Utah Division of Facilities Construction and Management (DCFM)

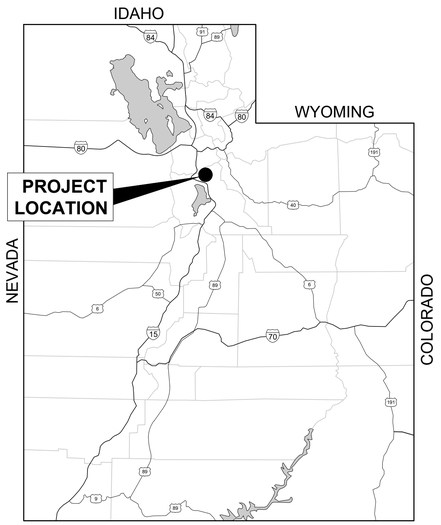
THE POINT REDEVELOPMENT

PACKAGE 03 TRANSMISSION LINE

100% SUBMITTAL

DFCM Project # 22427100

AUGUST 2024



STATE MAP

VICINITY MAP

NTS

Sheet List Table

SHEET NUMBER	SHEET TITLE
G.1.0	COVER
G.1.1	LEGEND AND UTILITY CONTACTS
G.1.2	GENERAL NOTES
G.1.3	SHEET REFERENCE
P.1.1	PLAN AND PROFILE - 16in WATER LINE
P.1.2	PLAN AND PROFILE - 16in WATER LINE
P.1.3	PLAN AND PROFILE - 30in WATER LINE
P.1.4	PLAN AND PROFILE - 30in WATER LINE
P.1.5	VAULT
P.1.6	METER VAULT
D.1.1	DETAILS
D.1.2	DETAILS
D.1.3	DETAILS
D.1.4	DETAILS
D.1.5	DETAILS
D.1.6	DETAILS
D.1.7	DETAILS
D.1.8	DETAILS
D.1.9	DETAILS
D.1.10	DETAILS
S.0.01	GENERAL NOTES I
S.0.02	GENERAL NOTES II
S.2.01	VAULT PLANS AND SECTIONS
S.2.02	METER VAULT PLANS
S.2.03	METER VAULT SECTIONS
S.6.01	STRUCTURAL DETAILS I

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PROJECT TITLE

THE POINT WATER LINES

DRAPER, UTAH

ISSUE TYPE: ---

ISSUE DATE: AUGUST 2024

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SHEET TITLE

COVER

SHEET NUMBER

G.1.0

PAGE 1

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

LEGEND

EXISTING

EXISTING BURIED ELECTRICAL LINE — bel

EXISTING OVERHEAD ELECTRICAL LINE — el

EXISTING BURIED CABLE TV — bctv

EXISTING OVERHEAD CABLE TV — ctv

EXISTING BURIED FIBER OPTIC — bfo

EXISTING OVERHEAD FIBER OPTIC — fo

EXISTING BURIED TELEPHONE — btel

EXISTING OVERHEAD TELEPHONE — tel

EXISTING GAS LINE — g

EXISTING SEWER — ss

EXISTING STORM DRAIN — sd

EXISTING WATER LINE — w

EXISTING IRRIGATION LINE — irr

PROPOSED

PROPOSED BURIED ELECTRICAL LINE — BEL

PROPOSED OVERHEAD ELECTRICAL LINE — EL

PROPOSED BURIED CABLE TV — BCTV

PROPOSED OVERHEAD CABLE TV — CTV

PROPOSED BURIED FIBER OPTIC — BFO

PROPOSED OVERHEAD FIBER OPTIC — FO

PROPOSED BURIED TELEPHONE — BTEL

PROPOSED OVERHEAD TELEPHONE — TEL

PROPOSED BURIED COM LINE — COM

PROPOSED GAS LINE — G

PROPOSED SEWER — SS

PROPOSED STORM DRAIN — SD

PROPOSED WATER LINE — W

PROPOSED IRRIGATION LINE — IRR

SYMBOLS

PROPOSED CROSS

PROPOSED TEE

PROPOSED 90° BEND

PROPOSED 45° BEND

PROPOSED 22.5° BEND

PROPOSED 11.25° BEND

PROPOSED CAP AND PLUG

PROPOSED GATE VALVE

PROPOSED FIRE HYDRANT

PROPOSED CATCH BASIN

PROPOSED SEWER CLEAN OUT

PROPOSED WATER METER

EXISTING IRRIGATION BOX — ir

ABBREVIATIONS

AC	ASPHALT CONCRETE PAVEMENT
BLDG.	BUILDING
BV	BUTTERFLY VALVE
CI	CAST IRON
℄	CENTER LINE
CLR	CLEAR
CO	CLEANOUT
COM	COMPRESSION FITTING
CONC	CONCRETE
CONST	CONSTRUCT
CS	CITY STANDARD
CTS	COPPER TUBE STEEL
CY	CUBIC YARD
d	DEPTH OF FLOW
D	DIAMETER OF PIPE
DCS	DRAPER CITY STANDARD
DI	DUCTILE IRON PIPE
DIA	DIAMETER
DIM.	DIMENSION
DWG	DRAWING
E	EAST
EA	EACH
EL, ELEV	ELEVATION
ESMT	EASEMENT
EW	EACH WAY
EXIST OR EX	EXISTING
FE	FLANGE END
FIP	FEMALE IRON PIPE FITTING
FL, FLG	FLANGE FITTING
FL, FL	FLOW LINE
FM	FORCE MAIN
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FOOT
GV	GATE VALVE
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IN (#)	INCH(ES)
INV	INVERT
LT	LEFT
MAX	MAXIMUM
MFRS	MANUFACTURERS
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIP	MALE IRON PIPE FITTING
MJ	MECHANICAL JOINT FITTING
N	NORTH, FRICTION FACTOR
N/A	NOT APPLICABLE
NO (#)	NUMBER
NOTED	NOTED
NTS	NOT TO SCALE
PERM	PERMANENT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
P	PROPERTY LINE
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PWD	PUBLIC WORKS DEPARTMENT
Q	RATE OF FLOW
REINF	REINFORCEMENT, REINFORCING
REQD	REQUIRED
RES	RESERVOIR
REV	REVISION
RT	RIGHT
R/W	RIGHT OF WAY
S	SOUTH, SLOPE
ST STL	STAINLESS STEEL
STA	STATION
STD	STANDARD
T.B.	THRUST BLOCK
TBM	TEMPORARY BENCH MARK
TEMP	TEMPORARY
TYP	TYPICAL
UBC	UNTREATED BASE COURSE
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
V	VELOCITY
VERT	VERTICAL
W	WEST

PIPE ABBREVIATIONS

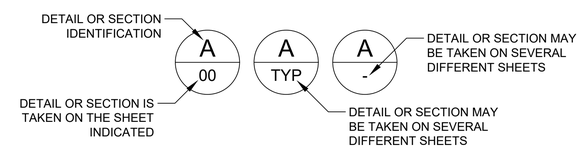
CIP	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED POLYETHYLENE PIPE
DI	DUCTILE IRON PIPE
HDPE	HIGH DENSITY POLYETHYLENE
POLY	POLYETHYLENE PIPE
PVC	POLYVINYL CHLORIDE PLASTIC PIPE
RCP	REINFORCED CONCRETE PIPE
VCP	VITRIFIED CLAY PIPE

UTILITY CONTACTS

UTILITY COMPANY	CONTACT NAME	TELEPHONE NUMBER	E-MAIL
BLUFFDALE CITY P.W.	KEVIN THOMPSON	801-849-9434	KTHOMPSON@BLUFFDALE.COM
LUMEN/CENTURYLINK	LARRY BUHLER	385-479-7357	LARRY.BUHLER@LUMEN.COM
DRAPER CITY PUBLIC WORKS	BRIEN MAXFIELD	801-576-6565	BRIEN.MAXFIELD@DRAPER.UT.US
FIRSTDIGITAL TELECOM	BRANDON BALMFORTH	801-456-1095	BBALMFORTH@FIRSTDIGITAL.COM
JORDAN VALLEY WATER C.D.	LORRIE COWLES	801-565-4300	LORRIEC@JVWCD.ORG
VERIZON BUSINESS (MCI)	NATIONAL FIBER SECURITY	800-624-9675	INVESTIGATIONS@VERIZON.COM
DOMINION ENERGY UTAH	SL MAPPING DEPARTMENT	801-324-3970	MAP.REQUESTS@DOMINIONENERGY.COM
ROCKY MOUNTAIN POWER	JOEL SIMMONS	503-813-6993	
SOUTH VALLEY SEWER DISTRICT	MATTHEW GARN	801-571-1166	MATTHEWG@SVSEWER.COM
UDOT REGION II	GOLDEN HOLT	801-887-3403	R2PERMITS@UTAH.GOV
UTOPIA FIBER	XIAOTONG WU	801-613-3854	XMU@UTOPIANET.ORG
WATER PRO IRRIGATION CO	STEVE CUNNINGHAM	801-571-2232	CUNNINGHAM@WATERPRO.NET

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

DETAIL REFERENCE



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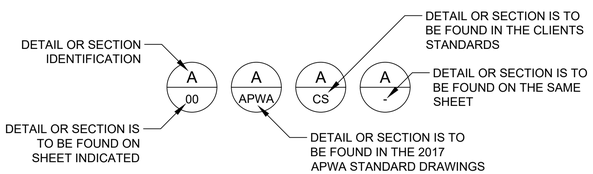

AS REFERENCE

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PROJECT TITLE

THE POINT WATER LINES

DRAPER, UTAH

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SHEET TITLE

LEGEND AND UTILITY CONTACTS

SHEET NUMBER

G.1.1

PAGE 2

PROFESSIONAL ENGINEER
DREW WILLIAM GEIGER
No. 10570537
STATE OF UTAH
08-08-24

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GENERAL NOTES

1. ALL UTILITY LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING BLUE STAKES FOR LOCATIONS OF ALL UTILITIES. CALL 1-800-662-4111 BEFORE YOU DIG.
2. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION AND ENSURE THEY REMAIN IN PLACE AND OPERATIONAL (UNLESS OTHERWISE NOTED BY PROPERTY OWNER).
3. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS, PRIOR TO FINAL PAYMENT.
4. IF EXISTING UTILITIES OR CULVERTS ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO REMOVE AND REPLACE THESE ITEMS.
5. SAFE CONSTRUCTION PROCEDURES AND WORKING CLEARANCES ARE TO BE MAINTAINED AT ALL TIMES WHILE WORKING NEAR POWERLINES.
6. THE CONTRACTOR IS TO PROTECT ALL MONUMENTS OR REPLACE IF DISTURBED.
7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
8. TRAFFIC CONTROL IS TO CONFORM WITH UDOT AND MUTCD STANDARDS.
9. TRAFFIC CONTROL SHALL INCLUDE PROVISIONS FOR BIKES AND PEDESTRIANS.
10. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY EACH HOME OR BUSINESS THAT WILL BE IMPACTED AND COORDINATE WORK AS NECESSARY.
11. NO PRODUCTS WILL BE FURNISHED BY THE OWNER UNLESS SPECIFICALLY STATED OTHERWISE.
12. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED WATER LINE TESTING AND NEEDED BLOW-OFFS.
13. RESTORE OR PRESERVE ALL EXISTING FENCES, ROAD, AND DITCHES UNLESS OTHERWISE STATED ON THE PLANS.
14. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS, THE MOST CURRENT EDITION OF UDOT STANDARD SPECIFICATIONS AND DRAWINGS, AND THE MOST CURRENT EDITION OF THE AMERICAN PUBLIC WORKS ASSOCIATION MANUAL OF STANDARD SPECIFICATION AND PLANS.
15. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL UTILITY CONFLICTS UPON DISCOVERY.
16. ALL EXCAVATION, BACKFILLING, AND OTHER EARTHWORK OPERATIONS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. STRUCTURAL FILL, BEDDING, IMPORTED BACKFILL, GRANULAR SUBBASE, AND BASE COURSE MATERIALS SHALL MEET THE REQUIREMENTS OUTLINED IN THE PROJECT SPECIFICATIONS.
17. (UDOT LIMITATIONS OF OPERATIONS: TO BE DEFINED AFTER UDOT REVIEW)

WATER UTILITY NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO DRAPER CITY STANDARDS, DFCM STANDARDS.
2. CONTRACTOR SHALL VERIFY ELEVATIONS OF ALL PIPELINES AND VERIFY LOCATION PRIOR TO PROCEEDING WITH ANY BUILDING OR PIPELINE CONSTRUCTION. IF THE IN FIELD CONDITION VARIES FROM DESIGN, THE CONTRACTOR IS RESPONSIBLE FOR COSTS DUE TO CHANGES IN CONDITION. CITY MAPS ARE "BEST KNOWLEDGE" AND APPROXIMATE.
3. 12 GAUGE THWN-2 JACKETED STRANDED COPPER WIRE SHALL BE TAPED TO ALL WATER LINES FOR LOCATING PURPOSES. 2 FEET OF ADDITIONAL WIRE SLACK IS REQUIRED IN ALL VALVE BOXES, VAULTS, MANHOLES, OR OTHER PIPE LINE APPURTENANCES.
4. ASPHALT REPLACED IS TO MATCH EXISTING PAVEMENT DEPTHS WITH A 6" OVER CUT FROM EDGE OF THE EXCAVATION OR ON EACH SIDE OF THE EXCAVATION.
5. ANY CHANGES MADE IN THE FIELD MUST BE FIRST APPROVED AND DOCUMENTED BY THE PROJECT REPRESENTATIVE.
6. RAISE ALL UTILITIES, SUCH AS MANHOLES, METER SETTERS, FIRE HYDRANTS, WATER VALVE LIDS, ETC. TO ROADWAY OR PROJECT FINISHED GRADE AS MAY BE APPLICABLE.
7. ALL HARDWARE, VALVES, COUPLINGS, MECHANICAL JOINTS, FLANGES, ETC. ARE TO BE COATED WITH WAX TAPE COATING SYSTEM. SEE SPECIFICATION 09 97 10.
8. DI = CLASS 52 DUCTILE IRON PIPE.
9. TRENCH EXCAVATION SHALL COMPLY WITH THE MOST CURRENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIVE STANDARDS. TRENCH BACKFILL SHOULD BE PLACED IN 4 TO 6 INCH LIFTS IF HAND COMPACTED OR NO MORE THAN 8 INCH LIFTS IF POWER COMPACTED.
10. LIMIT THE LENGTH OF OPEN TRENCH TO 500 FEET IN ADVANCE OF PIPE LAYING. COMPLETE BACKFILLING AND INSTALLATION AND COMPACTION OF AGGREGATE BASE COURSE NOT MORE THAN 500 FEET IN THE REAR OF PIPE LAYING. CLOSE TRENCHES DURING NIGHTTIME CONDITIONS THROUGH THE USE OF BACKFILL, TRENCH PLATES, BARRICADES AND/OR OTHER APPROVED PROTECTION METHODS.
11. POLYETHYLENE ENCASEMENT (POLYWRAP) OF DI PIPE IS REQUIRED PER AWWA C105.

WATER LINE PIPE LEGEND

PIPE SIZE	WORKING PRESSURE	TEST PRESSURE
16"	75 PSI	112.5 PSI
24"	75 PSI	112.5 PSI
30"	75 PSI	112.5 PSI

TEST STATIONS

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

IMPRESSED CURRENT CATHODIC PROTECTION

1. CONTRACTOR SHALL COORDINATE AC POWER SERVICE WITH LOCAL ELECTRICAL UTILITY, UTILITY SERVICE INSTALLATION COSTS TO BE PAID BY OWNER.
2. CONTRACTOR TO PROVIDE ALL EXCAVATION, BACKFILL, CONDUIT AND PULL STRING FOR UNDERGROUND AC POWER SERVICE TO METER PEDESTAL, UTILITY TO PROVIDE AND INSTALL CONDUCTORS, SPLICES, AND CONNECTIONS TO METER BASE PER UTILITY STANDARD SERVICE INSTALLATION.
3. DRILLING MUD, WATER AND CUTTINGS SHALL BE FULL CONTAINED ON THE PROJECT SITE AND SHALL NOT BE PERMITTED TO FLOW OVER THE GROUND SURFACE, ANY SPILLAGE OR LEAKAGE OF DRILLING MUD AND CUTTINGS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND THE SITE RESTORED TO ORIGINAL CONDITION.
4. CONCRETE WORK SHALL BE OF THE HIGHEST QUALITY, FORMS SHALL BE SET LEVEL AND SQUARE, CONCRETE FINISH SHALL BE TROWEL SURFACE AND RADIUS EDGES.
5. ALL FORM WORK SHALL BE REMOVED FROM THE CONCRETE AFTER CURING IS COMPLETED.
6. RECTIFIER SHALL BE ORIENTED AS SHOWN ON THE PLANS, ADJUSTMENT IN THE LOCATION AND ORIENTATION OF THE RECTIFIERS AND VENT PIPES SHALL BE APPROVED BY THE ENGINEER.

ELECTRICAL CONTINUITY

1. ALL BURIED OR VAULT JOINTS SHALL BE BONDED FOR ELECTRICAL CONTINUITY.
2. PROVIDE TWO BONDS, MINIMUM, ON EACH JOINT UNLESS SPECIFIED OTHERWISE FOR PIPE DIAMETER.
3. FLEXIBLE COUPLINGS, FLANGE COUPLING ADAPTERS, OR DEPEND-O-LOC JOINTS SHALL BE BONDED SIMILAR TO FLEXIBLE JOINT, SEE DETAIL X, SHEET CP-X
4. COATED STEEL PIPE JOINTS SHALL BE BONDED AS SHOWN IN DETAIL X, SHEET CP-X
5. MORTAR COATED STEEL PIPE SHALL BE BONDED AS SHOWN IN DETAIL X, SHEET CP-X
6. DUCTILE IRON PIPE JOINTS SHALL BE BONDED AS SHOWN IN DETAIL X, SHEET CP-X
7. BURIED OR VAULT FLANGE JOINTS SHALL BE BONDED AS SHOWN IN DETAIL X, SHEET CP-X.

ELECTRICAL ISOLATION

1. PROVIDE INSULATING JOINTS IN PIPELINE WHERE INDICATED ON THE DRAWINGS.
2. TEST ALL INSULATING JOINTS FOR ELECTRICAL ISOLATION AS SPECIFIED.
3. PROVIDE DC BLOCKING DEVICES AND INSULATING UNION IN ELECTRICAL CONDUITS ON ALL MOTOR OPERATED VALVES PER DETAIL X, DWG CP-X
4. ALL MISCELLANEOUS PIPING AND ELECTRICAL CONDUITS TO BE ELECTRICALLY ISOLATED FROM CATHODICALLY PROTECTED PIPES.

