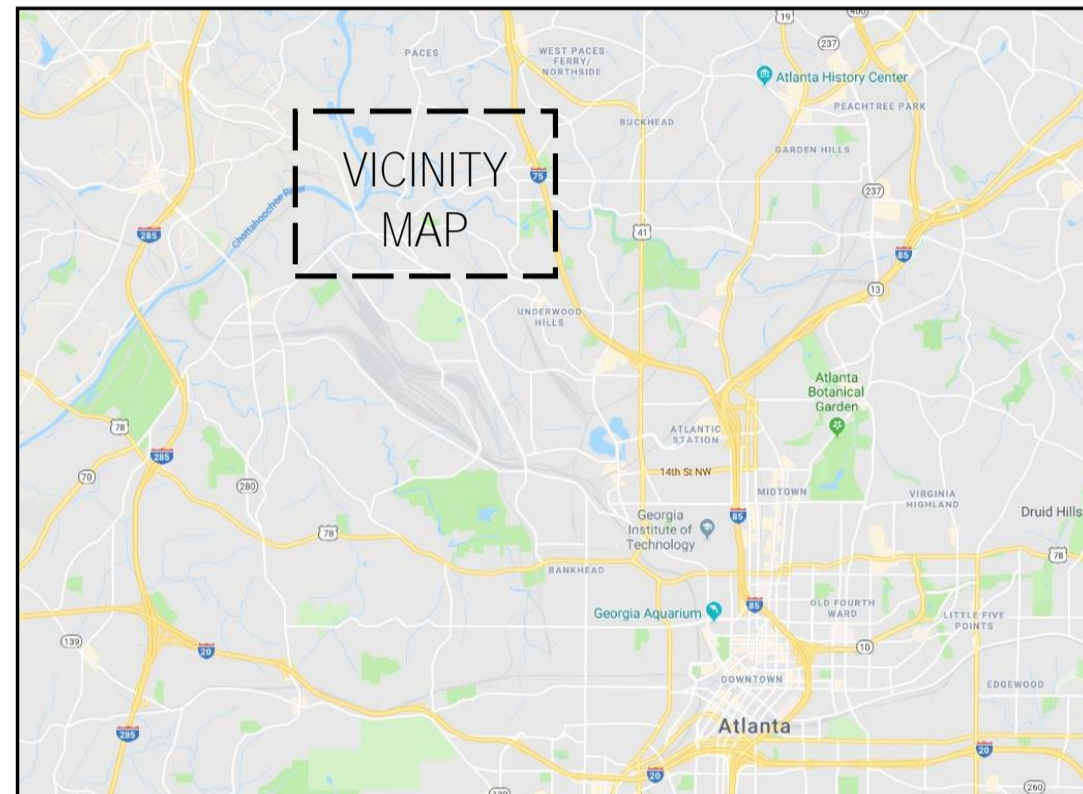


CITY OF ATLANTA

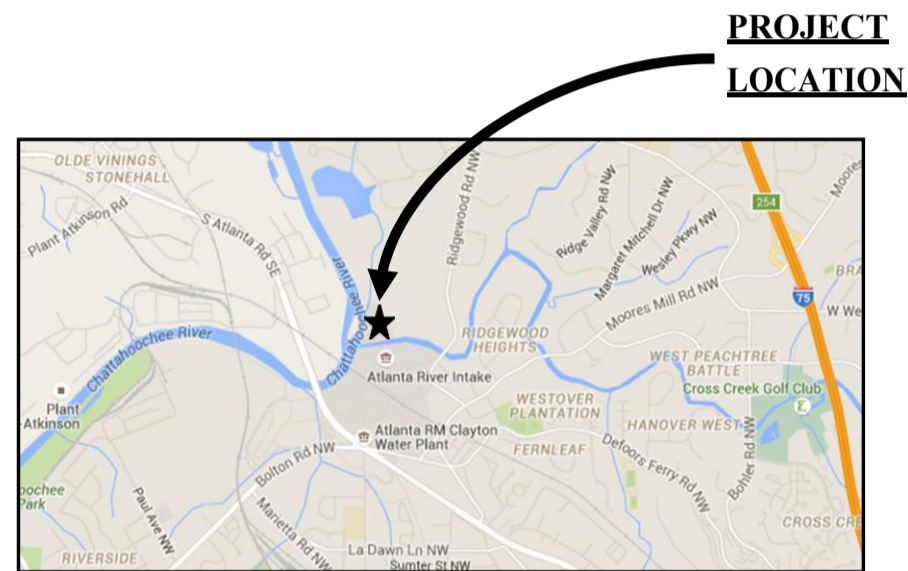
DEPARTMENT OF WATERSHED MANAGEMENT

Water Supply Program

CHATTAHOOCHEE FLOW CONNECTION



LOCATION MAP
NTS



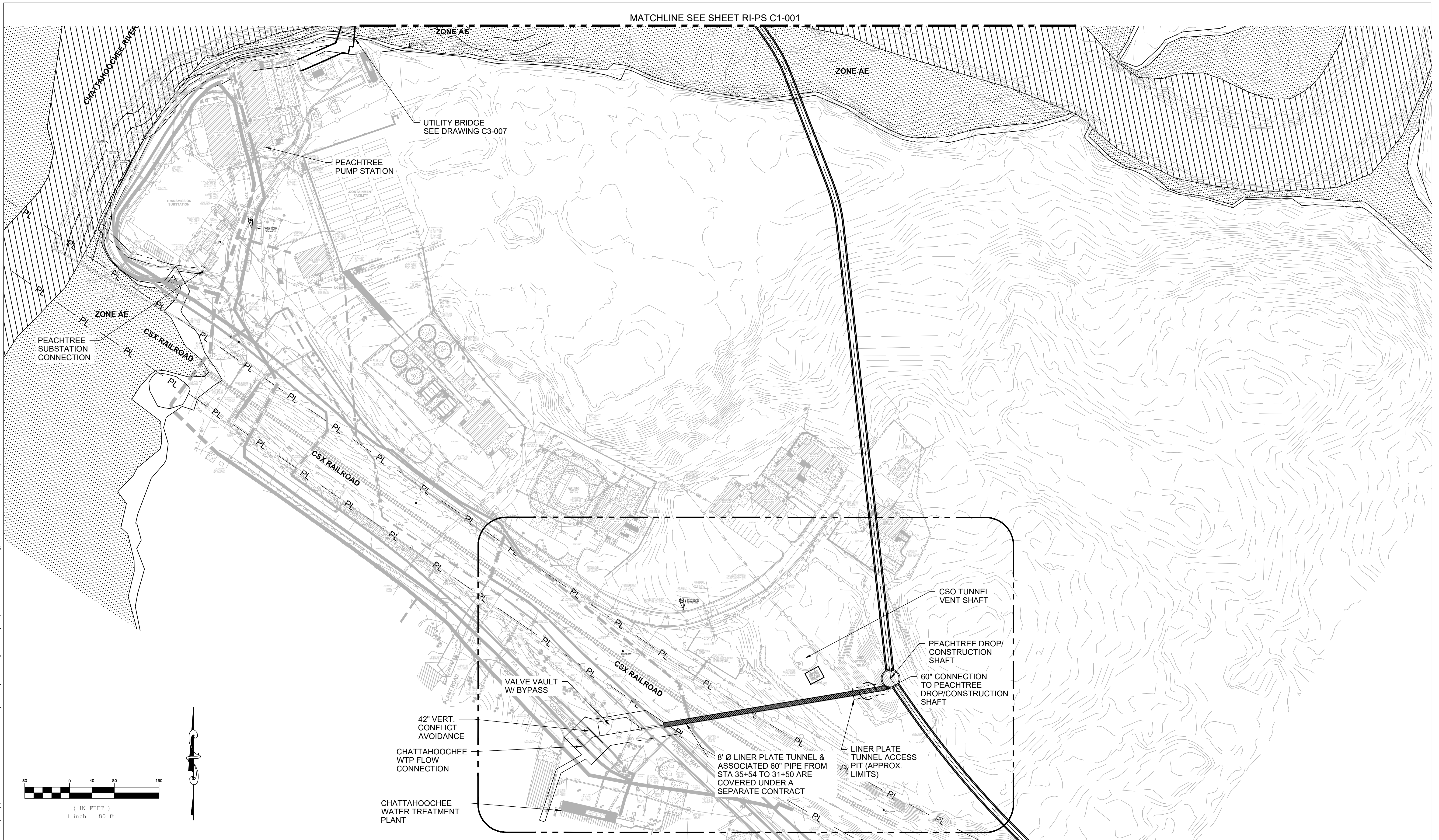
VICINITY MAP
NTS



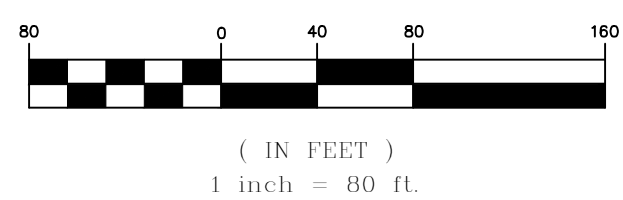
RIVER INTAKE PUMP STATION
NTS
2630 RIDGEWOOD ROAD NW
ATLANTA, GA 30318
FULTON COUNTY



MATCHLINE SEE SHEET RI-PS C1-001



P:\01 Active Projects\G47- City of Atlanta (6692)\G47\017 - TO 68 - River Intake Pump Station\31 Authoring Cad Files\CHW\RI-PS C1-001-002.RVT.dwg, PRINTED BY: lucas.walford ON Wed, Jul 21, 2021 AT 10:00 AM



No.	Description	Date

STAMP:

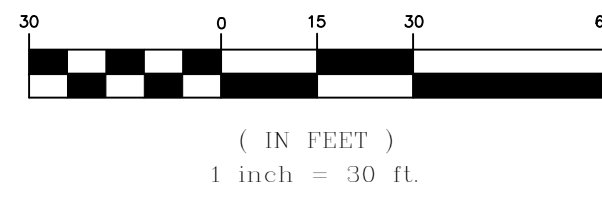
ADDRESS:

PROJECT NO: TASK 13
 DESIGNED BY: A.T.
 DRAWN BY: J.J.
 CHECKED BY: G.A.
 DATE: 07/08/2021
 SCALE: AS NOTED

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
OVERALL SITE PLAN
CHATTAHOOCHEE COMPLEX

DRAWING NO.
RI-PS
C1-002
 SHEET OF

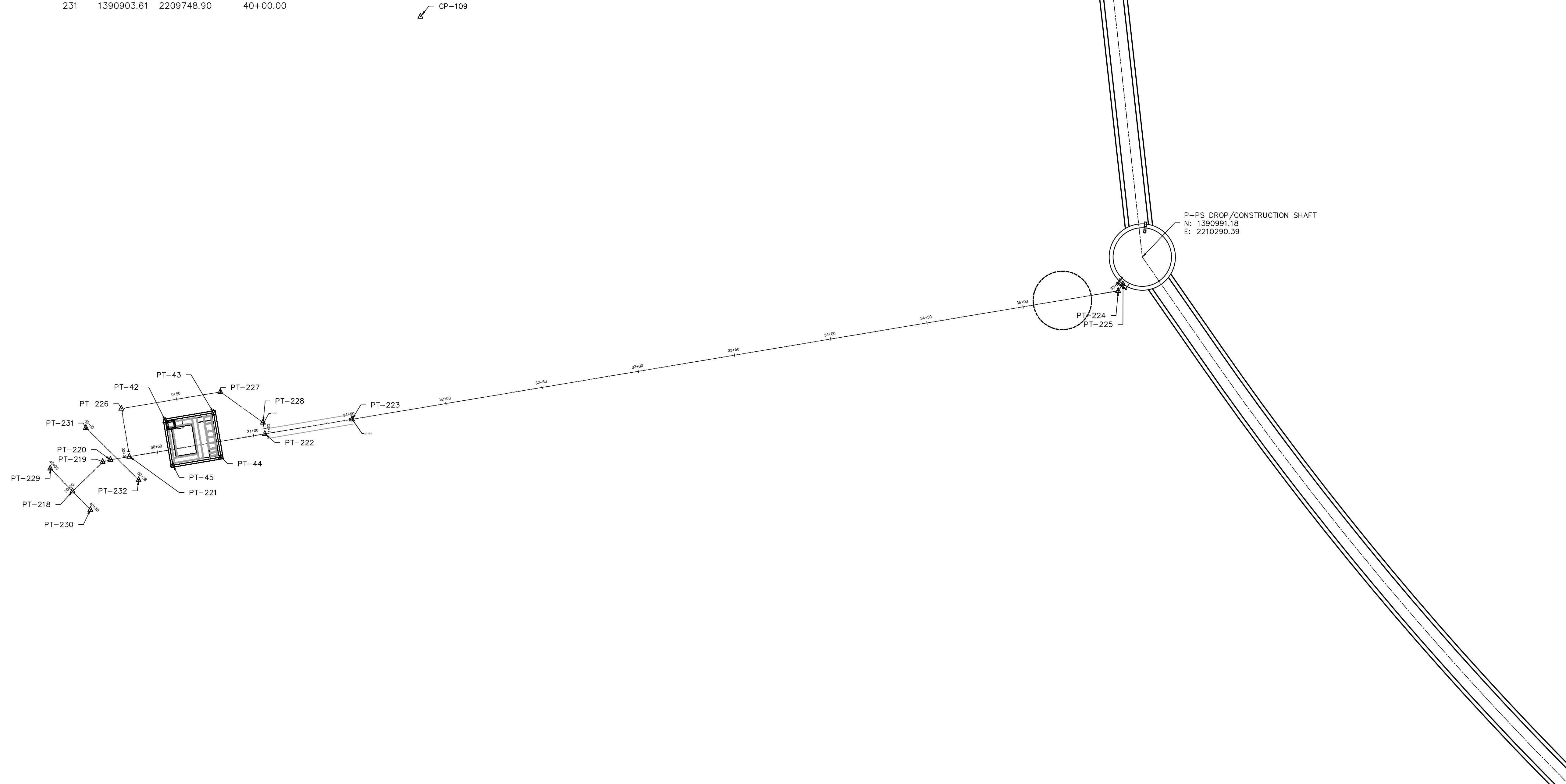
ISSUED FOR BID



Point #	Northing	Easting	Water Main Station
218	1390871.06	2209742.04	20+00.00
219	1390886.16	2209757.50	20+20.79
220	1390887.24	2209761.49	20+20.79
221	1390888.87	2209771.20	20+20.79
222	1390900.52	2209840.65	20+20.79
223	1390908.01	2209885.35	21+55.00
224	1390973.88	2210278.06	25+49.99
225	1390977.34	2210280.52	25+52.74
226	1390913.51	2209767.06	40+00.00
227	1390922.05	2209817.86	40+00.00
228	1390906.35	2209839.68	40+00.00
229	1390882.84	2209730.64	30+00.00
230	1390861.64	2209751.19	30+33.00
231	1390903.61	2209748.90	40+00.00

Point #	Northing	Easting	Description
42	1390907.17	2209789.63	Valve Vault
43	1390911.31	2209814.29	Valve Vault
44	1390888.62	2209818.09	Valve Vault
45	1390884.49	2209793.44	Valve Vault

Point #	Elevation	Northing	Easting	Description
109	828.29	N 1391114.53	E 2209920.37	BM SET



P:\01 Active Projects\047- City of Atlanta (6692)\0470017 - TO 68 - River Intake Pump Station\31 Authoring Cad Files\Civil\RI-PS C1-004-005 RI-PS.dwg, PRINTED BY: lusk.watford ON Wed, Jul 21, 2021 AT 10:02 AM



No.	Description	Date

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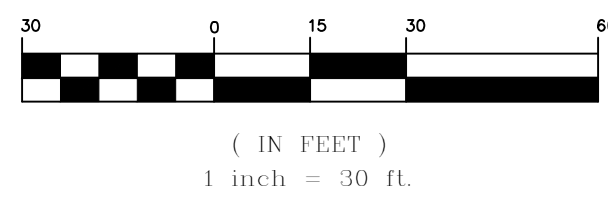
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PROJECT NO:	TASK_13
DESIGNED BY:	A.T.
DRAWN BY:	J.J.
CHECKED BY:	G.A.
DATE:	07/08/2021
SCALE:	AS NOTED

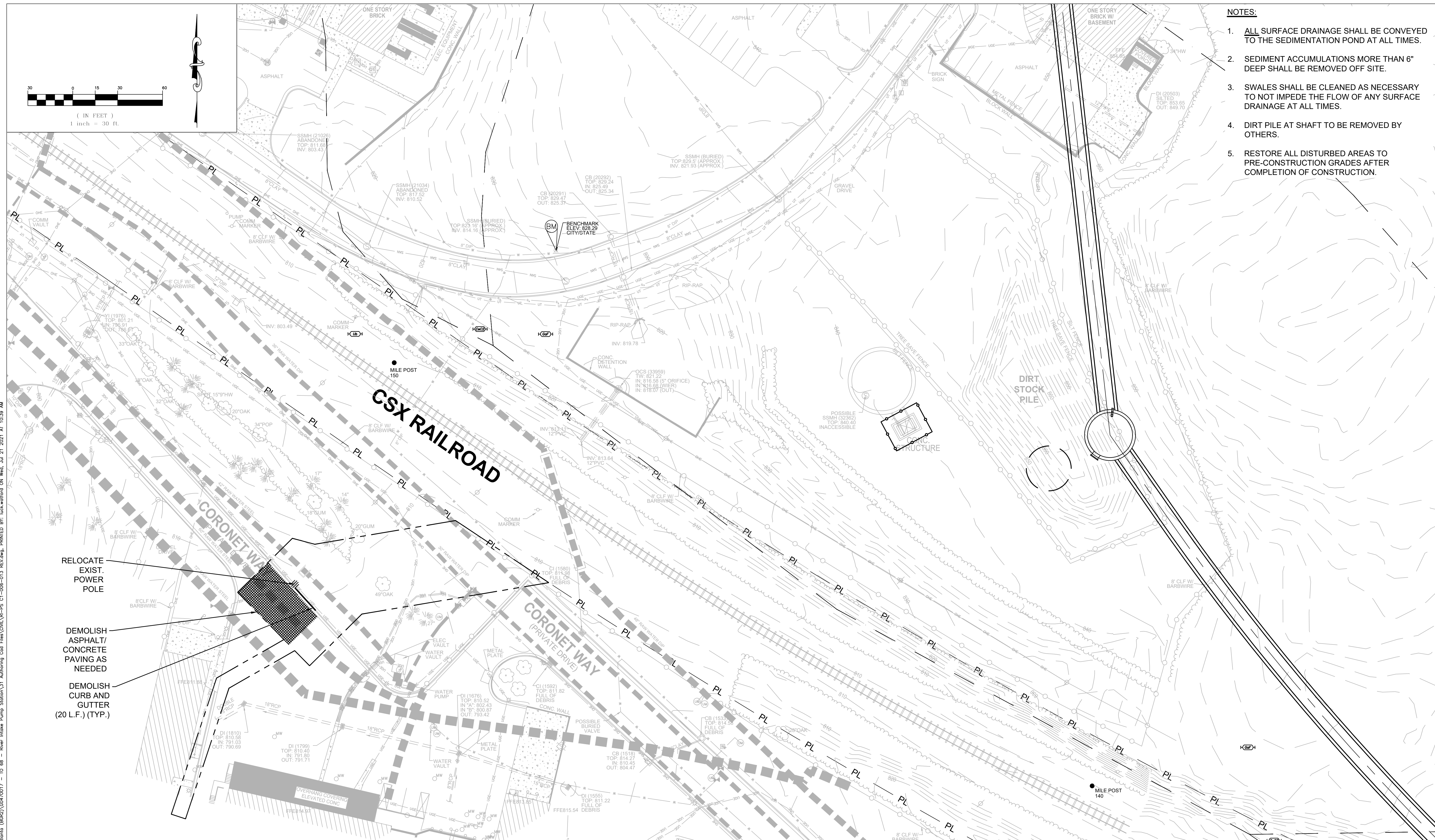
CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
 SURVEY CONTROL PLAN
 CHATTAHOOCHEE COMPLEX

DRAWING NO.
RI-PS
C1-004
 SHEET OF

ISSUED FOR BID



- NOTES:**
1. ALL SURFACE DRAINAGE SHALL BE CONVEYED TO THE SEDIMENTATION POND AT ALL TIMES.
 2. SEDIMENT ACCUMULATIONS MORE THAN 6" DEEP SHALL BE REMOVED OFF SITE.
 3. SWALES SHALL BE CLEANED AS NECESSARY TO NOT IMPEDE THE FLOW OF ANY SURFACE DRAINAGE AT ALL TIMES.
 4. DIRT PILE AT SHAFT TO BE REMOVED BY OTHERS.
 5. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION GRADES AFTER COMPLETION OF CONSTRUCTION.



P:\01 Active Projects\047- City of Atlanta (6622)\0472017 - TO 68 - River Intake Pump Station\31 Authoring Cad Files\Civil\RI-PS C1-012.dwg, PRINTED BY: luk.watford ON Wed, Jul 21, 2021 AT 10:39 AM

RELOCATE EXIST. POWER POLE
 DEMOLISH ASPHALT/ CONCRETE PAVING AS NEEDED
 DEMOLISH CURB AND GUTTER (20 L.F.) (TYP.)



No.	Description	Date

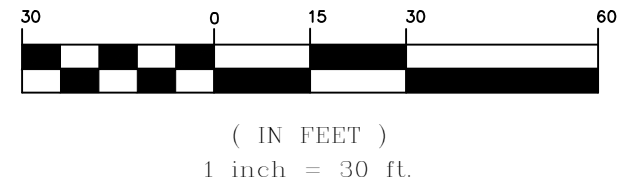
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 ADDRESS:

PROJECT NO:	TASK 13
DESIGNED BY:	A.T.
RAWN BY:	J.J.
CHECKED BY:	G.A.
TE:	07/08/2021
ALE:	AS NOTED

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
CHATTAHOOCHEE COMPLEX
SITE DEMOLITION PLAN

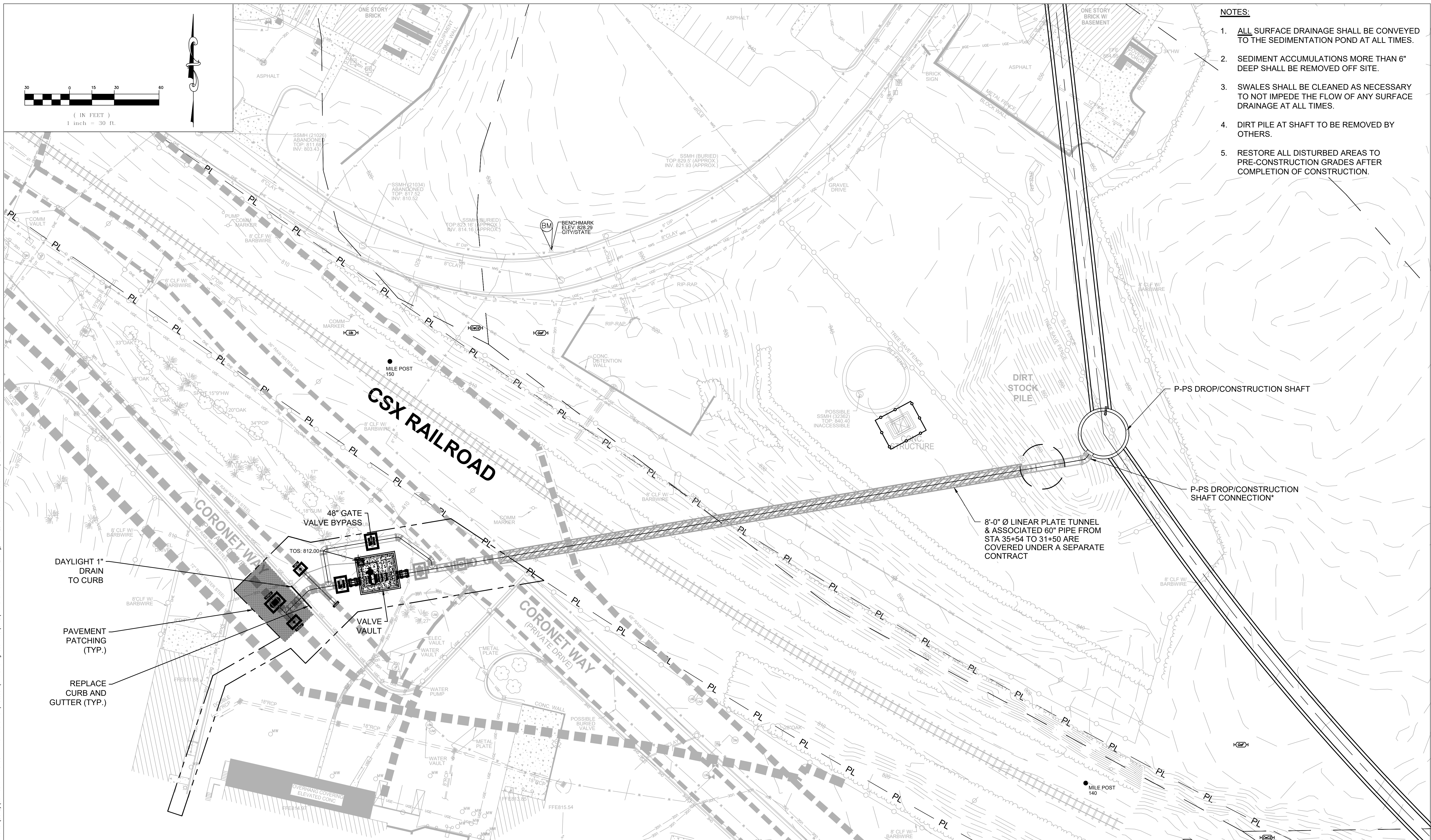
DRAWING NO.
RI-PS
C1-012
 SHEET OF

ISSUED FOR BID



NOTES:

1. ALL SURFACE DRAINAGE SHALL BE CONVEYED TO THE SEDIMENTATION POND AT ALL TIMES.
2. SEDIMENT ACCUMULATIONS MORE THAN 6" DEEP SHALL BE REMOVED OFF SITE.
3. SWALES SHALL BE CLEANED AS NECESSARY TO NOT IMPEDE THE FLOW OF ANY SURFACE DRAINAGE AT ALL TIMES.
4. DIRT PILE AT SHAFT TO BE REMOVED BY OTHERS.
5. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION GRADES AFTER COMPLETION OF CONSTRUCTION.



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No.	Description	Date

STAMP:

ADDRESS:

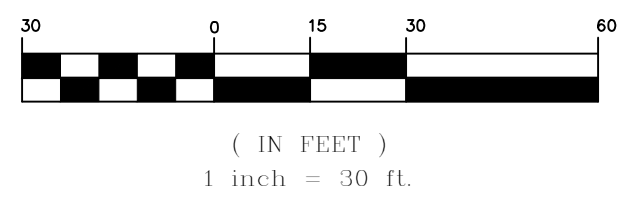
PROJECT NO:	TASK 13
DESIGNED BY:	A.T.
DRAWN BY:	J.J.
CHECKED BY:	G.A.
ATE:	07/08/2021
CALE:	AS NOTED

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

RIVER INTAKE PUMP STATION
CHATTAHOOCHEE COMPLEX
PROPOSED SITE PLAN

DRAWING NO.
RI-PS
C1-013
SHEET OF

ISSUED FOR BID



- NOTES:**
1. ALL SURFACE DRAINAGE SHALL BE CONVEYED TO THE SEDIMENTATION POND AT ALL TIMES.
 2. SEDIMENT ACCUMULATIONS MORE THAN 6" DEEP SHALL BE REMOVED OFF SITE.
 3. SWALES SHALL BE CLEANED AS NECESSARY TO NOT IMPEDE THE FLOW OF ANY SURFACE DRAINAGE AT ALL TIMES.
 4. DIRT PILE AT SHAFT TO BE REMOVED BY OTHERS.
 5. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION GRADES AFTER COMPLETION OF CONSTRUCTION.



No.	Description	Date	STAMP:	ADDRESS:

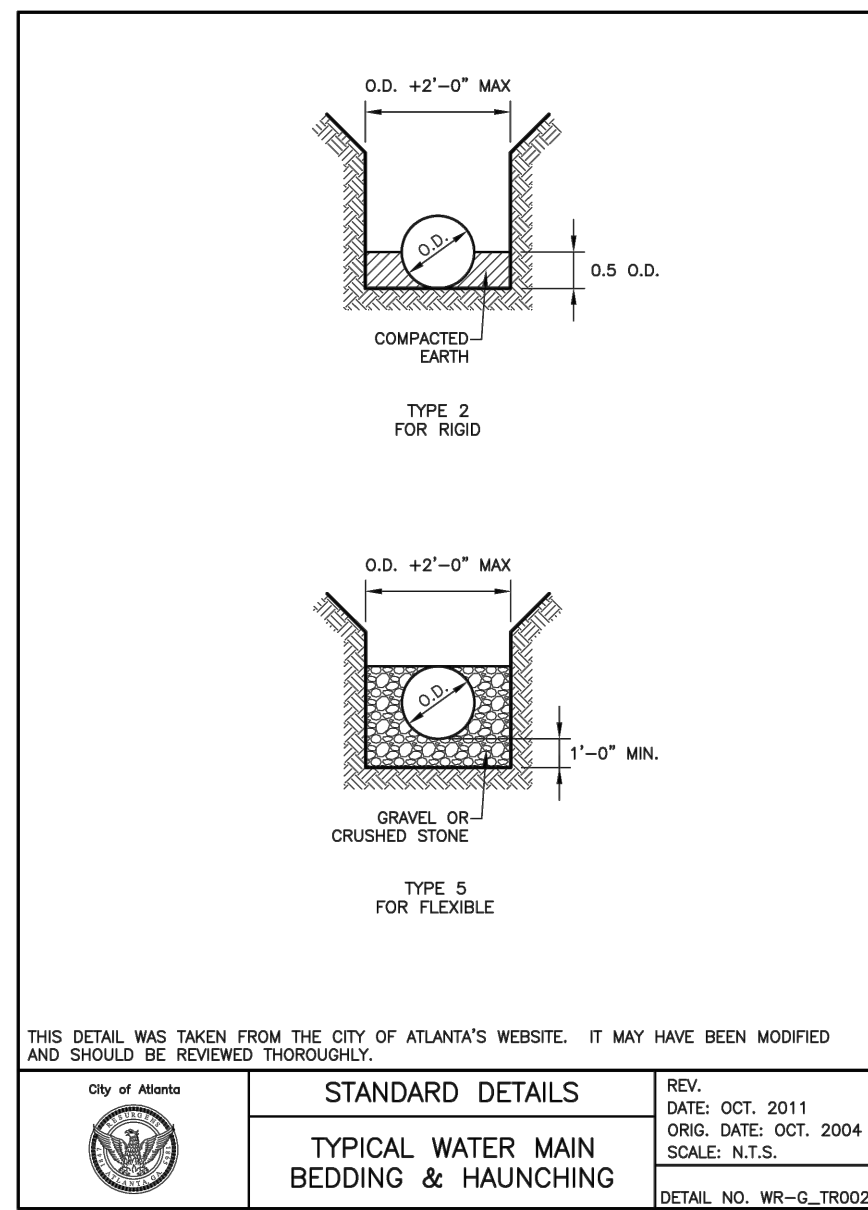
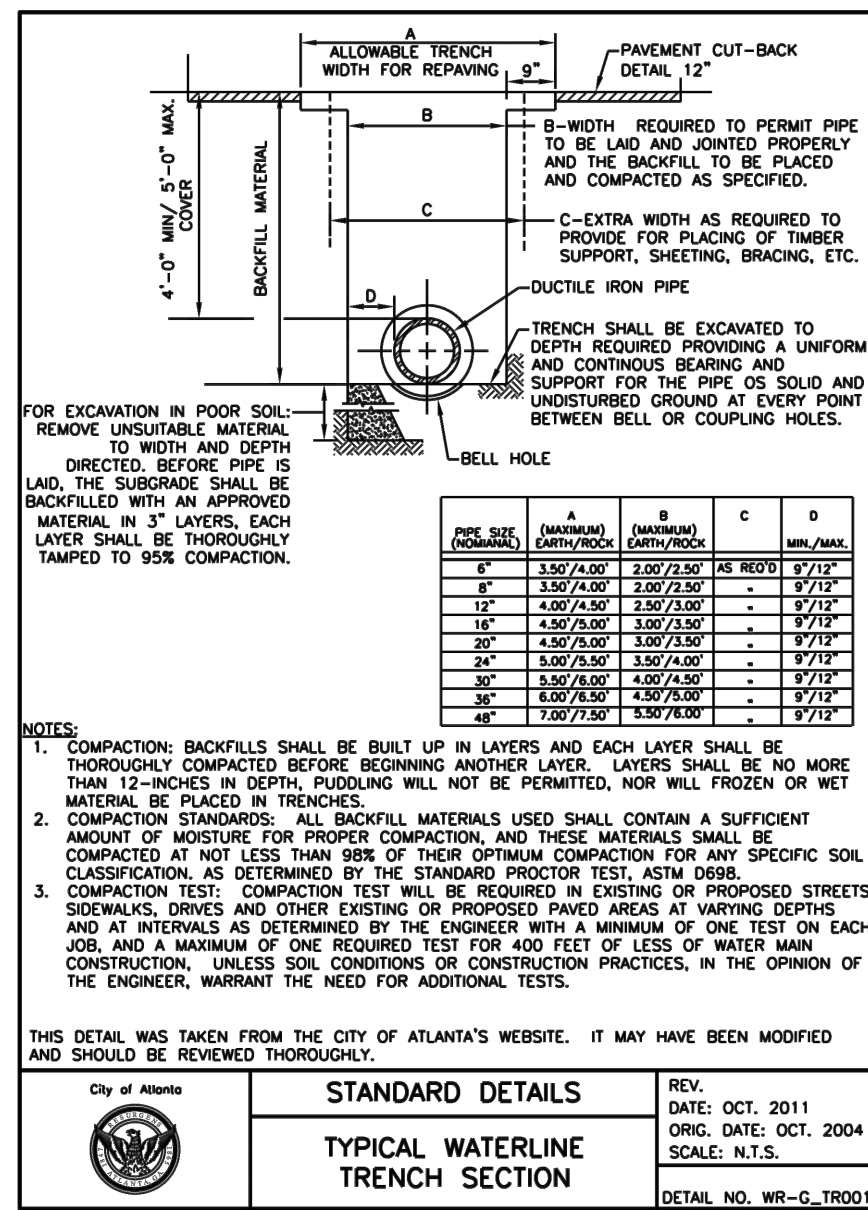
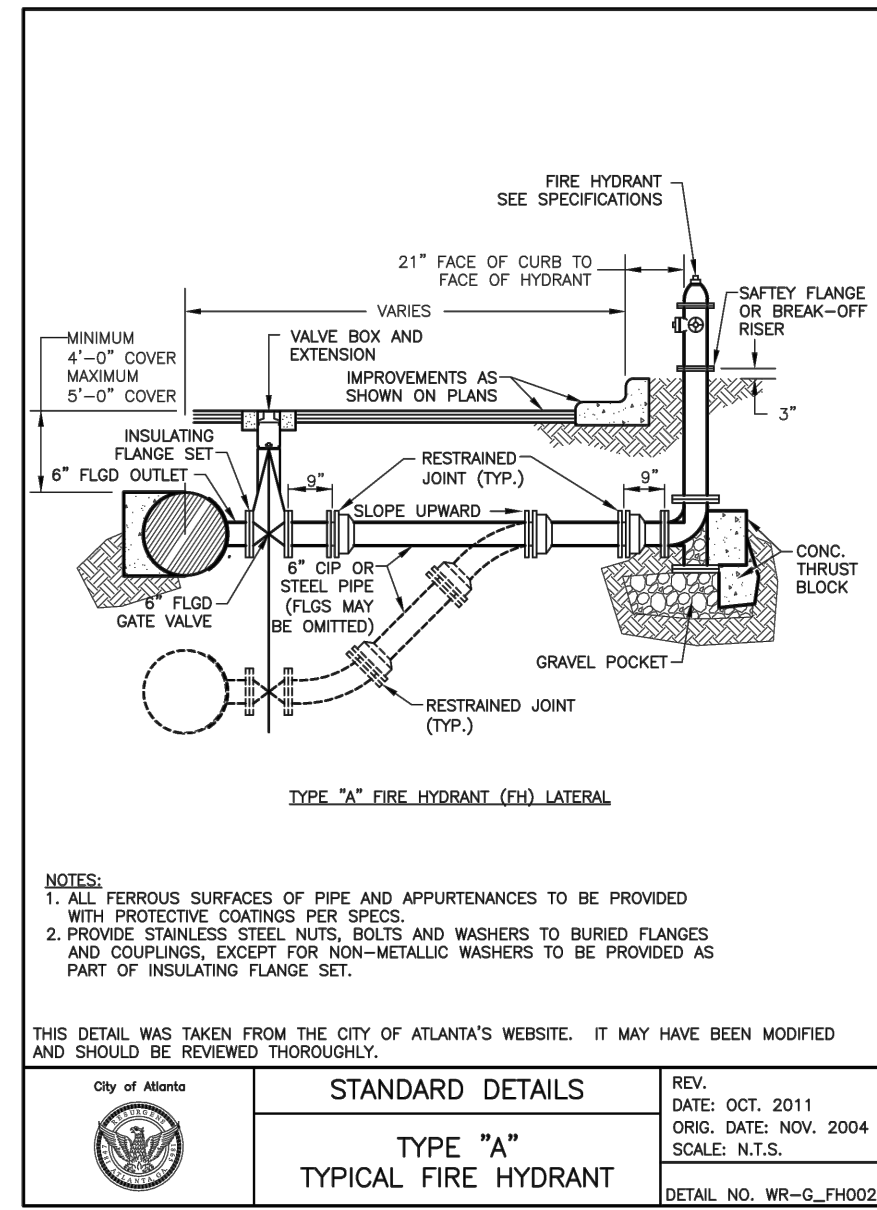
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DESIGNED BY:	A.T.
DRAWN BY:	J.J.
CHECKED BY:	G.A.
DATE:	07/08/2021
SCALE:	AS NOTED

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

**RIVER INTAKE PUMP STATION
 CHATTAHOOCHEE COMPLEX
 PROPOSED UTILITY PLAN**

DRAWING NO. **RI-PS**
C1-014
 SHEET OF

P:\01 Active Projects\G047 - City of Atlanta (662)\G047\0017 - TO 68 - River Intake Pump Station\31 - Authoring Cad Files\Civil\RI-PS C1-006-013_RI-PS.dwg, PRINTED BY: lucas.watford ON: Wed, Jul 21, 2021 AT 10:41 AM



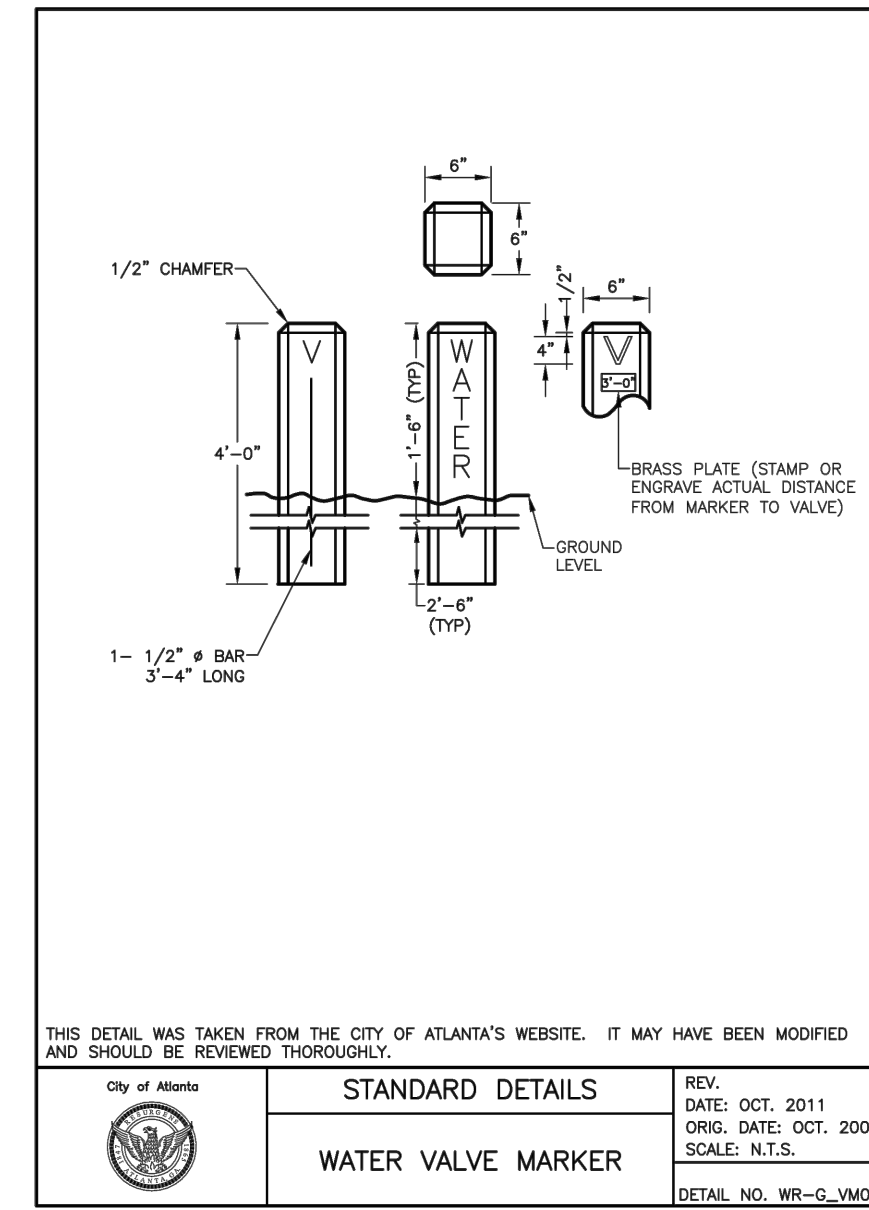
MAXIMUM PERMISSIBLE JOINT DEFLECTIONS

SIZE (NOM)	MECHANICAL JOINT (18 FT. JOINTS) (20 FT. JOINTS)			
	DEGREE	MAX. OFFSET	DEGREE	MAX. OFFSET
3"	4.0	15"	4.5	17"
4"	4.0	15"	4.5	17"
6"	4.0	15"	4.5	17"
8"	4.0	15"	4.5	17"
10"	4.0	15"	4.5	17"
12"	4.0	15"	4.5	17"
14"	2.5	9.4"	3.0	11"
16"	2.0	7.5"	3.0	11"
20"	2.0	7.5"	2.0	7.5"
24"	2.0	7.5"	2.0	7.5"
30"	1.5	5.5"	2.0	7.5"
36"	1.5	5.5"	2.0	7.5"
42"	1.5	5.5"	1.5	5.5"
48"	1.5	5.5"	1.5	5.5"

NOTES:
 1. WHEN A PIPE IS DEFLECTED, THE PIPE SHALL FIRST BE ASSEMBLED IN A STRAIGHT LINE, BOTH HORIZONTALLY AND VERTICALLY BEFORE THE DEFLECTION IS MADE.
 2. FOR MECHANICAL JOINT PIPE, THE BOLTS SHALL BE PARTIALLY TIGHTENED BEFORE THE LENGTH OF PIPE IS DEFLECTED. ANY SUPPORTED PIPE, SHALL BE SO SUPPORTED THAT THERE IS ZERO DEFLECTION EXCEPT WHERE EITHER A HORIZONTAL OR VERTICAL CURVE ON A BRIDGE OR OTHER STRUCTURE IS INVOLVED.
 3. THRUST RESTRAINTS MAY BE REQUIRED ON THE DEFLECTED JOINTS.

THIS DETAIL WAS TAKEN FROM THE CITY OF ATLANTA'S WEBSITE. IT MAY HAVE BEEN MODIFIED AND SHOULD BE REVIEWED THOROUGHLY.

City of Atlanta
STANDARD DETAILS
 REV. DATE: OCT. 2011
 ORIG. DATE: NOV. 2004
 SCALE: N.T.S.
MAXIMUM PERMISSIBLE JOINT DEFLECTIONS
 DETAIL NO. WR-G-DF001



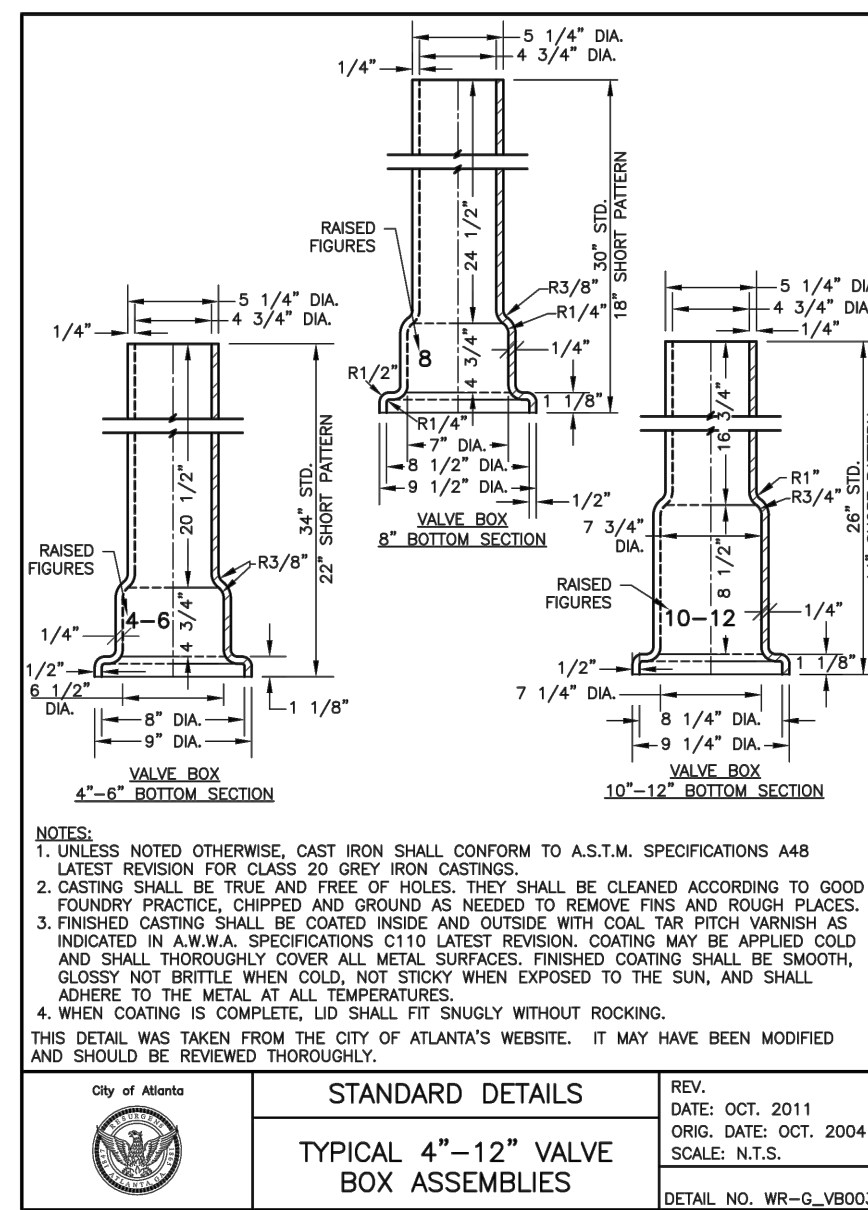
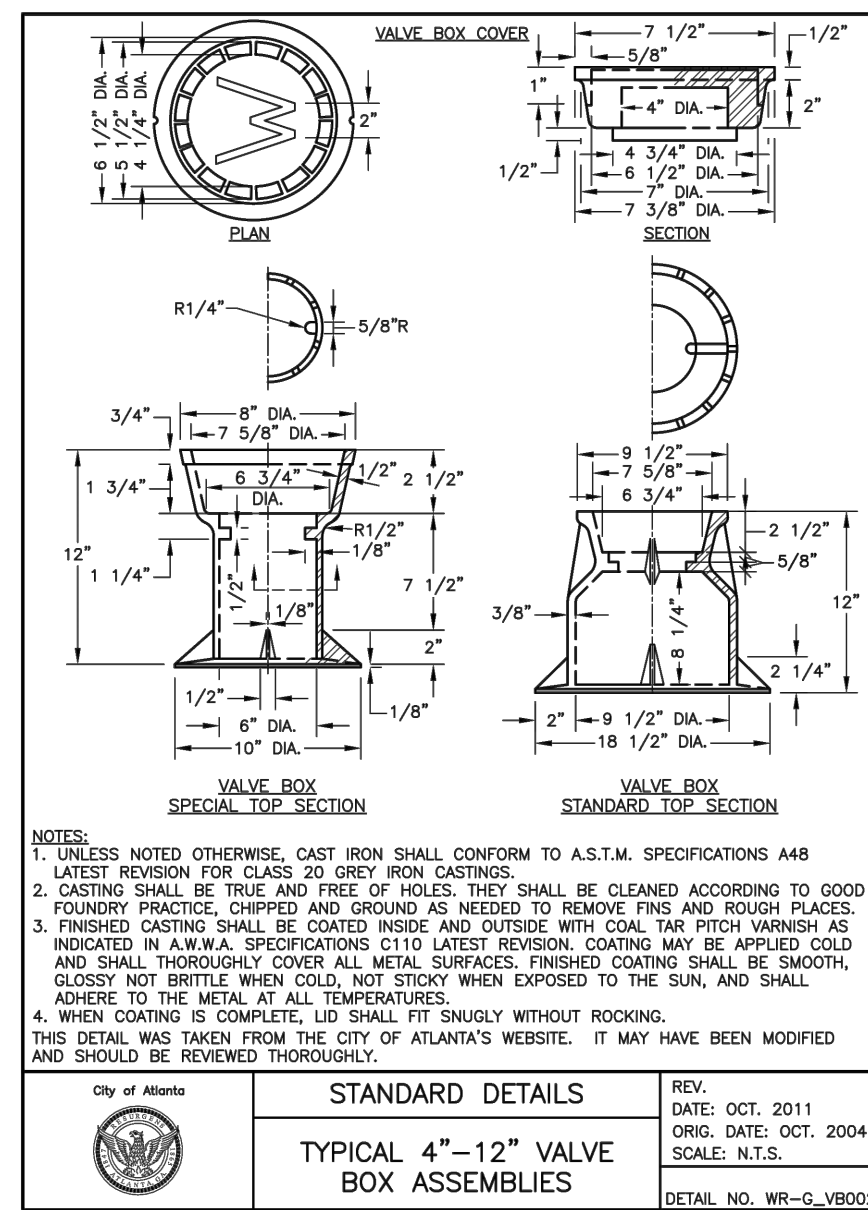
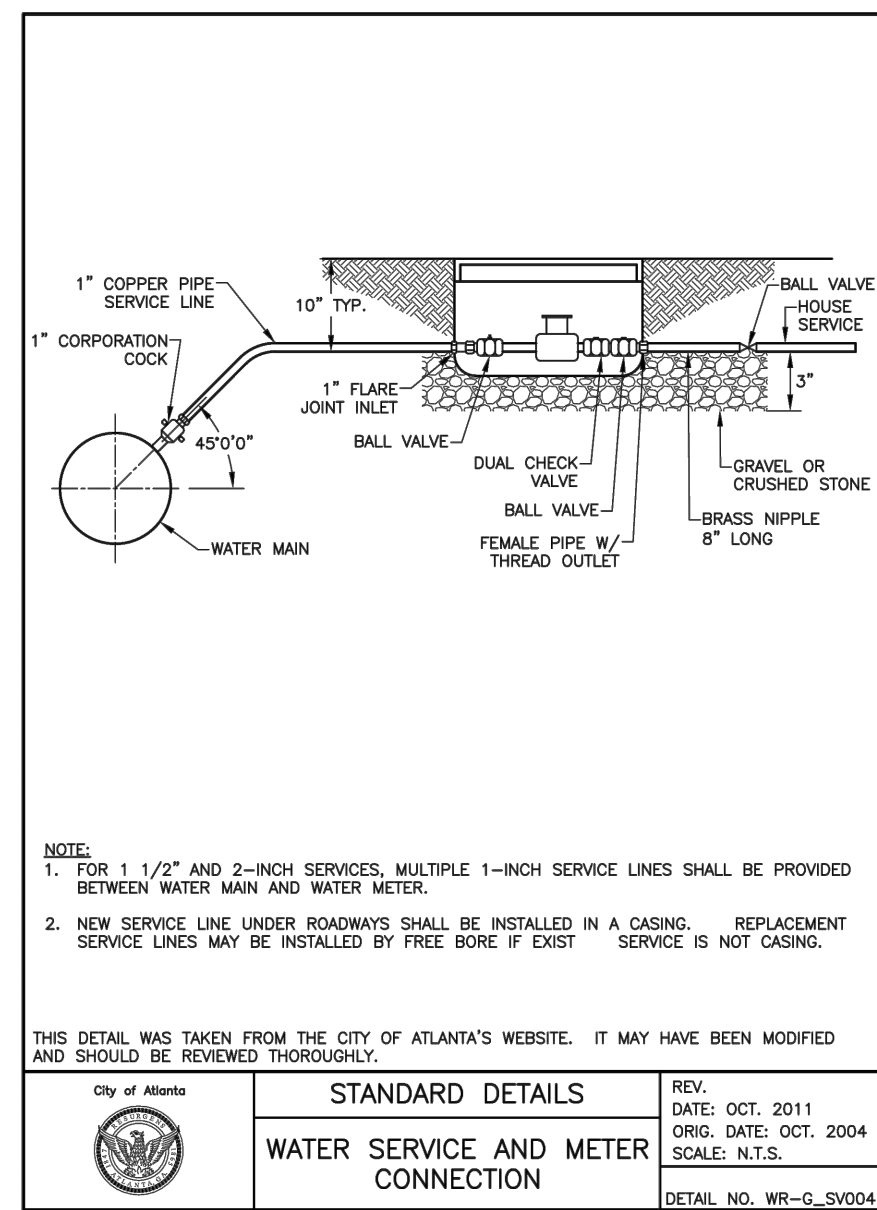
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2

3

4

5

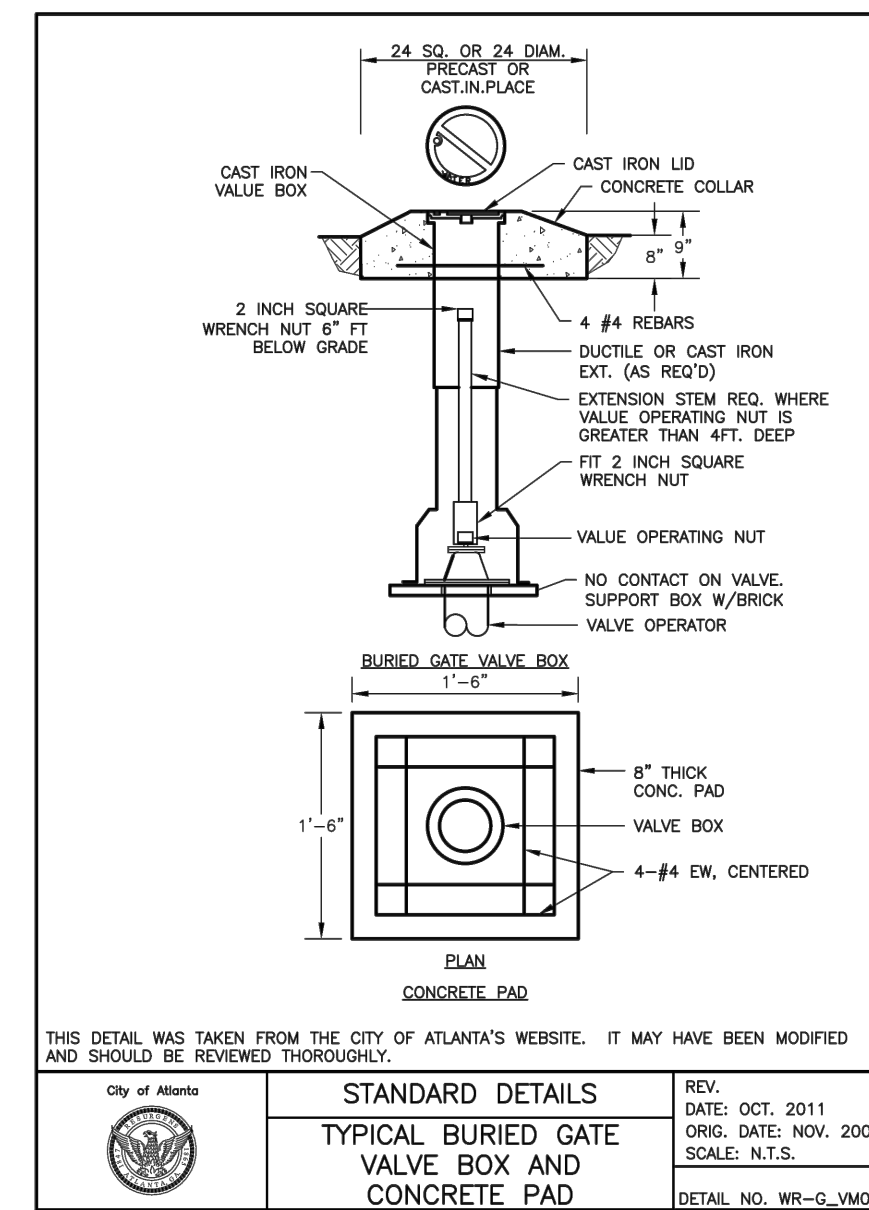


MECHANICAL JOINT BOLT USAGE CHART

NOM PIPE DIA.	BELL DEPTH	BOLTS			REC. TORQUE FT.-Lbs.	NUTS ACCESSORY WEIGHT-Lbs.
		DIAMETER	LENGTH	NUMBER PER JOINT		
4	2"	3/4"	3"	4	75-90	10
6	2"	3/4"	3"	6	75-90	16
8	2"	3/4"	4"	6	75-90	25
10	2"	3/4"	4"	8	75-90	30
12	2"	3/4"	4"	8	75-90	40
14	3 1/2"	3/4"	4"	10	75-90	45
18	3 1/2"	3/4"	4"	12	75-90	55
20	3 1/2"	3/4"	4"	14	75-90	65
24	3 1/2"	3/4"	5"	16	75-90	105
30	4"	1"	6"	20	100-120	220
36	4"	1"	6"	24	100-120	285
42	4"	1 1/4"	6"	28	120-150	400
48	4"	1 1/4"	6"	32	120-150	475

THIS DETAIL WAS TAKEN FROM THE CITY OF ATLANTA'S WEBSITE. IT MAY HAVE BEEN MODIFIED AND SHOULD BE REVIEWED THOROUGHLY.

