

ALL INTERIOR D.I. PIPE AND PIPING EXPOSED TO HIGHLY CORROSIVE CONDITIONS SHALL BE PREPARED PER CITY OF SAVANNAH SPECIFICATION 02554

INSTALL 24" FORCE MAIN BYPASS LINE (SEE SHEET G13 FOR CONTINUATION)

3  
M.I.O.

CONNECT TO EXISTING PUMP STATION AT INV. EL: 9.20' SAW CUT EXISTING CONCRETE STRUCTURE AND USE NON-SHRINK GROUT

EXISTING CONCRETE PAVEMENT

INSTALL 24" 90° D.I. FL BEND

CONTRACTOR TO INSTALL TWO NEW INFLUENT PUMP BASES AND ONE NEW PUMP (PHASE I)

EXISTING STAIRS

2  
M.I.O.

**EXISTING INFLUENT PUMP STATION PLAN VIEW**  
SCALE: 1/4" = 1' - 0"

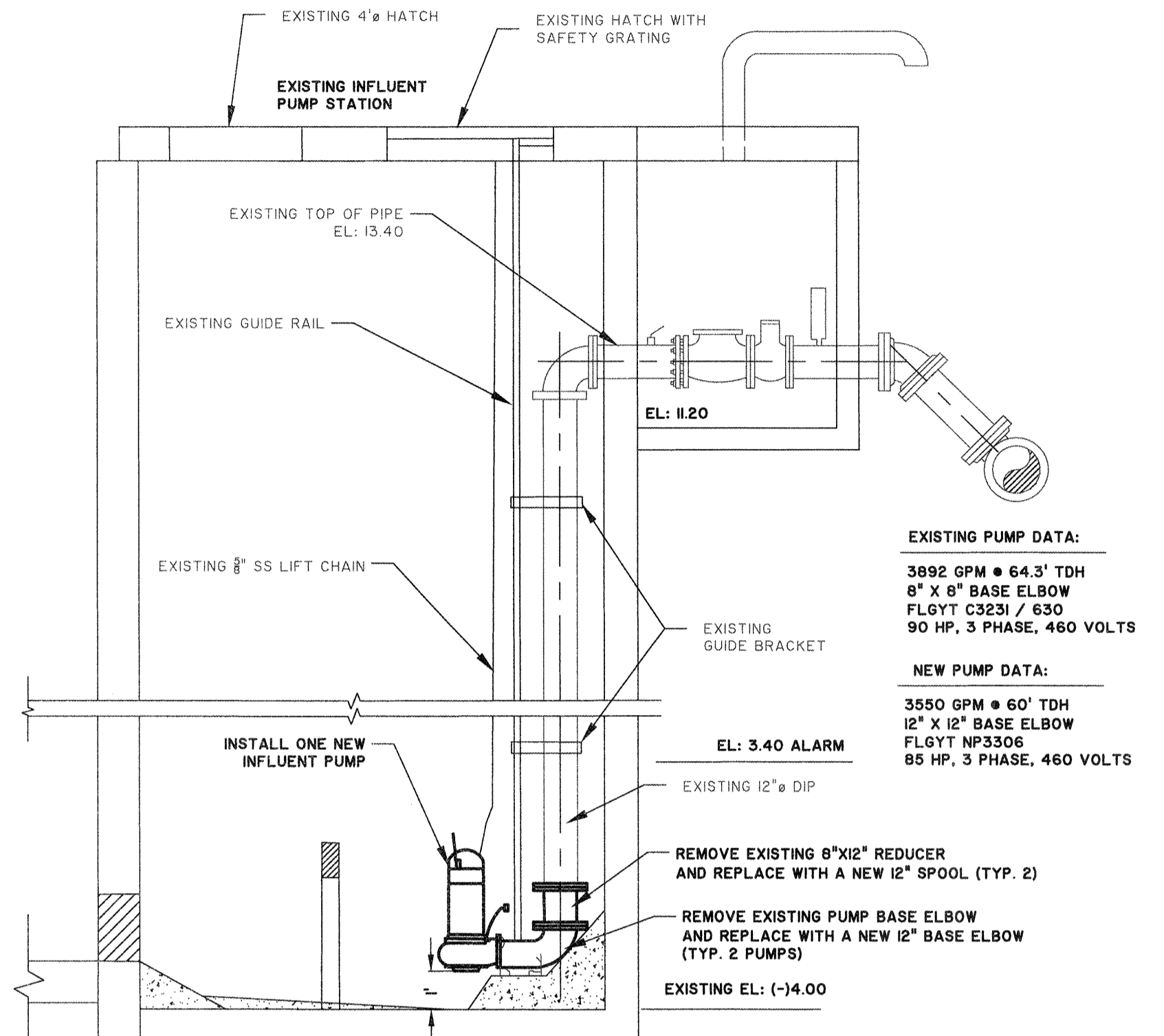
CONNECT TO EXISTING PUMP STATION AT INV. EL: 9.20' SAW CUT EXISTING CONCRETE STRUCTURE AND USE NON-SHRINK GROUT

**NOTE:**  
1. CONTRACTOR TO SAND BLAST THE EXISTING CRANE STRUCTURE AND REPAINT ACCORDING TO PAINTING SPECIFICATION  
2. CONTRACTOR TO BYPASS INFLUENT FORCE MAIN AND GRAVITY LINE(S) TO PUMP STATION IN ORDER TO REPLACE THE BASE PUMPS FOR PUMP #3 AND FUTURE PUMP. COORDINATE WITH CITY OF SAVANNAH CONVEYANCE DEPARTMENT.  
3. EXISTING STAINLESS STEEL COVERS TO BE RESTORED. REPLACE ANY NON-STAINLESS STEEL HARDWARE WITH STAINLESS STEEL HARDWARE.