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DREW WILLIAM GEIGER
No. 10570537
STATE OF UTAH
08-08-24

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SHEET TITLE

GENERAL NOTES

SHEET NUMBER

G.1.2

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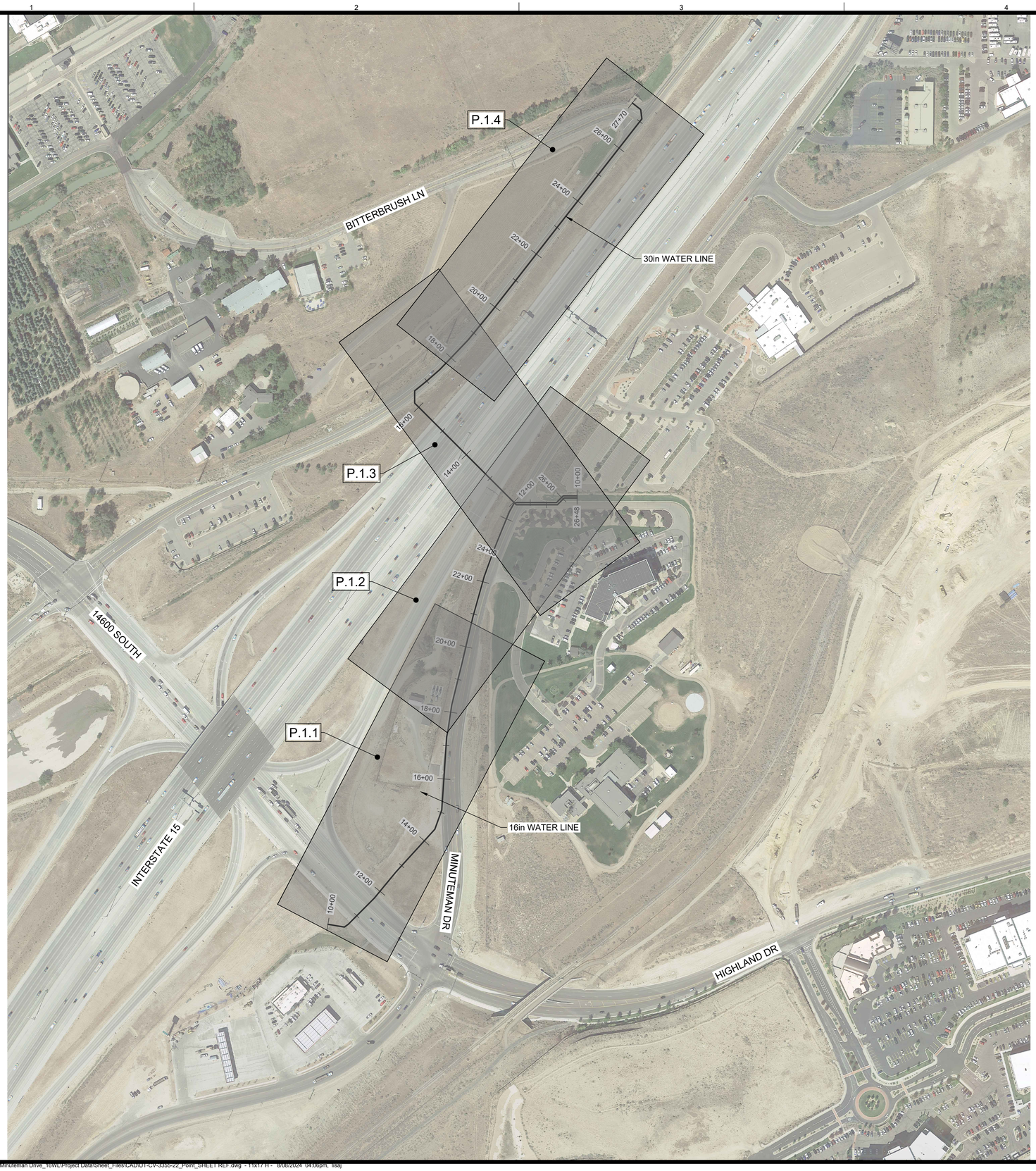

SCALE
HORIZONTAL: 1" = 150'

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Facilities Construction and Management
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G.1.3

PAGE 1

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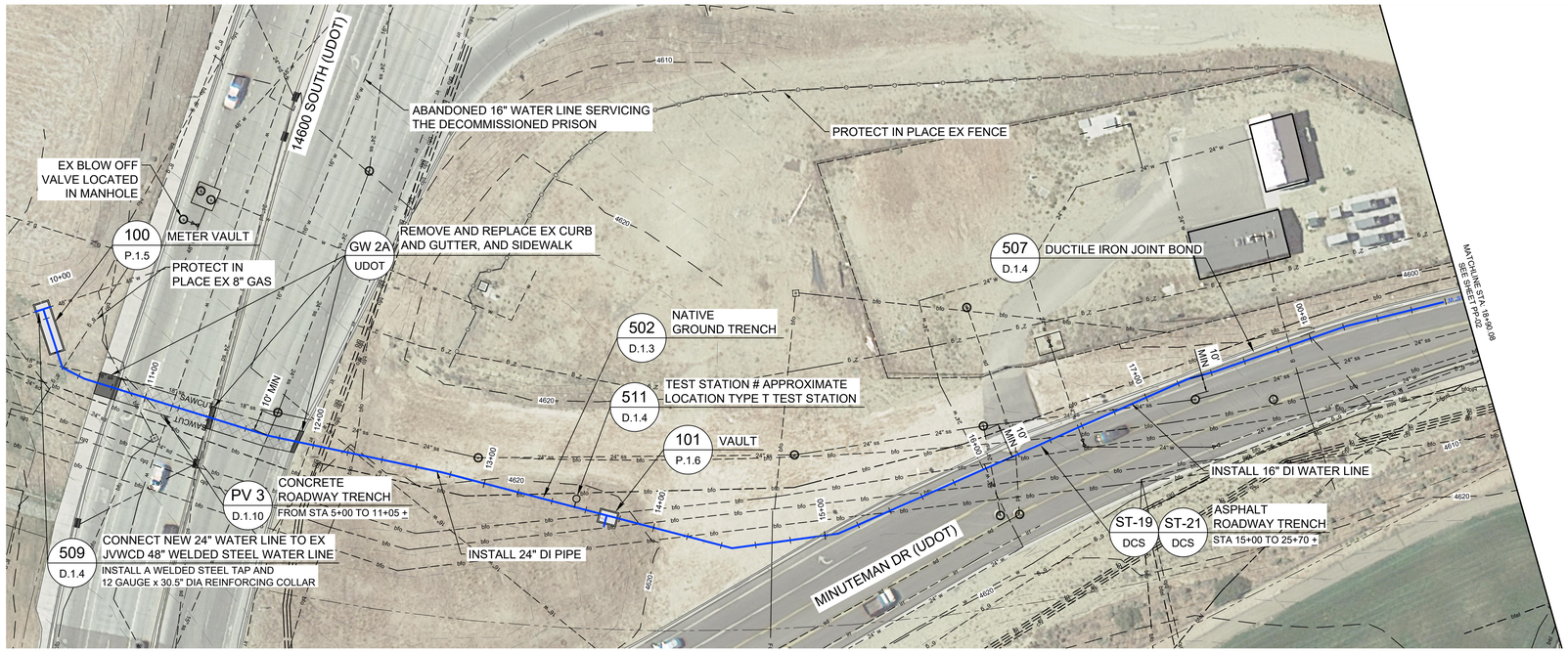

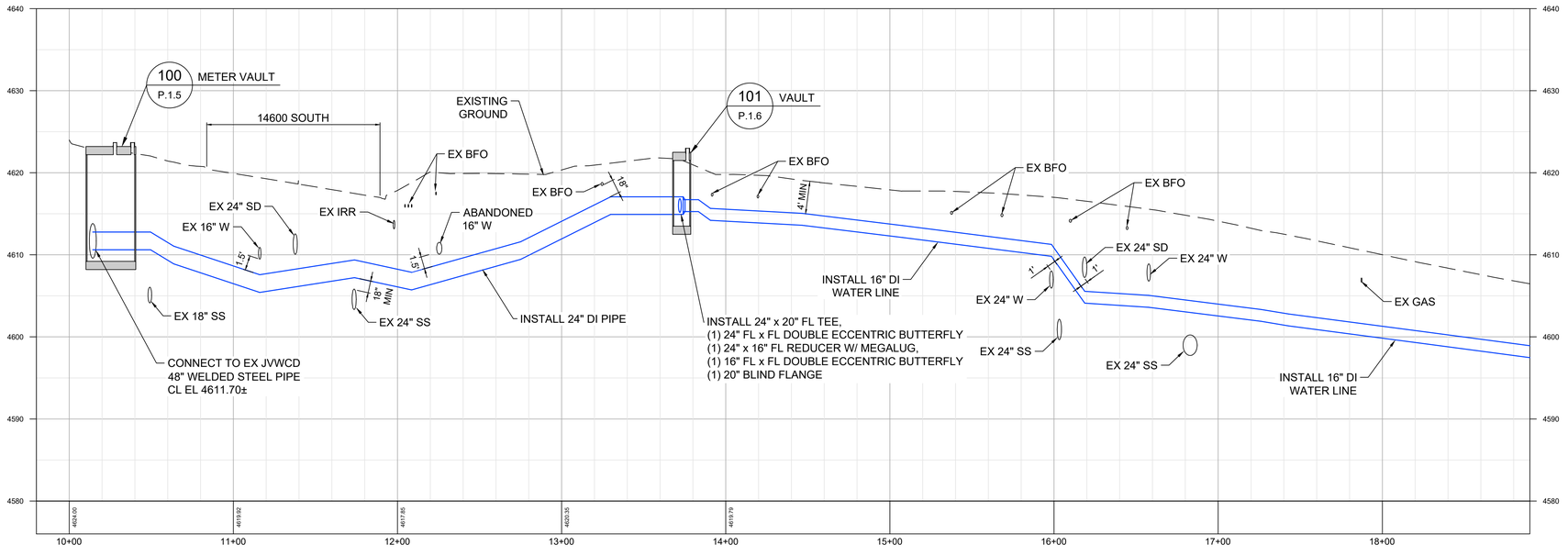

SCALE
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 8'

NOTES:

1. CONTRACTOR TO FIELD VERIFY THE LOCATION OF THE ABANDONED 16" WATER LINE.
2. IF THE ABANDONED 16" WATER LINE CONFLICTS WITH THE NEW 24" WATER LINE, THEN UPON APPROVAL OF THE ENGINEER THE CONTRACTOR MAY CUT, CAP AND ABANDON THE EXISTING 16" WATER LINE.
3. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL PARK STRIPS AND SHOULDERS TO MATCH DESIGN GRADES AND REPAIR TO BETTER THAN OR EQUAL TO EXISTING CONDITIONS.
4. REPLACE ALL ROAD STRIPING AND PAVEMENT MARKINGS TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS.
5. THE 16" DI PIPE SHALL BE ELECTRICALLY CONTINUOUS, SEE DETAILS ON SHEET D.1.4. IT SHALL BE ELECTRICALLY ISOLATED FROM THE 48" JVWCD PIPE.
6. JOINT BONDS REQUIRED AT EACH JOINT ALONG THE PIPELINE.

Know what's below.
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PLAN AND PROFILE - 16IN WATER LINE

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P.1.1

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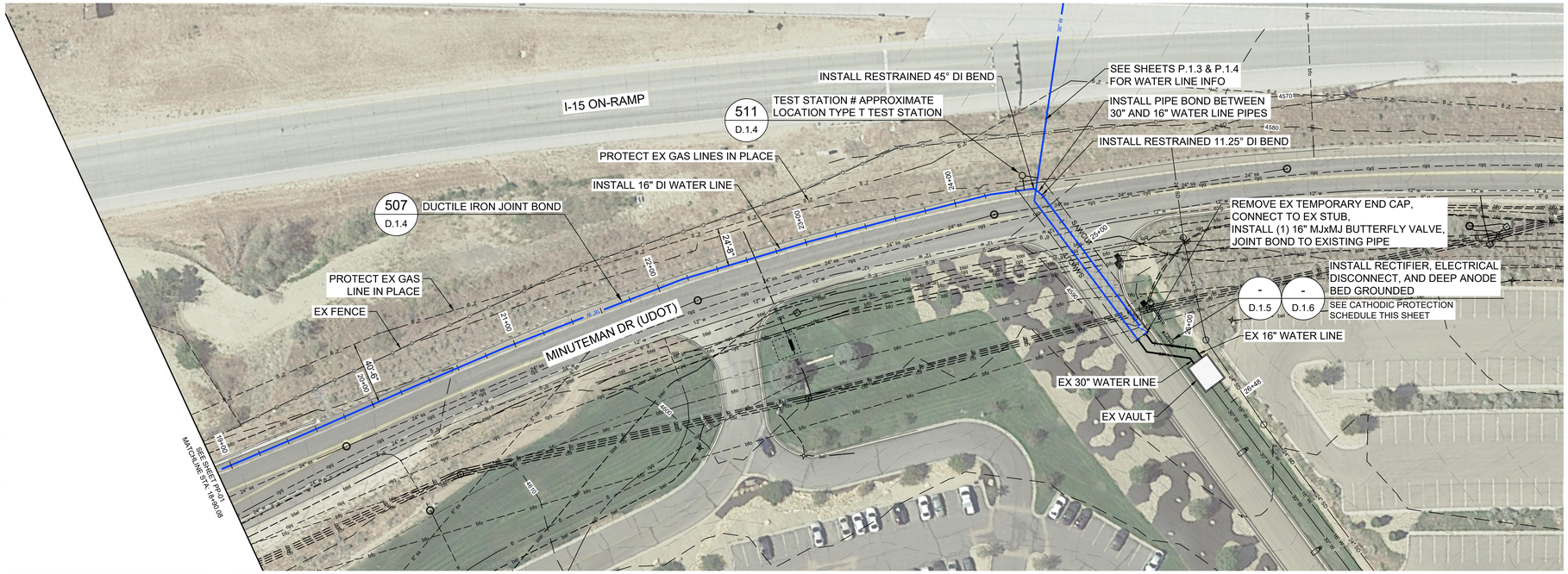

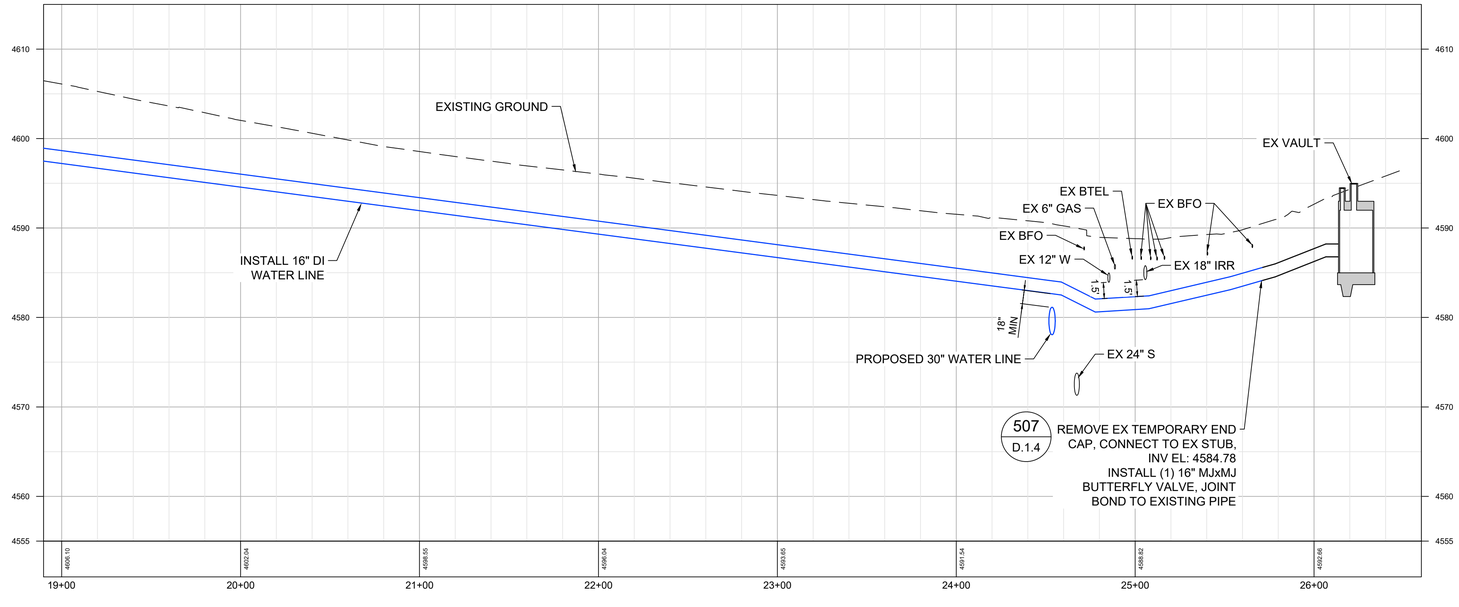

SCALE

HORIZONTAL: 1" = 40'

VERTICAL: 1" = 8'

NOTES:

1. CONTRACTOR TO FIELD VERIFY THE LOCATION OF THE ABANDONED 16" WATER LINE.
2. IF THE ABANDONED 16" WATER LINE CONFLICTS WITH THE NEW 16" WATER LINE, THEN UPON APPROVAL OF THE ENGINEER THE CONTRACTOR MAY CUT, CAP AND ABANDON THE EXISTING 16" WATER LINE.
3. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL PARK STRIPS AND SHOULDERS TO MATCH DESIGN GRADES AND REPAIR TO BETTER THAN OR EQUAL TO EXISTING CONDITIONS.
4. REPLACE ALL ROAD STRIPING AND PAVEMENT MARKINGS TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS.
5. THE 16" DI PIPE SHALL BE ELECTRICALLY CONTINUOUS, SEE DETAILS ON SHEET D.1.4. IT SHALL BE ELECTRICALLY ISOLATED FROM THE 48" JVWCD PIPE.
6. JOINT BONDS REQUIRED AT EACH JOINT ALONG THE PIPELINE.

CATHODIC PROTECTION SCHEDULE	
DESCRIPTION	**CPS STATION**
GROUNDBED INSTALLATION	
GROUNDBED STYLE	DEEP ANODE
GROUNDBED TERMINATION	TYPE 1
SURFACE CASING LENGTH	40 FEET
INACTIVE LENGTH	115 FEET
ACTIVE LENGTH	150 FEET
TOTAL LENGTH	235 FEET
DIAMETER	8-INCH
ANODE TYPE	45" LIDA
QUANTITY	15 EACH
ANODE SPACING	10 FOOT OC
GROUNDBED RAIL	YES
RECTIFIER INSTALLATION	
STYLE	TYPE 3
DC VOLTS OUTPUT	11 VOLTS
DC AMPS OUTPUT	7 AMPS
AC POWER INPUT	120/240 VAC, SINGLE
AC SERVICE STYLE	UNDERGROUND
AC METER	NO
AC DISCONNECT	YES
RECTIFIER RAIL	YES
REMOTE MONITOR UNIT	NO

08-08-24

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PROJECT TITLE

THE POINT WATER LINES

DRAPER, UTAH

ISSUE TYPE:	100% CD
ISSUE DATE:	AUGUST 2024
DFCM PROJ No.	UT-CV-3355-22
DRAWN BY:	LAJ
CHK'D BY:	DWG
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SHEET TITLE

PLAN AND PROFILE - 16IN WATER LINE

SHEET NUMBER

P.1.2

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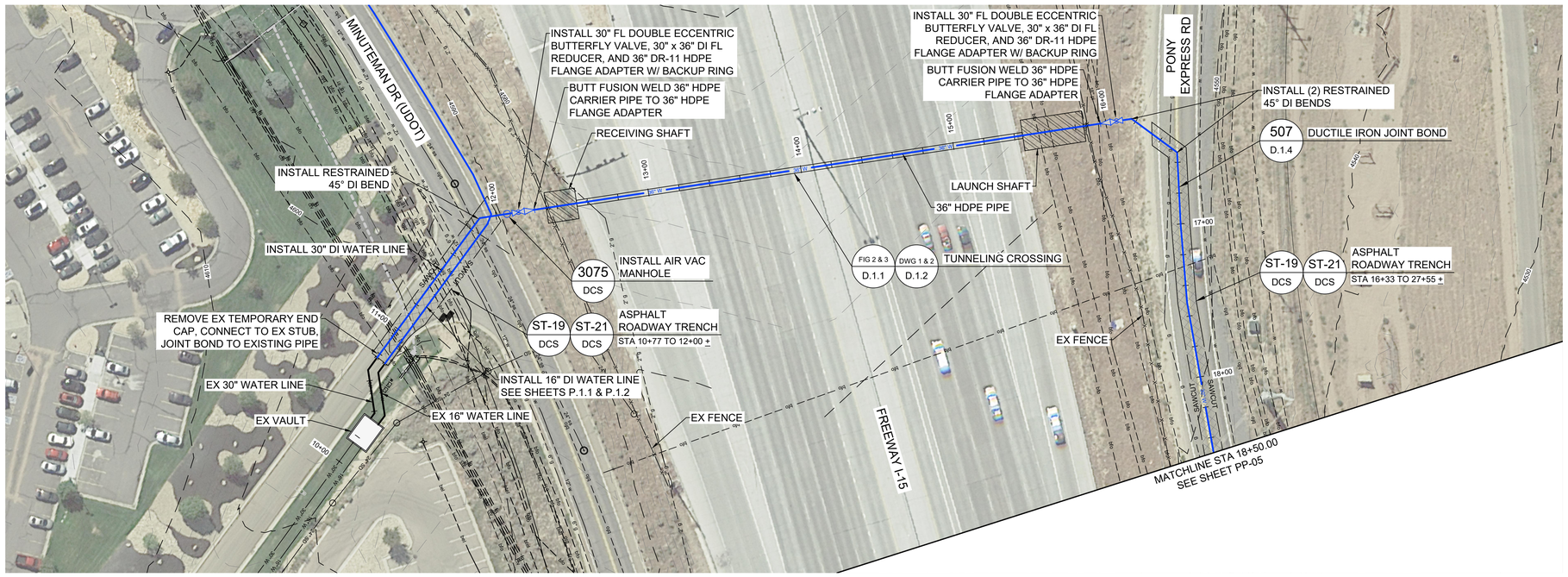

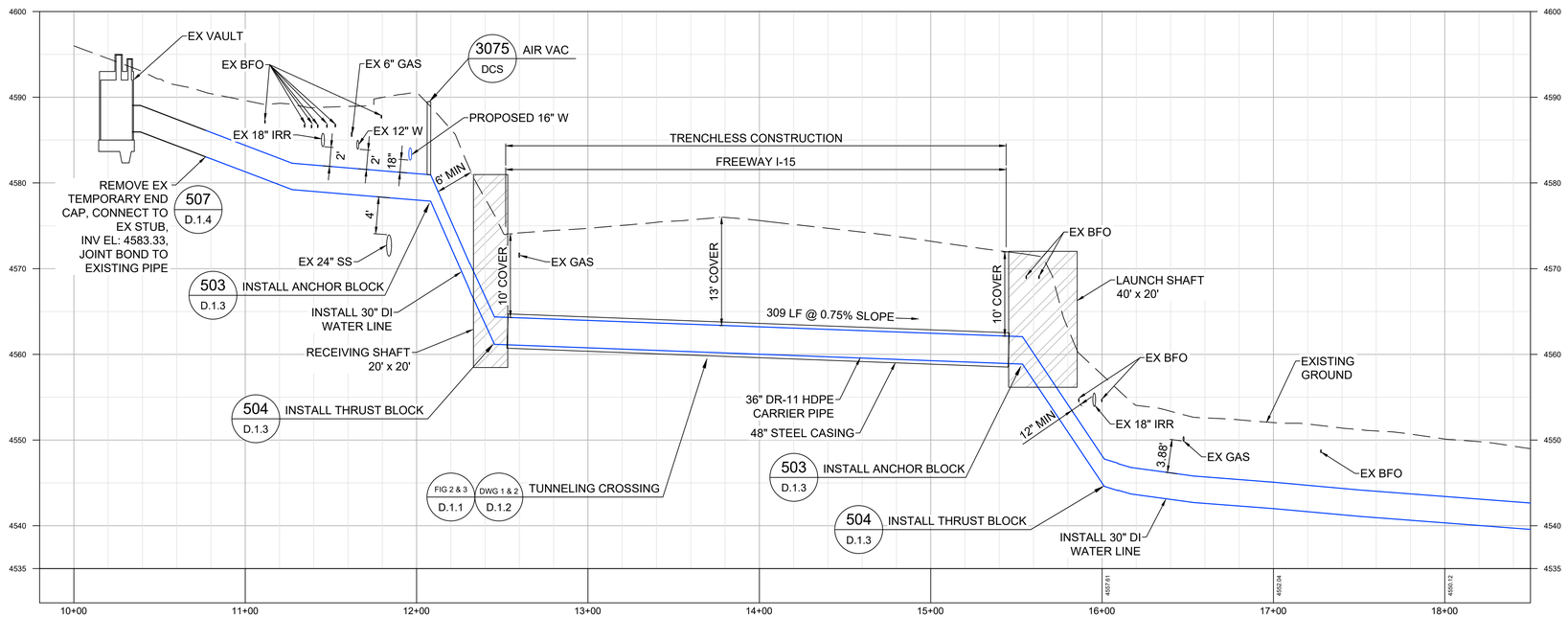

SCALE

HORIZONTAL: 1" = 40'