City of Atlanta
STANDARD DETAILS
 REV. DATE: OCT. 2011
 ORIG. DATE: NOV. 2004
 SCALE: N.T.S.
MECHANICAL JOINT BOLT USAGE CHART
 DETAIL NO. WR-G-MJ002



6

7

8

9

10



No.	Description	Date	STAMP:

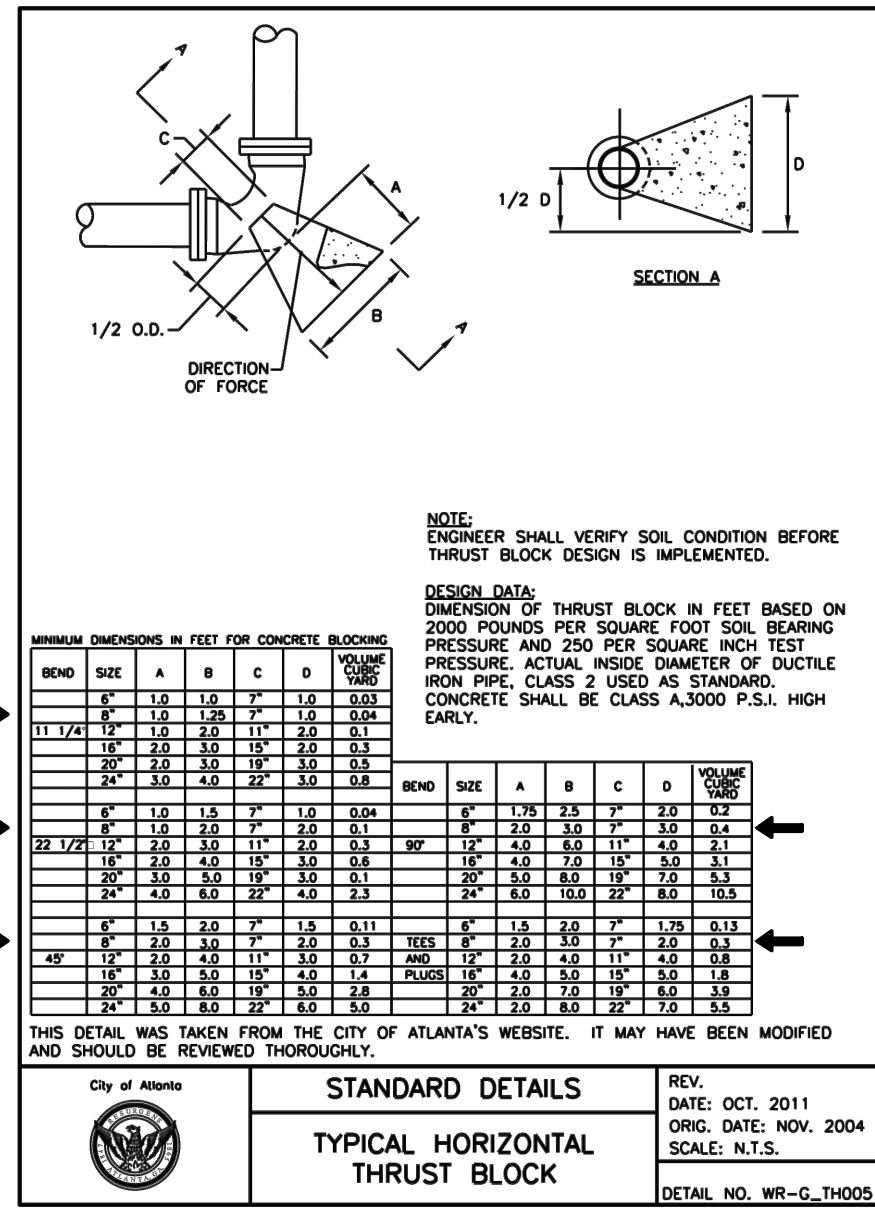
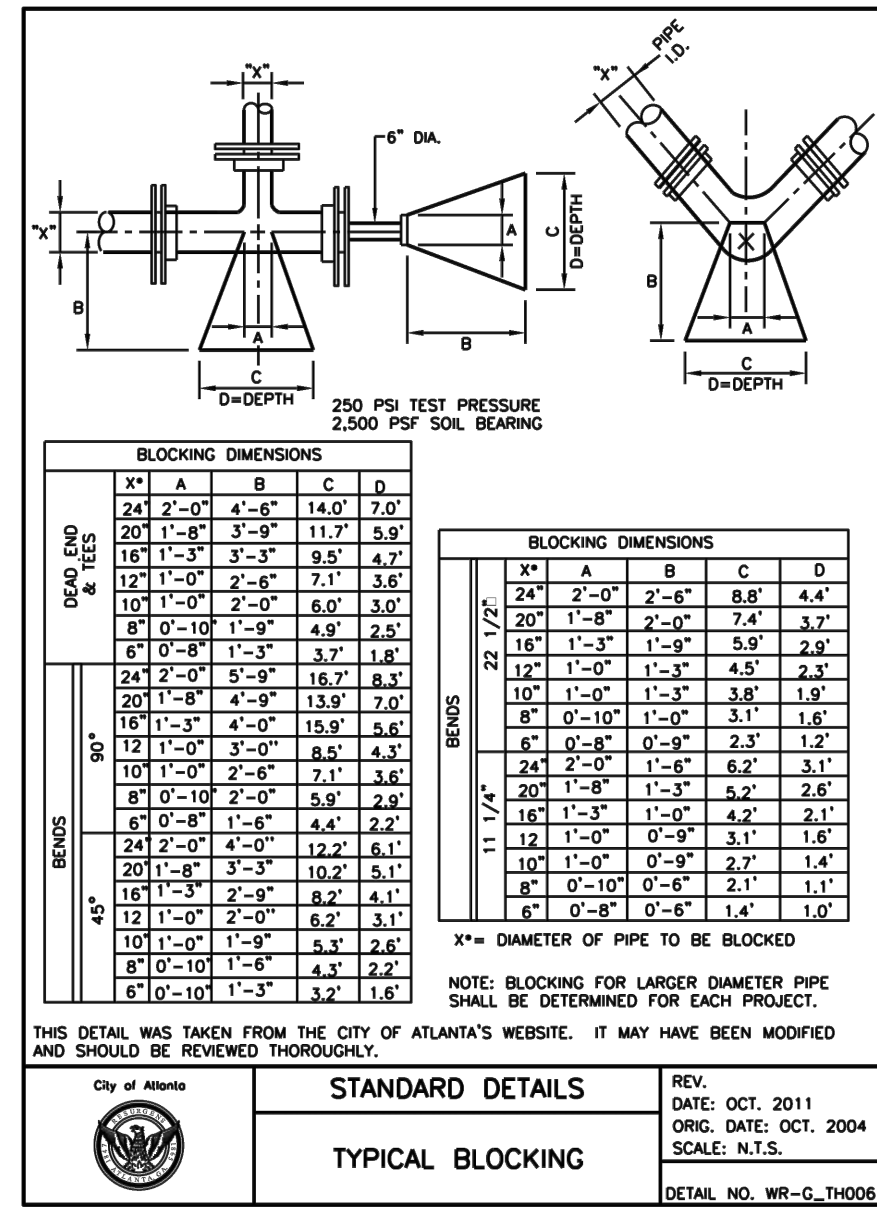
ADDRESS:

PROJECT NO:	TASK_13
DESIGNED BY:	A.T.
DRAWN BY:	J.J.
CHECKED BY:	G.A.
DATE:	07/08/2021
SCALE:	AS NOTED

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
 STANDARD DETAILS

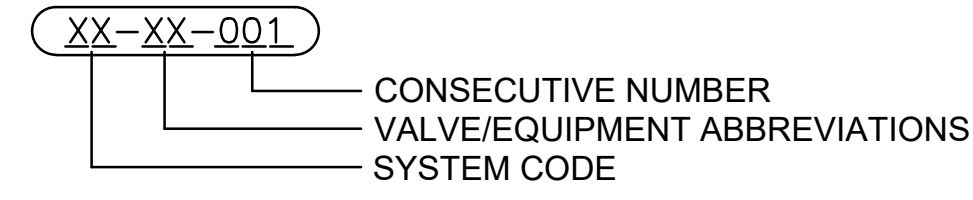
DRAWING NO.
RI-PS
C4-002
 SHEET OF

ISSUED FOR BID



NOTES

1. TYPICAL VALVE/EQUIPMENT TAG NUMBER DESIGNATION



A. SYSTEM CODE:

- 08 - WET WELL
- 09 - OPERATING FLOOR
- 10 - YARD PIPING

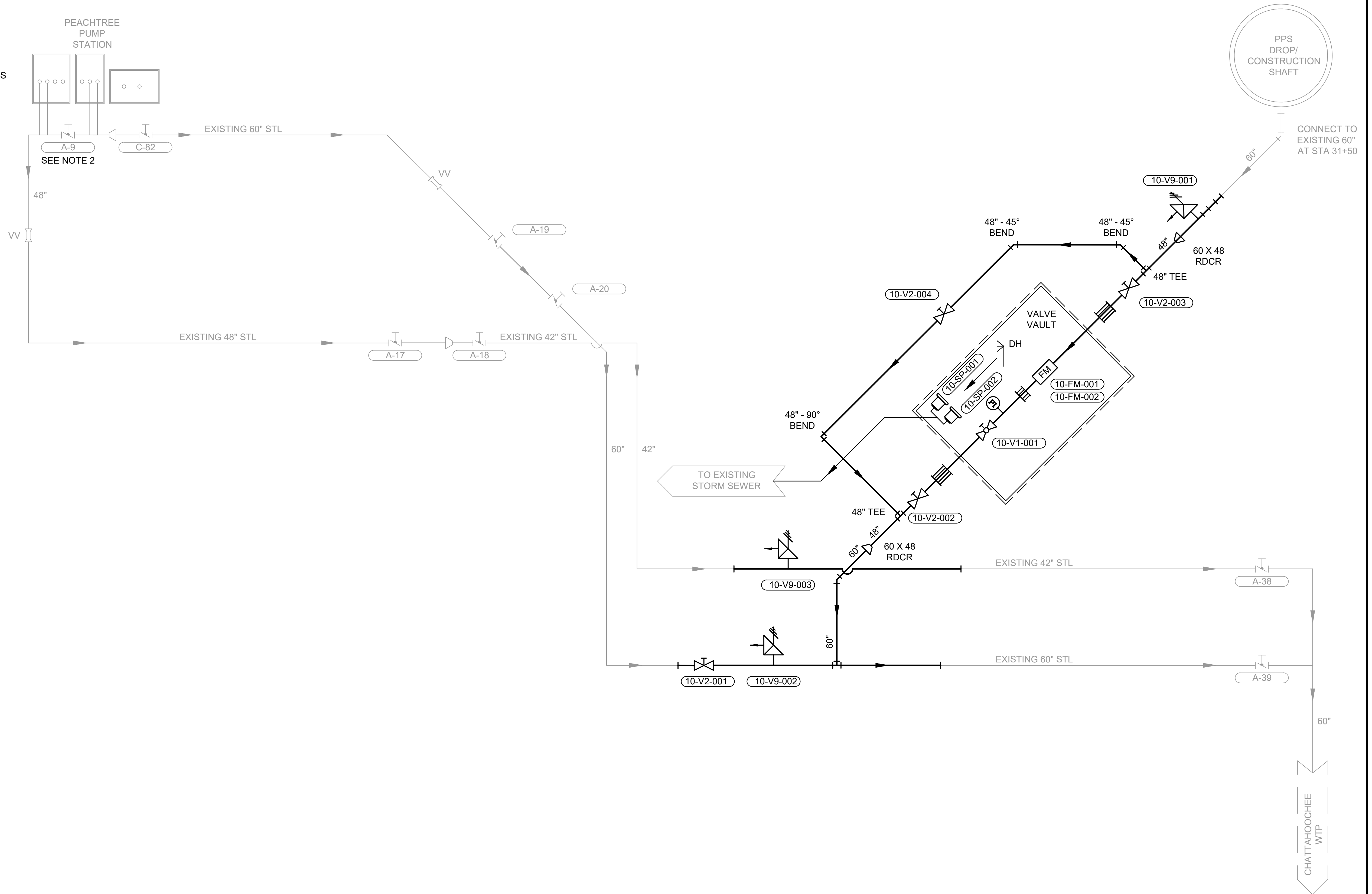
B. VALVE TYPE:

- V1 - BALL VALVE
- V2 - GATE VALVE
- V9 - AIR/VACUUM RELIEF VALVE

C. EQUIPMENT ABBREVIATIONS

- DH - DEHUMIDIFIER
- FM - FLOW METER
- PI - PRESSURE INDICATOR
- PP - PUMP
- SP - SUMP PUMPS
- VV - VENTURI VAULT
- SM - SAMPLE PUMPS

2. FOR EXISTING VALVES SCHEDULE SEE "COA PUMPING STATION & PIPING LAYOUT 1994"



P:\01 Active Projects\047- TO 48 - River Intake Pump Station\31 Authoring Coa Files\PROCESS\RI-PS DP0-002_Reviewed_Tunnel_Removed.dwg, PRINTED BY: Johnathon Pender ON Wed, Jul 21 2021 AT 9:45 AM



No.	Description	Date

STAMP:

ADDRESS:

PROJECT NO:	TASK_13
DESIGNED BY:	A.T.
DRAWN BY:	H.B.
CHECKED BY:	G.A.
DATE:	12/01/20
SCALE:	NONE

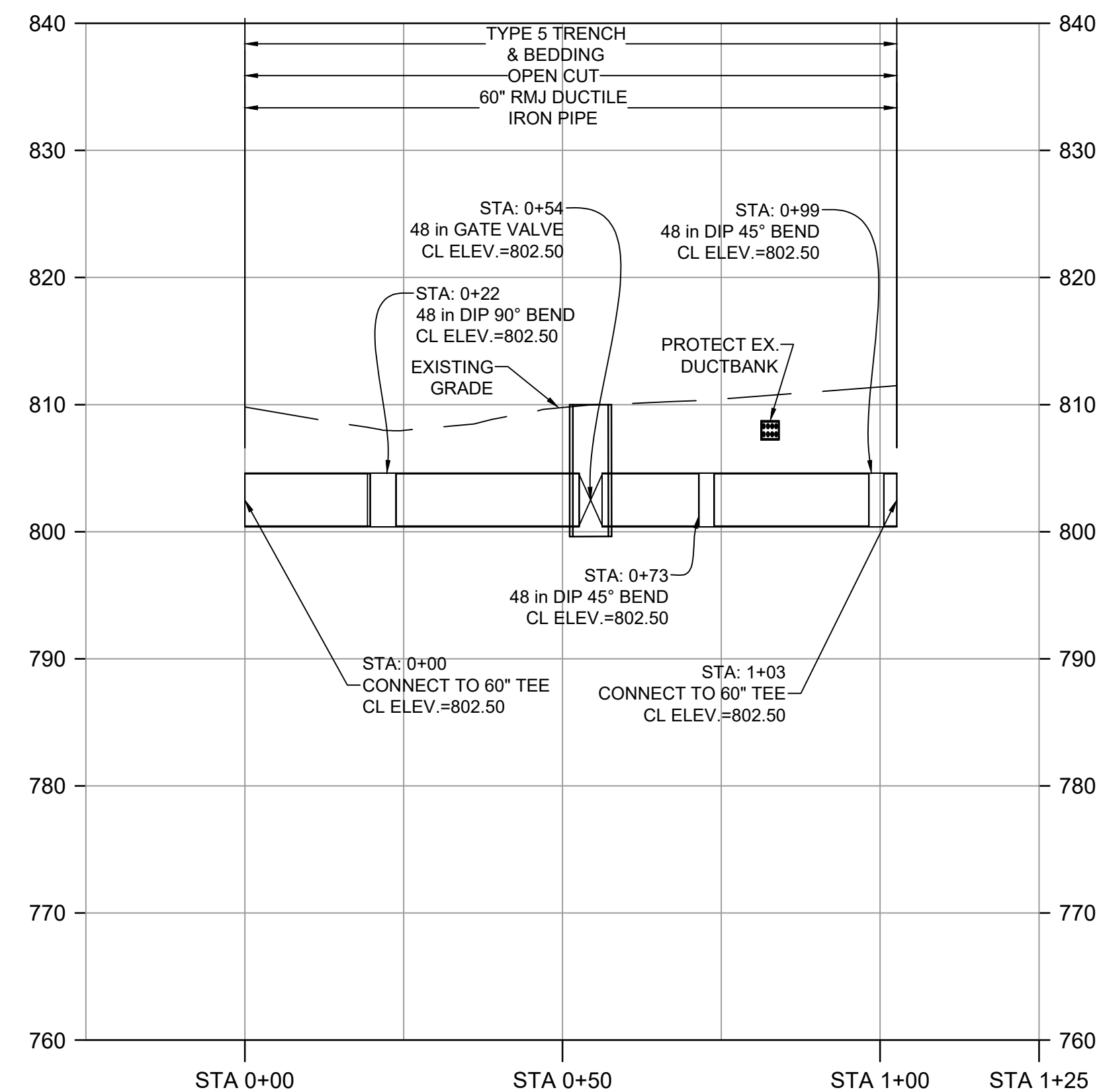
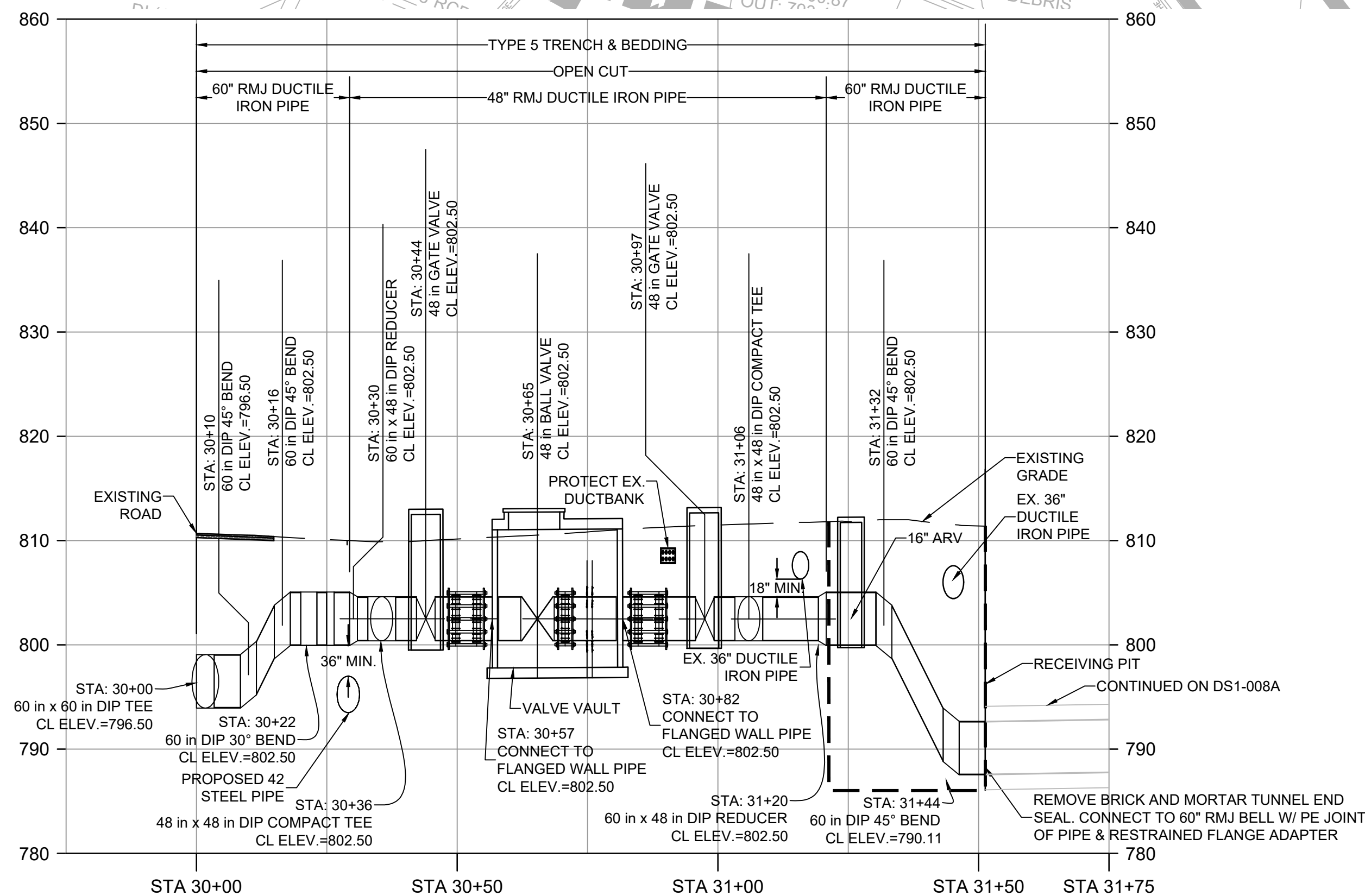
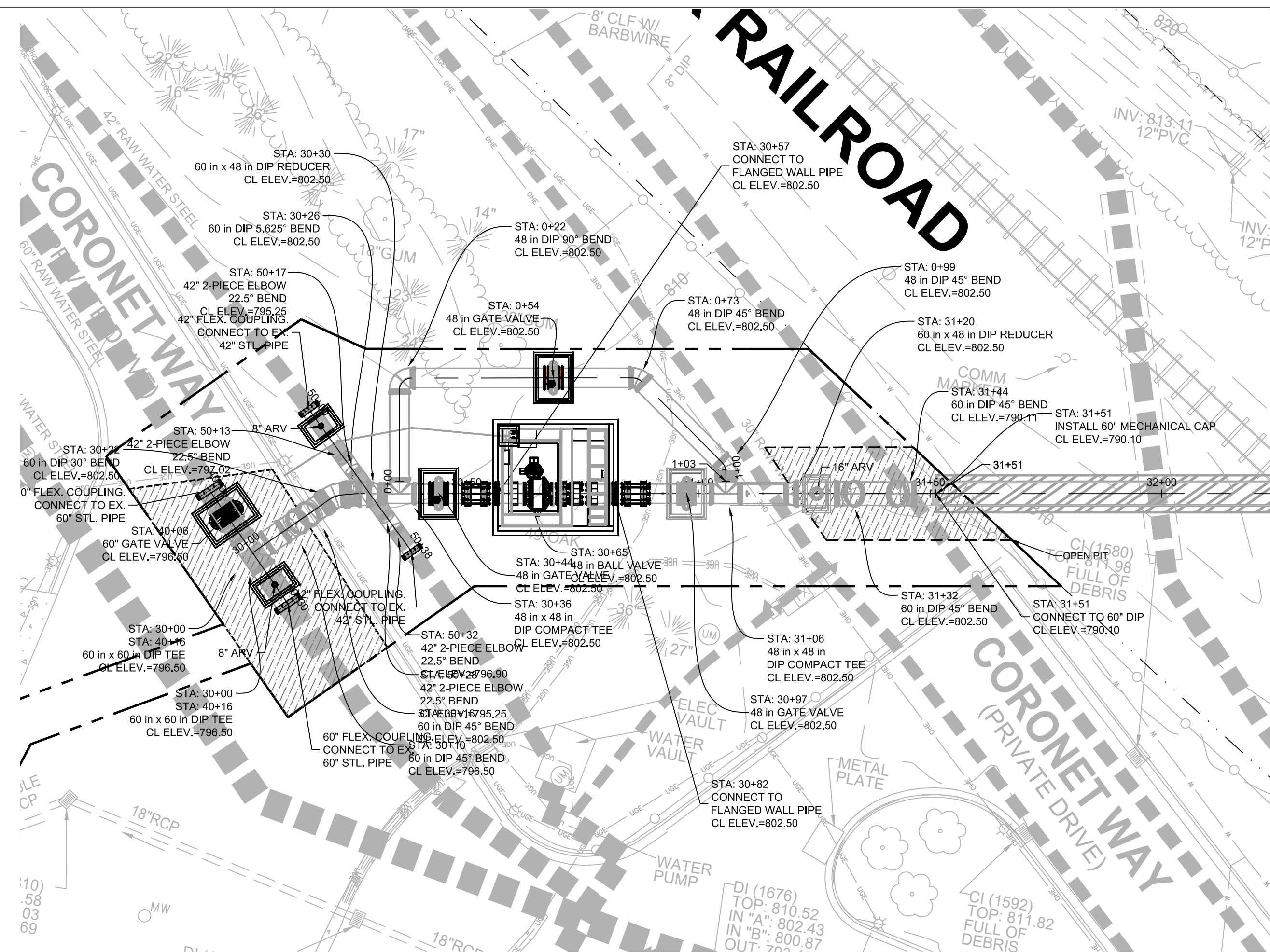
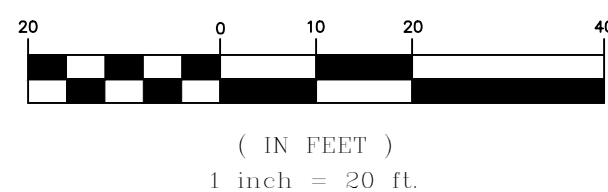
CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
 SITE 2
 PROCESS FLOW DIAGRAM

DRAWING NO.
RI-PS
DP0-002
 SHEET OF

ISSUED FOR BID

NOTES:

1. FINAL ALIGNMENT OF THE PROPOSED 60-INCH RAW WATER MAIN MAY ALTER PENDING VERTICAL UTILITY DATA.
2. SURVEY IS SUPPLEMENTED BY ADDITIONAL INFORMATION AS RECEIVED FROM CITY OF ATLANTA GIS AND AS-BUILTS. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES.
3. CONNECTIONS TO EXISTING TEES AND SERVICE CONNECTIONS MAY REQUIRE ADDITIONAL FITTINGS NOT SPECIFIED HEREON. ADDITIONAL INTERCONNECTIONS MAY BE PRESENT, THOUGH NOT DEPICTED HERE, AND SHALL BE RE-ESTABLISHED.
4. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REGULATIONS WHEN WORKING WITHIN THE IMMEDIATE VICINITY OF POWER POLES, POWER LINES, ETC.
5. YARD PIPING SHALL MAINTAIN EIGHTEEN (18) INCHES VERTICAL CLEARANCE FROM NON-POTABLE PIPELINES, TWENTY-FOUR (24) INCHES FROM ANY EXISTING GAS MAIN GREATER THAN TWO (2) INCHES, AND THIRTY-SIX (36) INCHES FROM ANY EXISTING PERPENDICULAR CROSSING OF GRAVITY AND FORCE MAINS. (MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.)



No.	Description	Date

STAMP:

ADDRESS:

PROJECT NO:	TASK_13
DESIGNED BY:	A.T.
DRAWN BY:	J.J.
CHECKED BY:	G.A.
DATE:	12/01/20
SCALE:	AS NOTED

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

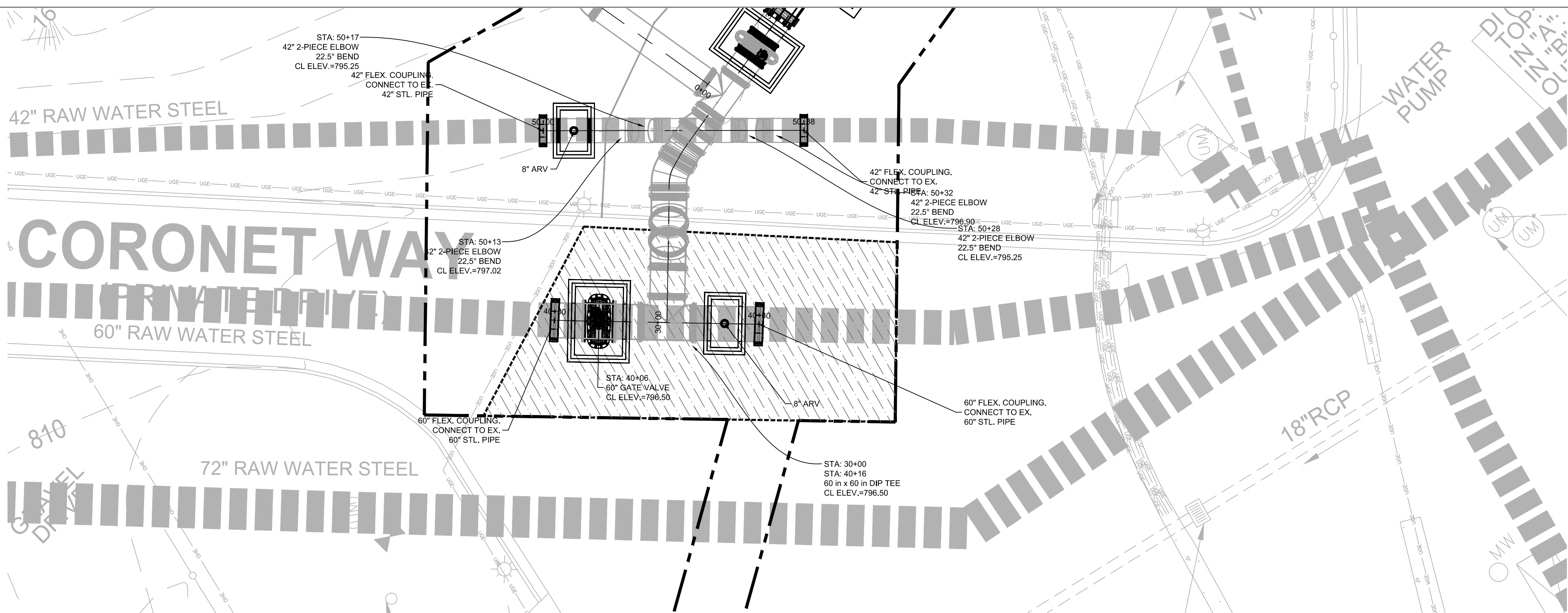
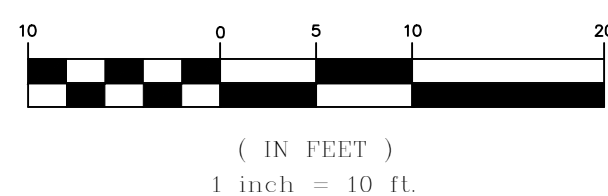
RIVER INTAKE PUMP STATION
YARD PIPING
PLAN & PROFILE

DRAWING NO.
RI-PS
DS1-008
SHEET OF

ISSUED FOR BID

NOTES:

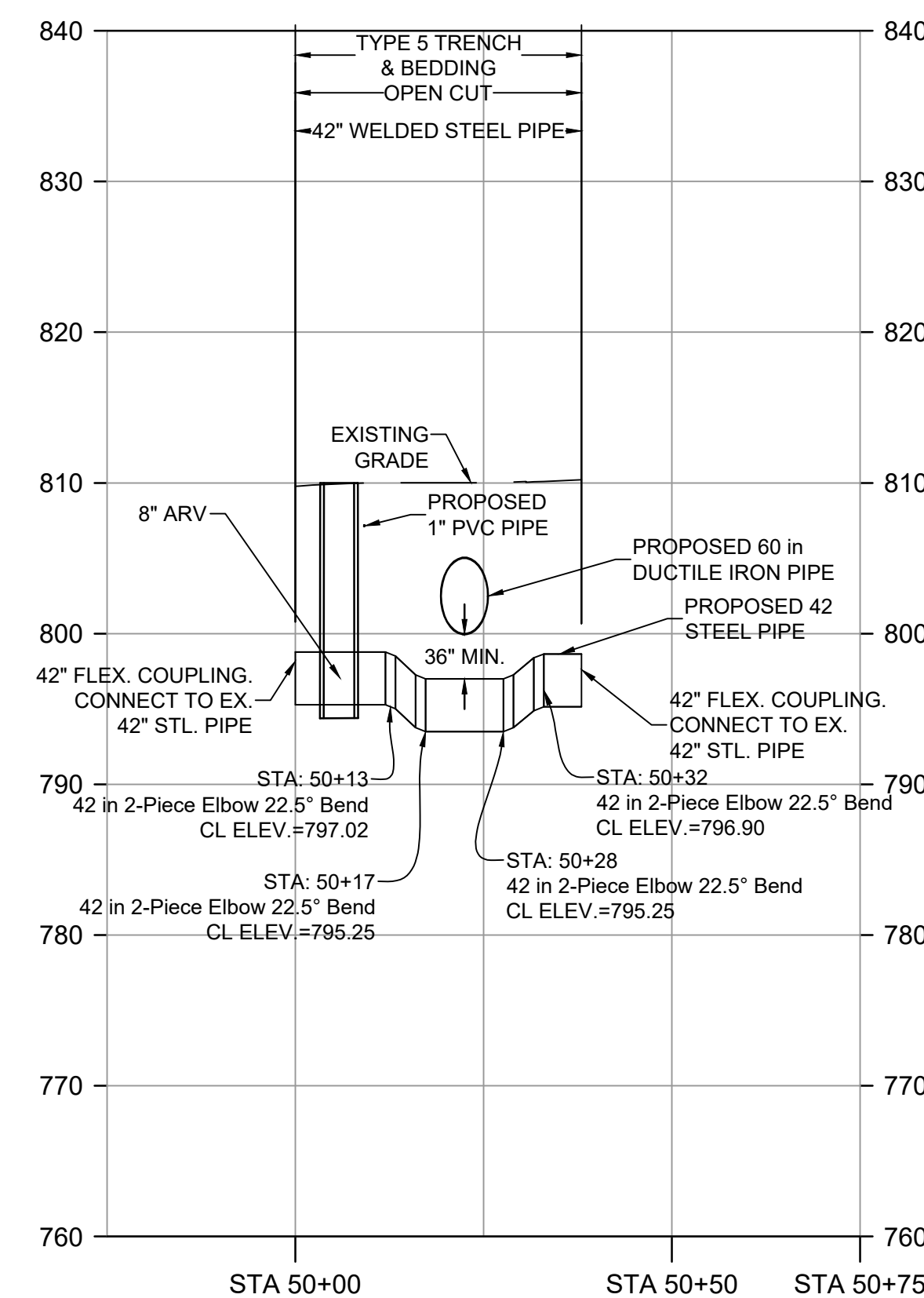
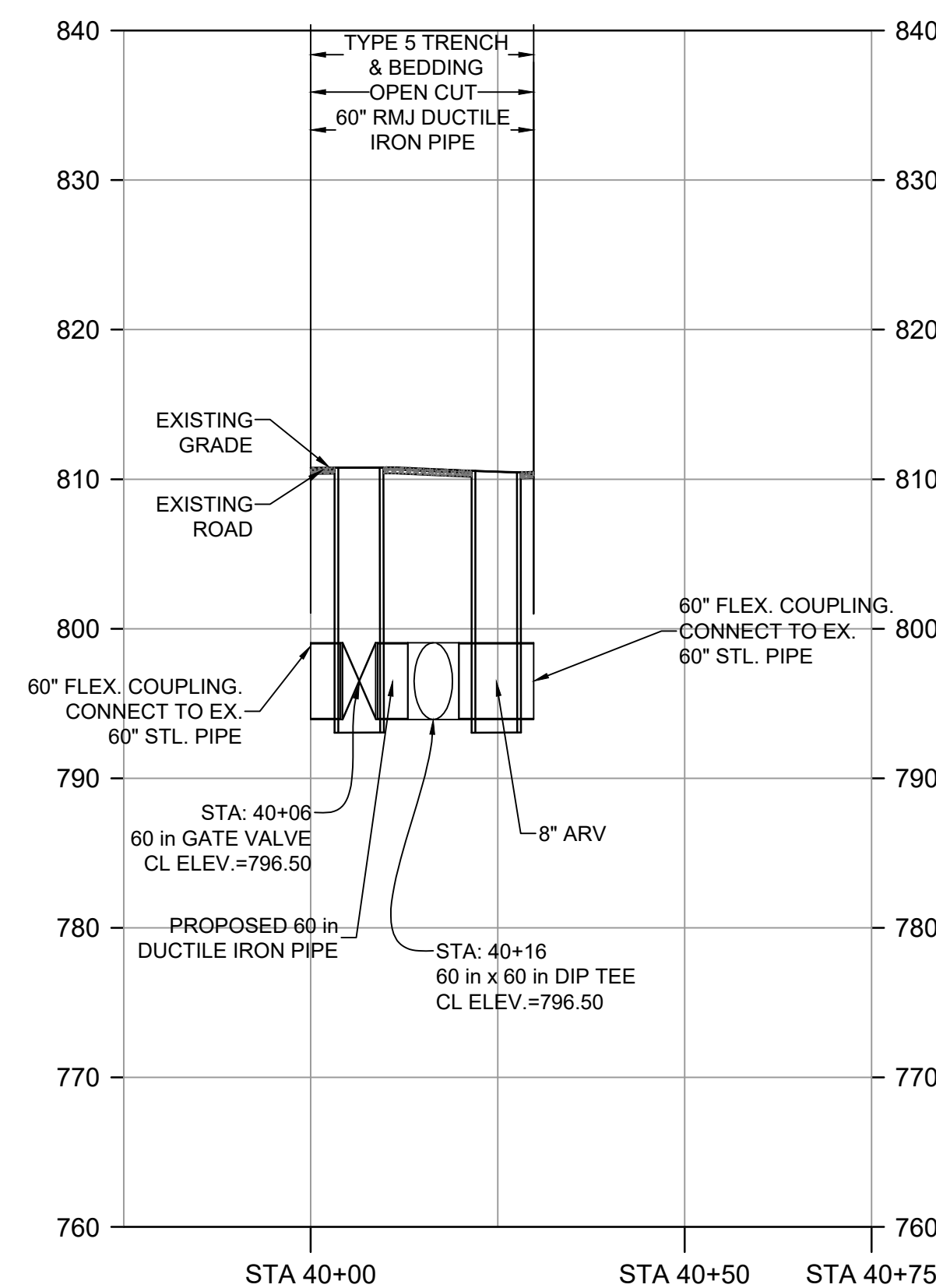
1. FINAL ALIGNMENT OF THE PROPOSED 60-INCH RAW WATER MAIN MAY ALTER PENDING VERTICAL UTILITY DATA.
2. SURVEY IS SUPPLEMENTED BY ADDITIONAL INFORMATION AS RECEIVED FROM CITY OF ATLANTA GIS AND AS-BUILTS. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES.
3. CONNECTIONS TO EXISTING TEES AND SERVICE CONNECTIONS MAY REQUIRE ADDITIONAL FITTINGS NOT SPECIFIED HEREON. ADDITIONAL INTERCONNECTIONS MAY BE PRESENT, THOUGH NOT DEPICTED HERE, AND SHALL BE RE-ESTABLISHED.
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CONNECTION AT CHATTAHOOCHEE COMPLEX

SCALE: 1" = 10'-0"

1



No.	Description	Date

STAMP:

ADDRESS:

PROJECT NO:	TASK_13
DESIGNED BY:	A.T.
DRAWN BY:	J.J.
CHECKED BY:	G.A.
DATE:	12/01/20
SCALE:	AS NOTED

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

RIVER INTAKE PUMP STATION

YARD PIPING
PLAN & PROFILE

DRAWING NO.

RI-PS

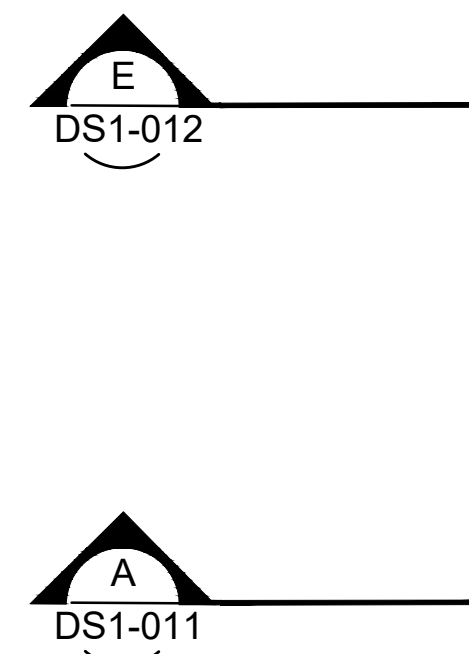
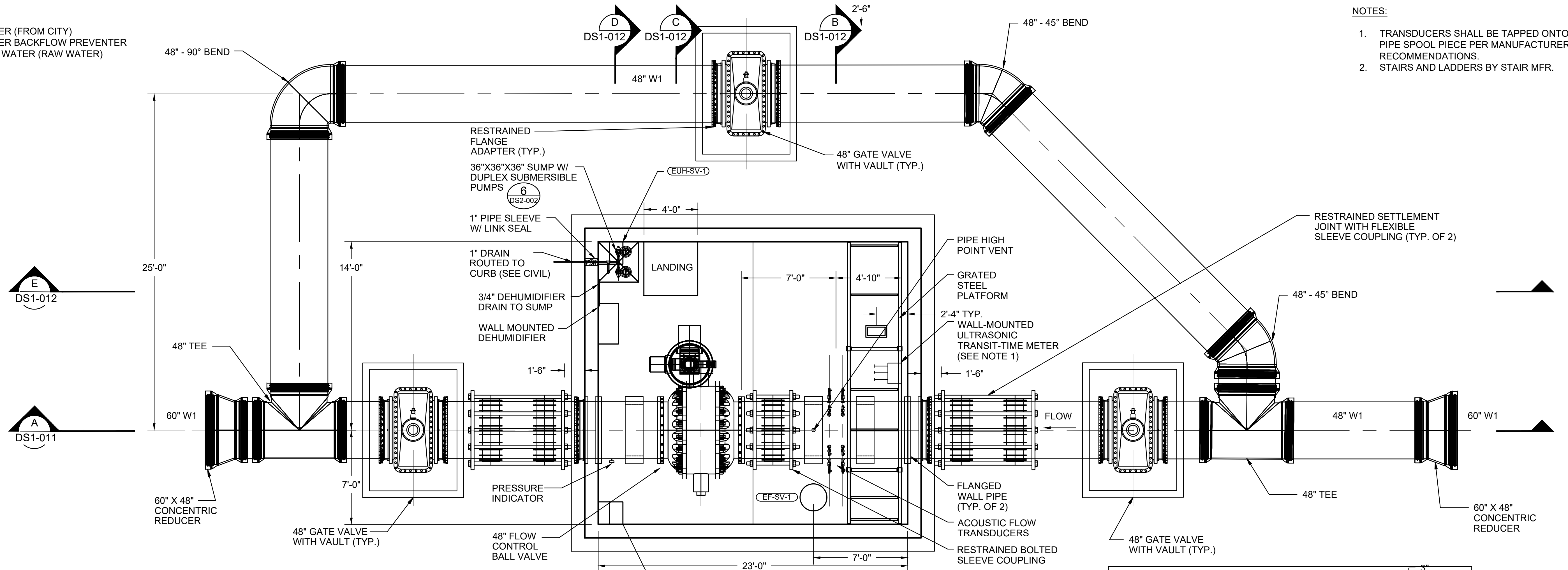
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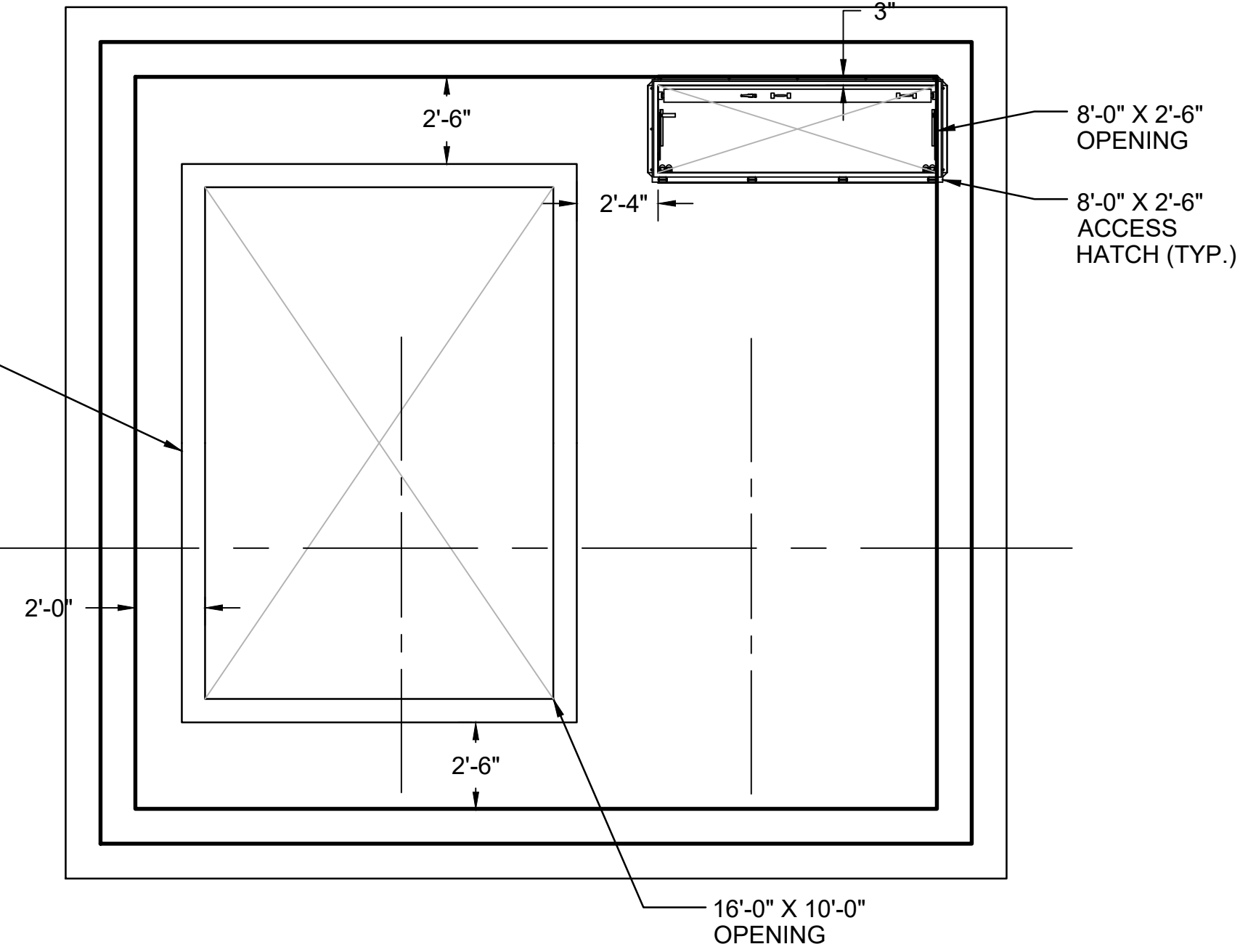
ISSUED FOR BID

ABBREVIATIONS
W1: POTABLE WATER (FROM CITY)
W2: POTABLE WATER BACKFLOW PREVENTER
W3: NON-POTABLE WATER (RAW WATER)

NOTES:
1. TRANSDUCERS SHALL BE TAPPED ONTO THE PIPE SPOOL PIECE PER MANUFACTURER'S RECOMMENDATIONS.
2. STAIRS AND LADDERS BY STAIR MFR.



FLOOR PLAN
SCALE: 3" = 1'-0"



ROOF PLAN
SCALE: 3" = 1'-0"

ACCESS HATCH SCHEDULE			
TAG NUMBER	SIZE (INCHES)		MANUFACTURER MODEL #
	WIDTH	LENGTH	
H-3	30	96	BILCO L50 ALUMINUM SERVICE STAIR HATCH

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No.	Description	Date

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ADDRESS:

PROJECT NO: TASK_13
DESIGNED BY: A.T.
DRAWN BY: H.B.
CHECKED BY: G.A.
DATE: 12/01/20
SCALE: AS NOTED

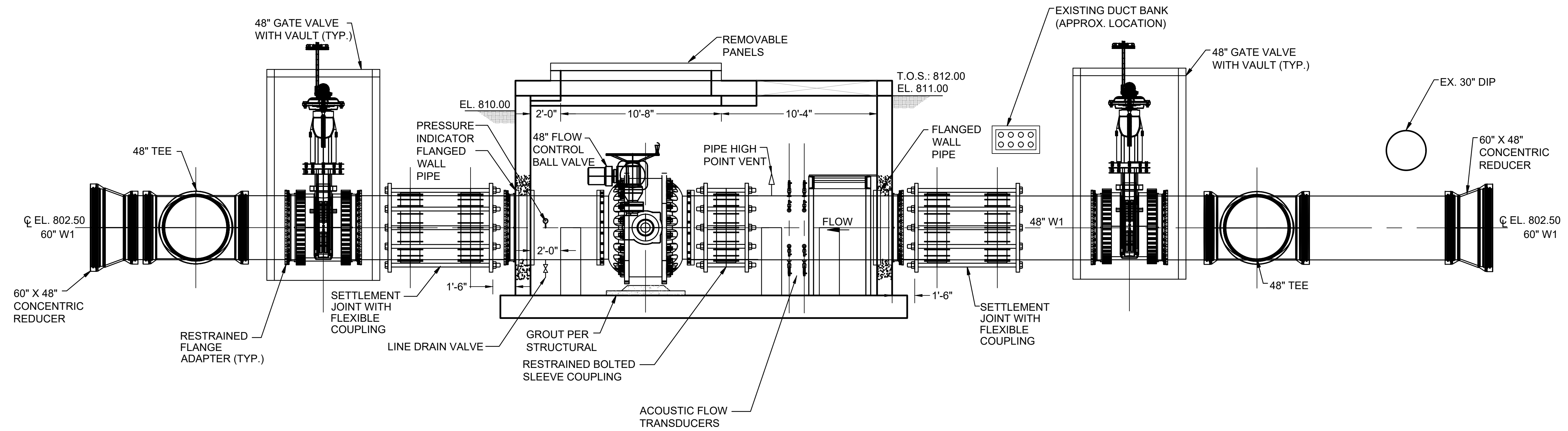
CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
VALVE VAULT
PLAN

DRAWING NO.
RI-PS
DS1-010
SHEET OF

ISSUED FOR BID

ABBREVIATIONS
 W1: POTABLE WATER (FROM CITY)
 W2: POTABLE WATER BACKFLOW PREVENTER
 W3: NON-POTABLE WATER (RAW WATER)

- NOTES:
1. TRANSDUCERS SHALL BE TAPPED ONTO THE PIPE SPOOL PIECE PER MANUFACTURER'S RECOMMENDATIONS.
 2. STAIRS AND LADDERS BY STAIR MFR.



VAULT SECTION A-A
 SCALE: 3" = 1'-0"

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DRAWN BY:	H.B.
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CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
 VALVE VAULT
 SECTIONS

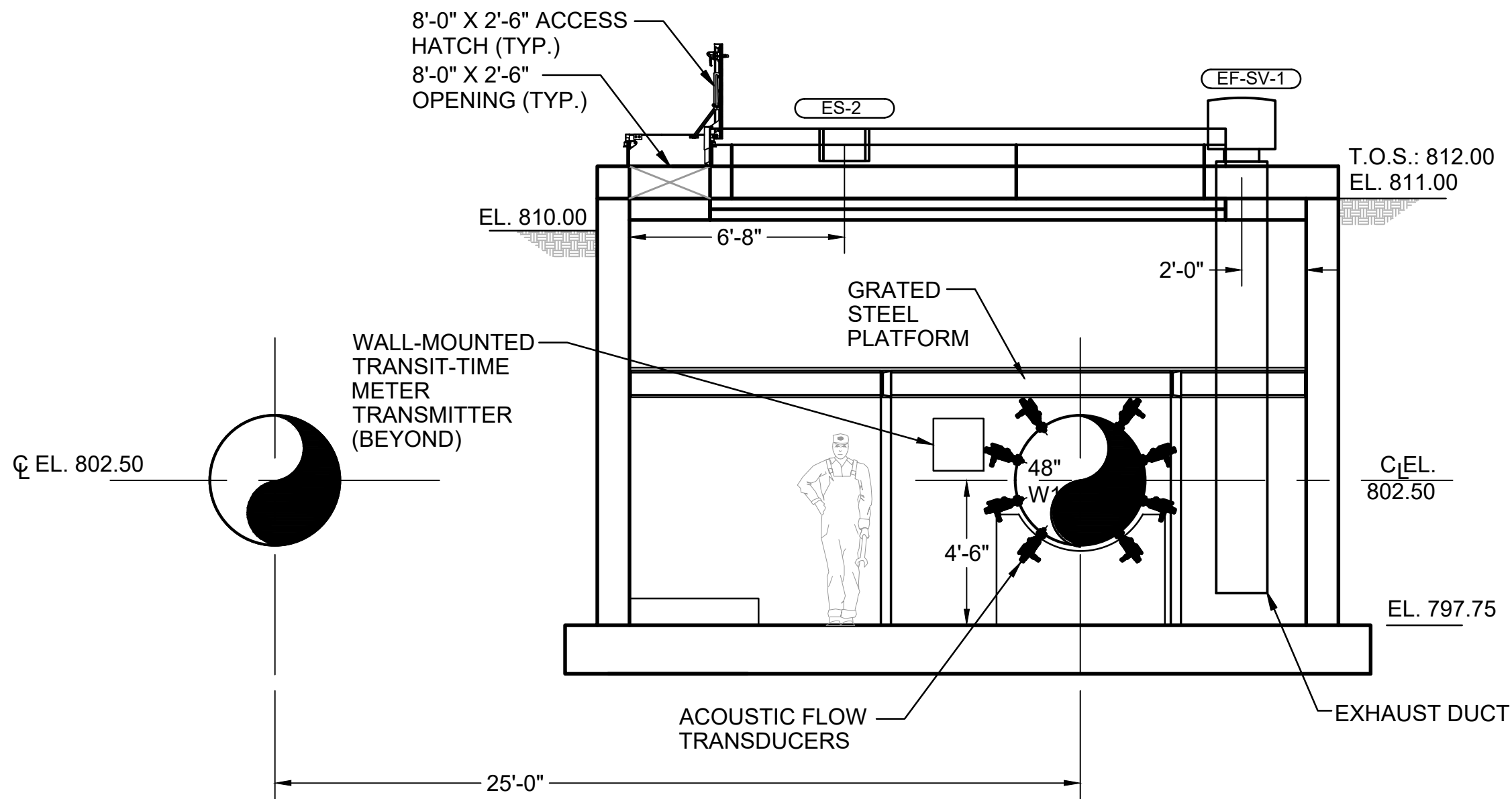
DRAWING NO.
RI-PS
DS1-011
 SHEET OF

ISSUED FOR BID

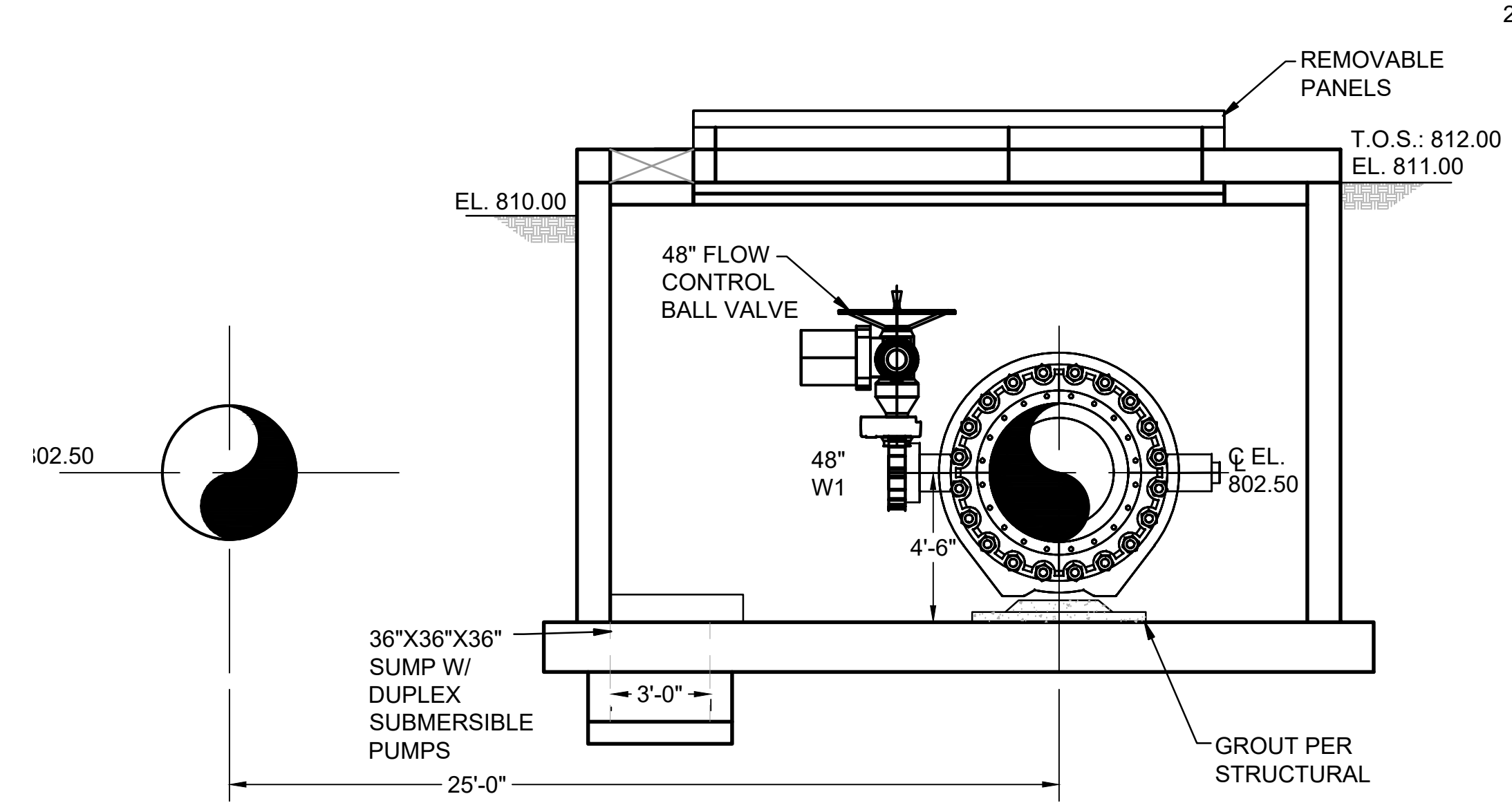
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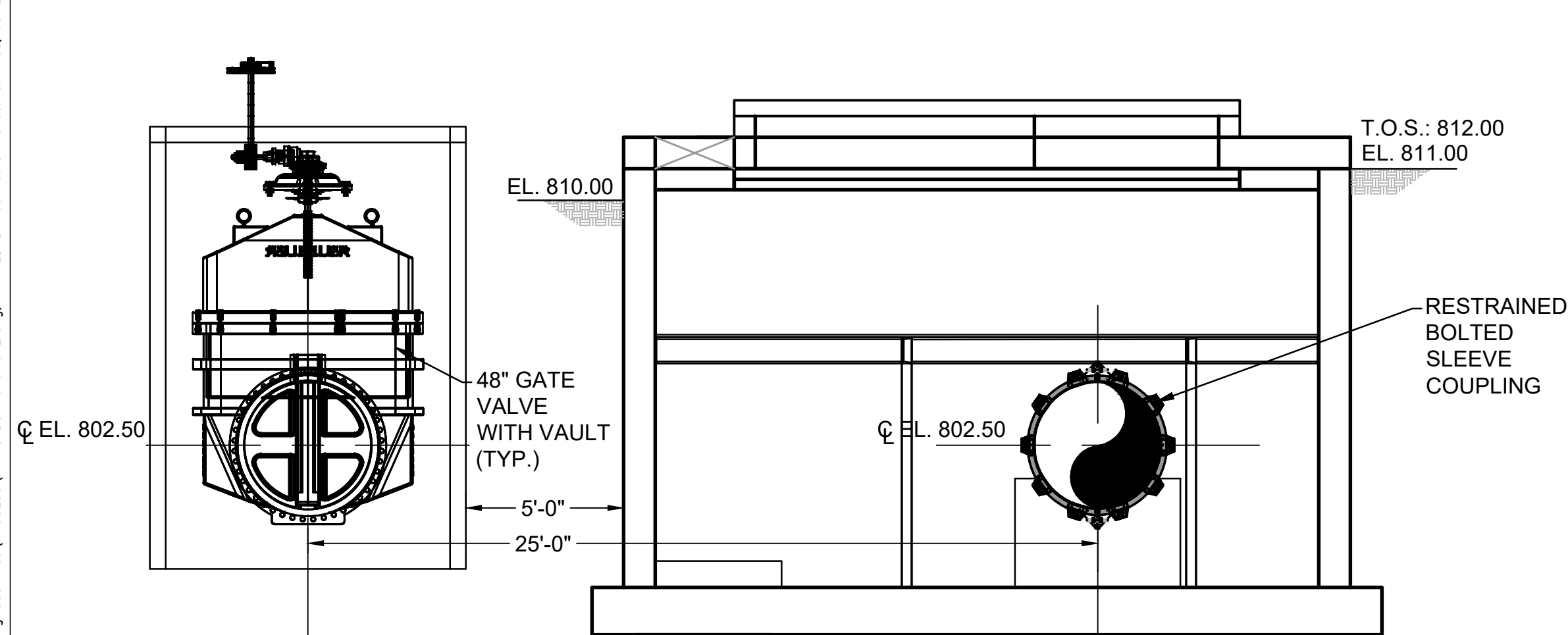
1. TRANSDUCERS SHALL BE TAPPED ONTO THE PIPE SPOOL PIECE PER MANUFACTURER'S RECOMMENDATIONS.
2. STAIRS AND LADDERS BY STAIR MFR.



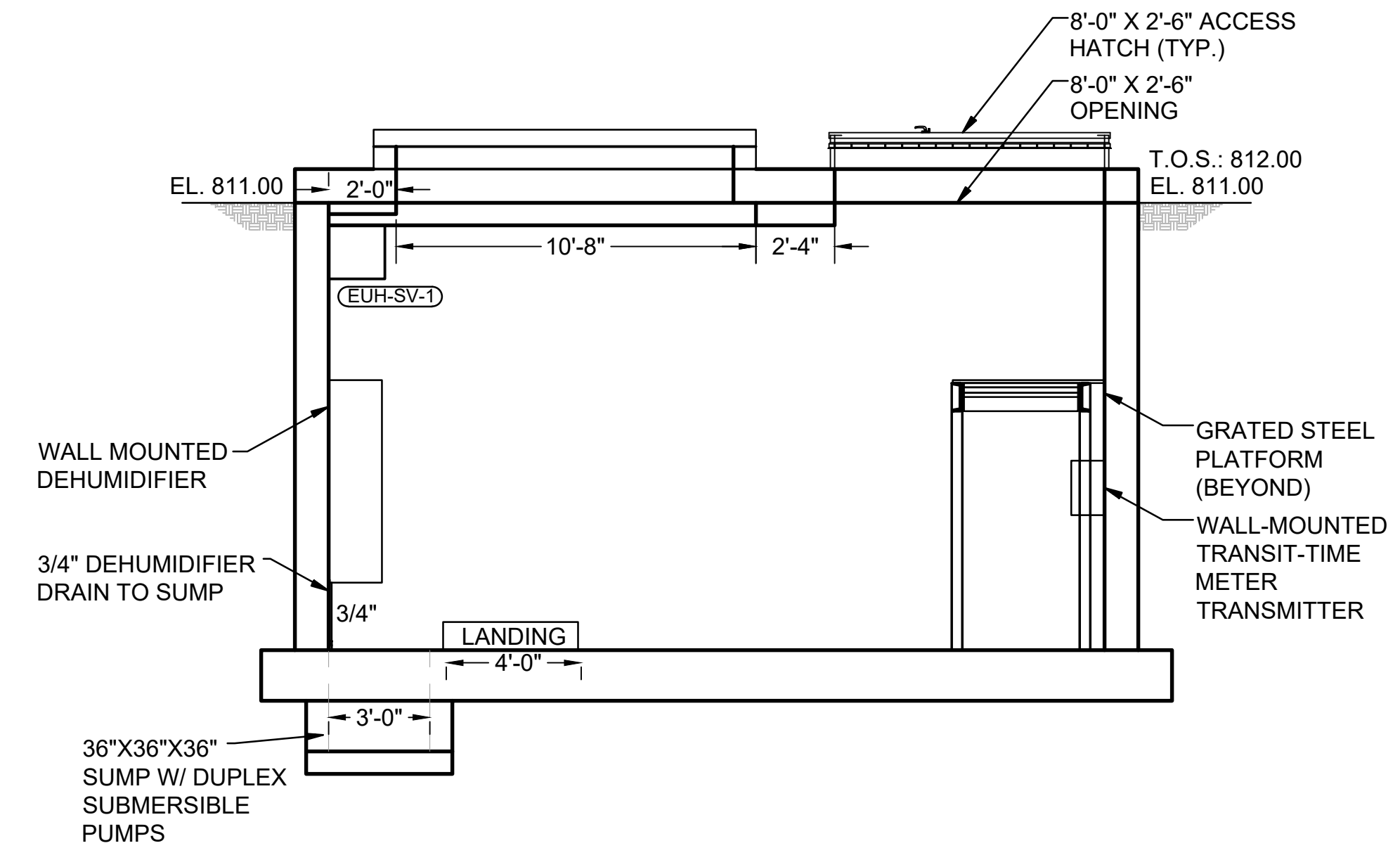
VAULT SECTION B-B
SCALE: 3" = 1'-0"



VAULT SECTION C-C
SCALE: 3" = 1'-0"



VAULT SECTION D-D
SCALE: 3" = 1'-0"



VAULT SECTION E-E
SCALE: 3" = 1'-0"



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CHECKED BY:	G.A.
DATE:	12/01/20
SCALE:	AS NOTED

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

RIVER INTAKE PUMP STATION
VALVE VAULT SECTION

DRAWING NO.