CONTRACTOR TO REMOVE/DEMO EXISTING VALVES AND VALVE BOX

CAP EXISTING 4" PIPE

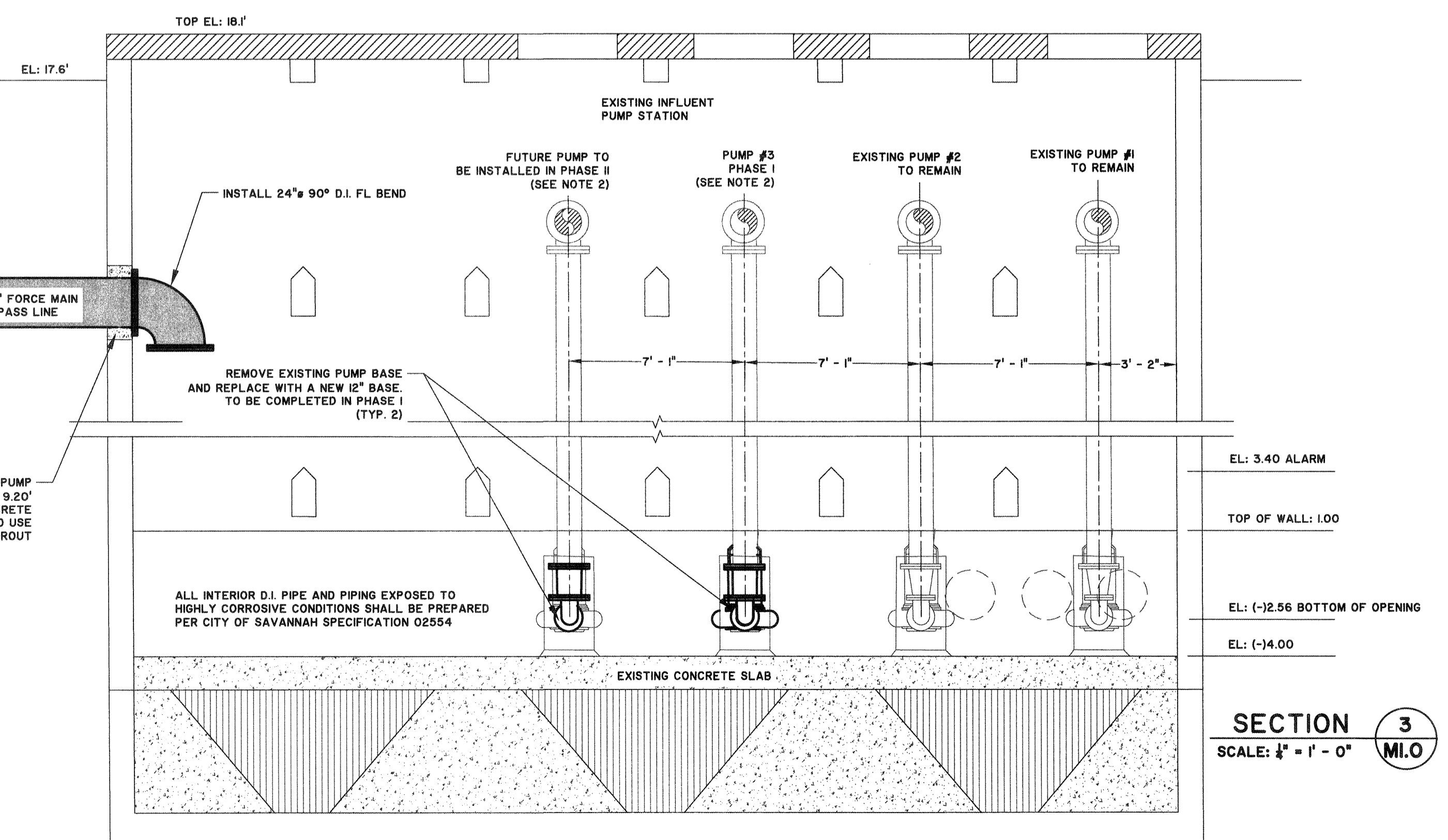
SEE NOTE 1



**EXISTING PUMP DATA:**  
3892 GPM @ 64.3' TDH  
8" X 8" BASE ELBOW  
FLOYT 03231 / 630  
90 HP, 3 PHASE, 460 VOLTS

**NEW PUMP DATA:**  
3550 GPM @ 60' TDH  
12" X 12" BASE ELBOW  
FLOYT NP3306  
85 HP, 3 PHASE, 460 VOLTS

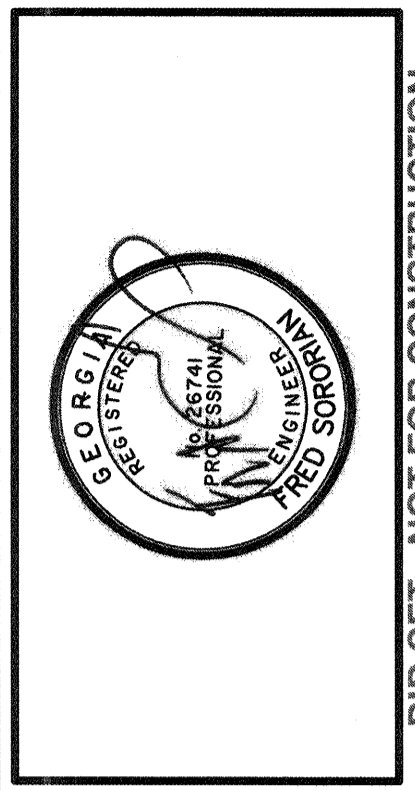
**SECTION 2**  
SCALE: 1/4" = 1' - 0" M.I.O.



REMOVE EXISTING PUMP BASE AND REPLACE WITH A NEW 12" BASE TO BE COMPLETED IN PHASE I (TYP. 2)

ALL INTERIOR D.I. PIPE AND PIPING EXPOSED TO HIGHLY CORROSIVE CONDITIONS SHALL BE PREPARED PER CITY OF SAVANNAH SPECIFICATION 02554

**SECTION 3**  
SCALE: 1/4" = 1' - 0" M.I.O.



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TRAVIS FIELD WATER RECLAMATION FACILITY  
EXISTING INFLUENT PUMP STATION PLAN AND SECTION VIEW

JOB NO:	J-26963.0000
DATE:	1-16-19
DRAWN:	CDR
DESIGNED:	CDR
REVIEWED:	FS
APPROVED:	FS
SCALE:	1/4"=1'-0"

