" W
	SERVICE LATERAL	

COMMUNICATIONS

EXISTING		PROPOSED
ctv	OVERHEAD CABLE TV	CTV
bctv	UNDERGROUND CABLE TV	BCTV
fo	OVERHEAD FIBER OPTIC	FO
bfo	UNDERGROUNG FIBER OPTIC	BFO
tel	OVERHEAD TELEPHONE	TEL
btel	UNDERGROUND TELEPHONE	BTEL

IRRIGATION

EXISTING		PROPOSED
irr	UNKNOWN	IRR
1" irr	1 INCH	1" IRR
2" irr	2 INCH	2" IRR
4" irr	4 INCH	4" IRR
6" irr	6 INCH	6" IRR
8" irr	8 INCH	8" IRR
10" irr	10 INCH	10" IRR
12" irr	12 INCH	12" IRR
18" irr	18 INCH	
24" irr	24 INCH	
30" irr	30 INCH	
36" irr	36 INCH	
	SERVICE LATERAL	

MISCELLANEOUS

EXISTING		PROPOSED
	DEMO	
pipe	UNKNOWN PIPE	
jut	JOINT UTILITY TRENCH	JUT
toe	TOE OF SLOPE	TOE
top	TOP OF SLOPE	TOP
	DIRECTIONAL FLOWLINE	
	EDGE OF PAVEMENT	
	GUARDRAIL	
	RAILROAD TRACKS	
4000	CONTOUR - MAJOR	4000
4002	CONTOUR - MINOR	4002

CONSTRUCTION KEYNOTE TAGS

D00	OR D99	DEMO PLAN
G1	OR G9	GRADING PLAN
01	OR 35	SITE PLAN
36	OR 50	WATER
51	OR 65	SEWER
66	OR 80	STORM DRAIN
81	OR 90	IRRIGATION
91	OR 93	CABLE TV
94	OR 96	TELEPHONE
97	OR 99	GAS
00	OR 00	POWER
A	OR Z	MISCELLANEOUS

CALLOUTS

- FFE: XXXX.XX — PROPOSED BUILDING FINISHED FLOOR ELEVATION
- 75.19 — PROPOSED TBC SPOT ELEVATION (@ PC'S, PT'S & PL
- 75.19 — PROPOSED EOP SPOT ELEVATION (@ EDGE OF
- # — PARKING STALL COUNT

DETAIL REFERENCE

X / - DETAIL NAME
SCALE: NTS

MATCHLINE STA. XX+XX.XX
SEE SHEET PP-XX

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PROFESSIONAL ENGINEER
NO. 5338108
KASEY B. PRESNALL
08/28/2025
STATE OF UTAH

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3MG RESERVOIR

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ISSUE DATE:	08/28/2025
DFCM PROJ No.	22427100
DRAWN BY:	DJ
CHK'D BY:	HORROCKS
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SHEET TITLE
LEGEND

SHEET NUMBER
G.1.2

PAGE 2

811 Know what's below. Call before you dig.

GENERAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH DRAPER CITY STANDARD DRAWINGS AND SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED HEREIN.
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR ANY AND ALL DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL THE DRAINAGE IMPROVEMENTS ARE IN PLACE AND FUNCTIONING.
4. ALL CONTRACTORS WORKING WITHIN THE PROJECT BOUNDARIES ARE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS OF ANY JURISDICTIONAL BODY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES, SAFETY DEVICES AND CONTROL OF TRAFFIC WITHIN AND AROUND THE CONSTRUCTION AREA.
5. THE CONTRACTOR SHALL KEEP ON SITE AT ALL TIMES A COPY OF THE APPROVED CONSTRUCTION PLANS ON WHICH IS RECORDED THE ACTUAL LOCATIONS OF THE CONSTRUCTED UTILITIES AND ANY OTHER UTILITIES ENCOUNTERED. THE CONTRACTOR SHALL PROVIDE THESE LOCATIONS TO THE DESIGN ENGINEER.
6. THE CONTRACTOR(S) SHALL REMOVE ALL OBSTRUCTIONS, BOTH ABOVE AND BELOW GROUND, AS REQUIRED FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. THIS SHALL INCLUDE CLEARING AND GRUBBING WHICH CONSISTS OF CLEARING THE GROUND SURFACE OF ALL TREES, STUMPS, BRUSH, UNDERGROWTH, HEDGES, HEAVY GROWTH OF GRASS OR WEEDS, FENCES, STRUCTURES, DEBRIS, RUBBISH, AND SUCH MATERIAL WHICH IN THE OPINION OF THE ENGINEER, IS UNSUITABLE FOR THE FOUNDATION OF PAVEMENTS. ALL MATERIAL NOT SUITABLE FOR FUTURE USE ON SITE SHALL BE DISPOSED OF OFF SITE.
7. OWNER/DEVELOPER/CONTRACTOR IS REQUIRED TO CALL BLUE STAKES OF UTAH 1-800-662-4111 AT LEAST (2) BUSINESS DAYS PRIOR TO CONSTRUCTION, TO DETERMINE LOCATION OF UNDERGROUND UTILITIES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL RECOMMENDATIONS WITHIN THE GEOTECHNICAL REPORT.
9. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF WORK AND BETWEEN TRADES. SUB-CONTRACTORS ARE ALSO RESPONSIBLE FOR COORDINATION WITH OTHER TRADES AND DISCIPLINES INCLUDED IN THE CONTRACT DOCUMENTS. IF ANY DISCREPANCIES ARE FOUND, THE GENERAL CONTRACTOR IS TO NOTIFY ENGINEER IMMEDIATELY BEFORE COMMENCEMENT OF WORK. NO EXTRA COSTS TO THE PROJECT WILL BE INCURRED DUE TO FAILURE OF GENERAL CONTRACTOR AND/OR SUB-CONTRACTORS TO REVIEW CONTRACT DOCUMENTS AND COORDINATE WITH OTHER TRADES.
10. ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND CITY STANDARDS.
11. THE CONTRACTOR MUST OBTAIN A PERMIT FROM THE BUILDING DEPARTMENT FOR ANY WALLS GREATER THAN 4' IN HEIGHT CONSTRUCTED WITHIN THE PROJECT. ALL ROCK WALLS CONSTRUCTED WITHIN THE PROJECT MUST BE CERTIFIED AND INSPECTED BY A LICENSED ENGINEER PRIOR TO THE CITY'S FINAL ACCEPTANCE.
12. ALL INTERIOR SURFACES AND COATINGS SHALL COMPLY WITH ANSI/NSF STANDARD 61 OR OTHER STANDARDS APPROVED BY THE DIRECTOR. THIS REQUIREMENT APPLIES TO ANY PIPES AND FITTINGS, PROTECTIVE MATERIALS (E.G., PAINTS, COATINGS, CONCRETE ADMIXTURES, CONCRETE RELEASE AGENTS, OR CONCRETE SEALERS), JOINING AND SEALING MATERIALS (E.G., ADHESIVES, CAULKS, GASKETS, PRIMERS AND SEALANTS) AND MECHANICAL DEVICES (E.G., ELECTRICAL WIRE, SWITCHES, SENSORS, VALVES, OR SUBMERSIBLE PUMPS) THAT MAY COME INTO CONTACT WITH THE DRINKING WATER.
13. CONTRACTOR SHALL PROVIDE SWPPP PER DRAPER CITY STANDARDS.
14. (NOT USED)
15. CONTRACTOR IS RESPONSIBLE FOR QUALITY CONTROL. DFCM WILL DO QUALITY ASSURANCE/ACCEPTANCE TESTING AND SPECIAL INSPECTIONS.
16. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION STAKING.
17. CONTRACTOR MAY DISPOSE OF EXCESS MATERIAL ON THE OLD PRISON SITE. MATERIAL MUST BE 6" MINUS TO BE ACCEPTED. COORDINATE WITH PROJECT ENGINEER.
18. PROTECT IN PLACE ALL CURB, GUTTER AND SIDEWALK, ROADS, PARKING LOTS, TRAILS, AND OTHER PAVED AREAS. IF DAMAGED, CONTRACTOR SHALL REPAIR OR REPLACE AT NO ADDITIONAL COST TO THE OWNER.

UTILITY NOTES

WATER

1. ALL CONSTRUCTION SHALL CONFORM TO DRAPER CITY STANDARDS, DFCM STANDARDS, AND AWWA STANDARDS FOR BURIED CONCRETE DRINKING WATER RESERVOIRS, WATER PIPELINES, CORROSION PROTECTION, AND WATER INFRASTRUCTURE.
2. CONTRACTOR SHALL POTHOLE ALL PIPELINES AND VERIFY LOCATION AND DEPTH PRIOR TO PROCEEDING WITH ANY BUILDING OR PIPELINE CONSTRUCTION. IF THE IN FIELD CONDITION VARIES FROM DESIGN THE CONTRACTOR IS RESPONSIBLE FOR COSTS DUE TO CHANGES IN CONDITION. CITY MAPS ARE BEST KNOWLEDGE AND APPROXIMATE.
3. 14 GAUGE WIRE SHALL BE TAPED TO ALL WATER LINES FOR LOCATING PURPOSES. THE WIRE SHALL ALSO BE BROUGHT UP AT EACH VALVE VAULT.
4. ALL JOINTS TO BE RESTRAINED WITH TR FLEX RESTRAINED JOINT PIPE OR APPROVED EQUAL.
5. ASPHALT REPLACED IS TO MATCH EXISTING PAVEMENT DEPTHS WITH A 6 OVER CUT FROM EDGE OF THE EXCAVATION OR ON EACH SIDE OF THE EXCAVATION.
6. ANY CHANGES MADE IN THE FIELD MUST BE FIRST APPROVED AND DOCUMENTED BY THE PROJECT REPRESENTATIVE.
7. RAISE ALL UTILITIES, SUCH AS MANHOLES, METER SETTERS, FIRE HYDRANTS, WATER VALVE LIDS, ETC. TO ROADWAY OR PROJECT FINISHED GRADE AS MAY BE APPLICABLE.
8. ALL BURIED FERROUS FITTINGS AND APPURTENANCES INCLUDING FLANGES, NUTS, BOLTS, AND HARDWARE SHALL BE COVERED WITH WAX TAPE COATING SYSTEM. SEE SPECIFICATIONS AND PER DRAPER CITY STANDARD DETAILS.
9. DI = CLASS 52 DUCTILE IRON PIPE.
10. VBIO POLYETHYLENE ENCASEMENT (POLYWRAP) OF DI PIPE IS REQUIRED PER AWWA C105 AND DRAPER CITY STANDARD DETAILS.

GRADING & DRAINAGE NOTES

A. THESE PLANS HAVE BEEN PREPARED BASED ON A GEOTECHNICAL REPORT TITLED,"THE POINT WATER STORAGE TANKS," PREPARED BY RB&G ENGINEERING, DATED OCTOBER 2023.

B. ALL IMPORTED STRUCTURAL FILL, IF REQUIRED, SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO DELIVERY TO THE SITE

C. THE GRADING AND DRAINAGE PLANS DO NOT IDENTIFY THE CONSTRUCTION METHODS, EQUIPMENT, PROCEDURES, AND OR SEQUENCING TO BE EMPLOYED BY THE CONTRACTOR. ALL GRADING OPERATIONS INCLUDING BUT NOT LIMITED TO SITE PREPARATION, SCARIFICATION, EXCAVATION, OVER-EXCAVATION, PLACEMENT, OF FILLS, AND COMPACTION OF FILLS, SHALL BE PERFORMED BY THE CONTRACTOR IN CONFORMANCE WITH THE GEOTECHNICAL REPORT DESCRIBED ABOVE AND ONSITE FIELD OBSERVATIONS AS REQUIRED BY THE GEOTECHNICAL FIRM.

D. IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY HORROCKS IMMEDIATELY IF THERE ARE ANY CONFLICTS BETWEEN THE REQUIREMENTS OF THE GRADING AND DRAINAGE PLANS AND THE REQUIREMENTS OF THE GEOTECHNICAL REPORT OR GEOTECHNICAL FIELD OBSERVATIONS.

E. ALL EXCAVATION, GRADING, AND FILL OPERATIONS WITHIN THE BUILDING AREA SHOULD BE OBSERVED BY THE GEOTECHNICAL ENGINEER TO VERIFY SUBSOIL CONDITIONS AND DETERMINE ADEQUACY OF SITE PREPARATION, SUITABILITY OF FILL MATERIALS AND COMPLIANCE WITH COMPACTION REQUIREMENTS.

F. THE CONTRACTOR SHALL PROVIDE SUITABLE METHODS & EQUIPMENT TO CONTROL DUST AND AIR POLLUTION CAUSED BY CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL ALSO PROVIDE SUITABLE MUD AND DIRT CONTAINMENT TO MAINTAIN THE WORK SITE. ACCESS ROADWAYS AND ADJACENT PROPERTIES IN A CLEAN CONDITION.

G. ALL EXCAVATION AND GRADING SHALL BE IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF DRAPER CITY CODES, DFCM BUILDING STANDARDS, UNIFORM BUILDING CODES, AND THE GEOTECHNICAL INVESTIGATION STUDY.

H. THE GEOTECHNICAL ENGINEER SHALL PROVIDE A FINAL GRADING REPORT TO CONFIRM WORK HAS BEEN PERFORMED IN CONFORMANCE WITH THEIR RECOMMENDATIONS.

CATHODIC PROTECTION TEST STATION GENERAL NOTES

1. USE POST MOUNT STYLE UNLESS OTHERWISE SPECIFIED.
2. PLACE CARSONITE MARKER WITH UTILITY NAME AND CONTACT NUMBER BY ALL FLUSH TEST STATIONS IN UNDEVELOPED AREAS.
3. MARK POST MOUNT STYLE STATIONS WITH UTILITY APPROVED LABEL MARKER ON POST.
4. PROVIDE WIRE LOOP AT BASE OF TEST STATION AND AT PIPE CONNECTIONS TO MINIMIZE SETTLEMENT STRESSES ON WIRE
5. FLUSH MOUNT TEST STATIONS SHALL BE PROVIDE WITH SUFFICIENT SLACK WIRE TO ALLOW EXTENSION OF TERMINAL BOARDS A MINIMUM OF 18-INCHES.
6. USE STANDARD COLOR CODE AS SHOWN ON DETAILS AND AS FOLLOWS:
   WHITE - DRAPER CITY LINE
   YELLOW - REFERENCE ELECTRODE
   ORANGE - CASING
   BLUE - FOREIGN WATER LINE
   RED - FOREIGN GAS LINE
   GREEN - CORROSION COUPONS
7. ALL TEST WIRES WIRES TO BE INSTALLED SPLICE FREE.
8. IN UNDEVELOPED OR CULTIVATED AREAS, BURY WIRES A MINIMUM OF 30-INCHES OR PLACE IN RIGID CONDUIT, SEE OFFSET TEST STATION DETAIL FOR CONDUIT REQUIREMENTS.
9. ALL TEST WIRE CONNECTIONS TO PIPE SHALL BE THERMITE WELDED CONNECTIONS, INDIVIDUAL WIRES SHALL BE CONNECTED TO PIPE WITH A MINIMUM OF 6-INCHES SEPARATION.
10. QUANTITY OF TERMINALS AND WIRING CONNECTIONS VARIES, SEE APPLICABLE TEST STATION TYPE.
11. ALL WIRES UNDER ROADWAY MUST BE PROTECTED BY PVC COATED STEEL CONDUIT AS SHOWN IN DETAIL, SEAL ENDS OF PIPE DUCT COMPOUND OR URETHANE FOAM, PROVIDE 2" CONDUIT FOR WIRES ONLY AND 3" CONDUIT FOR WIRES AND MONITORING PIPE, DO NOT CONNECT ROADWAY CONDUIT TO TEST STATION CONDUIT.
12. PROVIDE MONITORING PIPE WHERE TEST STATION OFFSET TO SIDE OF ROADWAY AS SHOWN IN THE DETAIL, INSTALLED MONITORING PIPE INSIDE A 3" PVC COATED RIGID STEEL CONDUIT.

UTILITIES

UTILITY COMPANY	CONTACT NAME	PHONE NUMBER
ROCKY MOUNTAIN POWER	BRAD KNOWLES	801-220-4437
DOMINION ENERGY	DEANNA HOPKINS	801-652-3824
SEWER DISTRICT	MATTHEW GAM	801-571-1166
DRAPER CITY	JASON HOBBS	801-576-6326
JORDAN VALLEY WATER CONSERVANCY DISTRICT	TRAVIS CHRISTENSEN	801-565-4300
WATERPRO	STEVE CUNNINGHAM	801-571-2232

UTILITY CONTACTS ARE LISTED AS A COURTESY AND MAY NOT BE UP TO DATE. CONTRACTOR SHALL ENSURE ALL APPROPRIATE UTILITY COORDINATION IS PERFORMED.

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE DRAWINGS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE DRAWINGS AND WE ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OF THEIR DEPICTED LOCATION ON THESE DRAWINGS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN, AND ALL OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE DRAWING BY VERIFICATION OF THEIR LOCATION IN THE FIELD PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

LEGAL NOTICE TO CONTRACTOR

USE OF THE INFORMATION CONTAINED IN THIS INSTRUMENT FOR OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS INTENDED AND FOR OTHER THAN THE CLIENT FOR WHOM IT WAS PREPARED IS FORBIDDEN UNLESS EXPRESSLY PERMITTED IN WRITING IN ADVANCE TO HORROCKS ENGINEERS, AND HORROCKS ENGINEERS SHALL HAVE NO LIABILITY TO ANY USE OF THIS INFORMATION WITHOUT THEIR WRITTEN CONSENT.

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800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

WARNING
0 1 2
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PROFESSIONAL ENGINEER
NO. 5338108
KASEY B. PRESNALL
08/28/2025
STATE OF UTAH

PROJECT TITLE
THE POINT
3MG RESERVOIR

ISSUE TYPE:	CD
ISSUE DATE:	08/28/2025
DFCM PROJ No.	22427100
DRAWN BY:	DJ
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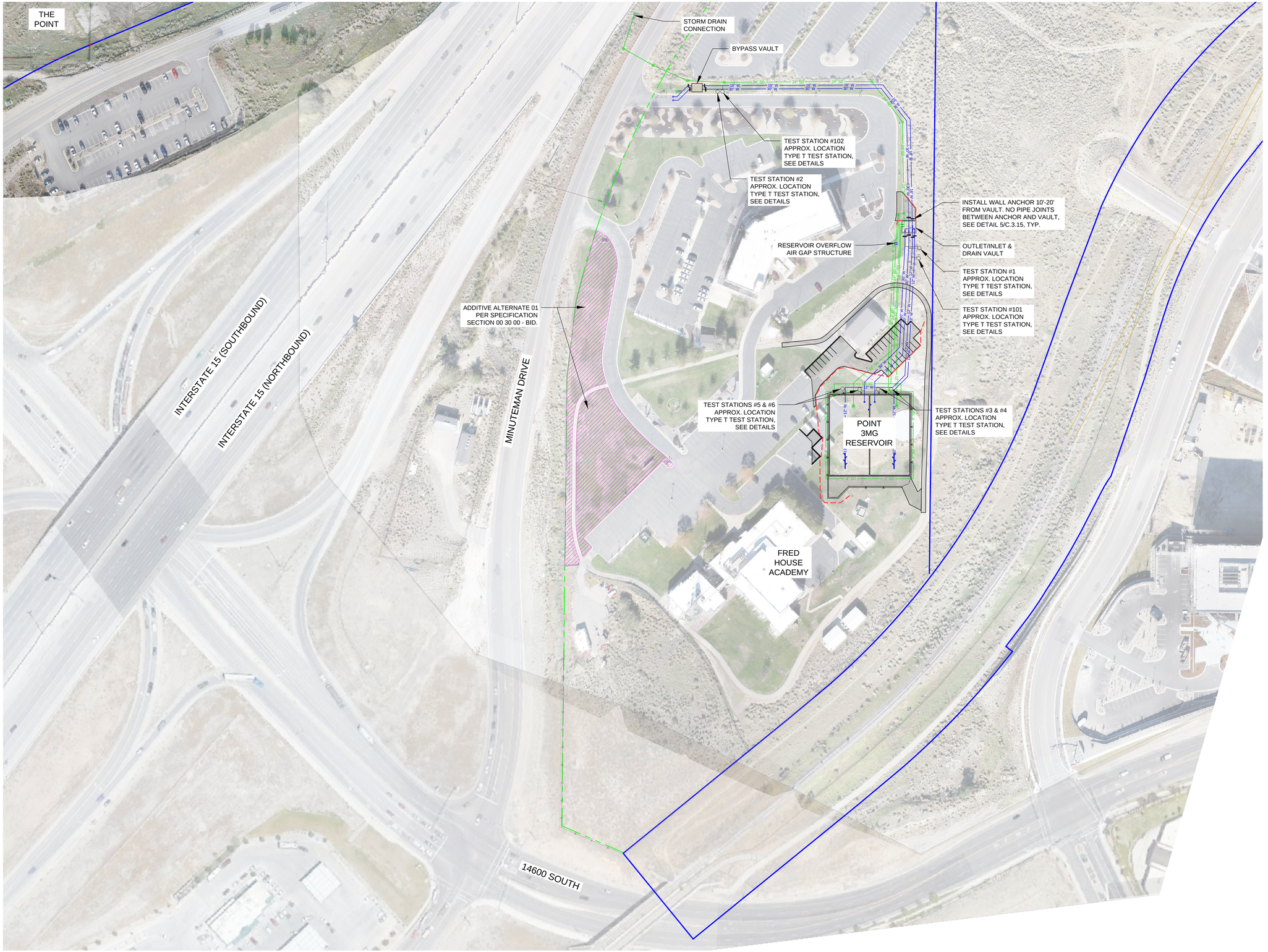
SHEET TITLE
GENERAL NOTES

SHEET NUMBER
G.1.3

PAGE 3



NORTH

0 90' 160'

SCALE: 1" = 80'

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LOCATION MAP

SHEET NUMBER
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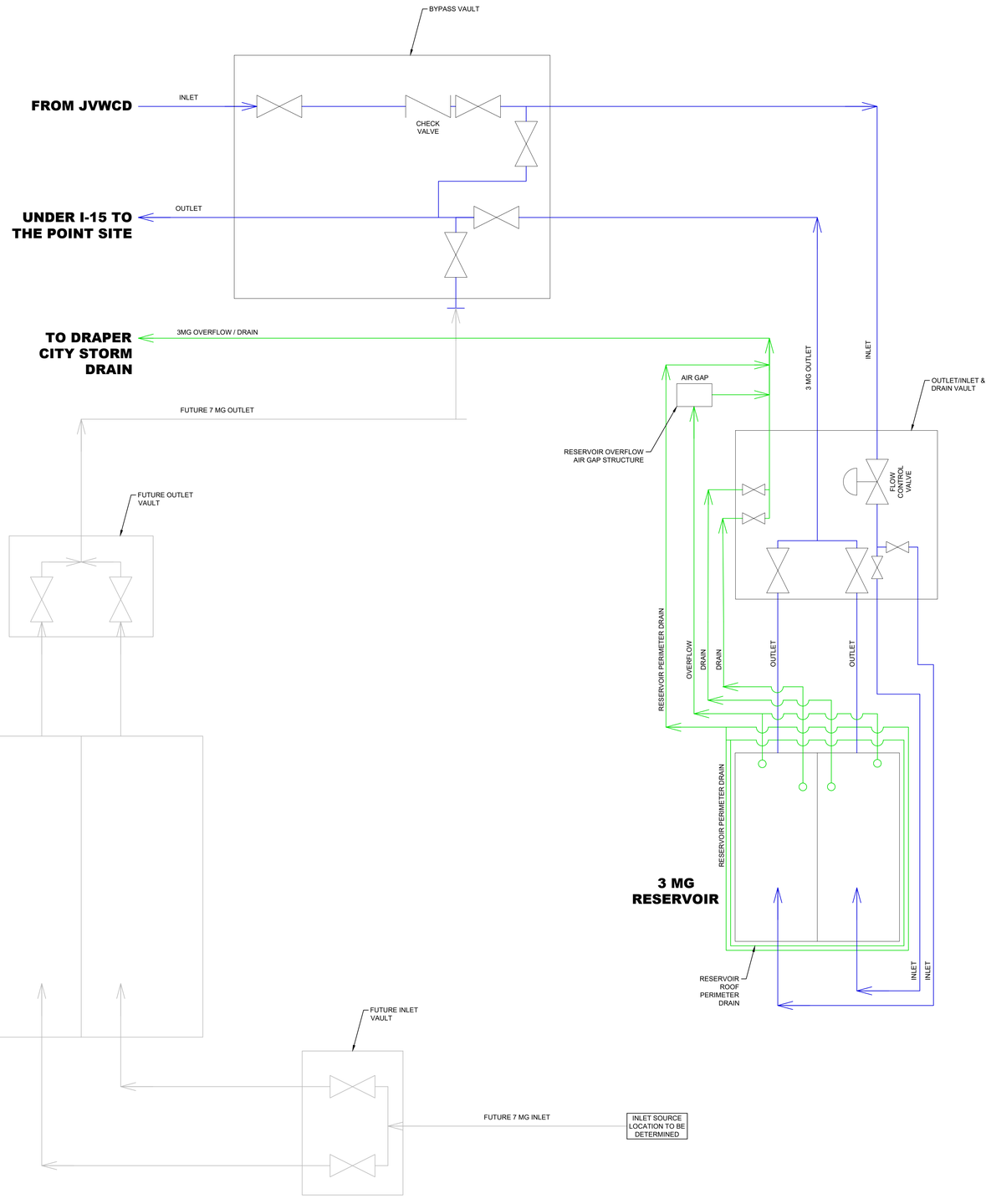

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PROCESS FLOW DIAGRAM

SHEET NUMBER

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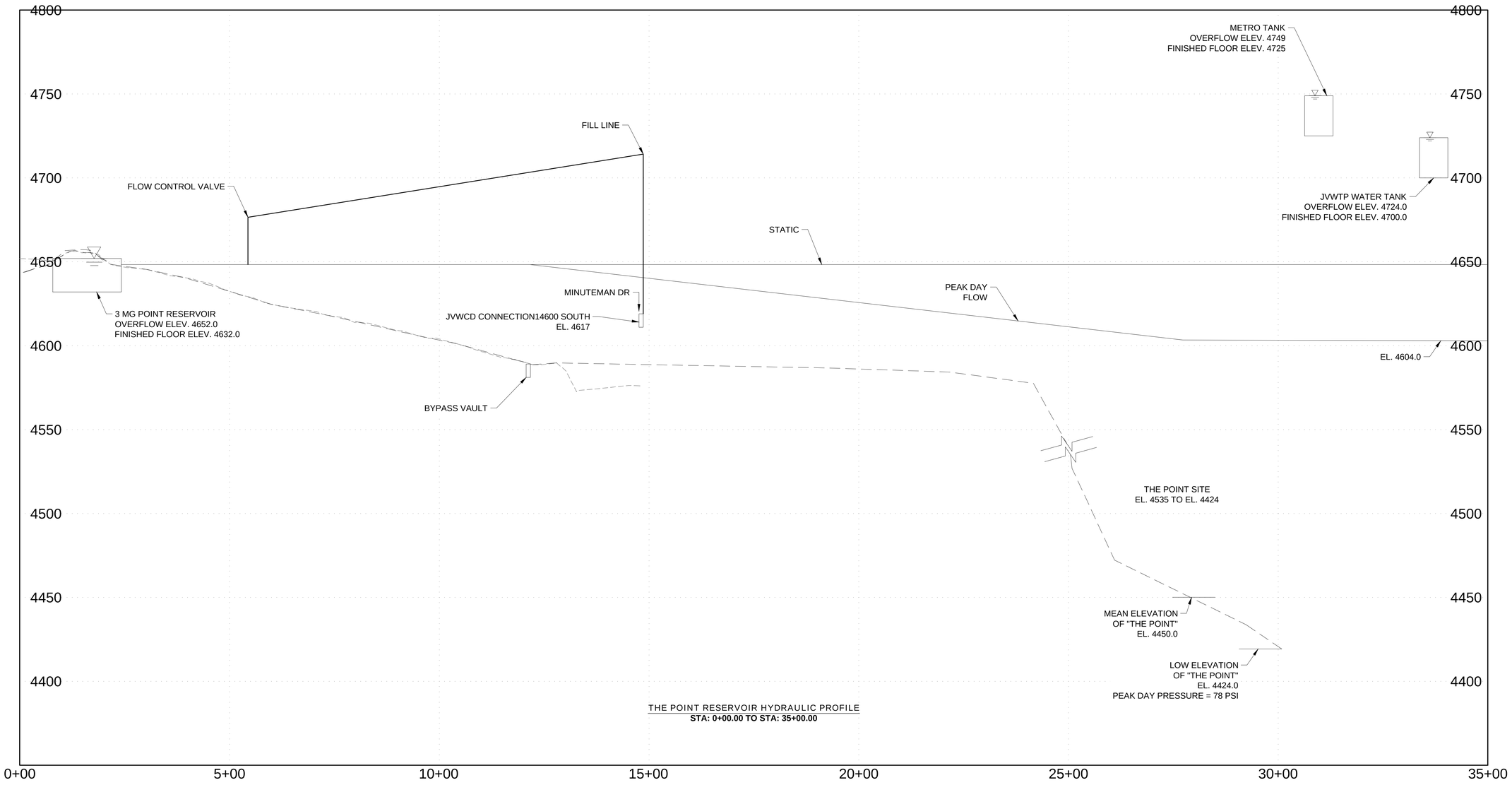
C: w work dustin. ones d0573491 G.0.6 Tank Site Process Flow Diagram.dwg - PROCESS - 8/25/2025 06:02am, dustin. ones



THE POINT RESERVOIR HYDRAULIC PROFILE
STA: 0+00.00 TO STA: 35+00.00

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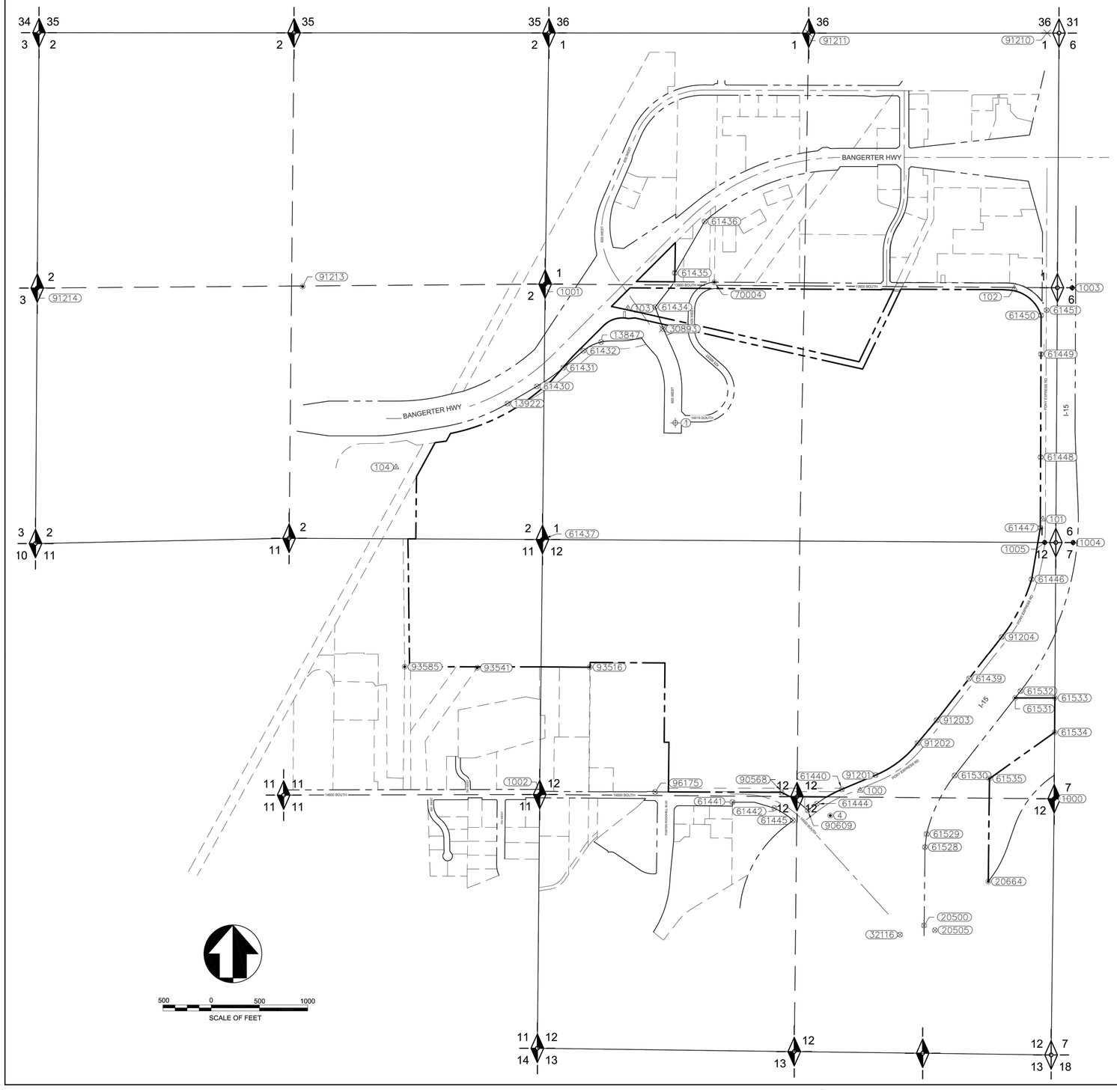

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	7351730.264	1528031.916	4430.786	CP NAIL/WASHER
4	7347655.817	1529639.524	4559.703	CP RC
100	7347914.447	1529947.725	4551.97	AT-PAINTED TARGET
101	7350731.083	1531839.945	4466.41	AT-PAINTED TARGET
102	7353122.987	1531545.459	4431.56	AT-PAINTED TARGET
103	7352918.694	1527540.413	4423.7	AT-PAINTED TARGET
104	7351270.242	1525136.268	4437.72	AT-PAINTED TARGET
1000	7347830.018	1531959.126	4673.65	QC-T4S R1W/1W SEC-7/12
1001	7353169.43	1526682.677	4427.16	QC-T4S R1W SEC-1/2
1002	7347874.094	1526626.506	4470.19	QC-T4S R1W SEC-11/12
1003	7353130.834	1532146.691	4436.91	WC-QC 153.94 T4S R1E/R1W SEC-1/6
1004	7350488.537	1532156.119	4478.11	WC-SC 180FT T4S R1E/R1W SEC-1/6/12/7
1005	7350490.489	1531861.16	4474.12	WC-SC 115FT T4S R1E/R1W SEC-1/6/12/7
13847	7352569.203	1527263.137	4429.995	RM
13922	7351930.639	1526292.838	4433.613	RM
20500	7346515.115	1530610.982	4661.118	ROW MON
20505	7346466.454	1530722.808	4669.471	ROW MON
20664	7346971.775	1531275.449	4658.615	FND RWC STATE PRISON BOUNDARY
30891	7352705.28	1527901.711	4427.167	RM UDOT R/W MON
30893	7352705.288	1527901.699	4427.155	RM UDOT R/W MON
32116	7346419.892	1530360.849	4634.37	UDOT R/W MON 96
61430	7352108.82	1526696.902	4429.373	491 FND ROWMON 3IN
61431	7352301.904	1526869.947	4429.589	492 FND ROWMON 3IN
61432	7352477.805	1527078.535	4429.752	493 FND ROWMON 3IN
61433	7352655.75	1527650.207	4427.985	574 FND BROKEN ROWMON
61434	7352930.347	1527823.018	4429.384	503 FND ROWMON 3IN
61435	7353284.735	1528027.776	4429.607	494 FND ROWMON 3IN
61436	7353818.7	1528336.388	4424.337	507 FND ROWMON 3IN
61437	7350521.623	1526655.118	4441.027	533 FND SECCOR 2.5IN
61439	7349076.215	1531076.691	4510.734	522 FND ROWMON 3IN
61440	7347927.683	1529758.202	4542.134	521 FND ROWMON 3IN
61441	7347795.139	1528624.321	4503.072	579 FND ROWMON 3IN
61442	7347732.404	1529058.163	4524.478	516 FND ROWMON 3IN
61444	7347777.137	1529497.894	4545.432	581 FND ROWMON BROKEN
61445	7347605.91	1529252.314	4549.03	515 FND ROWMON 3IN
61446	7350108.969	1531725.333	4480.585	523 FND ROWMON 3IN
61447	7350642.161	1531816.819	4465.67	524 FND ROWMON 3IN
61448	7351374.614	1531818.018	4450.575	525 FND ROWMON 3IN
61449	7352443.019	1531822.199	4434.55	526 FND ROWMON 3IN
61450	7352844.724	1531823.596	4432.733	582 FND ROWMON 3IN
61451	7352898.71	1531881.09	4438.798	583 FND ROWMON 3IN
61528	7347328.52	1530620.097	4618.401	FND ROW
61529	7347463.757	1530636.496	4609.287	FND ROW
61530	7348071.365	1530927.555	4584.009	FND ROW
61531	7348874.864	1531555.024	4544.02	FND RC
61532	7348946.185	1531609.204	4541.999	FND ROW
61533	7348875.207	1531965.736	4562.043	FND RC
61534	7348518.996	1531963.597	4595.445	FND RC
61535	7348037.982	1531287.889	4605.405	FND RC
70004	7353189.107	1528435.884	4425.675	RWC ENGINEERING LAND SURVEY
70998	7347815.034	1527774.863	4485.431	FND MERIDIAN CP
90568	7347893.768	1529134.368	4514.286	ROW MON
90609	7347709.259	1529405.114	4543.993	ROW MON
91201	7348075.976	1530107.455	4547.644	FND ROW MON 153+94
91202	7348406.056	1530541.649	4539.486	FND ROW MON NOT STAMPED
91203	7348644.821	1530740.095	4530.688	FND ROW MON 145+00
91204	7349509.594	1531414.492	4502.66	FND ROW MON 113
91210	7355773.505	1531886.624	4432.125	FND MON 3IN BRASS
91211	7355773.894	1529414.723	4413.197	FND MON 4IN BRASS
91213	7353143.59	1524169.83	4361.344	FND RC DL BAILEY 175754
91214	7353128.228	1521418.167	4380.634	FND MON 3IN BRASS
93516	7349194.348	1527144.895	4460.732	FND RC LEI
93541	7349188.404	1525978.391	4456.443	FND RC PETERSON\WANLESS
93585	7349199.313	1525226.924	4447.496	RC ENSIGN
96175	7347901.01	1527822.893	4485.77	FND ROW MON 187007

COORDINATE SYSTEM AND PROJECTION INFORMATION

1. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83)
   VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
   COORDINATE SYSTEM: US STATE PLANE 1983, (2011) UTAH CENTRAL ZONE 4302
   EPOCH DATE: 2010
   PROJECT UNITS: US SURVEY FOOT
   COMBINED SCALE FACTOR: 1.0002443955
   SCALE LOCATION: 0,0
   FALSE NORTHING TRUNCATION: NONE
   FALSE EASTING TRUNCATION: NONE
   PROJECT HEIGHT: 4400.00
   GEOID MODEL: GEOID18

NOTES

1. ALL CONTROL COORDINATES ARE BASED ON THE UTAH REFERENCE NETWORK GLOBAL POSITIONING SYSTEM (TURN GPS) AND WERE ESTABLISHED IN APRIL-MAY 2020 USING PERMANENT TURN GPS RTK BASE STATION DRAPER AND RE-VERIFIED IN SPRING OF 2023.
2. PRIMARY SURVEY CONTROL CONSISTS OF EXISTING AND NEWLY ESTABLISHED SURVEY MONUMENTS.
3. EXISTING TOPOGRAPHY WAS NOT REFERENCED INTO THIS SHEET TO AVOID CLUTTER COORDINATE CONVERSIONS:
4. PROJECT COORDINATES WERE CALCULATED BASED OFF NAD83 US STATE PLANE UTAH CENTRAL ZONE COORDINATES THEN SCALING SAID COORDINATES BY THE COMBINED SCALE FACTOR FROM 0,0 PROJECT COORDINATES TO STATE PLANE GRID COORDINATES
   STATE PLANE NORTHING = PROJECT NORTHING / 1.0002443955
   STATE PLANE EASTING = PROJECT EASTING /1.0002443955
   (SCALING LATITUDE = N20°31'27.66067") OR (SCALING NORTHING = 0)
   (SCALING LONGITUDE = W116°02'57.11642") OR (SCALING EASTING = 0)

PROFESSIONAL LAND SURVEYOR — No. 270814 — CRAIG E. AIRHART — 2/26/2024 — STATE OF UTAH

THE POINT
SURVEY CONTROL
SALT LAKE COUNTY, UTAH

DATE:	2-26-2024
PLOT DATE:	
SCALE:	1"=500'
PROJECT NUMBER	8HOE010400

PSOMAS
11456 Temple Drive, Suite 200
South Jordan, Utah 84095
(801) 270-5777 (801) 270-5782 (FAX)

DESIGNED	DRAFTED	CHECKED
CEA	SRV	JT

SHEET

1 OF 1

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PROFESSIONAL ENGINEER — NO. 5338108 — KASEY B. PRESCHUT — 08/28/2025 — STATE OF UTAH

PROJECT TITLE

THE POINT

3MG RESERVOIR

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SURVEY CONTROL

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PAGE 7

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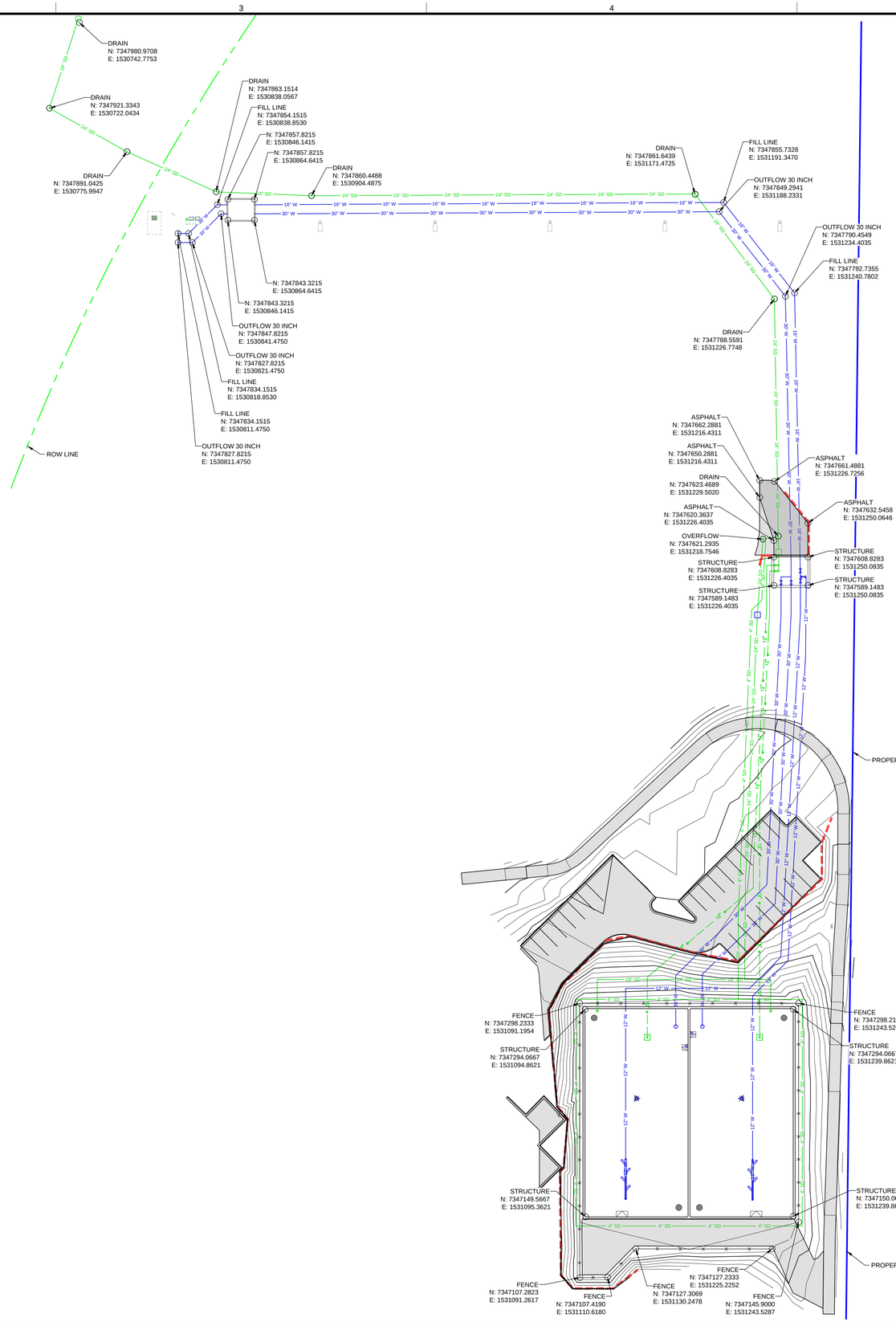

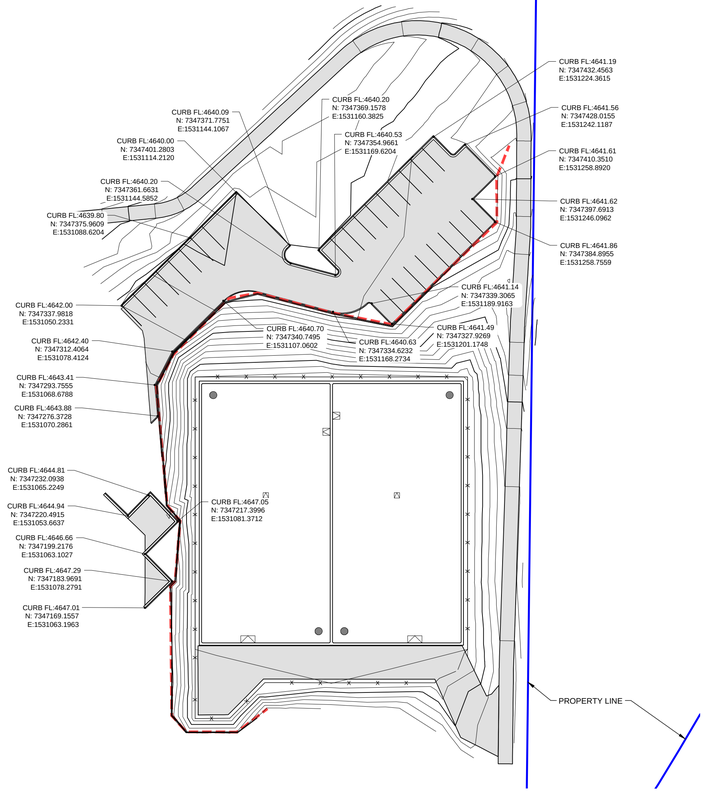

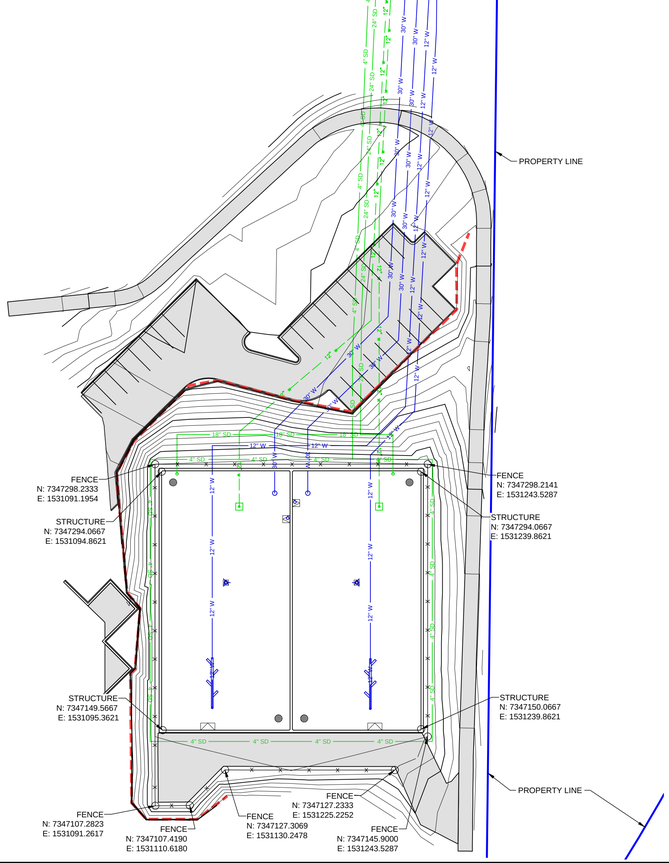

CURB COORDINATES

CURB ELEVATIONS ARE ANTICIPATED TO BE ADJUSTED TO FINAL GRADING. CONTRACTOR TO SUBMIT PAVING PLAN GRADING FOR ENGINEER APPROVAL PRIOR TO FINAL SUBGRADE PLACEMENT.

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08/28/2025
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STAKING COORDINATES

SHEET NUMBER

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PAGE 8

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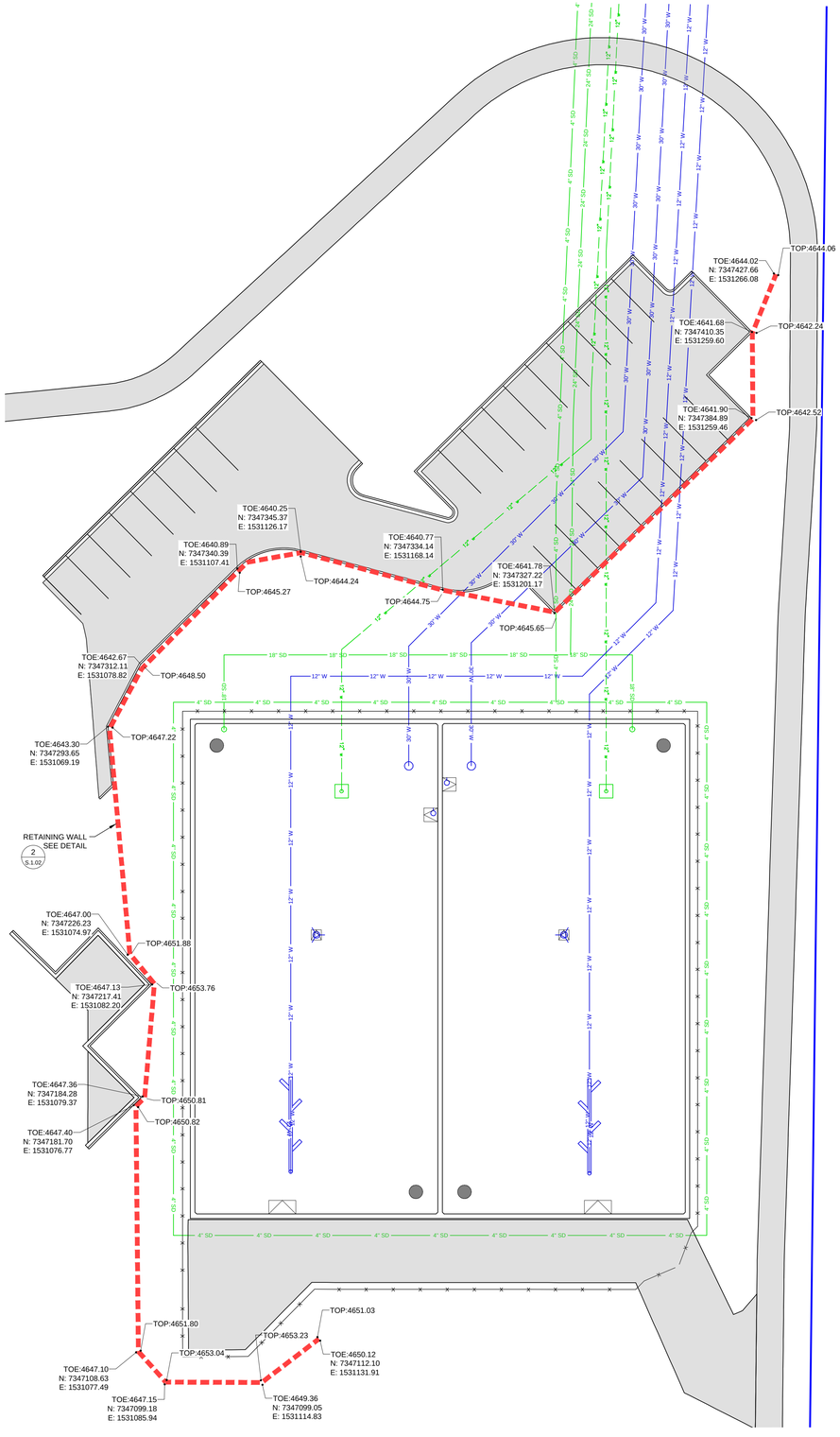
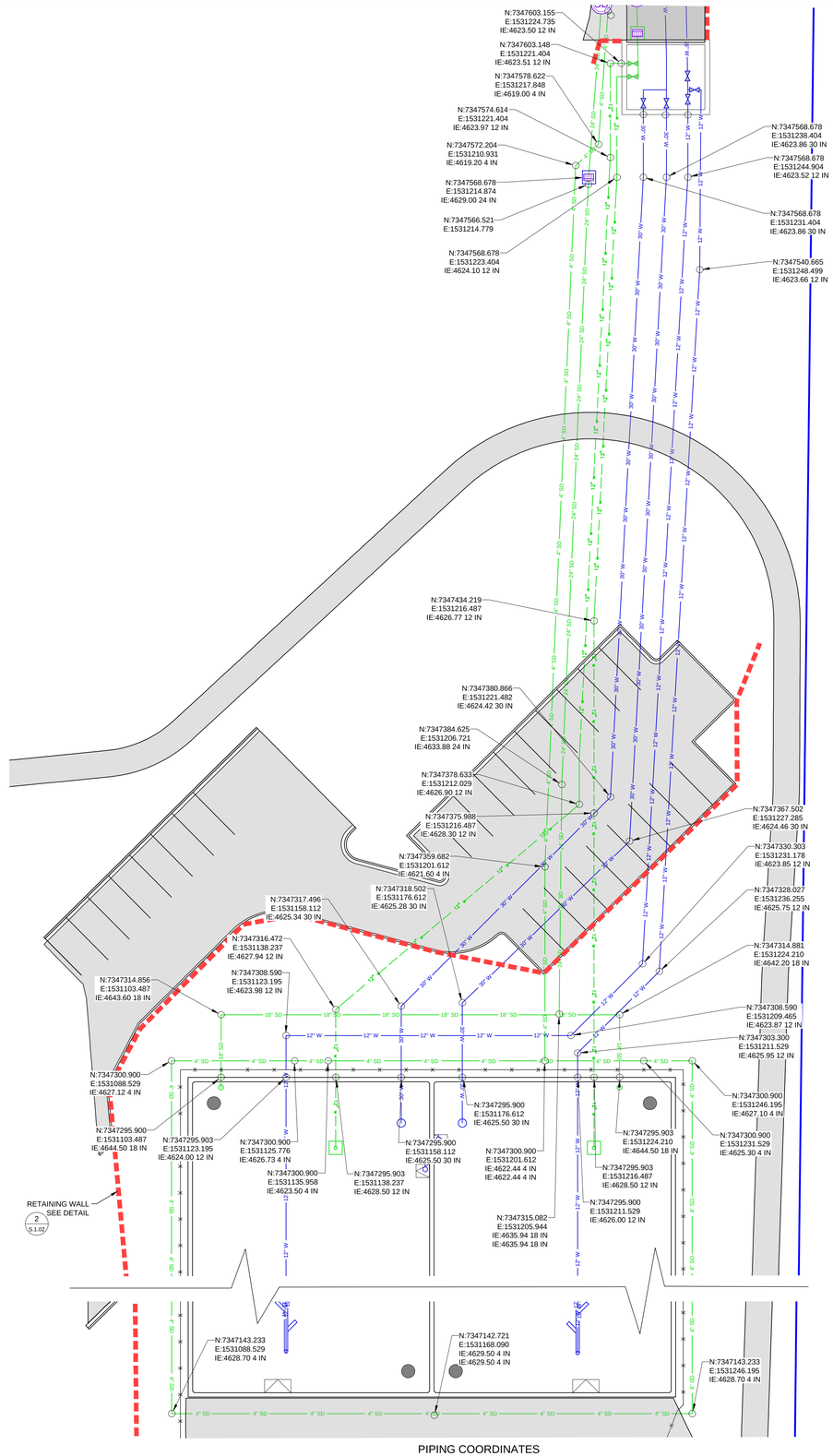


WALL COORDINATES

WALL LOCATION AND ELEVATIONS ARE ANTICIPATED TO BE ADJUSTED DURING CONSTRUCTION.
CONTRACTOR TO SUBMIT WALL PLAN FOR ENGINEER APPROVAL PRIOR TO FINAL GRADING.