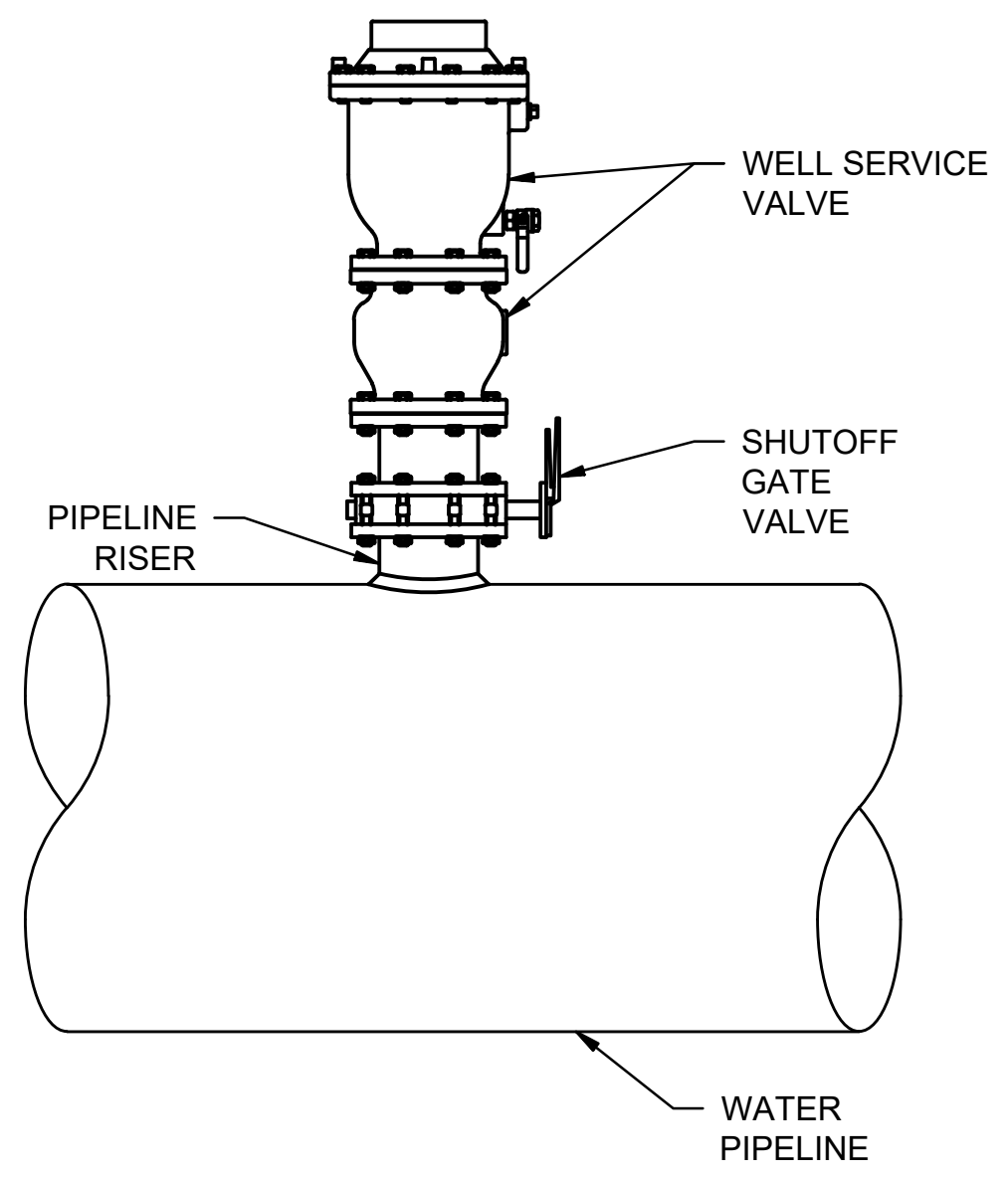
RI-PS

DS1-012

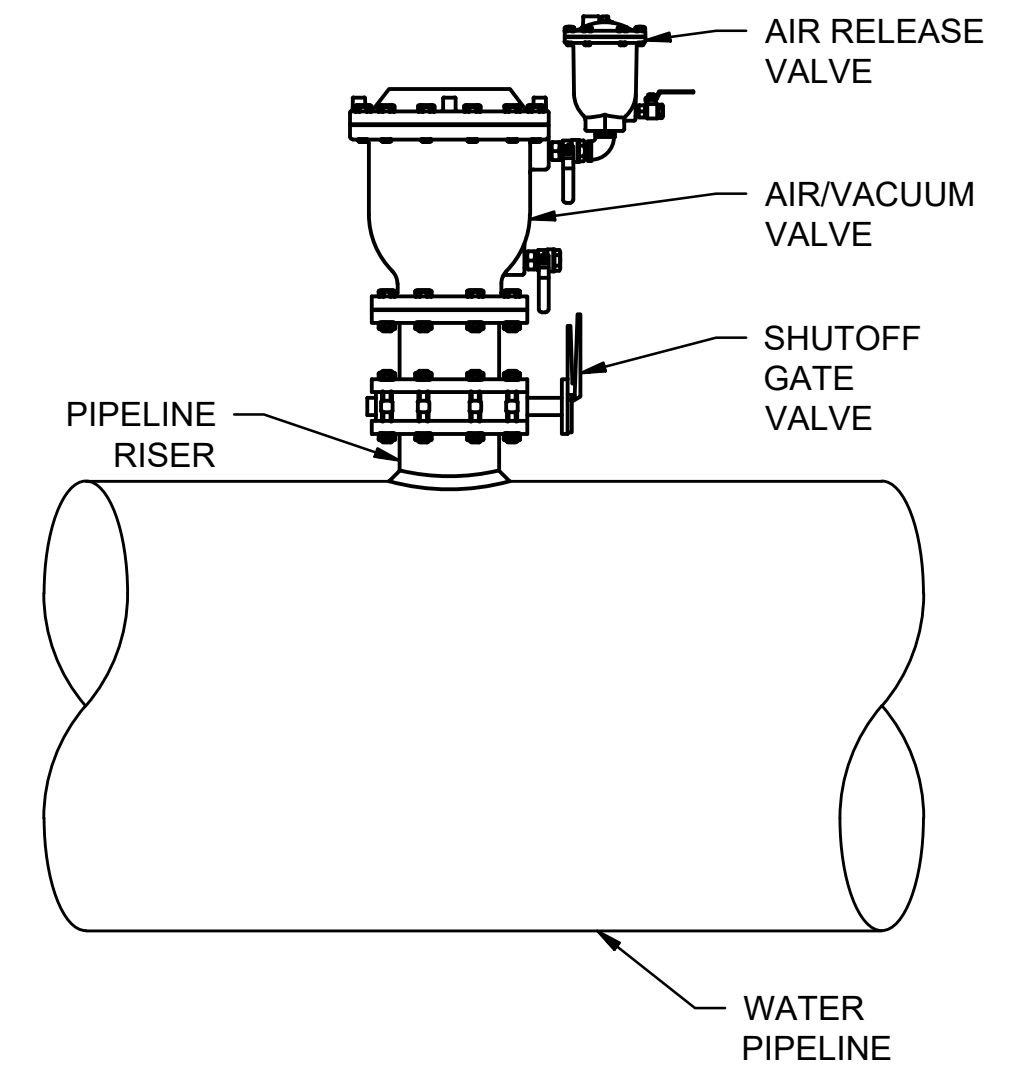
SHEET OF

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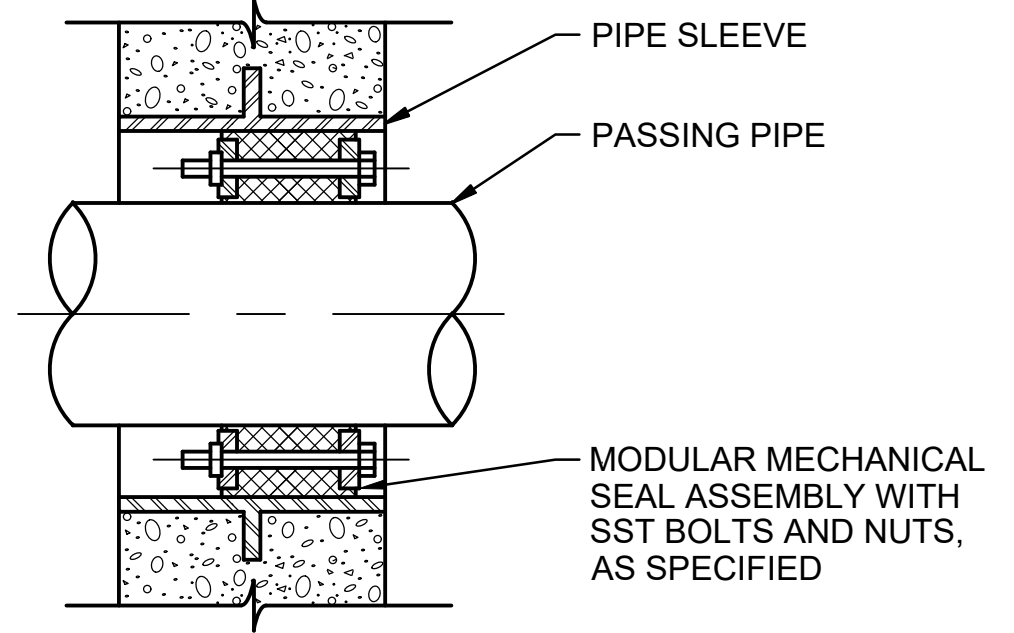
P:\01 Active Projects\047- City of Atlanta (6692)\047\001.dwg - River Intake Pump Station\31 - Authoring Cad Files\PROCESS\RI-PS_DS2-001.dwg, PRINTED BY: Johnathon Pender ON Wed, Jul 21, 2021 AT 10:21 AM



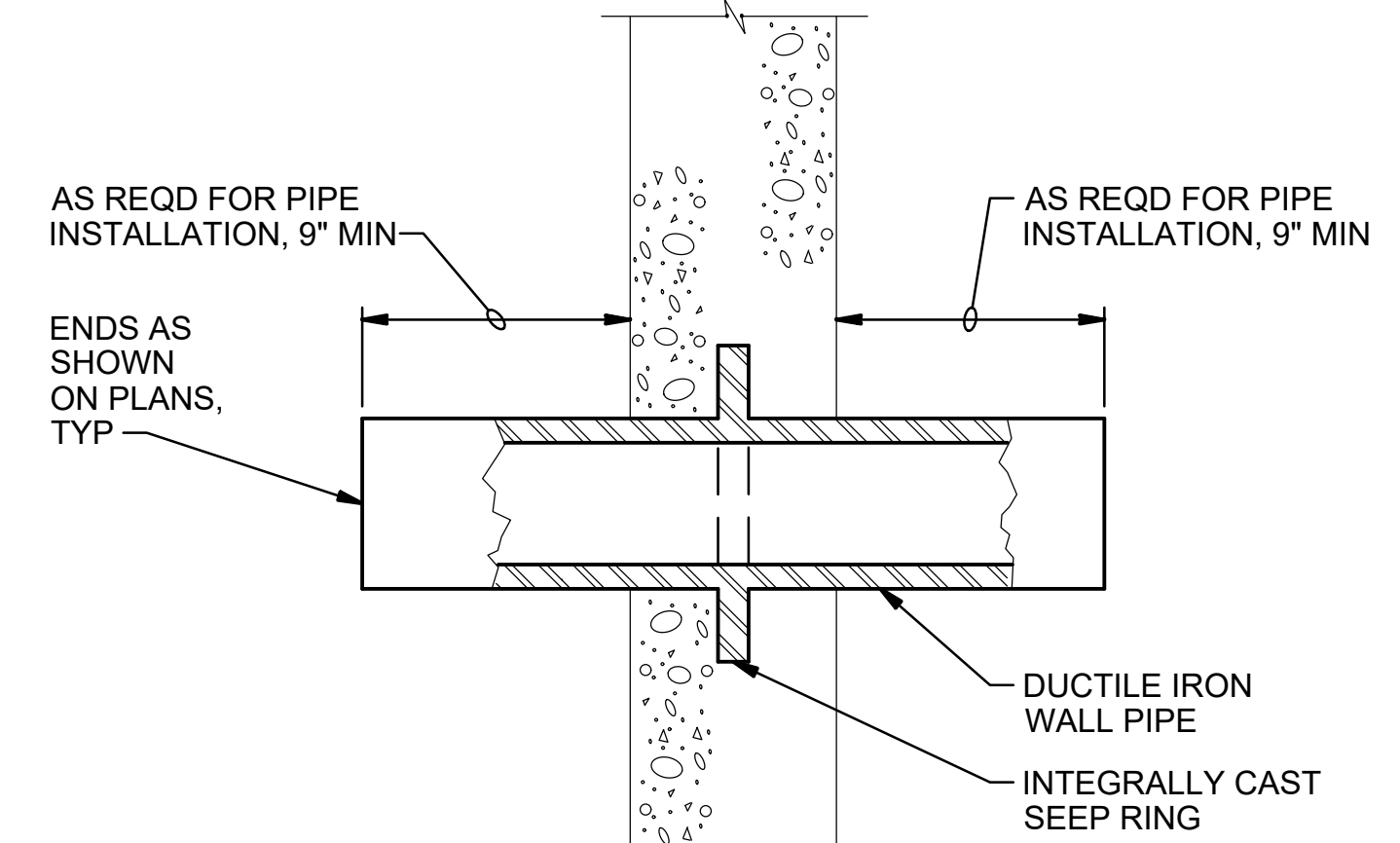
1 WELL SERVICE AIR VALVE
NTS



2 DUAL BODY COMBO. AIR VALVE
NTS

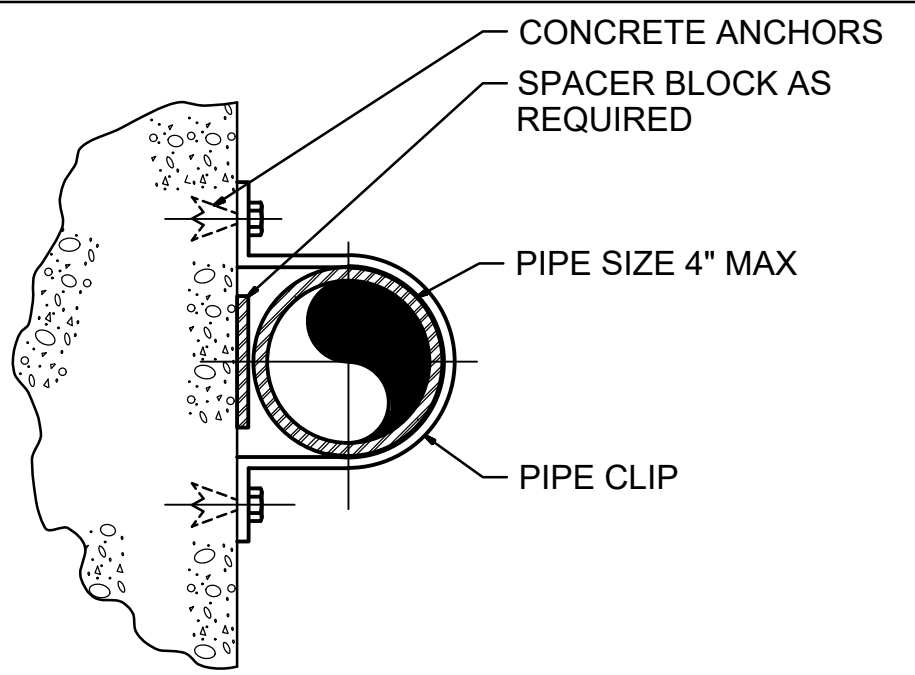


3 WALL PIPE PENETRATION SEAL
NTS



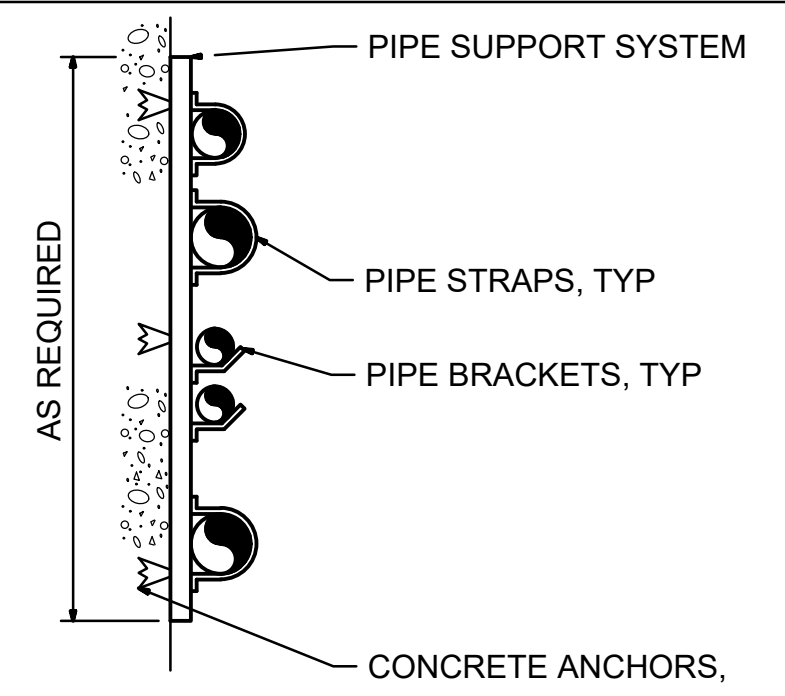
NOTES:
1. COAT WALL PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.

4 DUCTILE IRON WALL PIPE
NTS



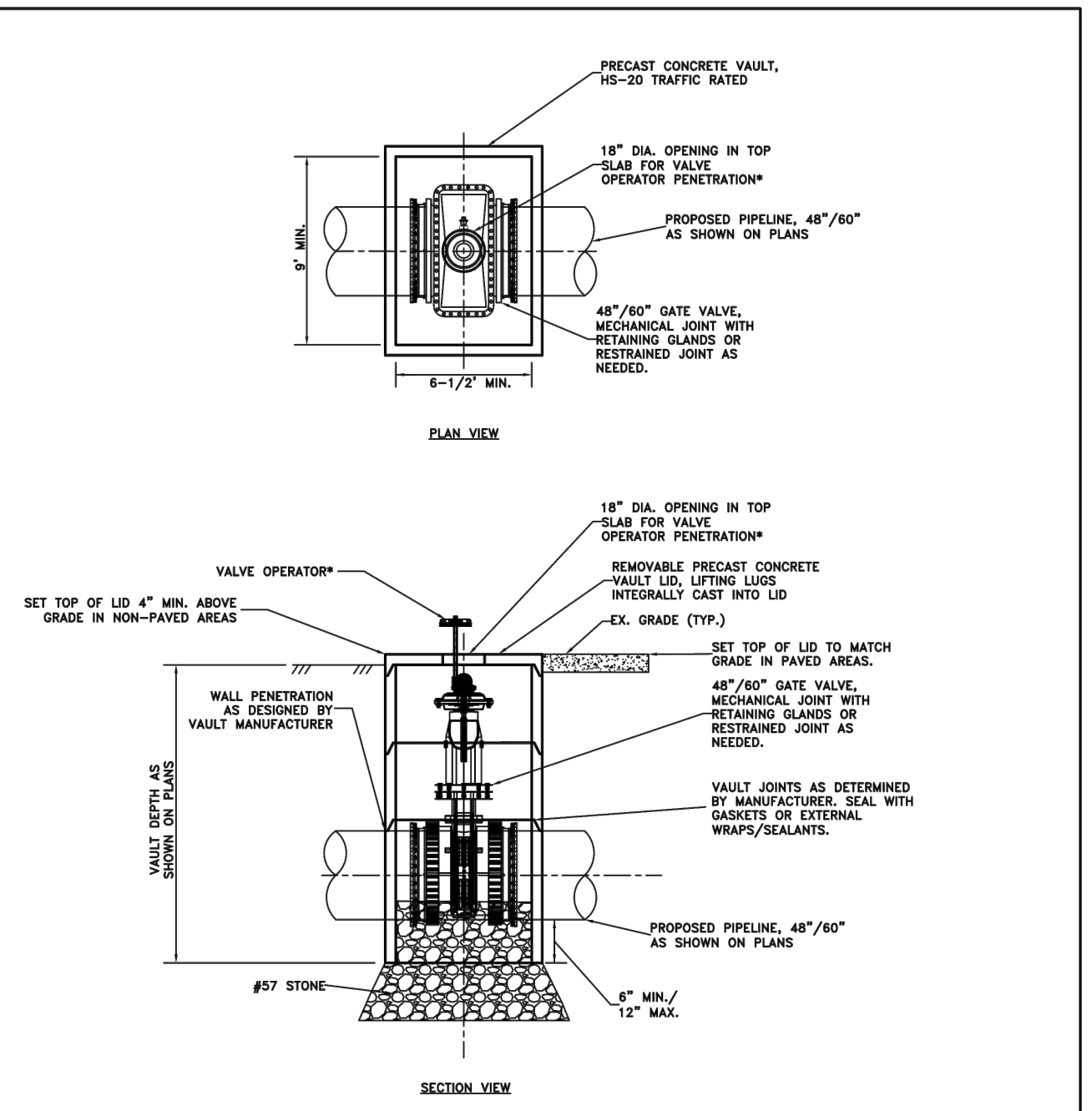
NOTES:
1. FOR VERTICAL PIPES ONLY.
2. PROVIDE PIPE PROTECTION BARRIER AS SPECIFIED. FABRICATE OVERSIZE STRAP WHERE REQUIRED.
3. STAINLESS STEEL WEDGE ANCHORS REQ'D OCCASIONALLY.
4. CATALOG STANDARD PRODUCTS ARE AVAILABLE IN LIMITED MATERIALS AND SIZES. SPECIAL MATERIALS AND SIZES REQUIRE FABRICATION TO CONFORM TO SPECIFICATION.
5. PIPE PROTECTION BARRIER MAY BE APPLIED FOR ELECTRICAL ISOLATION OF DISSIMILAR METALLIC PIPING FROM HANGER OR SUPPORT AND FOR PROTECTION OF PLASTIC PIPING FROM CLAMPING STRESSES.
6. PIPE SUPPORT PRODUCT CONFORMS TO SPECIFIED STANDARD MSS SP-58, PIPE HANGERS AND SUPPORTS - MATERIALS, DESIGN AND MANUFACTURE.

5 TYPICAL WALL MOUNT PIPE SUPPORT
NTS



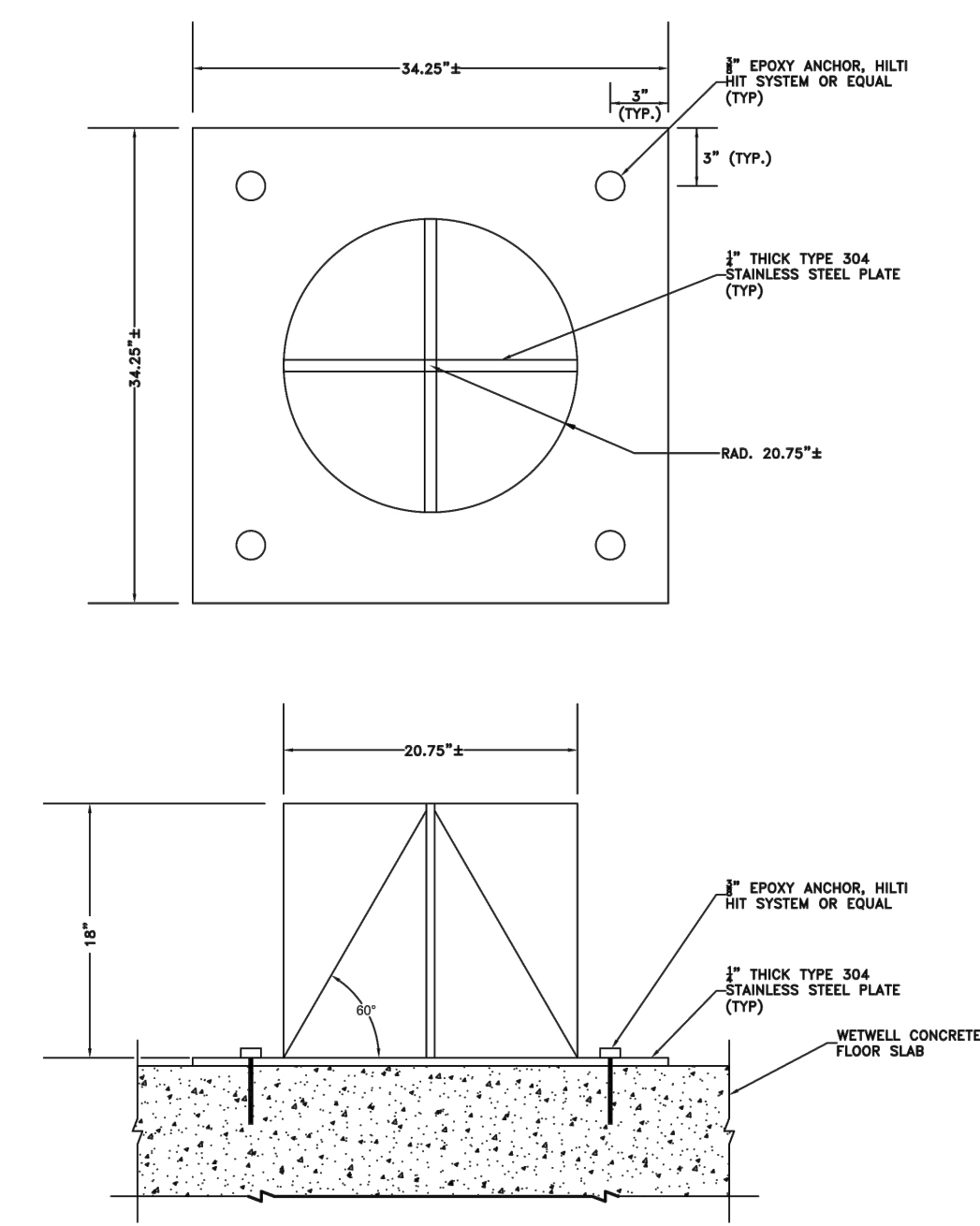
NOTES:
1. PROVIDE PIPE PROTECTION BARRIER AS SPECIFIED.
2. STAINLESS STEEL EXPANSION ANCHORS SOMETIMES REQUIRED. FILL IN ANCHOR SPACING.
3. CATALOG STANDARD PRODUCTS ARE AVAILABLE IN LIMITED MATERIALS AND SIZES. SPECIAL MATERIALS AND SIZES REQUIRE FABRICATION TO CONFORM TO SPECIFICATION.
4. PIPE PROTECTION BARRIER MAY BE APPLIED FOR ELECTRICAL ISOLATION OF DISSIMILAR METALLIC PIPING FROM HANGER OR SUPPORT AND FOR PROTECTION OF PLASTIC PIPING FROM CLAMPING STRESSES.

6 TYPICAL STACKED PIPE WALL SYSTEM
NTS



TYPICAL PRECAST CONCRETE GATE VALVE VAULT
SCALE: NTS
NOTES:
1. PRECAST VAULT ASSEMBLY SHALL BE HS-20 LOAD RATED.
2. IN PAVED AREAS, OMIT EXTENDED OPERATOR AND PROVIDE TRAFFIC RATED 18-INCH DIAMETER VALVE BOX FRAME AND COVER IN VAULT LID.

CITY OF ATANTA DEPARTMENT OF WATERSHED MANAGEMENT MARCH 22, 2019	WATER SUPPLY PROGRAM RIVER INTAKE PUMP STATION FC-1190004 ATTACHMENT TO ADDENDUM NO. 2	PREPARED BY: R2T, INC.
---	--	---------------------------



FLOW CONDITIONING CONE DETAIL
SCALE: NTS
NOTES:
1. FABRICATE UNIT FROM TYPE 304 STAINLESS STEEL.

CITY OF ATANTA DEPARTMENT OF WATERSHED MANAGEMENT MARCH 22, 2019	WATER SUPPLY PROGRAM RIVER INTAKE PUMP STATION FC-1190004 ATTACHMENT TO ADDENDUM NO. 2	PREPARED BY: R2T, INC.
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SCALE:	AS NOTED

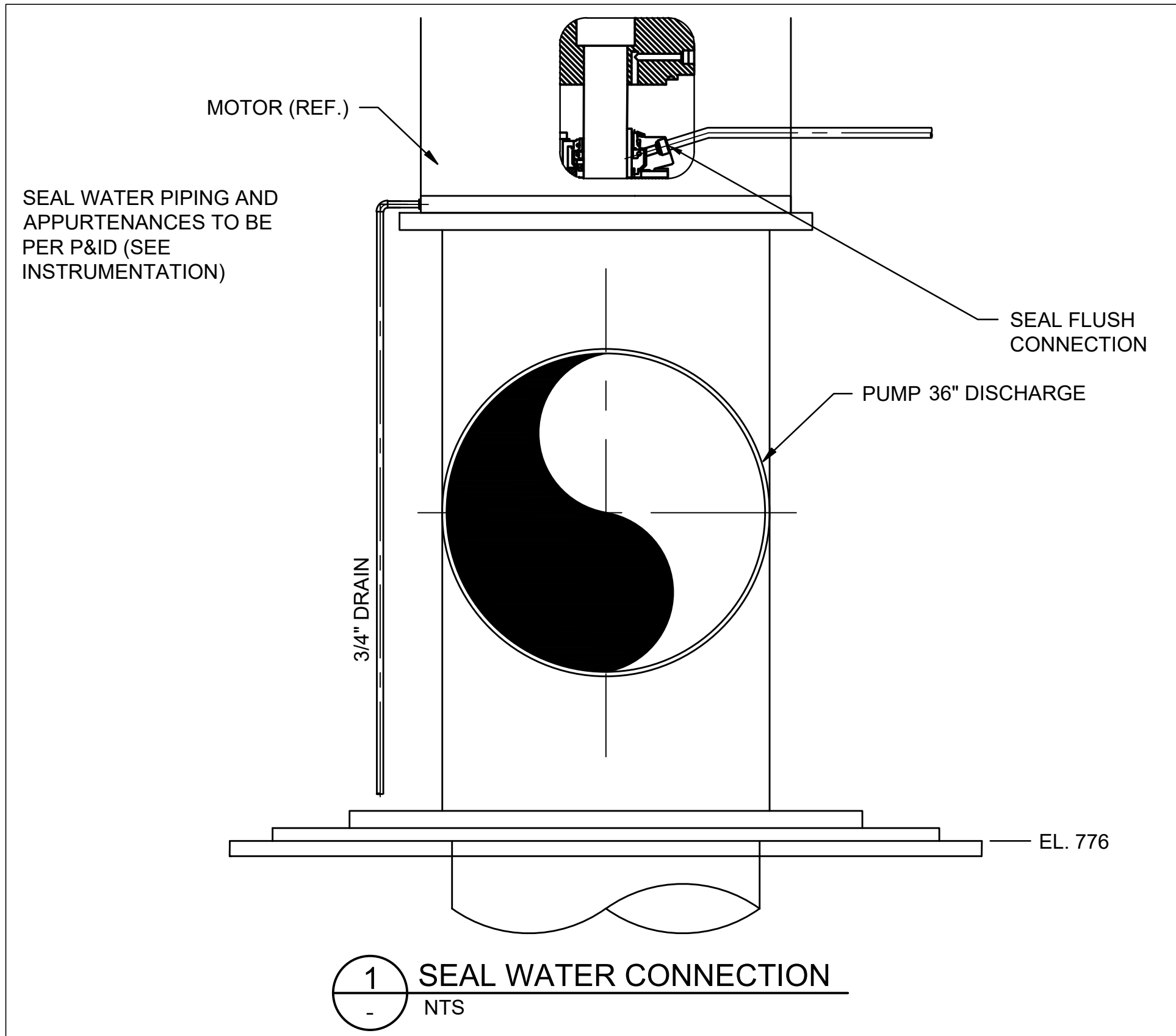
CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
PROCESS
DETAILS

DRAWING NO.
RI-PS
DS2-001
SHEET OF

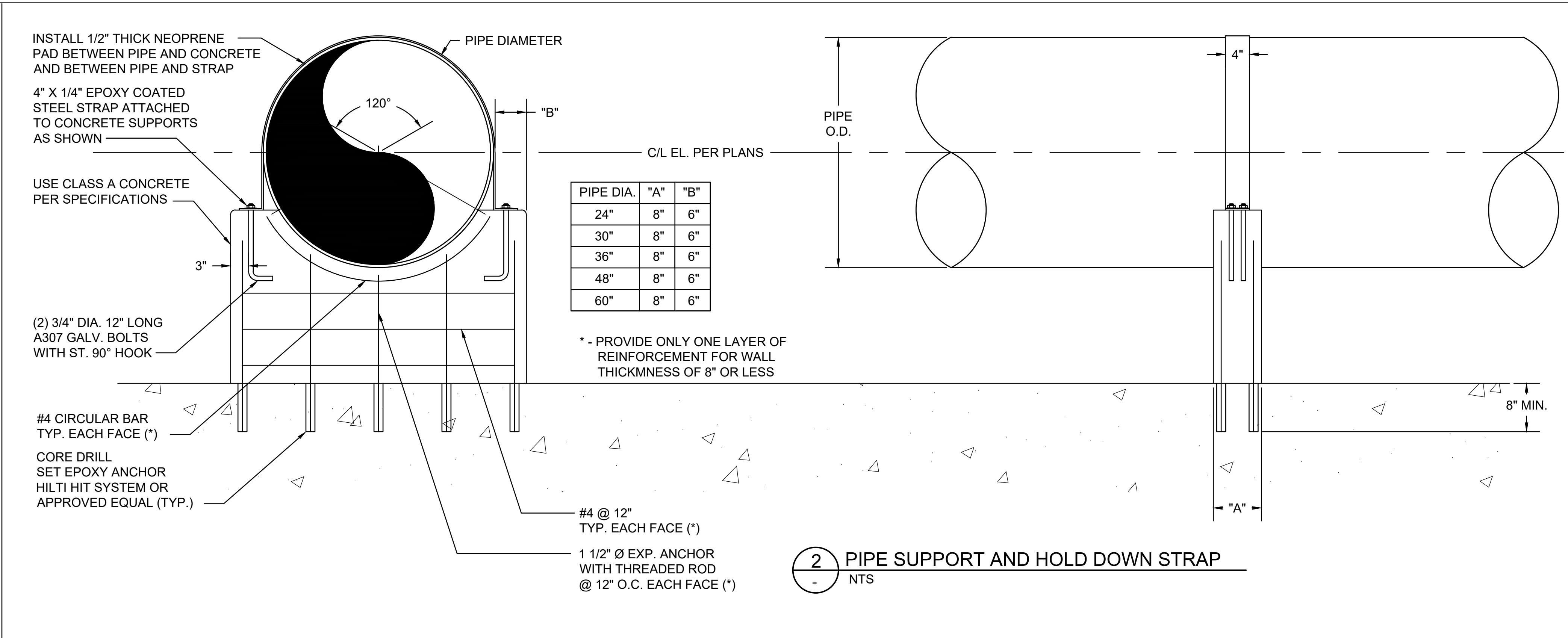
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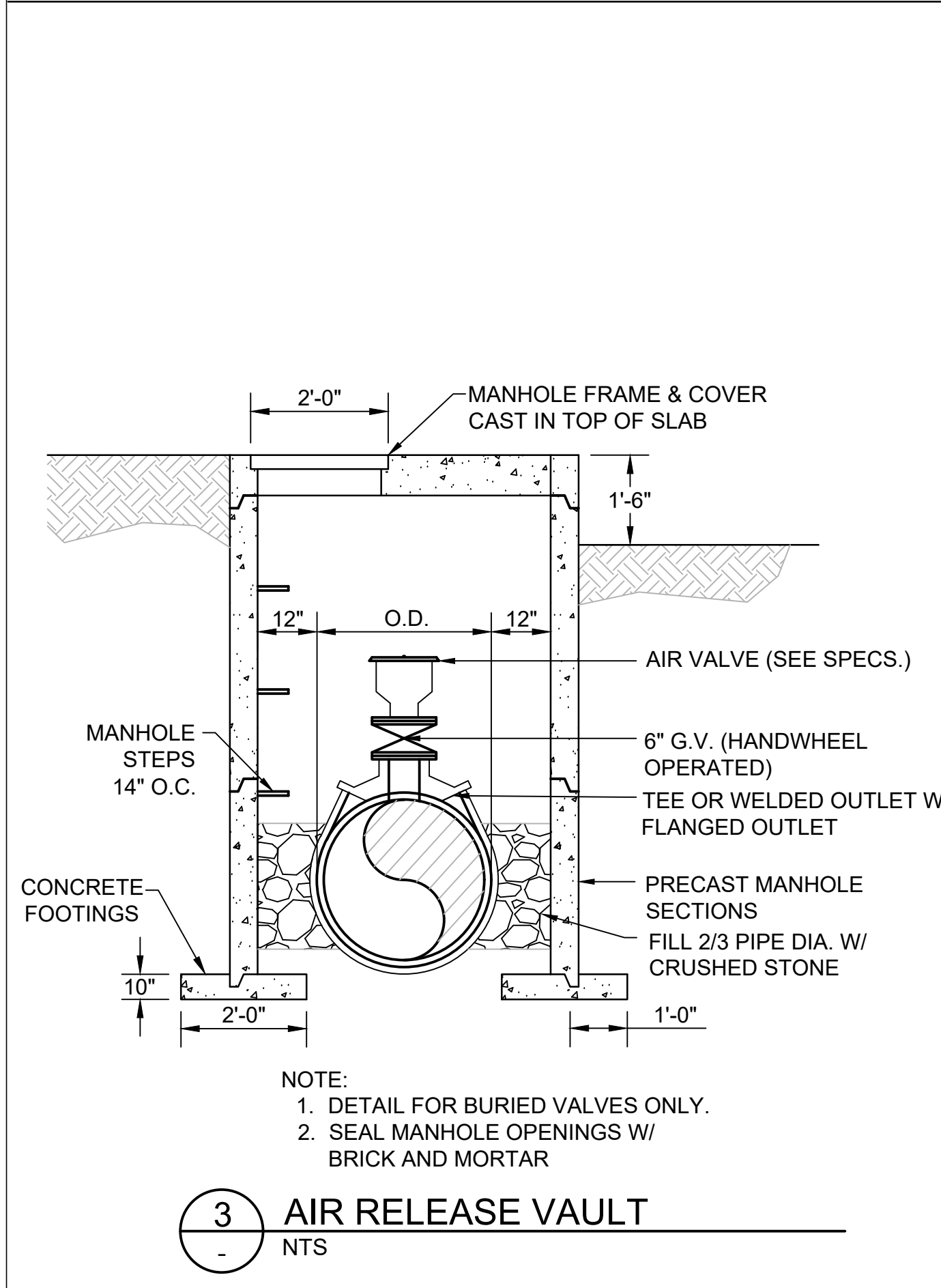
P:\01 Active Projects\047- City of Atlanta (6692)\0470017 - TO 68 - River Intake Pump Station\31 Authoring Cad Files\PROCESS\RI-PS_DS2-002.dwg, PRINTED BY: Johnathon Pender ON Wed, Jul 21, 2021 AT 10:21 AM



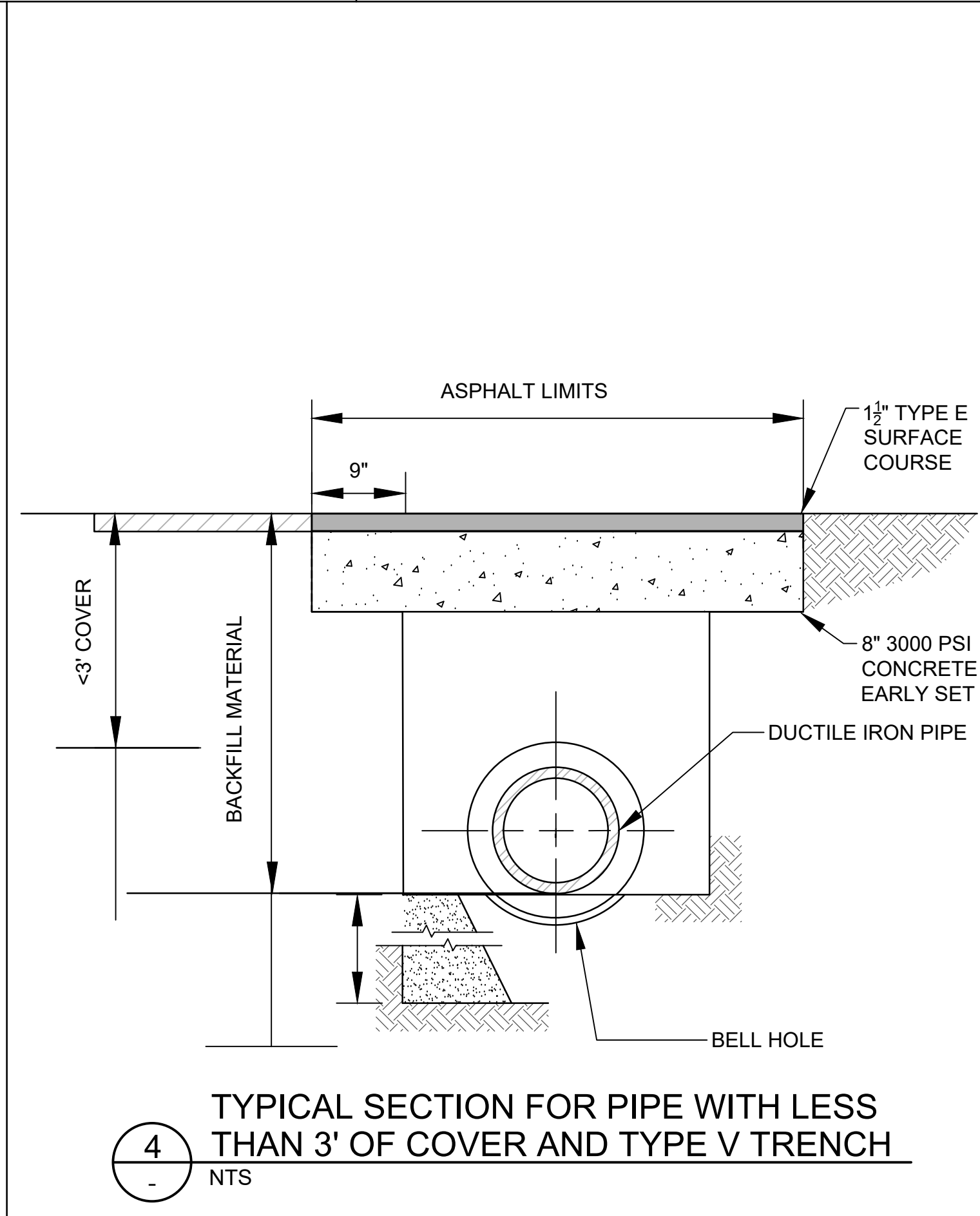
1 SEAL WATER CONNECTION
NTS



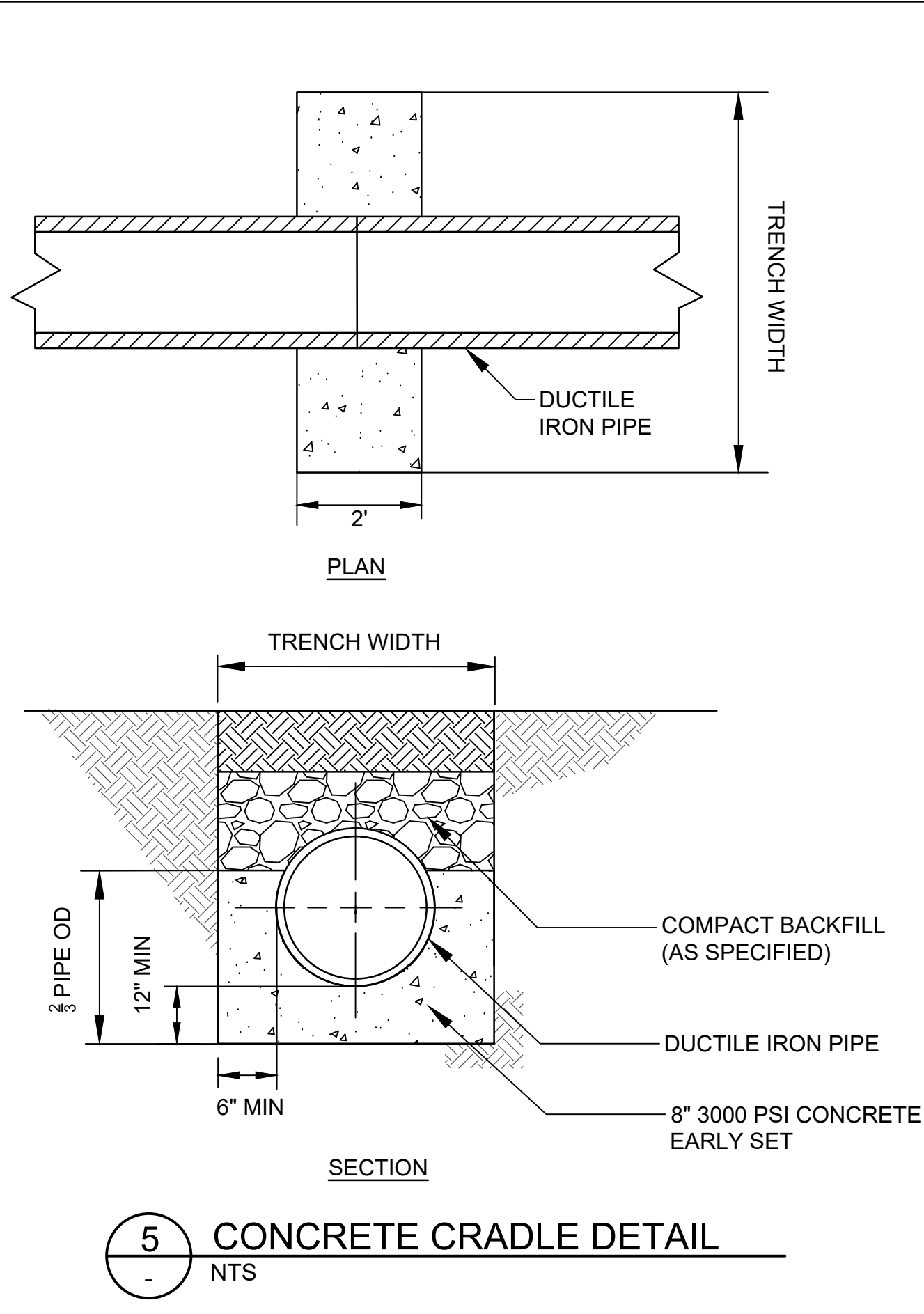
2 PIPE SUPPORT AND HOLD DOWN STRAP
NTS



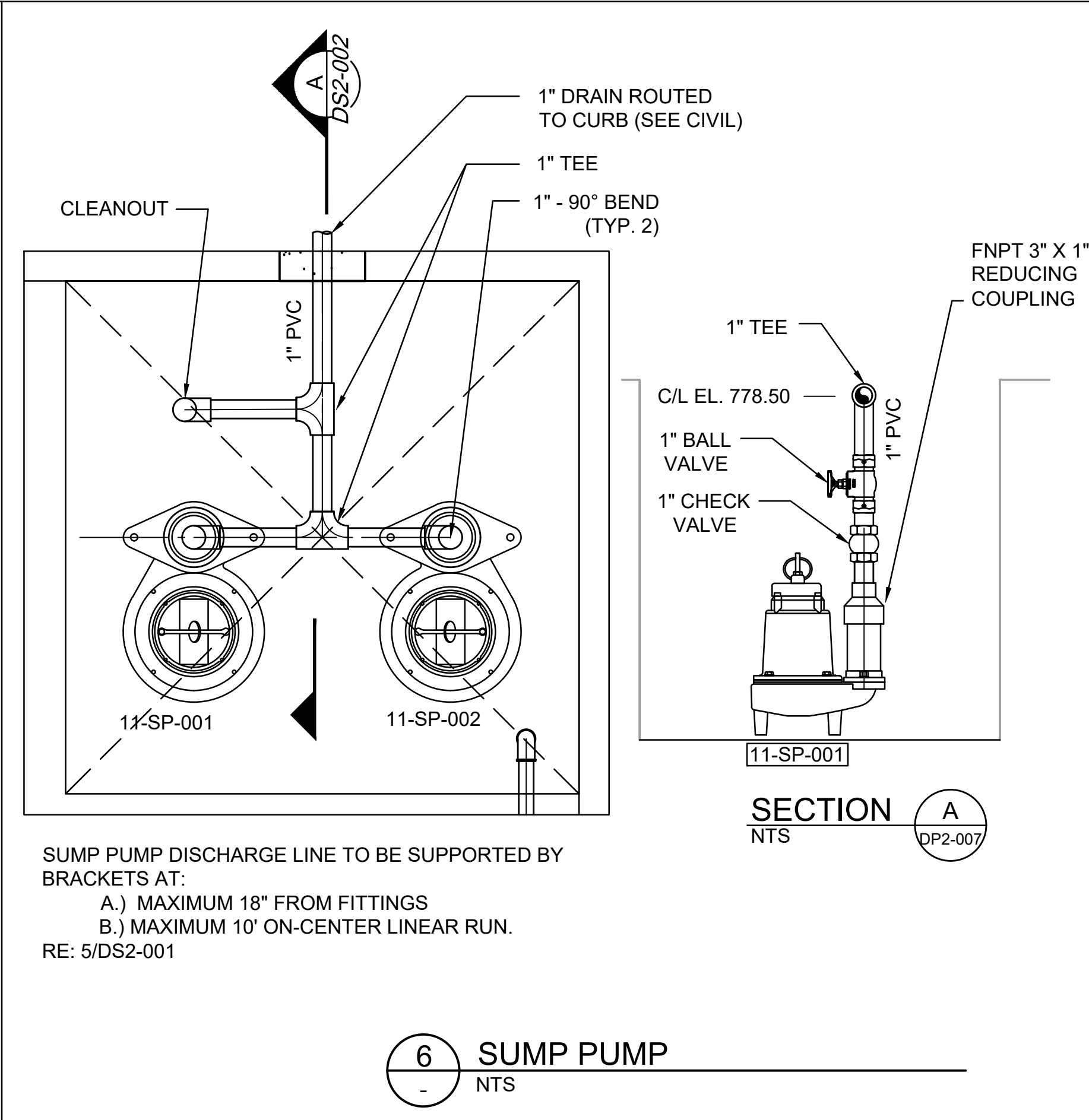
3 AIR RELEASE VAULT
NTS



4 TYPICAL SECTION FOR PIPE WITH LESS THAN 3' OF COVER AND TYPE V TRENCH
NTS



5 CONCRETE CRADLE DETAIL
NTS



6 SUMP PUMP
NTS



No.	Description	Date

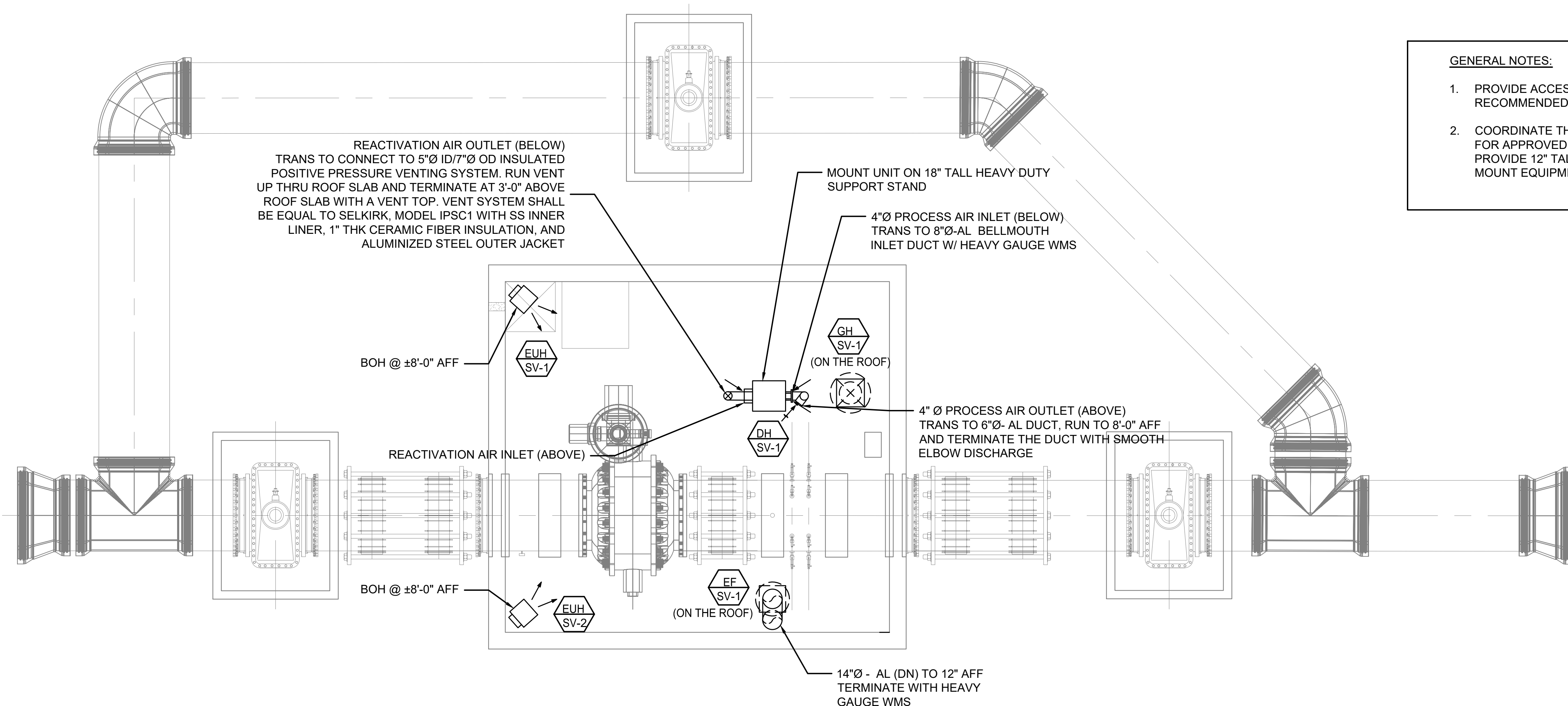
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CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
PROCESS
DETAILS

DRAWING NO.
RI-PS
DS2-002
SHEET OF

ISSUED FOR BID



- GENERAL NOTES:**
1. PROVIDE ACCESS AROUND THE DEHUMIDIFIER UNIT AS RECOMMENDED BY THE MANUFACTURER.
 2. COORDINATE THE ROOF SLAB OPENING SIZES WITH STRUCTURAL FOR APPROVED EXHAUST FAN AND GRAVITY INTAKE AIR HOODS. PROVIDE 12" TALL CONCRETE CURB FOR THESE OPENINGS TO MOUNT EQUIPMENT.

1 VALVE VAULT - HVAC PLAN
M1-103 SCALE: 1/4" = 1'-0"



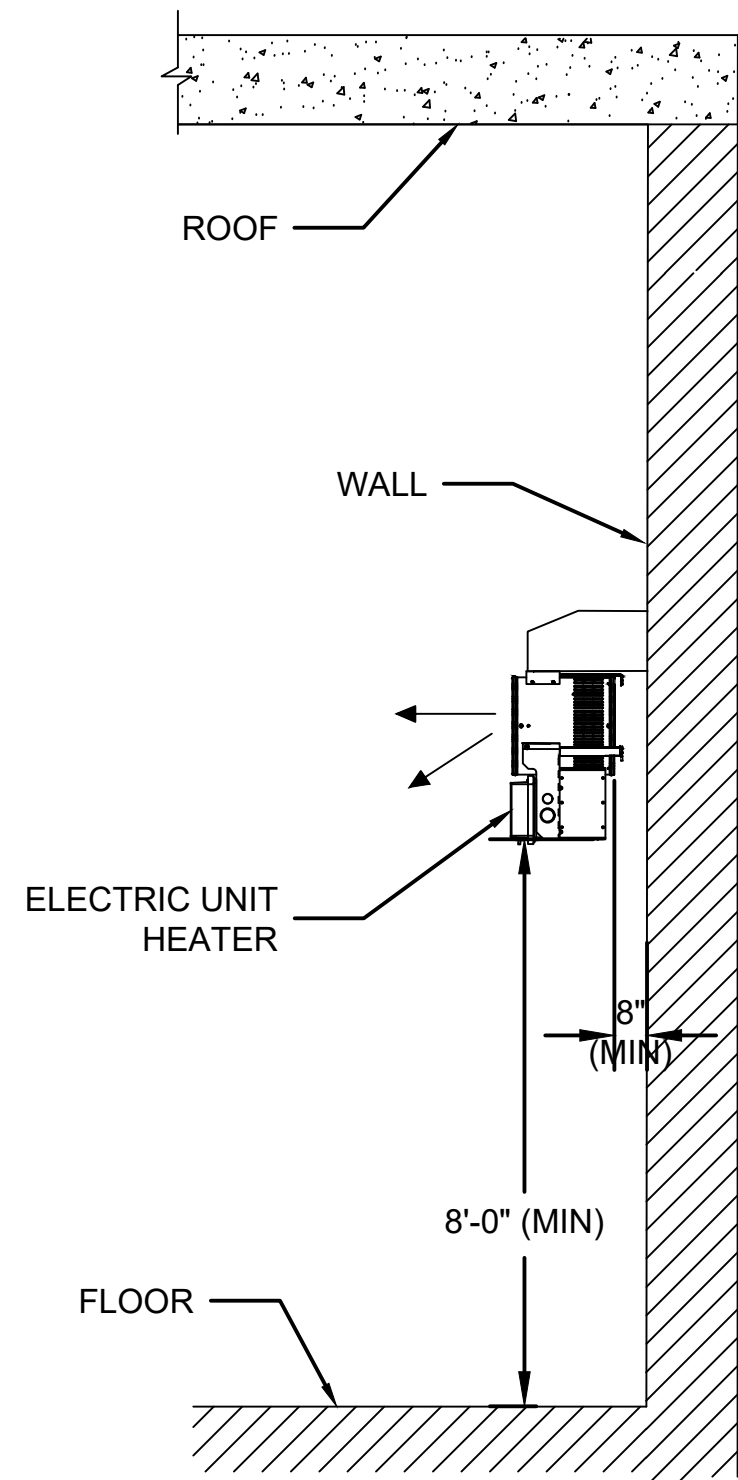
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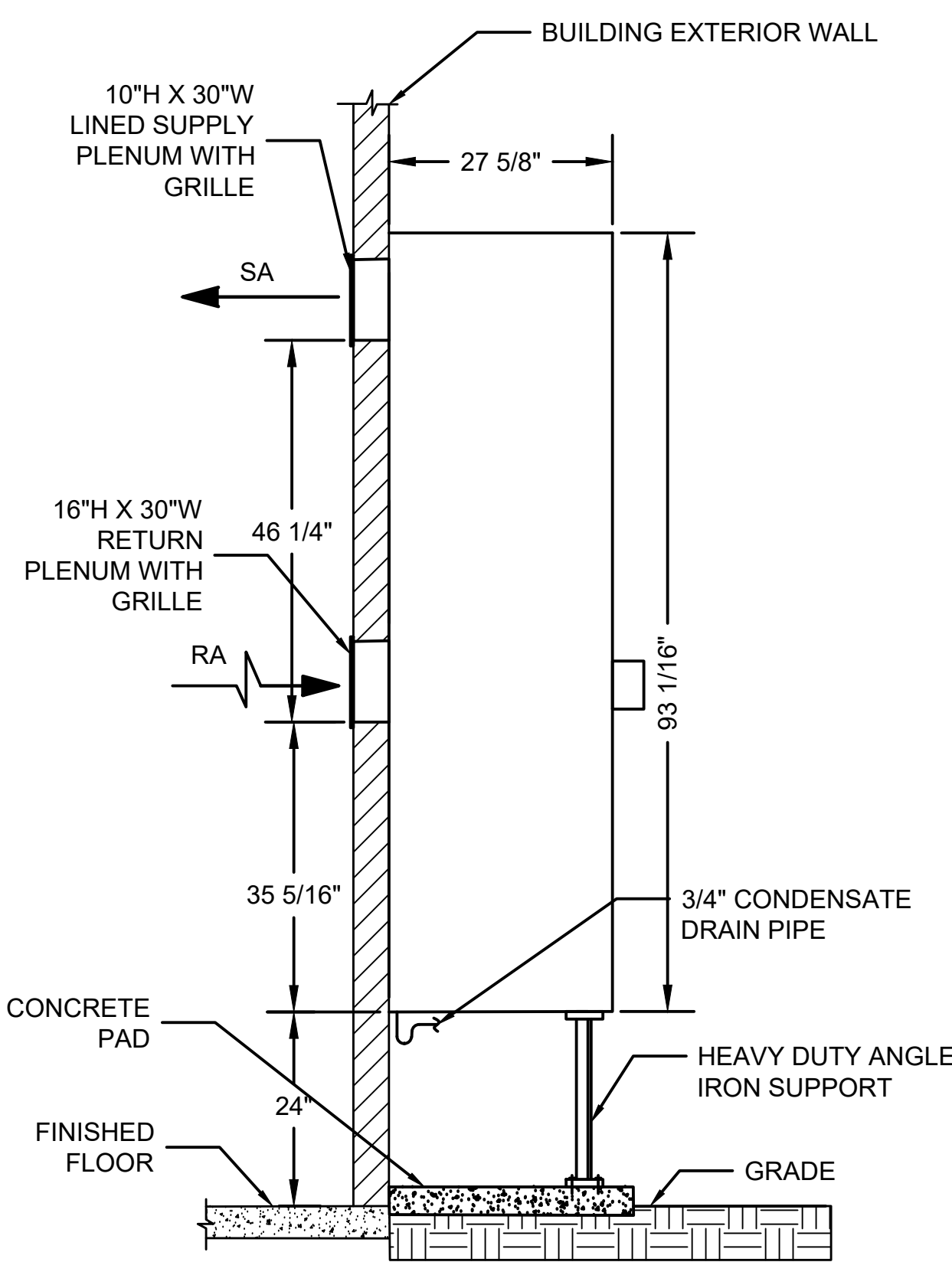
SCALE: 1/4" = 1'-0"

	No.	Description	Date	STAMP:	ADDRESS:	PROJECT NO:	TASK 1	CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT WATER SUPPLY PROGRAM RIVER INTAKE PUMP STATION VALVE VAULT HVAC PLAN	DRAWING NO.	RI-PS
						DESIGNED BY:	SP		M1-103	
						DRAWN BY:	NM		SHEET	OF
						CHECKED BY:	SP			
						DATE:	07-18-2021			
			SCALE:	AS NOTED						

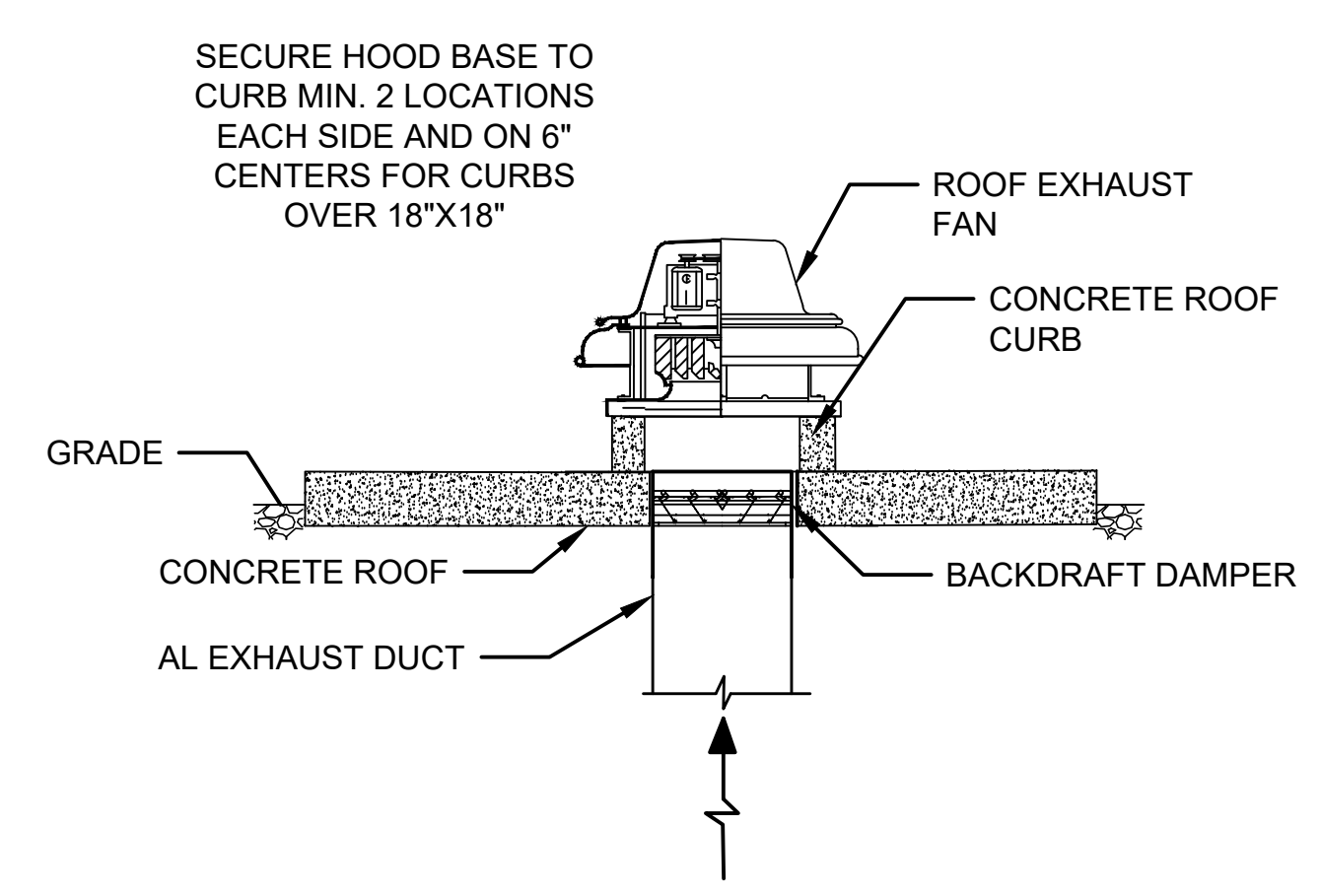
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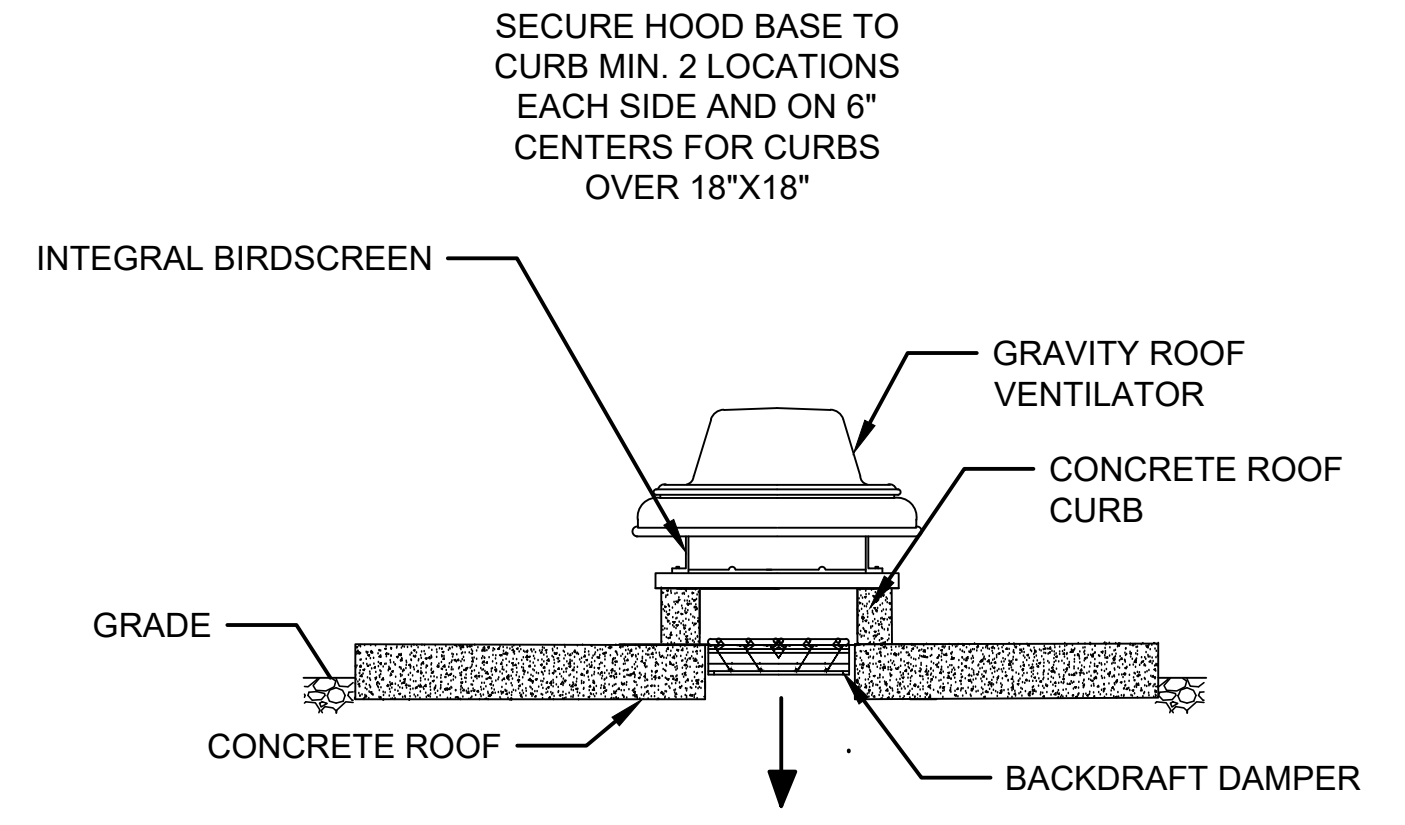
1 WALL MOUNTED ELECTRIC HEATER DETAIL
NTS



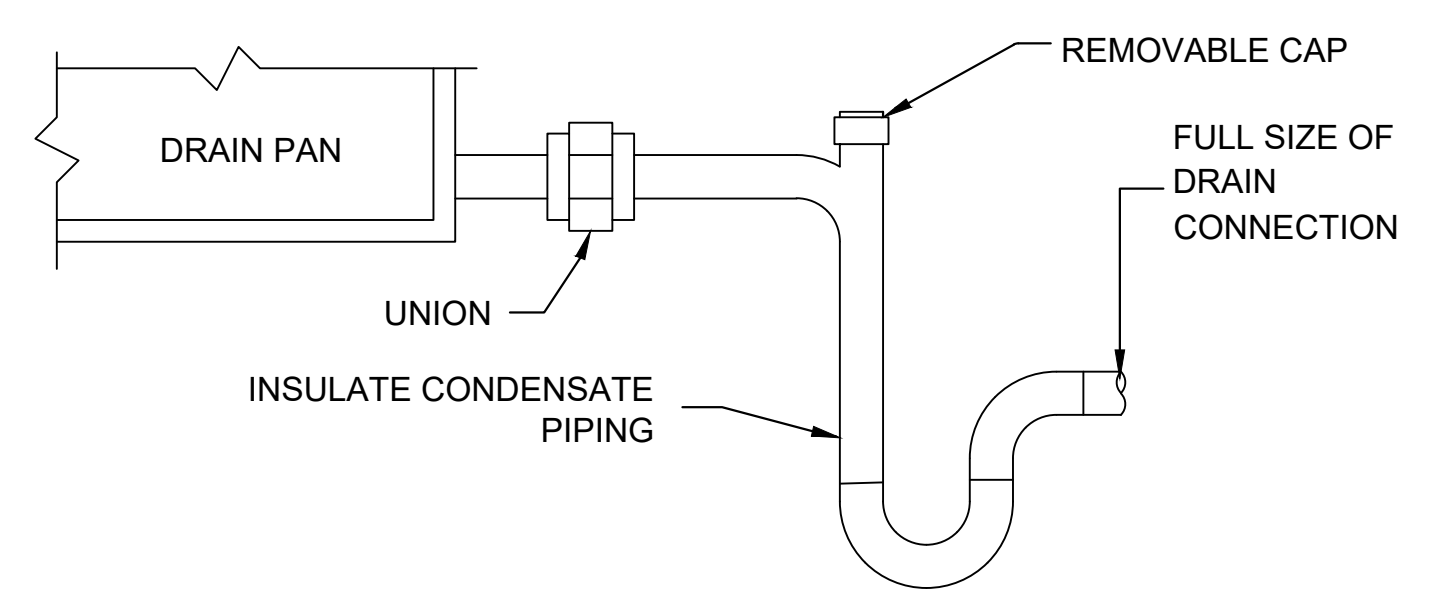
2 ACU MOUNTING DETAIL
NTS



3 ROOF FAN MOUNTING DETAIL
NTS




4 GRAVITY INTAKE AIR HOOD MOUNTING DETAIL
NTS



1. PIPING SHALL BE FULL SIZE OF DRAIN CONNECTION.
2. WHERE SUPPORTED, ISOLATE DRAIN PIPING FROM CLAMPS WITH DIELECTRIC ISOLATORS.
3. MINIMUM TRAP HEIGHT SHALL BE EQUAL TO FAN NEGATIVE STATIC PRESSURE.