**M1.0**

BID SET - NOT FOR CONSTRUCTION

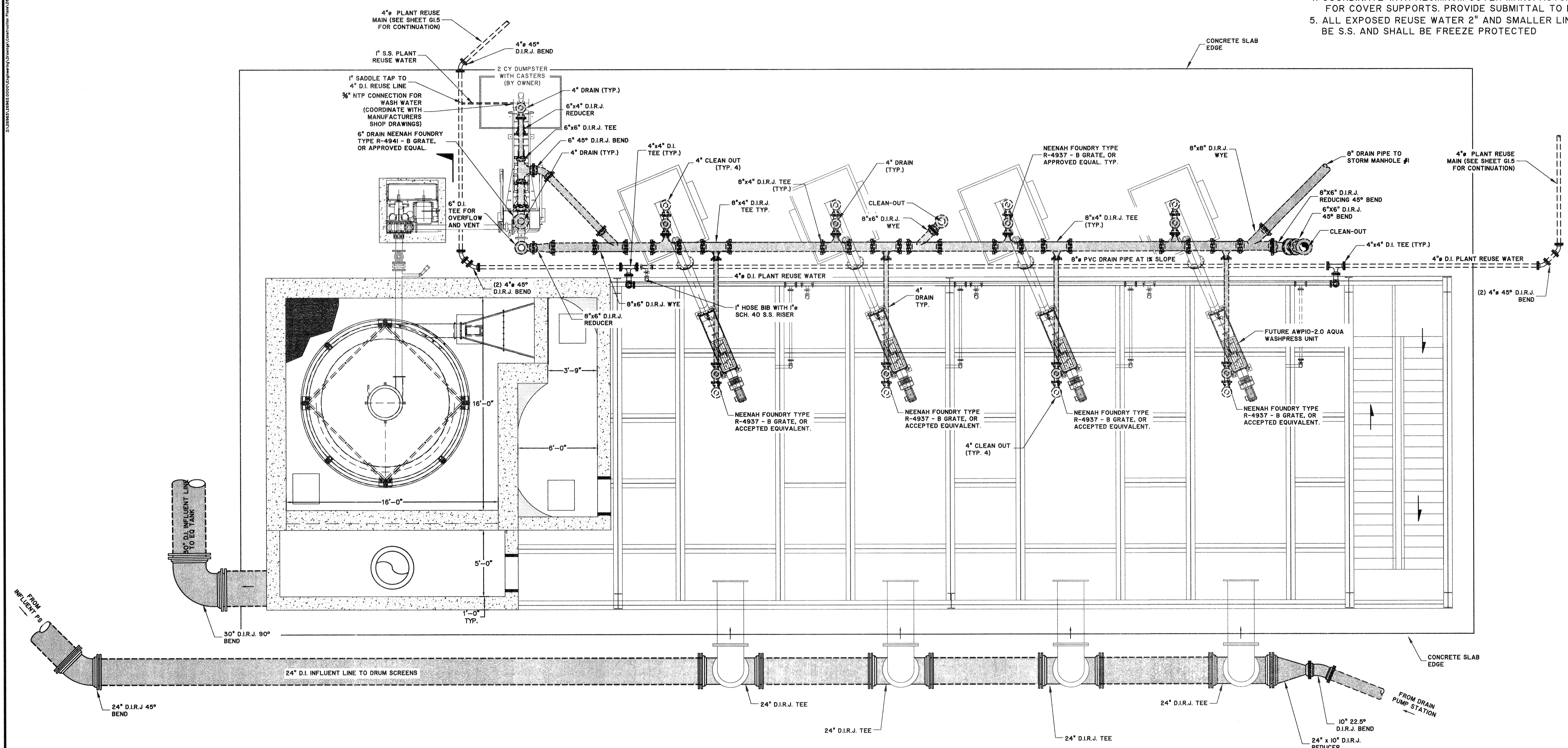




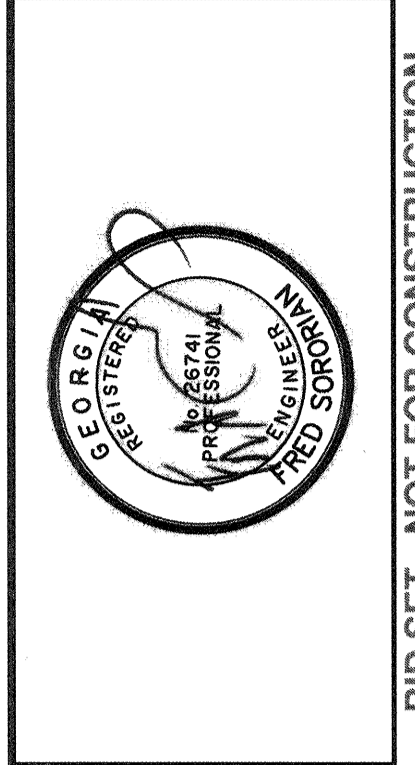


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- NOTE:**
1. ALL EXPOSED D.I. PIPING SHALL BE FREE OF ASPHALTIC COATING BEFORE FINAL COATING/PAINTING
  2. THE ENTIRE GRIT SYSTEM TOP AND INFLUENT TROUGH AND EFFLUENT BY-PASS STRUCTURE SHALL BE COVERED WITH ALUMINUM COVER. SEE SPECIFICATION 44 II 20.18
  3. GRIT SYSTEM CONCRETE WALLS TOP AND TOP 3 FT OF INTERIOR WALLS TO INCLUDE TROUGHS SHALL BE COATED WITH RAVEN 405
  4. COORDINATE WITH ALUMINUM COVER MANUFACTURERS FOR COVER SUPPORTS. PROVIDE SUBMITTAL TO ENGINEER.
  5. ALL EXPOSED REUSE WATER 2" AND SMALLER LINES SHALL BE S.S. AND SHALL BE FREEZE PROTECTED



**1 HEADWORKS UNDERGROUND PIPING**  
 M2.0B SCALE: 1/4" = 1'-0"



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**PLANT HEADWORKS PIPING**

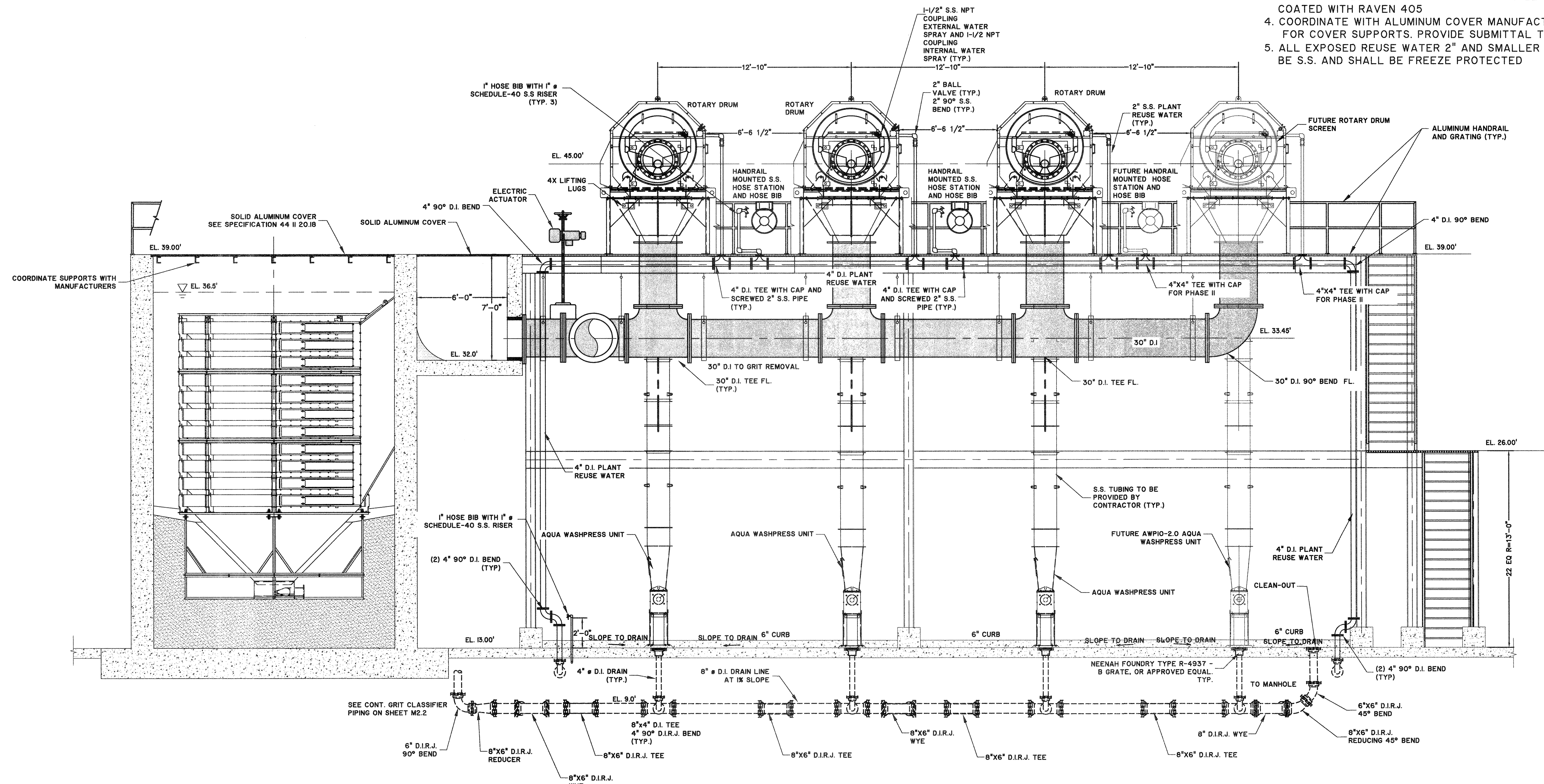
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DATE:	1-16-19
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APPROVED:	FS
SCALE:	AS NOTED

