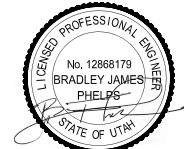


11800 SOUTH ZONE C RESERVOIRS



DIGITALLY SIGNED: 04/12/2024

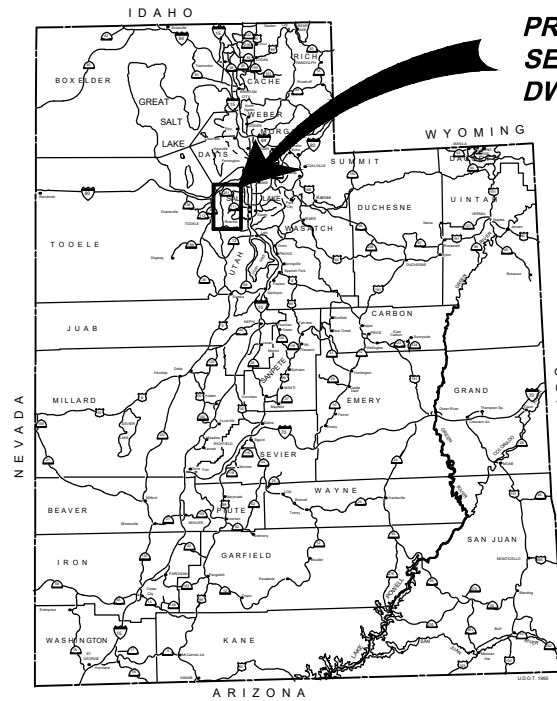


DIGITALLY SIGNED: 04/12/2024



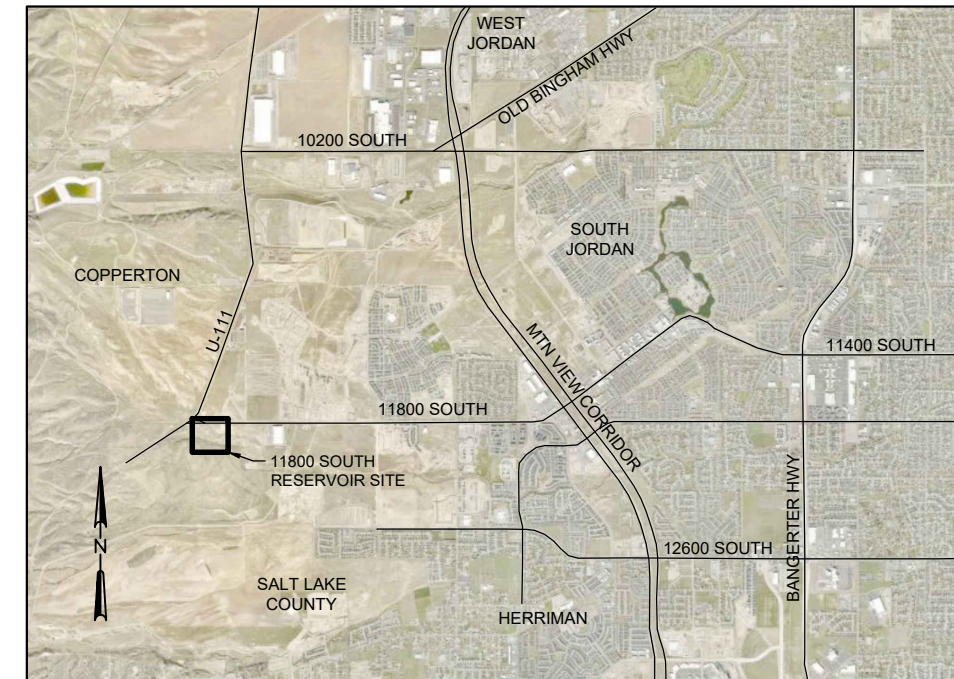
VOLUME 2 OF 3 100% BID DRAWINGS APRIL 2024

PROJECT #4276



PROJECT LOCATION
SEE INDEX MAP
DWG G-04

VICINITY MAP



LOCATION MAP
NTS

SITE LOCATED AT:
11800 SOUTH 7185 WEST,
SOUTH JORDAN CITY

BOARD OF TRUSTEES

COREY L. RUSHTON	MICK M. SUDBURY
KAREN D. LANG	ZACH JACOB
JOHN B. RICHARDSON	JOHN H. TAYLOR
ANDY PIERUCCI	BARBARA TOWNSEND
DAWN R. RAMSEY	

PROJECT MANAGERS

JORDAN VALLEY WATER CONSERVANCY DISTRICT
KEVIN RUBOW, PE
8215 SOUTH 1300 WEST
WEST JORDAN, UT 84088

JACOBS ENGINEERING GROUP
RYAN WILLEITNER, PE
6440 MILLROCK DR.
HOLLADAY, UT 84121

NO.	DATE	DR	CHK	BY
				R WILLEITNER

JORDAN VALLEY WATER
CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
GENERAL
COVER SHEET, VICINITY MAP,
AND LOCATION MAP

VERIFY SCALE	APRIL 2024
BAR IS ONE INCH ON ORIGINAL DRAWING.	W7Y49600
DATE	G-01
PROJ	1 of 79
DWG	
SHEET	

100% DESIGN

GENERAL NOTES

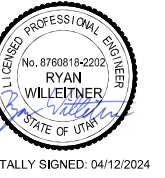
DRAWING LIST

- EXISTING UTILITIES SHOWN ARE BASED ON AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, SIZE, TYPE, AND ELEVATION OF ALL UTILITIES PRIOR TO CROSSING UTILITY. THE CONTRACTOR SHALL CONTACT BLUE STAKES AT 1 (800) 662-4111 FOR LOCATING EXISTING UTILITIES.
- FOR THE REPLACEMENT AND RECONSTRUCTION OF SOUTH JORDAN CITY AND CITY OF HERRIMAN FACILITIES DAMAGED DURING CONSTRUCTION, REFER TO SPECIFICATION SECTION 01 31 13, PROJECT COORDINATION.
- EXCAVATION LIMITS SHOWN IN THE DETAILS ARE GRAPHICAL REPRESENTATIONS ONLY AND DO NOT REPRESENT ACTUAL EXCAVATION LIMITS OR SAFE TRENCH WORKING CONDITIONS NECESSARY TO COMPLETE THE WORK. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING THE TRENCH LIMITS NEEDED FOR THE WORK AND CONFORMANCE WITH THE LOCAL, STATE, AND FEDERAL CODES GOVERNING SHORING, SHEETING, AND BRACING OF EXCAVATIONS AND TRENCHES, AND FOR PROTECTION AND SAFETY OF WORKERS AND OTHER CONSTRUCTION RELATED PERSONNEL. PROVIDE ADDITIONAL SHORING, SHEETING, AND BRACING AS REQUIRED TO PROTECT EXISTING FACILITIES AND WHERE SPECIFICALLY INDICATED ON THE DRAWINGS.
- UNLESS OTHERWISE NOTED, ALL ELEVATIONS FOR NEW CONSTRUCTED PIPELINES ARE PIPE CENTERLINE ELEVATIONS. ELEVATIONS OF EXISTING UTILITIES ARE CALLED OUT TO INVERT ELEVATION FOR GRAVITY UTILITIES (I.E. STORM DRAIN, SEWER, ETC.) AND TOP OF PIPE FOR EXISTING PIPELINES OR CONDUITS AND FOR ALL OTHER BURIED UTILITIES.
- ALL STATIONING AND DISTANCES SHOWN ON THE DRAWINGS ARE BASED ON HORIZONTAL MEASUREMENTS.
- CONTRACTOR SHALL LOCATE AHEAD AND UNCOVER ALL UNDERGROUND UTILITY CROSSINGS A MINIMUM OF 2 WEEKS IN ADVANCE OF OPERATIONS IN ORDER TO VERIFY CLEARANCE OF EXISTING UTILITIES FROM THE PROPOSED RESERVOIRS AND PIPING. REPORT ANY CONFLICTS TO THE ENGINEER IMMEDIATELY.
- CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO STAY WITHIN THE WORK LIMITS SHOWN AND COMPLY WITH TRAFFIC CONTROL REQUIREMENTS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, VEHICLES AND EQUIPMENT. LIMITS OF EXCAVATION, EXCAVATED MATERIAL, AND BACKFILL MATERIAL STORAGE. WHERE EASEMENTS ARE NOT SHOWN, LIMIT CONSTRUCTION ACTIVITIES TO STAY WITHIN ROAD RIGHTS-OF-WAY AND PERMANENT EASEMENTS UNLESS OTHERWISE SHOWN.
- CONTRACTOR SHALL ENSURE THAT OPERATION OF EXISTING IRRIGATION, SEWER, DRAINAGE, DOMESTIC WATER, AND OTHER UTILITY SYSTEMS ARE CONTINUOUS THROUGHOUT CONSTRUCTION.
- SURFACE RESTORATION SHALL BE AS SPECIFIED OR SHOWN ON THE DRAWINGS. RESTORE SURFACES TO EXISTING CONDITIONS UNLESS OTHERWISE SHOWN.
- RIPARIAN VEGETATION DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED AND MAINTAINED UNTIL ESTABLISHED. THE CONTRACTOR SHALL APPLY VEGETATIVE EROSION CONTROL PER SPECIFICATIONS AND DRAWINGS TO AREAS DISTURBED BY CONSTRUCTION ACTIVITIES AND NOT LANDSCAPED.
- RESERVOIR AND PIPE CONSTRUCTION WHEN NEAR EXISTING UTILITIES, WITHOUT APPROPRIATE CONTRACTOR-PROVIDED SHEETING, SHORING, AND PROTECTION, COULD COLLAPSE INTO THE EXCAVATIONS REQUIRED FOR THE PROJECT WORK. THE CONTRACTOR IS REQUIRED TO PROVIDE ALL NECESSARY DESIGNS (SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER IN THE STATE OF UTAH), FOR SHEETING, SHORING, AND OTHER PROTECTION TO PREVENT EXISTING UTILITIES FROM SHIFTING, LEAKING, COLLAPSING, OR OTHERWISE FAILING AS A RESULT OF THIS WORK.
- ANY DAMAGE WHICH OCCURS TO EXISTING UTILITIES AS A RESULT OF THE CONTRACTOR'S WORK SHALL BE PROMPTLY REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE PER PROJECT REQUIREMENTS, AND TO THE SATISFACTION OF THE OWNER OF THE DAMAGED UTILITIES.
- ITEMS DESIGNATED FOR DEMOLITION SHALL BE DEMOLISHED AND PROPERLY DISPOSED OFF SITE BY THE CONTRACTOR.
- CONTRACTOR SHALL REPLACE TO ORIGINAL OR BETTER CONDITION ALL FENCES REMOVED OR DAMAGED BY ANY PROJECT RELATED WORK WITH NEW FENCING AT THE ORIGINAL HORIZONTAL LOCATION UNLESS OTHERWISE SHOWN ON THE DRAWINGS. NEW FENCING SHALL BE EQUAL TO OR BETTER THAN THE ORIGINAL FENCING.
- CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH LOCAL EMERGENCY SERVICES TO ENSURE ACCESS TO ALL RESIDENTIAL, COMMERCIAL, AND OCCUPIED FACILITIES AT ALL TIMES.

SHEET NO.	DWG NO.	SHEET TITLE/DESCRIPTION
<u>GENERAL</u>		
1	G-01	COVER SHEET, VICINITY MAP, AND LOCATION MAP
2	G-02	GENERAL NOTES AND DRAWING LIST
3	G-03	OVERALL SITE MAP FINAL CONDITIONS
4	G-04	SYSTEM HYDRAULICS AND TESTING HGL REQUIREMENT
5	G-05	SURVEY CONTROL
6	G-06	ABBREVIATIONS
7	G-07	STANDARD SYMBOLS AND CIVIL LEGEND
8	G-08	MECHANICAL NOTES AND AND PIPING LEGEND
9	G-09	STRUCTURAL GENERAL NOTES - 1
10	G-10	STRUCTURAL GENERAL NOTES - 2
11	G-11	INSTRUMENTATION AND CONTROLS LEGEND - 1
12	G-12	INSTRUMENTATION AND CONTROLS LEGEND - 2
13	G-13	ELECTRICAL LEGEND - 1
14	G-14	ELECTRICAL LEGEND - 2
15	G-15	PIPELINE, ROADWAY, AND DRAINAGE ALIGNMENT AND COORDINATE TABLES
<u>CIVIL</u>		
16	C-01	SITE PLAN
17	C-02	GENERAL GRADING PLAN
18	C-03	GENERAL GRADING CROSS SECTIONS
19	C-04	INLET / OUTLET PIPING PLAN AND PROFILE
20	C-05	RESERVOIR OVERFLOW AND DRAIN PIPING PLAN AND PROFILE
21	C-06	DRAIN PIPING PLAN AND PROFILE
22	C-07	SITE DRAINAGE AND EROSION CONTROL PLAN
23	C-08	ROADWAY PLAN
24	C-09	ROADWAY PROFILES AND DETAILS
25	C-10	LANDSCAPING PLAN
26	C-11	DETENTION POND PLAN
<u>RESERVOIRS - STRUCTURAL</u>		
27	S-01	LEAK DETECTION PLAN - EAST RESERVOIR
28	S-02	FOUNDATION PLAN - EAST RESERVOIR
29	S-03	ROOF PLAN - EAST RESERVOIR
30	S-04	PARTIAL ROOF PLAN - EAST RESERVOIR
31	S-05	ENLARGED PLANS AND SECTIONS - EAST RESERVOIR
32	S-06	RESERVOIR SECTIONS AND DETAILS
33	S-07	RESERVOIR SECTIONS AND DETAILS
34	S-08	RESERVOIR SECTIONS AND DETAILS
35	S-09	SECTIONS - EAST RESERVOIR
36	S-10	LEAK DETECTION PLAN - WEST RESERVOIR
37	S-11	FOUNDATION PLAN - WEST RESERVOIR
38	S-12	ROOF PLAN - WEST RESERVOIR
39	S-13	ENLARGED PLANS AND SECTIONS - WEST RESERVOIR
<u>STRUCTURAL / MECHANICAL</u>		
40	SM-01	RESERVOIR VALVE VAULT - ROOF AND PIPING PLANS
41	SM-02	RESERVOIR VALVE VAULT - SECTIONS
42	SM-03	DRAINAGE VAULT - PLAN AND SECTIONS
43	SM-04	DRAINAGE OUTLET AT MIDAS CREEK
44	SM-05	CHLORINE BUILDING UTILITIES
45	SM-06	48" x 30" x 30" REDUCING WYE DETAILS
46	SM-07	OVERFLOW JUNCTION AND LEAK DETECTION BOX
<u>RESERVOIRS - MECHANICAL</u>		
47	M-01	INTERIOR PIPING - EAST RESERVOIR
48	M-02	INTERIOR PIPING - WEST RESERVOIR

SHEET NO.	DWG NO.	SHEET TITLE/DESCRIPTION
<u>INSTRUMENTATION AND CONTROLS</u>		
49	IC-01	SITE PROCESS FLOW DIAGRAM
50	IC-02	SITE PROCESS INSTRUMENTATION DIAGRAM
51	IC-03	NETWORK / CABLE BLOCK DIAGRAM
<u>ELECTRICAL</u>		
52	E-01	OVERALL ELECTRICAL SITE PLAN
53	E-02	DETAILED ELECTRICAL SITE PLANS
54	E-03	EAST AND WEST RESERVOIR ELECTRICAL / I&C PLANS
55	E-04	VALVE VAULT AND DRAINAGE VAULT ELECTRICAL PLANS
56	E-05	ONE-LINE DIAGRAM AND PANEL SCHEDULE
<u>STANDARD DETAILS</u>		
57	SD-01	STANDARD DETAILS
58	SD-02	STANDARD DETAILS
59	SD-03	STANDARD DETAILS
60	SD-04	STANDARD DETAILS
61	SD-05	STANDARD DETAILS
62	SD-06	STANDARD DETAILS
63	SD-07	STANDARD DETAILS
64	SD-08	STANDARD DETAILS
65	SD-09	STANDARD DETAILS
66	SD-10	STANDARD DETAILS
67	SD-11	STANDARD DETAILS
68	SD-12	STANDARD DETAILS
69	SD-13	STANDARD DETAILS
70	SD-14	STANDARD DETAILS
71	SD-15	STANDARD DETAILS
72	SD-16	STANDARD DETAILS
73	SD-17	STANDARD DETAILS
74	SD-18	STANDARD DETAILS
75	SD-19	STANDARD DETAILS
76	SD-20	STANDARD DETAILS
77	SD-21	STANDARD DETAILS
78	SD-22	STANDARD DETAILS
79	SD-23	STANDARD DETAILS

CHLORINE BUILDING DRAWINGS
VOLUME 3 OF 3
PROVIDED BY SUNRISE ENGINEERING



DIGITALLY SIGNED: 04/12/2024

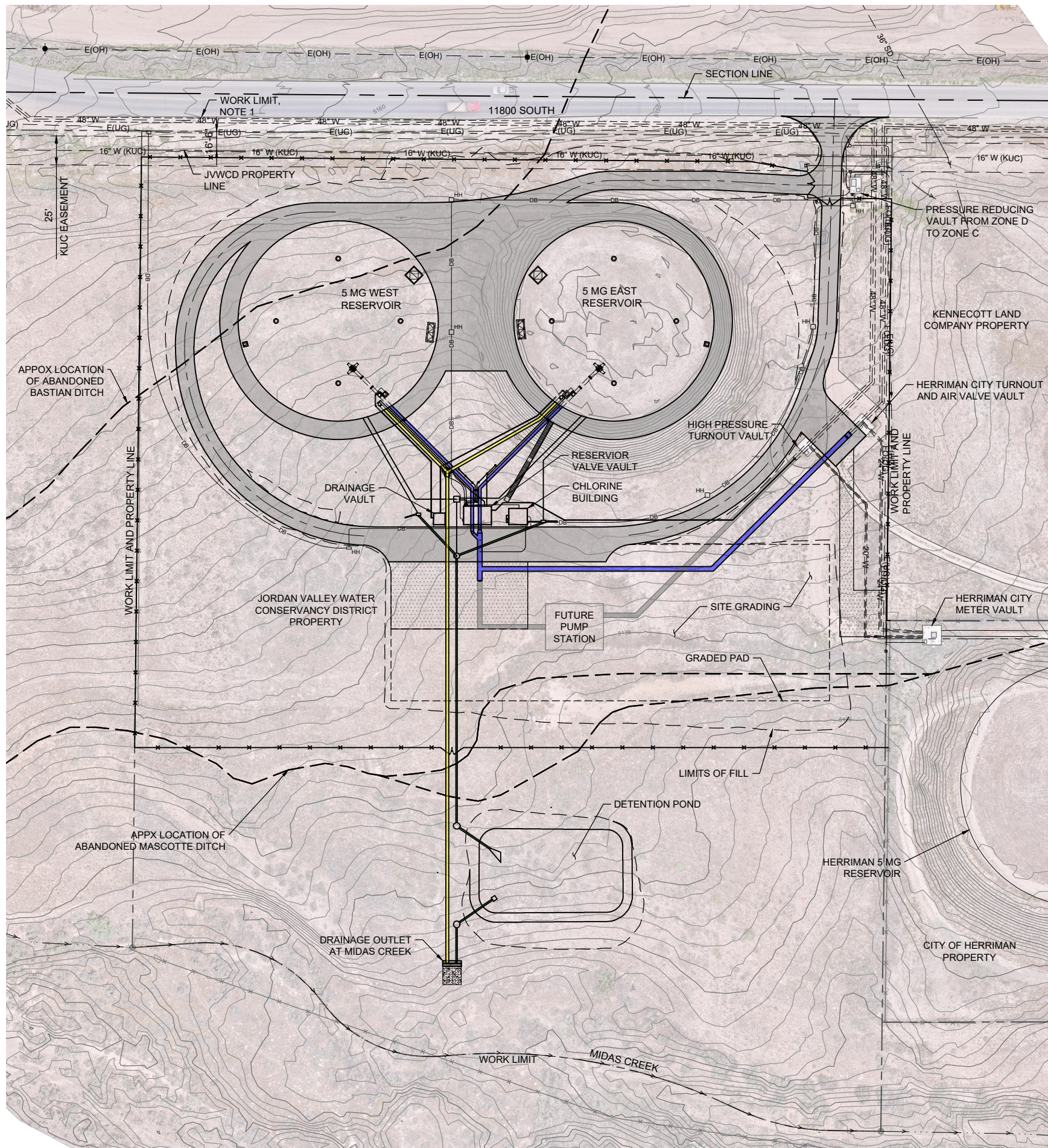
NO.	DATE	DR	CHK	APVD

JORDAN VALLEY WATER
CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

GENERAL
GENERAL NOTES AND DRAWING LIST

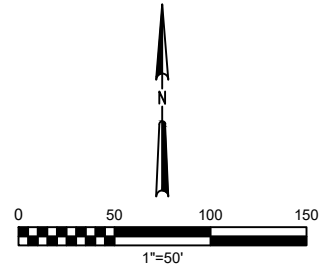
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE APRIL 2024
PROJ W7Y49600
DWG G-02
SHEET 2 of 79

100% DESIGN



- LEGEND:**
- INLET / OUTLET PIPELINE
 - RESERVOIR OVERFLOW / DRAIN PIPING
 - LEAK DETECTION AND SITE DRAINAGE

- NOTES:**
- JWVCD HAS DEEDED THE NORTH 16.5' OF THE PROPERTY TO SALT LAKE CITY AS A SETBACK. CONTRACTOR MUST OBTAIN PROPER PERMITTING FOR USE OF THIS SPACE.



DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DR	CHK	REVISION	BY

JORDAN VALLEY WATER CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

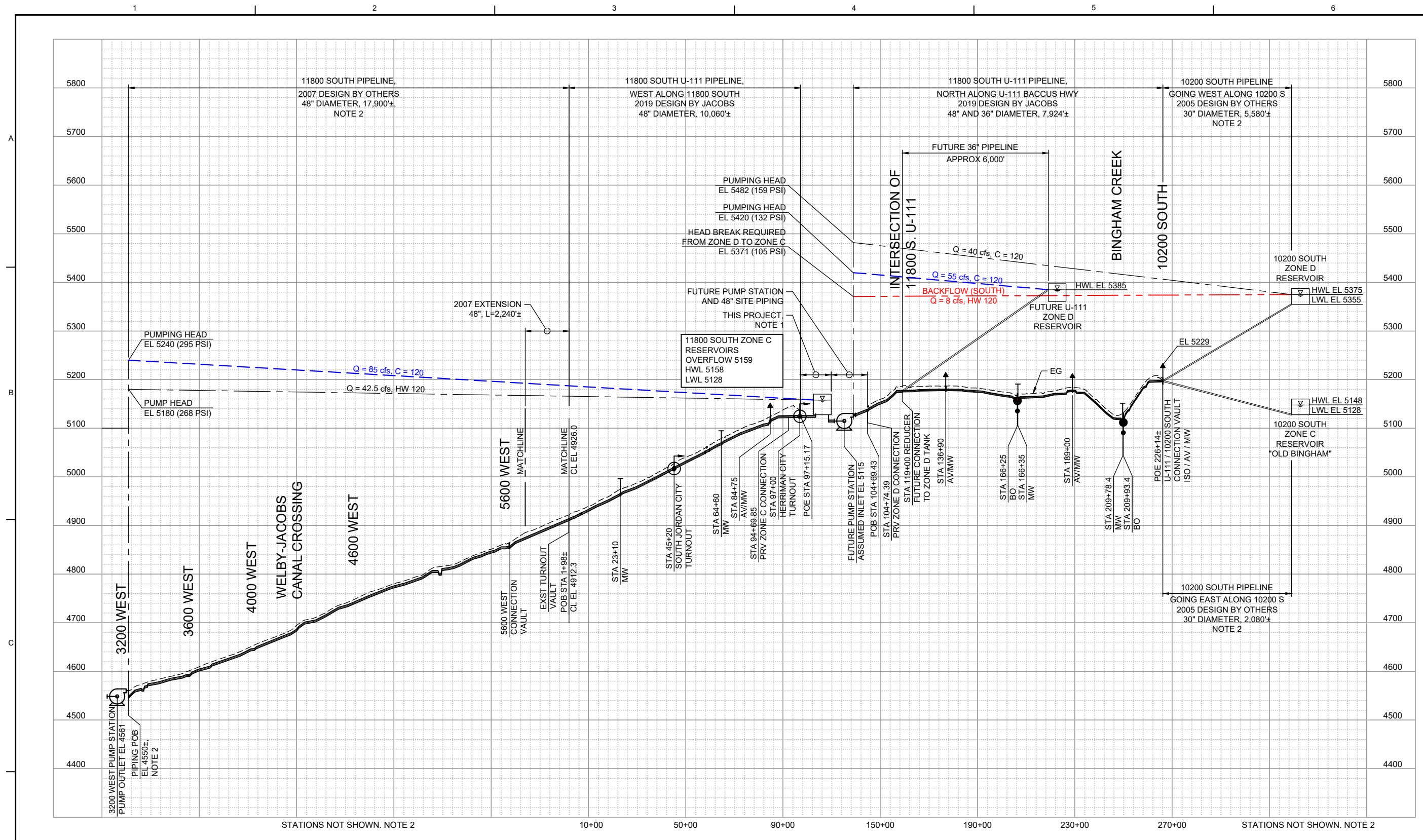
Jacobs
 GENERAL
**OVERALL SITE MAP
 FINAL CONDITIONS**

VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.
 0 50 100 150
 1"=50'

DATE	APRIL 2024
PROJ	W7Y49600
DWG	G-03
SHEET	3 of 79

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100% DESIGN



- NOTES:**
- PRESSURE TEST ZONE C PIPING TO 100 PSI, AND ZONE D PIPING TO 200 PSI. STATIC HYDRAULIC TEST RESERVOIRS AT 6" BELOW TOP OF OVERFLOW ELEVATION.
 - PROFILE IS APPROXIMATE AND IS BASED ON CURRENT PROJECT SURVEY DATUMS AND DISTRICT GIS DATA. THE 2007 PIPELINE WAS SHIFTED UP TO 3 FEET TO MATCH CURRENT DATUMS. HYDRAULIC CALCULATIONS ASSUMES THERE IS NO FLOW FROM PUMPING OR DEMANDS ALONG 10200 SOUTH. APPROXIMATE LENGTHS OF PIPELINES ARE PROVIDED AT THE TOP OF THE PROFILE.

SCALE: 1" = 2000' HORZ
1" = 100' VERT

LEGEND

- | | | | |
|---------------------------------|-----|---------------------|--|
| EXISTING GROUND | --- | FINISHED WATER TANK | |
| NON-TYPICAL OPERATING HGL | --- | PUMP STATION | |
| MAXIMUM OPERATING HGL | --- | TURNOUT | |
| OPERATING HGL AT FLOWRATE SHOWN | --- | AIR VALVE | |
| | | BLOW OFF | |
| | | MANWAY | |



NO.	DATE	DR	CHK	REVISION	BY	APVD
		R WILLEITNER				
					B PHELPS	
						R WILLEITNER



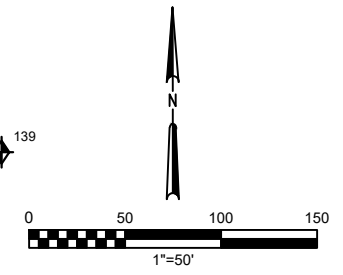
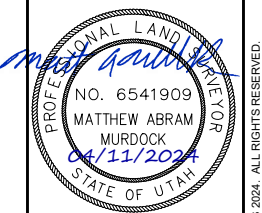
GENERAL SYSTEM HYDRAULICS AND TESTING HGL REQUIREMENT

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2024
PROJ	W7Y49600
DWG	G-04
SHEET	4 of 79

100% DESIGN



SURVEYORS CERTIFICATE
 I, MATTHEW ABRAM MURDOCK, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF UTAH, DO HEREBY CERTIFY THAT THIS CONTROL DIAGRAM HAS BEEN CORRECTLY DRAWN TO THE DESIGNATED SCALE AND IS A TRUE AND CORRECT REPRESENTATION HEREIN BASED ON DATA COMPILED FROM THE RECORDS IN THE SALT LAKE COUNTY RECORDERS OFFICE, AND A SURVEY PERFORMED BY ME OR UNDER MY DIRECTION.



CONTROL NOTES
 THE LATITUDE AND LONGITUDES FOR THIS PROJECT ARE BASED ON NAD 83 STATE PLANE UTAH CENTRAL ZONE. FOUND SECTION CORNERS WERE USED AS PUBLISHED BY THE SALT LAKE COUNTY SURVEYORS OFFICE (ELEVATIONS IN METERS WERE THEN CONVERTED TO U.S. SURVEY FEET FOR THE PROJECT. 1 METER = 3.280833333 U.S. SURVEY FEET).
 THE DATUM ELEVATION FOR THIS PROJECT WAS DERIVED FROM THE NAVD 88 ELEVATIONS PUBLISHED BY SALT LAKE COUNTY SURVEYORS OFFICE.
 THIS PROJECT IS ON A GRID SYSTEM NOT A GROUND SYSTEM TO MATCH THE DATUM USED BY JORDAN VALLEY WATER CONSERVANCY DISTRICT. THE PROPERTY AND RIGHT OF WAY LINE WORK WAS SCALED FROM GROUND TO GRID USING A COMBINED SCALE FACTOR OF 0.99973393250

- LEGEND**
- RIGHT-OF-WAY AND PROPERTY LINE
 - - - SECTION LINE
 - - - EASEMENT LINE
 - ◆ 137 FOUND P.L.S.S. CORNER AS NOTED
 - ◆ 301 FOUND STREET MONUMENT
 - △ 201 CONTROL POINT
 - ⊕ 201 AERIAL TARGET LOCATION SET BY WASATCH CIVIL ENGINEERING

CONTROL POINT	PROJECT COORDINATES		GEODETIC COORDINATES		ELEVATION	DESCRIPTION
	NORTHING	EASTING	LATITUDE	LONGITUDE		
1	7364818.595	1482795.655	N40°32'12.98"	W112°04'01.52"	5157.868	GCP1
2	7364239.406	1482587.397	N40°32'07.24"	W112°04'04.17"	5131.931	GCP2
3	7364136.194	1483079.206	N40°32'06.25"	W112°03'57.79"	5120.342	GCP3
4	7364093.837	1482500.089	N40°32'05.80"	W112°04'05.29"	5122.891	REBAR AND CAP
5	7363935.375	1483146.106	N40°32'04.27"	W112°03'56.91"	5106.435	REBAR AND CAP
139	7364818.304	1484037.576	N40°32'13.05"	W112°03'45.43"	5125.59	SE COR21
223	7364840.568	1481392.452	N41° 03' 42.86"	N040° 32' 13.11"	5170.35	SQTR COR21-GP5

NO.	DATE	DR	CHK	REVISION	BY
		T GOOD	T GOOD		R WILLEITNER
					M MURDOCK

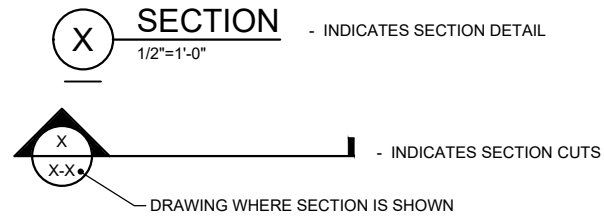
JORDAN VALLEY WATER CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

Jacobs
 GENERAL SURVEY CONTROL

VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.
 0 1"

DATE	APRIL 2024
PROJ	W7Y49600
DWG	G-05
SHEET	5 of 79

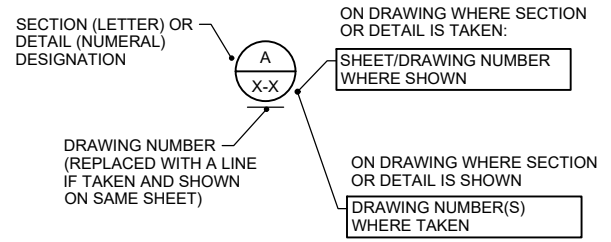
STANDARD SYMBOLS



STANDARD DETAIL DESIGNATION (NUMERAL) SHOWN ON STANDARD DETAIL DRAWINGS (SD)

15000

DESIGN DETAIL DESIGNATION



CIVIL LEGEND

EXISTING		THIS CONTRACT		
[Dashed Box]	EXISTING STRUCTURE OR FACILITY	[Solid Box]	THIS CONTRACT	SPOT ELEVATION
[Line with X's]	SILT FENCE	[Line with 155]	157.7	CONTOUR LINE
[Dashed Line]	DIRT ROAD OR PATH	[Line with 155]	155	EMBANKMENT AND SLOPE
[Line with X's]	RAILROAD	[Line with 3:1]		DRAINAGEWAY OR DITCH
[Arrow]	SLOPE WITH FLOW DIRECTION	[Square]		CATCH BASIN OR INLET
[Circle with slash]	ROUND OR DIAMETER	[Trench]		TRENCH DRAIN
[Square with slash]	SQUARE	[Sign]		SIGN
[@]	AT	[Manhole]		MANHOLE
[Angle]	ANGLE	[Electrical Manhole]		ELECTRICAL MANHOLE
CL OR C	CENTER LINE	[Handhole]		ELECTRIC HANDHOLE
[Coordinates]	STRUCTURE, BUILDING OR FACILITY LOCATION POINT - COORDINATES	[Post]		POST OR GUARD POST
[Granular]	GRANULAR BACKFILL	[Guy Anchor]		GUY ANCHOR
[Asphalt]	ASPHALT	[Fire Hydrant]		FIRE HYDRANT
[Earth]	EARTH	[Utility Pole]		UTILITY POLE
[Bedrock]	BEDROCK	[Light Pole]		LIGHT POLE
[Pothole]	POTHOLE LOCATION	[RR Signal]		RR SIGNAL
[Bore Hole]	BORE HOLE LOCATION	[Brush/Tree]		BRUSH/TREE LINE
[Point of Curvature]	POINT OF CURVATURE OR TANGENCY (CURVES)	[Tree]		TREE
[Point of Intersection]	POINT OF INTERSECTION (CURVES)	[Property Line]		PROPERTY LINE
[New Pipeline]	NEW PIPELINE	[Center Line]		CENTER LINE
		[Easement]		EASEMENT, STAGING, OR WORK AREA LIMITS
		[Demolition]		DEMOLITION STRUCTURE, BUILDING OR FACILITY
		[Swing Gate]		SINGLE SWING GATE
		[Double Gate]		DOUBLE SWING GATE
		[Sliding Gate]		SLIDING GATE
		[Guard Rail]		GUARD RAIL
		[Chain Link Fence]		CHAIN LINK OR WIRE FENCE
		[Architectural Fence]		ARCHITECTURAL FENCE
		[Culvert]		CULVERT
		[Culvert]		CULVERT

NOTES:

1. IN GENERAL ELEMENTS SHOWN WITH GREY TONE OR DASHED LINES, REPRESENT EXISTING FACILITIES OR FEATURES.
2. SCREENED BACKGROUNDS ON DRAWINGS CAN REPRESENT FACILITIES TO BE CONSTRUCTED UNDER THIS CONTRACT WHICH, IF DRAWN IN SOLID LINES WOULD OBSCURE THE PARTICULAR DETAILS BEING SHOWN. CONSULT THE ENGINEER FOR SCREENING THAT IS NOT SELF EXPLANATORY.

PIPING LEGEND AND SYMBOLS

[Line with 8" PE]	NOMINAL PIPE DIAMETER
[Line with X's]	PIPE USE IDENTIFICATION
[Line with X's]	PIPING < 30" DIAMETER
[Line with X's]	PIPING ≥ 30" DIAMETER
[Dashed Line]	PIPE TO BE ABANDONED
[Crossed Line]	PIPE TO BE REMOVED
[Dashed Line]	EXISTING WATER
[Dashed Line]	EXISTING SANITARY SEWER
[Dashed Line]	EXISTING STORM DRAIN
[Dashed Line]	EXISTING IRRIGATION PIPE
[Dashed Line]	EXISTING GAS
[Dashed Line]	EXISTING HIGH PRESSURE GAS
[Dashed Line]	EXISTING FIBER OPTIC
[Dashed Line]	EXISTING ELECTRIC UNDERGROUND
[Dashed Line]	EXISTING ELECTRIC OVERHEAD
[Dashed Line]	EXISTING TELEPHONE UNDERGROUND
[Dashed Line]	EXISTING TELEPHONE OVERHEAD
[Dashed Line]	EXISTING ELECTRICAL, TELEPHONE, AND TELEVISION OVERHEAD
[Dashed Line]	EXISTING TELEVISION
[Symbol]	AIR VALVE
[Symbol]	MANWAY
[Symbol]	BLOWOFF
[Symbol]	HORIZONTAL BEND
[Symbol]	WATER VALVE
[Symbol]	CATHODIC PROTECTION TEST STATION

NOTE:
IN GENERAL ELEMENTS SHOWN WITH GREY TONE OR DASHED LINES, REPRESENT EXISTING FACILITIES OR FEATURES.



NO.	DATE	REVISION	BY	APVD
			R WILLEITNER	
			B PHELPS	
			C HOGGARD	
			R WILLEITNER	

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

GENERAL SYMBOLS AND CIVIL LEGEND

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2024
PROJ	W7Y49600
DWG	G-07
SHEET	7 of 79

100% DESIGN

DESIGN CRITERIA

- 1. APPLICABLE CODE: 2021 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED BY THE STATE OF UTAH AND ALL OTHER APPLICABLE LOCAL AGENCIES.
2. REFER TO THE DRAWINGS FOR ADDITIONAL AND SPECIFIC STRUCTURE LOADINGS AND REQUIREMENTS.
3. ALL LOADS SHOWN ARE SERVICE LEVEL (UNFACTORED) UNLESS SPECIFICALLY NOTED OTHERWISE.
4. DEAD LOADS: SELF WEIGHT
5. ROOF LOADS: GROUND SNOW LOAD, Pg = 46 PSF; SNOW EXPOSURE FACTOR, Ce = 0.9; THERMAL FACTOR, Ct = 1.2; SLOPE FACTOR, Cs = 1.0; IMPORTANCE FACTOR, I = 1.2; MINIMUM FLAT ROOF SNOW LOAD, Pf = 42 PSF; LIVE LOAD = 20 PSF; COLLATERAL DEAD LOAD (SOLAR READY) = 10 PSF
6. FLOOR LIVE LOADS: CORRIDORS, EXITS, STAIRS = 100 PSF; WALKWAYS AND ELEVATED PLATFORMS = 100 PSF
7. WIND LOADS: ASCE 7 METHOD = MWFRS DIRECTIONAL PROCEDURE; BASIC WIND SPEED (3-SECOND GUST) = 110 MPH; WIND SPEED, Vasd = 85 MPH; EXPOSURE CATEGORY = C; INTERNAL PRESSURE COEFFICIENT, GCpI = +/- 0.18; RISK CATEGORY = III; IMPORTANCE FACTOR, Iw = 1.0
8. SEISMIC LOADS: MAPPED SPECTRAL RESPONSE ACCELERATIONS Ss = 1.02g; S1 = 0.33g; DESIGN SPECTRAL RESPONSE ACCELERATIONS SDs = 0.80g; SD1 = 0.54g; SITE CLASS = D; RISK CATEGORY = III; SEISMIC DESIGN CATEGORY = D; IMPORTANCE FACTOR, Ie = 1.25
STRUCTURES HAVE BEEN ANALYZED USING THE EQUIVALENT LATERAL FORCE PROCEDURES OF ASCE 7.
9. LATERAL FORCE-RESISTING SYSTEMS: SEE FACILITY DRAWINGS.
10. SPECIAL LOADS: SEE PLANS FOR STRUCTURE SPECIFIC LOADS
11. HYDRAULIC LOADS: SEE PLANS FOR STRUCTURE SPECIFIC LOADS
12. SOIL DESIGN PARAMETERS: A. NET ALLOWABLE SOIL BEARING PRESSURES: RESERVOIRS: 6000 PSF; ALL OTHERS: 2000 PSF; B. GROUND WATER (GW) ELEVATION: NONE ENCOUNTERED; C. EQUIVALENT DRAINED FLUID PRESSURES (ABOVE GW): GRANULAR FILL: ACTIVE: 35 PCF; AT REST: 55 PCF; PASSIVE: 480 PCF; NATIVE FILL: 50 PCF; 60 PCF; 300 PCF; D. EQUIVALENT UNDRAINED FLUID PRESSURES (GRANULAR FILL BELOW GW): ACTIVE: 80 PCF; AT REST: 90 PCF; PASSIVE: 310 PCF; E. WHERE H IS HEIGHT OF SOIL ADJACENT TO THE WALL: VERTICAL SURCHARGE: 2 FT OF SOIL WEIGHT; F. COEFFICIENT OF FRICTION: 0.45; G. MODULUS OF SUBGRADE REACTION: 400 PSI/IN; H. NATIVE SOIL UNIT WEIGHT: 120 PCF
13. FROST DEPTH: 30 IN

GENERAL INFORMATION

- 1. FOR ABBREVIATIONS NOT LISTED, SEE ASME Y14.38 "ABBREVIATIONS AND ACRONYMS: PUBLICATION AS DISTRIBUTED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).
2. DESIGN DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE INDIVIDUALLY CALLED OUT.
3. VERIFY FINAL OPENING DIMENSIONS IN WALLS, SLABS, AND DECKS WITH OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION OF THESE ELEMENTS.
4. FOR NUMBER, TYPE, SIZE, ARRANGEMENT, AND/OR LOCATION OF EQUIPMENT PADS, SEE OTHER DISCIPLINE DRAWINGS. COORDINATE WITH EQUIPMENT SUPPLIER PRIOR TO PLACING SLABS, WALLS AND FOUNDATIONS. COORDINATE PIPING OPENINGS WITH OTHER DISCIPLINE DRAWINGS.
5. DO NOT CUT OR MODIFY STRUCTURAL MEMBERS FOR PIPES, DUCTS, ETC., UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.
6. VISITS TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT ENGINEER IS GUARANTOR OF CONSTRUCTOR'S WORK, NOR RESPONSIBLE FOR THE COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, OR SAFETY AT THE JOB SITE.

INSPECTION AND TESTING

- 1. SPECIAL INSPECTION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR INSPECTIONS REQUIRED BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL SCHEDULE BOTH INSPECTIONS.
2. SPECIFIED CONCRETE AND MASONRY AND OTHER MATERIAL TESTING RELATED TO SPECIAL INSPECTION DURING CONSTRUCTION WILL BE OWNER FURNISHED.
3. SPECIFIED LABORATORY TEST MIXES AND SIMILAR TEST RESULTS TO VERIFY MATERIAL QUALITY AND CONFORMANCE TO SPECIFICATIONS, AND SUBMITTED FOR REVIEW PRIOR TO ACCEPTANCE FOR USE ON THE PROJECT, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. SPECIAL INSPECTION, TESTING AND OBSERVATION (OWNER FURNISHED) IS REQUIRED IN ACCORDANCE WITH IBC SECTIONS 110 AND 1704 AS INDICATED IN THE STATEMENT OF SPECIAL INSPECTIONS.

FOUNDATIONS

- 1. FOR SOILS INFORMATION, REFER TO GEOTECHNICAL ENGINEERING REPORT BY TERRACON DATED NOVEMBER 8, 2023
2. EXCAVATIONS SHALL BE SHORED TO PREVENT SUBSIDENCE AND DAMAGE TO ADJACENT EXISTING STRUCTURES, ROADS, UTILITIES, ETC.
3. RESERVOIR FOUNDATION SLABS, SLABS-ON-GRADE AND WALL AND COLUMN FOUNDATIONS SHALL BEAR ON 4" BASE COURSE AND 3'-0" OF COMPACTED GRANULAR FILL. ALL OTHER STRUCTURES SHALL BEAR ON 2'-0" MINIMUM COMPACTED GRANULAR FILL.
4. FOUNDATION BEARING SURFACES SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF FORMWORK OR REINFORCING STEEL. THE OBSERVATION SHALL VERIFY IF THE ACTUAL EXPOSED SUBGRADE IS AS ANTICIPATED BY THE SITE SPECIFIC BORINGS, TESTING, AND DATA REPORTS.
5. NO BACKFILL SHALL BE PLACED BEHIND WALLS UNTIL THE WALL'S CONCRETE HAS ATTAINED 100 PERCENT AND TOP SUPPORTING SLAB'S CONCRETE HAS ATTAINED 80 PERCENT OF THEIR SPECIFIED 28 DAY COMPRESSIVE STRENGTH, OR UNTIL TOP-OF-WALL FRAMING SYSTEMS, INCLUDING STEEL OR WOOD DIAPHRAGMS, HAVE BEEN COMPLETED.
6. NO BACKFILL SHALL BE PLACED BEHIND CANTILEVERED, FREE TOP WALLS UNTIL THE CONCRETE HAS ATTAINED 100 PERCENT OF ITS SPECIFIED 28 DAY COMPRESSIVE STRENGTH.
7. USE OF EXPLOSIVES IS ONLY ALLOWED WITH WRITTEN PERMISSION FROM ENGINEER.

FORMWORK, SHORING, AND BRACING

- 1. STRUCTURES SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED FOR STABILITY UNDER FINAL CONDITIONS ONLY. DESIGN SHOWN DOES NOT INCLUDE NECESSARY COMPONENTS OR EQUIPMENT FOR STABILITY OF THE STRUCTURES DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR WORK RELATING TO CONSTRUCTION ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS, SCAFFOLDING, FORMWORK, AND OTHER WORK AIDS REQUIRED TO SAFELY PERFORM THE WORK SHOWN.
2. TEMPORARY SHORING SHALL REMAIN IN PLACE UNTIL ELEVATED CONCRETE FLOOR OR SLABS HAVE REACHED 80 PERCENT OF THE 28 DAY COMPRESSIVE STRENGTH AS DETERMINED BY FIELD CYLINDER BREAKS.
3. "BURY" BARS OR "CARRIER" BARS ARE NOT ALLOWED FOR THE BOTTOM MATS OF REINFORCING IN ALL ELEVATED SLABS AND ARE NOT ALLOWED FOR THE TOP MATS OF REINFORCING IN ELEVATED SLABS LESS THAN 12 INCHES THICK.

CONCRETE REINFORCING

- 1. REINFORCING STEEL: TYPICAL: ASTM A615, GRADE 60; WELDED: ASTM A706, GRADE 60 (WELDING IS ONLY PERMITTED WITH WRITTEN PERMISSION FROM ENGINEER)
2. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1 "MANUAL OF STANDARD PRACTICE" AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
3. CONCRETE COVER FOR REINFORCING, UNLESS SHOWN OTHERWISE, SHALL BE: WHEN CAST AGAINST EARTH: 3"; CONCRETE EXPOSED TO EARTH, LIQUID, WASHDOWN, OR WEATHER: WALLS AND SLABS: 2"; BEAM STIRRUPS AND COLUMN TIES: 2"; BEAM AND COLUMN PRIMARY REINFORCING: 2 1/2"
4. REFER TO WALL CORNER AND WALL INTERSECTION REINFORCING DETAIL 0330-003. WALL CORNER REINFORCING SIZES AND SPACINGS SHALL BE AS SHOWN ON THE DRAWINGS AND REFERENCED TO THIS DETAIL. TYPICAL HORIZONTAL WALL REINFORCING SHALL LAP WITH THE CORNER HORIZONTAL REINFORCING.
5. 90 DEGREE BENDS, UNLESS OTHERWISE SHOWN, SHALL BE ACI 318 STANDARD HOOKS.
6. WALL CORNER AND WALL INTERSECTION REINFORCEMENT BARS SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH COLUMNS OR PILASTERS. REINFORCEMENT SHALL BE EXTENDED INTO CONNECTING WALLS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING WALLS, AS INDICATED IN DETAIL 0330-003.
7. WALL FOOTING CORNER AND INTERSECTION REINFORCEMENT BARS SHALL BE EXTENDED INTO CONNECTING FOOTINGS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING FOOTING. OUTSIDE FACE WALL FOOTING REINFORCEMENT SHALL BE LAPPED WITH CORNER BARS. ALL WALL FOOTING REINFORCEMENT SHALL BE CONTINUOUS THROUGH COLUMNS OR PILASTERS FOOTINGS.
8. LAP VERTICAL WALL BARS WITH DOWELS FROM BASE SLABS AND EXTEND INTO TOP FACE OF ROOF SLABS AND LAP WITH TOP SLAB REINFORCEMENT. PROVIDE A MINIMUM OF FOUR FULL HEIGHT VERTICAL BARS WITH MATCHING DOWELS AT WALL ENDS, CORNERS AND INTERSECTIONS WITH SIZE TO MATCH TYPICAL VERTICAL REINFORCING STEEL SHOWN OR REQUIRED BY NOTES ABOVE.
9. LOCATE ELEVATED SLAB AND BEAM TOP BAR SPLICES AT MIDSPAN AND BOTTOM BAR SPLICES AT SUPPORTS.
10. REINFORCING STEEL FOR FOOTINGS AND SLABS ON GRADE SHALL BE ADEQUATELY SUPPORTED ON BAR SUPPORTS WITH SPACERS TO KEEP REINFORCING ABOVE THE PREPARED GRADE. LIFTING REINFORCING OFF GRADE DURING CONCRETE PLACEMENT IS NOT PERMITTED.
11. REFER TO OPENING REINFORCING DETAIL 0330-001.
12. REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

Table with columns: BAR SIZE, #3, #4, #5, #6, #7, #8, #9, #10, #11. Rows include LAP SPLICE LENGTH, SPACING = 3", SPACING = 4", SPACING >= 6", EMBEDMENT LENGTH, SPACING = 3", SPACING = 4", SPACING >= 6".

- 1. LAP LENGTHS ARE BASED ON MINIMUM CONCRETE COVER OF 2". LONGER LENGTHS ARE REQUIRED FOR CONCRETE COVER LESS THAN 2".
2. TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.
3. WHERE 3000 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 16 PERCENT. WHERE 3500 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 7 PERCENT.

CAST IN PLACE CONCRETE

- 1. 28-DAY COMPRESSIVE STRENGTHS (TO MEET STRUCTURAL STRENGTH REQUIREMENTS): HYDRAULIC STRUCTURES: 4500 PSI; WALL SLURRY MIXTURE: SAME AS WALL CONCRETE; PRESTRESSED TANK CORE WALL: 5500 PSI; CURBS AND SIDEWALKS: 3500 PSI; DUCT BANKS AND PIPE ENCASEMENTS: NOT INTEGRAL WITH FOUNDATIONS: 3500 PSI
2. DESIGN STRENGTHS ARE SAME AS 28-DAY COMPRESSIVE STRENGTHS.
3. CONTINUOUS WATERSTOP AS SPECIFIED SHALL BE INSTALLED IN CONSTRUCTION JOINTS OF HYDRAULIC STRUCTURES, CHANNELS, AND BELOW GRADE STRUCTURES, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
4. CONSTRUCTION JOINTS INDICATED ARE SUGGESTED LOCATIONS. CONTRACTOR MAY REVISE LOCATION OF JOINTS, SUBJECT TO SPECIFIED REQUIREMENTS. LAYOUT SHOWING ALL CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED FOR REVIEW BY ENGINEER.
5. ROUGHEN AND CLEAN CONSTRUCTION JOINTS IN WALLS AND SLABS AS SPECIFIED PRIOR TO PLACING ADJACENT CONCRETE.
6. COORDINATE PLACEMENT OF OPENINGS, PIPE PENETRATIONS, CURBS, DOWELS, SLEEVES, CONDUITS, BOLTS AND INSERTS PRIOR TO PLACEMENT OF CONCRETE.
7. NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.
8. EMBEDDED CONDUIT IS NOT PERMITTED UNLESS SPECIFICALLY INDICATED IN DRAWINGS.
9. PATCH FORM TIE HOLES IN ACCORDANCE WITH DETAILS 0310-051 AND/OR 0310-052.

WELDING

- 1. WELDS SHALL CONFORM TO AMERICAN WELDING SOCIETY (AWS): D1.1. STRUCTURAL WELDING CODE STEEL; D1.2. STRUCTURAL WELDING CODE ALUMINUM; D1.3. STRUCTURAL WELDING CODE SHEET STEEL; D1.4. STRUCTURAL WELDING CODE REINFORCING STEEL; D1.6. STRUCTURAL WELDING CODE STAINLESS STEEL
2. REPAIR WELDS FOUND DEFECTIVE IN ACCORDANCE WITH AWS D1.1 SECTION 5.26.
3. USE INTERMITTENT WELDS AT FIELD WELDS OF EMBED PLATES AND ANGLES TO AVOID SPALLING OR CRACKING OF THE EXISTING CONCRETE.
4. BUTT JOINT WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) UNLESS INDICATED OTHERWISE.



DIGITALLY SIGNED: 04/12/2024

Table with columns: NO., DATE, DSGN, DR, T STIMPSON, A FIRTHIB PHELPS, S ROSE, REVISION, CHK, APVD, BY, APVD.



Jacobs GENERAL STRUCTURAL GENERAL NOTES - 1

Table with columns: VERIFY SCALE, DATE, PROJ, DWG, SHEET. Includes scale 1" = 8'-0" and sheet information 9 of 79.

INSTRUMENT IDENTIFICATION

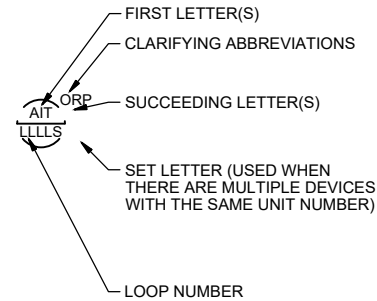
INSTRUMENT IDENTIFICATION LETTERS TABLE

LETTER	FIRST-LETTER		SUCCEEDING-LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	READOUT OR PASSIVE FUNCTION	READOUT OR PASSIVE FUNCTION
A	ANALYSIS (+), AIR		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE (*)	USER'S CHOICE (*)	USER'S CHOICE (*)
C	USER'S CHOICE (*)			CONTROL	
D	DENSITY (S.G.)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT, SENSOR		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE (*)		GLASS, GAUGE VIEWING DEVICE	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION				MIDDLE, INTERMEDIATE
N	TORQUE		USER'S CHOICE (*)	USER'S CHOICE (*)	USER'S CHOICE (*)
O	USER'S CHOICE (*)		ORIFICE, RESTRICTION		
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE	RELIEF		
R	RADIATION		RECORD OR PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTI VARIABLE		MULTI FUNCTION	MULTI FUNCTION	MULTI FUNCTION
V	VIBRATION, MECHANICAL ANALYSIS	VACUUM		VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED (*)	X AXIS	UNCLASSIFIED (*)	UNCLASSIFIED (*)	UNCLASSIFIED (*)
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION	Z AXIS		DRIVE, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

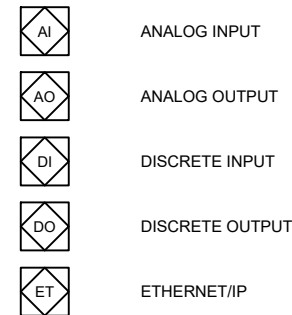
TABLE BASED ON THE INSTRUMENTATION, SYSTEMS, AND AUTOMATION SOCIETY (ISA) STANDARD.

(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS.
 (*) WHEN USED, DEFINE THE MEANING HERE FOR THE PROJECT.

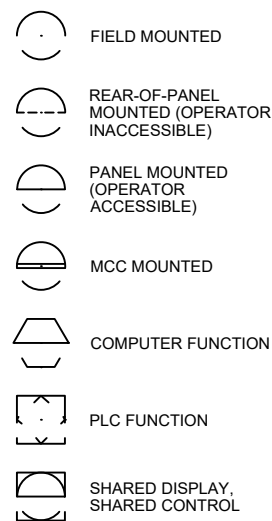
EXAMPLE SYMBOLS



DIGITAL SYSTEM INTERFACES



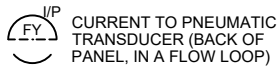
GENERAL INSTRUMENT OR FUNCTIONAL SYMBOLS



TRANSDUCERS

A	ANALOG	I	CURRENT
D	DIGITAL	P	PNEUMATIC
E	VOLTAGE	PF	PULSE FREQUENCY
F	FREQUENCY	PD	PULSE DURATION
H	HYDRAULIC	R	RESISTANCE

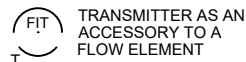
EXAMPLE



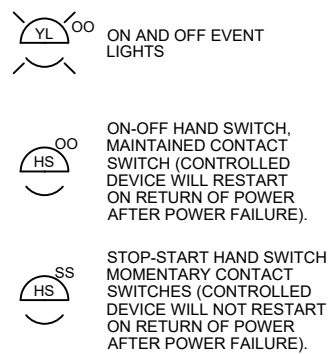
ACCESSORY DEVICES

A	ALARM
C	CONTROLLER
I	INDICATOR
R	RECORDER
S	SWITCH
T	TRANSMITTER
X	UNCLASSIFIED

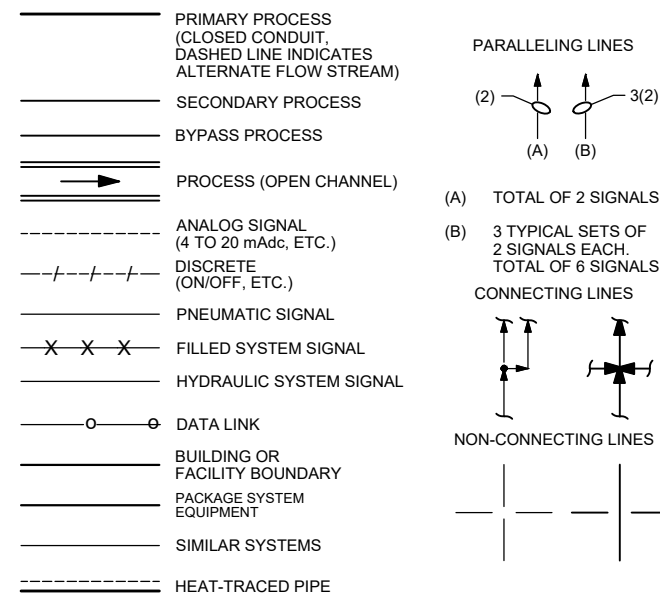
EXAMPLE



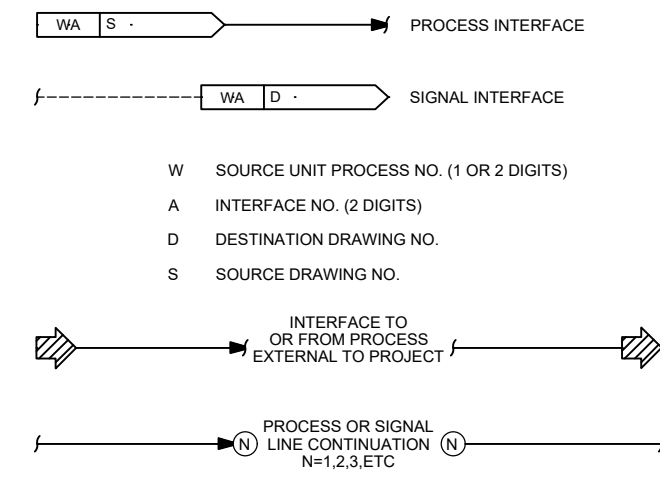
SPECIAL CASES



LINE LEGEND



INTERFACE SYMBOLS



INSTRUMENT AND EQUIPMENT TAG NUMBERS

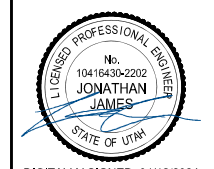
TAG NUMBER = PER JWCD STANDARDS
 123 = FACILITY NUMBER
 ABC = EQUIPMENT/INSTRUMENT IDENTIFIERS
 45678 = LOOP NUMBER

ABBREVIATIONS & LETTER SYMBOLS

AC	ALTERNATING CURRENT
ACC	AREA CONTROL CENTER
AM	AUTO-MANUAL
CAM	COMPUTER-AUTO-MANUAL
CCS	CENTRAL CONTROL SYSTEM
CL ₂ etc.	CHLORINE (TYPICAL: USE STANDARD CHEMICAL ELEMENT ABBREVIATIONS)
CLSD	CLOSED
CM	COMPUTER-MANUAL
COD	CHEMICAL OXYGEN DEMAND
CP-X	CONTROL PANEL NO. X
DC	DIRECT CURRENT
DCS	DISTRIBUTED CONTROL SYSTEM
DCU	DISTRIBUTED CONTROL UNIT
DO	DISSOLVED OXYGEN
FCL ₂	FREE CHLORINE RESIDUAL
FOS	FAST-OFF-SLOW
FOSA	FAST-OFF-SLOW-AUTO
FOSR	FAST-OFF-SLOW-REMOTE
FP-W-X	FIELD PANEL NO. WX (W=UNIT PROCESS NUMBER X= PANEL NUMBER)
FR	FORWARD-REVERSE
GNG	GO-NO GO
HOR	HAND-OFF-REMOTE
ISR	INTRINSICALLY SAFE RELAY
JB	JUNCTION BOX
LCP	LOCAL CONTROL PANEL
LEL	LOWER EXPLOSIVE LIMIT
LOS	LOCKOUT STOP
LR	LOCAL-REMOTE
MA	MANUAL-AUTO
MC	MODULATE-CLOSE
MCC-X	MOTOR CONTROL CENTER NO. X
MCP	MECHANICAL CONTROL PANEL
MSC	MANUFACTURER SUPPLIED CABLE
OC	OPEN-CLOSE(D)
OCA	OPEN-CLOSE-AUTO
OCR	OPEN-CLOSE-REMOTE
OO	ON-OFF
OOA	ON-OFF-AUTO
OOR	ON-OFF-REMOTE
ORP	OXIDATION REDUCTION POTENTIAL
OSC	OPEN-STOP-CLOSE
OPND	OPENED
pH	HYDROGEN ION CONCENTRATION
PLC	PROGRAMMABLE LOGIC CONTROLLER
REM	REMOTE
RIO	REMOTE I/O UNIT
RM-X	REMOTE MULTIPLEXING MODULE NO. X
RTU-X	REMOTE TELEMETRY UNIT NO. X
SF	SLOWER-FASTER
SHK	SPEED HAND CONTROL
SHWR	SHOWER
SS	START-STOP
SSC	SUPERVISORY SET POINT CONTROL
TCL ₂	TOTAL CHLORINE RESIDUAL
TOC	TOTAL ORGANIC CARBON
TOD	TOTAL OXYGEN DEMAND
TURB	TURBIDITY
VCP	VIBRATION CONTROL PANEL
VHC	VOLATILE HYDROCARBONS
VIB	VIBRATION
Δ	DIFFERENCE
Σ	SUM
x	MULTIPLY
÷	DIVIDE
F(X)	CHARACTERIZED
X ⁿ	RAISED TO THE Nth POWER
√	SQUARE ROOT
AVG	AVERAGE
1:1	REPEAT OR BOOST
>	SELECT HIGHEST SIGNAL
<	SELECT LOWEST SIGNAL
}	BIAS
%	GAIN OR ATTENUATE

GENERAL NOTES

- COMPONENTS AND PANELS SHOWN WITH A SINGLE ASTERISK (*) ARE TO BE PROVIDED AS PART OF A PACKAGE SYSTEM.
- COMPONENTS AND PANELS SHOWN WITH A DOUBLE ASTERISK (**) ARE TO BE PROVIDED UNDER DIVISION 26, ELECTRICAL.
- COMPONENTS SHOWN WITH A TRIPLE ASTERISK (***) ARE OWNER FURNISHED.
- THIS IS A STANDARD LEGEND. THEREFORE, NOT ALL OF THIS INFORMATION MAY BE USED ON THE PROJECT.