PIPING COORDINATES

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0 20' 40'
SCALE: 1" = 20'

WARNING
0 1 2
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PROFESSIONAL ENGINEER
NO. 5338108
KASEY B. PRESNUT
08/28/2025
STATE OF UTAH

PROJECT TITLE
THE POINT
3MG RESERVOIR

ISSUE TYPE:	CD
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STAKING COORDINATES

SHEET NUMBER
G.1.8B

PAGE PAGE #

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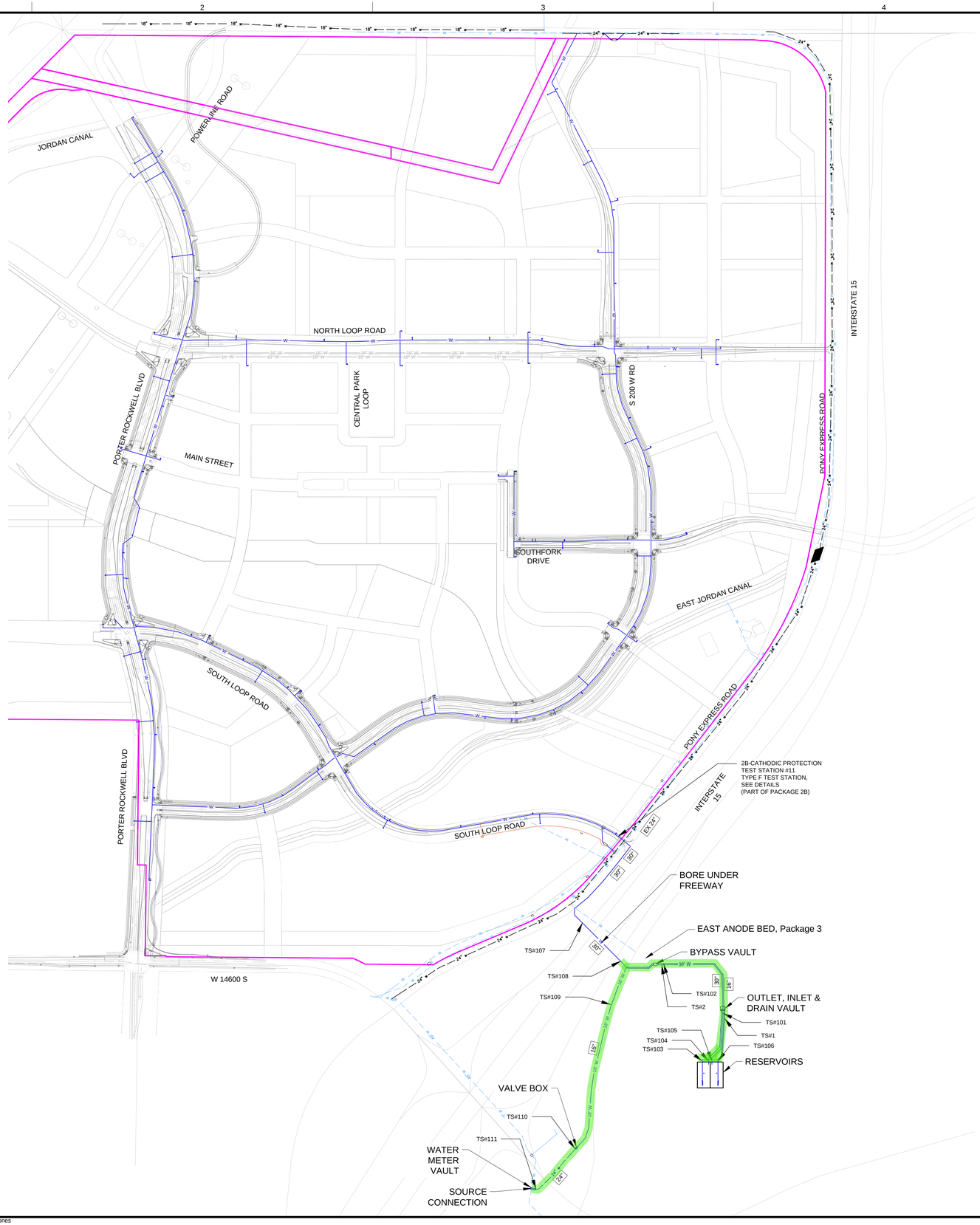

PACKAGE 1
& PACKAGE 3
TEST STATIONS

TEST STATION NUMBER	TEST STATION TYPE	PACKAGE # NORTHING: EASTING:
TS#102	T	PACKAGE 1 N: 7347854.4199 E: 1530903.000
TS#2	T	PACKAGE 1 N: 7347847.9476 E: 1530892.350
TS#101	T	PACKAGE 1 N: 7347572.1853 E: 1531238.404
TS#1	T	PACKAGE 1 N: 7347544.1730 E: 1531248.499
TS#103	I	PACKAGE 1 N: 7347299.5381 E: 1531123.195
TS#104	I	PACKAGE 1 N: 7347299.5381 E: 1531158.112
TS#105	I	PACKAGE 1 N: 7347299.5381 E: 1531176.612
TS#106	I	PACKAGE 1 N: 7347299.5381 E: 1531211.529
TS#107	T	PACKAGE 3 WATERLINE STATION 16+16
TS#108	T	PACKAGE 3 WATERLINE STATION 12+04
TS#109	T	PACKAGE 3 WATERLINE STATION 24+06
TS#110	T	PACKAGE 3 WATERLINE STATION 13+53
TS#110	T	PACKAGE 3 WATERLINE STATION 10+56

0 300' 600'
SCALE: 1" = 300'

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REGISTERED PROFESSIONAL ENGINEER
DAVID G. PETERSON
NO. 278097
STATE OF UTAH

PROJECT TITLE
THE POINT PACKAGE 1 & 3 CONST. DOCUMENTS

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CULINARY OVERVIEW

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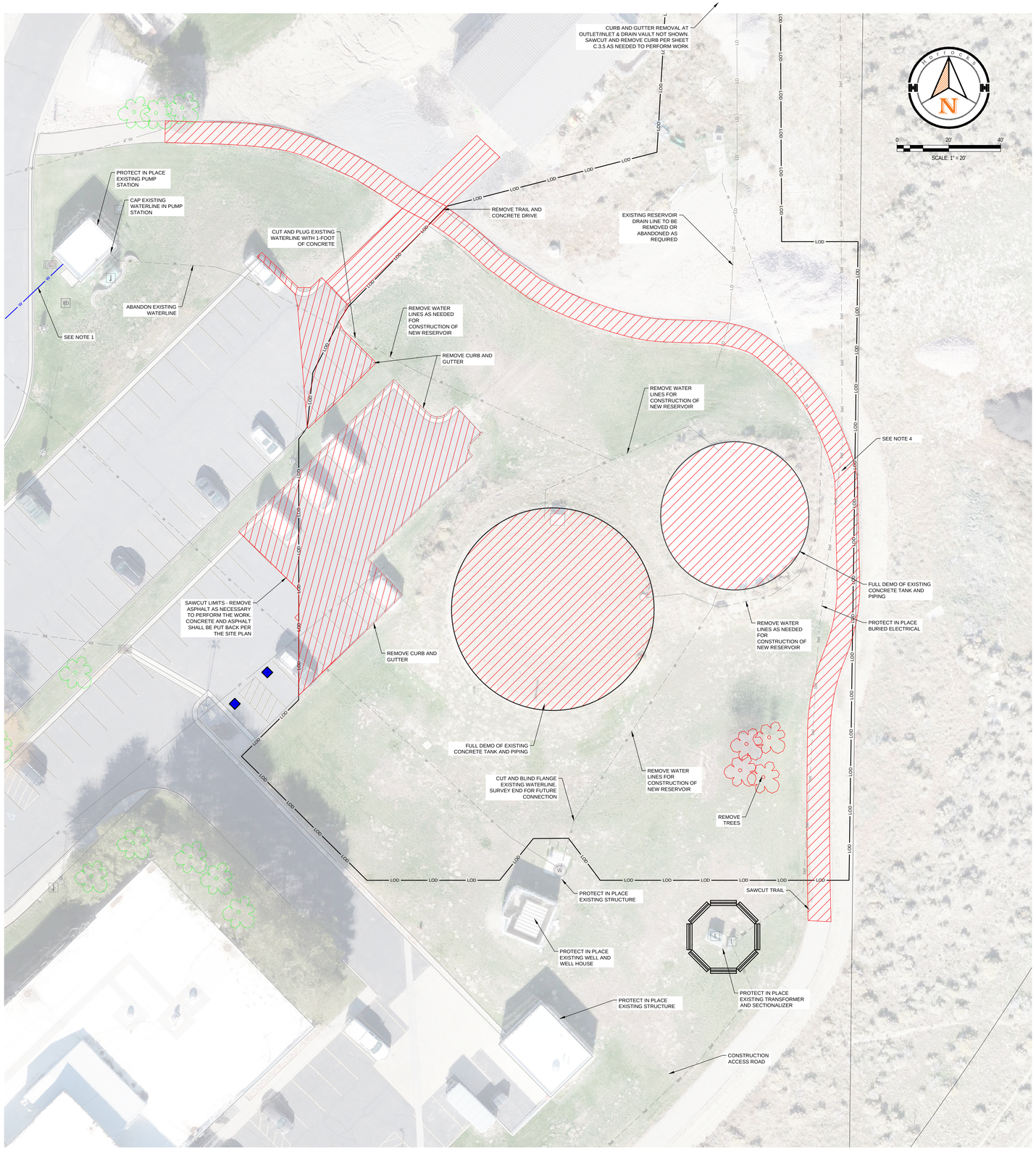

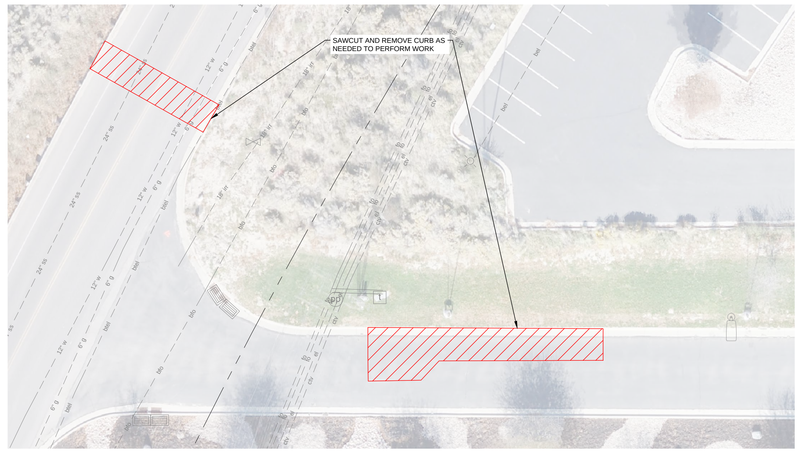

DEMOLITION NOTES

1. DEMOLITION OF THE EXISTING TANKS SHALL NOT BEGIN UNTIL DRAPER CITY WATERLINE IS CONNECTED TO THE SITE BY OTHERS. WATER REMAINING IN THE TANKS SHALL BE DRAINED OR PUMPED OUT TO APPROPRIATE STORM DRAIN.
2. REMOVE ALL PIPING AND VALVES ASSOCIATED WITH THE EXISTING TANKS.
3. DEMO BOTH CONCRETE TANKS IN FULL. CONCRETE SHALL BE BROKEN UP AND FULLY REMOVED FROM SITE. CONCRETE MAY BE HAULED TO THE POINT SITE.
4. SAW CUT AND REMOVE PAVED TRAIL AS NEEDED TO PERFORM THE WORK.
5. THE GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS PROPOSAL TO BECOME FAMILIAR WITH ALL EXISTING FIELD CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
6. THE DEMOLITION CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION MEASURES TO SAFEGUARD THE PUBLIC DURING CONSTRUCTION ACTIVITIES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES TO SAFEGUARD AGAINST THE INTERRUPTION OF SERVICES TO THE PUBLIC.
8. OWNER HAS THE FIRST RIGHT OF REFUSAL OF ALL SALVAGEABLE ITEMS. ALL REMAINING ITEMS ARE THE PROPERTY OF THE CONTRACTOR TO BE SOLD OR TAKEN TO THE DUMP AT THE CONTRACTOR'S COST. THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE OWNER THE SALVAGE OF FIXTURES, FURNISHINGS, DOORS & MISCELLANEOUS EQUIPMENT AS PER THE DFCM SALVAGE LIST.
9. WHILE AN ATTEMPT HAS BEEN MADE TO SHOW THE ITEMS TO BE REMOVED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ON-SITE EXAMINATIONS AND FAMILIARIZE THEMSELVES WITH THE ACTUAL SITE CONDITIONS. ADDITIONAL ITEMS, NOT SHOWN TO BE REMOVED, INTERFERING WITH THE COMPLETE REMOVAL OF THE EXISTING TANKS, SHALL BE REMOVED WITHOUT ADDITIONAL COST TO THE OWNER.
10. CARE SHOULD BE EXERCISED IN THE REMOVAL OF WORK TO PREVENT THE RELEASE OF TOXIC SUBSTANCES. SHOULD TOXIC SUBSTANCES, SUCH AS ASBESTOS BE ENCOUNTERED, THE OWNER AND ENGINEER SHALL BE NOTIFIED. UPON AUTHORIZATION, THE DISPOSAL OF SAME SHALL CONFORM TO ALL GOVERNING CODES AND REGULATIONS. DISPOSAL SHALL BE DONE ONLY BY CONTRACTORS LICENSED FOR THIS WORK, AND THE DEMOLITION CONTRACTOR SHALL ASSIST WITH DISPOSAL, PAYING ALL TIPPING AND DUMP FEES TO DISPOSE OF LEGALLY.
11. DURING DEMOLITION AND CONSTRUCTION OPERATIONS, PROVIDE ALL NECESSARY PROTECTION AND SAFE PASSAGE FOR THE PUBLIC. SUCH AS BUT NOT LIMITED TO: BARRICADES, TEMPORARY PARTITIONS, DUST BARRIERS, SIGNS, ETC. ERECT AND MAINTAIN THESE BARRIERS TO THE OWNER'S SATISFACTION AND ENGINEER AND ALL APPLICABLE RULES AND REGULATIONS.
12. THE CONTRACTOR SHALL TAKE PRECAUTIONS AS TO MINIMIZE DAMAGE TO ITEMS THAT ARE REMOVED AND TO REMAIN, INCLUDING ALL UTILITIES. DURING DEMOLITION AND CONSTRUCTION OPERATIONS, ITEMS NOT SPECIFICALLY NOTED FOR REMOVAL THAT ARE DAMAGED SHALL BE REPAIRED OR REPLACED TO MATCH EXISTING CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
13. COORDINATE CONSTRUCTION TIMING, MOVEMENT OF CONSTRUCTION MATERIALS, AND STORAGE OF REFUSE CONTAINERS WITH THE OWNER.
14. ONLY RE-USE NATIVE EXCAVATED MATERIAL AS FILL AND SUB-BASE WHERE POSSIBLE THAT MEETS THE BACKFILL REQUIREMENTS. ALL OTHER MATERIALS SHALL BE REMOVED FROM THE JOB SITE.
15. RETAIN AND PROTECT EXISTING INFRASTRUCTURE ON ADJACENT PROPERTIES.
16. REMOVE DEBRIS, RUBBISH, AND OTHER MATERIALS RESULTING FROM THE DEMOLITION AND SITE CLEARING OPERATIONS FROM THE SITE AND DISPOSE OF IN A LEGAL MANNER UNLESS DIRECTED OTHERWISE IN THE CONSTRUCTION DOCUMENTS.
17. THE CONTRACTOR SHALL EXCAVATE POTHOLES TO LOCATE ALL UTILITIES AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL IN-PLACE, PROTECTED, AND RELOCATED UTILITIES.
18. STOCKPILES SHALL BE GRADED TO MAINTAIN SLOPES NOT GREATER THAN 2:1 HORIZONTAL TO VERTICAL. PROVIDE EROSION CONTROL AS NEEDED TO PREVENT SEDIMENT TRANSPORT TO ADJACENT DRAINAGE WAYS. THE CONTRACTOR SHALL RECYCLE MATERIALS IF POSSIBLE BEFORE HAULING THEM TO AN APPROVED LANDFILL. THE CONTRACTOR WILL BE ABLE TO USE A DESIGNATED AREA WITHIN THE PROPERTY BOUNDARY FOR RECYCLING OPERATIONS.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL WASTE MATERIAL. DISPOSAL SHALL BE AT AN APPROVED SITE FOR SUCH MATERIAL. BURNING OR BURYING OF WASTE MATERIAL ON-SITE IS NOT PERMITTED UNLESS OTHERWISE SPECIFIED.
20. EXISTING WATERLINES SHALL BE FULLY REMOVED WHERE THEY EXIST WITHIN THE FOOTPRINT OF THE NEW 3 MG RESERVOIR. CUT AND CAP OUTSIDE LIMITS OF EXCAVATION.

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PROFESSIONAL ENGINEER
NO. 5338108
KASEY B. PRESNALL
08/28/2025
STATE OF UTAH

PROJECT TITLE

THE POINT

3MG RESERVOIR

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DEMOLITION PLAN

SHEET NUMBER

D.1.1

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NOTE:
1. CONTRACTOR SHALL NOT USE PARKING LOTS FOR CONSTRUCTION ACCESS. EQUIPMENT NOT ALLOWING IN PARKING AREAS OR ROADS.

2. CONTRACTOR SHALL CLEAR AND GRUB STAGING AREA AND PLACE 8" OF UNTREATED BASE COURSE.

3. PROTECT IN PLACE ALL CURB, GUTTER AND SIDEWALK, ROADS, PARKING LOTS, TRAILS, AND OTHER PAVED AREAS. IF DAMAGED, CONTRACTOR SHALL REPAIR OR REPLACE AT NO ADDITIONAL COST TO THE OWNER.

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SITE & STAGING

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PAGE 11

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RESERVOIR SITE PLAN

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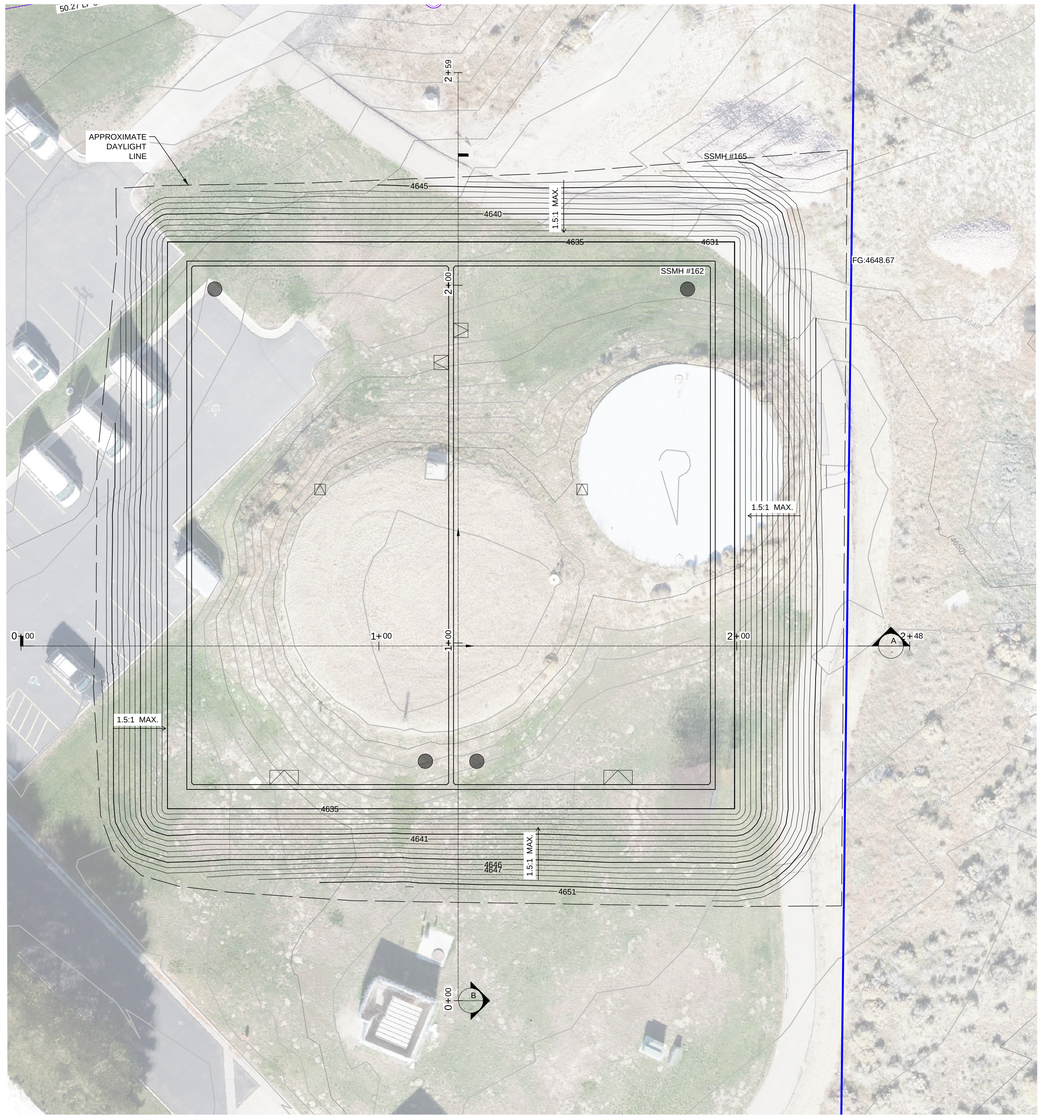
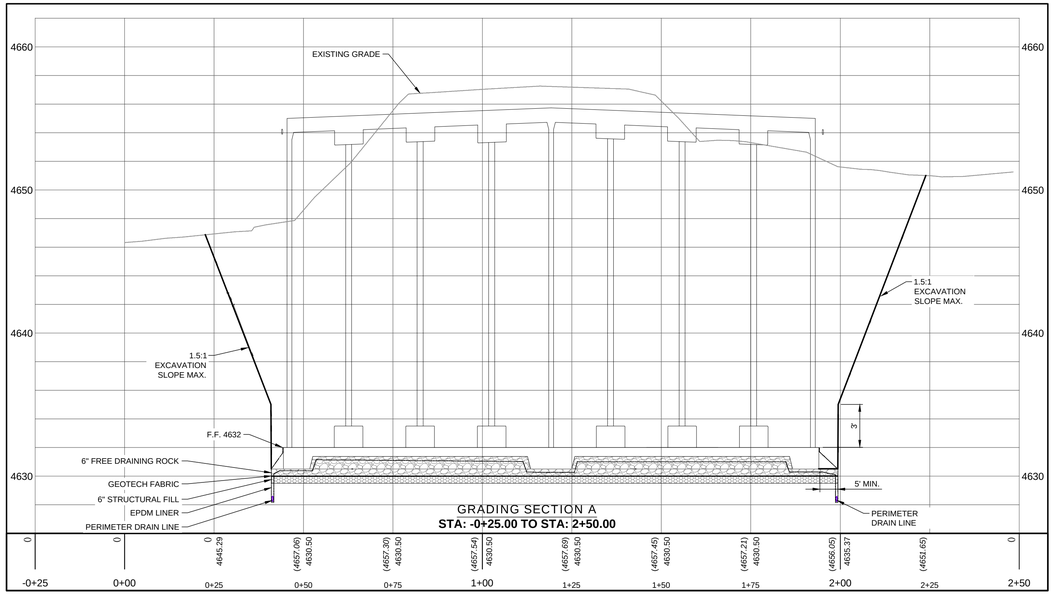
C.3.2

PAGE 12





GRADING SECTION A
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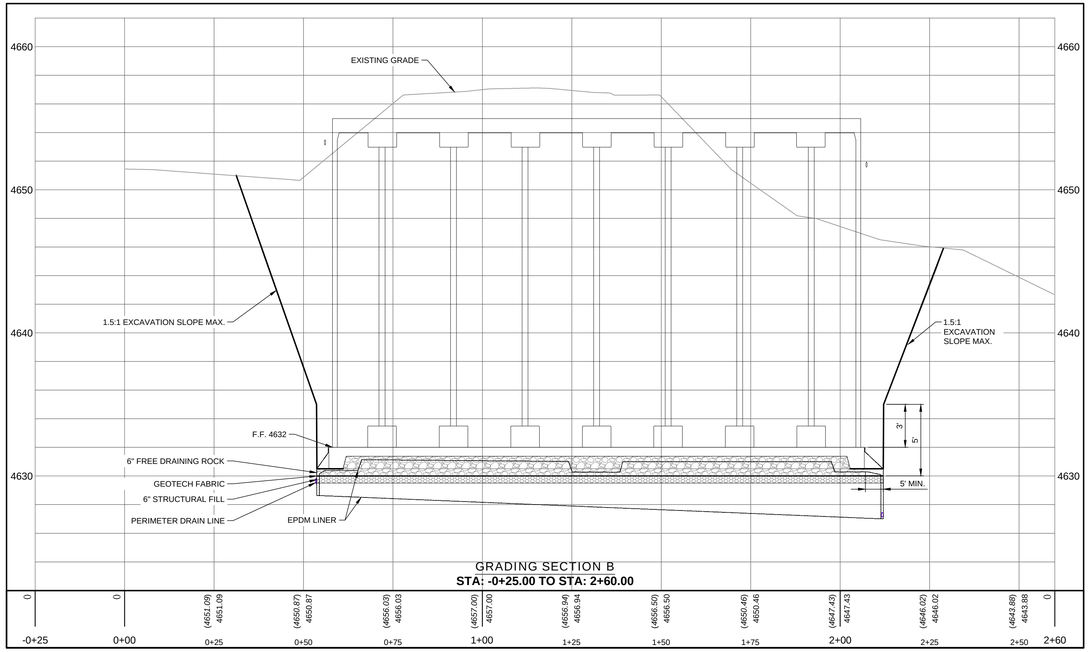

GRADING SECTION B
STA: -0+25.00 TO STA: 2+60.00

Material	Recommended Properties
Structural Fill	• 3-inch minus granular soil • 70 – 100% passing ¾-inch sieve • 5 – 20% passing No. 200 sieve • Moisture conditioned ±2% from optimum moisture content • Placed in loose lifts ≤ 8 inches thick • Below foundations: Compacted to at least 95% of the maximum laboratory density determined by ASTM D1557 (Modified Proctor) • Adjacent to structures, but not below foundations: Compact to at least 90% of the maximum laboratory density
Geotextile Fabric	• Non-woven • Weight ≥ 8 oz/yd^2
Free Draining Gravel	• 1-inch minus rock • ≤ 5% passing No. 30 sieve • Placed in loose lifts ≤ 12 inches thick • Consolidate the gravel with a walk-behind plate compactor.

BORROWS ENGINEERS

0 20' 40'
SCALE: 1" = 20'

NOTES:

1. BLASTING IS PROHIBITED UNLESS APPROVED BY ENGINEER.
2. PER THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY RB&G ENGINEERING, DATED OCTOBER 2023, "RECOMMEND PROJECT PLANNING ASSUME THE TOP OF QUARTZITE IS 20-FEET BELOW NATIVE GROUND SURFACE".
3. EXCAVATIONS MORE THAN 12 FEET DEEP SHALL BE SLOPED 1.5H:1V MAX.

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CONSTRUCTION GRADING PLAN

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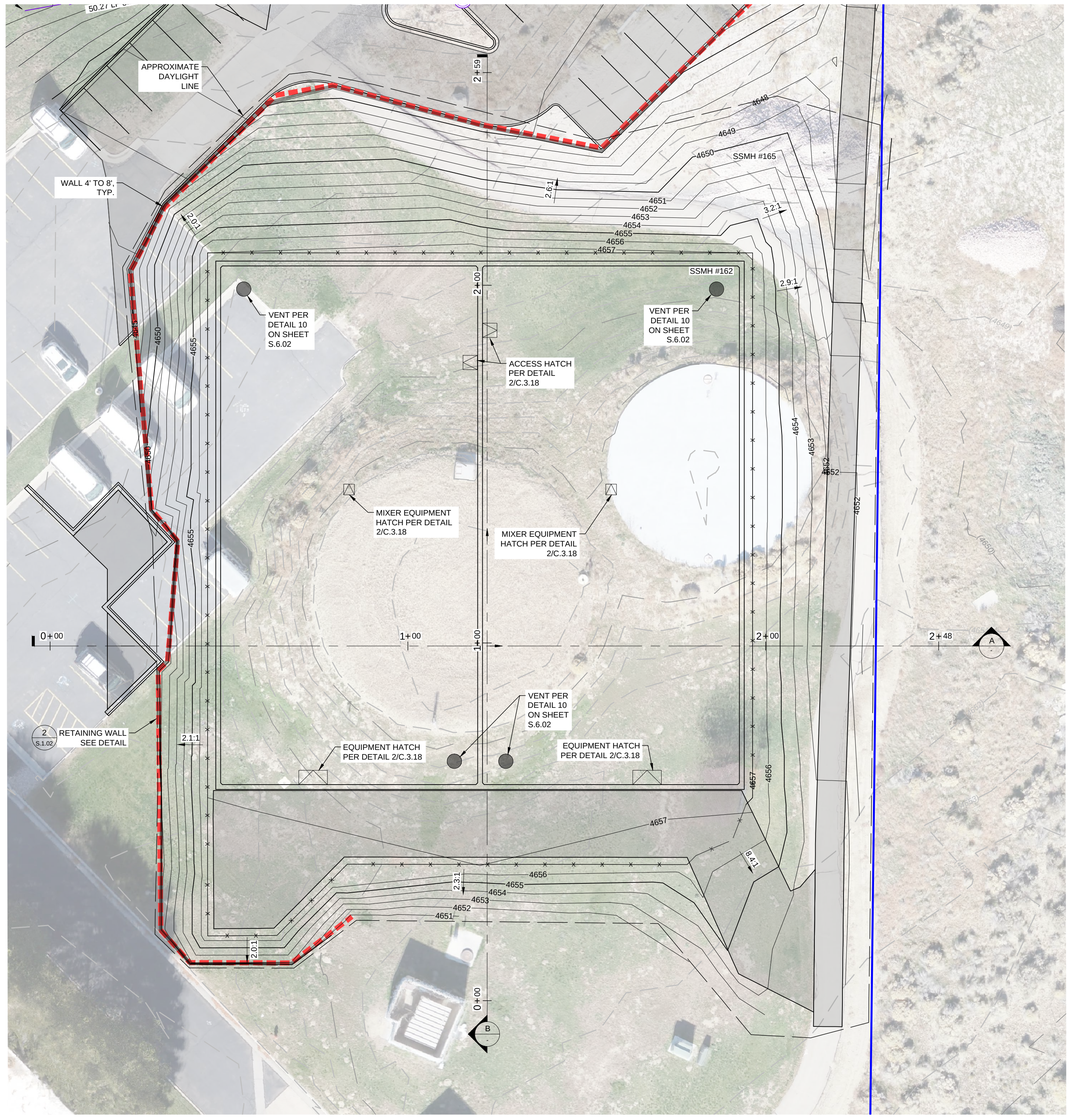

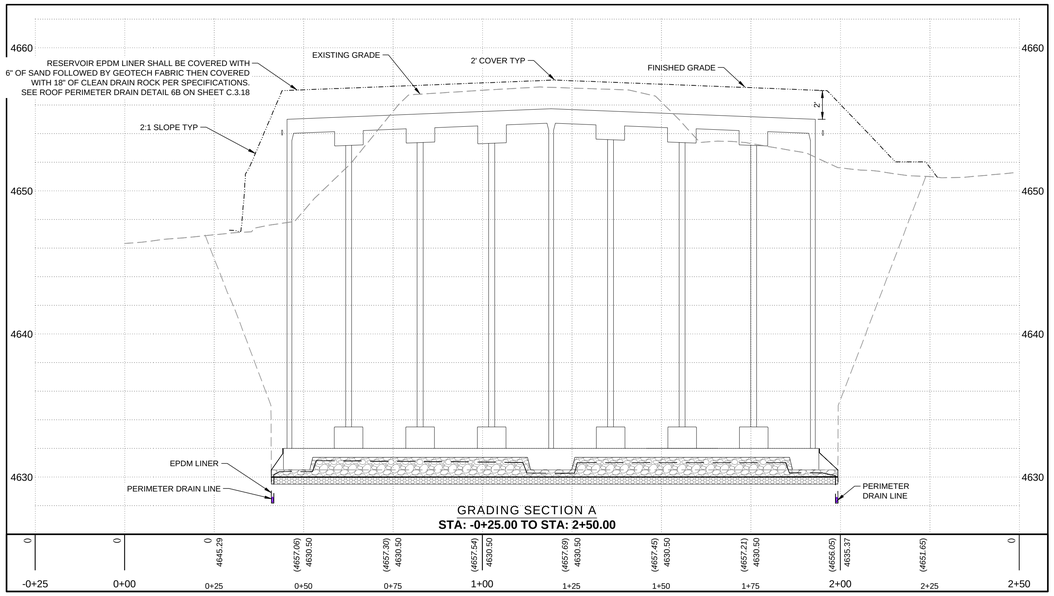

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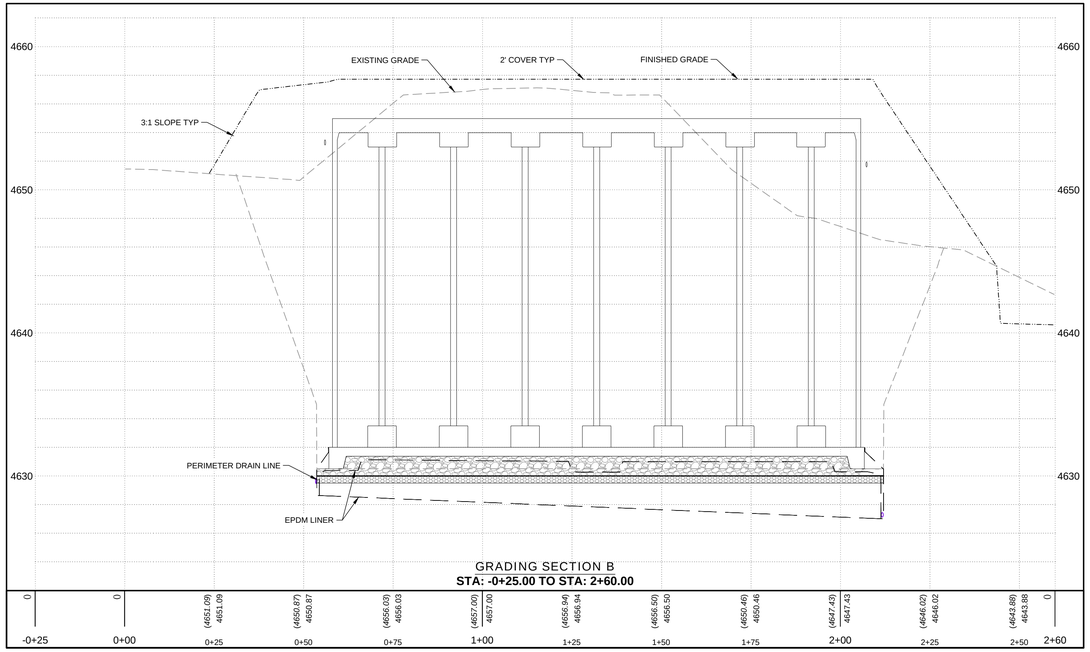

GRADING SECTION B
STA: -0+25.00 TO STA: 2+60.00

NOTES:

1. CONSTRUCTION GRADING SURFACE NOT SHOWN IN SECTIONS FOR CLARITY.

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SCALE: 1" = 20'

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FINISH GRADING PLAN

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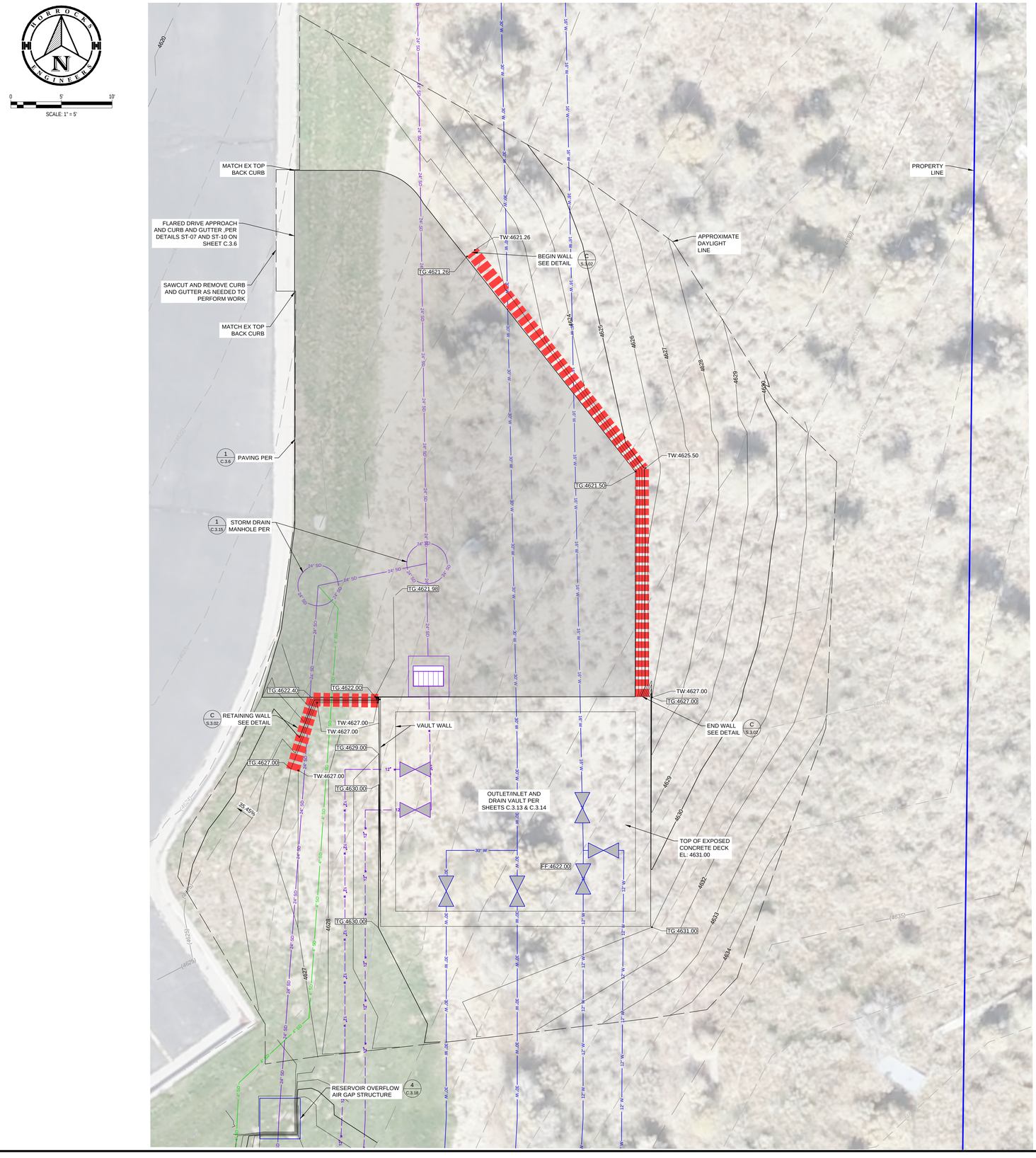

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0 5' 10'

SCALE: 1" = 5'

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OUTLET, INLET AND DRAIN VAULT AREA GRADING PLAN

SHEET NUMBER

C.3.5

PAGE 15

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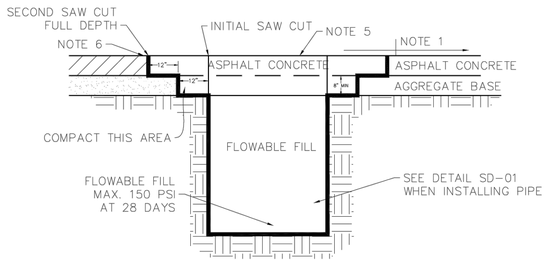


EXCAVATION ASPHALT PAVEMENT

EXCAVATION GENERAL NOTES

1. UNTREATED BASE COURSE: PROVIDE MATERIAL SPECIFIED IN SECTION 02230. PLACE AND COMPACT PER SECTION 02240 AND SECTION 02575. MAXIMUM LIFT THICKNESS IS 8-INCHES BEFORE COMPACTION.

2. SHORING: SHORE IN CONFORMANCE WITH SECTION 02214.

3. TACK COAT: FULL TACK COAT COVERAGE ON ALL VERTICAL SURFACES.

4. ASPHALT PAVEMENT: USE ASPHALT CONCRETE SPECIFIED IN SECTION 02513.
   A. COMPACT EACH LIFT IN CONFORMANCE WITH SECTION 02503
   B. PLANE OFF SURFACE DISTORTIONS THAT EXCEED 1/4 INCH DEVIATION IN 10 FEET.
      COAT PLANED SURFACES WITH A CATIONIC OR ANIONIC EMULSION AS APPROVED BY CITY ENGINEER.
   C. ASPHALT PAVEMENT THICKNESS DEPTH SHALL EQUAL EXISTING PLUS 1-INCH, 4" MINIMUM, 6" MAXIMUM
   D. MATCH EXISTING ASPHALT GRADATION ½ OR ¾.

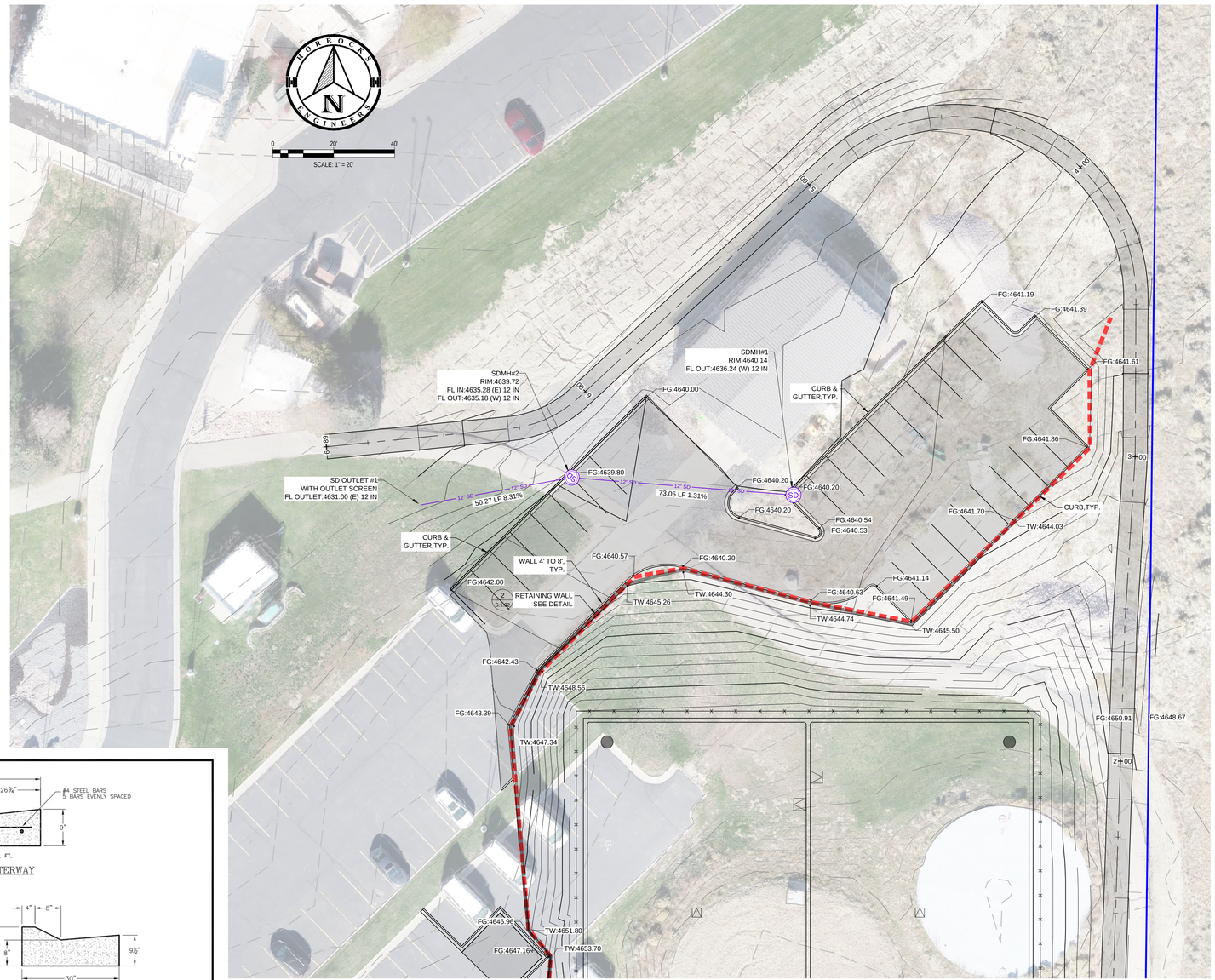
5. JOINT REPAIR: IF A CRACK OCCURS AT THE "T" PATCH CONNECTION TO EXISTING PAVEMENT OR AT ANY STREET FIXTURE, SEAL THE CRACK PER SECTION 02511.

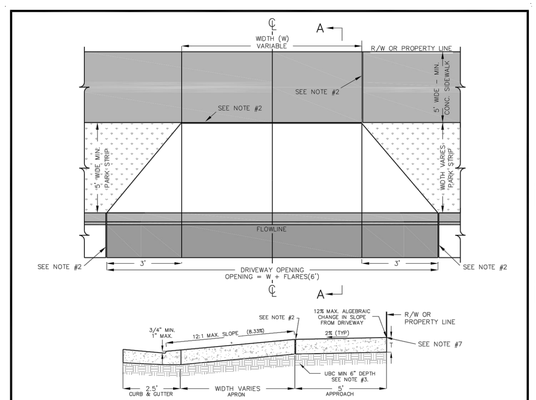
6. EQUIPMENT: ALL ASPHALT PAVEMENT SHALL BE INSTALLED WITH MECHANICAL PAVING EQUIPMENT UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

7. COMPLY WITH ALL REQUIREMENTS OF SECTION 02575.

8. PLANT MIX SEAL COAT: FOR PLANT MIX SEAL COAT COMPLY WITH UDOT SPECIFICATION, SECTION 02786. MILL AND REPLACE EXISTING PLANT MIX SEAL COAT 10 FEET FROM EDGE OF SECOND CUT IN ALL DIRECTIONS.

2 / - TYPICAL ASPHALT PAVEMENT REPAIR SECTION
NTS





SECTION A-A

GENERAL NOTES

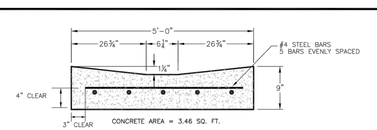
1. EDGE CONCRETE WITH 1/2" RADIUS EDGING TOOL.
2. PLACE 1/2" BITUMINOUS IMPREGNATED EXPANSION JOINT WHERE NOTED AND IN THE DRIVEWAY CENTERLINE IF "W" IS GREATER THAN 20'. EXPANSION JOINT SHALL BE FULL DEPTH OF CONCRETE PLUS 1", WITH TOP SET FLUSH WITH TOP OF CONCRETE. BOND BREAKER SHALL BE REQUIRED AT THE LINE BETWEEN TBC AND APRON.
3. USE 6" MIN. UNTREATED BASE COURSE MATERIAL, COMPACT TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY OF THE MODIFIED PROCTOR AS PER CURRENT ASTM D 1557 OR AASHTO T 180 SPECIFICATIONS; AT +/- 2% OF OPTIMUM MOISTURE CONTENT.
4. SEE ST-12 FOR SIDEWALK JOINT PATTERN.
5. ALL CONCRETE SHALL BE CLASS AA (AE). SEE SECTION 03000.
6. ALL CONCRETE SLABS WITH A LENGTH/WIDTH RATIO GREATER THAN 2:1 SHALL HAVE CONTRACTION JOINTS INSTALLED AS REQUIRED TO MAINTAIN A 2:1 RATIO MAX.
7. ALL DRIVEWAYS MUST MAINTAIN A NEGATIVE SLOPE AWAY FROM THE HOME. NO DOWN SLOPING DRIVEWAYS WILL BE ALLOWED UNLESS APPROVED BY ENGINEER.