VERTICAL: 1" = 8'

NOTES:

1. CONTRACTOR SHALL RELOCATE OR SUPPORT EXISTING INFRASTRUCTURE THAT INTERSECTS THE LAUNCH AND RECEIVING SHAFTS AS NECESSARY WITHOUT DAMAGE TO THE UTILITY.
2. BASELINE GROUND CONDITIONS ARE PROVIDED IN THE GEOTECHNICAL BASELINE REPORT (GBR).
3. ALLOWABLE TUNNEL MEANS AND METHODS ARE PROVIDED IN THE GBR AND THE SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR SELECTING MEANS AND METHODS THAT THEY ARE EQUIPPED TO PERFORM AND FULFILLING THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
4. TUNNEL CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL UDOT REGULATIONS WITHIN THE INTERSTATE 15 ROW.
5. REFERENCE TUNNEL DETAILS ON SHEET NUMBER D.1.2 FOR ADDITIONAL DETAILS ON TUNNEL INSTALLATION.
6. REFERENCE INSTRUMENTATION AND MONITORING DETAILS ON SHEET NUMBER D.1.1 FOR ADDITIONAL DETAILS ON MONITORING DURING TUNNEL INSTALLATION.
7. CONTRACTOR TO CONFORM TO GEOTECHNICAL RECOMMENDATIONS MADE IN LITHOS ENGINEERING GEOTECHNICAL BASELINE REPORT.
8. THE 30" DI PIPE SHALL BE ELECTRICALLY CONTINUOUS, SEE DETAILS ON SHEET D.1.4. IT SHALL BE ELECTRONICALLY ISOLATED FROM THE 48" CASING.
9. JOINT BONDS REQUIRED AT EACH JOINT ALONG THE PIPELINE.
10. 48" STEEL CASING PIPE TO HAVE A MINIMUM 5/8" (0.625) WALL THICKNESS.
11. STEEL PIPE MATERIAL TO CONFORM TO ASTM A 252 GRADE 2 STEEL AND BE MANUFACTURED SPECIFICALLY FOR JACKING. WELDS TO CONFORM TO ANSI/AWS D1.1.

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PROJECT TITLE

THE POINT WATER LINES

DRAPER, UTAH

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ISSUE DATE:	AUGUST 2024
DFCM PROJ No.	UT-CV-3355-22
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SHEET TITLE

PLAN AND PROFILE - 30IN WATER LINE

SHEET NUMBER

P.1.3

PAGE 8

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08-08-24

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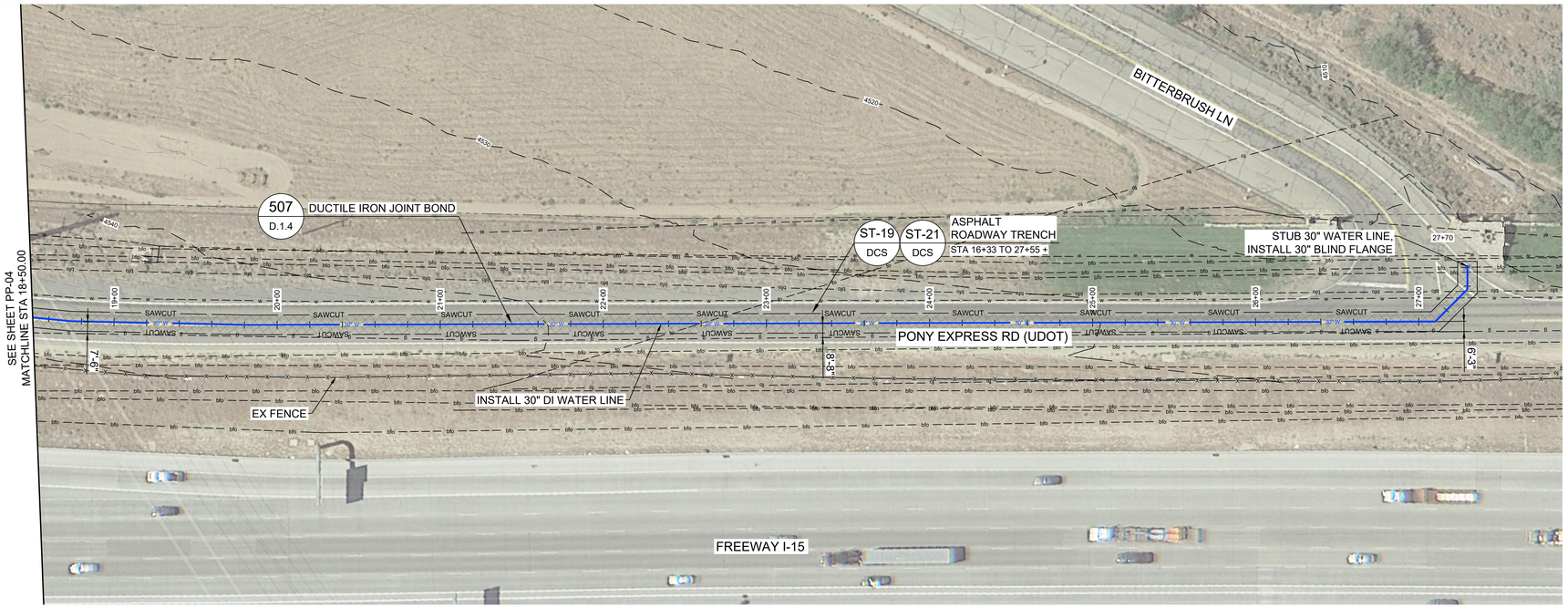

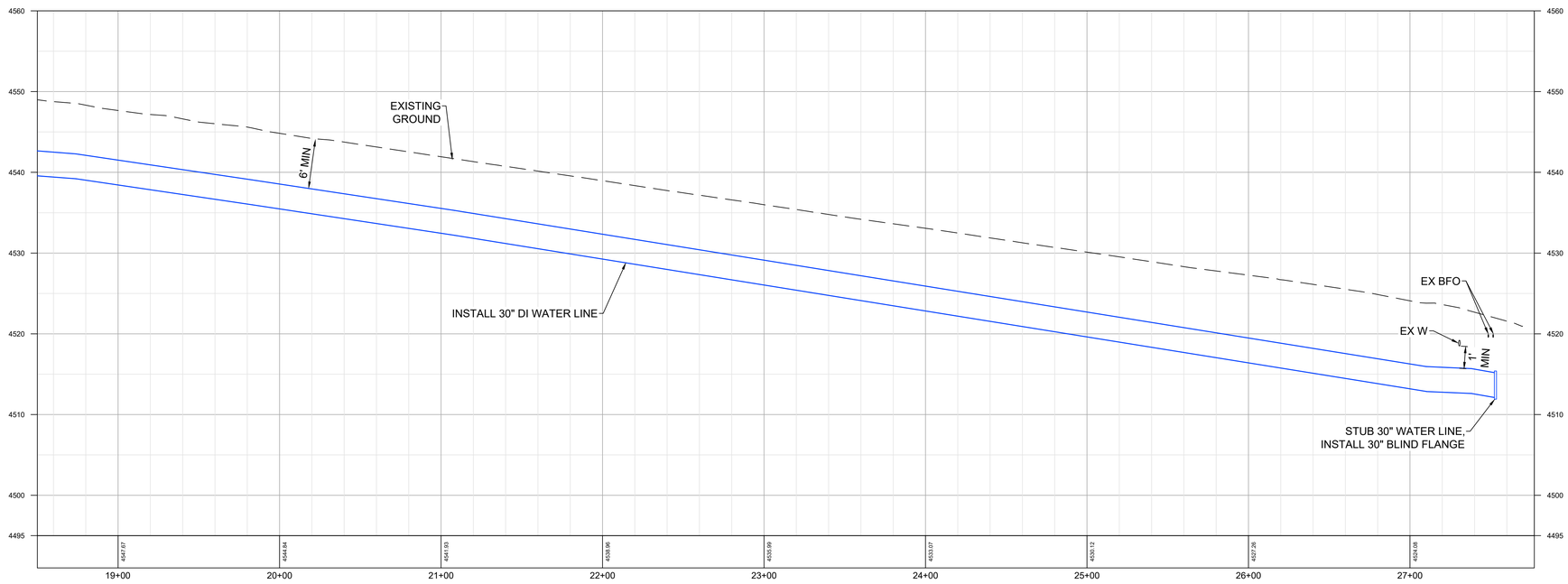

SCALE

HORIZONTAL: 1" = 40'

VERTICAL: 1" = 8'

NOTES:

1. CONTRACTOR TO FIELD VERIFY THE LOCATION OF THE ABANDONED 16" WATER LINE.
2. IF THE ABANDONED 16" WATER LINE CONFLICTS WITH THE NEW 16" WATER LINE, THEN UPON APPROVAL OF THE ENGINEER THE CONTRACTOR MAY CUT, CAP AND ABANDON THE EXISTING 16" WATER LINE.
3. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL PARK STRIPS AND SHOULDERS TO MATCH DESIGN GRADES AND REPAIR TO BETTER THAN OR EQUAL TO EXISTING CONDITIONS.
4. REPLACE ALL ROAD STRIPING AND PAVEMENT MARKINGS TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS.
5. THE 16" DI PIPE SHALL BE ELECTRICALLY CONTINUOUS, SEE DETAILS ON SHEET D.1.4. IT SHALL BE ELECTRICALLY ISOLATED FROM THE 48" JVWCD PIPE.
6. JOINT BONDS REQUIRED AT EACH JOINT ALONG THE PIPELINE.

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PLAN AND PROFILE - 30IN WATER LINE

SHEET NUMBER

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STATE OF UTAH
08-08-24

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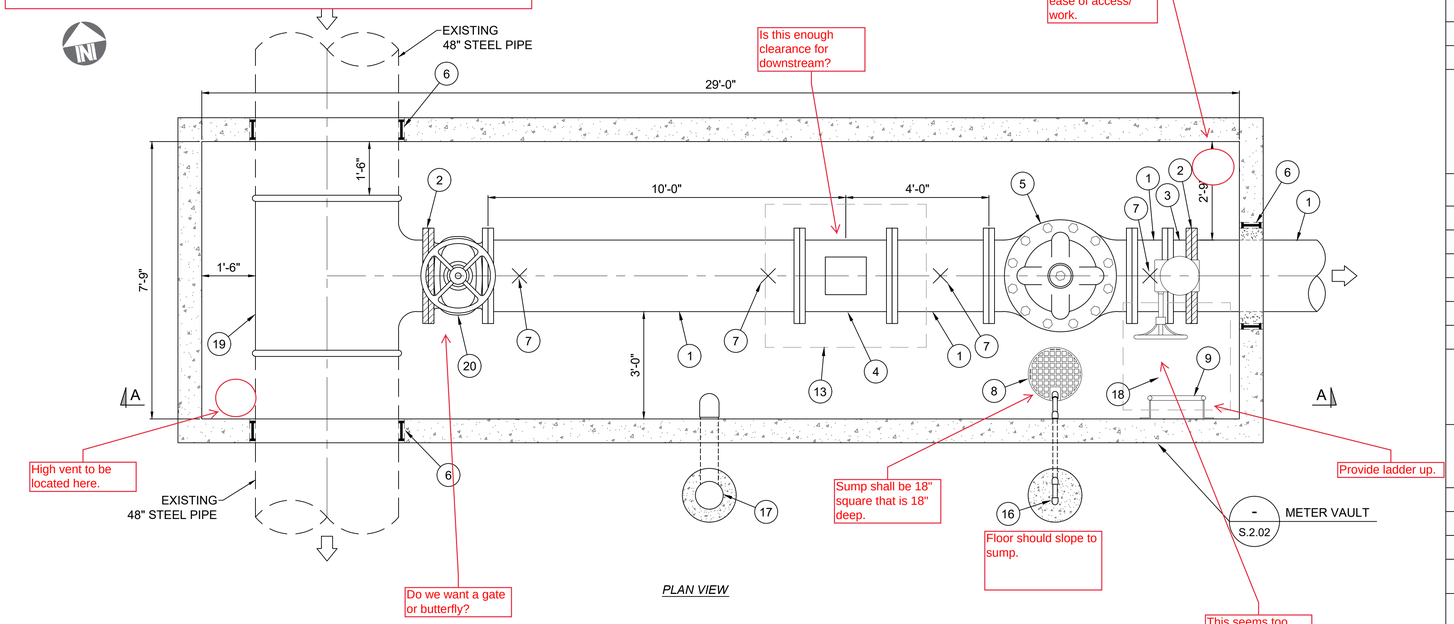
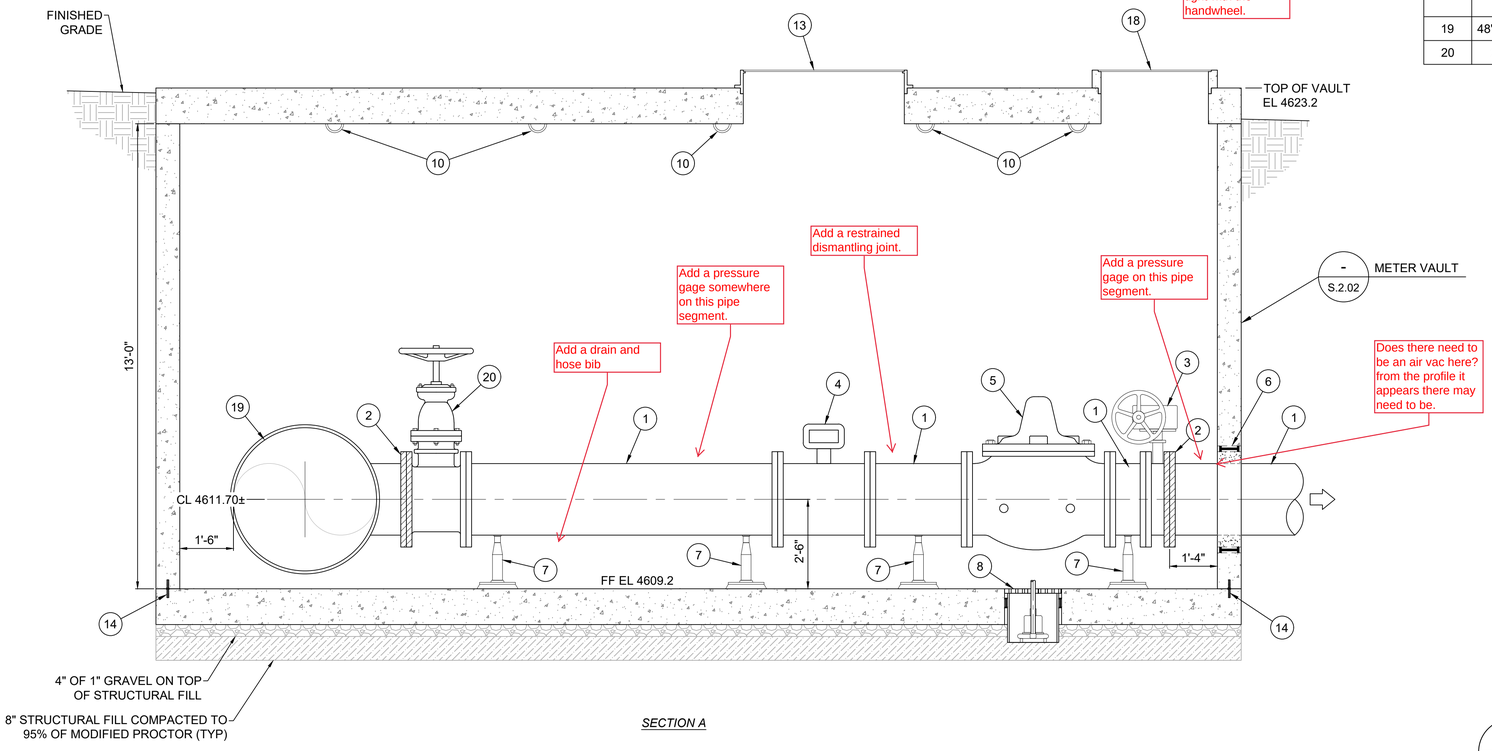
This system is dependent on MWDSLS head, if MWSLS goes down, the delivered head will be lower from JVWTP. Is this okay?



PLAN VIEW



SECTION A

100 / - METER VAULT
SCALE: 1" = 2'

Wrong name - FITTING SCHEDULE

ITEM #	SIZE	DESCRIPTION	CONNECTION	NOTES
1	24"	change to steel.	FLG	LENGTH VARIES
2	VARIES	FLANGE INSULATING KIT	---	SEE DETAIL 510, SHEET D.1.4
3	24"	BUTTERFLY VALVE	FLG	AV-TEK, VAG, OR EQUAL
4	24"	FLOW METER Is the meter spacing up and down work for both of these meters? 5 up 2 down? If not we will need to go to the 0 up o down.	FLG	ENDRESS HAUSER SERIES 400 SUBMERSIBLE RATED WITH MOD-BUS 485 INTERFACE WITH HEARTBEAT DIAGNOSTICS. MODEL 5W4C2F-AAALMP5DUA1LGA+AACBL4 OR ROSEMOUNT 8750W UTILITY MAGNETIC FLOW METER SYSTEM 8750WDEW1A1FPSAXXXCA1M4G1DWR
5	24"	CHECK VALVE	FLG	VALMATIC SWING FLEX WITH MECHANICAL DISK POSITION OR EQUAL
6	---	WALL SLEEVE W/ LINK SEAL	---	SEE DETAIL 522, SHEET D.1.7
7	---	PIPE SUPPORT	---	SEE DETAIL E, SHEET C2 (D.1.7)
8	---	SUMP AND SUMP PUMP	---	SEE DETAIL A, SHEET C5 (D.1.8)
9	---	STAINLESS STEEL LADDER	---	SEE DETAIL F, SHEET C2 (D.1.7)
10	---	LIFTING EYE	---	SEE DETAIL H, SHEET C2 (D.1.7)
11	---	HOSE BIB	---	SEE DETAIL G, SHEET C2 (D.1.7)
12	---	PRESSURE GAUGE	---	200 PSI LIQUID FILLED GLYCERIN PRESSURE GAUGE WITH 1/2" BRASS CLOSE NIPPLE, 1/2" FNPT WILKINS 700 XL DUAL CHECK VALVE AND 1/2" MIP FY-691, CHROME PLATED, SMOOTH END SAMPLING VALVE
13	54" x 48"	SECONDARY ACCESS	---	EJ CASTINGS FLUSH HS-20 TO JVWCD STANDARDS INCLUDING NYSTROM WEBBED SAFETY NET TO OSHA 29 CFR1926.502C (HINGED GRATING EXCLUDED)
14	---	VINYL WATER STOP	---	
15	---	AIR RELEASE VALVE	---	SEE DETAIL 3075, SHEET D.1.9
16	---	SUMP DISCHARGE	---	SEE DETAIL E, SHEET C4 (D.1.7)
17	---	VENT AND FAN	---	SEE DETAIL D, SHEET C4 (D.1.7) & DETAIL B, SHEET C5 (D.1.8)
18	36" x 36"	ACCESS hatches should have cover recessed padlocks. Hatches should drain to drain rock.	---	EJ CASTINGS FLUSH HS-20 TO JVWCD STANDARDS INCLUDING NYSTROM WEBBED SAFETY NET TO OSHA 29 CFR1926.502C (HINGED GRATING EXCLUDED)
19	48" x 24"	STEEL TEE	---	
20	24"	GATE VALVE	FLG	

NOTES:

1. VAULT TO BE DESIGNED FOR HS-20 TRAFFIC LOADING STRUCTURAL CONDITIONS.
2. CONCRETE TO HAVE A MINIMUM, 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
3. LADDER SHALL BE INSTALLED WITHIN 12" OF ACCESS COVER & 12" OF THE FLOOR.
4. SEAL COAT ALL BURIED EXTERIOR VAULT SURFACES WITH BITUMINOUS SURFACE COATING COMPOUND.
5. ALL VALVES AND FITTINGS TO COMPLY WITH AWWA STANDARDS.
6. SLOPE FLOOR TOWARD SUMP AT 2% MINIMUM.
7. INSTALL METER PER MANUFACTURER'S RECOMMENDATION.
8. STRUCTURAL REINFORCEMENT SUBMITTAL STAMPED BY LICENSED STRUCTURAL ENGINEER REQUIRED.
9. INSTALL FOUR LIFTING RINGS OVER PIPE AND ONE AT THE CORNER NEAR SECONDARY ACCESS.
10. ALL PIPING WITHIN THE VAULT SHALL BE EPOXY LINED AND COATED STEEL.
11. PROVIDE CLSM FLOWABLE FILL CONCRETE PIPE BEDDING FOR FIRST 10' FROM EACH SIDE OF VAULT.
12. PROVIDE INSULATING FLANGE KIT IF SOURCE LINE IS CATHODICALLY PROTECTED.