DIGITALLY SIGNED: 04/12/2024

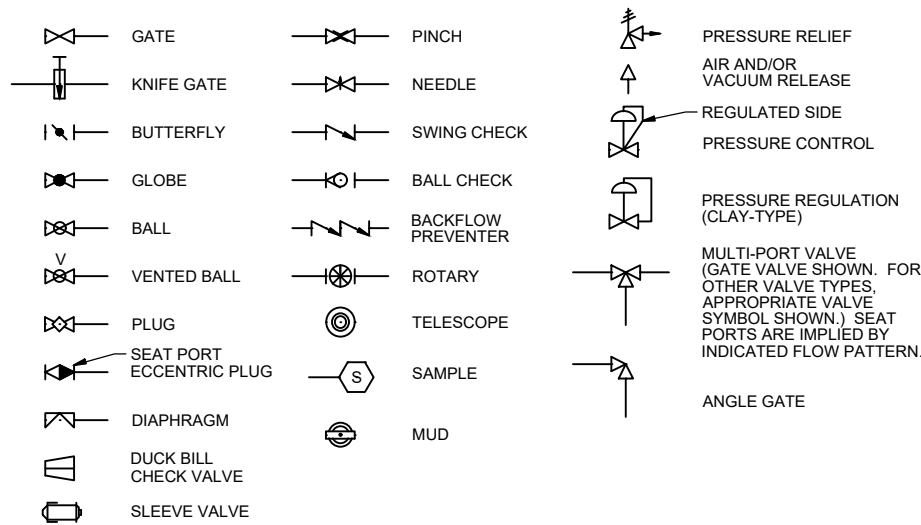
NO.	DATE	DR	REVISION	BY	APVD
				J. JAMES	

JORDAN VALLEY WATER CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

Jacobs
 GENERAL
 INSTRUMENTATION AND CONTROLS
 LEGEND - 1

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2024
PROJ	W7Y49600
DWG	G-11
SHEET	11 of 79

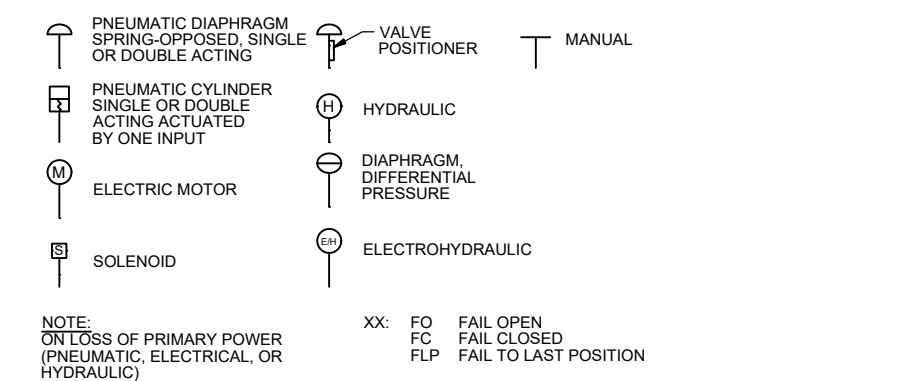
VALVE SYMBOLS



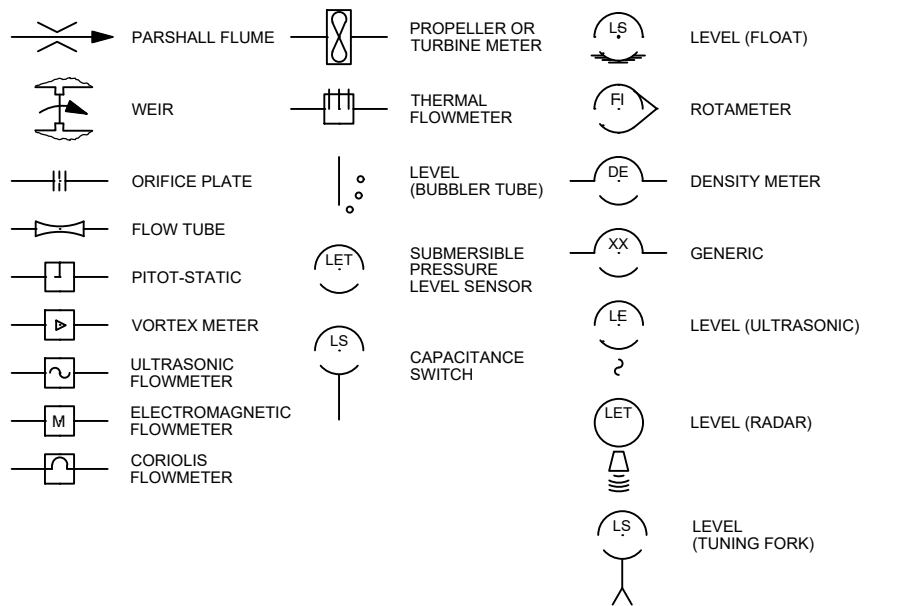
GATE SYMBOLS



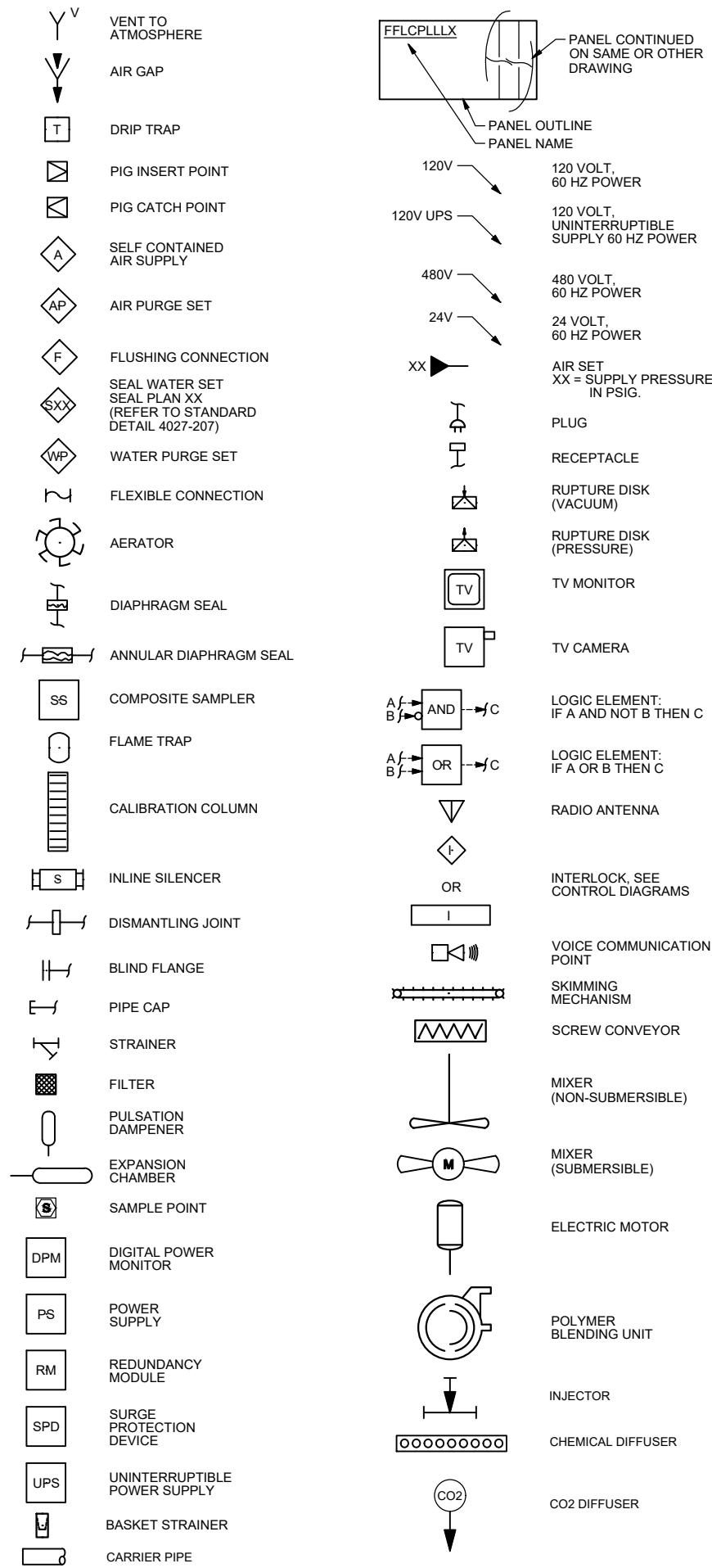
ACTUATOR SYMBOLS



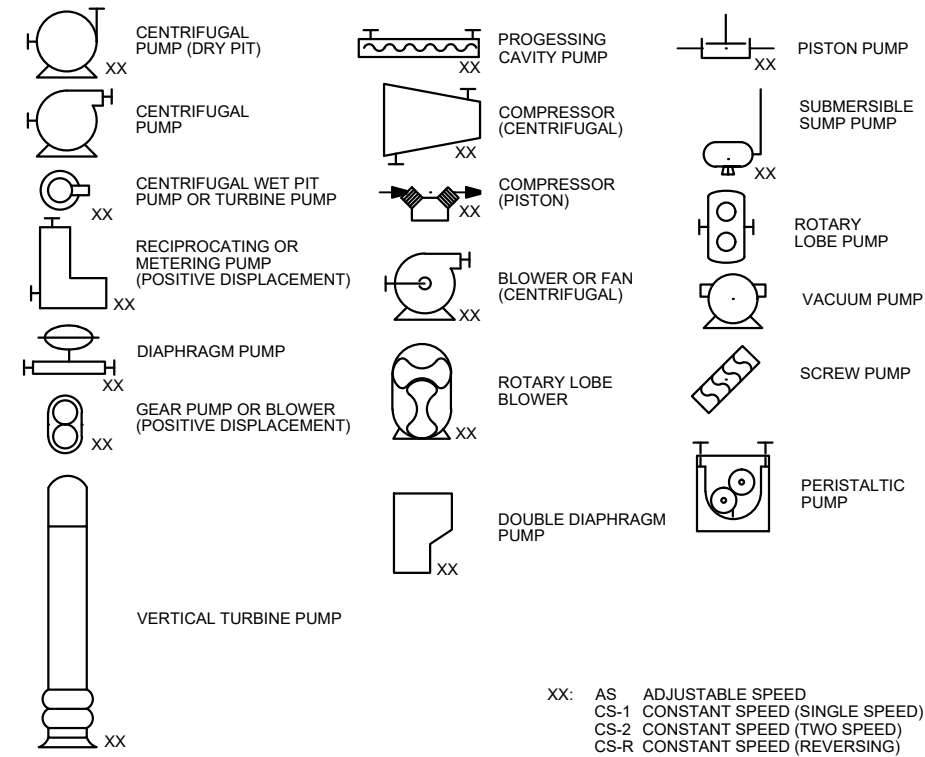
PRIMARY ELEMENT SYMBOLS



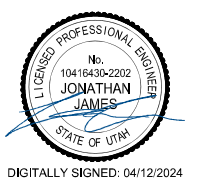
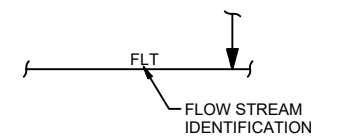
MISCELLANEOUS SYMBOLS



PUMP AND COMPRESSOR SYMBOLS



LINE IDENTIFICATION



NO.	DATE	DR	CHK	APVD	BY
					J. JAMES

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
GENERAL
**INSTRUMENTATION AND CONTROLS
LEGEND - 2**

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2024
PROJ	W7Y49600
DWG	G-12
SHEET	12 of 79

SYMBOL	DESCRIPTION
POWER SYSTEMS PLANS - 1	
	CONNECTION POINT TO EQUIPMENT SPECIFIED, RACEWAY, CONDUCTOR, TERMINATION AND CONNECTION IN THIS DIVISION.
	MAJOR ELECTRICAL COMPONENT OR DEVICE - NAME OR IDENTIFYING SYMBOL AS SHOWN.
	PANELBOARD - SURFACE MOUNTED
	PANELBOARD LETTER OR NUMBER FACILITY NUMBER LP - LOW VOLTAGE PANEL DP - DISTRIBUTION PANEL
	TERMINAL JUNCTION BOX
	MOTOR, SQUIRREL CAGE INDUCTION
	HOME RUN - DESTINATION SHOWN
	EXPOSED CONDUIT AND CONDUCTORS*
	CONCEALED CONDUIT AND CONDUCTORS*
NOTE: ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO. 12, ONE NO. 12 GROUND CONDUCTORS IN 3/4" CONDUIT. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF NO. 12 CONDUCTORS. CROSSHATCH WITH SUBSCRIPT "G" INDICATES GREEN GROUND WIRE.	
	CONDUIT AND CONDUCTOR CALLOUT, SEE LEGEND.
	CONDUIT DOWN
	CONDUIT UP
	CONDUIT, STUBBED AND CAPPED
	CONCRETE ENCASED CONDUIT
	EXISTING CONDUIT/DUCTBANK
	DIRECT BURIED CONDUIT
	GENERAL CONTROL OR WIRING DEVICE. LETTER SYMBOLS OR ABBREVIATIONS INDICATE TYPE OF DEVICE
	CONTROL STATION, SEE CONTROL DIAGRAMS FOR CONTROL DEVICE(S) REQUIRED.
	NONFUSED DISCONNECT SWITCH, CURRENT RATING INDICATED, 3 POLE
	CONVENIENCE RECEPTACLE - DUPLEX UNLESS NOTED OTHERWISE WP - WEATHERPROOF TL - TWIST LOCK GFCI - GROUND FAULT CIRCUIT INTERRUPTER SUBSCRIPT NUMBER AT RECEPTACLE INDICATES CIRCUIT
	WALL SWITCH: WP- WEATHERPROOF M- MOTOR RATED MS- MANUAL STARTER WITH OVERLOADS
	UTILITY POLE
	CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE, UNO
	MOTOR, SQUIRREL CAGE INDUCTION - HORSEPOWER INDICATED
	UTILITY REVENUE METER
	GROUND
	GROUND ROD
	GROUNDING CONDUCTOR, SIZE AS INDICATED
	GROUND ROD IN TEST WELL
	BREAKER, SEPARATELY MOUNTED, CURRENT RATING INDICATED (100/40, 100 = FRAME SIZE, 40 = TRIP RATING) 3 POLE

SYMBOL	DESCRIPTION
CONTROL DIAGRAMS	
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
	SELECTOR SWITCH - MAINTAINED CONTACT - CHART IDENTIFIES OPERATION WHEN NEEDED FOR CLARITY:
	MUSHROOM HEAD SWITCH
	INDICATING LIGHT, PUSH-TO-TEST, LETTER INDICATES COLOR
	INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN S - STROBE B - BLUE R - RED C - CLEAR W - WHITE
	ELAPSED TIME METER
	MOTOR STARTER CONTACTOR COIL
	CONTROL RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT
	TIME DELAY RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT
	CONTACT - NORMALLY OPEN
	CONTACT - NORMALLY CLOSED
	REMOTE DEVICE
	TIME DELAY RELAY CONTACT, NORMALLY OPEN, CLOSURES WHEN ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, NORMALLY CLOSED, OPENS WHEN ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, CLOSURES WHEN ENERGIZED, OPENS WHEN DE-ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, OPENS WHEN ENERGIZED, CLOSURES WHEN DE-ENERGIZED AND TIMED OUT
	TERMINAL BLOCK, REMOTE
	TERMINAL BLOCK, INTERNAL
	TRANSFORMER, CONTROL POWER
	FLOAT SWITCH, NORMALLY OPEN, CLOSURES ON DESCENDING LEVEL
	FLOAT SWITCH, NORMALLY OPEN, CLOSURES ON RISING LEVEL
	PRESSURE SWITCH, NORMALLY CLOSED, OPENS ON RISING PRESSURE
	PRESSURE SWITCH, NORMALLY OPEN, CLOSURES ON RISING PRESSURE
LIGHTING SYSTEM PLAN	
	LUMINAIRE, SEE SCHEDULE ON DRAWING
	SMALL LETTER SUBSCRIPT AT SWITCH AND LUMINAIRE INDICATES SWITCHING. SUBSCRIPT NUMBER AT LUMINAIRE INDICATES CIRCUIT
	WALL SWITCH: 2- DOUBLE POLE P- PILOT LIGHT 3- THREE WAY K- KEY OPERATED 4- FOUR WAY D- DIMMER WP- WEATHERPROOF CRE- CORROSION RESISTANT EX- EXPLOSIONPROOF L- MOMENTARY 3-WAY M- MOTOR RATED MS- MANUAL STARTER WITH OVERLOADS OS- OCCUPANCY SENSOR

SYMBOL	DESCRIPTION
ABBREVIATIONS	
A	AMPERE, AUTOMATIC
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT, CONTACTOR, CONDUCTOR, CLOSE
CKT	CIRCUIT
CL	CHLORINE
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DCS	DISTRIBUTED CONTROL SYSTEM
DP	DISTRIBUTION PANEL
DPC	DEFINITE PURPOSE CONTACTOR
DS	DISCONNECT SWITCH
E	EMPTY
ENCL	ENCLOSURE
EX	EXHAUST
F, FU	FUSE
FIT	FLOW INDICATING TRANSMITTER
FREQ	FREQUENCY
FT	FLOW TRANSMITTER
G	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HH	HANDHOLE
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HS	HAND SWITCH
HZ	HERTZ
IC	INTERRUPTING CAPACITY
I/O	INPUT / OUTPUT
J, JB	JUNCTION BOX
KA	KILOAMPERES
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATTS
LP	LIGHTING PANELBOARD
LSH	LEVEL SWITCH HIGH
M	MAGNETIC CONTACTOR COIL, MOTOR, MANUAL
MCC-X	MOTOR CONTROL CENTER NO. X
MFR	MANUFACTURER
MOV	MOTOR OPERATED VALVE
MPC	MINI-POWER CENTER
MSC	MANUFACTURER SUPPLIED CABLE
NC	NORMALLY CLOSED
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
NW	NETWORK
OL	OVERLOAD RELAY
P	POLES
PB	PULL BOX
PIT	PRESSURE INDICATING TRANSMITTER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PT	PRESSURE TRANSMITTER
RCPT	RECEPTACLE
RGS	RIGID GALVANIZED STEEL CONDUIT
RIO	REMOTE I/O UNIT
RTU	REMOTE TERMINAL UNIT
RTU-X	REMOTE TELEMETRY UNIT NO. X
S	SOUTH
SS	START STOP
SST	STAINLESS STEEL
SV	SOLENOID VALVE
TSP	TWISTED SHIELDED PAIR
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLTAGE, VOLTS
VA	VOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WIU	WHILE-IN-USE
WP	WEATHERPROOF
XFMR	TRANSFORMER

SYMBOL	DESCRIPTION
SECURITY SYSTEM PLAN AND RISER	
	CARD KEY ACCESS LOCATION
	CONTROL STATION
	DOOR SWITCH
	EGRESS PUSHBUTTON
	ELECTRONIC LOCK
	INTERCOM
	MONITOR
	MOTION SENSOR
	VIDEO CAMERA
POWER SYSTEMS PLANS - 2	
	TRANSFORMER
	FUSED DISCONNECT SWITCH, CURRENT RATING INDICATED (60/40, 60=SWITCH RATING / 40=FUSE RATING) 3 POLE
	COMBINATION CIRCUIT BREAKER AND MAGNETIC STARTER, NEMA SIZE INDICATED
	STARTER, MAGNETIC NEMA SIZE INDICATED
	PULLBOX
	POLE

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NO.	DATE	REVISION	CHK	BY
DGN	DATE	DGN	CHK	BY
DR	DATE	DR	CHK	BY
APVD	DATE	APVD	CHK	BY
APVD	DATE	APVD	CHK	BY
APVD	DATE	APVD	CHK	BY

JORDAN VALLEY WATER
CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

JACOBS

GENERAL

ELECTRICAL LEGEND - 1

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2024
PROJ	W7Y49600
DWG	G-13
SHEET	13 of 79

SYMBOL	DESCRIPTION
	DRAWOUT AIR CIRCUIT BREAKER, LOW VOLTAGE
	CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE, UNO
	CIRCUIT BREAKER, STATIC TRIP UNIT, SENSOR AMP TRIP AND FRAME RATINGS SHOWN, 3 POLE, UNO
	CIRCUIT BREAKER, MAGNETIC TRIP ONLY, TRIP RATING SHOWN, 3 POLE, UNO
	CIRCUIT BREAKER WITH CURRENT LIMITING FUSES, TRIP AND FUSE RATING INDICATED, 3 POLE, UNO
	FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE, UNO
	SWITCH, CURRENT RATING INDICATED, 3 POLE, UNO
	FUSE, CURRENT RATING AND QUANTITY INDICATED
	MAGNETIC STARTER WITH OVERLOAD, NEMA SIZE INDICATED, FVNR UNO
	ELECTRONIC STARTER/SPEED CONTROL RVSS = REDUCED VOLTAGE SOFT STARTER AFD = AC ADJUSTABLE FREQUENCY DRIVE DC = DC ADJUSTABLE SPEED DRIVE RVAT = REDUCED VOLTAGE AUTO TRANSFORMER TYPE RVRT = REDUCED VOLTAGE REACTOR TYPE
	CABLE OR BUS CONNECTION POINT
	KEY INTERLOCK
	SURGE ARRESTER (GAP TYPE)
	CAPACITOR - KVAR INDICATED, 3 PHASE
	AC MOTOR, SQUIRREL CAGE INDUCTION - HORSEPOWER INDICATED
	GENERATOR, KW/KVA RATING SHOWN
	ANALOG METER WITH SWITCH - SCALE RANGE SHOWN V = VOLTAGE KW = KILOWATTS A = AMPERAGE KVAR = KILOVARS PF = POWER FACTOR
	DIGITAL POWER METER (MULTIFUNCTION)
	UTILITY REVENUE METER
	GROUND
	TRANSFORMER, SIZE, VOLTAGE RATINGS, AND PHASE INDICATED
	SHIELDED ISOLATION TRANSFORMER
	POTENTIAL TRANSFORMER, VOLTAGE RATING AND QUANTITY INDICATED
	CURRENT TRANSFORMER, RATIO(100:5) AND QUANTITY INDICATED (3)
	CONNECTION POINT TO EQUIPMENT SPECIFIED IN OTHER DIVISIONS. RACEWAY, CONDUCTOR AND CONNECTION IN THIS DIVISION
	SURGE PROTECTIVE DEVICE

SYMBOL	DESCRIPTION
	DRAWOUT POWER CIRCUIT BREAKER, MEDIUM VOLTAGE
	NON DRAWOUT FUSED SWITCH, MEDIUM VOLTAGE
	DRAWOUT FUSED SWITCH AND CONTACTOR, MEDIUM VOLTAGE
	DRAWOUT FUSED SWITCH AND VACUUM CONTACTOR, MEDIUM VOLTAGE
	DRAWOUT VACUUM CONTACTOR, MEDIUM VOLTAGE
	MEDIUM VOLTAGE CABLE STRESS CONE TYPE TERMINATION, OPEN TERMINATOR OR ELBOW
	SWITCH - LOAD BREAK, GROUP OPERATED, MEDIUM VOLTAGE
	SWITCH W/ARCING HORNS, MEDIUM VOLTAGE
	DISCONNECTING FUSE - SOLID MATERIAL, MEDIUM VOLTAGE
	SWITCH - HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE
	FUSE - EXPULSION, HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE
	GROUND SWITCH, GANG OPERATED
	TERMINAL BLOCK LUG
	DELTA CONNECTION
	WYE GROUNDED CONNECTION, SOLID GROUND
	WYE NEUTRAL GROUND RESISTOR OR IMPEDANCE CONNECTION
	RELAY OR DEVICE, FUNCTION NUMBER AS INDICATED
	CURRENT TRANSFORMER, ZERO SEQUENCE, RATIO AND QUANTITY INDICATED
	BUSHING CURRENT TRANSFORMER, MULTI-RATIO AND QUANTITY INDICATED
	MOTOR OPERATOR, BREAKER OR SWITCH
	ENERGY MONITORING UNIT
	MOTOR PROTECTION RELAY

NOTES:

1. THESE ARE STANDARD LEGEND SHEETS. SOME SYMBOLS AND ABBREVIATIONS MAY APPEAR ON THE LEGEND AND NOT ON THE DRAWINGS.
2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS (HVAC, MECHANICAL, AND STRUCTURAL/ARCHITECTURAL) SEE OTHER LEGENDS.

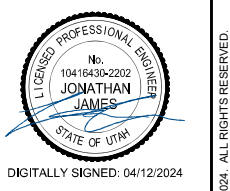
GENERAL CIRCUIT CONDUCTOR AND CONDUIT IDENTIFICATION

POWER CIRCUIT CALLOUTS		MULTICONDUCTOR POWER CABLE CIRCUIT CALLOUTS	
[P1]	[1/2"FLEX, 2#12, #12G]	[P24]	[1"C, 3#8, 3#14, 1#10G]
[P2]	[3/4"C, 2#12, 1#12G]	[P25]	[1"C, 3#8, 4#14, 1#10G]
[P3]	[3/4"C, 3#12, 1#12G]	[P26]	[1"C, 3#8, 5#14, 1#10G]
[P4]	[3/4"C, 4#12, 1#12G]	[P27]	[1"C, 2#6, 1#10G]
[P5]	[3/4"C, 5#12, 1#12G]	[P28]	[1"C, 3#6, 1#8G]
[P6]	[3/4"C, 6#12, 1#12G]	[P29]	[1"C, 3#6, 2#14, 1#8G]
[P7]	[3/4"C, 7#12, 1#12G]	[P30]	[1 1/4"C, 3#6, 3#14, 1#8G]
[P8]	[3/4"C, 8#12, 1#12G]	[P31]	[1 1/4"C, 3#6, 4#14, 1#8G]
[P9]	[3/4"C, 3#12, 2#14, 1#12G]	[P32]	[1 1/4"C, 3#6, 5#14, 1#8G]
[P10]	[3/4"C, 3#12, 3#14, 1#12G]	[P33]	[1 1/4"C, 3#4, 1#8G]
[P11]	[3/4"C, 3#12, 4#14, 1#12G]	[P34]	[1 1/4"C, 3#4, 3#14, 1#8G]
[P12]	[3/4"C, 3#12, 5#14, 1#12G]	[P35]	[1 1/4"C, 3#4, 5#14, 1#8G]
[P13]	[3/4"C, 3#12, 6#14, 1#12G]	[P36]	[1 1/4"C, 3#3, 1#6G]
[P14]	[1"C, 3#12, 7#14, 1#12G]	[P37]	[1 1/4"C, 3#3, 3#14, 1#6G]
[P15]	[2"C, 2#10, 1#10G]	[P38]	[1 1/4"C, 3#2, 1#6G]
[P16]	[3/4"C, 3#10, 1#10G]	[P39]	[1 1/2"C, 3#1, 1#6G]
[P17]	[3/4"C, 3#10, 2#14, 1#10G]	[P40]	[2"C, 3#1, 3#14, 1#6G]
[P18]	[3/4"C, 3#10, 3#14, 1#10G]	[P41]	[2"C, 3#2/0, 1#4G]
[P19]	[3/4"C, 3#10, 4#14, 1#10G]	[P42]	[2"C, 3#3/0, 1#4G]
[P20]	[1"C, 3#10, 5#14, 1#10G]	[P43]	[2"C, 3#4/0, 1#3G]
[P21]	[1"C, 2#8, 1#10G]	[P44]	[1 1/2"C, 4#1, 1#6G]
[P22]	[1"C, 3#8, 1#10G]	[P45]	[2"C, 3#2 (15KV), 1#6G (600V)]
[P23]	[1"C, 3#8, 2#14, 1#10G]		
[PC1] [3/4"C, 1 (3C#12, 1#12G) TYPE 2]		[PC2] [3/4"C, 1 (3C#10, 1#10G) TYPE 2]	
[PC3] [3/4"C, 1 (3C#8, 1#10G) TYPE 2]		[PC4] [3/4"C, 2 (3C#12, 1#12G) TYPE 2]	
[PC5] [1"C, 2 (3C#10, 1#10G) TYPE 2]		[PC1A] [3/4"C, 1 (2C#12, 1#12G) TYPE 2]	
[PC2A] [3/4"C, 1 (2C#10, 1#10G) TYPE 2]			
EMPTY CONDUIT			
[EC-1]	[3/4"C, WITH PULL STRING]	[EC-2]	[1"C, WITH PULL STRING]
[EC-3]	[1 1/4"C, WITH PULL STRING]	[EC-4]	[1 1/2"C, WITH PULL STRING]
[EC-5]	[2"C, WITH PULL STRING]	[EC-6]	[3"C, WITH PULL STRING]
[EC-7]	[4"C, WITH PULL STRING]	[EC-8]	[5"C, WITH PULL STRING]

ANALOG CIRCUIT CALLOUTS		CONTROL CIRCUIT CALLOUTS		MULTICONDUCTOR CONTROL CABLE CIRCUIT CALLOUTS	
[A1]	[3/4"C, 1 TYPE 3]	[C1]	[3/4"C, MSC]	[CC3]	[3/4"C, 1-3C TYPE 1]
[A2]	[3/4"C, 2 TYPE 3]	[C2]	[3/4"C, 2#14, 1#14G]	[CC5]	[3/4"C, 1-5C TYPE 1]
[A3]	[1"C, 3 TYPE 3]	[C3]	[3/4"C, 3#14, 1#14G]	[CC7]	[3/4"C, 1-7C TYPE 1]
[A4]	[1 1/4"C, 4 TYPE 3]	[C4]	[3/4"C, 4#14, 1#14G]	[CC9]	[1"C, 1-9C TYPE 1]
[A5]	[1 1/4"C, 5 TYPE 3]	[C5]	[3/4"C, 5#14, 1#14G]	[CC12]	[1"C, 1-12C TYPE 1]
[A6]	[1 1/4"C, 6 TYPE 3]	[C6]	[3/4"C, 6#14, 1#14G]	[CC19]	[1 1/2"C, 1-19C TYPE 1]
[A7]	[1 1/2"C, 7 TYPE 3]	[C7]	[3/4"C, 7#14, 1#14G]	[CC25]	[1 1/2"C, 1-25C TYPE 1]
[A8]	[1 1/2"C, 8 TYPE 3]	[C8]	[3/4"C, 8#14, 1#14G]	[CC37]	[2"C, 1-37C TYPE 1]
[A9]	[1 1/2"C, 9 TYPE 3]	[C9]	[3/4"C, 9#14, 1#14G]	[CCC1]	[1-7C #12 TYPE 1]
[A10]	[2"C, 10 TYPE 3]	[C10]	[3/4"C, 10#14, 1#14G]		
[A11]	[2"C, 11 TYPE 3]	[C11]	[3/4"C, 11#14, 1#14G]		
[A12]	[2"C, 12 TYPE 3]	[C12]	[3/4"C, 12#14, 1#14G]		
[A13]	[2"C, 13 TYPE 3]	[C13]	[3/4"C, 13#14, 1#14G]		
[A14]	[2"C, 14 TYPE 3]	[C14]	[1"C, 14#14, 1#14G]		
[A15]	[3/4"C, 1 TYPE 4]	[C15]	[1"C, 15#14, 1#14G]		
[A16]	[3/4"C, 2 TYPE 4]	[C16]	[1"C, 16#14, 1#14G]		
[A17]	[1"C, 3 TYPE 4]	[C17]	[1"C, 17#14, 1#14G]		
[A18]	[1 1/4"C, 4 TYPE 4]	[C18]	[1"C, 18#14, 1#14G]		
[A19]	[1 1/4"C, 5 TYPE 4]	[C19]	[1"C, 19#14, 1#14G]		
[A20]	[1 1/4"C, 6 TYPE 4]	[C20]	[1"C, 20#14, 1#14G]		
[A21]	[1 1/2"C, 7 TYPE 4]	[C21]	[1"C, 21#14, 1#14G]		
[A22]	[1 1/2"C, 8 TYPE 4]	[C22]	[1"C, 22#14, 1#14G]		
[A23]	[2"C, 9 TYPE 4]	[C23]	[1"C, 23#14, 1#14G]		
[A24]	[3/4"C, 1-4 pr. TYPE 5]	[C24]	[1 1/4"C, 24#14, 1#14G]		
[A25]	[1"C, 2-4 pr. TYPE 5]	[C25]	[1 1/4"C, 25#14, 1#14G]		

NOTES:

1. FOR CABLE TYPES, SEE SPECIFICATIONS. TYPES 1 AND 5 NOT INCLUDED. ALL CONDUCTORS SHALL BE STRANDED COPPER. ALL POWER CIRCUITS SHALL HAVE THEIR OWN NEUTRAL CONDUCTOR.
2. POWER CIRCUIT CALLOUTS ARE BASED ON THE AREA OF THW CONDUCTORS. CONTROL CIRCUIT CALLOUTS ARE BASED ON THE AREAS OF SCHEDULE 40 PVC CONDUIT AND TYPES XHHW & XHHW-2 INSULATION.
3. SIZING OF CONDUCTORS #1AWG AND SMALLER BASED ON AMPACITIES AT 60 DEGREES C, SIZING OF CONDUCTORS #1/0AWG AND LARGER BASED ON AMPACITIES AT 75 DEGREES C.
4. WHERE CIRCUITS ARE UNDERGROUND, DIRECT BURIED OR CONCRETE ENCASED, MINIMUM CONDUIT SIZE SHALL BE 1".
5. FOR METRIC CONDUIT SIZES USE THE FOLLOWING CONVERSION:
1/2" = 16 mm 1 1/4" = 35 mm
3/4" = 21 mm 1 1/2" = 41 mm
1" = 27 mm 2" = 53 mm



NO.	DATE	REVISION	CHK	APVD	BY
					J. JAMES
					J. JAMES
					J. JAMES

JORDAN VALLEY WATER
 CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

GENERAL
ELECTRICAL LEGEND - 2

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2024
PROJ	W7Y49600
DWG	G-14
SHEET	14 OF 79



NO.	DATE	DR	CHK	REVISION	BY	APVD
		T WITHERS	C HOGGARD		B PHELPS	R WILLEITNER

JORDAN VALLEY WATER
CONSERVANCY DISTRICT

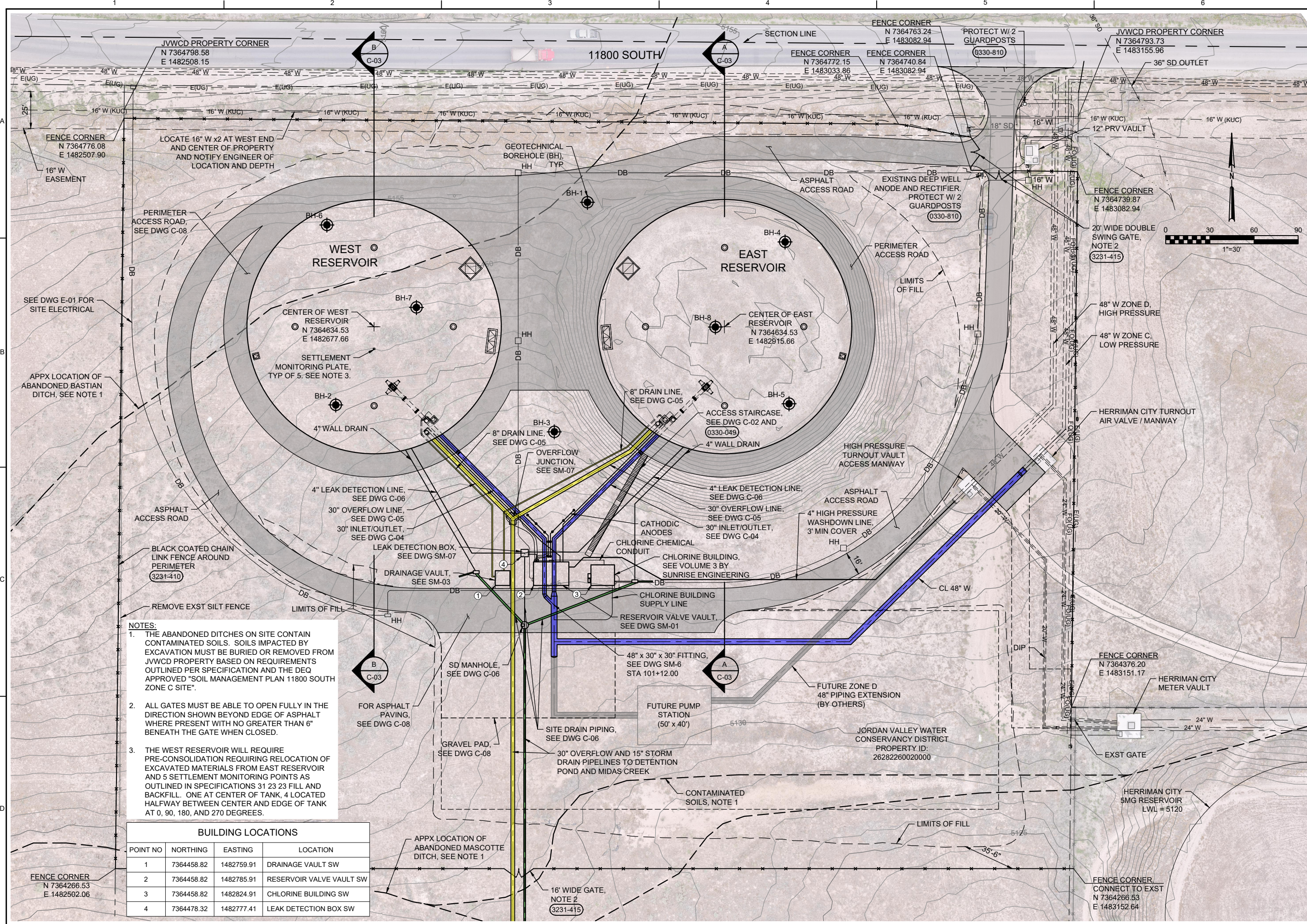
11800 SOUTH ZONE C RESERVOIRS

Jacobs

CIVIL

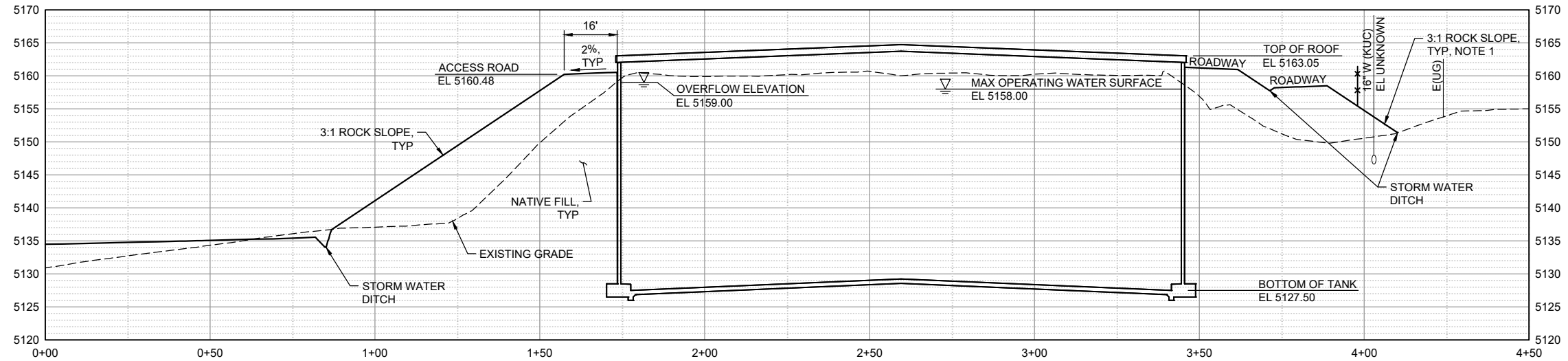
SITE PLAN

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2024
PROJ	W7Y49600
DWG	C-01
SHEET	16 of 79



- NOTES:**
1. THE ABANDONED DITCHES ON SITE CONTAIN CONTAMINATED SOILS. SOILS IMPACTED BY EXCAVATION MUST BE BURIED OR REMOVED FROM JWCD PROPERTY BASED ON REQUIREMENTS OUTLINED PER SPECIFICATION AND THE DEQ APPROVED "SOIL MANAGEMENT PLAN 11800 SOUTH ZONE C SITE".
 2. ALL GATES MUST BE ABLE TO OPEN FULLY IN THE DIRECTION SHOWN BEYOND EDGE OF ASPHALT WHERE PRESENT WITH NO GREATER THAN 6" BENEATH THE GATE WHEN CLOSED.
 3. THE WEST RESERVOIR WILL REQUIRE PRE-CONSOLIDATION REQUIRING RELOCATION OF EXCAVATED MATERIALS FROM EAST RESERVOIR AND 5 SETTLEMENT MONITORING POINTS AS OUTLINED IN SPECIFICATIONS 31 23 23 FILL AND BACKFILL. ONE AT CENTER OF TANK, 4 LOCATED HALFWAY BETWEEN CENTER AND EDGE OF TANK AT 0, 90, 180, AND 270 DEGREES.

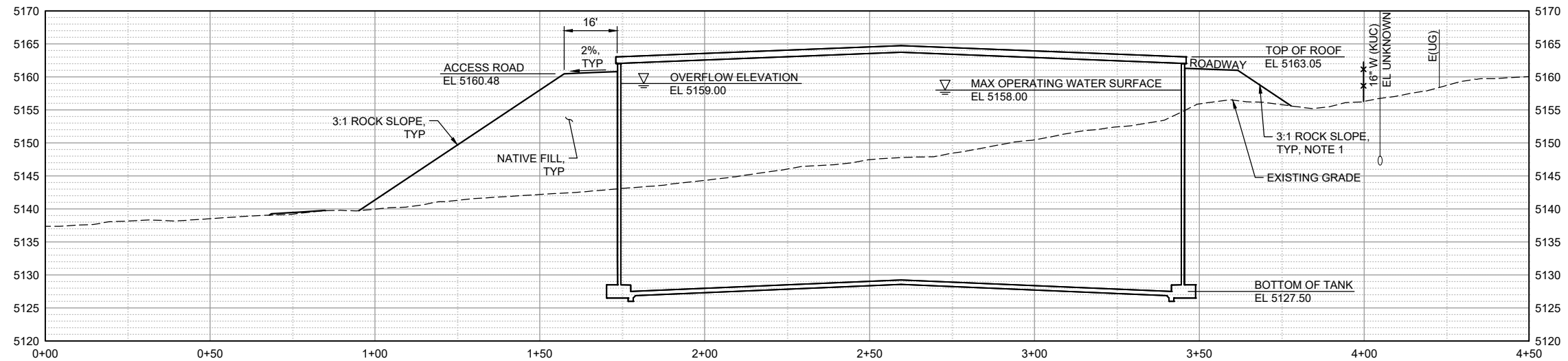
BUILDING LOCATIONS			
POINT NO	NORTHING	EASTING	LOCATION
1	7364458.82	1482759.91	DRAINAGE VAULT SW
2	7364458.82	1482785.91	RESERVOIR VALVE VAULT SW
3	7364458.82	1482824.91	CHLORINE BUILDING SW
4	7364478.32	1482777.41	LEAK DETECTION BOX SW



A SECTION - EAST RESERVOIR
1" = 20'
C-1

NOTES:

1. LANDSCAPE AND VEGETATE SLOPES PER DWG C-10 AND SPECIFICATION SECTION 32 92 00.



B SECTION - WEST RESERVOIR
1" = 20'
C-1



DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DSGN	DR	CHK	REVISION	BY
						R WILLEITNER
						B PHELPS
						C HOGGARD
						T WITHERS

JORDAN VALLEY WATER
CONSERVANCY DISTRICT



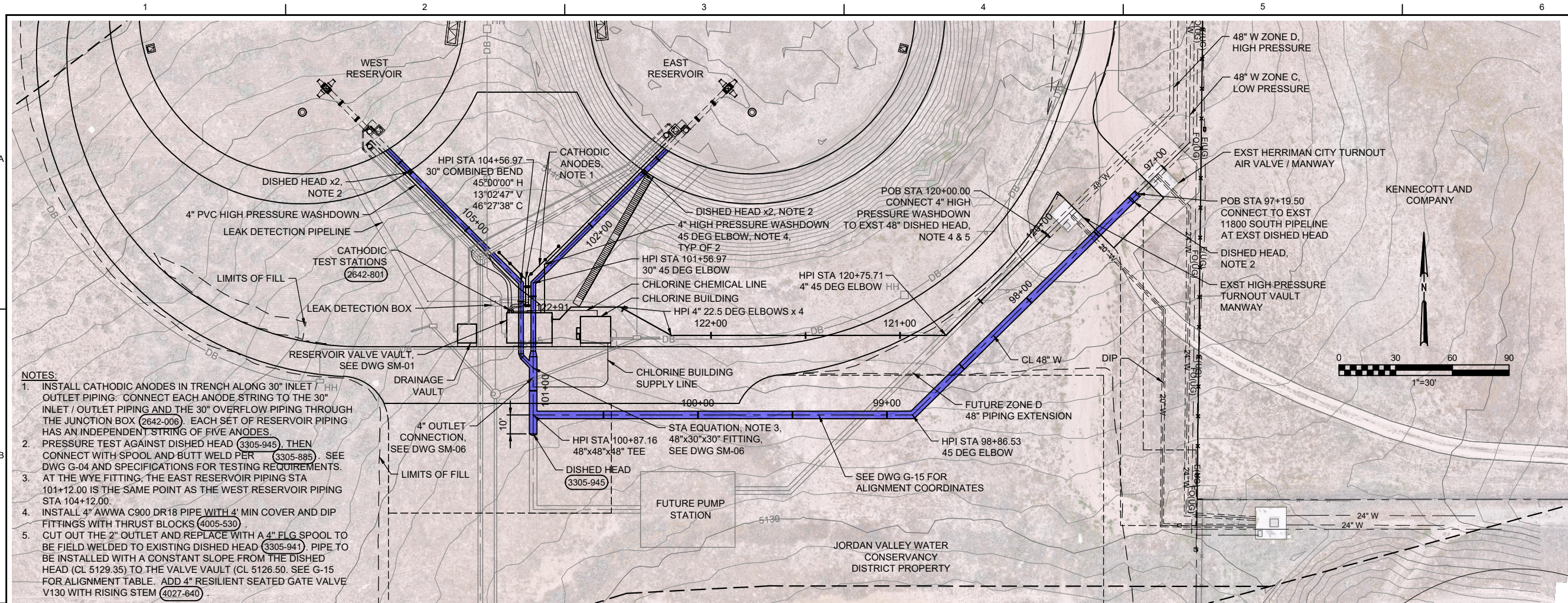
11800 SOUTH ZONE C RESERVOIRS

Jacobs

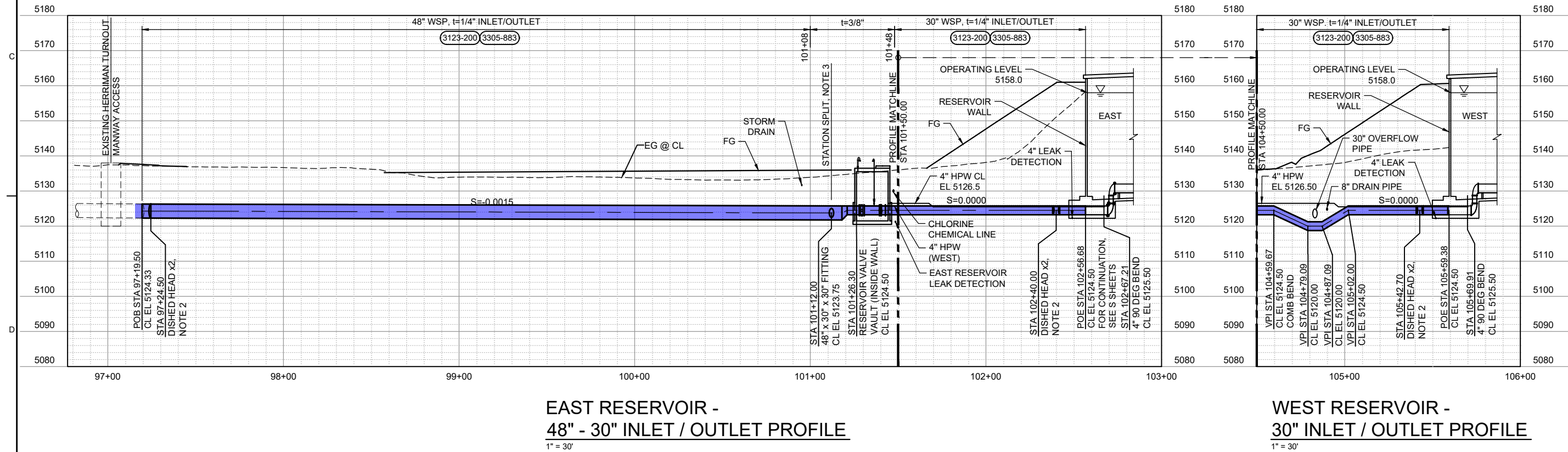
CIVIL
GENERAL GRADING
CROSS SECTIONS

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2024
PROJ	W7Y49600
DWG	C-03
SHEET	18 of 79

100% DESIGN



INLET / OUTLET PIPING PLAN
1" = 30'



DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD

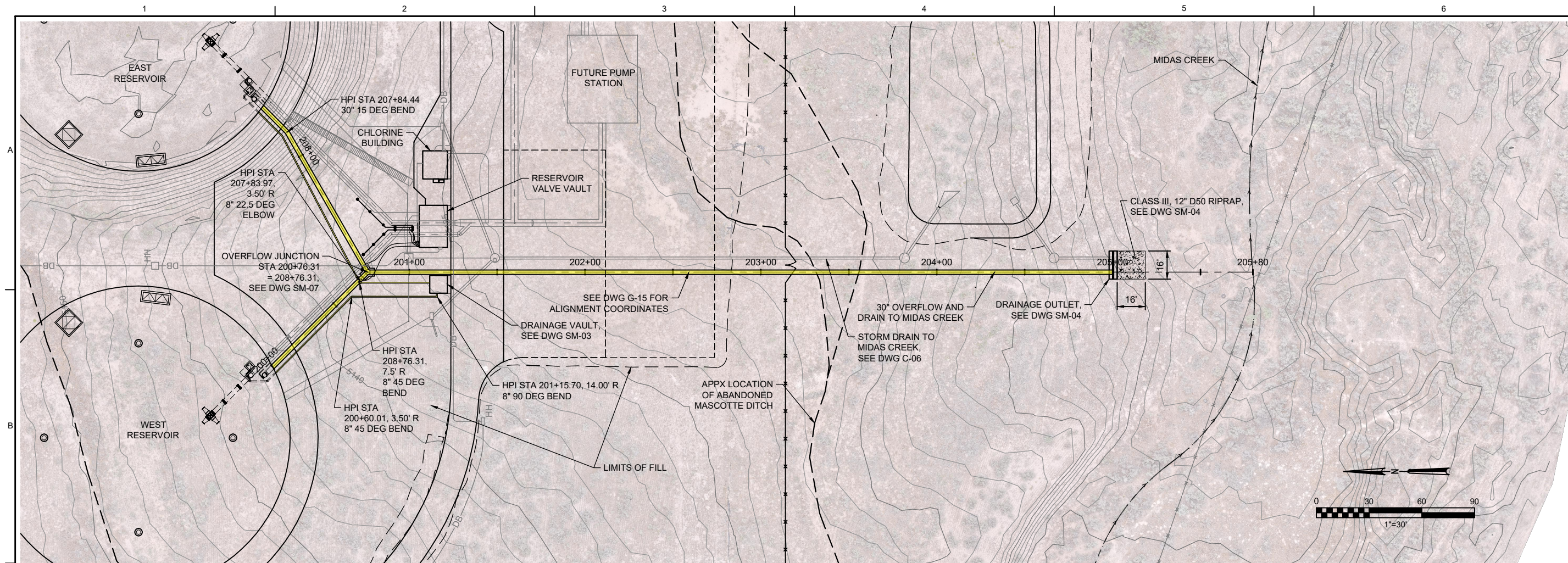
JORDAN VALLEY WATER
CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

JACOBS
CIVIL
INLET / OUTLET PIPING
PLAN AND PROFILE

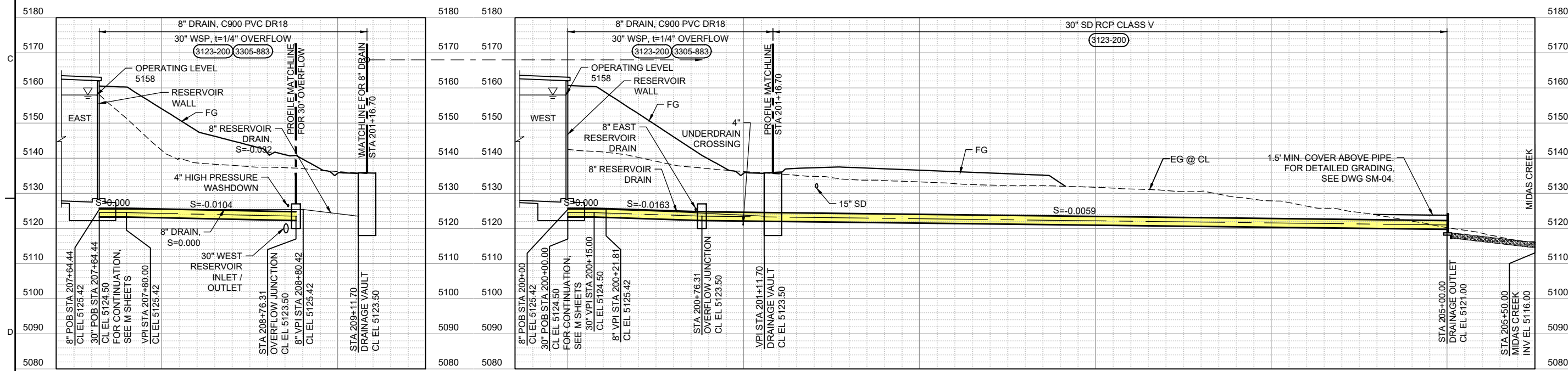
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	APRIL 2024
PROJ	W7Y49600
DWG	C-04
SHEET	19 of 79

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OVERFLOW AND DRAIN PIPING PLAN
1" = 30'



**EAST RESERVOIR -
30" OVERFLOW AND 8" RESERVOIR DRAIN
PIPES TO DRAINAGE VAULT PROFILE**
1" = 30'

**WEST RESERVOIR -
30" OVERFLOW, 8" RESERVOIR DRAIN PIPES, AND
30" COMBINED DRAIN TO MIDAS CREEK PROFILE**
1" = 30'

T. WITHERS
 LICENSED PROFESSIONAL ENGINEER
 No. 12561173
 TYLER
 WITHERS
 STATE OF UTAH
 DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DR	CHK	REVISION	BY	APVD
		T. WITHERS	C. HOGGARD		B. PHELPS	R. WILLEITNER

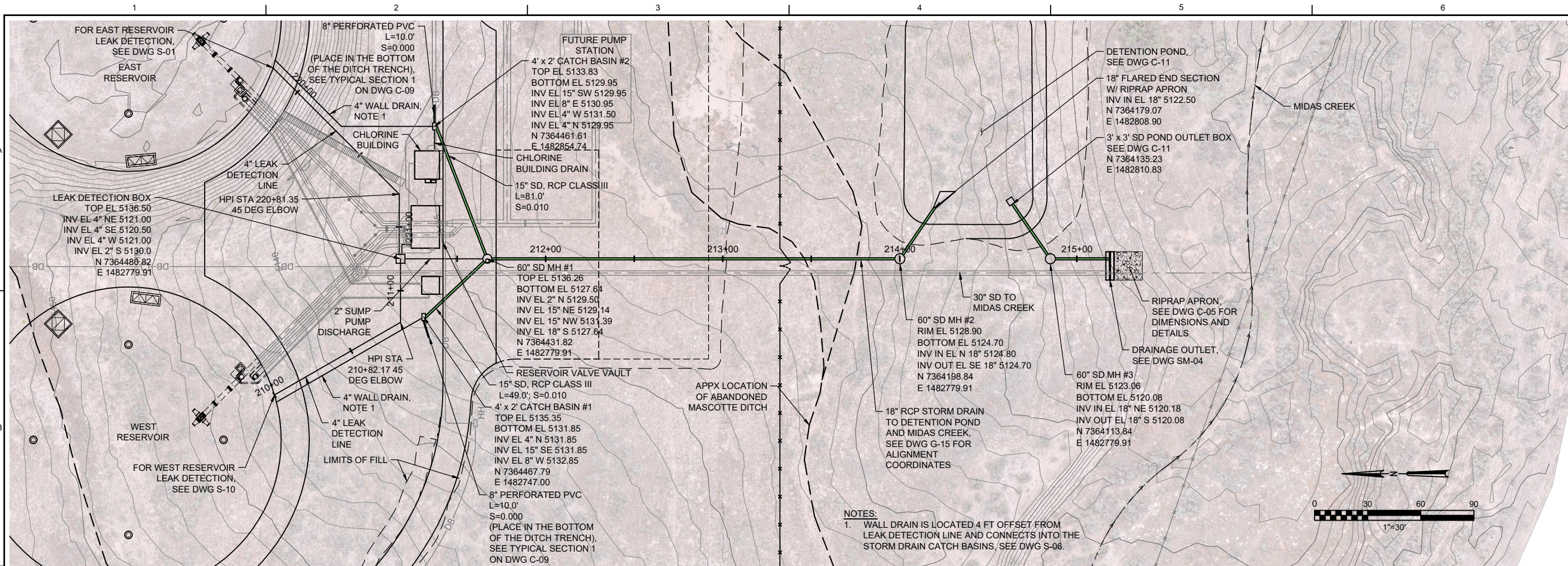
**JORDAN VALLEY WATER
CONSERVANCY DISTRICT**
 11800 SOUTH ZONE C RESERVOIRS

JACOBS CIVIL
**RESERVOIR OVERFLOW
AND DRAIN PIPING
PLAN AND PROFILE**

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	APRIL 2024
PROJ	W7Y49600
DWG	C-05
SHEET	20 OF 79

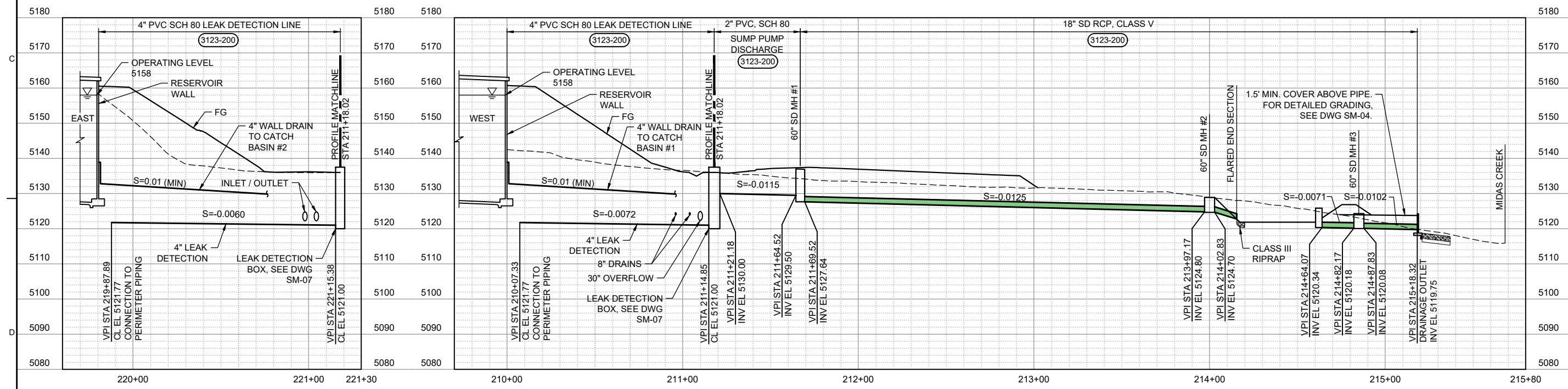
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NO.	DATE	DR	CHK	REVISION	BY	APVD

LEAK DETECTION AND SITE DRAINAGE PIPING PLAN

1" = 30'



EAST RESERVOIR - 4" LEAK DETECTION PROFILE
1" = 30'

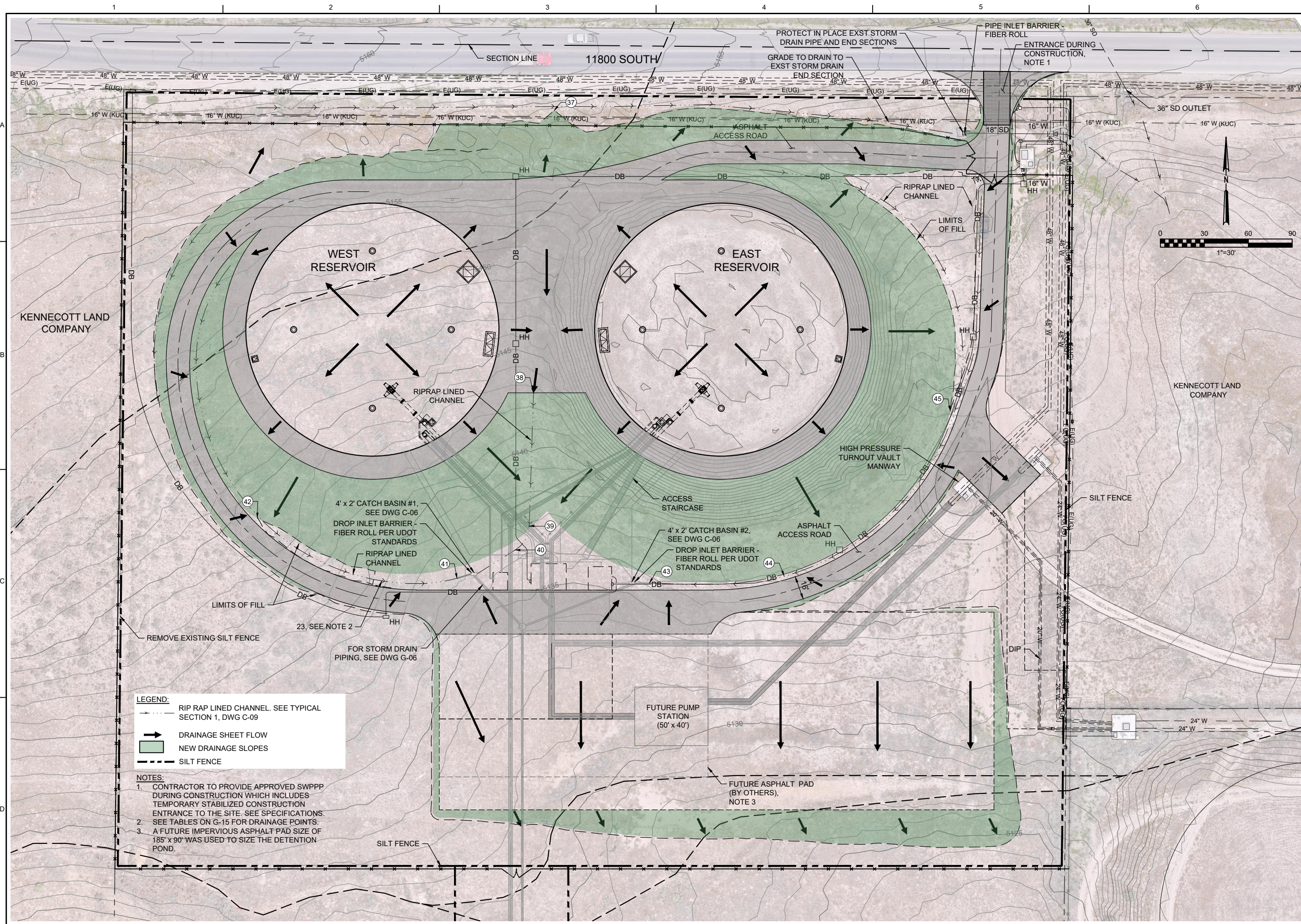
WEST RESERVOIR - 4" LEAK DETECTION AND 18" STORM DRAIN TO MIDAS CREEK PROFILE
1" = 30'

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs CIVIL
DRAIN PIPING PLAN AND PROFILE

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2024
PROJ	W7Y49600
DWG	C-06
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LEGEND:

- RIP RAP LINED CHANNEL. SEE TYPICAL SECTION 1, DWG C-09
- DRAINAGE SHEET FLOW
- NEW DRAINAGE SLOPES
- SILT FENCE

NOTES:

1. CONTRACTOR TO PROVIDE APPROVED SWPPP DURING CONSTRUCTION WHICH INCLUDES TEMPORARY STABILIZED CONSTRUCTION ENTRANCE TO THE SITE. SEE SPECIFICATIONS
2. SEE TABLES ON G-15 FOR DRAINAGE POINTS.
3. A FUTURE IMPERVIOUS ASPHALT PAD SIZE OF 185' x 90' WAS USED TO SIZE THE DETENTION POND.

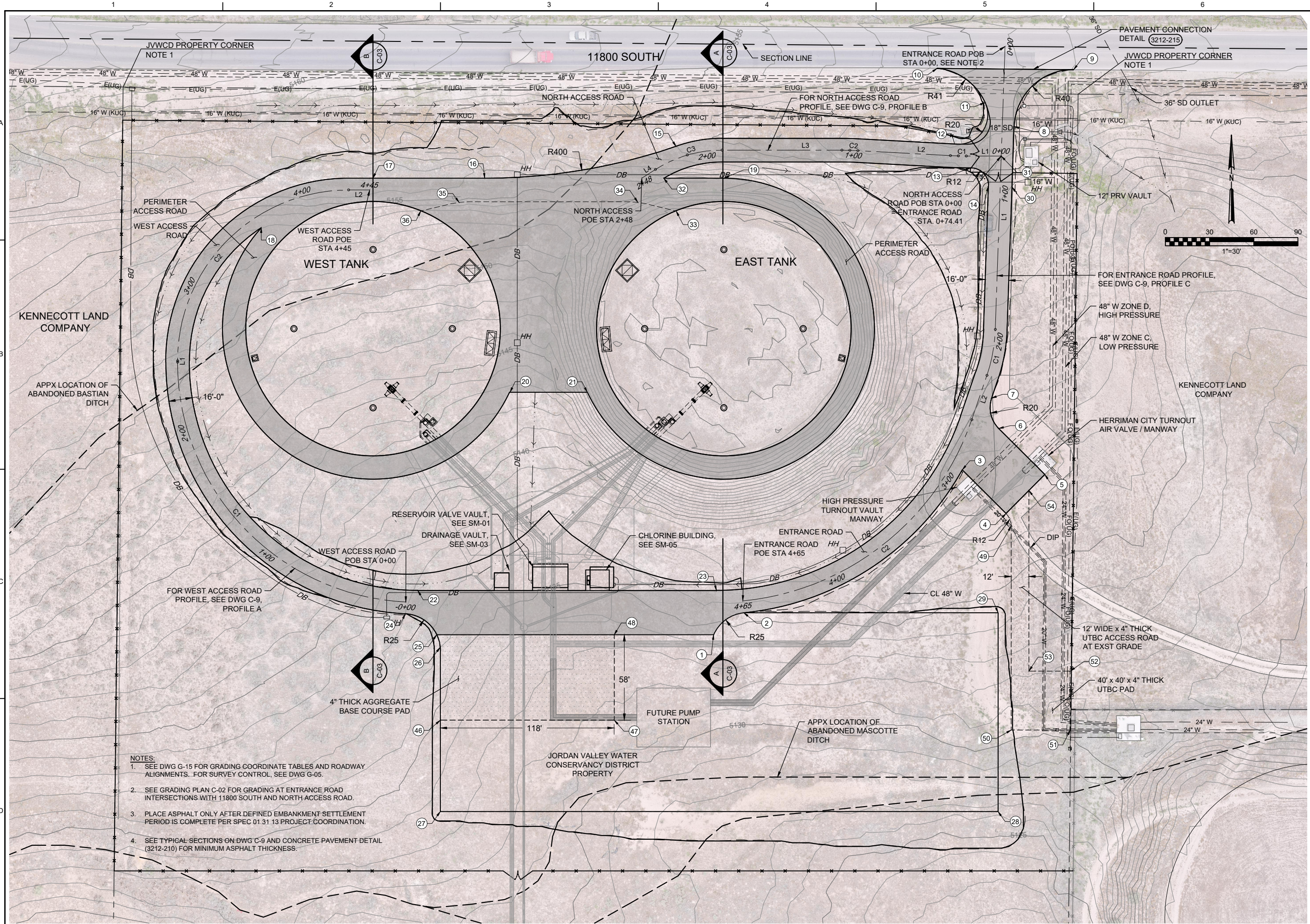
PROFESSIONAL ENGINEER
 No. 179190
 JAMES C. DAHL, JR.
 DATE OF ITRM: _____
 DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DR	CHK	REVISION	BY	APVD

JORDAN VALLEY WATER CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

Jacobs CIVIL
 SITE DRAINAGE AND EROSION CONTROL PLAN

VERIFY SCALE
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 DATE: APRIL 2024
 PROJ: W7Y49600
 DWG: C-07
 SHEET: 22 of 79



NOTES:
 1. SEE DWG G-15 FOR GRADING COORDINATE TABLES AND ROADWAY ALIGNMENTS. FOR SURVEY CONTROL, SEE DWG G-05.
 2. SEE GRADING PLAN C-02 FOR GRADING AT ENTRANCE ROAD INTERSECTIONS WITH 11800 SOUTH AND NORTH ACCESS ROAD.
 3. PLACE ASPHALT ONLY AFTER DEFINED EMBANKMENT SETTLEMENT PERIOD IS COMPLETE PER SPEC 01.31.13 PROJECT COORDINATION.
 4. SEE TYPICAL SECTIONS ON DWG C-9 AND CONCRETE PAVEMENT-DETAIL (3212-210) FOR MINIMUM ASPHALT THICKNESS.



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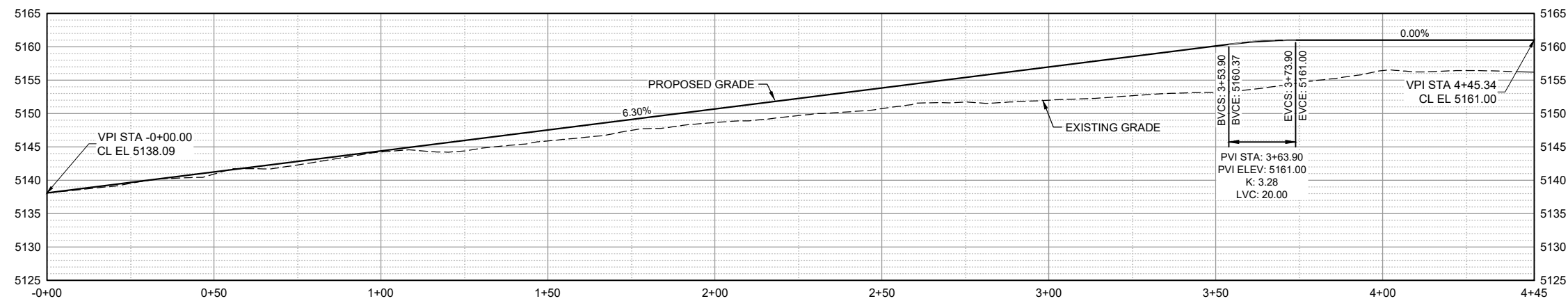
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 CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

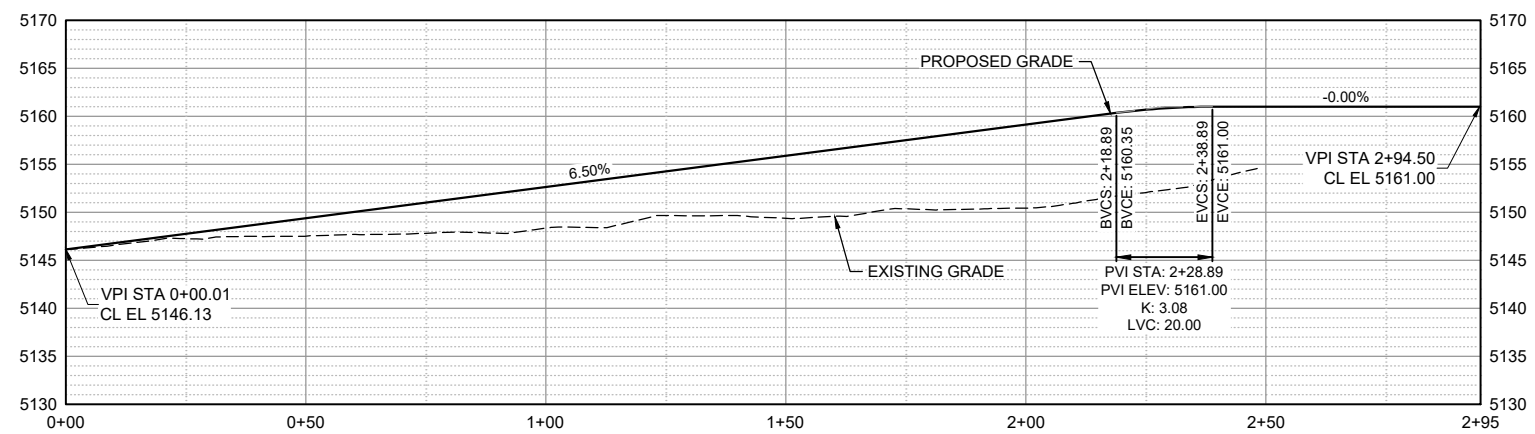
Jacobs
 CIVIL
ROADWAY PLAN

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2024
PROJ	W7Y49600
DWG	C-08
SHEET	23 of 79

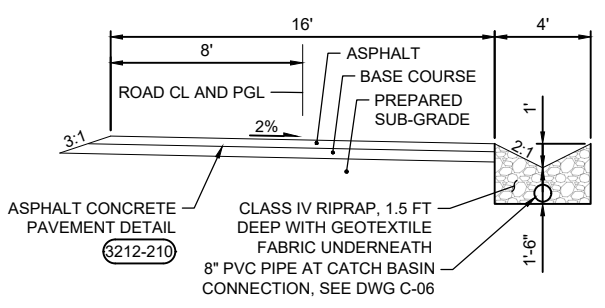
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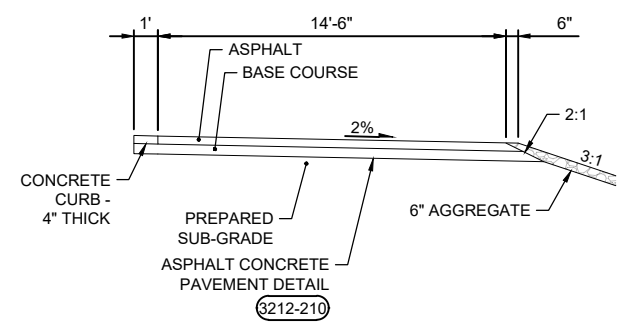
A WEST ACCESS ROAD CENTERLINE PROFILE
 1" = 20' H
 1" = 10' V
 C-6



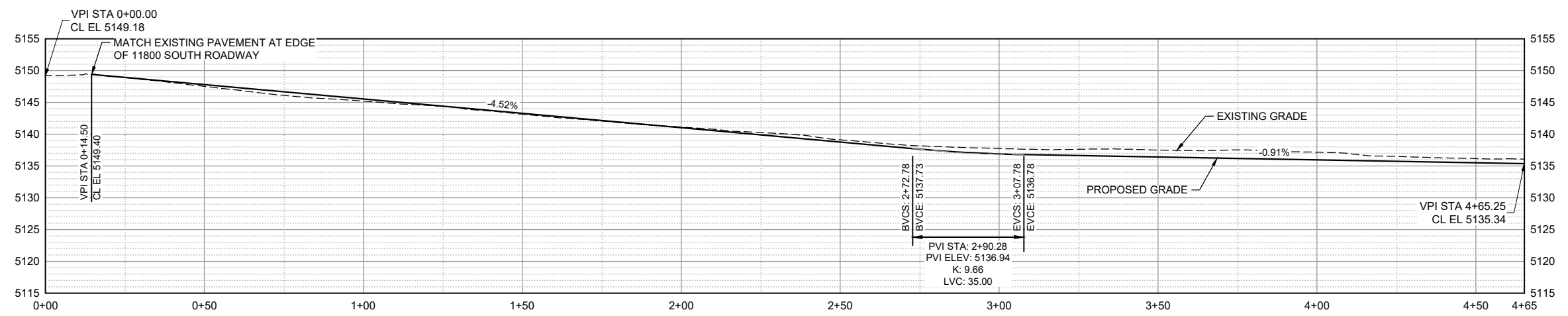
B NORTH ACCESS ROAD CENTERLINE PROFILE
 1" = 20' H
 1" = 10' V
 C-6



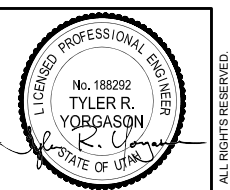
1 TYPICAL SECTION
 NORTH ACCESS ROAD 0+00 TO 2+40
 WEST ACCESS ROAD 0+00 TO 4+45
 ENTRANCE ROAD 0+00 TO 4+65



2 TYPICAL SECTION
 PERIMETER ACCESS ROAD



C ENTRANCE ROAD CENTERLINE PROFILE
 1" = 20' H
 1" = 10' V
 C-6



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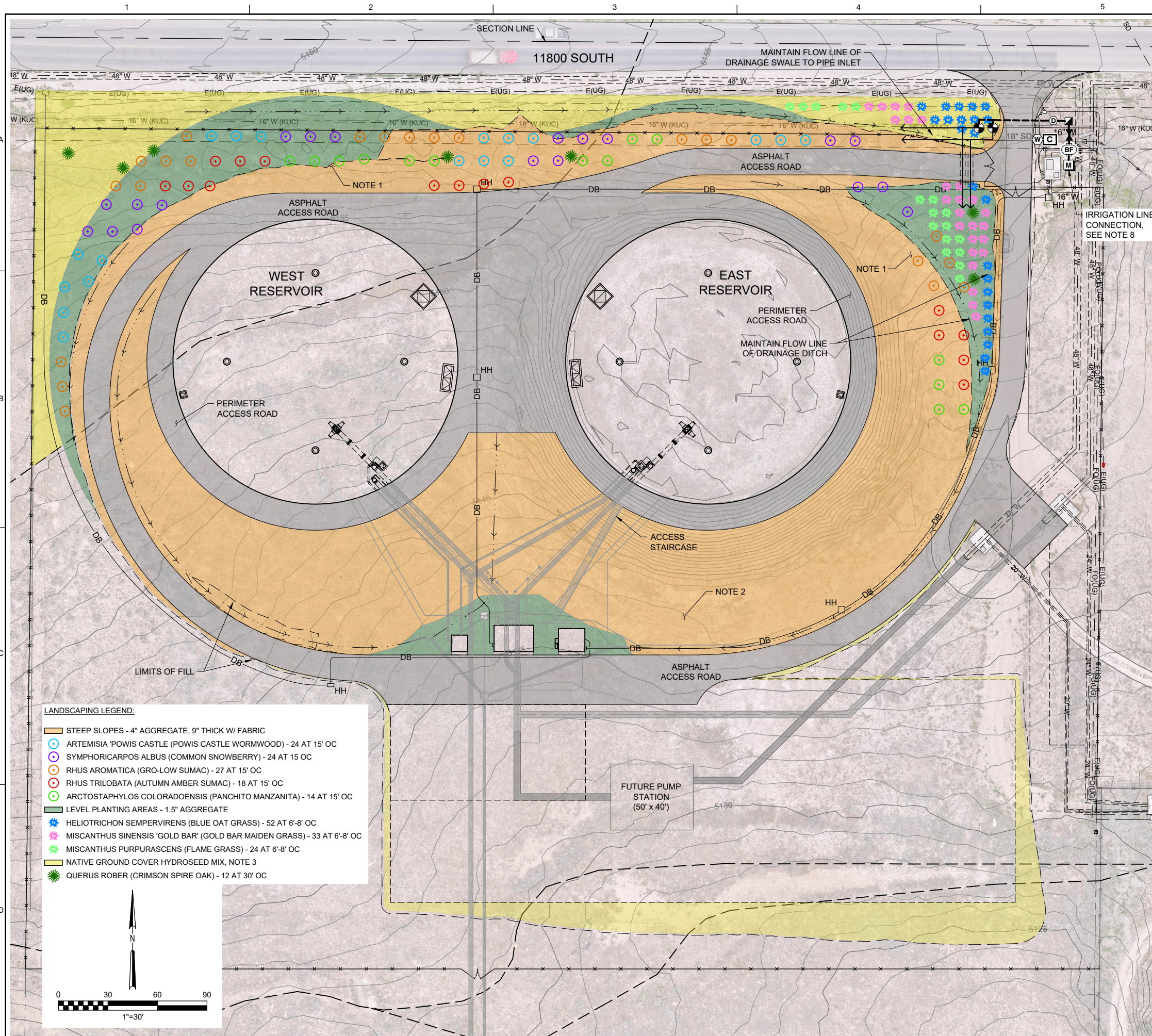
NO.	DATE	DSGN	DR	REVISION	CHK	BY
						R WILLEITNER
						B PHELPS
						C HOGGARD
						T YORGASON

JORDAN VALLEY WATER
 CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

Jacobs
 CIVIL
 ROADWAY PROFILES AND DETAILS

VERIFY SCALE	
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DATE	APRIL 2024
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SHEET	24 of 79

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LANDSCAPING LEGEND:

	STEEP SLOPES - 4" AGGREGATE, 9" THICK W/ FABRIC
	ARTEMISIA 'POWIS CASTLE' (POWIS CASTLE WORMWOOD) - 24 AT 15' OC
	SYMPHORICARPOS ALBUS (COMMON SNOWBERRY) - 24 AT 15' OC
	RHUS AROMATICA (GRO-LOW SUMAC) - 27 AT 15' OC
	RHUS TRILOBATA (AUTUMN AMBER SUMAC) - 18 AT 15' OC
	ARCTOSTAPHYLOS COLORADOENSIS (PANCHITO MANZANITA) - 14 AT 15' OC
	LEVEL PLANTING AREAS - 1.5" AGGREGATE
	HELIOTRICHON SEMPERVIRENS (BLUE OAT GRASS) - 52 AT 6'-8" OC
	MISCANTHUS SINENSIS 'GOLD BAR' (GOLD BAR MAIDEN GRASS) - 33 AT 6'-8" OC
	MISCANTHUS PURPURASCENS (FLAME GRASS) - 24 AT 6'-8" OC
	NATIVE GROUND COVER HYDROSEED MIX, NOTE 3
	QUERUS ROBER (CRIMSON SPIRE OAK) - 12 AT 30' OC

IRRIGATION LEGEND:

	TREE RING WITH THREE CONCENTRIC CIRCLES 3', 5', AND 7' DIAMETER. USE DRIP TUBING WITH ~0.9 GPH EMITTERS. KEEP TREES ON SEPARATE ZONE FROM THE PLANTS AND SHRUBS.
	RAIN BIRD XFS-04-18 XFS SUB-SURFACE PRESSURE COMPENSATING DRIPLINE W/COPPER SHIELD TECHNOLOGY. 0.4 GPH EMITTERS AT 18" O.C. UV RESISTANT. PLACE AROUND SHRUB LOCATIONS WITH 4 EMITTERS EQUALLY SPACED AROUND SHRUB. 1.6 GPH PER SHRUB. USE BLANK DRIP TUBING FOR STRETCHES BETWEEN SHRUBS.
	RAIN BIRD XCZ-100-PRB-COM DRIP CONTROL KIT, 1" PESB VALVE, BASKET FILTER, AND 40 PSI PRESSURE REGULATOR, SEE NOTE 9
	RAIN BIRD 44RC QUICK COUPLER VALVE, YELLOW RUBBER LOCKING COVER, RED BRASS AND STAINLESS STEEL, WITH 1" NPT INLET, 2-PIECE BODY. SEE NOTE 9
	GATE VALVE 2" TO 12" CAST IRON GATE VALVE. SAME SIZE AS MAINLINE PIPE WHERE LOCATED. RESILIENT WEDGE NON-RISING STEM FLOW CONTROL WITH IPS PUSH-ON ENDS. USE RESILIENT WEDGE GATE VALVES FOR 3" AND LARGER. USE BRASS BALL VALVES FOR 2-1/2" AND SMALLER.
	DRAIN VALVE INSTALL PER OWNER DIRECTION
	FEBCO 825V REDUCED PRESSURE BACKFLOW PREVENTER
	RAIN BIRD ESP-TM2 - 8 STATION FULL-FUNCTIONING CONTROLLER WITH TOUCHSCREEN, 120VAC (LNK WIFI-COMPATIBLE), SEE NOTE 9
	RAIN BIRD COMPATIBLE WSS WIRELESS SOLAR, RAIN FREEZE SENSOR WITH OUTDOOR INTERFACE, CONNECTS TO RAIN BIRD CONTROLLERS. INSTALL AS NOTED. INCLUDES 10 YEAR LITHIUM BATTERY AND RUBBER MODULE COVER, AND GUTTER MOUNT BRACKET.
	WATER METER 1" 1" METER ADJACENT TO VAULT - SEE CIVIL PLANS USE METER SETTER FORD VBHC84W-4444QNLAND METER BOX DWF PLASTICS DWF1324WBC4_12-AF4F 63D JWV (2 BOXES, DOUBLE STACKED). METER SHALL BE SENSUS IPERAL. SEE NOTE 9
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40
	IRRIGATION MAINLINE: 1" PVC SCHEDULE 40
	PIPE SLEEVE: PVC CLASS 200 TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION.