TABLE OF DRIVEWAY DIMENSIONS	
DIMENSION	ZONE
T	0'-6" RESIDENTIAL ZONES 0'-8" COMMERCIAL & INDUSTRIAL ZONES
W	25'-0" MIN. INDUSTRIAL & COMMERCIAL USE 35'-0" MAX. INDUSTRIAL & COMMERCIAL USE 16'-0" MIN. MAJOR & COLLECTOR STREET RESIDENTIAL USE 12'-0" MIN. LOCAL STREET RESIDENTIAL USE 30'-0" MAX. ALL RESIDENTIAL USE

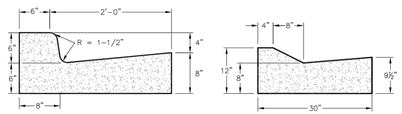
NO.	AUTHORIZED BY	REVISIONS	DATE
1	APPROVED		SEPT. 06

DRAPER CITY

FLARED DRIVE APPROACH — ST-07



5'-0" CONCRETE WATERWAY

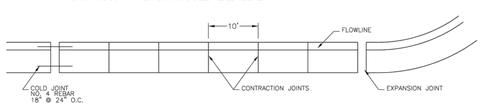


30" CONCRETE STANDARD CURB & GUTTER

TYPE "F" CURB & GUTTER

NOTES:

1. CONCRETE SHALL BE, CLASS AA (AE) AS PER DRAPER CITY STANDARD SPECIFICATION SECTION 03000.
2. PLACE EXPANSION-CONTRACTION JOINTS, (JOINT FILLER MATERIAL FULL DEPTH OF CONCRETE PLUS 1 INCH, FLUSH WITH TOP OF CONCRETE) EVERY 50 FEET FOR HAND SET FORMING AND FOR SLIP FORMING AND AT THE PC. AND PT. OF EACH RADIUS AND START AND FINISH OF EACH POUR.
3. ALL REINFORCING STEEL TO BE A MINIMUM OF THREE INCHES CLEAR CONCRETE COVERAGE UNLESS OTHERWISE SHOWN.
4. ROLLED AND GUTTALL GUTTER SHALL NOT BE USED FOR NEW CONSTRUCTION UNLESS AUTHORIZED BY THE CITY ENGINEER.
5. EDGE CONCRETE WITH A 1/2" EDGING TOOL.
6. USE 6" MIN. UNTREATED BASE COURSE MATERIAL, COMPACT TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY OF THE MODIFIED PROCTOR AS PER ASTM D 1557 OR AASHTO T 180 SPECIFICATIONS; AT +/- 2% OF OPTIMUM MOISTURE CONTENT.
7. STAGGER LAP SPLICES WITH A MINIMUM OF 15 INCHES.
8. FORM OIL CONTAMINATED REINFORCING STEEL WILL BE REJECTED.

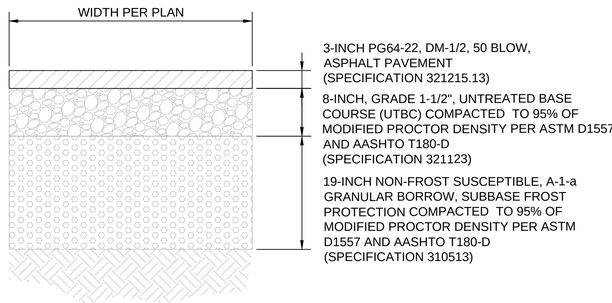


CURB AND GUTTER JOINT DETAIL

NO.	AUTHORIZED BY	REVISIONS	DATE
1	APPROVED		SEPT. 06

DRAPER CITY

STANDARD CURB & GUTTERS — ST-10



1 / - TYPICAL ASPHALT PAVED TRAIL AND ROAD SECTION
NTS

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WARNING
0 1 2
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PROFESSIONAL ENGINEER NO. 5338108 KASEY B. PRESNUT 08/28/2025 STATE OF UTAH

PROJECT TITLE
THE POINT
3MG RESERVOIR

ISSUE TYPE:	CD
ISSUE DATE:	08/28/2025
DFCM PROJ No.	22427100
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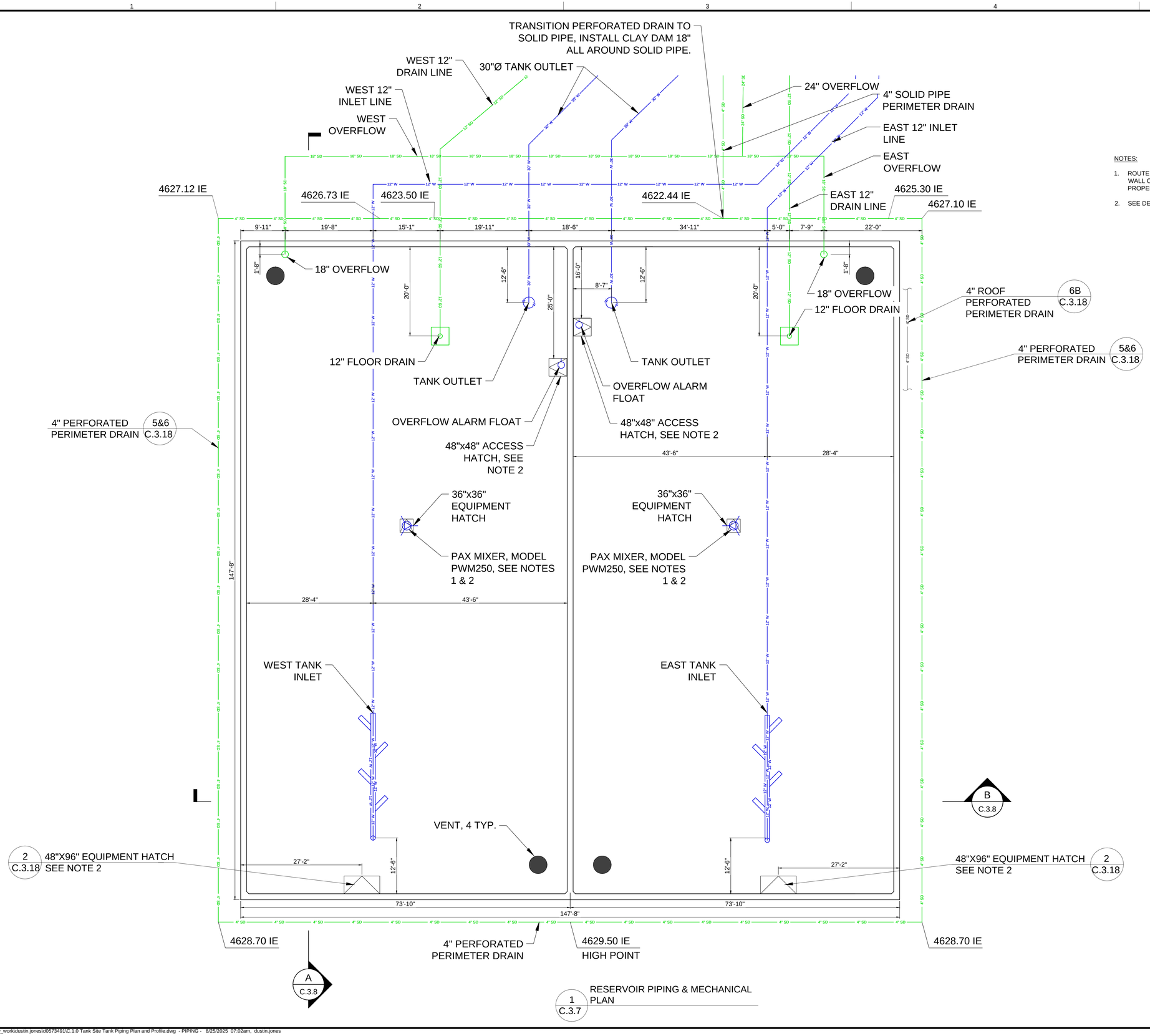
SHEET TITLE
TRAIL GRADING & DETAILS

SHEET NUMBER
C.3.6

PAGE 16



NOTES:

1. ROUTE MIXER POWER CABLES IN SLEEVE HORIZONTALLY THROUGH THE CURB WALL OF THE HATCH. IF ROUTED THROUGH MEMBRANE, PENETRATION SHALL BE PROPERLY SEALED. SEE DETAIL 2 / C.3.18.
2. SEE DETAIL 2 / C.3.18 FOR ACCESS HATCHES AND APRONS.

SCALE: 1" = 10'

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SHEET TITLE
RESERVOIR PLOT PLAN

SHEET NUMBER
C.3.7

PAGE 17

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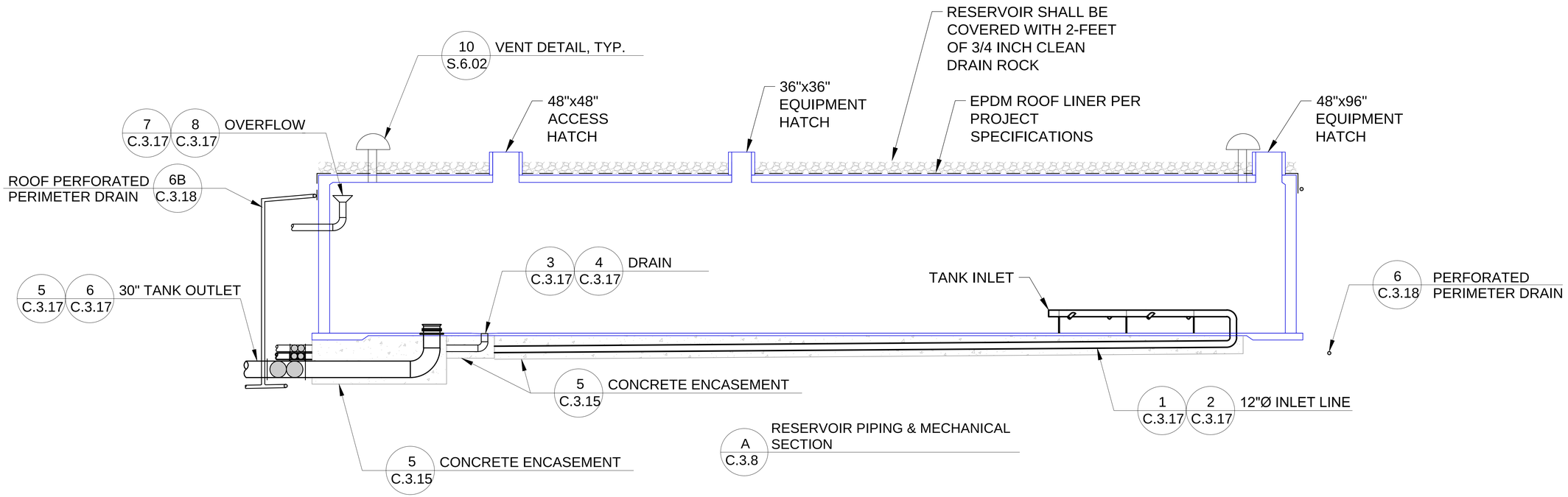

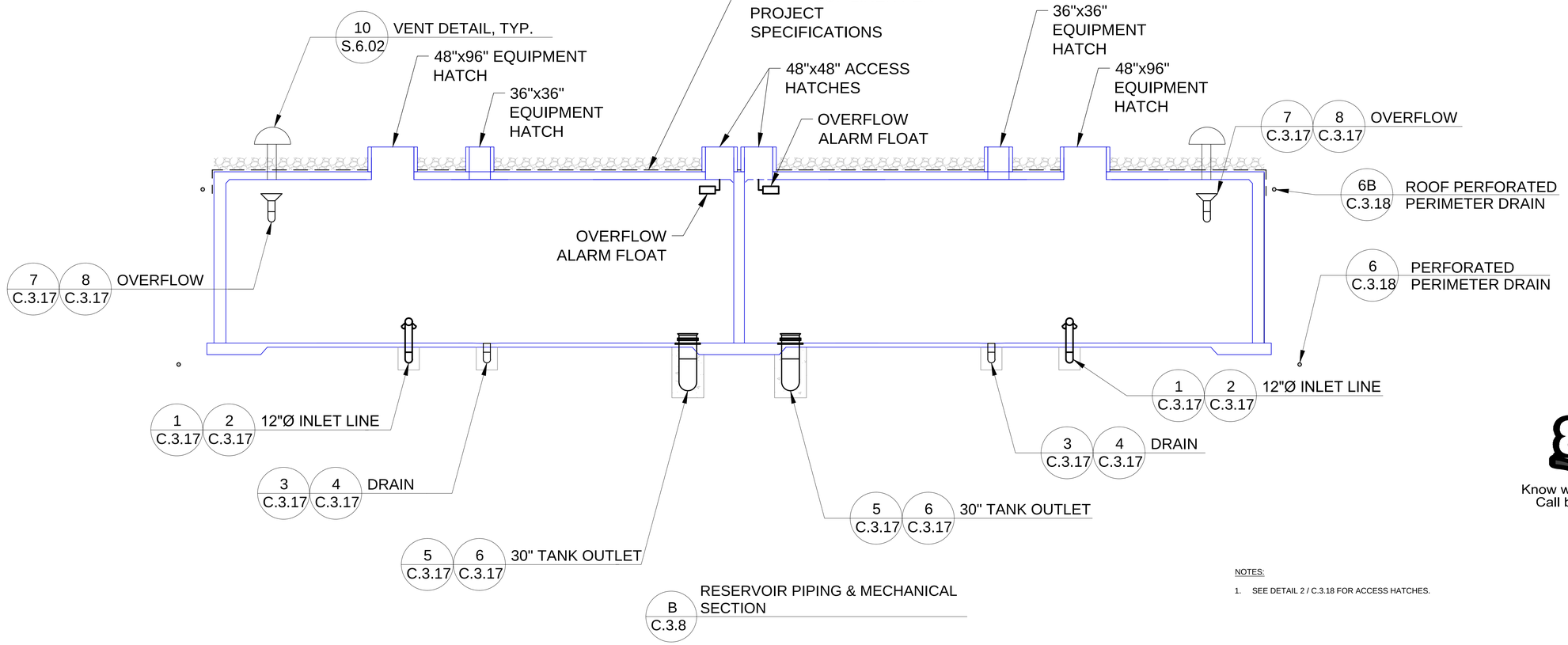

NOTES:

1. SEE DETAIL 2 / C.3.18 FOR ACCESS HATCHES.

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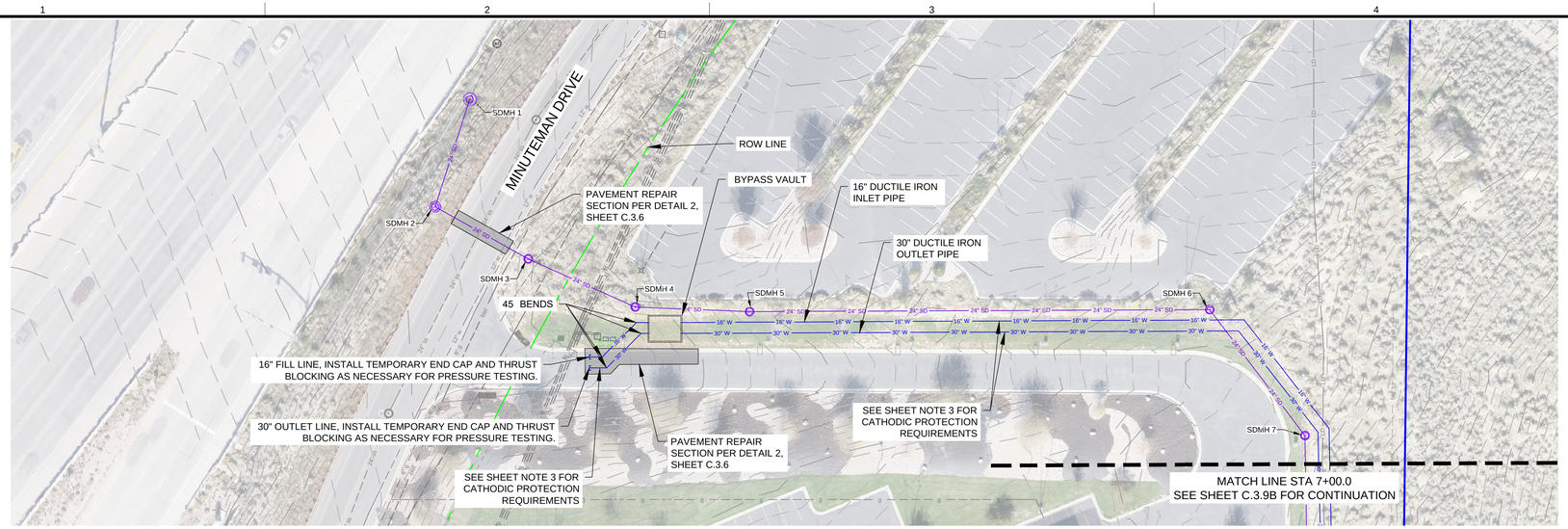
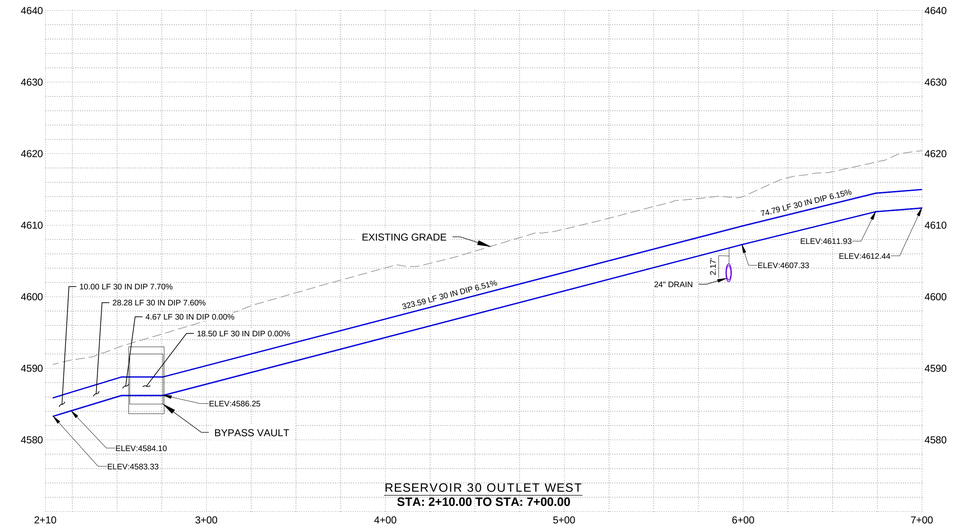
SHEET TITLE
RESERVOIR SECTIONS

SHEET NUMBER
C.3.8

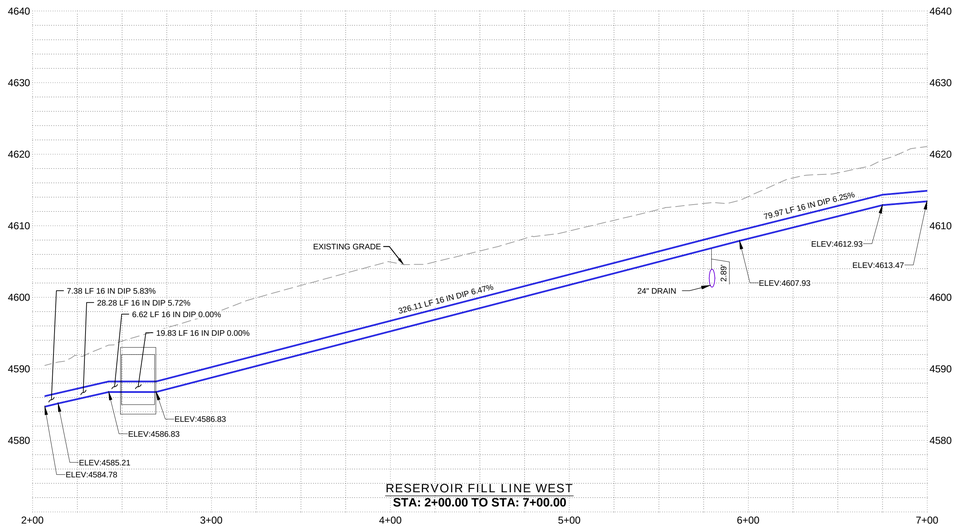
PAGE 18



SEE SHEET G.1.8 FOR STRUCTURE COORDINATES.
CONTRACTOR TO FIELD CONFIRM ALL RIM ELEVATIONS PRIOR TO ORDERING STRUCTURES.
ALL RIMS TO MATCH EXISTING GROUND UNLESS LOCATED IN DISTURBED AREAS, THEN RIMS TO MATCH FINISH GRADE.



RESERVOIR 30 OUTLET WEST
STA: 2+10.00 TO STA: 7+00.00



RESERVOIR FILL LINE WEST
STA: 2+00.00 TO STA: 7+00.00

NOTES:

1. SEE DETAIL 1 ON SHEET C.3.15 FOR MANHOLE DETAIL.
2. (NOT USED)
3. THE 30" OUTLET AND 12" & 16" INLET DUCTILE IRON PIPES SHALL BE ELECTRICALLY CONTINUOUS JOINT BONDS REQUIRED AT EVERY PIPE JOINT, SEE SHEET C.3.16 FOR DETAILS. THESE PIPES SHALL BE ELECTRICALLY ISOLATED FROM THE BYPASS VAULTS.

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WATER INLET & OUTLET PROFILES

SHEET NUMBER

C.3.9A

PAGE 19

SEE SHEET G.1.8 FOR STRUCTURE COORDINATES.
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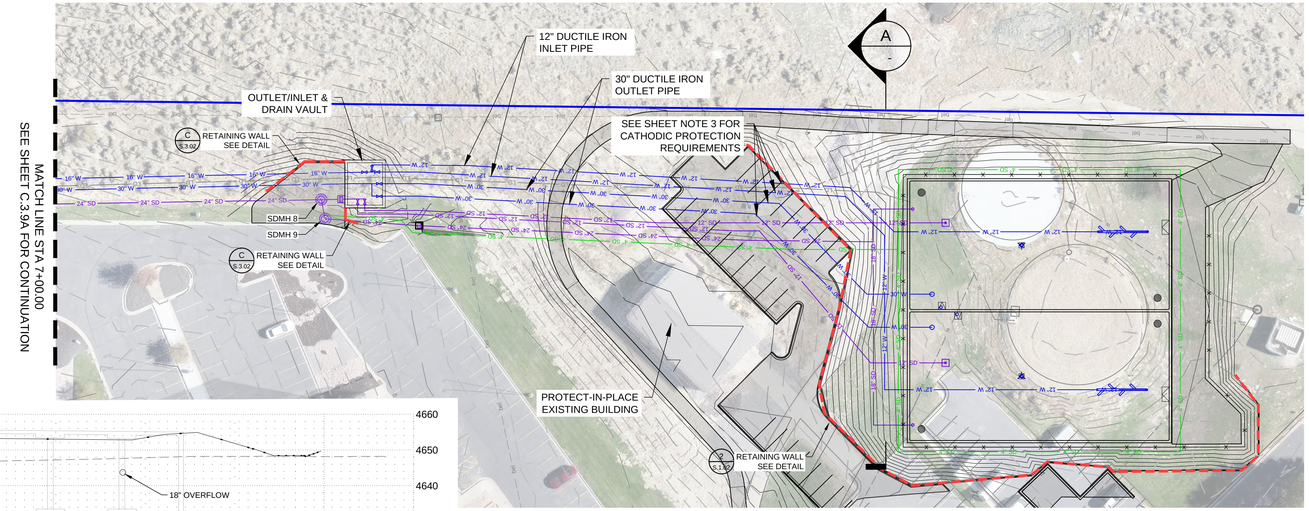
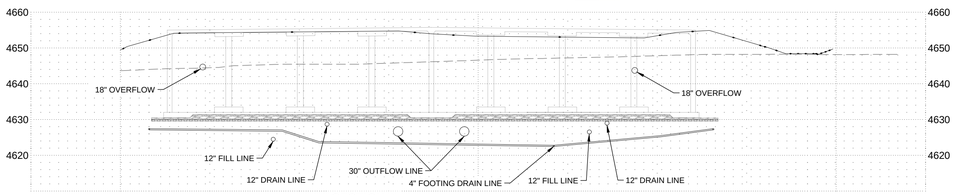
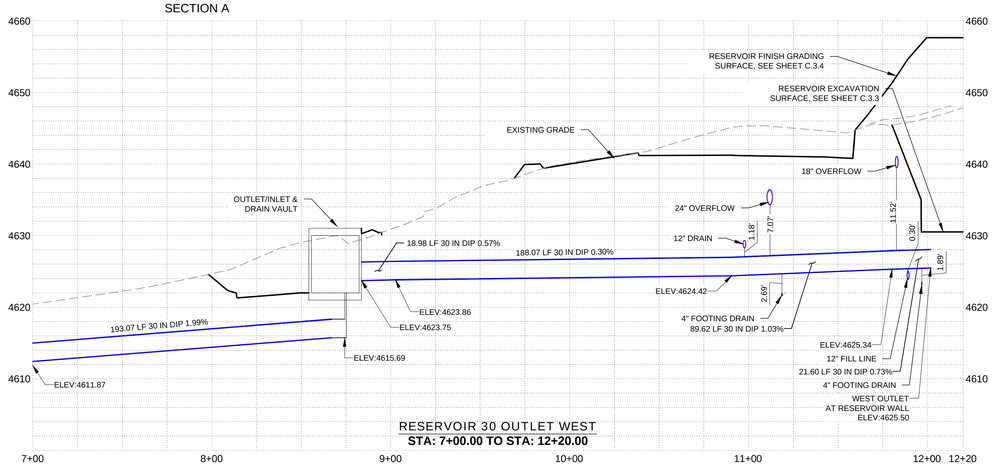
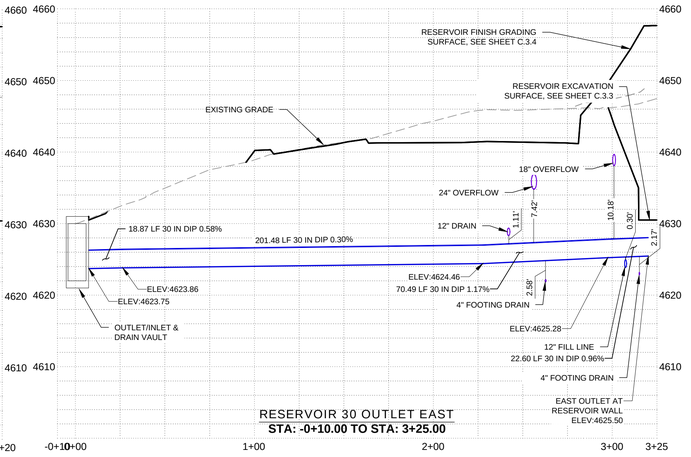




SECTION A



RESERVOIR 30 OUTLET WEST
STA: 7+00.00 TO STA: 12+20.00



RESERVOIR 30 OUTLET EAST
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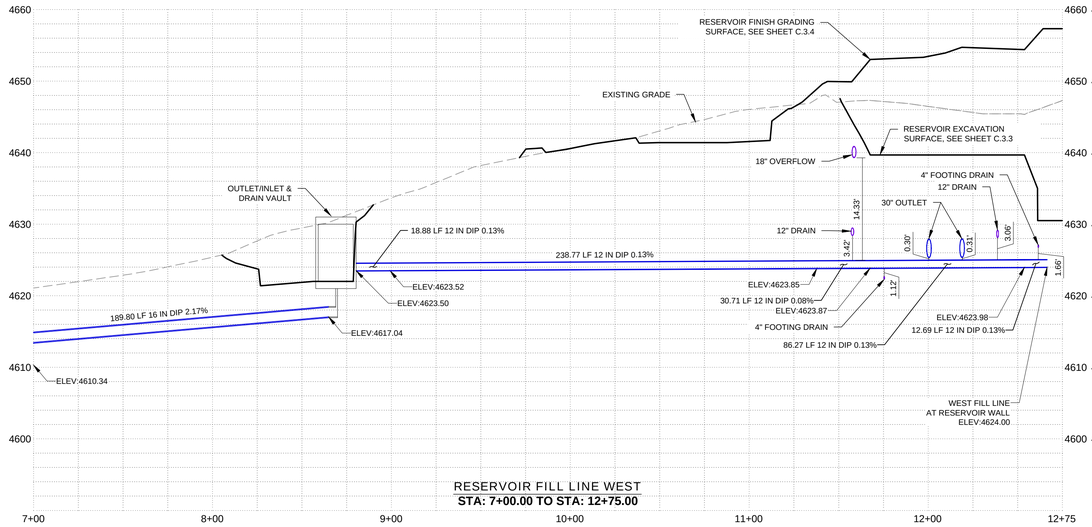

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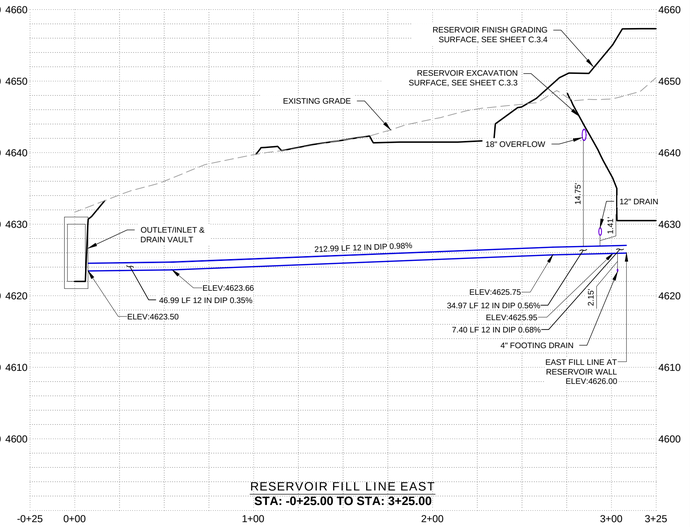

RESERVOIR FILL LINE EAST
STA: -0+25.00 TO STA: 3+25.00

NOTES:

1. SEE DETAIL 1 ON SHEET C.3.15 FOR MANHOLE DETAIL.
2. (NOT USED)
3. THE 30" OUTLET AND 12" & 16" INLET DUCTILE IRON PIPES SHALL BE ELECTRICALLY CONTINUOUS JOINT BONDS REQUIRED AT EVERY PIPE JOINT, SEE SHEET C.3.16 FOR DETAILS. THESE PIPES SHALL BE ELECTRICALLY ISOLATED FROM THE BYPASS VAULTS.

0 40' 80'
SCALE: 1" = 40'

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KASEY B. PRESNUT
08/28/2025
STATE OF UTAH

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WATER INLET & OUTLET PROFILES

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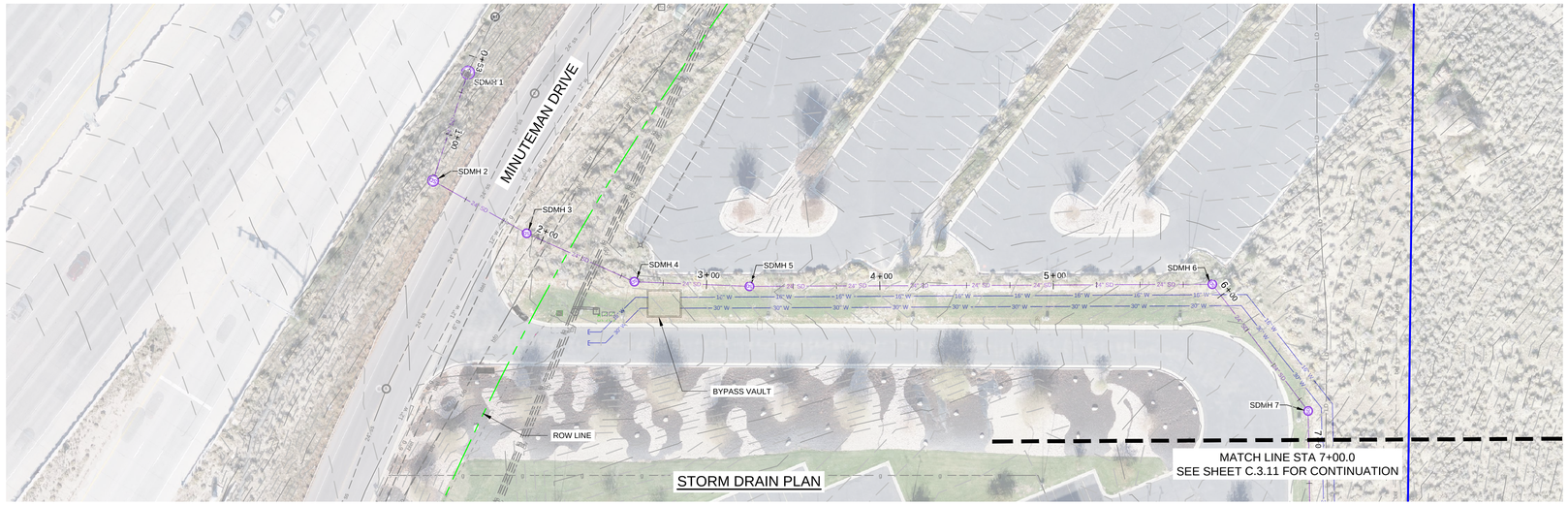
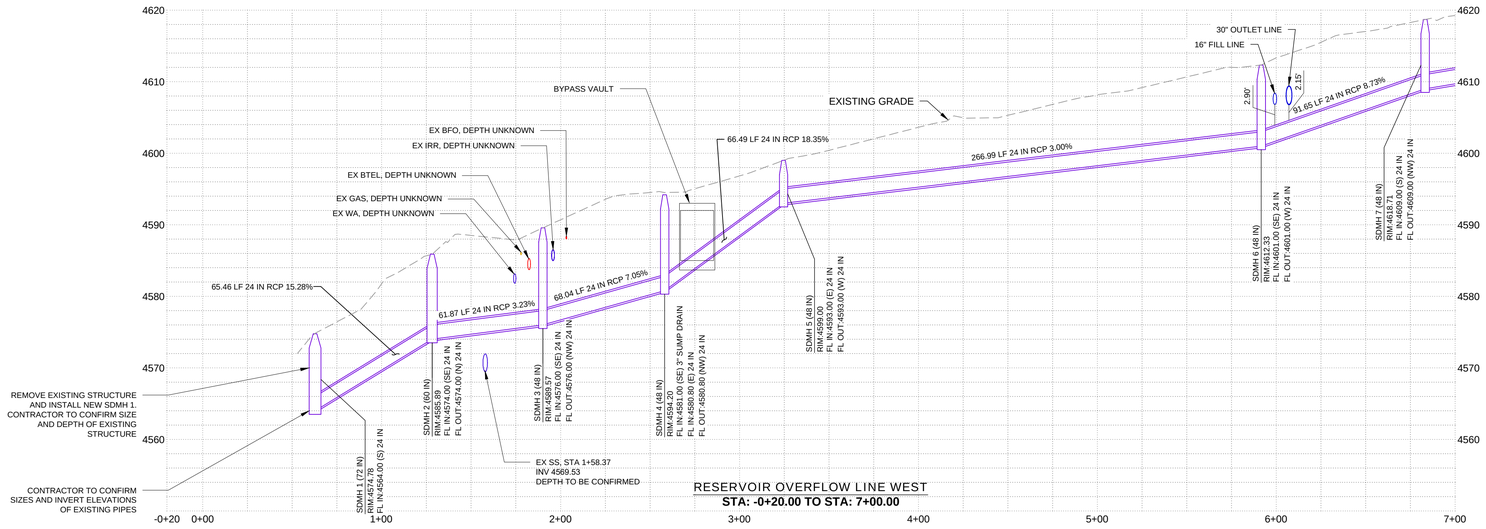


STORM DRAIN PLAN



RESERVOIR OVERFLOW LINE WEST
STA: -0+20.00 TO STA: 7+00.00

SEE SHEET G.1.8 FOR STRUCTURE COORDINATES.
CONTRACTOR TO FIELD CONFIRM ALL RIM ELEVATIONS PRIOR TO ORDERING STRUCTURES.
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NOTES:

1. SEE DETAIL 1 ON SHEET C.3.15 FOR MANHOLE DETAIL.

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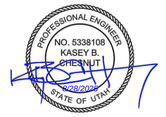

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DRAIN & OVERFLOW PROFILES

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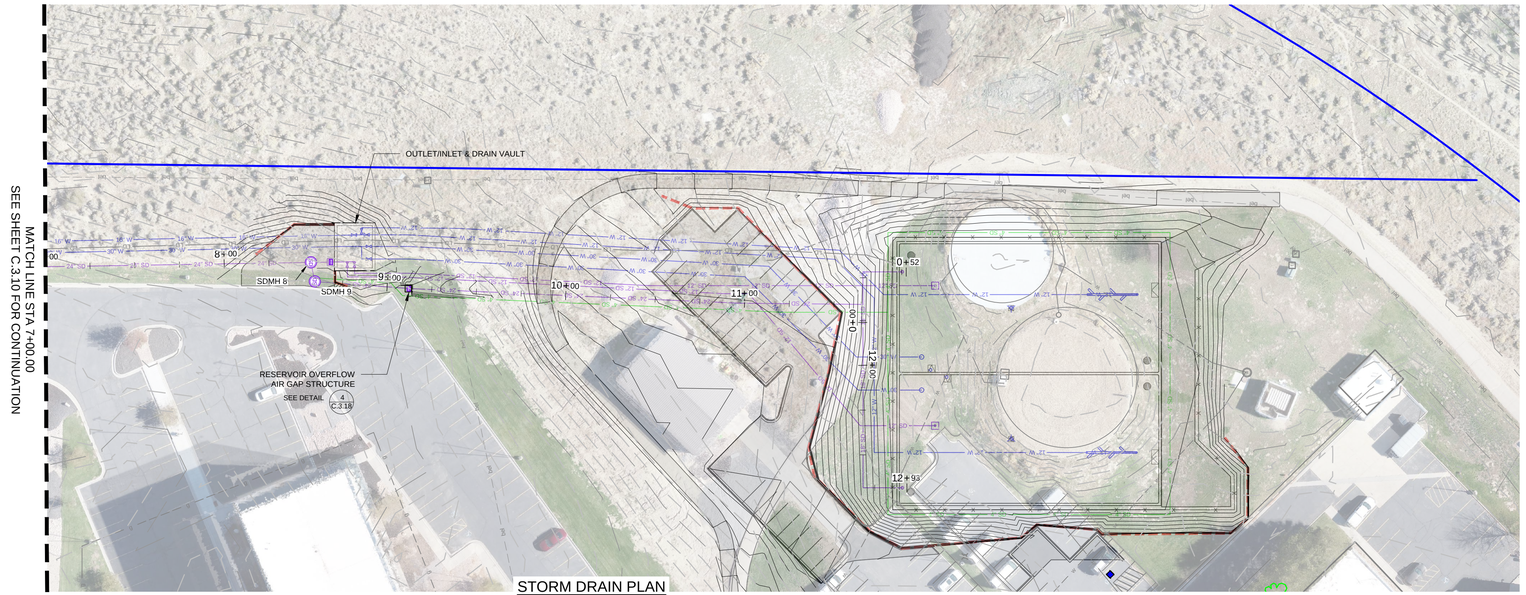
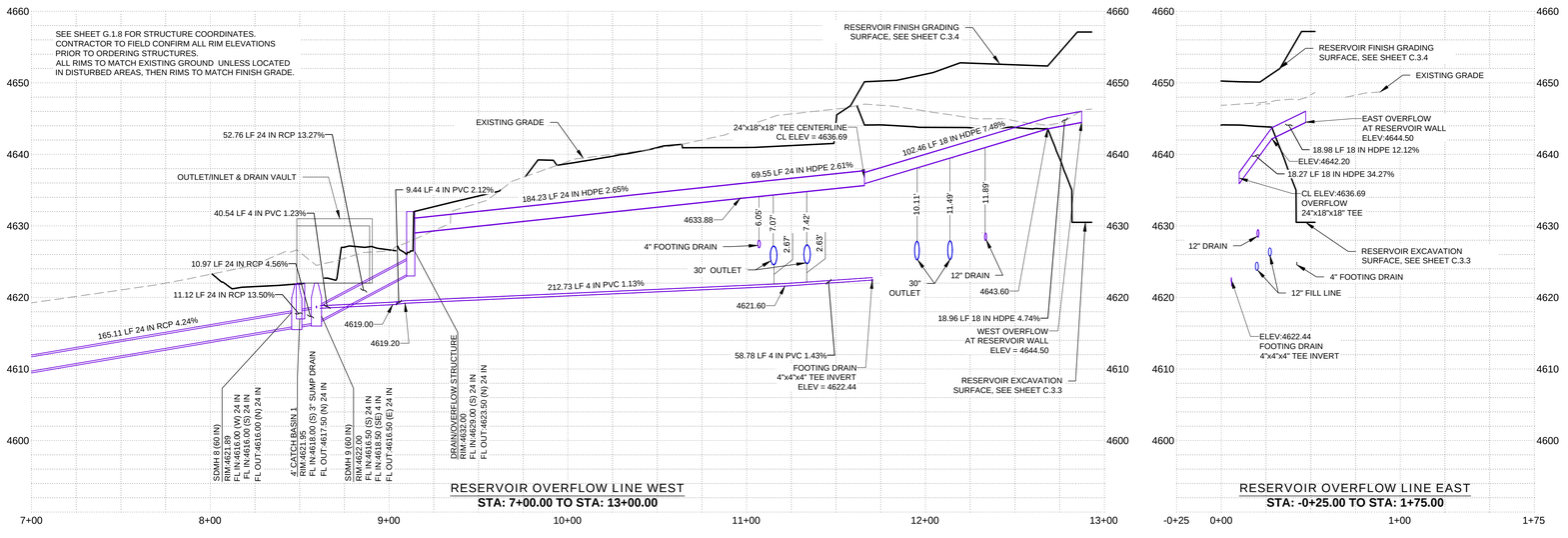
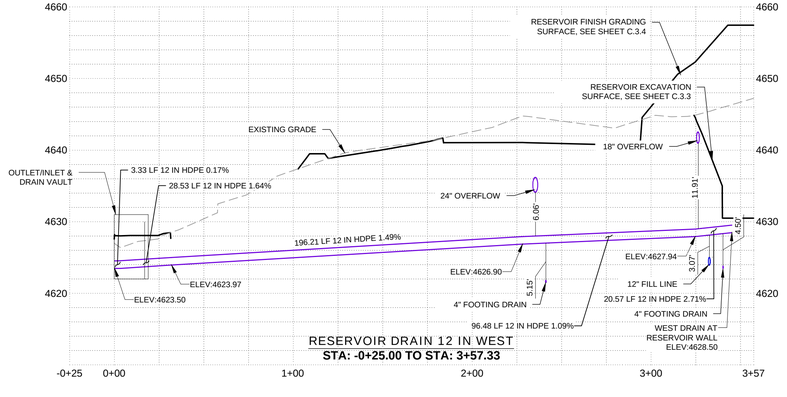
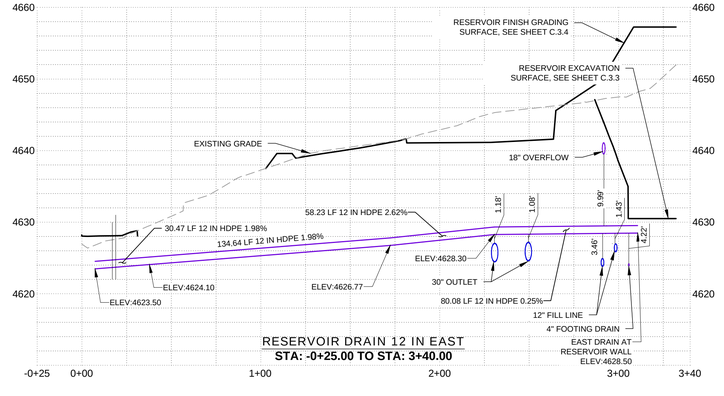
C:\pw_work\dustin.jones\d0573491\OVERFLOW & DRAIN-P&P.dwg - DRAIN P&P 1 - 8/25/2025 07:17am, dustin.jones



STORM DRAIN PLAN







NOTES:

1. SEE DETAIL 1 ON SHEET C.3.15 FOR MANHOLE DETAIL.

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PROJECT TITLE

THE POINT

3MG RESERVOIR

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DRAIN & OVERFLOW PROFILES

SHEET NUMBER

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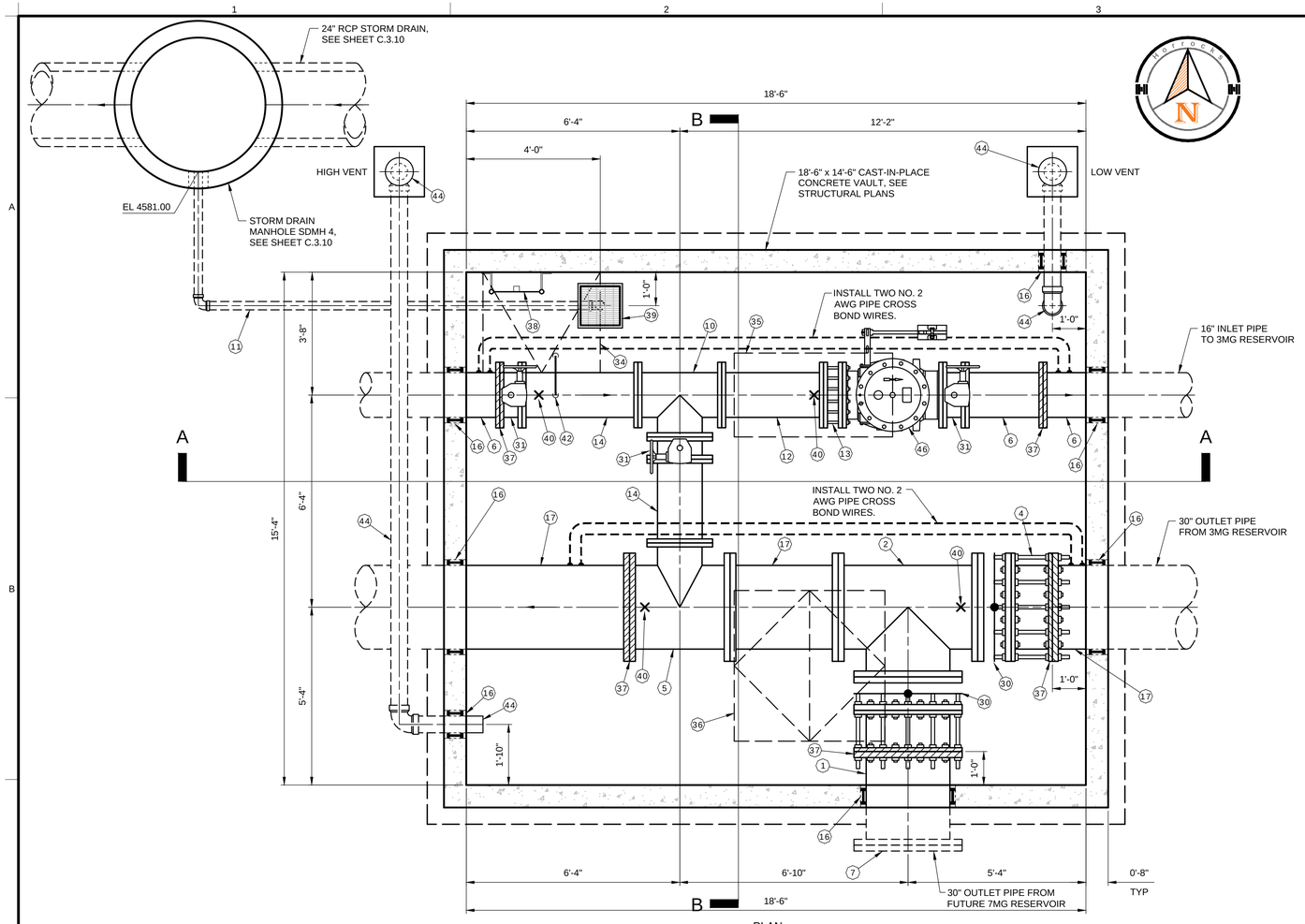
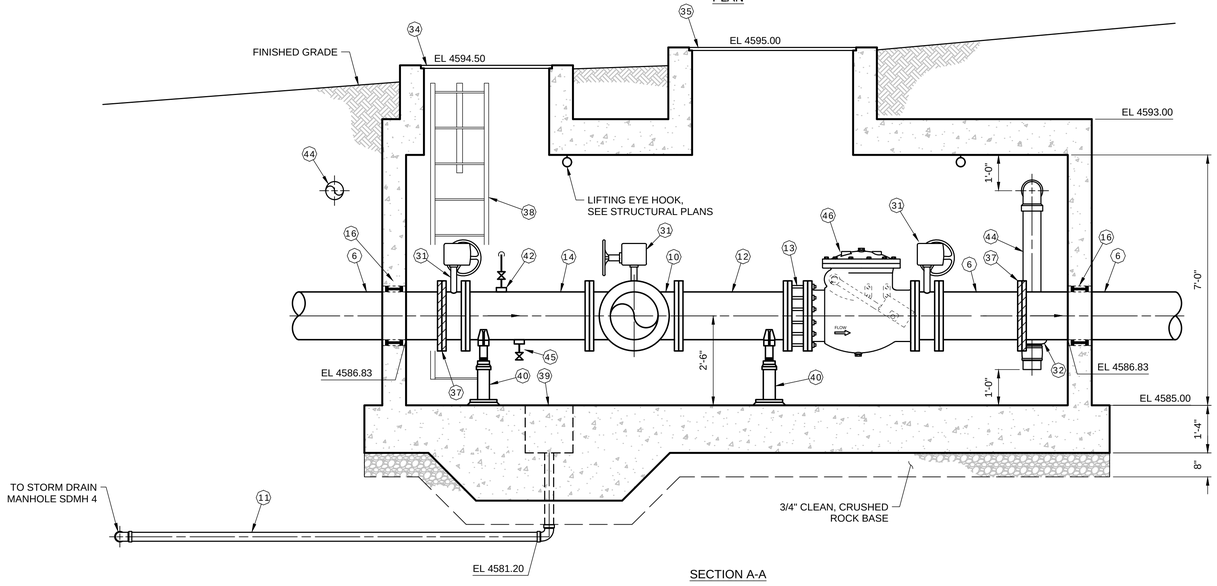
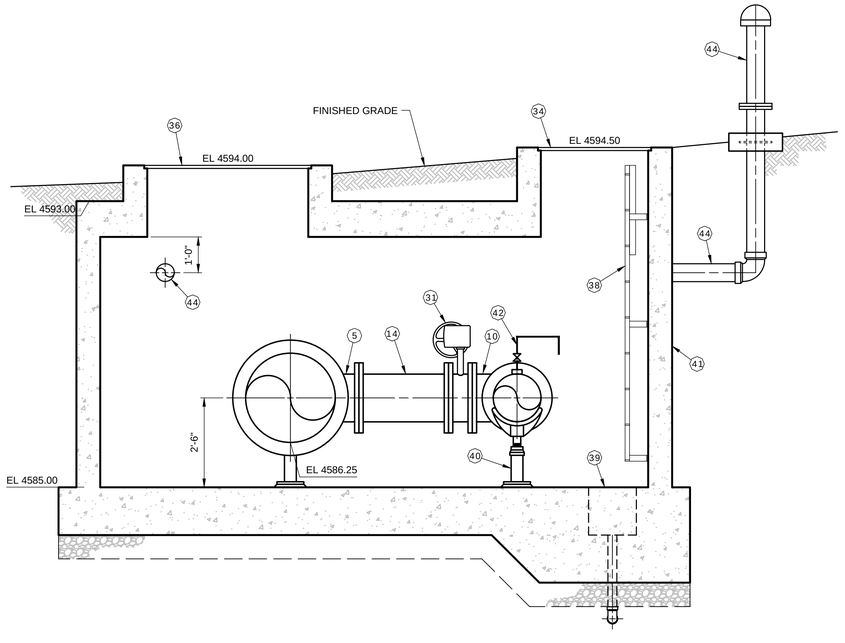


PLAN



SECTION A-A



SECTION B-B

1 BYPASS VAULT
SCALE: 1/2" = 1'-0"

VAULT FITTING SCHEDULE

ITEM	SIZE	DESCRIPTION	MATERIAL	CONNECTION	QTY	NOTES
1	30"	SPOOL	DI, CLASS 52	FLGxPE	1	
2	30"	TEE	EPOXY LINED & COATED STL	FLG	1	
3		NOT USED				
4	30"	DISMANTLING JOINT			1	
5	30"x16"	REDUCING TEE	EPOXY LINED & COATED STL	FLG	1	
6	16"	SPOOL	DI, CLASS 52	FLG	2	
7	30"	BLIND FLANGE	EPOXY LINED & COATED STL		1	
8		NOT USED				
9		NOT USED				
10	16"	TEE	EPOXY LINED & COATED STL	FLG	1	
11	3"	SUMP DRAIN PIPE	SCH 80 PVC			
12	16"	SPOOL	EPOXY LINED & COATED STL	FLGxPE	1	
13	16"	FLANGE COUPLING ADAPTER	STL		1	
14	16"	SPOOL	EPOXY LINED & COATED STL	FLG	1	
15		NOT USED				
16	VARIES	WALL SLEEVE W/ LINK SEAL	LINK SEAL		7	DETAIL 3/C.3.15
17	30"	SPOOL	DI, CLASS 52	FLG	3	

VAULT VALVE & EQUIPMENT SCHEDULE

ITEM	SIZE	TYPE	MANUFACTURER	CONNECTION	QTY	MODEL & NOTES
30	30"	BUTTERFLY VALVE	AV-TEK, VAG OR EQUAL	FLG	1	HIGH PERFORMANCE DOUBLE ECCENTRIC
31	16"	BUTTERFLY VALVE	AV-TEK, VAG OR EQUAL	FLG	3	HIGH PERFORMANCE DOUBLE ECCENTRIC
32	6"	VENT FAN			1	DETAIL 4/C.3.19
33		NOT USED				
34	36"x42"	ACCESS HATCH	EJ H24361801 OR EQUAL		1	SINGLE-LEAF, SEE NOTE 1 BELOW
35	48"x48"	ACCESS HATCH	EJ H30361801 OR EQUAL		1	SINGLE-LEAF, SEE NOTE 1 BELOW
36	54"x54"	ACCESS HATCH	EJ OR EQUAL		1	DOUBLE-LEAF, SEE NOTE 1 BELOW
37	VARIES	FLANGE INSULATING KIT			10	DETAIL 5/C.3.16
38	N/A	LADDER			1	DETAIL 1/C.3.19
39	16"x16"	SUMP AND GRATE			1	DETAILS 6A & 6AA/C.3.18, 2/S.6.02, 3/S.6.02
40	VARIES	PIPE SUPPORT			5	DETAIL 3/C.3.18
41		NOT USED				
42	N/A	PRESSURE GAUGE ASSEMBLY			1	DETAIL 1/C.3.18
43		NOT USED				
44	6"	AIR VENT			2	SCH 80 PVC PIPE
45	2"	DRAIN WITH 2" BALL VALVE			1	DETAIL 3/C.3.19
46	16"	CHECK VALVE	VAL-MATIC	FLG	1	MODEL 7800LW, REVERSE MOUNT

NOTES:

1. EJ CASTINGS FLUSH HS-20 TO JVWCD STANDARDS INCLUDING NYSTROM WEBBED SAFETY NET TO OSHA 29 CFR1926.502C (HINGED GRATING EXCLUDED).
2. ALL BURIED FERROUS FITTINGS AND APPURTENANCES, INCLUDING FLANGES, NUTS, BOLTS, AND HARDWARE, SHALL BE COVERED WITH WAX TAPE COATING SYSTEM, SEE SPECIFICATIONS.
3. DI = CLASS 52 DUCTILE IRON PIPE.
4. INSTALL JOINT BOND IN SCHEDULE 40 RIGID CONDUIT. EMBED JOINT BOND CONDUIT IN FLOOR SLAB.