**M2.0B**

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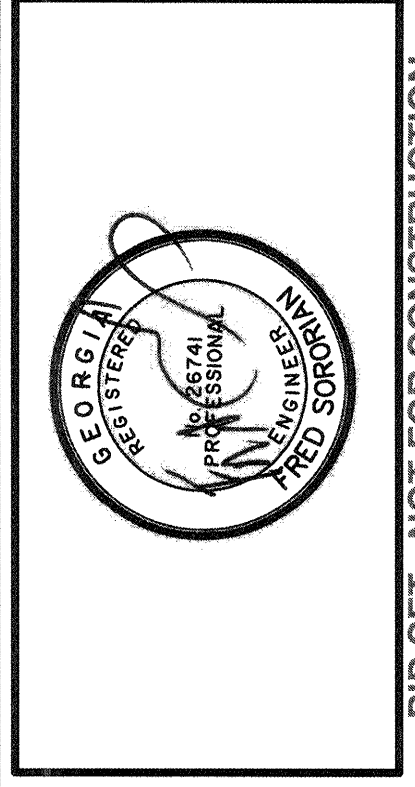


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1  
M2.0A M2.1 HEADWORKS SECTION VIEW  
SCALE: 1/4" = 1'-0"

- NOTE:**
1. ALL EXPOSED D.I. PIPING SHALL BE FREE OF ASPHALTIC COATING BEFORE FINAL COATING/PAINING
  2. THE ENTIRE GRIT SYSTEM TOP AND INFLUENT TROUGH AND EFFLUENT BY-PASS STRUCTURE SHALL BE COVERED WITH ALUMINUM COVER. SEE SPECIFICATION 44 II 20.18
  3. GRIT SYSTEM CONCRETE WALLS TOP AND TOP 3 FT OF INTERIOR WALLS TO INCLUDE TROUGHS SHALL BE COATED WITH RAVEN 405
  4. COORDINATE WITH ALUMINUM COVER MANUFACTURERS FOR COVER SUPPORTS. PROVIDE SUBMITTAL TO ENGINEER.
  5. ALL EXPOSED REUSE WATER 2" AND SMALLER LINES SHALL BE S.S. AND SHALL BE FREEZE PROTECTED



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TRAVIS FIELD WATER RECLAMATION FACILITY  
PLANT HEADWORKS SECTION VIEW

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DATE:	1-16-19
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APPROVED:	FS
SCALE:	1/4"=1'-0"

M2.1

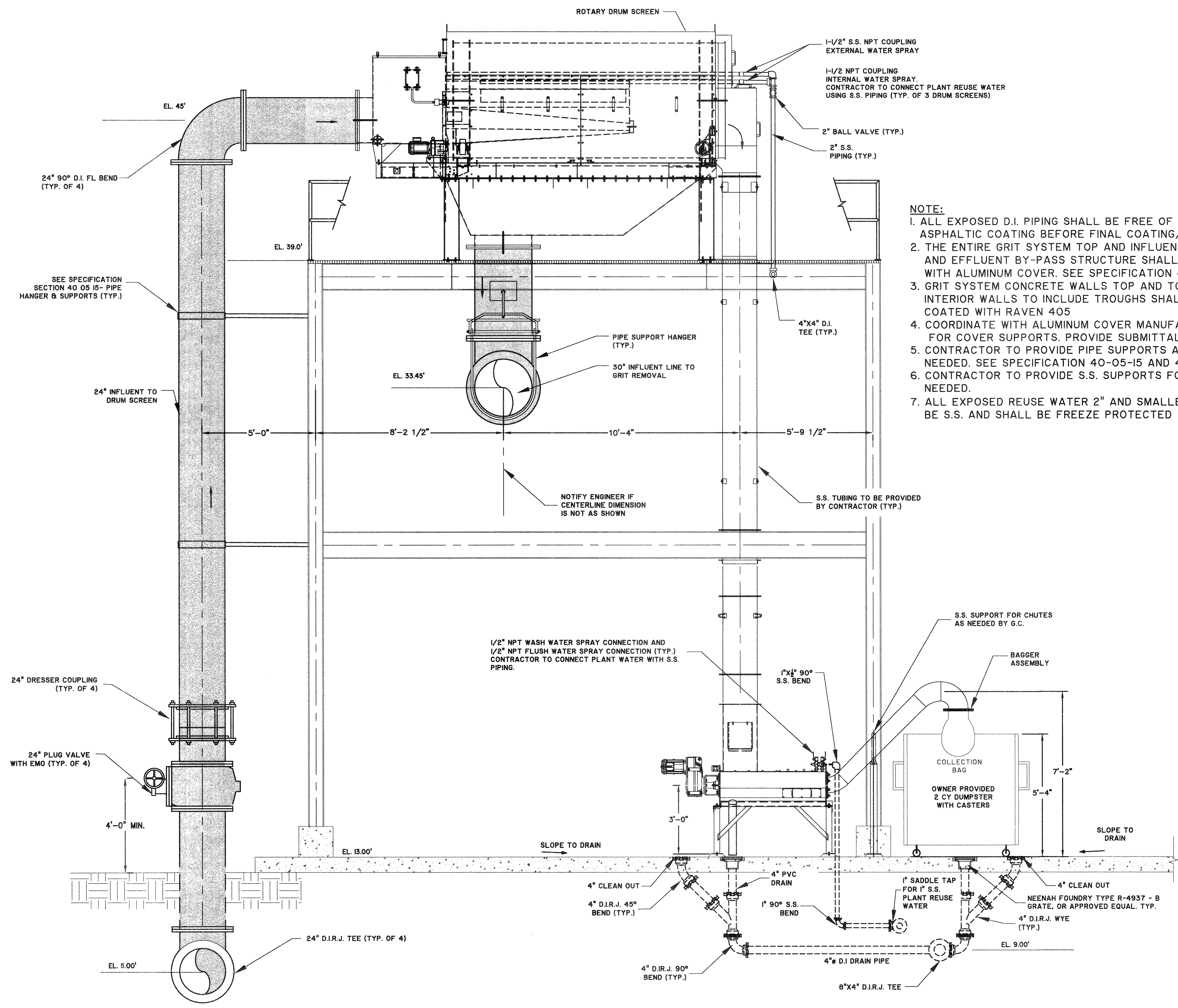
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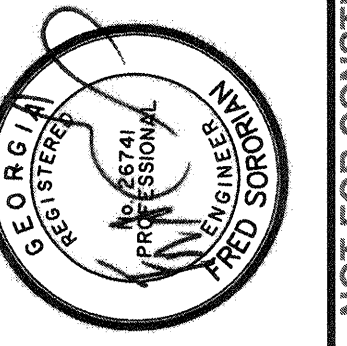


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- NOTE:**
1. ALL EXPOSED D.I. PIPING SHALL BE FREE OF ASPHALTIC COATING BEFORE FINAL COATING/PAINTING
  2. THE ENTIRE GRIT SYSTEM TOP AND INFLUENT TROUGH AND EFFLUENT BY-PASS STRUCTURE SHALL BE COVERED WITH ALUMINUM COVER. SEE SPECIFICATION 44 II 20.8
  3. GRIT SYSTEM CONCRETE WALLS TOP AND TOP 3 FT OF INTERIOR WALLS TO INCLUDE TROUGHS SHALL BE COATED WITH RAVEN 405
  4. COORDINATE WITH ALUMINUM COVER MANUFACTURERS FOR COVER SUPPORTS. PROVIDE SUBMITTAL TO ENGINEER.
  5. CONTRACTOR TO PROVIDE PIPE SUPPORTS AND HANGERS AS NEEDED. SEE SPECIFICATION 40-05-15 AND 40-05-15.10
  6. CONTRACTOR TO PROVIDE S.S. SUPPORTS FOR CHUTES AS NEEDED.
  7. ALL EXPOSED REUSE WATER 2" AND SMALLER LINES SHALL BE S.S. AND SHALL BE FREEZE PROTECTED