LANDSCAPING NOTES:

- NO VEGETATION TO BE PLANTED ON THE TOP HALF OF THE RESERVOIR SLOPES. SMALL TREES AND LARGE BUSHES CANNOT BE PLANTED WITHIN 10' OF EXISTING UTILITIES.
- ONLY AGGREGATE IS TO BE INSTALLED ON THE SOUTH SIDE OF THE RESERVOIRS AND AROUND THE FUTURE PUMP STATION PAD (NO VEGETATION).
- ANY AREA DISTURBED DURING CONSTRUCTION SHALL RECEIVE HYDROSEED MIX. BASED ON SLOPES. ADDITIONAL EROSION CONTROL MAY BE REQUIRED UNTIL VEGETATION IS ESTABLISHED. SEE SPECIFICATIONS.

IRRIGATION NOTES:

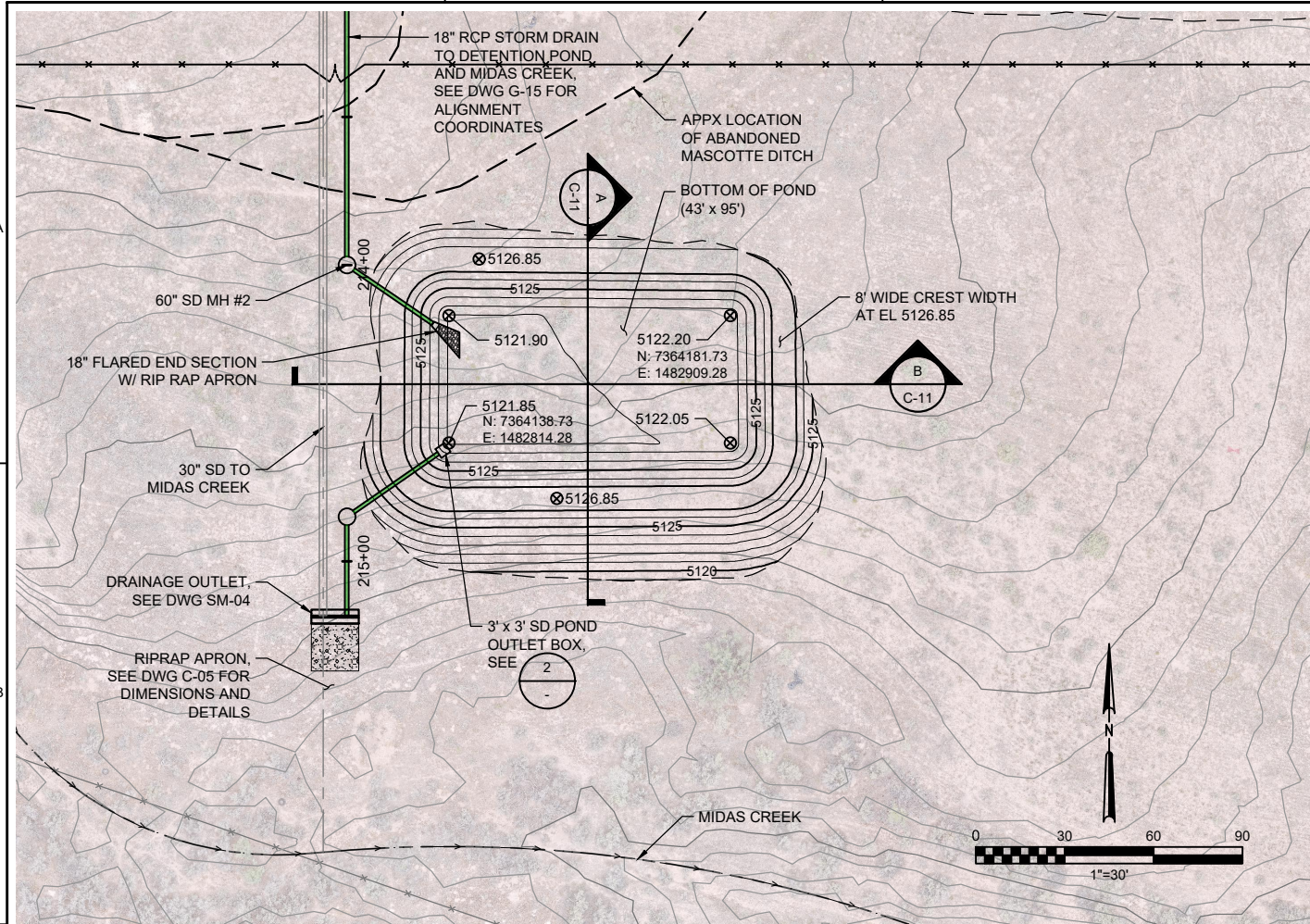
- THE IRRIGATION SYSTEMS ARE DESIGNED TO OPERATE AT WATER PRESSURE OF 60 PSI AT THE POINTS OF CONNECTION (IRRIGATION WATER METER), AND A FLOW DEMAND AS DETERMINED BY JW/CD. THE CONTRACTOR SHALL VERIFY PRESSURE PRIOR TO INSTALLATION OF IRRIGATION EQUIPMENT. IF THERE IS A DISCREPANCY, THE IRRIGATION CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT, IMMEDIATELY, IN WRITING SO ADJUSTMENTS CAN BE MADE.
- A PRESSURE REGULATING VALVE SHALL BE INSTALLED IF THE STATIC SERVICE PRESSURE EXCEEDS EIGHTY (80) POUNDS PER SQUARE INCH (PSI) AT THE POINT OF CONNECTION. THE PRESSURE REGULATING VALVE SHALL BE LOCATED BETWEEN THE LANDSCAPE WATER METER AND THE FIRST POINT OF WATER USE AND SHALL BE SET AT THE MANUFACTURER'S RECOMMENDED PRESSURE FOR SPRINKLERS.
- PLANS ARE DIAGRAMMATIC. INSTALL PIPES IN PLANTING AREAS. SLEEVE IS REQUIRED TO CROSS UNDER PAVEMENT.
- ALL DIMENSIONS, QUANTITIES AND MATERIALS SHALL BE VERIFIED BY IRRIGATION CONTRACTOR. CONTRACTOR SHALL INSTALL ADDITIONAL HEADS, AS NEEDED, TO PROVIDE ADEQUATE COVERAGE AT NO ADDITIONAL COST TO THE OWNER.
- CORE THROUGH PRV VAULT WALL 4' BELOW GRADE TO MAKE CONNECTION INSIDE OF THE VAULT TO THE HIGH PRESSURE SIDE. CONNECTION WILL REQUIRE A SHUTOFF VALVE AND SADDLE TAP. SUBMIT PLAN FOR APPROVAL.
- SET IRRIGATION BOXES ON 12" OF WASHED GRAVEL AND INSTALL WIRE MESH / RODENT SCREENS.



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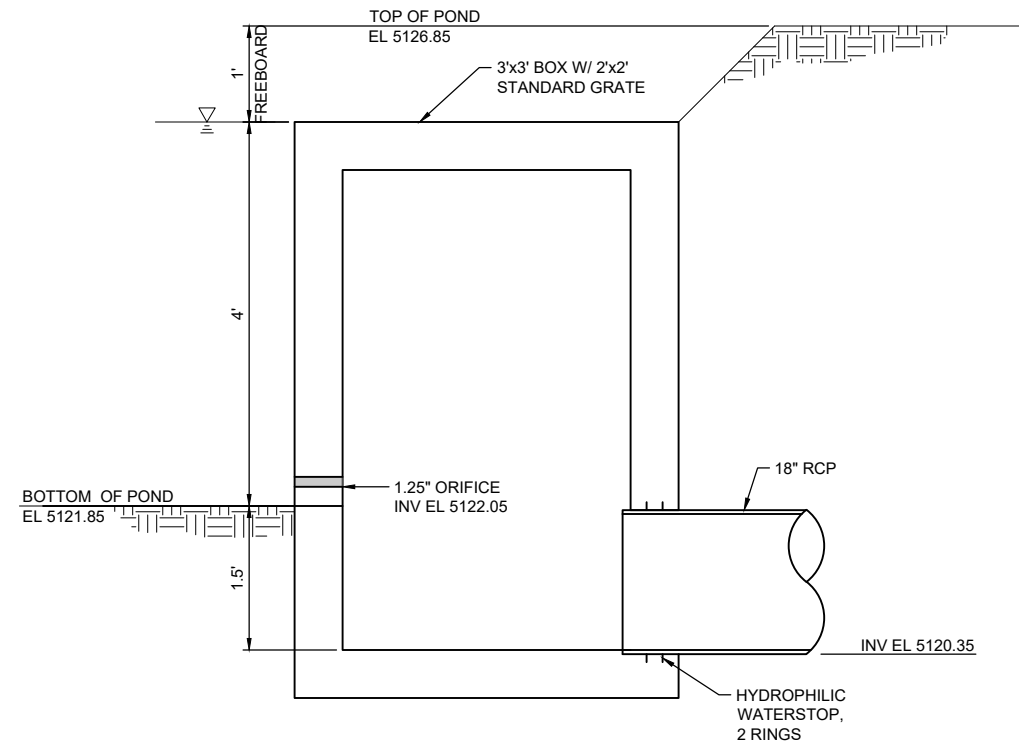
JORDAN VALLEY WATER CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS
 LANDSCAPING PLAN

Jacobs
 CIVIL
 LANDSCAPING PLAN
 VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.
 DATE: APRIL 2024
 PROJ: W7Y49600
 DWG: C-10
 SHEET: 25 OF 79

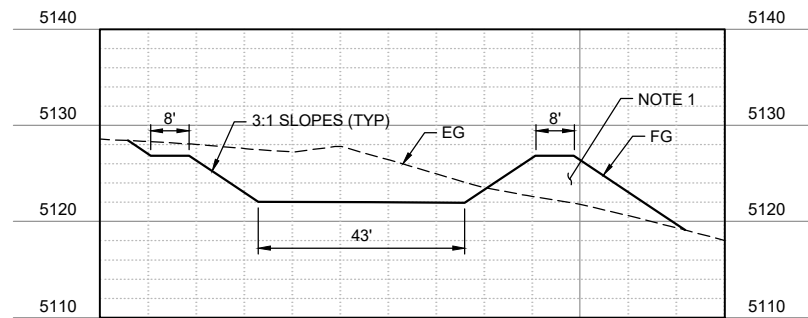


1 DETENTION POND PLAN
1" = 30'

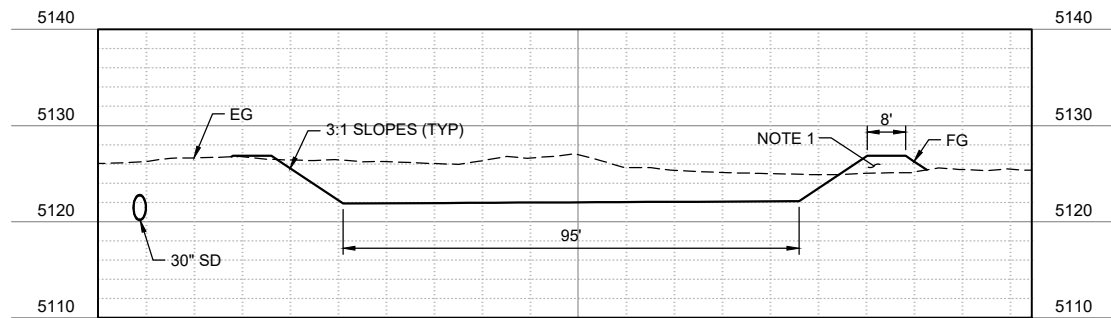
NOTES:
1. EMBANKMENT FILL SHALL BE NATIVE MATERIAL COMPACTED TO 95%.



2 SD POND OUTLET BOX
1" = 1'-0"



A SECTION
1" = 20'



B SECTION
1" = 20'



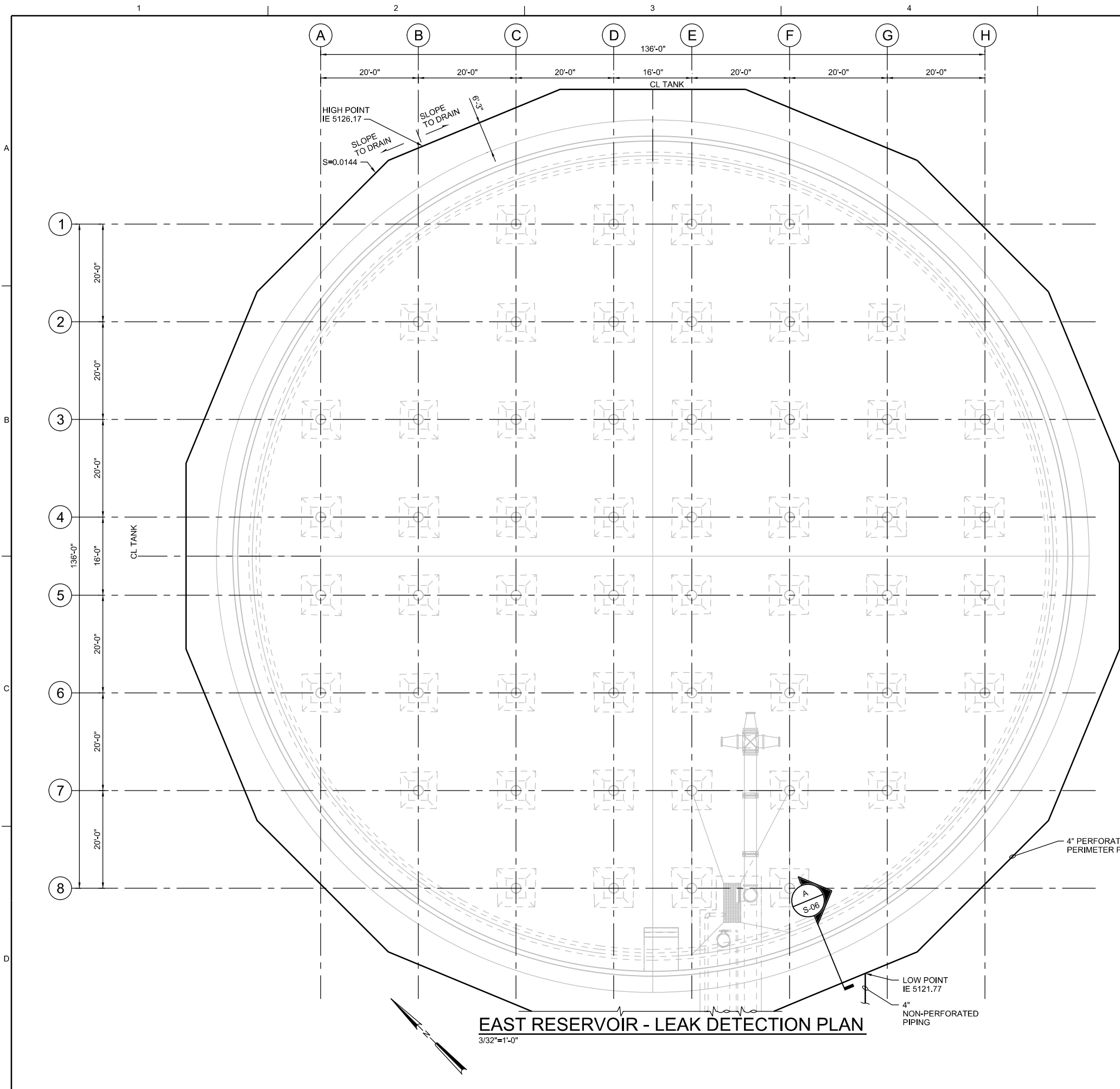
NO.	DATE	DR	CHK	REVISION	BY
		J DAHL	C HOGGARD		R WILLEITNER
					B PHELPS
					APVD

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
CIVIL
DETENTION POND

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2024
PROJ	W7Y49600
DWG	C-11
SHEET	26 of 79

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GENERAL NOTES:

- FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS G-09 AND G-10.
- GEOTEXTILE / DRAIN ROCK / GEOMEMBRANE SYSTEM LOCATED BELOW ENTIRE FOOTPRINT OF TANK AND CONNECTS TO OUTSIDE EDGE OF FOUNDATION WITH A LLDPE AND GEOMEMBRANE MATERIAL, SEE A

A
S-06



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JORDAN VALLEY WATER
CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs
RESERVOIRS - STRUCTURAL

LEAK DETECTION PLAN
EAST RESERVOIR

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2024
PROJ	W7Y49600
DWG	S-01
SHEET	27 of 79

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PROFESSIONAL STRUCTURAL ENGINEER
No. 501404-2203
STERLING K. ROSE
STATE OF UTAH
DIGITALLY SIGNED: 04/12/2024

GENERAL NOTES:

- FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS G-09 AND G-10.

BOTTOM SLAB:

- PREPARE GRANULAR FILL AND SUBGRADE MATERIALS AND CONSTRUCT FOUNDATION UNDERDRAINS AS REQUIRED BY SPECIFICATION, AND AS SHOWN ON DRAWINGS S-01 AND S-06.
- BOTTOM SLAB SHALL BEAR ON COMPACTED FILL. COLUMN FOOTINGS SHALL BEAR ON A MINIMUM OF 2 FEET OF GRANULAR FILL. COMPACT AROUND AND UNDER PIPE ENCASEMENTS AND UNDER SLAB AS SPECIFIED.
- MINIMUM COMPACTION OF BACKFILL AROUND TANK SHALL BE AS SPECIFIED. USE ONLY HAND HELD EQUIPMENT WITHIN 5'-0" OF THE WALL AND LIGHTWEIGHT EQUIPMENT BEYOND THE 5'-0" SO AS NOT TO DAMAGE THE WALL. BRING UP THE BACKFILL AROUND THE TANK IN UNIFORM LIFTS.
- GRANULAR FILL AT PIPE ENCASEMENTS SHALL BE SIMILAR TO SECTION **A** EXCEPT PROVIDE 1'-0" MIN COMPACTED GRANULAR FILL. **A S-06**
- DIMENSIONS FOR MATERIALS AT WALL BASE JOINT REQUIRE VERY CLOSE TOLERANCES IN LOCATING CENTERLINE OF WATERSTOP AND SEISMIC CABLES PRIOR TO AND DURING CONCRETE PLACEMENT OF BASE SLAB.
- CAST BASE SLAB IN 4 SEPARATE POURS WITH JOINTS BETWEEN AND WITH 2 DAYS MINIMUM TIME BETWEEN POURS.
- FOR CONCRETE PLACEMENT SEQUENCE AT WATERSTOP AND CONTRACTION JOINTS, SEE DETAIL **0315-161**
- SLAB TRANSVERSE REINFORCING SHALL BE ORIENTED PARALLEL AND PERPENDICULAR TO GRID LINES WHERE REQUIRED. LAP BOTTOM REINFORCING ON INTERSECTING GRID LINES AND TOP REINFORCING CENTERED BETWEEN GRID LINES.

CORE WALL:

- SUPPORT VERTICAL WALL REINFORCING ON HARD PLASTIC OR STAINLESS STEEL PLATE SUPPORTS. VERTICALS ARE NOT TO REST DIRECTLY ON THE BOTTOM RUBBER PADS.
- PRIOR TO CASTING CONCRETE IN WALL, WATER TEST THE VERTICAL BAR DUCT UNITS OR CLOSELY INSPECT THE UNITS FOR CRACKS. SEAL OR REPAIR ALL CRACKS OR DAMAGE PRIOR TO CASTING CONCRETE IN WALL.
- THE BOTTOM 4 INCHES OF CORE WALL IS TO BE POURED WITH SLURRY MIX (SEE SPECIFICATIONS). PROVIDE POSITIVE FORM SUPPORTS AT BASE OF WALL TO PREVENT SPREADING OF FORMS, SO THAT MORTAR WILL NOT PENETRATE BELOW TOP OF NEOPRENE PADS.
- THE CONTRACTOR SHALL COMPLETE THE VERTICAL POST-TENSIONING PRIOR TO THE HORIZONTAL PRESTRESSING OF THE WALL. THE ROOF SLAB SECTIONS SHALL NOT BE POURED UNTIL THE GROUT FOR THE POST TENSIONING BLOCKOUTS HAS BEEN PLACED.
- FORM WORK TOLERANCES SHALL CONFORM TO ACI 347, STANDARD PRACTICE FOR CONCRETE WORK. IN NO CASE SHALL THE FINISHED CONCRETE CORE WALL BE OUT OF ROUND OR OUT OF PLUMB BY MORE THAN 3/8" +/- . FLAT FORM PANELS IF USED SHALL NOT EXCEED 3 FEET IN WIDTH.
- CAST CORE WALL IN 14 WALL SEGMENTS WITH 2 DAYS MINIMUM BETWEEN ADJACENT POURS. SEE **0315-149**

MISCELLANEOUS:

- WALL AND FOOTING JOINTS DO NOT HAVE TO ALIGN.
- REFER TO SPECIFICATION 03 15 20, WALL BASE AND TOP JOINTS, FOR SPECIFIED TOLERANCE FOR PLACING 9" x 3/8" PLASTIC WATERSTOP AT BASE OF WALL.
- REFER TO SECTION 03 30 00, CONCRETE FOR EXPERIENCE REQUIREMENTS AND SPECIAL FORMING REQUIREMENTS FOR THE CONCRETE CORE WALL CONSTRUCTION.
- PERMANENTLY MARK COLUMN GRID NUMBERS ON COLUMNS AT 5'-0" ABOVE COLUMN FOOTING ON NORTH AND SOUTH SIDES WITH STENCILED BLOCK LETTERING, 12 INCHES TALL; PAINT SYSTEM 18.
- ALL INTERIOR PIPING TO BE RESTRAINED.
- PERFORM LIQUID TIGHTNESS TEST PRIOR TO BACKFILLING.
- STAIR RAILING SHALL CONFORM WITH DETAIL **0552-046** WITH TYPE C POST ANCHORAGE.

NO.	DATE	DR	APVD	BY	CHK

T STIMPSON
 S ROSE
 A FIRTH
 B PHELPS

Jordan Valley Water Conservancy District

11800 SOUTH ZONE C RESERVOIRS

JACOBS

RESERVOIRS - STRUCTURAL

**FOUNDATION PLAN
EAST RESERVOIR**

JACOBS

RESERVOIRS - STRUCTURAL

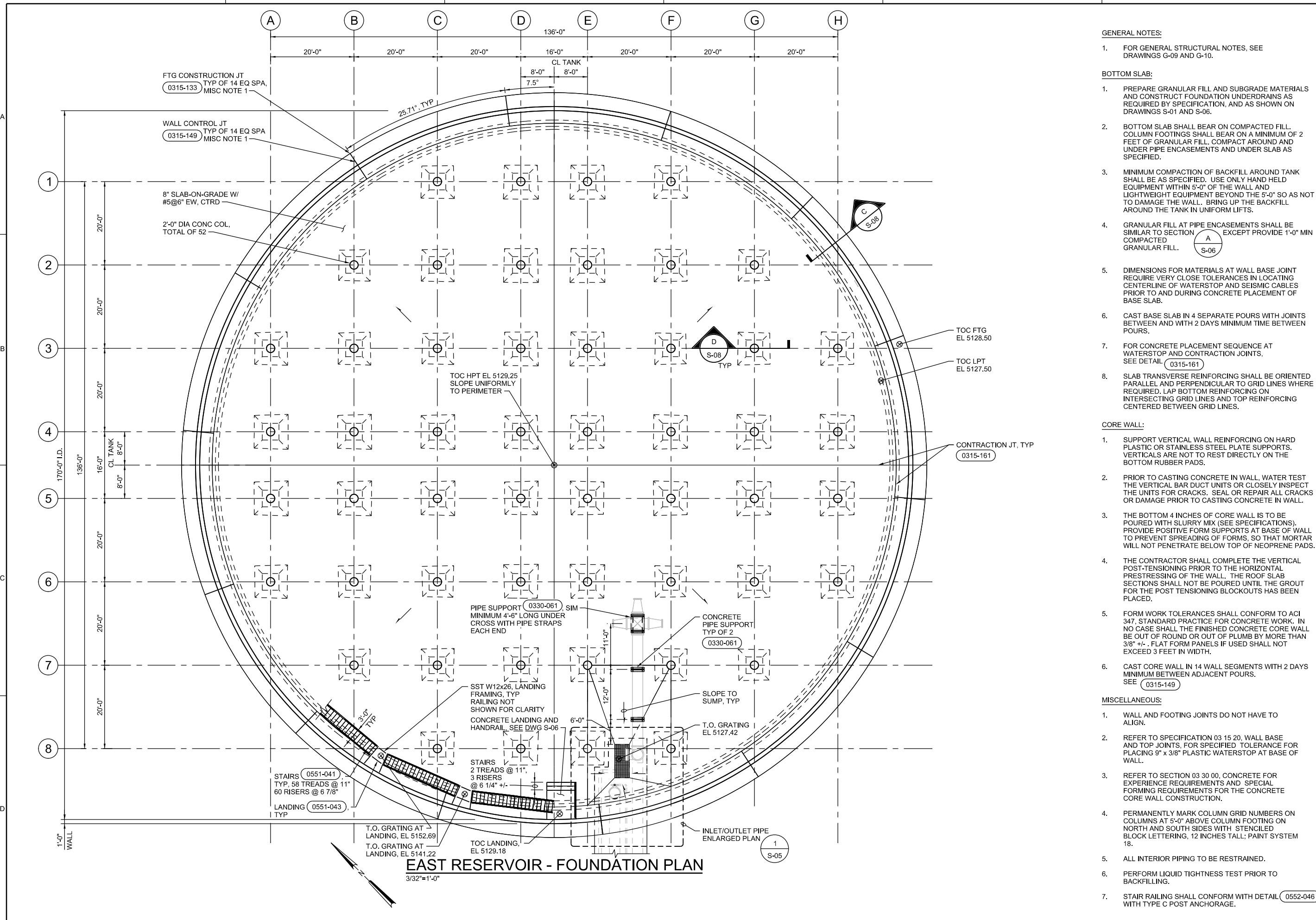
**FOUNDATION PLAN
EAST RESERVOIR**

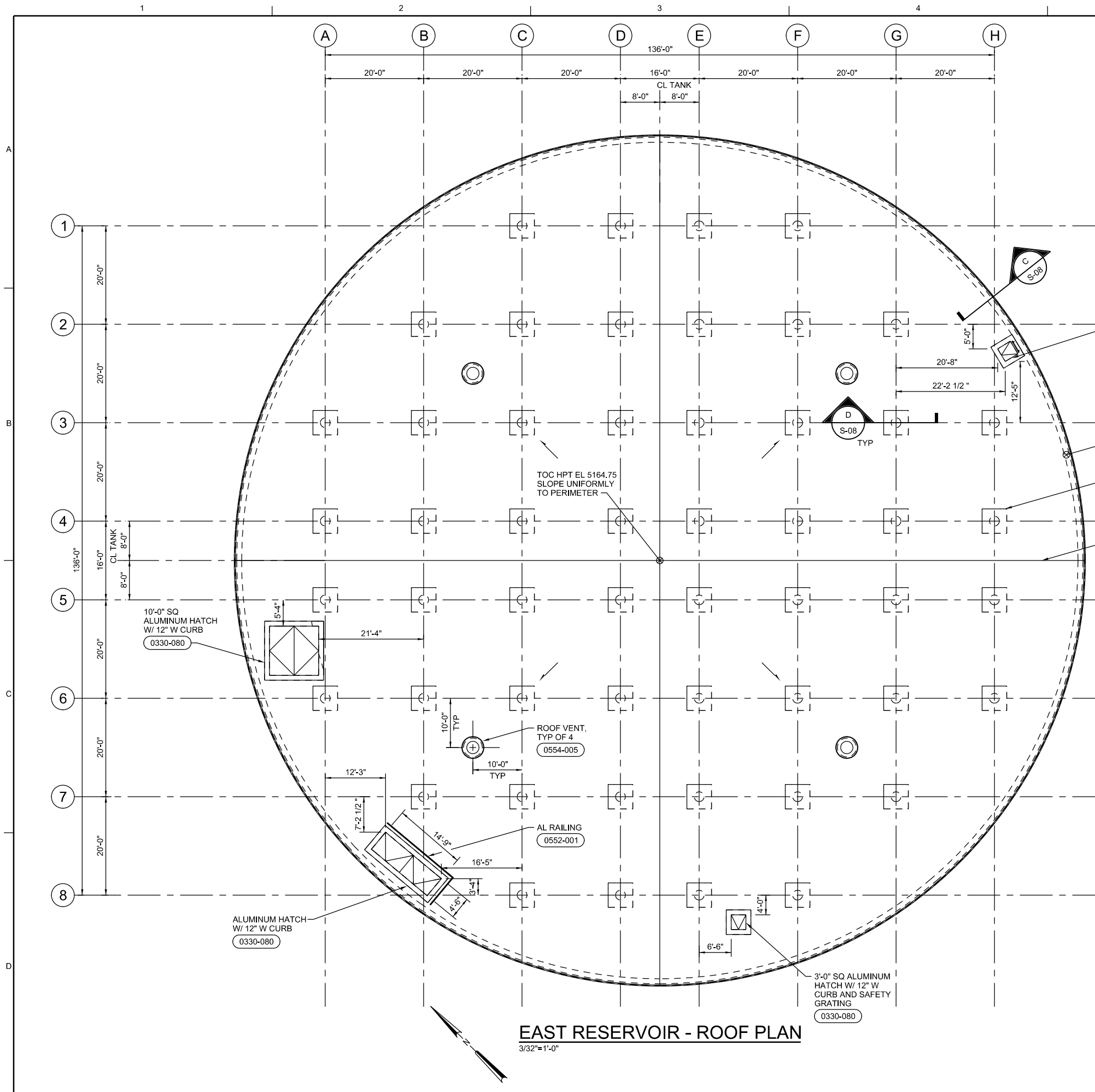
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.

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 DWG: S-02
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EAST RESERVOIR - ROOF PLAN
 3/32"=1'-0"

NOTES:
 1. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS G-09 AND G-10.



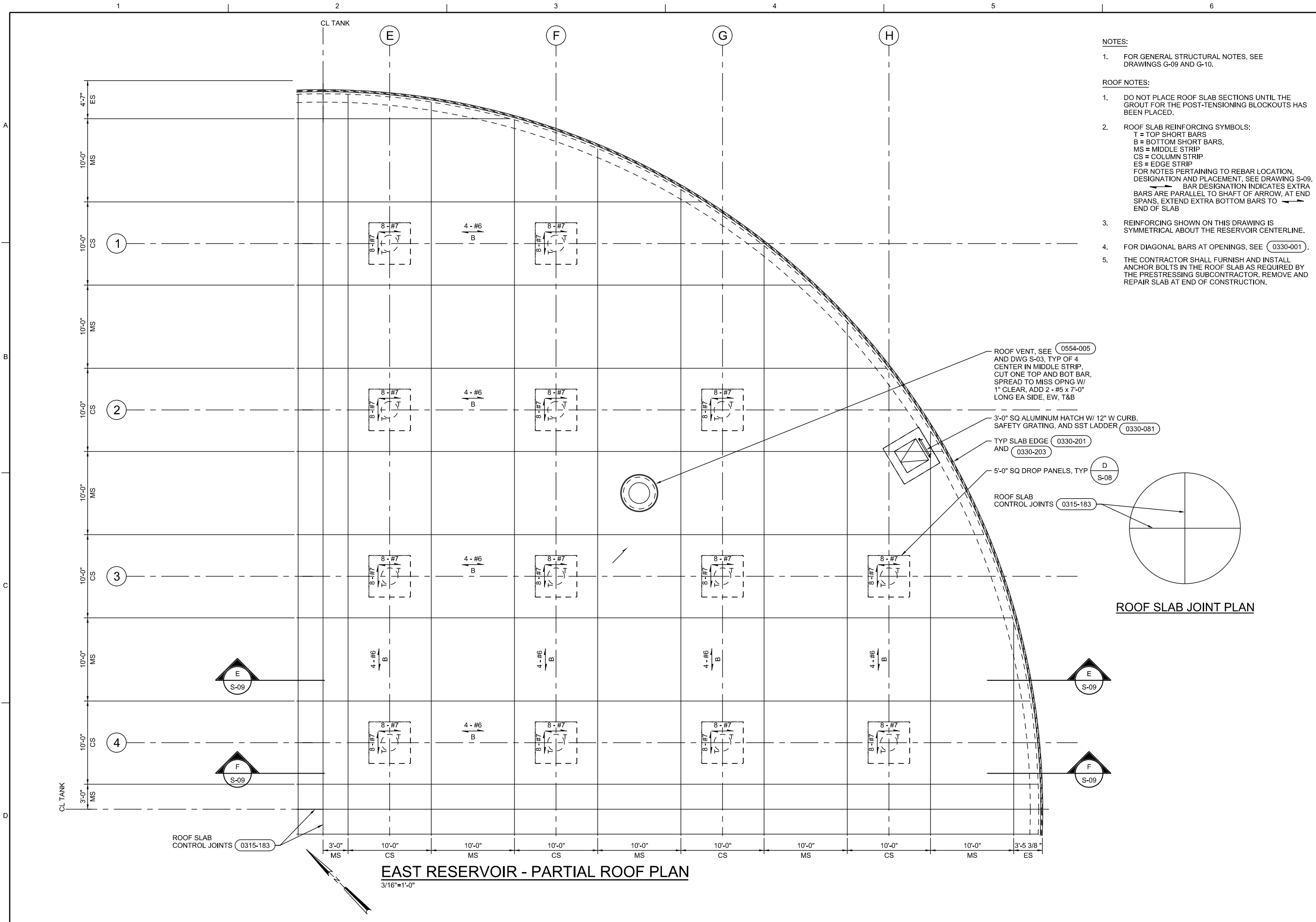
NO.	DATE	DR	APVD	BY	APVD
T STIMPSON			B PHELPS		
S ROSE			A FIRTH		

JORDAN VALLEY WATER CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

Jacobs
 RESERVOIRS - STRUCTURAL
ROOF PLAN
EAST RESERVOIR

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2024
PROJ	W7Y49600
DWG	S-03
SHEET	29 of 79

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- NOTES:**
- FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS G-09 AND G-10.
- ROOF NOTES:**
- DO NOT PLACE ROOF SLAB SECTIONS UNTIL THE GROUT FOR THE POST-TENSIONING BLOCKOUTS HAS BEEN PLACED.
 - ROOF SLAB REINFORCING SYMBOLS:
 T = TOP SHORT BARS
 B = BOTTOM SHORT BARS
 MS = MIDDLE STRIP
 CS = COLUMN STRIP
 ES = EDGE STRIP
 FOR NOTES PERTAINING TO REBAR LOCATION, DESIGNATION AND PLACEMENT, SEE DRAWING S-09.
 BAR DESIGNATION INDICATES EXTRA BARS ARE PARALLEL TO SHAFT OF ARROW. AT END SPANS, EXTEND EXTRA BOTTOM BARS TO END OF SLAB
 - REINFORCING SHOWN ON THIS DRAWING IS SYMMETRICAL ABOUT THE RESERVOIR CENTERLINE.
 - FOR DIAGONAL BARS AT OPENINGS, SEE (0330-001).
 - THE CONTRACTOR SHALL FURNISH AND INSTALL ANCHOR BOLTS IN THE ROOF SLAB AS REQUIRED BY THE PRESTRESSING SUBCONTRACTOR. REMOVE AND REPAIR SLAB AT END OF CONSTRUCTION.



DIGITALLY SIGNED: 04/12/2024

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JORDAN VALLEY WATER CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

Jacobs
 RESERVOIRS - STRUCTURAL
**PARTIAL ROOF PLAN
 EAST RESERVOIR**

VERIFY SCALE
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 DATE: APRIL 2024
 PROJ: W7Y49600
 DWG: S-04
 SHEET: 30 of 79

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NOTES:
 1. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS G-09 AND G-10.
 2. FOR PIPING DETAILS, SEE DRAWING M-02.



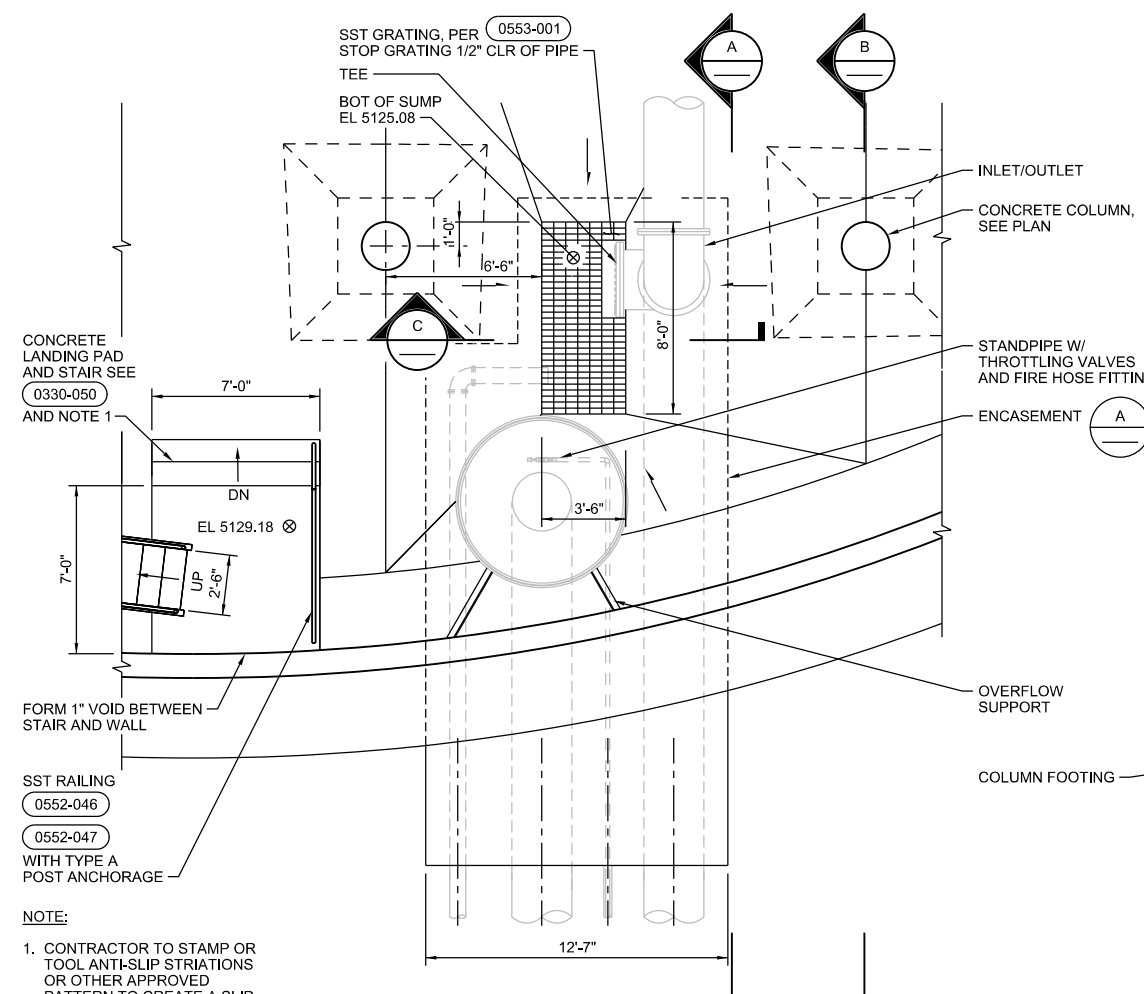
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JORDAN VALLEY WATER CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS
 ENLARGED PLANS AND SECTIONS EAST RESERVOIR

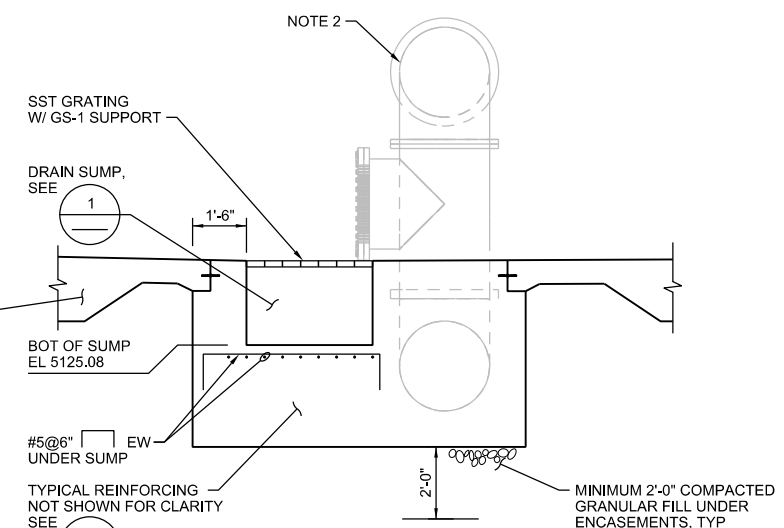
JACOBS
 RESERVOIRS - STRUCTURAL
 ENLARGED PLANS AND SECTIONS EAST RESERVOIR

DATE: APRIL 2024
 PROJ: W7Y49600
 DWG: S-05
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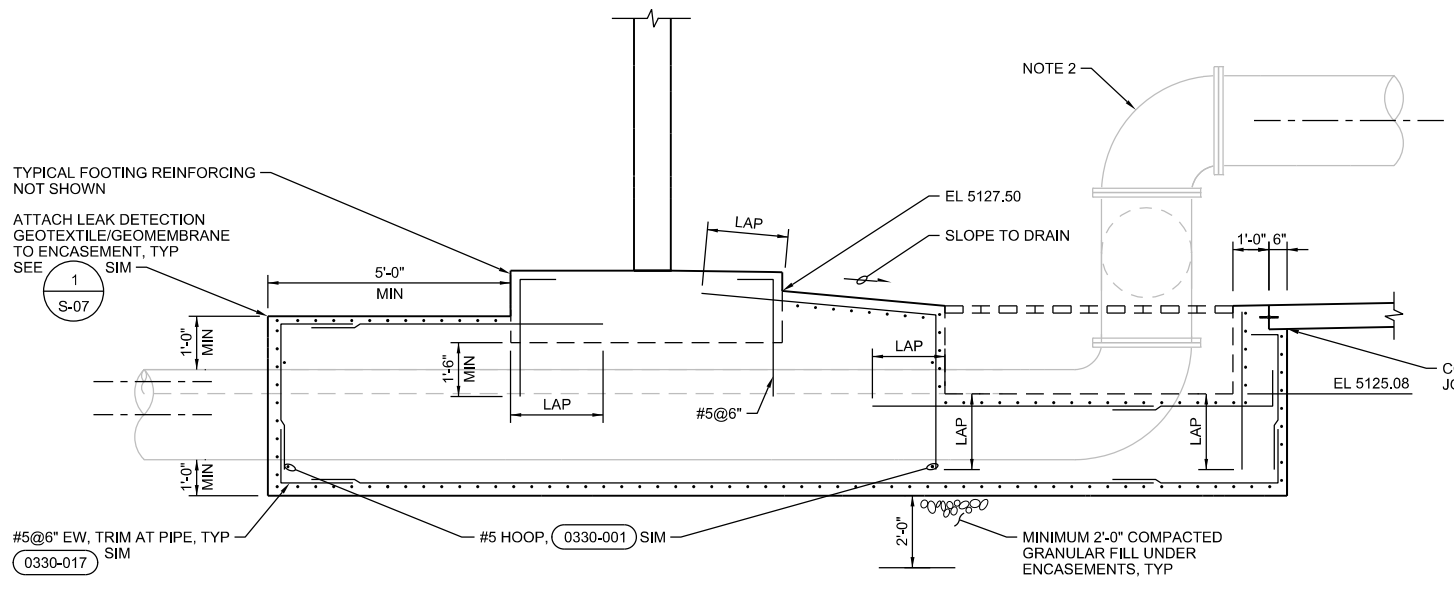
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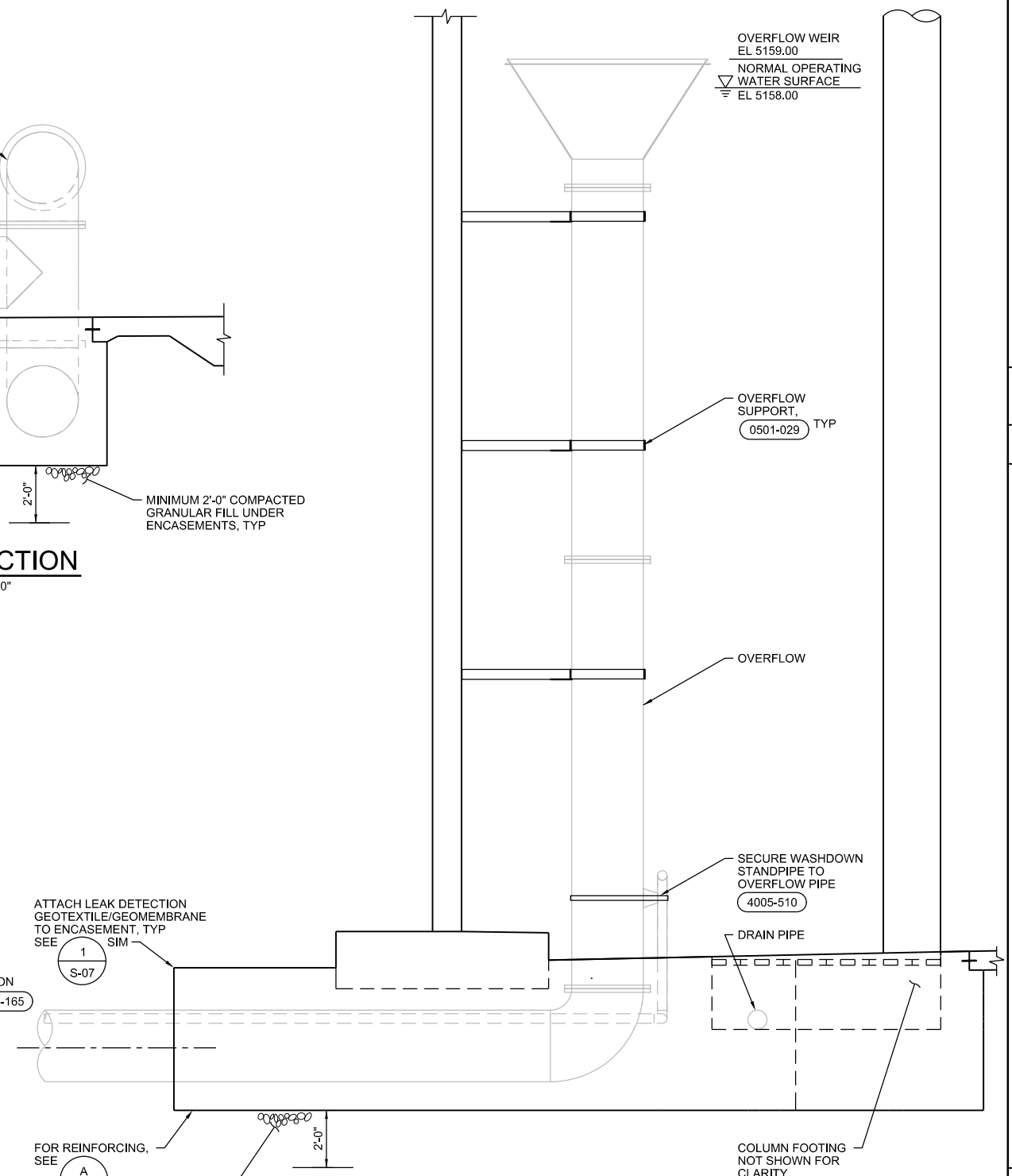
1 PIPE PLAN
 1/4"=1'-0"
 S-02



C SECTION
 3/8"=1'-0"

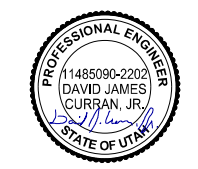


A SECTION
 3/8"=1'-0"



B SECTION
 3/8"=1'-0"

NOTES:
 1. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS G-09 AND G-10.



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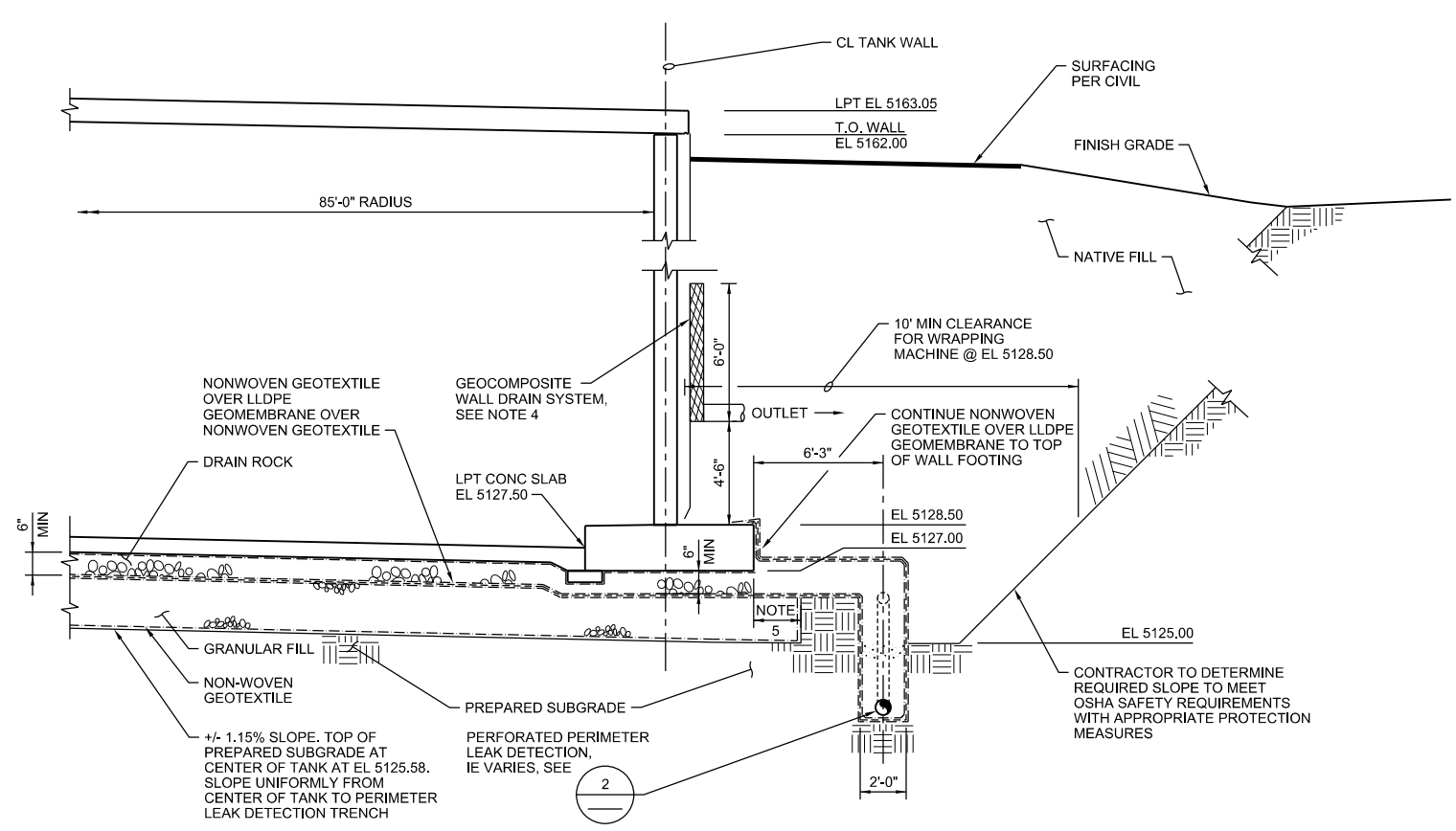
NO.	DATE	DR	REVISION	CHK	BY
		S ROSE/D CURRAN			
		T STIMPSON			
		A FIRTH			
		B PHELPS			

JORDAN VALLEY WATER CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

Jacobs
 RESERVOIR - STRUCTURAL
 RESERVOIR SECTIONS AND DETAILS

VERIFY SCALE	
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DATE	APRIL 2024
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DWG	S-06
SHEET	32 of 79

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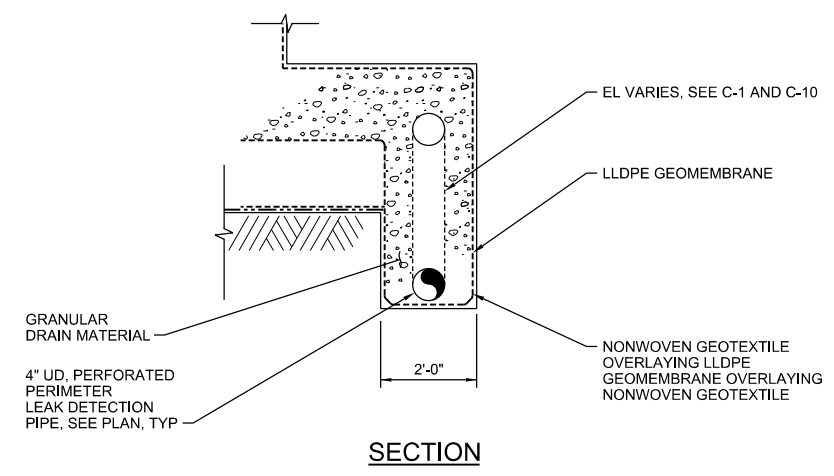
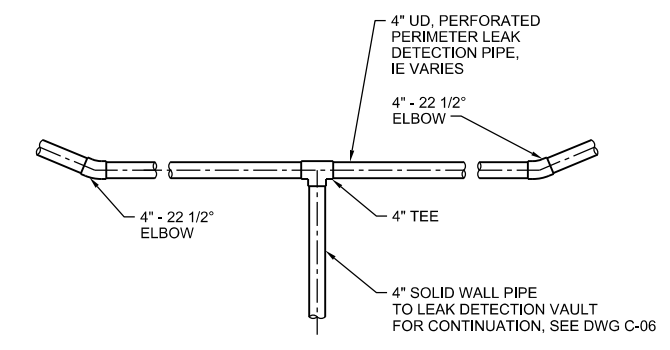


LEGEND:

---	NON-WOVEN GEOTEXTILE
----	LLDPE GEOMEMBRANE

- NOTES:**
- OBTAIN ENGINEER'S ACCEPTANCE OF THE FINAL SUBGRADE MATERIAL PRIOR TO BACKFILL AND PLACEMENT OF GEOMEMBRANE.
 - PLACE GRANULAR FILL BELOW RESERVOIR PRIOR TO EXCAVATING TRENCHES FOR INSTALLING LEAK DETECTION PIPES.
 - GEOMEMBRANE TO BE PLACED IN A MANNER TO AVOID SHARP CORNERS AND 90 DEGREE BENDS. CORNERS SHALL BE ROUNDED TO APPROXIMATELY 45 DEGREES AND A 2-INCH RADIUS.
 - INSTALL MEL-DRAIN TOTAL DRAIN SYSTEM OR APPROVED EQUAL. SET THE BOTTOM OF THE 6 FT TALL WALL 4.5 FT ABOVE THE TOP OF FOOTING. ROUTE OUTLET TO STORM DRAIN SYSTEM AS SHOWN ON CIVIL DRAWINGS.
 - EXTEND GRANULAR FILL A MINIMUM OF 3 FT BEYOND THE OUTSIDE FOOTING.

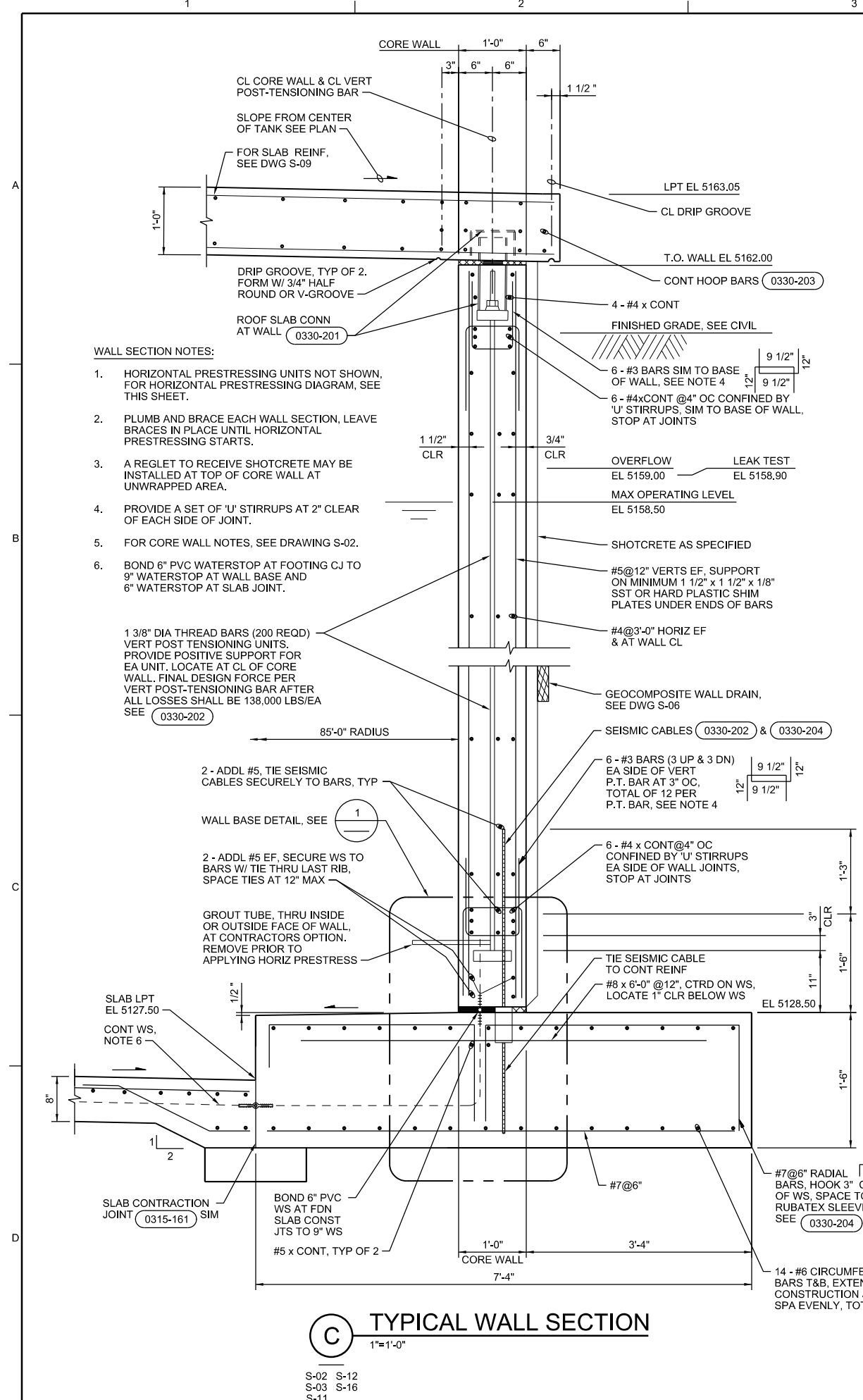
S-01 S-10
 S-02 S-11
 S-08





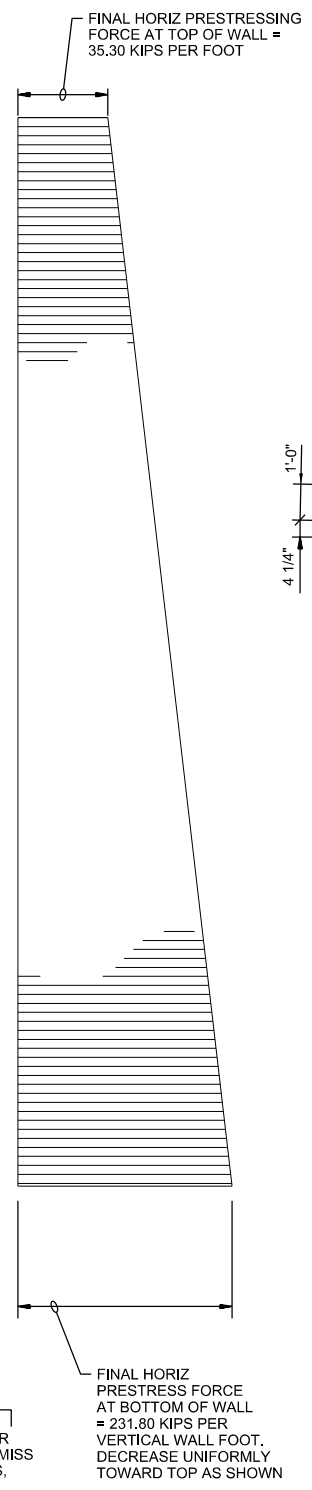
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- NOTES:
- FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS G-09 AND G-10.



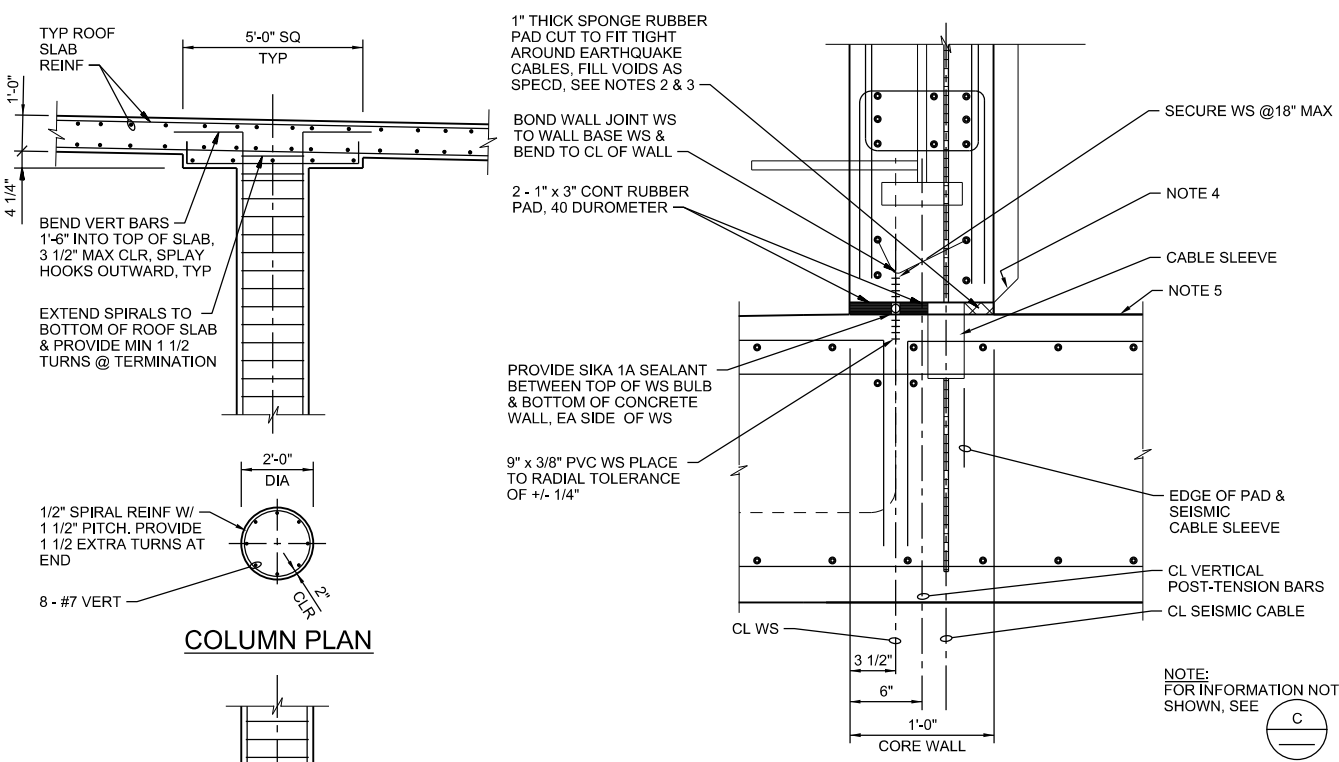
C TYPICAL WALL SECTION
1"=1'-0"

S-02 S-12
S-03 S-16
S-11



D TYPICAL COLUMN SECTION
3/8"=1'-0"

S-02 S-09
S-03 S-11
S-04 S-12



1 WALL BASE DETAIL
NTS

- WALL BASE NOTES:**
- TROWEL ENTIRE TOP OF SLAB DIRECTLY UNDER WALL BASE TO PROVIDE SMOOTH SURFACE.
 - SECURE RUBBER PAD AND SPONGE RUBBER PADS TO SLAB WITH RUBBER CEMENT. ALL CREVICES BETWEEN RUBBER PADS SHALL BE CAULKED WITH SEALANT AS SPECIFIED.
 - FURNISH SPONGE RUBBER PADS AT WALL BASE 1/4" WIDER THAN SHOWN. COMPRESS PADS WITH WALL FORMS TO FORM A TIGHT SEAL. CUT SPONGE RUBBER TO FIT TIGHTLY AROUND SEISMIC CABLE SLEEVE.
 - SHAPE SHOTCRETE AT BOTTOM OF WALL TO PROVIDE FREE JOINT OR PROVIDE A MINIMUM 3/4" THICK x CONTINUOUS SPONGE RUBBER PAD BETWEEN THE SHOTCRETE AND THE SLAB.
 - OBTAIN FORMING RESTRICTIONS FROM PRESTRESSOR FOR TOP OF EXTERIOR WALL SLAB EXTENSION TOLERANCE AND LEVEL REQUIREMENTS AND FOR ROUNDNESS TOLERANCE. SUBMIT SHOP DRAWING SHOWING WHERE PRESTRESS EQUIPMENT WILL BE SUPPORTED ON SLAB EXTENSION DURING WRAPPING.