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WARNING
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PROFESSIONAL ENGINEER NO. 5338108 KASEY B. PRESNALL 08/28/2025 STATE OF UTAH

PROJECT TITLE

THE POINT
3MG RESERVOIR

ISSUE TYPE:	CD
ISSUE DATE:	08/28/2025
DFCM PROJ No.	22427100
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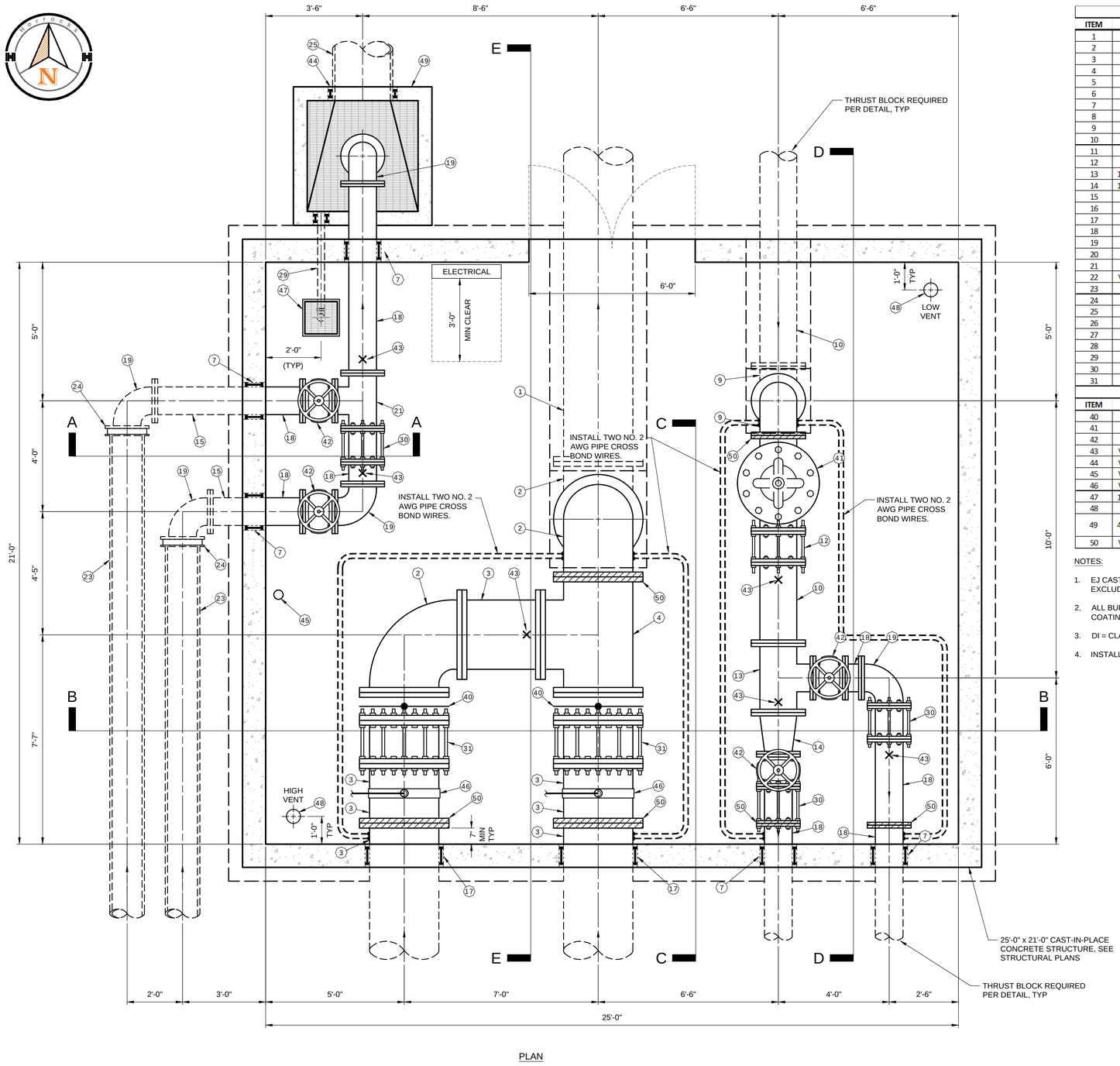
SHEET TITLE

BYPASS VAULT MECHANICAL PLANS & SECTION

SHEET NUMBER

C.3.12

C:\pw_work\dustin.jones\d0573491\C.5.0 Tank Site Civil Details.dwg - METER - 8/25/2025 07:24am, dustin.jones



PLAN

1 - OUTLET/ INLET AND DRAIN VAULT
SCALE: 1/2" = 1'-0"

VAULT FITTING SCHEDULE

ITEM	SIZE	DESCRIPTION	MATERIAL	CONNECTION	QTY	NOTES
1	30"	SPOOL	DI, CLASS 52	FLGxPE	1	
2	30"	90 DEG BEND	DI, CLASS 52	FLG	3	
3	30"	SPOOL	DI, CLASS 52	FLG	5	
4	30"	TEE	DI, CLASS 52	FLG	1	
5		NOT USED				
6		NOT USED				
7	12"	WALL SLEEVE W/ LINK SEAL	DI, CLASS 52		5	DETAIL 3/C.3.15
8	16"	SPOOL	DI, CLASS 52	FLGxPE	1	
9	16"	90 DEG BEND	DI, CLASS 52	FLG	2	
10	16"	SPOOL	DI, CLASS 52	FLG	2	
11		NOT USED				
12	16"	DISMANTLING JOINT		FLG	1	
13	16"x12"	REDUCING TEE	DI, CLASS 52	FLG	1	
14	16"x12"	REDUCER	DI, CLASS 52	FLG	1	CONCENTRIC
15		NOT USED				
16		NOT USED				
17	30"	WALL SLEEVE W/ LINK SEAL	DI, CLASS 52		2	DETAIL 3/C.3.15
18	12"	SPOOL	DI, CLASS 52	FLG	4	
19	12"	90 DEG BEND	DI, CLASS 52	FLG	4	
20	12"	FLANGE	DI, CLASS 52		1	
21	12"	TEE	DI, CLASS 52	FLG	1	
22	VARIES	SCREEN	TYPE 316 STAINLESS STEEL		1	#4 AND #14 BETWEEN FLANGES
23	12"	SPOOL	HDPE			
24	12"	HDPE TRANSITION			2	
25	24"	SPOOL	RCP			
26	16"	WALL SLEEVE W/ LINK SEAL	LINK SEAL		1	DETAIL 3/C.3.15
27	30"	COUPLING ADAPTER	DI, CLASS 52	FLG	1	
28	16"	COUPLING ADAPTER	DI, CLASS 52	FLG	1	
29	3"	SUMP DRAIN PIPE	SCH 80 PVC			
30	12"	DISMANTLING JOINT		FLG	3	
31	30"	DISMANTLING JOINT		FLG	2	

VAULT VALVE & EQUIPMENT SCHEDULE

ITEM	SIZE	TYPE	MANUFACTURER	CONNECTION	QTY	MODEL & NOTES
40	30"	BUTTERFLY VALVE	AV-TEK, VAG OR EQUAL	FLG	2	HIGH PERFORMANCE DOUBLE ECCENTRIC
41	16"	FLOW CONTROL VALVE	CLA-VAL	FLG	1	MODEL 631-22 OR EQUAL
42	12"	GATE VALVE	MUELLER, AMERICAN FLOW CONTROL, AVK	FLG	4	SEE SPECIFICATIONS
43	VARIES	PIPE SUPPORT			6	DETAIL 3/C.3.18
44	VARIES	WALL PENETRATION	LINK-SEAL		3	DETAIL 3/C.3.15
45	VARIES	TEMPERATURE SENSOR	EMERSON, SCHNEIDER		1	SEE SPECIFICATIONS
46	VARIES	PRESSURE TRANSDUCER	ROSEMOUNT, SCHNEIDER, ABB OR EQUAL		2	SEE SPECIFICATIONS, DETAIL 8/C.3.18
47	16"x16"	SUMP AND GRATE			1	DETAILS 6A & 6AA/C.3.18, 2/S.6.02, 3/S.6.02
48	6"	AIR VENT			2	SCH 80 PVC PIPE
49	48"x48"	CATCH BASIN	CONCRETE		1	PRECAST WITH GRATE TOP; DETAILS 6A/C.3.18, 2/S.6.02, 3/S.6.02
50	VARIES	FLANGE INSULATING KIT			6	DETAIL 5/C.3.16

NOTES:

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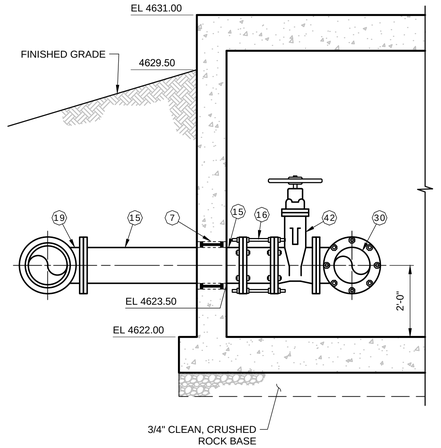
3. DI = CLASS 52 DUCTILE IRON PIPE.
4. INSTALL JOINT BOND IN SCHEDULE 40 RIGID CONDUIT. EMBED JOINT BOND CONDUIT IN FLOOR SLAB.



SECTION A-A

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PROFESSIONAL ENGINEER NO. 5338108 KASEY B. PRESNUT 08/28/2025 STATE OF UTAH

PROJECT TITLE
THE POINT
3MG RESERVOIR

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DFCM PROJ No.	22427100
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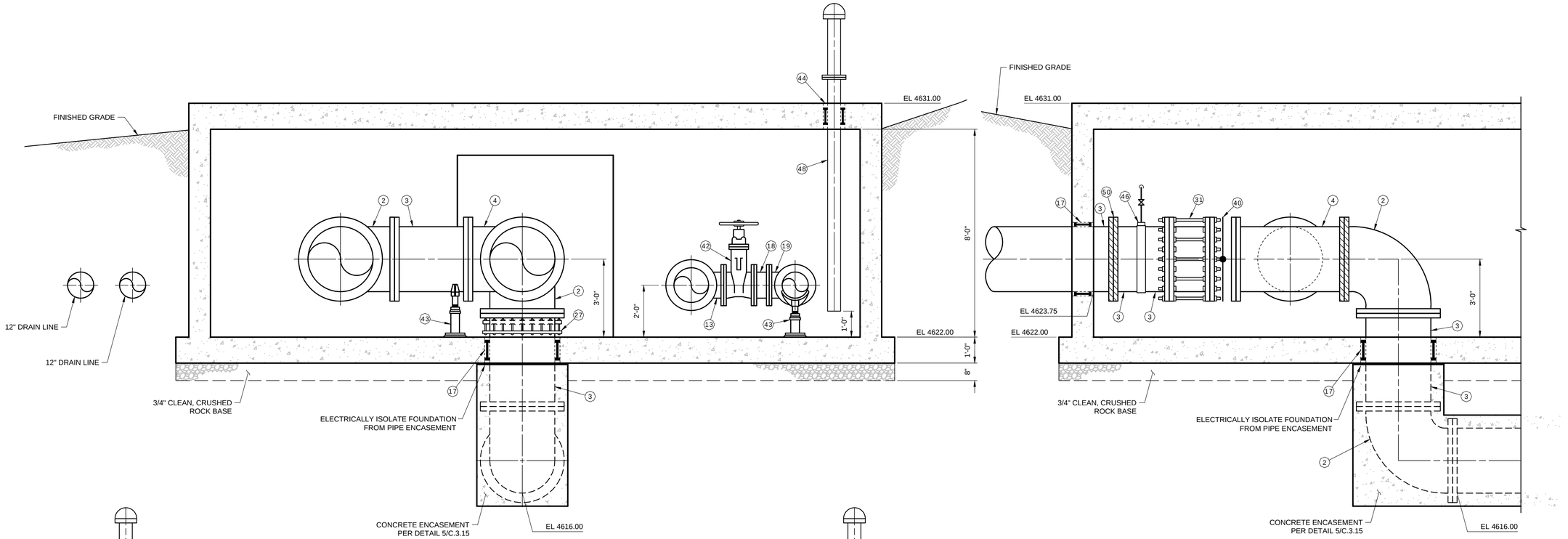
SHEET TITLE
OUTLET, INLET AND DRAIN VAULT MECHANICAL PLANS & SECTIONS

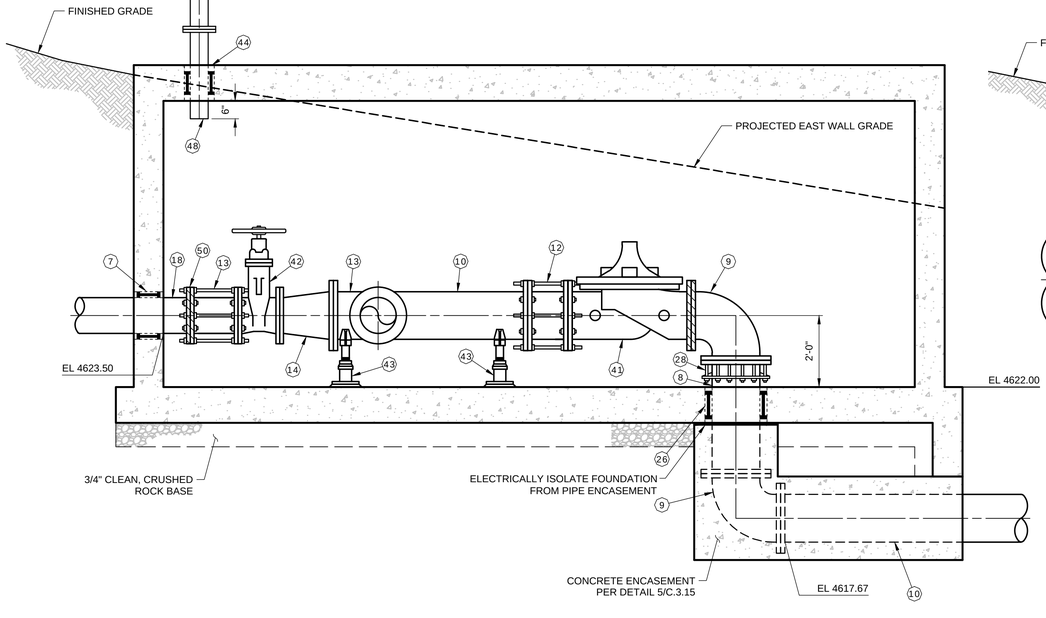
SHEET NUMBER
C.3.13

PAGE 24

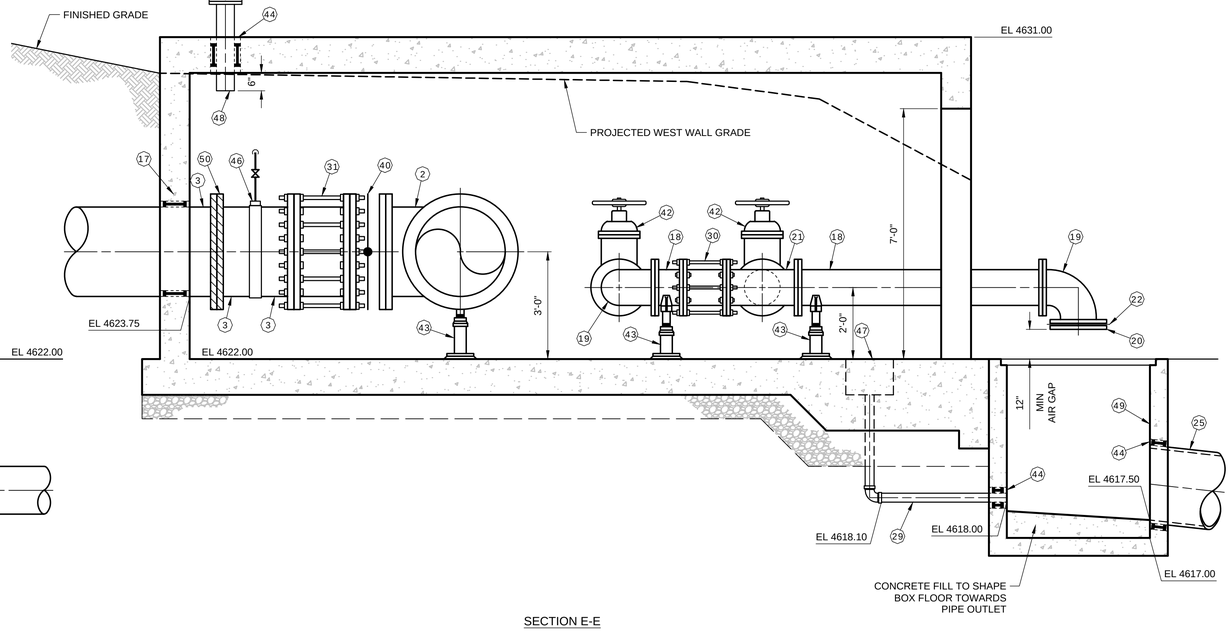


SECTION B-B

SECTION C-C



SECTION D-D



SECTION E-E

NOTES:

SEE SHEET C.3.13 FOR FITTINGS AND EQUIPMENT LIST.

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SHEET TITLE

OUTLET, INLET AND DRAIN VAULT MECHANICAL PLANS & SECTIONS

SHEET NUMBER

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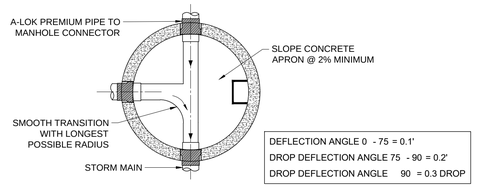
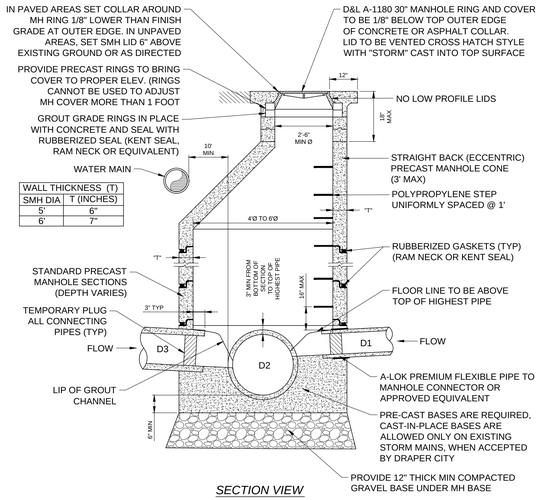
PAGE 25

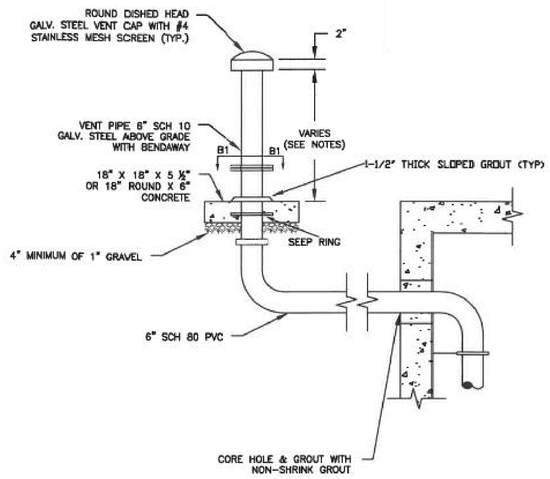


PLAN VIEW



SECTION VIEW

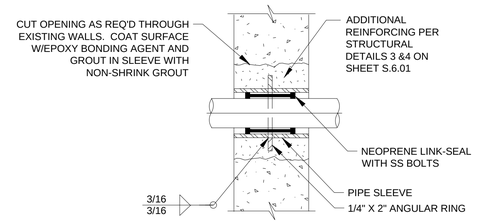
1 - MANHOLE
NTS



VENT PIPE NOTES:

1. WHEN VENT PIPES ARE INSTALLED GREATER THAN 36" APART, BOTH VENT PIPES SHALL BE 30" HIGH.
2. WHEN VENT PIPES ARE INSTALLED LESS THAN 36" FROM EACH OTHER, THE EXHAUST VENT SHALL BE 36" HIGH AND THE INTAKE SHALL BE 24" HIGH.
3. INSTALL INTAKE VENT PIPE END 12" ABOVE VAULT FLOOR.
4. INSTALL EXHAUST FAN NEAR CEILING.
5. IF VENT PIPES ARE WITHIN 10-FEET OF MARKED PARKING STALL, MINIMUM INTAKE VENT HEIGHT SHALL BE 48".
6. INSTALL LINK-SEAL TIGHTENING HARDWARE TO VAULT INTERIOR.

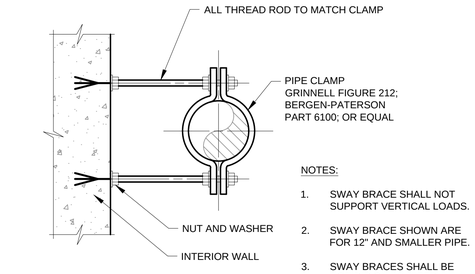
2 - VAULT VENT PIPE
NTS



NOTES:

1. FOR NEW CONSTRUCTION, SLEEVES SHALL BE CAST INTO WALL BLOCKOUTS AND SUBSQUENT GROUTING IN SLEEVES WILL NOT BE PERMITTED UNLESS A KEYED WATERSTOP JOINT IS PROVIDED.
2. 6" Ø SLEEVES AND SMALLER SHALL BE SCH 40 STEEL PIPE.
3. 8" Ø SLEEVE AND LARGER SHALL BE 1/4" THICK STEEL PIPE.
4. SLEEVE SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
5. CONTRACTOR TO ENSURE THE PIPE DOES NOT CONTACT METAL OR ANY OTHER CONCRETE REINFORCEMENT.

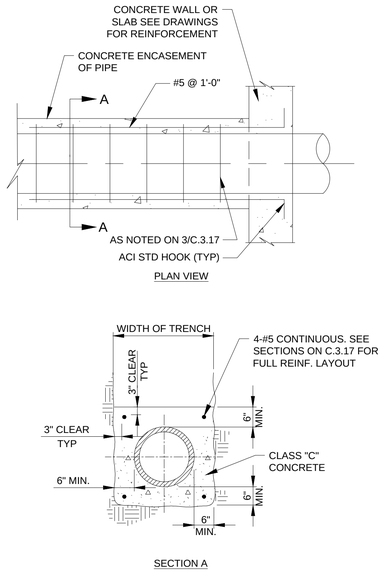
3 - SLEEVE - INSTALLATION THROUGH WALLS AND FLOOR SLABS
NTS



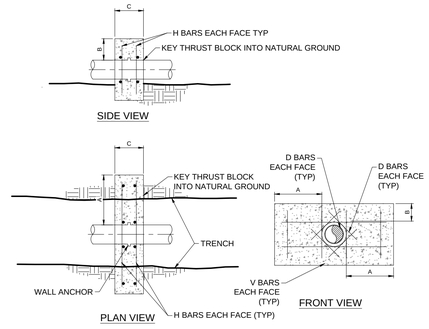
NOTES:

1. SWAY BRACE SHALL NOT SUPPORT VERTICAL LOADS.
2. SWAY BRACE SHOWN ARE FOR 12" AND SMALLER PIPE.
3. SWAY BRACES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.

4 - VERTICAL PIPE SWAY BRACE
NTS



5 - CONCRETE ENCASEMENT OF PIPE
NTS



THRUST BLOCK DIMENSIONS

PIPE SIZE	A	B	C	H BARS		V BARS		D BARS	
				SIZE	NO.	SIZE	NO.	SIZE	NO.
4" - 8"	1.5'	0.5'	1.0'	#4	2	#4	4	#4	4
10" - 12"	1.5'	1.0'	1.0'	#4	4	#4	4	#4	4
14" - 20"	2.0'	1.0'	1.0'	#4	4	#4	6	#4	4
22" - 24"	2.5'	1.0'	1.0'	#4	4	#4	8	#4	4
30"	2.75'	1.5'	2.0'	#5	6	#5	8	#5	4
2'-8"	2.75'	1.75'	2.0'	#5	8	#5	8	#5	4
2'-10"	2.75'	2.0'	2.0'	#5	8	#5	8	#5	4

6 - THRUST BLOCK DIMENSIONS
NTS

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TYPICAL DETAILS

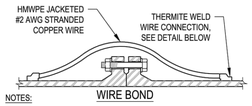
SHEET NUMBER
C.3.15

C:\pw_work\dustin.jones\d0573491M.2.1 Details.dwg - TYPICAL DTL 1 - 8/25/2025 07:39am, dustin.jones

10-17-2024

FLANGED JOINT BONDS

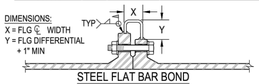
STEEL ROD BOND



WIRE BOND

JOINT BOND QUANTITIES*			
SCENARIO	SIZE	NUMBER OF BONDS	BOND TYPE
DUCTILE OR CAST IRON PIPE, EXTERNAL BONDS	≤18"	2	#2 AWG STRANDED HMWPE JACKETED COPPER WIRE
	18"< x ≤24"	3	#2 AWG STRANDED HMWPE JACKETED COPPER WIRE
FLANGED JOINTS	≤24"	3	#2 AWG STRANDED HMWPE JACKETED COPPER WIRE
	≤24"	2	STEEL ROD
MECHANICAL JOINTS	≤24"	2	#2 AWG STRANDED HMWPE JACKETED COPPER WIRE

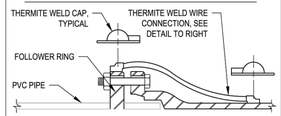
DIMENSIONS:
X = FLG ℄ WIDTH
Y = FLG DIFFERENTIAL + 1" MIN



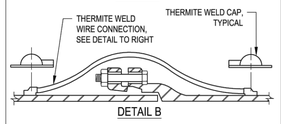
STEEL FLAT BAR BOND

NOTES:
1. CONTRACTOR MAY INSTALL EITHER STEEL ROD, STEEL FLAT BAR, OR BOND WIRE AS SHOWN, EXCEPT WHERE ARC WELDING TO FLANGE IS NOT PERMITTED.
2. INSTALL TWO BONDS AT EACH JOINT, MINIMUM, SEE JOINT BOND QUANTITY SCHEDULE FOR QUANTITY REQUIRED FOR PIPE DIAMETER.
3. COAT STEEL ROD OR FLAT BAR AND WELDS WITH FAST CURE EPOXY (BURIED) OR WITH COATING SYSTEM TO MATCH PIPE (VAULT).
4. FOR WIRE BONDS, SEE THERMITE WELD WIRE CONNECTION DETAIL BELOW FOR COATING REQUIREMENTS.
5. PROVIDE SST FLAT BAR IN LIEU OF STEEL WHERE COATING CANNOT BE PROPERLY APPLIED TO INTERIOR SURFACES.

MECHANICAL JOINT BONDS



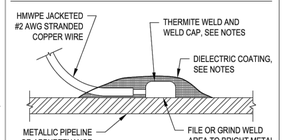
DETAIL A



DETAIL B

NOTES:
1. INSTALL NUMBER OF BOND WIRES SPECIFIED PER JOINT BOND QUANTITY SCHEDULE, ABOVE.

THERMITE WELD CONNECTION



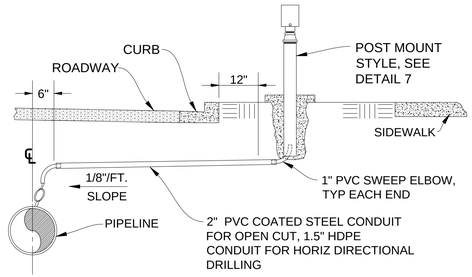
NOTES:
1. MAINTAIN SEPARATION BETWEEN MULTIPLE TEST WIRE CONNECTIONS OF ONE PIPE DIA OR 24", WHICHEVER IS LESS.
2. COPPER SLEEVES SHALL BE USED FOR #2 AWG JOINT BOND WIRE CONNECTIONS AND #12 AWG TEST WIRE CONNECTIONS.
3. WELDER AND CARTRIDGE SIZE VARIES ACCORDING TO PIPE SIZE AND PIPE MATERIAL. CONSULT WELDER MANUFACTURER FOR RECOMMENDED WELDER AND CARTRIDGE.
4. COAT ALL EXPOSED METAL WITH 3M SCOTCHKOTE LIQUID EPOXY COATING 323 OR DENSO PROTAL 7200, PER MANUFACTURER'S REQUIREMENTS. FOR THERMITE WELDS USE ROYSTON HANDY CAP IP THERMITE WELD CAPS, COATING SYSTEM AS OTHERWISE SPECIFIED, OR APPROVED EQUAL. HANDY CAPS SHALL NOT BE APPLIED ON TOP OF LIQUID EPOXY.

WATER PRO INC.
A Draper Irrigation Company

JOINT BONDING & THERMITE WELD WIRE CONNECTIONS

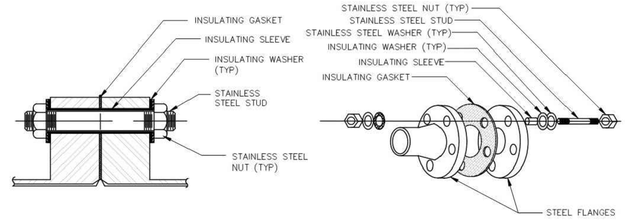
WT-CP2

STANDARD DETAIL 23



NOTES:
1. DO NOT CONNECT CONDUIT TO POST STYLE TEST STATION
2. BURIED CONDUIT TO BE RIGID PVC COATED STEEL.
3. SEAL BOTH ENDS OF CONDUIT WITH DUCT COMPOUND OR URETHANE FOAM

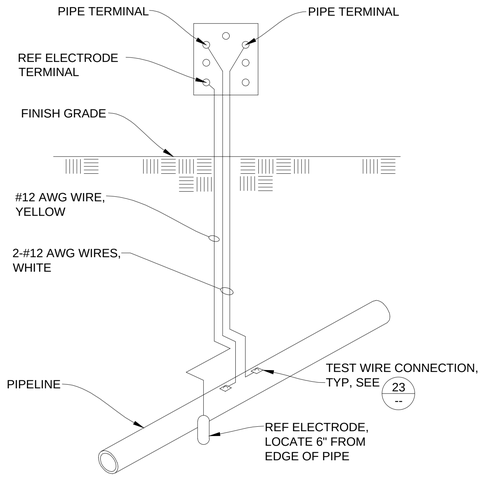
4 - TEST STATION ROADWAY OFFSET
NTS



NOTES:
1. THE COMPONENTS OF THE INSULATED FLANGE SHALL CONSIST OF NEMA G-10 GASKET, NEMA G-10 DIELECTRIC BOLT SLEEVES AND NEMA G-10 DIELECTRIC WASHERS.

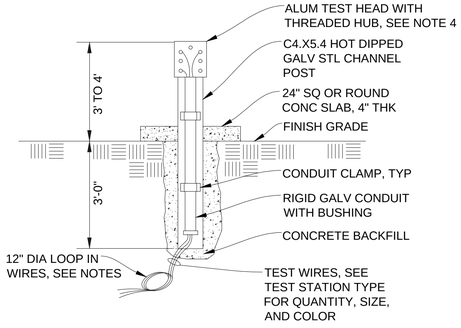
5 - FLANGE INSULATING KIT
NTS

WIRING DIAGRAM



NOTE REMOVED

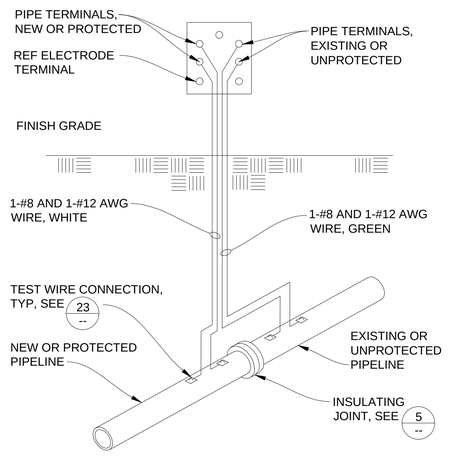
6 - TYPE T TEST STATION
NTS



NOTES:
1. TEST STATION TO BE ALUMINUM BODY AND LID WITH THREADED CONDUIT HUB.
2. TERMINAL QUANTITY AND WIRE CONNECTIONS VARY, SEE TEST STATION TYPE DETAIL
3. LOOP WIRE AT BASE OF POST TO MINIMIZE WIRE STRESS
4. TESTOX SERIES 700 TEST STATION FOR TYPE T, C, I, AND A TEST STATIONS OR TESTOX SERIES 2000 TEST STATION FOR TYPE F TEST STATIONS

7 - POST STYLE, STEEL POST
NTS

WIRING DIAGRAM



8 - TYPE I TEST STATION
NTS

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WARNING
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PROFESSIONAL ENGINEER
NO. 5338108
KASEY B. PRESNALL
08/28/2025
STATE OF UTAH

PROJECT TITLE
THE POINT
3MG RESERVOIR

ISSUE TYPE:	CD
ISSUE DATE:	08/28/2025
DFCM PROJ No.	22427100
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SHEET TITLE
CATHODIC PROTECTION

SHEET NUMBER
C.3.16

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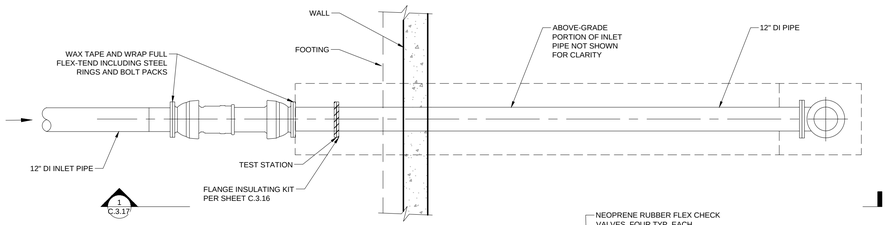
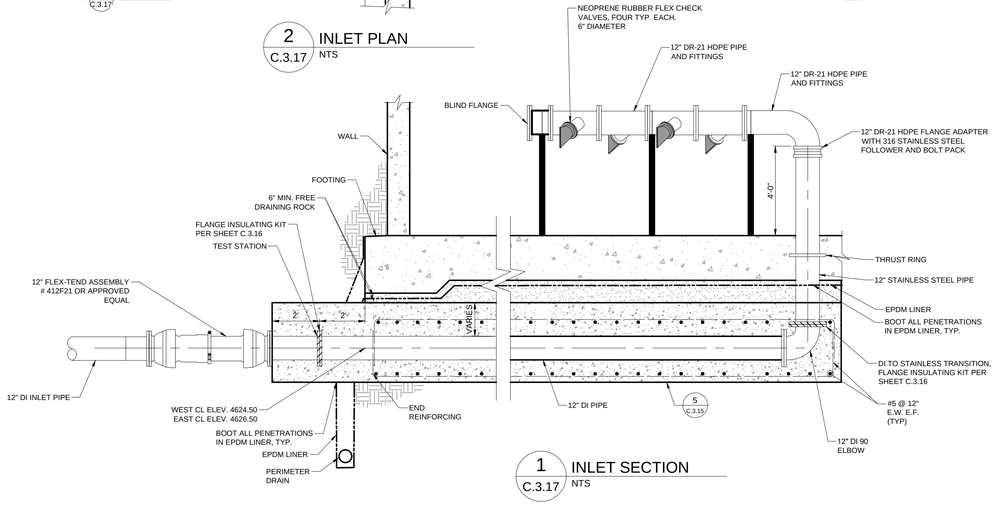
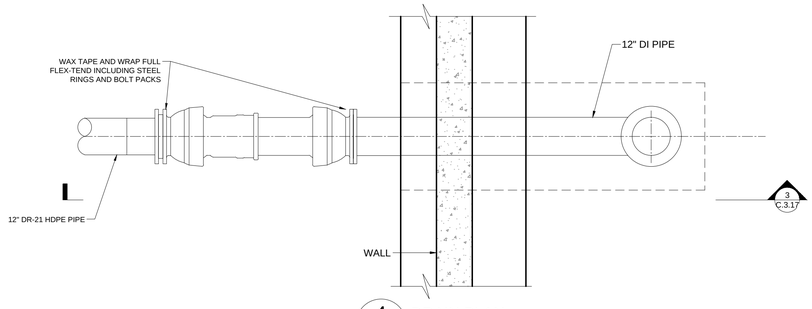


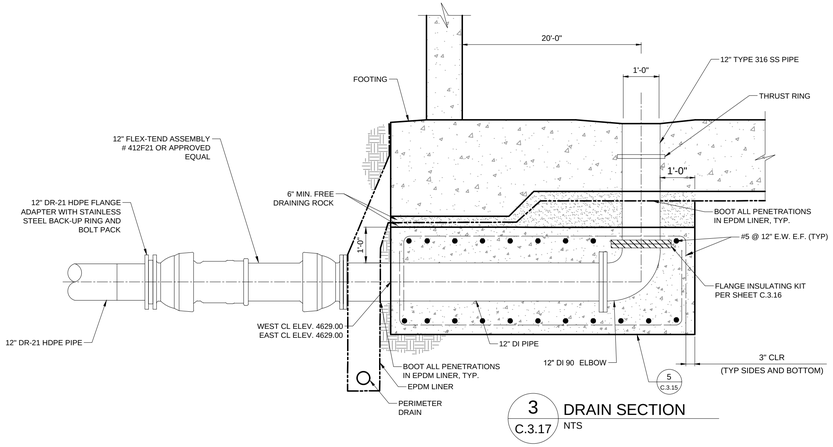
2 C.3.17 INLET PLAN
NTS



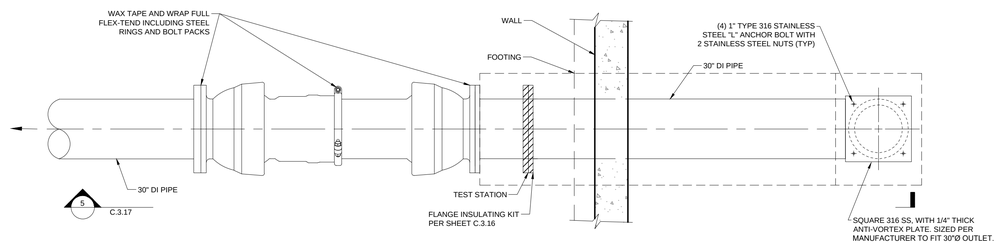
1 C.3.17 INLET SECTION
NTS



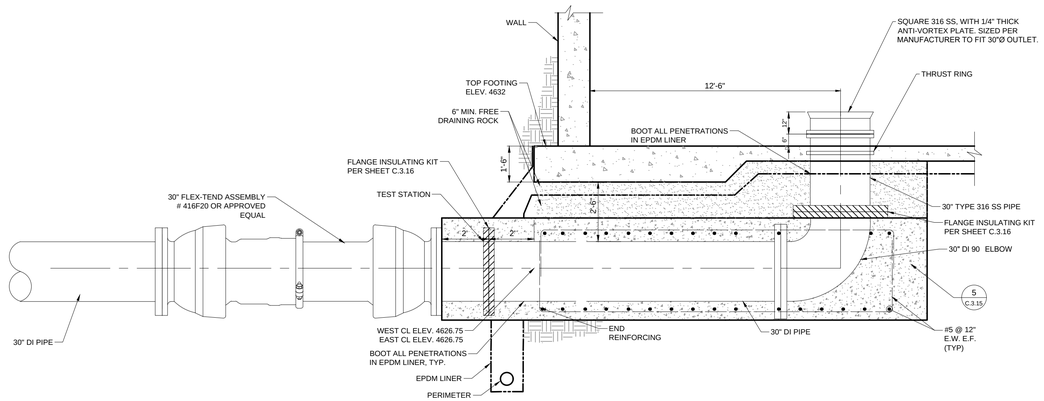
4 C.3.17 DRAIN PLAN
NTS



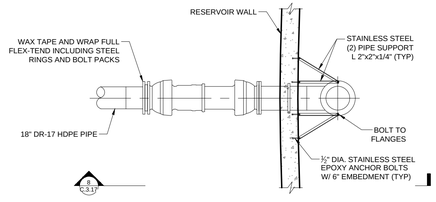
3 C.3.17 DRAIN SECTION
NTS



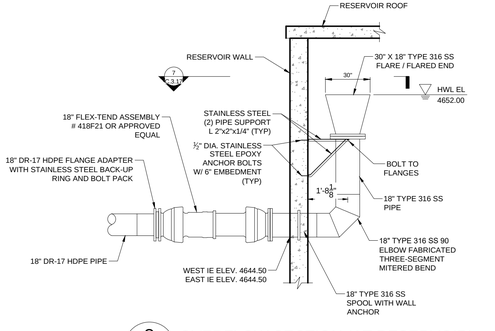
6 C.3.17 OUTLET PLAN
NTS



5 C.3.17 OUTLET SECTION
NTS



7 C.3.17 OVERFLOW PLAN VIEW
NTS



8 C.3.17 OVERFLOW SECTION (AT RESERVOIR)
NTS

SHEET NOTES:

1. ALL STAINLESS STEEL NUTS, WASHERS, BOLTS, SUPPORT BRACKETS, FLANGE ADAPTERS, ETC. SHALL BE 316 STAINLESS STEEL.

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NO. 5338108
KASEY B. PRESNALL
08/28/2025
STATE OF UTAH

PROJECT TITLE
THE POINT
3MG RESERVOIR

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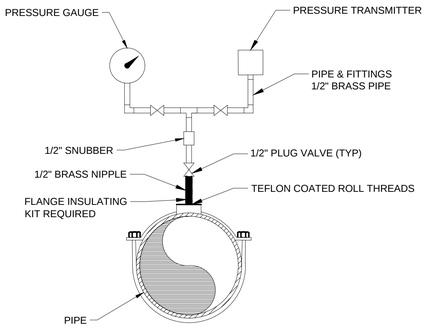
RESERVOIR SECTION - DETAILS

SHEET NUMBER
C.3.17

PAGE 28



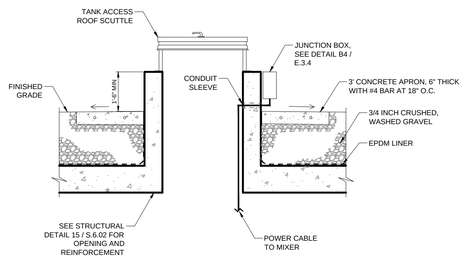
NOTE:

1. ALL TAPPING SADDLES SHALL HAVE A POLYETHYLENE WRAPPING.
2. BRASS PIPE SHALL HAVE A MAX LENGTH OF 1.5 INCHES.

1 / - PRESSURE GAUGE
NTS

TANK ACCESS ROOF SCUTTLE SCHEDULE:

48" X 48": BILCO NB-50 OR APPROVED EQUAL.
36" X 36": BILCO E-50 OR APPROVED EQUAL
48" X 96": BILCO OR APPROVED EQUAL

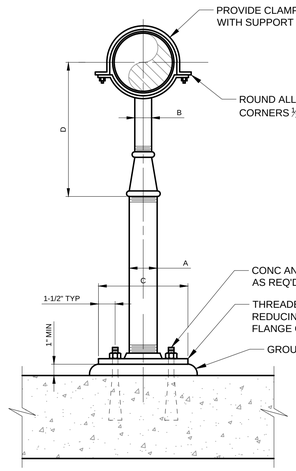


ELEVATION

NOTES:

1. FRAME FOR ROOF ACCESS OPENING SHALL BE SECURELY FASTENED AND SEALED TO PREVENT INFLOW OF CONTAMINANTS.
2. ROOF ACCESS SCUTTLE SHALL HAVE LOCKING MECHANISM.

2 / - TANK ACCESS ROOF
NTS



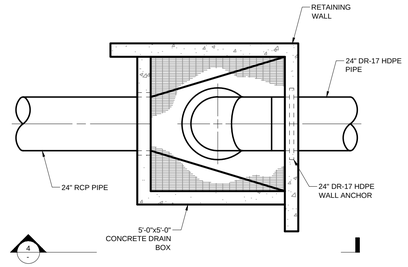
ADJUSTABLE PIPE SADDLE SUPPORT SCHEDULE
DIMENSIONS IN INCHES

PIPE SIZE	A	B	C	D MIN.	D MAX.
2 ½	2 ½	1 ½	9	8	13
3	2 ½	1 ½	9	8 ½	13 ½
3 ½	2 ½	1 ½	9	8 ½	13 ½
4	3	2 ½	9	9 ½	14
6	3	2 ½	9	10 ½	15 ½
8	3	2 ½	9	11 ½	16 ½
10	3	2 ½	9	13 ½	18 ½
12	3	2 ½	9	15	19 ½
14	4	3	11	16 ½	20 ½
16	4	3	11	17 ½	22 ½
18	6	3 ½	13 ½	19 ½	24
20	6	3 ½	13 ½	21	25 ½
24	6	4	13 ½	23 ½	28 ½
30	6	4	13 ½	27	31 ½
32	6	4	13 ½	28 ½	32 ½
36	6	4	13 ½	30 ½	34 ½

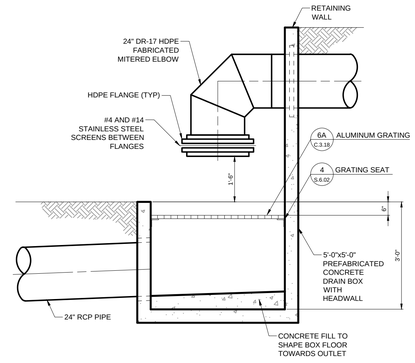
NOTES:

1. ANCHORS REQUIRED: DRILL AND EPOXY W/ SIMPSON SET-3G, 3/4" DIA, F1554 GR. 36 ANCHORS. EMBED 8" MIN.

3 / TYP PIPE SUPPORT WITH STRAP
NTS

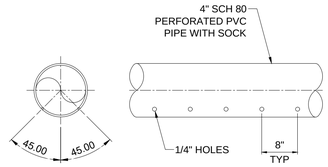


PLAN VIEW

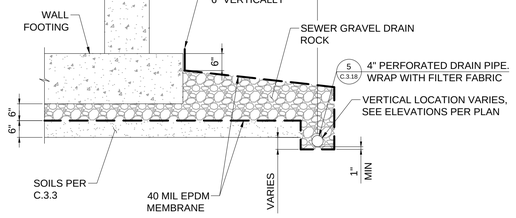


ELEVATION

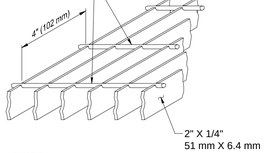
4 / - OVERFLOW AIR GAP STRUCTURE
NTS



5 / - 4" PERFORATED DRAIN PIPE
NTS



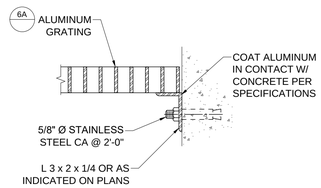
6 / - PERIMETER DRAIN
NTS



NOTES:

1. MODIFY SIZE AND SPACING TO OBTAIN H-20 TRAFFIC RATING AS NOTED ON PLANS.
2. HOT DIP GALVANIZED.
3. H-20 TRAFFIC RATED.

6A / C.3.18 ALUMINUM GRATING
NTS



6AA / C.3.18 GRATING SEAT
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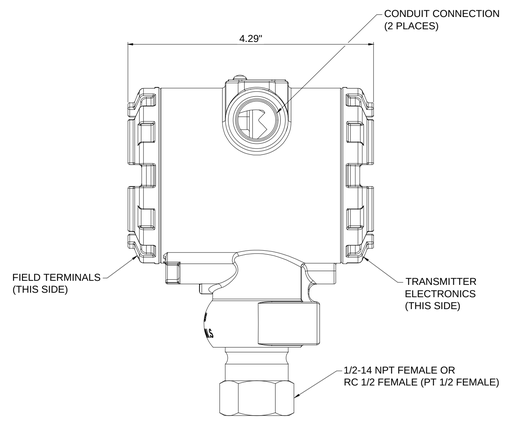
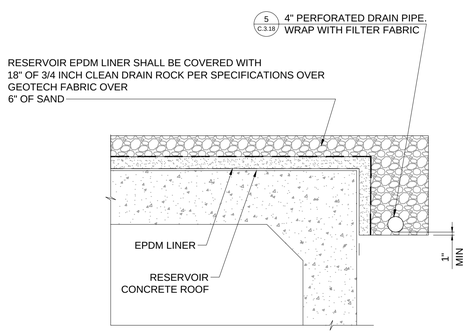
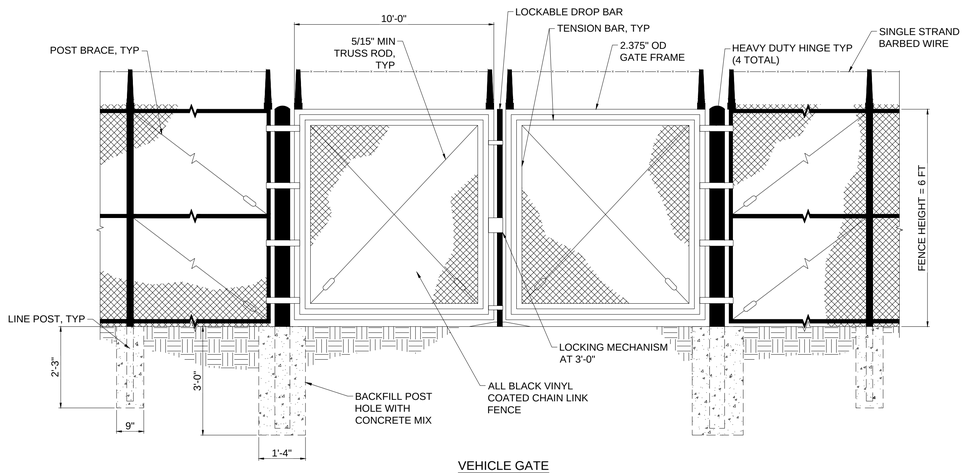


8 / - PRESSURE TRANSDUCER
NTS



6B / C.3.18 ROOF PERFORATED PERIMETER DRAIN
NTS



VEHICLE GATE

7 / - CHAINLINK FENCING DETAIL
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KASEY B. PRESNUT
08/28/2025
STATE OF UTAH

PROJECT TITLE
THE POINT
3MG
RESERVOIR

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RESERVOIR SECTION - DETAILS 2

SHEET NUMBER
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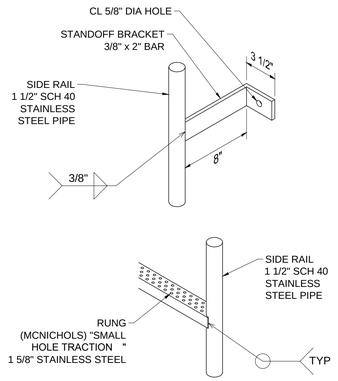
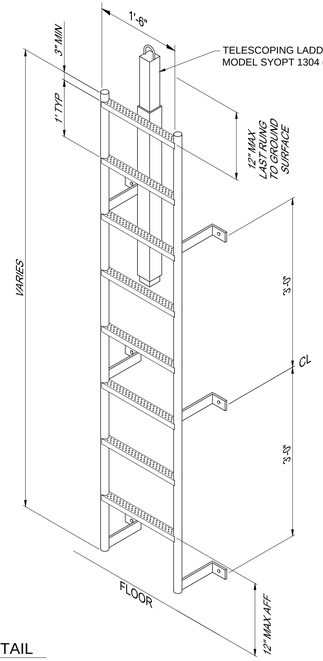
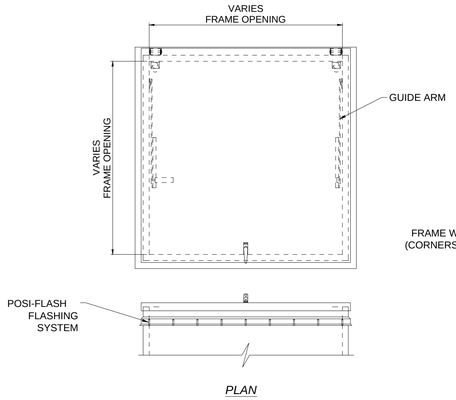
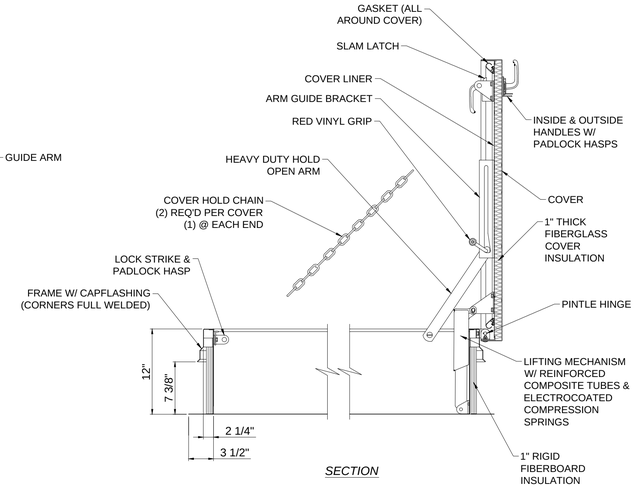




1 - LADDER DETAIL
NTS

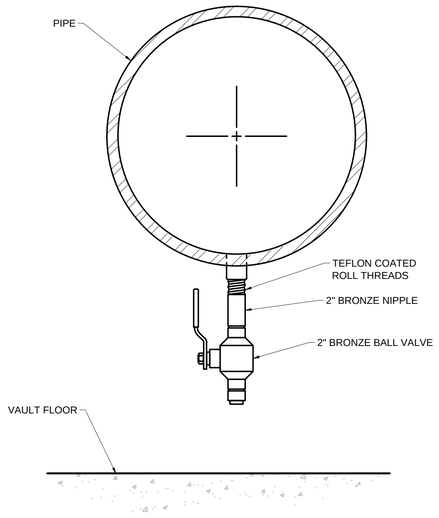


PLAN

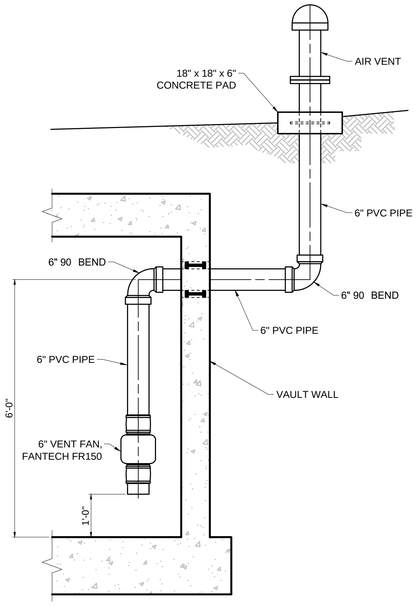


SECTION

2 - ACCESS HATCH
NTS



3 - 2" DRAIN
NTS



4 - VENT FAN
NTS

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PAGE 30

GENERAL REQUIREMENTS

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ 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 ARCHITECT/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 ARCHITECT/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 ARCHITECT/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.