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PROJECT TITLE
THE POINT WATER LINES
DRAPER, UTAH

ISSUE TYPE: ---
ISSUE DATE: AUGUST 2024
DFCM PROJ No. UT-CV-3355-22
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SHEET TITLE
VAULT

PROFESSIONAL ENGINEER
DREW WILLIAM GEIGER
No. 10570537
STATE OF UTAH
08-08-24

SHEET NUMBER
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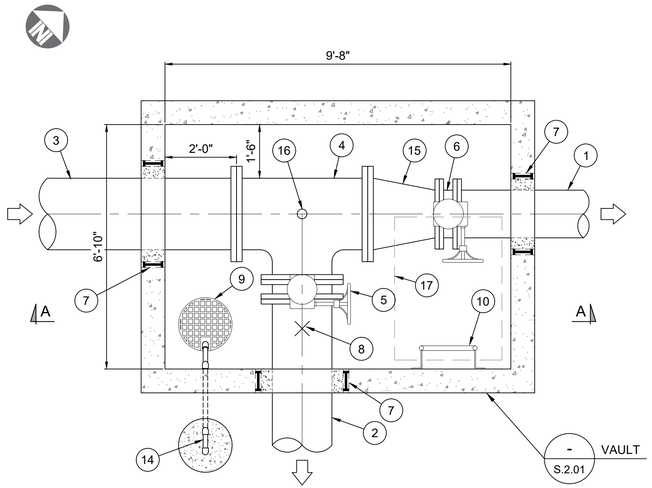
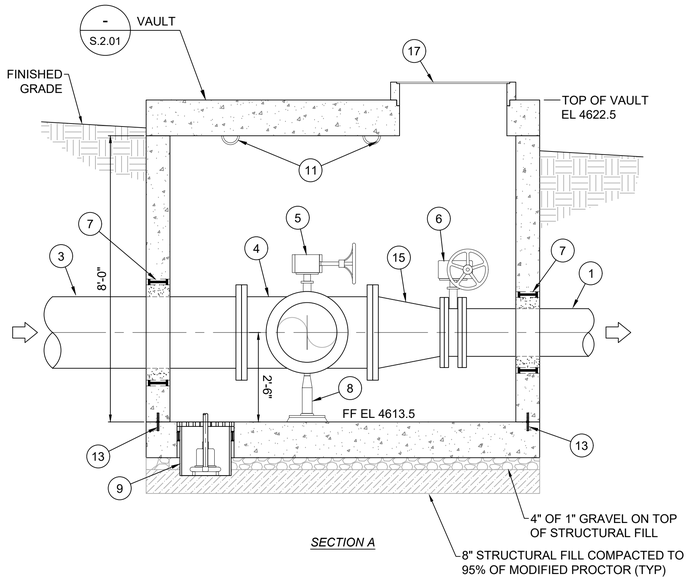
PAGE 1



PLAN VIEW



SECTION A

PUMP BUILDING - FITTING SCHEDULE				
ITEM #	SIZE	DESCRIPTION	CONNECTION	NOTES
1	16"	DI SPOOL	FLG	LENGTH VARIES
2	20"	DI SPOOL	FLG	LENGTH VARIES
3	24"	DI SPOOL	FLG	LENGTH VARIES
4	24" x 20"	DI TEE	FLG	
5	20"	DOUBLE ECCENTRIC BUTTERFLY VALVE	FLG	
6	16"	DOUBLE ECCENTRIC BUTTERFLY VALVE	FLG	
7	---	WALL SLEEVE W/ LINK SEAL	---	SEE DETAIL 505, SHEET D.1.3
8	---	PIPE SUPPORT	---	SEE DETAIL E, SHEET C2 (D.1.7)
9	---	SUMP AND SUMP PUMP	---	SEE DETAIL A, SHEET C5 (D.1.8)
10	---	STAINLESS STEEL LADDER	---	SEE DETAIL F, SHEET C2 (D.1.7)
11	---	LIFTING EYE	---	SEE DETAIL H, SHEET C2 (D.1.7)
12	---	HOSE BIB	---	SEE DETAIL G, SHEET C2 (D.1.7)
13	---	VINYL WATER STOP	---	
14	---	SUMP DISCHARGE	---	SEE DETAIL E, SHEET C4 (D.1.7)
15	24" x 16"	REDUCER	FLG	
16	---	AIR VAC	---	SEE DETAIL E, SHEET C4 (D.1.7)
17	48" x 36"	ACCESS	---	EJ CASTINGS FLUSH HS-20 TO JVWCD STANDARDS INCLUDING NYSTROM WEBBED SAFETY NET TO OSHA 29 CFR1926.502C (HINGED GRATING EXCLUDED)

NOTES:

1. VAULT TO BE DESIGNED FOR HS-20 TRAFFIC LOADING STRUCTURAL CONDITIONS.
2. CONCRETE TO HAVE A MINIMUM, 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
3. LADDER SHALL BE INSTALLED WITHIN 12" OF ACCESS COVER & 12" OF THE FLOOR.
4. SEAL COAT ALL BURIED EXTERIOR VAULT SURFACES WITH BITUMINOUS SURFACE COATING COMPOUND.
5. ALL VALVES AND FITTINGS TO COMPLY WITH AWWA STANDARDS.
6. SLOPE FLOOR TOWARD SUMP AT 2% MINIMUM.
7. STRUCTURAL REINFORCEMENT SUBMITTAL STAMPED BY LICENSED STRUCTURAL ENGINEER REQUIRED.
8. ALL PIPING WITHIN THE VAULT SHALL BE EPOXY LINED AND COATED STEEL.
9. PROVIDE CLSM FLOWABLE FILL CONCRETE PIPE BEDDING FOR FIRST 10' FROM EACH SIDE OF VAULT.

101 / - VAULT
SCALE: 1" = 2'

PROFESSIONAL ENGINEER
DREW WILLIAM GEIGER
No. 10570537
STATE OF UTAH
08-08-24

division of Facilities Construction and Management
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PROJECT TITLE

THE POINT WATER LINES

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ISSUE TYPE: ---
ISSUE DATE: AUGUST 2024
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METER VAULT

SHEET NUMBER
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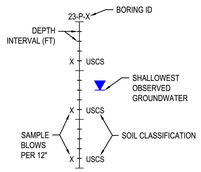
PAGE 1

GEOTECHNICAL BORING DETAIL:

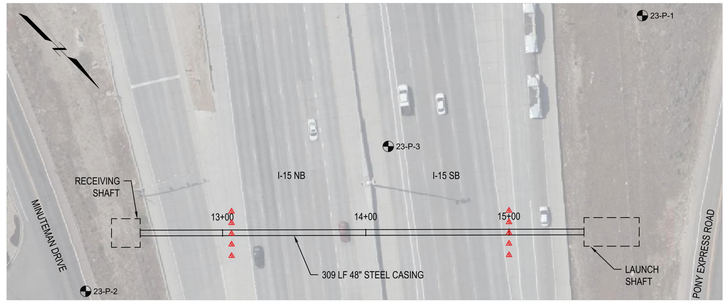


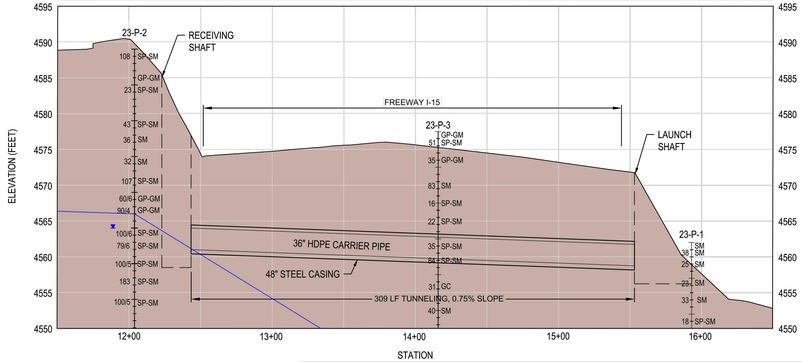
LEGEND:

- NON-COHESIVE SOIL
- BASELINE GROUNDWATER ELEVATION
- INITIAL SUPPORT
- CARRIER PIPE
- CONSTRUCTION SHAFTS

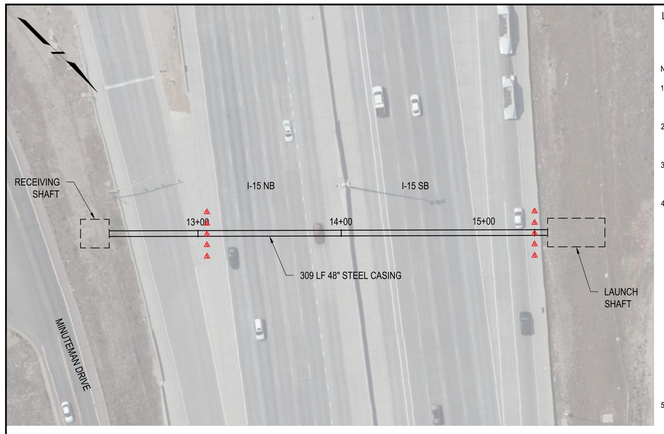
NOTES:

1. 5:1 VERTICAL EXAGGERATION
2. ALIGNMENT AND INFRASTRUCTURE ARE SHOWN AS IS IN THE CONTRACT DRAWINGS AND PROVIDED HEREIN FOR INFORMATIONAL PURPOSES ONLY.
3. GEOTECHNICAL BORINGS ARE AS SHOWN IN THE PROJECT GEOTECHNICAL INVESTIGATION REPORT (GIR) AND PROVIDED HEREIN FOR INFORMATIONAL PURPOSES ONLY. DETAILED DESCRIPTIONS OF THE BORINGS CAN BE FOUND IN THE GIR.
4. EXPLORATION DEPTHS OF 23-P-1, 23-P-2, AND 23-P-3 EXTEND BELOW THE HORIZONTAL AXIS. FOR SUBSURFACE CONDITIONS, SEE BORING LOGS IN THE GIR.





LITHOS ENGINEERING A GEI Company / GEI Consultants	881 WEST STATE RD, STE 140 - PMB #503 PLEASANT GROVE, UTAH 84062 801.743.1333
PROJECT TITLE	THE POINT - PACKAGE 3 TRANSMISSION LINE
DRAWING TITLE	BASELINE GEOLOGIC PROFILE I-15 TUNNEL
OWNER	UDOT
CLIENT	Horrocks.
PROJECT NO.	23217
DRAWN BY	DD
LOCATION	DRAPER, UTAH
DESIGNED BY	AW
DATE	07/17/2024
CHECKED BY	BC
FIGURE NUMBER	2



LEGEND:

SURFACE MONITORING POINT

NOTES:

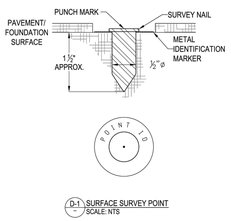
1. SITE SAFETY INCLUDING SURVEY READINGS CONDUCTED WITHIN ROADWAY SHOULDER SHALL BE AT THE INSTRUMENTATION SPECIALISTS DISCRETION. TRAFFIC CONTROL SHALL BE PROVIDED BY THE INSTRUMENTATION SPECIALIST AS NECESSARY TO CONDUCT SURVEY READINGS IN THE RIGHT OF WAY.
2. THE SURFACE MONITORING ARRAYS SHALL CONSIST OF EVENLY SPACED SURFACE SURVEY POINTS, AS SHOWN IN SECTION S-1, INSTALLED OUTSIDE OF THE TRAVEL LANES WITH PAINTED IDENTIFICATION MARKERS PLACED ON THE PAVEMENT SURFACE CORRESPONDING TO THE MONITORING ARRAY (DETAIL D-3).
3. SURFACE MONITORING POINTS AND MONITORING POINT ARRAYS SHALL HAVE MEASUREMENT READ TWICE WEEKLY DURING SHAFT CONSTRUCTION, TWICE DAILY DURING TUNNELING, AND WEEKLY AFTER COMPLETION OF THE TUNNEL UNTIL MOVEMENT BETWEEN SUCCESSIVE MEASUREMENTS IS NEGLIGIBLE AS DETERMINED BY THE ENGINEER.
4. RESPONSE VALUES FOR COLLECTED SURVEY DATA ARE AS SHOWN IN THE TABLE BELOW:

INSTRUMENTATION RESPONSE VALUES		
INSTRUMENTATION TYPE	THRESHOLD VALUE	SHUTDOWN VALUE
SURFACE MONITORING POINTS	0.02 FEET IN Z, 0.2 FEET IN ANY OF X OR Y	0.04 FEET IN Z, 0.4 FEET IN ANY X OR Y

4.1. IF A THRESHOLD VALUE IS REACHED, ALL PARTIES TO INCLUDE BUT NOT NECESSARILY LIMITED TO THE OWNER AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY BY THE INSTRUMENTATION SPECIALIST. THE CONTRACTOR SHALL MEET WITH THE OWNER, OWNER'S REPRESENTATIVE, AND/OR ENGINEER TO REVIEW COLLECTED DATA AND DETERMINE WHETHER ANY CHANGES TO THE CONSTRUCTION PROCEDURES ARE NECESSARY TO ENSURE THE SAFE COMPLETION OF THE WORK.

4.2. IF A SHUTDOWN VALUE IS REACHED, ALL PARTIES TO INCLUDE BUT NOT NECESSARILY LIMITED TO THE OWNER AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY BY THE INSTRUMENTATION SPECIALIST AND THE CONTRACTOR SHALL STOP TUNNEL WORK UNTIL MEETING WITH THE OWNER AND ENGINEER AND/OR ANY OTHER AFFECTED THIRD PARTIES OCCURS. A SEPARATE PLAN OF ACTION DIFFERING FROM THE MEANS AND METHODS UTILIZED CAUSING EXCESSIVE MOVEMENT SHALL BE ADOPTED TO HELP MITIGATE FUTURE GROUND MOVEMENT. IF THE OWNER AND ENGINEER DEEM EXCESSIVE MOVEMENT HAS OCCURRED, MITIGATION TO CORRECT THE DISPLACED SURFACE SHALL BE COMPLETED FOR THE AFFECTED STRUCTURES AT THE CONTRACTORS EXPENSE.

5. ALL MONITORING INSTRUMENTATION SHALL BE REMOVED AND RESTORED IN ACCORDANCE WITH THE OWNER'S REPRESENTATIVE'S PERMIT REQUIREMENTS AFTER THE ENGINEER HAS DETERMINED THAT ADDITIONAL SURVEY DATA IS NO LONGER REQUIRED.



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PROJECT TITLE	THE POINT - PACKAGE 3 TRANSMISSION LINE
DRAWING TITLE	INSTRUMENTATION AND MONITORING DETAILS
OWNER	Division of Facilities Construction and Management
CLIENT	Horrocks.
PROJECT NO.	240150
DRAWN BY	CN
LOCATION	DRAPER, UT
DESIGNED BY	AW
DATE	07/17/2024
CHECKED BY	BC
FIGURE NUMBER	3

NOTES:

1. 48" STEEL CASING PIPE TO HAVE A MINIMUM 5/8" (0.625) WALL THICKNESS.
2. STEEL PIPE MATERIAL TO CONFORM TO ASTM A 252 GRADE 2 STEEL AND BE MANUFACTURED SPECIFICALLY FOR JACKING. WELDS TO CONFORM TO ANSI/AWS D1.1.

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PROJECT TITLE

THE POINT WATER LINES

DRAPER, UTAH

ISSUE TYPE:	---
ISSUE DATE:	AUGUST 2024
DFCM PROJ No.	UT-CV-3355-22
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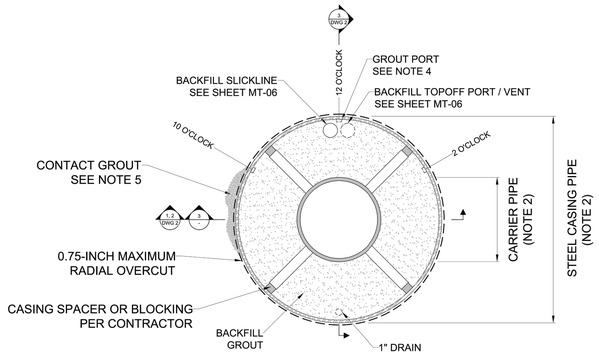
DETAILS

SHEET NUMBER

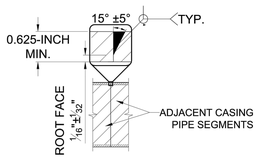
D.1.1

PROFESSIONAL ENGINEER
DREW WILLIAM GEIGER
No. 10570537
STATE OF UTAH
08-08-24

G:\2022\UT-CV-3355-22 The Point Redevelopment\Minuteman Drive_16WL\Project Data\Sheet_Files\CAD\UT-CV-3355-22_The Point_DETAILS.dwg - D.1.1 - 8/08/2024 04:07:pm, lisaj



1 - CARRIER PIPE AND INITIAL SUPPORT CROSS SECTION
36-INCH WATERLINE
NO SCALE



2 - WELDED JOINT DETAIL
NO SCALE

TUNNEL EXCAVATION & INITIAL SUPPORT NOTES

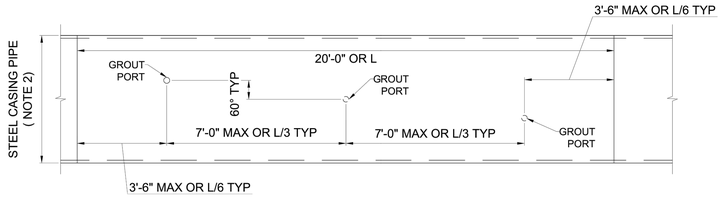
1. SPECIFICATION 31 71 00 TUNNEL EXCAVATION AND INITIAL SUPPORT PROVIDES THE ACCEPTABLE TUNNELING TECHNIQUES, THE MINIMUM SPECIFIED INITIAL SUPPORT THICKNESS, AND INSTALLATION TOLERANCES.
2. THE 36-INCH Ø WATERLINE SHALL BE HOUSED WITHIN A 48-INCH Ø STEEL CASING PIPE PER THE CONTRACT DOCUMENTS.

INITIAL SUPPORT JOINT NOTES

3. STEEL CASING SEGMENTS SHALL UTILIZE A WELDED JOINT AS INDICTED IN THE JOINT DETAIL AND SPECIFICATIONS OR T5 AS MANUFACTURED BY PERMALOK OR EQUIVALENT PER SPECIFICATION 31 71 00.

CONTACT GROUT NOTES

4. SEE SPECIFICATION 31 73 00 AND DETAIL 3.



3 - STEEL CASING GROUT PORT PROFILE
NO SCALE

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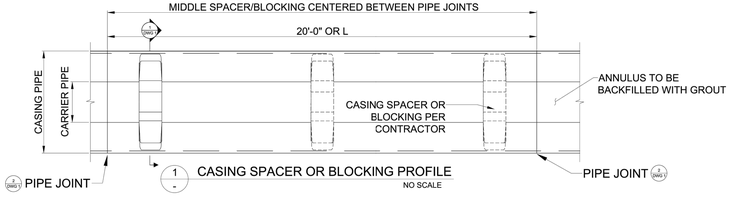
PROJECT TITLE: THE POINT - PACKAGE 3 TRANSMISSION LINE
DRAWING TITLE: TUNNEL DETAILS

OWNER: UDOT | CLIENT: Horrocks.

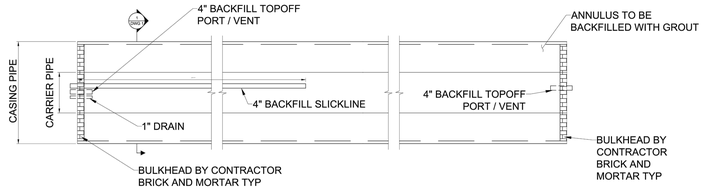
PROJECT NO.	240150	DRAWN BY	ON
LOCATION	DRAPER, UT	DESIGNED BY	AM
DATE	07/17/2024	CHECKED BY	BC

FIGURE NUMBER: **DWG 1**

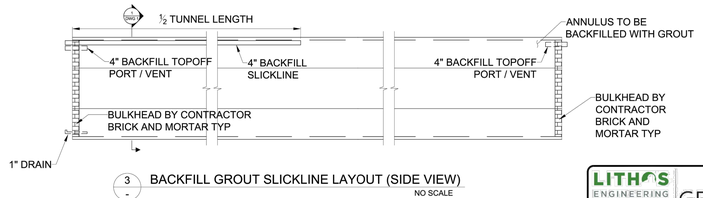
MIN 3 SPACERS/BLOCKING PER 20 FEET
8 FEET MAX BETWEEN SPACERS/BLOCKING
MIDDLE SPACER/BLOCKING CENTERED BETWEEN PIPE JOINTS



1 - CASING SPACER OR BLOCKING PROFILE
NO SCALE



2 - BACKFILL GROUT SLICKLINE LAYOUT (PLAN VIEW)
NO SCALE



3 - BACKFILL GROUT SLICKLINE LAYOUT (SIDE VIEW)
NO SCALE

CARRIER PIPE INSTALLATION AND BACKFILL GROUT NOTES

1. SEE SPECIFICATION 31 74 23 AND DETAILS 1 THROUGH 3.
2. END SEALS OF INITIAL SUPPORT SHALL BE SEALED WITH BRICK AND MORTAR OR APPROVED EQUIVALENT. END SEALS SHALL PREVENT INFLOW OF SOIL AND/OR WATER INTO THE ANNULAR SPACE.