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

REVISION
NO. DATE DSGN CHK DR

APVD BY APVD
B PHELPS
A FIRTH
S ROSE
T STIMPSON

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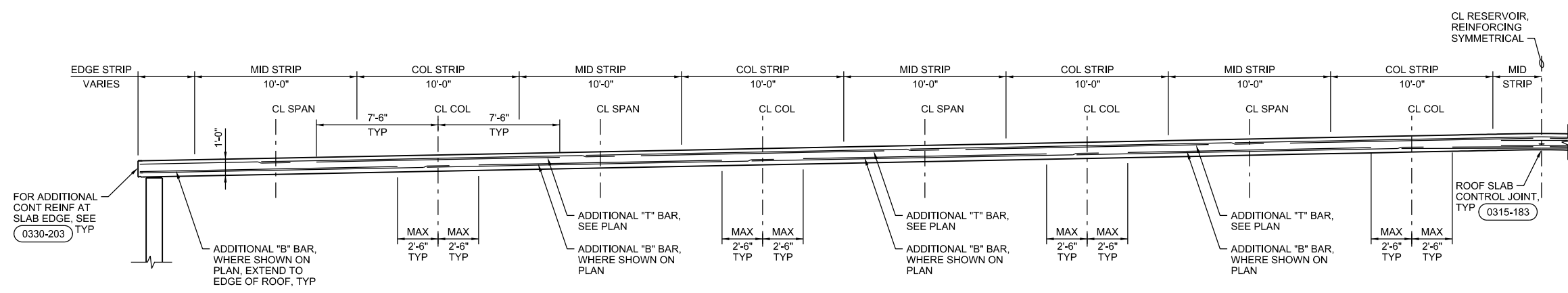
DATE APRIL 2024
PROJ WY49600
DWG S-08
SHEET 34 of 79

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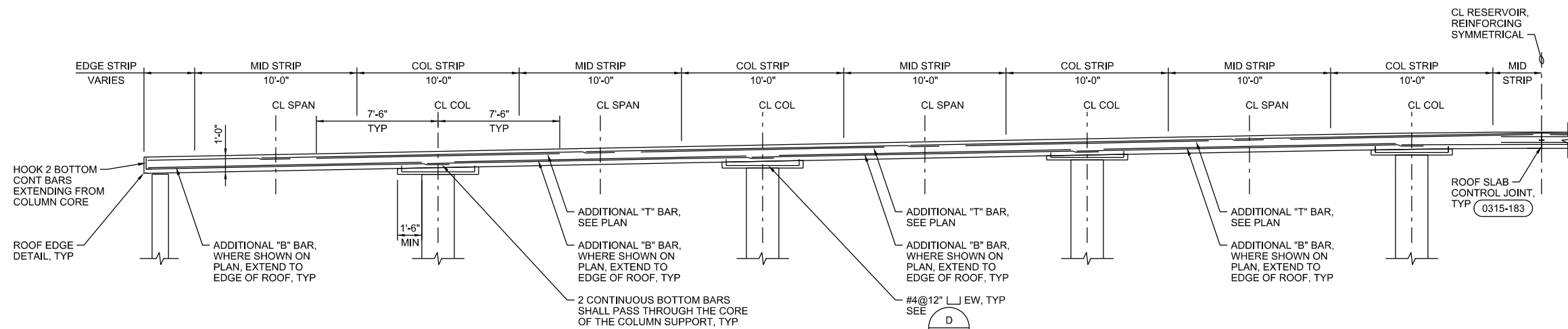


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- NOTES:**
- FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS G-09 AND G-10.
- NOTES FOR ROOF REINFORCING:**
- BOTTOM BARS SHALL BE 2" CLEAR AT BOTTOM OF SLAB, AND TOP BARS SHALL BE 2" CLEAR AT TOP OF SLAB.
 - PROVIDE #7@12" EACH WAY TOP AND #6@12" EACH WAY BOTTOM OF SLAB FOR TYPICAL, CONTINUOUS REINFORCING. SPLICE TOP BARS AT CENTERLINE OF SPAN AND SPLICE BOTTOM BARS AT COLUMN LINES. PROVIDE TYPICAL BARS AT 12"+/- SPACING PER STRIP STARTING 2" FROM EDGE OF STRIP. PROVIDE A MINIMUM OF 11 BARS PER EACH TYPICAL MIDDLE AND COLUMN STRIPS. TYPICAL REINFORCING IS ORTHOGONAL AND LOCATED PARALLEL TO STRIPS. FOR LAP LENGTHS, SEE GENERAL STRUCTURAL NOTES.
 - ADDITIONAL REINFORCING TO THE TYPICAL CONTINUOUS BARS EACH WAY, TOP AND BOTTOM, SHALL BE AS INDICATED ON THE ROOF PLAN (T = TOP ADDITIONAL SHORT BARS; B = BOTTOM ADDITIONAL SHORT BARS) AND SHALL BE DISTRIBUTED UNIFORMLY AND SYMMETRICALLY ACROSS COLUMN OR MIDDLE STRIPS, STARTING AT THE CENTER OF THE STRIP. ALTERNATE WITH TYPICAL REINFORCING.
 - REINFORCING SHOWN ON ONE QUADRANT ON DRAWING S-04 IS TYPICAL FOR ALL QUADRANTS.
 - TRANSVERSE BARS NOT SHOWN.
 - ALL BARS IN THE SAME DIRECTION IN THE SAME LAYER (TOP AND BOTTOM) SHALL BE IN THE SAME PLANE.
 - FOR ADDITIONAL REINFORCING AROUND SIDEWALK DOORS, VENT OPENINGS, ETC. SEE NOTES ON DRAWING S-04.
 - THE CONTRACTOR SHALL FURNISH AND INSTALL ANCHOR BOLTS IN THE ROOF SLAB AS REQUIRED BY THE PRESTRESSING SUBCONTRACTOR. REMOVE AND REPAIR AT END OF CONSTRUCTION AS APPROVED.
 - BARS FROM ONE SPAN MAY BE CONTINUOUS AND EXTENDED TO ADJACENT SPANS.
 - BURY BARS OR CARRIER BARS MAY NOT BE USED IN ROOF SLAB.
 - NUMBER OF SPANS AND COLUMNS IS SCHEMATIC AND MAY VARY FROM THAT OCCURRING IN ANY GIVEN ROOF STRIP.



E SECTION AT MIDDLE STRIP
 1/4"=1'-0" SCHEMATIC ABOUT CL - SEE ROOF PLAN
 S-04



F SECTION AT COLUMN STRIP
 1/4"=1'-0" SCHEMATIC ABOUT CL - SEE ROOF PLAN
 S-04

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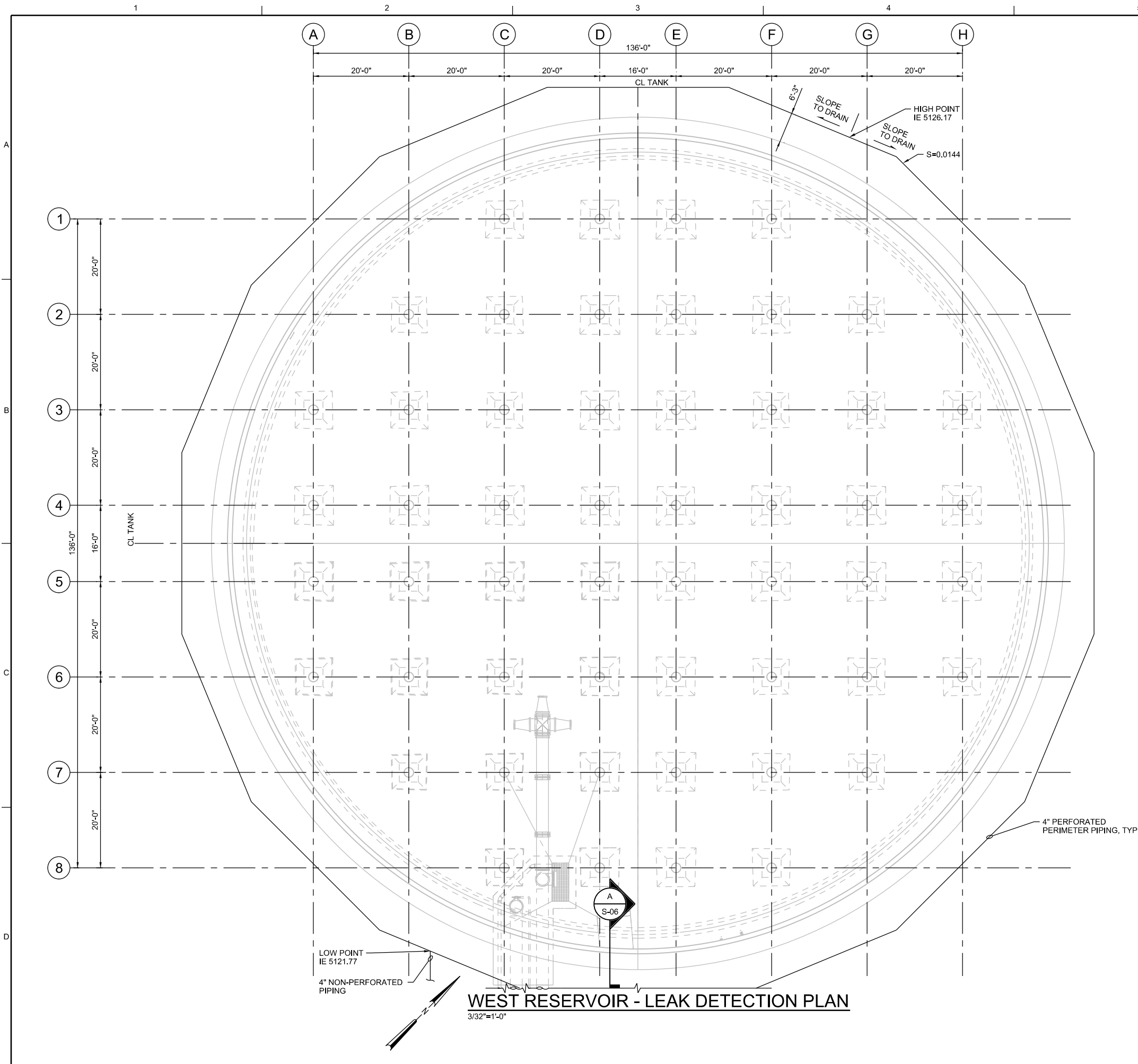
JORDAN VALLEY WATER CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

Jacobs
 RESERVOIRS - STRUCTURAL
 SECTIONS
 EAST RESERVOIR

VERIFY SCALE	
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DATE	APRIL 2024
PROJ	W7Y49600
DWG	S-09
SHEET	35 of 79

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GENERAL NOTES:

- FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS G-09 AND G-10.
- GEOTEXTILE / DRAIN ROCK / GEOMEMBRANE SYSTEM LOCATED BELOW ENTIRE FOOTPRINT OF TANK AND CONNECTS TO OUTSIDE EDGE OF FOUNDATION WITH A LLDPE AND GEOMEMBRANE MATERIAL, SEE A

A
S-06



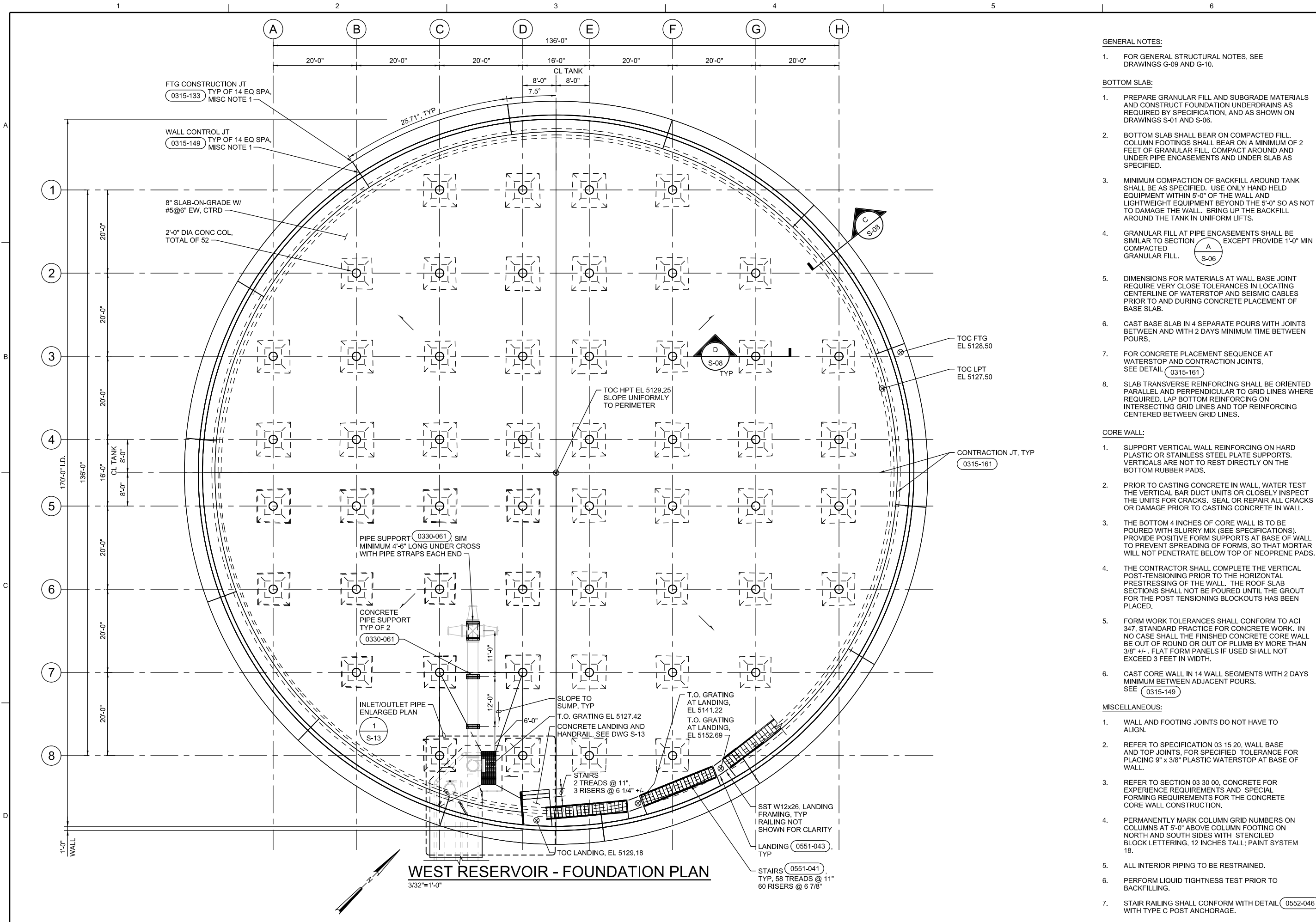
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Jordan Valley Water Conservancy District
11800 SOUTH ZONE C RESERVOIRS

Jacobs
RESERVOIRS - STRUCTURAL
LEAK DETECTION PLAN
WEST RESERVOIR

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DATE	APRIL 2024
PROJ	W7Y49600
DWG	S-10
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- GENERAL NOTES:**
- FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS G-09 AND G-10.
- BOTTOM SLAB:**
- PREPARE GRANULAR FILL AND SUBGRADE MATERIALS AND CONSTRUCT FOUNDATION UNDERDRAINS AS REQUIRED BY SPECIFICATION, AND AS SHOWN ON DRAWINGS S-01 AND S-06.
 - BOTTOM SLAB SHALL BEAR ON COMPACTED FILL. COLUMN FOOTINGS SHALL BEAR ON A MINIMUM OF 2 FEET OF GRANULAR FILL. COMPACT AROUND AND UNDER PIPE ENCASEMENTS AND UNDER SLAB AS SPECIFIED.
 - MINIMUM COMPACTION OF BACKFILL AROUND TANK SHALL BE AS SPECIFIED. USE ONLY HAND HELD EQUIPMENT WITHIN 5'-0" OF THE WALL AND LIGHTWEIGHT EQUIPMENT BEYOND THE 5'-0" SO AS NOT TO DAMAGE THE WALL. BRING UP THE BACKFILL AROUND THE TANK IN UNIFORM LIFTS.
 - GRANULAR FILL AT PIPE ENCASEMENTS SHALL BE SIMILAR TO SECTION **A** EXCEPT PROVIDE 1'-0" MIN COMPACTED GRANULAR FILL. **S-06**
 - DIMENSIONS FOR MATERIALS AT WALL BASE JOINT REQUIRE VERY CLOSE TOLERANCES IN LOCATING CENTERLINE OF WATERSTOP AND SEISMIC CABLES PRIOR TO AND DURING CONCRETE PLACEMENT OF BASE SLAB.
 - CAST BASE SLAB IN 4 SEPARATE POURS WITH JOINTS BETWEEN AND WITH 2 DAYS MINIMUM TIME BETWEEN POURS.
 - FOR CONCRETE PLACEMENT SEQUENCE AT WATERSTOP AND CONTRACTION JOINTS, SEE DETAIL **0315-161**
 - SLAB TRANSVERSE REINFORCING SHALL BE ORIENTED PARALLEL AND PERPENDICULAR TO GRID LINES WHERE REQUIRED. LAP BOTTOM REINFORCING ON INTERSECTING GRID LINES AND TOP REINFORCING CENTERED BETWEEN GRID LINES.
- CORE WALL:**
- SUPPORT VERTICAL WALL REINFORCING ON HARD PLASTIC OR STAINLESS STEEL PLATE SUPPORTS. VERTICALS ARE NOT TO REST DIRECTLY ON THE BOTTOM RUBBER PADS.
 - PRIOR TO CASTING CONCRETE IN WALL, WATER TEST THE VERTICAL BAR DUCT UNITS OR CLOSELY INSPECT THE UNITS FOR CRACKS. SEAL OR REPAIR ALL CRACKS OR DAMAGE PRIOR TO CASTING CONCRETE IN WALL.
 - THE BOTTOM 4 INCHES OF CORE WALL IS TO BE POURED WITH SLURRY MIX (SEE SPECIFICATIONS). PROVIDE POSITIVE FORM SUPPORTS AT BASE OF WALL TO PREVENT SPREADING OF FORMS, SO THAT MORTAR WILL NOT PENETRATE BELOW TOP OF NEOPRENE PADS.
 - THE CONTRACTOR SHALL COMPLETE THE VERTICAL POST-TENSIONING PRIOR TO THE HORIZONTAL PRESTRESSING OF THE WALL. THE ROOF SLAB SECTIONS SHALL NOT BE POURED UNTIL THE GROUT FOR THE POST TENSIONING BLOCKOUTS HAS BEEN PLACED.
 - FORM WORK TOLERANCES SHALL CONFORM TO ACI 347, STANDARD PRACTICE FOR CONCRETE WORK. IN NO CASE SHALL THE FINISHED CONCRETE CORE WALL BE OUT OF ROUND OR OUT OF PLUMB BY MORE THAN 3/8" +/- . FLAT FORM PANELS IF USED SHALL NOT EXCEED 3 FEET IN WIDTH.
 - CAST CORE WALL IN 14 WALL SEGMENTS WITH 2 DAYS MINIMUM BETWEEN ADJACENT POURS. SEE **0315-149**
- MISCELLANEOUS:**
- WALL AND FOOTING JOINTS DO NOT HAVE TO ALIGN.
 - REFER TO SPECIFICATION 03 15 20, WALL BASE AND TOP JOINTS, FOR SPECIFIED TOLERANCE FOR PLACING 9" x 3/8" PLASTIC WATERSTOP AT BASE OF WALL.
 - REFER TO SECTION 03 30 00, CONCRETE FOR EXPERIENCE REQUIREMENTS AND SPECIAL FORMING REQUIREMENTS FOR THE CONCRETE CORE WALL CONSTRUCTION.
 - PERMANENTLY MARK COLUMN GRID NUMBERS ON COLUMNS AT 5'-0" ABOVE COLUMN FOOTING ON NORTH AND SOUTH SIDES WITH STENCILED BLOCK LETTERING, 12 INCHES TALL; PAINT SYSTEM 18.
 - ALL INTERIOR PIPING TO BE RESTRAINED.
 - PERFORM LIQUID TIGHTNESS TEST PRIOR TO BACKFILLING.
 - STAIR RAILING SHALL CONFORM WITH DETAIL **0552-046** WITH TYPE C POST ANCHORAGE.



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JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

RESERVOIRS - STRUCTURAL

FOUNDATION PLAN WEST RESERVOIR

Jacobs

RESERVOIRS - STRUCTURAL

FOUNDATION PLAN WEST RESERVOIR

VERIFY SCALE

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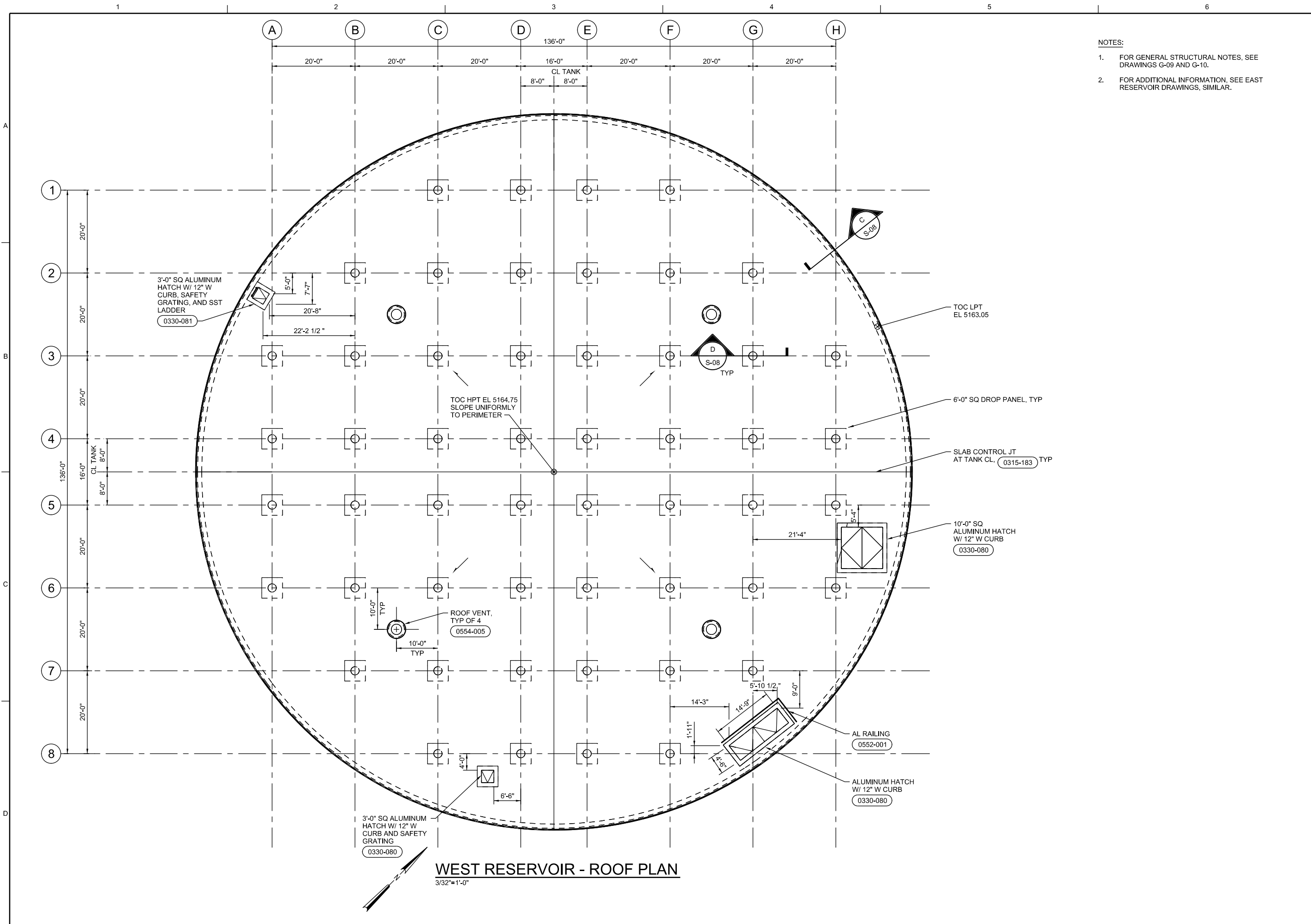
DATE: APRIL 2024

PROJ: W7Y49600

DWG: S-11

SHEET: 37 of 79

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WEST RESERVOIR - ROOF PLAN
3/32"=1'-0"

- NOTES:
- FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS G-09 AND G-10.
 - FOR ADDITIONAL INFORMATION, SEE EAST RESERVOIR DRAWINGS, SIMILAR.



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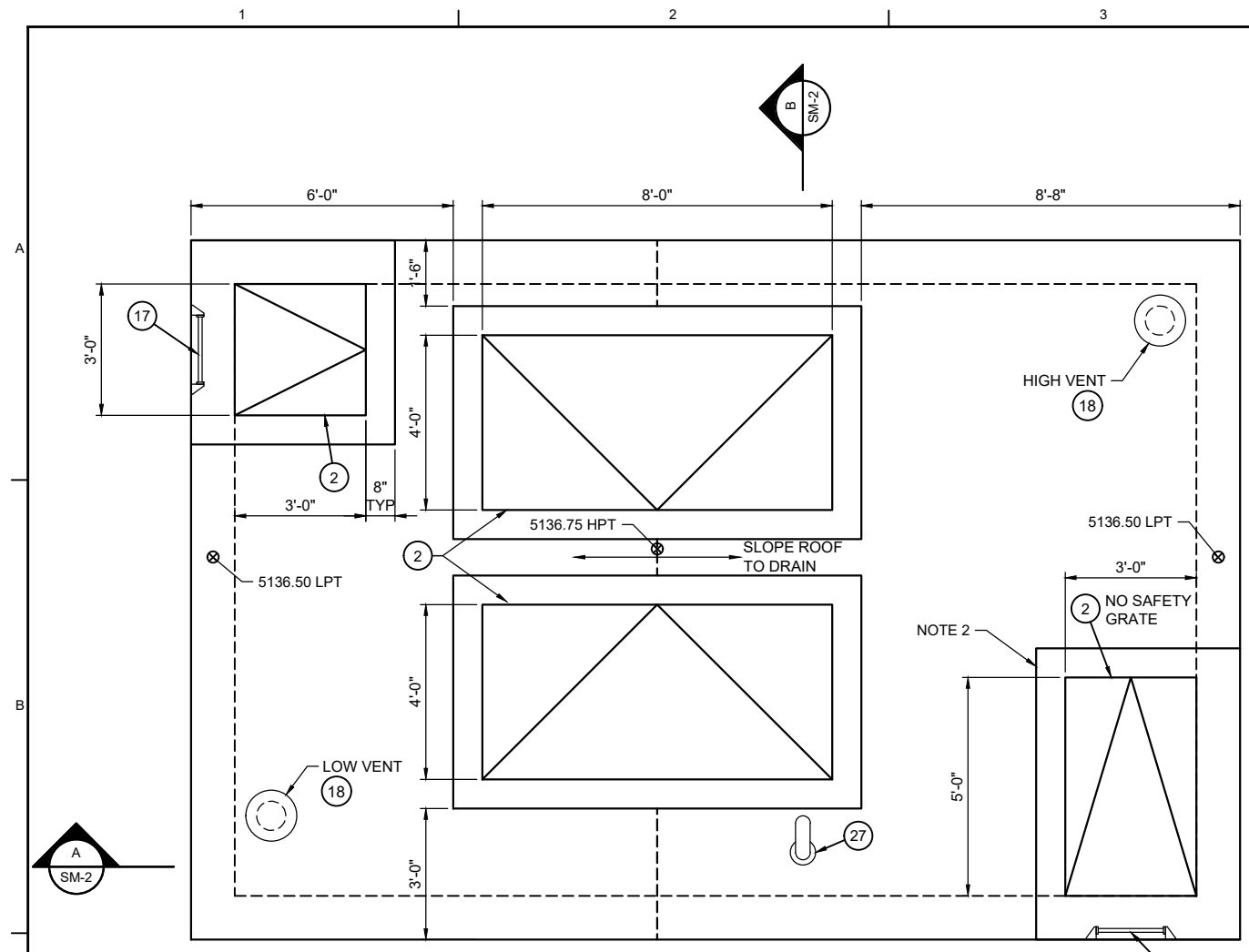
JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

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RESERVOIRS - STRUCTURAL
ROOF PLAN WEST RESERVOIR

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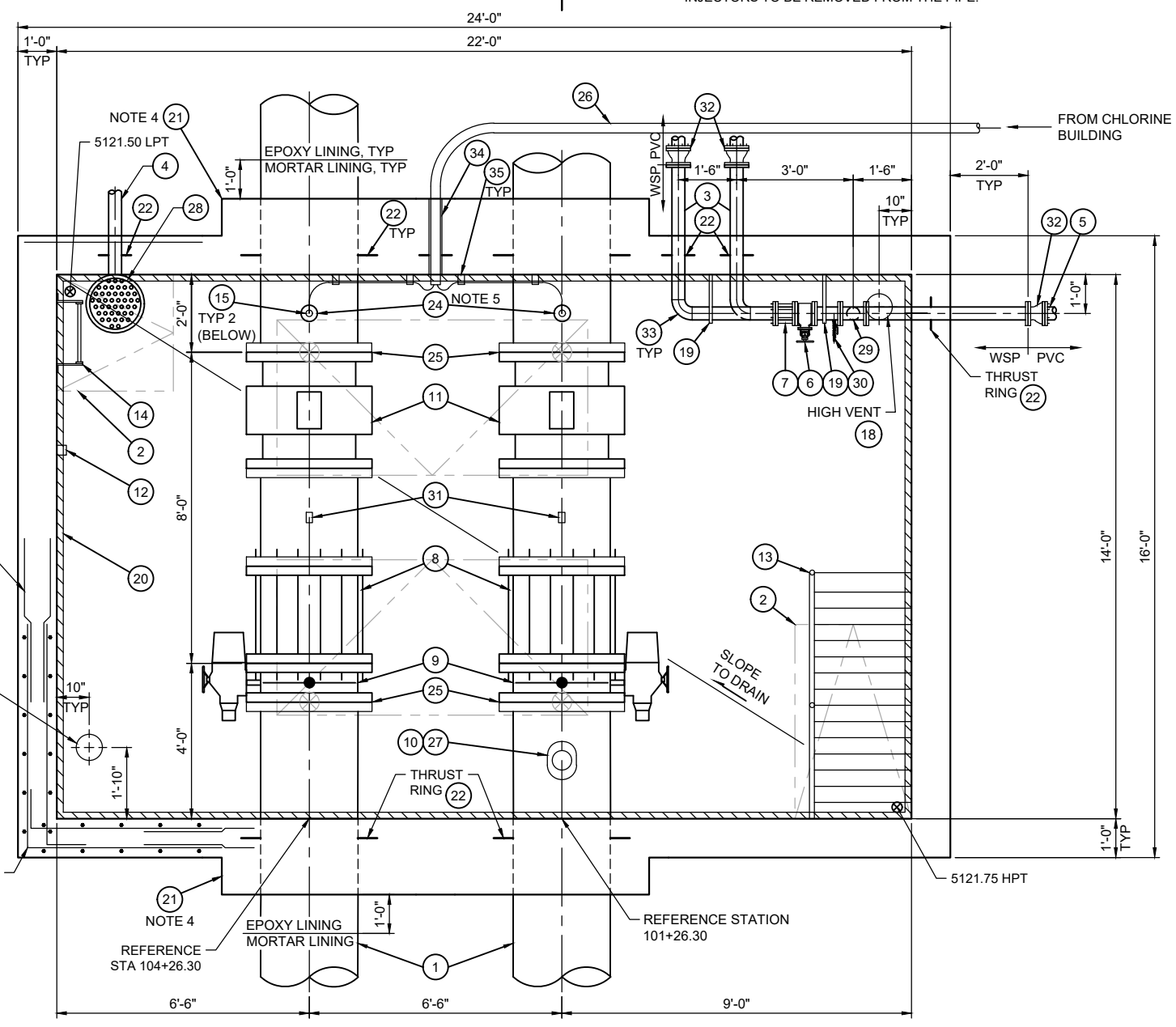
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1 ROOF PLAN
1/2" = 1'-0"

MATERIAL SCHEDULE

- | | |
|--|---|
| <ul style="list-style-type: none"> 1 30" WSP, SEE PROFILE FOR THICKNESS 2 SIDEWALK DOOR WITH SAFETY GRATING AND 8" WIDE CURB (0330-082) 3 4" WSP, STD WT HIGH PRESSURE WASHDOWN 4 4" SUMP PIPING DRAIN TO LEAK DETECTION BOX 5 4" HIGH PRESSURE WASHDOWN PIPELINE 6 4" RESILIENT SEATED GATE VALVE V130 7 4" RESTRAINED DISMANTLING JOINT 8 30" RESTRAINED DISMANTLING JOINT 9 30" FLG BUTTERFLY VALVE, V504 10 4" COMBINATION AIR VALVE TYPE V746 (4027-120) 11 MAG FLOW METER (4091-222) 12 FLOOD SWITCH (2605-015) 13 SHIPS LADDER (0551-151) 14 SST LADDER (0551-101) 15 2" SST BALL VALVE (DRAIN) (4027-195) 16 PIPE SUPPORT (4005-500) 17 EXTERIOR LADDER (0551-143) 18 8" VENT PIPE W/ROOF PENETRATION (2337-806) | <ul style="list-style-type: none"> 19 WALL MOUNTED PIPE SUPPORT (4005-505) 20 2" THICK RIGID INSULATION ON CEILING AND WALLS 4 FT DOWN FROM INSIDE OF CEILING. OMIT BEHIND LADDER. 21 PIPE COLLAR (0330-021) SIM 22 SEEP RING, SIM (3305-916), USE 1/2" THICK FOR THRUST RING 23 EXHAUST FAN (2337-810) 24 CHLORINE INJECTION QUILL (4027-957) 25 INSULATED FLANGE (2642-925), NOTE 4 26 3" SCH 80 PVC CONDUIT WITH LONG RADIUS ELBOWS AND (2) 3/8" CHLORINE INJECTION LINES, SEE VOLUME 3 27 AIR VALVE VENT PIPE ASSEMBLY (2337-805) 28 18" SUMP W/ DRAIN (0330-324) 29 4" x 4" WSP TEE, STD WT 30 HOSE BIB (4090-692) 31 ANALOG PRESSURE GAUGE (4090-691) 32 4" DIP FLG x MJ ADAPTER W/ RESTRAINED JOINT. WAX TAPE COAT 33 4" WSP 90 DEGREE SHORT RADIUS ELBOW, STD WT 34 4" STEEL SLEEVE WITH SEEP RING AND MODULAR MECHANICAL SEAL (4027-607) 35 SST SUPPORT STRAPS W/ CONCRETE ANCHORS (2 EA) |
|--|---|



2 PIPING PLAN
1/2" = 1'-0"

- NOTES:**
1. DO NOT BACKFILL STRUCTURE UNTIL ROOF SLAB HAS REACHED 80% OF THE DESIGN COMPRESSIVE STRENGTH. AT CONTRACTORS OPTION, BACKFILLING PRIOR TO INSTALLATION OF THE ROOF IS ACCEPTABLE IF REINFORCING IS REVISED TO #6 @ 6" EACH WAY, EACH FACE.
 2. REINFORCE OPENINGS PER DETAIL (0330-001).
 3. REINFORCE CORNERS PER DETAIL (0330-003).
 4. CONFIRM ELECTRICAL ISOLATION AT THE FLANGE FROM CATHODIC SYSTEMS BEFORE CASTING CONCRETE WALL. IN THE PRESENCE OF DISTRICT STAFF OR REPRESENTATIVE, TEST ISOLATION BETWEEN WSP AND WALL REBAR BEFORE AND AFTER WALLS ARE CAST.
 5. LEAVE ENOUGH SLACK IN THE CHLORINE LINES TO ALLOW FOR THE INJECTORS TO BE REMOVED FROM THE PIPE.



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11800 SOUTH ZONE C RESERVOIRS

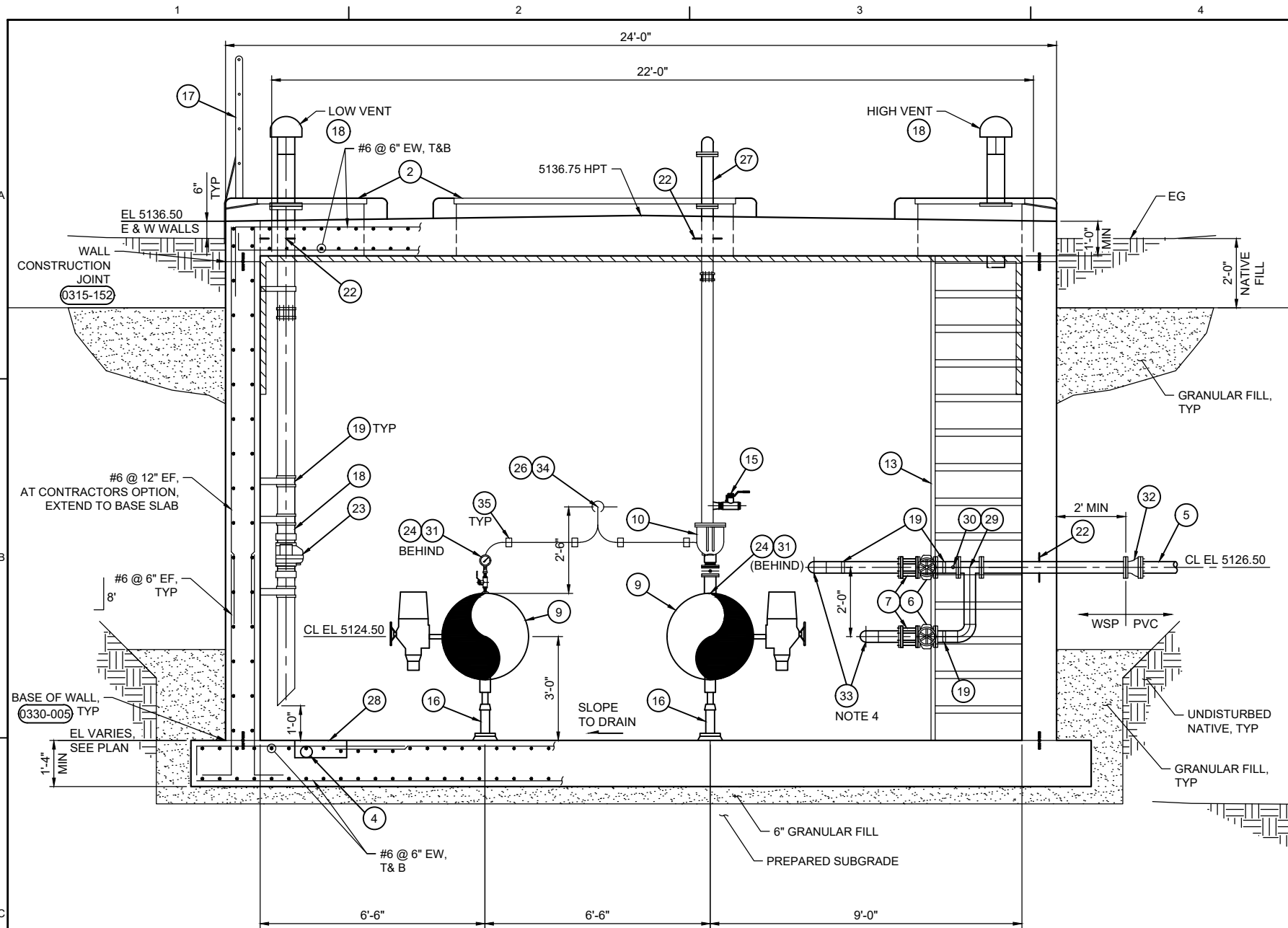
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STRUCTURAL / MECHANICAL
RESERVOIR VALVE VAULT
ROOF AND PIPING PLANS

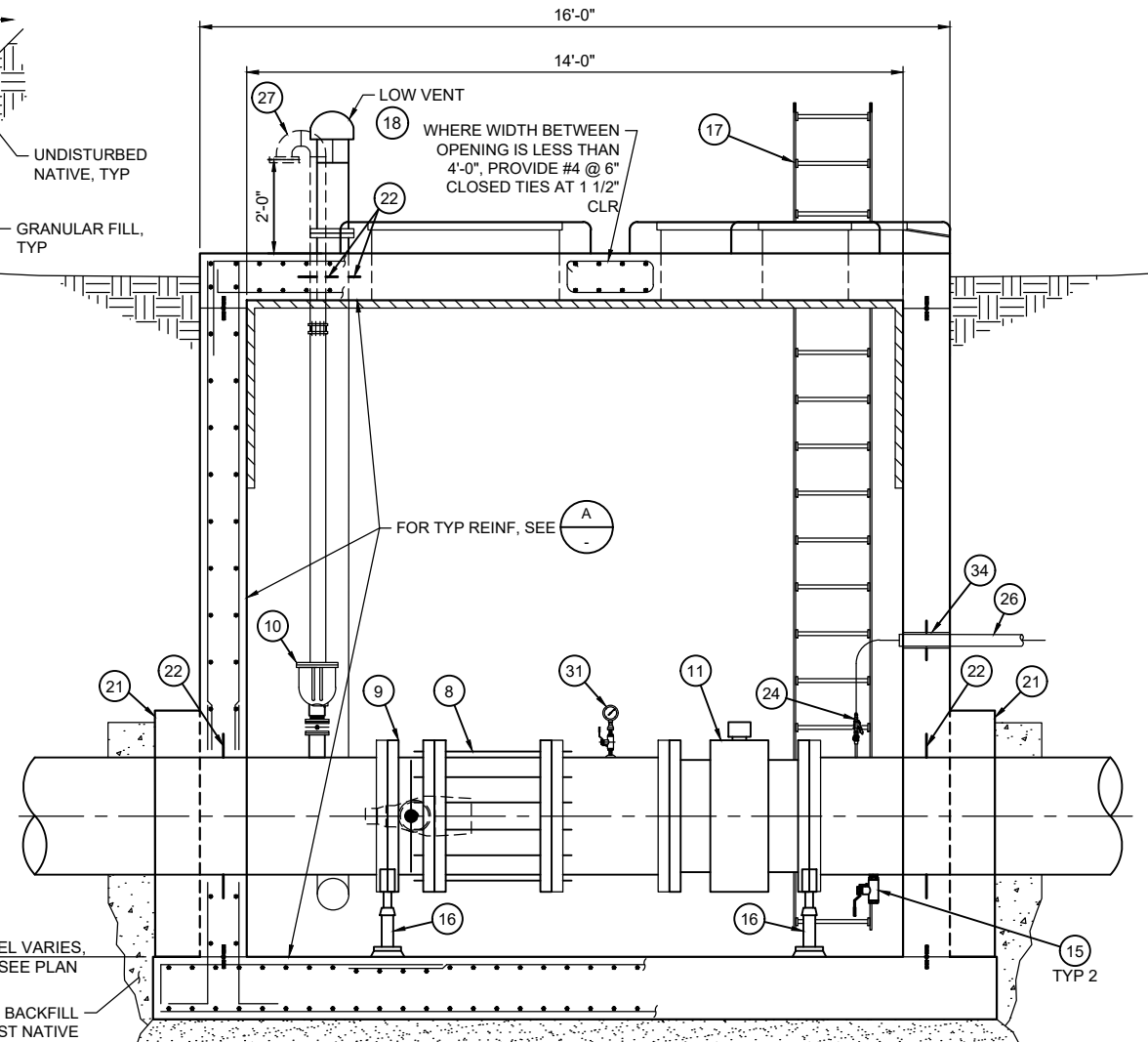


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DATE	APRIL 2024
PROJ	W7Y49600
DWG	SM-01
SHEET	40 of 79

100% DESIGN



A SECTION
1/2" = 1'-0"



B SECTION
1/2" = 1'-0"

- NOTES:**
- DO NOT BACKFILL STRUCTURE UNTIL ROOF SLAB HAS REACHED 80% OF THE DESIGN COMPRESSIVE STRENGTH. AT CONTRACTORS OPTION, BACKFILLING PRIOR TO INSTALLATION OF THE ROOF IS ACCEPTABLE IF REINFORCING IS REVISED TO #6@6" EACH WAY, EACH FACE.
 - REINFORCE OPENINGS PER DETAIL (0330-001).
 - REINFORCE CORNERS PER DETAIL (0330-003).
 - INSTALL PLACARD ABOVE EACH PIPE TO IDENTIFY WHICH TANK IT SERVICES (E.G. EAST OR WEST)



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JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
STRUCTURAL / MECHANICAL
RESERVOIR VALVE VAULT SECTIONS

VERIFY SCALE
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DATE	APRIL 2024
PROJ	W7Y49600
DWG	SM-02
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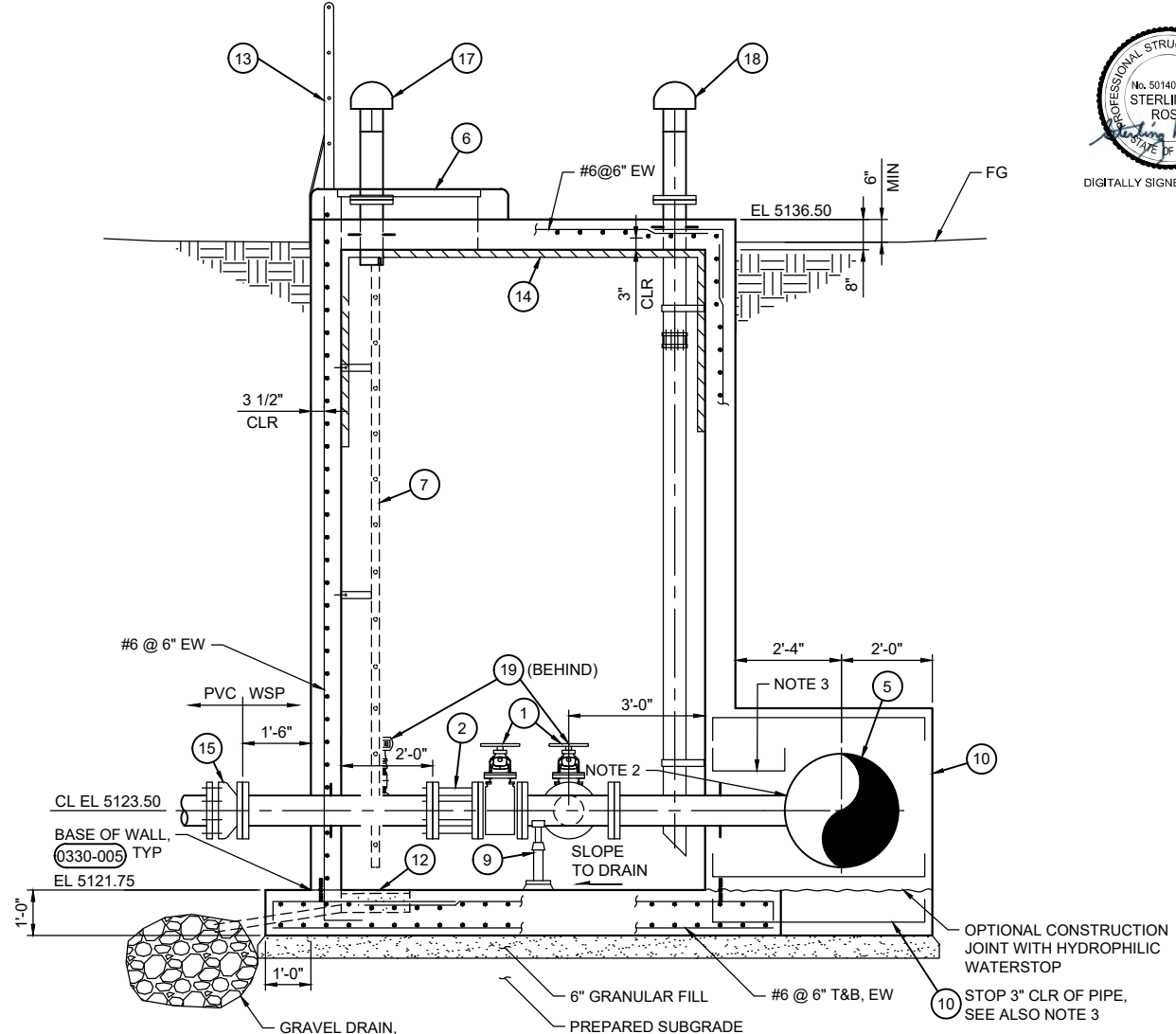
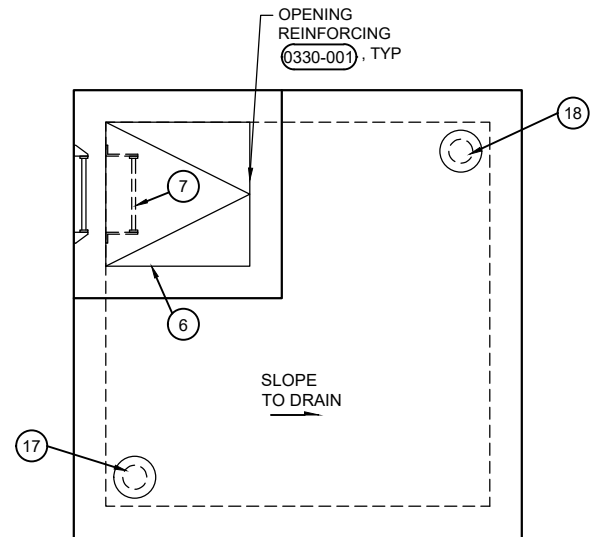
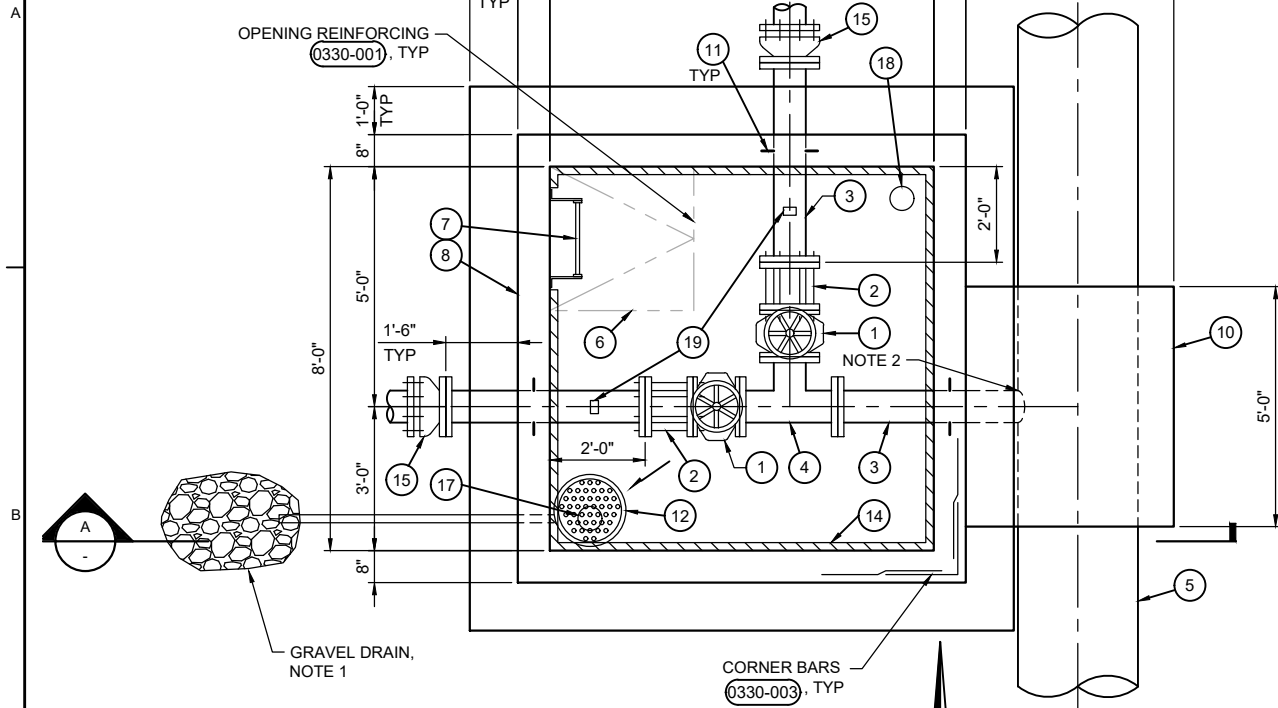
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3

4

5

6



MATERIAL SCHEDULE

- 1 8" RESILIENT SEATED GATE VALVE V130
- 2 8" RESTRAINED DISMANTLING JOINT
- 3 8" WSP, STD WT W/ EPOXY LINING AND COATING
- 4 8"x8" TEE, STD WT
- 5 30" RCP, SEE SITE PLAN
- 6 36" SQUARE SIDEWALK DOOR WITH SAFETY GRATING AND 8" CURB 0330-082
- 7 SST LADDER 0551-101
- 8 8' x 8' PRECAST VAULT
- 9 PIPE SUPPORT 4005-500
- 10 PIPE ENCASEMENT 0330-017, SIM
- 11 SEEP RING 4027-605
- 12 18" SUMP W/ 2" SCH 80 PVC DRAIN TO GRAVEL 0330-324
- 13 EXTERIOR LADDER 0551-143
- 14 2" THICK RIGID INSULATION ON CEILING AND WALLS 4 FT DOWN FROM INSIDE OF CEILING. OMIT BEHIND LADDER
- 15 8" DIP FLG x MJ ADAPTER W/ RESTRAINED JOINT. WAX TAPE COAT
- 16 NOT USED
- 17 6" HIGH VENT 2337-806
- 18 6" LOW VENT 2337-806
- 19 PRESSURE TRANSMITTER W/ READ BOX IN THE CHLORINE BUILDING 4090-690

NOTES:

1. DRAIN ROCK WRAPPED IN GEOTEXTILE FABRIC 1.5 CY. TOP OF DRAIN ROCK SHALL BE BELOW INVERT OF 2" DRAIN.
2. CORE RCP PIPE TO INSERT 8" DRAIN PIPING. USE NON-SHRINK GROUT TO FILL ANNULAR SPACE BETWEEN DRAIN PIPE AND RCP.
3. AT CONTRACTOR'S OPTION, PLACE MONOLITHICALLY WITH VAULT CONCRETE, USE FORM SAVERS, OR ADHESIVE DOWELS WITH 6" MIN EMBED.



DIGITALLY SIGNED: 04/12/2024



DIGITALLY SIGNED: 04/12/2024



11800 SOUTH ZONE C RESERVOIRS

Jacobs

STRUCTURAL / MECHANICAL
**DRAINAGE VAULT
PLAN AND SECTIONS**

DATE	APRIL 2024
PROJ	W7Y49600
DWG	SM-03
SHEET	42 of 79

100% DESIGN

1 2 3 4 5 6



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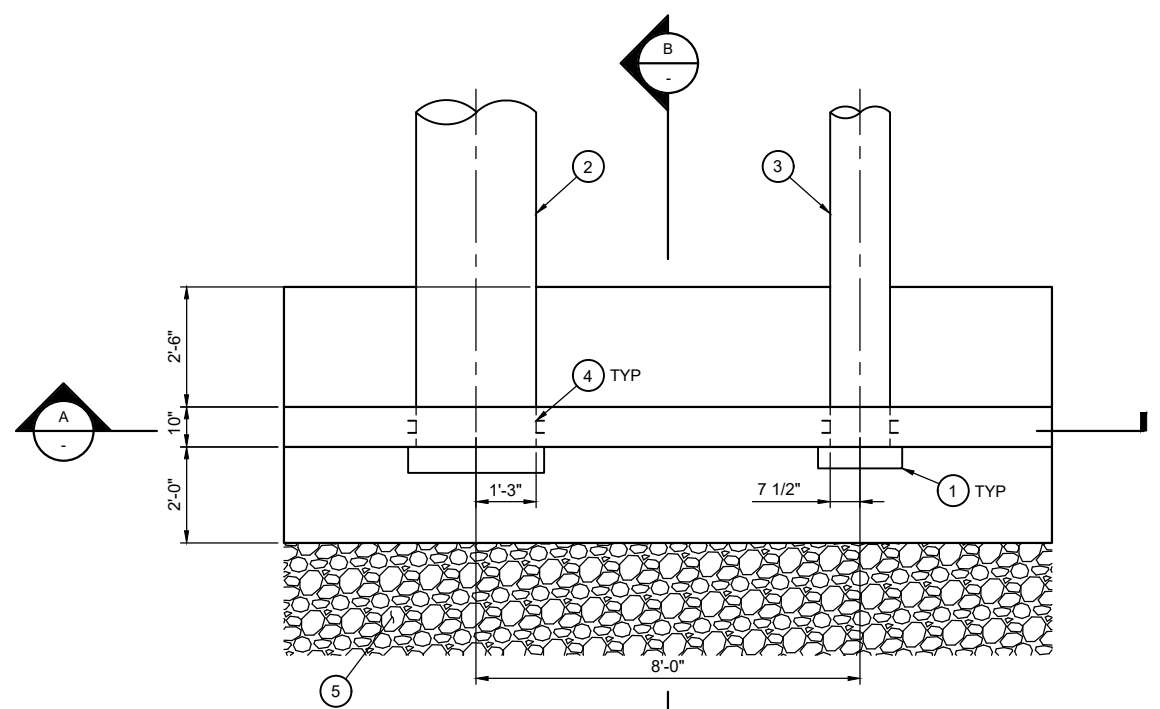
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MATERIAL SCHEDULE

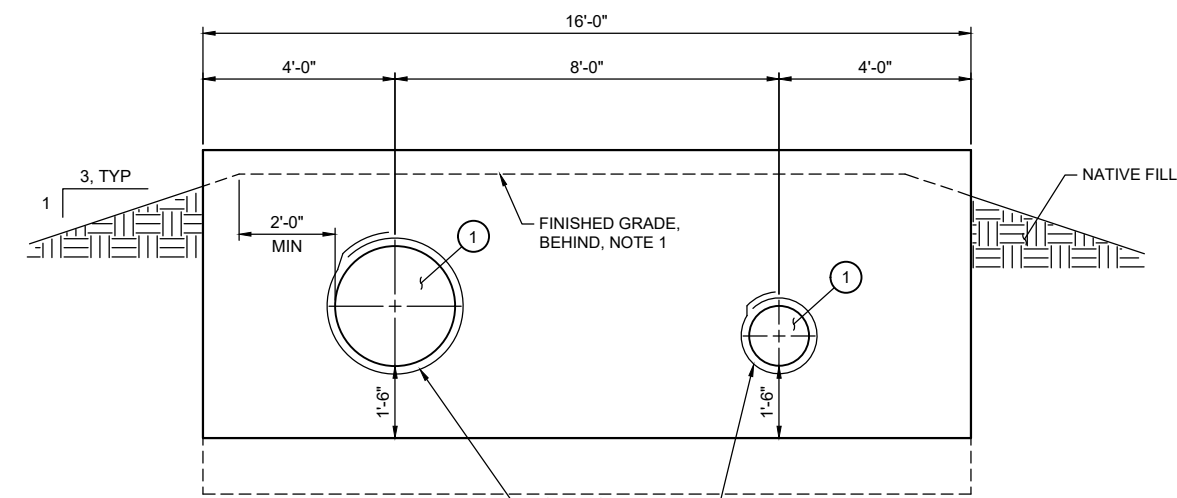
- 1 1/4" SST SCREEN WITH FLAP GATE VALVE, WATERMAN F-10 OR SIMILAR. ANCHOR TO CONCRETE WALL
- 2 30" RCP
- 3 18" RCP
- 4 HYDROPHILIC WATERSTOP, 2 RINGS
- 5 RIPRAP, CLASS III - 12" D50, SEE DWG C-05

NOTES:

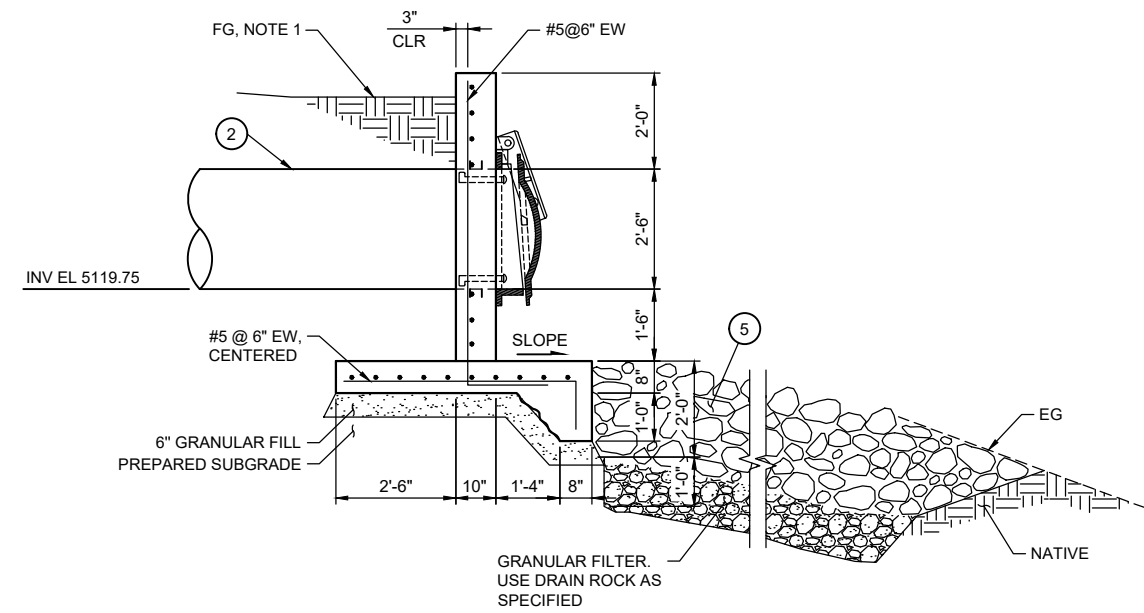
- 1. MOUND SOIL OVER PIPE TO CATCH EXISTING GRADE. APPROXIMATELY 40 FEET.



1 PLAN
1/2" = 1'-0"



A SECTION
1/2" = 1'-0"



B SECTION
1/2" = 1'-0"

NO.	DATE	DR	CHK	BY	APVD
		T. WITHERS/ROSE			
		C. HOGGARD			
		B. PHELPS			
		R. WILLEITNER			

JORDAN VALLEY WATER
CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
STRUCTURAL / MECHANICAL
DRAINAGE OUTLET AT
MIDAS CREEK

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2024
PROJ	W7Y49600
DWG	SM-04
SHEET	43 of 79

100% DESIGN



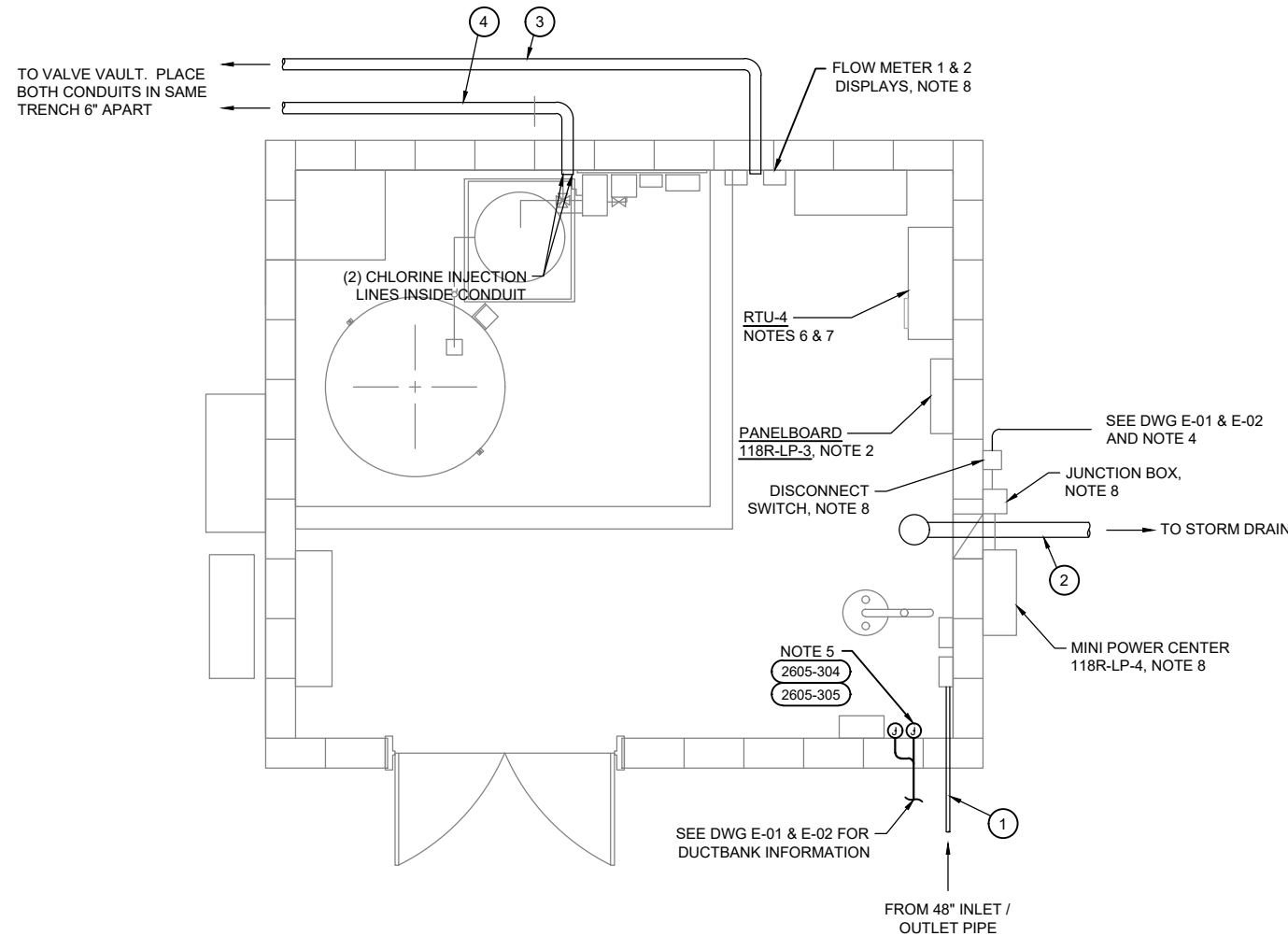
DIGITALLY SIGNED: 04/12/2024

MATERIAL SCHEDULE

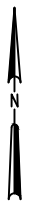
- ① 1" HDPE, BUILDING WATER SUPPLY LINE
- ② 4" SCH 80 PVC DRAIN LINE
- ③ 2" SCH 40 PVC CONDUIT WITH LONG RADIUS BENDS FOR FLOW METER DISPLAY CABLES
- ④ 3" SCH 40 PVC CONDUIT WITH LONG RADIUS BENDS FOR CHLORINE LINES. LONG RADIUS BENDS

NOTES:

1. FOR STRUCTURAL AND MECHANICAL ELEMENTS, SEE VOLUME 3 DWG AND SPECS.
2. SUBPANEL FED BY 118R-LP-4. SEE VOLUME 3 DWG AND SPECS.
3. PROVIDE 20A SIMPLEX RECEPTACLE FOR SUMP PUMP. MOUNT AT 48" ABOVE FINISHED FLOOR. FEED THE INDICATED CIRCUITS FROM PANELBOARD 118R-LP-3. PROVIDE 2#12 FOR VALVE AND RECEPTACLE.
4. ROUTE UNDERGROUND DIRECT BURIED RACEWAY AS PER STANDARD DETAILS, PROVIDING ONE 2" CONDUIT TO RGS JUNCTION BOX AND ROUTING IT TO THE TRANSFORMER AND PANELBOARD, SHOWN ON THIS DRAWING.
5. SIGNALS GOING TO AND COMING FROM BOTH RESERVOIRS, DRAINAGE VAULT, LEAK DETECTION BOX, AND RESERVOIR VALVE VAULT. CONSOLIDATE SIMILAR CIRCUITS (UP TO 3 CIRCUITS) IN THEIR JUNCTION BOXES FOR ROUTING VIA SITE DUCT BANK.
6. CONNECT DEVICES TO RTU-4 AT THE NORTHEAST CORNER OF THE SITE.
7. PROVIDE ETHERNET CONNECTIONS AS PER DWG IC-02.
8. SEE DWG E-05 FOR ONE-LINE DIAGRAM.