REINFORCING STEEL

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

MATERIAL	SIZE	GRADE
CONCRETE	ALL SIZES	60
MASONRY	ALL SIZES	60

2. ALL WELDED REINFORCING BARS SHALL BE A.S.T.M. A-706 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 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	57

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.
   - o——— 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.

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 PSF).

CONSTRUCTION	STRENGTH (PSI)	AGGREGATE	H_2O/CEMENT RATIO	SLUMP	TYPE
FOUNDATION	4,500	¾"	0.42	4"	IL (HS)
SLAB ON GRADE	4,500	¾"	0.42	4"	IL (HS)
CONCRETE WALLS	4,500	¾"	0.42	4"	IL (HS)
SUSPENDED SLAB	4,500	¾"	0.42	4"	IL (HS)
COLUMNS	4,500	¾"	0.42	4"	IL (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 ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL 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.
12. A CRYSTALLINE WATERPROOFING ADDITIVE SHALL BE ADDED TO THE CONCRETE MIX TO SEAL CONCRETE AGAINST PENETRATIONS OF LIQUID FROM ANY DIRECTION. XYPEX CHEMICAL CORPORATION IS AN ACCEPTABLE MANUFACTURER FOR THIS MATERIAL. SEE SPECIFICATION 033040 FOR COMPLETE GUIDANCE ON CRYSTALLINE WATERPROOFING ADDITIVE.

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
   - X 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

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 FOUNDATIONS AND BOTTOM SLAB.
2. HORROCKS ENGINEERS MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO EACH INDIVIDUAL CONCRETE PLACEMENT (POUR) OF THE CONCRETE WALLS AND COLUMNS.
3. HORROCKS ENGINEERS MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE PLACEMENT OF THE TOP SLAB AND DROP PANELS. THE FOLLOWING ITEMS SHALL BE COMPLETE PRIOR TO HORROCKS' INSPECTION:
   A. ALL #8 DOWELS SHALL BE INSTALLED WITH NEOPRENE AND RUBATEX PADS IN PLACE, ALONG WITH THE 2" I.D. PIPE WITH CAP FILLED WITH RUBATEX AS DETAILED.
   B. GOOSENECKS SHALL BE INSTALLED WITH ADDITIONAL REINFORCEMENT AS DETAILED.

APPROVED EPOXY ANCHORING SYSTEMS

1. HILTI 'HIT-RE 500-SD' INSTALLED PER I.C.C. ESR-2322
2. SIMPSON 'SET-3G' INSTALLED PER I.C.C. ESR-4057
3. ALL EPOXY ANCHOR INSTALLATIONS SHALL COMPLY WITH THE SPECIFIED I.C.C. REPORT AND THE MANUFACTURERS RECOMMENDATIONS.
4. ALL EPOXY ANCHOR INSTALLATIONS REQUIRE SPECIAL INSPECTION.
5. 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.

FOUNDATION

1. THE CONTRACTOR SHALL REVIEW THE SOIL REPORT 202201-026-002 BY RB&G ENGINEERING, INC., DATED OCTOBER 2023. IF THE CONTRACTOR ENCOUNTERS CONDITIONS OTHER THAN THOSE DESCRIBED IN THE SOILS REPORT, HE 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 90% 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.

EXCAVATION AND STRUCTURAL FILL

CONSTRUCTING THE UNDERDRAIN SHALL BE PERFORMED BY EXCAVATING 12 INCHES BELOW THE BOTTOM OF THE FLOOR SLAB, INSTALLING 6 INCHES OF STRUCTURAL FILL, THEN A NON-WOVEN GEOTEXTILE FABRIC, THEN INSTALLING 6 INCHES OF FREE DRAINING GRAVEL. 2-INCH DIAMETER PERFORATED PVC PIPES SHOULD BE INSTALLED AT ABOUT 15-FOOT SPACING WITHIN THE 6-INCH THICK FREE DRAINING LAYER, AND THE PERFORATED PIPES SHOULD BE CONNECTED TO A SOLID COLLECTOR PIPE DESIGNED TO CARRY THE WATER TO A DISCHARGE LOCATION. THE MATERIALS FOR THE UNDERDRAIN SHALL HAVE THE FOLLOWING PROPERTIES:

STRUCTURAL FILL:
- 3-INCH MINUS GRANULAR SOIL
- 70 100% PASSING -INCH SIEVE
- 5 20% PASSING NO. 200 SIEVE
- MOISTURE CONDITIONED 2% FROM OPTIMUM MOISTURE CONTENT
- PLACED IN LOOSE LIFTS 8 INCHES THICK
- BELOW FOUNDATIONS: COMPACTED TO AT LEAST 95% OF THE MAXIMUM LABORATORY DENSITY DETERMINED BY ASTM D1557 (MODIFIED PROCTOR)
- ADJACENT TO STRUCTURES, BUT NOT BELOW FOUNDATIONS: COMPACT TO AT LEAST 90% OF THE MAXIMUM LABORATORY DENSITY

GEOTEXTILE FABRIC:
- NON-WOVEN
- WEIGHT 8 OZ/YD 2

FREE DRAINING GRAVEL:
- 1-INCH MINUS ROCK
- 5% PASSING NO. 30 SIEVE
- PLACED IN LOOSE LIFTS 12 INCHES THICK
- COMPACTED WITH AT LEAST 3 PASSES OF A VIBRATORY COMPACTOR WEIGHING AT LEAST 5 TONS, OR 5 PASSES OF TRENCH COMPACTOR WEIGHING AT LEAST 1.5 TONS

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)
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 ENGINEERINGS, INC. 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 .

BUILDING CRITERIA

GOVERNING CODE	2021 INTERNATIONAL BUILDING CODE
STATE OF REGISTERED ENGINEER STAMP	UT
OCCUPANCY CATEGORY	IV
GRAVITY DESIGN DATA-RESERVOIR	TOP SLAB SOIL COVER = 250 PSF (2'-0" COVER) TRAFFIC LIVE LOAD = H-10 TOP SLAB LIVE LOAD = 100 PSF
WIND DESIGN DATA	113 MPH (3 SEC GUST) I_w = 1.0 EXPOSURE C INTERNAL PRESSURE COEF. = 0.18
SNOW DESIGN DATA	Pg = 35 sf Is = 1.2
SEISMIC DESIGN INFO	I = 1.5 Soil Site Class C Ss = 1.66 and S1 = 0.55 Fa = 1.01 and Fv = 1.4 Sds = 1.12 and Sd1 = 0.52 Design Category D RESERVOIR SEISMIC COEFFICIENTS Ri = 3.25 AND Rc = 1 PIPE SUPPORT SEISMIC COEFFICIENTS FOR OTHER MECHANICAL OR ELECTRICAL COMPONENETS a = 1.0 AND R =1.5
FLOOD DESIGN DATA	NONE
SOILS DESIGN DATA-RESERVOIR	ALLOWABLE BEARING PRESSURE = 4500 PSF COEFFICIENT OF FRICTION = 0.45 ACTIVE PRESSURE = 35 PCF AT-REST PRESSURE = 56 PCF ALLOWABLE PASSIVE PRESSURE = 437 PSF SEISMIC-ACTIVE PRESSURE = 39 PCF SEISMIC-PASSIVE PRESSURE REDUCTION = 100 PCF
SOILS REPORT	THE POINT WATER TANK STORAGE TANKS -- 202201-026-002 OCTOBER 2023 - RB&G ENGINEERING, INC.

ABBREVIATIONS

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

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WARNING
0 1 2
IF THIS BAR DOES NOT MEASURE 2" THEN DRAWING IS NOT TO SCALE

PROFESSIONAL STRUCTURAL ENGINEER
6838267-2202
ROBERT J. MEMBERSHOT
5/1/25
STATE OF UTAH

PROJECT TITLE
THE POINT
3MG RESERVOIR

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SHEET TITLE
GENERAL STRUCTURAL NOTES I

SHEET NUMBER
S.0.01

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, ENGINEER OR ARCHITECT 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 1704.2.1 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 ENGINEERS FOR REVIEW WITHIN SEVEN (7) DAYS OF THE WORK. EACH REPORT SHALL BE SIGNED BY A LICENSED ENGINEER OR ARCHITECT. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED TO THE BUILDING OFFICIAL AND HORROCKS ENGINEERS. HORROCKS ENGINEERS 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 INSPECTORS 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):
    SPECIAL REINFORCED MASONRY SHEAR WALLS WITH WOOD PANEL DIAPHRAGMS ALL SUPPORTED ON CONC. FTGS

11. SPECIAL INSPECTION (INSP) AND MATERIAL TESTING (TEST) MATRIX:

DIVISION OF FACILITIES CONSTRUCTION & MANAGEMENT

Office of the State Building Official
4315 S 2700 W
Taylorsville, UT 84129
Phone: (801) 538-3018
Website: http://dfcm.utah.gov/

Special Inspection, Material Testing & Structural Observation Items Required by Chapter 17 of the 2021 IBC

Indicate items requiring special inspection, structural testing, or structural observations by checking the appropriate box. All items not requiring inspection/testing should be removed from the form. For items requiring continuous inspection, a special inspector must be present onsite during the performance of that task. In most cases "periodic" inspections/tests shall be performed prior to commencing the task, intermittently during the task, and at the completion of the task. The "Detailed Instructions & Frequency" provides a description of the presumed requirements for tasks requiring "periodic" inspections. The design professional in responsible charge should revise the requirements as needed on a project-specific basis.

FABRICATORS (IBC 1704.2.5.1 & 1705.10)

☐ Approved Fabricator	Yes	No

Fabricators Name:	
Fabricators plant location	
Required In-plant Inspections	☐ Steel Construction ☐ Concrete Construction ☐ Wood Construction ☐ Cold-formed Construction ☐ Other: _____ ☐ Other: _____

STRUCTURAL STEEL (IBC 1705.2.1, 1705.12.1 & 1705.13.1)

Item			*Detailed Instructions and Frequencies*
PRIOR TO WELDING (TABLE N5.4-1, AISC 360-16):			
Welder qualification records	☒ Observe	☐ Perform	Verify welder qualification records and continuity records.
Welding procedures (WPS) and consumable certificates	☐ Observe	☒ Perform	
Material identification	☒ Observe	☐ Perform	Verify type and grade of material.
Welder identification	☒ Observe	☐ Perform	Confirm a system is in place by which a welder who has welded a joint or member can be identified.
Fit-up groove welds	☒ Observe	☐ Perform	Verify joint preparation, dimensions, cleanliness, tacking, and backing.
Fit-up of CJP welds to HSS T-, Y- and K- joints without backing	☒ Observe	☐ Perform	Verify joint preparation, dimensions, cleanliness and tacking.
Access holes	☒ Observe	☐ Perform	Verify configuration and finish.
Fit-up of fillet welds	☒ Observe	☐ Perform	Verify dimensions, cleanliness and tacking.
DURING WELDING (TABLE N5.4-2, AISC 360-16):			
Control and handling of welding consumables	☒ Observe	☐ Perform	Verify packaging and exposure control.
Cracked tack welds	☒ Observe	☐ Perform	Verify that welding does not occur over cracked tack welds.
Environmental conditions	☒ Observe	☐ Perform	Verify wind speed is within limits as well as precipitation and temperature.
WPS followed	☒ Observe	☐ Perform	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position.
Welding techniques	☒ Observe	☐ Perform	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass.
Headed stud anchors	☐ Observe	☒ Perform	Verify placement and installation of head stud anchors.
AFTER WELDING (TABLE N5.4-3, AISC 360-16):			
Welds cleaned	☒ Observe	☐ Perform	Verify that welds have been properly cleaned.
Size, length, and location of welds	☐ Observe	☒ Perform	Verify the size, length and location of welds.
Welds meet visual acceptance criteria	☐ Observe	☒ Perform	Verify that welds meet crack prohibition, base metal fusion, profile, size, undercut, and porosity provisions.
Arc strikes	☐ Observe	☒ Perform	Verify that arc strikes do not exist outside the permanent weld areas.
k-area	☐ Observe	☒ Perform	When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks.
Backing & weld tabs removed	☐ Observe	☒ Perform	If required on the approved construction documents, verify that back and weld tabs are removed.
Repair activities	☐ Observe	☒ Perform	Verify that repair activities are performed in accordance with AISC 360 and AWS D1.1.
Documentation	☐ Observe	☒ Perform	Document the acceptance or rejection of the welded joint or member.
Prohibited welds	☒ Observe	☐ Perform	Verify that no prohibited welds have been added with the approval of the engineer of record.
NONDESTRUCTIVE TESTING (SECTION N5, AISC 360-16):			
CJP welds (Risk Cat. II)	☐ Observe	☒ Perform	UT testing shall be performed on 10% of CJP groove welds in butt, T- and corner joints subject to transversely applied tension loading in materials 5/16-inch thick or greater. (This must be performed on 100% of CJP welds in SDC "D-F" per AISC 341.)
CJP welds (Risk Cat. III or IV)	☐ Observe	☒ Perform	UT testing shall be performed on all CJP groove welds in butt, T- and corner joints subject to transversely applied tension loading in materials 5/16-inch thick or greater.
Welded joints subject to fatigue	☐ Observe	☒ Perform	Welded joints subject to fatigue (see Table A-3.1 of AISC 360) shall have radiographic or UT testing.
PRIOR TO BOLTING (TABLE N5.6-1, AISC 360-16):			
➢ *Not required if only snug-tight joints are specified [per Section N5.6(1) of AISC 360-16].*			
Certifications of fasteners	☐ Observe	☒ Perform	Verify that manufacturer's certificates are available for fastener materials.
Fasteners marked	☒ Observe	☐ Perform	Verify that fasteners have been marked in accordance with ASTM requirements.
Proper fasteners for joint	☒ Observe	☐ Perform	Verify grade, type, and bolt length if threads are excluded from the shear plane.
Proper bolting procedure	☒ Observe	☐ Perform	Verify proper procedure is used for the joint detail.
Connecting elements	☒ Observe	☐ Perform	Verify appropriate faying surface condition and hole preparation, if specified, meet requirements.
Pre-installation verification testing	☒ Observe	☐ Perform	Observe and document verification testing by installation personnel for fastener assemblies and methods used.
Proper storage	☒ Observe	☐ Perform	Verify proper storage of bolts, nuts, washers, and other fastener components.
DURING BOLTING (TABLE N5.6-2, AISC 360-16):			
➢ *Not required if only snug-tight joints are specified [per Section N5.6(1) of AISC 360-16].*			
➢ *Not required for pretensioned joints using turn-of-the-nut method with match-marking, direct-tension-indicators, or twist-off type tension control method [per Section N5.6(2) of AISC 360-16].*			
Fastener assemblies	☒ Observe	☐ Perform	Verify that fastener assemblies are of suitable condition, paced in all holes, and washers are positioned as required.
Snug-tight prior to pretensioning	☒ Observe	☐ Perform	Verify that joints are brought to snug-tight condition prior to pretensioning operation.
Fastener component	☒ Observe	☐ Perform	Verify that fastener component is not turned by wrench prevented from rotating.
Pretensioned fasteners	☒ Observe	☐ Perform	Verify that fasteners are Pretensioned in accordance with RCSC Specification, progressing systematically from the most rigid point toward the free edges.
AFTER BOLTING (TABLE N5.6-3, AISC 360-16):			
Documentation	☐ Observe	☒ Perform	Document the acceptance or rejection of bolted connections.
OTHER STEEL INSPECTIONS (SECTION N5.7 & N5.8, AISC 360-16; Tables J8.1 & J10.1, AISC 341-16):			
Galvanized structural steel	☒ Observe	☐ Perform	Verify that exposed cut surfaces of galvanized structural steel does not include cracks prior to galvanizing the surface.
Structural steel details	☒ Observe	☐ Perform	All fabricated steel or steel frames shall be inspected to verify compliance with the details shown in the approved construction documents, such as braces, stiffeners, member locations, and proper application of joint details at each connection.
Anchor rods and other embedments supporting structural steel	☒ Observe	☐ Perform	Shall be on the premises during the placement of anchor rods and other embedments supporting structural steel for compliance with construction documents. Verify the diameter, grade, type, and length of the anchor rod or embedded item, and the extent or depth of embedment prior to placement of concrete.
Reduced beam sections (RBS)	☐ Observe	☒ Perform	Verify contour and finish as well as dimensional tolerances *(see Table J8.1 of AISC 341-16)*.
Protected zones	☐ Observe	☒ Perform	Verify that no holes or unapproved attachments are made within the protected zone *(see Table J8.1 of AISC 341-16)*.
H-piles	☐ Observe	☒ Perform	Verify that no holes or unapproved attachments occur within the protected zones of piling *(see Table J10.1 of AISC 341-16)*.

CONCRETE CONSTRUCTION (IBC 1705.3 & 1705.12.1)

Item			*Detailed Instructions and Frequencies*
Reinforcing steel, including prestressing tendons	☐ Continuous	☒ Periodic	Verify prior to placing concrete that reinforcing is of specified type, grade and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report.
Welding of reinforcing steel	☐ Continuous	☒ Periodic	Visually inspect all welds and also verify weldability of reinforcing steel based upon carbon equivalent and in accordance with AWS D1.4. Continuously inspect any welds over 5/16" thick.
Cast-in bolts & embeds	☐ Continuous	☒ Periodic	Inspection of anchors or embeds cast in concrete is required when allowable loads have been increased or where strength design is used.
Post-installed anchors or dowels	☐ Continuous	☒ Periodic	All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report. Horizontally or upwardly inclined anchors that resist sustained tension loads require continuous inspection and approved installers.
Use of required mix design	☐ Continuous	☒ Periodic	Verify that all mixes used comply with the approved construction documents; ACI 318: Ch. 19, 26.4.3, 26.4.4; and IBC 1904.1, 1904.2.
Concrete sampling for strength tests, slump, air content, and temperature	☒ Continuous	☐ Periodic	
Concrete & shotcrete placement	☒ Continuous	☐ Periodic	
Curing temperature and techniques	☐ Continuous	☒ Periodic	Verify that the ambient temperature for concrete is kept at > 50°F for at least 7 days after placement. High-early-strength concrete shall be kept at > 50°F for at least 3 days. Accelerated curing methods may be used (see ACI 318: 26.5.3-26.5.5). The ambient temperature for shotcrete shall be > 40°F for the same period of time as noted for concrete. Shotcrete shall be kept continuously moist for at least 24 hours after shotcreting. All concrete materials, reinforcement, forms, fillers, and ground shall be free from frost. In hot weather conditions ensure that appropriate measures are taken to avoid plastic shrinkage cracking and that the specified water/cement ratio is not exceeded.
Pre-stressed concrete	☒ Continuous	☐ Periodic	ACI 318 26.10
Erection of precast concrete	☐ Continuous	☒ Periodic	Verify that all precast elements are lifted, assembled and braced in accordance with the approved construction documents.
Precast concrete diaphragm connections or reinforcement classified as moderate or high deformability elements in seismic design category C-F.	☒ Continuous	☐ Periodic	Inspect connections and reinforcement in the field for: a. Installation of the embedded parts b. Completion of the continuity of reinforcement across joints. c. Completion of connections in the field.
Installation tolerances of precast concrete diaphragm connections	☐ Continuous	☒ Periodic	
Strength verification	☐ Continuous	☒ Periodic	Verify that adequate strength has been achieved prior to the removal of shores and forms or the stressing of post-tensioned tendons.
Formwork	☐ Continuous	☒ Periodic	Verify that the forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents.

SOILS CONSTRUCTION (IBC 1705.6)

Item			*Detailed Instructions and Frequencies*
Verify subgrade is adequate to achieve design bearing capacity	☐ Continuous	☒ Periodic	Prior to placement of concrete.
Verify excavations extend to proper depth and material	☐ Continuous	☒ Periodic	Prior to placement of compacted fill or concrete.
Verify that subgrade has been appropriately prepared prior to placing compacted fill	☐ Continuous	☒ Periodic	Prior to placement of compacted fill.
Perform classification and testing	☐ Continuous	☒ Periodic	All materials shall be checked at each lift for proper
of compacted fill materials			classifications and gradations not less than once for each 10,000ft² of surface area.
Verify proper materials, densities and lift thicknesses during placement and compaction.	☒ Continuous	☐ Periodic	Verify use of proper materials and procedures in accordance with the geotechnical report. Verify densities and lift thicknesses during placement and compaction of compacted fill.

Special Inspectors Shall:

- Be approved by the Building Official prior to performing any duties;
- Provide proof of licensure as a special inspector by the State of Utah for each type of inspection;
- Inspection reports are to meet the requirements of IBC 1704.2.4 and DFCM standards;
- Inspection reports are to be submitted to the code consultant, architect, DFCM project manager, and the State of Utah Building Official within 48 hours of performing inspections;
- A final inspection report shall be submitted following completion of the project documenting the types of special inspections performed and a statement indicating that the structure is in compliance with the approved construction documents and applicable codes (see IBC 1704.2.4).

DIVISION OF FACILITIES CONSTRUCTION & MANAGEMENT

4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538-3018
Website: http://dfcm.utah.gov/

Nonstructural Component Checklist

The attached checklist must be provided near the front of the construction plans of all DFCM projects involving new construction, building additions, or the addition of new or replaced components. One box must be checked within each row. Comments should be provided noting the particular component(s) that require seismic restraint.

Please review the **"DFCM Guidelines for Seismic Restraint of Nonstructural Components"** handout for more clarification on the requirements for non-structural components and an example of how to fill out the attached checklist.

Last Revised: 10/2016

NONSTRUCTURAL COMPONENT CHECKLIST

ITEM DESCRIPTION	*NOT REQUIRED*	*ON CONST. DOCUMENTS*	*DEFERRED SUBMITTAL*	*COMMENTS*
Architectural Components:				
Interior Nonstructural Walls & Partitions	X			
Cantilever Elements *(i.e. parapets, etc.)*	X			
Exterior Nonstructural Wall Elements	X			
Veneer	X			
Penthouses	X			
Ceilings *(i.e. suspended grid or hard-lid)*	X			
Cabinets *(i.e. storage cabinets, equip. etc.)*	X			
Access Floors	X			
Storage Racks	X			
Appendages & Ornamentations	X			
Signs & Billboards	X			
Other:	X			
Other:	X			
MEP Components:				
Fire Sprinklers	X			
Mechanical Equipment *(i.e. HVAC, fans, air handlers, boilers, furnaces, tanks, chillers, water heaters, heat exchangers, evaporators, engines, turbines, pumps, compressors, MFR equipment, etc.)*	X			
Electrical Equipment *(i.e. generators, batteries, inverters, transformers, MCC, panel boards, switch gear, cabinets, etc.)*			X	
Elevator & Escalator Components	X			
Communication Equipment, Computers, Instrumentation, and Controls	X			
Roof-mounted Chimneys, Stacks, Cooling & Electrical Towers	X			
Lighting Fixtures	X			
Vibration Isolated Components	X			
Piping & Conduit Systems			X	PIPE SUPPORTS, PER 3/C.3.18
Ductwork *(including in-line components)*	X			
Conveyors	X			
Cable Trays	X			
Other:	X			
Other:	X			

NOTES:

1. Deferred submittals for seismic restraint of nonstructural components must be submitted to the DFCM Building Official a minimum of two weeks prior to the planned installation in order to allow for plan review and forwarding to inspectors. In the event that the submittal is deficient additional time may become necessary.
2. When seismic restraint of non-structural components is installed prior to receiving DFCM approval it shall not be covered or concealed until receiving both plan review and inspection approval. Further, installers are proceeding at their own risk until plan review and inspection approval occurs.
3. The requirements for seismic restraint of nonstructural components cannot be satisfied by a general reference to Design Manuals. The design professional may utilize these manuals as a basis of their design, but must provide all supporting documentation to ensure that the design conforms to the requirements of ASCE 7-05, Chapter 13.
4. Submittals must include details of the proposed seismic restraint of nonstructural components. These details must show specific information relating to the materials, type, size, and locations of anchorages; materials used for bracing; attachment requirements of bracing to structure and component; and locations of transverse and longitudinal sway bracing and rod stiffeners. Submittals may also require structural calculations, engineering reports, test data, and/or specifications to ensure code compliance.

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www.horrocks.com

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Salt Lake City, UT 84111
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801-328-5151
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WARNING
0 1 2
IF THIS BAR DOES NOT MEASURE 2" THEN DRAWING IS NOT TO SCALE

PROFESSIONAL STRUCTURAL ENGINEER
168826-2202
ROBERT J. MENDERSHOT
5/1/25
STATE OF UTAH

PROJECT TITLE

THE POINT

3MG RESERVOIR

ISSUE TYPE:	100% CD
ISSUE DATE:	5/1/2025
DFCM PROJ No.	2546300
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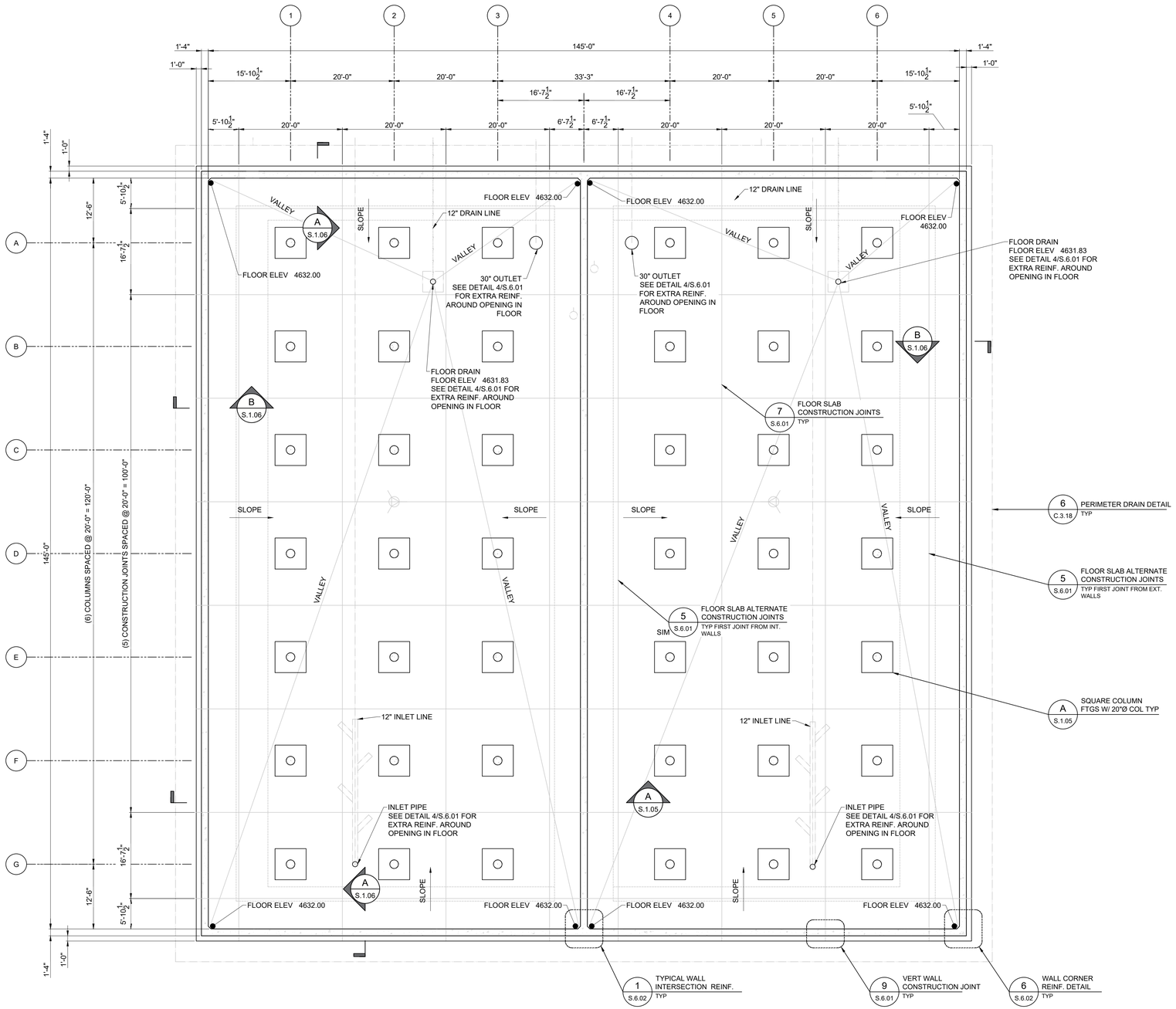
GENERAL STRUCTURAL NOTES II

SHEET NUMBER

S.0.02

NOTES:

1. ALL FLOOR SURFACES TO BE HAIR BROOMED AFTER STEEL TROWEL FINISH
2. WATERSTOPS SHALL BE BONDED TOGETHER OR SPLICED BY THERMAL WELDING IN ACCORDANCE WITH MANUFACTURE INSTRUCTIONS. LAPPING IS NOT PERMITTED.
3. AT ALL SLAB CONSTRUCTION JOINTS, CONCRETE SHALL BE WORKED UNDER WATERSTOPS BY HAND, MAKING SURE ALL AIR AND ROCK POCKETS ARE REMOVED.
4. CRACK REPAIR SHALL BE PERFORMED BEFORE FILLING THE RESERVOIR WITH WATER PER DETAIL 14/S.6.01.
5. PROVIDE FORM BEVELS AT INTERSECTIONS PER DETAIL 17/S.6.01.
6. PROVIDE SEALANT GROOVE AT FILLET LOCATIONS PER DETAIL 18/S.6.01.
7. PROVIDE SEALANT AT VALLEYS PER DETAIL 13/S.6.01



1 S.1.01 RESERVOIR FOUNDATION PLAN
SCALE: 3/32" = 1'-0"

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#8826220-2202
ROBERT J. HENDERSHOT
5/1/25
STATE OF UTAH

PROJECT TITLE

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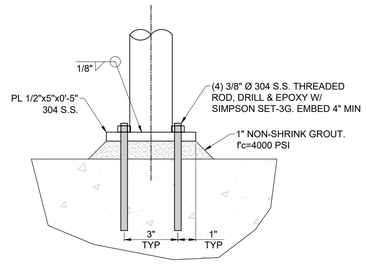
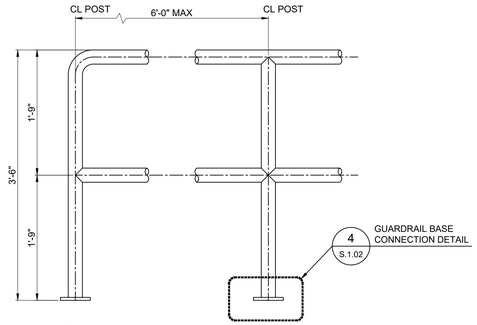
RESERVOIR FOUNDATION PLAN

SHEET NUMBER
S.1.01

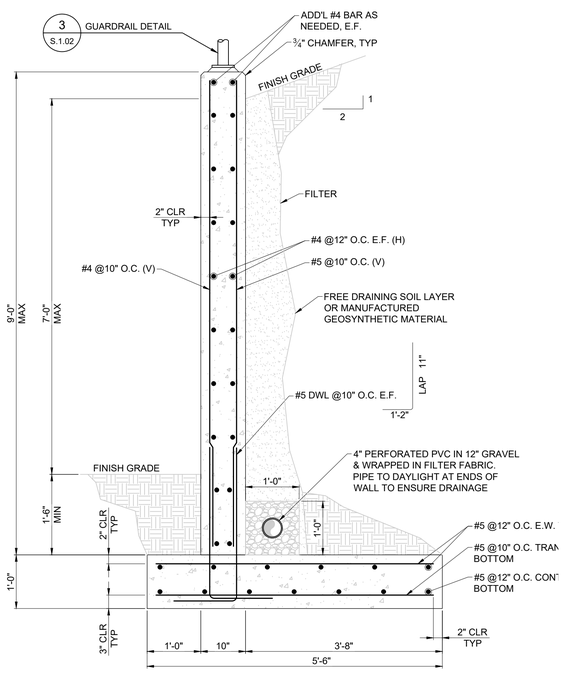


4 S.1.02 GUARDRAIL BASE CONNECTION DETAIL
SCALE: 3" = 1'-0"

NOTE:
ALL GUARDRAIL ELEMENTS SHALL BE SCH 40 2" STD PIPE, 304 STAINLESS STEEL

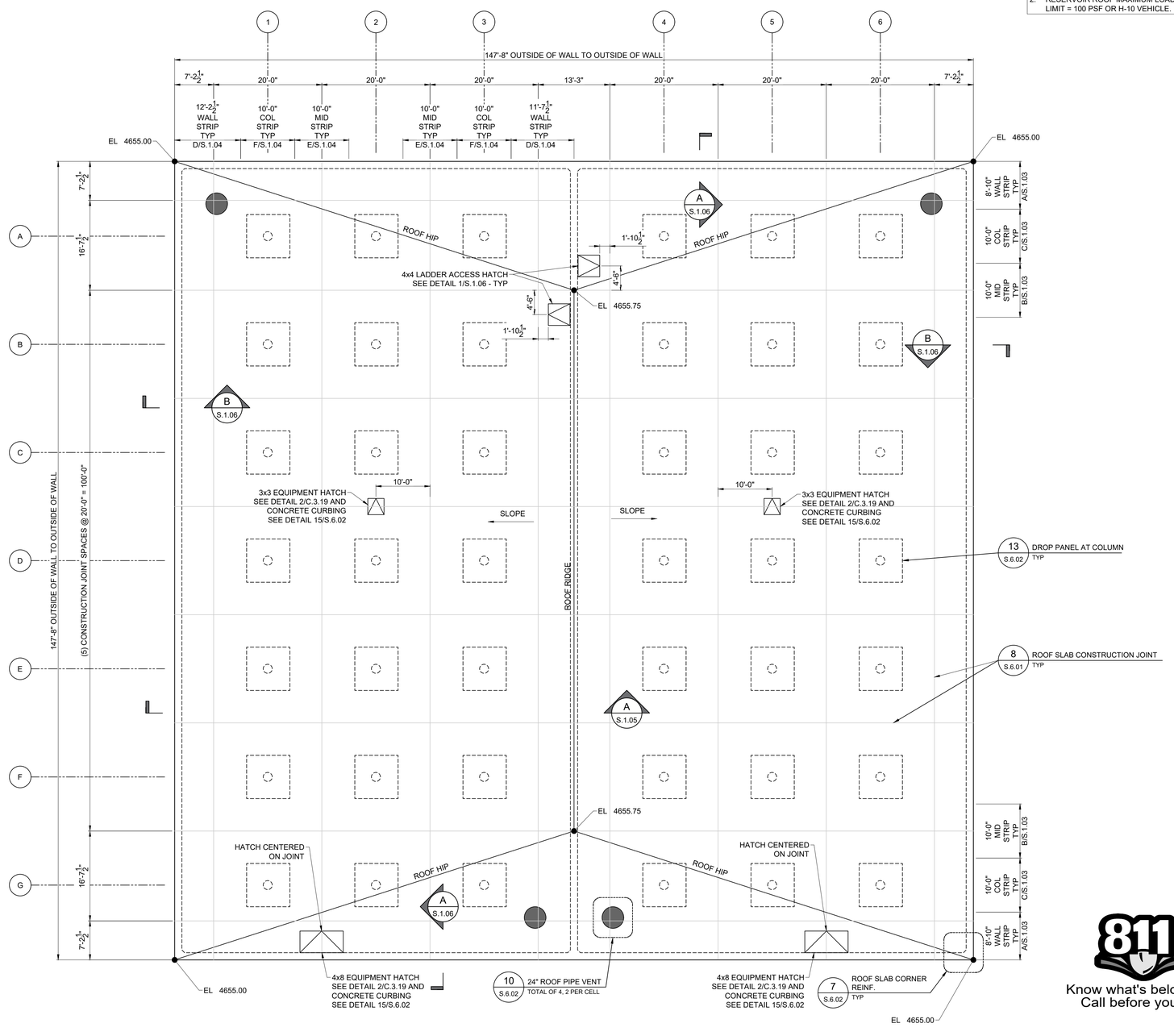


3 S.1.02 GUARDRAIL DETAIL
SCALE: 1" = 1'-0"



2 S.1.02 TANK PERIMETER SITE WALL SECTION
SCALE: 3/4" = 1'-0"

NOTES:
1. ALL ROOF SURFACES TO HAVE STEEL TROWEL FINISH.
2. RESERVOIR ROOF MAXIMUM LOAD LIMIT = 100 PSF OR H-10 VEHICLE.



1 S.1.02 RESERVOIR ROOF PLAN
SCALE: 3/32" = 1'-0"

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WARNING
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PROFESSIONAL STRUCTURAL ENGINEER 368262-2202 ROBERT J. HENDERSHOT 5/1/25 STATE OF UTAH

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RESERVOIR ROOF PLAN

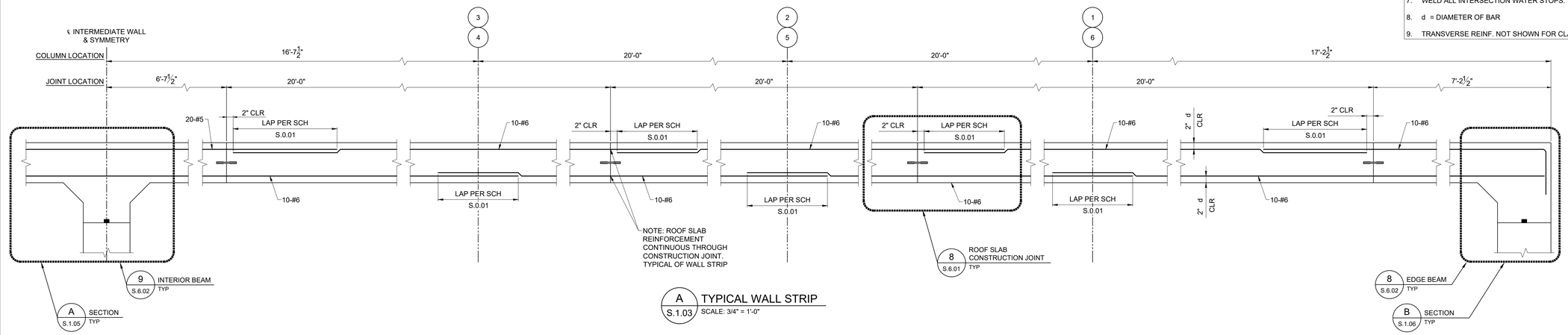
SHEET NUMBER

S.1.02

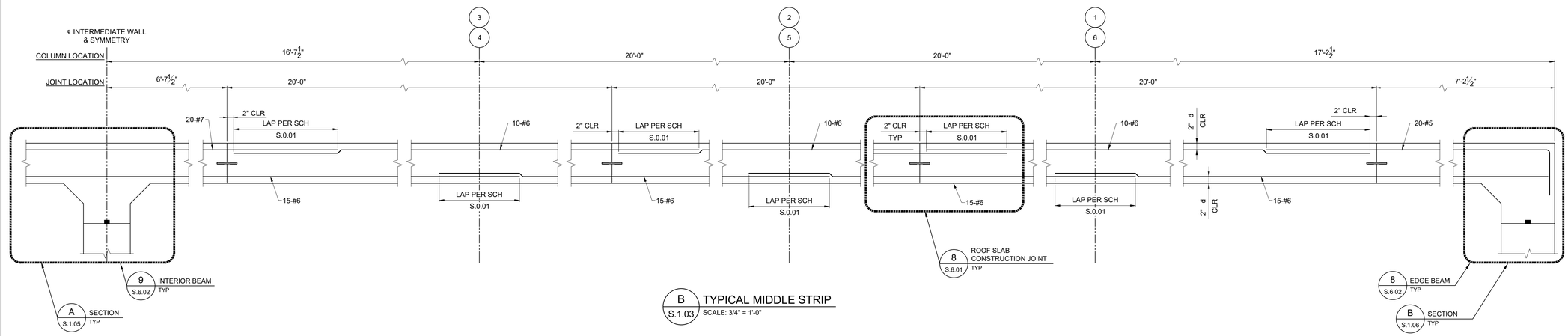
PAGE 34

NOTES:

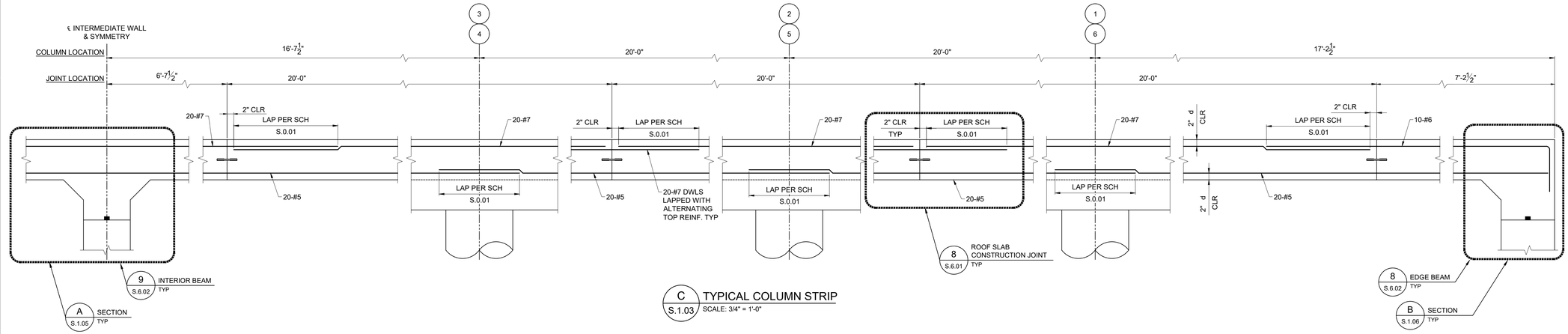
1. UNLESS NOTED OTHERWISE, ALL ROOF SLAB BARS SHALL BE EQUALLY SPACED WITHIN DESIGNATED STRIPS. SEE SHEET S.1.02.
2. FOR ADDITIONAL REINFORCEMENT AT ROOF ACCESS OPENINGS, SEE DETAIL SHEETS.
3. METAL BAR SUPPORTS OR SPACES SHALL NOT MAKE CONTACT WITH FORMS. AT COLUMNS, TOP REINFORCEMENT OF ROOF MAY BE WIRED TO COLUMN.
4. FOR WALL REINFORCEMENT, SEE TYPICAL WALL SECTION.
5. FOR ROOF PLAN, SEE SHEET S.1.02.
6. STRIP SECTIONS SHOWN ARE ONLY TYPICAL FOR SHOWN GRID LINES.
7. WELD ALL INTERSECTION WATER STOPS.
8. d = DIAMETER OF BAR
9. TRANSVERSE REINF. NOT SHOWN FOR CLARITY.



A S.1.03 TYPICAL WALL STRIP
SCALE: 3/4" = 1'-0"



B S.1.03 TYPICAL MIDDLE STRIP
SCALE: 3/4" = 1'-0"



C S.1.03 TYPICAL COLUMN STRIP
SCALE: 3/4" = 1'-0"

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STATE OF UTAH
JOSEPH J. HENDERSHOT
5/1/25

PROJECT TITLE

THE POINT

3MG RESERVOIR

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ISSUE DATE:	5/1/2025
DFCM PROJ No.	2546300
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SHEET TITLE

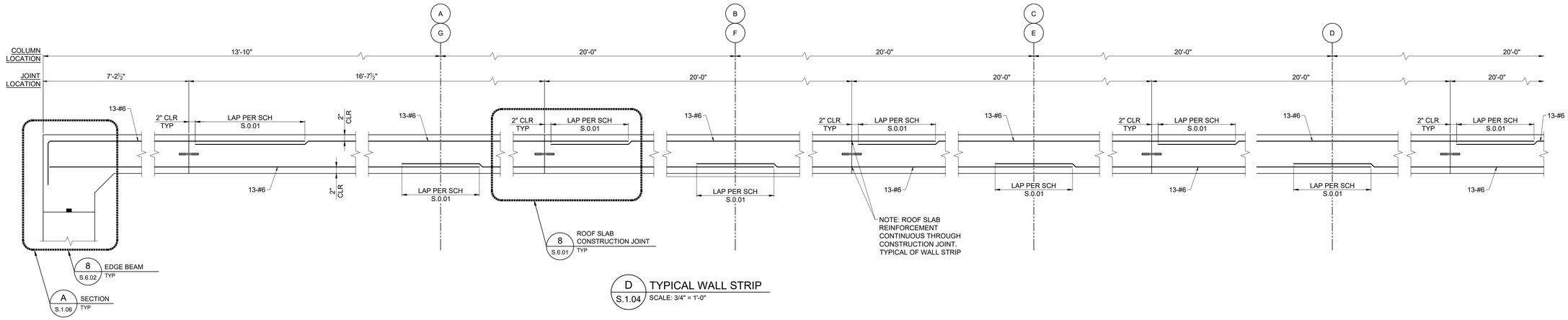
RESERVOIR ROOF REINFORCMENT I

SHEET NUMBER

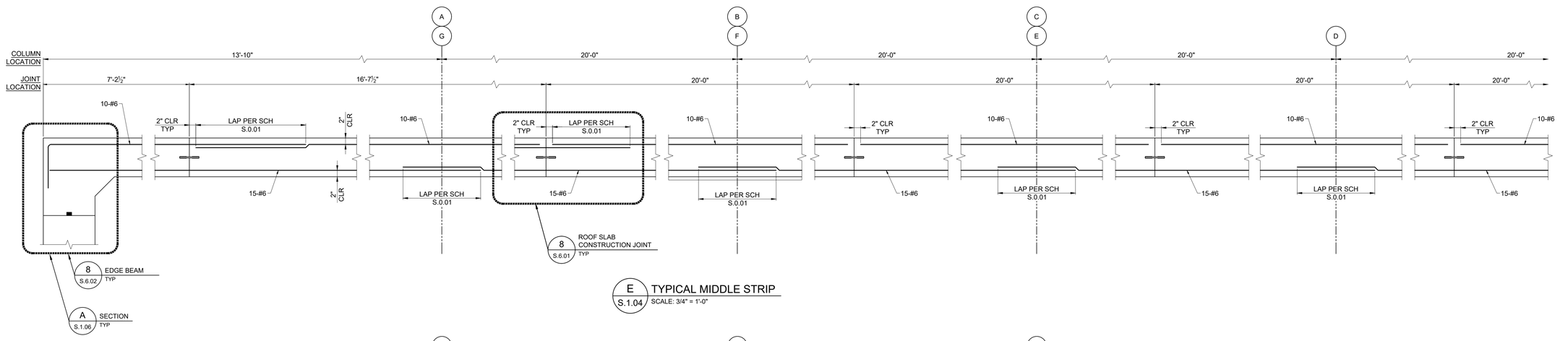
S.1.03

NOTES:

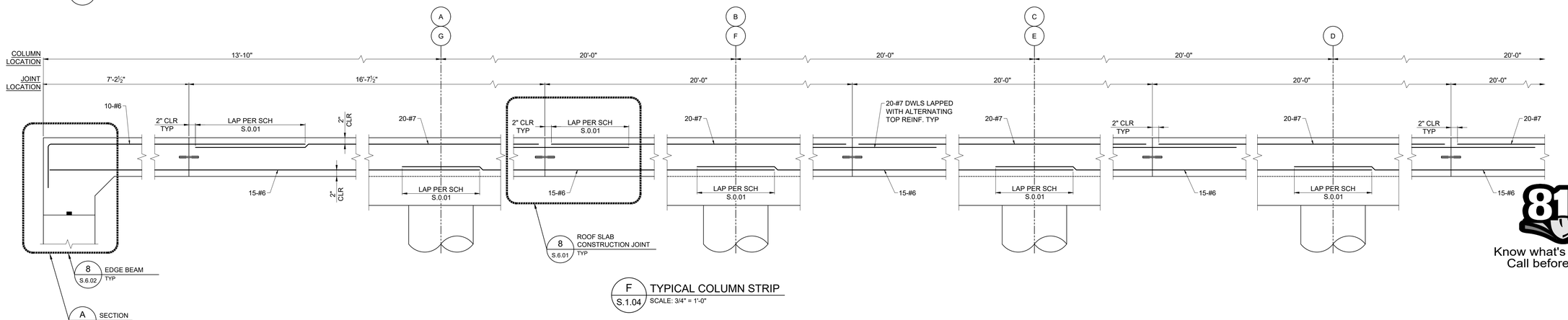
1. UNLESS NOTED OTHERWISE, ALL ROOF SLAB BARS SHALL BE EQUALLY SPACED WITHIN DESIGNATED STRIPS. SEE SHEET S.1.02.
2. FOR ADDITIONAL REINFORCEMENT AT ROOF ACCESS OPENINGS, SEE DETAIL SHEETS.
3. METAL BAR SUPPORTS OR SPACES SHALL NOT MAKE CONTACT WITH FORMS. AT COLUMNS, TOP REINFORCEMENT OF ROOF MAY BE WIRED TO COLUMN.
4. FOR WALL REINFORCEMENT, SEE TYPICAL WALL SECTION.
5. FOR ROOF PLAN, SEE SHEET S.1.02.
6. STRIP SECTIONS SHOWN ARE ONLY TYPICAL FOR SHOWN GRID LINES.
7. WELD ALL INTERSECTION WATER STOPS.
8. d = DIAMETER OF BAR.
9. TRANSVERSE REINF. NOT SHOWN FOR CLARITY.