5 CONDENSATE DRAIN DETAIL
NTS

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DRAWN BY:	NM
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DATE:	07-18-2021
SCALE:	AS NOTED

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
HVAC DETAILS

DRAWING NO.
RI-PS
M5-001
SHEET OF

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GENERAL NOTES

- THESE CONTRACT DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. IT IS INTENDED THAT A COMPLETE HVAC SYSTEM BE PROVIDED WITH ALL NECESSARY EQUIPMENT, APPURTENANCES, AND CONTROLS, COMPLETELY COORDINATED WITH ALL DISCIPLINES. ALL PARAMETERS GIVEN IN THESE DOCUMENTS SHALL BE STRICTLY CONFORMED WITH ALL ITEMS AND LABOR REQUIRED FOR A COMPLETE HVAC SYSTEM IN ACCORDANCE WITH ALL APPLICABLE STANDARDS AND LATEST STATE AND LOCAL CODES AND THIS PACKAGE OF CONTRACT DOCUMENTS SHALL BE FURNISHED WITHOUT INCURRING ANY ADDITIONAL COST TO THE CONTRACTOR. CONTRACTOR SHALL CAREFULLY REVIEW ALL CONTRACT DOCUMENTS AND THE DESIGN OF OTHER TRADES BEFORE PREPARING SHOP DRAWINGS, AND COMMENCING ANY WORK.
- COORDINATE DUCTWORK AND PIPING WITH ARCHITECTURAL, PROCESS MECHANICAL, STRUCTURAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL. MAKE OFFSETS AND TRANSITIONS TO COORDINATE WITH OTHER TRADES WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
- MECHANICAL CONTRACTOR SHALL COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT WITH THE ELECTRICAL CONTRACTOR AND ALL ELECTRICAL CONTRACT DOCUMENTS PRIOR TO ORDERING.
- ALL WALL MOUNTED THERMOSTATS SHALL BE INSTALLED 4'-0" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
- ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS BY MEANS OF TEMPORARY PARTITIONS AND/OR TARPS TO KEEP DUST AND DIRT WITHIN THE CONSTRUCTION AREA.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFEKEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTIES AGAINST FIRE, THEFT AND ENVIRONMENTAL CONDITIONS.

WALL MOUNTED AIR CONDITIONING UNITS WITH ELECTRIC HEAT

EQUIPMENT TAG	MAX SUPPLY AIR (CFM)	OA (CFM)	NOMINAL TONS	ESP (IN. WG)	INDOOR FAN MOTOR (HP)	COOLING		ELECTRIC HEATING KW	OUTDOOR FAN MOTOR (HP)	ELECTRICAL			EER	MAKE & MODEL		WEIGHT OF UNIT (LBS)	REMARKS
						TOTAL (MBH)	SENSIBLE (MBH)			VOLT/PH/HZ	MCA (AMPS)	MOP (AMPS)		MFR	MODEL		
ACU-1	1,925	100	6.0	0.2	3/4	70.0	48.3	9	1/2	460/3/60	19.4	30	10	MARVAIR	MGA1072A	800	1 THRU 14
ACU-2	1,925	100	6.0	0.2	3/4	70.0	48.3	9	1/2	460/3/60	19.4	30	10	MARVAIR	MGA1072A	800	1 THRU 14

GENERAL NOTES:

- COOLING CAPACITY BASED ON EAT OF 80F DB/67F WB, AND 95F OA TEMPERATURE

REMARKS:

- SINGLE POINT POWER CONNECTION
- ECONOMIZER WITH ENTHALPY CONTROLS
- LOW AMBIENT CONTROLS
- SCROLL COMPRESSOR WITH COMPRESSOR SOUND JACKET
- ECM INDOOR FAN MOTOR
- HIGH EFFICIENCY UNIT WITH HEAVY DUTY CONSTRUCTION
- HUMIDITY CONTROL WITH HOT GAS RE-HEAT
- MERV 11 FILTERS. DIRTY FILTER INDICATOR
- SUPPLY AND RETURN GRILLES. TOP SUPPLY AND BOTTOM RETURN AIRFLOW
- PROTECTIVE COATING ON CONDENSER COIL
- DRY CONTACTS FOR REMOTE ALARMING
- DISCONNECT SWITCH
- COMMSTAT3 LEAD/LAG MICROPROCESSOR CONTROLLER WITH CAPABILITY TO RUN BOTH UNITS UPON DEMAND
- COLOR TO BE SELECTED BY THE ARCHITECT DURING SHOP DRAWING REVIEW

GRAVITY INTAKE AIR HOOD SCHEDULE

EQUIPMENT TAG	LOCATION	SERVICE	AIR FLOW (CFM)	PRESSURE DROP (IN. WG)	MAKE & MODEL		REMARKS
					MFR	MODEL	
GH-SV-1	VALVE VAULT	INTAKE	800	0.05	GREENHECK	GRSI - 16	1, 2
GH-DV-1	METER VAULT	INTAKE	1,100	0.05	GREENHECK	GRSI - 20	1, 2

GENERAL NOTES:

- OR EQUAL BY LOREK COOK

ACCESSORIES:

- GRAVITY BACK DRAFT DAMPER
- BIRD SCREEN

ELECTRIC UNIT HEATER SCHEDULE

EQUIPMENT TAG	LOCATION	KW	CFM	FAN HP	VOLT/PH/HZ	MAKE & MODEL		REMARKS
						MFR	MODEL	
EUH-SV-1	VALVE VAULT	5	405	1/15	480/3/60	CHROMALOX	HD3D-500	1, 2, 3
EUH-SV-2	VALVE VAULT	5	405	1/15	480/3/60	CHROMALOX	HD3D-500	1, 2, 3
EUH-DV-1	METER VAULT	7.5	590	1/15	480/3/60	CHROMALOX	HD3D-750	1, 2, 3
EUH-DV-2	METER VAULT	7.5	590	1/15	480/3/60	CHROMALOX	HD3D-750	1, 2, 3

GENERAL NOTES:

- OR EQUAL BY QMARK

ACCESSORIES:

- HOSE-DOWN CORROSION RESISTANT BLOWER HEATER
- INTEGRAL THERMOSTAT
- MOUNTING BRACKETS

ABBREVIATIONS

ACU	AIR CONDITIONING UNIT	EER	ENERGY EFFICIENCY RATIO	MIN	MINIMUM
AD	ACCESS DOOR	EF	EXHAUST FAN	MOP	MAXIMUM OVERCURRENT PROTECTION
AFF	ABOVE FINISHED FLOOR	ESP	EXTERNAL STATIC PRESSURE	MTD	MOUNTED
AFG	ABOVE FINISHED GRADE	EUH	ELECTRICAL UNIT HEATER	OA	OUTSIDE AIR
AHU	AIR HANDLING UNIT	FLR	FLOOR	OAI	OUTSIDE AIR INTAKE
AL	ACOUSTICAL LINING	FOB	FLAT ON BOTTOM	OAT	OUTSIDE AIR TEMPERATURE
AP	ACCESS PANEL	FPM	FEET PER MINUTE	OC	ON CENTER
B/G	BELOW GROUND	GC	GENERAL CONTRACTOR	SF	SUPPLY FAN
BMS	BUILDING MANAGEMENT SYSTEM	GH	GRAVITY HOOD	SP	STATIC PRESSURE
BOG	BOTTOM OF GRILLE	GPH	GALLONS PER HOUR	TYP	TYPICAL
BOH	BOTTOM OF HEATER	GPM	GALLONS PER MINUTE	UON	UNLESS OTHERWISE NOTED
BOU	BOTTOM OF UNIT	HD	HAND DAMPER	V	VENT
CFM	CUBIC FEET PER MINUTE	HP	HORSE POWER	W	WASTE
DB	DRY BULB	IE	INVERT ELEVATION	WB	WET BULB
DH	DEHUMIDIFICATION UNIT	KW	KILOWATT	WG	WATER GAGE
DN	DOWN	MCA	MINIMUM CIRCUIT AMPACITY	WL	WALL LOUVER
EAT	ENTERING AIR TEMPERATURE	MFR	MANUFACTURER	WMS	WIRE MESH SCREEN

DESICCANT DEHUMIDIFICATION UNIT

EQUIPMENT TAG	PROCESS AIR FLOW (SCFM)	REACTIVATION AIR FLOW (SCFM)	REACTIVATION HEATER (KW)	DESICCANT WHEEL DRIVE MOTOR (HP)	MOISTURE REMOVAL CAPACITY (LBS/HR)	ELECTRICAL			MODEL	REMARKS
						VOLT/PH/HZ	TOTAL CONNECTED LOAD (AMPS)	MOPD		
DH-SV-1	150	50	1.75	1/40	3.8	460/3/60	4.7	20	GC-150	1 THRU 5
DH-DV-1	150	50	1.75	1/40	3.8	460/3/60	4.7	20	GC-150	1 THRU 5

GENERAL NOTES:

- BASIS OF DESIGN IS MUNTERS

ACCESSORIES:

- SELF-CONTAINED, HONEYCOMB DESICCANT WHEEL TYPE DEHUMIDIFIER UNIT
- BUILT-IN HYGROMETER AND HUMIDISTAT FOR HUMIDITY CONTROL
- ALUMINUM CABINET WITH LIGHT GRAY ENAMEL PAINT
- VERICAL UNIT
- CONTACT AIR SEALS TO SEPARATE PROCESS AND REACTIVATION AIR STREAMS

FAN SCHEDULE


EQUIPMENT TAG	LOCATION	SERVICE	AIR FLOW (CFM)	ESP (IN. W.G.)	FAN RPM	DRIVE	ELECTRICAL		MAKE & MODEL		REMARKS
							MOTOR HP	VOLT/PH/HZ	MFR	MODEL	
EF-SV-1	VALVE VAULT	EXHAUST	750	0.4	1,210	DIRECT	1/4	120/1/60	GREENHECK	G-103-VG	1, 2, 3
EF-DV-1	METER VAULT	EXHAUST	1,050	0.5	1,180	DIRECT	1/4	120/1/60	GREENHECK	G-123-VG	1, 2, 3

GENERAL NOTES:

- OR EQUAL BY LOREK COOK

ACCESSORIES:

- VARI-GREEN EC MOTOR
- PROVIDE DISCONNECT SWITCH
- PROVIDE BACK DRAFT DAMPER, AND BIRD SCREEN

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No.	Description	Date

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DESIGNED BY:	SP
DRAWN BY:	NM
CHECKED BY:	SP
DATE:	07-18-2021
SCALE:	AS NOTED

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
NOTES, LEGENDS, ABBREVIATIONS AND
SCHEDULES

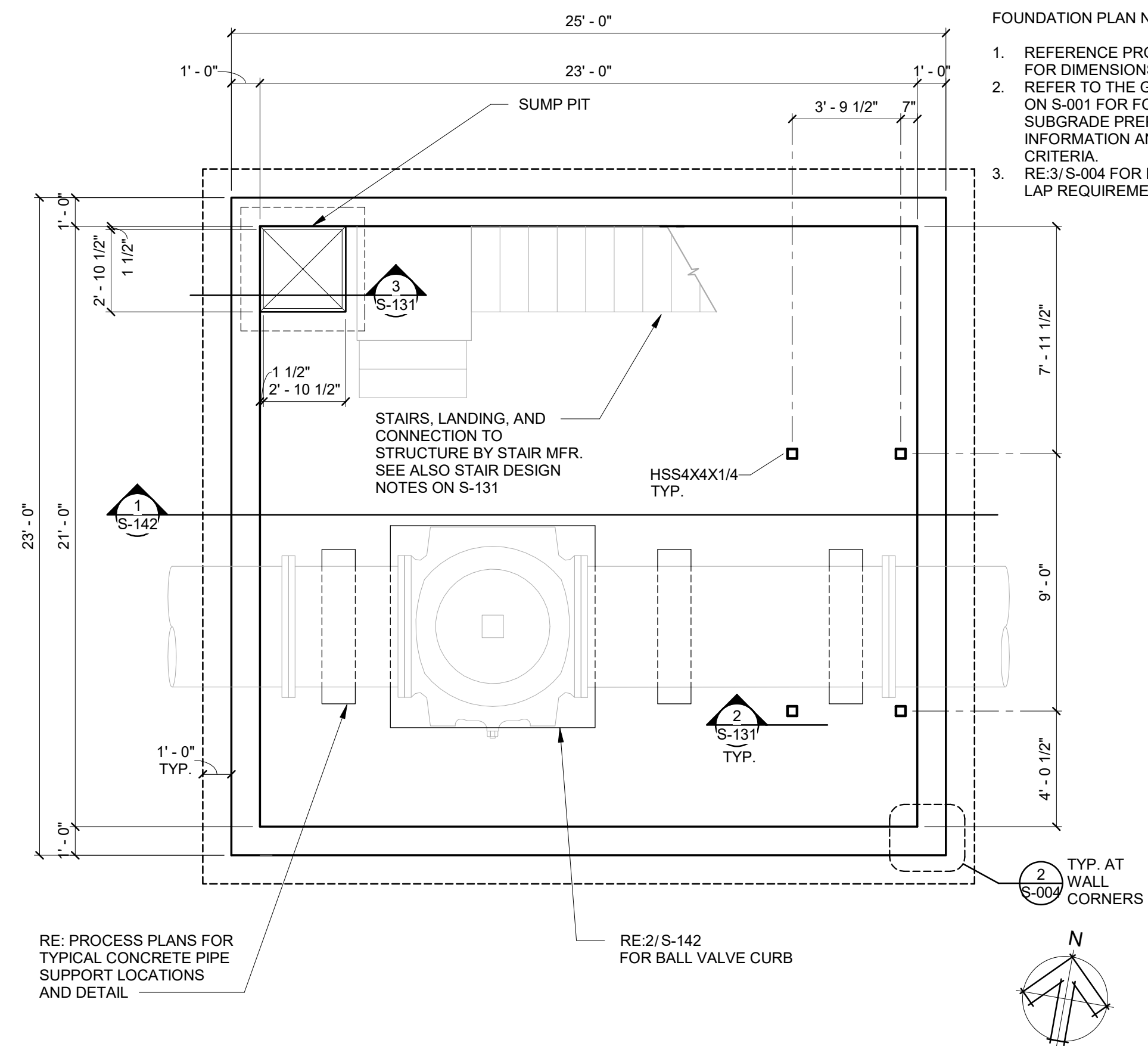
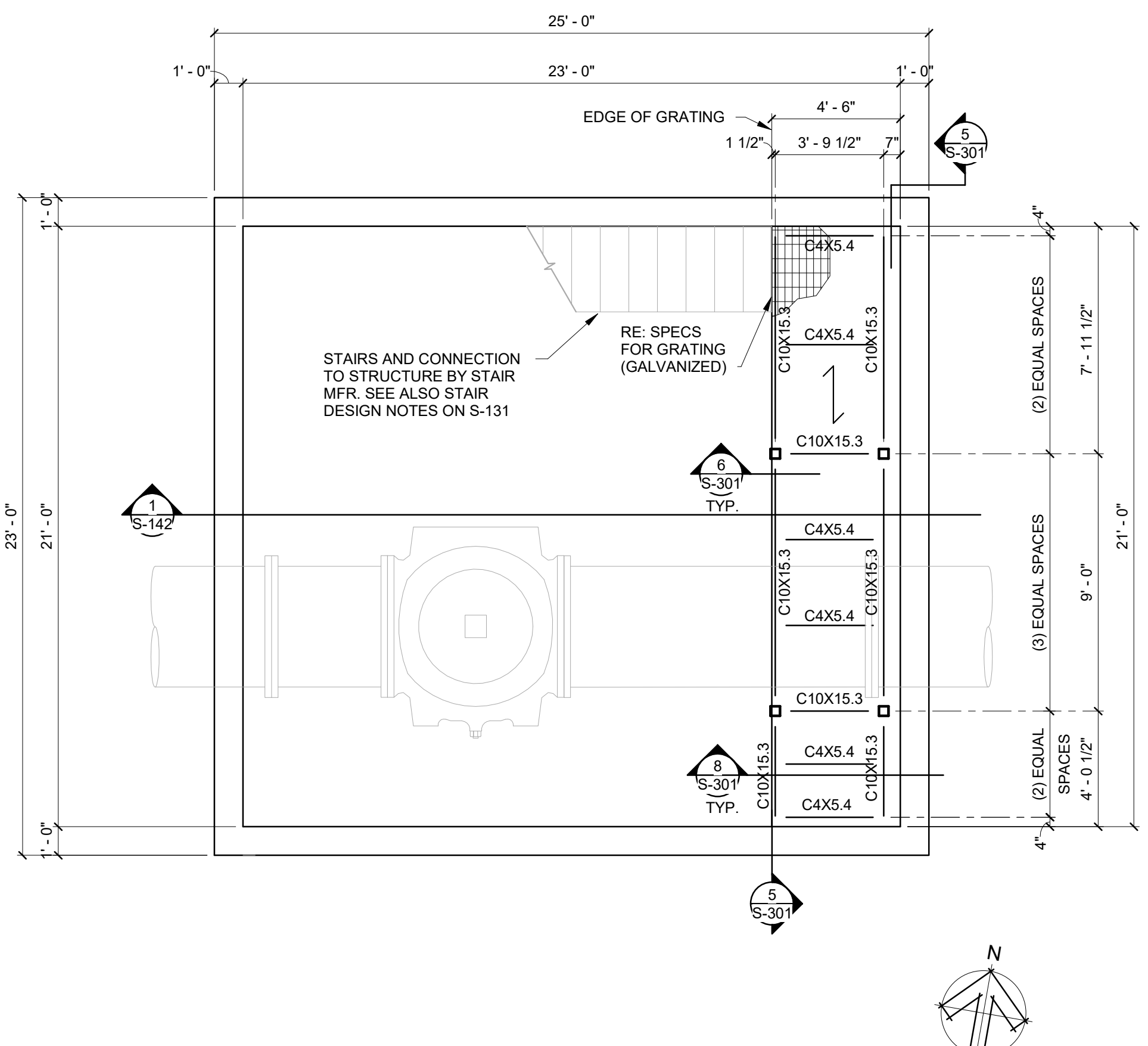
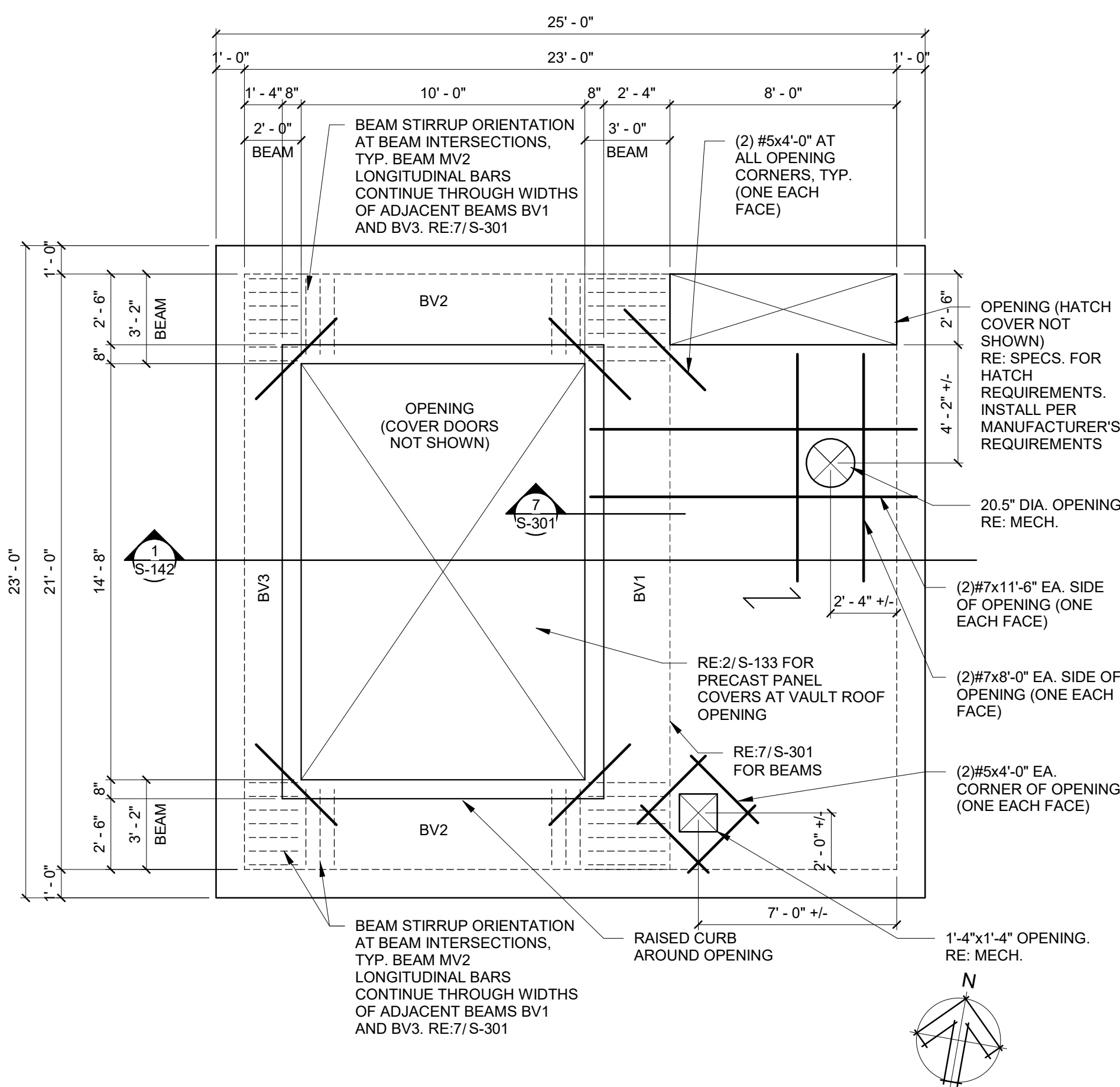
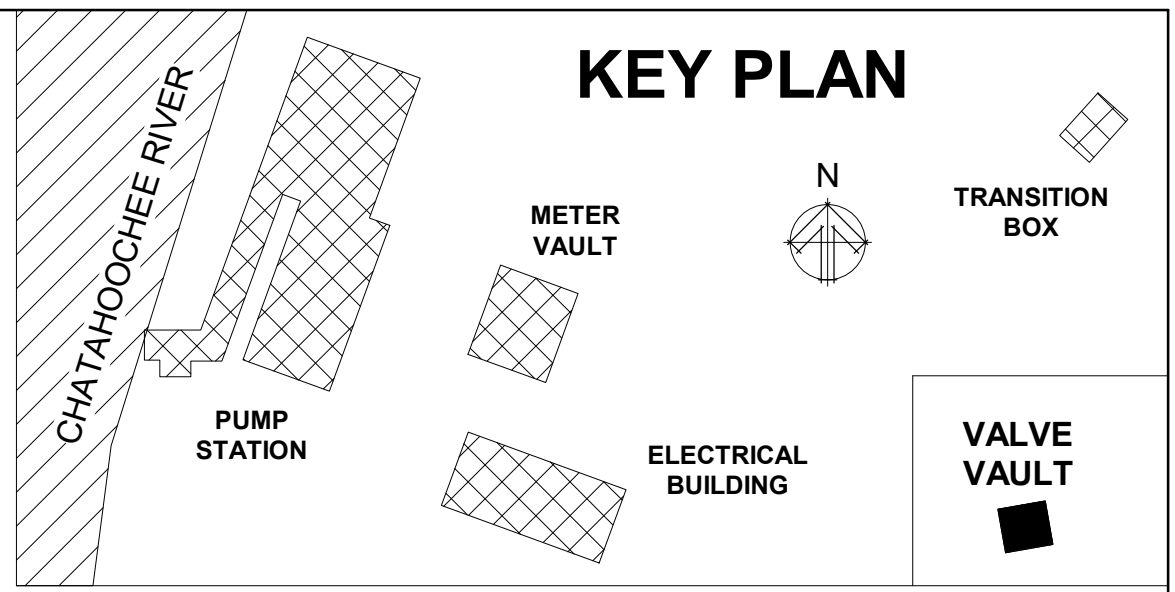
DRAWING NO.

RI-PS

M7-001

SHEET OF

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- FOUNDATION PLAN NOTES:
1. REFERENCE PROCESS PLANS FOR DIMENSIONS NOT SHOWN.
 2. REFER TO THE GENERAL NOTES ON S-001 FOR FOUNDATION SUBGRADE PREPARATION INFORMATION AND DESIGN CRITERIA.
 3. RE: S-004 FOR REINFORCING LAP REQUIREMENTS.

3 VALVE VAULT FRAMING PLAN
1/4" = 1'-0"

2 VALVE VAULT MEZZANINE PLAN
1/4" = 1'-0"

1 VALVE VAULT FOUNDATION PLAN
1/4" = 1'-0"



No.	Description	Date

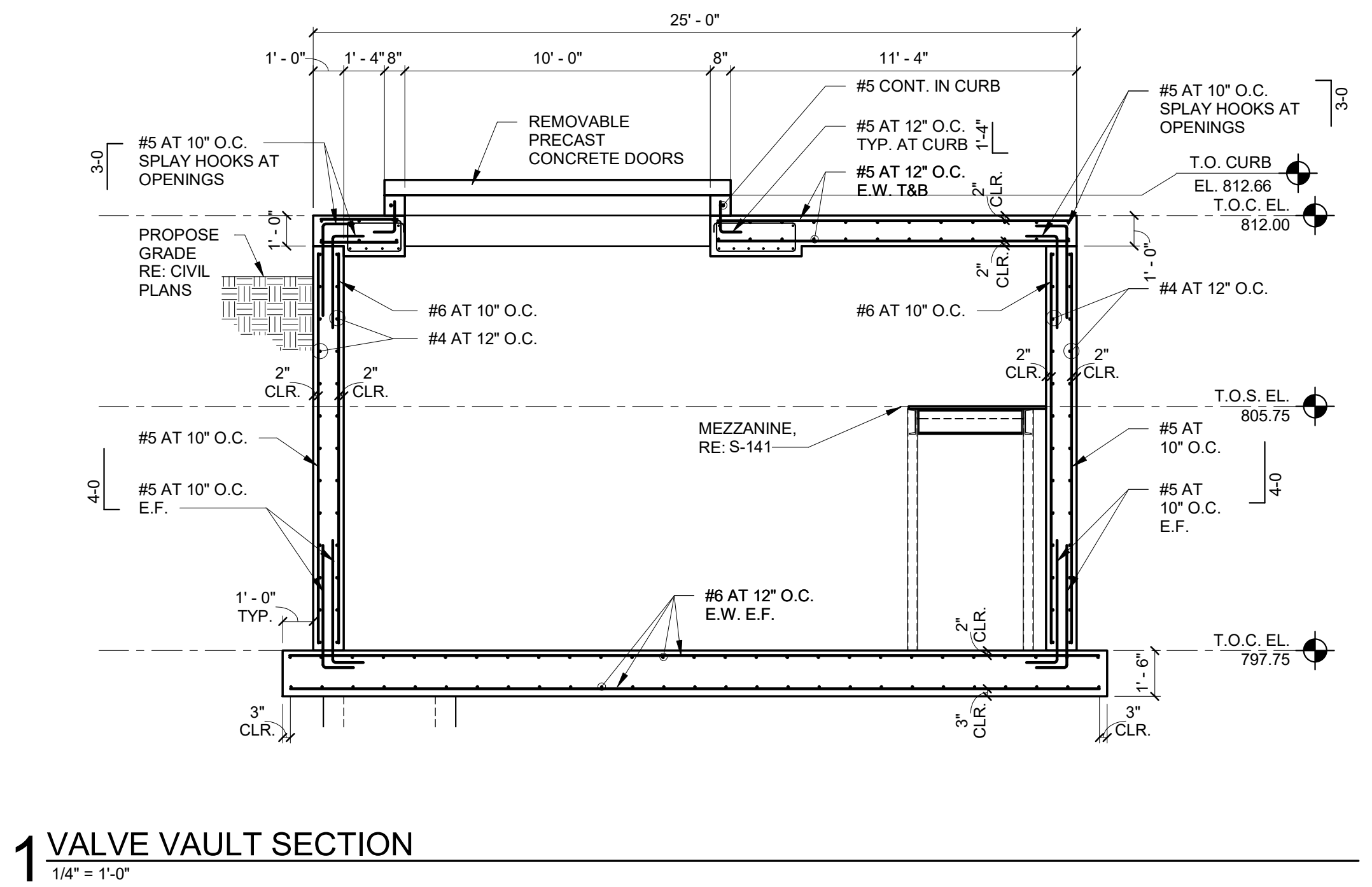
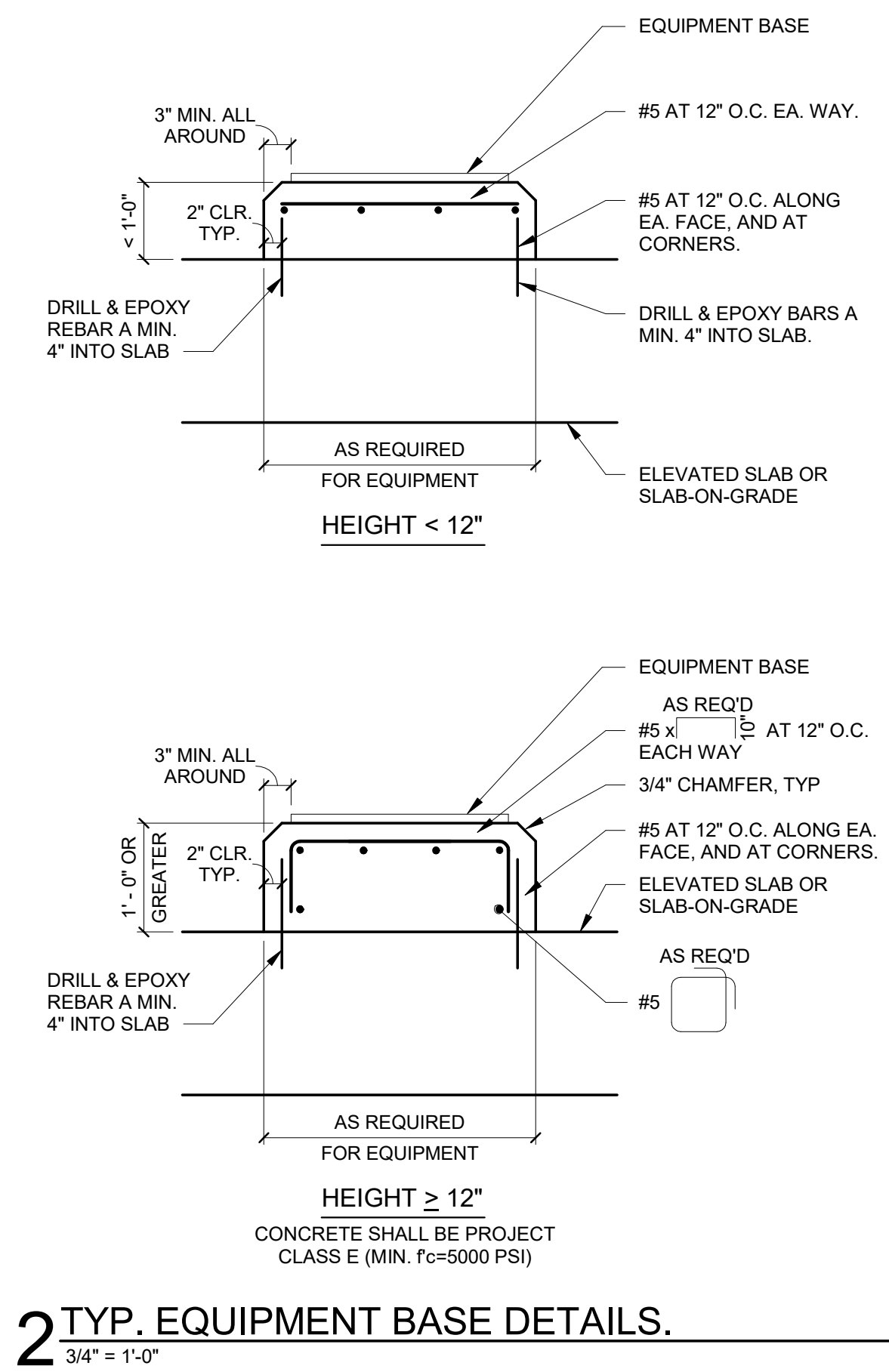
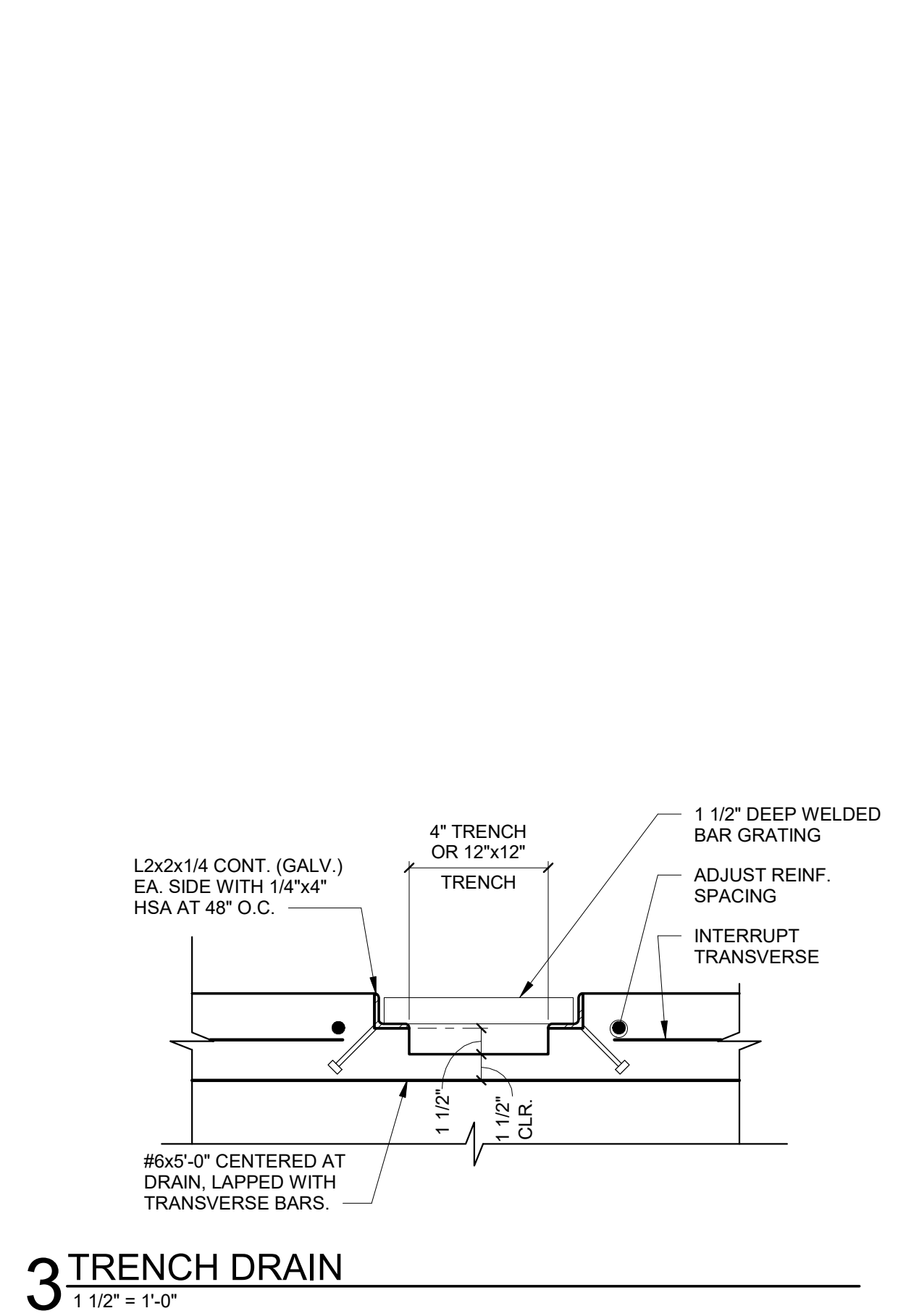
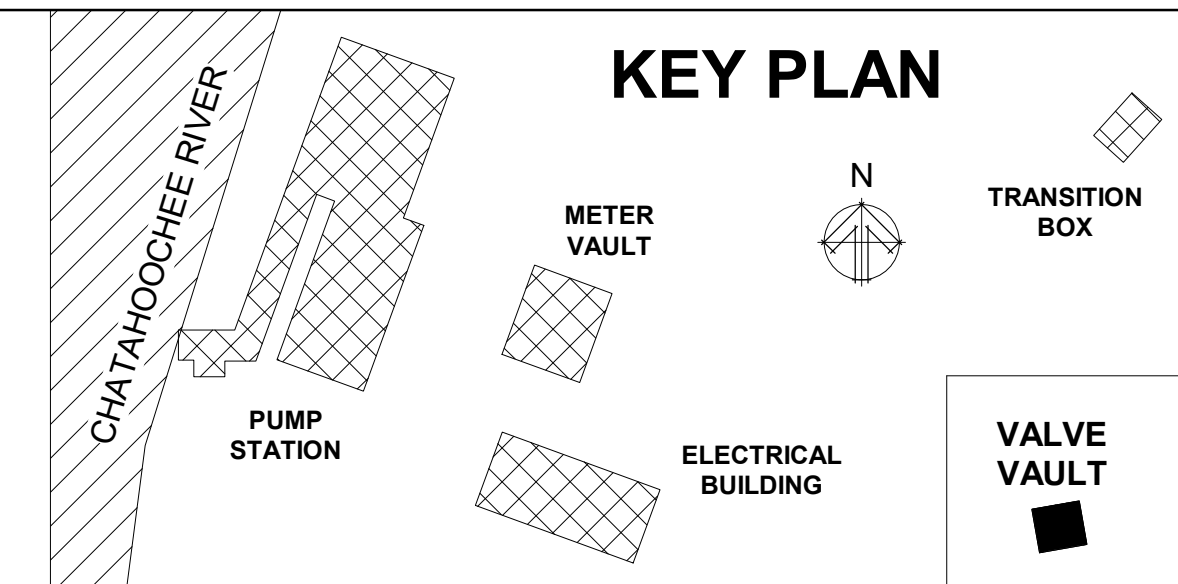
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ADDRESS:

PROJECT NO:	1790066
DESIGNED BY:	MIN
DRAWN BY:	LRA
CHECKED BY:	RGR
DATE:	07/08/2021
SCALE:	1/4" = 1'-0"

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM - Phase 1
RIVER INTAKE PUMP STATION
VALVE VAULT
FOUNDATION AND FRAMING PLANS

DRAWING NO.
RI-PS
S-141
SHEET OF



3 TRENCH DRAIN
1 1/2" = 1'-0"

2 TYP. EQUIPMENT BASE DETAILS.
3/4" = 1'-0"

1 VALVE VAULT SECTION
1/4" = 1'-0"



No.	Description	Date

STAMP:

ADDRESS:

PROJECT NO:	1790066
DESIGNED BY:	MIN
DRAWN BY:	LRA
CHECKED BY:	RGR
DATE:	07/08/2021
SCALE:	As indicated


CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM - Phase 1
RIVER INTAKE PUMP STATION
VALVE VAULT
BUILDING SECTIONS

DRAWING NO.
RI-PS
S-142
SHEET OF

SCHEMATIC DIAGRAM SYMBOLS	ONE LINE DIAGRAM SYMBOLS	GENERAL ABBREVIATIONS	GENERAL NOTES:
<p>CONDUCTORS CONNECTED</p> <p>CONDUCTORS NOT CONNECTED</p> <p>CONNECTION POINT</p> <p>TERMINAL POINT FOR OUTGOING CONDUCTORS, WITH IDENTIFICATION. "XX" DENOTES CONTRACTOR ASSIGNED.</p> <p>MCPXXX-XX XXA MAGNETIC-ONLY CIRCUIT BREAKER (MCP), WITH CURRENT RATING</p> <p>CBXXX-XX XXA CIRCUIT BREAKER, THERMAL-MAGNETIC UNLESS OTHERWISE NOTED, WITH FRAME SIZE AND TRIP RATING</p> <p>FUXXX-XX [XXA] FUSE WITH SIZE AND OPTIONAL IDENTIFICATION.</p> <p>DSXXX-XX XXXXA DISCONNECT SWITCH, RATING OPTIONAL. 30 AMP, 600V RATED MINIMUM UNLESS OTHERWISE NOTED.</p> <p>FUXXX-XX [XXA] FUSE DISCONNECT SWITCH, RATING OPTIONAL. 30 AMP, 600V MINIMUM UNLESS OTHERWISE NOTED.</p> <p>XX M-XXX MOTOR (HP AS SHOWN, PHASES AS REQUIRED)</p> <p>MSR-XXX MOTOR STARTER COIL</p> <p>OL THERMAL MOTOR OVERLOAD</p> <p>M-XXX MOTOR CONTACT</p> <p>LSXXX-XX LSXXX-XX LIMIT SWITCH NORMALLY CLOSED AND NORMALLY OPEN</p> <p>PSXXX-XX PSXXX-XX PRESSURE SWITCH NORMALLY CLOSED AND NORMALLY OPEN</p> <p>TSXXX-XX TSXXX-XX TEMPERATURE SWITCH NORMALLY CLOSED AND NORMALLY OPEN</p> <p>FSXXX-XX FSXXX-XX FLOW SWITCH NORMALLY CLOSED AND NORMALLY OPEN</p> <p>FLTXXX-XX FLTXXX-XX LEVEL SWITCH NORMALLY CLOSED AND NORMALLY OPEN</p> <p>PRSXXX-XX PRSXXX-XX PROXIMITY SWITCH NORMALLY CLOSED AND NORMALLY OPEN</p> <p>PCSXXX-XX PCSXXX-XX PULLCORD SWITCH NORMALLY CLOSED AND NORMALLY OPEN</p> <p>SVXXX-XX SOLENOID VALVE</p> <p>PBXXX-XX PBXXX-XX MOMENTARY PUSHBUTTON NORMALLY CLOSED AND NORMALLY OPEN</p> <p>SSXXX-XX SSXXX-XX SELECTOR SWITCH NORMALLY NORMALLY CLOSED AND NORMALLY OPEN</p> <p>LTXXX-XX PILOT LIGHT X = LENS COLOR A = AMBER B = BLUE G = GREEN R = RED W = WHITE</p> <p>CRXXX-XX CONTROL RELAY</p> <p>CRXXX-XX CRXXX-XX CONTROL RELAY CONTACT NORMALLY CLOSED AND NORMALLY OPEN</p> <p>ALXXX-XX ALARM LIGHT</p> <p>AHXXX-XX ALARM HORN</p> <p>H1 H2 X1 X2 TFRXXX-XX CONTROL POWER TRANSFORMER, PRIMARY AND SECONDARY VOLTAGE SHOWN, SIZE AS SHOWN OR SPECIFIED.</p> <p>C.T. CURRENT TRANSFORMER, PRIMARY/SECONDARY TURNS RATIO AS SHOWN.</p>	<p>LOW VOLTAGE POWER CIRCUIT AND BREAKER DRAWOUT TYPE, FRAME TRIP SHOWN</p> <p>CB-XXX MOLDED CASE CIRCUIT BREAKER, FRAME AND TRIP ID SHOWN</p> <p>LIGHTNING ARRESTOR AND GROUND</p> <p>DS-XXX DISCONNECT OR ISOLATING SWITCH: CONTINUOUS RATING SHOWN</p> <p>MCP-XXX MAGNETIC-ONLY CIRCUIT BREAKER (MCP), DRAWOUT TYPE, WITH CURRENT RATING</p> <p>FS-XXX FUSED SWITCH: FUSE AND SWITCH CONTINUOUS RATINGS SHOWN</p> <p>TFR-XXX POWER TRANSFORMER: PRIMARY & SECONDARY VOLTAGES, %, SIZE SHOWN</p> <p>CURRENT TRANSFORMER: RATIO SHOWN (3 INDICATES NO. OF CT'S) METER SWITCH, XS: AS - AMMETER SWITCH VS - VOLTMEER SWITCH FS - FREQUENCY SWITCH</p> <p>PT POTENTIAL TRANSFORMER PRIMARY & SECONDARY VOLTAGES & WINDINGS SHOWN. (x) UNITS</p> <p>METER: A - AMMETER W - WATTMETER KWH - WATT-HOUR METER F - FREQUENCY METER VAR - VAR METER V - VOLTMETER</p> <p>FVNR SIZE X FULL VOLTAGE, NON-REVERSING MAGNETIC MOTOR STARTER. NEMA SIZE INDICATED</p> <p>FVR SIZE X FULL VOLTAGE, REVERSING MAGNETIC MOTOR STARTER. NEMA SIZE INDICATED</p> <p>XXHP VFD-XXX VARIABLE FREQUENCY DRIVE. NEMA SIZE INDICATED</p> <p>XXHP RVSS-XXX REDUCED VOLTAGE SOLID STATE DRIVE (SOFT START). NEMA SIZE INDICATED</p> <p>XX M-XXX MOTOR (HP AS SHOWN, PHASES AS REQUIRED)</p> <p>GENERATOR RECEPTACLE</p> <p>MTS-XXX MANUAL TRANSFER SWITCH</p> <p>CABLE TAG: P - POWER CABLE C - CONTROL CABLE S - SHIELDED SIGNAL CABLE</p> <p>CIRCUIT AND RACEWAY SYMBOLS</p> <p>RACEWAY OR WIRING SYSTEM ABOVE FLOOR LEVEL BELOW CEILING, EXPOSED. (UNLESS OTHERWISE NOTED)</p> <p>RACEWAY OR WIRING SYSTEM BELOW FLOOR LEVEL, ABOVE CEILING, HIDDEN, OR EXISTING CABLE/CONDUIT. (UNLESS OTHERWISE NOTED)</p> <p>SCHEMATIC DIAGRAM FIELD WIRING. (UNLESS OTHERWISE NOTED)</p> <p>ONE LINE DIAGRAM EQUIPMENT ENCLOSURE. (UNLESS OTHERWISE NOTED)</p> <p>GROUNDING CONDUCTOR (CONCEALED), #4/0 AWG BARE COPPER</p> <p>GROUNDING CONDUCTOR (EXPOSED), #4/0 AWG INSULATED COPPER</p> <p>HOME RUN - SEE PANELBOARD SCHEDULE FOR CIRCUIT INFORMATION EXAMPLE: HOME TO PANELBOARD PBD A, CIRCUITS 1, 3, AND 5</p>	<p>GENERAL ABBREVIATIONS</p> <p>AR ALARM RELAY AS AMMETER SELECTOR SWITCH A, AMP AMP(S), AMPERE(S) AC ALTERNATING CURRENT AFF ABOVE FINISHED FLOOR AHAP AS HIGH AS POSSIBLE AIC AMPS INTERRUPTING CAPACITY, SYMM. AL ALUMINUM AT AMPERE TRIP AF AMPERE FRAME AUTO AUTOMATIC AUX AUXILIARY AWG AMERICAN WIRE GAUGE BC BARE COPPER CONDUCTOR BKR BREAKER C CONDUCTOR/CONTACTOR CB CIRCUIT BREAKER CJB CIRCUIT JUNCTION BOX CKT CIRCUIT CLG CEILING CR CONTROL RELAY CND CONDUIT CONC CONCRETE CS CONTROL SWITCH CONT CONTROL CPT CONTROL POWER TRANSFORMER CT CURRENT TRANSFORMER CU COPPER D DIAMETER DB DUCT BANK DC DIRECT CURRENT DET DETAIL DIAG DIAGRAM DPSH DIFFERENTIAL PRESSURE SWITCH DS DISCONNECT SWITCH DWG DRAWING EA EACH EC ELECTRICAL CONTRACTOR EF EXHAUST FAN EL ELEVATION ELEC ELECTRIC(AL) EMER EMERGENCY ENCL ENCLOSURE/ENCLOSED EP EXPLOSION PROOF EQUIP. EX, E EXISTING FCP FURNISHED WITH EQUIPMENT PANEL FDR FEEDER FLA FULL LOAD AMPS FPP FIBER OPTIC DISTRIBUTION PANEL FS FLOW SWITCH FU FUTURE FUT FUTURE FVNR FULL VOLTAGE NON-REVERSING FVR FULL VOLTAGE REVERSING GALV GALVANIZED GEN GENERATOR GFR GROUND FAULT RELAY GRD GROUND GRS GALVANIZED RIGID STEEL H HIGH HH HEIGHT HID HANDHOLE HP HIGH INTENSITY DISCHARGE HOR HORSEPOWER HS HAND STATION (SWITCH) HVAC HEATING, VENTILATION AND AIR CONDITIONING HZ HERTZ (CYCLES PER SECOND) HOA HAND/OFF/AUTO HOR HAND/OFF/REVERSE HMH HIGH VOLTAGE MANHOLE ID INSIDE DIAMETER IMC INDIVIDUAL MOTOR CONTROLLER INTLK INTERLOCK INST INSTANTANEOUS INSTR INSTRUMENT I/O INPUT-OUTPUT JB JUNCTION BOX KV KILOVOLT KVA KILOVOLT-AMPERE KYAR KILOVOLT-AMPERE REACTIVE KW KILOWATT KWH KILOWATT-HOUR KAIC KILO AMPERE INTERRUPTING CURRENT L-O-R LOCAL-OFF-REMOTE L LONG LC LIGHTING CONTACTOR LCP LOCAL CONTROL PANEL LP LIGHTING PANEL LOS LOCK-OUT STOP LSC LONG, SHORT, INSTANTANEOUS TRIP LSIG SETTING AND GROUND FAULT PROTECTION LSL LEVEL SWITCH LOW LSO LIMIT SWITCH OPEN LSC LIMIT SWITCH CLOSED LTG LIGHTING LV LOW VOLTAGE LSH LEVEL SWITCH HIGH M MOTOR CONTACTOR mA MILLIAMPERE MAX MAXIMUM MCB MAIN CIRCUIT BREAKER</p> <p>MCC MOTOR CONTROL CENTER MCP MOTOR CONTROL PANEL/MOTOR CIRCUIT PROTECTOR MECH MECHANICAL MFR MANUFACTURE(R) MH MANHOLE MIC MICROPHONE MIN MINIMUM MISC MISCELLANEOUS MM MILLIMETER mV MILLIVOLT MCM MILLI CIRCULAR MILLS MOP MOTOR OPERATOR PANEL MPR MOTOR PROTECTION RELAY MCB MAIN CIRCUIT BREAKER MTR MOTOR MVS MEDIUM VOLTAGE STARTER N/A NOT APPLICABLE NC NORMALLY CLOSED NEUT,N NEUTRAL NIC NOT IN CONTRACT NO NORMALLY OPEN NOM NOMINAL NP NAMEPLATE NTS NOT TO SCALE OC ON CENTER OD OUTSIDE DIAMETER OH OVERHEAD OL S OVERLOADS OT OIL TIGHT P POLE PA PUBLIC ADDRESS PB PUSHBUTTON, PULLBOX PE PHOTO ELECTRIC CELL PF POWER FACTOR PH PHASE PJB POWER JUNCTION BOX PLC PROGRAMMABLE LOGIC CONTROLLER PNL PANEL PP POWER PANEL PR PAIR PRI PRIMARY PS PRESSURE SWITCH PT POTENTIAL TRANSFORMER PVC POLYVINYL CHLORIDE PWR POWER QSH SHEAR PIN LIMIT SWITCH RCT RECEPTACLE REF REFERENCE REQ'D REQUIRED RMS ROOT MEAN SQUARE RTD RESISTANCE TEMPERATURE DETECTOR SCH SCHEDULE SE SPEED SENSOR SEC SECONDARY SEL SELECTOR SER SERVICE ENTRANCE RATED SPDT SINGLE POLE DOUBLE THROW SPEC SPECIFICATION SPTR MOTOR SPACE HEATER SPKR SPEAKER SUB SUBSTATION SW SWITCH SYMM SYMMETRICAL SYS SYSTEM SV SOLENOID OPERATED VALVE SPB SIGNAL PULL BOX STP SHIELDED TWISTED PAIR TB TERMINAL BOX TEL TELEPHONE TEMP TEMPERATURE TFR TRANSFORMER TH THERMOSTAT TJB TERMINAL JUNCTION BOX TSH TEMPERATURE SWITCH HIGH TV TELEVISION TYP TYPICAL TR TIMING RELAY TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR TSP TWISTED SHIELDED PAIR UG UNDERGROUND UH UNIT HEATER UON UNLESS OTHERWISE NOTED V VOLT VA VOLT AMPERE VAR VOLT AMPERE REACTIVE VFD VARIABLE FREQUENCY DRIVE VSH VIBRATION SWITCH W WATT, WIRE, WIDE W/ WITH W/O WITHOUT WE WEIGHT LOAD CELL WIP WEIGHT INDICATING TRANSMITTER WP WEATHERPROOF WH WARNING HORN/LIGHT XT ANEMOMETER ZS POSITION (LIMIT) SWITCH ZSO POSITION (LIMIT) SWITCH OPEN ZSC POSITION (LIMIT) SWITCH CLOSED ZT POSITION TRANSMITTER</p> <p>GROUNDING SYMBOLS</p> <p>GROUND ROD, 3/4" x 10'-0", COPPERCLAD (UNLESS OTHERWISE NOTED)</p> <p>GROUND ROD AND WELL</p> <p>COMPRESSION TYPE GROUNDING BOND TO MOTOR CASING OR EQUIPMENT</p> <p>EXOTHERMIC TYPE GROUNDING BOND TO MOTOR CASING OR EQUIPMENT</p>	<p>1. SCOPE:</p> <p>A. FURNISH ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS REQUIRED TO COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEM INCLUDING BUT NOT LIMITED TO WIRING, BOXES, LIGHT FIXTURES, PANELS, SWITCHES, RECEPTACLES, DISCONNECTS, STARTERS, AND ALL OTHER WORK INDICATED ON THE DRAWINGS OR AS SPECIFIED HEREIN.</p> <p>B. OBTAIN ALL PERMITS, INSPECTIONS, AND APPROVALS AS REQUIRED BY THE LOCAL AUTHORITIES HAVING JURISDICTION AND DELIVER CERTIFICATE OF APPROVAL TO THE GENERAL CONTRACTOR. ALL ASSOCIATED FEES SHALL BE PAID BY THE CONTRACTOR.</p> <p>C. ALL MATERIALS AND EQUIPMENT OF THE ELECTRICAL SYSTEM NECESSARY FOR ITS PROPER AND SAFE OPERATION OR OTHERWISE REQUIRED BY CODE, BUT NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, SHALL BE FURNISHED AND INSTALLED WITHOUT ADDITIONAL CHARGE.</p> <p>D. WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE, THE LATEST STANDARD BUILDING CODE, NFPA, ANY OTHER LOCALLY ADOPTED CODES AND LOCAL AUTHORITIES HAVING JURISDICTION.</p> <p>2. ALL SUBSTITUTIONS FOR EQUIPMENT AND MATERIAL SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.</p> <p>3. CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL OTHER TRADES. IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY THE ACTUAL LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC. AND COORDINATED THE INSTALLATION ACCORDINGLY. THE EQUIPMENT WIRING SHALL INCLUDE ALL NECESSARY CABLES AND CONDUIT REQUIRED FOR THE PROPER AND SAFE EQUIPMENT OPERATION.</p> <p>4. ALL CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM CONDUCTOR SIZE FOR POWER AND LIGHTING WIRING. USE #14 AWG MINIMUM CONDUCTOR FOR SIGNAL WIRING. THE INSULATION FOR ALL CONDUCTORS SHALL BE THWN-2. SERVICE ENTRANCE CONDUCTORS SHALL BE XHHW. ALL CABLE INSTALLED IN CABLE TRAYS SHALL BE TC RATED.</p> <p>5. POWER WIRES SIZES #12 AWG AND #10 AWG SHALL BE SOLID TYPE. ALL OTHER SIZES SHALL BE STRANDED. CABLES BETWEEN THE VFD AND ASSOCIATED MOTOR SHALL BE SHIELDED POWER VFD RATED CABLES.</p> <p>6. ALL EXPOSED CONDUITS SHALL BE ALUMINUM, UNLESS NOTED OTHERWISE ON THE DRAWINGS, MINIMUM OF 3/4". ALL BURIED CONDUIT SHALL BE PVC-40, MINIMUM OF 1". ALL UNDERGROUND CONDUITS SHALL HAVE RIGID STEEL ELBOWS. ALL UNDERGROUND CONDUITS CONTAINING SIGNAL CABLES SHALL BE GALVANIZED RIGID STEEL (GRS). ALL UNDERGROUND STEEL CONDUITS SHALL BE PVC COATED TO PREVENT CONDUIT CORROSION.</p> <p>7. ALL FITTINGS SHALL BE CAST WITH THREADED HUBS. ALL CONNECTIONS SHALL BE COMPRESSION TYPE.</p> <p>8. CONTRACTOR SHALL PROVIDE PULL STRING AND IDENTIFICATION LABELS AT EACH CONDUIT END FOR ALL SPARE CONDUITS.</p> <p>9. ALL DEMOLISHED ELECTRICAL EQUIPMENT SHALL BE RETURNED TO THE OWNER FOR RE-USE OR AS SPARES.</p> <p>8. CONTRACTOR SHALL PROVIDE ALL REQUIRED PULLBOXES AND/OR CONDULETS TO MEET NEC ARTICLE 314 FOR CABLE PULLS.</p> <p>9. ALL PHONE AND COMPUTER WIRING TO BE EMT CONDUIT.</p> <p>10. ELECTRICAL EQUIPMENT INSIDE THE ELECTRICAL ROOMS SHALL BE SIZED TO FIT THE AVAILABLE SPACE.</p> <p>11. CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND DISTANCES IN THE FIELD. IN CASE OF DISCREPANCY, CONTRACTOR SHALL INCLUDE A MORE EXPENSIVE OPTION.</p> <p>12. THE CONTRACTOR SHALL ADJUST CIRCUIT BREAKER SIZES, CABLES, AND CONDUITS FOR VENDOR SUPPLIED EQUIPMENT AT NO ADDITIONAL COST BASED ON THE ACTUAL APPROVED SHOP DRAWINGS.</p> <p>13. ALL EXPOSED PIPES 2" IN DIAMETER AND SMALLER SHALL BE ELECTRICALLY HEAT-TRACED. CONTRACTOR SHALL INCLUDE GFCI, 30ma, 120V, 20A RATED CIRCUIT BREAKERS AND ASSOCIATED CABLES AND CONDUITS FOR ALL REQUIRED HEAT TRACING.</p> <p>14. ALL SCHEMATIC WIRING DIAGRAMS ARE GENERAL IN NATURE. THE CONTRACTOR SHALL ADJUST NUMBER AND SIZE OF CABLES/CONDUITS BASED ON THE APPROVED VENDOR DRAWINGS.</p> <p>15. WHEN THE CABLES ARE LARGER THAN THE TERMINATING LUGS OR TERMINALS (DUE TO VOLTAGE DROP), THE CONTRACTOR SHALL PROVIDE A TERMINAL JUNCTION BOX FOR CABLE SIZE REDUCTION.</p> <p>16. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING ALL CABLES AND CONDUITS FOR VENDOR SUPPLIED SYSTEMS AS REQUIRED BY APPROVED SHOP DRAWINGS.</p> <p>17. ALL SPARE STUB-UPS SHALL BE CAPPED TO PREVENT MOISTURE AND DIRT INTRUSION TO THE CONDUIT.</p> <p>18. CONTRACTOR SHALL INCLUDE ALL DISCONNECT SWITCHES AS REQUIRED BY NEC FOR REMOTELY MOUNTED EQUIPMENT.</p> <p>PLAN DRAWING SYMBOLS</p> <p>MOTOR CONNECTION</p> <p>MOTOR STARTER, INDIVIDUAL -- NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY</p> <p>COMBINATION MOTOR STARTER/DISCONNECT INDIVIDUAL -- NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY</p> <p>DISCONNECT SWITCH. DISCONNECT SWITCHES ARE HEAVY DUTY, SINGLE THROW, WITH NEMA 4X ENCLOSURE UNLESS OTHERWISE NOTED. MOUNT AT 4'-8" TO CENTER OF DISCONNECT.</p> <p>FUSED DISCONNECT, NON-FUSED. PROVISION FOR CLASS R FUSES.</p> <p>FIELD INSTRUMENT CONNECTION</p> <p>START/STOP HAND STATION MOUNTED TO HANDRAIL (NEMA 4X UNLESS OTHERWISE NOTED)</p> <p>120V, 20A, 1P TOGGLE SWITCH [BLANK] = 1P TOGGLE SWITCH 2 = 2P TOGGLE SWITCH 3 = 3P TOGGLE SWITCH D = SLIDE DIMMER M = MOTOR RATED S = TOGGLE WITH OCCUPANCY SENSOR</p> <p>DUPLEX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 18" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.</p> <p>GFCI DUPLEX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 18" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.</p> <p>QUADRAPLEX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 18" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.</p> <p>TELEPHONE BOX. MOUNT 18" A.F.F., INSTALL A 1/2" CONDUIT FROM BOX TO 6" ABOVE CEILING. PROVIDE PULL CORD FOR FUTURE CONNECTIONS AS REQUIRED.</p> <p>NEMA 4X SS JUNCTION BOX (UNLESS NOTED OTHERWISE)</p> <p>60A, 480V, 3PH WELDING RECEPTACLE WITH INTERLOCKED 60A (NEMA 4X FUSED DISCONNECT SWITCH UNLESS OTHERWISE NOTED)</p>

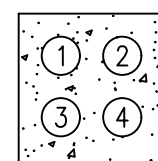
PROJECT NO:	TASK 1
DESIGNED BY:	RV
DRAWN BY:	RV
CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	N.T.S.