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DRAWING TITLE: TUNNEL DETAILS

OWNER: UDOT | CLIENT: Horrocks.

PROJECT NO.	240150	DRAWN BY	ON
LOCATION	DRAPER, UT	DESIGNED BY	AM
DATE	07/17/2024	CHECKED BY	BC

FIGURE NUMBER: **DWG 2**

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DRAPER, UTAH

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DREW WILLIAM GEIGER
No. 10570537
STATE OF UTAH
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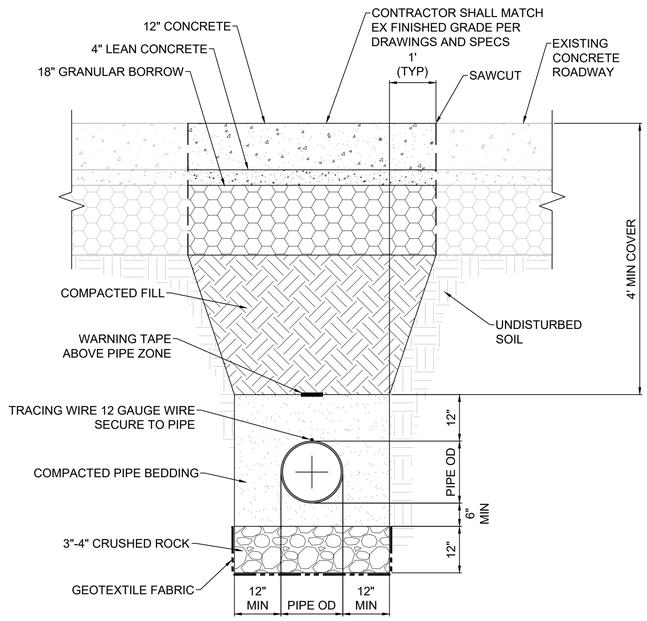
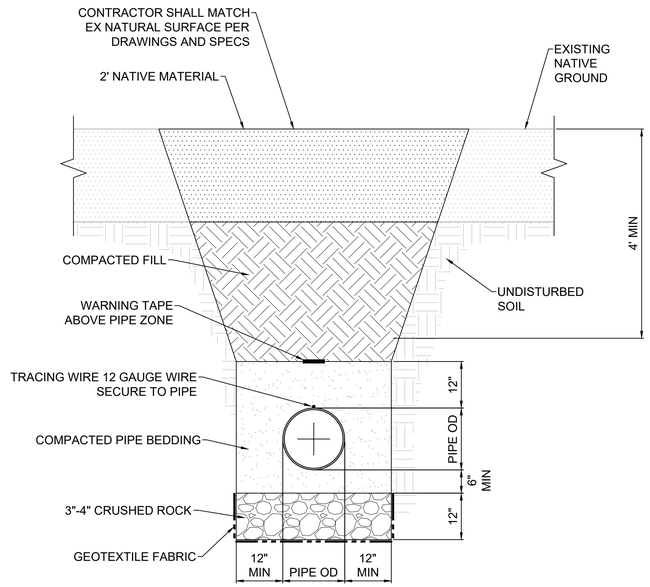
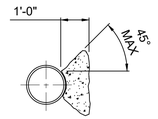
PAGE 1



501 - CONCRETE ROADWAY TRENCH SECTION
NTS

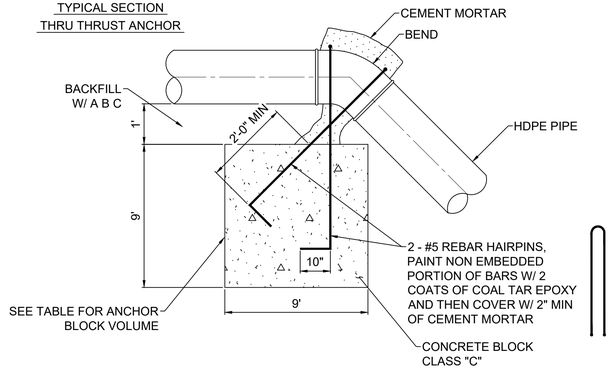


502 - NATIVE GROUND TRENCH SECTION
NTS



TYPICAL SECTION THRU THRUST ANCHOR

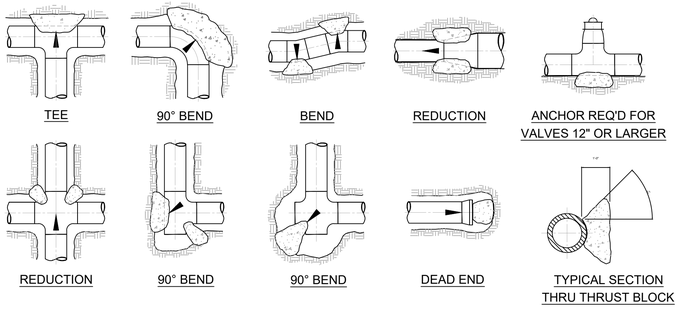
NOMINAL PIPE SIZE	VOLUME OF ANCHOR BLOCKS (CY)
4	0.75
6	1.75
8	3.00
10	5.00
12	7.00
30	27.00



NOTES:

1. ALL THRUST ANCHORS SHALL BE POURED AGAINST UNDISTURBED SOIL OR APPROVED COMPACTED BACKFILL.
2. CONCRETE SHALL BE CLASS 6.0-B-3000.
3. ALL THRUST ANCHOR SIDES SHALL BE FORMED.
4. CALCULATED ON 175 LB. TEST PRESSURE, AND SAFTEY FACTOR OF 1.5
5. DIFFERING TEST PRESSURES SHALL REQUIRE MORE OR LESS BLOCK VOLUME.
6. ANCHOR CALCULATIONS BASED ON LISTED OUTSIDE DIAMETER OF PIPE.
7. SPECIALLY DESIGNED THRUST RESTRAIN SYSTEM MAY REPLACE THRUST ANCHORS IF APPROVED BY ENGINEER.

503 - ANCHOR BLOCK FOR VERTICAL BEND
NTS



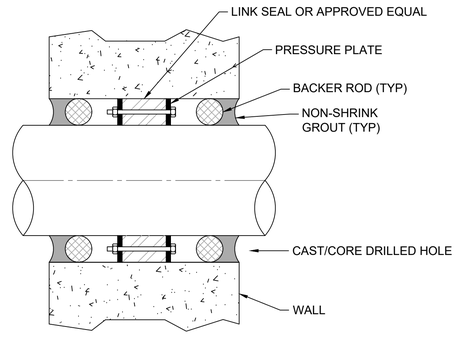
THRUST BLOCK BEARING AREA IN S.F.						
DIA.	TEE	DEAD END	90	45	22.5	11.25
4	2.1	2.1	3.0	1.6	0.8	0.4
6	4.8	4.8	6.7	3.6	1.8	0.9
8	8.5	8.5	12.0	6.5	3.2	1.6
10	13.2	13.2	18.7	10.1	5.1	2.5
12	19.1	19.1	26.9	14.6	7.3	3.6
14	26.0	26.0	36.6	19.9	9.9	5.0
16	33.9	33.9	47.8	25.9	13.0	6.5
18	42.9	42.9	60.5	32.8	16.4	8.2
20	53.0	53.0	74.7	40.5	20.2	10.1
24	190.17	190.17	190.17	55.7	14.5	3.65
30	463.14	463.14	463.14	135.65	35.25	8.9
36	962.75	962.75	962.75	281.9	73.3	18.5
42	1783.52	1783.52	1783.52	522.4	135.76	34.27

TEST PRESSURE: 225 PSI
SOIL BEARING: 2000 PSF
SAFETY FACTOR: 1.5

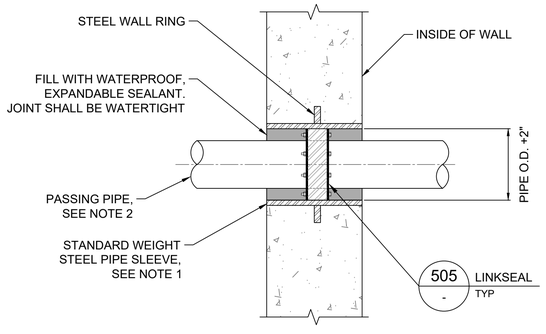
NOTES:

1. ALL THRUST BLOCK BEARING FACES SHALL BE POURED AGAINST UNDISTURBED SOIL OR APPROVED COMPACTED BACKFILL.
2. CONCRETE SHALL BE CLASS 6.0-B-3000.
3. ALL THRUST BLOCK SIDES SHALL BE FORMED.
4. CALCULATED ON 225 LB TEST PRESSURE, ALLOWABLE BEARING PRESSURE OF 2000 LB PER SQ FT, AND SAFETY FACTOR OF 1.5.
5. IN POORER SOILS SPECIAL DESIGN IS REQUIRED.

504 - THRUST BLOCK GENERAL CONDITIONS
NTS



505 - LINKSEAL DETAIL
NTS



NOTES:

1. COAT SLEEVE WITH SPECIFIED PAINT SYSTEM BEFORE CONCRETE PLACEMENT.
2. FOR PIPE DIAMETER, SEE DRAWINGS.

506 - WALL SLEEVE
NTS

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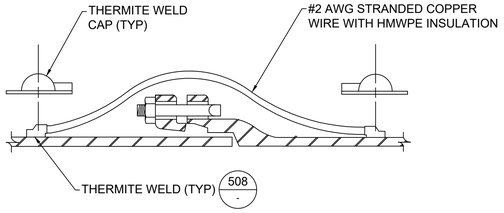
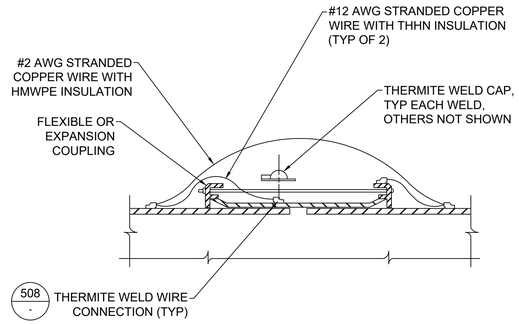
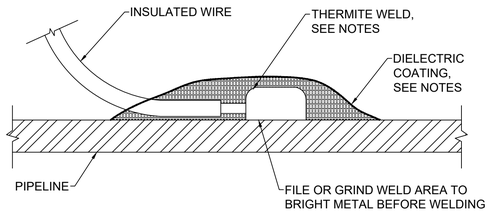


NOTES:
1. BOND SIMILAR FOR RESTRAINED AND OTHER DUCTILE IRON JOINTS.
2. INSTALL TWO BONDS AT EACH JOINT, MINIMUM, SEE SPECS FOR QUANTITY REQUIRED FOR PIPE DIAMETER.
3. SEE THERMITE WELD DETAIL FOR COATING REQUIREMENTS.

507 - DUCTILE IRON JOINT BOND
NTS



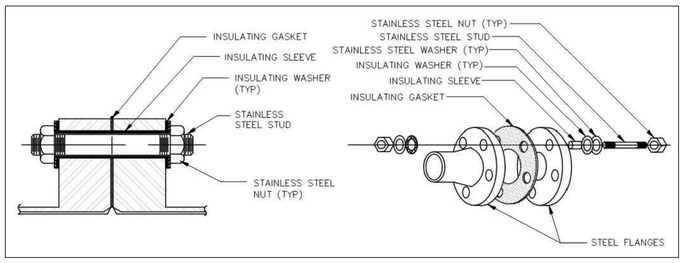
508 - FLEXIBLE JOINT BOND
NTS



NOTES:

1. MAKE WIRE CONNECTION TO PIPE AT FIELD JOINT WHERE HOLDBACK OCCURS ON PIPELINE COATING.
2. MAINTAIN SEPARATION BETWEEN MULTIPLE TEST WIRE CONNECTIONS OF ONE PIPE DIA OR 24", WHICHEVER IS LESS.
3. COPPER SLEEVE REQUIRED FOR #2 AWG JOINT BONDS OR FOR #12 AWG OR SMALLER TEST WIRES.
4. WELDER AND CARTRIDGE SIZE VARIES ACCORDING TO PIPE SIZE AND PIPE MATERIAL, SEET THERMITE WELD SCHEDULE FOR RECOMMENDED WELDER AND CARTRIDGES
5. COAT COMPLETED CONNECTIONS AS SHOWN AND SPECIFIED.
6. PIPELINE JOINT COATING NOT SHOWN FOR CLARITY.

509 - WIRE CONNECTION
NTS

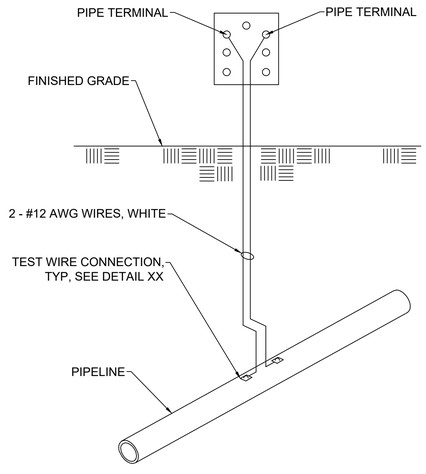


NOTES:

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

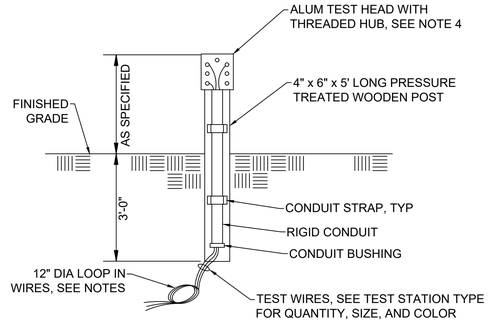
510 - FLANGE INSULATING KIT
NTS

WIRING DIAGRAM



NOTES:
1. SEE TEST STATION STYLE DETAIL AS REQUIRED BY TEST STATION SCHEDULE.
2. WHERE TEST STATION OFFSET IS REQUIRED, SEE DETAIL XX.

511 - TYPE T TEST STATION
NTS



NOTES:
1. TEST STATION TO BE ALUMINUM BODY AND LID WITH THREADED CONDUIT HUB.
2. TERMINAL QUANTITY AND WIRE CONNECTIONS VARY, SEE APPLICABLE TEST STATION TYPE DETAIL.
3. LOOP WIRE AT BASE OF POST TO MINIMIZE WIRE STRESS.
4. TESTOX SERIES 700 (RECTANGLE) OR 800 (ROUND) TEST STATION FOR TYPE T, C, I, AND A TEST STATIONS OR TESTOX SERIES 2000 TEST STATION FOR TYPE F TEST STATIONS WITH THREADED HUB.

512 - POST STYLE, WOOD POST
NTS

08-08-24

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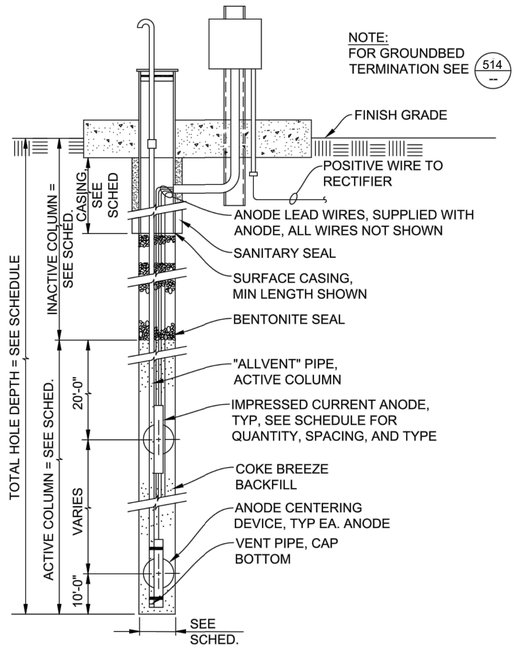
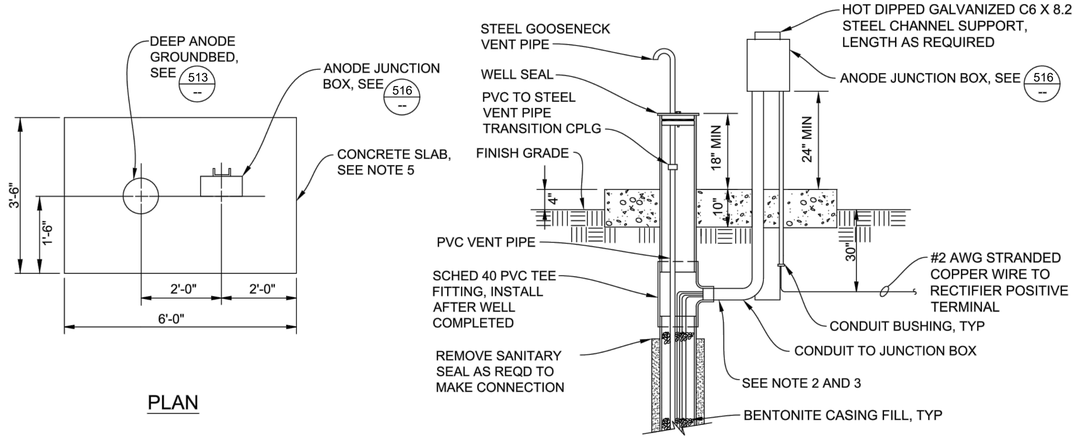
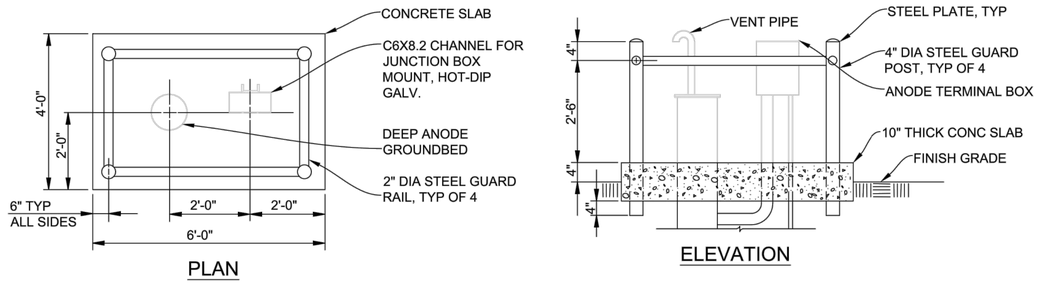


513 - TYPE 1 - DEEP ANODE GROUND BED
NTS



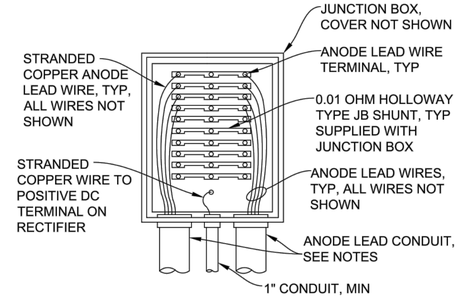
NOTES:
1. PROTECT WIRES FROM NICKS, CUTS, OR OTHER DAMAGE WHEN CUTTING CASING.
2. SEAL CONDUIT AT EACH END WITH URETHANE FOAM TO PREVENT ENTRY OF GROUNDBED GASES OR MOISTURE INTO JUNCTION BOX.
3. ALL BURIED CASING AND CONDUIT JOINTS TO BE SOLVENT WELDED FOR WATERTIGHT CONNECTIONS.
4. FINISH GRADE AWAY FROM WELL CASING.
5. FINISH CONCRETE SLAB TO DRAIN WATER OFF SLAB AND AWAY FROM ALL SURFACE MOUNTED EQUIPMENT AND SUPPORTS AND PROTECTIVE RAILS.

514 - TYPE 1 - SURFACE CASING AND TERMINATION
NTS



NOTES:
1. BOLT TWO FRONT RAILS TO GUARD POSTS AND WELD ALL REMAINING RAILS TO GUARD POSTS
2. ORIENTATION OF ANODE JUNCTION BOX TO BE DETERMINED IN THE FIELD.
3. HOT DIP GALVANIZE GUARD RAIL AND VENT PIPE AFTER FABRICATION.
4. ORIENT EQUIP TO ALLOW ACCESS DOORS TO FULLY OPEN WITHOUT OBSTRUCTION.

515 - GROUNDBED GUARD RAIL
NTS



NOTES:
1. SIZE ANODE LEAD CONDUIT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. PROVIDE ONE CONDUIT WITH UP TO 15 ANODES, TWO WITH 16 TO 30 ANODES.