D S.1.04 TYPICAL WALL STRIP
SCALE: 3/4" = 1'-0"



E S.1.04 TYPICAL MIDDLE STRIP
SCALE: 3/4" = 1'-0"



F S.1.04 TYPICAL COLUMN STRIP
SCALE: 3/4" = 1'-0"

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5/1/25
STATE OF UTAH

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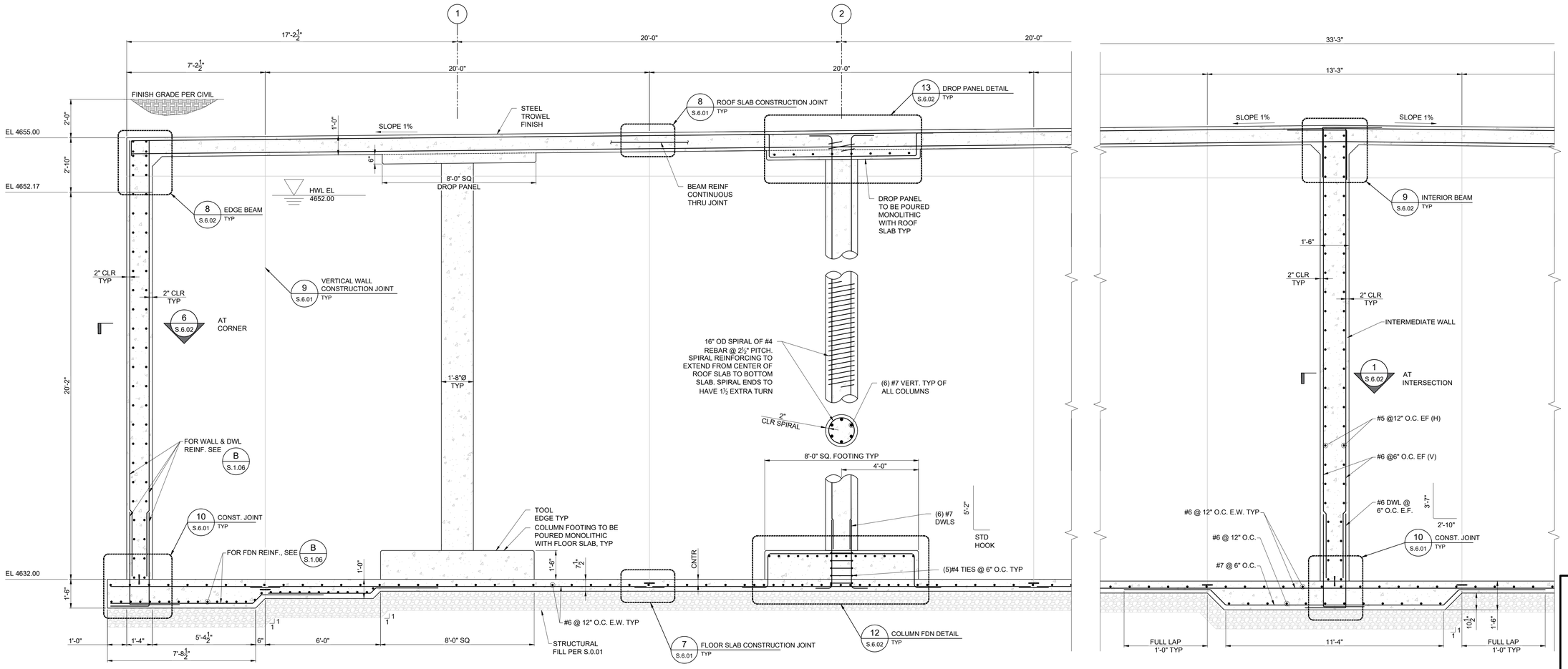
SHEET TITLE
RESERVOIR ROOF REINFORCMENT II

SHEET NUMBER
S.1.04



NOTES:

1. FLOOR SLAB TO HAVE BROOM OR BELT FINISH PER SPECIFICATION 033500.
2. WELD ALL INTERSECTING WATERSTOP LOCATIONS.
3. WATERSTOP TO BE PLACED CENTER OF ALL WALL AND ROOF CONSTRUCTION JOINTS, UNLESS NOTED OTHERWISE.
4. SEE SHEET S.1.03 AND S.1.04 FOR TOP SLAB REINFORCEMENT.
5. ALL WALLS BELOW GRADE SHALL BE WATERPROOFED.

A S.1.05 RESERVOIR SECTION
SCALE: 3/8" = 1'-0"

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ROBERT J. HENDERSHOT
5/1/25
STATE OF UTAH

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3MG RESERVOIR

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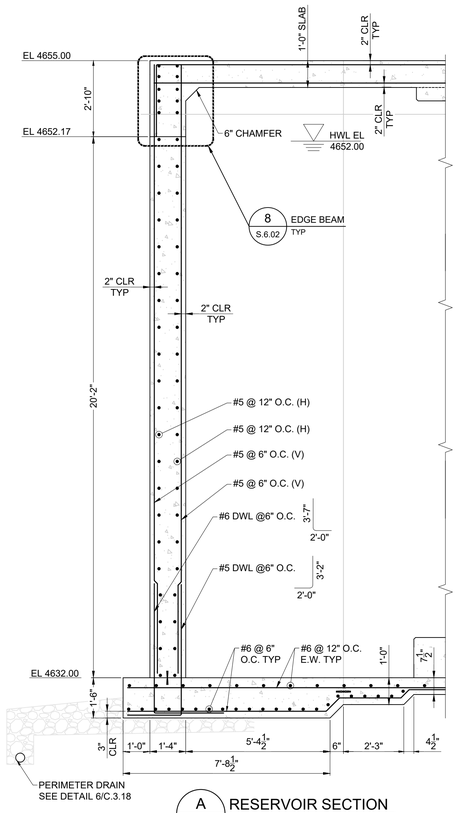
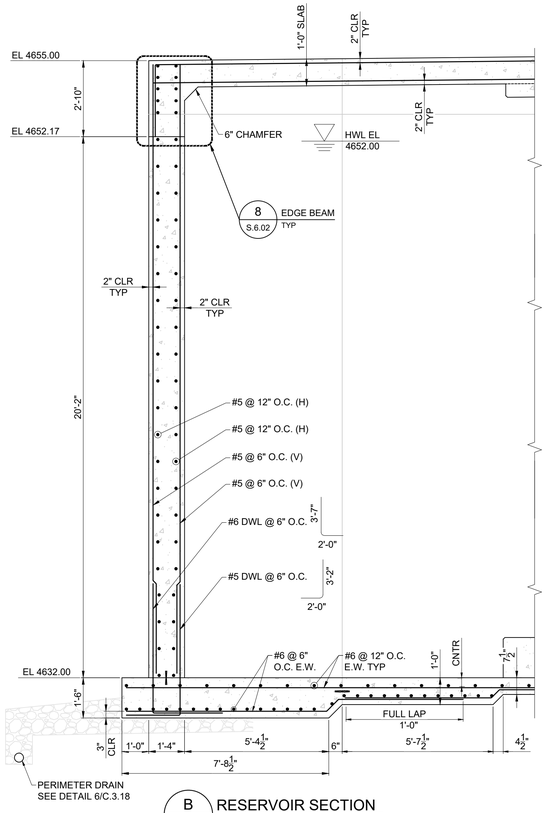
SHEET TITLE
RESERVOIR SECTIONS

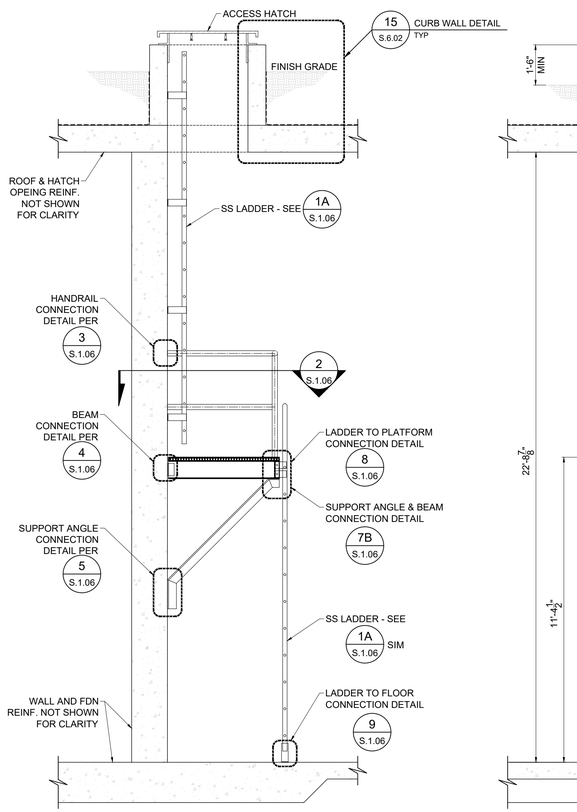
SHEET NUMBER
S.1.05



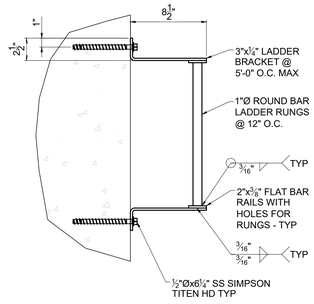
A S.1.06 RESERVOIR SECTION
SCALE: 3/8" = 1'-0"



B S.1.06 RESERVOIR SECTION
SCALE: 3/8" = 1'-0"



1 S.1.06 LADDER & PLATFORM DETAIL
SCALE: 3/8" = 1'-0"



1A S.1.06 LADDER & CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"

NOTE:
ALL METAL COMPONENTS OF LADDER, PLATFORM, GRATING AND HANDRAIL TO BE 316 STAINLESS STEEL

NOTE:
SS McNICHOLS
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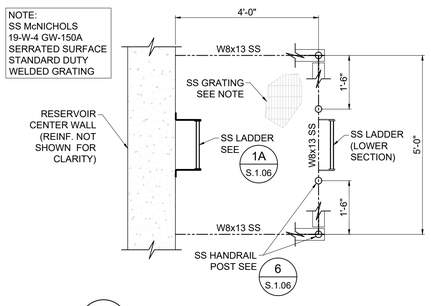
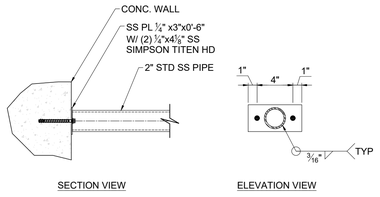
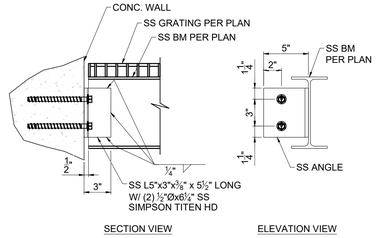
STANDARD DUTY
WELDED GRATING



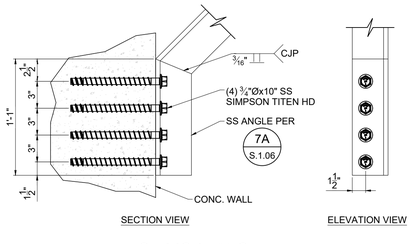
2 S.1.06 LADDER PLATFORM PLAN
SCALE: 1/2" = 1'-0"



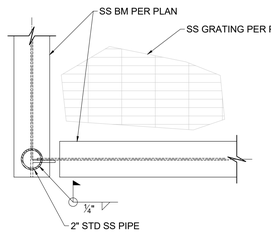
3 S.1.06 HANDRAIL CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"



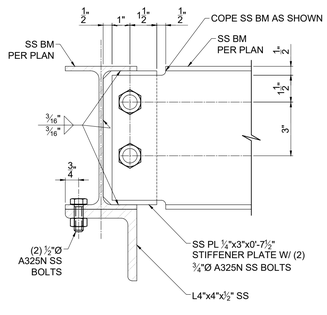
4 S.1.06 BEAM CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"



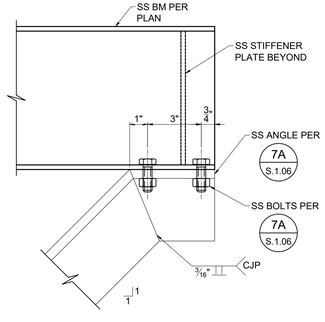
5 S.1.06 SUPPORT ANGLE CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"



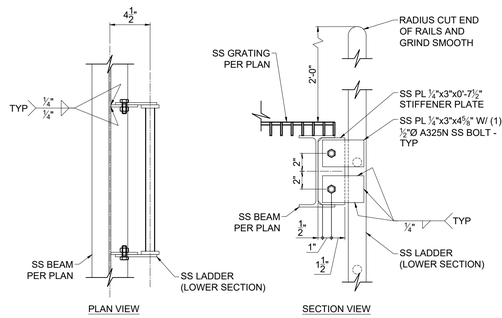
6 S.1.06 POST CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"



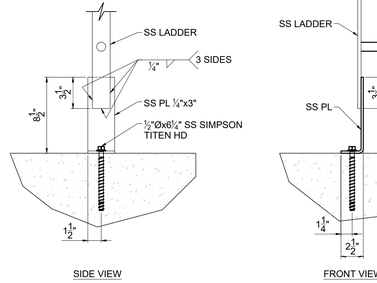
7A S.1.06 SUPPORT ANGLE & BEAM CONNECTION DETAIL
SCALE: 3" = 1'-0"



7B S.1.06 SUPPORT ANGLE & BEAM CONNECTION DETAIL
SCALE: 3" = 1'-0"



8 S.1.06 LADDER TO PLATFORM CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"



9 S.1.06 LADDER TO FLOOR CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"

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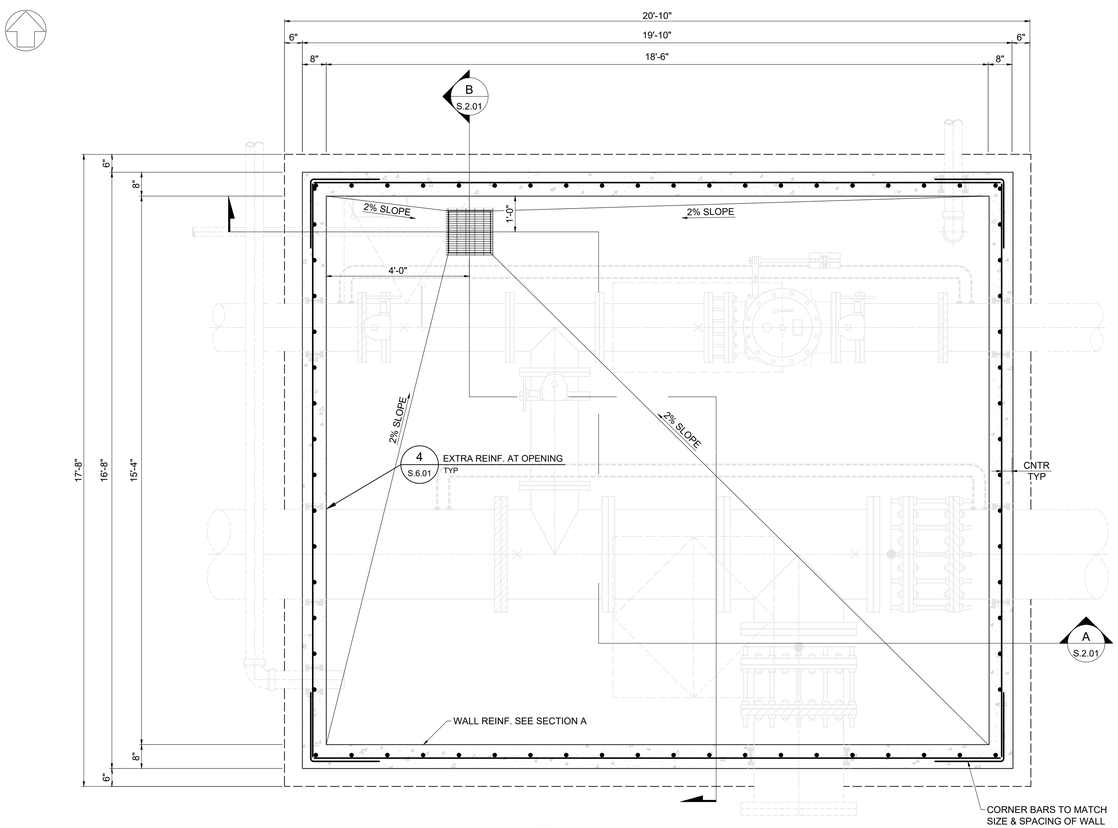
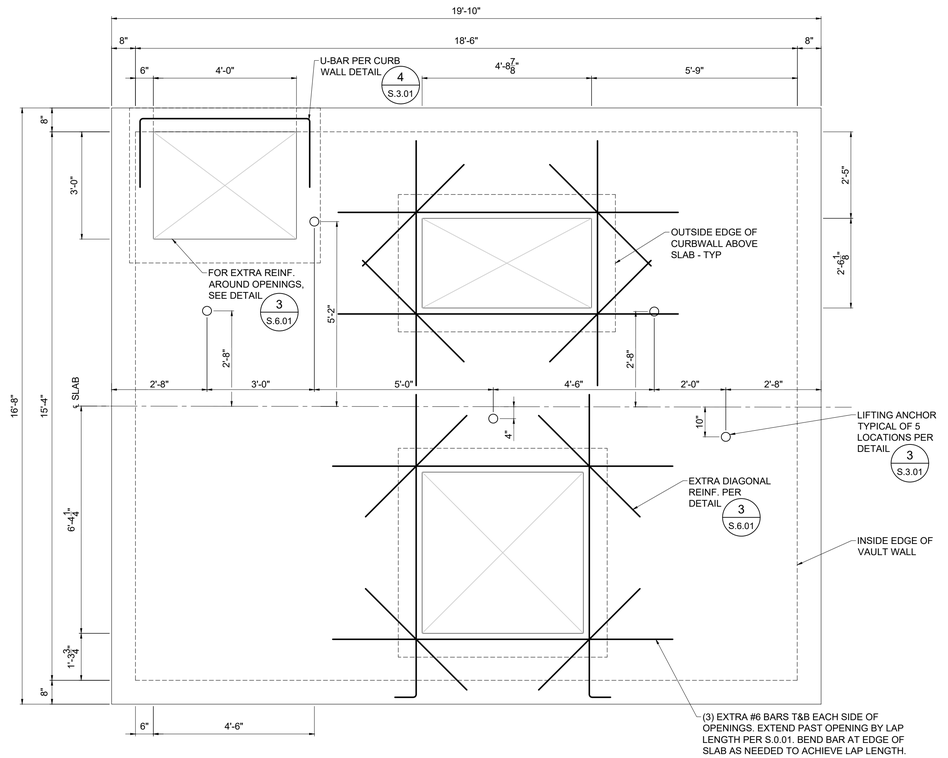
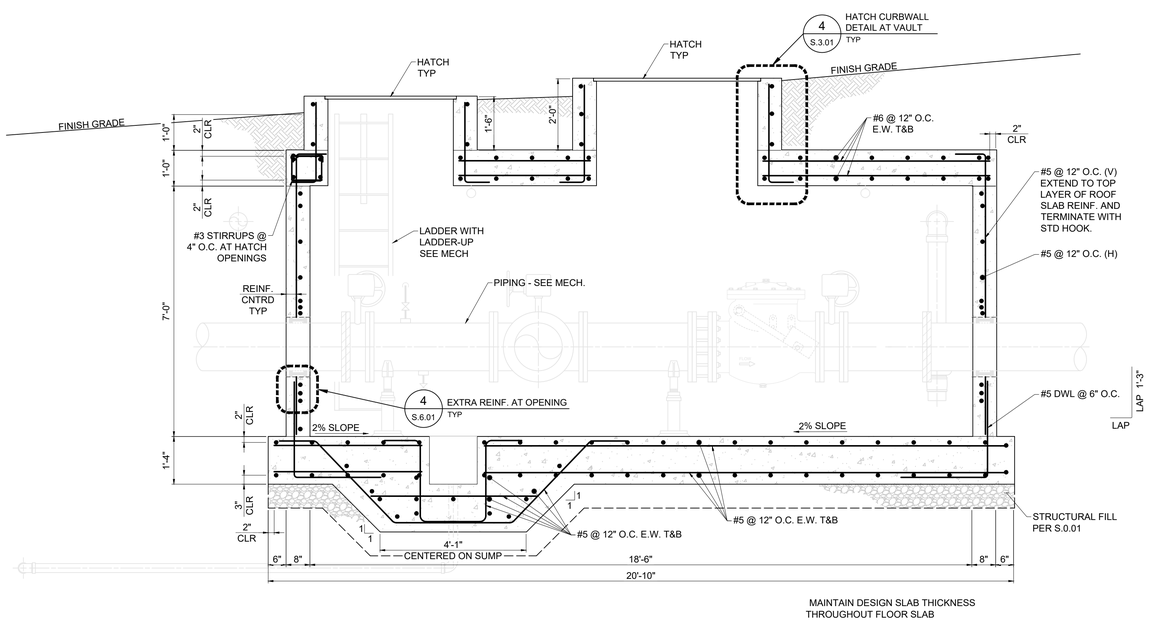


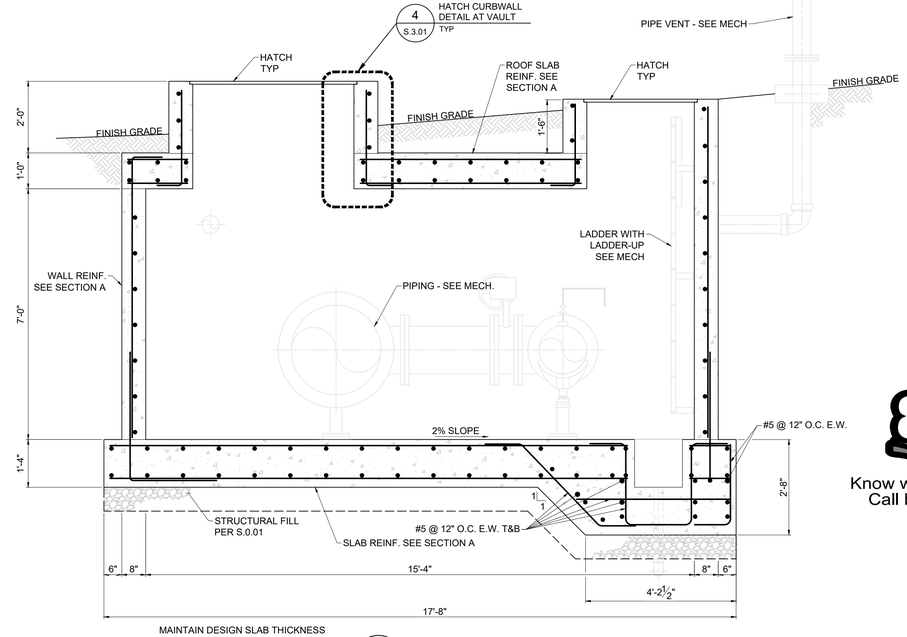
1 S.2.01 BYPASS VAULT FOUNDATION PLAN
SCALE: 1/2" = 1'-0"



2 S.2.01 BYPASS VAULT ROOF PLAN (REFLECTED)
SCALE: 1/2" = 1'-0"



A S.2.01 SECTION
SCALE: 1/2" = 1'-0"



B S.2.01 SECTION
SCALE: 1/2" = 1'-0"

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BYPASS VAULT PLANS & SECTIONS

SHEET NUMBER
S.2.01

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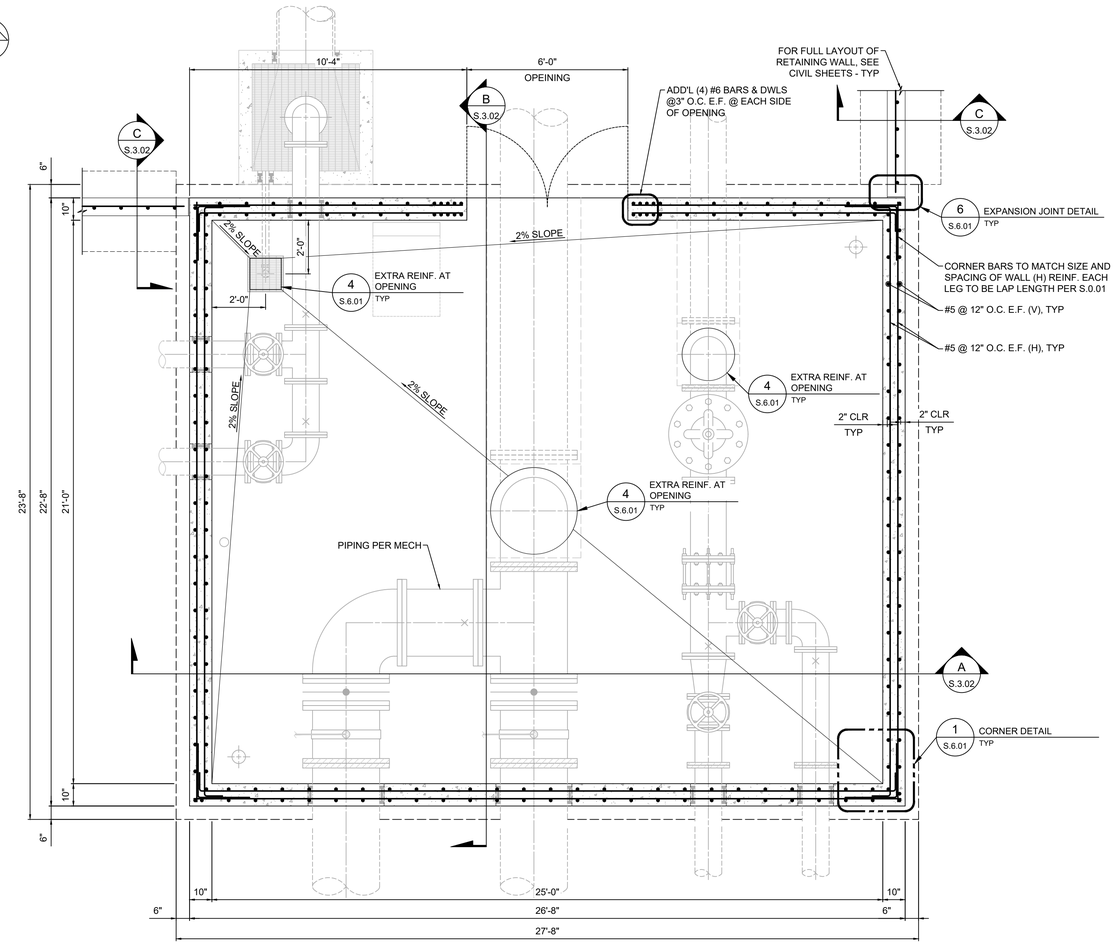
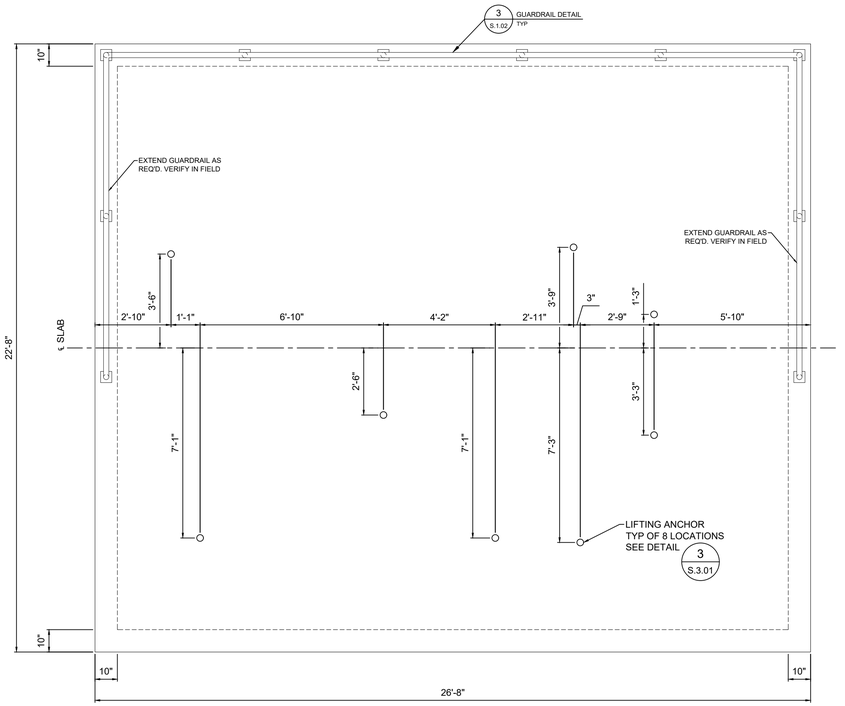
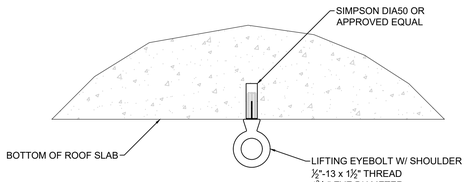
Q: 2022 UT-CV-3355-22 The Point Redevelo ment Pro ect Data 02 CAD 2.03 Sheet Files Construction Drawings CIVIL CAD STRUCTURES UT-CV-3355-22 S 2 01 (Metering Vault Fdn Plan).dwg - S.2.01 - 8/26/2025 12:37 m, dustin. ones



1 S.3.01 INLET-OUTLET COMBO VAULT FOUNDATION PLAN
SCALE: 3/8" = 1'-0"



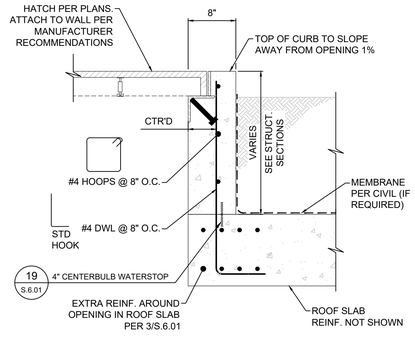
2 S.3.01 INLET-OUTLET COMBO VAULT ROOF PLAN (REFLECTED)
SCALE: 3/8" = 1'-0"



NOTES:

1. LIFTING ANCHORS TO HAVE 1500LB MIN LIFTING CAPACITY
2. INTERNALLY THREADED ANCHOR TO BE INSTALLED INTO BOTTOM OF ROOF SLAB AT LOCATIONS SHOWN ON ROOF PLAN AND PER MANUFACTURER RECOMMENDATIONS.
3. EYEBOLTS TO BE SIZED TO SUPPORT REQUIRED LOADS OF EQUIPMENT IN VAULT.

3 S.3.01 LIFTING ANCHOR DETAIL
SCALE: 3" = 1'-0"



4 S.3.01 HATCH CURBWALL DETAIL AT VAULT
SCALE: 1" = 1'-0"

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5/1/25
STATE OF UTAH

PROJECT TITLE

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3MG RESERVOIR

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INLET-OUTLET COMBO VAULT FDN PLAN

SHEET NUMBER

S.3.01

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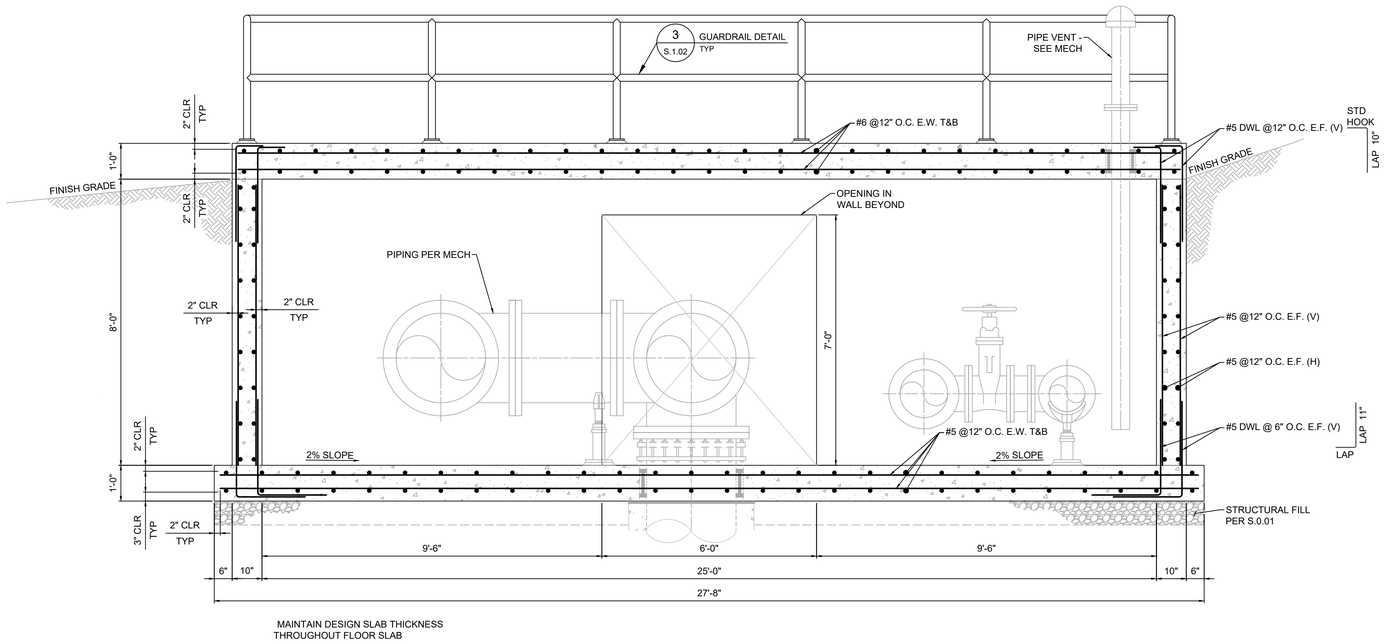
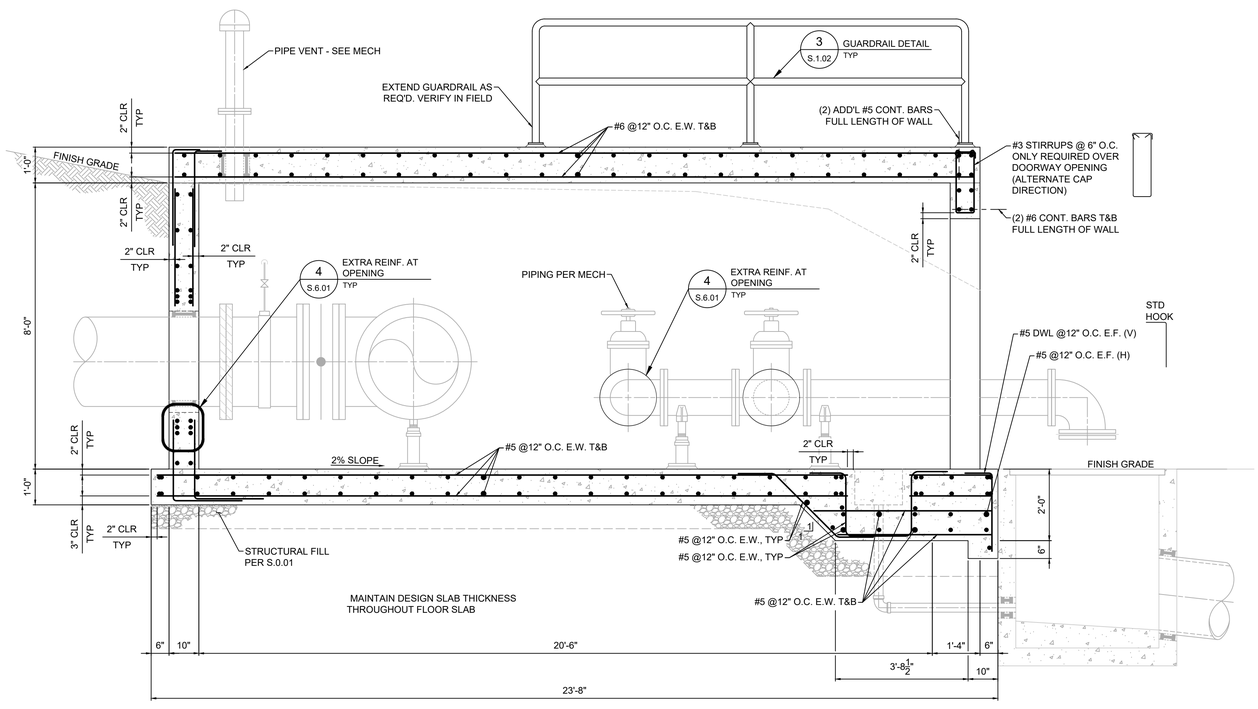


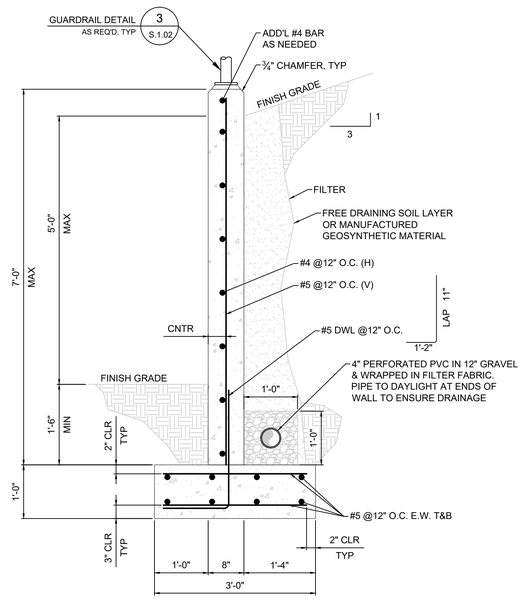
MAINTAIN DESIGN SLAB THICKNESS THROUGHOUT FLOOR SLAB

A S.3.02 SECTION
SCALE: 1/2" = 1'-0"



MAINTAIN DESIGN SLAB THICKNESS THROUGHOUT FLOOR SLAB

B S.3.02 SECTION
SCALE: 1/2" = 1'-0"



C S.3.02 SECTION
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801-328-5151
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WARNING
0 1 2
IF THIS BAR DOES NOT MEASURE 2" THEN DRAWING IS NOT TO SCALE

PROFESSIONAL STRUCTURAL ENGINEER
#8826220-2202
ROBERT J. HENDERSHOT
5/1/25
STATE OF UTAH

PROJECT TITLE
THE POINT
3MG RESERVOIR

ISSUE TYPE:	100% CD
ISSUE DATE:	5/1/2025
DFCM PROJ No.	2546300
DRAWN BY:	JEJ/MJR
CHK'D BY:	BB
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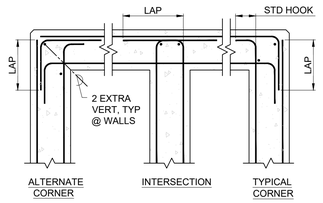
SHEET TITLE
INLET-OUTLET COMBO VAULT SECTIONS

SHEET NUMBER
S.3.02

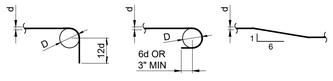
Q: 2022 UT-CV-3355-22 The Point Redevelo ment Pro ect Data 02 CAD 2.03 Sheet Files Construction Drawings CIVIL CAD STRUCTURES UT-CV-3355-22 S 3 01 (Inlet Outlet Combo).dwg - S.3.02 - 2/18/2025 02:16 m, dustin. ones



LAP: FOR CONCRETE: PER TABLE IN REINF STEEL NOTES ON SHEET S.0.01

NOTE: WHERE SINGLE LAYER OF REINFORCING OCCURS, BEND STEEL AS SHOWN FOR OUTSIDE BARS.

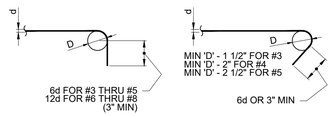
1 S.6.01 REINF. AT INTERSECTIONS OF CONCRETE WALLS, FOOTINGS & BEAMS
SCALE: 3/4"=1'-0"



D - 6d FOR #3 THRU #8
D - 8d FOR #9 THRU #11
D - 10d FOR #14 THRU #18

NOTE:
ALL BENDS SHALL BE MADE COLD

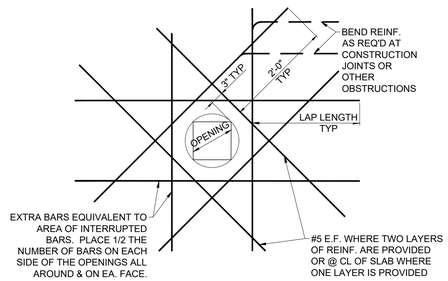
REBAR BENDS & END HOOKS



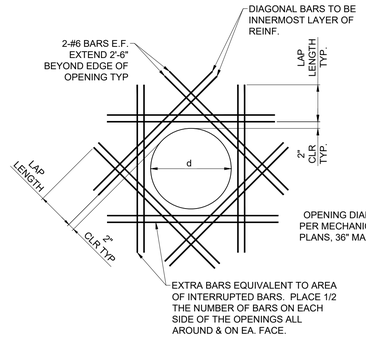
TIE AND STIRRUP END HOOKS

2 S.6.01 TYPICAL REBAR HOOKS AND BENDS
SCALE: 3/4"=1'-0"

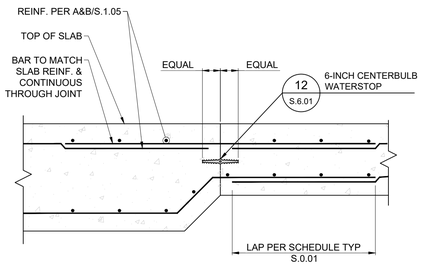
NOTE:
1. DETAIL FOR SQUARE OPENINGS



3 S.6.01 TYP REINF. @ SLAB PENETRATIONS
SCALE: 3/4"=1'-0"

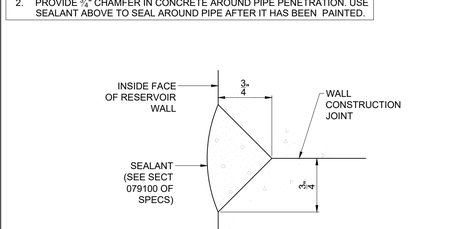


4 S.6.01 TYP REINF AT CIRCULAR OPENINGS
SCALE: 3/4"=1'-0"

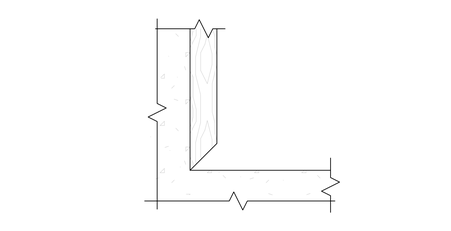


5 S.6.01 ALTERNATE FLOOR SLAB CONSTRUCTION JOINT
SCALE: 1"=1'-0"

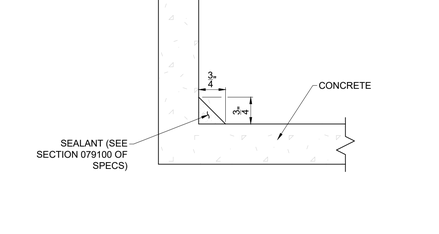
NOTE:
1. DISCONTINUE ALL REINFORCING AT JOINT.



6 S.6.01 EXPANSION JOINT DETAIL
SCALE: 1-1/2"=1'-0"

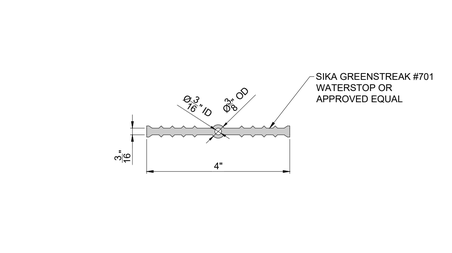


7 S.6.01 FLOOR SLAB CONSTRUCTION JOINT
SCALE: 1"=1'-0"



8 S.6.01 ROOF SLAB CONSTRUCTION JOINT
SCALE: 1"=1'-0"

NOTE:
1. WALL SEALANT GROOVE CONTINUOUS FROM TOP OF FOOTING TO BOTTOM OF ROOF FILLET.



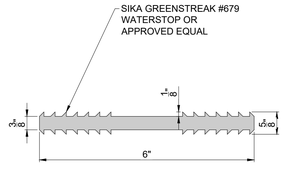
9 S.6.01 VERTICAL WALL CONSTRUCTION JOINT
SCALE: 1"=1'-0"

NOTE:
REINF. NOT SHOWN THIS DETAIL

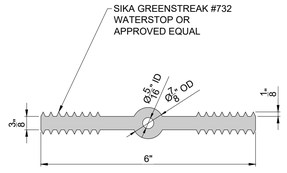
10 S.6.01 STRUCTURAL CONSTRUCTION JOINT
SCALE: 1" = 1'-0"

NOTE:
1. ALL CRACKS IN FLOOR SLABS WALLS & ROOF SLABS SHALL BE REPAIRED PER DETAIL OR AS INSTRUCTED BY THE DISTRICT ENGINEER PRIOR TO FILLING THE RESERVOIR WITH WATER.
2. NON-SHRINK GROUT SHALL HAVE 4,500 PSI STRENGTH.
3. ALL MATERIALS USED FOR CRACK REPAIR SHALL BE NSF 61 CERTIFIED.

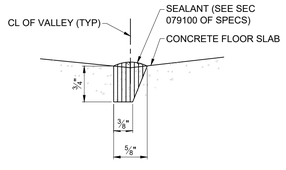
NOTE:
1. AT CONTRACTORS OPTION, SEALANT GROOVES MAY CONTINUE STRAIGHT ACROSS CONSTRUCTION JOINT INTERSECTION OR BE STAGGERED UPON APPROVAL BY THE ENGINEER.
2. NO BOND BREAKER WHERE SEALANT GROOVE IS CONSTRUCTED.



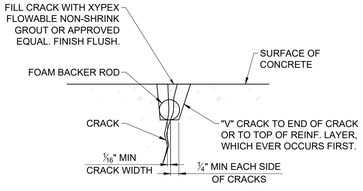
11 S.6.01 6-INCH FLAT STRIP WATERSTOP
SCALE: 6" = 1'-0"



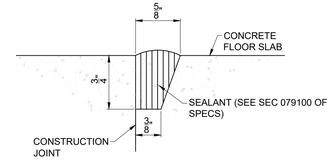
12 S.6.01 6-INCH CENTERBULB WATERSTOP
SCALE: 6" = 1'-0"



13 S.6.01 VALLEY
SCALE: NONE



14 S.6.01 CRACK REPAIR
SCALE: NONE



15 S.6.01 FLOOR SLAB-FORMED SEALANT GROOVE
SCALE: NONE

NOTES:
1. SEALANT GROOVE TO EXTEND FROM TOP OF WALL FOOTING TO BOTTOM OF 6" FILLET, INSIDE WALL CONSTRUCTION JOINTS ONLY.
2. PROVIDE 3/4" CHAMFER IN CONCRETE AROUND PIPE PENETRATION. USE SEALANT ABOVE TO SEAL AROUND PIPE AFTER IT HAS BEEN PAINTED.

16 S.6.01 WALL FORMED SEALENT GROVE (WATER SIDE ONLY)
SCALE: NONE

NOTE:
1. FORM TO BE BEVELED AS SHOWN AT ALL PLACES WHERE HORIZONTAL AND VERTICAL SURFACES INTERSECT WHEN BOTH ARE IN THE SAME POUR.

17 S.6.01 FORM BEVEL
SCALE: NONE

18 S.6.01 SEALANT FILLET
SCALE: NONE

19 S.6.01 4-INCH CENTERBULB WATERSTOP
SCALE: 6" = 1'-0"

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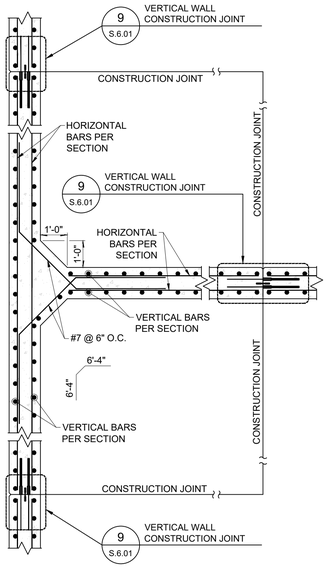
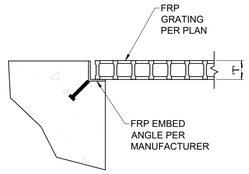
SHEET TITLE
TYPICAL DETAILS I

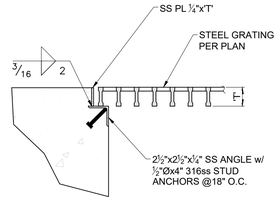
SHEET NUMBER
S.6.01



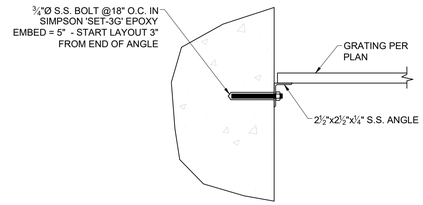
1 S.6.02 TYP WALL INTERSECTION REINF. DETAIL
SCALE: 3/8"=1'-0"



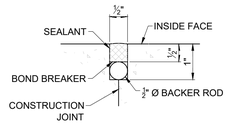
2 S.6.02 FRP GRATING & BEARING DETAIL
SCALE: NONE



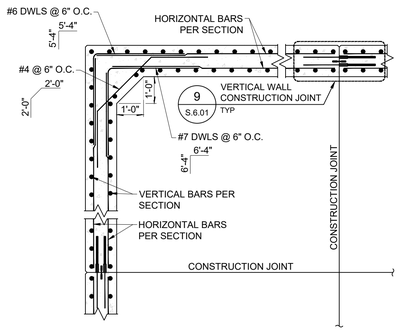
3 S.6.02 GRATING & BEARING DETAIL
SCALE: NONE



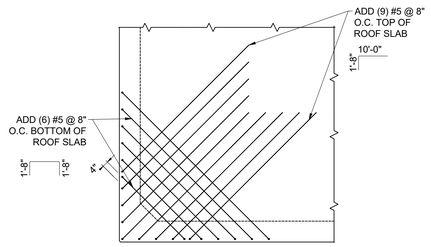
4 S.6.02 BOLTED GRATING BEARING DETAIL
SCALE: NONE



5 S.6.02 DETAIL
SCALE: 6" = 1'-0"

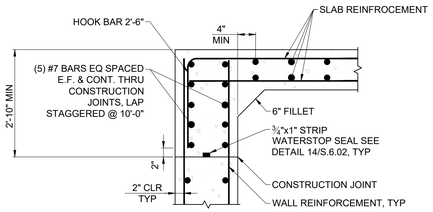


6 S.6.02 WALL CORNER REINF. DETAIL
SCALE: 3/8"=1'-0"

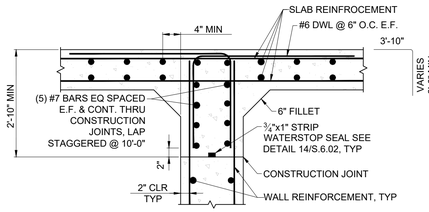


NOTE:
1. PROVIDE ADDITIONAL REINF AT EXTERIOR CORNERS ONLY

7 S.6.02 ROOF SLAB CORNER REINF. DETAIL
SCALE: 1/4"=1'-0"

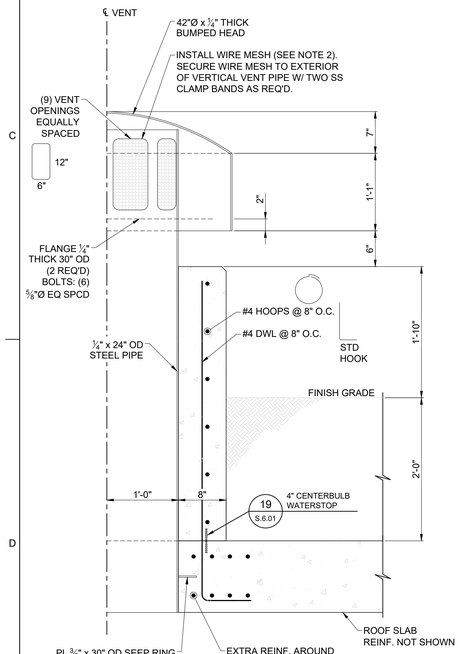


8 S.6.02 EDGE BEAM
SCALE: 3/4"=1'-0"



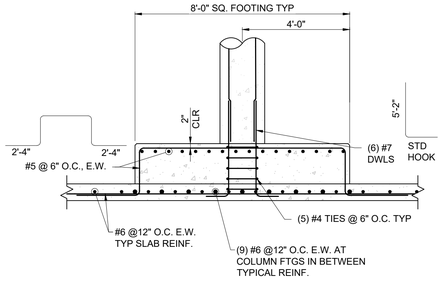
9 S.6.02 INTERIOR BEAM
SCALE: 3/4"=1'-0"

NOTE:
1. ALL STEEL ELEMENTS OF VENT SHALL BE HOT DIPPED GALVANIZED (INTERIOR AND EXTERIOR) AFTER FABRICATION EXCEPT WIRE MESH SCREEN AND CLAMP BANDS.
2. WIRE MESH FOR VENT TO BE TWO LAYERS OF STAINLESS STEEL: #4 OVER #14.
3. REFER TO ROOF PLAN FOR VENT LOCATIONS.