No.	Description	Date	STAMP:	ADDRESS:

	
CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT WATER SUPPLY PROGRAM	
RIVER INTAKE PUMP STATION	
ELECTRICAL LEGEND AND NOTES	
DRAWING NO. RI-PS E5-000	
SHEET OF	

DRAWING NO. RI-PS E5-000	
SHEET OF	

DRAWING NO. RI-PS E5-000	
SHEET OF	



DB-R14

- 1 - 2" C. (480V POWER TO MPZ-RDS)
- 2 - 2" C. (FIBER)
- 3 - 2" C. (SPARE)
- 4 - 2" C. (SPARE)



No.	Description	Date

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CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

RIVER INTAKE PUMP STATION
DUCTBANK SECTIONS

DRAWING NO.

RI-PS

E5-001

SHEET OF

ISSUED FOR BID

ELECTRICAL EQUIPMENT MATERIALS RATING					
NO.	EQUIPMENT	AREA			
		INDOOR NON-PROCESS ELECTRICAL AND CONTROL ROOM ONLY	INDOOR PROCESS	OUTDOOR	UNDERGROUND
1	CONDUITS	ALUMINUM	ALUMINUM	ALUMINUM	PVC SCHEDULE 40
2	CABLE TRAYS	ALUMINUM	ALUMINUM	ALUMINUM	N/A
3	JUNCTION BOXES	NEMA 1	N/A	NEMA 4X SS	N/A
4	PULL BOXES	NEMA 1	N/A	NEMA 4X SS	N/A
5	UNI-STRUT	ALUMINUM	ALUMINUM	ALUMINUM	N/A
6	MCC	NEMA 1	N/A	NEMA 4X SS	N/A
7	PANELBOARDS	NEMA 1	N/A	NEMA 4X SS	N/A
8	TRANSFORMERS	NEMA 1	N/A	NEMA 4X SS	N/A
9	DISCONNECT SWITCHES	NEMA 1	N/A	NEMA 4X SS	N/A
10	MOTOR STARTERS	NEMA 1	N/A	NEMA 4X SS	N/A
11	CONTACTORS	NEMA 1	N/A	NEMA 4X SS	N/A
12	LIGHTS AND RECEPTACLES	STANDARD	WEATHERPROOF	NEMA 3R	NEMA 6
13	CONTROL PANELS	NEMA 1	N/A	NEMA 4X SS	N/A



No.	Description	Date

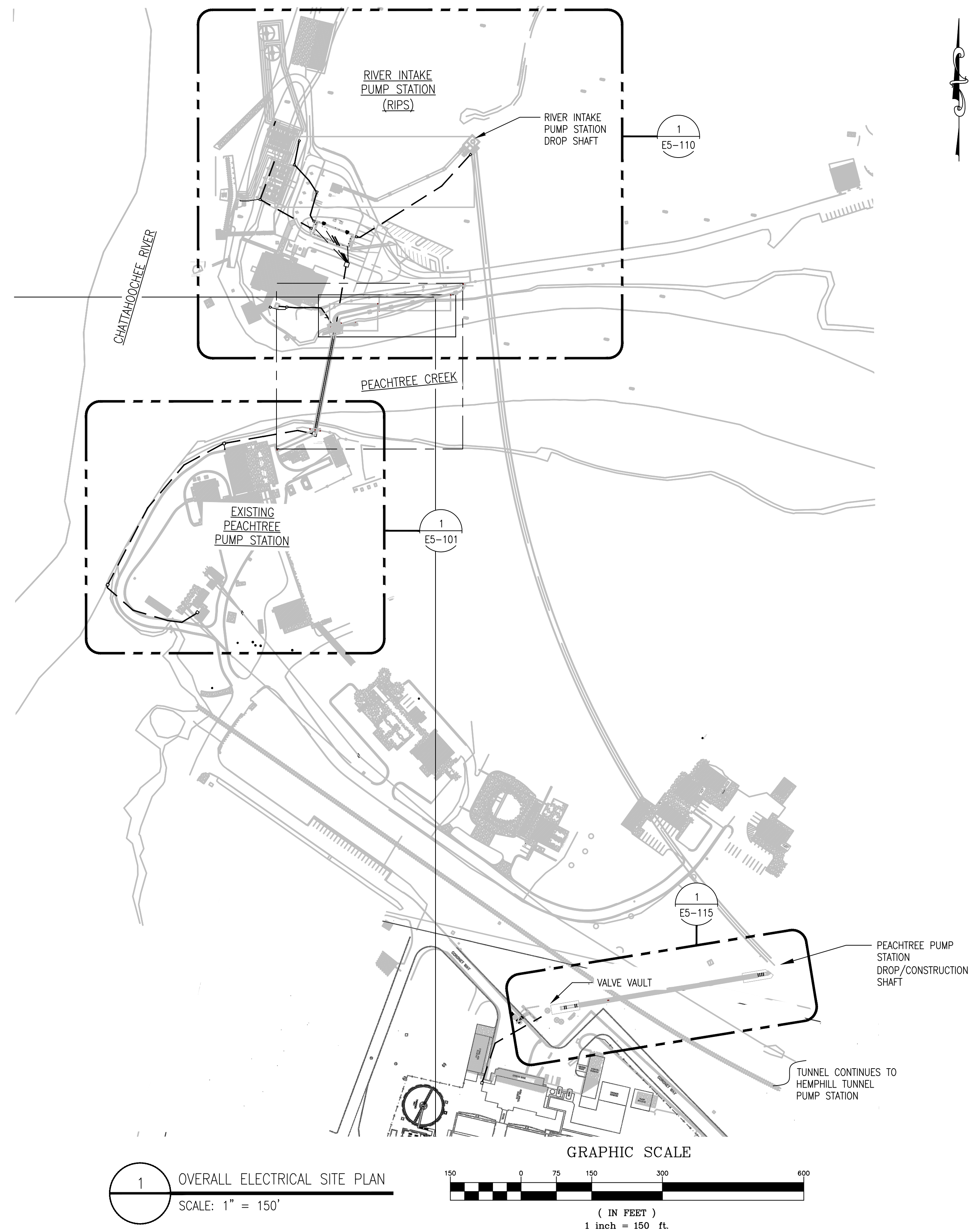
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CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
MATERIAL RATING SCHEDULE

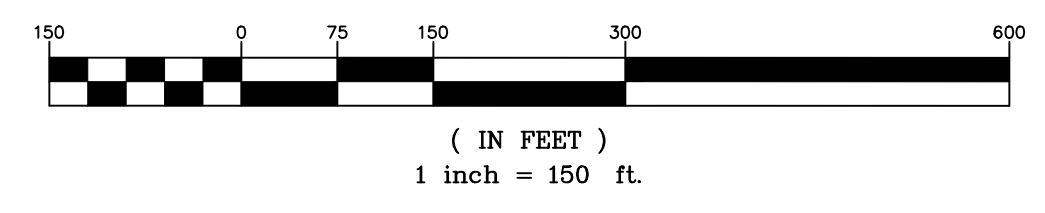
DRAWING NO.
RI-PS
E5-002
 SHEET OF



- NOTES:
- SCALE AND EQUIPMENT LOCATIONS ARE APPROXIMATE. THE EXACT DISTANCES SHALL BE CONFIRMED IN THE FIELD.
 - SEE PARTIAL POWER PLANS FOR MORE DUCTBANKS AND MANHOLES LOCATIONS.

- LEGEND:
- - CONCRETE ENCASED UNDERGROUND DUCTBANK (DETAIL D, DWG. EG-002)
 - SURFACE MOUNTED CONDUITS

1 OVERALL ELECTRICAL SITE PLAN
SCALE: 1" = 150'



No.	Description	Date

STAMP:

ADDRESS:

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CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	N.T.S.

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

RIVER INTAKE PUMP STATION
OVERALL ELECTRICAL SITE PLAN









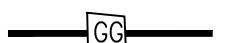




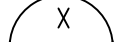

DRAWING NO.
RI-PS
E5-100
SHEET OF



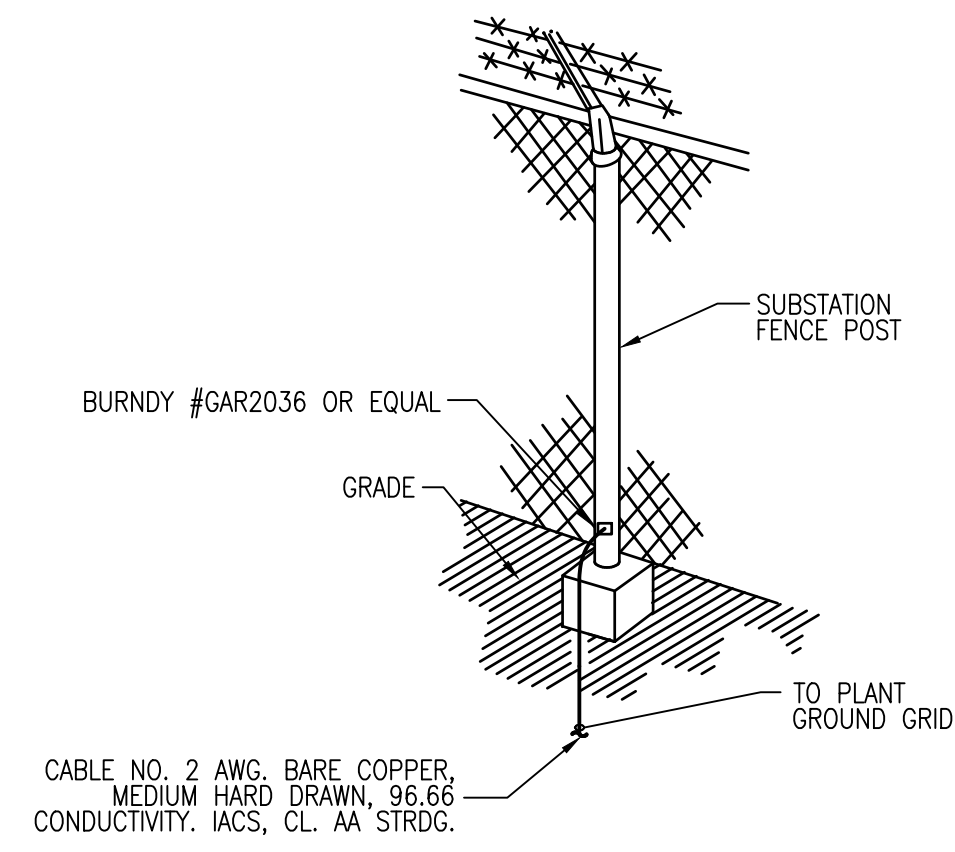
GENERAL NOTES:

1. REFER TO INSTALLATION SPECIFICATION FOR GROUNDING SYSTEM PROCEDURES AND OTHER REQUIREMENTS. DETAILS TAKE PRECEDENCE OVER SPECIFICATION. ARRANGEMENT DRAWING CONTENT SUPERSEDES TYPICAL DETAILS. DISCREPANCIES BETWEEN DRAWING & DETAILS SHOULD BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.
2. REFER TO TYPICAL GROUNDING DETAILS (DRAWINGS E5-211....219) FOR SPECIFIC METHODS OF GROUNDING TO EQUIPMENT, GROUNDING MATERIAL REQUIREMENTS, AND OTHER INSTALLATION CRITERIA.
3. MAXIMUM DISTANCE BETWEEN DRIVEN GROUND RODS IS NOT TO EXCEED 75' UNLESS NOTED OTHERWISE.
4. MAXIMUM HORIZONTAL SPACING BETWEEN CONCRETE REBAR VERTICAL RISER CONNECTIONS OR HORIZONTAL MAT CONNECTIONS (WHEN UTILIZED) IS NOT TO EXCEED 30' UNLESS NOTED OTHERWISE (U.N.O.).
5. ALL GROUNDING CONDUCTORS TO BE BARE, STRANDED, SOFT DRAWN, COPPER, #4/0 AWG U.N.O.
6. MAIN RING GROUND WIRE TO BE MAXIMUM 3' OUTSIDE FOUNDATIONS AND 2'-6" BELOW FINISH GRADE.
7. CONTRACTOR TO DETERMINE ACTUAL LOCATION OF ANY EQUIPMENT UTILIZING BONDS TO GROUNDING TAILS. CONTRACTOR TO LOCATE 1" PVC GROUNDING STUB-UPS IN ACCORDANCE WITH EQUIPMENT VENDOR INFORMATION OR DRAWING REQ.
8. FOR COMPRESSION APPLICATIONS, APPLY A COAT OF "NO-OXIDE" COMPOUND ONTO COPPER CABLE AND COMPRESSION CONNECTORS PRIOR TO CRIMPING CONNECTION OR USE PRE-FILLED CONNECTORS.
9. ALL GROUND CABLES STUBBING UP THROUGH CONCRETE SHALL STUB UP THRU PVC CONDUIT, SIZED PER PLAN DRAWINGS. PVC CONDUIT SHALL EXTEND A MINIMUM OF 6" ABOVE AND 6" BELOW THE CONCRETE.
10. PIGTAILS SHOULD BE INSTALLED THRU 1" PVC CONDUIT, 10' LONG U.N.O.
11. PROVIDE ALL BELOW GRADE CONDUCTOR AND UNDER GROUND CONNECTIONS TO FOUNDATIONS, PIERS, REBAR, GROUNDING RODS, TEST WELLS, UNDERGROUND DUCT BANKS, ETC. ALL TAILS TO ABOVE GRADE COLUMNS, STRUCTURES, EQUIPMENT, ELECTRICAL ROOM BUSES AND VARIOUS CABLE TRAY GROUPINGS ARE FOR FUTURE USE AND EXTENSION AND DETAILING BY OTHERS. PROVIDE TAILS ALLOWANCES FOR FUTURE LIGHTNING PROTECTION DOWNCOMER CONNECTIONS AT MAJOR COLUMNS OF THOSE STRUCTURES EXPECTED TO PROVIDE PROTECTION FOR AREAS UNDER TYPICAL ZONES OF PROTECTION OFFERED BY THE LARGER STRUCTURES WHERE INDICATED ON THE DRAWINGS.
12. EXOTHERMIC WELDS SHALL BE UTILIZED IN UNDERGROUND INSTALLATIONS ONLY. ALL SUCH WELDS SHALL BE INSPECTED BY THE BUZZI UNICEM USA SITE ELECTRICAL REPRESENTATIVE PRIOR TO COVER.
13. ALL ABOVE GROUND GROUNDING CONNECTIONS SHALL EMPLOY PROPERLY RATED COMPRESSION CONNECTORS.
14. THE MAIN GROUNDING RING CONDUCTOR SHALL BE RUN AS MECHANICALLY CONTINUOUS AS POSSIBLE WITH A MINIMUM OF CUTS AND SPLICES.
15. PROVIDE FENCE GROUNDING PER THE NEC. PROVIDE UNDERGROUND PERIMETER FENCE GROUND WIRE THREE (3) TO FOUR (4) FEET OUTSIDE THE FENCE.
16. ALL ELECTRICAL INSTALLATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NFPA NATIONAL ELECTRIC CODE, MINING SAFETY & HEALTH ADMINISTRATION, BUZZI UNICEM ELECTRICAL INSTALLATION GUIDELINE SPECIFICATION AND ANY OTHER LOCAL CODES HAVING JURISDICTION.

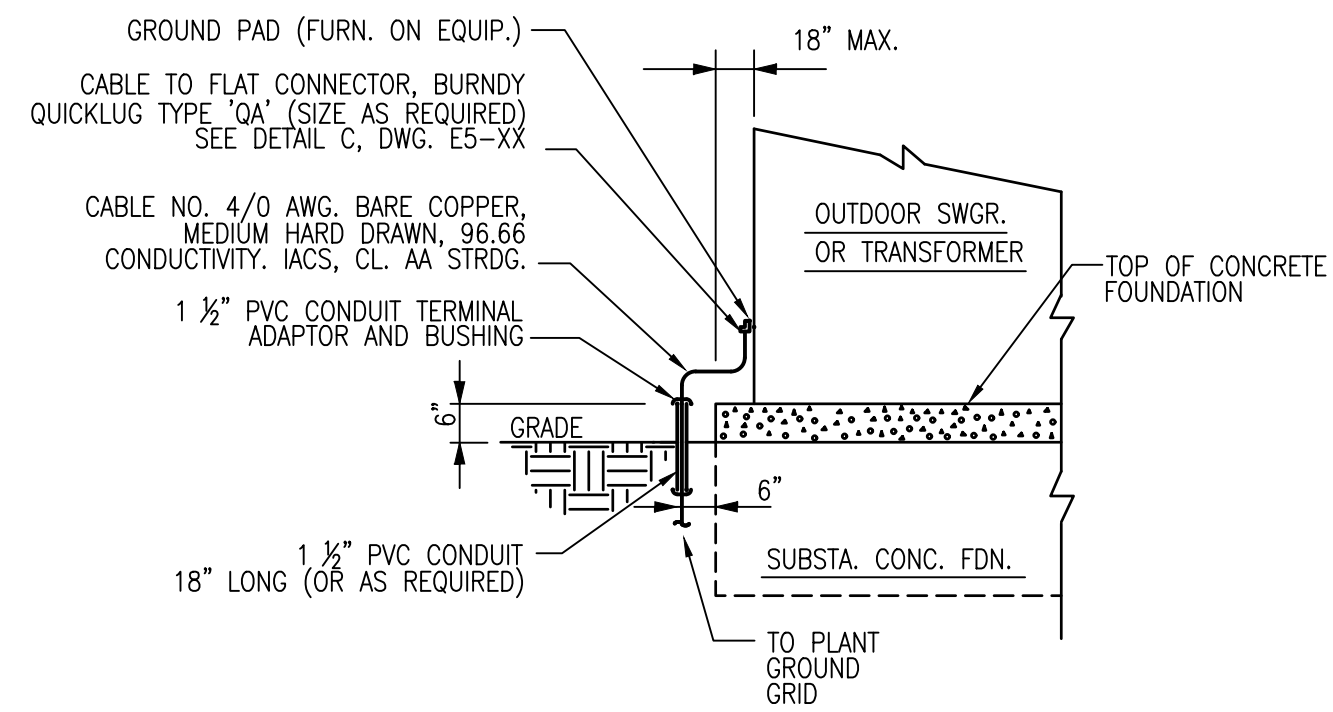
GROUNDING SYMBOL LEGEND

-  - DRIVEN GROUNDING ELECTRODE ROD
-  - DRIVEN GROUNDING ELECTRODE TEST WELL
- T.W.
-  - CABLE TO STRUCTURE OR EQUIPMENT, BOLTED IRREVERSIBLE COMPRESSION CONNECTION.
-  - MECHANICAL GROUNDING CONNECTION (EXPOSED)
-  - EQUIPMENT GROUNDING BUS BAR (EXPOSED)
-  - EXOTHERMIC WELD TO CONCRETE REBAR OR RISER(S).
-  - GROUNDING PAD (SURFACE EMBEDDED MOUNTED 2' ABOVE GRADE OR A.F.F. U.N.O.)
-  - CABLE TO CABLE EXOTHERMIC WELD.
-  - GROUNDING CONDUCTOR (CONCEALED), #4/0 AWG BARE COPPER
-  - GROUNDING CONDUCTOR (EXPOSED), #4/0 AWG INSULATED COPPER
-  - LIGHTNING PROTECTION CONDUCTOR (EXPOSED), #4/0 AWG BARE COPPER
-  - EXOTHERMIC WELD TO CONCRETE REBAR IN HORIZONTAL MAT
-  - GROUNDING PIGTAIL. (LENGTH AS PER PLAN DRAWINGS)
-  - GROUND WIRE TAG
-  - DRAWING NUMBER FOR GROUND WIRE CONTINUATION

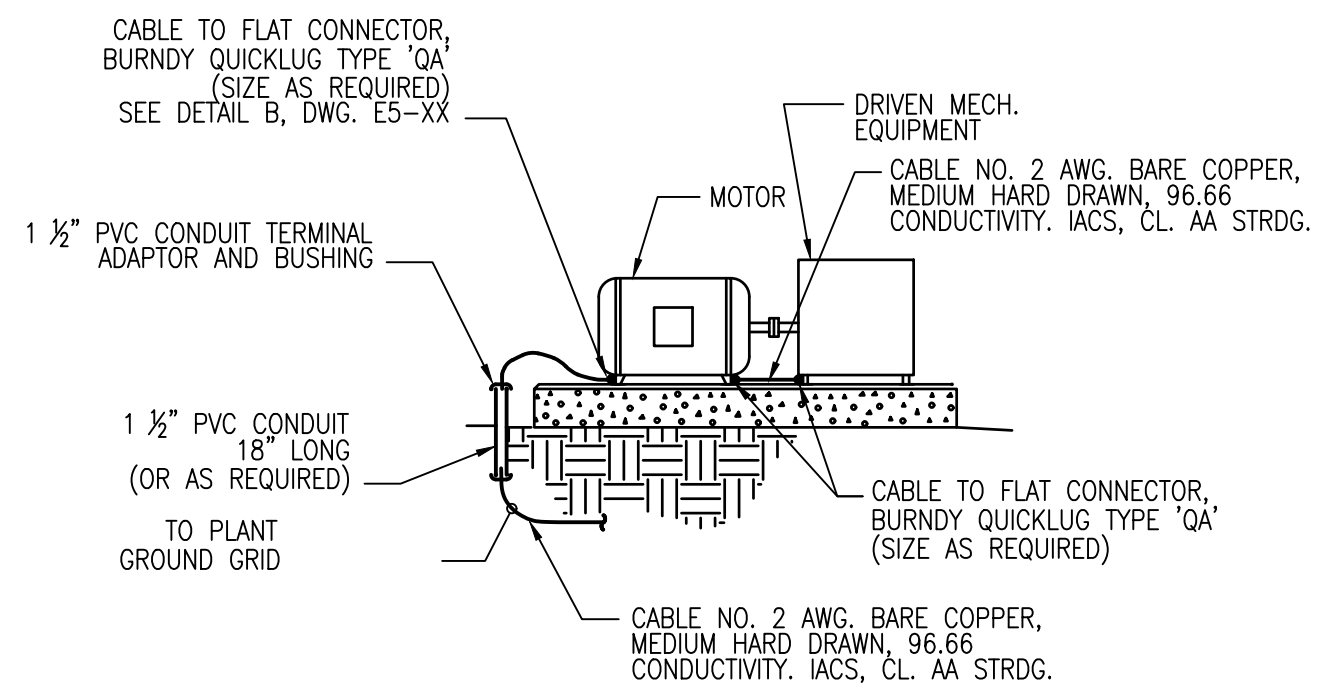
		No.	Description	Date	STAMP:	ADDRESS:	PROJECT NO: TASK 1	CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT WATER SUPPLY PROGRAM RIVER INTAKE PUMP STATION GROUNDING SYMBOLS NOTES AND DETAILS	DRAWING NO.
							DESIGNED BY: RV		RI-PS
							DRAWN BY: RV		E5-210
							CHECKED BY: AZ		SHEET OF
							DATE: 11-22-2019		
						SCALE: N.T.S.		ISSUED FOR BID	



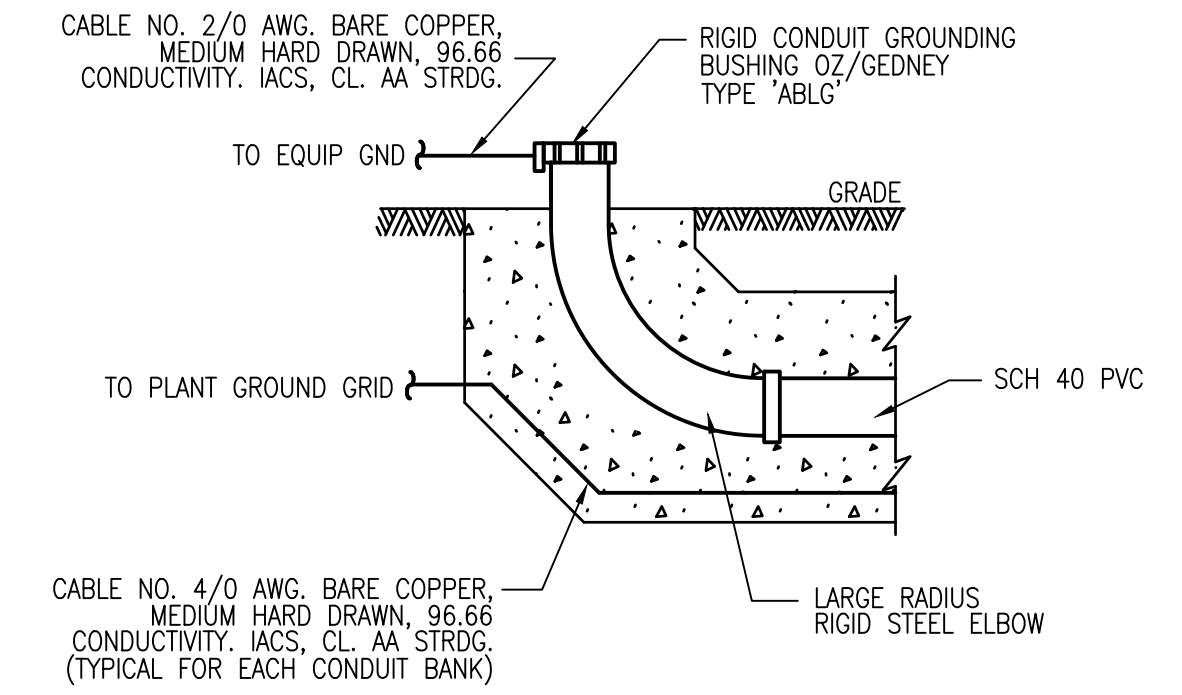
A FENCE GROUNDING



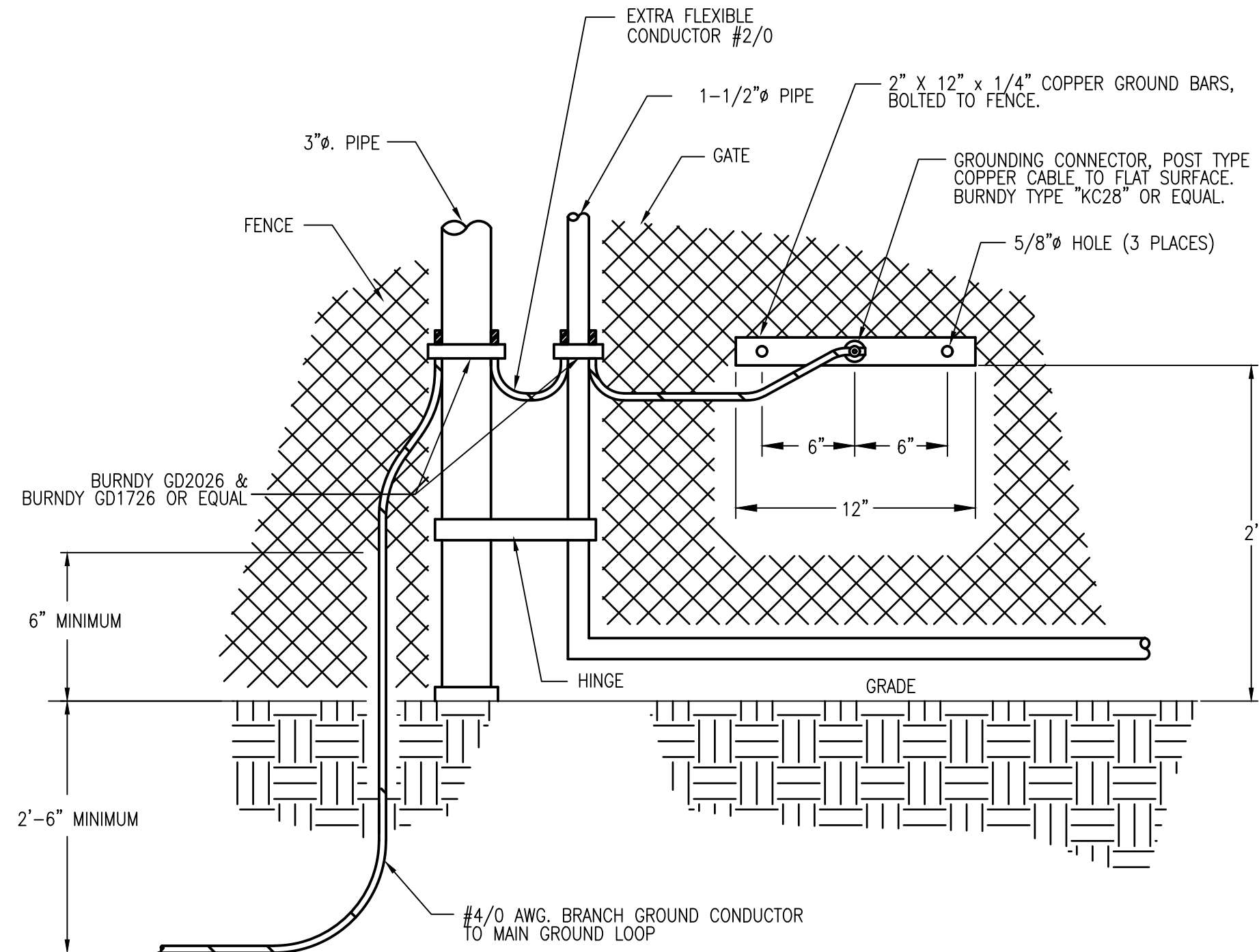
B OUTDOOR SWITCHGEAR OR TRANSFORMER



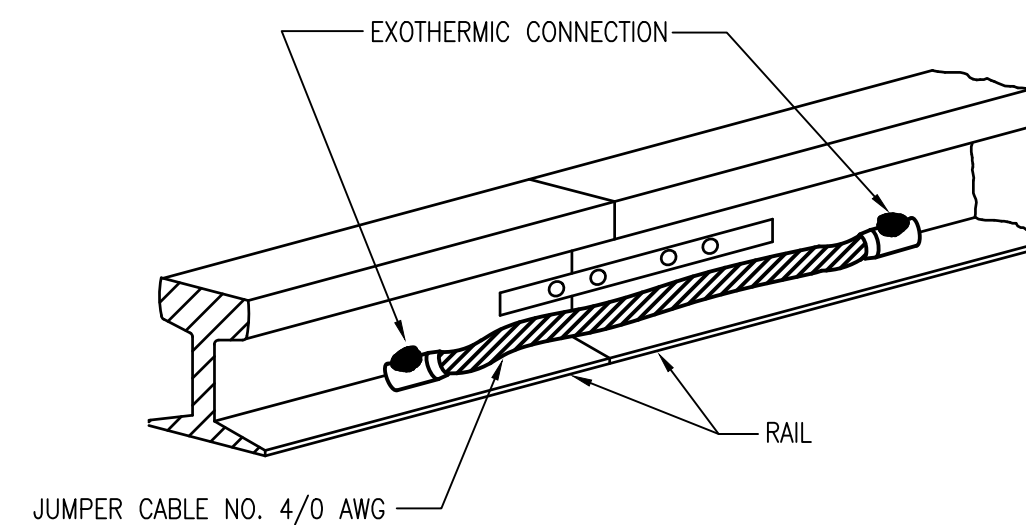
C MOTORS & EQUIPMENT ABOVE 600V



D UNDERGROUND CONDUIT STUB-UP



E FENCE GATE GROUNDING



NOTE:
EXOTHERMIC CONNECTIONS SHALL BE LEFT OR RIGHT HAND, AS SHOWN ON PLANS.

F RAIL GROUNDING



No.	Description	Date

STAMP:

ADDRESS:

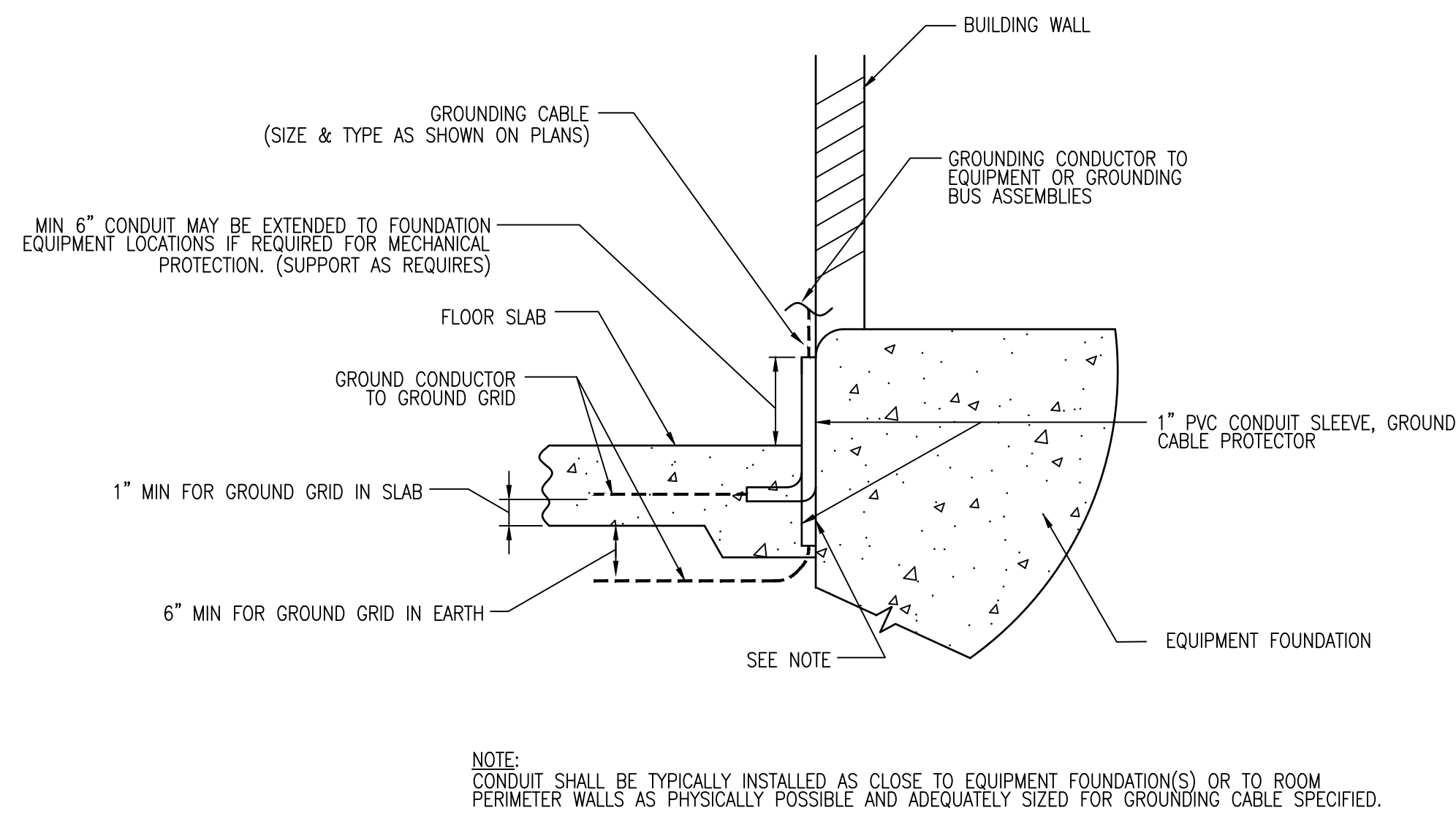
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DESIGNED BY:	RV
DRAWN BY:	RV
CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	N.T.S.

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

RIVER INTAKE PUMP STATION
GROUNDING
INSTALLATION DETAILS

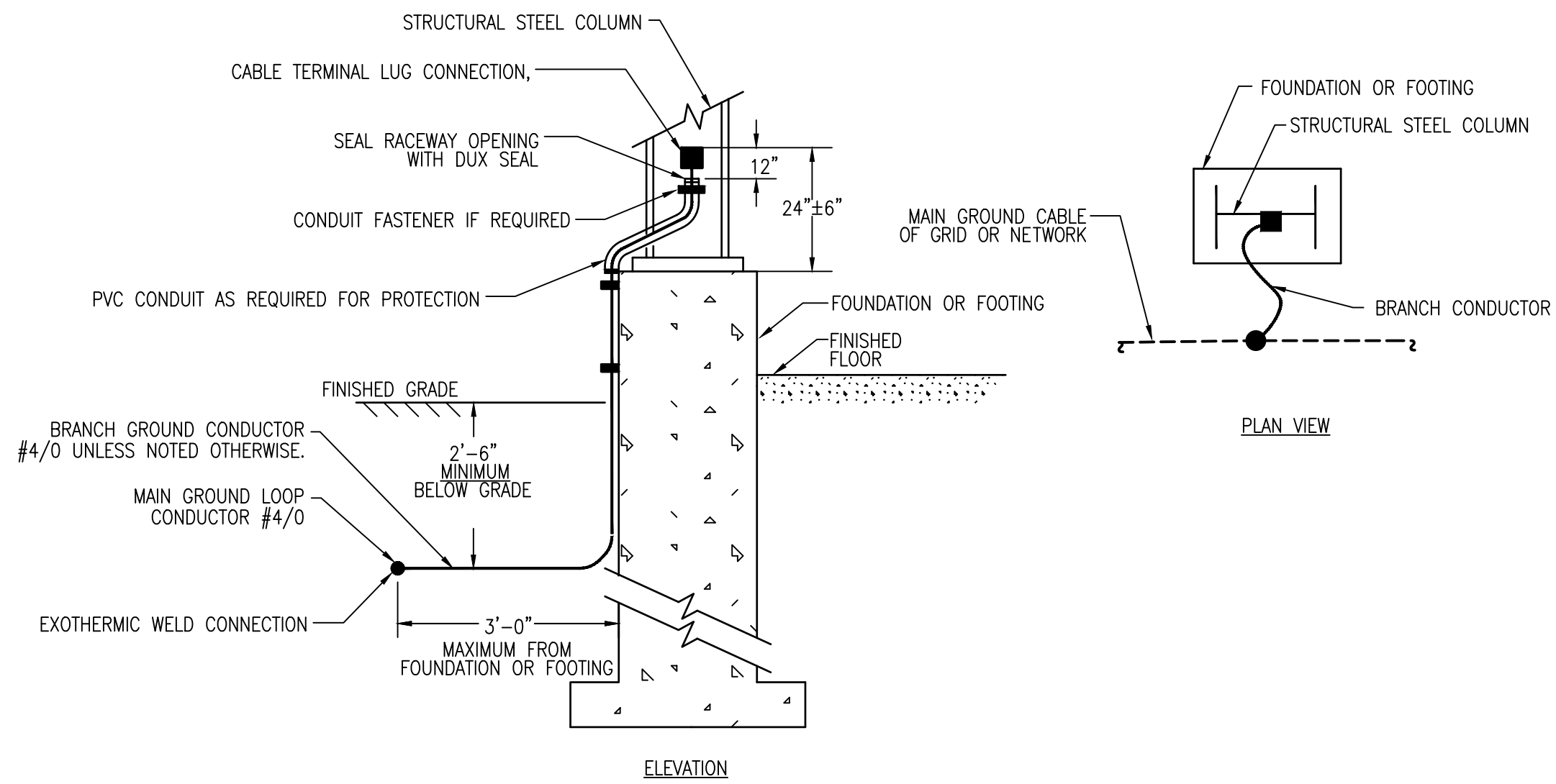
DRAWING NO.
RI-PS
E5-211
SHEET OF

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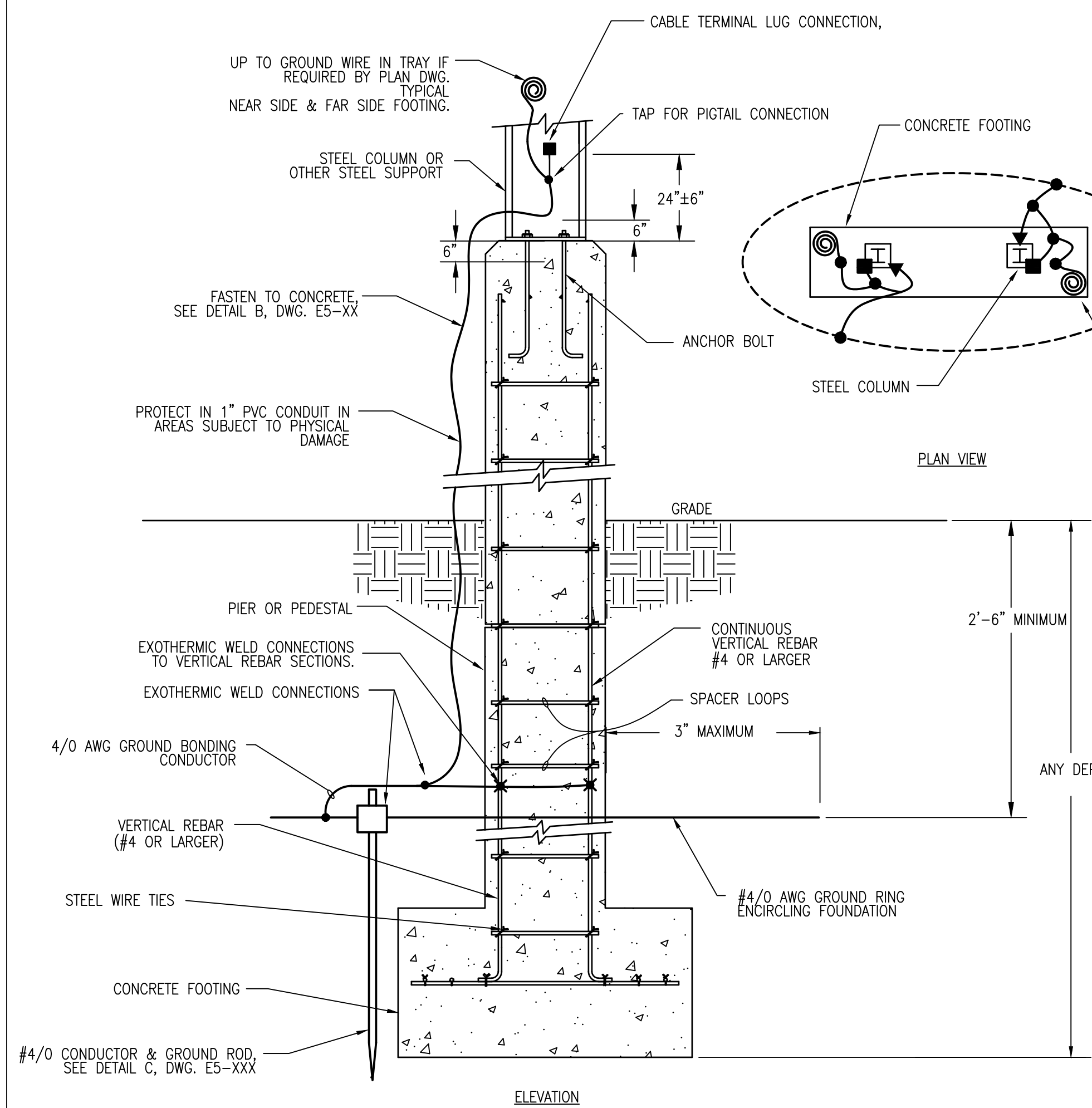


NOTE:
CONDUIT SHALL BE TYPICALLY INSTALLED AS CLOSE TO EQUIPMENT FOUNDATION(S) OR TO ROOM PERIMETER WALLS AS PHYSICALLY POSSIBLE AND ADEQUATELY SIZED FOR GROUNDING CABLE SPECIFIED.

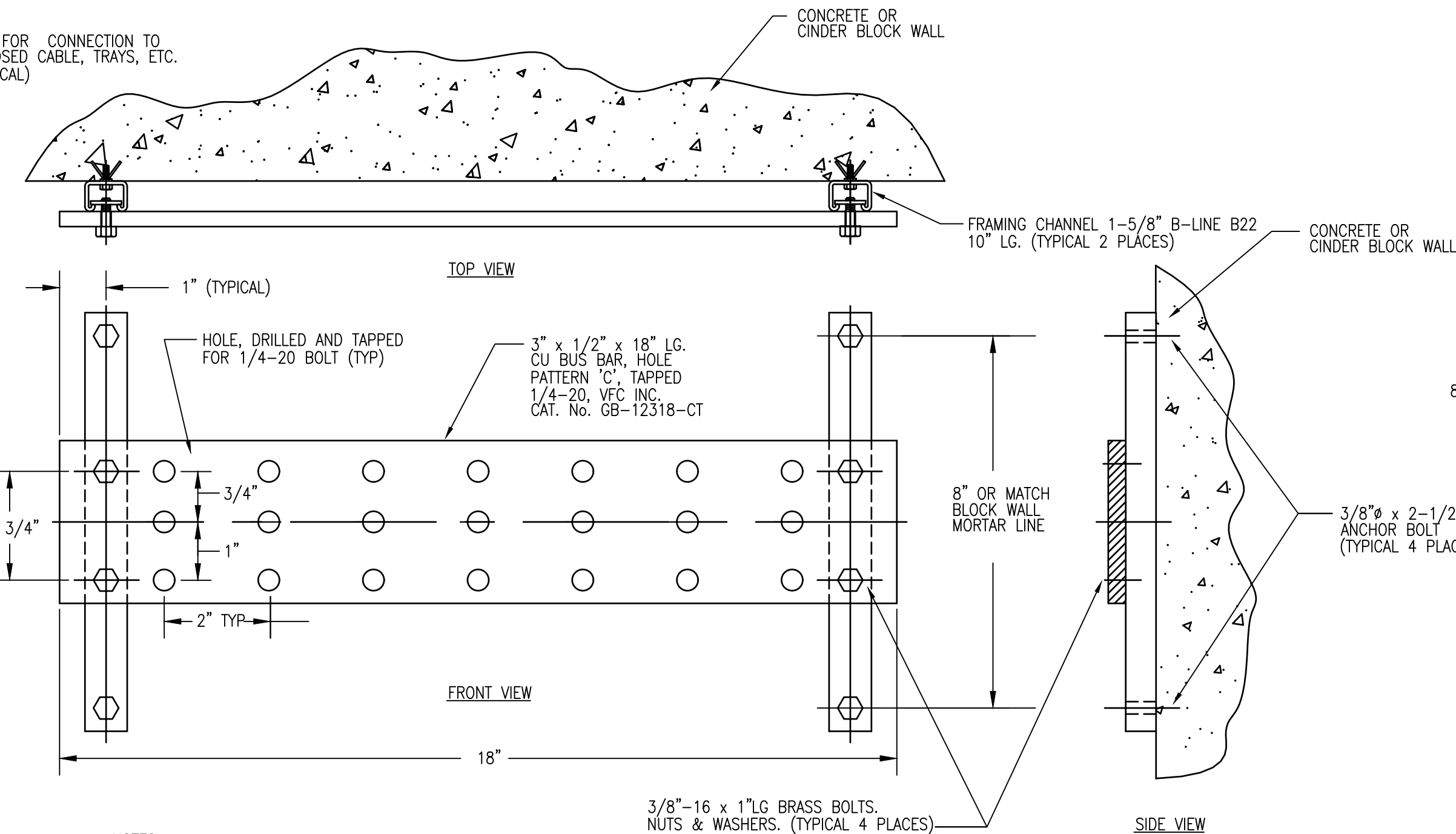
A STUB UP AT BUILDING WALL DETAIL



C STEEL COLUMN GROUNDING CONNECTION



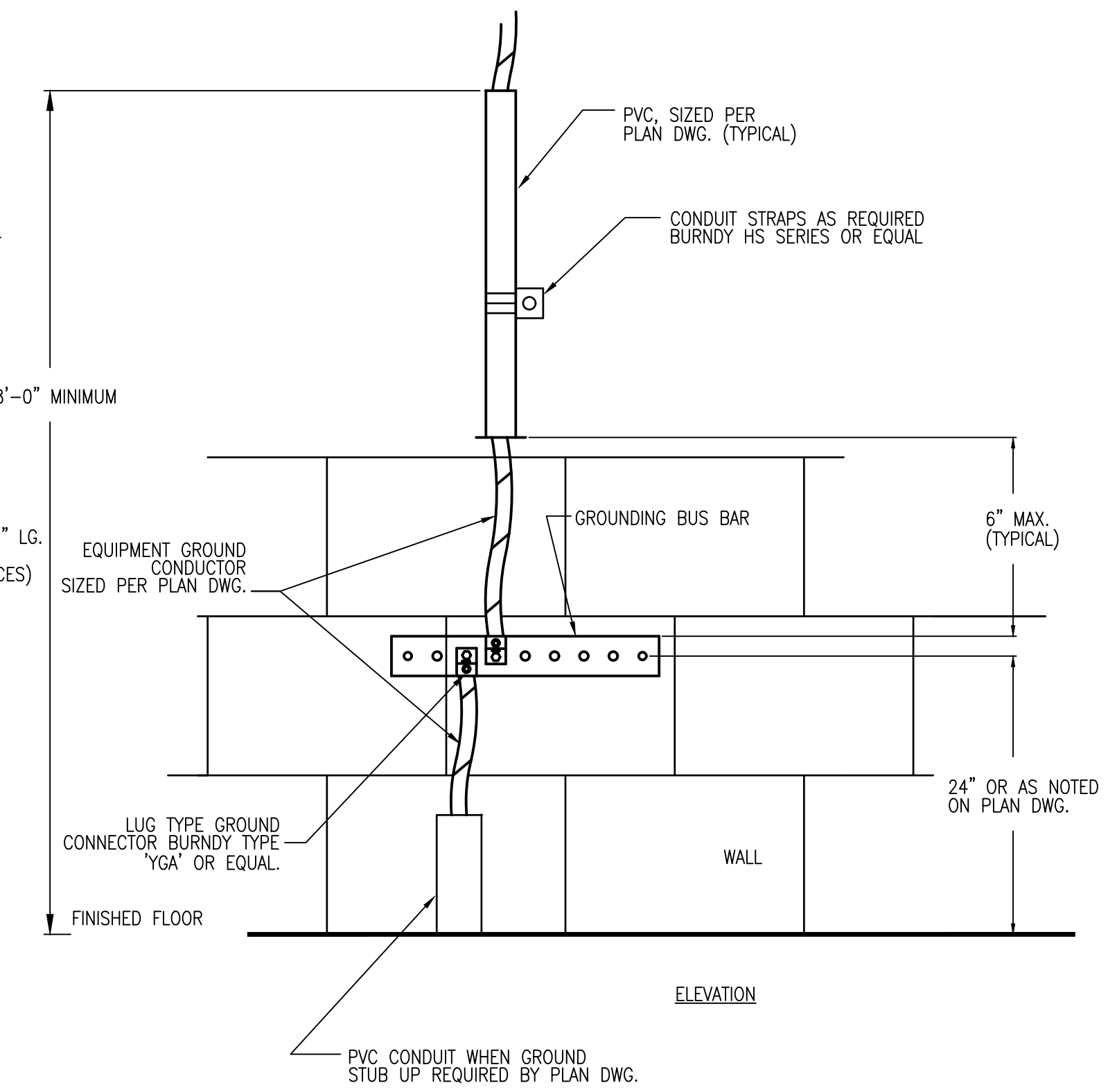
B CONCRETE FOOTING GROUNDING DETAIL



NOTES:
IF REQUIRED TO ACCOMMODATE LARGER MOUNTING BOLTS, ELECTRICAL CONTRACTOR TO DRILL OUT EXISTING TAPPED HOLE IN BUS BAR AND DRILL AND TAP LARGER SIZE.

NOTES:
1. APPLY A COAT OF "NO-OXIDE" COMPOUND ONTO COPPER CABLE AND COMPRESSION CONNECTOR PRIOR TO CRIMPING CONNECTION OR USE PRE FILLED CONNECTORS.
2. TYPICALLY MIN. OF TWO(2) BUS BAR ASSEMBLIES ARE PROVIDED IN EACH PLANT ELECTRICAL ROOM.

D GROUNDING BUS BAR



ELEVATION



No.	Description	Date

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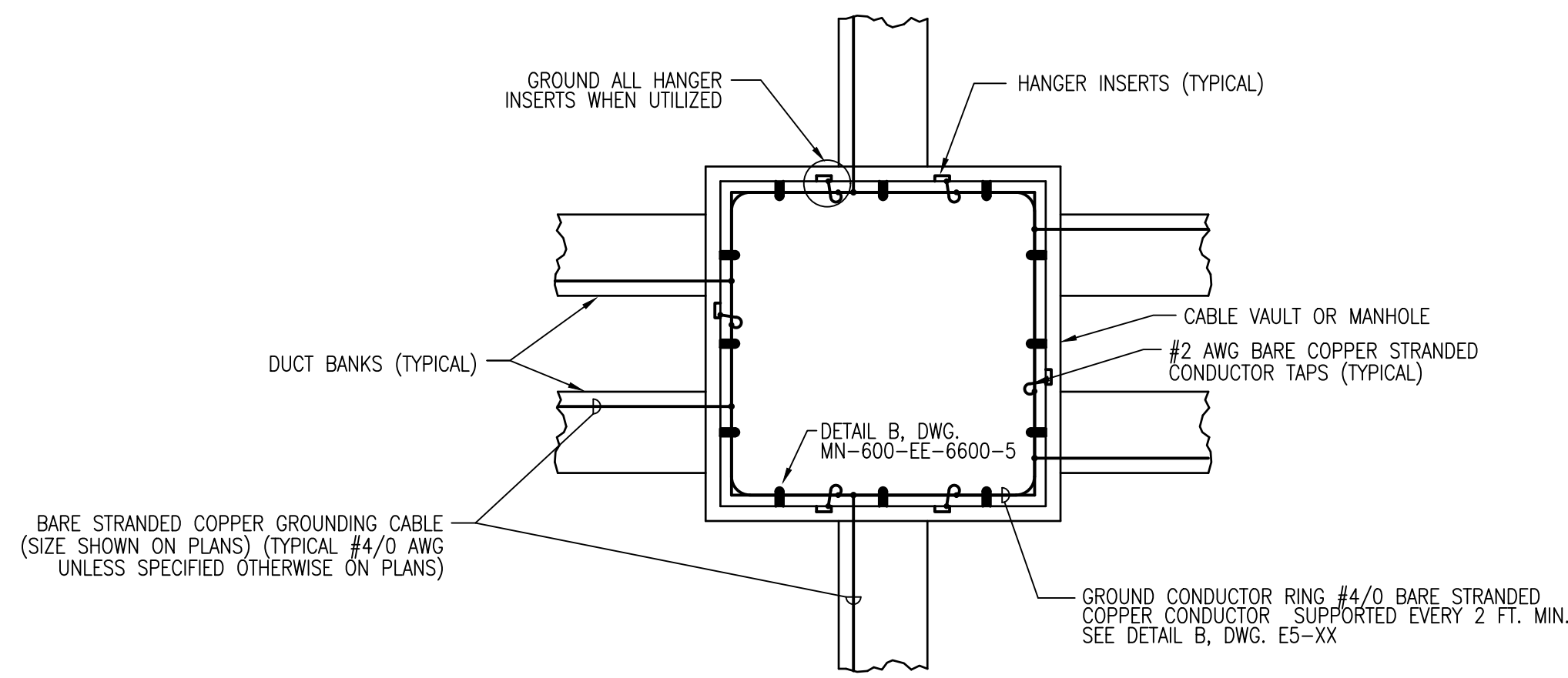
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PROJECT NO:	TASK 1
DESIGNED BY:	RV
DRAWN BY:	RV
CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	N.T.S.

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
GROUNDING
INSTALLATION DETAILS

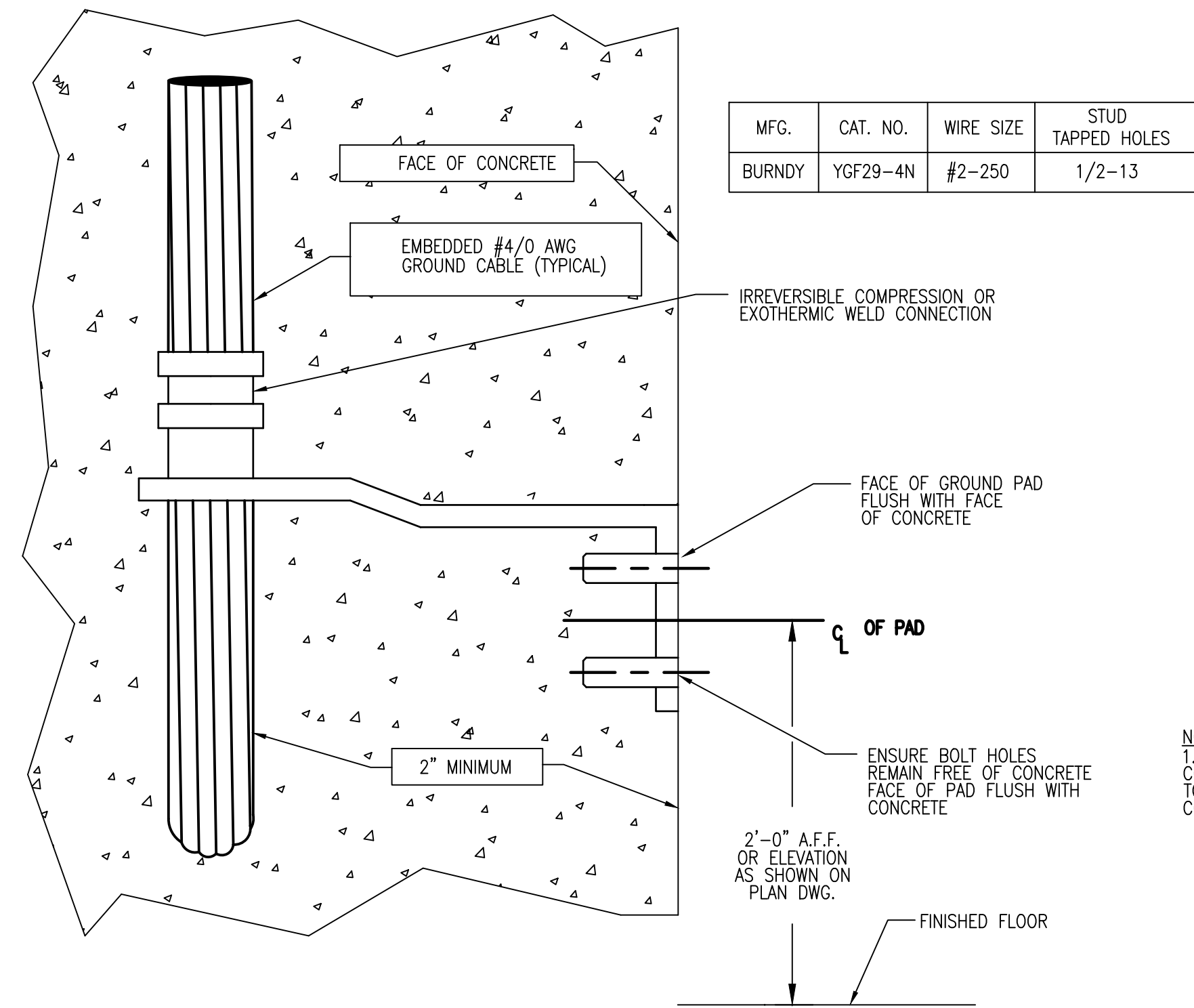
DRAWING NO.
RI-PS
E5-212
SHEET OF

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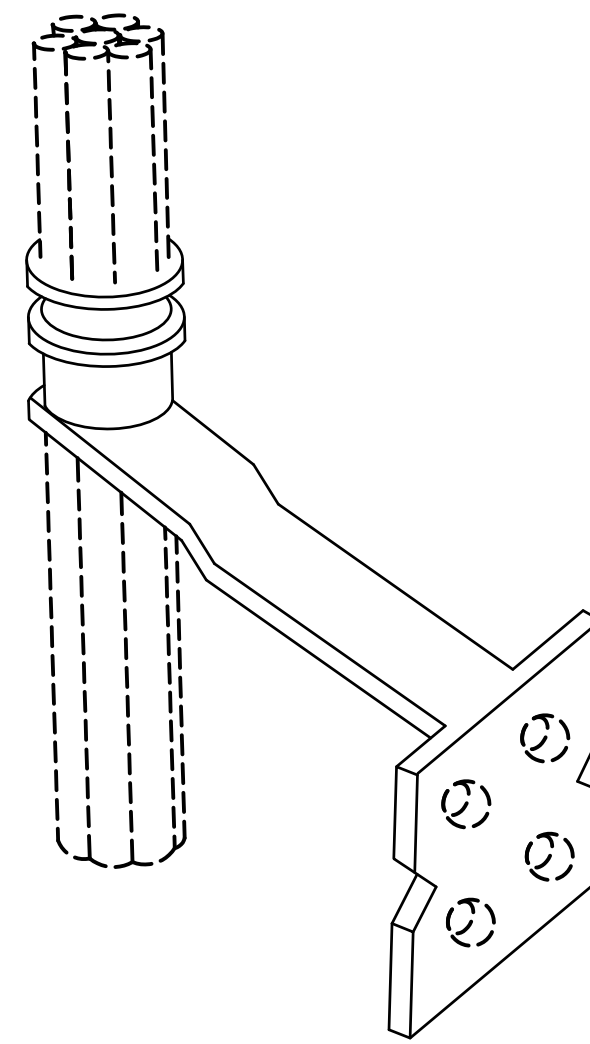


NOTE:
PROVIDE EXOTHERMIC WELD FOR CABLE TO CHANNEL CONNECTION.
PROPER WELD TYPE TO BE USED TO SUIT THE TYPE AND SIZE CHANNEL UTILIZED.