516 - ANODE JUNCTION BOX
NTS

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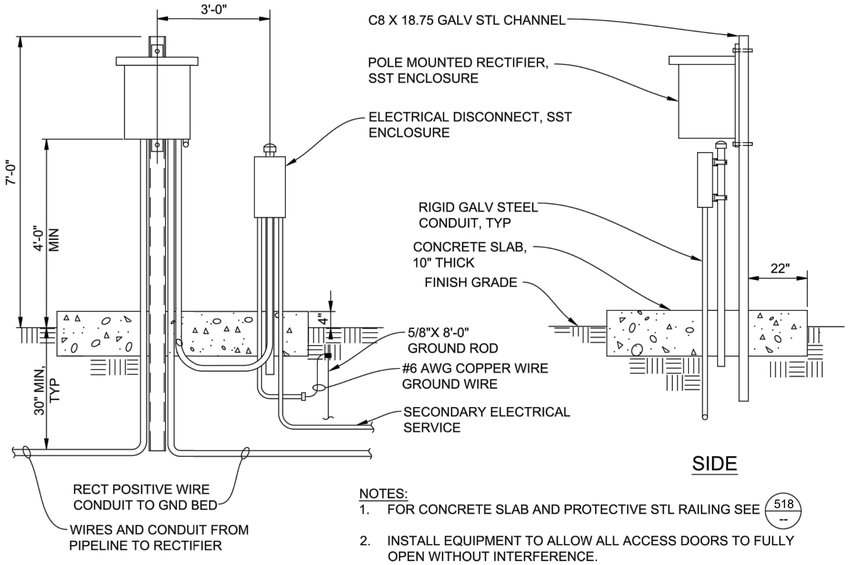
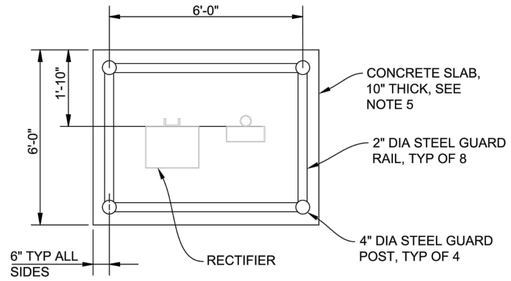


SIDE

FRONT

NOTES:
1. FOR CONCRETE SLAB AND PROTECTIVE STL RAILING SEE 518/--
2. INSTALL EQUIPMENT TO ALLOW ALL ACCESS DOORS TO FULLY OPEN WITHOUT INTERFERENCE.
3. RIGID CONDUIT SHALL BE 1-INCH DIAMETER, MINIMUM, OR AS REQUIRED BY NEC.

517/- TYPE 3 - POLE MOUNTED RECTIFIER
NTS



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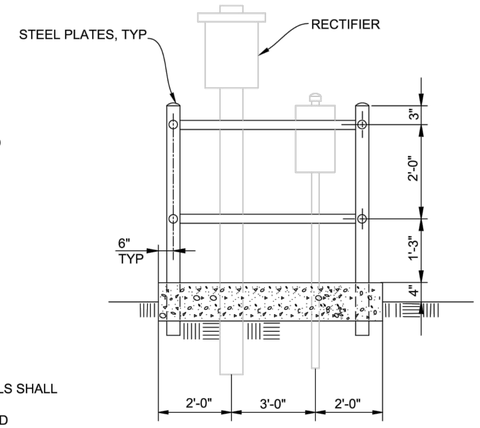
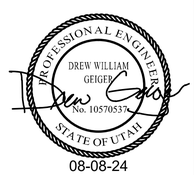


ELEVATION

NOTES:
1. ALL RAIL TO POST CONNECTIONS SHALL BE WELDED, EXCEPT BOTH FRONT RAILS SHALL HAVE BOLTED CONNECTIONS FOR REMOVAL.
2. ORIENTATION OF RECTIFIER AND AC PEDESTAL TO BE DETERMINED IN THE FIELD
3. ALL EQUIPMENT DOORS SHALL BE FULLY OPENABLE AND WITHOUT OBSTRUCTION
4. HOT DIP GALVANIZE RAILING AFTER FABRICATION.
5. FINISH CONCRETE SLAB TO DRAIN WATER OFF SLAB AND AWAY FROM ALL SURFACE MOUNTED EQUIPMENT AND SUPPORTS AND PROTECTIVE RAILS.

518/- TYPE 1 - RECTIFIER RAIL
NTS



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PROJECT TITLE
THE POINT WATER LINES

DRAPER, UTAH

ISSUE TYPE: ---
ISSUE DATE: AUGUST 2024
DFCM PROJ No. UT-CV-3355-22
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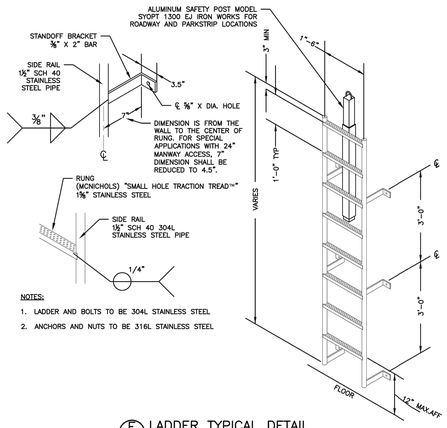
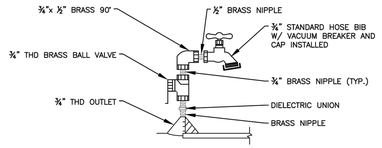


F LADDER TYPICAL DETAIL
SCALE: NTS



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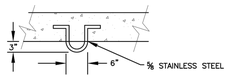
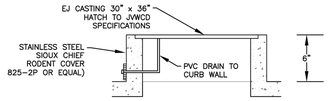
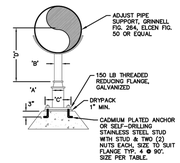


H LIFTING EYE DETAIL
SCALE: NTS



J RAISED HATCH DETAIL
SCALE: NTS



E ADJUSTABLE PIPE SUPPORT
SCALE: NTS

PIPE SUPPORT DETAIL									
PIPE SIZE	APPROX. WEIGHT lbs per 100		A	B	C	D	E		STUD SIZE
	COMPLETE	SADDLE ONLY			SQUARE		MIN.	MAX.	
AR	2020	1280	3	2 1/2	9	6 7/8	11 3/4	16 1/2	5/8

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DESIGN: DRM
DRAWING: TMP
PROJ. MGR.:
APPROVAL:
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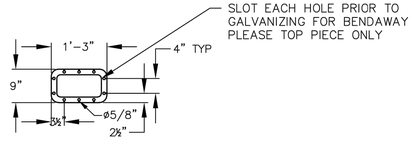
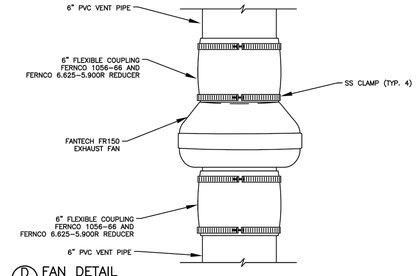
JVWCD STANDARD WHOLESALE METER VAULT TYPICAL

CIVIL / MECHANICAL DETAILS

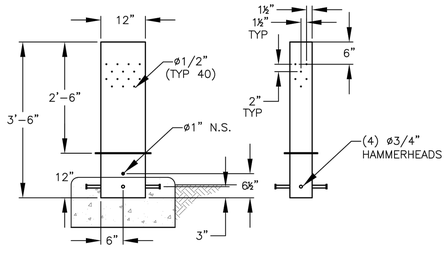
DATE 8/30/21
PROJECT NUMBER TYP
DRAWING NUMBER C2
SHEET NUMBER 4 OF 10

PARTS LIST		
ITEM	QTY	DESCRIPTION
A	1	TS 12" x 6" x 1/4" x 2'-5 3/4"
B	1	TS 12" x 6" x 1/4" x 11 7/8"
C	1	1/4" PL - 6" x 1'-0"
D	2	1/4" PL - 9" x 1'-3"
E	4	3/4" x 4" H.S.A.

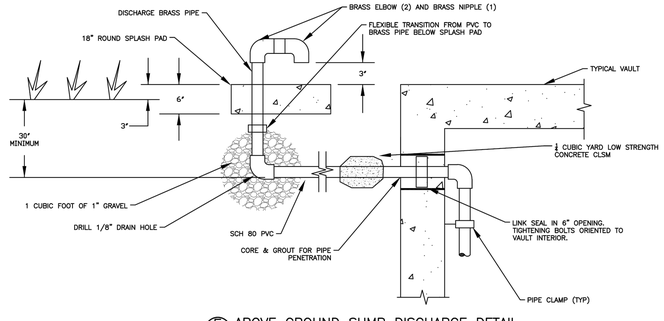




D FAN DETAIL
SCALE: NTS



C STAND PIPE FOR 2" AIR VENT
SCALE: NTS



E ABOVE GROUND SUMP DISCHARGE DETAIL
SCALE: NTS

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JVWCD STANDARD WHOLESALE METER VAULT TYPICAL

SUMP DISCHARGE AND FAN DETAILS

DATE 8/30/21
PROJECT NUMBER TYP
DRAWING NUMBER C4
SHEET NUMBER 6 OF 10

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08-08-24

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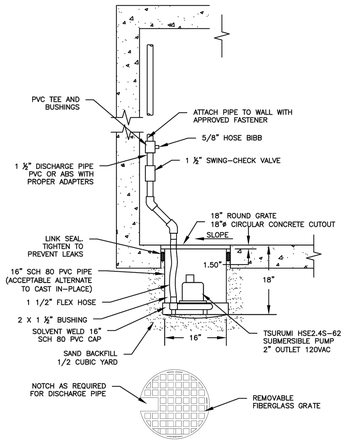
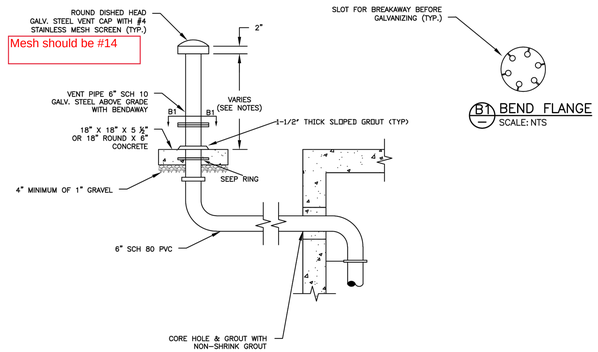


NOTES

1. INSURE FLOAT SWITCH MOVES FREELY IN SUMP BASIN WITHOUT TOUCHING BASIN WALLS.
2. AFTER INSTALLATION, RUN WATER INTO BASIN AND ALLOW PUMP TO GO THROUGH SEVERAL ON-OFF CYCLES TO ASSURE SATISFACTORY OPERATION.
3. INSTALL 2" NOTCH IN GRATE FOR SUMP DISCHARGE.
4. PROVIDE ELECTRICAL RECEPTACLE FOR SUMP PUMP 48" AFF.

A SUMP AND SUMP PUMP DETAIL
SCALE: NTS



B1 BEND FLANGE
SCALE: NTS

VENT PIPE NOTES

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

B VENT PIPE DETAIL
SCALE: NTS

1.40M

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PROJ. MGR.:
APPROVAL:

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JVWCD STANDARD WHOLESALE METER VAULT TYPICAL

SUMP DISCHARGE AND FAN DETAILS

DATE 8/30/21
PROJECT NUMBER TYP
DRAWING NUMBER C5
SHEET NUMBER 7 OF 10

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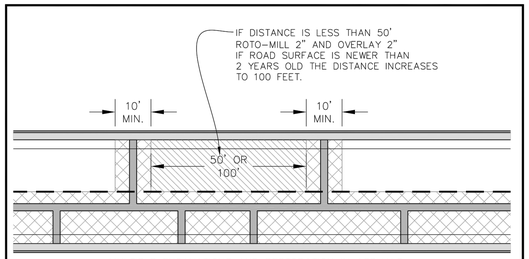
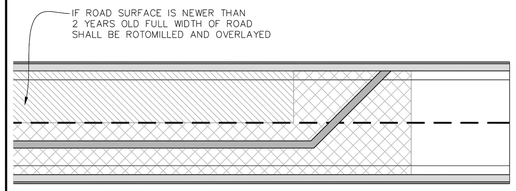


MULTIPLE EXCAVATIONS AND RESTORATION IN ASPHALT

NOTE:
RESTORATION MUST BE A MINIMUM OF 10' CURB LENGTH BY THE WIDTH OF EACH LANE EXCAVATED



LOGITUDINAL EXCAVATION AND RESTORATION IN CONCRETE

AREA OF EXCAVATION

LIMITS OF RESTORATION OF EQUIVALENT ROAD SURFACE (ROAD SURFACE OLDER THAN 2 YEARS)

LIMITS OF RESTORATION OF EQUIVALENT ROAD SURFACE (ROAD SURFACE NEWER THAN 2 YEARS)

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STREET REPAIR REQUIREMENTS

ST-19
1of2

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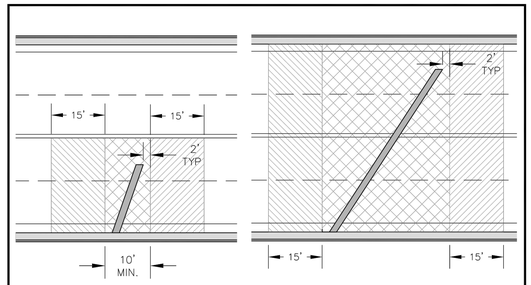
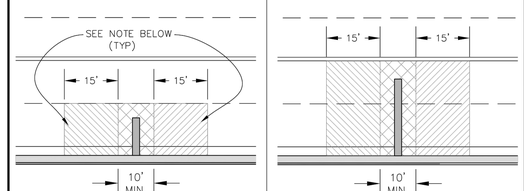


TRANSVERSE EXCAVATION AND RESTORATION



SINGLE LANE EXCAVATION AND RESTORATION

DOUBLE LANE EXCAVATION AND RESTORATION

AREA OF EXCAVATION

LIMITS OF RESTORATION

LIMITS OF OVERLAY AREA (2 YEARS OR NEWER)

NOTE:
IF ROAD SURFACE IS 2 YRS. OR NEWER, CONTRACTOR SHALL ROTO-MILL EXISTING ROADWAY DOWN 2" & DO A 2" OVERLAY ON SAID AREA

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STREET REPAIR REQUIREMENTS

ST-19
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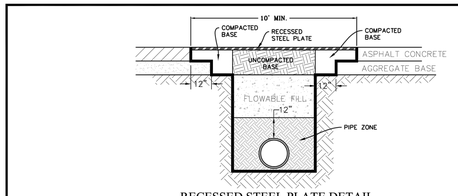
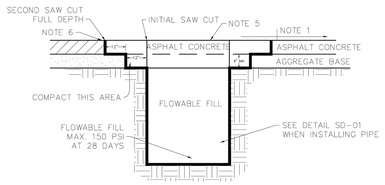


RECESSED STEEL PLATE DETAIL



EXCAVATION ASPHALT PAVEMENT

EXCAVATION GENERAL NOTES

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

2. SHORING: SHORE IN CONFORMANCE WITH SECTION 02214.

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

4. ASPHALT PAVEMENT: USE ASPHALT CONCRETE SPECIFIED IN SECTION 02513.
   A. COMPACT EACH LIFT IN CONFORMANCE WITH SECTION 02503
   B. PLANE OFF SURFACE DISTORTIONS THAT EXCEED 1/4 INCH DEVIATION IN 10 FEET.
      COAT PLANED SURFACES WITH A CATIONIC OR ANIONIC EMULSION AS APPROVED BY CITY ENGINEER.
   C. ASPHALT PAVEMENT THICKNESS DEPTH SHALL EQUAL EXISTING PLUS 1-INCH, 4" MINIMUM, 6" MAXIMUM
   D. MATCH EXISTING ASPHALT GRADATION ⅜ OR ¾

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

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

7. COMPLY WITH ALL REQUIREMENTS OF SECTION 02575.

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

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TRENCH REPAIR DETAIL

ST-21

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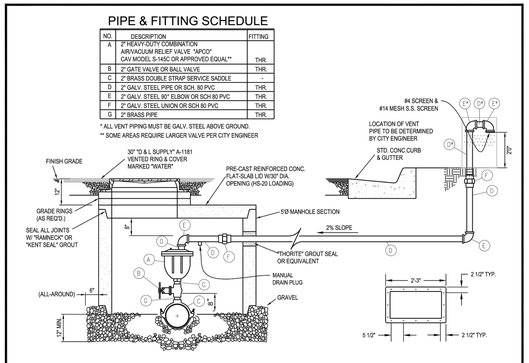
PIPE & FITTING SCHEDULE

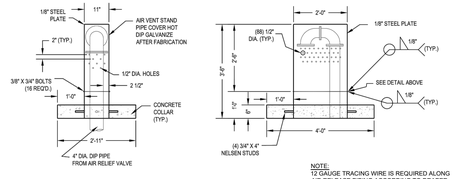
NO.	DESCRIPTION	FITTING
A	2" HEAVY-DUTY COMBINATION AIR/VACUUM RELIEF VALVE "APCO" CAV MODEL S-140C OR APPROVED EQUAL**	THR.
B	2" GATE VALVE OR BALL VALVE	THR.
C	2" BRASS DOUBLE STRAP SERVICE SADDLE	---
D	2" GALV. STEEL PIPE OR SCH. 80 PVC	THR.
E	2" GALV. STEEL 90° ELBOW OR SCH 80 PVC	THR.
F	2" GALV. STEEL UNION OR SCH 80 PVC	THR.
G	2" BRASS PIPE	THR.

* ALL VENT PIPING MUST BE GALV. STEEL ABOVE GROUND.
** SOME AREAS REQUIRE LARGER VALVE PER CITY ENGINEER



AIR/VACUUM RELIEF STATION

AIR VENT STAND PIPE



NOTE:
12 GAUGE TRACING WIRE IS REQUIRED ALONG AIR RELEASE PIPING ACCORDING TO DRAPER CITY STANDARDS AND SPECIFICATIONS

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COMBINATION AIR RELEASE & VACUUM VALVE

3075

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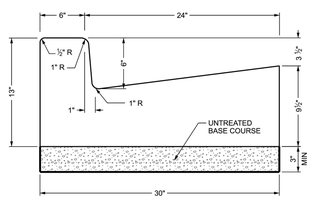

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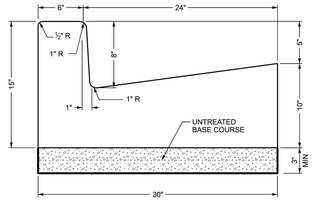

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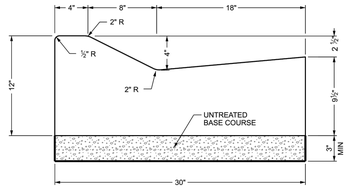
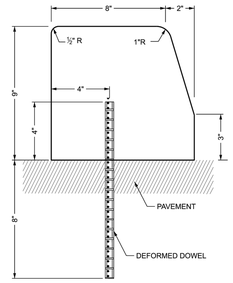
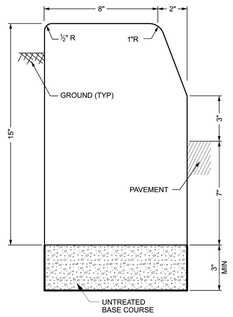


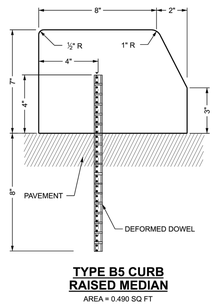
TYPE M1 CURB & GUTTER
AREA = 1.982 SQ FT



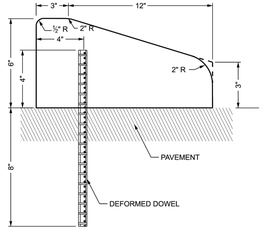
TYPE B3 CURB
AREA = 0.580 SQ FT



TYPE B4 CURB
AREA = 1.033 SQ FT



TYPE B5 CURB RAISED MEDIAN
AREA = 0.490 SQ FT



TYPE M2 CURB
AREA = 0.484 SQ FT

NOTES:

1. USE ⅝ INCH DEFORMED DOWELS ON 5 FT MAXIMUM CENTERS.
2. PRECAST CURBS:
   A. MINIMUM OF 10 FT IN LENGTH.
   B. DOWELS AT A MINIMUM OF 3 PER 10 FT LENGTH.
   C. INCLUDE ADEQUATE REINFORCING STEEL TO WITHSTAND HANDLING STRESSES.
3. MEASURE CURB HEIGHT VERTICALLY FROM THE FLOW LINE OF THE GUTTER TO TOP BACK OF CURB.
4. REFER TO STD DWG GW 2B FOR CURB AND GUTTER AT ADA ACCESSES.

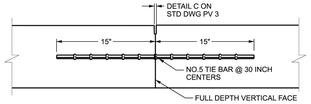
REVISIONS

	DATE	BY	DESCRIPTION
2	4/5/22	VAN	REMOVED DESIGN ONLY NOTES
1	8/31/17	CGM	LEVELED BOTTOM OF CURB AND GUTTER SECTIONS
NO.	DATE	BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH
STANDARD DRAWING EDITION
2025 Standard Drawing

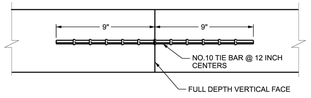
CONCRETE CURB AND GUTTER TYPES
STANDARD DRAWING TITLE

STD. DWG. NO.
GW 2A

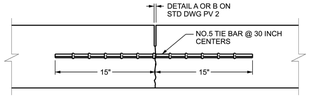


LONGITUDINAL CONTACT JOINT DETAIL "A"

NOTE: NO. 5 TIE BAR @ 15 INCH CENTERS IF DRILLED AND EPOXIED.