1 HEADWORKS SECTION VIEW  
 M2.04 M2.3 SCALE: 3/8"=1'-0"



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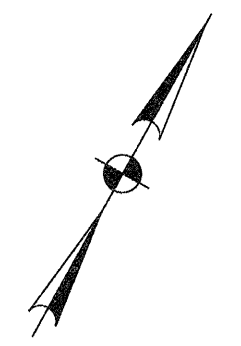
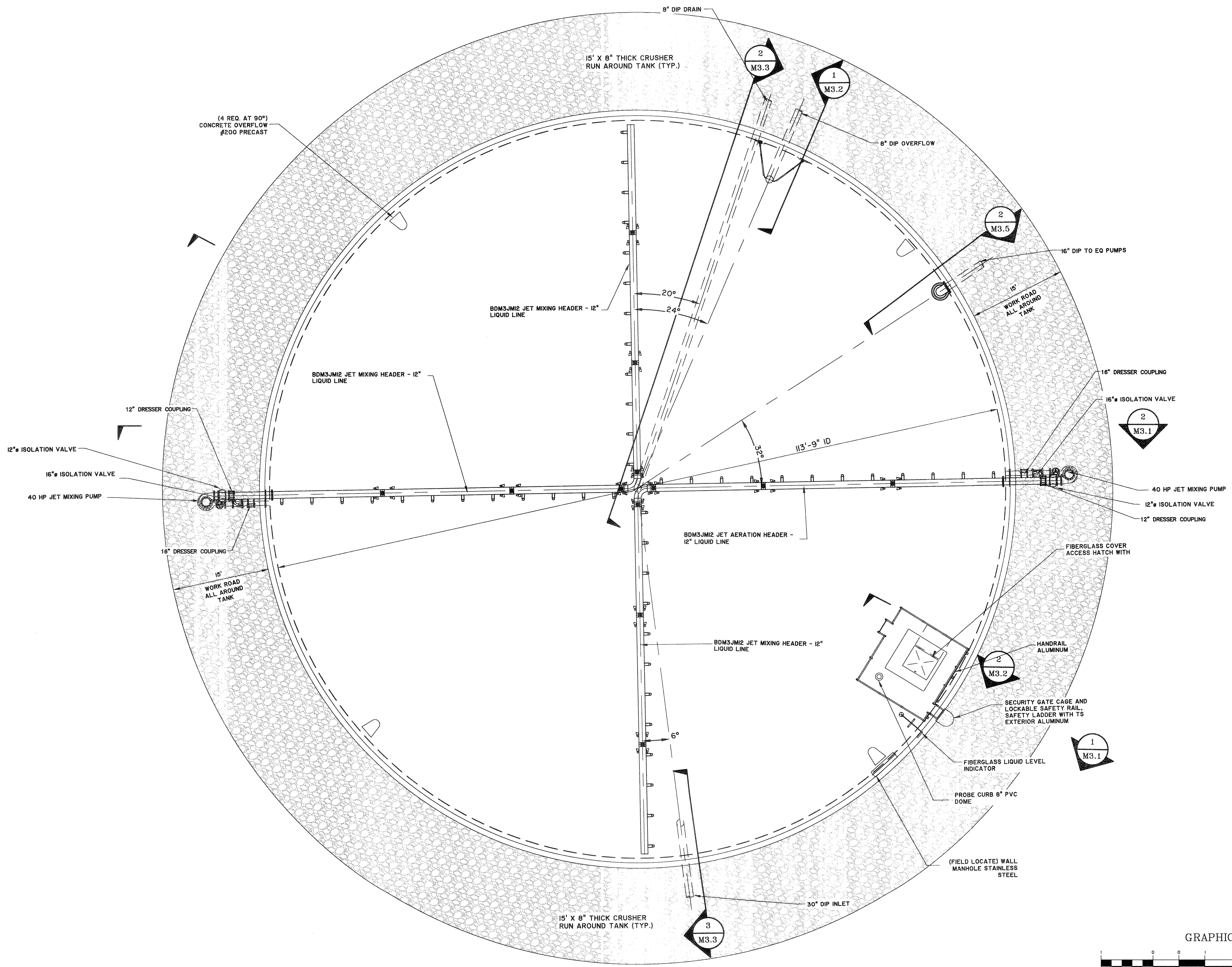
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 PLANT HEADWORKS SECTION VIEW

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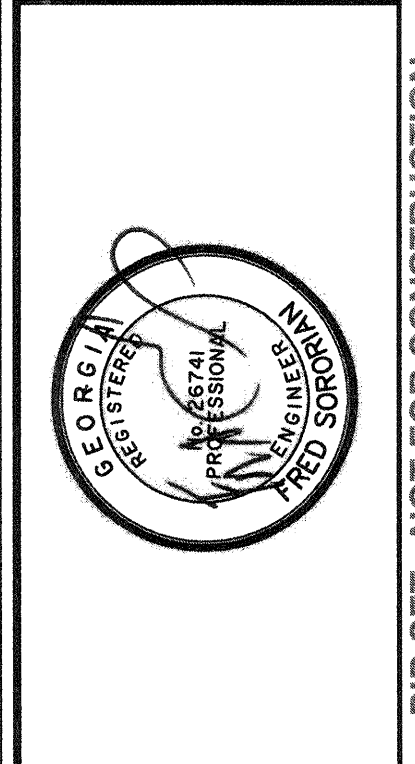
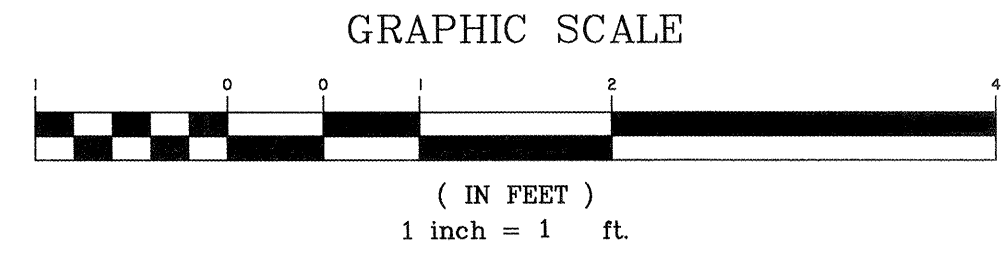
**M2.3**



2:18963.00000 Engineering/Construction/Plant/0803.0000 - EQ Tank Plan - Rev. 02.1018 - 02/14/13



**1** EQUALIZATION TANK PLAN  
SCALE: 1/8"=1'-0"



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**EQUALIZATION TANK PLAN VIEW**