A TYPICAL GROUND CONNECTION CABLE VAULT OR MANHOLE

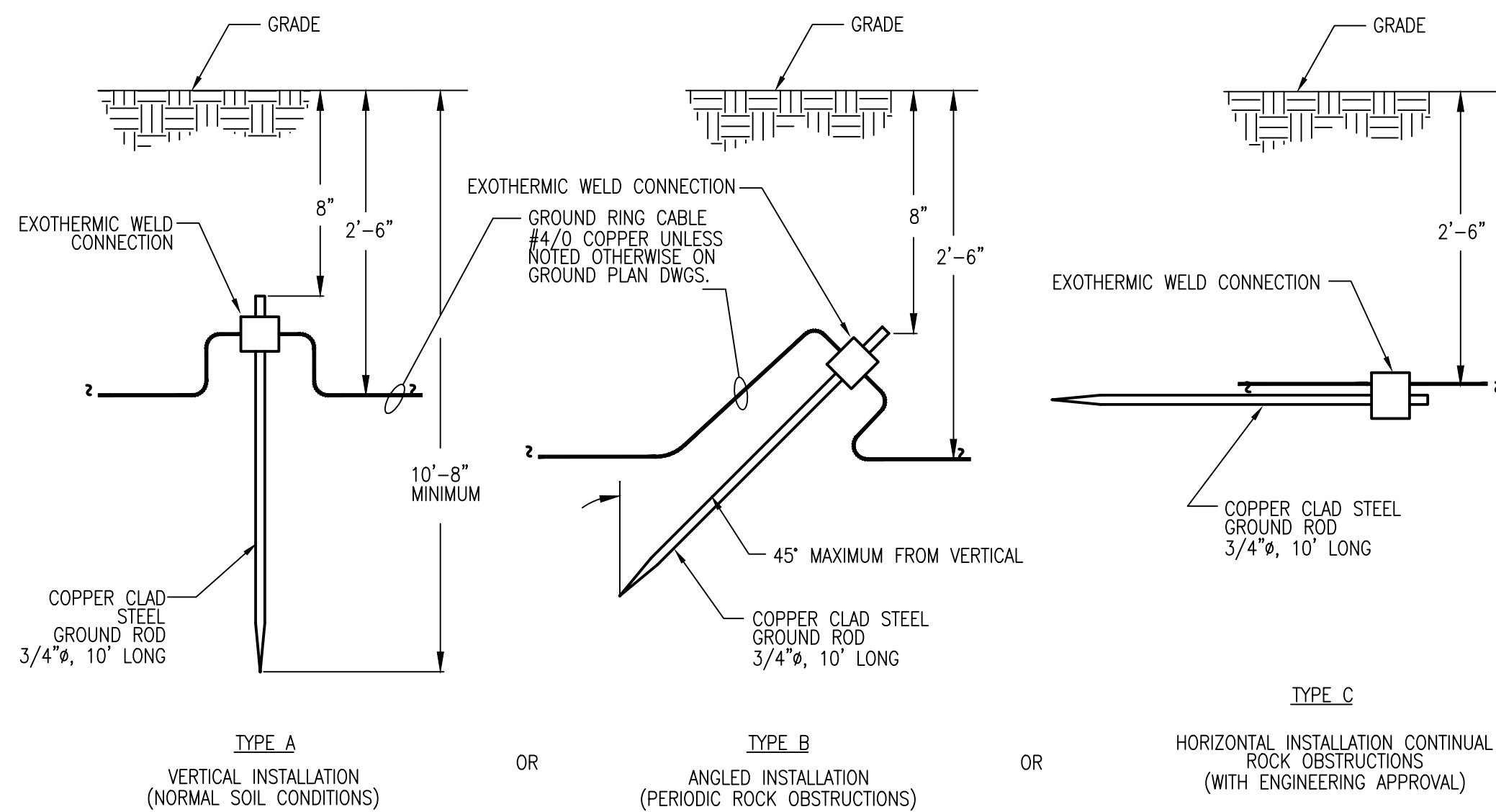


MFG.	CAT. NO.	WIRE SIZE	STUD TAPPED HOLES
BURNDY	YGF29-4N	#2-250	1/2-13

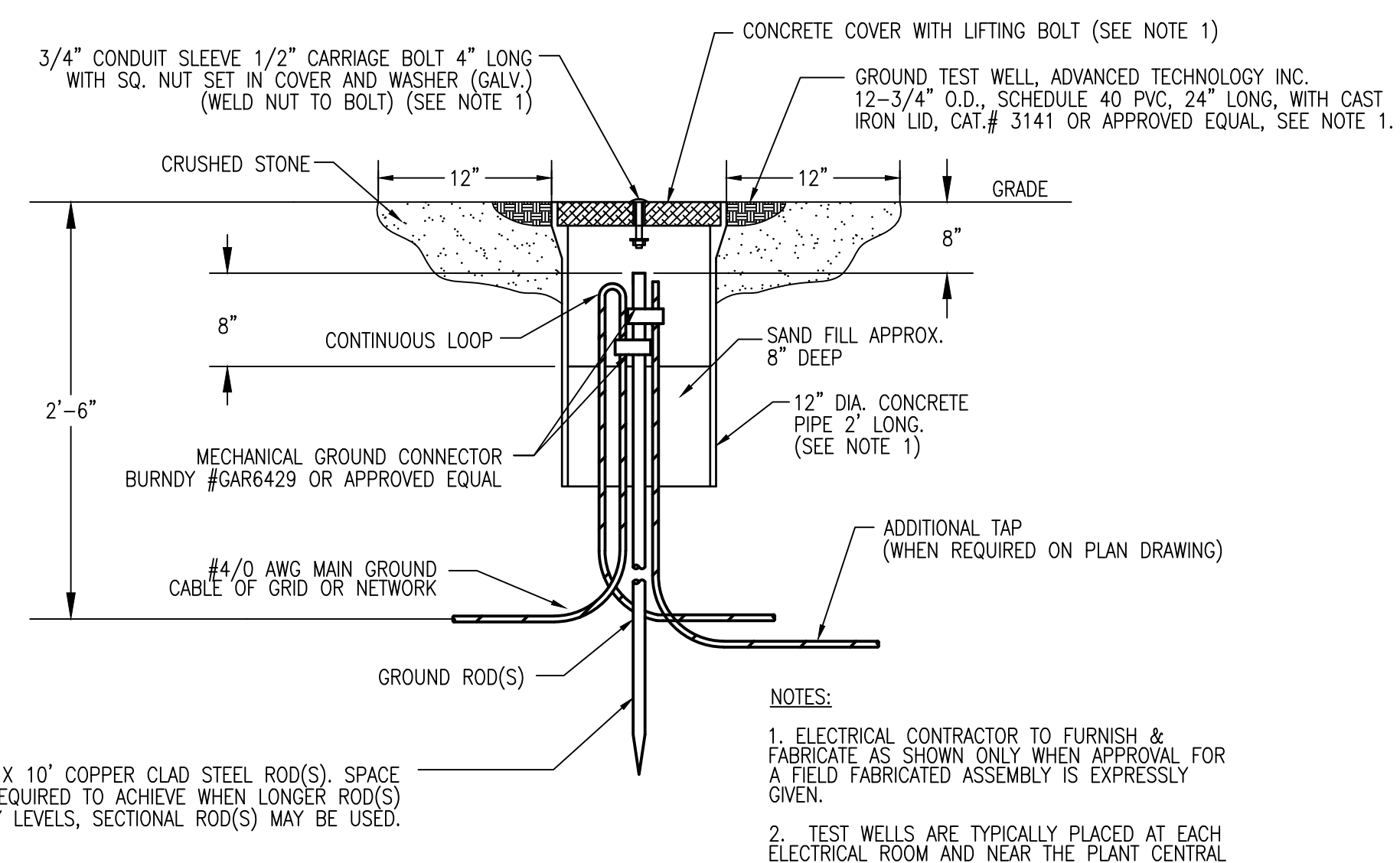


NOTES:
1. APPLY A COAT OF "NO-OXIDE" COMPOUND ONTO COPPER CABLE AND COMPRESSION CONNECTOR PRIOR TO CRIMPING CONNECTION OR USE PRE FILLED CONNECTORS.

B TYPICAL INSTALLATION DETAIL GROUNDING PAD

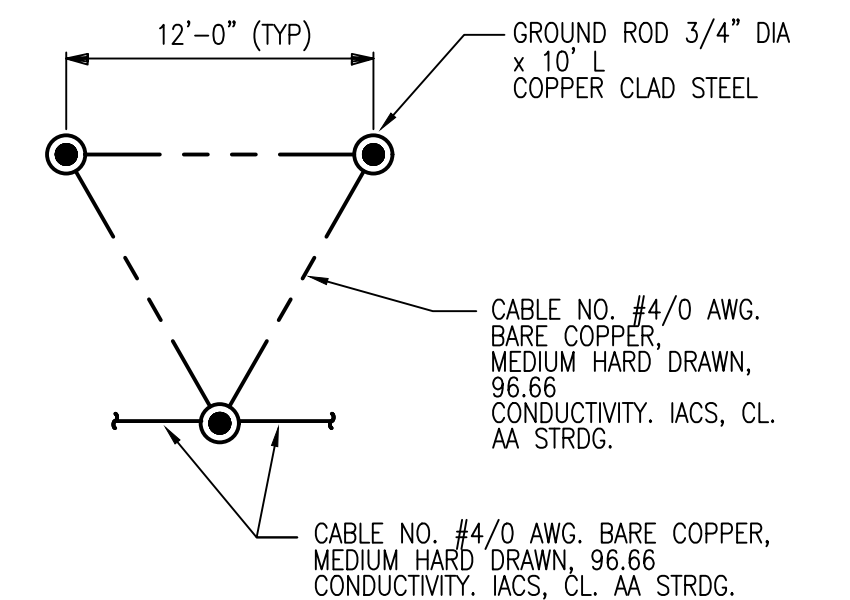


C SINGLE GROUND ROD INSTALLATION ARRANGEMENTS



NOTES:
1. ELECTRICAL CONTRACTOR TO FURNISH & FABRICATE AS SHOWN ONLY WHEN APPROVAL FOR A FIELD FABRICATED ASSEMBLY IS EXPRESSLY GIVEN.
2. TEST WELLS ARE TYPICALLY PLACED AT EACH ELECTRICAL ROOM AND NEAR THE PLANT CENTRAL CONTROL ROOM.

D GROUND TEST WELL



NOTE:
SUFFICIENT GROUND RODS SHALL BE DRIVEN INTO THE GROUND SO AS TO PROVIDE NOT MORE THAN 5 OHMS RESISTANCE TO GROUND AS MEASURED BY USING A BIDDLE CO. MEGGER.

E MULTIPLE ROD ASSEMBLY



No.	Description	Date

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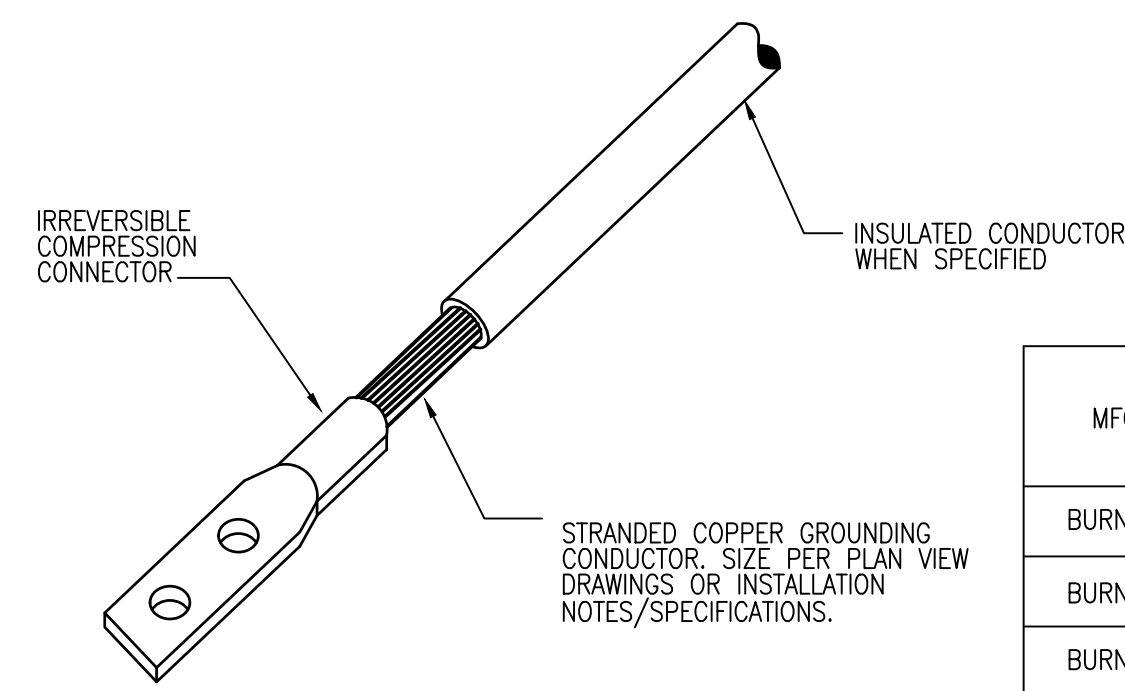
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PROJECT NO:	TASK 1
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DRAWN BY:	RV
CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	N.T.S.

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
GROUNDING
INSTALLATION DETAILS

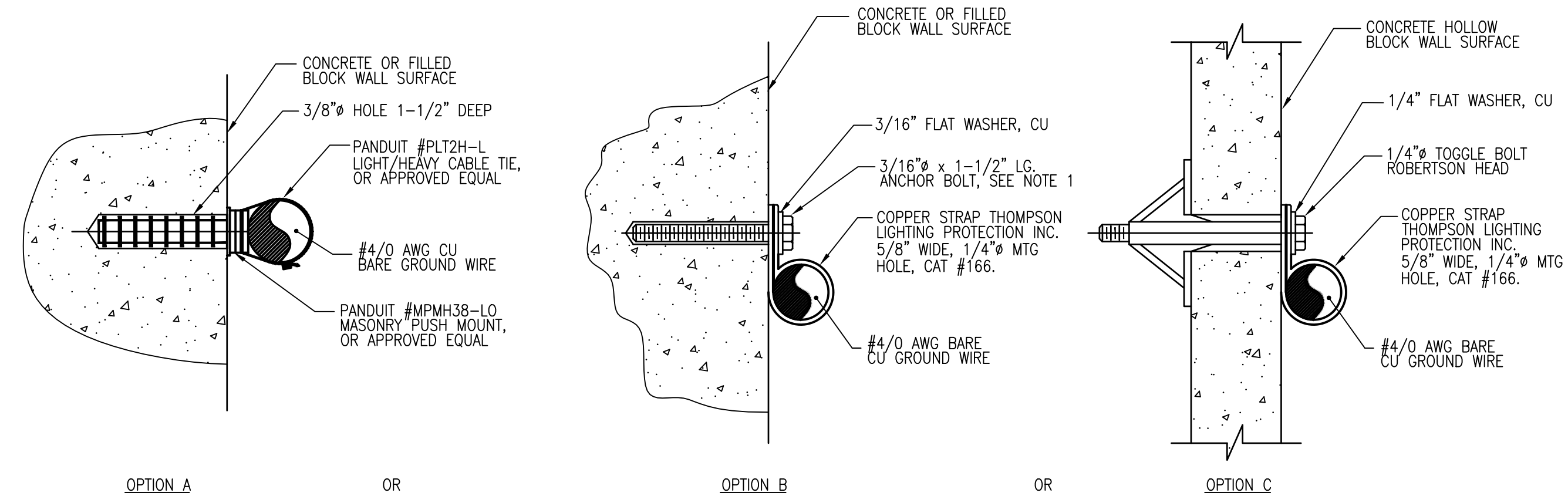
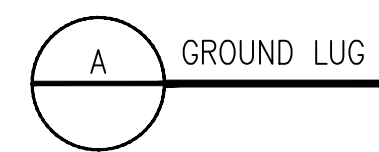
DRAWING NO.
RI-PS
E5-213
SHEET OF

MAT'L: HIGH CONDUCTIVITY CAST COPPER
 NEMA SPACED TWO-HOLE GROUND LUG FOR COPPER CABLE, FOR
 TERMINALS AT EQUIPMENT AND/OR COLUMNS (WHEN SPECIFIED ON PLAN VIEWS)

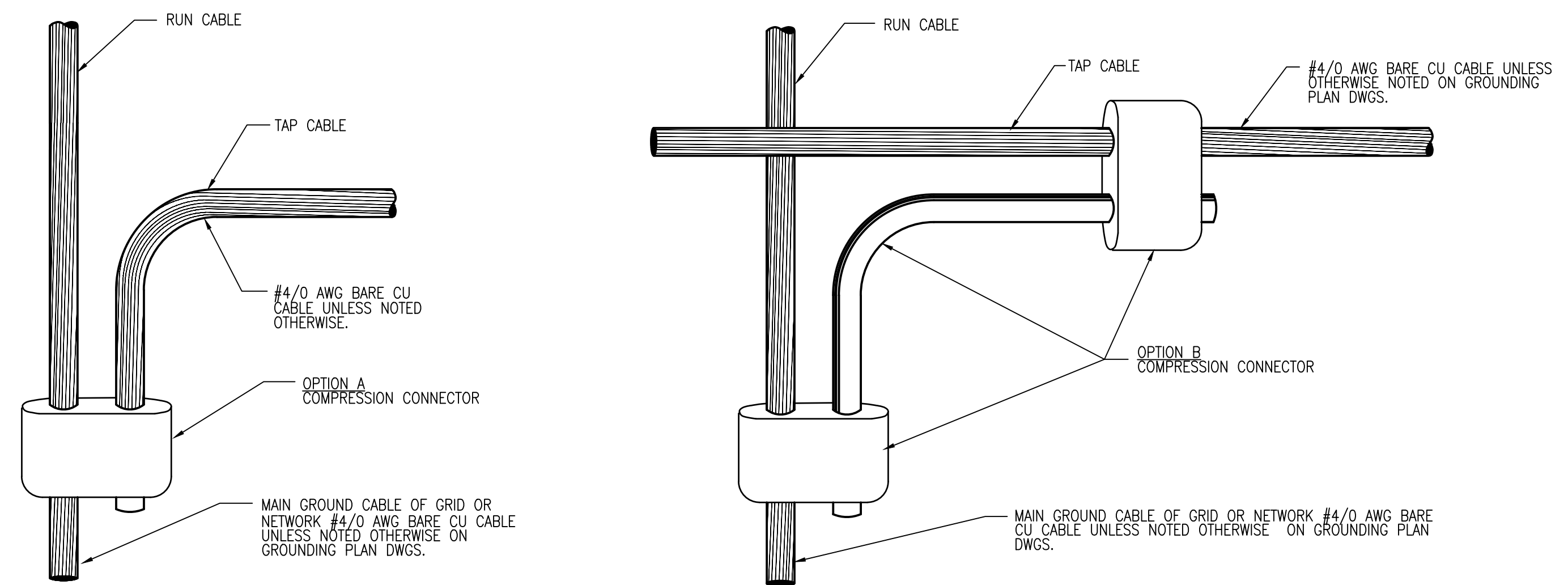
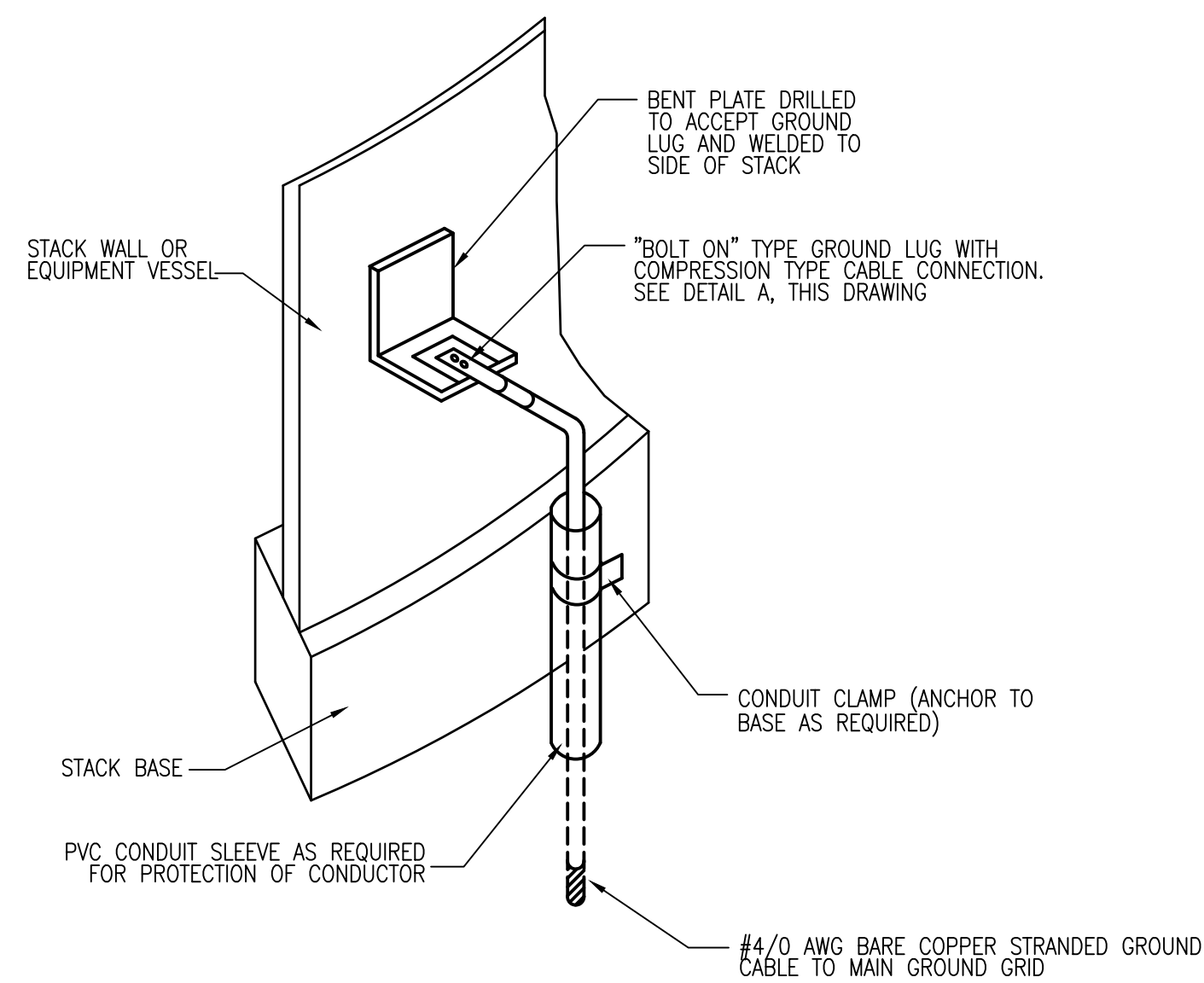
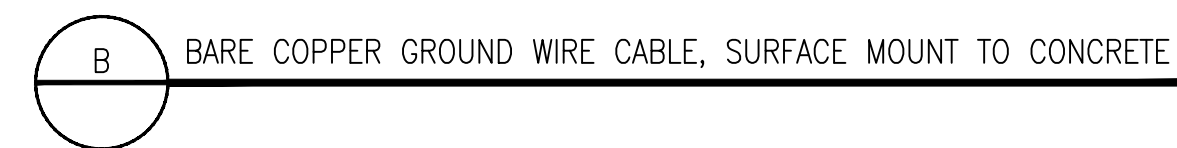


MFG.	CAT. #	WIRE SIZE (AWG)	BOLT HOLE
BURNDY	YGHA28-2N	4/0	ON 1/3/4" CENTERS
BURNDY	YGHA26-2N	2/0	ON 1/3/4" CENTERS
BURNDY	YGHA25-2N	1/0	ON 1/3/4" CENTERS
BURNDY	YGHA2C-2N	2	ON 1/3/4" CENTERS

NOTES:
 1. APPLY A COAT OF "NO-OXIDE" COMPOUND ONTO COPPER CABLE AND COMPRESSION CONNECTOR PRIOR TO CRIMPING CONNECTION OR USE PRE-FILLED CONNECTORS.



NOTE:
 1. FOR HOLLOW BLOCK USE 1/4" TOGGLE BOLT WITH ROBERTSON HEAD, & 1/4" FLAT, CU WASHER. SEE OPTION "C".



	MFG.	CATALOG No.	RUN WIRE SIZE	TAP WIRE SIZE
OPTION B	BURNDY	YGL29C29	2-250	2-250
OPTION A	BURNDY	YHC29C26	3/0-250	6-2/0
OPTION A	BURNDY	YHC29C29	3/0-250	3/0-250



No.	Description	Date

STAMP:

ADDRESS:

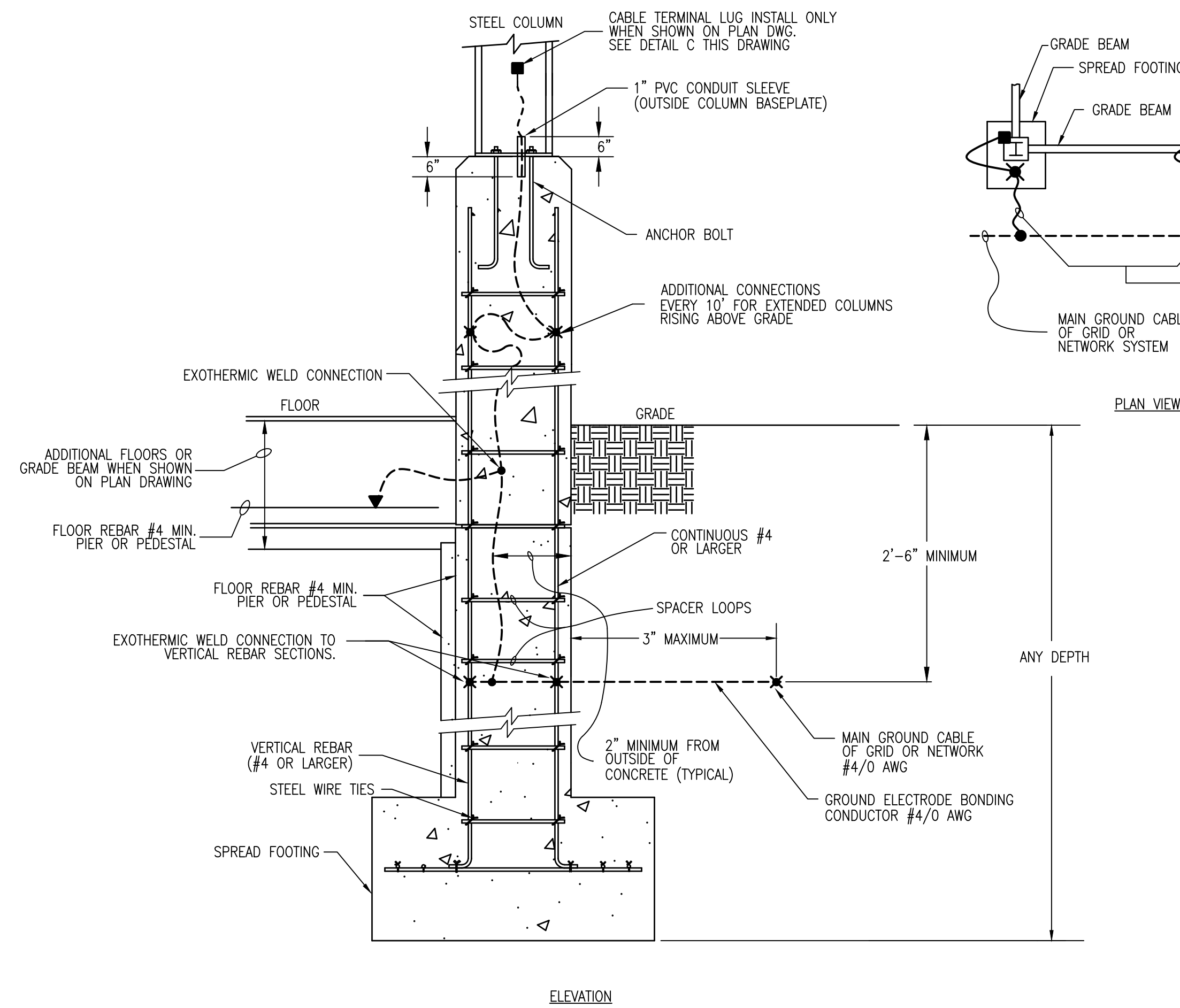
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CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	N.T.S.

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

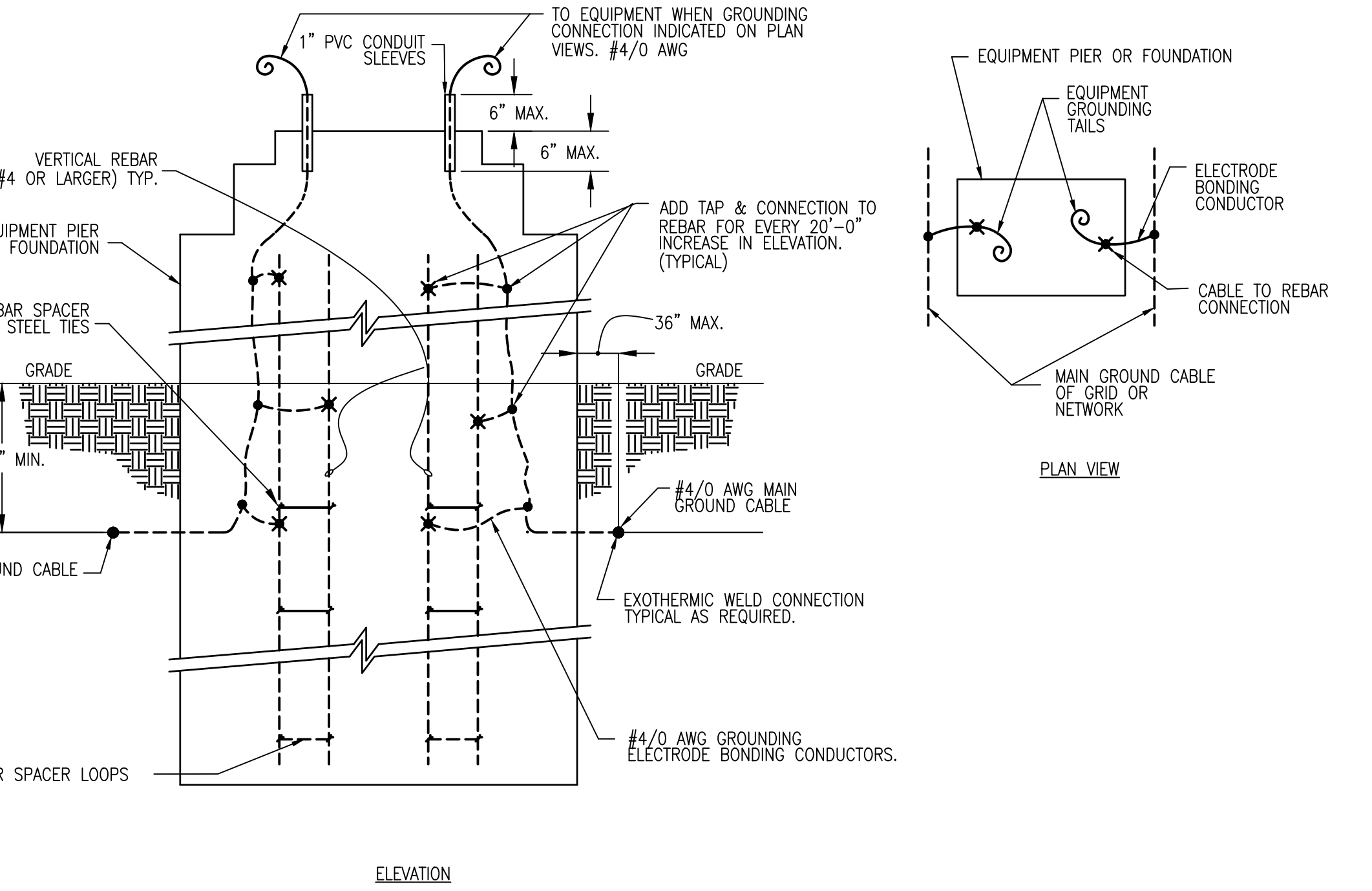
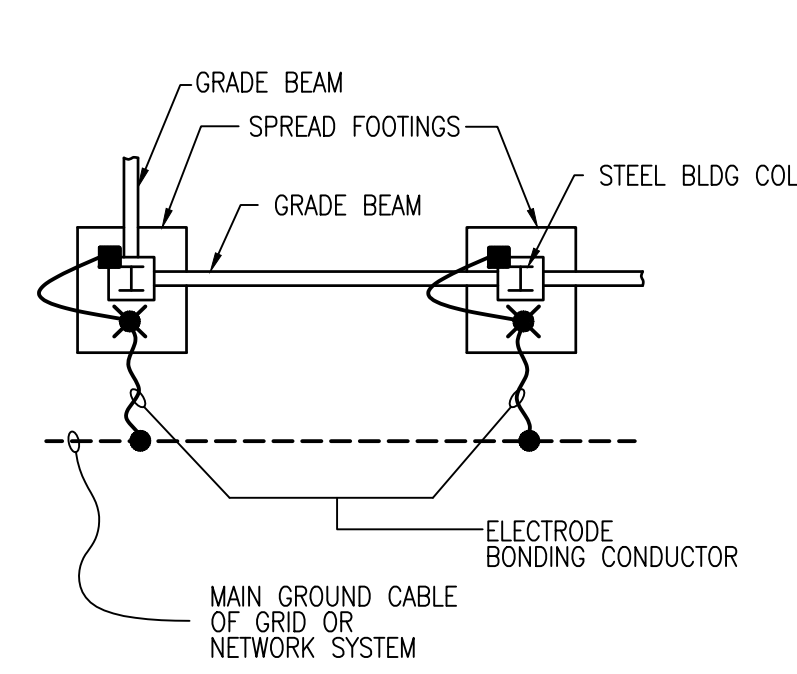
RIVER INTAKE PUMP STATION
 GROUNDING
 INSTALLATION DETAILS

DRAWING NO.
RI-PS
E5-214
 SHEET OF

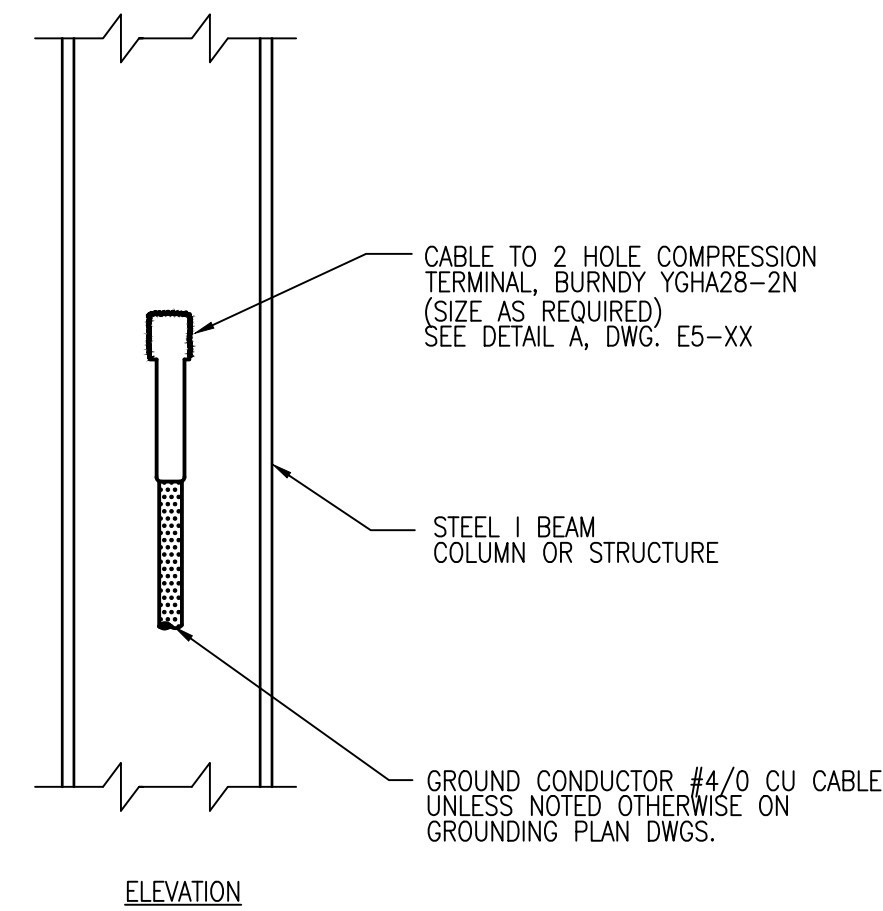
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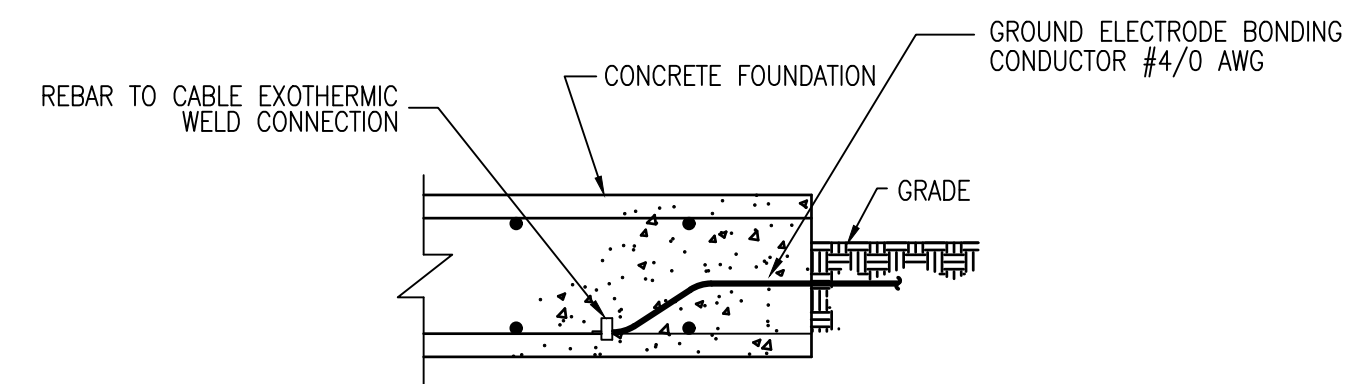
A REINFORCED CONCRETE FOOTING GROUNDING DETAIL



B "EQUIPMENT PIER OR FOUNDATION" CONCRETE AND REBAR RISER CONNECTIONS



C GROUND CABLE TO STEEL COLUMN LUG



D GROUND CABLE CONNECTION TO REBAR



No.	Description	Date

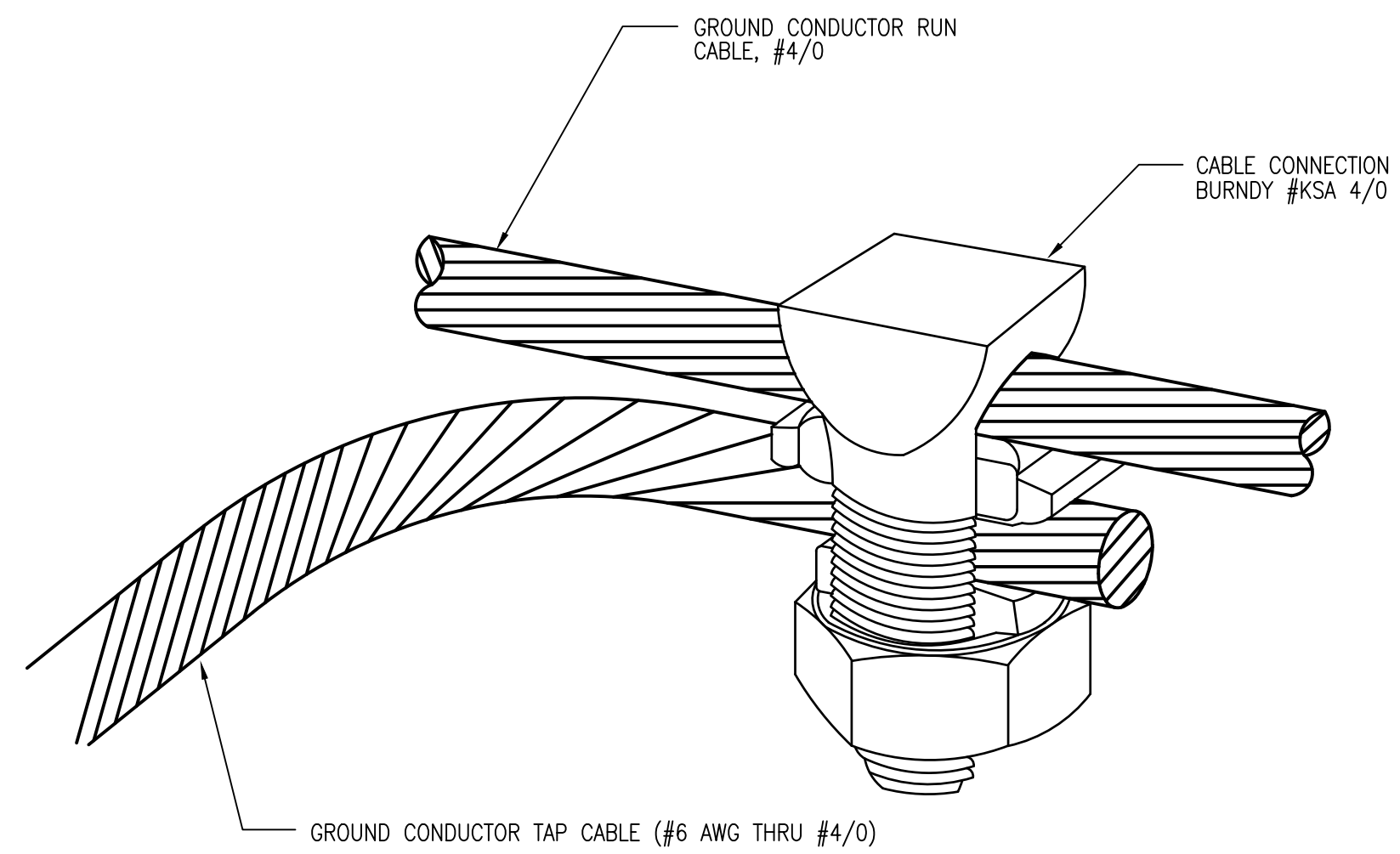
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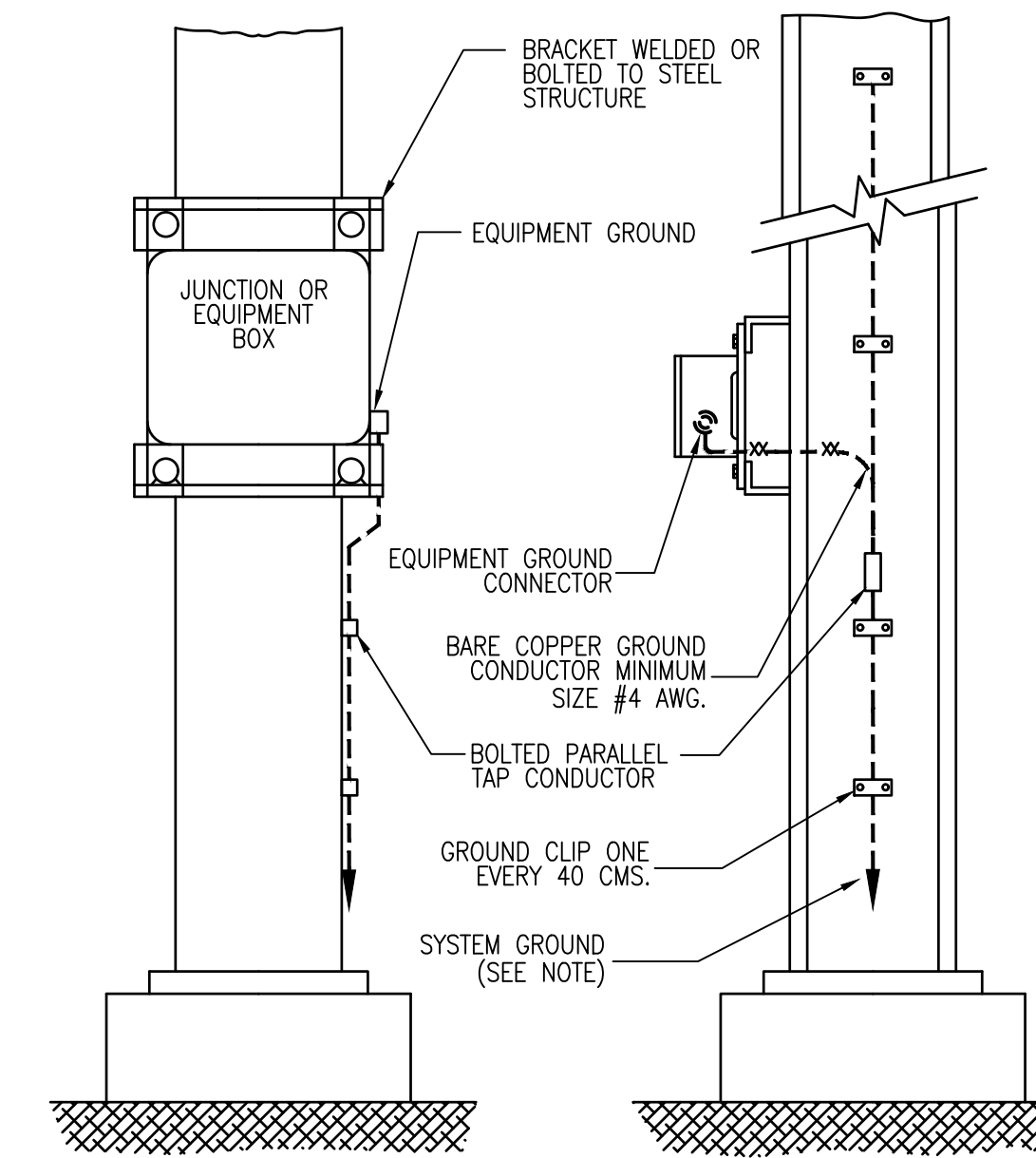
PROJECT NO:	TASK 1
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CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	N.T.S.

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
 GROUNDING
 INSTALLATION DETAILS

DRAWING NO.
RI-PS
E5-215
 SHEET OF

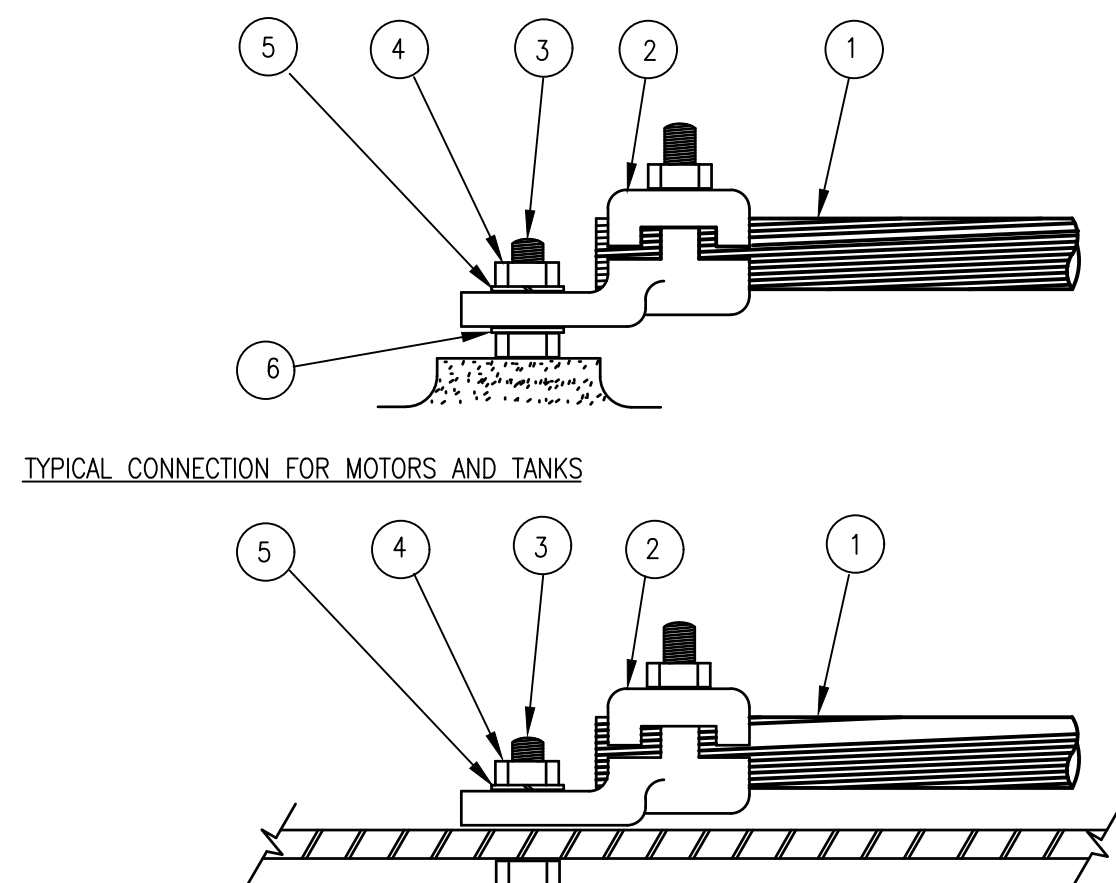


A (*) ABOVE GROUND CABLE TO CABLE CONNECTIONS
 * (ONLY FOR USE ON EQUIPMENT WHICH NEEDS TO BE DISCONNECTED FOR MAINTENANCE PURPOSES)



NOTE:
 SYSTEM GROUND IS A 2/0 OR A 4/0 BARE COPPER CONDUCTOR AND MAY BE RUN IN THE CABLE TRAY SYSTEM OR ON THE SURFACE OF THE STRUCTURE

B TYPICAL GROUNDING CONNECTION FOR J.B. & EQUIPMENT BOXES



TYPICAL CONNECTION FOR MOTORS AND TANKS

1 GROUND CABLE SIZE		2 BURNDY CAT. NO.	3 BOLT DIA.	4 NUT SIZE	5 LOCK WASHER SIZE	6 FLAT WASHER SIZE
MINIMUM	MAXIMUM					
#6	#4	QA-4C-B	1/4" 20	1/4" 20	1/4"	1/4"
#4	#1	QA-1C-B	1/4" 20	1/4" 20	1/4"	1/4"
#1/0	#2/0	QA-26-B	3/8" 16	3/8" 16	3/8"	3/8"
#3/0	#4/0	QA-28-B	3/8" 16	3/8" 16	3/8"	3/8"
250 MCM	350 MCM	QA-31-B	1/2" 13	1/2" 13	1/2"	1/2"
400 MCM	500 MCM	QA-34-B	1/2" 13	1/2" 13	1/2"	1/2"

C TYPICAL CONNECTION FOR EQUIPMENT

No.	Description	Date

STAMP:

ADDRESS:

PROJECT NO:	TASK 1
DESIGNED BY:	RV
DRAWN BY:	RV
CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	N.T.S.

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

RIVER INTAKE PUMP STATION
 GROUNDING
 INSTALLATION DETAILS

DRAWING NO.

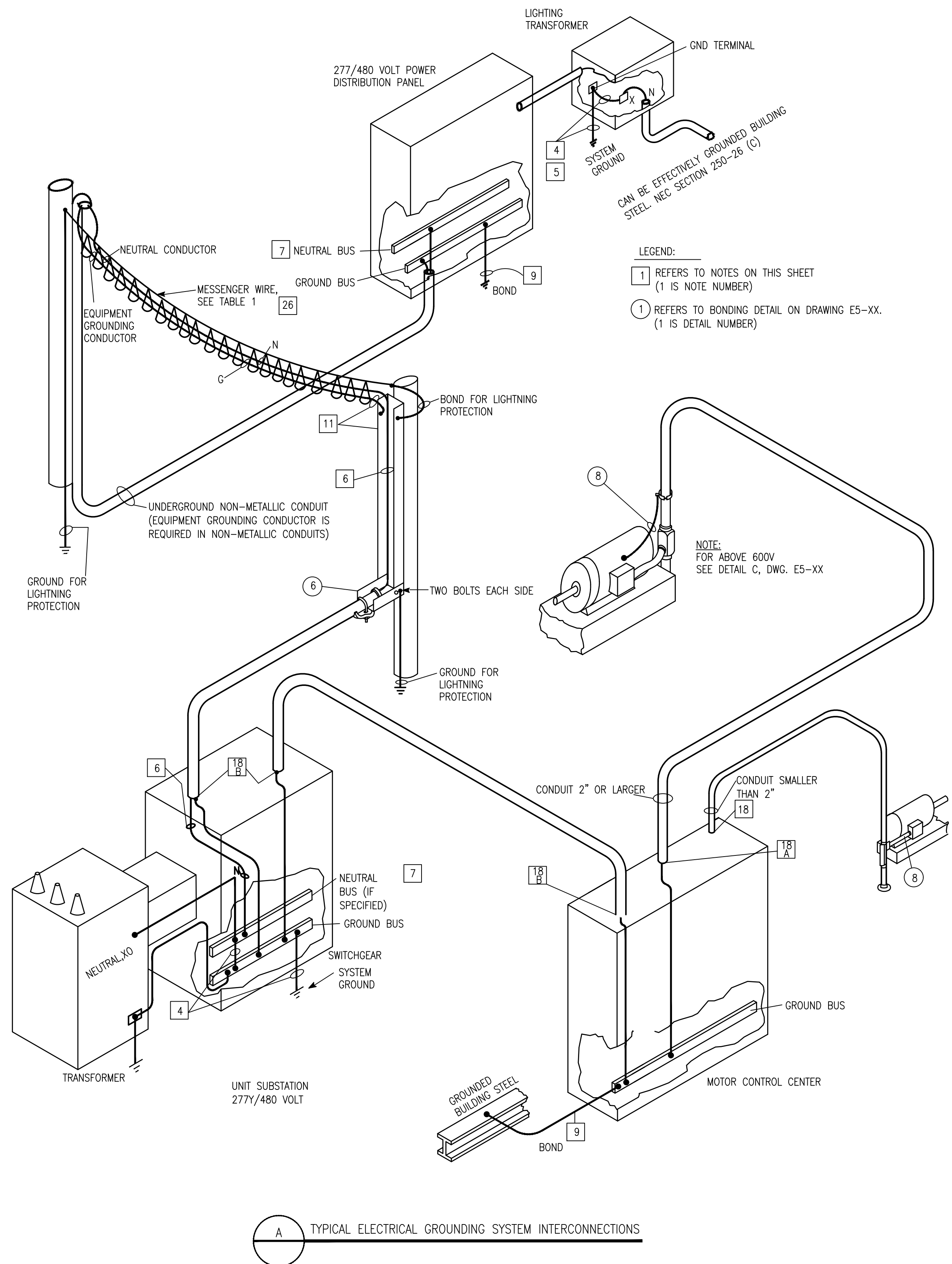
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A TYPICAL ELECTRICAL GROUNDING SYSTEM INTERCONNECTIONS

GENERAL NOTES:

1. THESE DRAWINGS ARE ARRANGED TO ILLUSTRATE TYPICAL GROUNDING AND BONDING REQUIREMENTS FOR WIRING SYSTEMS RATED 600 VOLTS OR LESS. THE ILLUSTRATIONS ARE NOT TO BE USED AS A GUIDE FOR LAYING OUT CABLE TRAYS OR ROUTING CONDUITS OR CABLES INTO PANELS, ETC. WIRING SYSTEM LAYOUTS AND EQUIPMENT INSTALLATION DETAILS FOR SPECIFIC INSTALLATIONS ARE SHOWN ON THE APPROPRIATE PROJECT DRAWINGS.
2. WHERE MULTICONDUCTOR CABLES ARE INDICATED ON THESE DRAWINGS, THE PHASE CONDUCTORS ARE OMITTED FOR CLARITY. SEE NOTE 12.
3. GROUNDING AND BONDING FOR PREVENTING ELECTRICAL NOISE ON LOW ENERGY SIGNAL CIRCUITS OR EQUIPMENT IS NOT COVERED ON THESE DRAWINGS.

SYSTEM GROUNDING

4. SOLIDLY GROUNDED ELECTRICAL SYSTEMS SHALL BE CONNECTED TO GROUND AT THE TRANSFORMER (OR SUBSTATION SWITCHGEAR) ONLY. SYSTEM GROUNDING CONDUCTORS SHALL BE COPPER.
5. SYSTEM GROUNDING CONDUCTORS FOR TRANSFORMERS USED FOR CONTROL POWER, LIGHTING AND SMALL POWER SYSTEMS SHALL BE SIZED AS FOLLOWS:
 TRANSFORMERS THROUGH 3 KVA - SIZE 14
 5 KVA THROUGH 10 KVA - SIZE 8
 15 KVA THROUGH 50 KVA - SIZE 4
 75 KVA THROUGH 150 KVA - SIZE 2/0

6. ALL GROUNDED CIRCUIT CONDUCTORS (NEUTRALS) SHALL BE INSULATED, AND SHALL NOT BE USED FOR GROUNDING EQUIPMENT ENCLOSURES.

7. ALL NEUTRAL BUSES, BARS AND TERMINALS SHALL BE INSULATED FROM ENCLOSURES, UNLESS SPECIFIED OTHERWISE ON PROJECT DRAWINGS.

EQUIPMENT GROUNDING

8. EQUIPMENT GROUNDING SYSTEMS SHALL PROVIDE A CONTINUOUS, SOLIDLY BONDED, METALLIC GROUND FAULT CURRENT RETURN PATH FROM EACH METALLIC ENCLOSURE FOR CONDUCTORS, EQUIPMENT, CONTROL DEVICES, ETC., TO THE GROUNDED TERMINAL AT THE TRANSFORMER OR GENERATOR SUPPLYING EACH SYSTEM.

9. THE GROUND BUS IN MOTOR CONTROL CENTERS AND POWER PANELS SHALL BE BONDED TO ANY ADJACENT STRUCTURAL STEEL USING A SIZE 2/0 BONDING JUMPER. REFER TO PROJECT DRAWINGS FOR GROUNDING STEEL.

10. WIRE USED FOR GROUNDING AND BONDING SHALL BE STRANDED COPPER (ALUMINUM IS NOT ACCEPTABLE). SINGLE CONDUCTORS USED AS EQUIPMENT GROUNDING CONDUCTORS IN RACEWAYS SHALL HAVE GREEN INSULATION, OR SHALL BE IDENTIFIED AT TERMINATIONS BY GREEN TAPE OR BY STRIPPING THE INSULATION. EXPOSED BONDING JUMPERS MAY BE GREEN OR BLACK.

11. IN ADDITION TO COPPER WIRE, THE FOLLOWING MAY BE USED AS EQUIPMENT GROUNDING CONDUCTORS (GROUND-FAULT CURRENT RETURN PATHS), AND SHALL BE BONDED AS ILLUSTRATED ON THESE DRAWINGS:

- A. ALUMINUM OR STEEL CABLE TRAYS OR CHANNELS.
- B. RIGID ALUMINUM OR STEEL CONDUIT.
- C. ELECTRICAL METALLIC TUBING (EMT).
- D. ANACONDA TYPE UA SEALTITE FLEXIBLE STEEL CONDUIT, 1/4" AND SMALLER, IF THE LENGTH IS NOT MORE THAN 3 FEET, AND IT IS TERMINATED IN FITTINGS BY APPLETON, EFCOR, GEDNEY OR THOMAS AND BETTS.
- E. ENCLOSURES FOR FEEDER OR PLUG-IN BUS DUCT, RATED 200 AMPS OR LESS, WITH BOLTED JOINTS HAVING METAL-TO-METAL CONTACT.
- F. GALVANIZED STEEL OR COPPER-CLAD STEEL MESSENGER WIRES. (SEE NOTE 26)
- G. UNISTRUT (OR EQUAL) USED AS RACEWAY/SUPPORT SYSTEM FOR LIGHTING BRANCH CIRCUITS.

12. MULTICONDUCTOR POWER CABLES CONTAIN COPPER EQUIPMENT GROUNDING CONDUCTORS WHICH SHALL BE CONNECTED AS SHOWN ON THESE DRAWINGS.

13. WHERE TWO OR MORE BOLTS ARE INSTALLED THROUGH EACH METAL-TO-METAL JOINT BETWEEN SECTIONS OF CABLE TRAY AND/OR CHANNEL, BONDING JUMPERS ARE NOT REQUIRED. SEE DETAILS A AND B FOR EXAMPLES. WHERE TWO BOLTS CANNOT BE INSTALLED THROUGH A METAL-TO-METAL JOINT, A SINGLE BONDING JUMPER IS REQUIRED AS SHOWN IN DETAIL C. BONDING JUMPERS ON CABLE TRAYS SHALL BE SIZE 2/0 AND ON CABLE CHANNELS SHALL BE SIZE 2.

14. WHERE METAL-TO-METAL CONTACT CANNOT BE ESTABLISHED BETWEEN SECTIONS OF CABLE TRAY AND/OR CHANNEL, BONDING JUMPERS SHALL BE INSTALLED AS SHOWN IN DETAIL D. INSTALL TWO SIZE 2/0 BONDING JUMPERS BETWEEN SECTIONS OF CABLE TRAY AND ONE SIZE 2/0 JUMPER BETWEEN CABLE CHANNELS AND TRAYS.

15. WHERE CABLE DROPS FROM CABLE TRAYS TO SWITCHGEAR, MOTOR CONTROL CENTERS AND POWER PANELS ARE NOT IN CONDUITS OR CABLE CHANNELS, THE FOLLOWING BONDING JUMPERS SHALL BE INSTALLED:

- A. ONE SIZE 2/0 JUMPER FROM ONE SIDE RAIL TO GROUND BUSES IN MOTOR CONTROL CENTERS AND POWER PANELS.
- B. TWO SIZE 2/0 JUMPERS, ONE FROM EACH SIDE RAIL, TO GROUND BUSES IN SUBSTATION SWITCHGEAR.

16. ENCLOSURES SUCH AS LIGHTING, CONTROL OR RELAY PANELS SHALL BE BONDED TO CABLE TRAYS OR CHANNELS WHICH SERVE THEM; THIS SHALL BE DONE BY SIZE 2 BONDING JUMPER OR BY INTERVENING CONDUITS OR CABLE CHANNELS.

17. WHERE CABLE CHANNELS ARE ATTACHED TO ENCLOSURES USING TWO BOLTS AT EACH METAL-TO-METAL JOINT, BONDING JUMPERS ARE NOT REQUIRED EXCEPT AT SWITCHGEAR, MOTOR CONTROL CENTER, OR POWER PANELS WHERE THE CHANNEL SHALL BE BONDED TO THE GROUND BUS USING SIZE 2 BONDING JUMPERS.

18. WHERE CONDUITS ENTER ENCLOSURES THROUGH INTEGRAL THREADED HUBS, BONDING JUMPERS ARE NOT REQUIRED. MYERS SCRU-TITE HUBS OR LOCKNUTS PROVIDE ADEQUATE BONDING WHERE CONDUITS ENTER UNTHREADED OPENINGS IN SHEET METAL ENCLOSURES EXCEPT AS FOLLOWS:
 A. ANY CONDUIT LARGER THAN 1" TRADE SIZE.
 B. ANY SIZE CONDUIT RUNNING FROM SUBSTATION SWITCHGEAR TO MOTOR CONTROL CENTERS OR POWER DISTRIBUTION PANELS.
 C. WHEN USING ANY BUT THE LARGEST OPENING OF CONCENTRIC KNOCKOUTS.
 D. IN CLASS I, DIVISION 2 CLASSIFIED LOCATIONS.

THESE CASES REQUIRE GROUNDING BUSHINGS WITH BONDING JUMPERS ATTACHED TO THE GROUND BUS, IF PROVIDED, OR TO THE ENCLOSURE. THESE BONDING SHALL BE SIZED AS FOLLOWS:

- 1/2" - 3/4", 1" CONDUIT - SIZE 8
- 1 1/4" - 2 1/2" CONDUIT - SIZE 4
- 3" - 4" CONDUIT - SIZE 2

19. WHERE CONDUITS CANNOT BE BONDED TO CABLE TRAYS OR CHANNELS USING CONDUIT CLAMPS AS SHOWN AND SPECIFIED IN DETAILS E AND F, A BONDING JUMPER SHALL BE INSTALLED AS SHOWN IN DETAIL G, SIZE AS LISTED IN NOTE 18.

20. ENCLOSURES FOR CORD CONNECTED EQUIPMENT SHALL BE BONDED TO GROUNDING WIRES IN THE CORD WHICH ARE ATTACHED TO GROUNDING TYPE PLUGS.

21. UNLESS SPECIFIED OTHERWISE ON PROJECT DRAWINGS, INSTRUMENTS OR CONTROL DEVICES OPERATING AT LESS THAN 150 VOLTS TO GROUND ARE ADEQUATELY BONDED IF THE MOUNTING HARDWARE PROVIDES A CURRENT PATH BETWEEN THE ENCLOSURE AND THE CONDUIT OR CABLE CHANNEL.

22. THE FOLLOWING CONDITIONS MUST BE SATISFIED TO ENSURE ADEQUATE BONDING AT ALL CONNECTIONS:

- A. ALL CONNECTIONS SHALL BE MADE UP WRENCH TIGHT.
- B. NON-CONDUCTING MATERIAL SHALL NOT BE USED ON CONDUIT THREADS.
- C. LOCKNUTS SHALL BE INSTALLED SO THEY COMPLETELY PENETRATE ANY PAINT OR OTHER NON-CONDUCTIVE COATING ON ENCLOSURE METAL.
- D. WHEN METALLIC SUPPORT MATERIAL IS USED FOR GROUNDING OR BONDING, ANY PAINT OR OTHER NON-CONDUCTIVE COATING MUST BE REMOVED AT THE POINT OF SUPPORT OR A FASTENER MUST BE USED WHICH WILL PENETRATE THE PAINT.
- E. MATERIALS SHALL BE SELECTED WHICH ARE NOT SUBJECT TO CORROSION IN THE ENVIRONMENT AND APPLICATION IN WHICH THEY ARE USED.

23. ONE-HOLE TIN-PLATED ALUMINUM COMPRESSION LUGS SHALL BE USED FOR CONNECTING COPPER BONDING JUMPERS TO CABLE TRAYS OR CHANNELS.

24. EITHER MECHANICAL OR COMPRESSION LUGS MAY BE USED FOR CONNECTING COPPER GROUNDING AND BONDING CONDUCTORS TO GROUND BUSES OR METALLIC EQUIPMENT ENCLOSURES. ALUMINUM BUSES OR ENCLOSURES REQUIRE TIN-PLATED ALUMINUM LUGS.

25. GROUNDING CLAMPS FOR ALUMINUM CONDUIT SHALL BE GALVANIZED MALLEABLE IRON OR TIN-PLATED ALUMINUM.

26. SEE TABLE NO.1 FOR MINIMUM SIZE OF MESSENGER WIRE THAT IS PERMITTED TO BE USED AS AN EQUIPMENT GROUNDING CONDUCTOR. EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED WITH MESSENGER SUPPORTED CABLES (AS A SEPARATE CONDUCTOR OR IN MULTICONDUCTOR CABLE(S)) WHERE THE MESSENGER WIRE IS NOT SUITABLE FOR USE AS THE EQUIPMENT GROUNDING CONDUCTOR.

TABLE NO. 1 - SEE NOTE 26

MAXIMUM RATING OR SETTING OF LARGEST OVERCURRENT DEVICE PROTECTING ANY CIRCUIT SUPPORTED BY THE MESSENGER (AMPERES)	MINIMUM SIZE OF MESSENGER WIRE PERMITTED FOR USE AS EQUIPMENT GROUNDING CONDUCTOR	
	GALVANIZED STEEL WIRE	COPPER-CLAD STEEL WIRE
UP TO 15	5/16", 7-STR.	
16-20	3/8", 7-STR.	
21-30	7/16", 7-STR.	
31-40	1/2", 7-STR.	5/16", 7-STR.
41-60		3/8", 7-STR.
61-100		7/16", 7-STR.
100-200		3/8", 7-STR.

No.	Description	Date

STAMP:

ADDRESS:

PROJECT NO:	TASK 1
DESIGNED BY:	RV
DRAWN BY:	RV
CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	N.T.S.

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

RIVER INTAKE PUMP STATION
GROUNDING
INSTALLATION DETAILS

DRAWING NO.