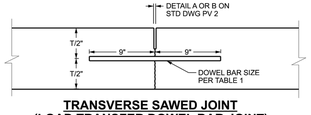


MID-PANEL CONTACT JOINT DETAIL "B"



LONGITUDINAL SAWED JOINT DETAIL "C"

(T/3 SAW CUT W/ AGGREGATE INTERLOCK BELOW)

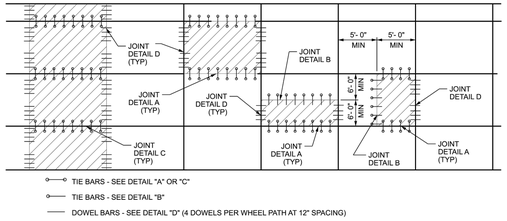


TRANSVERSE SAWED JOINT (LOAD TRANSFER DOWEL BAR JOINT) DETAIL "D"

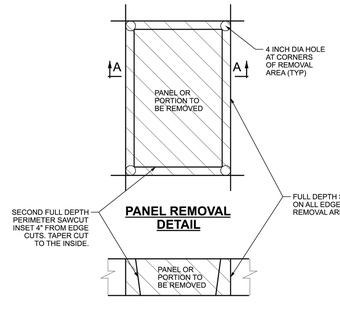
INSTALL DOWEL BARS PARALLEL TO THE CENTERLINE AND TO THE PAVEMENT SURFACE. LIMIT DEVIATIONS FROM PARALLEL TO ± ¼ INCH IN THE LENGTH OF THE DOWEL BAR.

JOINT SECTION DETAILS

TABLE 1	
PAVEMENT THICKNESS	DOWEL BAR DIAMETER
LESS THAN 9"	1"
≥ 9" AND < 11"	1.25"
11" OR GREATER	1.5"

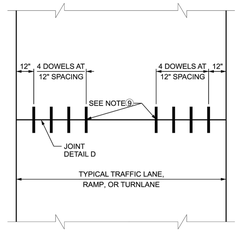


TYPICAL PAVEMENT PANEL REPLACEMENT



PANEL REMOVAL DETAIL

SECTION A-A



LOAD TRANSFER DOWEL BAR LAYOUT FOR NEW PAVEMENT

NOTES:

1. COAT ALL BARS ACCORDING TO STANDARD SPECIFICATION 03211.
2. USE DEFORMED REINFORCING BAR FOR TIE BARS.
3. USE SMOOTH DOWEL BARS.
4. MAKE FULL DEPTH SAWCUT AROUND ALL EDGES OF PANELS OR PORTIONS REPLACED. MINIMIZE OVERCUT INTO ADJACENT PANELS.
5. REPLACE THE ENTIRE PANEL WHEN REPLACING A PARTIAL PANEL IF THE WIDTH OF REMAINING PORTION IS LESS THAN THE MINIMUM SHOWN.
6. DO NOT INSTALL DOWEL BARS IN THE SHOULDERS UNLESS DIRECTED TO DO SO BY THE PROJECT SPECIFIC SPECIAL PROVISION OR PLAN SHEET.
7. PARTIAL PANEL REPLACEMENTS APPLY ONLY TO THE REHABILITATION OF EXISTING PAVEMENTS AND NOT TO PROJECTS CONSTRUCTING NEW OR ORIGINAL PAVEMENT. REPAIRS TO PAVEMENT ON NEW PROJECTS REQUIRE FULL PANEL REPLACEMENT.
8. ELIMINATE TIE BARS THAT INTERFERE WITH "LOAD TRANSFER DOWEL BARS".
9. THREE DOWELS, INSTEAD OF FOUR, AT 12 INCH SPACING UNDER EACH WHEEL PATH IS ACCEPTABLE. WHEN CONCRETE IS ON ASPHALT. REMOVE THE INSIDE DOWEL BAR IN EACH WHEEL PATH.

REVISIONS

	DATE	BY	SHEET NUMBER / CONCEPT / NOTES AND DETAIL TITLES CHANGED
1	12/20/17	EA	
NO.	DATE	BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH
STANDARD DRAWING EDITION
2025 Standard Drawing

CONCRETE PAVEMENT DETAILS 2 OF 2
STANDARD DRAWING TITLE

STD. DWG. NO.
PV 3

division of Facilities Construction and Management
4315 SOUTH 2700 WEST, FL 3
TAYLORSVILLE, UT 84129-2128
801-957-7230

Horrocks.
2162 West Grove Pkwy., Suite 100
Pleasant Grove, UT 84062
(801) 763-5100
www.horrocks.com

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

PROJECT TITLE

THE POINT WATER LINES

DRAPER, UTAH

ISSUE TYPE: ---

ISSUE DATE: AUGUST 2024

DFCM PROJ No. UT-CV-3355-22
DRAWN BY: LAJ
CHK'D BY: DWG
COPYRIGHT: ####

SHEET TITLE

DETAILS

SHEET NUMBER

D.1.10

PAGE 1

PROFESSIONAL ENGINEER
DREW WILLIAM GEIGER
No. 10570537
STATE OF UTAH
08-08-24

GENERAL REQUIREMENTS

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

REINFORCING STEEL

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

MATERIAL	SIZE	GRADE
CONCRETE	ALL SIZES	60
MASONRY	ALL SIZES	60

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

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

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

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

5. CONCRETE REINFORCING LAP SPLICES SHALL BE AS FOLLOWS:

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

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

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

REINFORCED CONCRETE

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

CONSTRUCTION	STRENGTH (PSI)	AGGREGATE	H_2O/CEMENT RATIO	SLUMP	TYPE
FOUNDATION	4,500	¾"	0.42	4"	IL (HS)
SLAB ON GRADE	4,500	¾"	0.42	4"	IL (HS)
CONCRETE WALLS	4,500	¾"	0.42	4"	IL (HS)
SUSPENDED SLAB	4,500	¾"	0.42	4"	IL (HS)
COLUMNS	4,500	¾"	0.42	4"	IL (HS)

2. DRY PACK SHALL BE COMPOSED OF 1 PART PORTLAND CEMENT AND NO MORE THAN 3 PARTS SAND.
3. PORTLAND CEMENT SHALL CONFORM TO A.S.T.M. C 595. STRUCTURAL CONCRETE AGGREGATE SHALL CONFORM TO A.S.T.M. C 33-07 FOR STANDARD WEIGHT OR C 330-05 FOR LIGHTWEIGHT.
4. ADMIXTURES MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER. ADMIXTURES USED TO INCREASE THE WORKABILITY OF THE CONCRETE SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT (CALCIUM CHLORIDE SHALL NOT BE USED). CONCRETE SHALL NOT COME IN CONTACT WITH ALUMINUM.
5. ALL CONCRETE WORK SHALL BE PLACED, CURED, STRIPPED, AND PROTECTED AS DIRECTED BY THE SPECIFICATIONS AND ACI STANDARDS AND PRACTICES.
6. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING AND FORMWORK.
7. NO CONDUIT PLACED IN A CONCRETE SLAB SHALL HAVE AN OUTSIDE DIAMETER GREATER THAN 1/3 THE THICKNESS OF THE SLAB. NO CONDUIT SHALL BE EMBEDDED IN A SLAB THAT IS LESS THAN 4 IN. THICK. WITH THE EXCEPTION OF LOCAL OFFSETS, MINIMUM CLEAR DISTANCE BETWEEN CONDUITS SHALL BE 6 IN.
8. BEFORE CONCRETE IS POURED CHECK WITH ALL TRADES TO INSURE PROPER PLACEMENT OF ALL PIPES, CONDUITS, ETC. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE FOOTINGS UNLESS SPECIFICALLY DETAILED IN THE STRUCTURAL PLANS OR AS DIRECTED BY THE ENGINEER.
9. TIE ALL INSERTS, ANCHOR BOLTS OR OTHER EMBEDDED ELEMENTS SECURELY IN PLACE PRIOR TO PLACEMENT OF CONCRETE.
10. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ALL MOLDS, GROOVES, ORNAMENT, CLIPS OR GROUNDS, REQUIRED TO BE ENCASED IN CONCRETE AND FLOOR LOCATION OF FLOOR FINISHES AND SLAB DEPRESSIONS.
11. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED.
12. A CRYSTALLINE WATERPROOFING ADDITIVE SHALL BE ADDED TO THE CONCRETE MIX TO SEAL CONCRETE AGAINST PENETRATIONS OF LIQUID FROM ANY DIRECTION. XYPEX CHEMICAL CORPORATION IS AN ACCEPTABLE MANUFACTURER FOR THIS MATERIAL. SEE SPECIFICATION 033040 FOR COMPLETE GUIDANCE ON CRYSTALLINE WATERPROOFING ADDITIVE.

STRUCTURAL SHOP DRAWINGS

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

CONSTRUCTION OBSERVATIONS

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

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

APPROVED EPOXY ANCHORING SYSTEMS

1. HILTI 'HIT-RE 500-SD' INSTALLED PER I.C.C. ESR-2322
2. SIMPSON 'SET-3G' INSTALLED PER I.C.C. ESR-4057
3. ALL EPOXY ANCHOR INSTALLATIONS SHALL COMPLY WITH THE SPECIFIED I.C.C. REPORT AND THE MANUFACTURERS RECOMMENDATIONS.
4. ALL EPOXY ANCHOR INSTALLATIONS REQUIRE SPECIAL INSPECTION.
5. ANY ALTERNATIVE TO THE ABOVE ANCHORING SYSTEMS SHALL HAVE A CURRENT I.C.C. REPORT AND BE SUBMITTED TO THE GOVERNING JURISDICTION AND THE ENGINEER OF RECORD PRIOR TO ANY INSTALLATION.

FOUNDATION

1. THE CONTRACTOR SHALL REVIEW THE SOIL REPORT 202201-026-002 BY RB&G ENGINEERING, INC., DATED OCTOBER 2023. IF THE CONTRACTOR ENCOUNTERS CONDITIONS OTHER THAN THOSE DESCRIBED IN THE SOILS REPORT, HE SHALL NOTIFY THE GEOTECHNICAL ENGINEER IMMEDIATELY BEFORE PROCEEDING WITH WORK.
2. IN THE EVENT THAT THE FOUNDATION EXCAVATIONS ARE CARRIED TO A DEPTH GREATER THAN THAT REQUIRED, THE ADDITIONAL DEPTH SHALL BE FILLED WITH THE SAME CONCRETE AS THAT USED FOR THAT FOOTING AT NO ADDITIONAL EXPENSE TO THE OWNER. NO UNCONTROLLED FILL WILL BE PERMITTED.
3. ALL EXCAVATIONS ADJACENT TO AND BELOW FOOTING ELEVATION FOR OTHER TRADES SHALL BE ACCOMPLISHED PRIOR TO POURING ANY FOOTINGS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR LATERALLY SUPPORTING ALL RETAINING TYPE FOUNDATION WALLS WHILE COMPACTING BEHIND WALLS AND UNTIL ALL SUPPORTING MEMBERS HAVE BEEN PLACED (SUCH AS FLOOR SLABS). ALL OPEN EXCAVATIONS AND TRENCHES SHALL BE SUPPORTED AND BARRICADED BY CONTRACTOR TO CONFORM WITH OSHA SAFETY STANDARDS.
5. THE FOOTING EXCAVATIONS SHALL BE KEPT FREE FROM LOOSE MATERIAL AND NO FOOTINGS SHALL BE PLACED IN WATER OR ON FROZEN GROUND.
6. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE.
7. UNLESS NOTED OTHERWISE BY THE SOILS REPORT, ALL REQUIRED BACKFILL AND ALL UTILITY TRENCHES SHALL BE COMPACTED TO AT LEAST 90% OF THE MAXIMUM DENSITY OBTAINABLE BY THE A.S.T.M. DESIGNATION D-1557 (LATEST EDITION) METHOD OF COMPACTION.
8. A COMPACTION REPORT MUST BE SUBMITTED TO AND APPROVED BY THE GOVERNING JURISDICTION PRIOR TO PLACEMENT OF ANY CONCRETE ON FILL.
9. IT IS REQUIRED THAT THE SOILS ENGINEER SUBMITS VERIFICATION TO THE GOVERNING JURISDICTION THAT FOUNDATION CONSTRUCTION IS IN ACCORDANCE WITH THE RECOMMENDATIONS AND CONCLUSIONS OF HIS REPORT.
10. PRIOR TO REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION, THE GEOTECHNICAL ENGINEER SHALL CERTIFY THAT:
    - THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOILS REPORT.
    - THE ACTUAL SOIL CONDITIONS ARE CONSISTENT WITH THE ASSUMPTIONS MADE IN THE SOIL REPORT.
    - THE FOUNDATION EXCAVATIONS ARE TO THE PROPER DEPTH OR BEARING STRATA.

EXCAVATION AND STRUCTURAL FILL

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

STRUCTURAL FILL:
- 3-INCH MINUS GRANULAR SOIL
- 70 – 100% PASSING ¾-INCH SIEVE
- 5 – 20% PASSING NO. 200 SIEVE
- MOISTURE CONDITIONED ±2% FROM OPTIMUM MOISTURE CONTENT
- PLACED IN LOOSE LIFTS ≤ 8 INCHES THICK
- BELOW FOUNDATIONS: COMPACTED TO AT LEAST 95% OF THE MAXIMUM LABORATORY DENSITY DETERMINED BY ASTM D1557 (MODIFIED PROCTOR)
- ADJACENT TO STRUCTURES, BUT NOT BELOW FOUNDATIONS: COMPACT TO AT LEAST 90% OF THE MAXIMUM LABORATORY DENSITY

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

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

BUILDING CRITERIA

GOVERNING CODE	2021 INTERNATIONAL BUILDING CODE
STATE OF REGISTERED ENGINEER STAMP	UT
OCCUPANCY CATEGORY	IV
GRAVITY DESIGN DATA-RESERVOIR	TRAFFIC LIVE LOAD = H-10 TOP SLAB LIVE LOAD = 100 PSF
WIND DESIGN DATA	NONE
SNOW DESIGN DATA	Pg = 35 psf Is = 1.2
SEISMIC DESIGN INFO	I = 1.5 Soil Site Class C Ss = 1.66 and S1 = 0.55 Fa = 1.01 and Fv = 1.4 Sds = 1.12 and Sd1 = 0.52 Design Category D PIPE SUPPORT SEISMIC COEFFICIENTS FOR OTHER MECHANICAL OR ELECTRICAL COMPONENETS ap = 1.0 AND Rp=1.5
FLOOD DESIGN DATA	NONE
SOILS DESIGN DATA-RESERVOIR	ALLOWABLE BEARING PRESSURE = 4500 PSF COEFFICIENT OF FRICTION = 0.45 ACTIVE PRESSURE = 35 PCF AT-REST PRESSURE = 56 PCF ALLOWABLE PASSIVE PRESSURE = 437 PSF SEISMIC-ACTIVE PRESSURE = 39 PCF SEISMIC-PASSIVE PRESSURE REDUCTION = 100 PCF
SOILS REPORT	THE POINT WATER TANK STORAGE TANKS -- 202201-026-002 OCTOBER 2023 - RB&G ENGINEERING, INC.

ABBREVIATIONS

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

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

PROFESSIONAL ENGINEER — No. 9206167-2202 — KIRK WINEGAR — STATE OF UTAH
08 / 08 / 2024

PROJECT TITLE
THE POINT
ADDITIONAL WATER LINES
DRAPER, UTAH

ISSUE TYPE:		---
ISSUE DATE:		AUG 2024
DFCM PROJ No.		UT-CV-3355-22
DRAWN BY:		GL
CHK'D BY:		BB
COPYRIGHT:		2024

SHEET TITLE
GENERAL NOTES I

SHEET NUMBER
S.0.01

PAGE PAGE #

STATEMENT OF SPECIAL INSPECTION

1. PROVIDE SPECIAL INSPECTIONS IN ACCORDANCE WITH THE APPROPRIATE SECTIONS OF CHAPTER 17 OF THE BUILDING CODE FOR THE ITEMS SHOWN IN THE TABLE BELOW ALONG WITH ANY ADDITIONAL INSPECTIONS AS REQUIRED BY THE OWNER, BUILDING OFFICIAL, ENGINEER OR ARCHITECT AS THEY SEE FIT.

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL.

3. WHERE SPECIAL INSPECTION IS REQUIRED, IT MUST BE PERFORMED BY A CERTIFIED SPECIAL INSPECTOR EMPLOYED BY THE OWNER & APPROVED BY THE BUILDING OFFICIAL. THE SPECIAL INSPECTOR SHALL DEMONSTRATE COMPETENCE FOR THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION TO THE BUILDING OFFICIAL AND STRUCTURAL ENGINEER, PER SECTION 1704.2.1 OF THE BUILDING CODE. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE GOVERNING JURISDICTION TO PERFORM THE TYPES OF INSPECTIONS SPECIFIED.

   PROVIDE SPECIAL INSPECTION REPORTS TO THE STRUCTURAL ENGINEER WITHIN 7 DAYS FROM THE DAY OF INSPECTION.

4. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE SPECIAL INSPECTOR SHALL FURNISH COPIES OF INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO HORROCKS ENGINEERS FOR REVIEW WITHIN SEVEN (7) DAYS OF THE WORK. EACH REPORT SHALL BE SIGNED BY A LICENSED ENGINEER OR ARCHITECT. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED TO THE BUILDING OFFICIAL AND HORROCKS ENGINEERS. HORROCKS ENGINEERS SHALL BE NOTIFIED IMMEDIATELY OF ANY TEST WHICH INDICATES NON-COMPLIANCE WITH APPLICABLE CODES OR REQUIREMENTS OF THESE PLANS, PER SECTION 1704.2.4 OF THE BUILDING CODE.

5. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTORS KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE, TO THE BUILDING OFFICIAL AND TO HORROCKS ENGINEERS, PER SECTION 1704.2.4 OF THE BUILDING CODE.

6. AN APPLICATION OF OFF-SITE FABRICATION MUST BE SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO FABRICATION.

7. A CERTIFICATE OF COMPLIANCE FOR OFF-SITE FABRICATION MUST BE COMPLETED AND SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO ERECTION OF PREFABRICATED COMPONENTS. SPECIAL INSPECTION REQUIRED PER SECTION 1704.2.5 OF THE BUILDING CODE.

8. SPECIAL INSPECTION OF SHOP FABRICATION AND SHOP WELDING IS NOT REQUIRED FOR CERTIFIED FABRICATOR AS REQUIRED BY THE STRUCTURAL STEEL SECTION OF THE GENERAL STRUCTURAL NOTES.

9. THE CONSTRUCTION INSPECTIONS LISTED ARE IN ADDITION TO THE CALLED INSPECTIONS REQUIRED BY SECTION 110 OF THE BUILDING CODE. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY A CITY INSPECTOR. SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR COVERED WITHOUT APPROVAL OF THE CITY INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE.