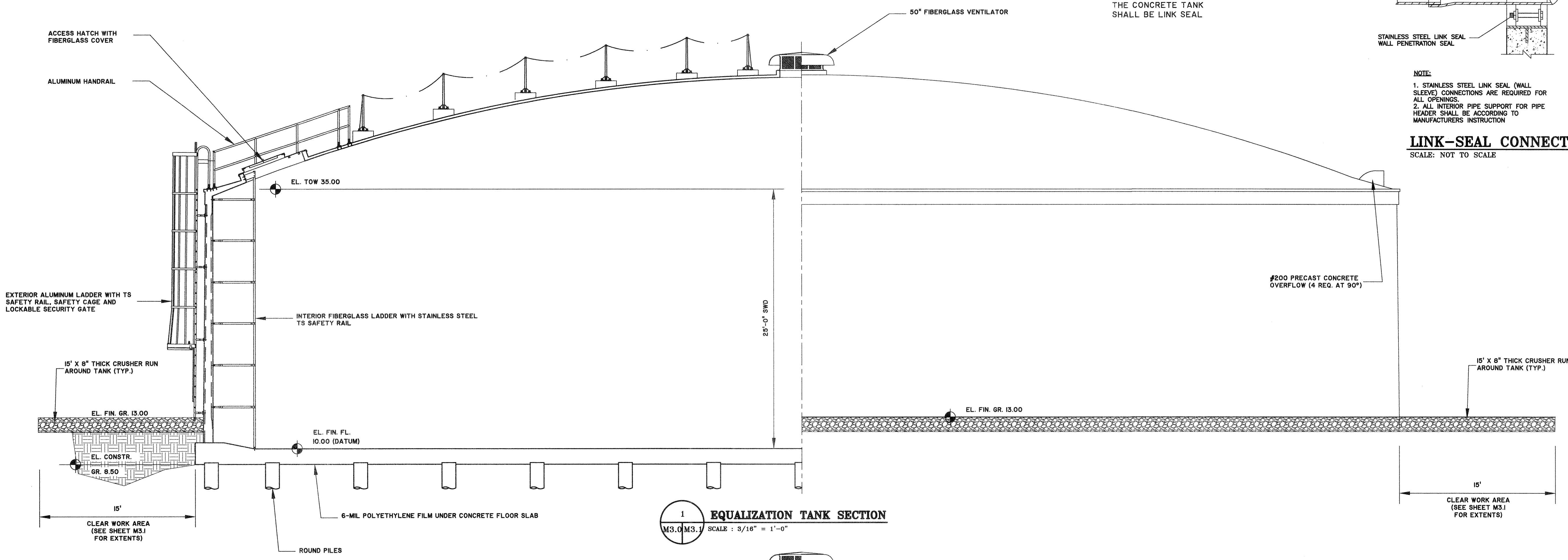
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DATE:	1-16-19
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SCALE:	1/8"=1'-0"

**M3.0**

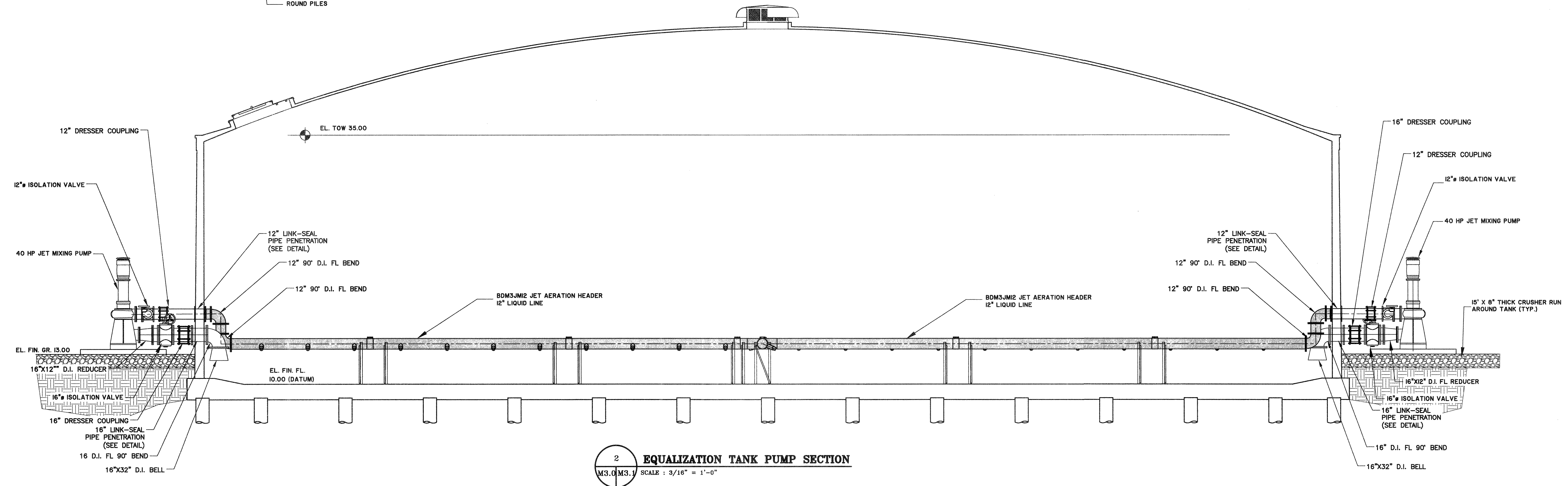
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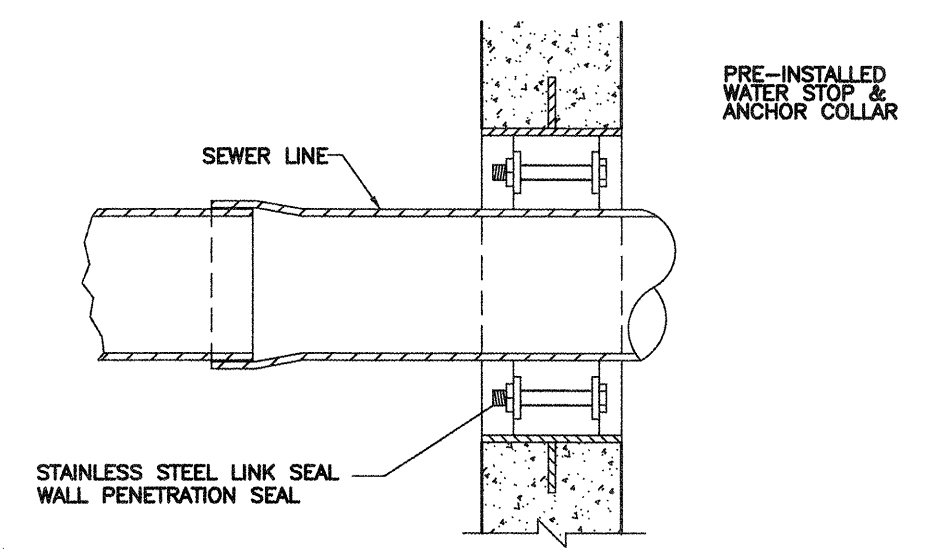


**1 EQUALIZATION TANK SECTION**  
SCALE: 3/16" = 1'-0"



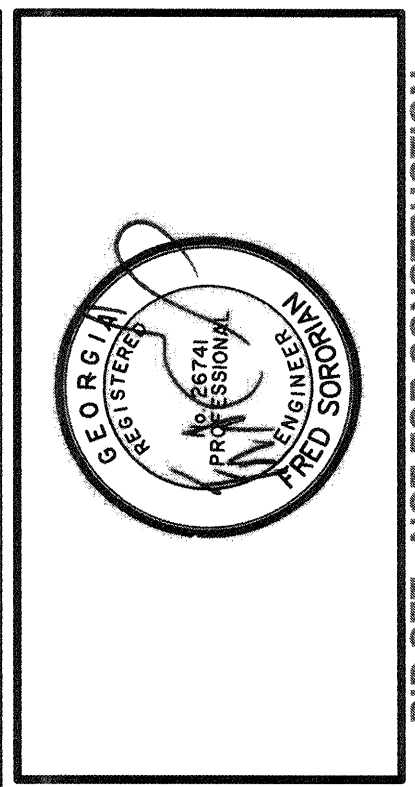
**2 EQUALIZATION TANK PUMP SECTION**  
SCALE: 3/16" = 1'-0"

NOTE: ALL OPENING TO THE CONCRETE TANK SHALL BE LINK SEAL



NOTE:  
1. STAINLESS STEEL LINK SEAL (WALL SLEEVE) CONNECTIONS ARE REQUIRED FOR ALL OPENINGS.  
2. ALL INTERIOR PIPE SUPPORT FOR PIPE HEADER SHALL BE ACCORDING TO MANUFACTURERS INSTRUCTION