① **BUILDING PLAN**
1/2" = 1'-0"



NO.	DATE	DR	CHK	APVD	BY
		T WITHERS	C HOGGARD	B PHELPS	R WILLEITNER
		DSGN	REVISION	APVD	BY

JORDAN VALLEY WATER
CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
STRUCTURAL / MECHANICAL
CHLORINE BUILDING UTILITIES

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2024
PROJ	W7Y49600
DWG	SM-05
SHEET	44 of 79

100% DESIGN



DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DR	REVISION	BY

JORDAN VALLEY WATER CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

Jacobs
 STRUCTURAL / MECHANICAL
 48" x 30" x 30"
 REDUCING WYE DETAILS

DATE	APRIL 2024
PROJ	W7Y49600
DWG	SM-06
SHEET	45 of 79

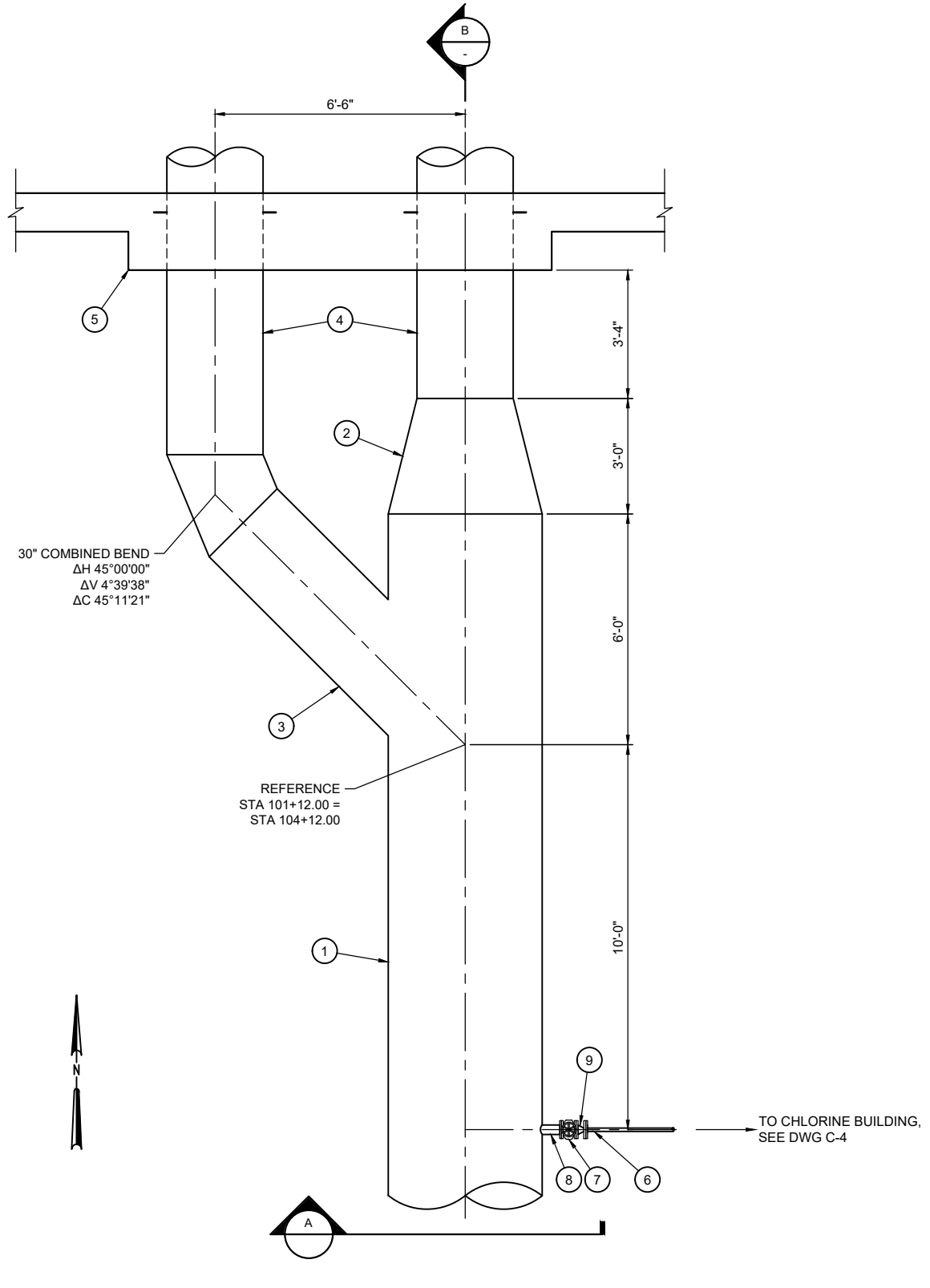
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MATERIAL SCHEDULE

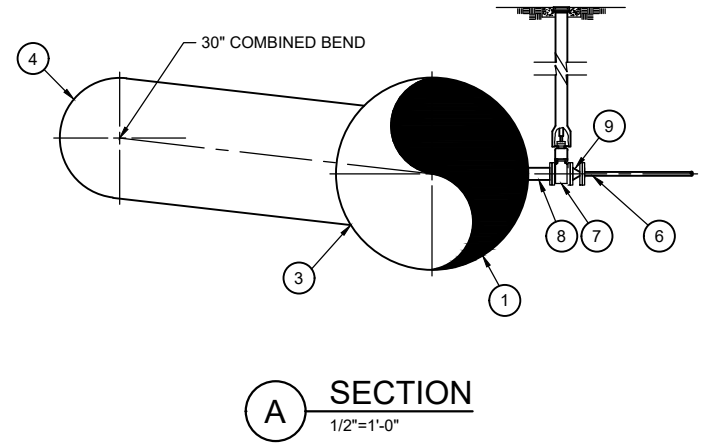
- 1 48" WSP, SEE DWG C-04 PROFILE FOR THICKNESS
- 2 48" x 30" ECCENTRIC REDUCER (FLAT TOP)
- 3 48" x 30" 45 DEGREE OUTLET, NOTE 1
- 4 30" WSP, SEE DWG C-04 PROFILE FOR THICKNESS
- 5 OUTSIDE WALL OF VALVE VAULT, SEE DWG SM-01
- 6 1" HDPE DR 21 FLANGED CONNECTION
- 7 4" FLG x FLG BURIED GATE VALVE (4027-640)
- 8 4" WSP OUTLET, STD WT (3305-937), NOTE 3
- 9 4" x 1" WSP FLANGED REDUCER, STD WT, NOTE 3

NOTES:

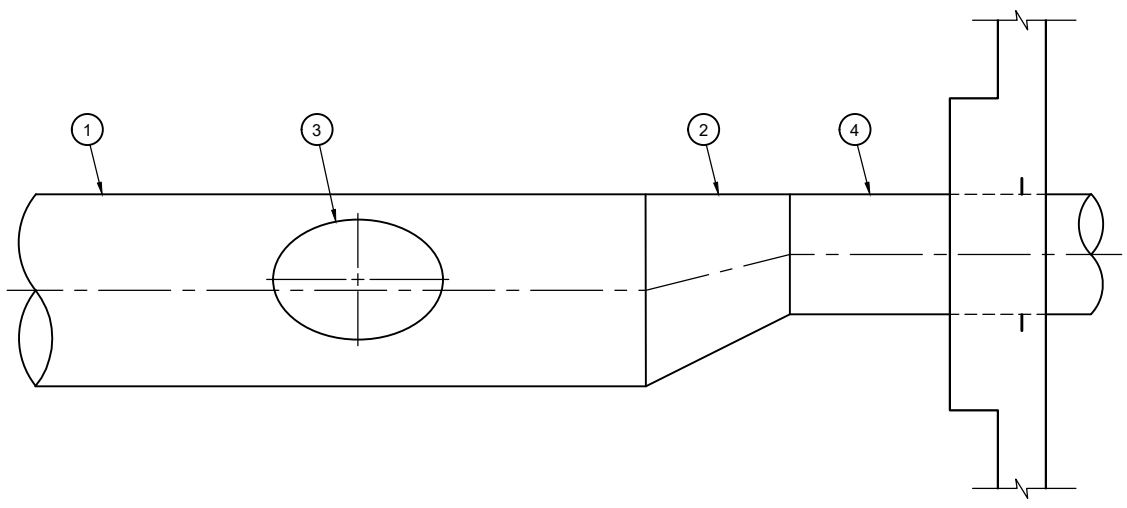
- 1. ALL WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) GROOVE WELDS AND SHALL BE 100% ULTRASONICALLY TESTED (UT) PER ASME BPV CODE SECTION VIII, DIV. 1, UW-53.
- 2. SHOP HYDROSTATICALLY TEST TO DESIGN PRESSURE OF 100 PSI PER ASME BPV CODE SECTION VIII, DIV. 1, UG-99.
- 3. EPOXY LINE AND COAT 4" AND SMALLER PIPING. WAX TAPE COAT ALL BURIED FLANGES, PER SPECIFICATIONS.



1 48" x 30" x 30" REDUCING WYE FITTING
 1/2" = 1'-0"

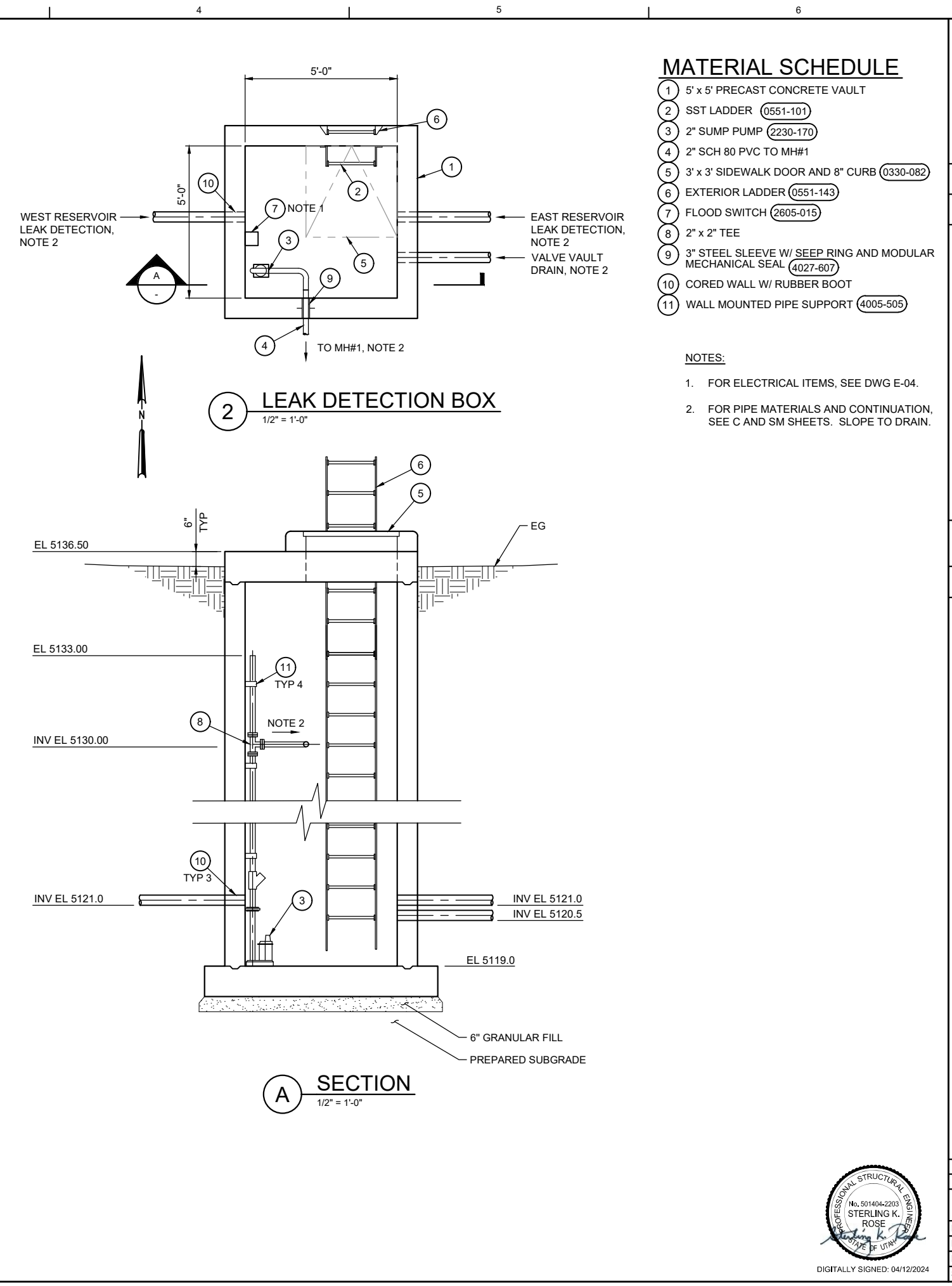
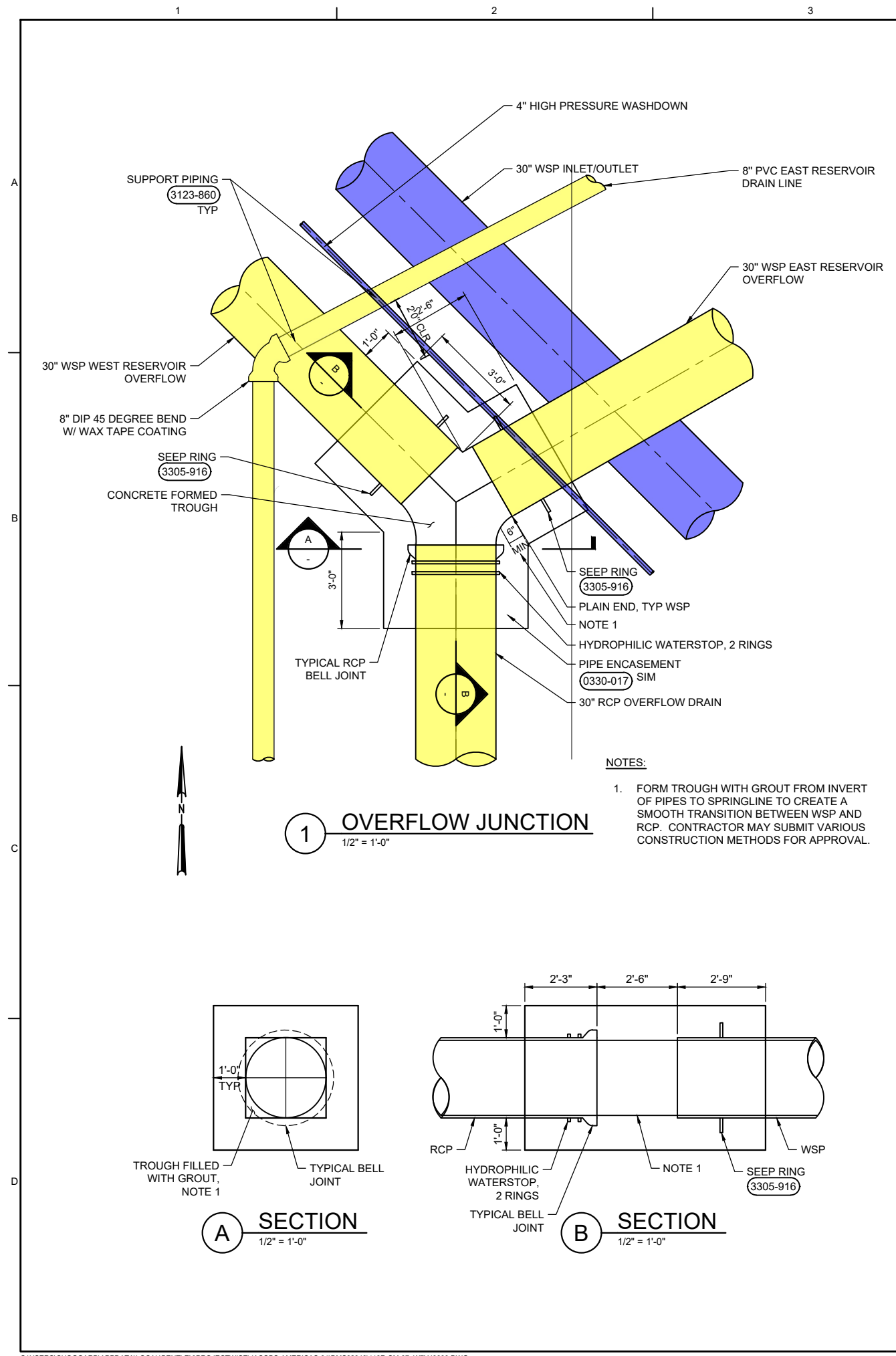


A SECTION
 1/2" = 1'-0"



B SECTION
 1/2" = 1'-0"

TO CHLORINE BUILDING, SEE DWG C-4



JACOBS
STRUCTURAL / MECHANICAL
OVERFLOW JUNCTION
AND LEAK DETECTION BOX

JORDAN VALLEY WATER
CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

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100% DESIGN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE: APRIL 2024
PROJ: W7Y49600
DWG: SM-07
SHEET: 46 of 79

PROFESSIONAL ENGINEER
No. 501404-2203
STERLING K. ROSE
STATE OF UTAH

DIGITALLY SIGNED: 04/12/2024

PROFESSIONAL ENGINEER
No. 12561173
TYLER WITHERS
STATE OF UTAH
DIGITALLY SIGNED: 04/12/2024

T. WITHERS ROSE
C. HOGGARD
B. PHELPS
R. WILLETNER

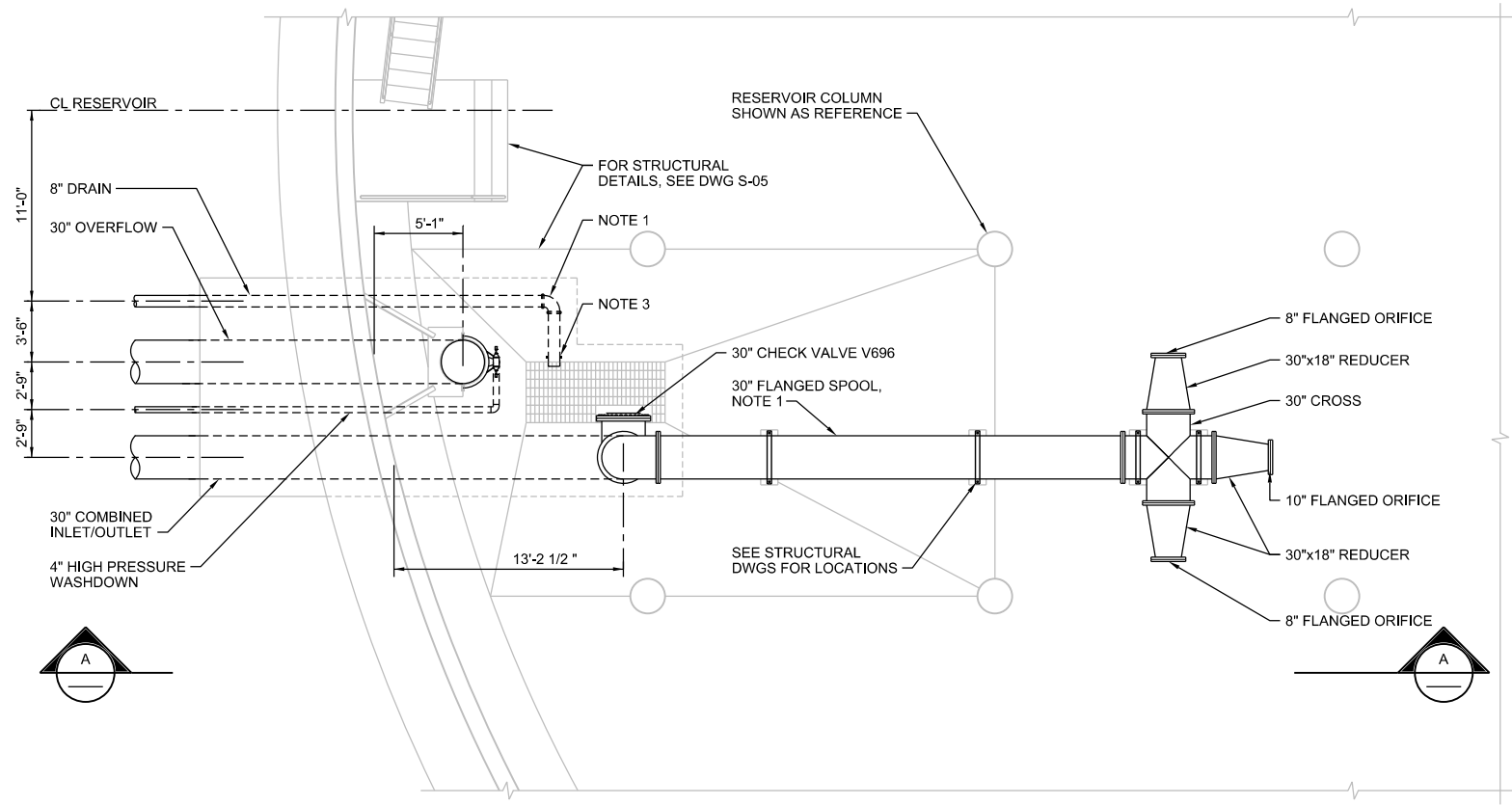
DRG NO. DATE
REVISION
CHK
BY APVD



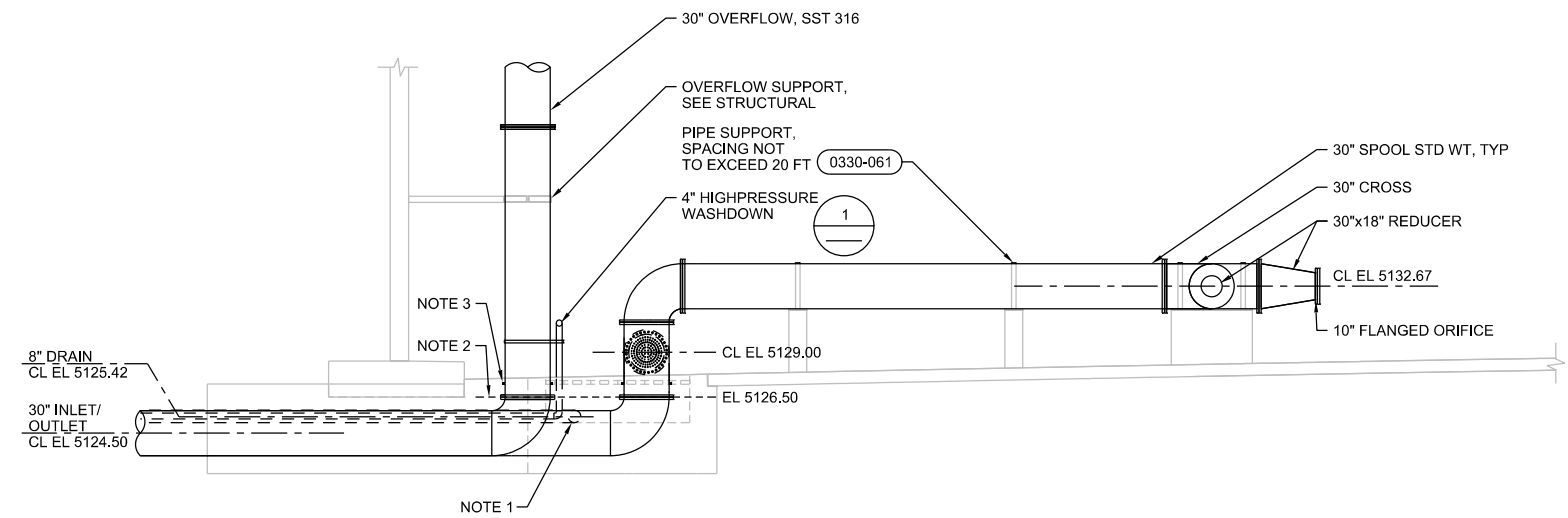
DIGITALLY SIGNED: 04/12/2024

NOTES:

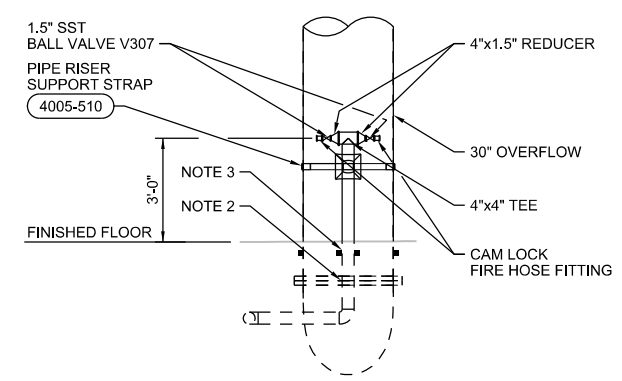
- ALL PIPING INSIDE THE RESERVOIR WILL BE 316 STAINLESS STEEL. SEE PROFILES FOR MATERIAL TRANSITION LOCATION. FIELD WELDED OF STAINLESS STEEL PIPING IS NOT PERMITTED. CONTRACTOR MAY SUBMIT A REQUEST TO THE ENGINEER IF ADDITIONAL FLANGES ARE NEEDED FOR INSTALLATION.
- ALL PIPE MATERIALS (WSP AND PVC) TRANSITION TO 316 STAINLESS STEEL 6" BELOW FINISHED FLOOR. PROTECT ALL STAINLESS STEEL PIPING, NUTS, AND BOLTS, FROM DAMAGE BY CARBON STEEL TOOLS.
- ALL PIPES INTO THE RESERVOIR REQUIRE A HYDROPHILIC WATERSTOP AROUND THE CIRCUMFERENCE 2" BELOW FINISHED FLOOR.



FLOOR PLAN
3/16"=1'-0"



A SECTION
3/16"=1'-0"
M-02



1 HIGH PRESSURE WASHDOWN
M-02

JORDAN VALLEY WATER
CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

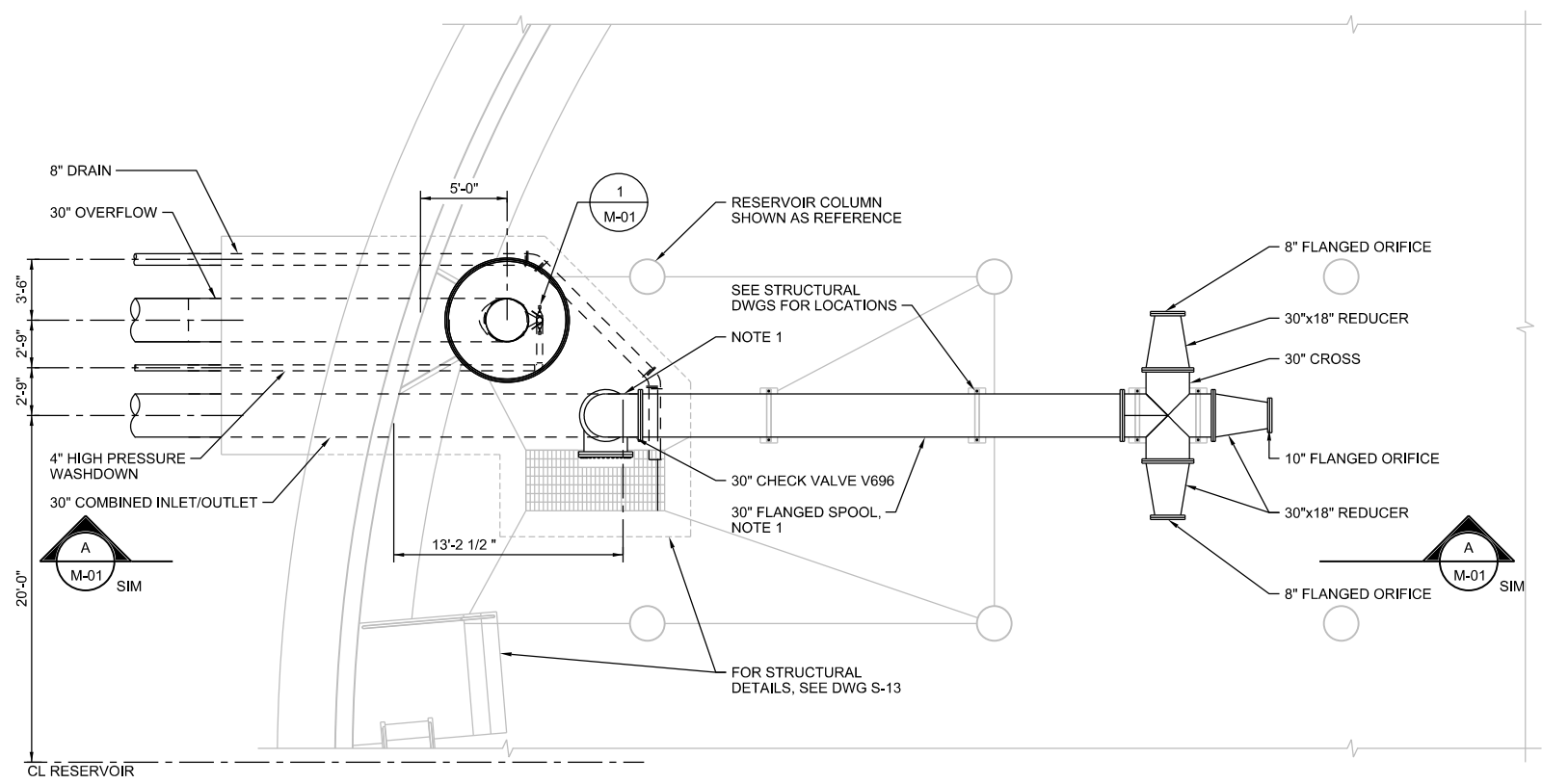
Jacobs
RESERVOIRS - MECHANICAL

INTERIOR PIPING
EAST RESERVOIR

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE APRIL 2024
PROJ WY49600
DWG M-01
SHEET 47 of 79

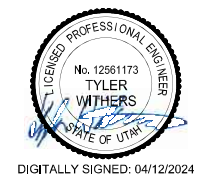
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FLOOR PLAN
3/16"=1'-0"

- NOTES:**
- ALL PIPING INSIDE THE RESERVOIR WILL BE 316 STAINLESS STEEL. SEE PROFILES FOR MATERIAL TRANSITION LOCATION. FIELD WELDED OF STAINLESS STEEL PIPING IS NOT PERMITTED. CONTRACTOR MAY SUBMIT A REQUEST TO THE ENGINEER IF ADDITIONAL FLANGES ARE NEEDED FOR INSTALLATION.
 - ALL PIPE MATERIALS (WSP AND PVC) TRANSITION TO 316 STAINLESS STEEL 6" BELOW FINISHED FLOOR.
 - ALL PIPES INTO THE RESERVOIR REQUIRE A HYDROPHILIC WATERSTOP AROUND THE CIRCUMFERENCE 2" BELOW FINISHED FLOOR.



NO.	DATE	DR	CHK	REVISION	BY

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
RESERVOIRS - MECHANICAL
INTERIOR PIPING WEST RESERVOIR

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2024
PROJ	W7Y49600
DWG	M-02
SHEET	48 of 79

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GENERAL NOTES

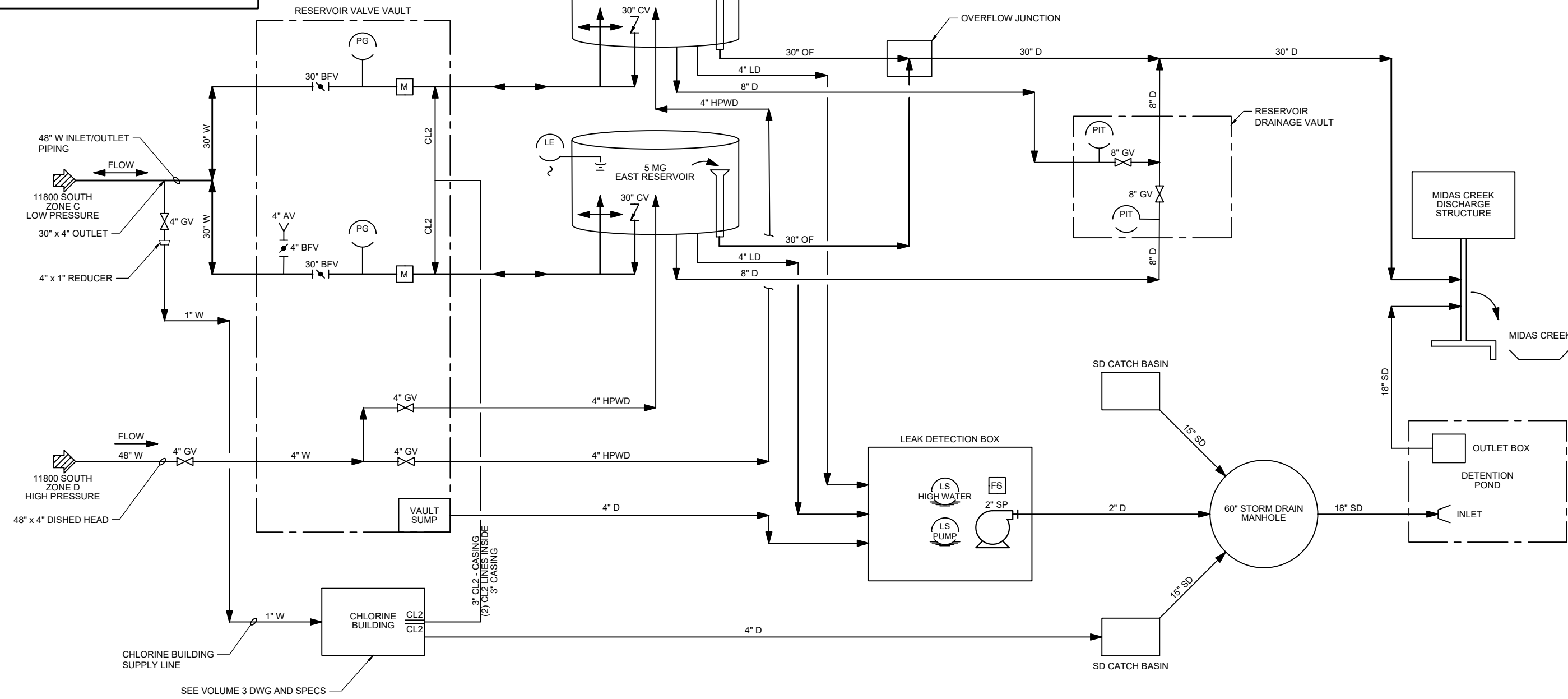
1. CONNECT DEVICES ON THIS DRAWING TO RTU-4.

ABBREVIATIONS

- AV AIR VALVE
- BFV BUTTERFLY VALVE
- BV BALL VALVE
- CL2 CHLORINE LINE
- CV CHECK VALVE
- FS FLOOD SWITCH
- GV GATE VALVE
- HPWD HIGH PRESSURE WASH DOWN
- LD LEAK DETECTION
- LE LEVEL - ULTRASONIC
- LS LEVEL SENSOR
- M FLOWMETER - ULTRASONIC
- OF OVERFLOW
- PG PRESSURE GAUGE - ANALOGUE
- PIT PRESSURE INDICATING TRANSDUCER
- SD STORM DRAIN
- SP SUMP PUMP
- VD VAULT DRAIN
- W WATERLINE - CULINARY



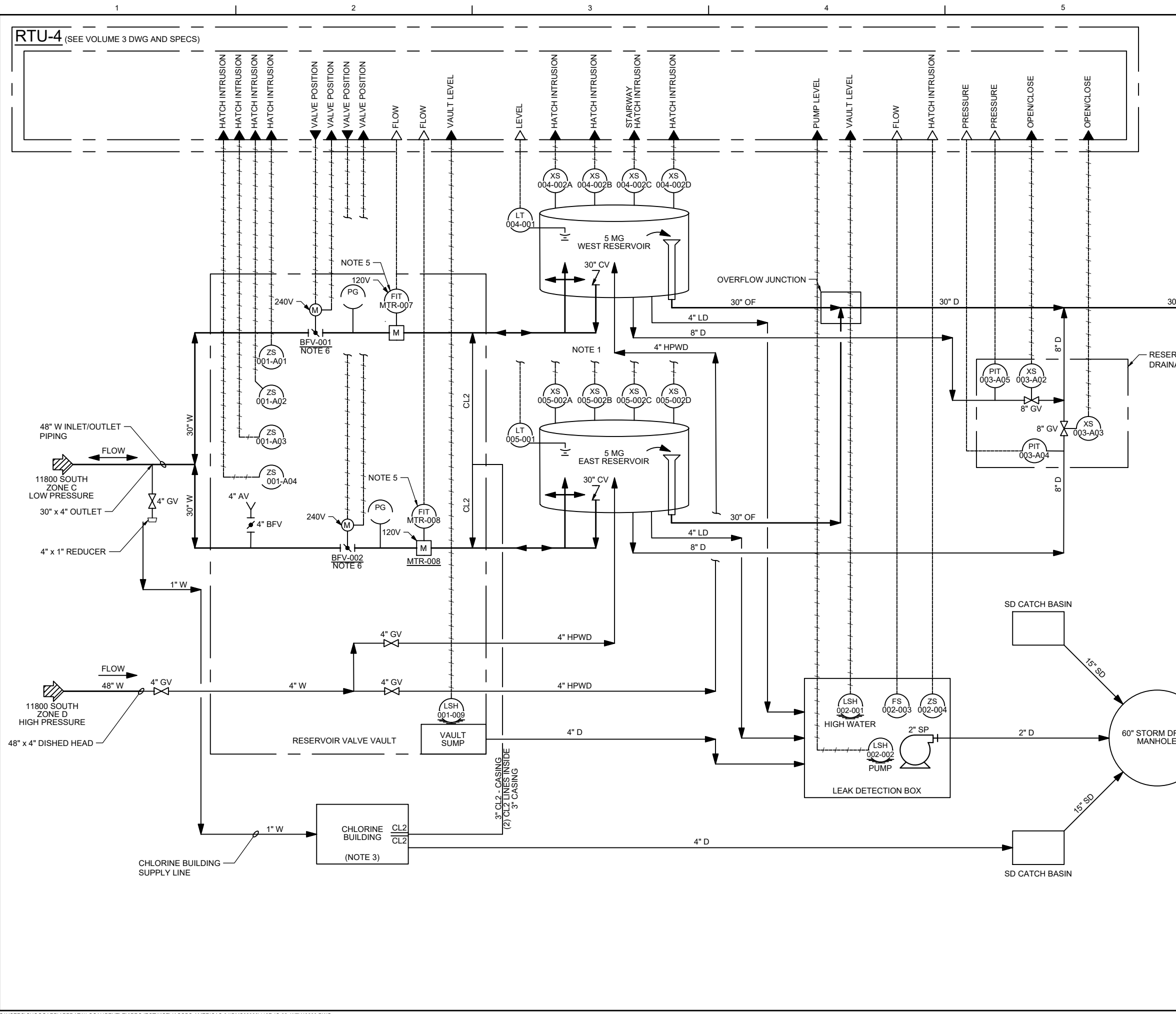
NO.	DATE	DSGN	DR	CHK	REVISION	BY	APVD



JORDAN VALLEY WATER
CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
INSTRUMENTATION AND CONTROLS
SITE PROCESS FLOW
DIAGRAM

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2024
PROJ	W7Y49600
DWG	IC-01
SHEET	49 of 79



- ### GENERAL NOTES
- EAST RESERVOIR TO HAVE SAME SIGNALS AS SHOWN FOR WEST RESERVOIR.
 - PROVIDE ELECTROMAGNETIC FLOW METER CAPABLE OF READING MEASUREMENTS IN EITHER FLOW DIRECTION.
 - VOLUME 3 DWG AND SPECS INCLUDE SUNRISE DESIGN PACKAGE FOR ELEMENTS IN THE CHLORINE BUILDING.
 - SUMP PUMP IN LEAK DETECTION BOX SHOULD NOT NORMALLY OPERATE. USE FLOAT ON PUMP TO AUTOMATICALLY OPERATE IF WATER IS IN THE VAULT, AND NOTIFY OWNER THE PUMP IS OPERATING.
 - COORDINATE WITH SUNRISE ENGINEERING TO PROVIDE FLOW DETECTED BY THIS METER IN THE CHLORINE BUILDING.
 - 30-INCH BUTTERFLY VALVE WILL HAVE A PERCENT SET OPEN. SEE SPECIFICATIONS 40 27 02 AND 40 27 03.

Jacobs
 INSTRUMENTATION AND CONTROLS
 SITE PROCESS
 INSTRUMENTATION DIAGRAM

11800 SOUTH ZONE C RESERVOIRS

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DATE: APRIL 2024
 PROJ: W7Y49600
 DWG: IC-02
 SHEET: 50 of 79

NO.	DATE	DSGN	TWITHERS	DR	CHK	REVISION	BY	APVD

Jordan Valley Water Conservancy District

11800 SOUTH ZONE C RESERVOIRS

INSTRUMENTATION AND CONTROLS
 SITE PROCESS
 INSTRUMENTATION DIAGRAM

VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.
 0 1"

Jacobs

INSTRUMENTATION AND CONTROLS
 SITE PROCESS
 INSTRUMENTATION DIAGRAM

11800 SOUTH ZONE C RESERVOIRS

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DATE: APRIL 2024
 PROJ: W7Y49600
 DWG: IC-02
 SHEET: 50 of 79

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GENERAL NOTES

- CAMERA AND ETHERNET CAT6E CABLE TO BE PROVIDED BY OTHERS.
- REFER TO SUNRISE DRAWINGS FOR RTU-4 LOCATION, INSTALLATION AND CONNECTION.



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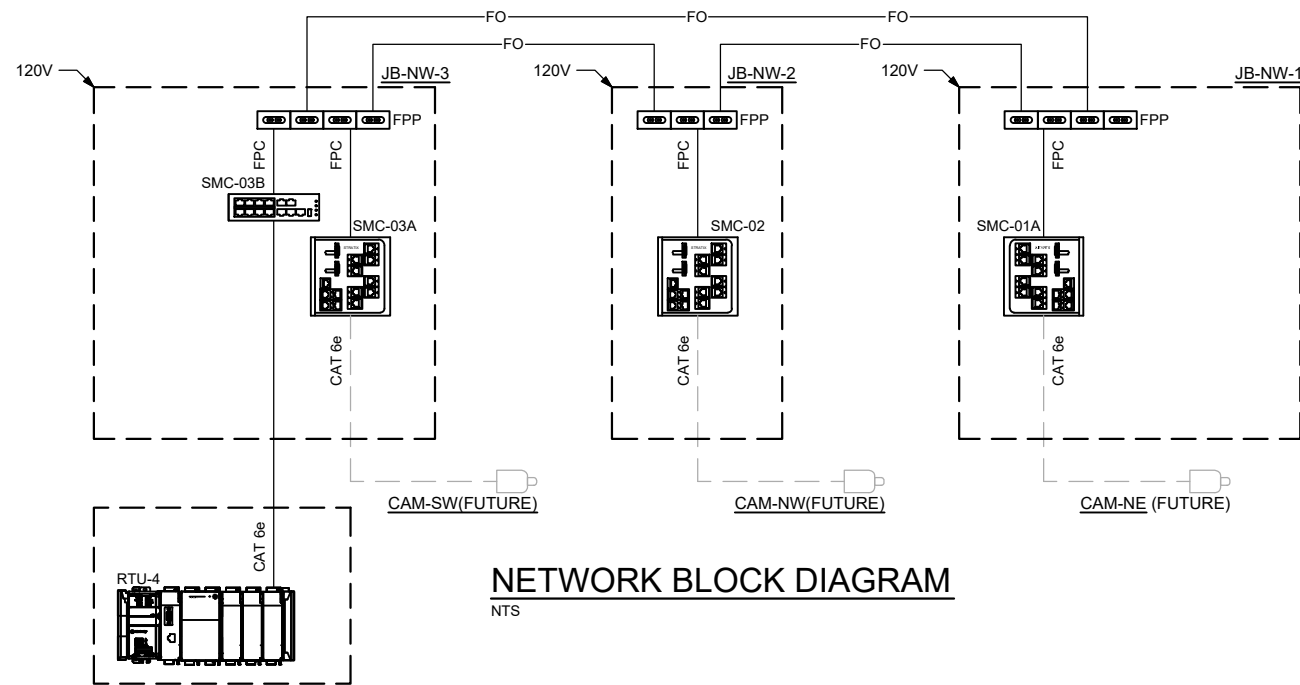
NO.	DATE	DR	CHK	BY
				J JAMES
				J JAMES
				J JAMES

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
INSTRUMENTATION AND CONTROLS
NETWORK / CABLE BLOCK DIAGRAM

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2024
PROJ	W7Y49600
DWG	IC-03
SHEET	51 of 79

100% DESIGN



NETWORK BLOCK DIAGRAM

NTS

NOTES:

- CAT6e: ETHERNET CABLE (SEE SPECIFICATIONS)
- SMC: SWITCH MEDIA CONVERTER MANAGED SWITCH. 2GB ST FIBER OPTIC PORTS (CORNING POE MEDIA CONVERTER OR EQUAL)
- FPC: FIBER PATCH CABLE (CORNING ALTOS LOOSE TUBE, GEL FREE OR EQUAL)
- FPP: FIBER PATCH PANEL (CORNING ECLIPSE HARDWARE OR EQUAL)

A

B

C

D

GENERAL NOTES

- INFORMATION ON EXISTING INSTALLATION IS FROM RECORD DRAWINGS DATED JANUARY 2019 BY CH2M (PROJECT 680064). FIELD VERIFY AND NOTIFY CLIENT, ENGINEER AND OWNER OF DISCREPANCIES.
- MAINTAIN AND PROTECT IN PLACE EXISTING ELECTRICAL CONDUITS BEFORE, THROUGHOUT AND AFTER CONSTRUCTION. POWER MUST ALWAYS BE PROVIDED TO THE SITE.
- PROVIDE JB-3 AND JB-4 AS 24"W x 24"H x 10"D. PROVIDE 12' TALL CAMERA/LIGHT POLES, AS PER DETAIL 2656-216. INSTALL JB-NW-1, -2 AT BASE OF THE POLES. INSTALL JB-NW-3 AT THE CHLORINE BUILDING WALL.
- REFER TO IC-03 FOR CONNECTIONS BETWEEN AND INSIDE NETWORK JUNCTION BOXES (JB-NW-X), INSTALLED AT THE POLE BASES OR SURFACE MOUNTED ON BUILDINGS, AND CAMERAS. CAMERAS WILL BE INSTALLED BY OTHERS IN FUTURE.
- PROVIDE 1" MINIMUM SIZE ON ALL BURIED CONDUITS. USE 2#10 AS MINIMUM CONDUCTOR SIZE ON POWER CIRCUITS 75 FEET OR MORE.

SHEET KEYNOTES

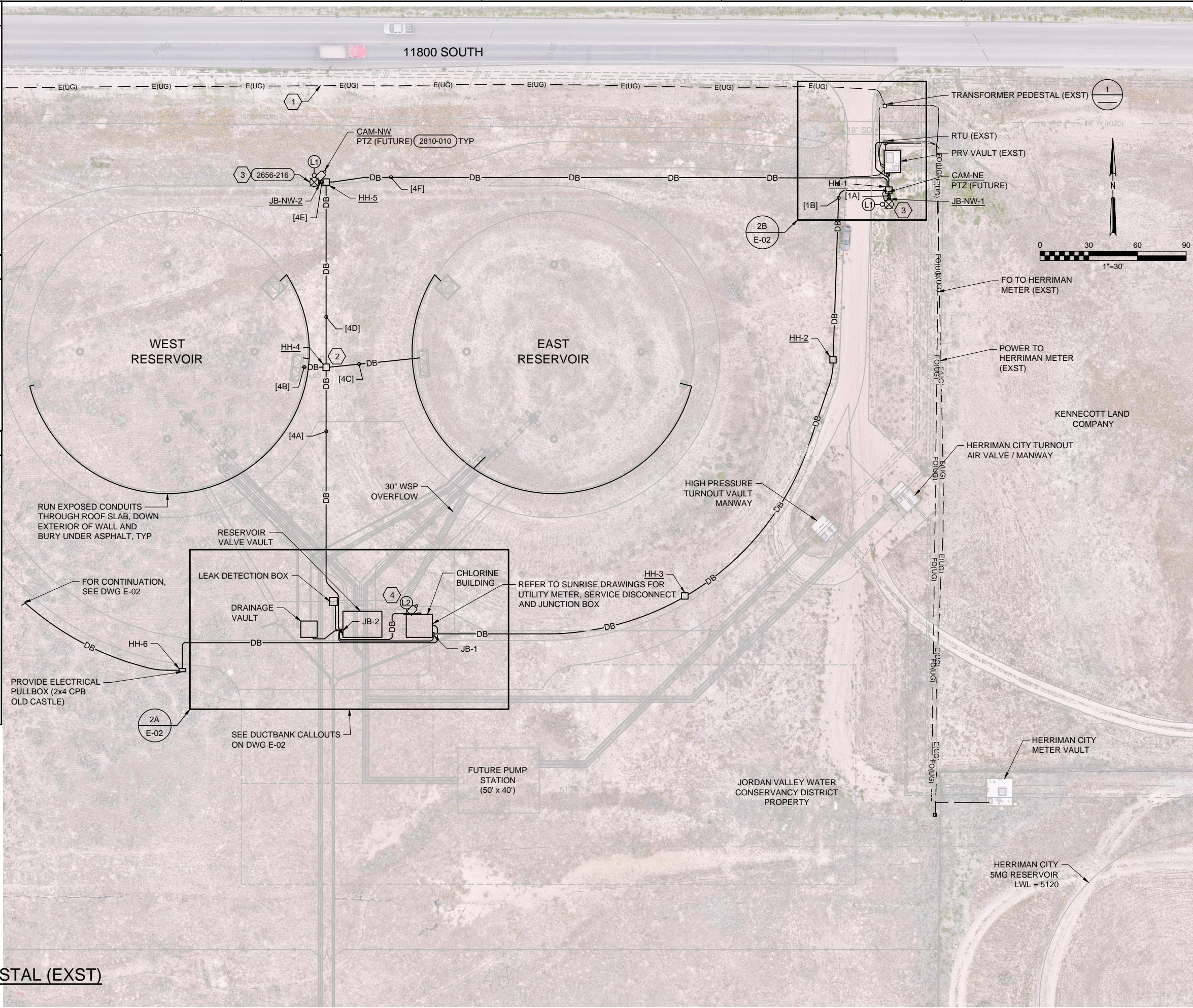
- USE EXISTING 3" CONDUIT TO RUN 3#2,1#8G FROM THE NEW ROCKY MOUNTAIN POWER ELECTRICAL SERVICE FROM A 50KVA, 7.2KV/480V UTILITY TRANSFORMER.
- RUN 2#10, 1#10G FROM RACEWAY 4A TO HH-4. RUN 2#10, 1#10G TO RUN IN RACEWAY 4B. RUN 2#10, 1#10G TO RUN IN RACEWAY 4C.
- PROVIDE LITHONIA D-SERIES SIZE 2 WITH INTEGRATED PHOTOCELL ON SQUARE POLE. L1 = DSX2 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD.
- PROVIDE LITHONIA D-SERIES SIZE 2 WITH INTEGRATED PHOTOCELL. L2 = DSX2 LED P7 40K 70CRI T3M MVOLT WBA NLTAIR2 PIRHN DDBXD.

DIRECT BURIED RACEWAY CONTENTS

- CALLOUT CONTENTS
- [1A] [1"C, 2#10, 1#10G], [1"C, 6 STRAND, 50/125 MULTIMODE, FIBER OPTIC CABLE]
 - [1B] [2"C, 6 STRAND, 50/125 MULTIMODE, FIBER OPTIC CABLE], [2"C, EMPTY SPARE FOR FUTURE]
 - [1C] [2"C, 6 STRAND 50/125 MULTIMODE, FIBER OPTIC CABLE], [1"C, SPARE]
 - [2A] [P2], [2[P15], [C25], [C31], [A4], 3[1"C, 6 STRAND, 50/125 MULTIMODE, FIBER OPTIC CABLE], [1"C, EMPTY SPARE FOR FUTURE]
 - [2B] [P2], [2[P15], [C25], [C31], [A4], 3[1"C, 6 STRAND, 50/125 MULTIMODE, FIBER OPTIC CABLE], [2"C, 6 STRAND, 50/125 MULTIMODE, FIBER OPTIC CABLE], [1"C, EMPTY SPARE FOR FUTURE]
 - [3A] [P15], [C22], [A2]
 - [3B] [P2], [1"C, 6 STRAND, 50/125 MULTIMODE, FIBER OPTIC CABLE]
 - [3C] [P15], [C6], [A2]
 - [3D] [2[P15], [C8]
 - [4A] [P15], [C20], 2[1"C, 6 STRAND, 50/125 MULTIMODE, FIBER OPTIC CABLE], [1"C, EMPTY SPARE FOR FUTURE]
 - [4B] [2"C, 2#10, 1#10G], [C10]
 - [4C] [2"C, 2#10, 1#10G], [C10]
 - [4D] [2[P15], 2[1"C, 6 STRAND, 50/125 MULTIMODE, FIBER OPTIC CABLE], [1"C, EMPTY SPARE FOR FUTURE]
 - [4E] [P15], [1"C, 6 STRAND, 50/125 MULTIMODE, FIBER OPTIC CABLE]
 - [4F] [P15], [1"C, 6 STRAND, 50/125 MULTIMODE, FIBER OPTIC CABLE], [1" C, EMPTY SPARE FOR FUTURE]



1 TRANSFORMER PEDESTAL (EXST)
NTS



LICENSED PROFESSIONAL ENGINEER
No. 10416430-2202
JONATHAN JAMES
STATE OF UTAH
DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DR	REVISION	CHK	BY	APVD

JORDAN VALLEY WATER
CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
ELECTRICAL
OVERALL ELECTRICAL
SITE PLAN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
1" = 30'

DATE	APRIL 2024
PROJ	W7Y49600
DWG	E-01
SHEET	52 of 79

100% DESIGN

GENERAL NOTES

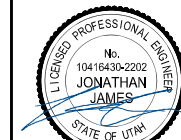
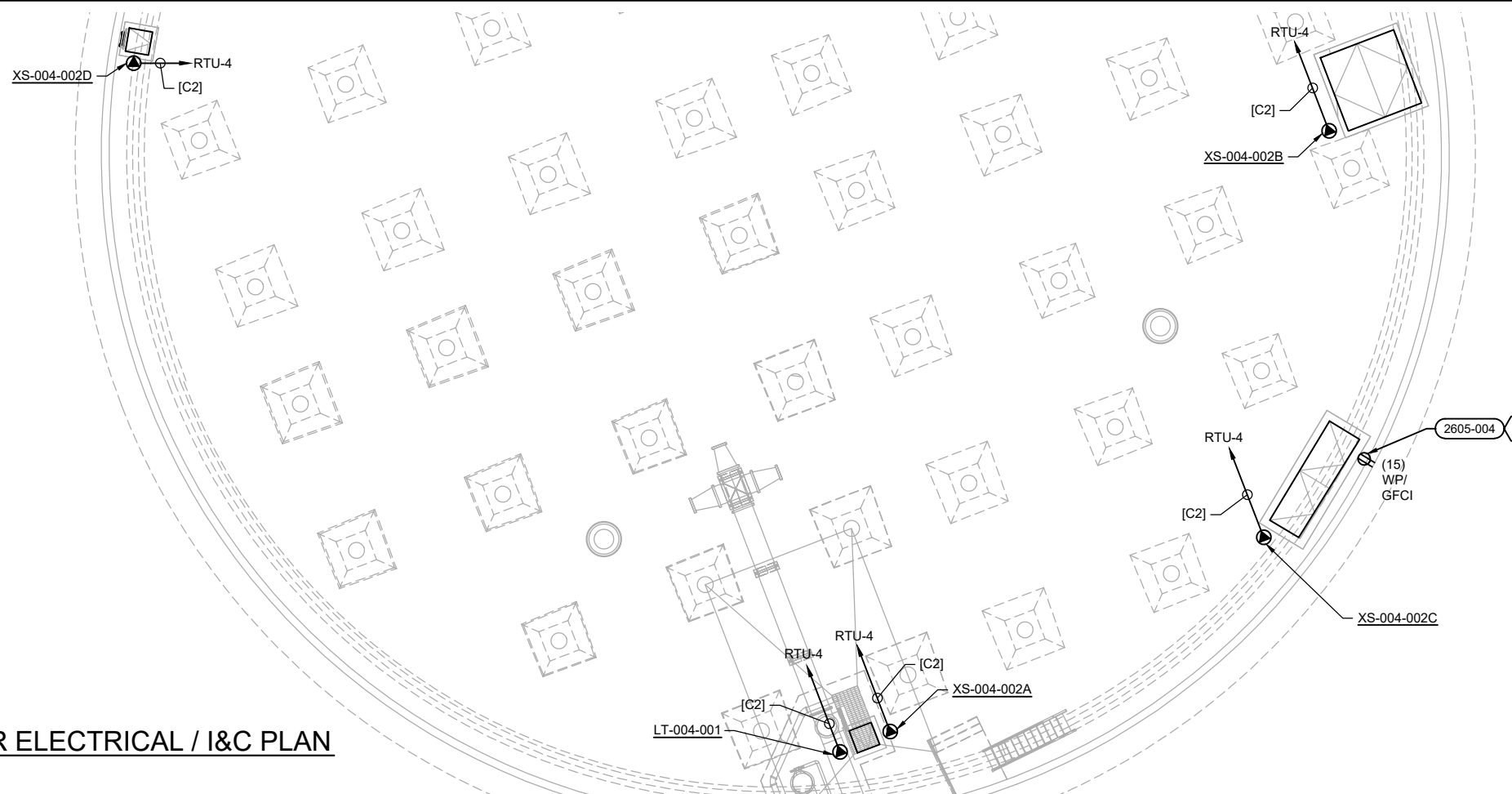
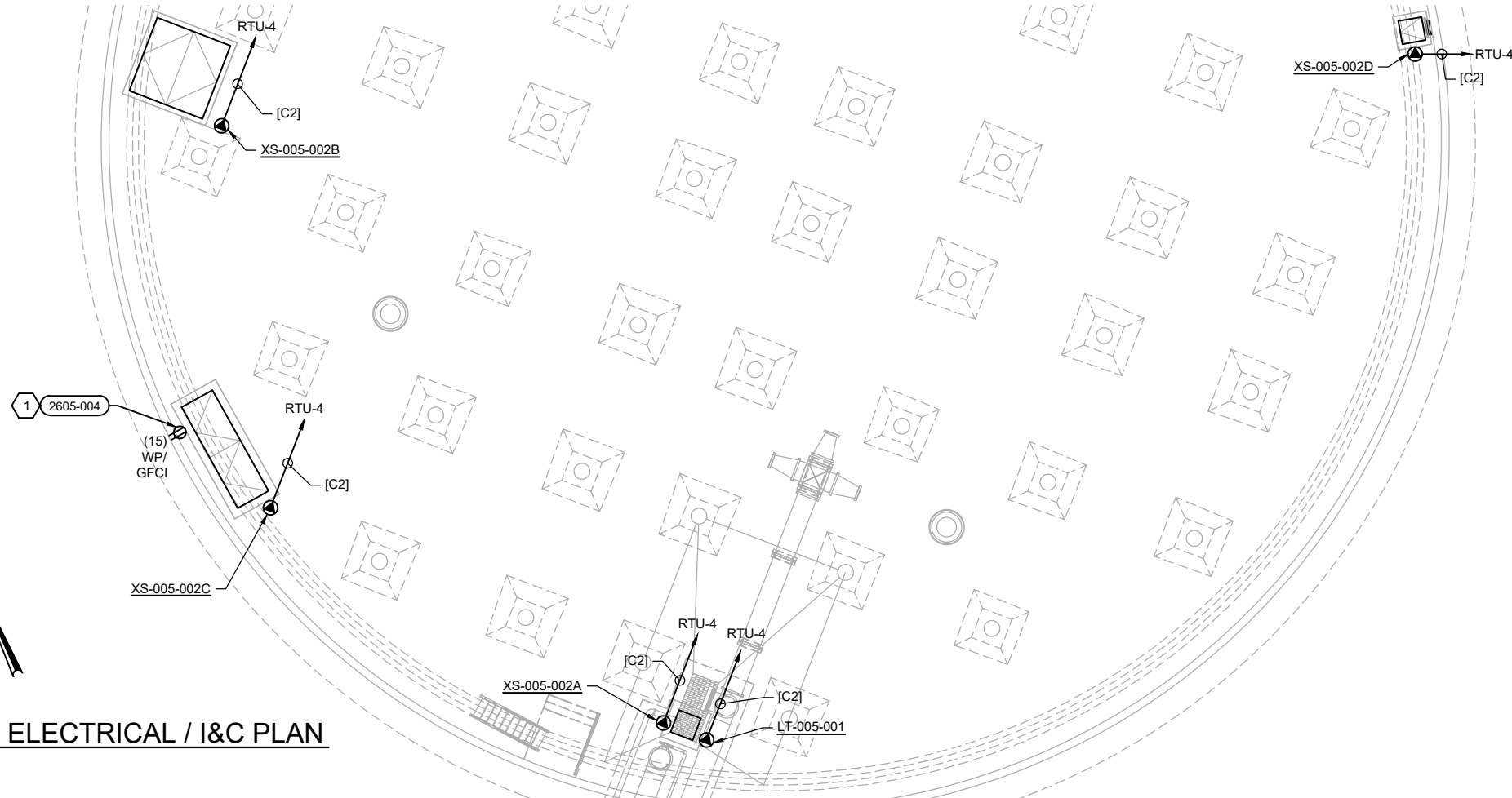
1. LIGHTS AND RECEPTACLES ARE FED FROM THE INDICATED CIRCUITS ON PANELBOARD 118R-LP-4. PROVIDE 2#12 FOR LIGHTS. NUMBER SHOWN IN PARENTHESIS, (N) ADJACENT TO LIGHT AND RECEPTACLES DENOTE CIRCUIT NUMBER IN PANELBOARDS. PROVIDE #12 CONDUCTORS FOR 20A OR 15A CIRCUITS LESS THAN 75 FEET. PROVIDE #10 CONDUCTORS FOR CIRCUITS GREATER THAN 75 FEET.

SHEET KEYNOTES

1. MOUNT DUPLEX RECEPTACLE ON THE RAILING, ON THE OUTSIDE WALL OF RESERVOIR.

1 EAST RESERVOIR ELECTRICAL / I&C PLAN
1" = 10'

2 WEST RESERVOIR ELECTRICAL / I&C PLAN
1" = 10'



DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DR	CHK	REVISION	BY	APVD
					J. JAMES	
					J. JAMES	
					A. CUGLIATI	
					H. IDREES	

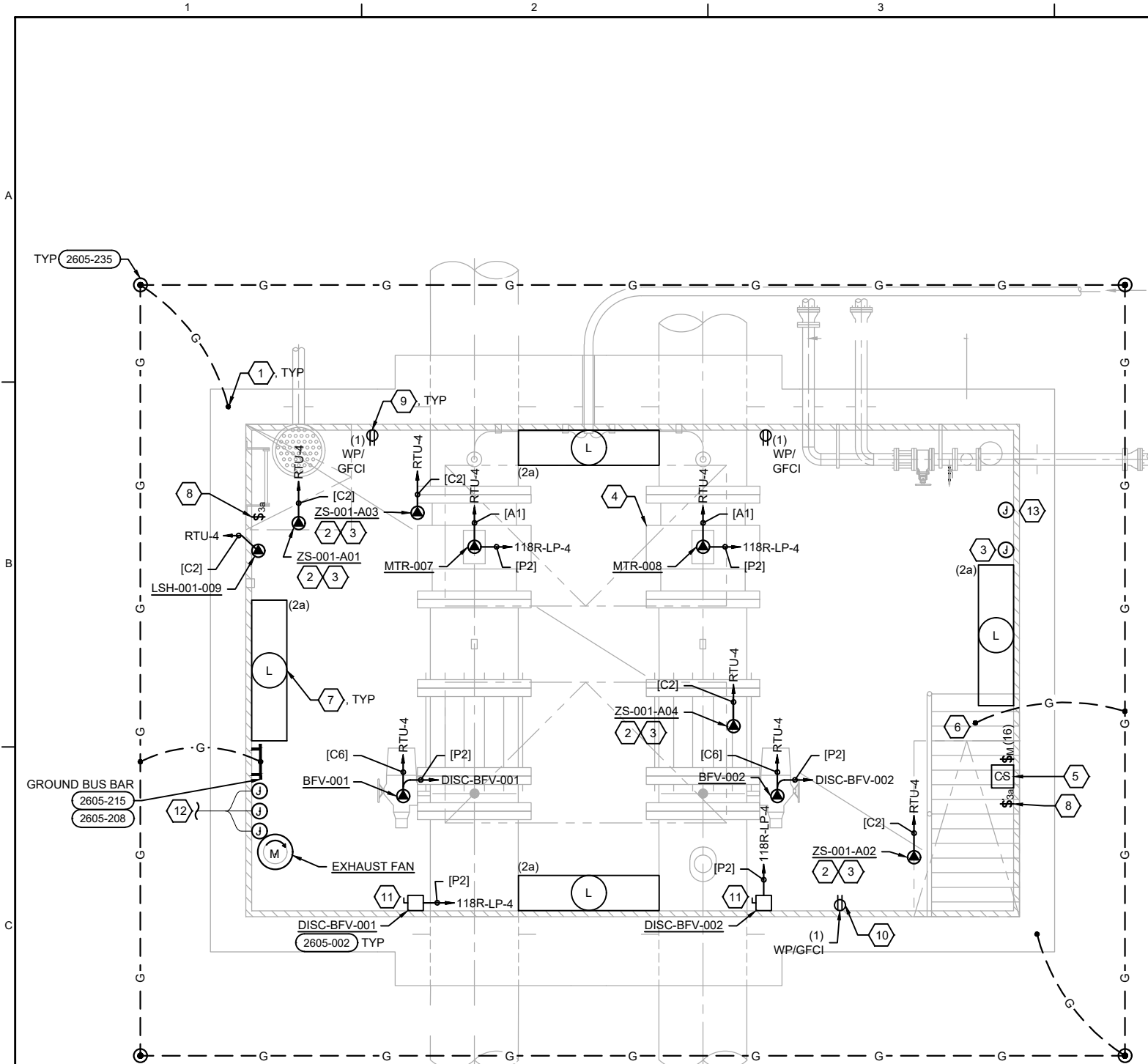
JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
ELECTRICAL
EAST AND WEST RESERVOIR ELECTRICAL / I&C PLANS

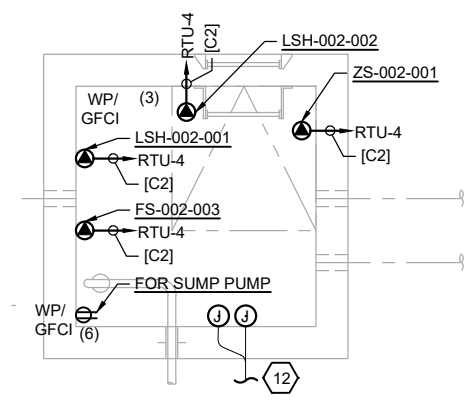
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	APRIL 2024
PROJ	W7Y49600
DWG	E-03
SHEET	54 of 79

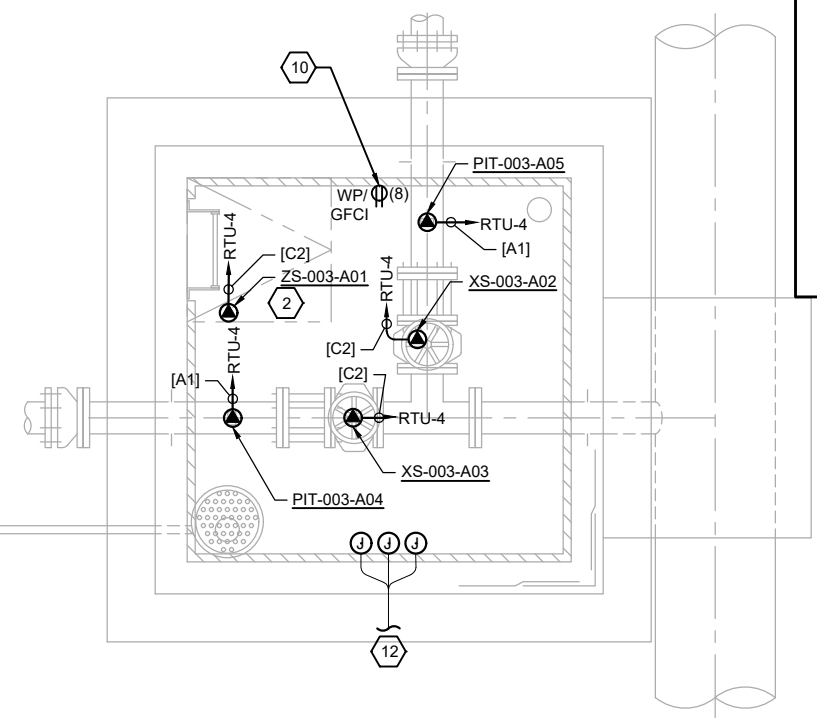
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1 VALVE VAULT ELECTRICAL PLAN
1/2" = 1'-0"



3 LEAK DETECTION BOX
1/2" = 1'-0"



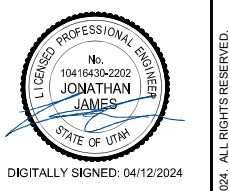
2 DRAINAGE VAULT ELECTRICAL PLAN
1/2" = 1'-0"

GENERAL NOTES

- LUMINAIRES AND RECEPTACLES ARE FED FROM THE INDICATED CIRCUITS ON PANELBOARD 118R-LP-4. PROVIDE #12 FOR LIGHTS AND EXHAUST FAN.
- NUMBER SHOWN IN PARENTHESIS, (N), ADJACENT TO LIGHT AND RECEPTACLES DENOTE CIRCUIT NUMBER IN PANELBOARDS. PROVIDE #12 CONDUCTORS FOR 20A OR 15A CIRCUIT LESS THAN 75 FEET. PROVIDE #10 CONDUCTORS FOR CIRCUITS GREATER THAN 75 FEET.
- COORDINATE WITH OTHERS TO PROVIDE FLOW METER TRANSMITTERS IN THE CHLORINE BUILDING.

SHEET KEYNOTES

- PROVIDE GROUND CONNECTION FOR CONNECTION TO REBAR.
- ACCESS HATCH INTRUSION SWITCH, WIDE-GAP MAGNETIC CONTACT SWITCH, 24VDC RATING. MOUNT SWITCH INSIDE HATCH. PROVIDE INTERLOGIX 2507AH OR APPROVED EQUAL.
- INSTALL CONDUITS EMBEDDED IN CONCRETE FROM HATCH INTRUSION SWITCH AND LEVEL SENSOR TO JUNCTION BOX ON EAST VAULT WALL. FROM JUNCTION BOX, ROUTE CONDUIT TO RTU-4 IN CHLORINE BUILDING.
- RUN CONDUITS FOR FLOW METER AROUND THE EDGE OF THE PIPE. COORDINATE WITH OTHER TRADES.
- PROVIDE HAND-OFF-AUTO MOTOR-RATED SWITCH AT PRINCIPAL ACCESS HATCH ADJACENT TO LIGHT SWITCH. PROVIDE TORK #8009 TIME SWITCH (NO SUBSTITUTES). REFER TO STANDARD DETAIL 2605-002.
- PROVIDE GROUNDING BONDS TO SHIP LADDER/STAIR TO GROUND RING.
- PROVIDE ENCLOSED AND GASKETED LINEAR LED LUMINAIRE, LITHONIA FEM-L48-6000LMN-IMAFL-WD-MVOLT-40K OR APPROVED EQUAL. WALL MOUNT AT 7'-6" ABOVE FINISHED FLOOR.
- INSTALL LIGHT SWITCH 6 INCHES BELOW ACCESS HATCH AND ADJACENT TO LADDER. PROVIDE WATERPROOF WHILE-IN-USE COVER.
- PROVIDE WATERPROOF WHILE-IN-USE COVER.
- FEED RECEPTACLES FROM INDICATED CIRCUIT ON PANELBOARD 118R-LP-4. MOUNT RECEPTACLE AT 48" ABOVE FINISHED FLOOR. PROVIDE WATERPROOF WHILE-IN-USE COVER.
- INSTALL A NON-FUSED ROTARY DISCONNECT SWITCH RATED 600V, 30A, 3 POLE NEMA 4X FOR THE MOTOR OPERATED VALVE. USE HUBBLE, HBLDS SERIES OR APPROVED EQUAL. MOUNT DISCONNECT SWITCH OR APPROVED EQUAL. MOUNT DISCONNECT SWITCH ON VAULT WALL AT 60" ABOVE THE FLOOR.
- CONSOLIDATE SIMILAR CIRCUITS (UP TO 3 CIRCUITS) IN THEIR JUNCTION BOXES FOR ROUTING VIA SITE DUCT BANK.
- PROVIDE A NEMA 4X FIBERGLASS ENCLOSURE FOR TIME CLOCK HOFFMAN A16148CHQRFQ OR APPROVED EQUAL. REFER TO STANDARD DETAIL 2605-002.



NO.	DATE	DSGN	DR	CHK	REVISION	BY	APVD

Jordan Valley Water Conservancy District
11800 SOUTH ZONE C RESERVOIRS

Jacobs
ELECTRICAL
VALVE VAULT AND DRAINAGE VAULT ELECTRICAL PLANS

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2024
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SHEET	55 of 79

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GENERAL NOTES

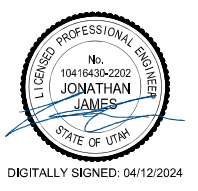
- FIELD VERIFY EXISTING EQUIPMENT, SIZES OF CONDUCTORS AND PROTECTIVE DEVICES.
- SEE ADDITIONAL CONDUCTOR SIZES ON DWG E-01.
- REFER TO SUNRISE ENGINEERING DRAWINGS FOR 118R-LP-3 PANELBOARD SCHEDULE, CONDUITS AND CONDUCTORS TO THE TRANSFORMER AND PANELBOARD 118-LP-4.

SHEET KEYNOTES

- COORDINATE WITH ROCKY MOUNTAIN POWER TO CONNECT TO THE ELECTRICAL SERVICE.