10. SPECIAL INSPECTION TABLES:

DIVISION OF FACILITIES CONSTRUCTION & MANAGEMENT

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

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

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

FABRICATORS (IBC 1704.2.5.1 & 1705.10)

☐ Approved Fabricator	Yes	No

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

STRUCTURAL STEEL (IBC 1705.2.1, 1705.12.1 & 1705.13.1)

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

CONCRETE CONSTRUCTION (IBC 1705.3 & 1705.12.1)

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

SOILS CONSTRUCTION (IBC 1705.6)

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

Special Inspectors Shall:

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

DIVISION OF FACILITIES CONSTRUCTION & MANAGEMENT

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

Nonstructural Component Checklist

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

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

Last Revised: 10/2016

NONSTRUCTURAL COMPONENT CHECKLIST

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

NOTES:

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

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division of Facilities Construction and Management
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PROFESSIONAL ENGINEER — No. 9206167-2202 — KIRK WINEGAR — STATE OF UTAH
08 / 08 / 2024

PROJECT TITLE

THE POINT

ADDITIONAL WATER LINES

DRAPER, UTAH

ISSUE TYPE:	---
ISSUE DATE:	AUG 2024
DFCM PROJ No.	UT-CV-3355-22
DRAWN BY:	GL
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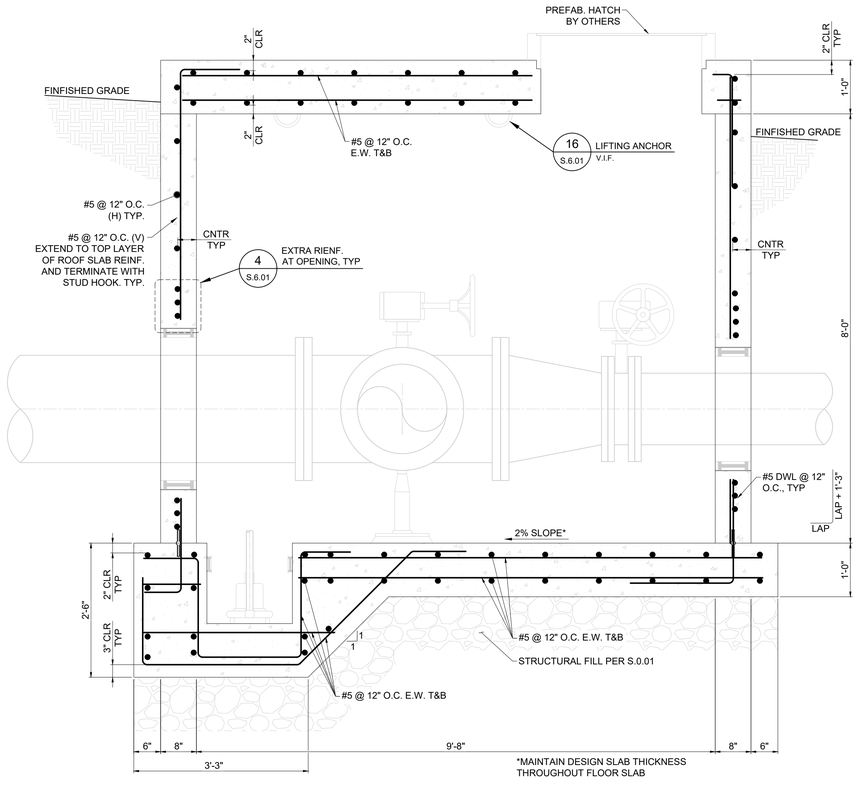
SHEET TITLE

GENERAL NOTES II

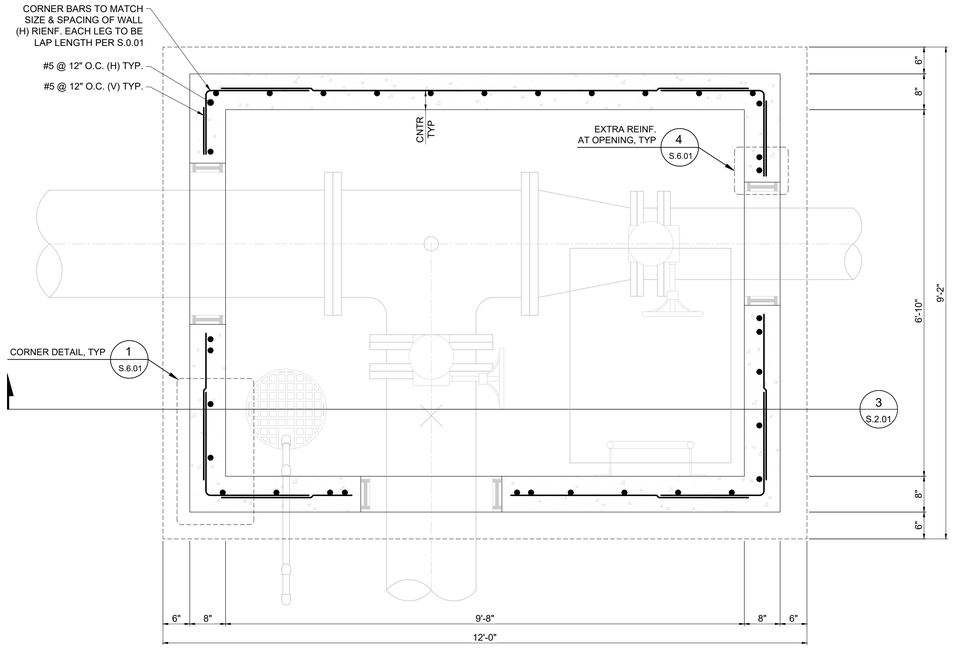
SHEET NUMBER

S.0.02

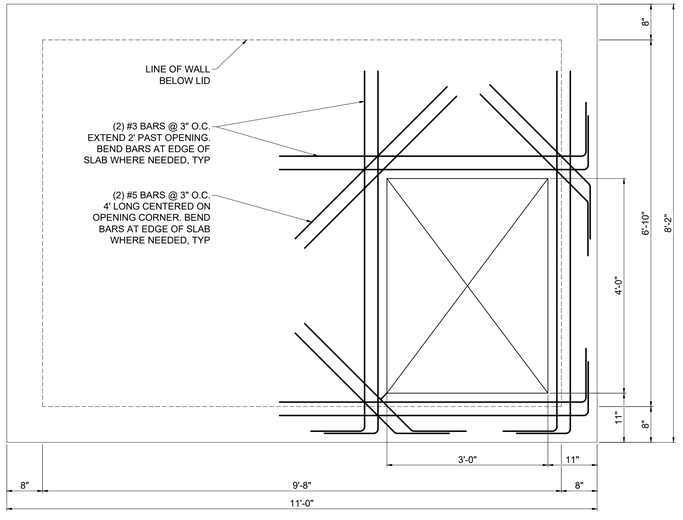
PAGE PAGE #



3 S.2.01 VAULT SECTION VIEW
SCALE: 3/4"=1'-0"



1 S.2.01 VAULT PLAN VIEW
SCALE: 3/4"=1'-0"



2 S.2.01 VAULT LID PLAN VIEW
SCALE: 3/4"=1'-0"

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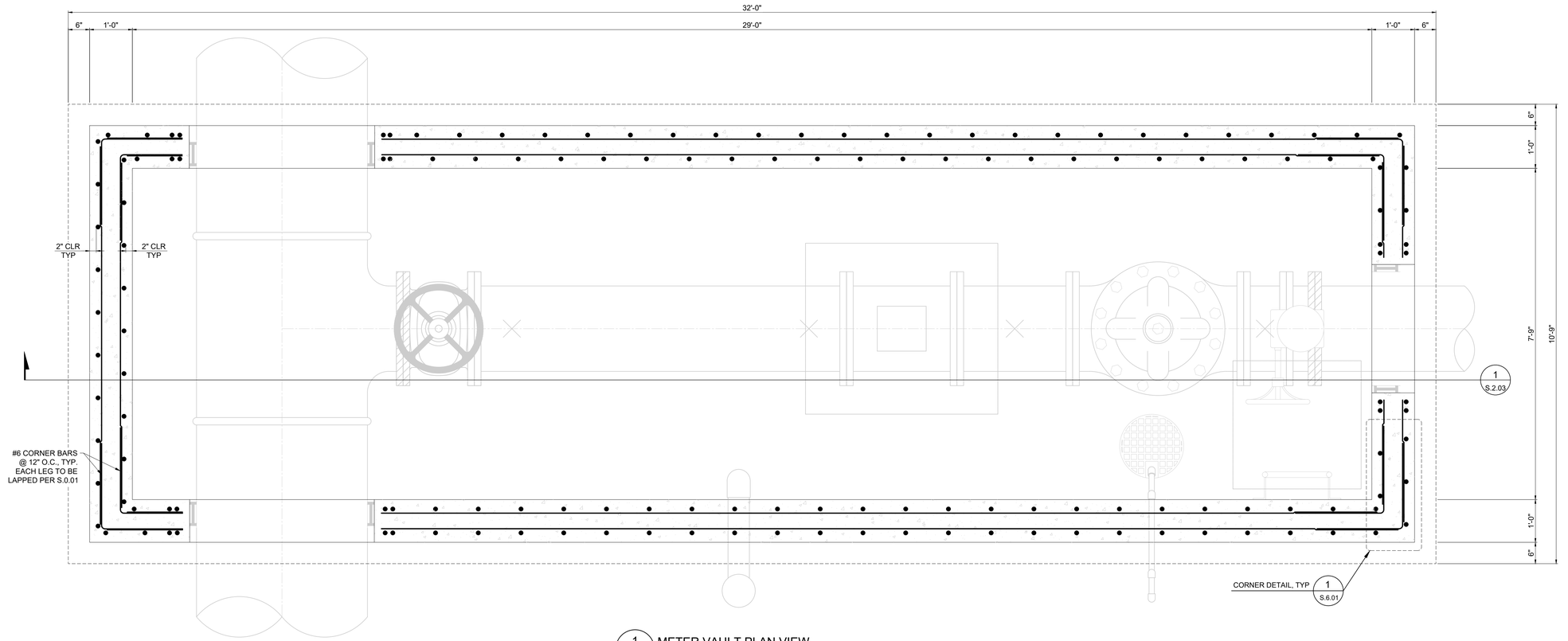
VAULT PLANS AND SECTIONS

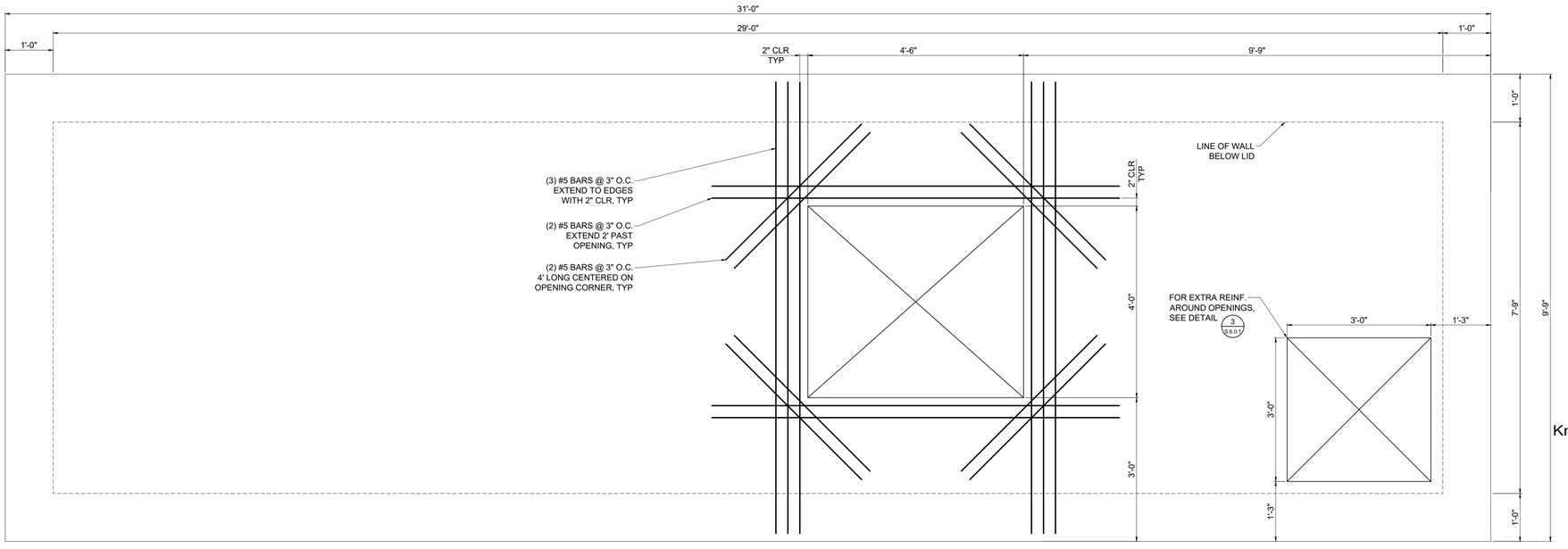
SHEET NUMBER

S.2.01

PAGE PAGE #



1 S.2.02 METER VAULT PLAN VIEW
SCALE: 1/2"=1'-0"



2 S.2.02 MERER VAULT LID
SCALE: 1/2"=1'-0"

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METER VAULT PLANS

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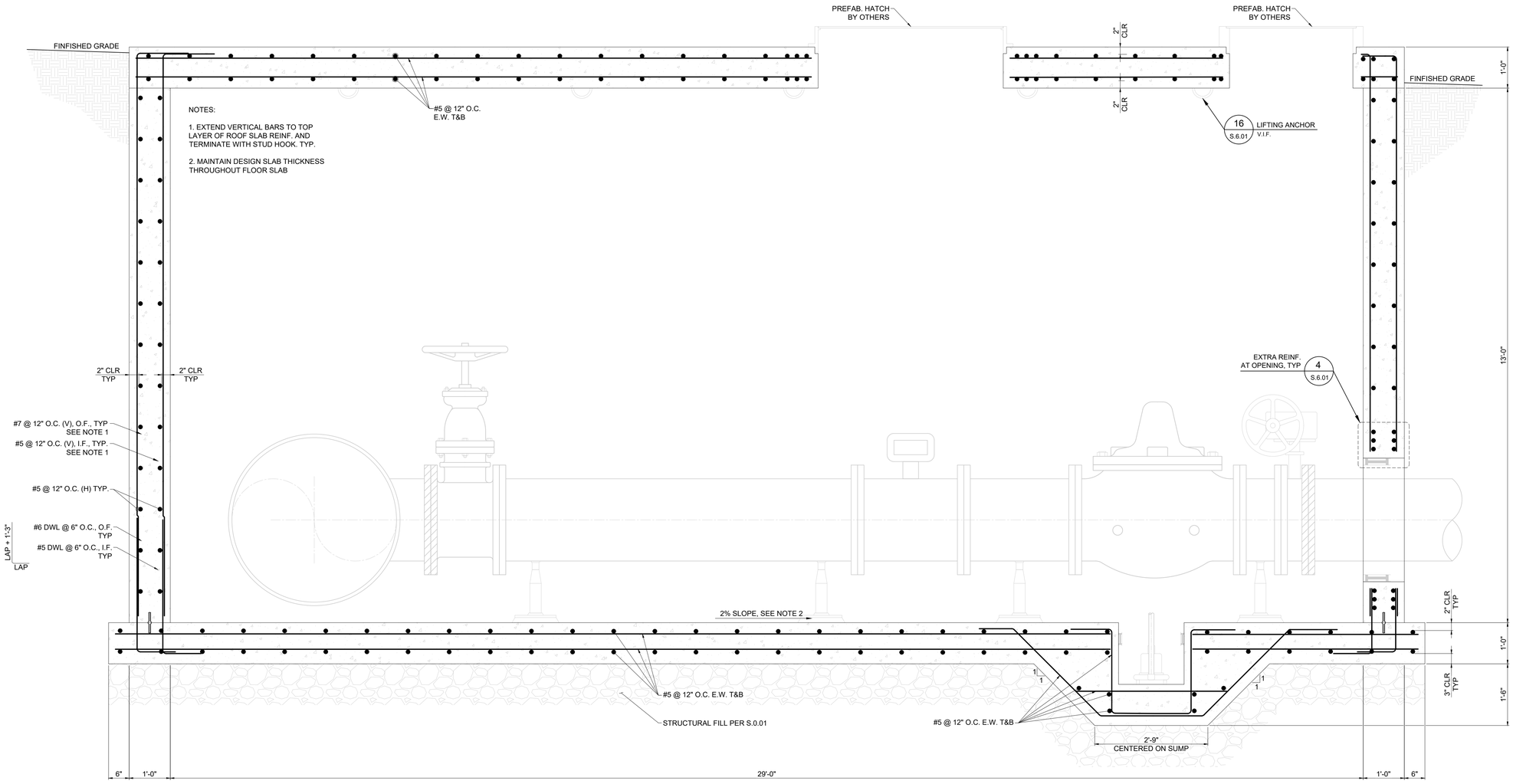

1 S.2.03 METER VAULT SECTION VIEW

SCALE: 3/4"=1'-0"

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METER VAULT SECTIONS

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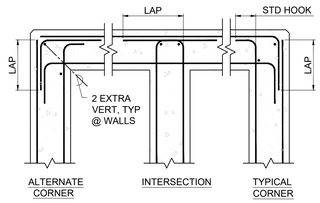
S.2.03

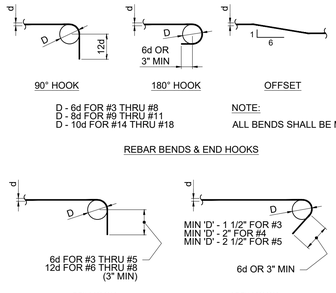
PAGE PAGE #



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

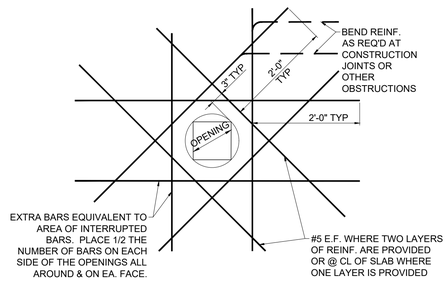
NOTE: WHERE SINGLE LAYER OF REINFORCING OCCURS, BEND STEEL AS SHOWN FOR OUTSIDE BARS.

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

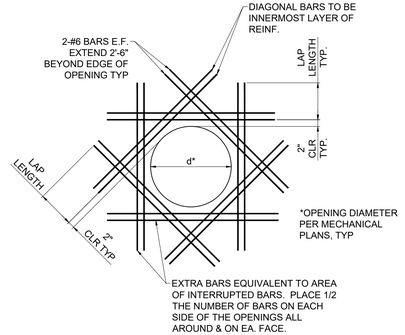


2 S.6.01 TYPICAL REBAR HOOKS AND BENDS
SCALE: 3/4"=1'-0"

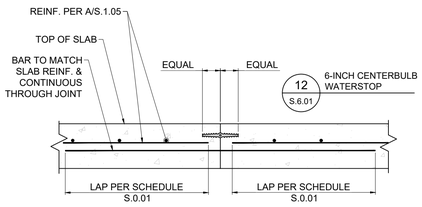
NOTE:
1. DETAIL FOR SQUARE OPENINGS



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

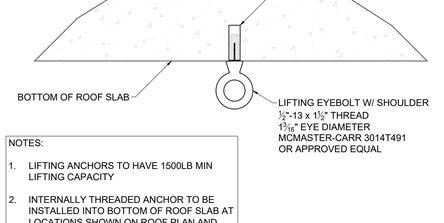


4 S.6.01 TYP REINF AT CIRCULAR OPENINGS
SCALE: 3/4"=1'-0"

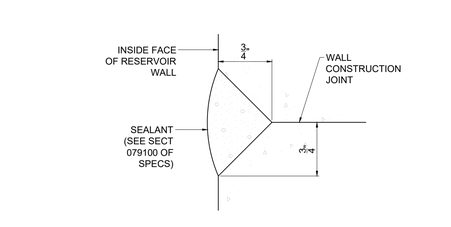


5 S.6.01 ALTERNATE FLOOR SLAB CONSTRUCTION JOINT
SCALE: 1"=1'-0"

NOTE:
1. DISCONTINUE ALL REINFORCING AT JOINT.



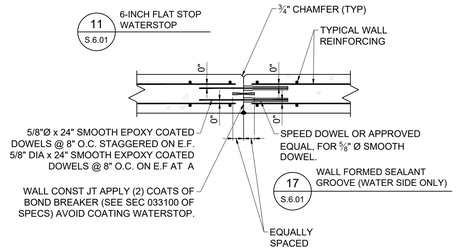
6 S.6.01 EXPANSION JOINT DETAIL
SCALE: 1-1/2"=1'-0"



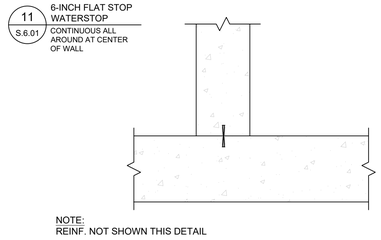
7 S.6.01 FLOOR SLAB CONSTRUCTION JOINT
SCALE: 1"=1'-0"

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

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



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

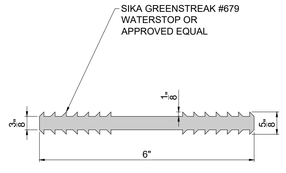


NOTE:
REINF. NOT SHOWN THIS DETAIL

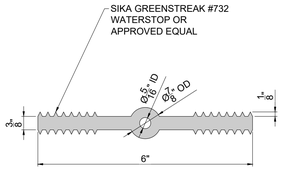
10 S.6.01 STRUCTURAL CONSTRUCTION JOINT
SCALE: 1" = 1'-0"

NOTE:
1. ALL CRACKS IN FLOOR SLABS WALLS & ROOF SLABS SHALL BE REPAIRED PER DETAIL OR AS INSTRUCTED BY THE DISTRICT ENGINEER PRIOR TO FILLING THE RESERVOIR WITH WATER.

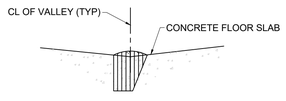
NOTE:
1. AT CONTRACTORS OPTION, SEALANT GROOVES MAY CONTINUE STRAIGHT ACROSS CONSTRUCTION JOINT INTERSECTION OR BE STAGGERED UPON APPROVAL BY THE ENGINEER.
2. NO BOND BREAKER WHERE SEALANT GROOVE IS CONSTRUCTED.



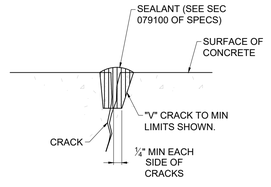
11 S.6.01 6-INCH FLAT STRIP WATERSTOP
SCALE: 6" = 1'-0"



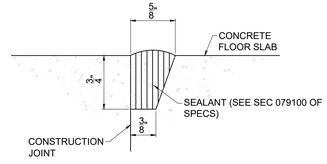
12 S.6.01 6-INCH CENTERBULB WATERSTOP
SCALE: 6" = 1'-0"



13 S.6.01 VALLEY
SCALE: NONE



14 S.6.01 CRACK REPAIR
SCALE: NONE



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

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

16 S.6.01 LIFTING ANCHOR DETAIL
SCALE: 3"=1'-0"

NOTES:
1. SEALANT GROOVE TO EXTEND FROM TOP OF WALL FOOTING TO BOTTOM OF 6" FILLET, INSIDE WALL CONSTRUCTION JOINTS ONLY.
2. PROVIDE ¾" CHAMFER IN CONCRETE AROUND PIPE PENETRATION. USE SEALANT ABOVE TO SEAL AROUND PIPE AFTER IT HAS BEEN PAINTED.

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

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STRUCTURAL DETAILS I

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