**LINK-SEAL CONNECTION**  
SCALE: NOT TO SCALE



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**EQUALIZATION TANK SECTION VIEW**

JOB NO:	J-26963.0000
DATE:	1-16-19
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APPROVED:	FS
SCALE:	3/16"=1'-0"

**M3.1**

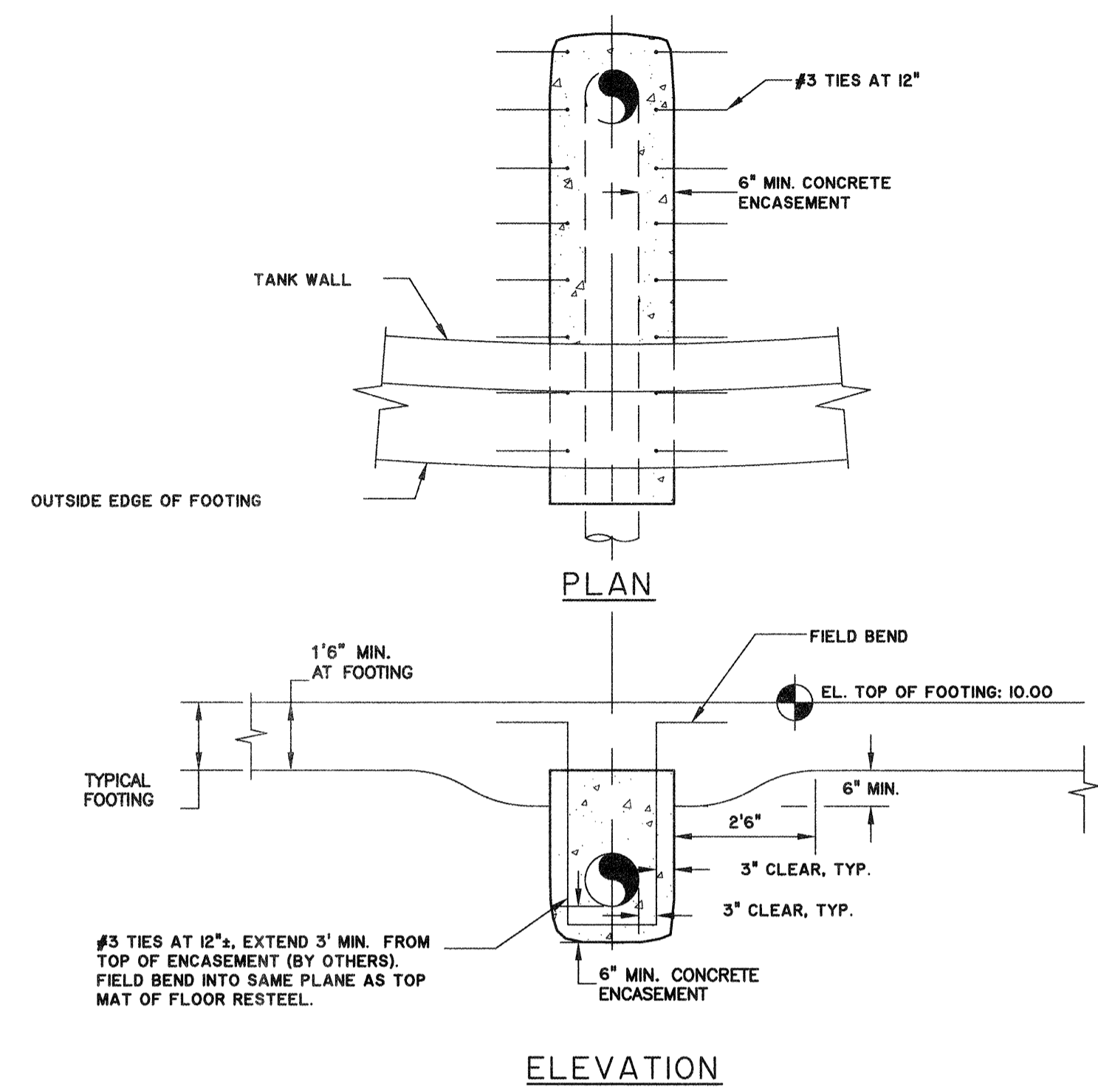
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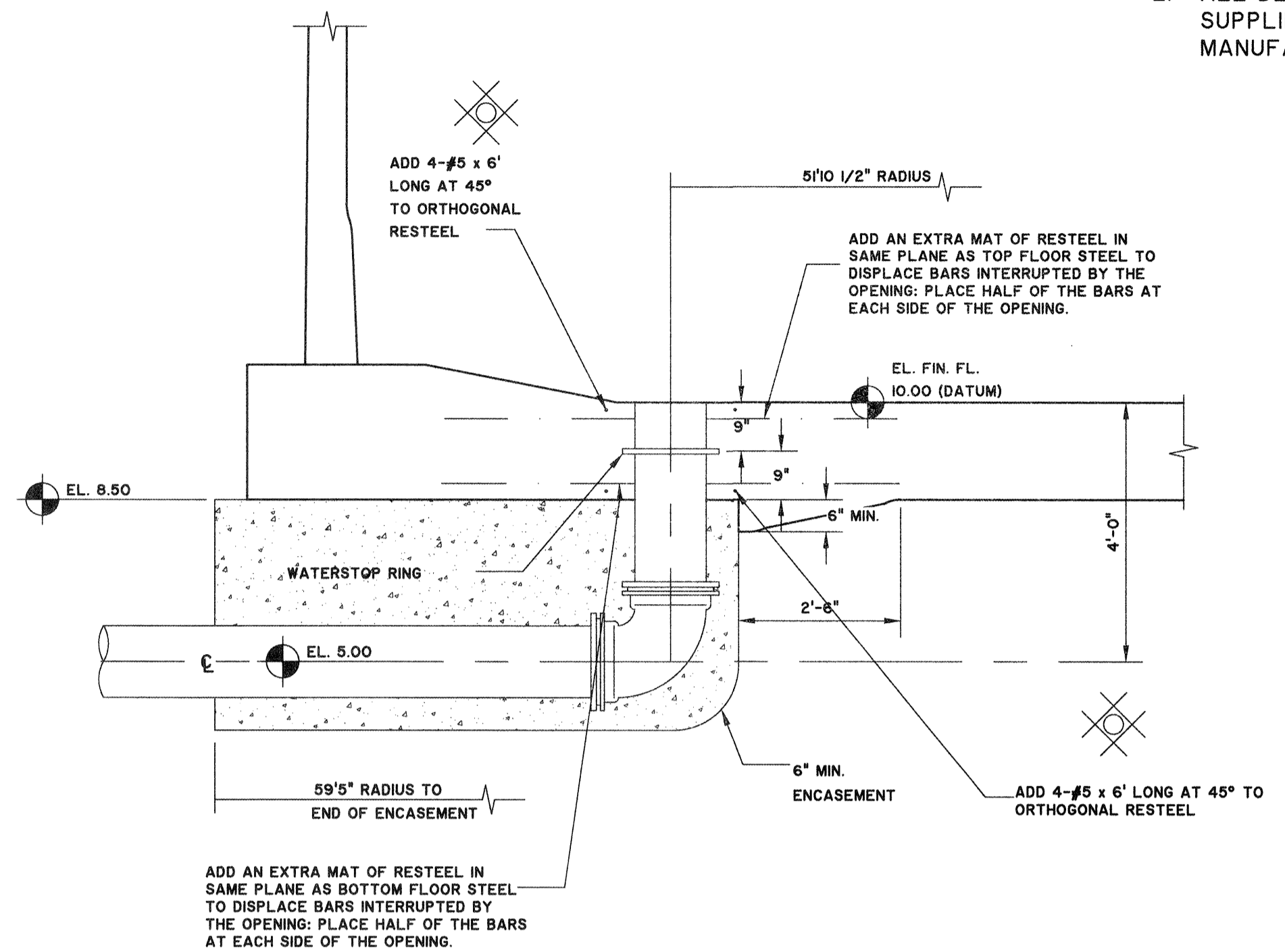