PANEL: 118R-LP-4				LOCATION: OUTSIDE 11800 S RESERVOIR CHEMICAL BUILDING			
SERVICE VOLTAGE: 120/240V				PHASE: 1 WIRE: 3			
TOTAL KVA: 24.4				BUS SIZE: 200A MAIN SIZE: 150A			
REMARKS: NEMA 4X ENCLOSURE				MOUNTING: SURFACE			
				SCCR: 10 kA			
				TYPE: BKR			
				FED FROM: 25KVA XFMR			

LOAD IN VA		CIRCUIT DESCRIPTION	BKR A/P	CKT NO.	CKT NO.	BKR A/P	CIRCUIT DESCRIPTION	LOAD IN VA	
A	B							A	B
540	180	GFCI RECEPTACLES (VALVE VAULT)	20/1	1	2	20/1	LIGHTS (VALVE VAULT)	227	
		GFCI RCPT (LEAK DETECTION BOX)	20/1	3	4	20/1	OUTDOOR RCPT (VALVE VAULT)		180
2400		DISC-BFV-001 (VALVE VAULT)	20/2	5	6	20/1	SUMP PUMP RCPT (LEAK DETECTION BOX)	600	
	2400			7	8	20/1	GFCI RCPT (DRAINAGE VAULT)		180
2400		DISC-BFV-001 (VALVE VAULT)	20/2	9	10	20/1	JB-NW-1 (EXTERIOR)	960	
	2400			11	12	20/1	JB-NW-2 (EXTERIOR)		960
1242		SITE LIGHTS	20/1	13	14	20/1	JB-NW-3 (EXTERIOR)	960	
	360	GFCI RCPT (EAST/WEST RESERVOIRS)	20/1	15	16	20/1	EXHAUST FAN (VALVE VAULT)		1200
3600		118R-LP-3	100/2	17	18	20/1	SPARE	0	
	3600			19	20	20/1	SPARE	0	0
0		SPARE	20/1	21	22	20/1	SPARE	0	
		SPD	BY	23	24	20/1	SPARE	0	0
			MFR	25	26	20/1	SPARE	0	
10182	8940		TOTALS					2747	2520

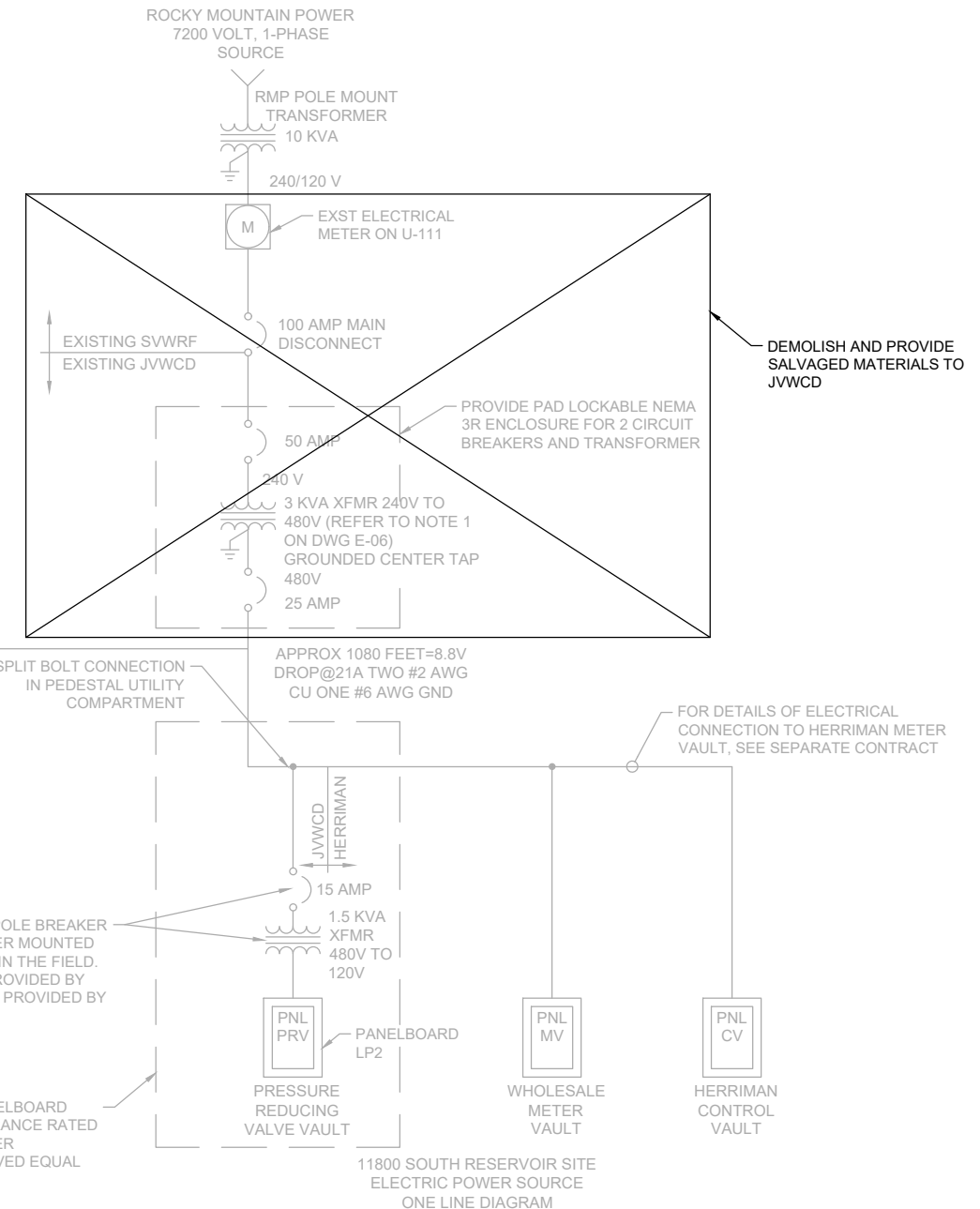
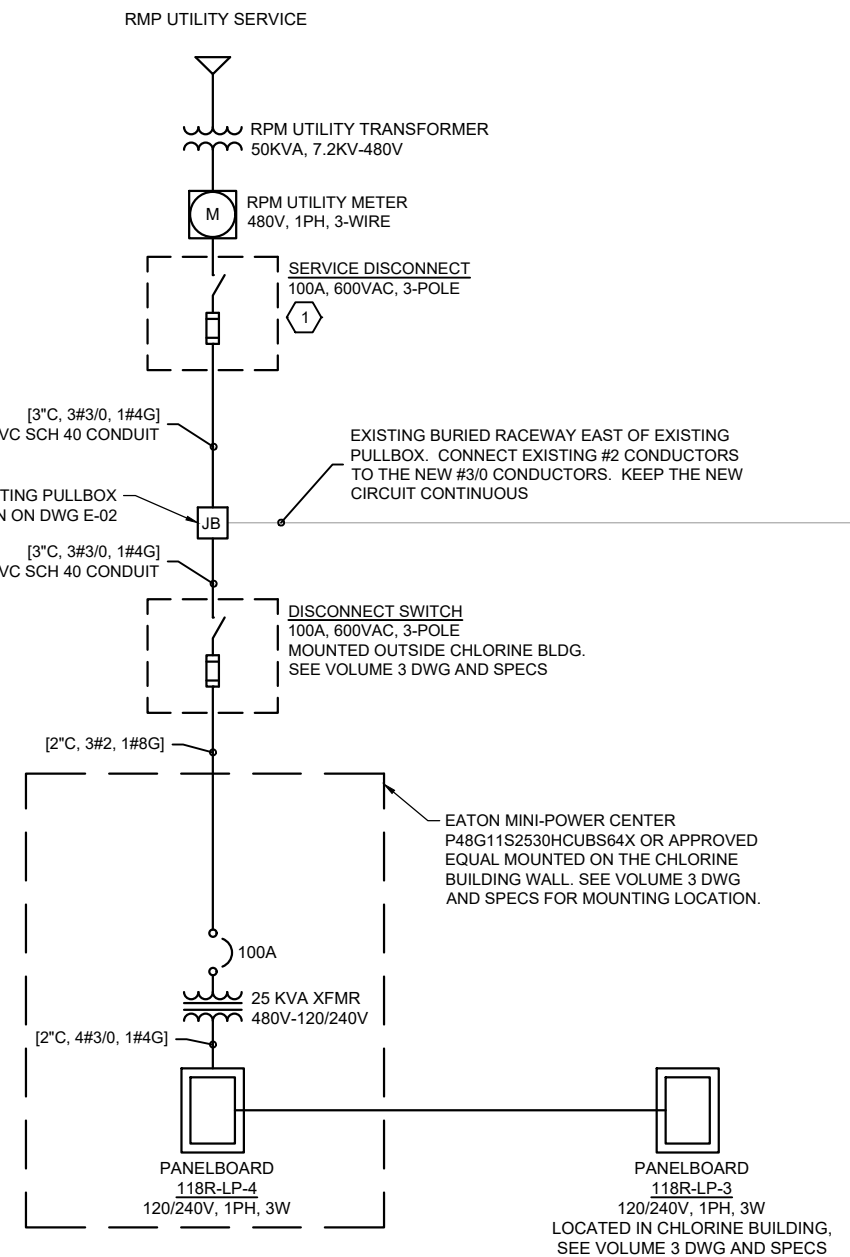


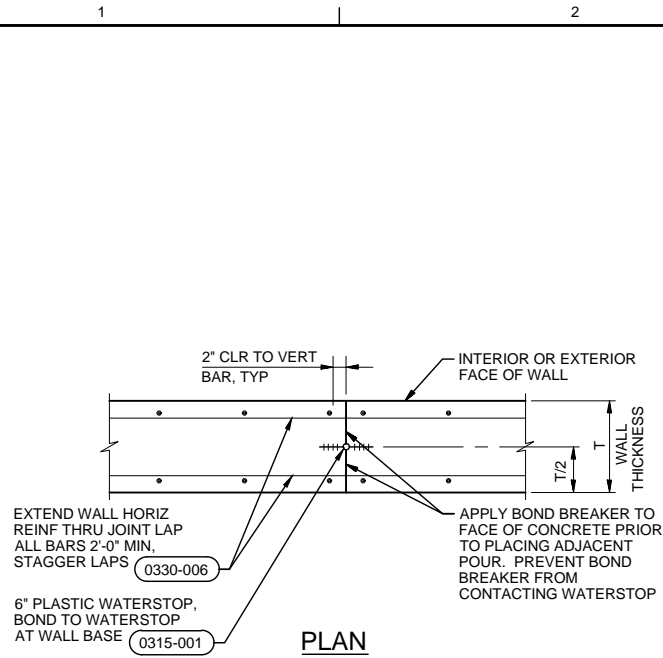
NO.	DATE	DR	CHK	BY	APVD
				J. JAMES	
				J. JAMES	
				A. CUGLIATI	

JORDAN VALLEY WATER CONSERVANCY DISTRICT
 11800 SOUTH ZONE C RESERVOIRS

Jacobs
 ELECTRICAL
ONE-LINE DIAGRAM AND PANELBOARD SCHEDULE

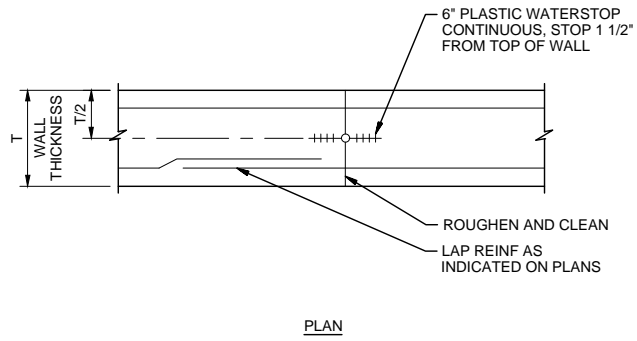
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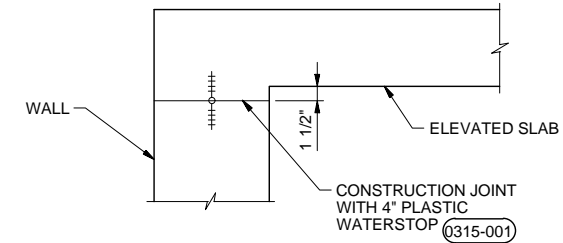
RESERVOIR VERTICAL WALL CONTROL JOINT

0315-149



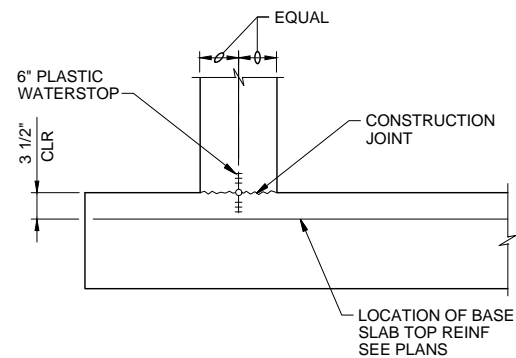
WALL VERTICAL CONSTRUCTION JOINT

0315-151



WALL CONSTRUCTION JOINT AT ELEVATED SLAB

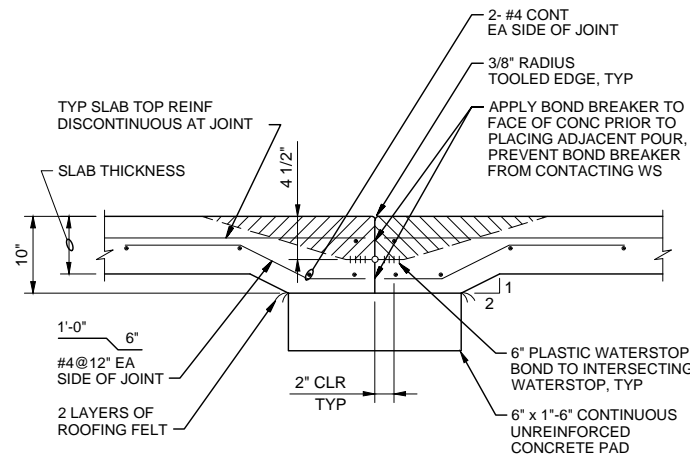
0315-152



- NOTES:**
- FOR WALLS WITH SINGLE MAT OF REINFORCING LOCATE WATERSTOP ON LIQUID FACE, 1" CLEAR OF REINFORCEMENT.
 - SECURE WATERSTOP IN-PLACE AS SPECIFIED.

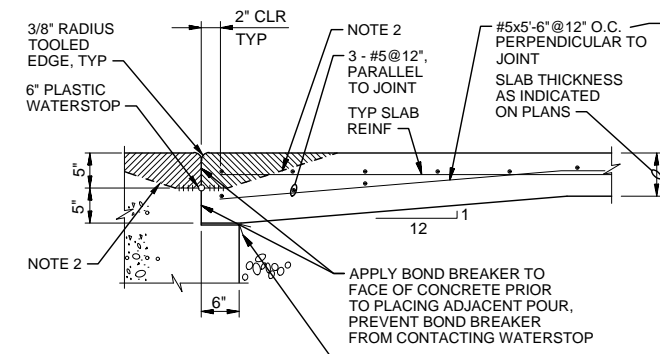
WALL BASE CONSTRUCTION JOINT

0315-154



BASE SLAB CONTRACTION JOINT

0315-161



- NOTES:**
- SLAB SLOPE MAY VARY FROM THAT SHOWN, SEE STRUCTURAL PLAN.
 - PLACE CONCRETE AND CONSOLIDATE UNDER WATERSTOP PRIOR TO PLACING REMAINING CONCRETE

BASE SLAB CONTRACTION JOINT AT ENCASEMENT

0315-165



DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DR	REVISION	BY
			CHK	APVD
				B PHELPS
				A FIRTH
				S ROSE

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

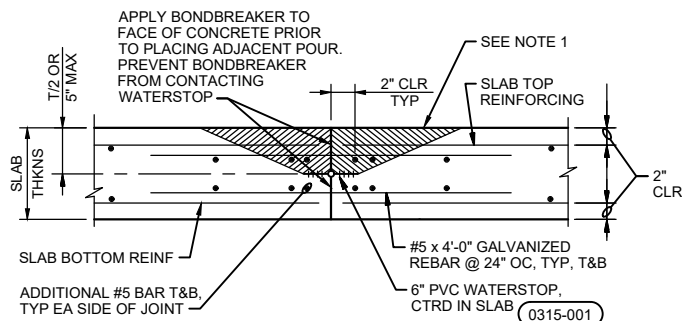


STANDARD DETAILS
STANDARD DETAILS

VERIFY SCALE
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DATE	APRIL 2024
PROJ	W7Y49600
DWG	SD-02
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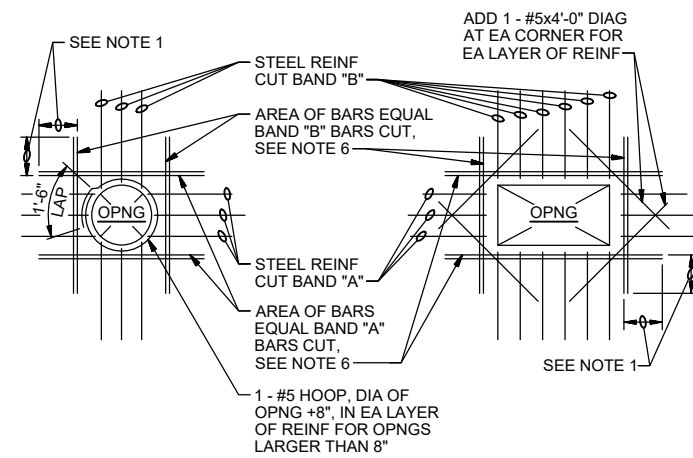


- NOTES:**
1. PLACE CONCRETE AND CONSOLIDATE UNDER WATERSTOP PRIOR TO PLACING REMAINING CONCRETE.

**RESERVOIR ROOF
SLAB CONTROL JOINT**

NTS

0315-183

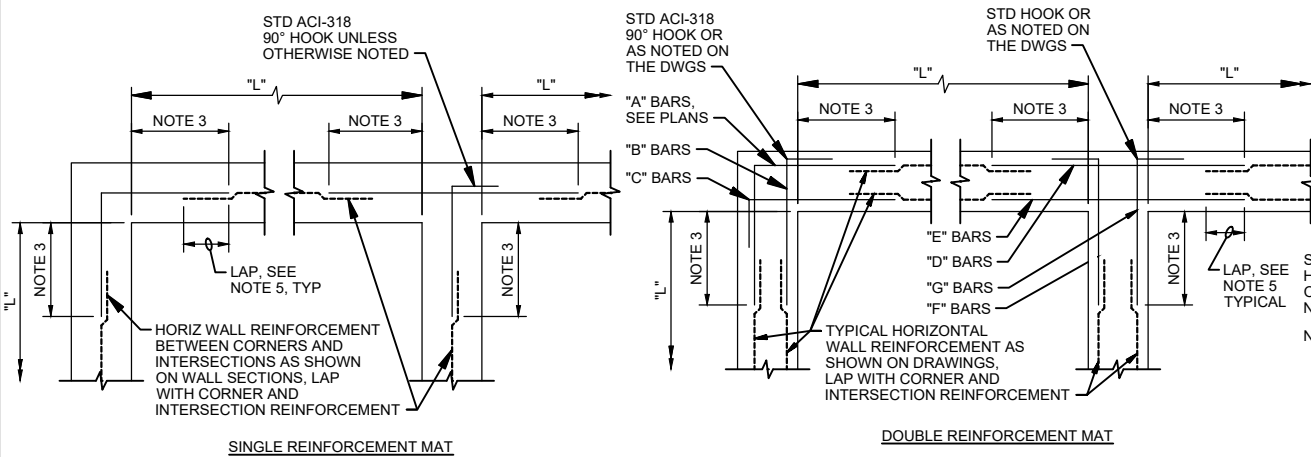


- NOTES:**
1. PROVIDE MINIMUM LAP, SEE GENERAL STRUCTURAL NOTES.
 2. TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS OF BELOW GRADE AND HYDRAULIC STRUCTURES AND ALL STRUCTURAL CONCRETE SLABS UNLESS INDICATED OTHERWISE ON PLANS.
 3. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.
 4. PROVIDE A MINIMUM OF 2 "A" BARS AND 2 "B" BARS EACH SIDE OF OPENING (1 EACH FACE).
 5. FOR OPENINGS LARGER THAN 8'-0", REINFORCE SAME AS FOR 8'-0" OPENINGS.
 6. SPACE AT 3 BAR DIAMETERS (OR 3" MINIMUM) ON CENTER.

OPENING REINFORCING

NTS

0330-001

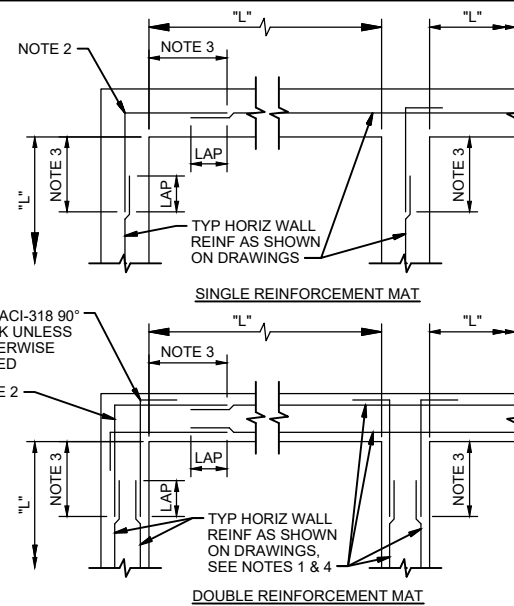


- NOTES:**
1. TYPICAL HORIZONTAL WALL CORNER AND INTERSECTION REINFORCEMENT LAYOUT IS SHOWN TO AVOID CONGESTION AND PERMIT PROPER PLACEMENT, FOR SIZE AND SPACING SEE PLANS. ALL HORIZONTAL REINFORCEMENT AT CORNERS AND INTERSECTIONS SHALL BE FABRICATED AND INSTALLED WITH SPLICES LOCATED WHERE SHOWN REGARDLESS OF BAR SIZE AND SPACING.
 2. WHERE THE CORNER OR INTERSECTION REINFORCEMENT SIZE AND SPACING IS NOT SHOWN, NOTED OR TABULATED ON THE PLANS, THE SIZE AND SPACING SHALL BE THE SAME AS THE WALL HORIZONTAL REINFORCEMENT SHOWN ON THE WALL SECTIONS OR AS NOTED FOR THE REINFORCEMENT BETWEEN THE CORNERS OR INTERSECTIONS.
 3. EXCEPT WHERE OTHERWISE SHOWN ON THE DRAWINGS, THE LENGTH INDICATED AS "NOTE 3" SHALL BE THE LESSER OF L/4, 10 FEET, OR 1.0 TIMES THE HEIGHT OF THE WALL, EXCEPT THAT IN NO CASE SHALL IT BE LESS THAN A LAP LENGTH.
 4. L = LENGTH OF WALL PARALLEL TO THE BAR LENGTH IN QUESTION.
 5. EXCEPT WHERE OTHERWISE SHOWN ON THE DRAWINGS, THE LENGTH INDICATED AS "NOTE 5" SHALL BE EQUAL TO ONE "LAP LENGTH" AS REQUIRED BY THE GENERAL STRUCTURAL NOTES. USE THE LAP LENGTH AS REQUIRED FOR THE SMALLER OF THE TWO REINFORCEMENT BARS BEING SPLICED.
 6. UNLESS OTHERWISE NOTED, "B" AND "C" BARS ARE THE SAME SIZE AND SPACING AND "F" AND "G" BARS ARE THE SAME SIZE AND SPACING.

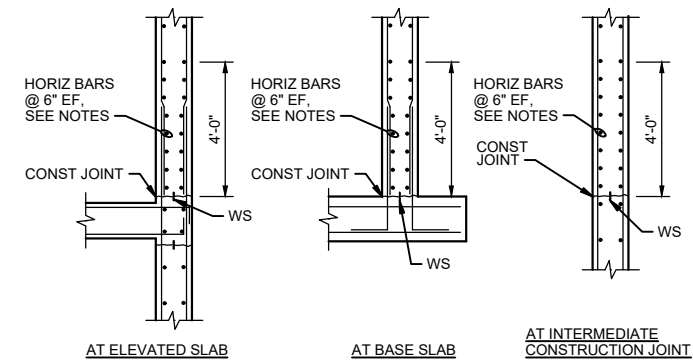
TYPICAL WALL CORNER AND INTERSECTION REINFORCING

NTS

0330-003



- NOTES:**
1. WHERE SHOWN ON PLANS, ADDITIONAL HORIZONTAL WALL CORNER AND INTERSECTION REINFORCEMENT SHALL BE ALTERNATED WITH THE TYPICAL HORIZONTAL REINFORCEMENT SHOWN IN THIS DETAIL.
 2. CORNER BARS SHALL MATCH SIZE OF TYPICAL HORIZONTAL REINFORCEMENT SHOWN IN SECTIONS.
 3. EXCEPT WHERE OTHERWISE SHOWN ON THE DRAWINGS, THE LENGTH INDICATED AS "NOTE 3" SHALL BE THE LESSER OF L/4, 10 FEET, OR 1.0 TIMES THE HEIGHT OF THE WALL, EXCEPT THAT IN NO CASE SHALL IT BE LESS THAN 2 FEET.
 4. TYPICAL HORIZONTAL REINFORCEMENT SHALL BE LAPPED WHERE SHOWN OR AS INDICATED IN THE GENERAL STRUCTURAL NOTES.
 5. WHERE LAPPED BARS ARE DIFFERENT SIZE, USE THE LAP LENGTH REQUIRED FOR THE SMALLER OF THE TWO REINFORCEMENT BARS BEING SPLICED.



- NOTES:**
1. PROVIDE HORIZONTAL BARS AT 6" SPACING EACH FACE IN THE FIRST 4'-0" ABOVE ALL HORIZONTAL WALL CONSTRUCTION JOINTS IN LIQUID CONTAINING AND BELOW-GRADE STRUCTURES. WHERE TYPICAL WALL HORIZONTAL BARS ARE AT 12" SPACING, PROVIDE ADDITIONAL BARS FOR 6" SPACING.
 2. HORIZONTAL BAR SIZE FOR THE 4'-0" ZONE SHALL BE THE TYPICAL WALL HORIZONTAL BAR SIZE SHOWN ON THE DRAWINGS OR THE MINIMUM BAR SIZE IN THE TABLE BELOW, WHICHEVER IS GREATER.
- | WALL THICKNESS (INCHES) | MINIMUM BAR SIZE |
|-------------------------|------------------|
| 10 | #5 |
| 12, 14 | #6 |
| 16, 18, 20 | #7 |
| ≥22 | #8 |
3. PROVIDE CORNER BARS AT 6" SPACING EACH FACE TO LAP WITH THE BARS SHOWN ABOVE, SEE 0330-003.

**REINFORCEMENT AT HORIZONTAL
CONSTRUCTION JOINT**

NTS

0330-004



NO.	DATE	REVISION	CHK	BY	APVD

DR: S ROSE, T STIMPSON
A FIRTH: APVD
B PHELPS: BY APVD

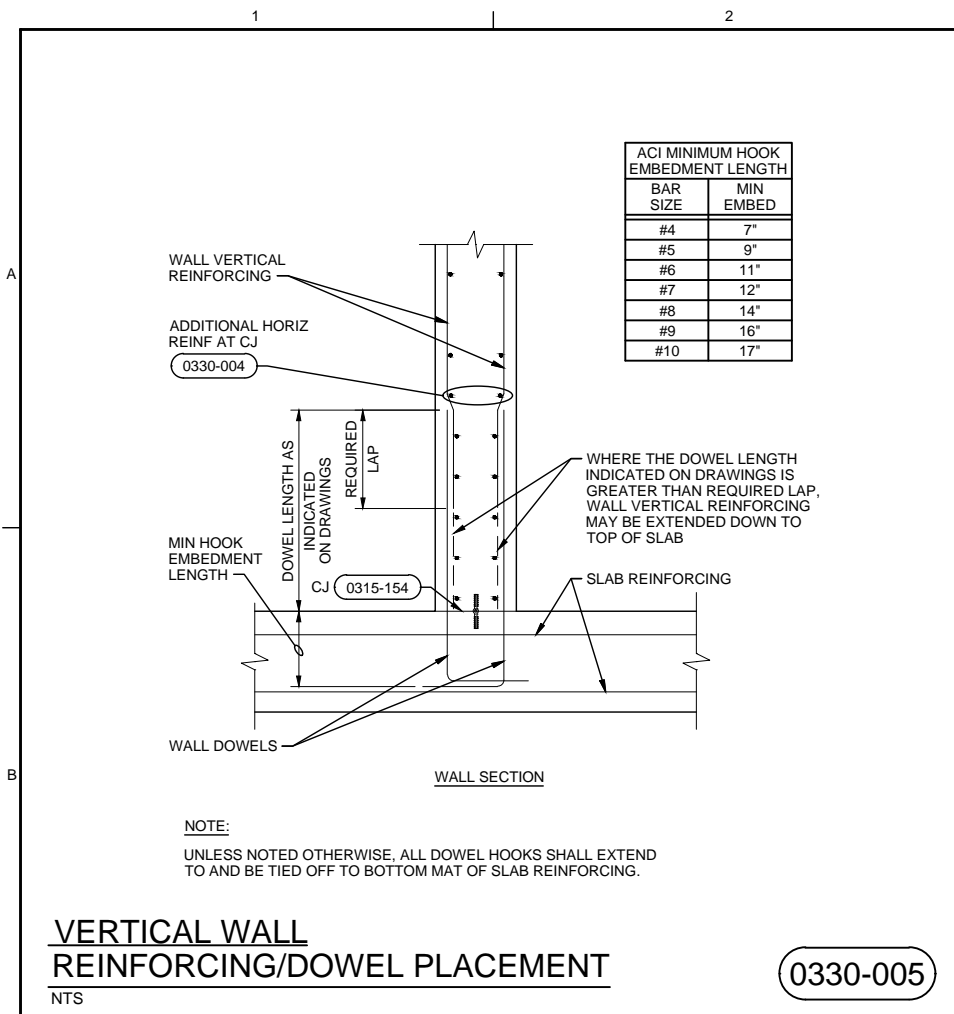
**JORDAN VALLEY WATER
CONSERVANCY DISTRICT**
11800 SOUTH ZONE C RESERVOIRS

Jacobs
STANDARD DETAILS
STANDARD DETAILS

VERIFY SCALE
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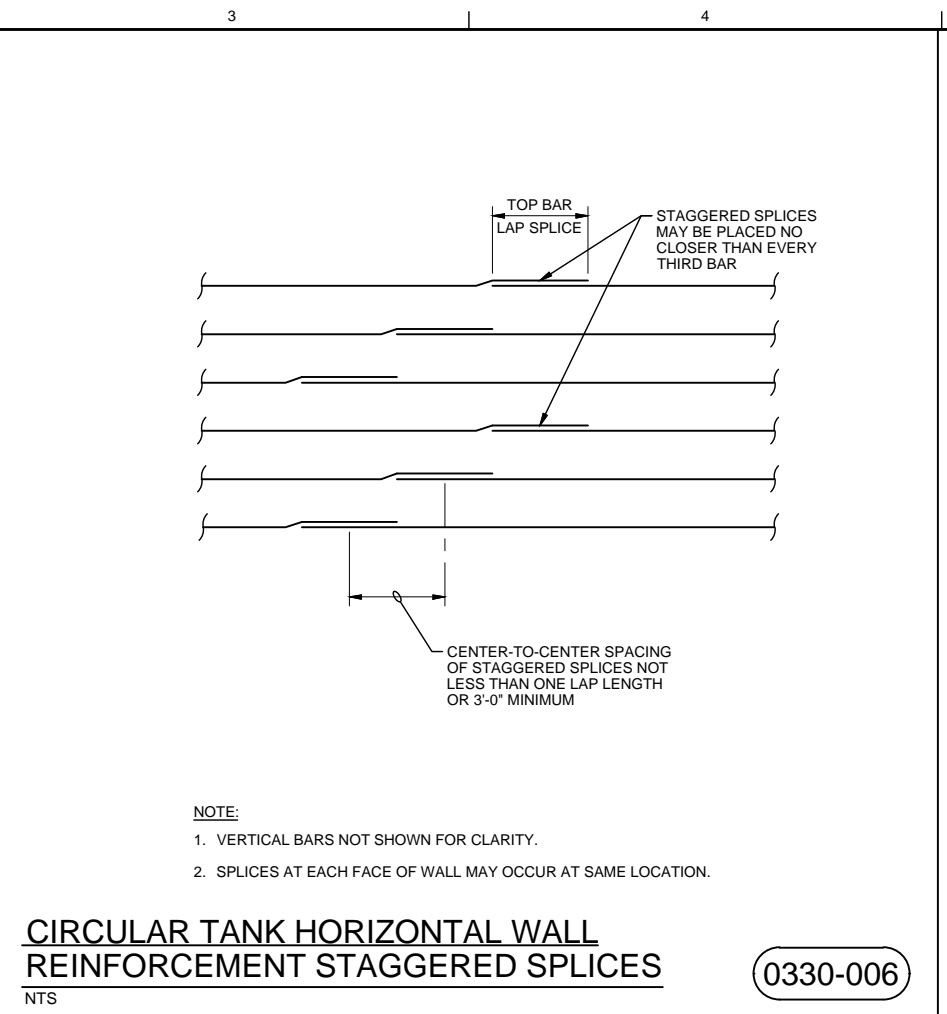
DATE	APRIL 2024
PROJ	W7Y49600
DWG	SD-03
SHEET	59 of 79

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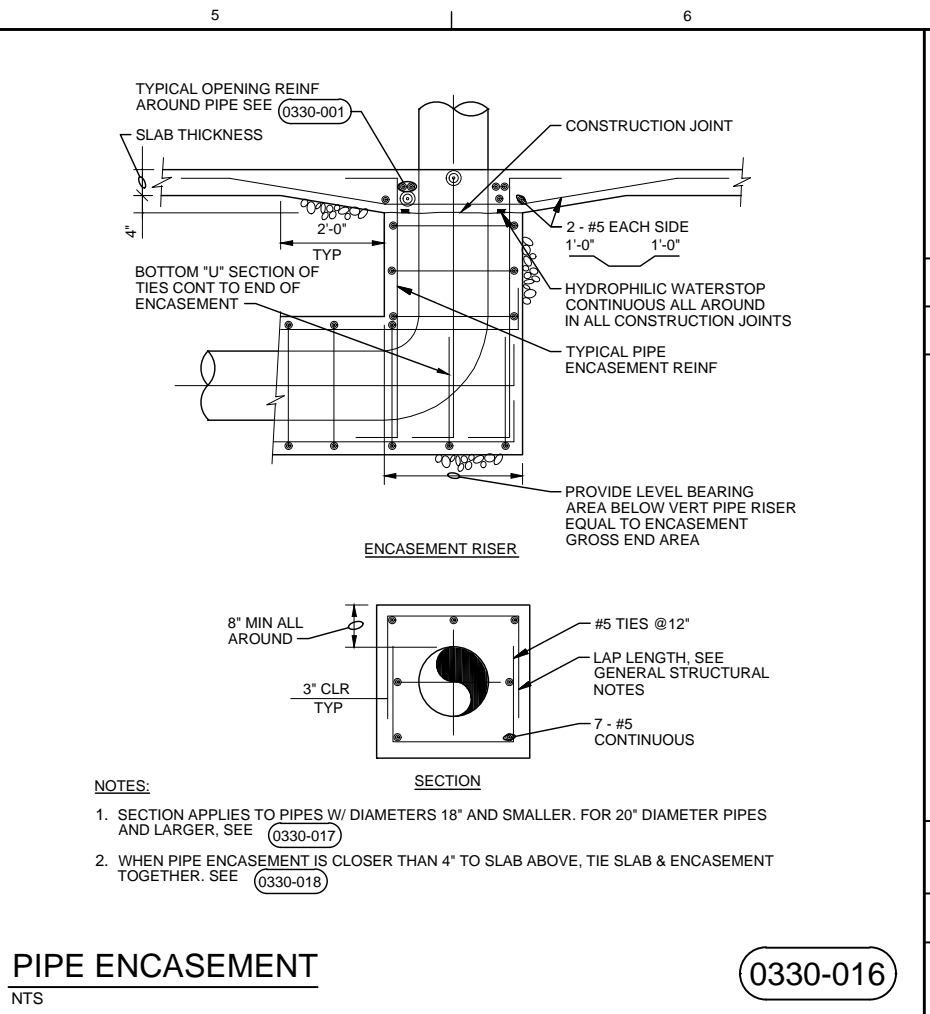
VERTICAL WALL REINFORCING/DOWEL PLACEMENT
NTS

0330-005



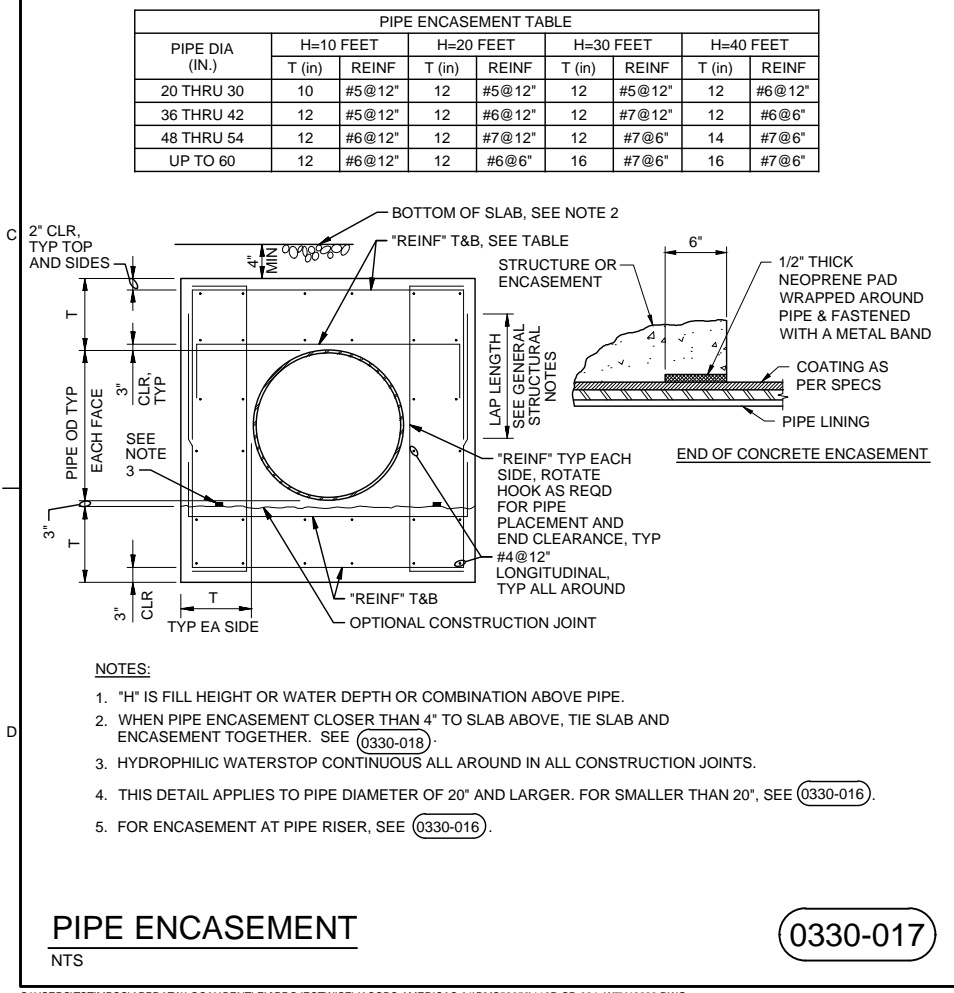
CIRCULAR TANK HORIZONTAL WALL REINFORCEMENT STAGGERED SPLICES
NTS

0330-006



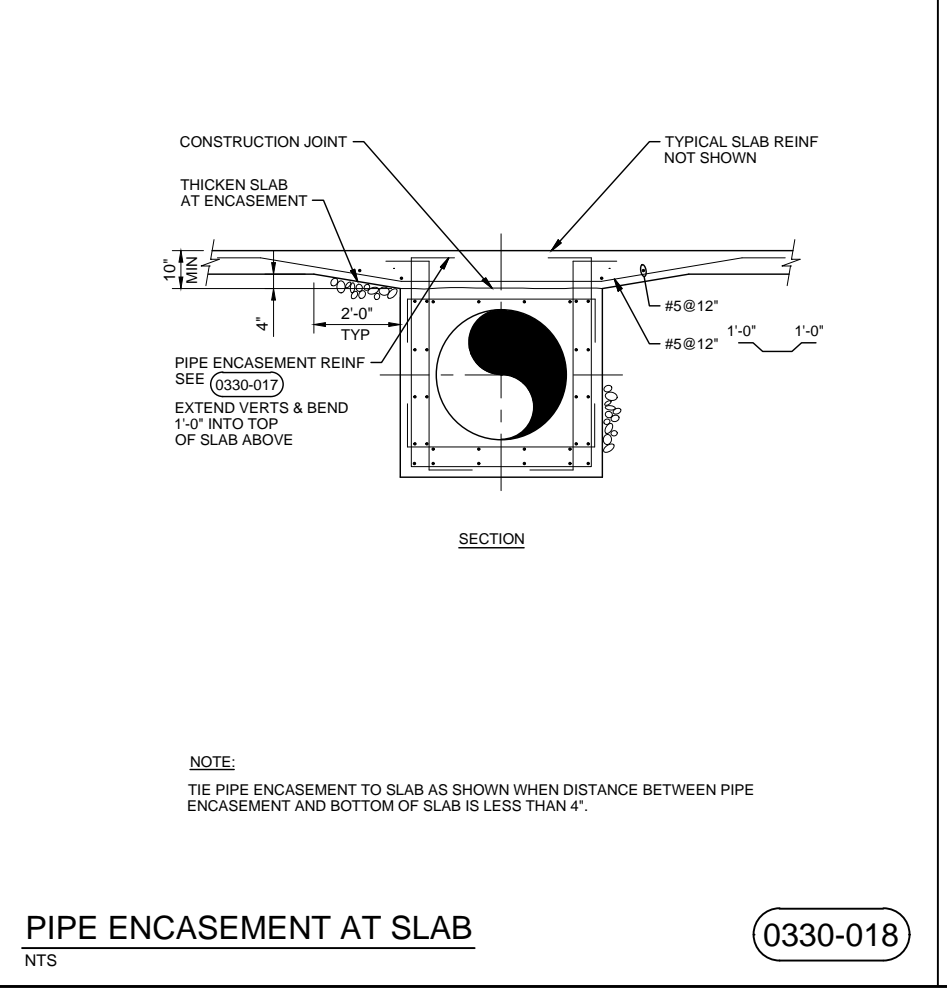
PIPE ENCASEMENT
NTS

0330-016



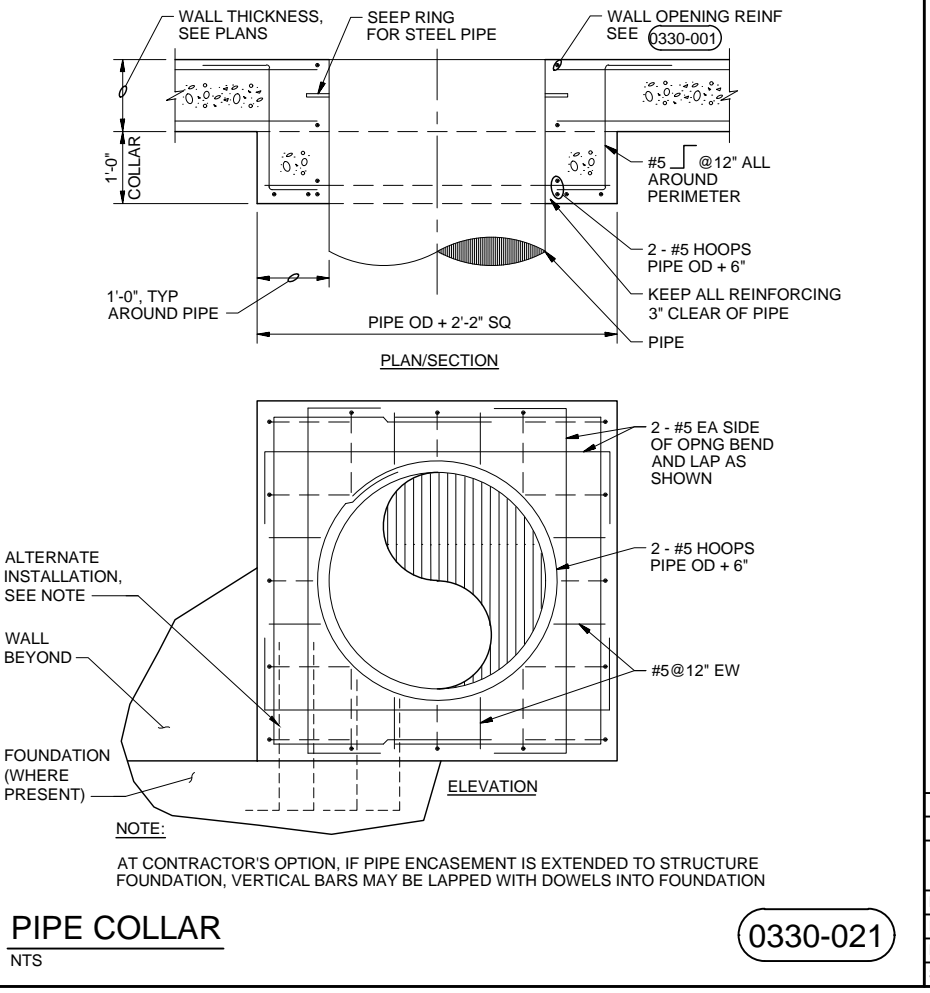
PIPE ENCASEMENT
NTS

0330-017



PIPE ENCASEMENT AT SLAB
NTS

0330-018



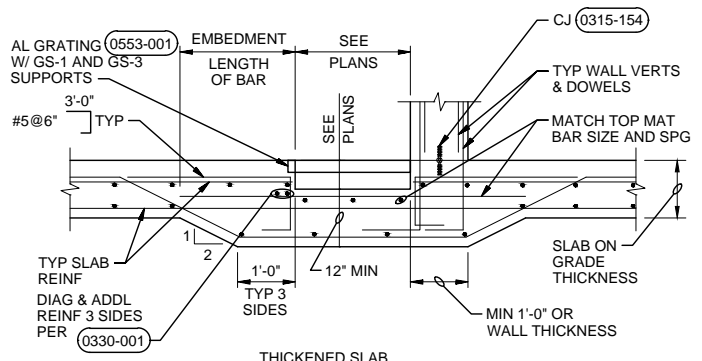
PIPE COLLAR
NTS

0330-021

PROFESSIONAL STRUCTURAL ENGINEER
No. 501404-2203
STERLING K. ROSE
STATE OF UTAH
DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DR	REVISION	CHK	BY	APVD	APVD	APVD	APVD	APVD	APVD
		S ROSE	T STIMPSON	B PHELPS							
<p>JORDAN VALLEY WATER CONSERVANCY DISTRICT 11800 SOUTH ZONE C RESERVOIRS</p>											
<p>Jacobs STANDARD DETAILS STANDARD DETAILS</p>											
<p>VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. DATE: APRIL 2024 PROJ: W7Y49600 DWG: SD-04 SHEET: 60 of 79</p>											

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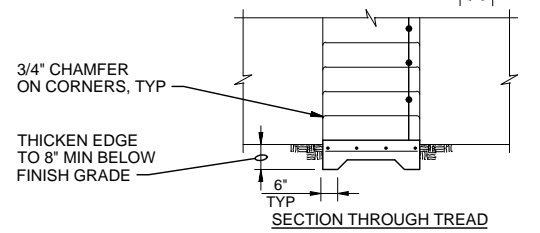
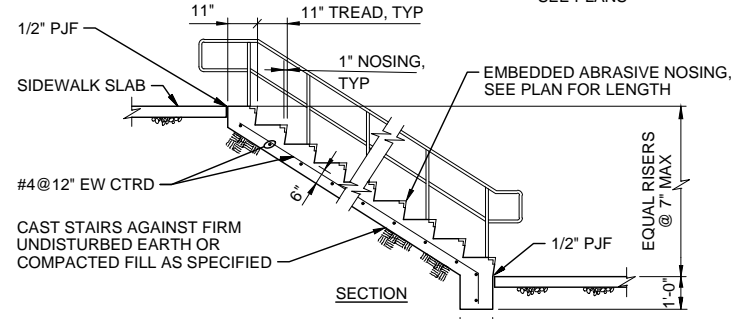
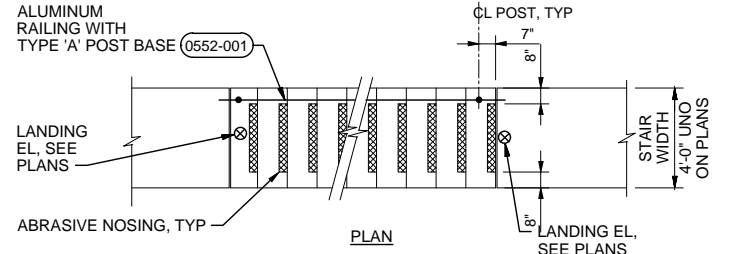


NOTES:
1. REBAR LOCATION SHALL ACCOMMODATE GRATING CONNECTIONS WHERE REQUIRED. SEE DETAIL (0553-001)

IN-SLAB SUMP REINFORCEMENT

NTS

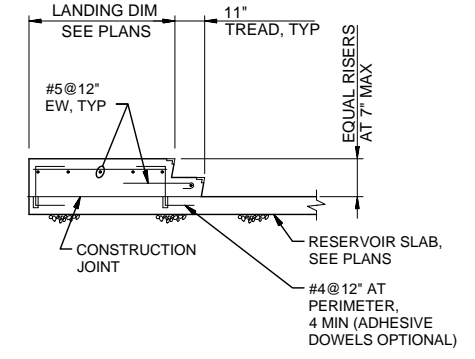
(0330-044)



CONCRETE STAIR - ON GRADE

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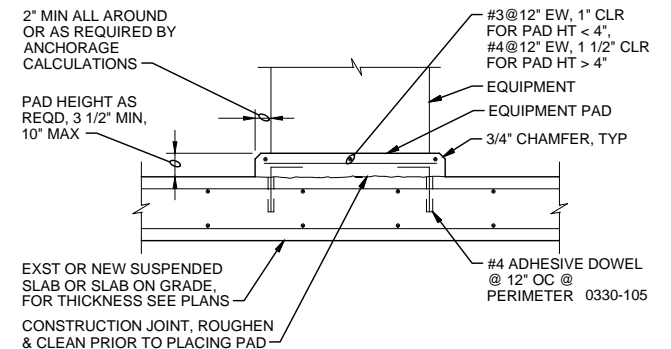
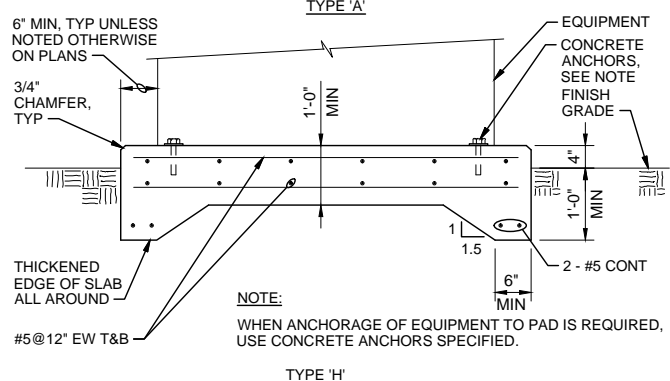
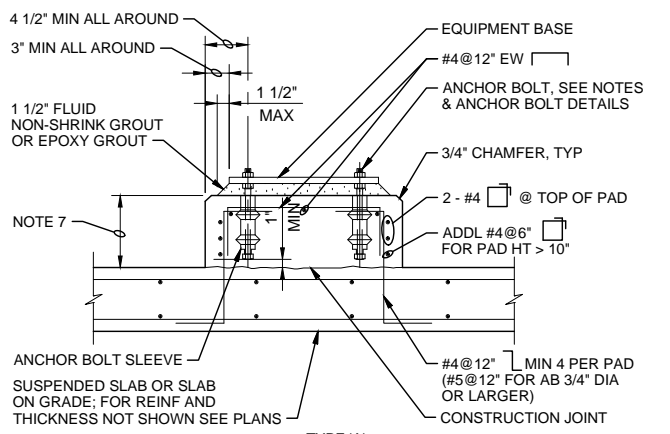
(0330-049)



CONCRETE LANDING PAD AND STAIR

NTS

(0330-050)



NOTES:
1. WHEN ANCHORAGE OF EQUIPMENT TO PAD IS REQUIRED, USE CONCRETE ANCHORS SPECIFIED.
2. CONCRETE PADS FOR ELECTRICAL EQUIPMENT SHALL BE 3 1/2" HIGH, UNLESS NOTED OTHERWISE.

- EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS INDICATED OTHERWISE.
- WEDGES, SHIMS, OR LEVELING NUTS SHALL BE USED TO SUPPORT THE BASE WHILE THE GROUT IS PLACED. WEDGES OR SHIMS SHALL BE REMOVED AFTER GROUT IS SET AND PACK VOID WITH GROUT.
- HEIGHT OF PADS SHALL BE MINIMUM REQUIRED FOR ANCHOR BOLT CLEARANCE TO KEEP ANCHOR BOLT ABOVE SUPPORTING SLAB (SEE TABLE BELOW). WHERE EQUIPMENT OR PIPING ELEVATION REQUIRE A PAD HEIGHT LESS THAN THE MINIMUM SHOWN, USE TYPE 'B' EQUIPMENT PAD WITH BLOCKOUT.
- TYPE 'D' PAD SHALL BE USED ONLY WHERE SPECIFICALLY INDICATED. PLACE THE SURROUNDING FLOOR SLAB AFTER THE EQUIPMENT PAD.
- AT CONTRACTOR'S OPTION, CONCRETE ANCHORS MAY BE USED IN LIEU OF CAST-IN-PLACE ANCHOR BOLTS FOR EQUIPMENT ANCHOR BOLTS LESS THAN 3/4" DIAMETER WHEN APPROVED BY THE EQUIPMENT MANUFACTURER AND APPROVED BY THE ENGINEER. ANCHORS SHALL BE INSTALLED WITH 4" MINIMUM EDGE DISTANCE IN EACH DIRECTION.

AB DIA (IN.)	1/2	5/8	3/4	7/8	1	1 1/4	1 3/8	1 1/2	1 3/4	2
MIN PAD HT (IN.)	7	8 1/2	10	11	12 1/2	15	16 1/2	18	21	24

CONCRETE EQUIPMENT PAD

NTS

(0330-056)



NO.	DATE	DR	REVISION	BY
		S ROSE		
		T STIMPSON		
		APVD		
		CHK		
		APVD		
		B PHELPS		

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
STANDARD DETAILS
STANDARD DETAILS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	APRIL 2024
PROJ	W7Y49600
DWG	SD-05
SHEET	61 of 79

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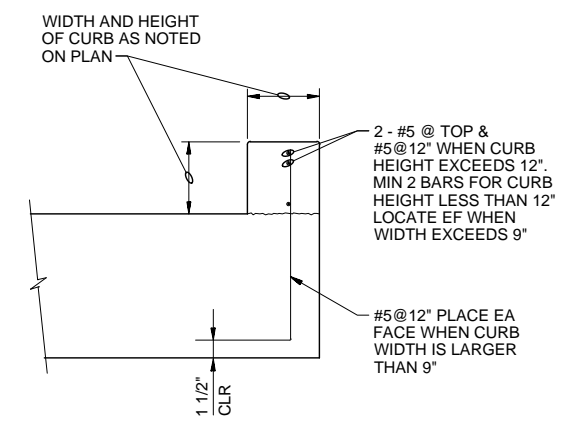
NO.	DATE	DR	REVISION	BY
		S ROSE		B PHELPS
		T STIMPSON		A FIRTH
			CHK	APVD
			APVD	

JORDAN VALLEY WATER
CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS
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STANDARD DETAILS
STANDARD DETAILS

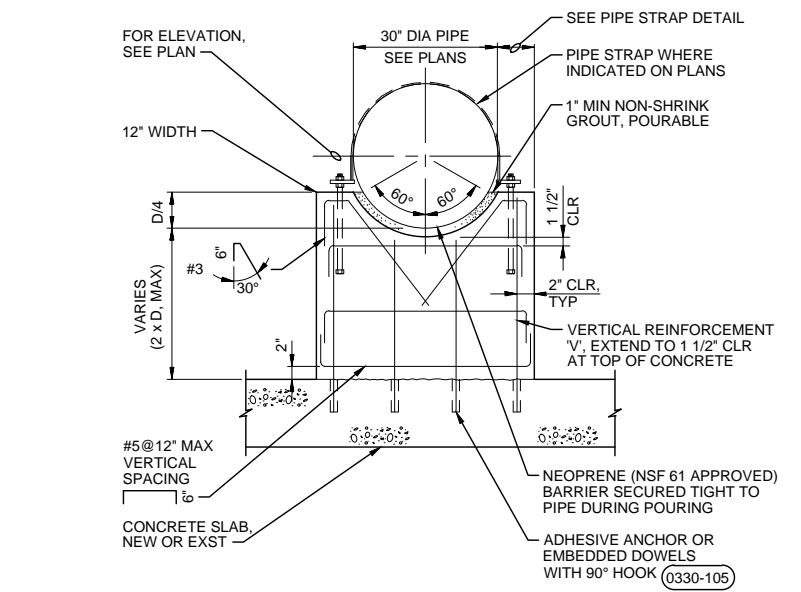
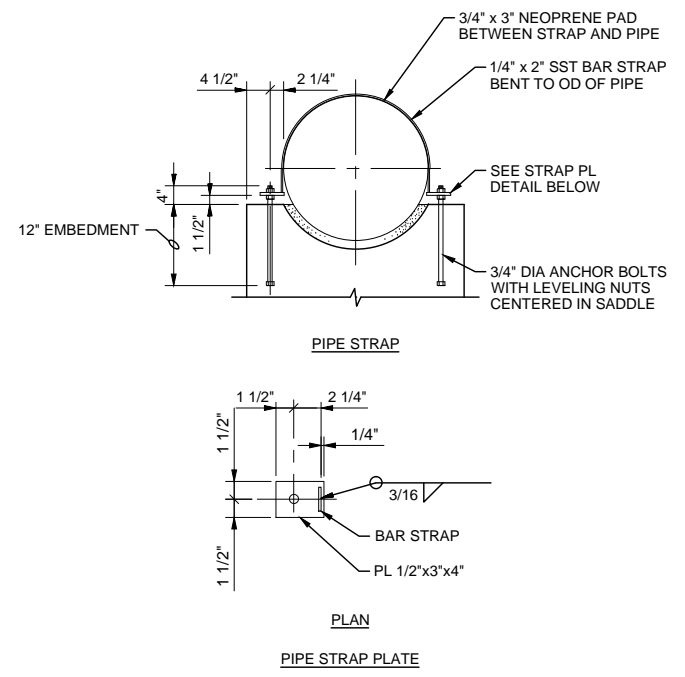
VERIFY SCALE	DATE	APRIL 2024
BAR IS ONE INCH ON ORIGINAL DRAWING.	PROJ	W7Y49600
	DWG	SD-06
	SHEET	62 of 79

100% DESIGN



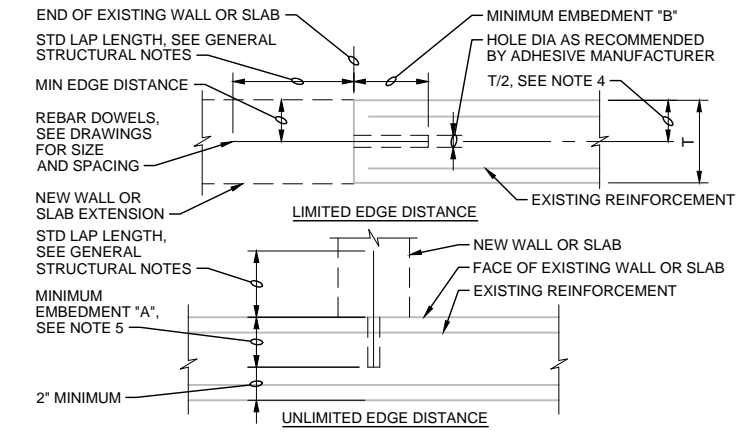
CONCRETE CURB
NTS

0330-080



PIPE SUPPORT - CONCRETE SADDLE
NTS

0330-061

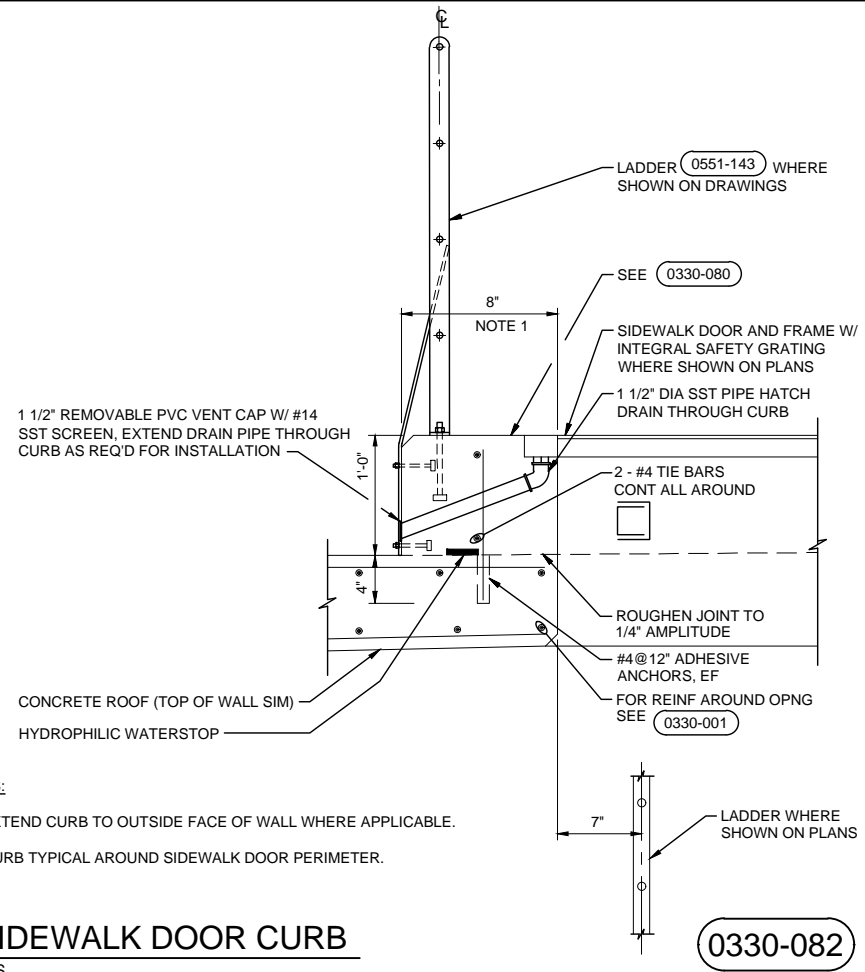


DOWEL SIZE	MINIMUM EDGE DISTANCE	MINIMUM EMBEDMENT "A"	MINIMUM EMBEDMENT "B"
#3	2 1/2"	5"	8"
#4	3 1/2"	7"	11"
#5	4"	8"	13"
#6	5"	10 1/2"	16"
#7	6"	12 1/2"	20"
#8	7"	14"	22"
#9	7 1/2"	15"	24"

- NOTES:
- CONFORM TO REQUIREMENTS OF SPECIFICATION SECTION 03 63 00, CONCRETE DOWELING.
 - FOLLOW ADHESIVE MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
 - USE MINIMUM EMBEDMENTS SHOWN, EXCEPT USE MANUFACTURER'S MINIMUM RECOMMENDED EMBEDMENT IF GREATER.
 - LOCATE DOWELS CENTERED IN WALL OR SLAB UNLESS OTHERWISE NOTED ON DRAWINGS. WHERE 2 ROWS OF DOWELS INDICATED, STAGGER SPACING & LOCATE ALTERNATING DOWELS AT MINIMUM EDGE DISTANCE FROM OPPOSITE FACES.
 - PROVIDE MINIMUM EMBEDMENT "A" SHOWN IN TABLE UNLESS SHORTER EMBEDMENT DEPTH IS CALLED OUT ON DRAWINGS.

ADHESIVE DOWEL
NTS

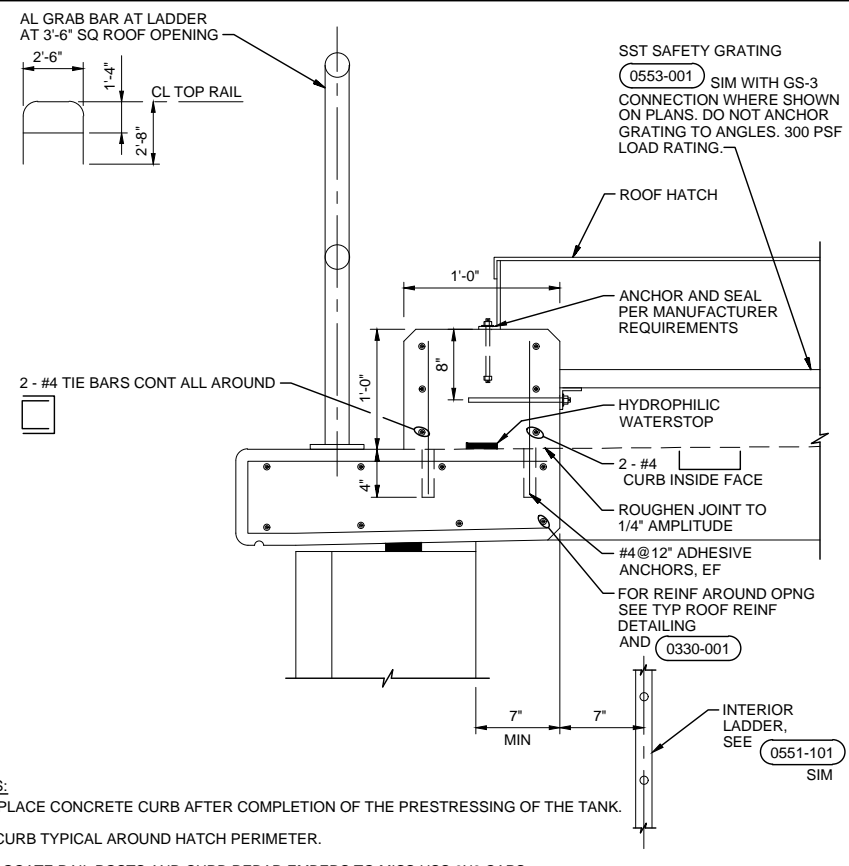
0330-105



- NOTES:
- EXTEND CURB TO OUTSIDE FACE OF WALL WHERE APPLICABLE.
 - CURB TYPICAL AROUND SIDEWALK DOOR PERIMETER.

SIDEWALK DOOR CURB
NTS

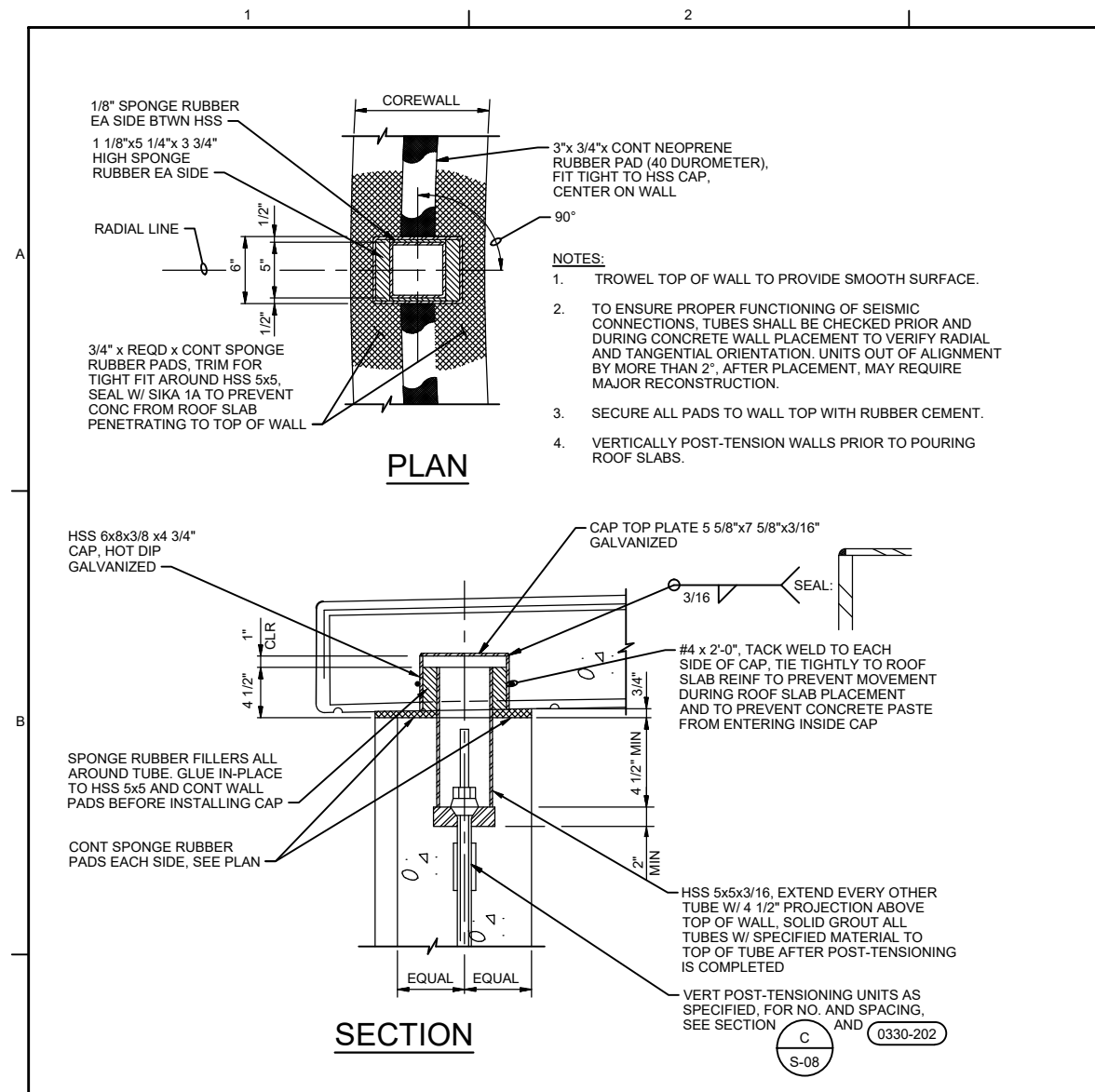
0330-082



- NOTES:
- PLACE CONCRETE CURB AFTER COMPLETION OF THE PRESTRESSING OF THE TANK.
 - CURB TYPICAL AROUND HATCH PERIMETER.
 - LOCATE RAIL POSTS AND CURB REBAR EMBEDS TO MISS HSS 6X8 CAPS.