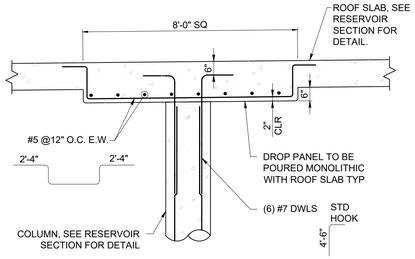


10 S.6.02 VENT PIPE DETAIL
SCALE: 1"=1'-0"

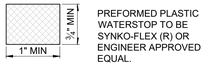
NOT USED



12 S.6.02 COLUMN FDN DETAIL
SCALE: 3/8"=1'-0"

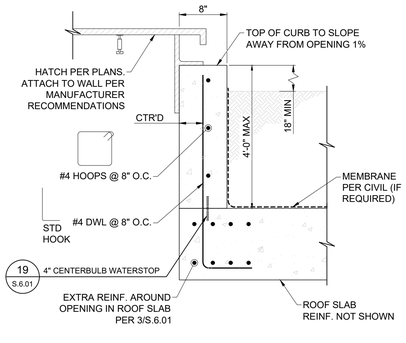


13 S.6.02 DROP PANEL DETAIL
SCALE: 3/8"=1'-0"



PREFORMED PLASTIC WATERSTOP TO BE SYNKO-FLEX (R) OR ENGINEER APPROVED EQUAL.

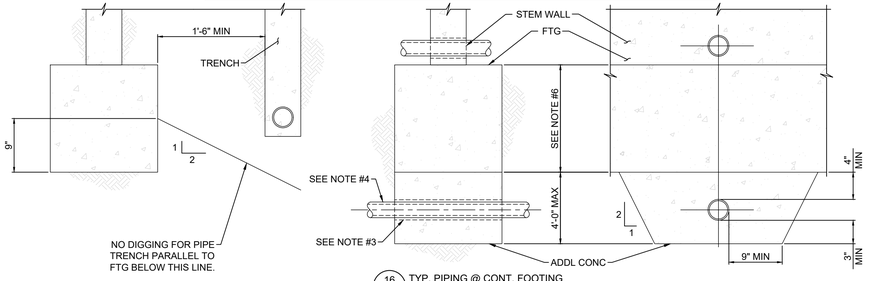
14 S.6.02 STRIP WATERSTOP
SCALE: 6" = 1'-0"



11 S.6.02 PERIMETER DRAIN DETAIL
SCALE: 1/2"=1'-0"

15 S.6.02 HATCH CURB WALL DETAIL AT RESERVOIR
SCALE: 1"=1'-0"

NOTES:
1. WHERE PIPES ARE MORE THAN 4'-0" BELOW BOTTOM OF FOOTING, NO SPECIAL DETAILING IS REQUIRED.
2. PIPES SHALL NOT PASS UNDERNEATH GRADE BEAMS OR COLUMN FOOTINGS.
3. EMBED PIPE IN ABS SLEEVE WITH 1" CLR ALL AROUND OR IN 1" FOAM RUBBER WRAP.
4. MAXIMUM PIPE SIZE IS 10" DIAMETER. LARGER SIZES MUST BE APPROVED BY THE ENGINEER.
5. SEE CIVIL & MECHANICAL DRAWINGS FOR LOCATION & SIZE OF PIPES.
6. FOOTING THICKNESS - NO PIPES SHALL BE PLACED WITHIN THIS HEIGHT.



16 S.6.02 TYP. PIPING @ CONT. FOOTING
SCALE: 1"=1'-0"

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SHEET TITLE
TYPICAL DETAILS II

SHEET NUMBER
S.6.02

GENERAL REQUIREMENTS:

Comply with the requirements of all required building codes, including, but not limited to the National Electrical Code, International Building Code, International Energy Conservation Code, Local Codes, and NECA.
Provide and pay for all required permits. Bidders shall view the site and shall include all costs incurred by existing conditions in the bid proposal.

Materials other than those specified may be accepted providing a written request is submitted to the engineer at this least 10 working days prior to bid opening.
Approved products will be listed in the addendum.
All equipment shall be new and contain the manufacturer's name, model number and electrical characteristics.
All equipment shall be UL listed for it's intended use and/or approved by the authority having jurisdiction.
Provide native electronic PDF format, bound, bookmarked (each section and product), and highlighted.
Job name and subcontractor shall be on the front cover. Prepare an index of equipment submitted in each tab.
Electronic submittals shall be submitted to the engineer within 21 days of award on the contract, unless otherwise directed by engineer.

SUBMITTALS:

Submittals shall include all electrical material provided as it related to this project and shall specifically include but is not limited to: wiring devices, raceways, Surface Raceways, floorboxes, lighting fixtures, lighting controls, panels and breakers, disconnects, telephone/data structured cabling systems, fire alarm systems, access controls system, intrusion detection system, and lightning protection systems.

Provide as-built drawings to engineer before application for final payment.

INSTALLATION REQUIREMENTS:

Electrical plans are diagrammatic. Verify exact equipment locations for all equipment. Coordinate with all other division drawings and existing conditions to avoid conflicts. All work shall be installed in a neat, inconspicuous, workmanlike manner. Conduit runs shall be parallel and perpendicular to structural lines where exposed. Outlet boxes, fixtures and equipment shall be securely mounted and supported. The site shall be left clean and free of dirt and debris. Panels, fixtures, outlets and equipment shall be left clean and free of foreign materials and dirt.

Panels, switches, and all controls shall be clearly and permanently labeled with laminated engraved labels. Where changes are made in existing panels, distribution centers, etc., the labeling and schedules shall be accurately corrected to reflect the changes. New typed panel schedules shall be provided for all existing panelboards that have changes.

Receptacles and light switch cover plates shall be labeled with a permanent adhesive typed label indicating the panel and circuit number.

All wiring shall be installed in raceways except where otherwise specifically shown on the Drawings.

SAFETY:

The Engineer has not been retained or compensated to provide construction review related to the Contractor 's safety precautions or to means, methods, sequences, or procedures required for the contractor to complete the work.

GUARANTEE:

Guarantee the electrical installation against all defects in materials, equipment and workmanship, for one year after the date of acceptance of the work. Defects shall be promptly remedied to the satisfaction of the Engineer at no cost to the Owner. All equipment and products shall carry a minimum 1 year warranty from the date of final acceptance by the Owner.

MATERIALS AND METHODS:

Provide RMC in 3/4" minimum size unless noted otherwise. Metallic Liquidtight Flexible conduit may be used for up to the last 24" of raceway when connection has potential of movement, vibration, or shifting. Buried conduit in earth shall be schedule 40 PVC not concrete encased. Any exposed conduit shall be RMC.
Raceway shall not be installed directly on vault surface. Shall use galvanized strut structure or malleable iron conduit clamp with clampback/spacer.
RMC connectors to be steel, zinc or cadmium coated, factory pre-insulated. Conduit bushings to be heavy duty, insulated.

Wire shall be stranded copper THHN/THWN-2. Unless otherwise shown on the Drawings, copper #12 is the minimum size for lighting and power use. Size wire as indicated on the drawings, or appropriate to carry the entire load per the NEC.
All cables shall be labeled with naming shown in drawings.
Provide a green equipment grounding conductor in each power conduit.
Provide dedicated neutral wiring for all branch circuits, common (shared) neutral wiring is not permitted. For branch circuiting longer than 100 feet, increase wire size by one size to control voltage drop. All wiring shall be color coded with solid coloring or for sizes above #6 may have colored tape bands at all accessible locations and ends, color coding shall be as follows:
Phase A - Black; Neutral A - White
Phase B - Red; Neutral B - White
Ground - Green

WIRING DEVICES:

Install wiring devices to the following heights (heights to center of device) unless noted otherwise on the drawings.
Switch - Height shall be just below entrance hatch.
Standard Receptacle - 48"
Simplex to be 20 ampere specification grade with metallic weatherproof inuse cover.
Duplex receptacles to be 20 ampere GFCI specification grade with metallic weatherproof cover.

Nylon faceplates not allowed. Shall be steel or industrial grade faceplates.
All devices shall be heavy duty, back wired only, suitable for stranded wire. stranded wire shall not be wrapped around device screws. compression lugs may be used when necessary.
All conduit bodies and boxes for wiring devices shall be cast malleable iron. boxes are type FS or FD.

EQUIPMENT CONNECTIONS:

Connect each item of mechanical or other types of equipment shown on the Drawings, providing all power requirements. Verify equipment electrical requirements prior to roughing-in and ordering equipment.
Furnish all code required disconnects under this work, whether specifically shown or not.
Control devices and control wiring will be furnished and installed under other work unless specifically called for on the electrical drawings.

LIGHTING FIXTURES:

All lighting shall be LED.
Fixtures shall be adequately supported with a safety factor of four. Fixtures shall be stabilized or locked into place to resist seismic forces. Fixtures shall all be clean and in proper operation at the time of acceptance of the work.

SCADA:

Contractor shall coordinate with APCO for the SCADA equipment and programming. Contact is listed on this sheet. Refer to Specification 262721 for additional information and requirements.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
A5 / E-501	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
A5 / E-201	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
A5 / E-201	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
1	KEYNOTE INDICATOR.
1	REVISION INDICATOR.
	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING
	BREAK, ROUND
	NEW LINE: MEDIUM LINE.
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE
	EXISTING TO REMAIN LINE: THIN LINE.
	DEMOLITION LINE: DASHED, MEDIUM LINE
	PROPERTY LINE: DASHED, WIDE LINE.
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
WIRING METHODS	
	WIRING.
A-1	SINGLE BRANCH CIRCUIT HOME RUN TO PANELBOARD WITH DEDICATED NEUTRAL CONDUCTOR. LETTER AND NUMBER NOTATION IDENTIFY PANEL AND CIRCUIT NUMBER.
	LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE.
	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.
1	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.
	JUNCTION BOX.
PB	PULL BOX.
	GROUND BUSBAR. REFER TO GROUNDING RISER DIAGRAM FOR ADDITIONAL INFORMATION.
WIRING DEVICES	
WP	SINGLE RECEPTACLE, GFCI, WEATHERPROOF: NEMA 5-20R.
WP	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.
TS	THERMOSTAT.
X $	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).
$ST	TOGGLE SWITCH WITH THERMAL OVERLOAD.
$HOA	SWITCH, HAND/OFF/AUTO.
LIGHTING (REFER TO FIXTURE SCHEDULE FOR SYMBOLS)	
	LIGHT FIXTURE. PROPERTIES AS NOTED ON PLANS.
SENSORS	
PTW	PRESSURE TRANSDUCER WEST
PTE	PRESSURE TRANSDUCER EAST
CI	CONTACT INDICATOR
FM	UTILITY FLOW METER
FCV	FLOW CONTROL VALVE
WL	WATER LEVEL FLOAT
TS	TEMPERATURE SENSOR
ELECTRICAL POWER AND DISTRIBUTION	
	TRANSFORMER (ONE-LINE DIAGRAM).
225/3 "1H"	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
225/3 "1H" 60/3	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER (ONE-LINE DIAGRAM).

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
ELECTRICAL POWER AND DISTRIBUTION	
	EARTH GROUND (ONE-LINE DIAGRAM).
	SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRAM).
	DISCONNECT SWITCH, FUSED.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

1P	SINGLE POLE
1PH	SINGLE-PHASE
1WAY	ONE-WAY
2/C	TWO-CONDUCTOR
2WAY	TWO-WAY
3/C	THREE-CONDUCTOR
3WAY	THREE-WAY
4OUT	QUADRUPLE RECEPTACLE OUTLET
4PDT	FOUR-POLE DOUBLE THROW
4PST	FOUR-POLE SINGLE THROW
4W	FOUR-WIRE
4WAY	FOUR-WAY
A	ABOVE COUNTER
AC	ARMORED CABLE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ALUM	ALUMINUM
AMP	AMPERE
ANN	ANNUNCIATOR
AP	ACCESS POINT (WIRELESS DATA)
AR	AS REQUIRED
ASC	AMPS SHORT CIRCUIT
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAGE
BB XFMR	BUCK-BOOST TRANSFORMER
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
C	CEILING MOUNTED
CAT	CATEGORY
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT
CCTV	CLOSED CIRCUIT TELEVISION
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CFBA	CUSTOM FINISH AS SELECTED BY ARCHITECT
CKT	CIRCUIT
CM	CONSTRUCTION MANAGER
CND	CONDUIT
CO	CONVENIENCE OUTLET
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
dBA	UNIT OF SOUND LEVEL
DPDT	DOUBLE POLE, DOUBLE THROW
DS	DISCONNECT SWITCH
E	ENHANCED
EA	EACH
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRIC NONMETALLIC TUBING
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
ER	EQUIPMENT ROOM
EX	EXISTING
F	FURNITURE MOUNTED
FA	FIRE ALARM
FCP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT
FOB	FREIGHT ON BOARD
FPP	FIBER PATCH PANEL
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GEN	GENERATOR
GFCI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GIG	GIGA HERTZ
GND	GROUND
HD	HEAVY DUTY
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HWM	HORIZONTAL WIRE MANAGEMENT
HZ	HERTZ
I/O	INPUT/ OUTPUT
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IN/IS	INSULATED/ ISOLATED
IR	INFRARED
J-BOX	JUNCTION BOX
kV	KILOVOLT
kVA	KILOVOLT AMPERE
kVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWh	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MC	METAL CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MDP	MAIN DISTRIBUTION PANEL
MG	MOTOR GENERATOR
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTS	MANUAL TRANSFER SWITCH
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFC	NATIONAL FIRE CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OCP	OVER CURRENT PROTECTION
OE	OWNER ELECTRONICS
OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/ OWNER INSTALLED
OFP	OBTAIN FROM PLANS
OH DR	OVERHEAD (COILING) DOOR
OL	OVERLOAD
PB	PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PNM	PLENUM
PR	PAIR
PS	POWER SUPPLY
PT	POTENTIAL TRANSFORMER
PTZ	PAN/TILT/ZOOM
QTY	QUANTITY
R	REMOVE
RCP	REFLECTED CEILING PLAN
RMC	RIGID METAL CONDUIT
RNC	RIGID NONMETAL CONDUIT
RPM	REVOLUTIONS PER MINUTE
RPP	RISER PATCH PANEL
RR	REMOVE AND RELOCATE
S/S	START/STOP
SCA	SHORT CIRCUIT AMPS
SCBA	STANDARD COLOR AS SELECTED BY ARCHITECT
SF	SQUARE FOOT (FEET)
SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
SPD	SURGE PROTECTIVE DEVICE
SPDT	SINGLE POLE, DOUBLE THROW
SPEC	SPECIFICATION
SPP	STATION PATCH PANEL
SPST	SINGLE POLE, SINGLE THROW
ST	SINGLE THROW
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TL	TWIST LOCK
TP	TELEPHONE POLE
TP	TWISTED PAIR
TR	TELECOMMMUNICATIONS ROOM
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UF	UNDERFLOOR
UGND	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPERE
VFC/VFD	VARIABLE FREQUENCY MOTOR CONTROLLER
VWM	VERTICAL WIRE MANAGEMENT
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
WPP	WIRELESS PATCH PANEL
XFMR	TRANSFORMER

GENERAL ELECTRICAL NOTES

1 ALL WORK SHALL BE DONE ACCORDING TO ALL APPLICABLE CODES AS LISTED ON COVER SHEET. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE AHJ.

2 ALL ELECTRICAL EQUIPMENT AND SUPPLIES SHALL BE LISTED AND LABELED FOR ITS INTENDED USE.

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

ELECTRICAL SHEET INDEX

E.0.1	ELECTRICAL COVER SHEET
E.3.0	ELECTRICAL DEMOLITION SITE PLAN
E.3.1	ELECTRICAL OVERALL SITE PLAN
E.3.2	NEW BYPASS VAULT ELECTRICAL PLAN
E.3.3	NEW WATER INLET/OUTLET VALVE VAULT ELECTRICAL PLAN
E.3.4	DETAILS
E.3.5	GROUNDING DETAILS
E.3.6	VAULT DETAILS
E.3.7	ELECTRICAL DIAGRAMS AND SCHEDULES
E.3.8	SCADA CABLING RISER
E.3.9	SCADA PANEL LAYOUTS

SITE COORDINATION

THE LOCATION, CAPACITY, AND VOLTAGE OF THE LINES ARE ALL IN ACCORDANCE WITH DATA GIVEN THIS OFFICE BY THE UTILITY COMPANY. COORDINATE WITH THE LOCAL UTILITY COMPANY FOR THE INSTALLATION OF THE ELECTRICAL SERVICE. COMPLY WITH UTILITY REGULATIONS. REPORT DISCREPANCIES TO THE ENGINEER.

ELECTRIC UTILITY

ROCKY MOUNTAIN POWER
W.O. #7155940

PERSON CONTACTED: BRENT BEDKE
DATE: 12-5-2023
PHONE NUMBER: (801) 576-6149
EMAIL: brent.bedke@rockymountianpower.net

CONTROLS INTEGRATOR

APCO

PERSON CONTACTED: STEVE ANDERSON
DATE: 11-17-2023
PHONE NUMBER: (801) 330-6504
EMAIL: steve.anderson@apco-inc.com

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WARNING
0 1 2
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LICENSED PROFESSIONAL ENGINEER
No. 5497590-2202
Christopher Henry Kawashi
STATE OF UTAH

08/28/2025

PROJECT TITLE

THE POINT 3MG RESERVOIR

DRAPER, UTAH

ISSUE TYPE:	CD
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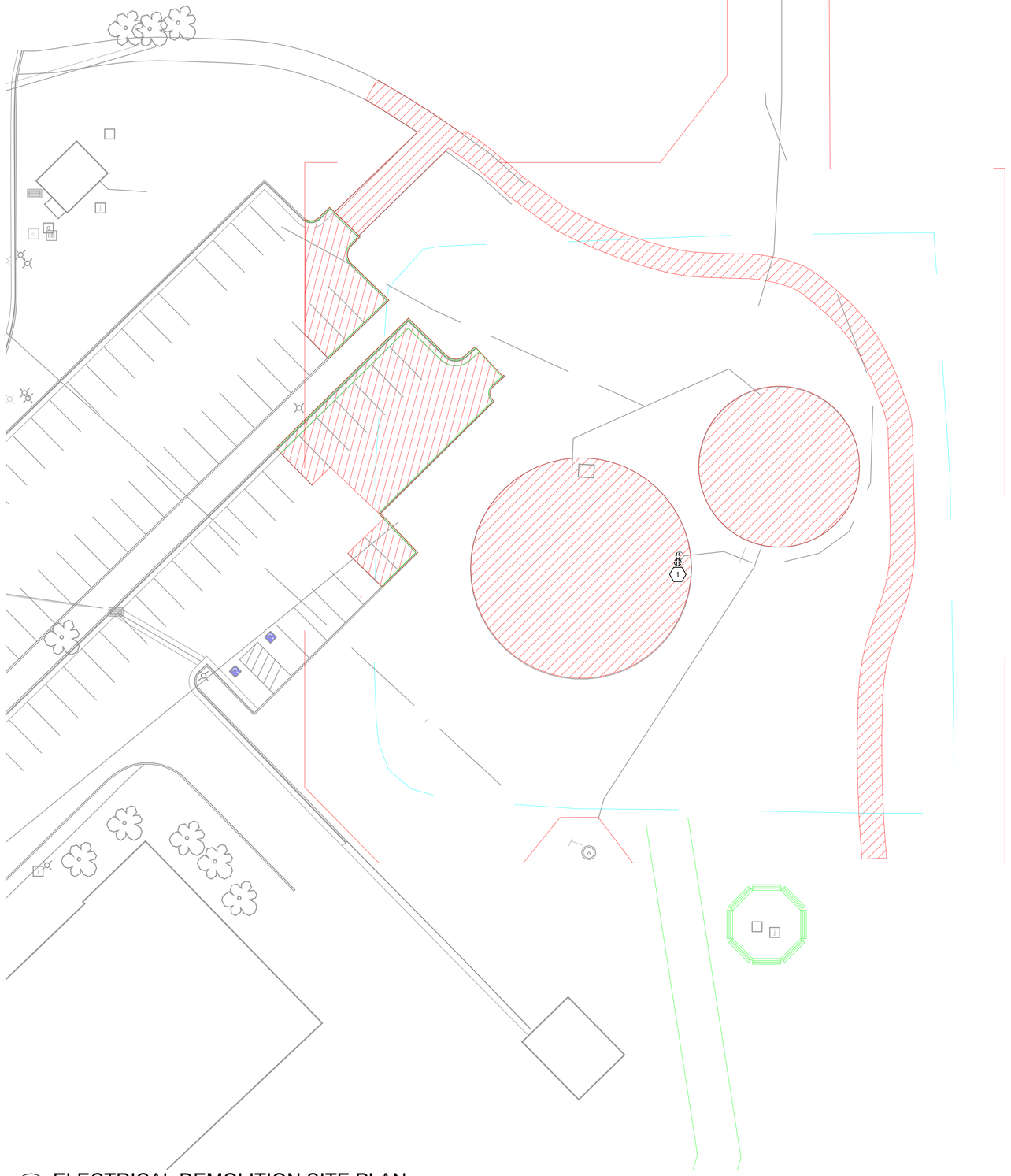
ELECTRICAL COVER SHEET

SHEET NUMBER

E.0.1

PAGE



D2 ELECTRICAL DEMOLITION SITE PLAN
SCALE: 1" = 20'-0"

0 10' 20' 40'

GENERAL SHEET NOTES

1 EXACT ROUTING OF CONDUIT IS UNKNOWN. LINES SHOWN ARE BASED ON DRAWINGS PROVIDED BY OTHERS. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY ALL LOCATIONS AND LENGTHS, WITH MODIFICATION AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.

2 ALL UTILITIES SHALL BE POTHOLED WITH VACUUM TRUCK EXCAVATION METHOD IN AREA OF UNDERGROUND WORK PROIR TO EXCAVATION TO LOCATE UTILITIES. CONTRACTOR SHALL REPAIR ANY DAMAGED UTLITIES AT NO ADDITIONAL COST TO OWNER.

3 ALL TRENCHING AND EXCAVATED SOIL SHALL BE HAULED OFF-SITE AND DISPOSED OF. NEW ENGINEERED BACKFILL SHALL BE PROVIDED ALONG WITH TOP SOIL PER CIVIL REQUIREMENTS.

4 COORDINATE ALL LOCATIONS, SIZES, DEPTHS, ECT. OF ALL STRUCTURAL FOUNDATIONS, FOOTINGS, WALLS ECT. WITH STRUCTURAL INSTALLER PRIOR TO ROUGH-IN/TRENCHING.

5 COORDINATE ALL ROUGH-IN AND STUB UP REQUIREMENTS WITH APPROVED SHOP EQUIPMENT SUBMITTALS PRIOR TO ROUGH-IN.

6 CONTRACTOR SHALL ADJUST DEPTH OF RACEWAYS DEEPER AS NECESSARY TO AVOID CONFLICTS WITH OTHER UTILITIES AND MAINTAIN A SEPARATION OF NO LESS THAN 1 FOOT FROM ALL OTHER UTILITIES CROSSINGS UNLESS NOTED OTHERWISE.

7 CONTRACTOR SHALL UPSIZE BRANCH CIRCUITS AND FEEDERS FOR VOLTAGE DROP BASED ON ACTUAL INSTALLED LENGTHS. BRANCH CONDUCTORS SHALL BE SIZED AS SPECIFIED ON E3.7.

8 ALL ELECTRICAL GEAR AND EQUIPMENT LOCATED OUTDOOR OR EXPOSED TO WEATHER SHALL BE NEMA 4X RATED UNLESS NOTED OTHERWISE

9 REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.

SHEET KEYNOTES

1 REMOVE EXISTING RECEPTACLE AND WIREWAY, INCLUDING BRANCH CIRCUIT CONDUIT AND ALL CONDUCTORS BACK TO SOURCE.

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ELECTRICAL DEMOLITION SITE PLAN

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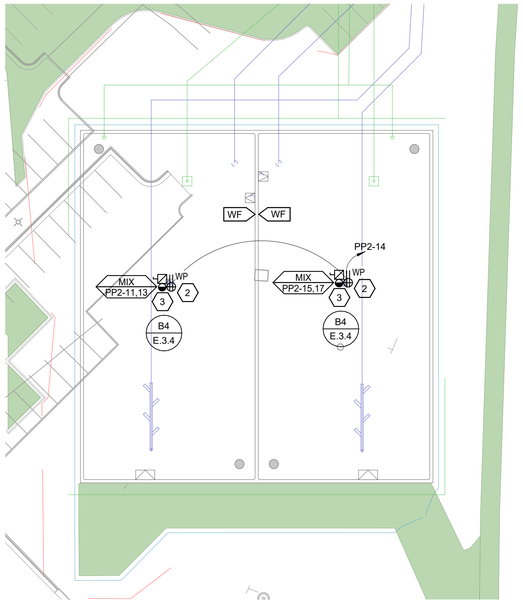
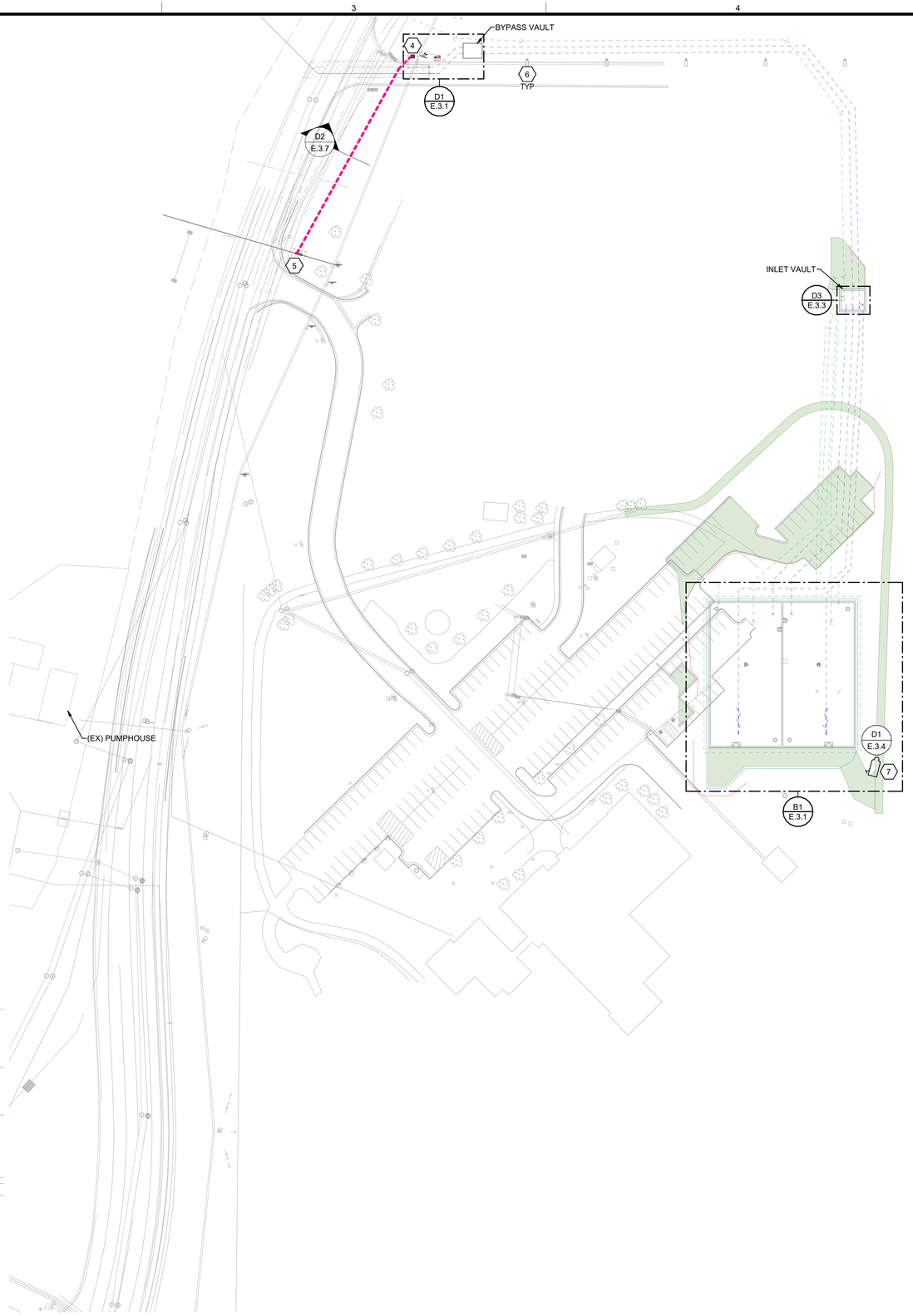
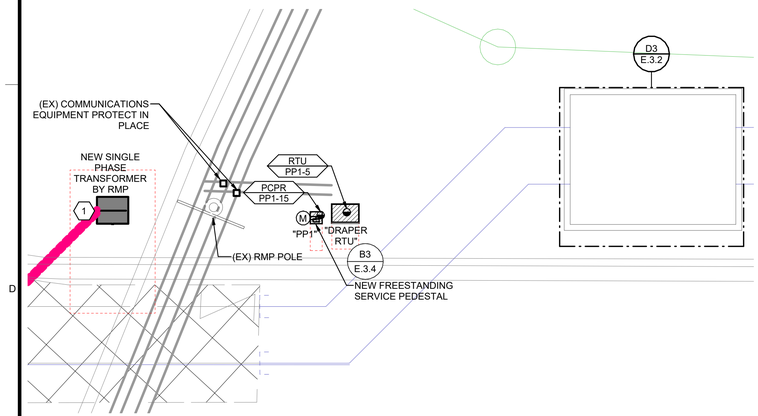


B1 ELECTRICAL TANK SITE PLAN

SCALE: 1" = 30'-0"

0 15' 30' 60'





D1 ENLARGED SERVICE PEDESTAL SITE PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

D3 ELECTRICAL OVERALL SITE PLAN

SCALE: 1" = 60'-0"

0 30' 60' 120'

GENERAL SHEET NOTES

1. EXACT ROUTING OF CONDUIT IS UNKNOWN. LINES SHOWN ARE BASED ON DRAWINGS PROVIDED BY OTHERS. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY ALL LOCATIONS AND LENGTHS, WITH MODIFICATION AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
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3. ALL TRENCHING AND EXCAVATED SOIL SHALL BE HAULED OFF-SITE AND DISPOSED OF. NEW ENGINEERED BACKFILL SHALL BE PROVIDED ALONG WITH TOP SOIL PER CIVIL REQUIREMENTS.
4. COORDINATE ALL LOCATIONS, SIZES, DEPTHS, ECT. OF ALL STRUCTURAL FOUNDATIONS, FOOTINGS, WALLS ECT. WITH STRUCTURAL INSTALLER PRIOR TO ROUGH-IN/TRENCHING.
5. COORDINATE ALL ROUGH-IN AND STUB UP REQUIREMENTS WITH APPROVED SHOP EQUIPMENT SUBMITTALS PRIOR TO ROUGH-IN.
6. CONTRACTOR SHALL ADJUST DEPTH OF RACEWAYS DEEPER AS NECESSARY TO AVOID CONFLICTS WITH OTHER UTILITIES AND MAINTAIN A SEPARATION OF NO LESS THAN 1 FOOT FROM ALL OTHER UTILITIES CROSSINGS UNLESS NOTED OTHERWISE.
7. CONTRACTOR SHALL UPSIZE BRANCH CIRCUITS AND FEEDERS FOR VOLTAGE DROP BASED ON ACTUAL INSTALLED LENGTHS. BRANCH CONDUCTORS SHALL BE SIZED AS SPECIFIED ON E3.7.
8. ALL ELECTRICAL GEAR AND EQUIPMENT LOCATED OUTDOOR OR EXPOSED TO WEATHER SHALL BE NEMA 4X RATED UNLESS NOTED OTHERWISE
9. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.

SHEET KEYNOTES

1. PROVIDE FIBERGLASS PAD FOR NEW TRANSFORMER, RMP STOCK #1720600.
2. LOCATE RECEPTACLE 6" ABOVE FINISHED GRADE ON TOP OF THE TANK.
3. LOCATE A CONDUIT PENETRATION THROUGH THE LID OF THE TANK TO A SURFACE MOUNTED JUNCTION BOX FOR POWER CONNECTION TO THE SUBMERSIBLE TANK MIXER NEAR THE ACCESS HATCH. COORDINATE THE EXACT LOCATION WITH THE TANK FABRICATOR. PROVIDE A STRAIN RELIEF/CABLE SUPPORT GRIP FOR THE CORD SECURED TO THE TOP OF THE TANK, COMPRESSION SLING TYPE, EQUAL TO HUBBELL KELLEMS GRIP.
4. INTERCEPT EXISTING 3" CONDUIT ROUTED FROM POLE #127401 EXTENDING TO TRANSFORMER #127480 AND ROUTE TO NEW SINGLE PHASE JUNCTION/ SECTIONALIZING CABINET.
5. PROVIDE FIBERGLASS PAD FOR NEW SINGLE PHASE SECTIONALIZING CABINET, RMP STOCK #1720620.
6. EXISTING STREET LIGHT. PROTECT POLE AND UNDERGROUND BRANCH CIRCUITING DURING CONSTRUCTION.
7. PROVIDE POLE MOUNTED SECURITY CAMERA EQUAL TO (AXIS P3268-LVE) OR APPROVED EQUAL.

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ELECTRICAL OVERALL SITE PLAN

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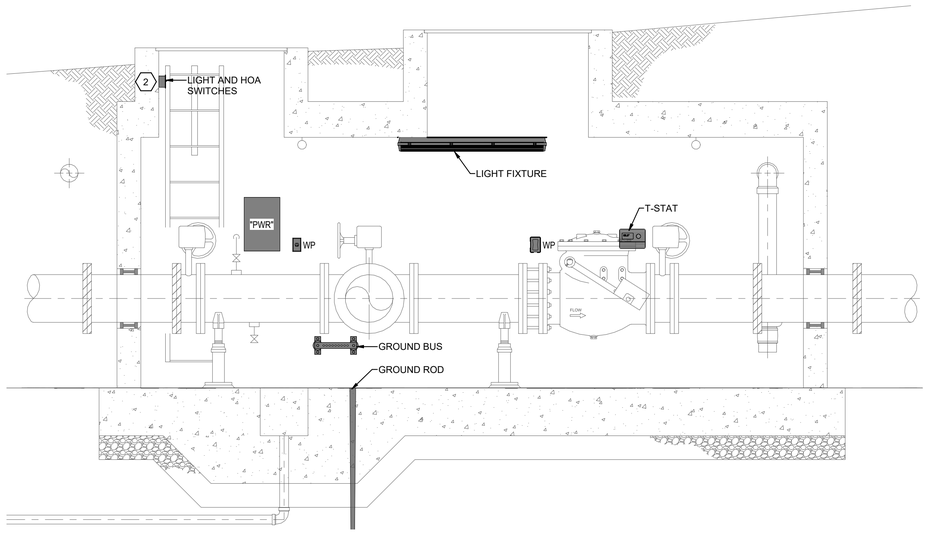
PAGE

GENERAL SHEET NOTES

1. INDICATED LOCATION OF MECHANICAL EQUIPMENT IS APPROXIMATE. COORDINATE EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
2. CONTRACTOR SHALL COORDINATE ELECTRICAL NEEDS WITH APPROVED SUBMITTALS FOR ALL MECHANICAL EQUIPMENT, STRUCTURE EQUIPMENT, METER/SENSOR EQUIPMENT, OWNER SUPPLIED EQUIPMENT, ETC. PRIOR TO ROUGH-IN AND RELEASE OF ASSOCIATED ELECTRICAL EQUIPMENT.
3. ALL VAULT PENETRATIONS SHALL BE SEALED AND GROUTED.
4. CONDUIT TO ALL PIPE MOUNTED ELECTRICAL ITEMS SHALL END WITH FLEXIBLE NON-METALLIC CONDUIT NOT TO EXCEED 3' IN LENGTH.

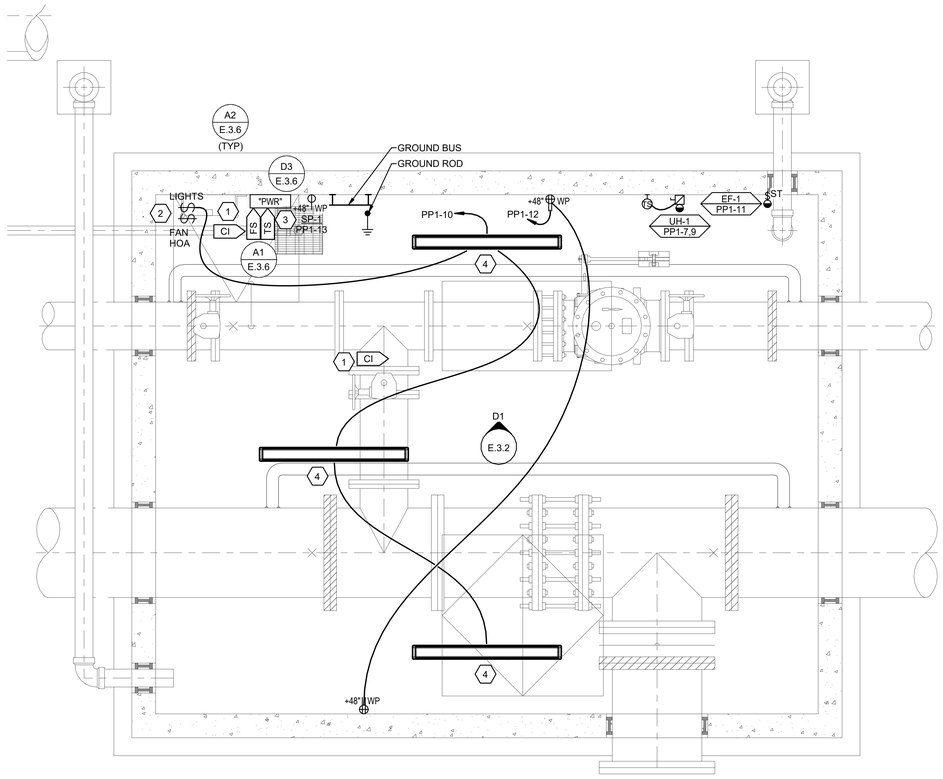
SHEET KEYNOTES

1. CONTRACTOR SHALL PROVIDE IP67 MICROSWITCH SENSOR WITH STEEL AUXILIARY ACTUATOR AND SIMULATED ROLLER FOR HATCH CONTACT INDICATOR. COORDINATE DEVICE AND INSTALLATION WITH OWNER AND ACCESS HATCH PROVIDED.
2. CONTRACTOR SHALL PROVIDE HOA SWITCH SQUARE D KS42BH2 WITH "HAND-OFF-AUTO" LEGEND PLATE IN HOFFMAN Q1PBPCD ENCLOSURE FOR EXHAUST FAN CONTROL. SWITCH SHALL BE ACCESSIBLE FROM OUTSIDE OF THE HATCH.
3. NEMA 4X NON-METALLIC 24"X18"X6" JUNCTION BOX ENCLOSURE WITH CONTINUAL HINGE ON THE SIDE. PROVIDE TERMINAL BLOCKS AND GROUND BAR ON THE INSIDE FOR TERMINATIONS. SEE ASSOCIATED DETAIL.
4. CONTRACTOR SHALL PROVIDE LITHONIA FEM-L48-4000LM-LPPFL-MD-MVOLT-GZ10-40K-80CRI-BSLS20-WLFEND OR EQUAL. COORDINATE FINAL LOCATION WITH OWNER.



D1 NEW BYPASS VAULT ELEVATION
SCALE: 1/2" = 1'-0"

0 1' 2' 4'



D3 NEW BYPASS VAULT ELECTRICAL PLAN
SCALE: 1/2" = 1'-0"

0 1' 2' 4'

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LICENSED PROFESSIONAL ENGINEER
No. 5497590-2202
Christopher Michael Kawashi
STATE OF UTAH
08/28/2025

PROJECT TITLE
THE POINT 3MG RESERVOIR
DRAPER, UTAH

ISSUE TYPE:	CD
ISSUE DATE:	08/28/2025
DFCM PROJ No.	22427100
DRAWN BY:	WRT
CHK'D BY:	MCC
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SHEET TITLE
NEW BYPASS VAULT ELECTRICAL PLAN

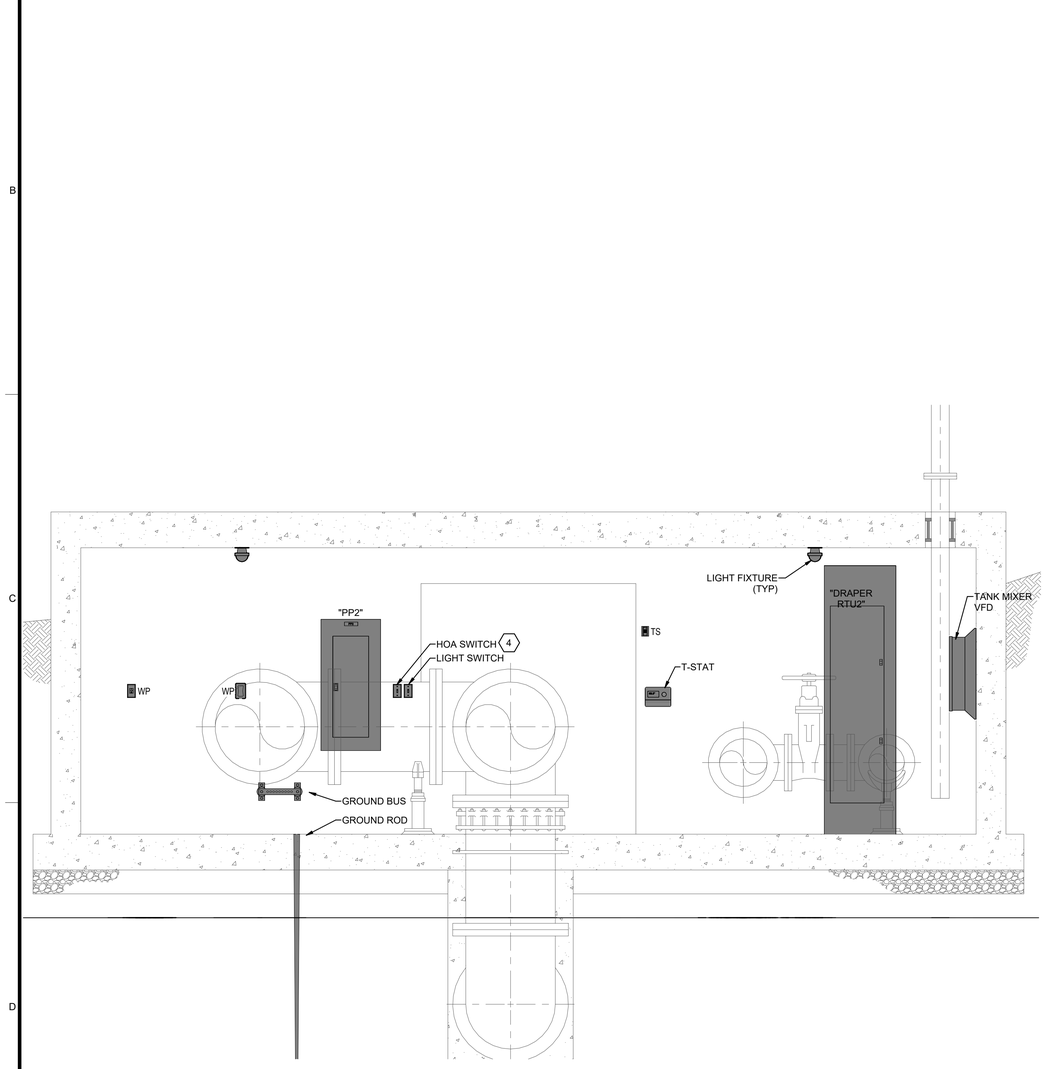
SHEET NUMBER
E.3.2
PAGE

GENERAL SHEET NOTES

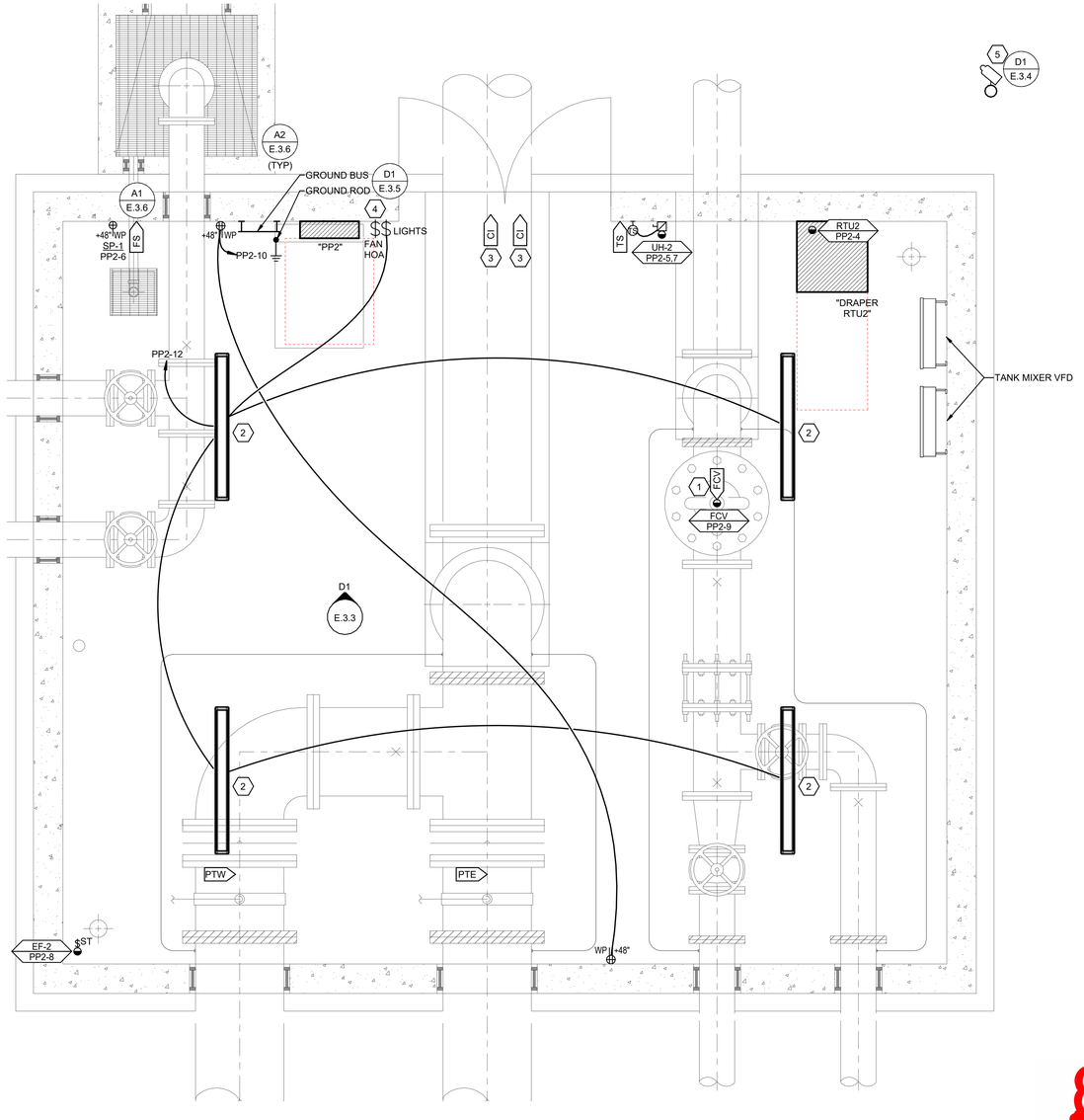
1. INDICATED LOCATION OF MECHANICAL EQUIPMENT IS APPROXIMATE. COORDINATE EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
2. CONTRACTOR SHALL COORDINATE ELECTRICAL NEEDS WITH APPROVED SUBMITTALS FOR ALL MECHANICAL EQUIPMENT, STRUCTURE EQUIPMENT, METER/SENSOR EQUIPMENT, OWNER SUPPLIED EQUIPMENT, ETC. PRIOR TO ROUGH-IN AND RELEASE OF ASSOCIATED ELECTRICAL EQUIPMENT.
3. ALL VAULT PENETRATIONS SHALL BE SEALED AND GROUTED.
4. CONDUIT TO ALL PIPE MOUNTED ELECTRICAL ITEMS SHALL END WITH FLEXIBLE NON-METALLIC CONDUIT NOT TO EXCEED 3' IN LENGTH.

SHEET KEYNOTES

1. BUTTERFLY VALVE CONTROL SOLENOID. SEE CIVIL DRAWINGS FOR MORE INFORMATION. ROUTE CONDUIT ON CEILING AND DROP CONNECTION TO DEVICE.
2. CONTRACTOR SHALL PROVIDE LITHONIA FEM-L48-4000LM-LPPFL-MD-MVOLT-GZ10-40K-80CRI-BSLS20-WLFEND OR EQUAL. COORDINATE FINAL LOCATION WITH OWNER.
3. CONTRACTOR SHALL PROVIDE IP67 MICROSWITCH SENSOR WITH STEEL AUXILIARY ACTUATOR AND SIMULATED ROLLER FOR HATCH CONTACT INDICATOR. COORDINATE DEVICE AND INSTALLATION WITH OWNER AND ACCESS HATCH PROVIDED.
4. CONTRACTOR SHALL PROVIDE HOA SWITCH SQUARE D KS42BH2 WITH "HAND-OFF-AUTO" LEGEND PLATE IN HOFFMAN Q1PBPCD ENCLOSURE FOR EXHAUST FAN CONTROL. SWITCH SHALL BE ACCESSIBLE FROM OUTSIDE OF THE HATCH.
5. PROVIDE POLE MOUNTED SECURITY CAMERA EQUAL TO (AXIS P3268-LVE) OR APPROVED EQUAL.



D1 NEW INLET/OUTLET VAULT ELEVATION
SCALE: 1/2" = 1'-0"
0 1' 2' 4'



D3 NEW WATER INLET/OUTLET VALVE VAULT ELECTRICAL FLOOR PLAN
SCALE: 1/2" = 1'-0"
0 1' 2' 4'

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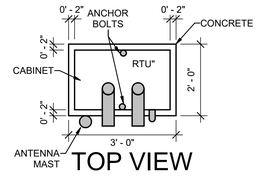
NEW WATER INLET/OUTLET VALVE VAULT ELECTRICAL PLAN

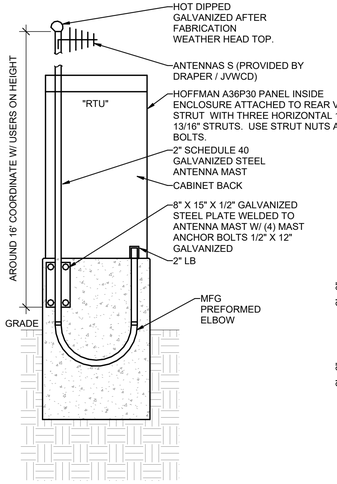
SHEET NUMBER
E.3.3
PAGE

NOTES:

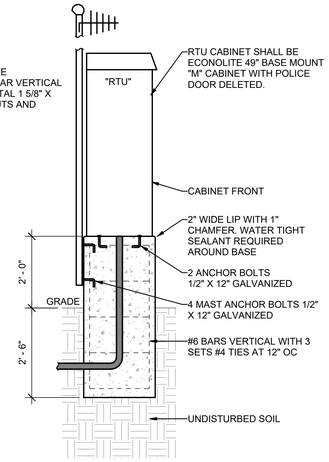
1. CONTRACTOR SHALL PROVIDE CABINET, ANTENNA, INTERNAL COMPONENTS, PROGRAMMING, AND ALL PARTS, PIECES, AND CABLES REQUIRED FOR A FULLY FUNCTIONAL UNIT. THIS ONLY APPLIES TO THE DRAPER RTU.
2. CONTRACTOR SHALL PROVIDE THE ENCLOSURE, BACK PANEL AND ANTENNA MAST, INCLUDING ASSOCIATED MOUNTING HARDWARE, FOR "JVWCD RTU". ALL INTERNAL EQUIPMENT, CABLING AND ANTENNA SHALL BE PROVIDED AND INSTALLED BY JVWCD.