RI-PS

E5-218

SHEET OF

ISSUED FOR BID



PANELBOARD PP-CH LOCATED AT CHATTAHOOCHEE VALVE VAULT													
VOLTAGE (L-N):		---		ENCLOSURE TYPE:		NEMA 4X SS							
VOLTAGE (L-L):		480V		MOUNTING:		SURFACE							
PHASES, WIRES:		3 φ 3 W		AIC RATING (A):		42000							
MINIMUM BUS CAPACITY (A):		200A		NOTES:									
MAIN O.C. DEVICE (A):		200A MB											
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP)						POLE	TRIP AMPS	DESCRIPTION	CKT NO
				A	B	C							
1	FLOW CONTROL VALVE 10-V1-001	20	3	5.0	5.0					3	20	GATE VALVE 10-V2-004	2
3					5.0	5.0							4
5						5.0	5.0						6
7	GATE VALVE 10-V2-001	20	3	5.0	18.0					3	30	15KVA MPZ-CH AT VALVE VAULT	8
9					5.0	18.0							10
11						5.0	18.0						12
13	GATE VALVE 10-V2-002	20	3	5.0	5.0					3	20	SUMP PUMP CONTROL PNL CP-10-SP	14
15					5.0	5.0							16
17						5.0	5.0						18
19	GATE VALVE 10-V2-003	20	3	5.0	0.0					3	20	SPARE	20
21					5.0	0.0							22
23						5.0	0.0						24
25	UNIT HEATER EUH-SV-1	20	3	7.2	4.7					3	20	DEHUMIDIFIER DH-WV	26
27					7.2	4.7							28
29						7.2	4.7						30
31	UNIT HEATER EUH-SV-2	20	3	7.2	0.0					3	20	SPARE	32
33					7.2	0.0							34
35						7.2	0.0						36
37	SPARE	20	3	0.0	0.0					3	30	SPARE	38
39					0.0	0.0							40
41						0.0	0.0						42
USE #12 CABLES IN 1" FOR 20A CB				CONNECTED LOAD PHASE TOTALS (AMP)									
USE #10 CABLES IN 1" FOR 30A CB				67.1	67.1	67.1							

PANELBOARD MPZ-CH LOCATED AT CHATTAHOOCHEE VALVE VAULT													
VOLTAGE (L-N):		120V		ENCLOSURE TYPE:		NEMA 4X							
VOLTAGE (L-L):		208V		MOUNTING:		SURFACE							
PHASES, WIRES:		3 φ 4 W		AIC RATING (A):		14000							
MINIMUM BUS CAPACITY (A):		50A		NOTES:									
MAIN O.C. DEVICE (A):		50A MB											
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP)						POLE	TRIP AMPS	DESCRIPTION	CKT NO
				A	B	C							
1	REMOTE I/O PANEL RIO-CH	20	1	10.0	4.2					1	20	VALVE VAULT LIGHTING	2
3	EXHAUST FAN EF-SV-1	20	1		5.8	3.0				1	20	VALVE VAULT RECEPTACLES	4
5	SPARE	20	1			0.0	2.2			1	20	VALVE VAULT SITE LIGHTING	6
7	SPARE	20	1	0.0	0.0					1	20	SPARE	8
9	SPARE	30	1		0.0	0.0				1	20	SPARE	10
11	SPARE	30	1			0.0	0.0			1	20	SPARE	12
13	SPACE			0.0	0.0							SPACE	14
15	SPACE				0.0	0.0						SPACE	16
17	SPACE					0.0	0.0					SPACE	18
19	SPACE			0.0	0.0							SPACE	20
21	SPACE				0.0	0.0						SPACE	22
23	SPACE					0.0	0.0					SPACE	24
USE #12 CABLES IN 1" FOR 20A CB				CONNECTED LOAD PHASE TOTALS (AMP)									
USE #10 CABLES IN 1" FOR 30A CB				14.2	8.8	2.2							

* - GFCI, 30mA CIRCUIT BREAKER FOR HEAT TRACE.

PANELBOARD PP-PPS LOCATED AT PPS DROP/CONSTRUCTION SHAFT													
VOLTAGE (L-N):		120V		ENCLOSURE TYPE:		NEMA 4X							
VOLTAGE (L-L):		208V		MOUNTING:		SURFACE							
PHASES, WIRES:		3 φ 4 W		AIC RATING (A):		22000							
MINIMUM BUS CAPACITY (A):		100A		NOTES:		INCLUDE 60KAIC PER PHASE SPD							
MAIN O.C. DEVICE (A):		100A MB SERVICE ENTRANCE RATED											
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP)						POLE	TRIP AMPS	DESCRIPTION	CKT NO
				A	B	C							
1	REMOTE I/O PANEL RIO-PPS	20	1	5.0	2.0					1	20	SITE LIGHTING	2
3	SPARE	20	1		0.0	1.5				1	20	PPS DROP SHAFT RECEPTACLE	4
5	SPARE	20	1			0.0	0.0			1	20	SPARE	6
7	SPARE	20	1	0.0	0.0					1	20	SPARE	8
9	SPARE	30	1		0.0	0.0				1	20	SPARE	10
11	SPARE	30	1			0.0	0.0			1	30	SPARE	12
13	SPACE			0.0	0.0							SPACE	14
15	SPACE				0.0	0.0						SPACE	16
17	SPACE					0.0	0.0					SPACE	18
19	SPACE			0.0	0.0							SPACE	20
21	SPACE				0.0	0.0						SPACE	22
23	SPACE					0.0	0.0					SPACE	24
USE #12 CABLES IN 1" FOR 20A CB				CONNECTED LOAD PHASE TOTALS (AMP)									
USE #10 CABLES IN 1" FOR 30A CB				7.0	1.5	0.0							

No.	Description	Date

STAMP:

ADDRESS:

PROJECT NO:	TASK 1
DESIGNED BY:	RV
DRAWN BY:	RV
CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	N.T.S.

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

RIVER INTAKE PUMP STATION
PANELBOARD SCHEDULES

DRAWING NO.

RI-PS

E6-203

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**GENERAL ELECTRICAL CONSTRUCTION NOTES
(GENERAL NOTES APPLY TO ALL DRAWINGS AND SPECIFICATIONS)**

- THE ELECTRICAL INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, THE AMERICAN WITH DISABILITIES ACT, AND OTHER APPLICABLE STATE AND LOCAL CODES.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE WORK OF THEIR TRADE WITH THAT OF THE OTHER TRADES INVOLVED IN THE PROJECT. CONFLICTS WITH OTHER TRADES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER PRIOR TO INSTALLATION. WORK SHOULD ALSO BE COORDINATED AROUND PORTABLE AND MOBILE EQUIPMENT.
- THE ELECTRICAL CONTRACTOR SHALL SCHEDULE THEIR WORK SO THAT THE CONSTRUCTION SCHEDULE IS MAINTAINED.
- THE ELECTRICAL CONTRACTOR SHALL REQUEST A COMPLETE SET OF THE CIVIL, AND PROCESS DRAWINGS TO VERIFY CONNECTIONS TO THE EQUIPMENT.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE COORDINATION DRAWINGS PRIOR TO INSTALLING ANY EQUIPMENT ABOVE CEILINGS AND IN MECHANICAL ROOMS.
- THE ELECTRICAL CONTRACTOR SHALL FURNISH MATERIALS AND LABOR FOR A COMPLETE ELECTRICAL INSTALLATION AS INDICATED IN THESE DOCUMENTS. MATERIAL, APPARATUS, AND EQUIPMENT SHALL BE NEW AND SHALL BEAR THE UNDERWRITERS LABEL WHERE APPLICABLE.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING AND POWER SERVICE WHILE THE AREA IS UNDER CONSTRUCTION ACCORDING TO CURRENT OSHA STANDARDS.
- ALL CIRCUITS SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR (GREEN COLORED INSULATION) ROUTED IN CONDUIT AND SIZED AS INDICATED.
- ALL CONDUIT EXPOSED TO PHYSICAL DAMAGE SHALL BE INTERMEDIATE METAL CONDUIT (IMC).
- ALL CONDUITS BELOW GRADE SHALL BE PVC. ALL ELBOWS TURNING UP TOWARD ABOVE GRADE, AND ALL CONDUITS EXPOSED ABOVE GRADE SHALL BE IMC.
- FLEXIBLE (TYPE MC) CABLE SHALL BE ALLOWED FOR THE FLEXIBLE CONNECTIONS TO VIBRATING EQUIPMENT AND RECESSED LIGHTING FIXTURES IN LAY-IN TYPE CEILINGS. A GROUNDING CONDUCTOR SHALL BE INCLUDED WITH THE POWER CONDUCTORS INSIDE THE FLEXIBLE CONNECTION.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE COPPER CONDUCTORS. CONDUCTORS SHALL BE SOLID FOR SIZES #10 AWG AND SMALLER. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE A SEPARATE RACEWAY SYSTEM FOR THE 480Y/277V AND THE 208Y/120V CIRCUITS/FEEDERS.
- THE ELECTRICAL CONTRACTOR SHALL LIMIT LIGHTING AND RECEPTACLE BRANCH CIRCUIT HOMERUNS TO 5 CONDUCTORS: 3 PHASE CONDUCTORS, 1 NEUTRAL CONDUCTOR, AND 1 EQUIPMENT GROUNDING CONDUCTOR.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE FOLLOWING COLOR CODING OF CIRCUITS/FEEDERS. CIRCUITS/FEEDERS RATED 480Y/277V: PHASE "A" = BROWN
PHASE "B" = ORANGE
PHASE "C" = YELLOW
NEUTRAL = GRAY
GROUNDING = GREEN
ISOLATED G = GREEN/YELLOW STRIPE

CIRCUITS/FEEDERS RATED 208Y/120V: PHASE "A" = BLACK
PHASE "B" = RED
PHASE "C" = BLUE
NEUTRAL = WHITE
GROUNDING = GREEN
ISOLATED G = GREEN/YELLOW STRIPE
- RECESSED TYPE LIGHTING FIXTURES SHALL BE LOCATED AS INDICATED ON THE ARCHITECTURAL REELECTED CEILING PLAN.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL CEILING CONSTRUCTION BEFORE ORDERING LIGHTING FIXTURES AND SHALL PROVIDE CORRECT MOUNTING HARDWARE WITHOUT ADDITIONAL COST. LIGHTING FIXTURES SHALL BE AS SCHEDULED, INCLUDING LAMPS.
- ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE, AND FUSIBLE WHERE INDICATED.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY ADDITIONAL SUPPORT FOR ALL ELECTRICAL EQUIPMENT WHERE THE BUILDING STRUCTURE IS NOT SUITABLE FOR A PROPERLY SUPPORTED INSTALLATION.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE AN OUTLET BOX FOR EACH LIGHTING FIXTURE WIRING DEVICE OR JUNCTION POINT. ELECTRICAL BOXES SHALL BE OF SUFFICIENT CAPACITY FOR THE NUMBER OF CONDUCTORS AND SPLICES WITHIN THE BOX; IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
- DEVICE PLATES SHALL BE INSTALLED ON OUTLETS FOR ALL SWITCHES, RECEPTACLES, ETC. AND COLOR SHALL BE AS SELECTED BY ARCHITECT. WHERE MORE THAN ONE SWITCH IS INDICATED IN THE SAME LOCATION, SWITCHES SHALL BE GANGED UNDER A COMMON ONE-PIECE PLATE. MULTI-PIECE COVER PLATES ARE NOT ACCEPTABLE.
- THE ELECTRICAL CONTRACTOR SHALL FIRESTOP, DRAFT STOP, AND/OR PROTECT THE ANNULAR SPACE AROUND ALL RACEWAY, CONDUIT, WIRE, AND CABLE PENETRATIONS THROUGH WALLS, PARTITIONS, FLOORS, CEILINGS AND ROOFS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND UL LISTING REQUIREMENTS.
- THE ELECTRICAL CONTRACTOR SHALL SEAL ALL PENETRATIONS AND OPENINGS AROUND ALL RACEWAY, CONDUIT, WIRE, AND CABLE IN EXISTING AND NEW WALLS WHERE THERE IS AN HVAC PRESSURE DIFFERENTIAL REQUIREMENT.
- THE ELECTRICAL CONTRACTOR SHALL NOT INSTALL OUTLET BOXES "BACK-TO-BACK". PROVIDE A MINIMUM OF 8" HORIZONTAL SEPARATION BETWEEN OUTLET BOXES.
- ALL INTERIOR BRANCH CIRCUITS SHALL BE INSTALLED OVERHEAD INSIDE BUILDINGS.
- UNDERGROUND EXTERIOR BRANCH CIRCUITS SHALL BE RAN OVERHEAD INSIDE BUILDINGS TO AN EXTERIOR WALL, THEN DOWN BEFORE PENETRATING THE EXTERIOR WALL AND LEAVING THE BUILDING UNDERGROUND.
- ALL EXTERIOR UNDERGROUND BRANCH CIRCUITS SHALL BE INSTALLED LAST AFTER ALL OTHER UNDERGROUND UTILITY WORK ASSOCIATED WITH THIS PROJECT IS COMPLETE.
- THE ELECTRICAL CONTRACTOR SHALL LABEL EACH RECEPTACLE, DISCONNECT, AND MISCELLANEOUS EQUIPMENT WITH BOTH THE PANELBOARD AND CIRCUIT NUMBER. PROVIDE SELF ADHESIVE LABEL TO DEVICE COVERPLATE.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
111	ROOM NUMBER "111"	⊕	SAME AS ABOVE, EXCEPT RECEPTACLE IS QUADRAPLEX TYPE.
T	DRY TYPE TRANSFORMER WITH VOLTAGES, KVA, AND PHASES AS SHOWN ON DRAWINGS.	⊖	FLUSH MOUNTED, DISPLAY TYPE, SINGLE RECEPTACLE NEMA 5-15R, 120V, 15AMP, 3 WIRE. COPPER CATALOG #775V OR EQUAL.
[]	EQUIPMENT AS NOTED.	▶	JUNCTION BOX FOR DATA/TELEPHONE OUTLET WITH 3/4" EMPTY CONDUIT STUBBED INTO ACCESSIBLE CEILING. PROVIDE PULL STRING.
3#10, #10G, 1" C	EXAMPLE OF WIRING AND CONDUIT NOTATION.	F	FIRE ALARM MANUAL PULL STATION, PROVIDE CONDUIT DROP AND JUNCTION BOX.
↗	CONDUIT TURNING UP.	F	FIRE ALARM AUDIBLE AND VISUAL SIGNAL DEVICE, PROVIDE CONDUIT DROP AND JUNCTION BOX.
↘	CONDUIT TURNING DOWN.	SD	FIRE ALARM DUCT MOUNTED SMOKE DETECTOR, PROVIDE JUNCTION BOX.
↔	CONDUIT ROUTED EXPOSED.	SD	FIRE ALARM DUCT MOUNTED SMOKE DETECTOR, PROVIDE CONDUIT DROP AND JUNCTION BOX.
⤴	CONDUIT ROUTED CONCEALED ABOVE DROPPED CEILING AND/OR WALLS.	SD	FIRE ALARM AREA SMOKE DETECTOR, PROVIDE CONDUIT DROP AND JUNCTION BOX.
XX-XX	HOMERUN TO PANEL INDICATED (XX) AND CIRCUIT NUMBER INDICATED (XX). ONE CIRCUIT: PROVIDE 2#12, #12G, 1/2" C, UNO. TWO CIRCUITS: PROVIDE 3#12, #12G, 1/2" C, UNO. THREE CIRCUITS: PROVIDE 4#12, #12G, 1/2" C, UNO	S	SINGLE POLE LIGHT SWITCH, FLUSH MOUNTED 42" AFF, 120/277V, 20AMP. ON STRIKER SIDE OF DOOR OR WHERE OTHERWISE INDICATED ON PLANS. * IF SUBSCRIPTS APPLIES, SEE BELOW: "3" INDICATES NUMBER OF SWITCHES (I.E. 3-WAY ROCKER SWITCH)
⊕	CONDUIT WITH TWO CONDUCTORS AND ONE GROUND.	⊗	SINGLE FACE EXIT LIGHTING CEILING OR PENDANT MOUNTED W/BATTERY BACKUP. (ARROWS INDICATE DIRECTION OF TRAFFIC). SHADED SIDE INDICATES SIDE WITH LIGHTED FACE.
⊕	CONDUIT WITH TWO CONDUCTORS, ONE NEUTRAL AND ONE GROUND.	⊗	SAME AS ABOVE, EXCEPT WALL MOUNTED
⊕	CONDUIT WITH FOUR CONDUCTORS, ONE NEUTRAL AND ONE GROUND.	PE	PHOTOELECTRIC RELAY.
⊕	CONDUIT WITH THREE CONDUCTORS AND ONE GROUND.		
⊙	JUNCTION BOX, CEILING MOUNTED		
⊙	JUNCTION BOX FOR CAMERA, CEILING MOUNTED		
⊙	JUNCTION BOX FOR DOOR INTERLOCKS		
5	MOTOR, HORSEPOWER AS INDICATED.		
■	SURFACE MOUNTED PANELBOARD.		
■	RECESSED MOUNTED PANELBOARD.		
⊕	FLUSH MOUNTED DUPLEX CONVENIENCE OUTLET NEMA 5-20R, 120V, 20AMP, 3 WIRE MOUNTED 18" AFF. ** IF SUBSCRIPT APPLIES, SEE BELOW: "GF" INDICATES GROUND FAULT INTERRUPTING TYPE. "TV" INDICATES TELEVISION. "C" INDICATES COUNTER TOP RECEPTACLE MOUNTED 6" ABOVE COUNTER TOP. "D" INDICATES DEDICATED CIRCUIT.		

LIGHTING FIXTURE SCHEDULE AND SYMBOLS

TAG	SYMBOLS	DESCRIPTION	MFR.	MODEL NO.	TYPE	VOLTAGE/ DESIGN WATTAGE	MOUNTING
A	⊕ or ⊖ NON-BATTERY	7" X 50" DIMENSIONS AND 5" DEEP, 1 LED LAMP, ENHANCED LED ACRYLIC LENS, BATTERY PACK HAS TO BE ORDERED SEPARATELY	PHILIPS DAY-BRITE	DWAE35L 840-4-UNV	LAMP COLOR: 840	UNV-120V-277V/32W	SURFACE
B	⊕ or ⊖ NON-BATTERY	COFFAIRE RECESSED LED 2' X 2' FIXTURE WITH PERFORATED BASKET, BATTERY PACK HAS TO BE ORDERED SEPARATELY	PHILIPS DAY-BRITE	CFS22GPG 25L35ULAG	LAMP COLOR: 35	UNV-120V-277V/35W	RECESSED
C	⊕ or ⊖ NON-BATTERY	FX2 LED FLOODLIGHTS SLEEK DESIGN WITH PRECISION INJECTION MOLDED OPTICS, BATTERY PACK HAS TO BE ORDERED SEPARATELY	PHILIPS GARDCO	FX296TAFCA5NNS	LAMP COLOR: A	A-120V-277V/96 LEDS	TENON
D	⊕ or ⊖ NON-BATTERY	STONCO WALL PACK LARGE WP LED VERSATILE LUMINAIRE, BATTERY PACK HAS TO BE ORDERED SEPARATELY	PHILIPS STONCO	WP49LED4K-8	LAMP COLOR: B	UNV-120V-277V/99W	WALL
E	⊕ or ⊖ NON-BATTERY	LED CALCULITE CFL 6" SURFACE CYLINDER, TRIPLE TUBE (4-PIN)	PHILIPS LIGHTOLIER	CS6132VUCCL	LAMP COLOR: WHITE	120V-277V/42W	CEILING MOUNT
F	F NON-BATTERY	8-5/8"x2' LED WRAPAROUND, DURABLE FROSTACRYLIC LENS/SHIELD	PHILIPS DAY-BRITE	OWL230L840-UNV	LAMP COLOR: WHITE	UNV-120V-277V/33W	CEILING MOUNT
G	⊕ or ⊖ NON-BATTERY	POLE MOUNTED LED LIGHT FOR ROADWAY LIGHTING (35' POLE HEIGHT)	PHILIPS GARDCO POLE-HAPCO	ASA160G1 530NW 3L0480SAM F2 POLE: RTA35C8B4-BA	LAMP COLOR: WHITE	480V/254W	POLE
G1	⊕ or ⊖ NON-BATTERY	POLE MOUNTED LED LIGHT FOR ROADWAY LIGHTING (35' POLE HEIGHT)	PHILIPS GARDCO POLE-HAPCO	ASA160G1 530NW 3L0120SAM F1 POLE: RTA35C8B4-BA	LAMP COLOR: WHITE	120V/254W	POLE

ABBREVIATIONS

A	AMPERES	EXIST	EXISTING	NEC	NATIONAL ELECTRICAL CODE
AFF	ABOVE FINISHED FLOOR	FACP	FIRE ALARM CONTROL PANEL	NF	NON FUSED
AHU	AIR HANDLING UNIT	FBO	FURNISHED BY OTHERS	NIC	NOT IN CONTRACT
AIC	ASYMMETRICAL INTERRUPTING	FWE	FURNISHED WITH EQUIPMENT	NTS	NOT TO SCALE
BFG	BELOW FINISHED GRADE	GFI	GROUND FAULT INTERRUPTER	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
C	CONDUIT	GND	GROUND	PB	PUSH BUTTON
CAT	CATALOG	HP	HORSEPOWER	PNL	PANEL(S)
CU	CONDENSING UNIT	HID	HIGH INTENSITY DISCHARGE	RECEPT	RECEPTACLE
DDT	DOUBLE TWIN TUBE	IMC	INTERMEDIATE METAL CONDUIT	REQD	REQUIRED
DWG	DRAWING(S)	JB	JUNCTION BOX	RGS	RIGID GALVANIZED STEEL CONDUIT
EA	EACH	KV	KILOVOLT	RM	ROOM
EB	ELECTRONIC BALLAST	KVA	KILOVOLT-AMPERE	RTU	ROOF TOP UNIT
EC	EMPTY CONDUIT	LTG	LIGHTING	TYP	TYPICAL
ECB	ENCLOSED CIRCUIT BREAKER	MCA	MINIMUM CIRCUIT AMPS	UH	UNIT HEATER
EF	EXHAUST FAN	MOCB	MAXIMUM OVER CURRENT PROTECTION	UNO	UNLESS NOTED OTHERWISE
EM	EMERGENCY	MLO	MOLDED CASE CIRCUIT BREAKER	V	VOLT(S)
EMT	ELECTRICAL METALLIC TUBING	MT	MAIN LUGS ONLY	VA	VOLT-AMPERE(S)
EQUIP	EQUIPMENT	MTD	MOUNTED	WP	WEATHERPROOF
EWC	ELECTRIC WATER COOLER	MTG	MOUNTING	XFMR	TRANSFORMER
		N	NEUTRAL		

No.	Description	Date

STAMP:

ADDRESS:

PROJECT NO:	TASK 1
DESIGNED BY:	RV
DRAWN BY:	RV
CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	AS NOTED

**CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM**

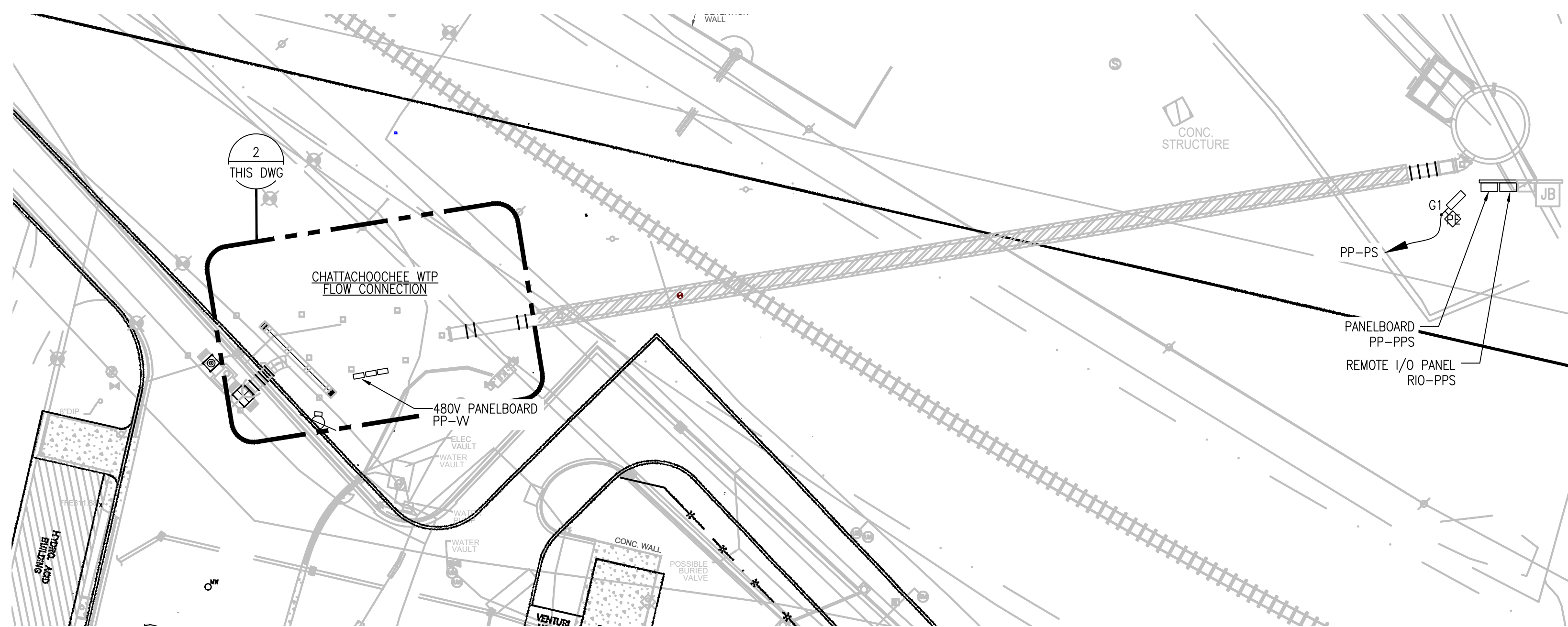
**RIVER INTAKE PUMP STATION
LOW VOLTAGE**

ELECTRICAL LEGEND, NOTES & DETAILS

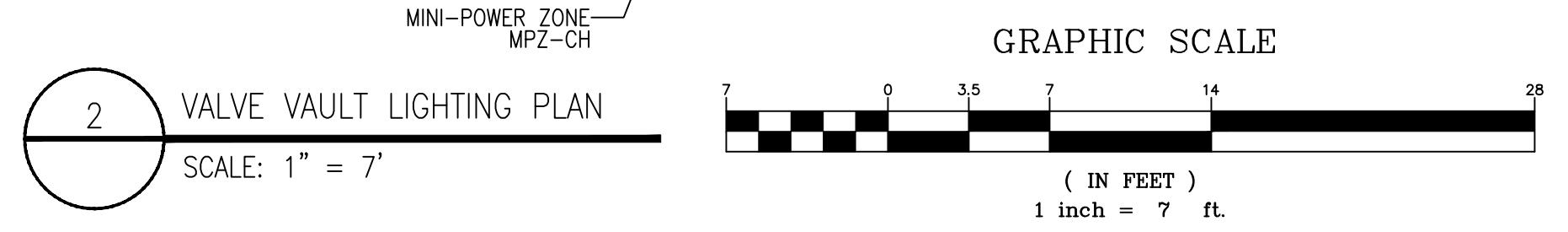
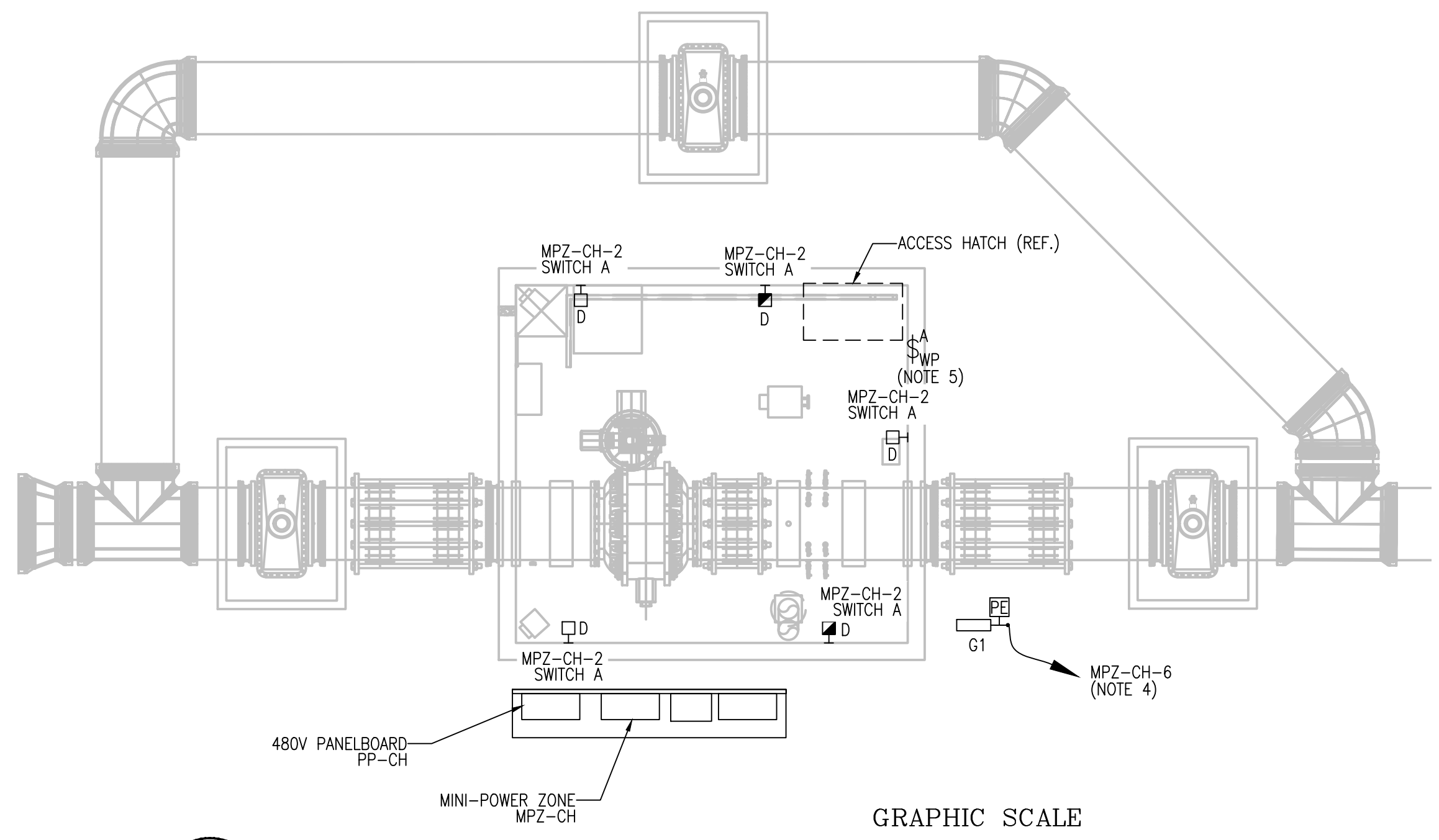
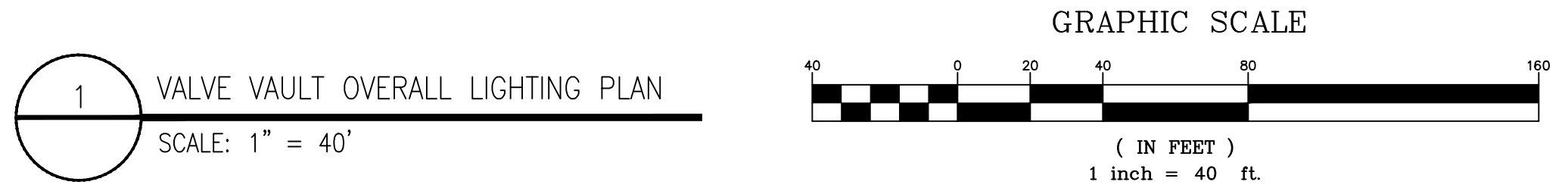
DRAWING NO.
RI-PS

E7-101

SHEET OF



- NOTES:
1. SEE DRAWING E7-101 FOR ELECTRICAL LEGEND, NOTES AND CIRCUIT WIRING REQUIREMENTS.
 2. ALL EMERGENCY LIGHT FIXTURES AND EXIT SIGNS SHALL HAVE INDIVIDUAL BATTERY PACKS ORDERED FOR EACH ONE AND SHALL ALSO BE WIRED TO NORMAL POWER.
 3. ALL NON-EMERGENCY LIGHT FIXTURES SHALL BE WIRED TO NORMAL POWER.
 4. TWO (2) #10 AWG CONDUCTORS AND ONE (1) #10 AWG GROUND CONDUCTOR IN 3/4" CONDUIT ALONG WITH ONE (1) 1" CONDUIT WITH PULL WIRES FOR CAMERA.
 5. LIGHT SWITCH FOR STAIRWELL LIGHTING SHALL BE WEATHER-PROOF, MOUNTED ON POST AND LOCATED AT TOP OF STAIRWELL DIRECTLY BELOW ACCESS HATCH.
 6. CONTRACTOR SHALL MOUNT ALL FIXTURES TYPE "D" AT 12FT A.F.F.
 7. ALL DEVICES SHALL BE GROUNDED TO GROUNDING SYSTEM IN ACCORDANCE WITH SECTION 16060 OF SPECIFICATIONS AND DRAWING E5-203. TYPICAL DETAILS ARE REFERRED ON EG-001 THRU EG-004.



No.	Description	Date

STAMP:

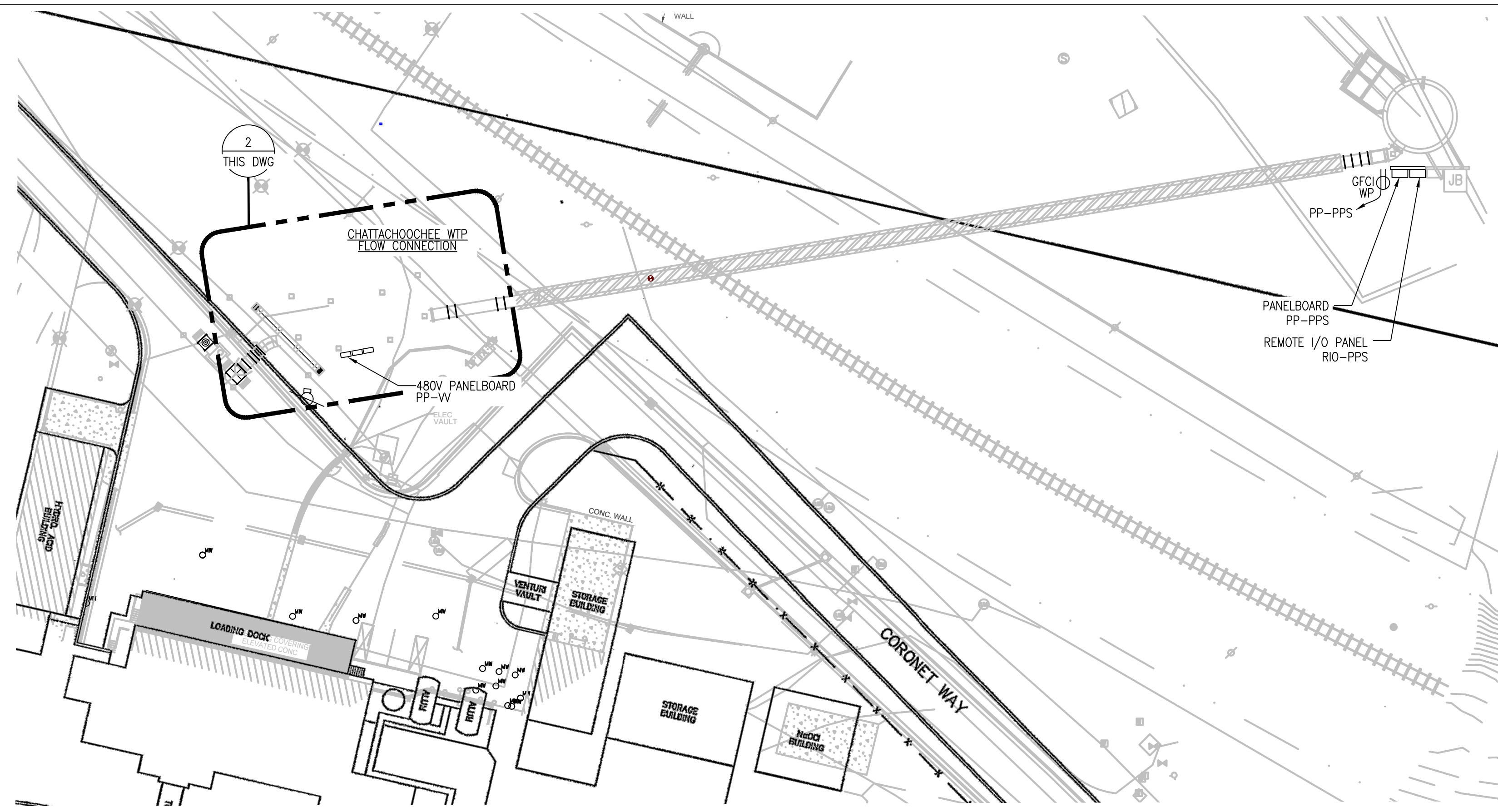
ADDRESS:

PROJECT NO:	TASK 1
DESIGNED BY:	RV
DRAWN BY:	RV
CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	AS NOTED

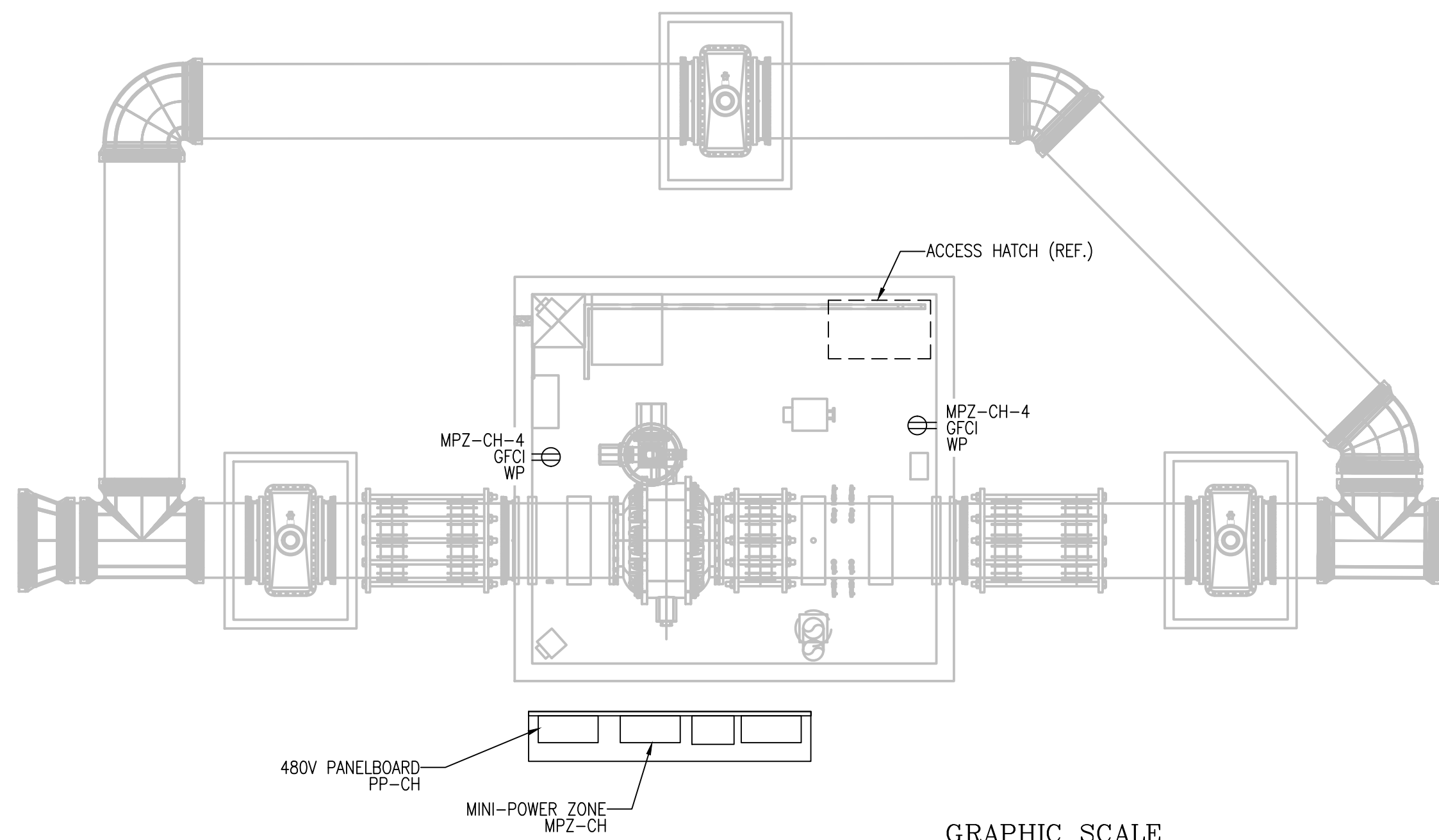
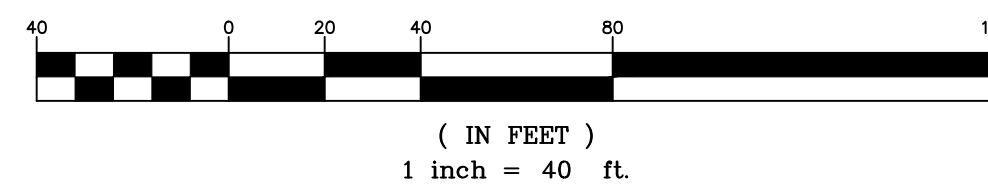
CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
 VALVE VAULT
 LIGHTING PLAN

DRAWING NO.
RI-PS
E7-110
 SHEET OF

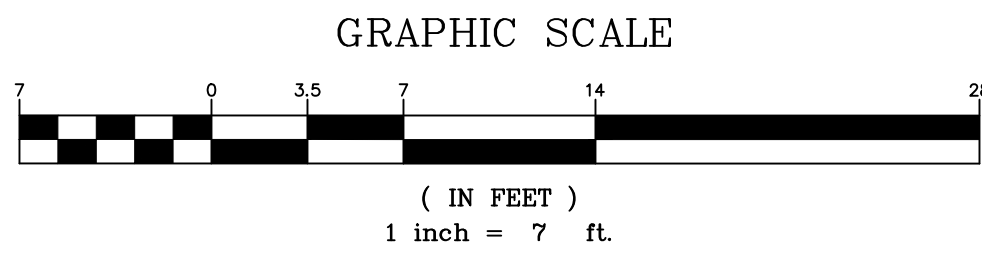
ISSUED FOR BID



1 VALVE VAULT OVERALL LOW VOLTAGE POWER PLAN
SCALE: 1" = 40'



2 VALVE VAULT LOW VOLTAGE POWER PLAN
SCALE: 1" = 7'



- NOTES:
1. SEE DRAWING E7-101, ELECTRICAL LEGEND, NOTES AND CIRCUIT WIRING REQUIREMENTS.
 2. FOR WIRING OF RECEPTACLES, CIRCUITS CAN SHARE CONDUITS WITH NO MORE THAN (3) 120V, 20A CIRCUITS IN ANY ONE CONDUIT, THIS WILL ALSO ALLOW SHARING OF THE NEUTRAL BETWEEN THE THREE CIRCUITS OF DIFFERENT PHASES. IN NO CASE SHALL THE NUMBER OF CIRCUITS COMBINED IN ONE CONDUIT EXCEED THREE CIRCUITS. FOR WIRING, USE 4 #12 AND 1 #12 GND. IN 1/2" C AND CIRCUITING TAG ADJACENT TO EACH RECEPTACLE.
 3. ALL OUTLETS SHALL BE MOUNTED IN AN ACCESSIBLE LOCATION TO MEET CLEARANCE REQUIREMENTS PER THE NEC (NATIONAL ELECTRIC CODE).
 4. ALL OUTLETS SHALL BE MOUNTED 48" AFF.
 5. ALL DEVICES SHALL BE GROUNDED TO GROUNDING SYSTEM IN ACCORDANCE WITH SECTION 16060 OF SPECIFICATIONS AND DRAWING E5-203. TYPICAL DETAILS ARE REFERRED ON EG-001 THRU EG-004.

No.	Description	Date

STAMP:
ADDRESS:

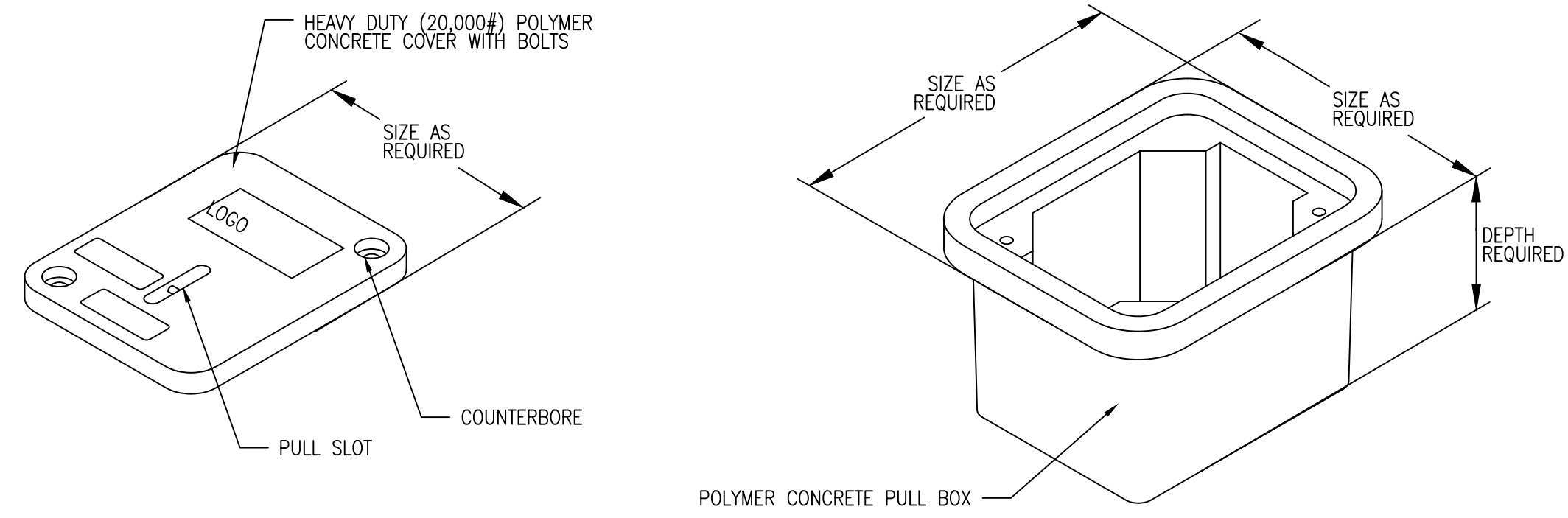


PROJECT NO:	TASK 1
DESIGNED BY:	RV
DRAWN BY:	RV
CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	AS NOTED

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
VALVE VAULT
LOW VOLTAGE POWER PLAN

DRAWING NO.
RI-PS
E7-111
SHEET OF

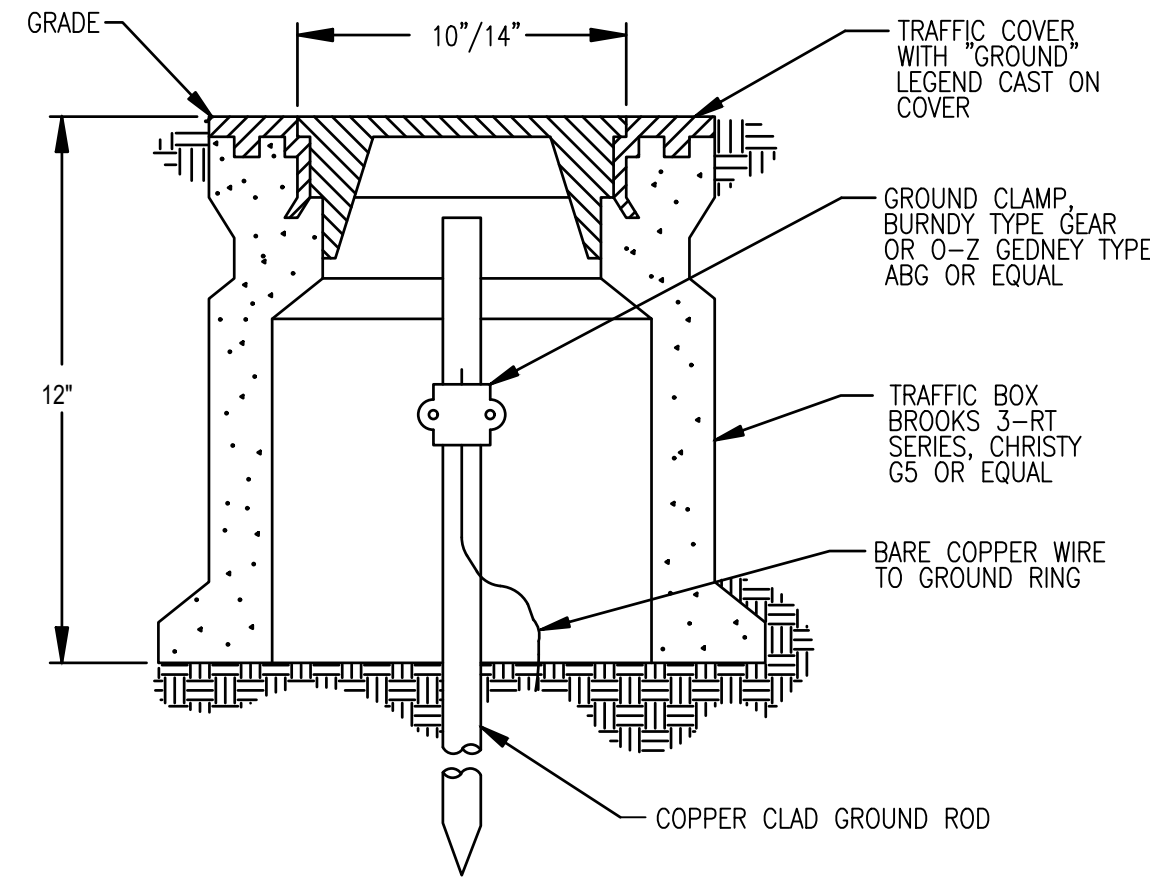
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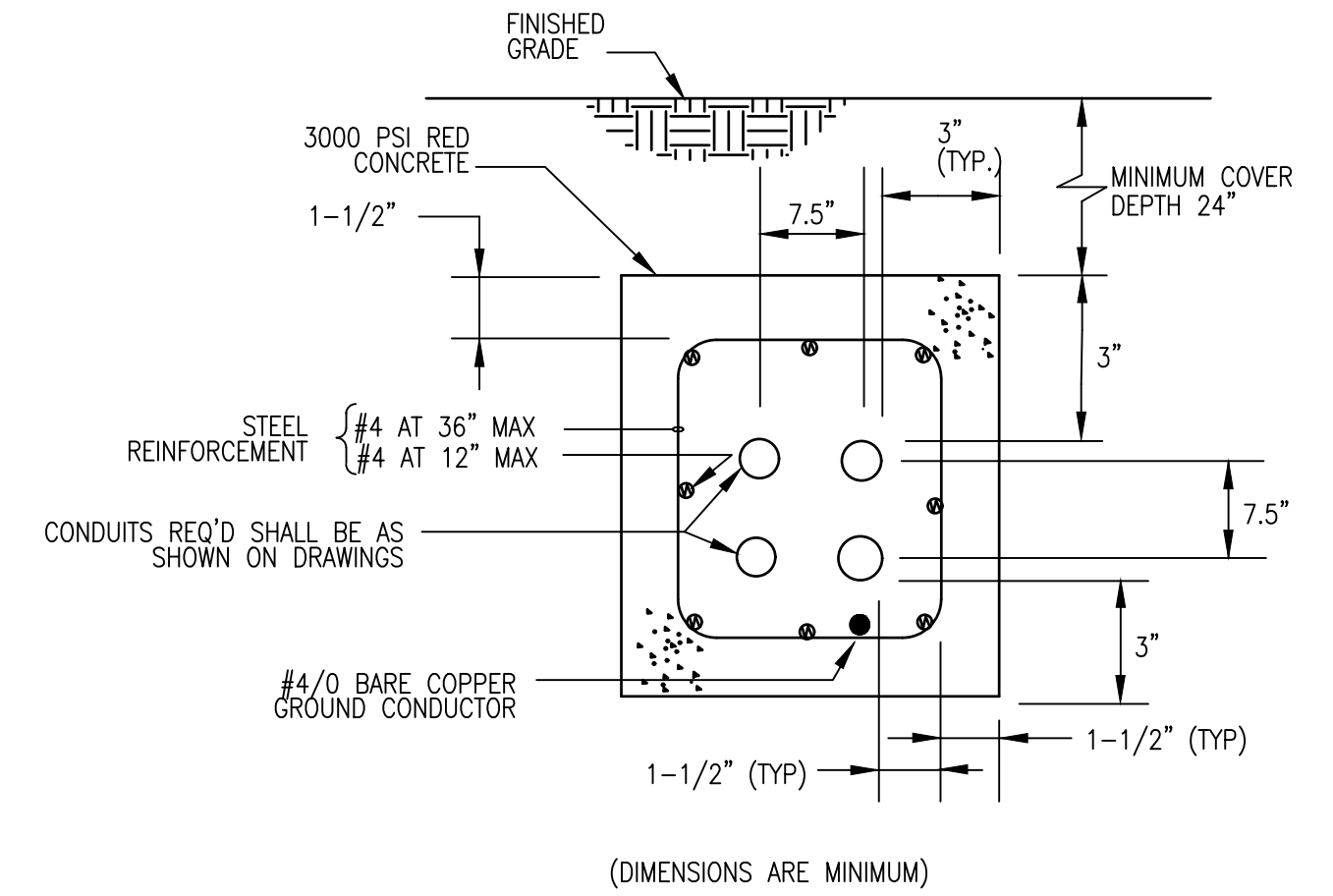
NOTES:

1. PULL BOX TO BE "HUBBELL" QUAZITE BOX MADE WITH PRECAST POLYMER CONCRETE FIBERGLASS REINFORCED, STACKABLE WITH SELF-ALIGNING, REPLACEABLE EZ-NUT.

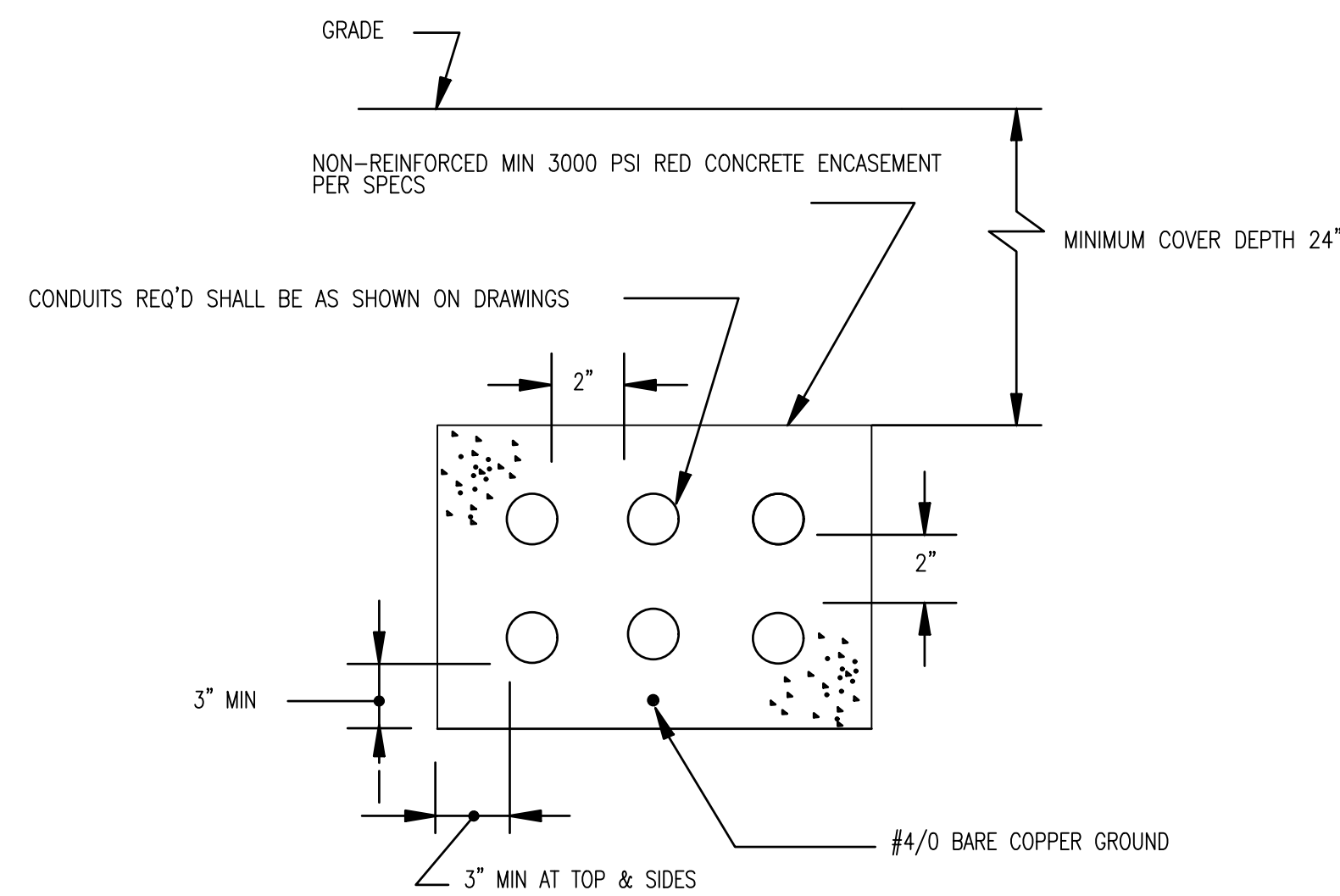
A UNDERGROUND PULL BOX DETAIL



B GROUND WELL INSTALLATION DETAIL



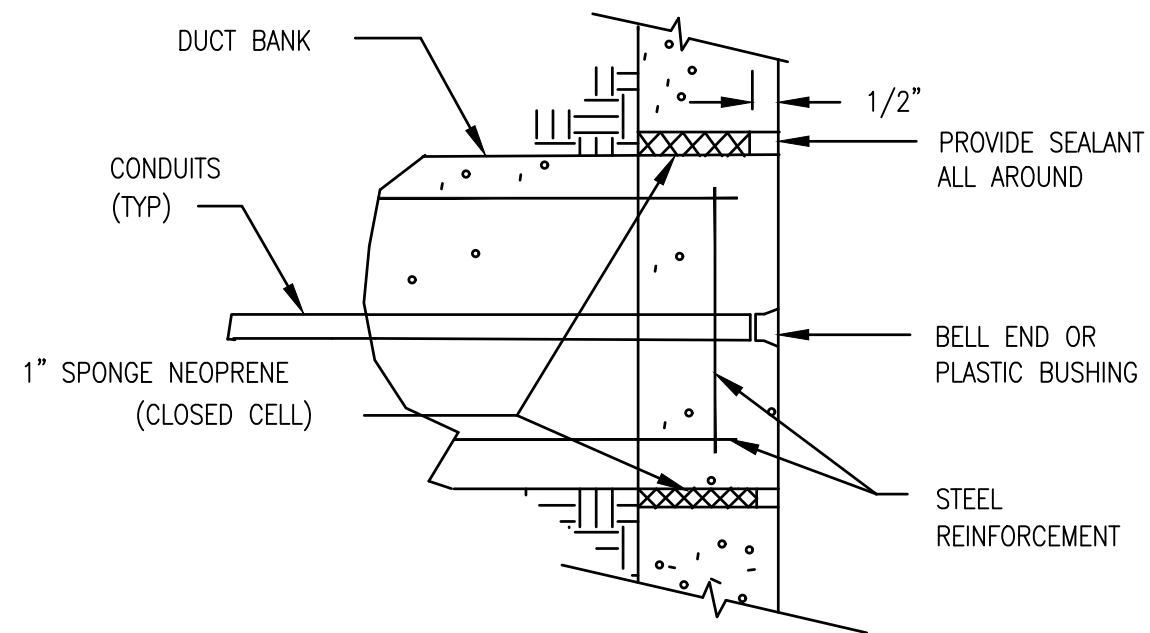
C REINFORCED DUCTBANK DETAIL
TO BE USED UNDER THE ROADS AND PARKING AREAS.



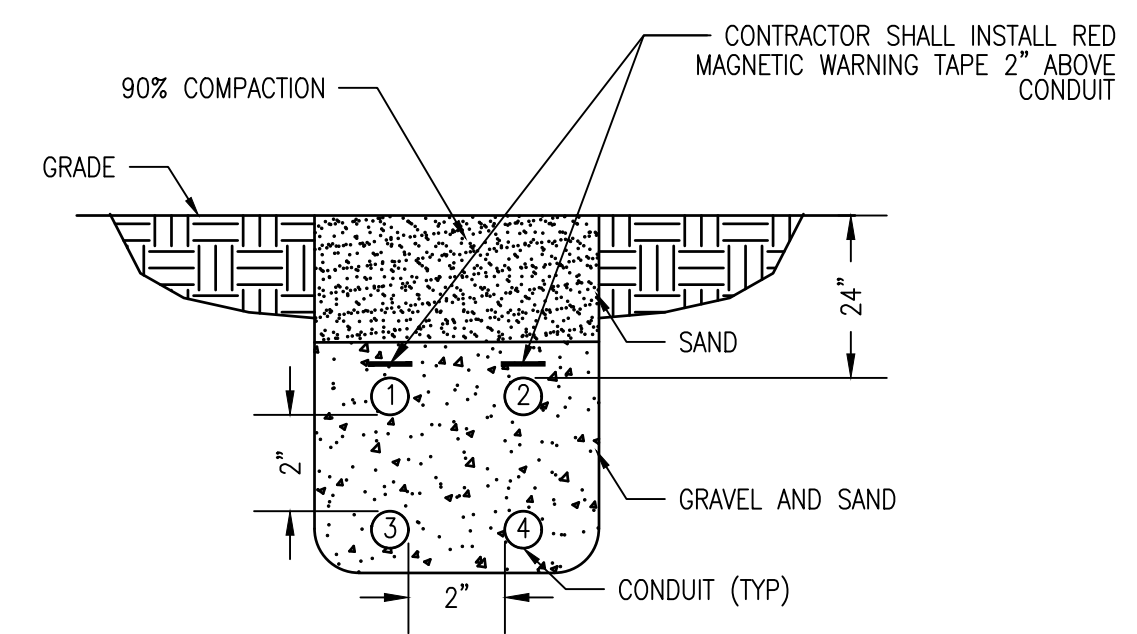
NOTES:

1. ALL DUCT BANKS SHALL BE CONCRETE ENCASED. ALL DUCTBANKS CROSSING ROADS OR HEAVY TRAFFIC AREAS SHALL BE REINFORCED WITHIN 5 (FIVE) FEET OF TRAFFIC AREAS.
2. CONTRACTOR SHALL FIELD COORDINATE EXACT DUCTBANK ROUTING WITH PROCESS PIPING.

D NONREINFORCED DUCTBANK DETAIL



E DUCT BANK AT STRUCTURES



F CONDUIT SECTION IN TRENCH

No.	Description	Date

STAMP:

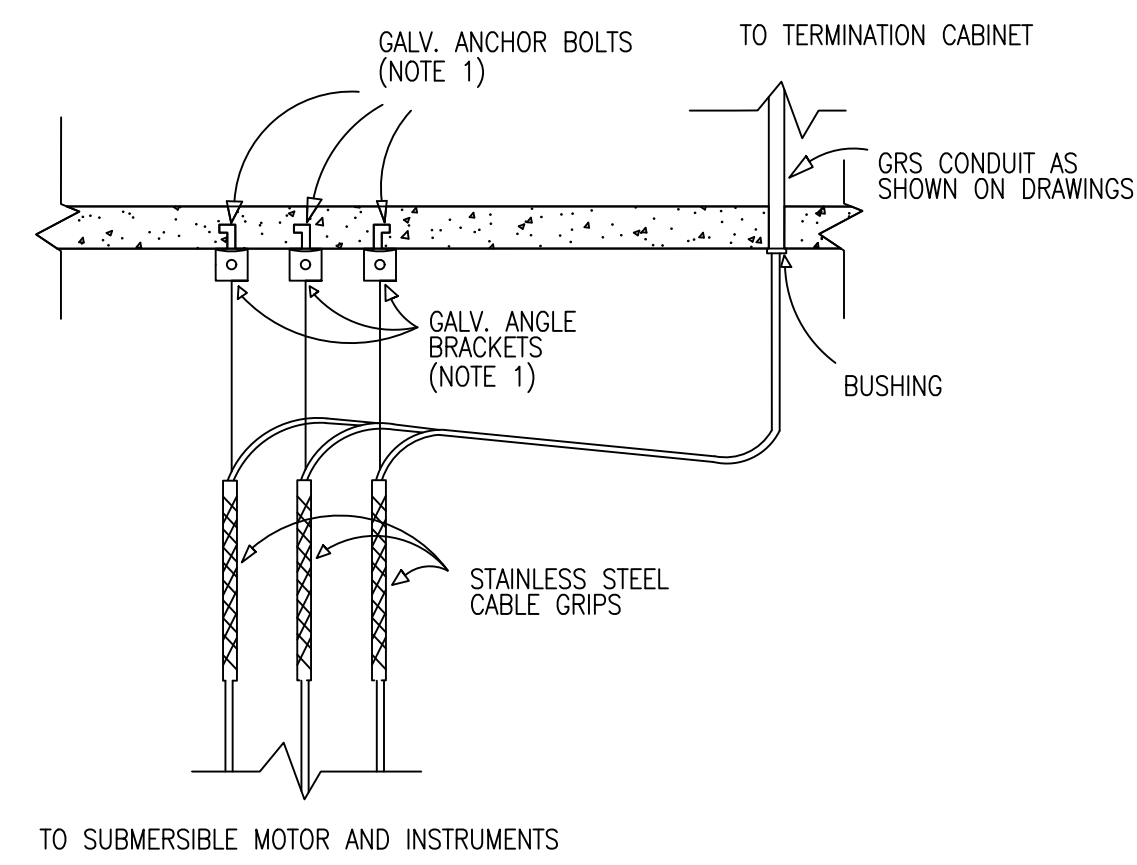
ADDRESS:

PROJECT NO:	TASK 1
DESIGNED BY:	RV
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SCALE:	N.T.S.