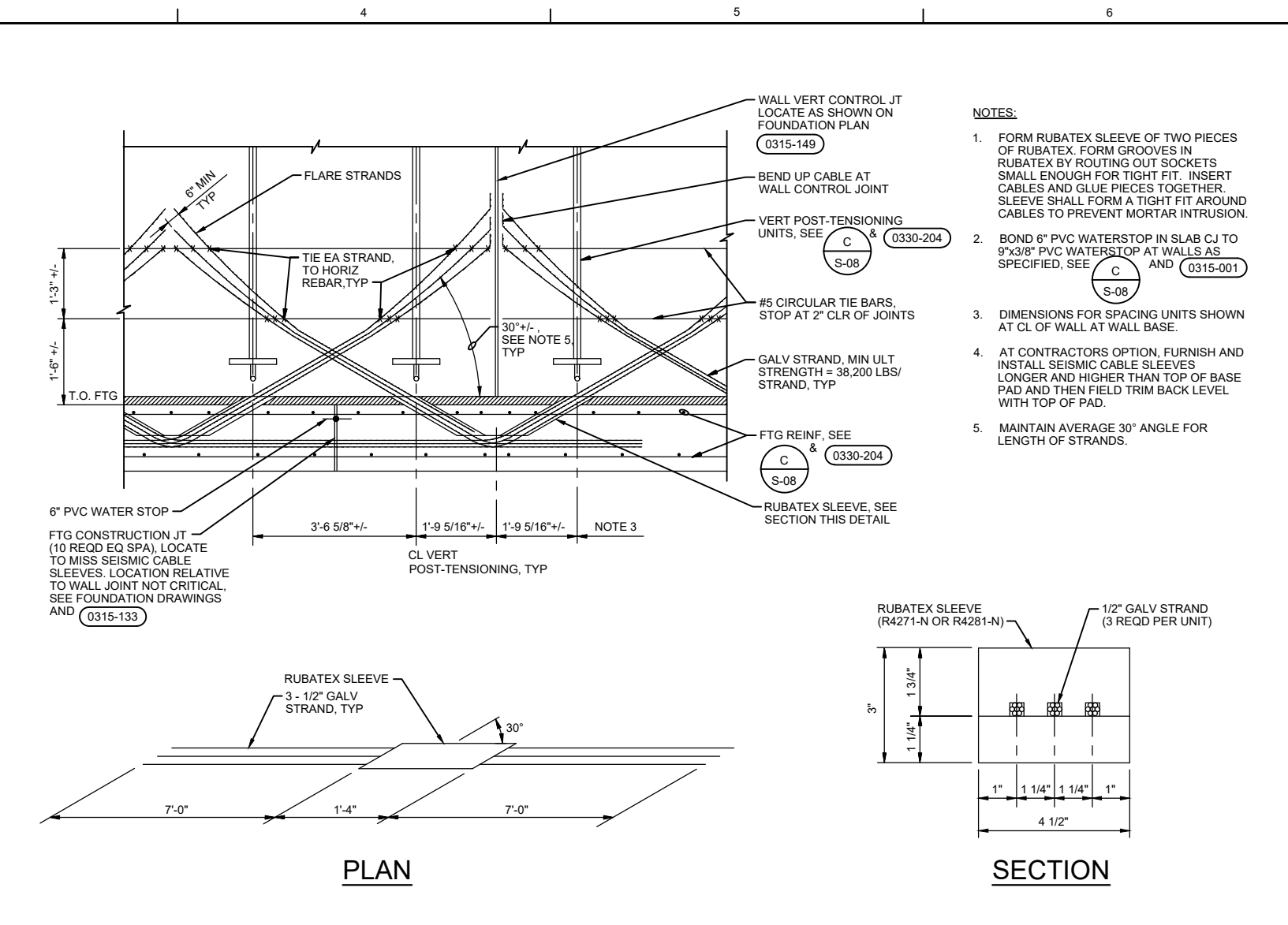
RESERVOIR ROOF HATCH CURB DETAIL
NTS

0330-081



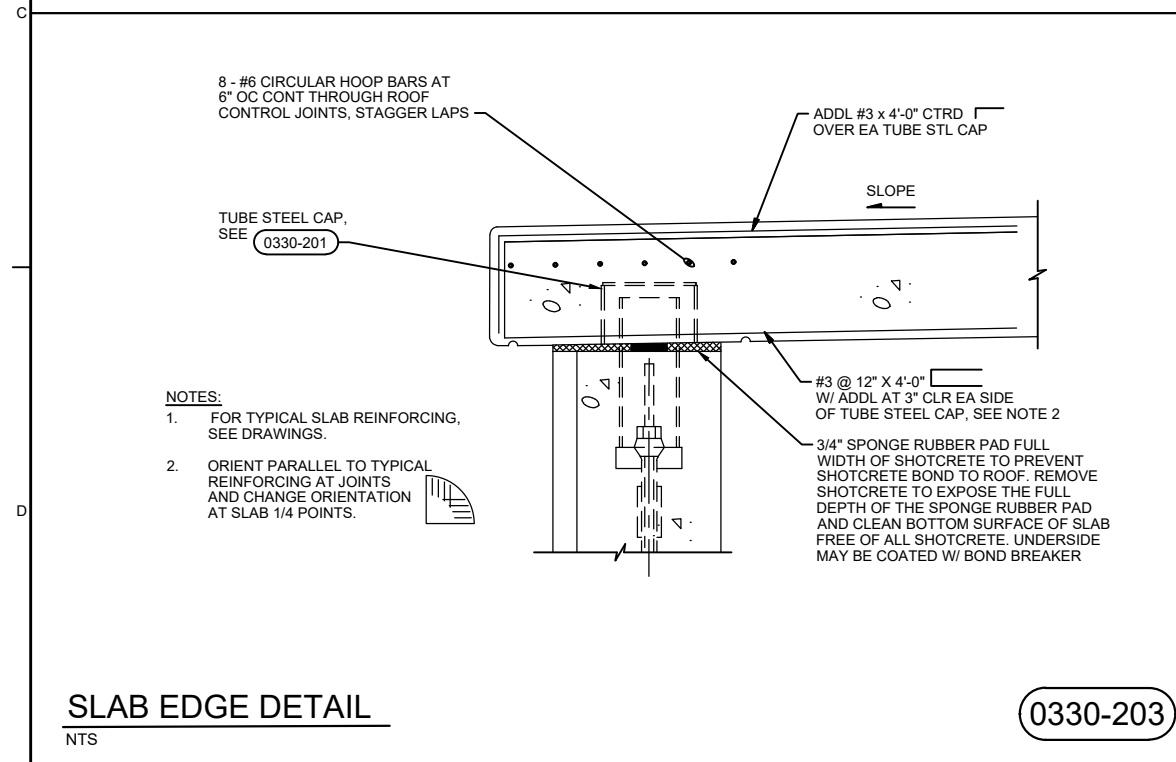
ROOF SLAB SEISMIC CONN
NTS

0330-201



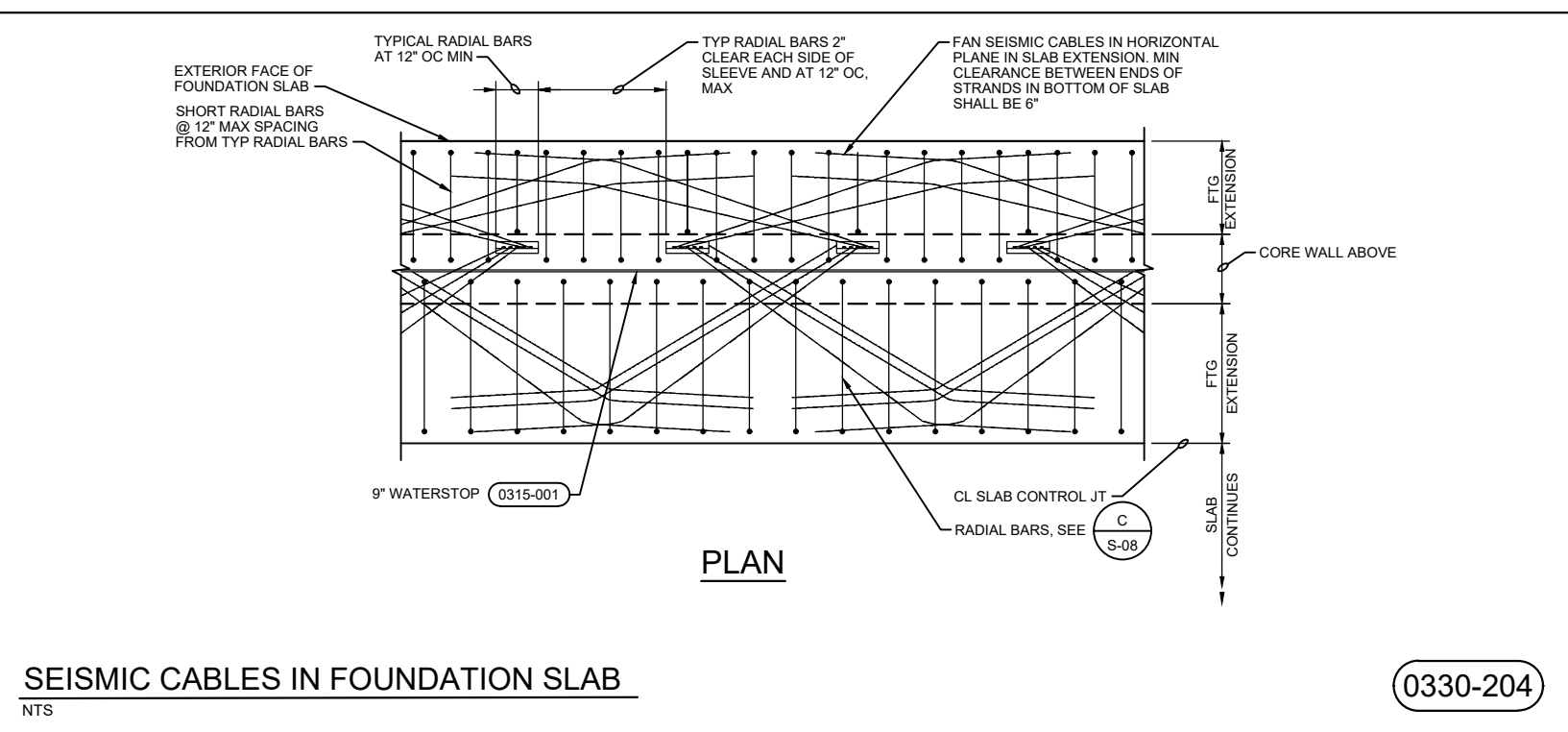
SEISMIC CABLE SLEEVE
NTS

0330-202



SLAB EDGE DETAIL
NTS

0330-203



SEISMIC CABLES IN FOUNDATION SLAB
NTS

0330-204



NO.	DATE	DR	CHK	BY
				B PHELPS
				A FIRTH
				T STIMPSON
				S ROSE

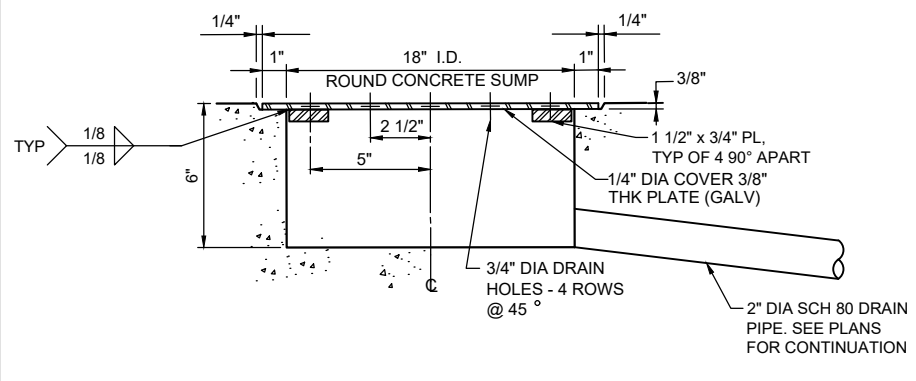
JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
STANDARD DETAILS
STANDARD DETAILS

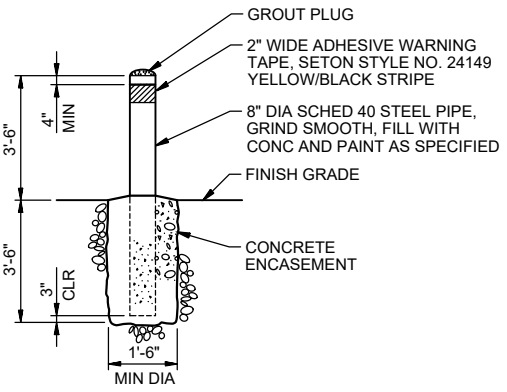
VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2024
PROJ	W7Y49600
DWG	SD-07
SHEET	63 of 79

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NOTE:
 PROVIDE REINF AROUND SUMP PER 0330-001 AND 0330-044



SUMP DETAIL
 NTS

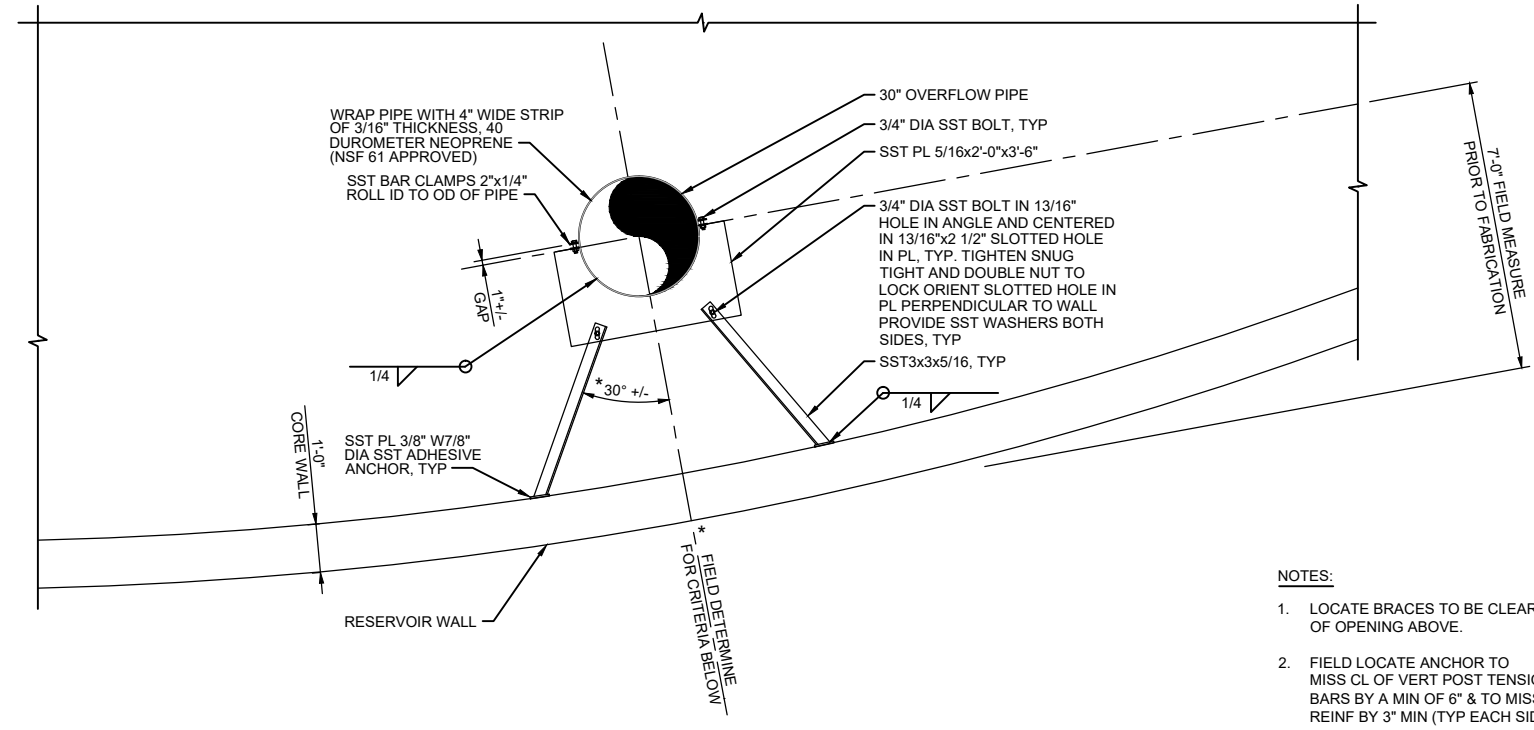
0330-324

GUARDPOST - EXTERIOR
 NTS

0330-810

NO.	DATE	DR	CHK	REVISION	APVD	BY	APVD

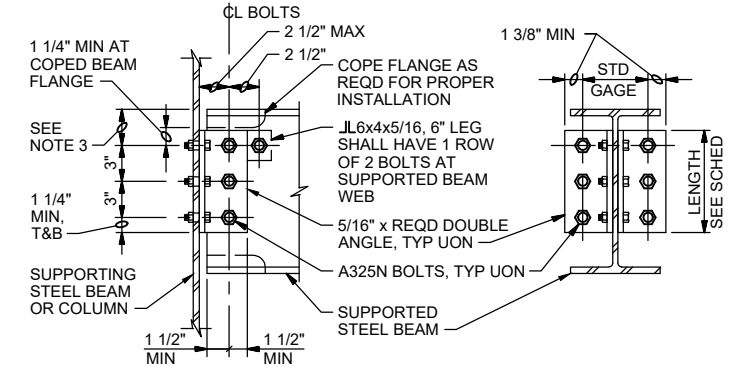
T STIMPSON
 S ROSE
 A FIRTH
 B PHELPS



- NOTES:
- LOCATE BRACES TO BE CLEAR OF OPENING ABOVE.
 - FIELD LOCATE ANCHOR TO MISS CL OF VERT POST TENSION BARS BY A MIN OF 6" & TO MISS REINF BY 3" MIN (TYP EACH SIDE)

OVERFLOW SUPPORT BRACKET
 NTS

0501-029

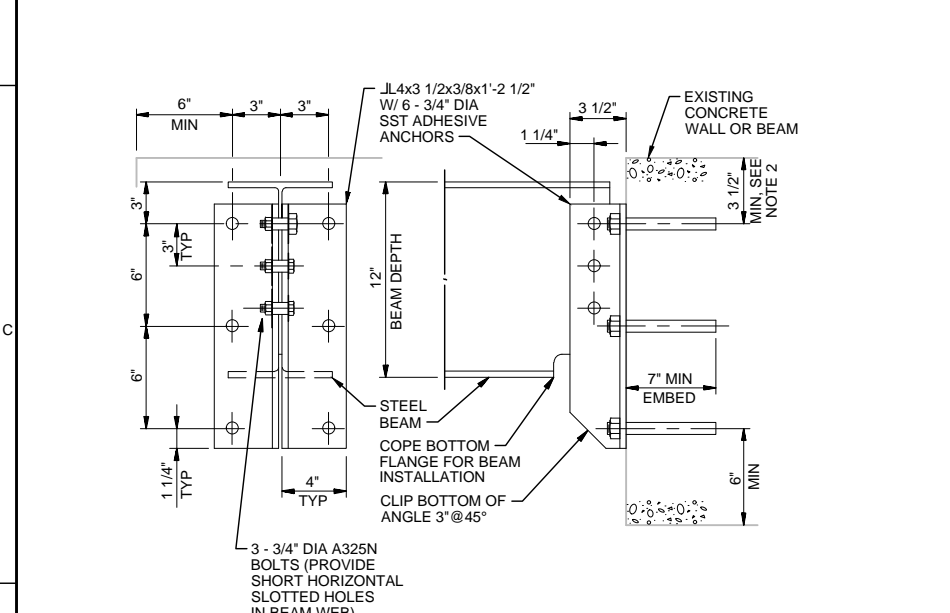
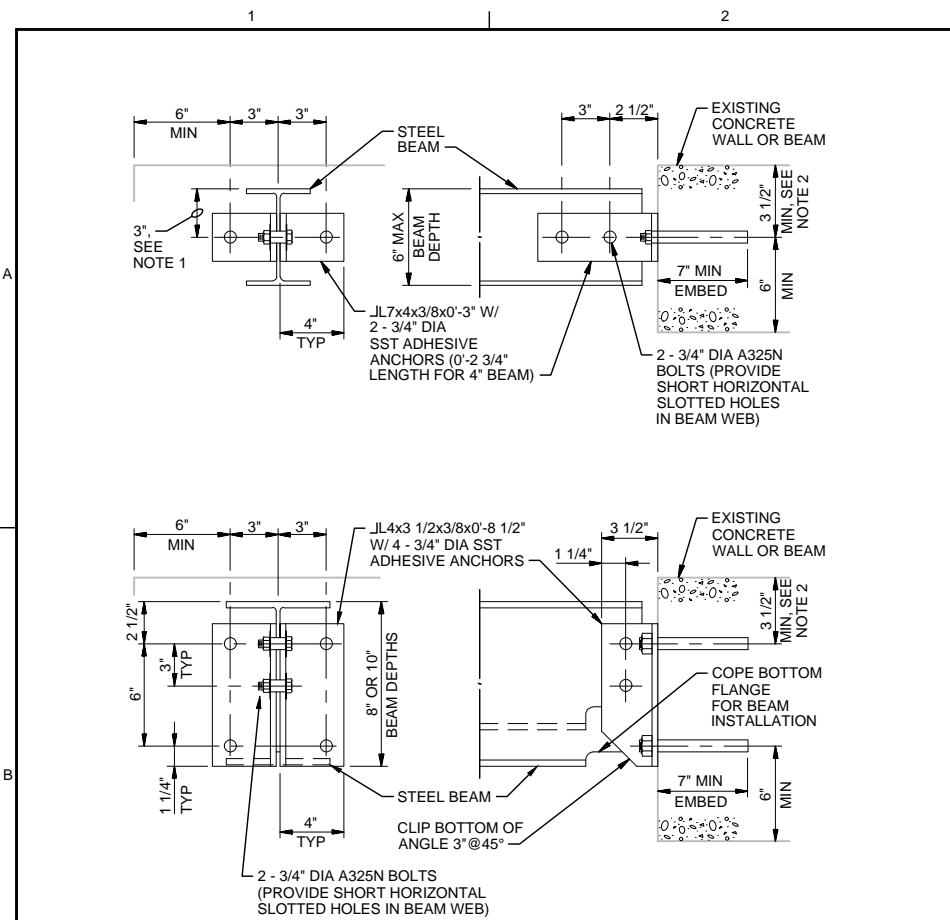


NOMINAL BEAM DEPTH, INCHES	ROWS OF BOLTS	BOLT DIA, INCHES	DOUBLE ANGLE, LENGTH, INCHES	COMMENTS
16-18	4	3/4"	0'-11 1/2"	-
12-15	3	3/4"	0'-8 1/2"	-
8-10	2	3/4"	0'-5 1/2"	-
6	1	3/4"	0'-3"	JL6"x4"x5/16"

- NOTES:
- ALL BEAM FRAMING CONNECTIONS SHALL CONFORM TO THIS DETAIL UNLESS SPECIFICALLY NOTED OTHERWISE OR APPROVED IN WRITING BY THE ENGINEER.
 - PROVIDE ADDITIONAL 1 1/2" LENGTH TO DOUBLE ANGLE FOR STAGGERED BOLT CONNECTIONS WHEN REQUIRED OR USED.
 - DIMENSION SHALL BE 3" UNLESS OTHERWISE REQUIRED FOR PROPER FABRICATION.

TYPICAL BEAM CONNECTION - STEEL
 NTS

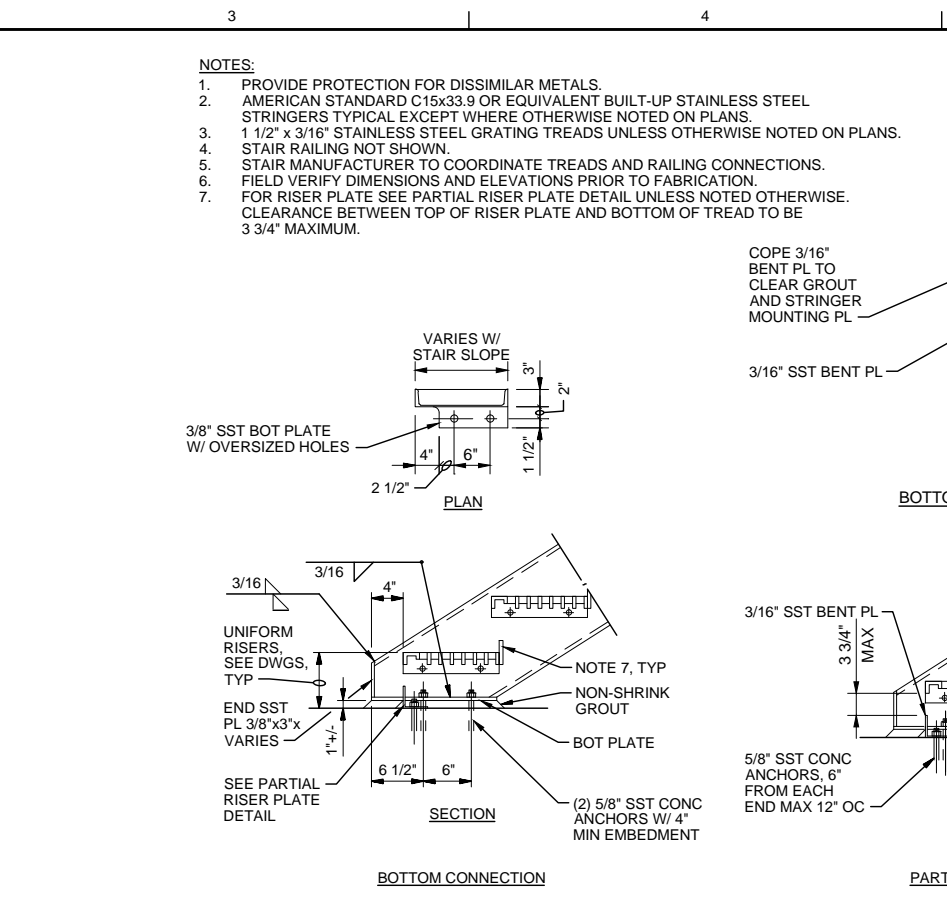
0512-020



- NOTES:**
- 3" DIMENSION TYPICAL EXCEPT 2 1/2" FOR 5" BEAMS AND 2" FOR 4" BEAMS.
 - DO NOT CUT EXISTING CONCRETE BEAM TOP REINFORCING DURING DRILL-IN ANCHOR INSTALLATION. FIELD LOCATE BEAM REINFORCING PRIOR TO FABRICATION WITH GROUND PENETRATING RADAR OR OTHER ACCEPTABLE MEANS. ADD LENGTH TO CLIP ANGLES AS REQUIRED TO LOWER ANCHORS TO CLEAR REINFORCING WHILE MAINTAINING SPACING AND EDGE DISTANCE AS SHOWN.
 - WHERE BOTH ENDS OF BEAM ARE ATTACHED TO A WALL, PROVIDE LONG HORIZONTALLY SLOTTED HOLES IN BEAM WEB AT ONE END. TIGHTEN NUTS SNUG TIGHT, BACK OFF 1/2 TURN, AND LOCK WITH DOUBLE NUT.

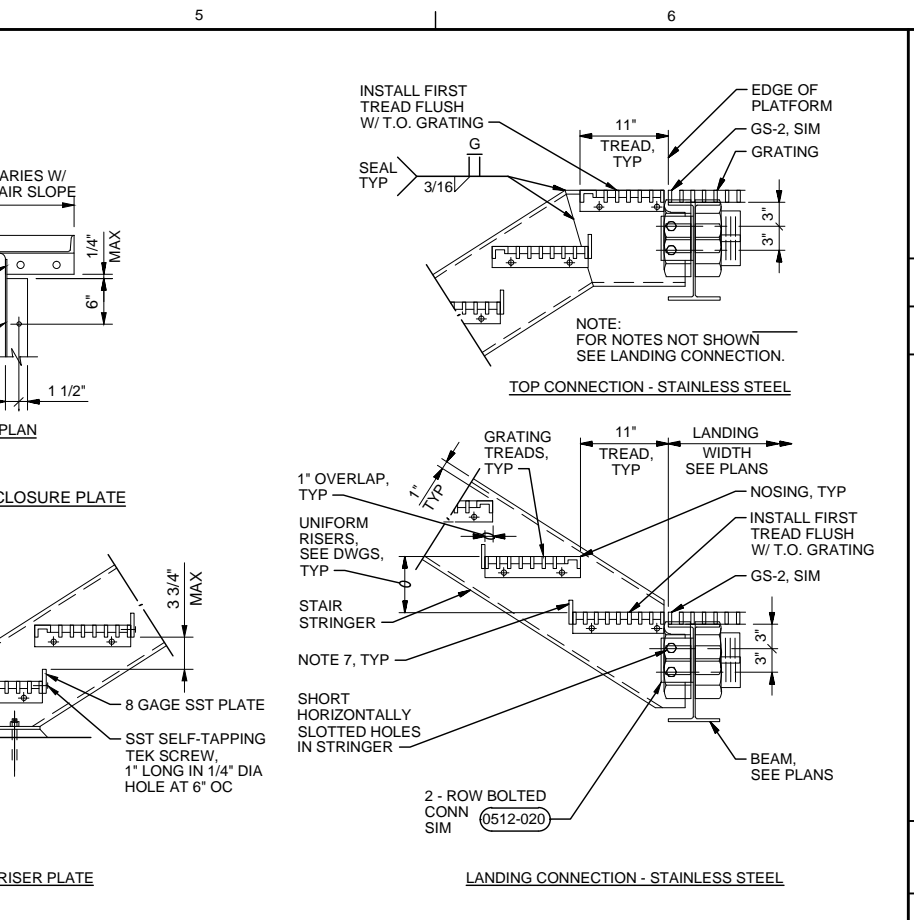
BEAM/WALL CONNECTION - STEEL
NTS

0512-056



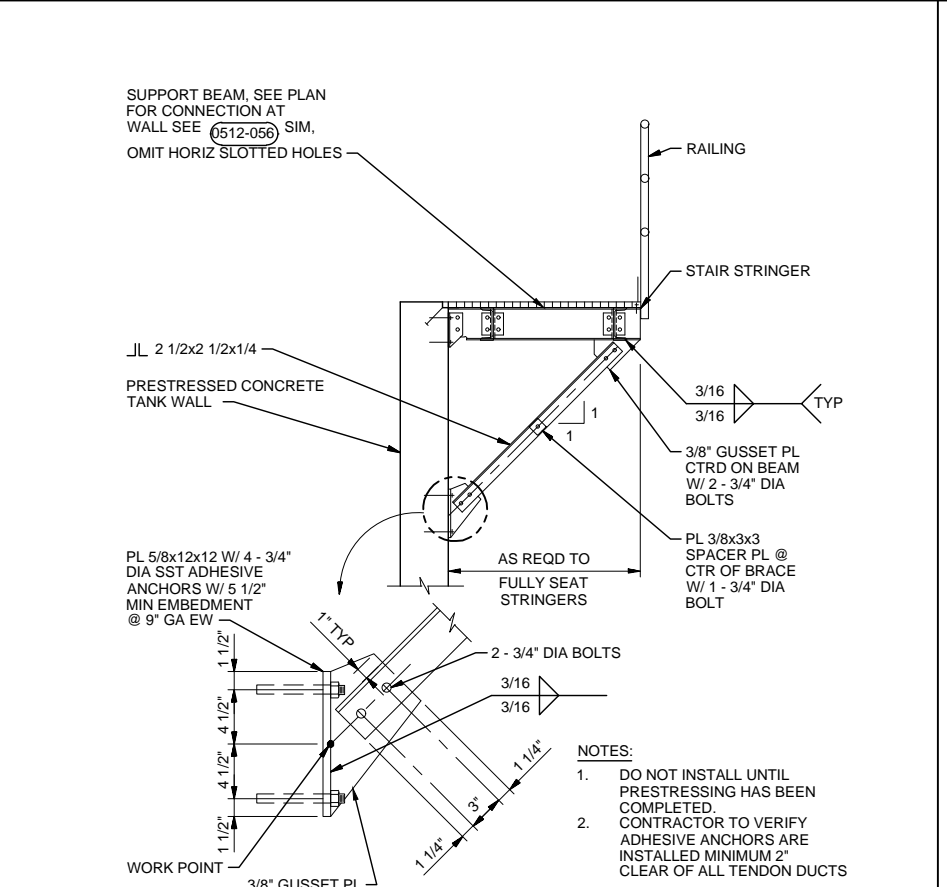
STAIR DETAILS - STAINLESS STEEL TYPE 316
NTS

0551-043

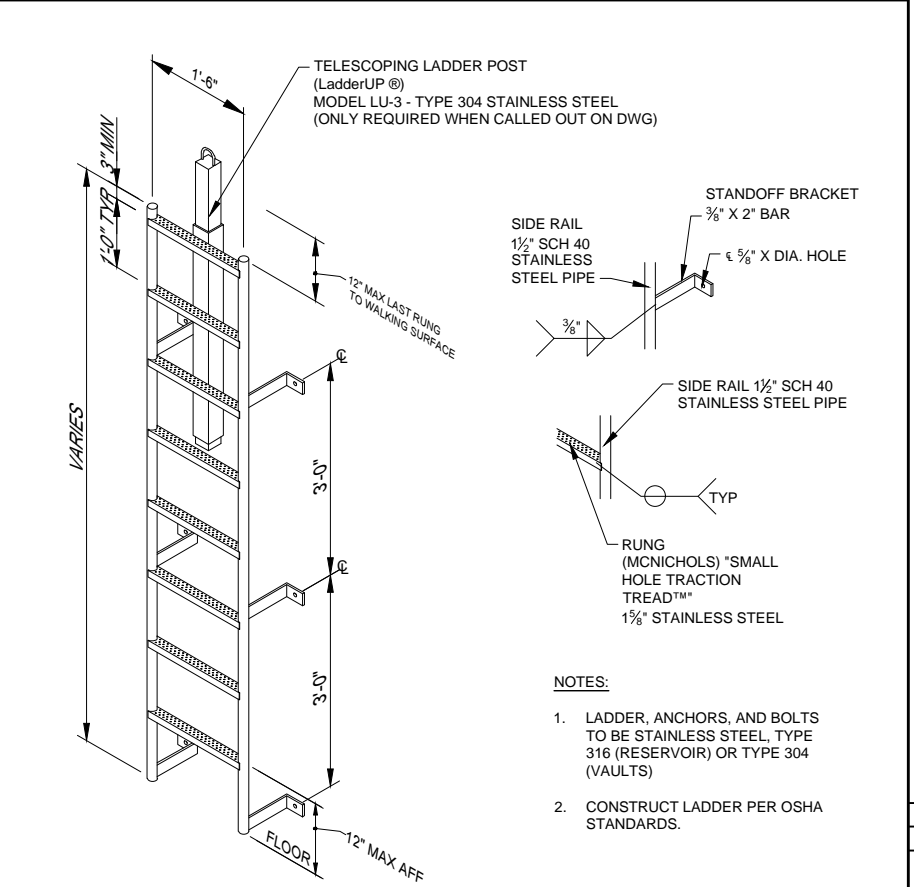


STAIR DETAILS - STAINLESS STEEL TYPE 316
NTS

0551-041



STAIR DETAILS - STAINLESS STEEL
NTS



INTERIOR ACCESS LADDER
NTS

0551-101

PROFESSIONAL STRUCTURAL ENGINEER
No. 501404-2203
STERLING K. ROSE
STATE OF UTAH
DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DR	REVISION	BY	APVD	B PHELPS

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

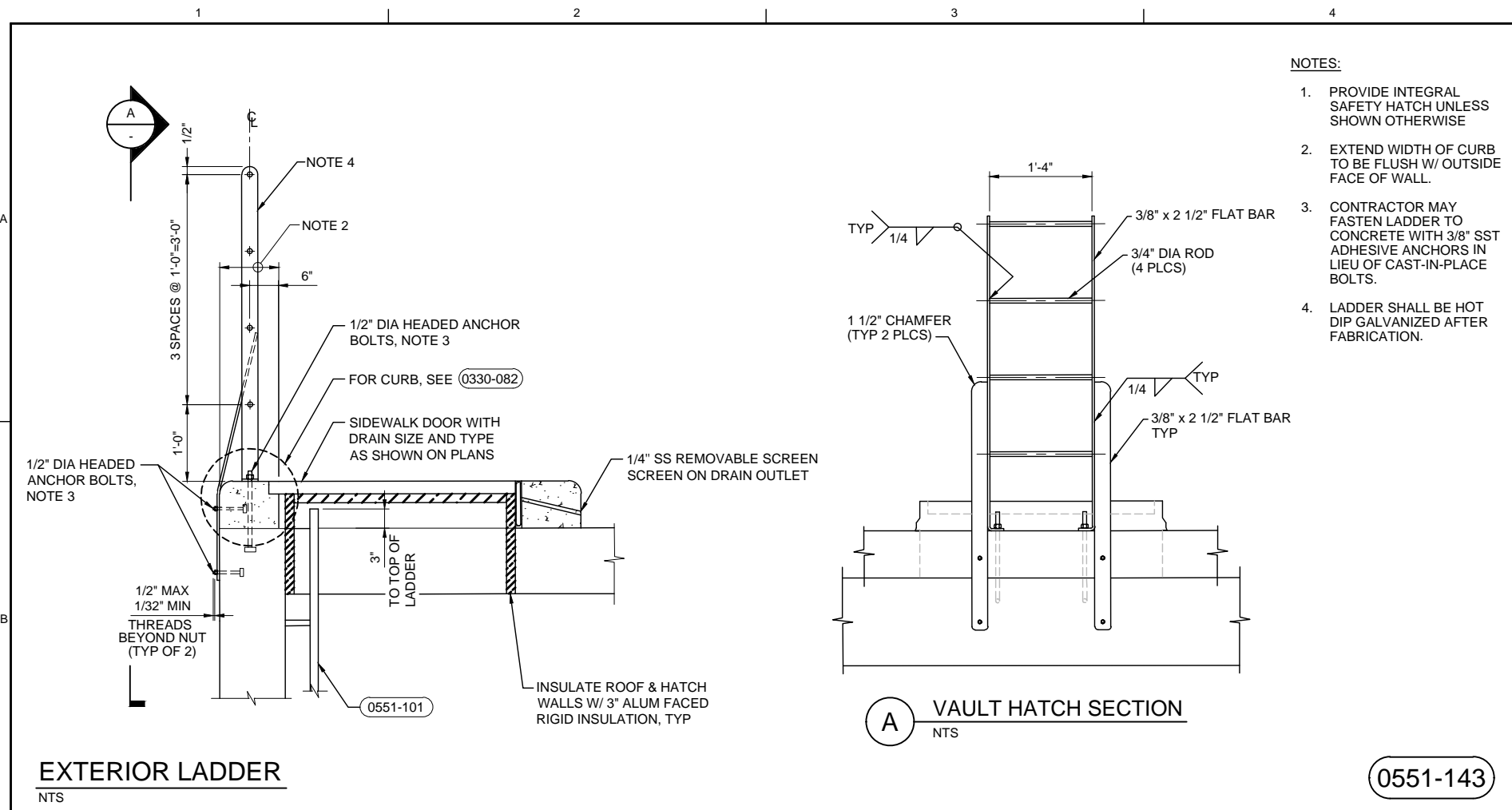
Jacobs

STANDARD DETAILS

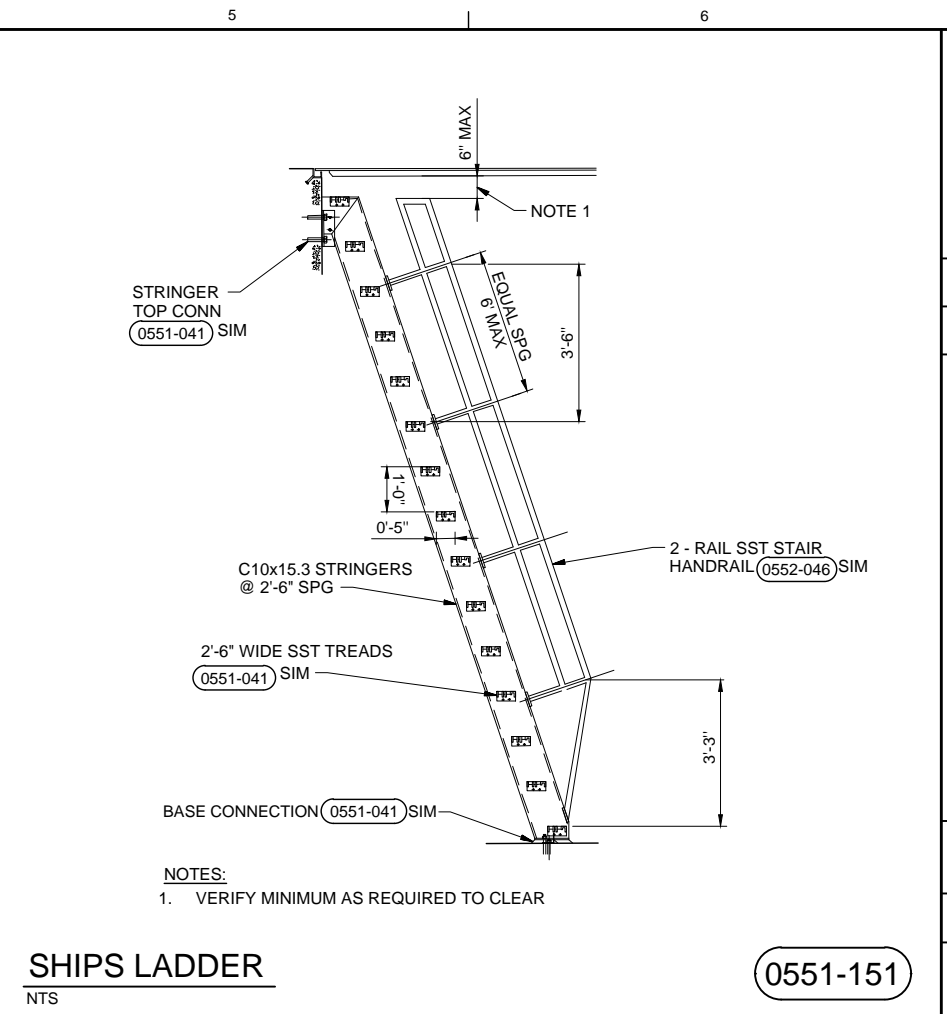
STANDARD DETAILS

VERIFY SCALE	DATE
BAR IS ONE INCH ON ORIGINAL DRAWING.	APRIL 2024
PROJECT	W7Y49600
DWG	SD-09
SHEET	65 OF 79

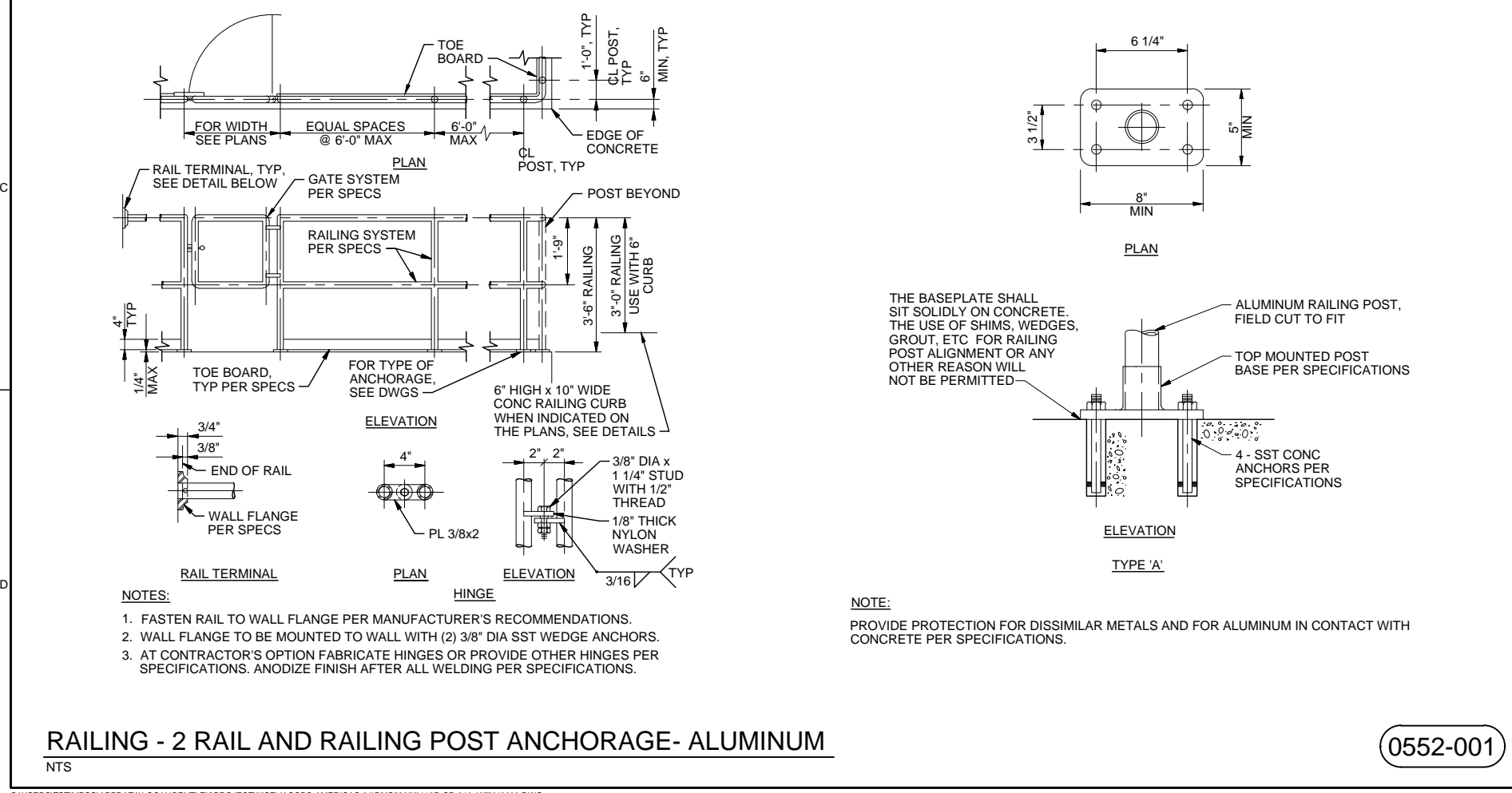
100% DESIGN



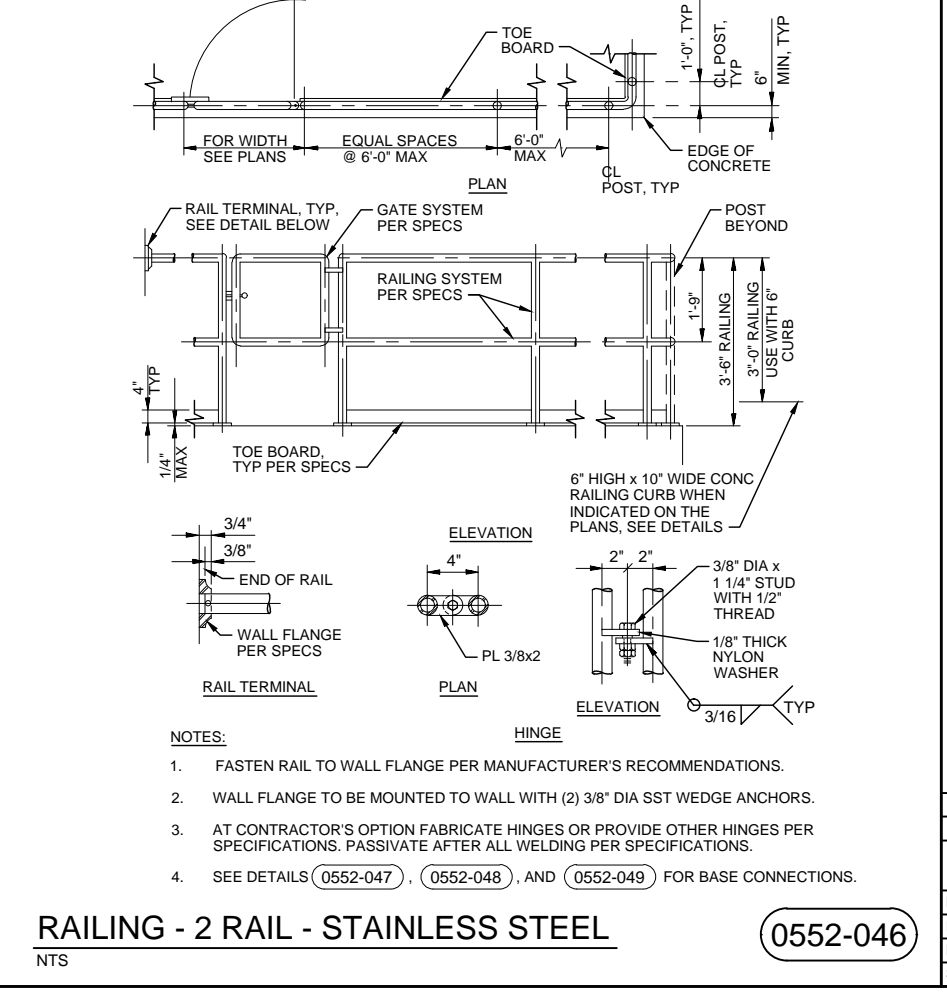
0551-143



0551-151



0552-001



0552-046



NO.	DATE	DR	REVISION	BY	APVD
		S ROSE			
		T STIMPSON			
		A FIRTH			
		B PHELPS			

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
STANDARD DETAILS
STANDARD DETAILS

VERIFY SCALE	DATE	APRIL 2024
BAR IS ONE INCH ON ORIGINAL DRAWING.	PROJ	W7Y49600
	DWG	SD-10
	SHEET	66 of 79



PROFESSIONAL STRUCTURAL ENGINEER
No. 501404-2203
STERLING K. ROSE
STATE OF UTAH
DIGITALLY SIGNED: 04/12/2024

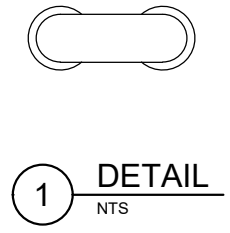
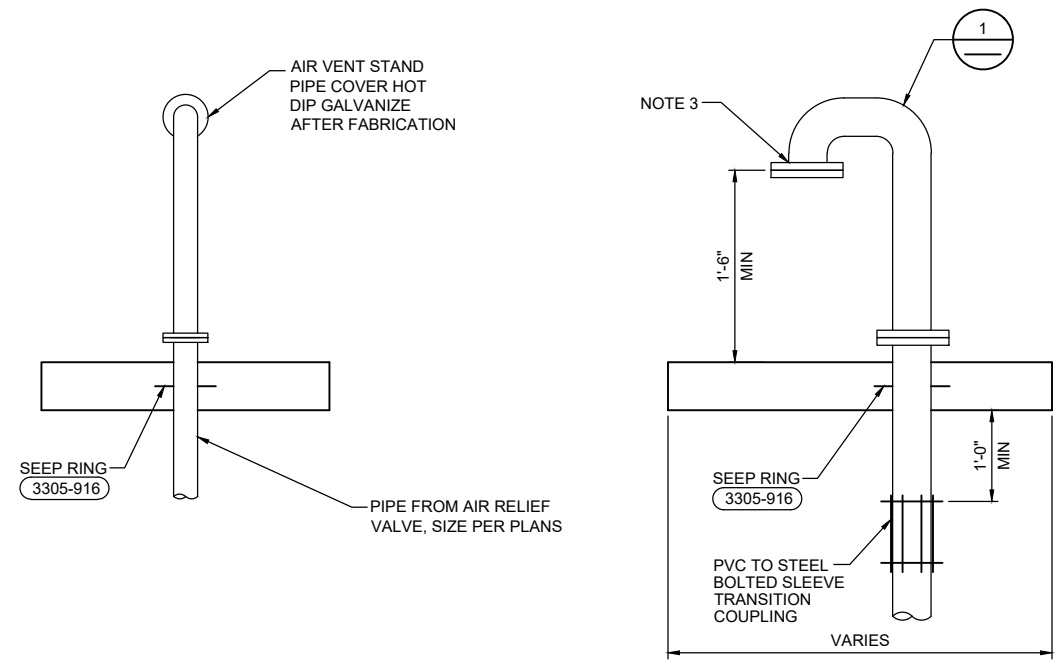
NO.	DATE	DR	CHK	BY
		T. WITHERS	C. HOGGARD	R. WILLEITNER
			B. PHELPS	

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
STANDARD DETAILS
STANDARD DETAILS

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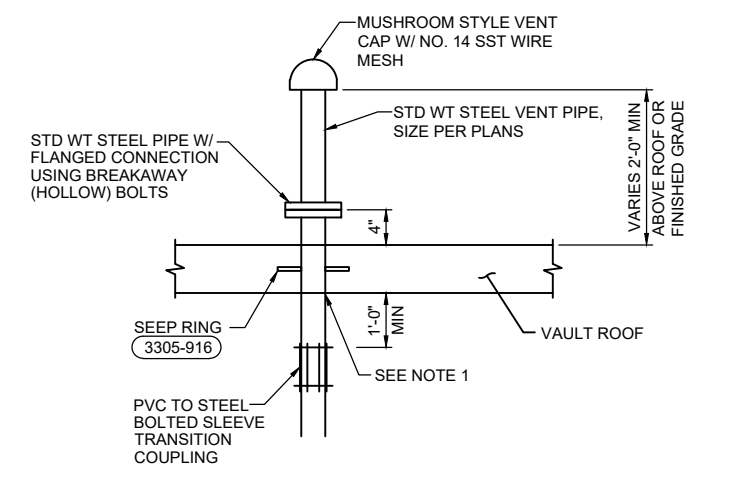


- NOTES:**
- FOR INSTALLATION ON VAULT ROOF SLAB PROVIDE SINGLE PIECE AND BOLT DIRECTLY TO THE CONCRETE W/ 3/8" DIA CONCRETE SCREW ANCHORS.
 - GALVANIZE STEEL PIPE AND COVER AFTER FABRICATION, EXCEPT SCREEN.
 - TYPE 304 SST SCREEN #14 MESH. USE AWWA C207 CLASS B RING FLG BOLTED (SST BOLTS) TO FLG ABOVE FOR RETAINER.

AIR VALVE VENT PIPE COVER

AIR VALVE VENT PIPE ASSEMBLY
NTS

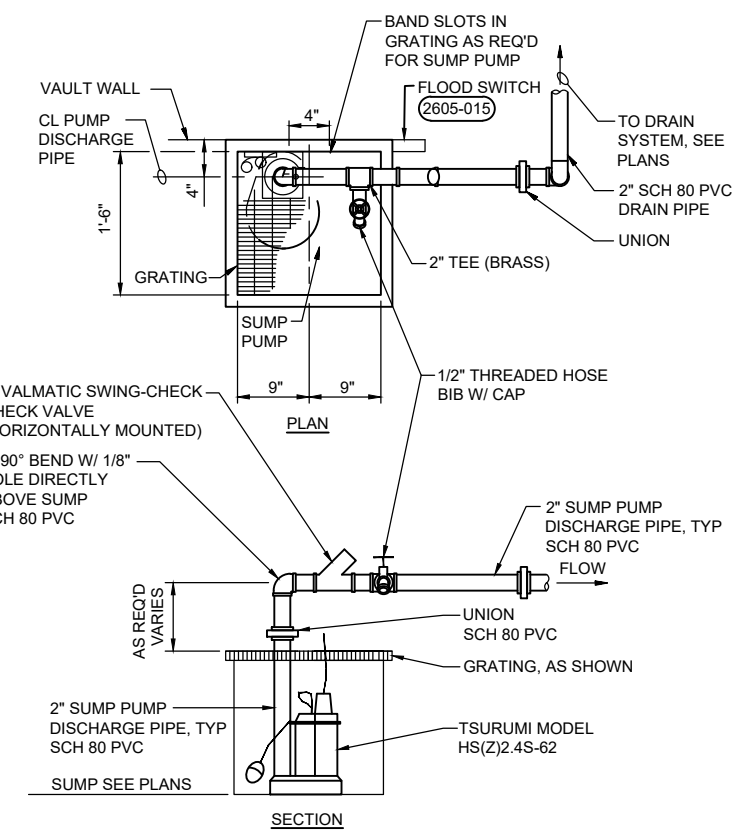
2337-805



- NOTES:**
- SEALANT SHALL BE ONE-PART, COLD APPLIED, NON-SAGGING SILICONE SEALANT, DOW CORNING 790, 795, OR EQUAL.
 - HOT DIP GALVANIZE STL PIPE AFTER FABRICATION, EXCEPT SCREEN.

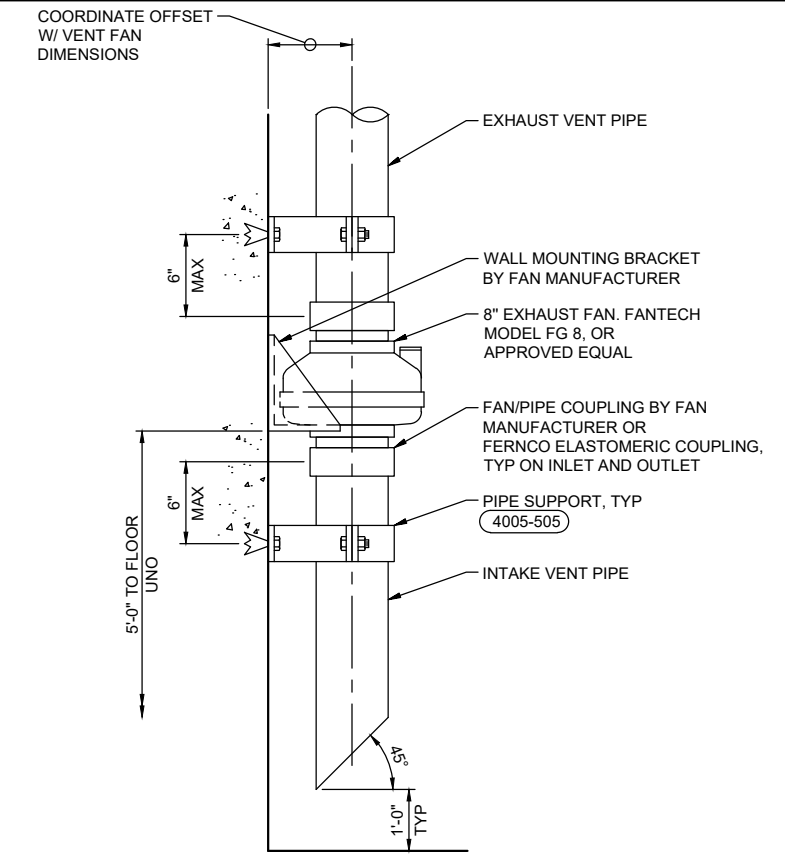
VENT PIPE ROOF PENETRATION
NTS

2337-806



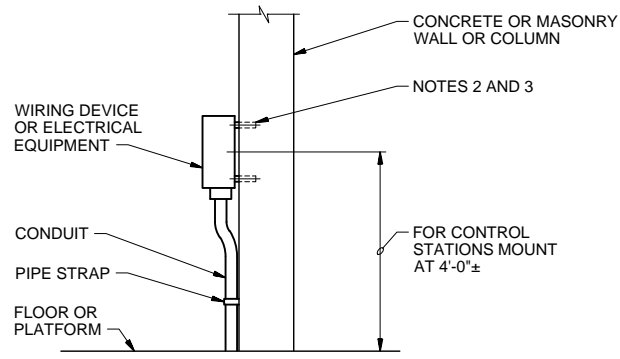
SUMP PUMP
NTS

2230-170



EXHAUST FAN
NTS

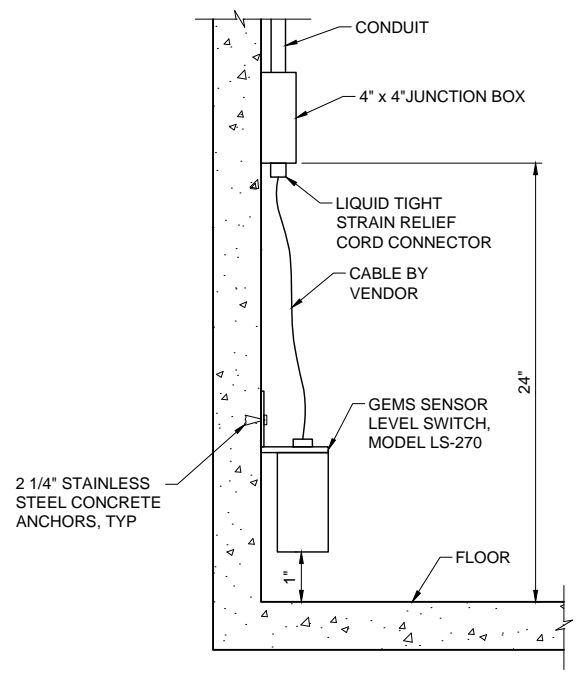
2337-810



- NOTES:**
1. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL. USE BOTH WASHER AND LOCK WASHERS UNDER ALL NUTS.
 2. ON CONCRETE WALLS USE STAINLESS STEEL CONCRETE ANCHORS. MOUNT ENCLOSURE ON SPACERS OF MIN 1/2" SCHEDULE 80 PVC CONDUIT.
 3. BOXES 6 INCHES SQUARE AND SMALLER SHALL BE SUPPORTED BY TWO ANCHORS, MIN. LARGER BOXES SHALL BE SUPPORTED AS REQUIRED BY CALCULATION; FOUR ANCHORS MIN.
 4. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

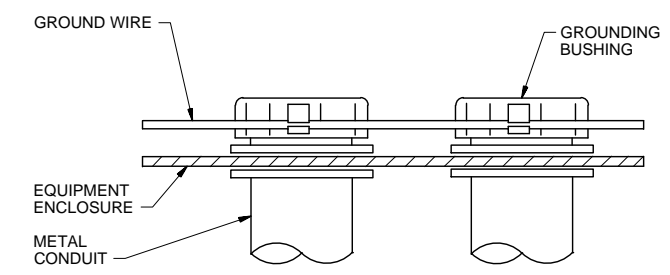
DEVICE MOUNTING, WALL OR COLUMN
NTS

2605-002



FLOOD SWITCH INSTALLATION
NTS

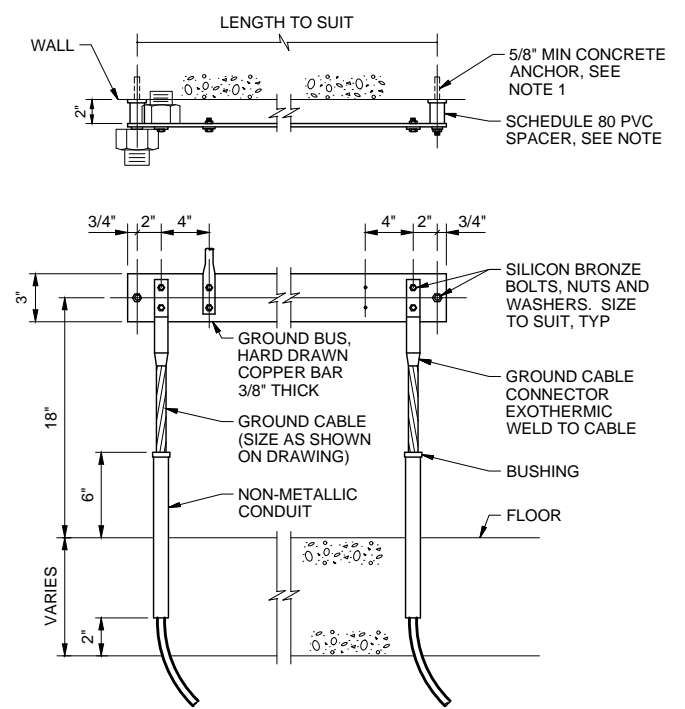
2605-015



- NOTES:**
1. THE ENDS OF ALL CONDUITS REQUIRED TO BE GROUNDED BY THE SPECIFICATIONS SHALL BE GROUNDED IN ACCORDANCE WITH THIS DETAIL.

CONDUIT GROUNDED
NTS

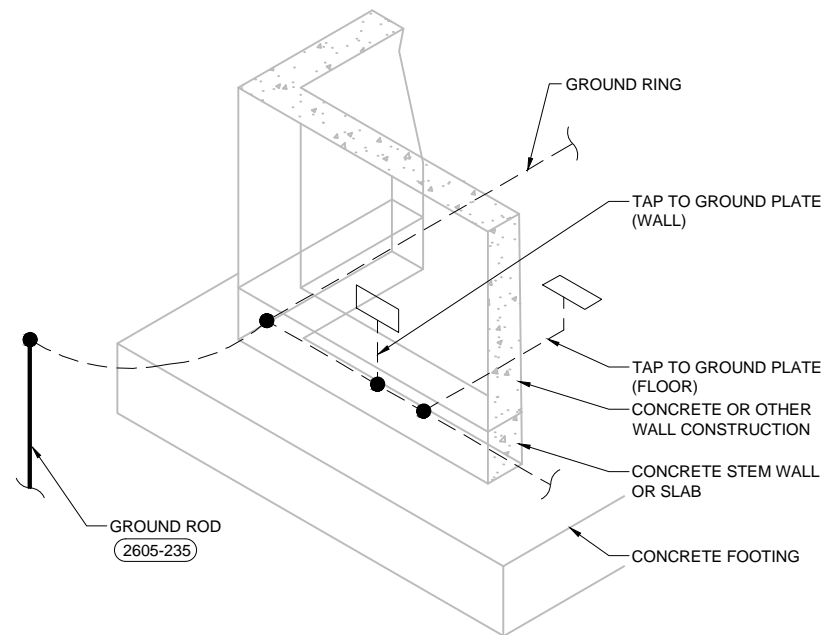
2605-203



- NOTES:**
1. MAXIMUM SPAN BETWEEN SUPPORTS NOT TO EXCEED 24".

GROUND BUS
NTS

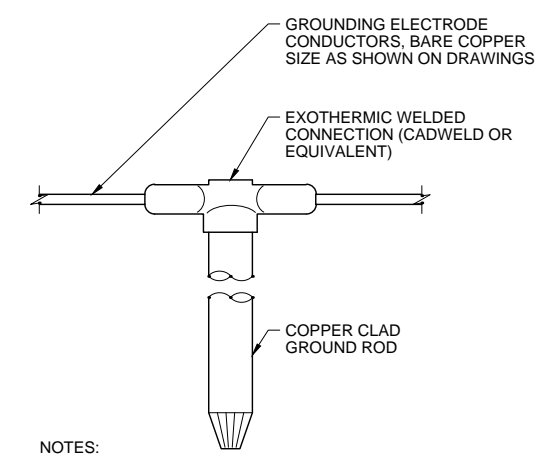
2605-208



- NOTES:**
1. ALL LOOP, RISER AND TAP CONDUCTORS SHALL BE #1 AWG BARE COPPER.

GROUND RING AND LOOP DETAIL
NTS

2605-215



- NOTES:**
1. TOP OF GROUND ROD SHALL BE SAND BEDDED 6" MIN BELOW GRADE.
 2. CONNECTIONS TO GROUNDING ELECTRODE CONDUCTORS SHALL BE CADWELD OR EQUIVALENT.