TOP VIEW



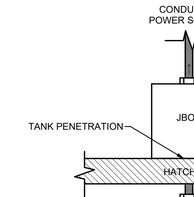
BACK VIEW



SIDE VIEW

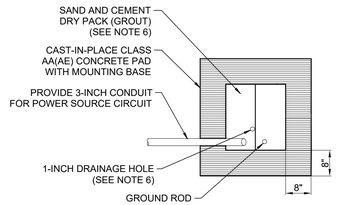
B3 RTU DETAIL

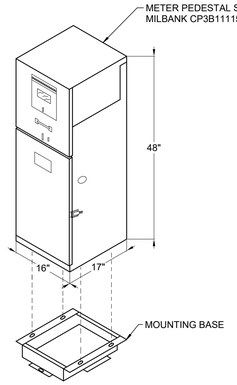
SCALE: NTS



B4 SUBMERSIBLE TANK MIXER DETAIL

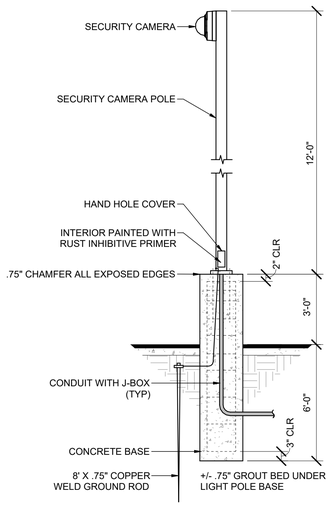
SCALE: NTS





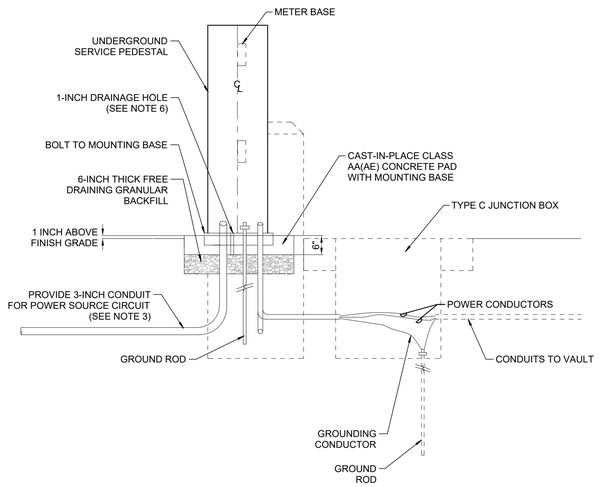
SINGLE METER
UNDERGROUND SERVICE PEDESTAL

(ACTUAL DIMENSIONS MAY VARY, DIMENSIONS FOR INFORMATION ONLY)



D1 SECURITY CAMERA POLE BASE DETAIL

SCALE: NTS



D2 UNDERGROUND SERVICE PEDESTAL

SCALE: NTS

NOTES:

1. LOCATE SERVICE PEDESTAL SO WATER DRAINS AWAY FROM FOUNDATIONS AND JUNCTION BOXES. SITE PREPARATION, INCLUDING GRADING, MAY BE REQUIRED BEFORE PLACING EQUIPMENT.
2. PROVIDE SINGLE-PHASE, 3-WIRE, 200A SERVICE. COORDINATE WITH LOCAL UTILITIES REGARDING SERVICE CONDUCTORS.
3. PROVIDE UNDERGROUND SERVICE PEDESTAL PER STANDARD SPECIFICATION 16530 AND AS SPECIFIED IN THE CONTRACT DOCUMENTS.
4. INSTALL SAND AND CEMENT DRY PACK (GROUT) WITHIN MOUNTING BASEAFTER INSTALLATION OF CONDUITS AND GROUND ROD. PROVIDE 1-INCH DRAINAGE HOLE AT LOW POINT TO ALLOW DRAINAGE FROM TOP OF GROUT.
5. CAST PEDESTAL MOUNTING BASE INTO CONCRETE PEDESTAL PAD.
6. PROVIDE 6 FT MINIMUM LATERAL OFFSET BETWEEN GROUND RODSWITHIN SERVICE PEDESTAL AND TYPE C JUNCTION BOX.
7. SQUARE UP THE SERVICE PEDESTAL, CABINET AND JUNCTION BOX COLLARS. MATCH ELEVATIONS OF JUNCTION BOX COLLARS AND THESERVICE PEDESTAL FOUNDATION TO SIDEWALK. PLACE CONCRETE MONOLITHICALLY WHEN THERE IS LESS THEN A 2-FT GAP BETWEEN ANY PROPOSED CONCRETE.

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DETAILS

SHEET NUMBER

E.3.4

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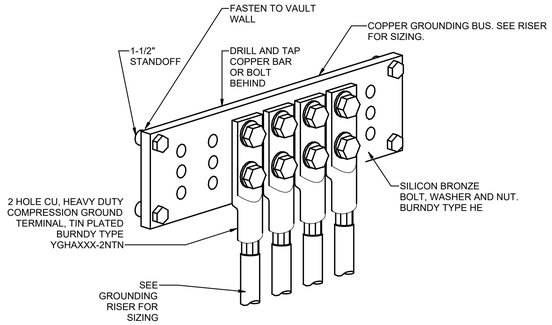
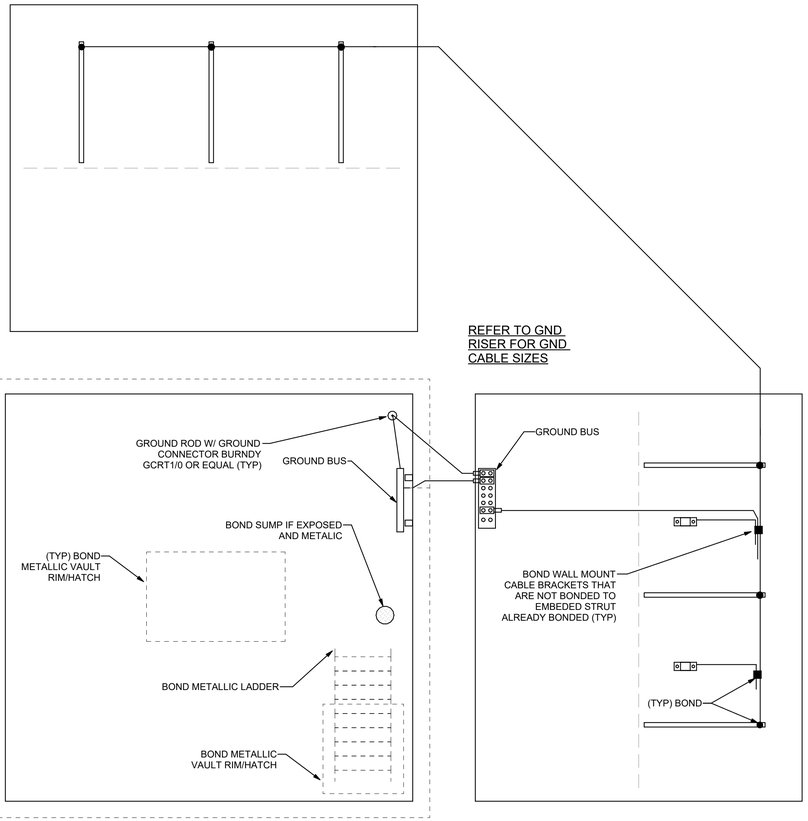


B1 TYPICAL VAULT GROUND BUS DETAIL

SCALE: NTS

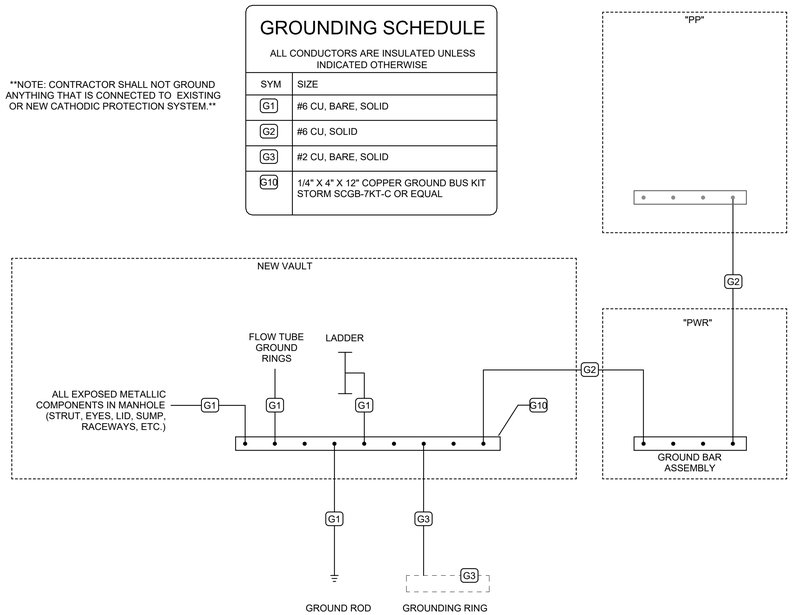


NOTE: CONTRACTOR SHALL NOT GROUND ANYTHING THAT IS CONNECTED TO EXISTING OR NEW CATHODIC PROTECTION SYSTEM.

GROUNDING SCHEDULE

ALL CONDUCTORS ARE INSULATED UNLESS INDICATED OTHERWISE

SYM	SIZE
G1	#6 CU, BARE, SOLID
G2	#6 CU, SOLID
G3	#2 CU, BARE, SOLID
G10	1/4" X 4" X 12" COPPER GROUND BUS KIT STORM SCGB-7KT-C OR EQUAL



D1 TYPICAL VAULT GROUNDING RISER DIAGRAM

SCALE: NTS

D3 TYPICAL VAULT GROUNDING DETAIL - BUTTERFLY VIEW

SCALE: NTS

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LICENSED PROFESSIONAL ENGINEER No. 5497590-2202 Christopher Henry Kawashi STATE OF UTAH

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DRAPER, UTAH

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GROUNDING DETAILS

SHEET NUMBER

E.3.5

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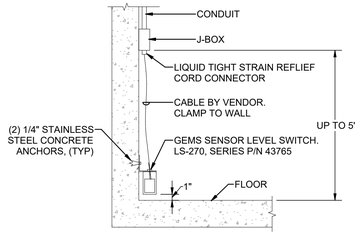
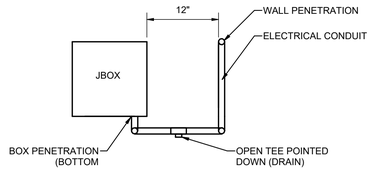


A1 FLOOD SENSOR DETAIL

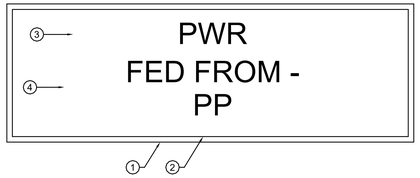
SCALE: NTS



A2 CONDUIT INTO JUNCTION BOX (TYP)

SCALE: NTS

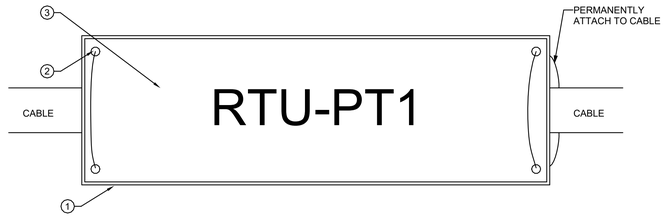
1. LABEL TO BE PROVIDED AT EACH PULLBOX/ENCLOSURE, AND DISCONNECT. LABEL IS TO BE 3" X REQUIRED LENGTH X 1/16" LAMINATED 2-PLY PLASTIC LAMACOID. LETTERS SHALL BE FORMED BY ENGRAVING OUTER WHITE PLY, EXPOSING BLACK PLY BENEATH.
2. LABEL IS TO BE MOUNTED USING DOUBLE SIDED ADHESIVE TAPE COVERING THE BACK OF THE LABEL.
3. FIRST LINE: LETTERING IS TO BE 3/8" HIGH, CENTERED, AND FORMATTED AS SHOWN. REPLACE THE LETTER/NUMBER AS TAGGED ON PLANS/ELEVATION.
4. SECOND/THIRD LINE: LETTERING IS TO BE 3/8" HIGH, CENTERED, AND FORMATTED AS SHOWN. PROVIDE "FED FROM-" AND REPLACE MDP1 WITH THE DEVICES NAME THAT FEEDS THE PANELBOARD.



B2 TYPICAL ENCLOSURE OR PULLBOX LABEL

SCALE: NTS

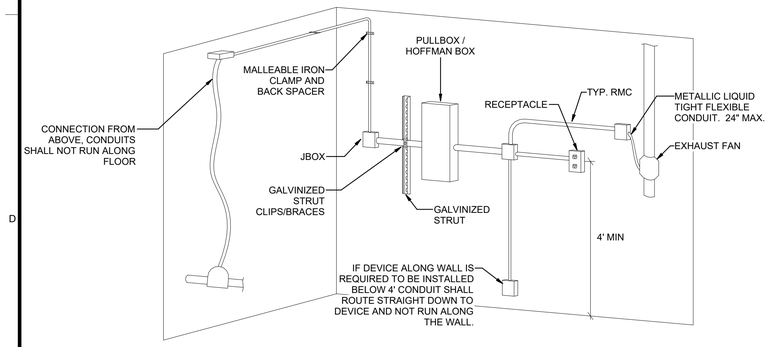
1. CIRCUIT LABELS ARE TO BE PROVIDED FOR EACH CABLE AND ATTACHED TO EACH TERMINATION END. LABEL TO BE 3/4"X2"X1/16" LAMINATED 2-PLY PLASTIC LAMACOID. LETTERS SHALL BE FORMED BY ENGRAVING OUTER RED PLY, EXPOSING WHITE PLY BENEATH. LABELS ARE TO BE PROVIDE IN VAULT IN EACH PULL BOX IT PASSES THROUGH AND AT THE TERMINATION END. LABELS ARE ALSO TO BE PROVIDED IN EACH PULLBOX, ENCLOSURE, OR RTU OUTSIDE THE VAULT.
2. TAG IS TO BE ATTACHED USING A BLACK WEATHER RESISTANT ZIP TIE. TAG IS TO BE FIXED SUCH THAT THE LETTERING IS VISIBLE AND NOT PULLED SO TIGHT THAT IT CAN NOT BE ADJUSTED.
3. LETTERING IS TO BE 1/4" HIGH, CENTERED AND FORMATED AS DIRECTED BY ENGINEER OR OWNER.



B4 BRANCH FEEDER AND SENSOR CABLES LABEL

SCALE: NTS

NOTE: ALL RACEWAYS SHALL BE ROUTED IN A NEAT AND PROFESSIONAL MANNER AND ROUTED PARALLEL OR PERPENDICULAR TO WALL/CEILINGS.



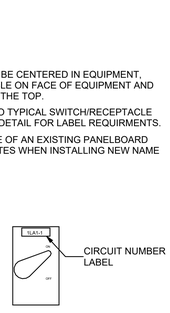
D1 TYPICAL CONDUIT ROUTING/MOUNTING

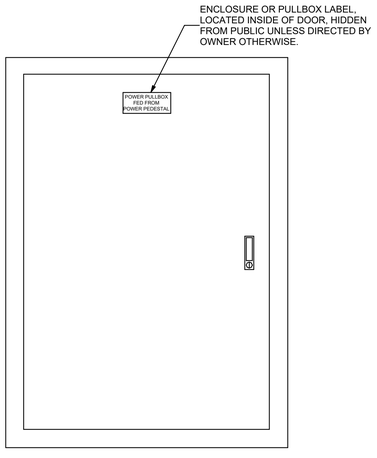
SCALE: NTS

*LABEL TO BE CENTERED IN EQUIPMENT, PREFERABLE ON FACE OF EQUIPMENT AND TOWARDS THE TOP.

**REFER TO TYPICAL SWITCH/RECEPTACLE LABELING DETAIL FOR LABEL REQUIRMENTS.

***DISPOSE OF AN EXISTING PANELBOARD NAME PLATES WHEN INSTALLING NEW NAME PLATES.



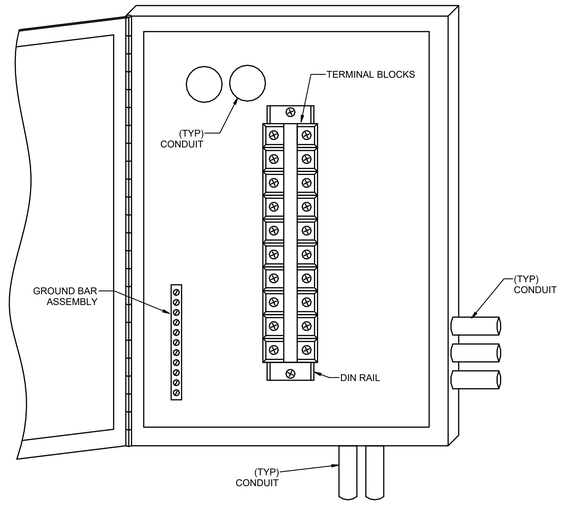


D2 TYPICAL RECEPTACLE AND PULLBOX LABELING LOCATION DETAIL

SCALE: NTS

NOTE: CONDUITS SHALL NOT ENTER/EXIT ENCLOSURE FROM ABOVE UNLESS ABLOSUTELY NECESSARY. CONDUIT CONNECTIONS TO ENCLOSURE SHALL BE GASKETED AND SEALED.

FLOW METER CABLES SHALL NOT BE CUT OR SPLICED ANYWHERE IN THEIR RUN.



D3 TYPICAL "PWR" JUNCTION BOX ENCLOSURE

SCALE: NTS

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VAULT DETAILS

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811 Know what's below. Call before you dig.

EQUIPMENT SCHEDULE

EQUIPMENT SCHEDULE KEY
E - DIVISION 26
Q - FURNISHED WITH EQUIPMENT, INSTALLED BY DIV.26

NOTES:
1. PROVIDE MANUAL STARTER WITH THERMAL OVERLOAD AND RELAY FOR ATC/BAS CONTROL.
2. PROVIDE FUSED DISCONNECT ELEVATOR POWER MODULE WITH SHUNT TRIP.
3. INDOOR UNITS FED FROM OUTDOOR UNIT. PROVIDE DISCONNECTS FOR BOTH.

GENERAL NOTES:
1. LOCATE ELECTRICAL EQUIPMENT IN ACCESSIBLE LOCATION, SUCH THAT IT IS WITHIN SIGHT OF THE EQUIPMENT IT IS SERVING, AND COMPLIES WITH N.E.C. REQUIRED CLEARANCES.
2. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND SIZE FEEDER, STARTER, DISCONNECT AND OVERCURRENT PROTECTION IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OF ACTUAL EQUIPMENT SUPPLIED.
3. ELECTRICAL CONTRACTOR SHALL REVIEW OTHER DIVISION DRAWINGS FOR ANY ADDITIONAL REQUIREMENTS PRIOR TO BID.
4. ELECTRICAL CONTRACTOR SHALL REVIEW OTHER DIVISION SUBMITTALS FOR ANY EQUIPMENT REQUIRING CONNECTION BY ELECTRICAL CONTRACTOR AND COORDINATE ALL REQUIREMENTS PRIOR TO ROUGH-IN.

LABEL	QTY	DESCRIPTION	LOAD DATA HP	kW	MCA	FLA	V	PH	WIRE AND CONDUIT SIZE	OCPD DEVICE	OCPD FED FROM	DISCONNECT PROVIDED BY	DISCONNECT DEVICE	MOTOR CONTROLLER PROVIDED BY	MOTOR CONTROLLER DEVICE	MOTOR CONTROLLER SIZES	NEMA ENCLOSURE RATING	NOTES
EF-1	1	EXHAUST FAN	-	500 W	-	4.2	120	1	2 #12, #12 GR 0.75" CND	20/1 CB	PP1	E	TOGGLE SWITCH	E	-	-	4X	
EF-2	1	EXHAUST FAN	-	500 W	-	4.2	120	1	2 #12, #12 GR 0.75" CND	20/1 CB	PP2	E	TOGGLE SWITCH	E	-	-	4X	
FCV	1	FLOW CONTROL VALVE	-	500 W	-	4.2	120	1	2 #12, #12 GR 0.75" CND	20/1 CB	PP2	E	-	-	-	-	4X	
MIX	2	SUBMERSIBLE TANK MIXER	2	-	-	12	240	1	2 #8, #8 GR 1" CND	20/2 CB	PP2	Q	VFD	Q	VFD	2 HP	4X	
PCPR	1	PIPE CORROSION PROTECTION RECTIFIER	-	-	-	5	120	1	2 #12, #12 GR 0.75" CND	20/1 CB	PP1	E	-	-	-	-	4X	
RTU	1	RTU POWER	-	-	-	5	120	1	2 #12, #12 GR 0.75" CND	20/1 CB	PP1	E	-	-	-	-	4X	
RTU2	1	RTU POWER	-	-	-	5	120	1	2 #12, #12 GR 0.75" CND	20/1 CB	PP2	E	-	-	-	-	4X	
UH-1	1	UNIT HEATER	-	3kW	-	12.5	240	1	2 #10, #10 GR 0.75" CND	30/2 CB	PP1	E	30A/2P FRS-20	E	-	-	4X	
UH-2	1	UNIT HEATER	-	3kW	-	12.5	240	1	2 #10, #10 GR 0.75" CND	30/2 CB	PP2	E	30A/2P FRS-20	E	-	-	4X	

ELECTRICAL FIXTURE SCHEDULE

EQUIPMENT SCHEDULE KEY
E - DIVISION 26
Q - FURNISHED WITH EQUIPMENT
* - COORDINATE WITH THE DIVISION 23 TEMPERATURE CONTROL INSTALLER
** - AUTOMATIC CONTROL WIRING BY DIVISION 23

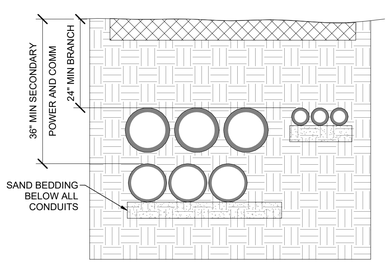
NOTES:
1. NEMA 3R
2. TOGGLE SWITCH W/ THERMAL OVERLOAD
3. PROVIDE FUSED DISCONNECT ELEVATOR POWER MODULE WITH SHUNT TRIP
4. CONTRACTOR TO PERFOM FINAL CONNECTION TO LINE VOLTAGE THERMOSTATS
5. TOGGLE SWITCH W/BACNET INTERFACE.
6. INDOOR UNITS FED FROM OUTDOOR UNIT. PROVIDE DISCONNECTS FOR BOTH.
7. PROVIDE SWITCH WITH BACNET MS/TP CAPABILITY.
8. PROVIDE LABEL ON DISCONNECT "DISCONNECT OUTDOOR UNIT PRIOR TO INDOOR."
9. LINE VOLTAGE THERMOSTAT ON WALL.
10. PROVIDE EXPLOSION PROOF DEVICES AND WIRING METHODS.
11. PROVIDE DUAL-REDUNDANT 100% RATED VFD'S FOR AIR HANLDER.
12. PROVIDE MANUAL STARTER WITH THERMAL OVERLOAD AND RELAY FOR ATC/BAS CONTROL.

ITEM NO.	QTY	DECSRIPTION	MOUNTING HEIGHT (AFF)	LOAD DATA VOLT	PHASE	AMPS	kW	LOAD DATA HP	WIRE AND CONDUIT SIZE	CONNECTION TYPE FURN BY	DEVICE	ELECTRICAL REMARKS
SP-1	2	SUMP PUMP	+48"	120	1	4	0.5	-	2#12, 12GR 0.75" CND	E	SIMPLEX NEMA 5-20	

BRANCH CIRCUIT CONDUCTOR AND CONDUIT SIZING TABLE

CIRCUIT AMPACITY/VOLTAGE	CIRCUIT LENGTH	CONDUCTOR SIZE (PHASE, NEUTRAL AND GR)	CONDUIT SIZE
20A/120V	0' - 60'	#12 AWG	0.75" Ø
20A/120V	60' - 95'	#10 AWG	0.75" Ø
20A/120V	95' - 150'	#8 AWG	1" Ø
20A/120V	150' - 240'	#6 AWG	1.25" Ø
20A/277V	0' - 140'	#12 AWG	0.75" Ø
20A/277V	140' - 220'	#10 AWG	0.75" Ø
20A/277V	220' - 350'	#8 AWG	1" Ø
20A/277V	350' - 550'	#6 AWG	1.25" Ø

NOTES:
1. WIRE SIZING IS BASED ON COPPER CONDUCTORS SUPPLYING A 20A, 120V CIRCUIT AT THE INDICATED VOLTAGE, ASSUMED TO BE 80% LOADED (16A), WITH MAXIMUM VOLTAGE DROP OF 3% AT THE LOAD.
2. DOWN-SIZED WIRE AT DEVICE/LOAD AS REQUIRED AND TERMINATE CONDUCTORS IN A SAFE AND CODE COMPLIANT MANNER.
3. CONDUIT SIZE IS BASED ON A MAXIMUM OF 3 CIRCUITS PER CONDUIT, EACH WITH A SEPARATE NEUTRAL CONDUCTOR.



NOTE:
REPAIR EXISTING ASPHALT OR SURFACE TO MATCH EXISTING CONDITIONS:
FOR CONCRETE:
- 5" CEMENT CONCRETE
- 6" UNTREATED BASE COURSE COMPACT TO 95% MODIFIED PROCTOR
- 6" PIT RUN GRAVE COMPACT TO 95% MODIFIED PROCTOR
FOR ASPHALT:
- 3" STANDARD ASPHALT
- 4" UNTREATED BASE COURSE COMPACT TO 95% MODIFIED PROCTOR
- 6" PIT RUN GRAVE COMPACT TO 95% MODIFIED PROCTOR
FOR TURF/PLANTER/LANDSCAPE:
- TURF/PLANTER/LANDSCAPE
- 12" TOPSOIL

NOTES:
1. ALL BENDS SHALL BE LARGE RADIUS.
2. ALL CONDUIT ABOVE GROUND, ALL BENDS AND FIRST 10' BELOW GROUND SHALL BE PVC WRAPPED RMC. CONDUIT BELOW GROUND MAY BE PVC.
3. PROVIDE POLYPROPYLENE PULL ROPE IN EMPTY CONDUITS.

D2 TYPICAL CONDUIT DIRECT BURY DETAIL
SCALE: NTS

PANEL: "PP1"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	FED FROM:	CABINET:	LOCATION:	NOTES:
120/240 V, 1 PH 3 WIRE	22" W x 6" D, BOLT-ON	200 AMPERE MAIN CB		PEDESTAL		

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR — AIC RATING: 10,000

CKT NO	OCP AMP	OCP POLE	OCP BKR	LOAD (kVA) LTG	LOAD (kVA) PWR	LOAD (kVA) CO	DESCRIPTION	PHASE LOAD A	PHASE LOAD B	DESCRIPTION	LOAD (kVA) CO	LOAD (kVA) PWR	LOAD (kVA) LTG	OCP BKR	OCP POLE	OCP AMP	CKT NO
1	200	2	--	0.0	0.0	0.0	MAIN	0.0	6.7								
3	--	--	--	--	--	--	--		0.0	5.6	--	--	--	--	--	--	4
5	20	1		0.0	0.6	0.0	PWR: DRAPER RTU	0.6	0.0								
7	30	2		0.0	3.0	0.0	PWR: UNIT HEATER (UH-1)			SPARE	0.0	0.0	0.0	--	1	20	8
9	--	--	--	--	--	--	--	1.5	0.1								
11	20	1		0.0	0.5	0.0	PWR: EXHAUST FAN (EF-1)			LTG: BYPASS VAULT	0.0	0.0	0.1		1	20	10
13	20	1		0.0	0.5	0.0	PWR: SUMP PUMP (SP-1)	0.5	0.0								
15	20	1		0.0	0.6	0.0	PWR: (PCPR)			CO: BYPASS VAULT	0.4	0.0	0.0		1	20	12
17	20	1		0.0	0.0	0.0	SPARE	0.0	0.0								
19	20	1	--	0.0	0.0	0.0	SPARE			(FUT) CORROSION PROTECTION	0.0	0.0	0.0	--	1	20	14
21	20	1	--	0.0	0.0	0.0	SPARE	0.0	0.0								
23	20	1	--	0.0	0.0	0.0	SPARE			SPARE	0.0	0.0	0.0	--	1	20	16
										SPARE	0.0	0.0	0.0	--	1	20	18
										SPARE	0.0	0.0	0.0	--	1	20	20
										SPARE	0.0	0.0	0.0	--	1	20	22
										SPARE	0.0	0.0	0.0	--	1	20	24
TOTALS:							CONNECTED kVA PER PHASE	9	9	CONNECTED TOTAL kVA =	18						
							CONNECTED AMPS PER PHASE	78	71	AVERAGE CONNECTED AMPS PER PHASE =	75						

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS: **0.2 kVA @ 125% = 0.3 kVA** - 100% CONNECTED LOAD PLUS 25%
RECEPTACLES: **1.1 kVA @ 100% = 1.1 kVA** - FIRST 10kVA @ 100%, REMAINDER @ 50%
ALL OTHER LOADS @ 100% : **16.8 kVA** - MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH LARGEST MOTOR CALCULATED @ 125% PER NEC

DIVERSIFIED TOTAL kVA = **19**
AVERAGE AMPS PER PHASE = **78**

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI

PANEL: "PP2"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	FED FROM:	CABINET:	LOCATION:	NOTES:
120/240 V, 1 PH 3 WIRE	22" W x 6" D, BOLT-ON	100 AMPERE MAIN CB	PP1	SURFACE		

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR — AIC RATING: 10,000

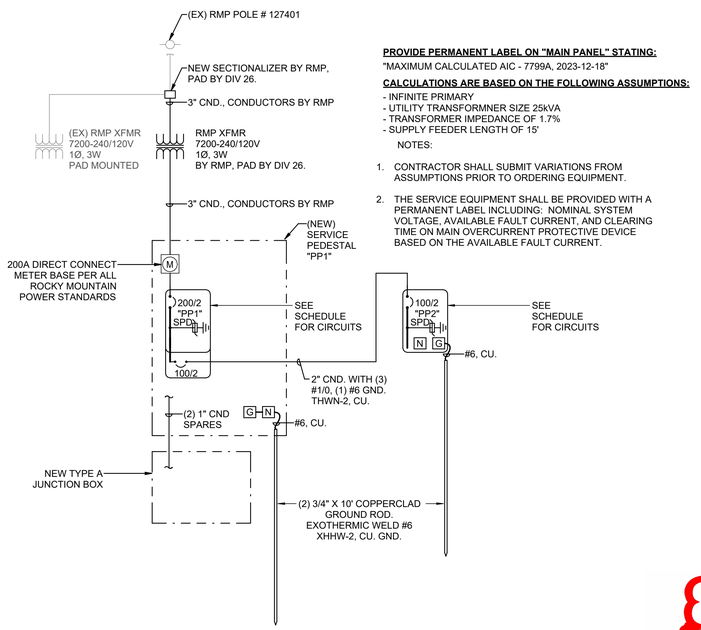
CKT NO	OCP AMP	OCP POLE	OCP BKR	LOAD (kVA) LTG	LOAD (kVA) PWR	LOAD (kVA) CO	DESCRIPTION	PHASE LOAD A	PHASE LOAD B	DESCRIPTION	LOAD (kVA) CO	LOAD (kVA) PWR	LOAD (kVA) LTG	OCP BKR	OCP POLE	OCP AMP	CKT NO
1	100	2	--	0.0	0.0	0.0	MAIN	0.0	0.6								
3	--	--	--	--	--	--	--		0.0	0.6	PWR: (PCPR-2) "RTU2"	0.0	0.6	0.0	--	1	20	4
5	30	2		0.0	3.0	0.0	PWR: UNIT HEATER (UH-2)	1.5	0.5								
7	--	--	--	--	--	--	--		1.5	0.5	PWR: H2O OUTLET EXHST FAN (EF-2)	0.0	0.5	0.0		1	20	8
9	20	1		0.0	0.5	0.0	PWR: FLOW CNTRL VALVE (FCV)	0.5	0.4								
11	20	2		0.0	2.9	0.0	PWR: TANK MIXER (MIX)		1.4	0.1	LTG: H2O OUTLET	0.0	0.0	0.1		1	20	12
13	--	--	--	--	--	--	--	1.4	0.4								
15	20	2		0.0	2.9	0.0	PWR: TANK MIXER (MIX)		1.4	0.0	SPARE	0.0	0.0	0.0	--	1	20	16
17	--	--	--	--	--	--	--	1.4	0.0								
19	20	1	--	0.0	0.0	0.0	SPARE		0.0	0.0	SPARE	0.0	0.0	0.0	--	1	20	20
											JVWCD RTU	0.0	0.0	0.0	--	1	20	2
											PWR: H2O OUTLET SMP PMP (SP-1)	0.0	0.5	0.0		1	20	6
											CO: H2O OUTLET VAULT	0.4	0.0	0.0		1	20	10
											CO: H2O TANKS	0.4	0.0	0.0		1	20	14
											SPARE	0.0	0.0	0.0	--	1	20	18
											SPARE	0.0	0.0	0.0	--	1	20	20
TOTALS:							CONNECTED kVA PER PHASE	7	6	CONNECTED TOTAL kVA =	12						
							CONNECTED AMPS PER PHASE	56	47	AVERAGE CONNECTED AMPS PER PHASE =	51						

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS: **0.1 kVA @ 125% = 0.2 kVA** - 100% CONNECTED LOAD PLUS 25%
RECEPTACLES: **0.7 kVA @ 100% = 0.7 kVA** - FIRST 10kVA @ 100%, REMAINDER @ 50%
ALL OTHER LOADS @ 100% : **11.6 kVA** - MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH LARGEST MOTOR CALCULATED @ 125% PER NEC

DIVERSIFIED TOTAL kVA = **13**
AVERAGE AMPS PER PHASE = **54**

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI



PROVIDE PERMANENT LABEL ON "MAIN PANEL" STATING:
"MAXIMUM CALCULATED AIC - 7799A, 2023-12-18"

CALCULATIONS ARE BASED ON THE FOLLOWING ASSUMPTIONS:
- INFINITE PRIMARY
- UTILITY TRANSFORMNER SIZE 25kVA
- TRANSFORMER IMPEDANCE OF 1.7%
- SUPPLY FEEDER LENGTH OF 15'

NOTES:
1. CONTRACTOR SHALL SUBMIT VARIATIONS FROM ASSUMPTIONS PRIOR TO ORDERING EQUIPMENT.
2. THE SERVICE EQUIPMENT SHALL BE PROVIDED WITH A PERMANENT LABEL INCLUDING: NOMINAL SYSTEM VOLTAGE, AVAILABLE FAULT CURRENT, AND CLEARING TIME ON MAIN OVERCURRENT PROTECTIVE DEVICE BASED ON THE AVAILABLE FAULT CURRENT.

D4 ONE-LINE DIAGRAM - RESERVOIR SYSTEM
SCALE: NTS

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LICENSED PROFESSIONAL ENGINEER No. 5497590-2202 Christopher Henry Kawashi STATE OF UTAH
08/28/2025

PROJECT TITLE
THE POINT 3MG RESERVOIR
DRAPER, UTAH

ISSUE TYPE:	CD
ISSUE DATE:	08/28/2025
DFCM PROJ No.	22427100
DRAWN BY:	WRT
CHK'D BY:	MCC
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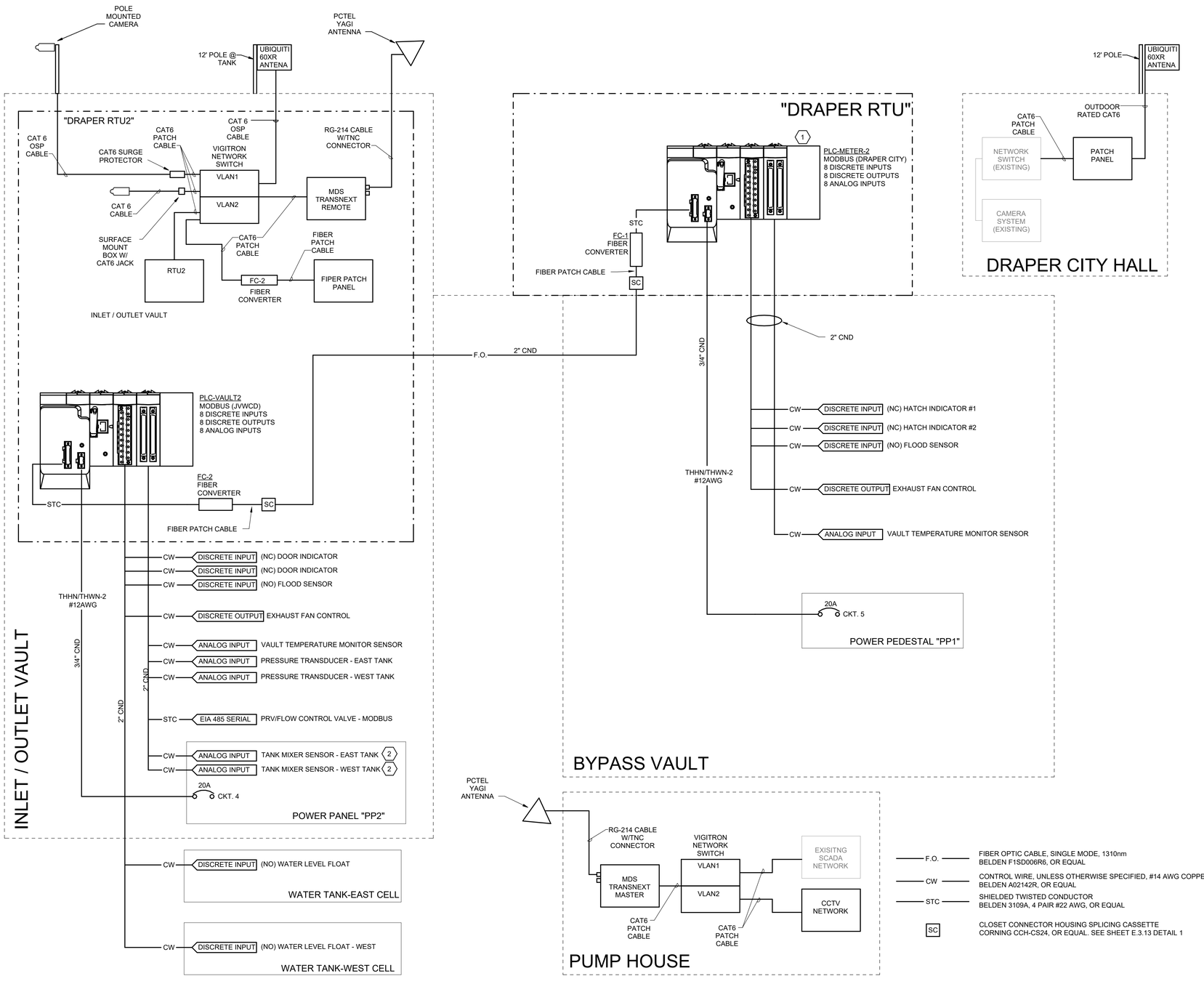
SHEET TITLE
ELECTRICAL DIAGRAMS AND SCHEDULES

SHEET NUMBER
E.3.7

PAGE



GENERAL SHEET NOTES

1. FOR ALL CABLE TERMINATIONS NOT COMPLETED BY CONTRACTOR, CONTRACTOR SHALL PROVIDE 10' SLACK LOOP INSIDE ENCLOSURE, LABEL CABLE AS SHOWN IN LABEL DETAIL, AND CAP FOR EXTENSION BY OTHERS.
2. PROVIDE 0.75" CND UNLESS OTHERWISE NOTED.
3. ALL CABLING SHALL HAVE 600V RATED INSULATION.
4. CONTRACTOR SHALL INSTALL SIGNAL CABLES TO SENSOR LOCATIONS AT THEIR RESPECTIVE TANKS.
5. UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL PROVIDE, INSTALL AND CONFIGURE ALL CABLING, SENSORS AND OTHER SCADA RELATED DEVICES.

SHEET KEYNOTES

1. INSTALL PROTECTIVE DUST COVERS ON ANY UNUSED MODULE PORTS.
2. INSTALL CURRENT SENSORS ON MIXER BRANCH CIRCUITS IN THE PANEL.

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LICENSED PROFESSIONAL ENGINEER No. 5497590-2202 Christopher Mark Kawashi STATE OF UTAH

08/28/2025

PROJECT TITLE

THE POINT 3MG RESERVOIR

DRAPER, UTAH

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SHEET TITLE

SCADA CABLING RISER

SHEET NUMBER

E.3.8

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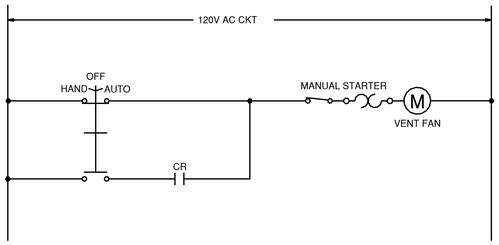
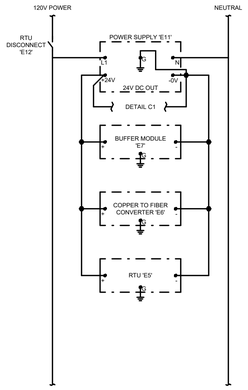


A1 TYPICAL RTU SCADA - DISCRETE INPUTS/OUTPUTS

SCALE: NTS

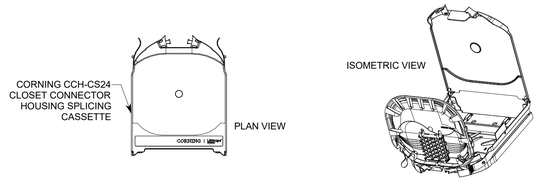


TYPICAL LARGE CUSTOM RTU MAJOR EQUIPMENT SCHEDULE

THE ITEMS INDICATED BELOW SHALL NOT BE CONSTRUED AS A "BILL OF MATERIALS". THIS LIST IDENTIFIES ITEMS OF SIGNIFICANCE USED DURING THE DESIGN OF THE CABLING INSTALLATION. WHERE THE ITEMS INDICATED ARE ONE PORTION OF AN ASSEMBLY, THE ENTIRE ASSEMBLY SHALL BE PROVIDED UNLESS SPECIFIED OTHERWISE. PROVIDE ALL MISCELLANEOUS HARDWARE AND SUPPORTS WHICH MAY NOT BE LISTED IN SCHEDULE, FOR A COMPLETE INSTALLATION. COMPARE CATALOG NUMBERS WITH DESCRIPTIONS AND NOTIFY ENGINEER OF DISCREPANCIES PRIOR TO BID. IF CATALOG NUMBERS DO NOT MATCH DESCRIPTIONS, THE DESCRIPTIONS TAKE PRECEDENCE. PROVIDE COMPLETE SUBMITTAL FOR APPROVAL PRIOR TO PURCHASING ANY EQUIPMENT OR CABLE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

TAG	QUANTITY	DESCRIPTION	APPROVED MANUFACUTRE & PART#	APPROVED MANUFACUTRE & PART#
E1	1	NEMA 4X ENCLOSURE, HINGED DOOR WITH KEY LOCK LATCH	HOFFMAN (CSD30308LG)	OR PRIOR APPROVED EQUAL
E2	1	BACK PANEL	HOFFMAN (CP3030)	OR PRIOR APPROVED EQUAL
E3	2	DIN RAIL MOUNTS	IBOCO (OMEGA3F)	OR PRIOR APPROVED EQUAL
E4	4	PVC SLOTED WIREWAY (1.5"WIDE X 3" DEEP X LENGTH REQUIRED)	IBOCO (TI-1530G)	OR PRIOR APPROVED EQUAL
E5	1	DIN RAIL MOUNT, HARDENED RTU INTEGTAL WITH:		OR PRIOR APPROVED EQUAL
		(1) RTU CONTROLLER M340, 512 DISCRETE, 128 ANALOG IO, MODBUS	BMXP341000	-
		(1) REDUNDANT POWER SUPPLY (24V TO 48V DC)	BMXCPS4022	-
		(1) MIXED IO MODULE, 8 INPUTS, 8 OUTPUTS 24VDC POSITIVE	BMXDDM16022	-
		(1) 8 LOW LEVEL ANALOG INPUT SIGNALS 40mV POSITIVE OR NEGATIVE	BMXART0814	-
		(1) COMMUNICATION MODULE, 2-RS485 OR 232 PORTS IN MODBUS	BMXNOM0200	-
		(1) RACK, MODICON M340, 4 SLOTS PANEL, PLATE OR DIN RAIL MOUNTING	BMXXBP0400	-
E6	1	DIN RAIL MOUNT, HARDENED MEDIA CONVERTER (SINGLE-MODE)	MOXA (IFC-1150-S-ST-T)	OR PRIOR APPROVED EQUAL
E7	1	DIN RAIL MOUNT, BUFFER MODULE	PHOENIX CONTACT (2320393)	OR PRIOR APPROVED EQUAL
E8	2	DIN RAIL MOUNT DC 2-TIER TERMINAL BLOCK SPLITTER	PHOENIX CONTACT (3044636)	OR PRIOR APPROVED EQUAL
E9	2	DIN RAIL MOUNT AC TERMINAL BLOCK SPLITTER	PHOENIX CONTACT (3044131)	OR PRIOR APPROVED EQUAL
E10	1	DIN RAIL MOUNT MODBUS TERMINAL BLOCK SPLITTER	BALLARD (RN5SD100F)	OR PRIOR APPROVED EQUAL
E11	1	DIN RAIL MOUNT POWER SUPPLY	PHOENIX CONTACT (2904601)	OR PRIOR APPROVED EQUAL
E12	1	DIN RAIL MOUNT BREAKER	ABB	OR PRIOR APPROVED EQUAL
E13	1	CONTROL PANEL MOUNTING BRACKET	HOFFMAN (CCPM4)	OR PRIOR APPROVED EQUAL
E14	4	ENCLOSURE MOUNTING BRACKET CONTRACTOR TO FIELD VERIFY	HOFFMAN (CMFKSS)	OR PRIOR APPROVED EQUAL
	OR 4	ENCLOSURE WHICH TYPE IS REQUIRED FOR EACH	HOFFMAN (CPMK20)	OR PRIOR APPROVED EQUAL
E15	3	PLASTIC PROTECTIVE COUPLER WITH ACCESS HOLE IN CONTROL PANEL		-
E16	1	DIN RAIL MOUNT CONTROL RELAY 24VDC COIL, 120VAC, 20A CONTACTS	PHOENIX CONTACT (2960261)	OR PRIOR APPROVED EQUAL
E17	1	CLOSET CONNECTOR HOUSING SPLICING CASSETTE	CORNING (CCH-CS24)	OR PRIOR APPROVED EQUAL
E18		GROUNDING BUS BAR	-	-
E19		DIN RAIL MOUNT NETWORK SWITCH	VIGITRON	OR PRIOR APPROVED EQUAL

*QUANTITY TOTALED PER RTU UNIT, SEE PLANS FOR TOTAL COUNTS.
**PROVIDE FIBER CONVERTERS AT ALL LOCATIONS WHERE COMMUNICATION CABLE LENGTHS EXCEED 250FT.
***ALL LOCKS SHALL BE KEYED THE SAME AND CONTRACTOR TO PROVIDE 10 KEYS TO OWNER.

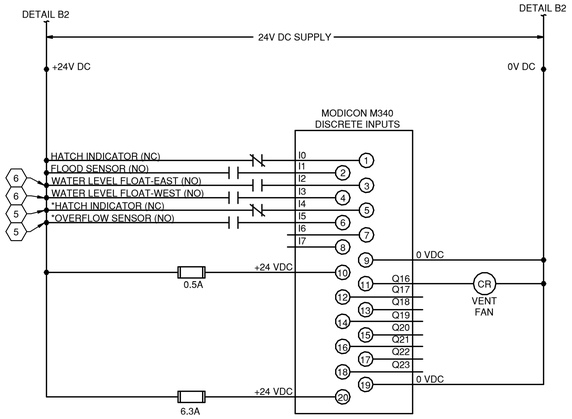


B2 RTU ENCLOSURE RISER

SCALE: NTS

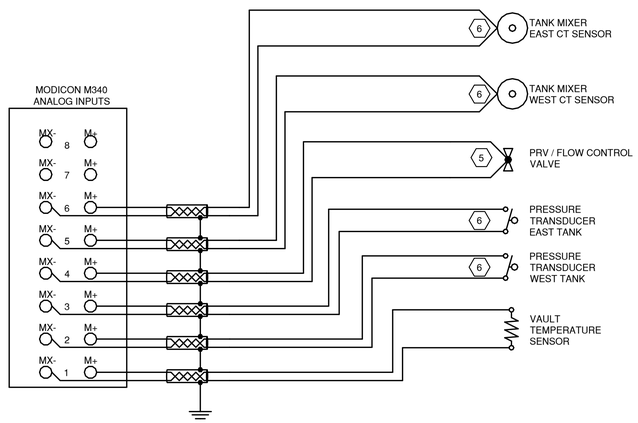
B3 SPLICE CASSETTE DETAIL

SCALE: NTS



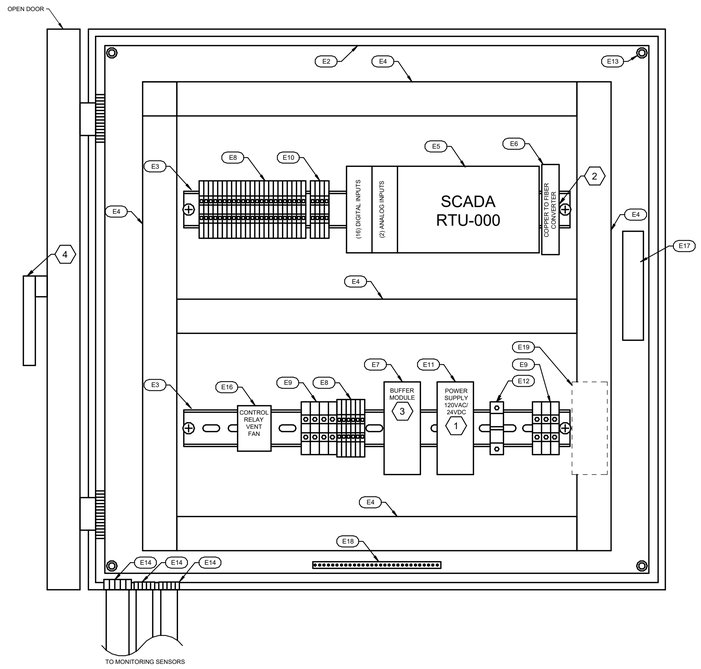
C1 TYPICAL RTU SCADA - DISCRETE INPUTS/OUTPUTS

SCALE: NTS



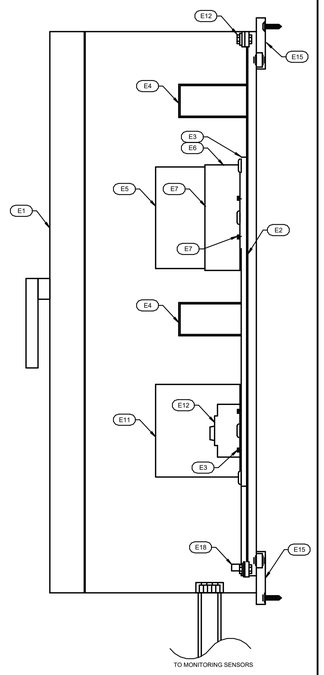
D1 TYPICAL RTU SCADA - ANALOG INPUTS

SCALE: NTS



D2 TYPICAL RTU SCADA ENCLOSURE FRONT DETAIL VIEW

SCALE: NTS



D3 TYPICAL RTU SCADA ENCLOSURE SIDE DETIAL VIEW

SCALE: NTS

GENERAL SHEET NOTES

1 CONTRACTOR TO PROVIDE SPARE PARTS TO OWNER FOR RTU BUILDS, REFER TO SPECIFICATIONS FOR QUANTITIES.

2 CONTRACTOR TO PROVIDE FULLY FUNCTIONAL RTU BUILD AND CONFIRM NEC CODE CLEARANCE REQUIREMENTS ARE MET FOR EACH RTU.

3 CONTRACTOR SHALL PROVIDE THE ENCLOSURE, BACK PANEL AND ANTENNA MAST, INCLUDING ASSOCIATED MOUNTING HARDWARE, FOR "JVWCD RTU". ALL INTERNAL EQUIPMENT, CABLING AND ANTENNA SHALL BE PROVIDED AND INSTALLED BY JVWCD.

SHEET KEYNOTES

1 CONTRACTOR TO SIZE POWER SUPPLY TO FULL RATING OF ALL EQUIPMENT WITHIN CABINET PLUS A MINIMUM OF 25% OF SPARE CAPACITY.

2 PROVIDE COPPER TO FIBER CONVERTER AT EACH LOCATION.

3 BUFFER MODULE SHALL BE SIZED TO PROVIDE POWER TO ALL COMPONENTS IN RTU ENCLOSURE DURING POWER FAILURE FOR A MINIMUM OF 5 SECONDS.

4 ALL RTU ENCLOSURE LOCKS TO BE KEYED ALIKE.

5 ITEMS TO BE INSTALLED ONLY IN THE METERING VAULT.

6 ITEMS TO BE INSTALLED ONLY IN THE INLET/OUTLET VAULT.

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WARNING
0 1 2
IF THIS BAR DOES NOT MEASURE 2" THEN DRAWING IS NOT TO SCALE

LICENSED PROFESSIONAL ENGINEER
No. 5497590-2202
Christopher Merrill Kawashi
STATE OF UTAH

08/28/2025

PROJECT TITLE

THE POINT 3MG RESERVOIR

DRAPER, UTAH

ISSUE TYPE:	CD
ISSUE DATE:	08/28/2025
DFCM PROJ No.	22427100
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SHEET TITLE

SCADA PANEL LAYOUTS

SHEET NUMBER

E.3.9

PAGE

811 Know what's below. Call before you dig.