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
ELECTRICAL
INSTALLATION DETAILS

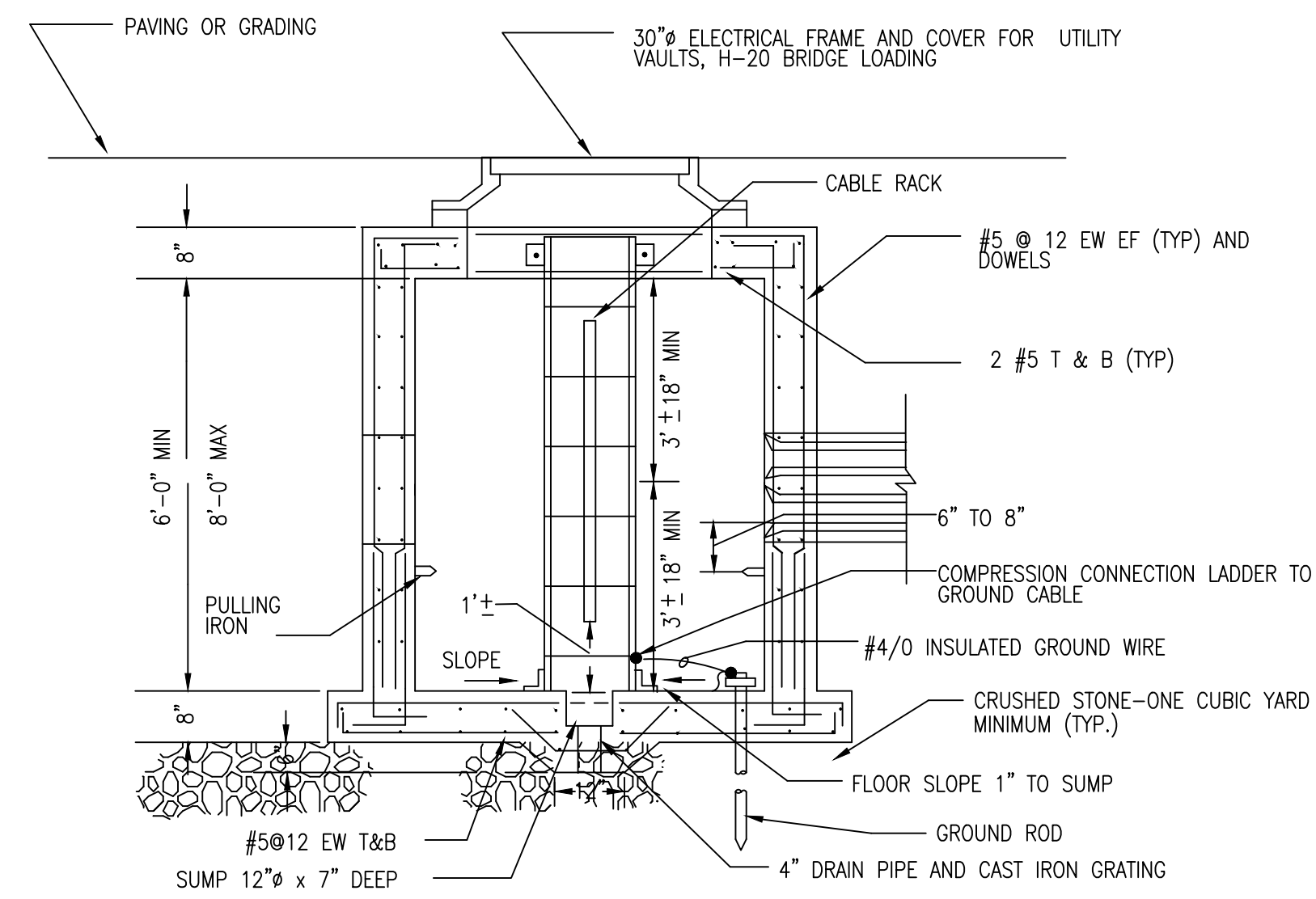
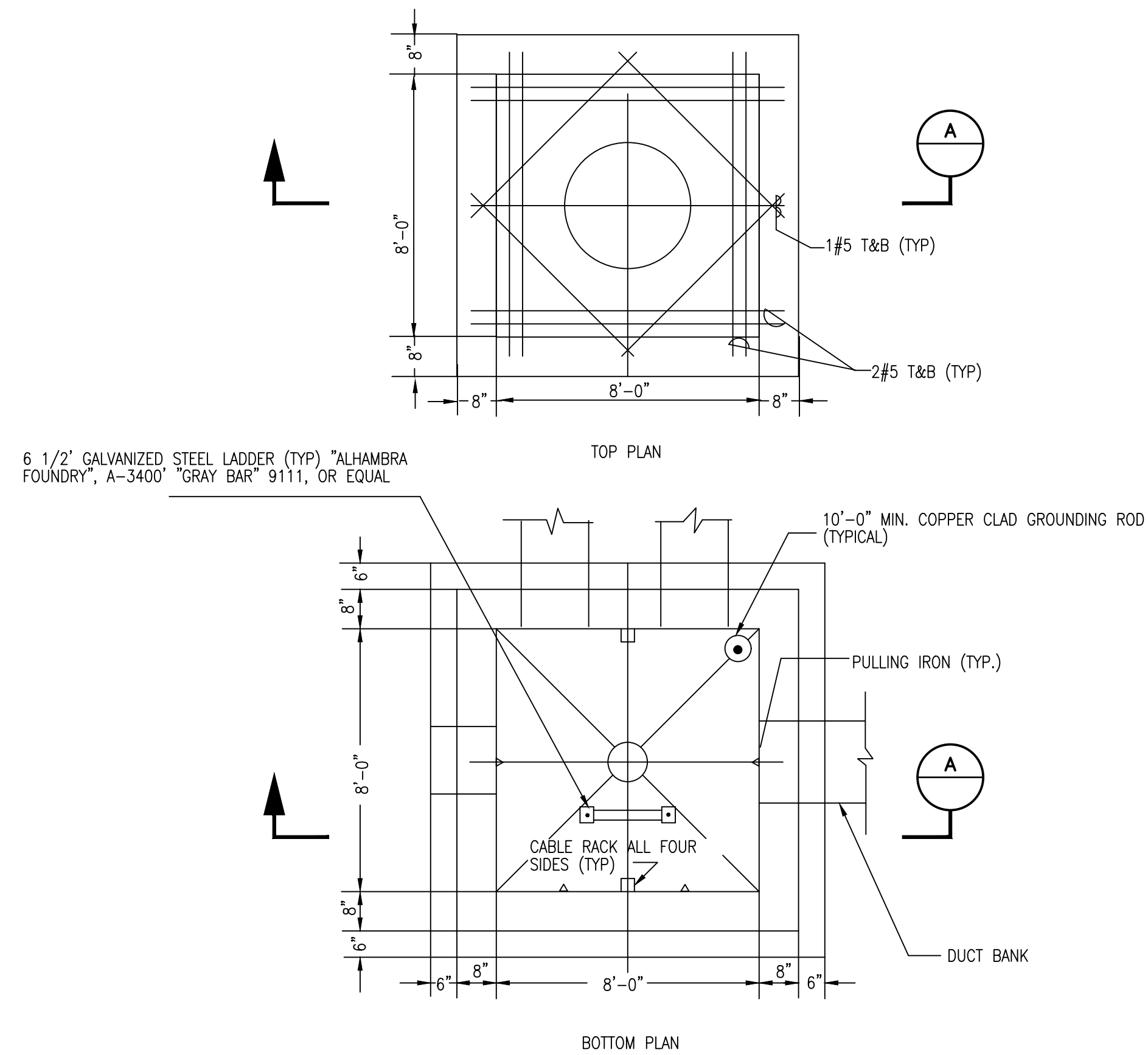
DRAWING NO.
RI-PS
EG-002
SHEET OF



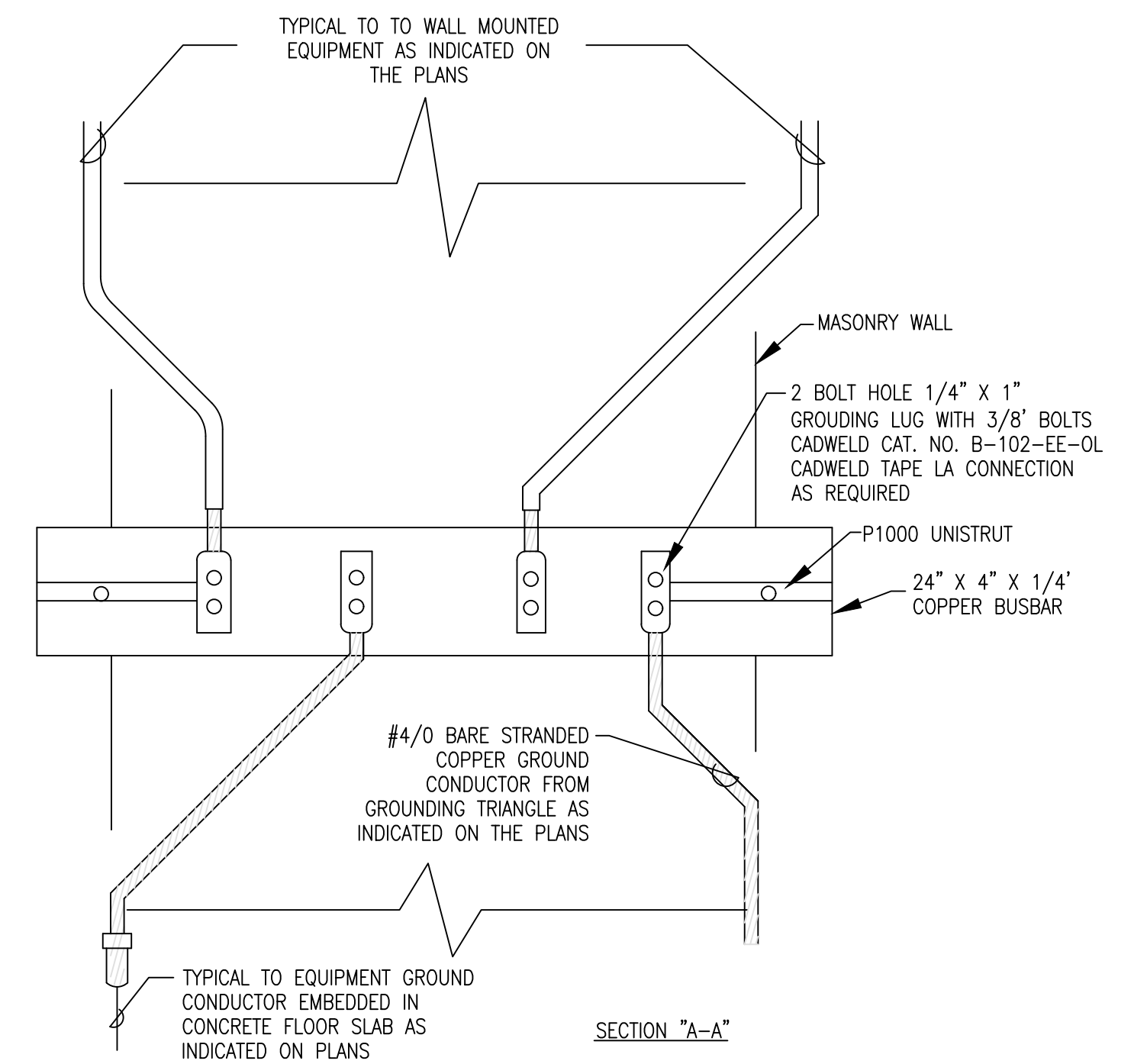
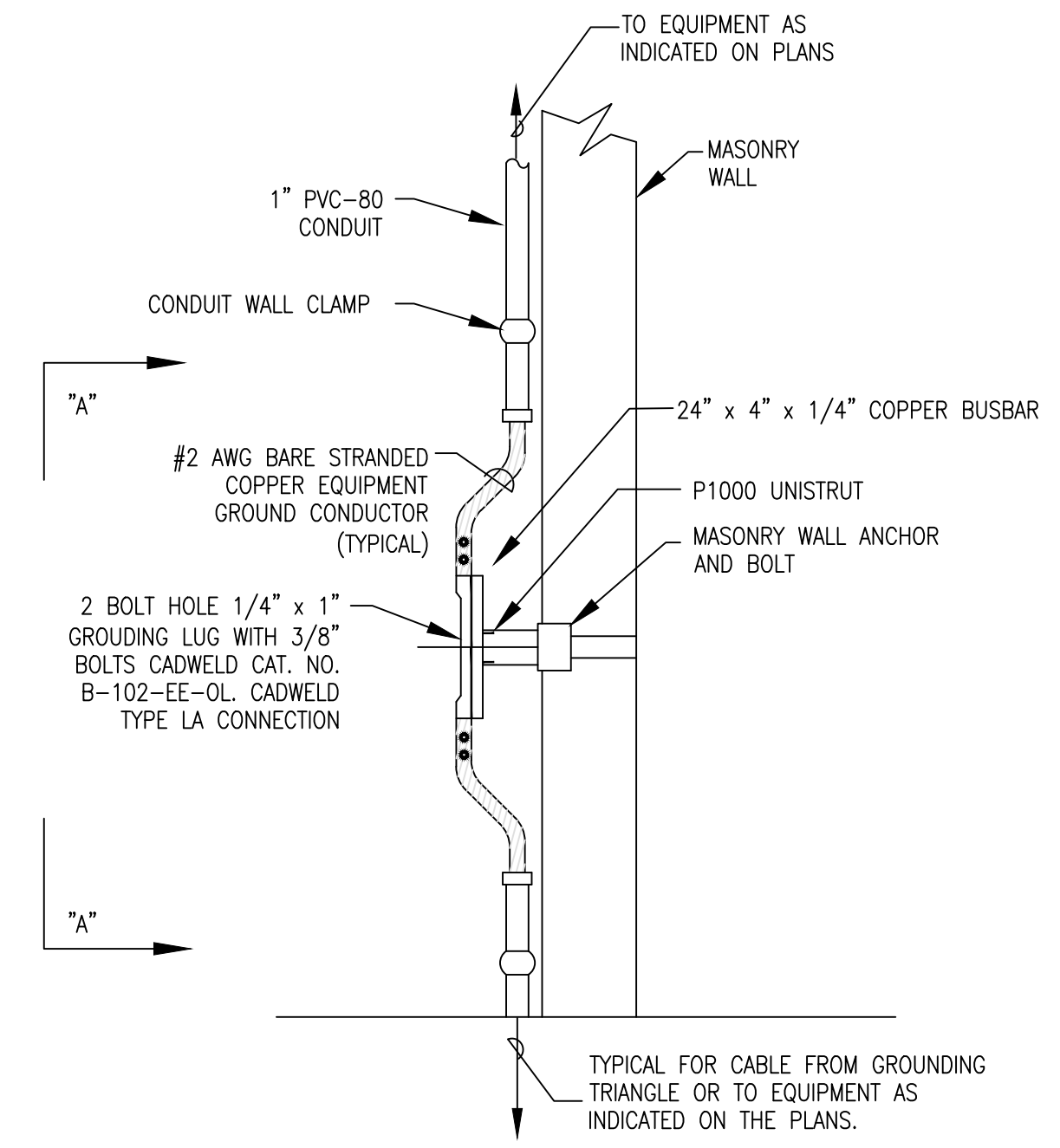


A TYPICAL SUBMERSIBLE CABLE ANCHORS

NOTES:
1. CONTRACTOR SHALL PROVIDE AND INSTALL SUBMERSIBLE POWER AND SIGNAL CABLE SUPPORT BRACKETS AND BOLTS SIZED FOR THE ACTUAL POWER AND SIGNAL CABLE WEIGHTS. CONTRACTOR SHALL SUBMIT THE CALCULATIONS REQUIRED TO CONFIRM THE PROPOSED HARDWARE.



B TYPICAL MANHOLE PLAN AND ELEVATION



C GROUND BUS BAR DETAIL



No.	Description	Date

STAMP:

ADDRESS:

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SCALE:	N.T.S.

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

RIVER INTAKE PUMP STATION
ELECTRICAL
INSTALLATION DETAILS

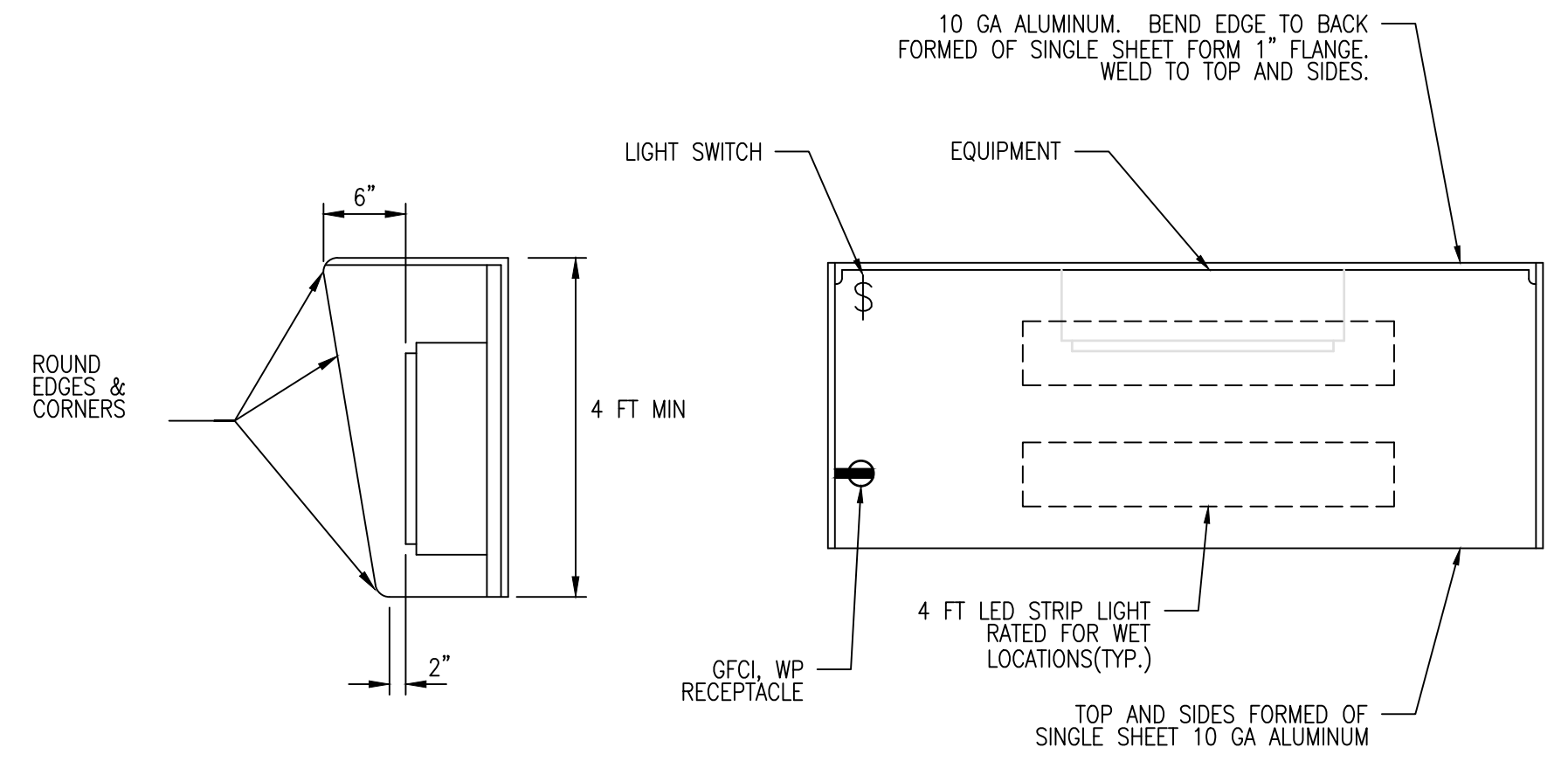
DRAWING NO.

RI-PS

EG-004

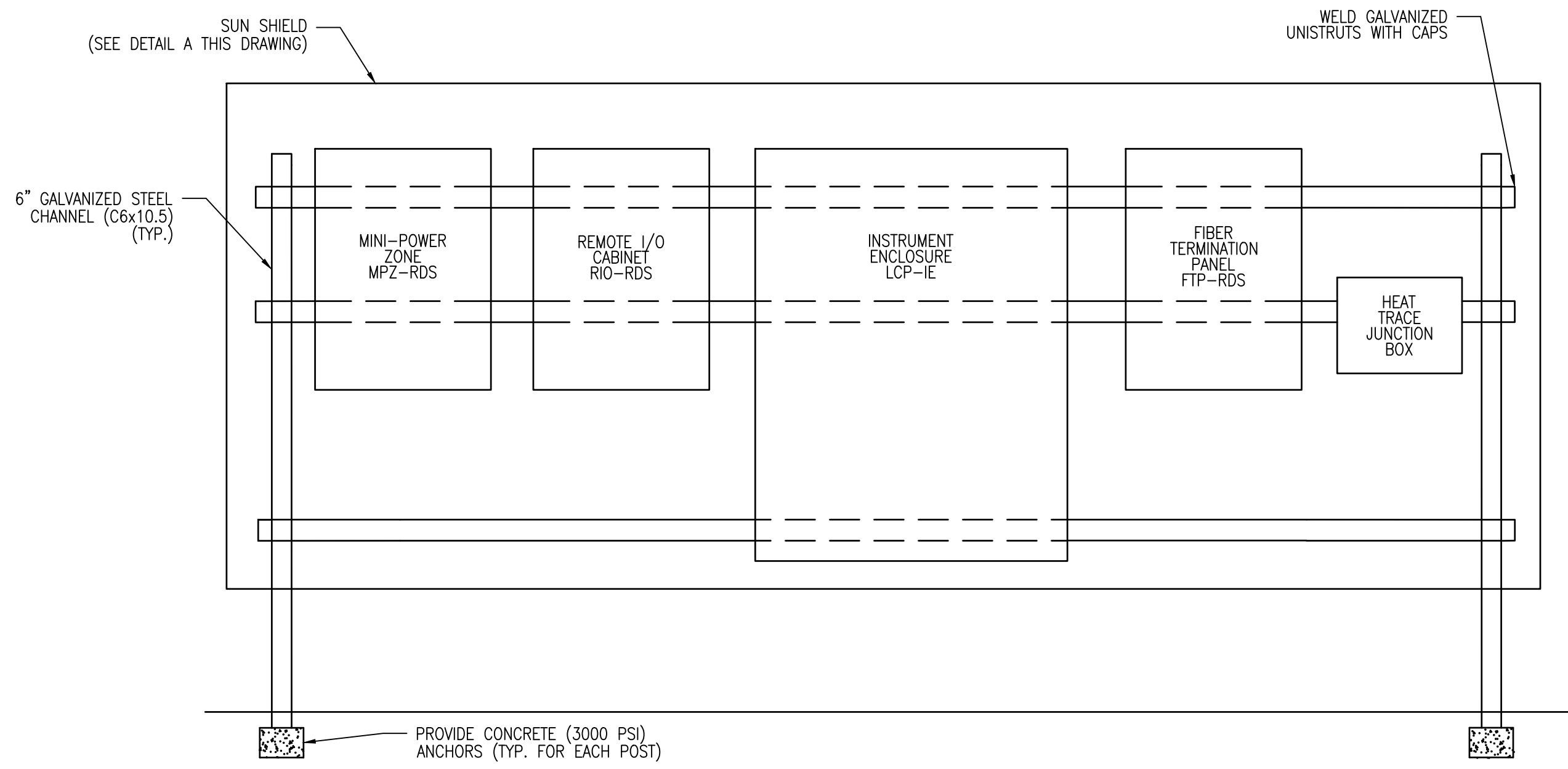
SHEET OF

ISSUED FOR BID



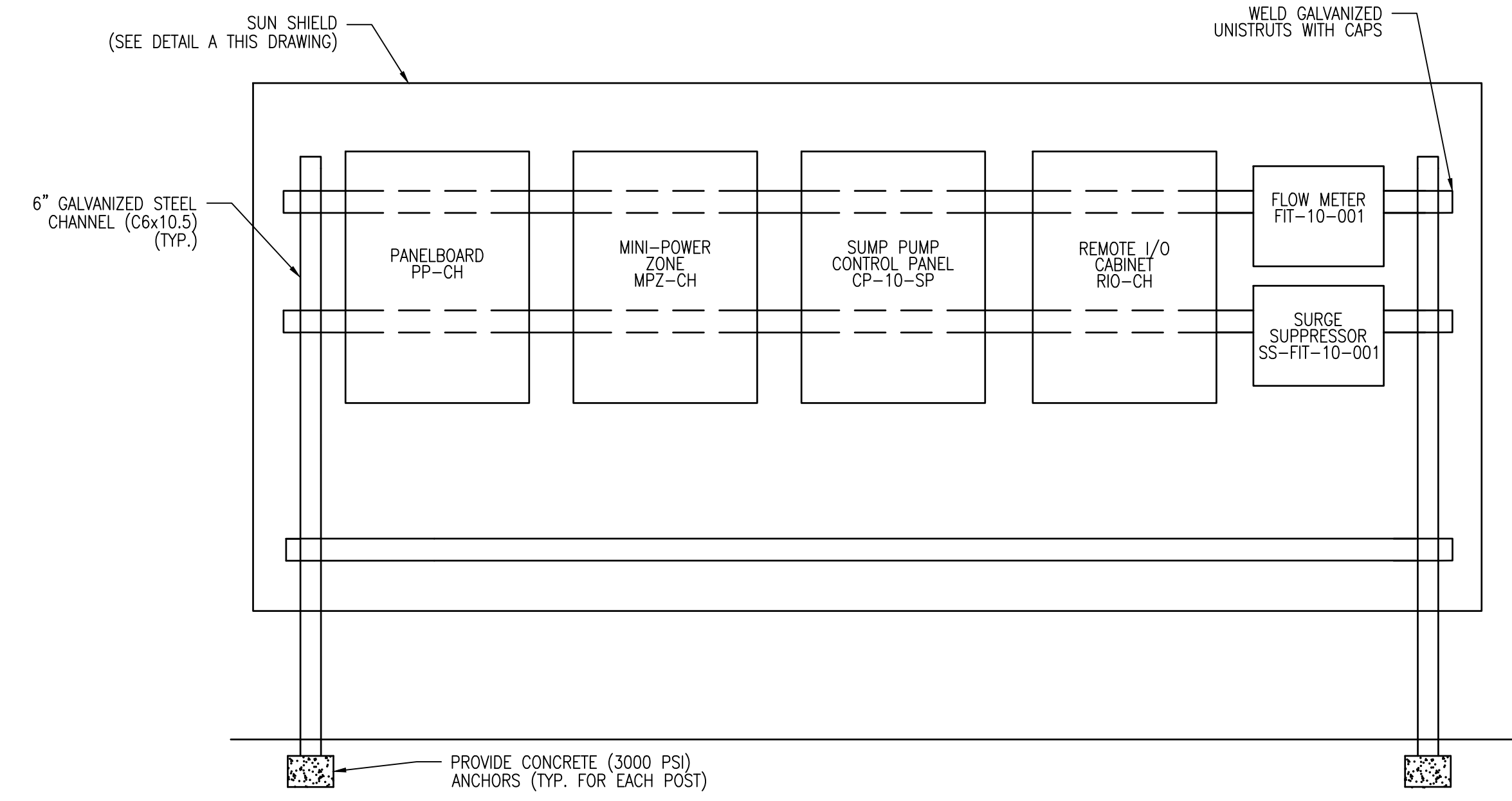
- NOTES:
 1. ALL EXPOSED EDGES TO BE GRIND SMOOTH AND BURR FREE.
 2. MOUNT RAIN HOOD BETWEEN INSTRUMENT AND STANCHION. USE STAINLESS STEEL BOLTS AND INSULATING WASHERS AND SLEEVES.

A SUN SHIELD DETAIL



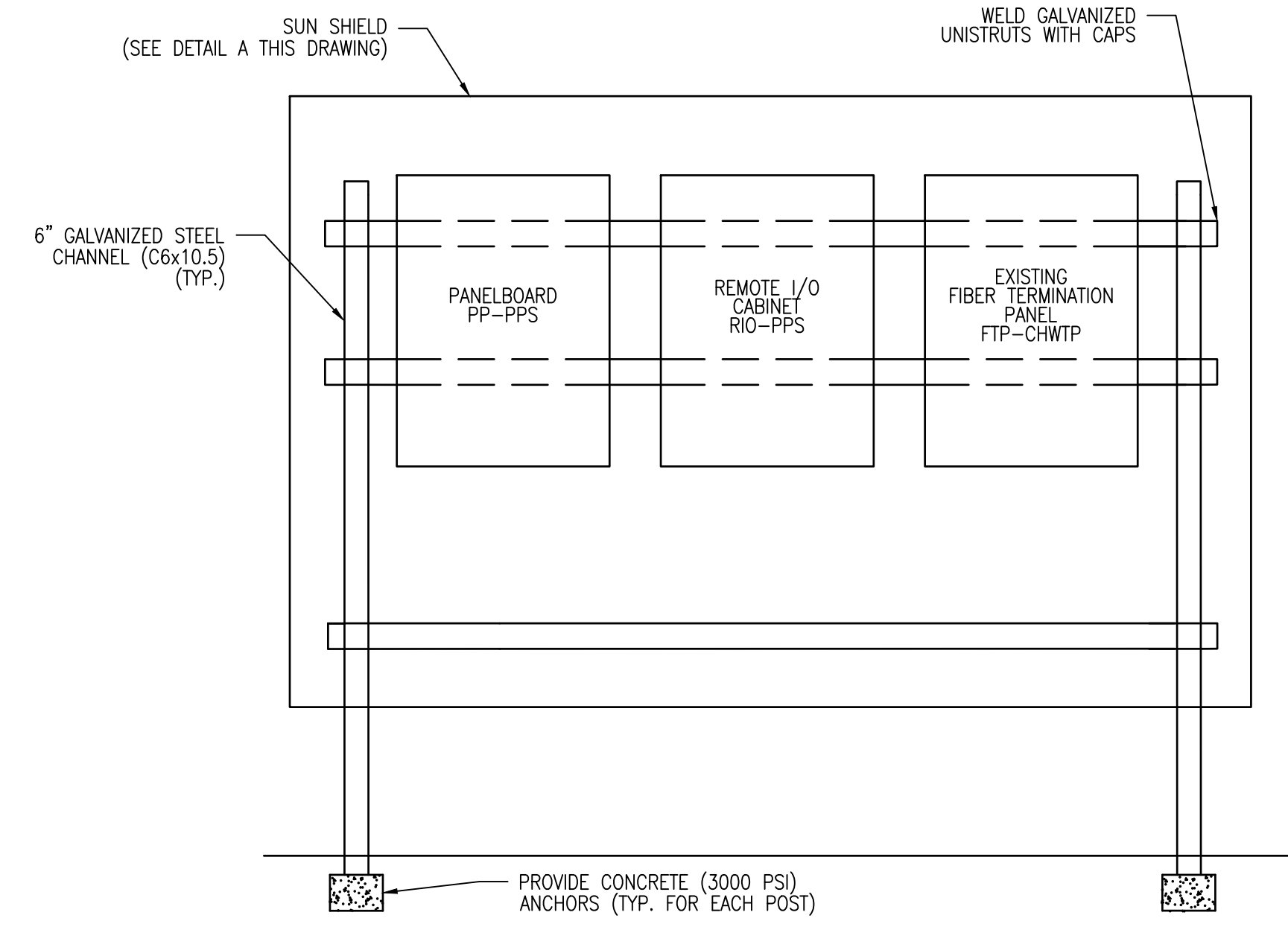
- NOTES:
 1. CONTRACTOR SHALL PROVIDE ANCHORS, CHANNELS AND UNISTRUTS AS REQUIRED TO SUPPORT EQUIPMENT.
 2. SEE ELECTRICAL PLAN DRAWING FOR ACTUAL EQUIPMENT LAYOUT.

B RIVER INTAKE PUMP STATION DROP/CONSTRUCTION SHAFT UNISTRUT LAYOUT



- NOTES:
 1. CONTRACTOR SHALL PROVIDE ANCHORS, CHANNELS AND UNISTRUTS AS REQUIRED TO SUPPORT EQUIPMENT.
 2. SEE ELECTRICAL PLAN DRAWING FOR ACTUAL EQUIPMENT LAYOUT.

C CHATTAHOOCHEE VALVE VAULT UNISTRUT LAYOUT



- NOTES:
 1. CONTRACTOR SHALL PROVIDE ANCHORS, CHANNELS AND UNISTRUTS AS REQUIRED TO SUPPORT EQUIPMENT.
 2. SEE ELECTRICAL PLAN DRAWING FOR ACTUAL EQUIPMENT LAYOUT.

D PPS DROP/CONSTRUCTION SHAFT



No.	Description	Date

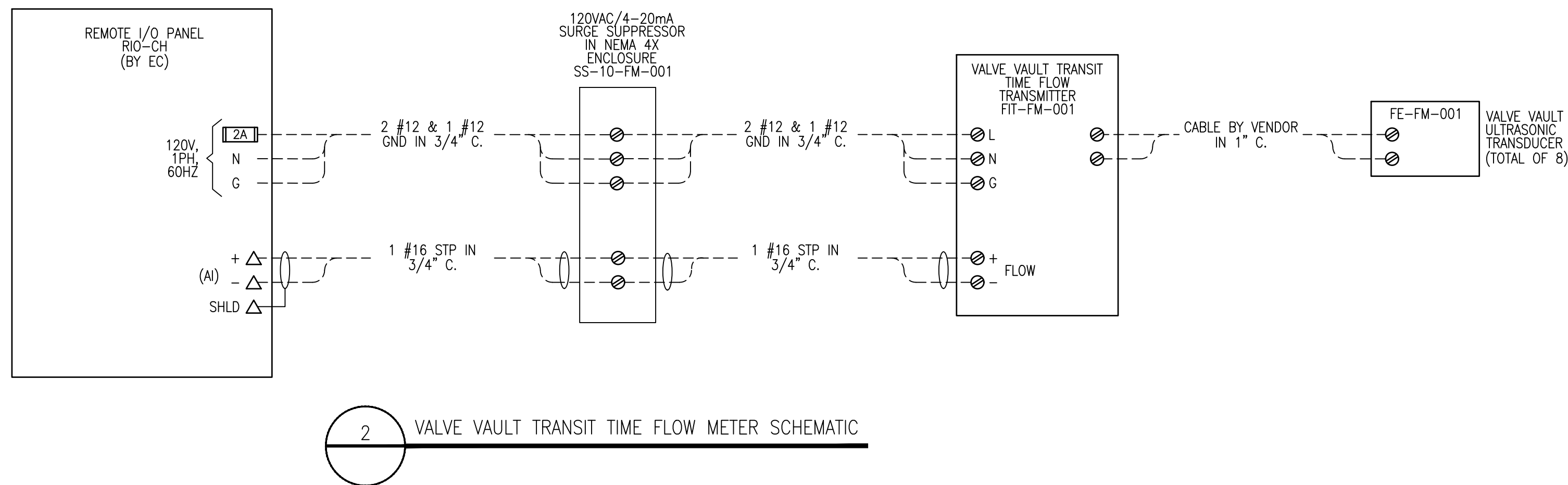
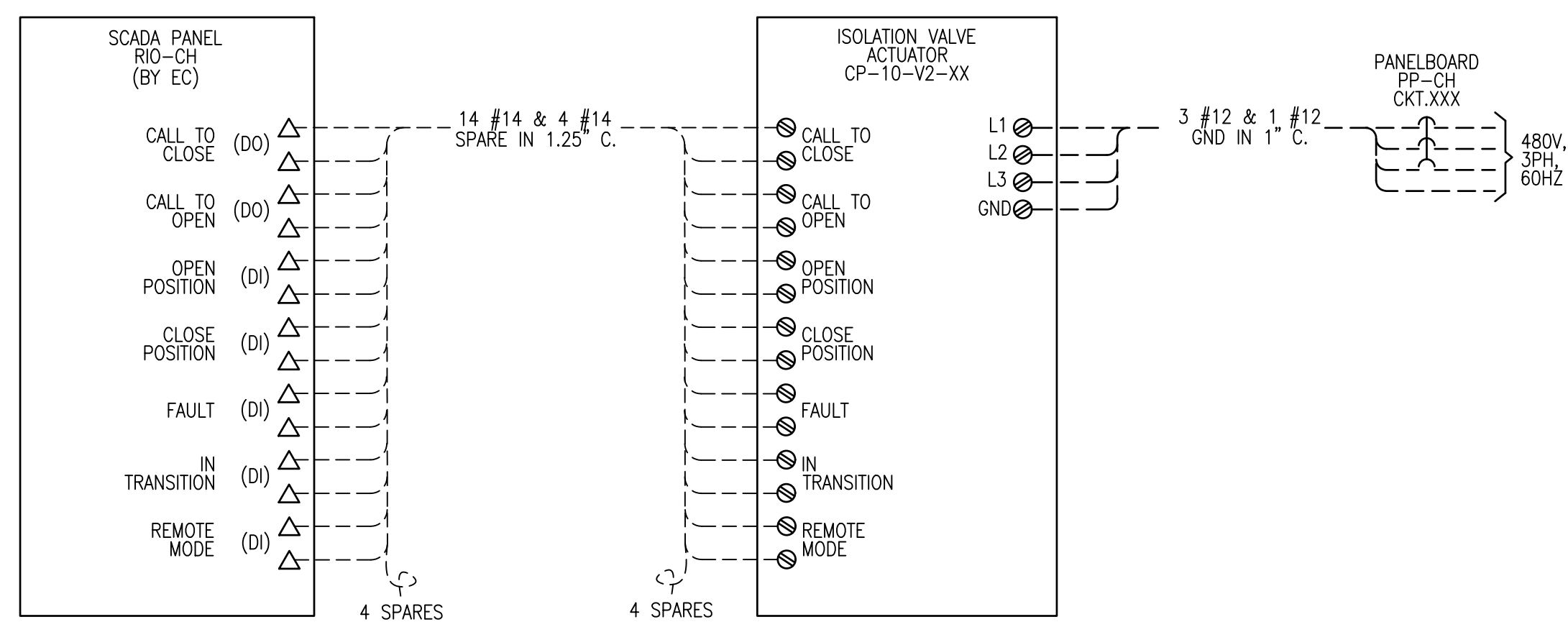
STAMP:

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PROJECT NO:	TASK 1
DESIGNED BY:	RV
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SCALE:	N.T.S.

CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM
RIVER INTAKE PUMP STATION
 INSTRUMENTATION
 INSTALLATION DETAILS

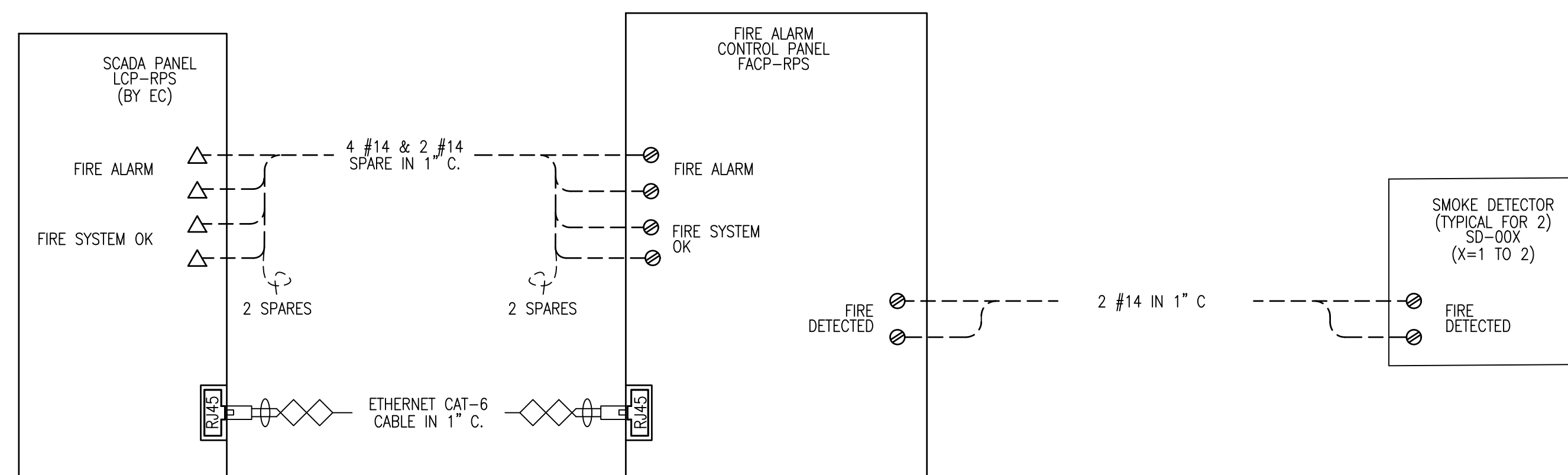
DRAWING NO.
RI-PS
IG-002
 SHEET OF



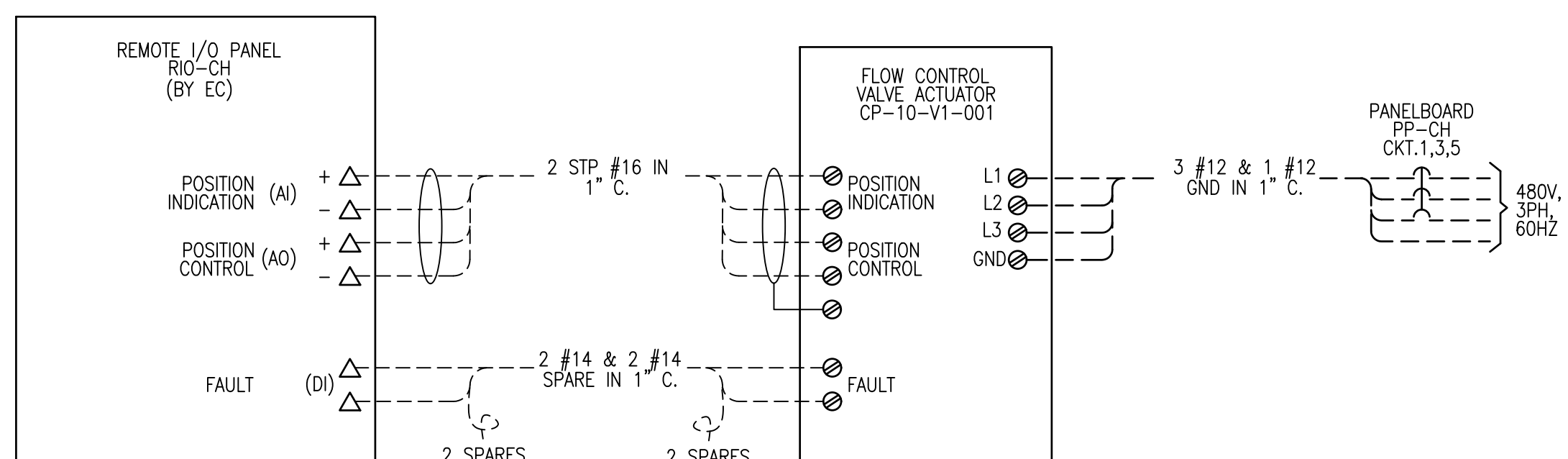
2 VALVE VAULT TRANSIT TIME FLOW METER SCHEMATIC

#	CP-10-V2-XXX	DESCRIPTION	CKT. #
1	CP-10-V2-001	FLOW CONTROL ISOLATION VALVE #1	CKT.7,9,11
2	CP-10-V2-002	FLOW CONTROL ISOLATION VALVE #2	CKT.13,15,17
3	CP-10-V2-003	FLOW CONTROL ISOLATION VALVE #3	CKT.19,21,23
4	CP-10-V2-004	FLOW CONTROL ISOLATION VALVE #4	CKT.2,4,6

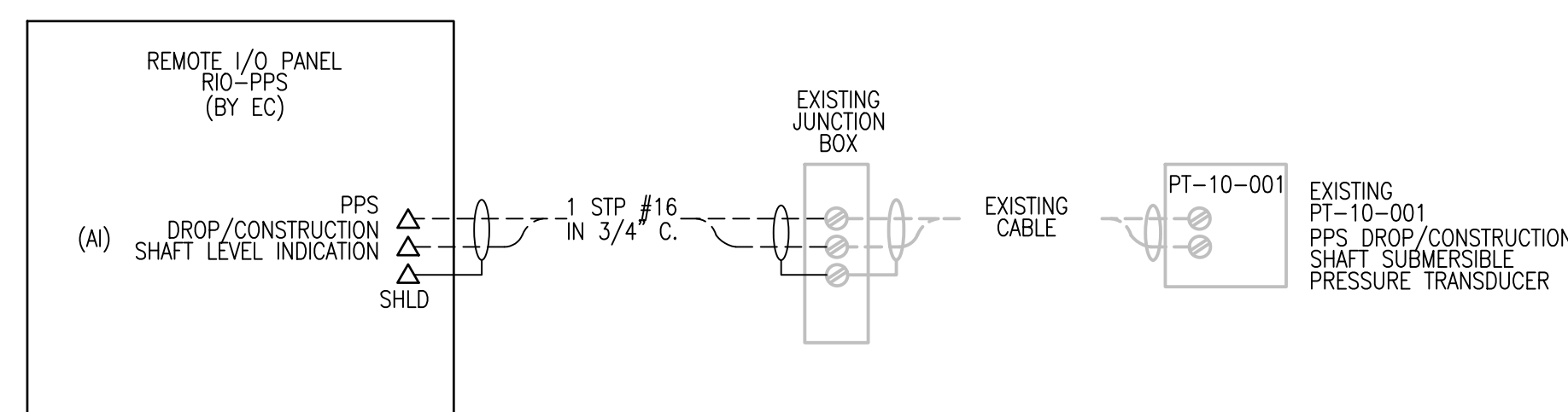
1 FLOW CONTROL ISOLATION VALVE SCHEMATIC (TYPICAL FOR 4)



4 FIRE ALARM CONTROL PANEL CABLE/CONDUIT RISER DIAGRAM



3 FLOW CONTROL MODULATING VALVE SCHEMATIC



5 PPS DROP/CONSTRUCTION SHAFT CONTROL SCHEMATIC

* MOUNTED ON MCC

LEGEND:

- - RVSS POWER TERMINAL
- - RVSS CONTROL TERMINAL
- △ - SCADA PANEL TERMINAL
- ▲ - RIO PANEL TERMINALS
- ▲ - PUMPS VIBRATION/TEMPERATURE PANEL TERMINALS
- ⊗ - LOCAL CONTROL PANEL TERMINAL
- - DEVICE TERMINAL
- - - SHORT DASHED LINE INDICATES FIELD WIRING
- — — SOLID LINE INDICATES WIRING INTERNAL INSIDE AN ENCLOSURE (i.e. CONTROL, RVSS CAB. OR SCADA PANEL).



No.	Description	Date

STAMP:

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CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
WATER SUPPLY PROGRAM

RIVER INTAKE PUMP STATION
SCHEMATIC DIAGRAMS

DRAWING NO.

RI-PS

EI-006

SHEET OF

ISSUED FOR BID

- PROCESS LINES**
- PROCESS FLOW LINE
 - DRAIN/WASTE LINE
 - OVERFLOW LINE
 - BLOWER AIR LINE
 - BACKWASH LINE
 - SAMPLE LINE
 - CHEMICAL INJECTION POINT
- () AVERAGE FLOW
[] PEAK FLOW
- ABBREVIATIONS**
- A TO C - AIR TO CLOSE
 - A TO O - AIR TO OPEN
 - AVG - AVERAGE
 - B/EL - BOTTOM ELEVATION
 - CL - CENTER LINE
 - CFM - CUBIC FEET PER MINUTE
 - CV - CONTROL VALVE
 - CW - CITY WATER (POTABLE)
 - DIA - DIAMETER
 - DWG - DRAWING
 - EL - ELEVATION
 - F.C. - FAIL CLOSED
 - F.O. - FAIL OPEN
 - FRL - FILTER\REGULATOR\LUBRICATOR
 - FTR - FAIL TO RESPOND OR FAIL TO RUN
 - GAL - GALLONS
 - GPD - GALLONS PER DAY
 - GPH - GALLONS PER HOUR
 - GPM - GALLONS PER MINUTE
 - HB - HOSE BIB
 - HG - INCHES OF MERCURY
 - HI - HIGH
 - HOA - HAND/OFF/AUTO
 - HMI - HUMAN MACHINE INTERFACE
 - HP - HORSEPOWER
 - IA - INSTRUMENT AIR
 - ID - INSIDE DIAMETER
 - INV - INVERT
 - LO - LOW
 - MH - MANHOLE
 - MV - MODULATING VALVE
 - MW - MANWAY
 - N.C. - NORMALLY CLOSED
 - N.O. - NORMALLY OPEN
 - OAL - OVERALL LENGTH
 - O.D. - OUTSIDE DIAMETER
 - PA - PLANT AIR
 - PLC - PROGRAMMABLE LOGIC CONTROLLER
 - PSIG - POUNDS PER SQUARE INCH - GAUGE
 - PW - PLANT WATER
 - RED - REDUCER
 - RPM - REVOLUTIONS PER MINUTE
 - SCFM - STANDARD CUBIC FEET PER MINUTE
 - SCH - SCHEDULE
 - SG - SPECIFIC GRAVITY
 - SP - SETPOINT
 - SSH - STRAIGHT SIDE HEIGHT
 - STD - STANDARD
 - SW - SEAL WATER
 - SWD - SIDE WATER DEPTH
 - TDH - TOTAL DYNAMIC HEAD(F.T OF FLUID)
 - T/EL - TOP ELEVATION
 - TYP - TYPICAL
 - VAC - VACUUM
 - VSD - VARIABLE SPEED DRIVE
 - VTP - VERTICAL TURBINE PUMP
 - WC - WATER COLUMN
 - WD - WATER DEPTH
 - WL - WATER LEVEL
 - WV - WORKING VOLUME (DOES NOT INCLUDE FREEBOARD OR HEEL)
 - WSF - WATER STORAGE FACILITY
 - WTP - WATER TREATMENT PLANT

- VALVE SYMBOLS**
- ANGLE
 - BALL
 - BUTTERFLY
 - CHECK
 - DIAPHRAGM
 - GATE
 - GLOBE
 - KNIFE
 - NEEDLE
 - PINCH
 - PLUG
 - BACK PRESSURE VALVE
 - PRESSURE REDUCING
 - AIR RELIEF
 - SQUEEZE
 - THREE WAY
 - FOUR WAY
 - VACUUM BREAKER
 - AIR RELEASE
 - HOSE BIBB
 - INTEGRAL BLOCK & BLEED
 - RUPTURE DISK
 - MUD VALVE
 - BACKFLOW PREVENTER
 - SURGE ANTICIPATOR VALVE
 - SLIDE GATE
- INSTRUMENTATION AND RELATED ITEMS**
- CAPILLARY TUBING
 - ELECTRICAL
 - HYDRAULIC
 - PNEUMATIC
 - DATA LINK
 - FLUME
 - MAG - MAGNETIC FLOW METER
 - ROTAMETER
 - SONIC FLOW METER
 - TURBINE FLOW METER
 - VENTURI
 - WEIR
 - VORTEX SENSOR
 - ANNUBAR
 - ORIFICE PLATE
 - POSITIVE DISPLACEMENT METER
 - SAMPLE POINT

- PIPING AND TUBING MATERIALS**
- ABS - ACRYLONITRILE BUTADIENE STYRENE TRUSS PIPE
 - ALM - ALUMINUM PIPE OR TUBING
 - ARP - ALUMINUM REINFORCED PLASTIC PIPE
 - BL - BLACK IRON PIPE
 - BPT - BRAIDED PLASTIC TUBING-PVC
 - CI - CAST IRON PIPE
 - CISP - CAST IRON SOIL PIPE
 - CMCP - CORRUGATED METAL CULVERT PIPE
 - CMH - CHEMICAL HOSE
 - CMP - CORRUGATED METAL PIPE
 - COP - COPPER PIPE
 - CPVC - CHLORINATED POLYVINYL CHLORIDE PIPE
 - CS - CARBON STEEL PIPE
 - DI - DUCTILE CAST IRON PIPE
 - ERP - EPOXY RESIN PIPE
 - FRP - FIBERGLASS REINFORCED PLASTIC PIPE
 - GS - GALVANIZED STEEL PIPE
 - HOSE - FLEXIBLE HOSE
 - HSI - HIGH SILICON IRON PIPE
 - KLS - PVDF LINED STEEL PIPE (KYNAR LINED TYPICAL)
 - KYN - PVDF (KYNAR TYPICAL)
 - MI - CARBON STEEL PIPE W/MALLEABLE IRON FITTINGS
 - NEO - NEOPRENE HOSE
 - NI - NICKEL ALLOY PIPE
 - NLS - NEOPRENE LINED STEEL PIPE
 - PEP - POLYETHYLENE PIPE
 - PETB - POLYETHYLENE TUBING
 - PLS - POLYPROPYLENE LINED STEEL PIPE
 - POP - POLYPROPYLENE PIPE
 - PRP - PHENOLIC RESIN PIPE
 - PVC - POLYVINYL CHLORIDE PIPE
 - PVC HOSE - POLYVINYL CHLORIDE HOSE
 - PVDF - POLYVINYLIDENE FLUORIDE PIPE
 - PW - POTABLE WATER
 - RBR - RUBBER HOSE
 - RCCP - REINFORCED CONCRETE CULVERT PIPE
 - RCP - REINFORCED CONCRETE PIPE
 - SAR - SARAN TUBING
 - SLH - SLUDGE HOSE
 - SLS - SARAN LINED STEEL PIPE
 - SS - STAINLESS STEEL PIPE OR TUBING
 - TEF - TEFLON TUBING
 - TI - TITANIUM ALLOY PIPE
 - TLS - TEFLON LINED STEEL PIPE
 - TYB - TYGON TUBING-BRAIDED
 - TYG - TYGON TUBING-UNBRAIDED
- ACTUATORS**
- CYLINDER
 - DIAPHRAGM-SPRING
 - ELECTRO HYDRAULIC
 - ELECTRO PNEUMATIC
 - SOLENOID
 - POSITIONER *- TYPE
 - MOTOR
 - MODULATING VALVE ACTUATOR
 - OPEN/CLOSE VALVE ACTUATOR

- CABLE TAGS**
- CABLE SUPPLIED BY VENDOR
- PIPING ACCESSORIES**
- DIAPHRAGM SEAL
 - EXPANSION JOINT
 - FLANGED CONNECTION
 - FLEXIBLE HOSE
 - HOSE CONNECTION
 - INSULATION
 - INSULATED PIPE WITH ELECTRIC HEAT TRACE
 - INSULATED PIPE WITH STEAM HEAT TRACE
 - PIPE TO TUBING ADAPTER
 - PULSATION DAMPENR
 - QUICK DISCONNECT
 - CONCENTRIC REDUCER
 - ECCENTRIC REDUCER
 - RUPTURE DISK
- PUMPS AND EQUIPMENTS**
- STATIC MIXER
 - MECHANICAL FLOCCULATOR
 - CENTRIFUGAL PUMP
 - SAMPLE PUMP
 - BLOWER
 - PUMP, ROTARY LOBE
 - PUMP, SUBMERSIBLE TURBINE
 - HOSE PUMP
 - AIR COMPRESSOR
 - PUMP, DIAPHRAGM
 - PUMP, GEAR
 - PUMP, METERING
 - PUMP, PROGRESSING CAVITY
 - PUMP, VERTICAL TURBINE
 - PUMP, SUBMERSIBLE
- LINE NUMBER IDENTIFICATION**
- 1" - PA - CS
- MATERIAL CLASS
FLOW STREAM IDENTIFICATION
LINE SIZE
- LINE CONTINUATIONS**
- INDICATES A LINE GOING TO OR COMING FROM BATTERY LIMITS (CONTRACT LIMITS)
- INDICATES CONTINUATION OF LINE IS ON SHEET NUMBER 5 (SAME DRAWING NUMBER) IN ZONE A 2
- INDICATES CONTINUATION OF A SIGNAL IS ON SHEET NUMBER 5

ISA INSTRUMENT IDENTIFICATION TABLE

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

LEGEND BASED ON ISA STANDARD S 5.1

INSTRUMENT TAG NUMBERS

TIC 103 - INSTRUMENTATION IDENTIFICATION OR TAG NUMBER
103 - LOOP NUMBER
TIC - FUNCTIONAL IDENTIFICATION
NOTE: HYPHENS ARE OPTIONAL AS SEPARATORS

ELECTRICAL AND RELATED ITEMS

- SELECTOR SWITCHES
- VARIABLE FREQUENCY DRIVE
- EMERGENCY POWER
- INTERLOCK
- PILOT LIGHT
- LENS COLOR REFERENCE

I/O SIGNALS:

- ETHERNET (CAT6)
- DISCRETE INPUT
- DISCRETE OUTPUT
- ANALOG INPUT
- ANALOG OUTPUT

EQUIPMENT / VALVE TAG

P-6 15-1A

EQUIPMENT NO. NUMBER DENOTES MULTIPLE DEVICES USED IN IDENTICAL DUPLICATE SYSTEMS. LETTER DISTINGUISHES MULTIPLE SIMILAR DEVICES IN THE SAME INSTRUMENT LOOP.

LOOP NO.
PROCESS I.D.
EQUIPMENT / VALVE IDENTIFICATION

EQUIPMENT FUNCTIONAL IDENTIFICATION

- BLOWER
- MECHANICAL EQUIPMENT
- PUMP
- PULSATION DAMPENR
- STRAINER
- TANK
- CALIBRATION COLUMN
- INJECTION QUILL ASSEMBLY
- EDUCTOR

INSTRUMENT SYMBOLS	PRIMARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR	FIELD MOUNTED	AUXILIARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR	AUXILIARY LOCATION NORMALLY INACCESSIBLE TO OPERATOR
DISCRETE INSTRUMENTS				
SHARED DISPLAY, SHARED CONTROL				
COMPUTER FUNCTION				
PROGRAMMABLE LOGIC CONTROL				

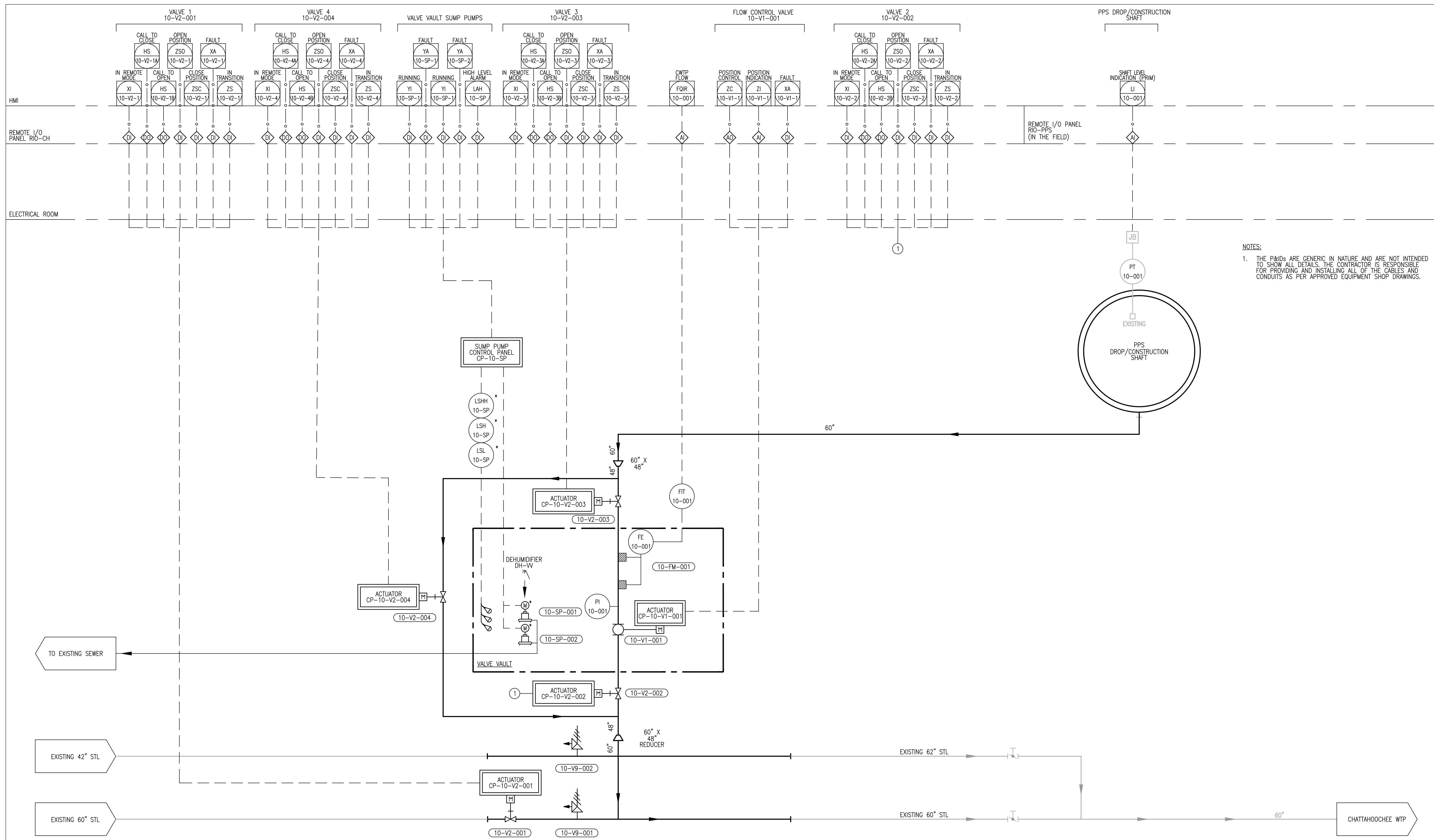
* INSTRUMENT PROVIDED BY EQUIPMENT VENDOR

VENDOR SUPPLIED CONTROL PANEL

INSTRUMENTS

- LEVEL FLOAT SWITCH
- ULTRASONIC LEVEL SENSOR
- RADAR LEVEL SENSOR
- SUBMERSIBLE PRESSURE TRANSDUCER

	No.	Description	Date	STAMP:	ADDRESS:	PROJECT NO: TASK 1 DESIGNED BY: RV DRAWN BY: RV CHECKED BY: AZ DATE: 11-22-2019 SCALE: N.T.S.	CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT WATER SUPPLY PROGRAM RIVER INTAKE PUMP STATION PROCESS P&ID'S LEGEND AND SYMBOLS	DRAWING NO. RI-PS PID-1 SHEET OF



NOTES:
 1. THE P&IDs ARE GENERIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL DETAILS. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING ALL OF THE CABLES AND CONDUITS AS PER APPROVED EQUIPMENT SHOP DRAWINGS.



No.	Description	Date

STAMP:

ADDRESS:

PROJECT NO:	TASK 1
DESIGNED BY:	RV
DRAWN BY:	RV
CHECKED BY:	AZ
DATE:	11-22-2019
SCALE:	N.T.S.

**CITY OF ATLANTA DEPT. OF WATERSHED MANAGEMENT
 WATER SUPPLY PROGRAM**
**RIVER INTAKE PUMP STATION
 PROCESS P&ID'S
 FLOW CONTROL VALVE VAULT**

DRAWING NO.
RI-PS
PID-6
 SHEET OF