GROUND ROD CONNECTION
NTS

2605-235

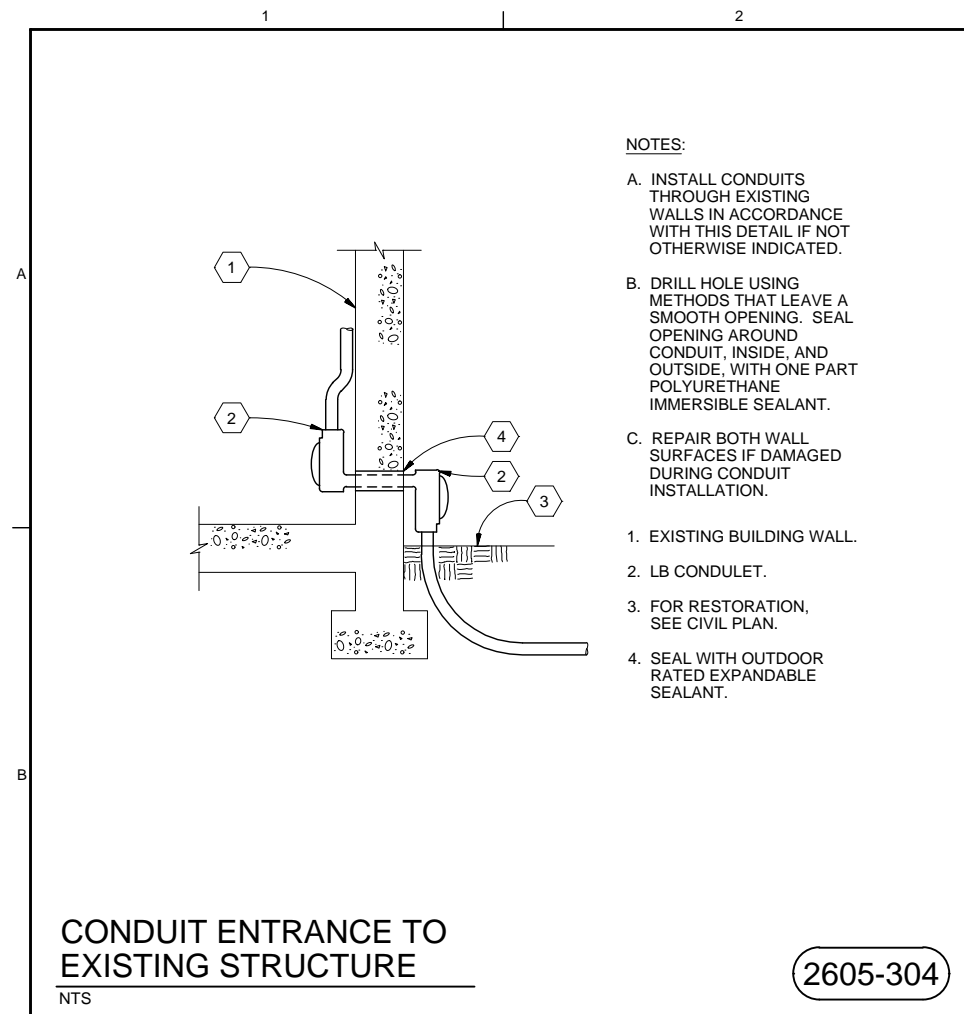


NO.	DATE	DR	REVISION	BY
			CHK	R WILLEITNER
			APVD	B PHELPS
			APVD	C HOGGARD

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

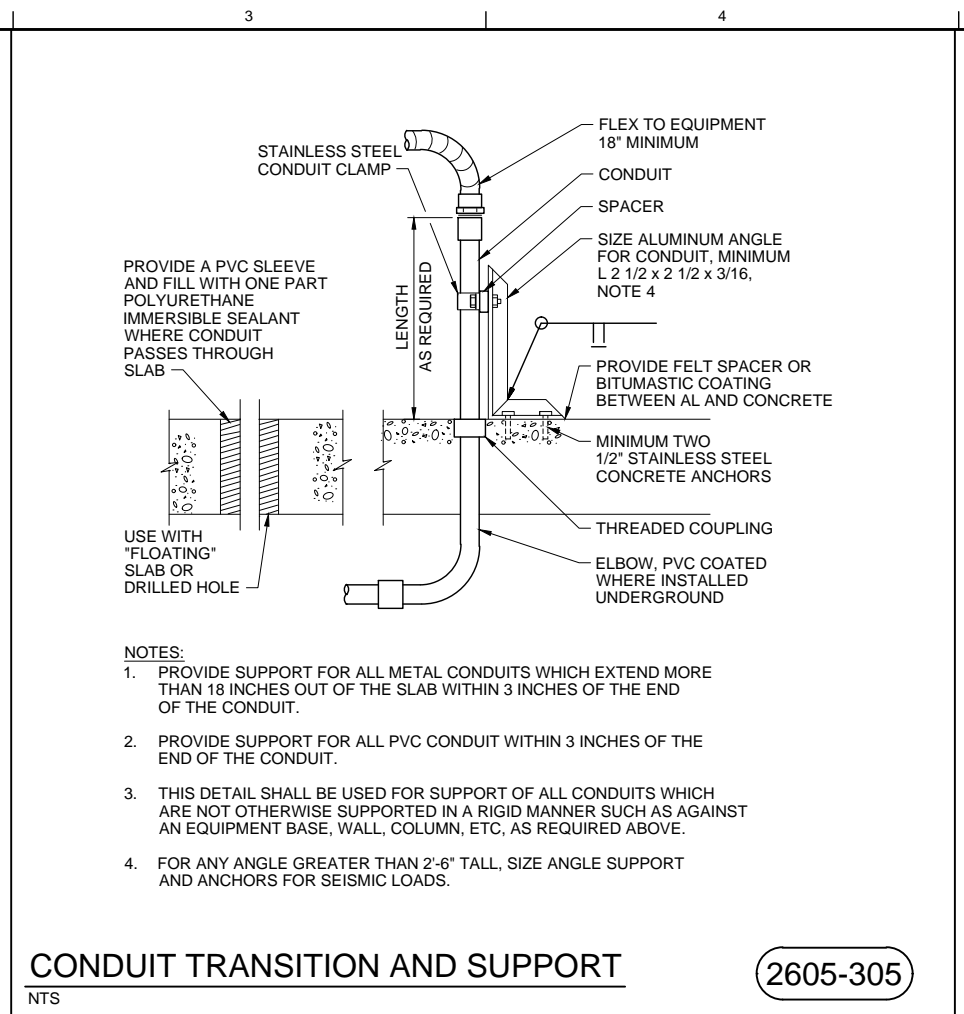
Jacobs
STANDARD DETAILS
STANDARD DETAILS

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2024
PROJ	W7Y49600
DWG	SD-13
SHEET	69 of 79



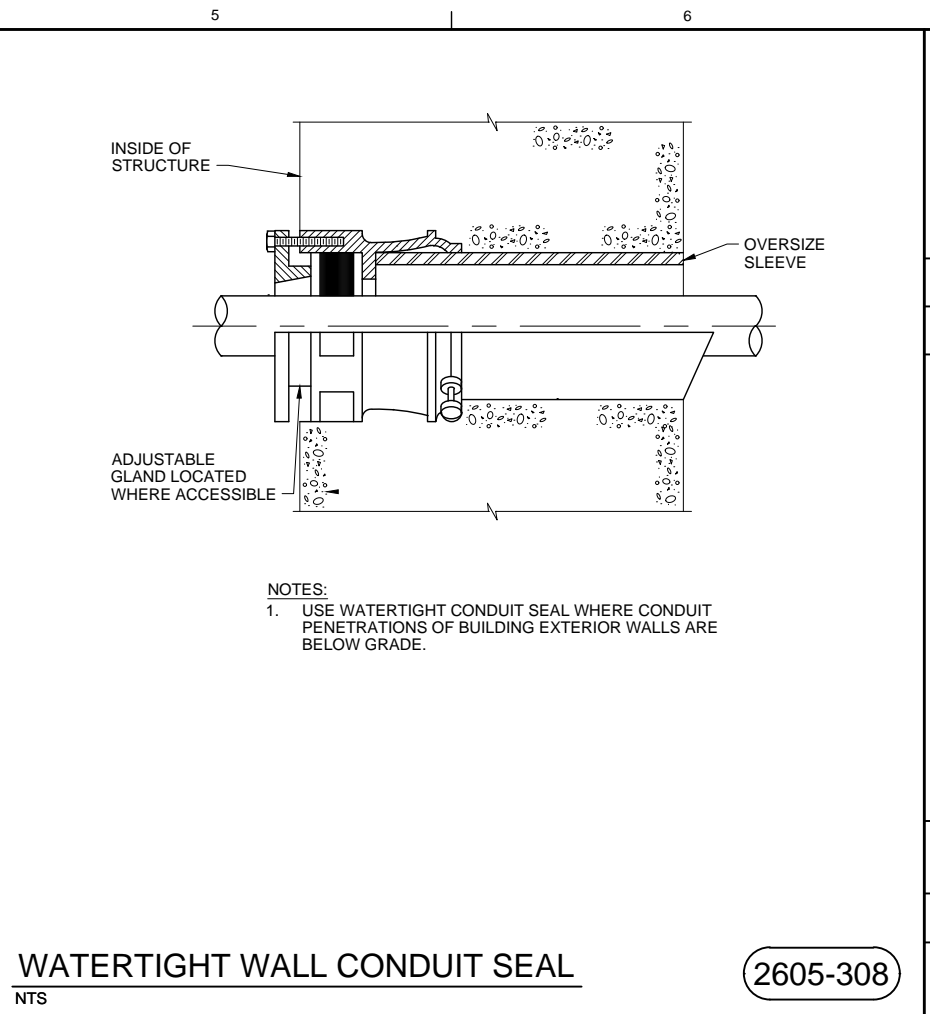
CONDUIT ENTRANCE TO EXISTING STRUCTURE

2605-304



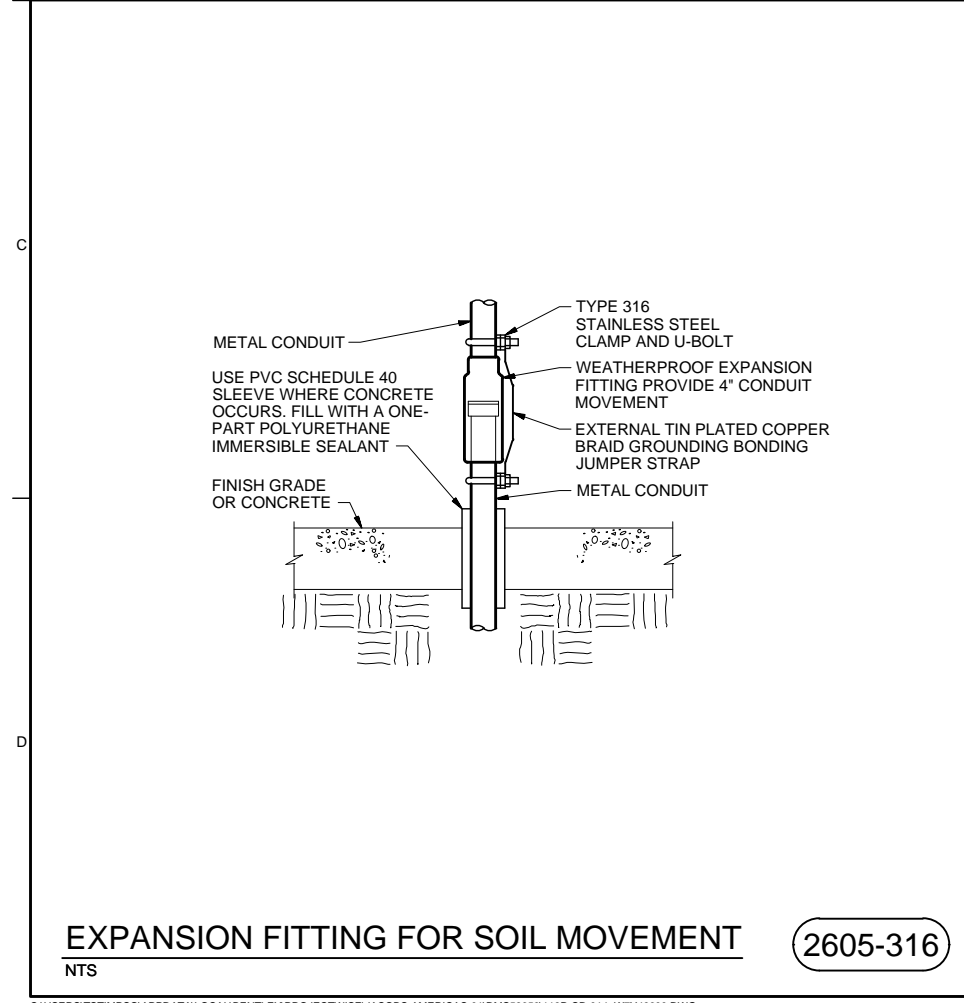
CONDUIT TRANSITION AND SUPPORT

2605-305



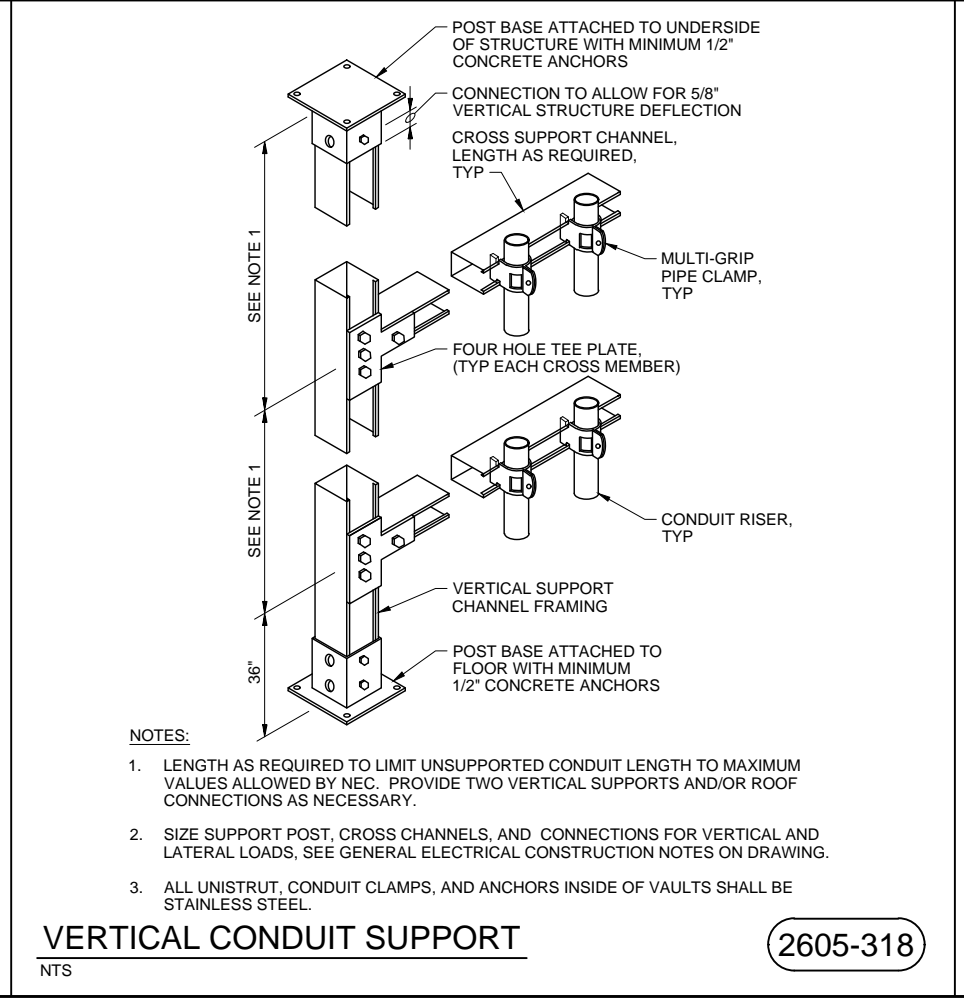
WATERTIGHT WALL CONDUIT SEAL

2605-308



EXPANSION FITTING FOR SOIL MOVEMENT

2605-316



VERTICAL CONDUIT SUPPORT

2605-318

NO.	DATE	DR	BY
			R WILLETTNER
			B PHELPS
			C HOGGARD
			T WITHERS
			APVD
			CHK
			REVISION

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

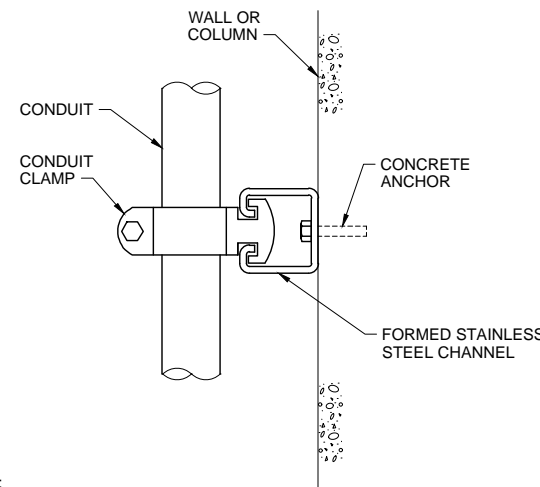
Jacobs
STANDARD DETAILS
STANDARD DETAILS

VERIFY SCALE	
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A



NOTES:

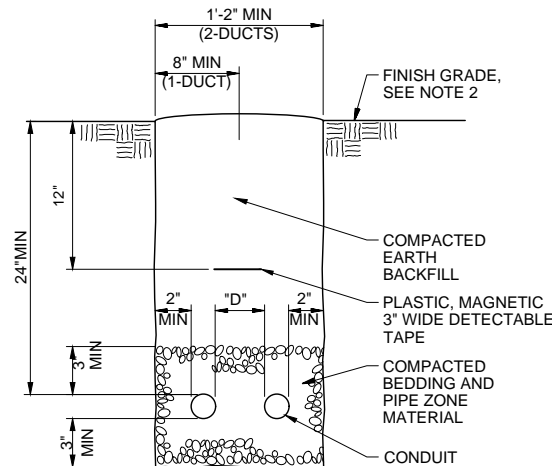
1. SUPPORT ALL EXPOSED CONDUITS ON FORMED STEEL CHANNELS.
2. ALL UNISTRUT, CONDUIT CLAMPS, AND ANCHORS INSIDE OF VAULTS SHALL BE STAINLESS STEEL. ANCHORAGE AND BRACING DESIGN BY CONTRACTOR.

CONDUIT SUPPORT ON STRUCTURE

NTS

2605-348

B



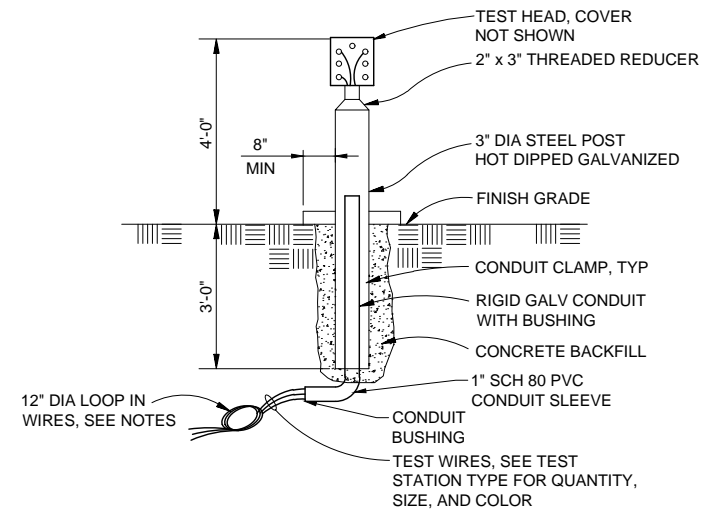
NOTES:

1. MINIMUM CLEAR SPACING BETWEEN CONDUITS (D):
D = 3" MIN FOR 2" AND LARGER CONDUIT
D = 2" MIN FOR 1 1/2" AND SMALLER CONDUIT
2. PROVIDE RESTORATION OF EXISTING SURFACE PER DETAIL. 3123-300

TRENCH AND CONDUIT PLACEMENT

NTS

2605-400



NOTES:

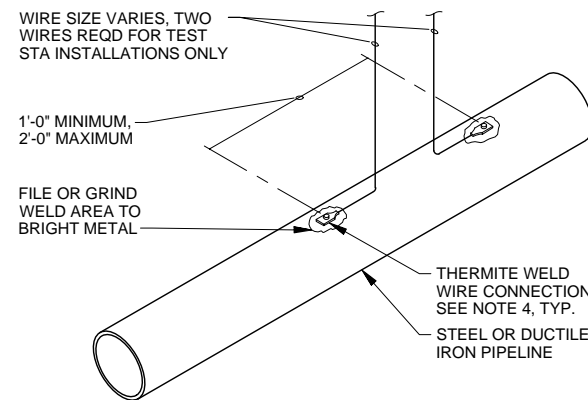
1. TEST STATION TO BE ALUMINUM BODY AND LID WITH THREADED CONNECTION FOR CONDUIT.
2. QUANTITY OF TERMINALS AND WIRING CONNECTIONS VARIES, SEE APPLICABLE TEST STATION DETAILS FOR TYPE OF STATION REQUIRED.
3. PROVIDE WIRE LOOP AT BASE OF POST MOUNTED TEST STATION TO MINIMIZE SETTLEMENT STRESSES ON WIRE

POST STYLE, STEEL POST

NTS

2642-006

C



NOTES:

1. COPPER SLEEVE REQUIRED FOR THERMITE WELDING OF #10 AWG AND SMALLER WIRE.
2. USE COPPER SLEEVE ON #2 AWG JOINT BONDING WIRES.
3. WELDER AND CARTRIDGE SIZE VARIES ACCORDING TO WIRE SIZE AND PIPE MATERIAL. CONSULT WELDER MANUFACTURER FOR RECOMMENDED WELDER AND CARTRIDGE.
4. AFTER THERMITE WELD HAS BEEN TESTED AND COOLED, APPLY THERMITE WELD COATING. ENCAPSULATING ALL EXPOSED BARE STEEL AND COPPER. THERMITE WELD COATING MATERIAL SHALL OVERLAP EXISTING PIPELINE COATING AND WIRE INSULATION A MINIMUM OF 2".

WIRE CONNECTION FOR STEEL OR DUCTILE IRON PIPE

NTS

2642-012

CATHODIC PROTECTION TEST STATION SCHEDULE 11800 SOUTH ZONE C RESERVOIR JORDAN VALLEY WATER CONSERVANCY DISTRICT		
CATHODIC PROTECTION SCHEDULE		
TEST STATION LOCATION	PIPELINE	COMMENTS
NORTH OF VALVE VAULT	EAST RESERVOIR INLET/OUTLET AND OUTLET	BRING BOTH SETS OF TEST WIRES, FROM EACH PIPELINE, INTO A SINGLE TEST STATION AS SHOWN ON THE DRAWINGS. LOCATE ANODES BETWEEN OVERFLOW PIPELINE AND INLET/OUTLET PIPELINE OF EAST RESERVOIR.
NORTH OF VALVE VAULT	WEST RESERVOIR INLET/OUTLET AND OUTLET	BRING BOTH SETS OF TEST WIRES, FROM EACH PIPELINE, INTO A SINGLE TEST STATION AS SHOWN ON THE DRAWINGS. LOCATE ANODES ON EAST SIDE OF THE INLET/OUT PIPELINE OF WEST RESERVOIR.

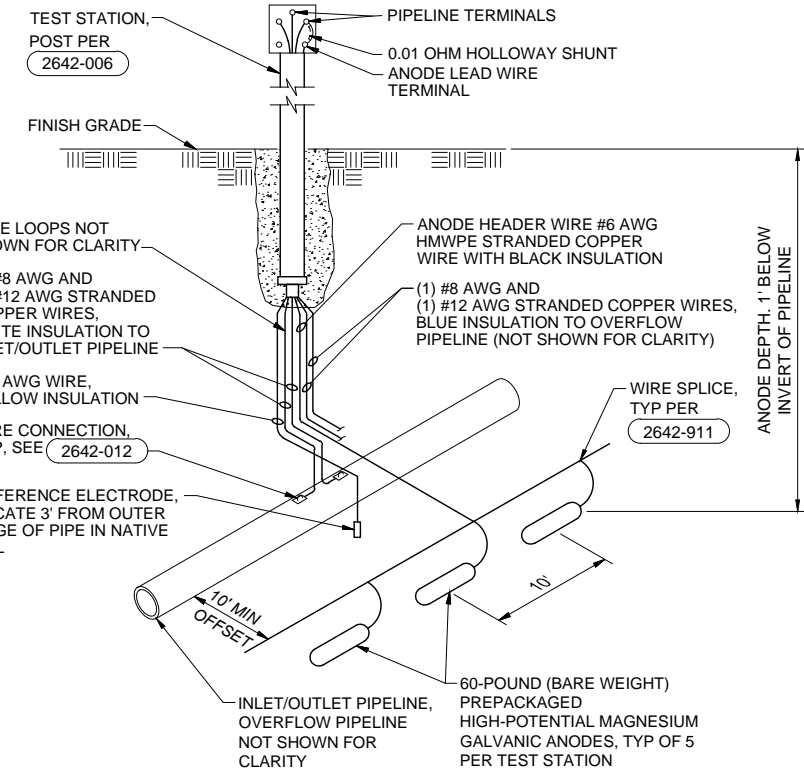
NOTES:

1. TEST STATION LOCATION IS APPROXIMATE. LOCATE TEST STATION TO ACCOMMODATE EXISTING SITE CONDITIONS AND AS DIRECTED BY THE ENGINEER.

CATHODIC PROTECTION SCHEDULE

NTS

2642-800



NOTES:

1. SEE 2642-800 FOR LOCATIONS OF TEST STATIONS AND ANODES.
2. UTILIZE ONE TEST STATION FOR EACH RESERVOIR CONTAINING INLET/OUTLET PIPELINE, OVERFLOW PIPELINE, REFERENCE ELECTRODE AND ANODE HEADER WIRES.
3. BURY ALL WIRES 3' MIN DEEP, BACKFILL PER SPEC.

POST MOUNTED TEST STATION

NTS

2642-801



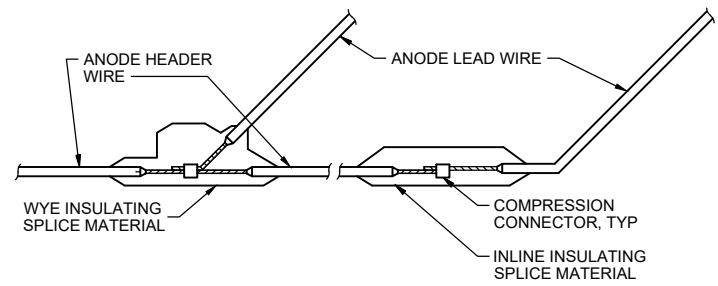
DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DR	CHK	REVISION	APVD	BY	APVD

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs
STANDARD DETAILS
STANDARD DETAILS

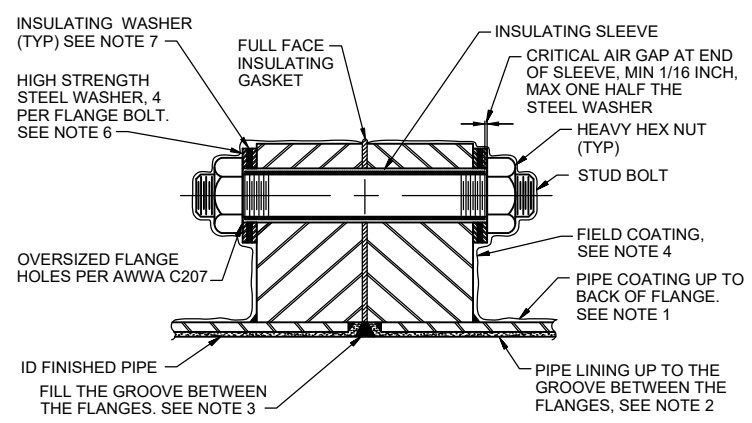
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE: APRIL 2024
PROJ: W7Y49600
DWG: SD-15
SHEET: 71 of 79



NOTES:
 1. EPOXY SPLICE KITS SHALL BE CURED A MINIMUM OF 2 HOURS AND HEAT SHRINK SPLICE KITS COOLED A MINIMUM OF 1 HOUR BEFORE BURIAL OR SUBMERSION.

WIRE SPLICE
NTS

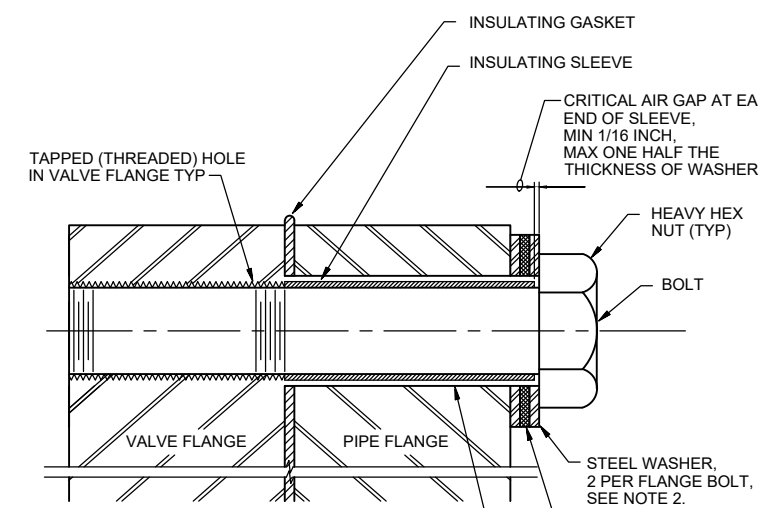
2642-911



NOTES:
 1. THE PIPE COATING ON EACH SIDE OF THE INSULATED FLANGE SHALL BE THE SAME IN TYPE, THICKNESS, AND QUALITY UP TO THE BACK SIDE OF THE RESPECTIVE FLANGE.
 2. THE LINING ON THE PIPE SHALL BE THE SAME IN TYPE, THICKNESS, AND QUALITY UP TO THE INSULATED FLANGE JOINT.
 3. FOR PIPE LARGER THAN 24 INCH DIAMETER, THOROUGHLY CLEAN THE GROOVE AND FILL THE INSULATED FLANGE'S INTERNAL GAP WITH A MATERIAL COMPATIBLE WITH THE PIPE LINING.
 4. COAT JOINTS AS SPECIFIED AFTER INSTALLATION.
 5. SEE (2642-927) FOR INSULATED BOLTS AT TAPPED VALVE FLANGES.
 6. FOR PIPE SMALLER THAN 36 INCH DIAMETER DELETE INNER STEEL WASHERS.
 7. FOR BURIED OR SUBMERGED INSULATING FLANGE, DO NOT INSTALL INSULATING WASHER ON PROTECTED SIDE OF FLANGE.

INSULATED FLANGES
NTS

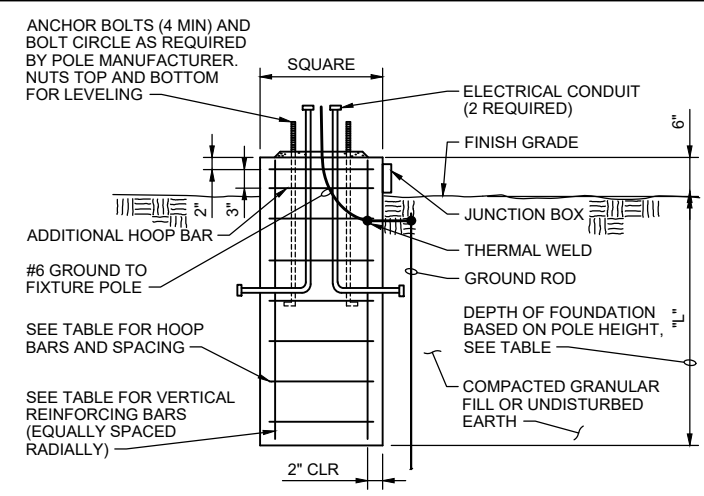
2642-925



NOTES:
 1. COAT COMPLETED JOINT AS SPECIFIED AFTER INSULATION.
 2. FOR PIPE SMALLER THAN 36 INCH DIAMETER, DELETE INNER STEEL WASHER.

INSULATING BOLTS AT TAPPED VALVE FLANGES
NTS

2642-927

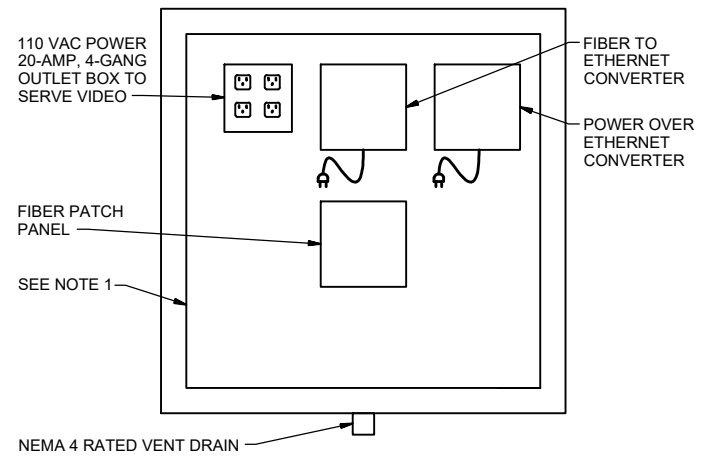


MAX POLE HEIGHT	"L"	VERTICAL BARS	HOOP BARS
20'-0"	7'-0"	(8) #8	#4 @ 12"

NOTES:
 1. USE STAINLESS STEEL NUTS AND LOCKWASHERS.
 2. INSTALL TWO CONDUITS (MINIMUM) PER POLE.
 3. INSTALL CENTERLINE OF POLE 3'-0" BEHIND THE FACE OF THE CURB.
 4. CONDUITS SHALL BE STUBBED UP TO WITHIN SIX INCHES OF THE POLE HANDHOLE.
 5. COORDINATE WITH SITE PLANS FOR PROPER ORIENTATION OF POLE.

SITE AREA POLE FOOTING
NTS

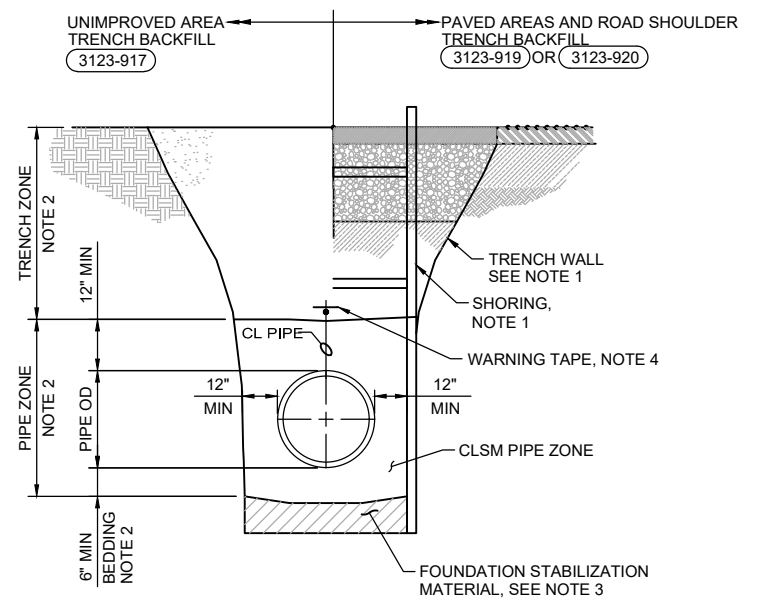
2656-216



NOTES:
 1. WEATHERPROOF NEMA 4 ENCLOSURE, SIZED 24"x24"x12", WITH STEEL INTERIOR PANEL, OR EQUAL. MATCH OWNER'S SECURITY KEYING FOR ENCLOSURE LATCH KEYWAY. MOUNT JUNCTION BOX SECURELY USING STRUT RACKING AND STRAPS.

REMOTE CAMERA JUNCTION BOX
NTS

2810-010



NOTES:
 1. CONTRACTOR SHALL SLOPE TRENCH WALLS OR SHORE EXCAVATIONS FOR CONSTRUCTION AND SAFETY AND IN ACCORDANCE WITH CURRENT OSHA REQUIREMENTS. PROVIDE SHORING OR BRACING OF EXCAVATION WHERE SHOWN ON THE DRAWINGS OR AS REQUIRED TO PROTECT EXISTING UTILITIES AND TO KEEP EXCAVATIONS WITHIN THE WORK LIMITS.
 2. TRENCH ZONE, PIPE ZONE, AND BEDDING MATERIAL SHALL EXTEND TO EDGE OF EXCAVATED TRENCH REGARDLESS OF TRENCH WIDTH. PIPE ZONE MATERIAL SHALL BE CLSM UNLESS NOTED OTHERWISE.
 3. WHERE SOFT SOILS ARE ENCOUNTERED, PROVIDE FOUNDATION STABILIZATION MATERIAL ONLY WHERE APPROVED BY THE ENGINEER TO ADDRESS UNFORESEEN WEAK SUBSOILS.
 4. FOR PVC, HDPE, AND DUCTILE IRON PIPE, INSTALL TRACER WIRE UNDER WARNING TAPE AS SPECIFIED.

TYPICAL PIPE TRENCH
NTS

3123-200



NO.	DATE	DR	CHK	APVD	BY
		T. WITHERS	C. HOGGARD	B. PHELPS	R. WILLEITNER

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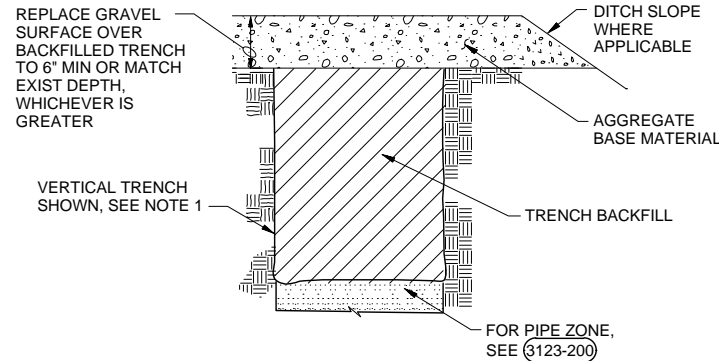
Jacobs
 STANDARD DETAILS
 STANDARD DETAILS

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING
DATE	APRIL 2024
PROJ	W7Y49600
DWG	SD-16
SHEET	72 of 79

100% DESIGN

NOTES:

- CONTRACTOR SHALL SLOPE TRENCH WALLS OR SHORE EXCAVATIONS FOR CONSTRUCTION AND SAFETY AND IN ACCORDANCE WITH CURRENT OSHA REQUIREMENTS.
- THE TOP 6" OF TRENCH BACKFILL, BENEATH THE TOPSOIL LAYER, SHOULD BE INSTALLED, SMOOTHED, BUT LEFT UN-COMPACTED.
- TOPSOIL SHALL EXTEND BEYOND TOP OF TRENCH AND TO THE LIMITS SPECIFIED.
- WHERE PART OF TRENCH IS IN GRAVEL ROAD OR IN ROAD SHOULDER, USE DETAIL (3123-920) AS REQUIRED OR DIRECTED BY THE ENGINEER.
- SEE TRAFFIC CONTROL SPECIFICATIONS FOR LANE CLOSURE, DETOUR, AND TRAFFIC CONTROL REQUIREMENTS.
- CONTRACTOR SHALL PERMANENTLY REPLACE ALL PAVEMENT SURFACES, STRIPING, AND TRAFFIC CONTROLS PRIOR TO REMOVING DETOURS.
- PRIOR TO PLACEMENT OF PERMANENT PAVING, EXISTING PAVEMENT SHALL BE SAW CUT OUTSIDE THE LIMITS OF CONTRACTOR-DISTURBED PAVEMENT TO A NEAT STRAIGHT LINE. ALL CRACKED PAVEMENT WITHIN 10 FEET EITHER SIDE OF THE TRENCH AND ALL CONTRACTOR-DAMAGED PAVEMENT REGARDLESS OF DISTANCE FROM TRENCH SHALL BE REMOVED AND REPLACED.
- REMOVE ADDITIONAL PAVEMENT TO A PAINTED LANE STRIPE, A LIP OF GUTTER, A CURB, AN EXISTING PAVEMENT PATCH, OR AN EDGE OF THE PAVEMENT IF SUCH A FEATURE IS WITHIN TWO FEET OF THE SECOND SAW CUT.
- NOT USED.
- HOT ASPHALTIC CONCRETE PAVEMENT SHALL BE PLACED IN LIFTS PER APWA STANDARDS WITH MAXIMUM COMPACTED LIFT NOT EXCEEDING 3 INCHES. A TACK COAT SHALL BE PLACED BETWEEN LIFTS AND ALONG ALL VERTICAL SURFACES OF EXISTING PAVEMENT.
- COMPACTION OF BACKFILL SHALL BE VERIFIED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER AS SPECIFIED.



GRAVEL SURFACE TRENCH BACKFILL SECTION

NTS

(3123-920)

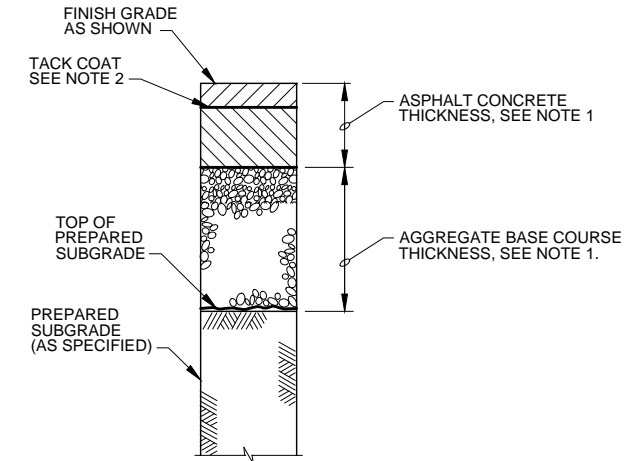


TABLE 1 - ASPHALT CONCRETE PAVEMENT SCHEDULE

ROADWAY SECTION	ASPHALT CONCRETE THICKNESS (IN)	AGGREGATE BASE COURSE THICKNESS (IN)
ACCESS ROADS	3	6

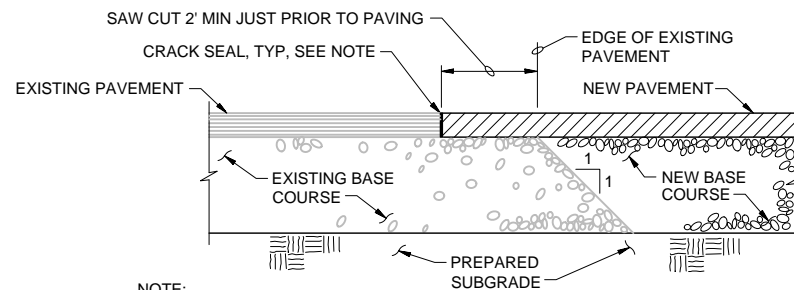
NOTE:

- PROVIDE ASPHALT CONCRETE PAVEMENT AND BASE COURSE THICKNESS AS SHOWN IN TABLE 1 FOR EACH ROAD SHOWN ON PLANS.
- TACK COAT BETWEEN LIFTS.

ASPHALT CONCRETE PAVEMENT

NTS

(3212-210)



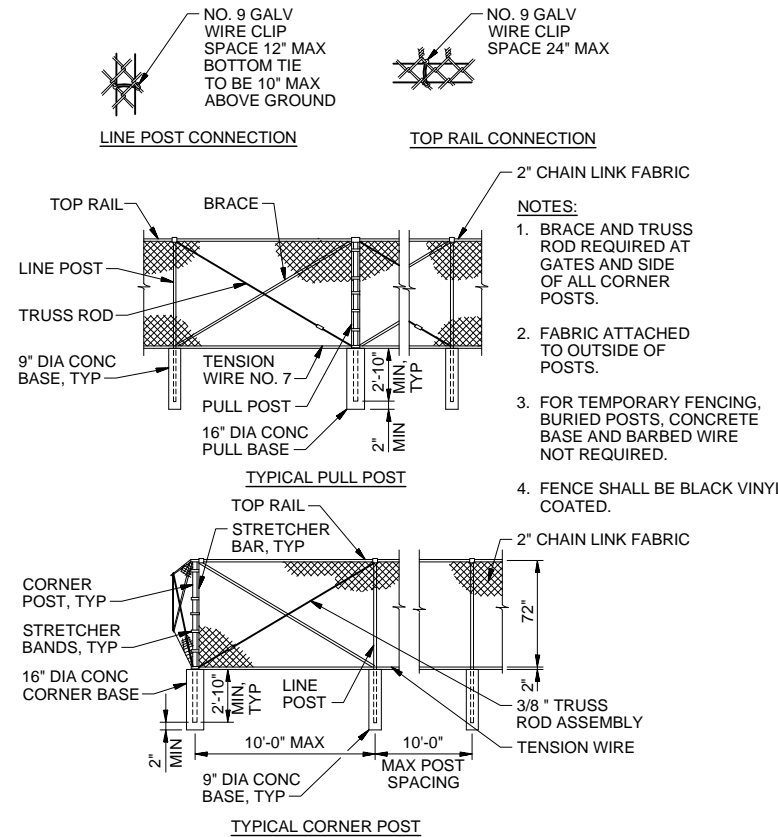
NOTE:

- PAINT EDGE OF EXISTING ASPHALT WITH TACK COAT PRIOR TO PAVING. CRACK SEAL JOINT AFTER PAVING OPERATION HAS BEEN COMPLETED.

PAVEMENT CONNECTION

NTS

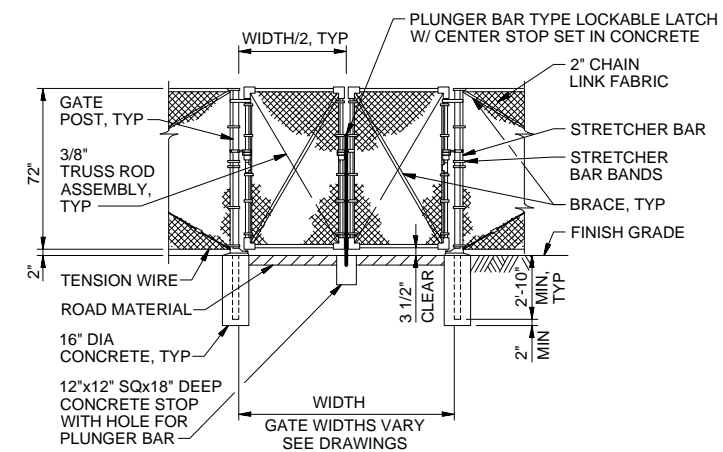
(3212-215)



CHAIN LINK FENCE

NTS

(3231-410)



DOUBLE SWING GATE

NTS

(3231-415)

JORDAN VALLEY WATER CONSERVANCY DISTRICT

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STANDARD DETAILS

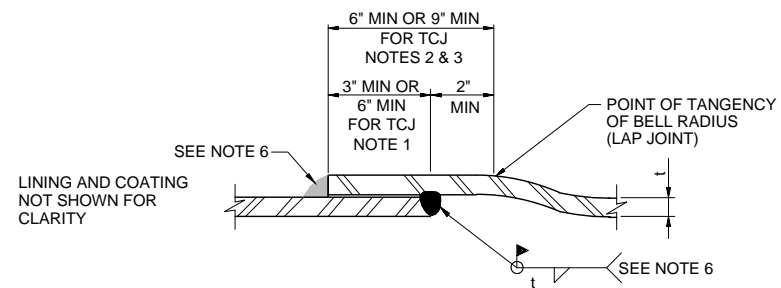
VERIFY SCALE

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DWG	SD-18
SHEET	74 of 79

100% DESIGN

LICENSED PROFESSIONAL ENGINEER
 No. 12561173
 TYLER WITHERS
 STATE OF UTAH
 DIGITALLY SIGNED: 04/12/2024
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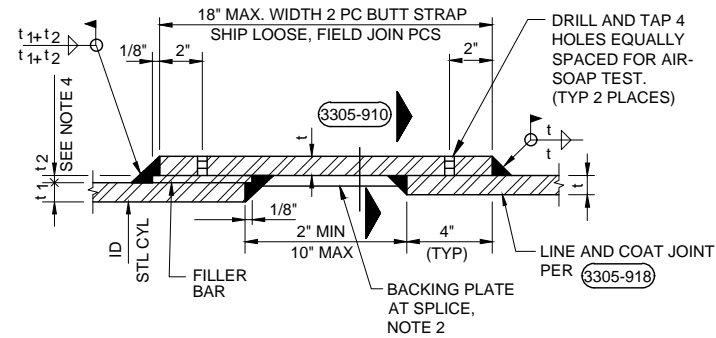
NOTES:

1. COMPLETED JOINT OVERLAP AFTER WELDING SHALL BE 3" FOR STANDARD JOINTS. FOR SPECIAL TEMPERATURE CONTROL JOINTS, THE JOINT OVERLAP, SHALL BE 6 INCHES AS FURTHER DISCUSSED IN NOTE 3.
2. FOR LINING AND COATING HOLD BACKS, SEE (3305-918).
3. FOR SPECIAL TEMPERATURE CONTROL JOINTS, THE SPIGOT SHALL BE INSERTED INTO THE LENGTHENED BELL TO PROVIDE 6 INCHES MINIMUM JOINT OVERLAP. SEE SPECIFICATIONS SECTION 33 05 01.01 FOR SPECIAL TEMPERATURE CONTROL JOINT WELDING REQUIREMENTS.
4. FILLET WELDS FOR BELL AND SPIGOT LAP JOINTS SHOWN. FILLET WELDS ON OTHER JOINTS ARE SIMILAR.
5. THE JOINTS SHALL BE FABRICATED AND INSTALLED TO BE WITHIN THE TOLERANCES INDICATED. THE TOLERANCE REQUIREMENTS SHALL APPLY TO BOTH WELDS AND TO BOTH STRAIGHT AND DEFLECTED JOINTS.
6. FOR SINGLE LAP JOINTS WELD MAY BE ON THE INTERIOR OR EXTERIOR OF THE PIPE.
7. WELD AFTER BACKFILL WILL NOT BE ALLOWED.

SINGLE LAP JOINT WELD

NTS

3305-883



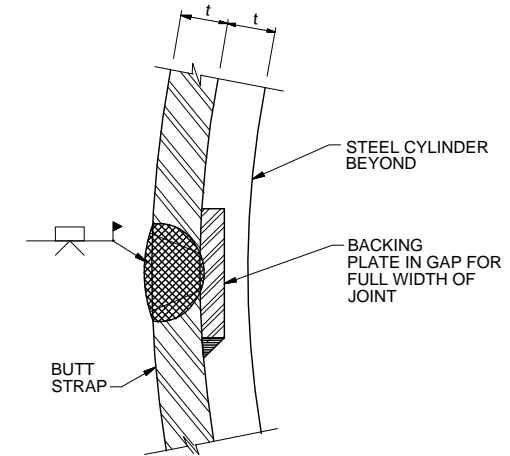
NOTES:

1. LININGS AND COATINGS NOT SHOWN FOR CLARITY, SEE (3305-918)
2. FOR FIELD WELDING OF INDIVIDUAL BUTT STRAP PIECES TO EACH OTHER, SEE (3305-910)
3. AFTER INSTALLATION OF HEAT SHRINK SLEEVE, HOLIDAY TEST AS SPECIFIED.
4. THICKNESS "t₂" INDICATES OFFSET OF ID BETWEEN STEEL CYLINDERS. PROVIDE FILLER BAR WHERE "t₂" IS 3/16" OR GREATER.

WSP BUTT STRAP JOINT DETAILS

NTS

3305-885



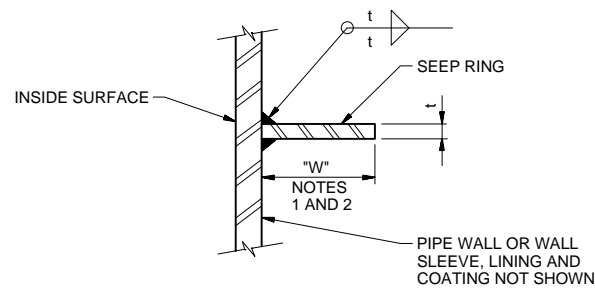
NOTES:

1. LININGS AND COATINGS ARE NOT SHOWN FOR CLARITY.
2. BEVEL ENDS OF BACKING PLATE AT BUTT STRAP PRIOR TO WELDING OR BACK GOUGE AT CONTACT WITH ADJACENT CYLINDER PRIOR TO COMPLETING INSIDE FILLET WELD.

BUTT STRAP SPLICE

NTS

3305-910



SEEP RING THICKNESS		
PIPE SIZE	THICKNESS-t	WIDTH-W
30" & UNDER	1/4"	2"
31" TO 60"	1/2"	4"

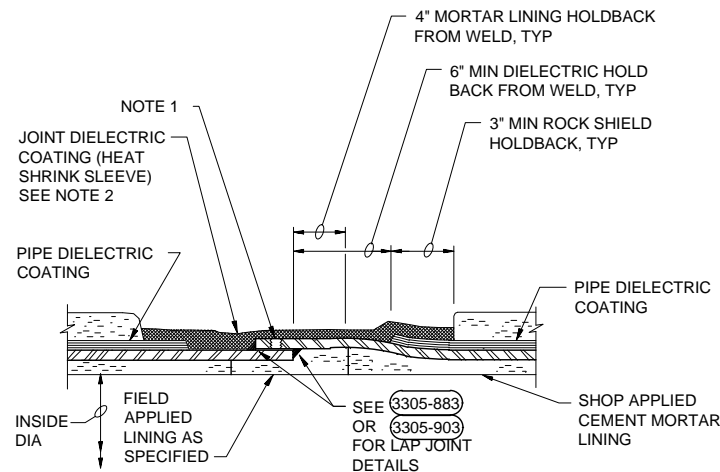
NOTES:

1. PROVIDE 2" CLEAR BETWEEN REINFORCING BARS AND SEEP RING.
2. LINE AND COAT AS SPECIFIED.

SEEP RING

NTS

3305-916



NOTES:

1. ON DOUBLE LAP WELDED JOINTS, CONTRACTOR SHALL CONDUCT AN AIR/SOAP SOLUTION LEAK TEST AT 40 PSI AIR PRESSURE IN ADDITION TO DYE PENETRANT OR MAGNETIC PARTICLE TESTING AS SPECIFIED. IF LEAKS ARE DETECTED, THE CONTRACTOR SHALL REPAIR AND RETEST THE WELDS UNTIL THERE ARE NO DEFECTS. PLUG TAPS WITH A THREADED OR WELDED PLUG AT COMPLETION OF TEST AND COAT AND LINE AS SHOWN OR SPECIFIED. TAP HOLES MAY BE ON INSIDE OR OUTSIDE OF JOINT.
2. AFTER INSTALLATION OF JOINT DIELECTRIC COATING, A HOLIDAY TEST SHALL BE COMPLETED AS SPECIFIED.

LAP WELDED SLIP JOINT

NTS

3305-918



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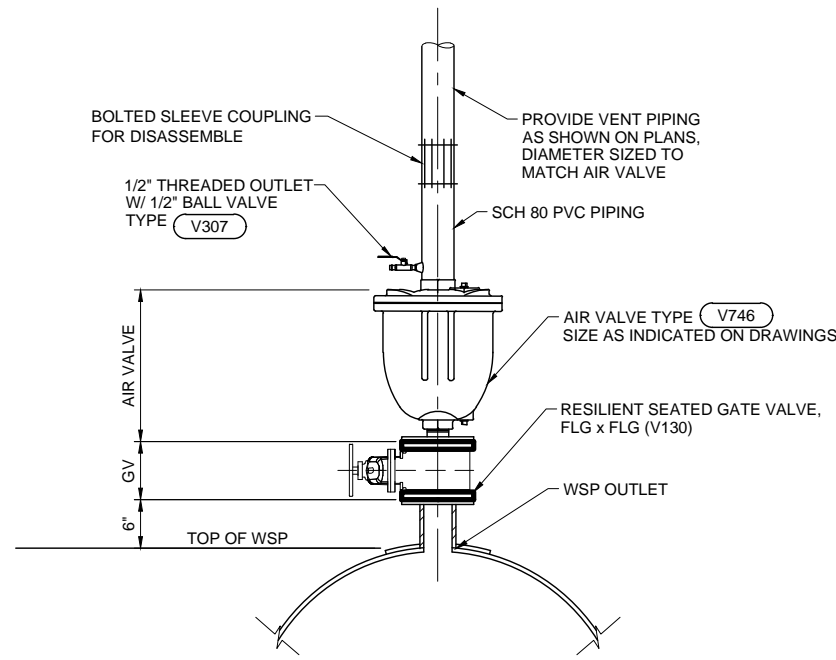
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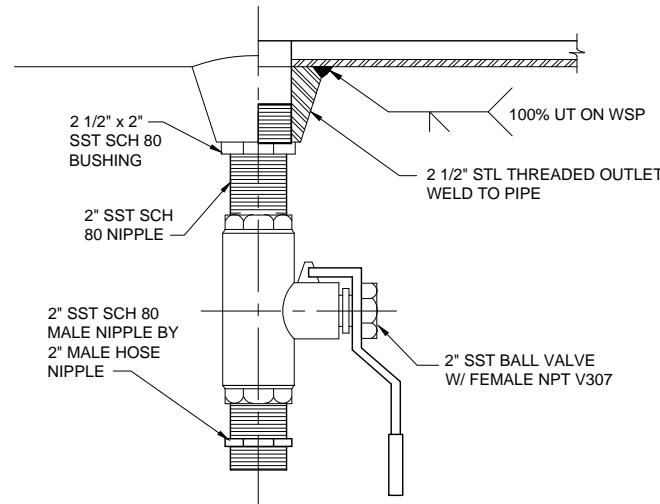
VERIFY SCALE	
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**COMBINATION AIR VALVE ASSEMBLY
(DIRECT CONNECTION)**

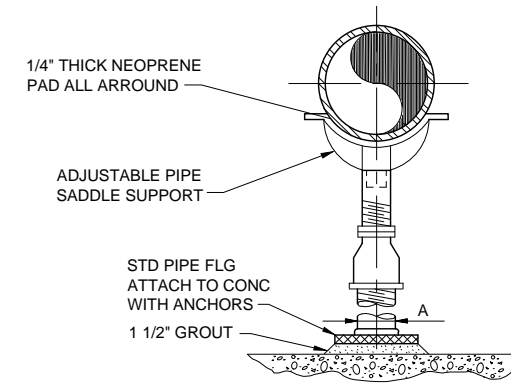
4027-120



2" DRAIN DETAIL

NTS

4027-195



PIPE SUPPORT

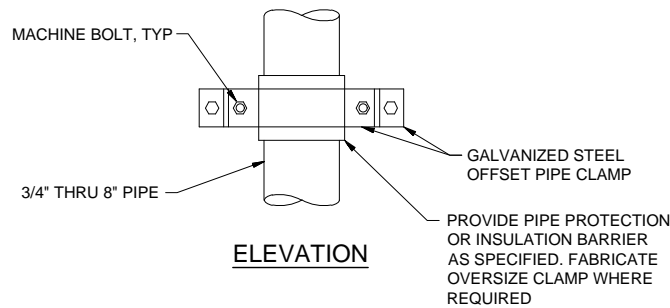
NTS

4005-500

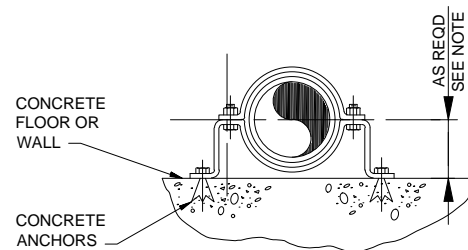
DIMENSION TABLE

PIPE SIZE	A
2-1/2"	2-1/2"
3"	2-1/2"
4"	3"
6"	3"
8"	3"
10"	3"
12"	3"
14"	4"
16"	4"
18"	6"
20"	6"
24"	6"
30"	6"
36"	6"

NOTE:
1. ALL MATERIAL SHALL BE TYPE 304 STAINLESS STEEL.



ELEVATION



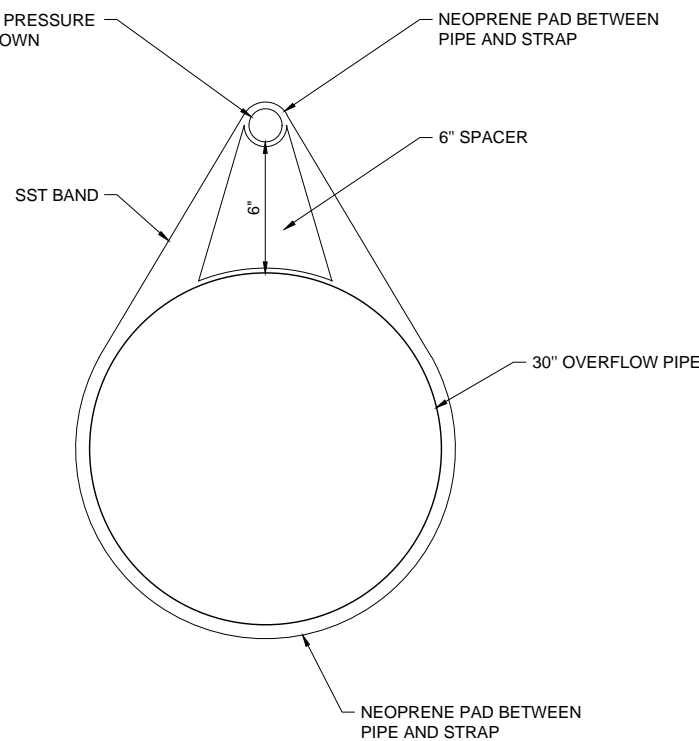
SECTION

NOTE:
COORDINATE BRACKET DIMENSIONS W/ FAN
DIAMETER AND INSULATION THICKNESS.
6" MIN PIPE TO WALL SEPARATION.

PIPE SUPPORT - WALL MOUNTED

NTS

4005-505



PIPE RISER SUPPORT STRAP

NTS

4005-510



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					B PHELPS
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					T WITHERS

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CONSERVANCY DISTRICT**



11800 SOUTH ZONE C RESERVOIRS

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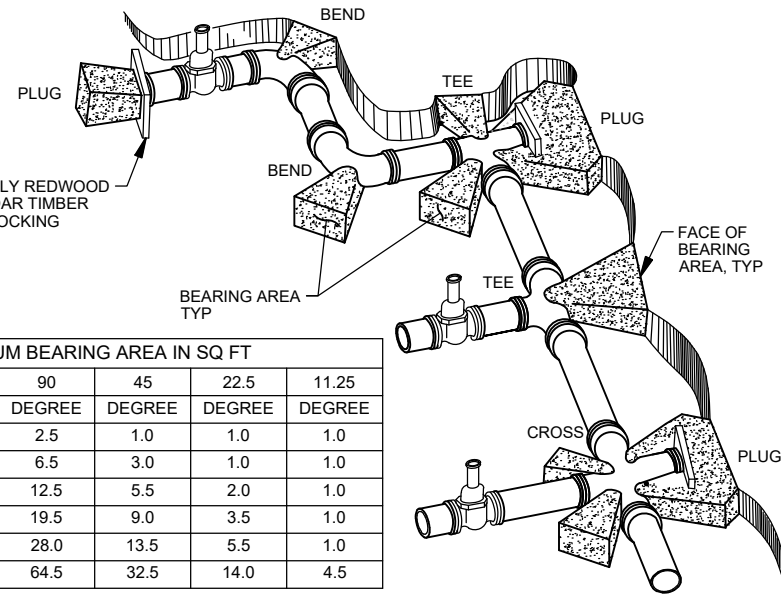
PROJ: W7Y49600

DWG: SD-21

SHEET: 77 of 79

100% DESIGN

USE ONLY REDWOOD OR CEDAR TIMBER FOR BLOCKING



MINIMUM BEARING AREA IN SQ FT						
SIZE IN	PLUG	TEE	90 DEGREE	45 DEGREE	22.5 DEGREE	11.25 DEGREE
4	1.5	2.5	1.0	1.0	1.0	1.0
6	4.0	6.5	3.0	1.0	1.0	1.0
8	8.0	12.5	5.5	2.0	1.0	1.0
10	13.0	19.5	9.0	3.5	1.0	1.0
12	19.0	28.0	13.5	5.5	1.0	1.0
18	44.5	64.5	32.5	14.0	4.5	1.0

INDIVIDUAL PIPES

- NOTES:**
1. PROVIDE 20'-0" MINIMUM LENGTH OF RESTRAINED PIPE EACH SIDE OF FITTING (BY USING MEGA LUGS OR THRUST LOCKING PIPE).
 2. AT SINGLE PIPE ANCHORS NO CONCRETE SHALL BE PLACED WITHIN 1 1/2" OF JOINT OR BOLTS. FOR SINGLE AND PARALLEL ANCHORS, COVER ALL METAL CONTACT AREAS W/ POLY-WRAP PRIOR TO PLACING CONCRETE.
 3. THRUST BLOCKS DESIGNED FOR THRUST RESULTING FROM 250 PSI AND A LATERAL SOIL BEARING STRENGTH OF 2,000 PSF WITH A MINIMUM RESTRAINED PIPE LENGTH OF 20'-0" EACH SIDE OF FITTING.
 4. THRUST BLOCKS SHALL BE REQUIRED AT ALL 11.25° BENDS OR GREATER.
 5. PLACE CONCRETE AGAINST UNDISTURBED GROUND IN TRENCH BOTTOM AND SIDES.
 6. ALL BURIED FITTINGS AND BOLTS SHALL BE WAX TAP COATED.

THRUST BLOCK DESIGN

NTS

4005-530

STEEL WALL PIPE

NTS

4027-605

WALL PIPE PENETRATION SEAL

NTS

4027-607



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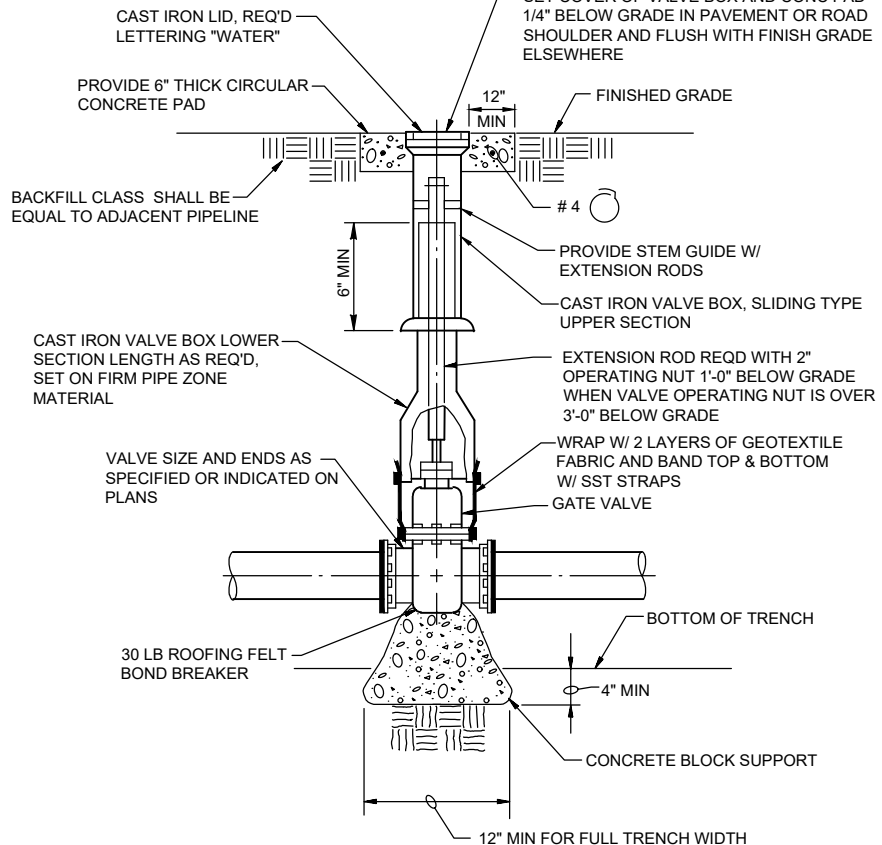
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SHEET	78 of 79

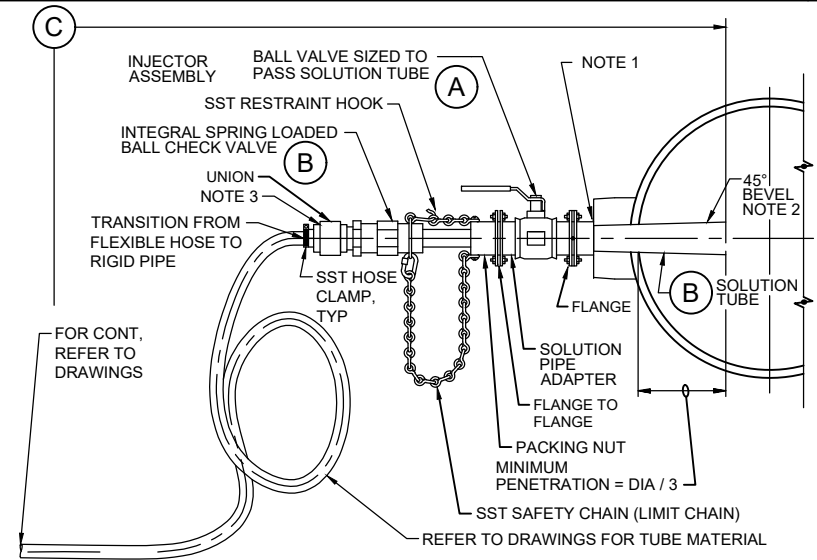
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BURIED GATE VALVE BOX

NTS

4027-640



- SPECIFIC NOTES**
1. UNLESS OTHERWISE NOTED, PROVIDE WELDED OUTLET SIMILAR TO (4027-195). WELD FITTINGS IN FACTORY PRIOR TO APPLYING INTERIOR COATING.
 2. ORIENT BEVEL SO IT FACES FLOW DIRECTION. SEE VENDOR'S RECOMMENDATIONS.
 3. FIELD LOCATE UNIONS AND FITTINGS TO ALLOW REMOVAL OF CHEMICAL PIPE. USE FITTINGS AS NEEDED.
 4. DETAIL SUITABLE FOR FEED PUMP MAX RELIEF PRESSURE OF 150 PSIG, MAIN LINE PRESSURE 100 PSIG OR LESS, AND FEED LINE 1" OR LESS.
 5. COMPONENTS SUITABLE FOR CONCENTRATIONS LISTED UP TO 100 F.
 6. FOR HYPOCHLORITE ISOLATION VALVE (D), PROVIDE PRESSURE RELIEF HOLE DRILLED ON LOW PRESSURE SIDE OF BALL VALVE. PROVIDE HASTELLOY C276 OR CPVC VALVES.

CHEMICAL INJECTOR, RETRACTABLE, REMOVABLE RIGID PIPE

NTS

4027-957

SCHEDULE 1 - CHEMICAL INJECTOR DEFAULT COMPONENTS		
COMPONENT MARK	COMPONENT DESCRIPTION	MODEL / MATERIALS
(A)	SOLUTION TUBE ISOLATION VALVE	1" V307 (SST)
(B)	SOLUTION TUBE AND INTEGRAL SPRING LOADED BALL CHECK VALVE WITH TEFLON BALL	HASTELLOY C-276 CPVC, NOTE 6
(C)	INJECTOR ASSEMBLY INCLUDES (B) AND ANCILLARIES	SAF-T-FLO EB146 OR HC-100; OR EQUAL
(D)	ISOLATION VALVE	1/2" V330 (PVC)

1

2

3

4

5

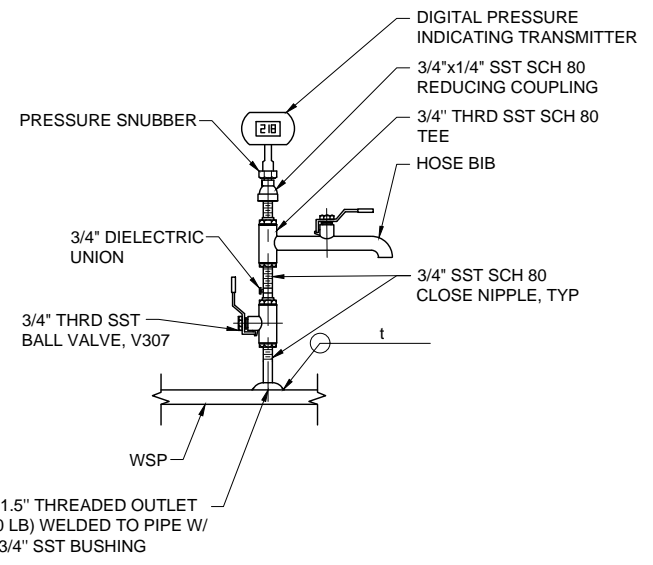
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A

B

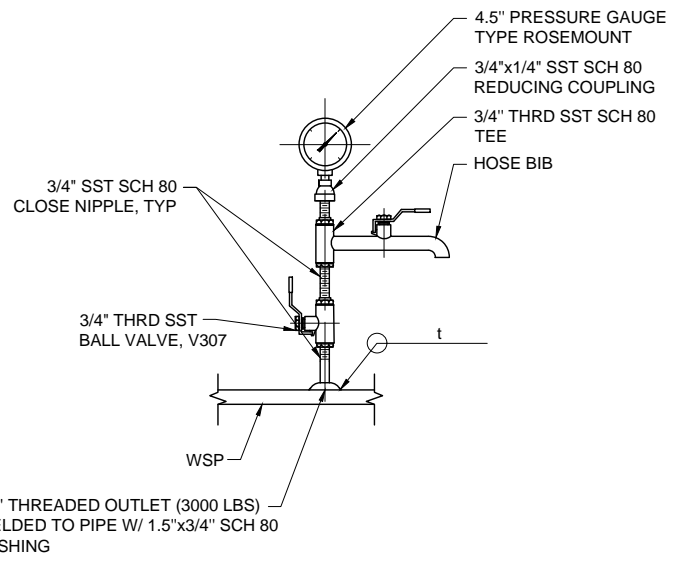
C

D



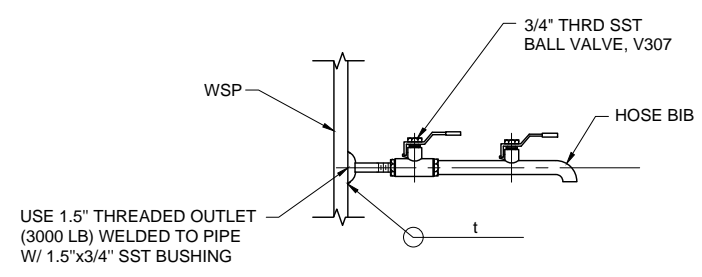
DIGITAL PRESSURE TRANSMITTER-GAUGE
NTS

4090-690

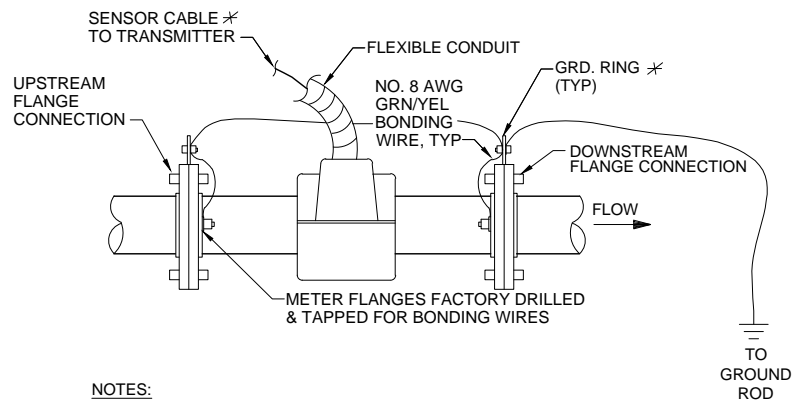


ANALOG PRESSURE GAUGE
NTS

4090-691



4090-692

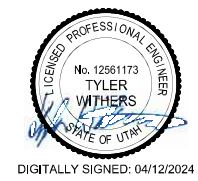


NOTES:

- COMPONENTS DESIGNATED BY * ARE SUPPLIED BY INSTRUMENT MANUFACTURER.
- IF PIPE IS NON-CONDUCTIVE BOND MAGMETER TO ONE OF THE FOLLOWING ACCEPTABLE GROUNDS:
A) METALLIC WATER PIPE IF BURIED PORTION IS MORE THAN 10'.
B) STRUCTURAL STEEL.

MAGNETIC FLOWMETER INSTALLATION
NTS

4091-222



DIGITALLY SIGNED: 04/12/2024

NO.	DATE	DR	CHK	REVISION	BY
					R WILLEITNER
					B PHELPS
					C HOGGARD
					T WITHERS

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS



STANDARD DETAILS
STANDARD DETAILS

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2024
PROJ	W7Y49600
DWG	SD-23
SHEET	79 of 79

100% DESIGN