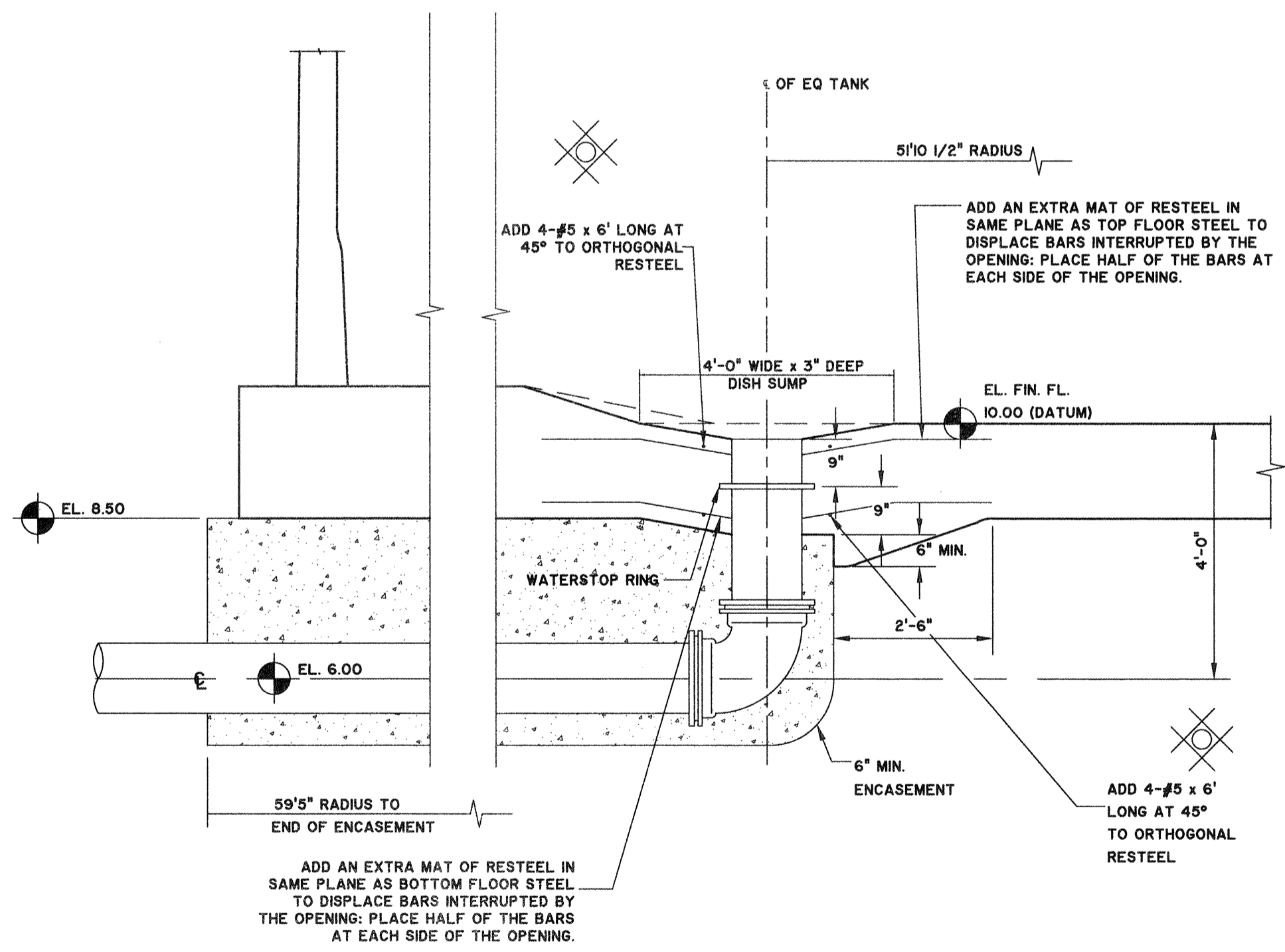
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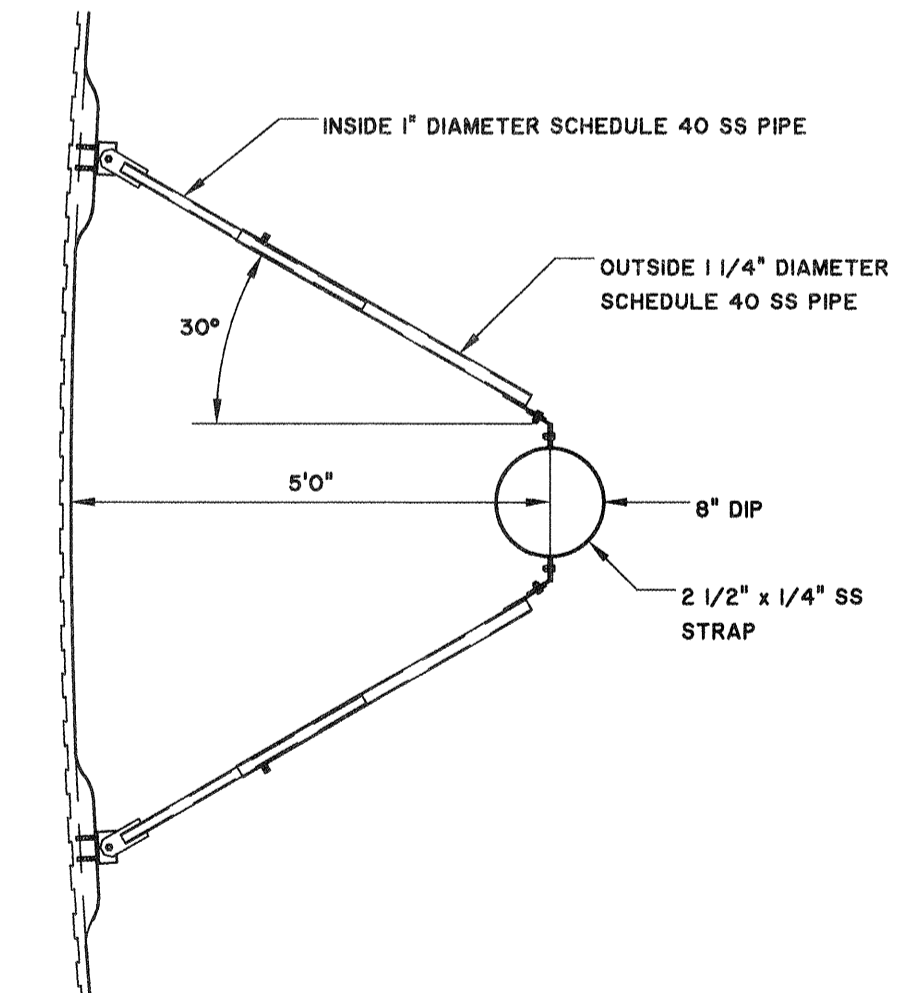
**1 TYPICAL PIPE ENCASEMENT AT FOOTING**  
 M3.3 SCALE: NTS



**3 30" D.I.P. INLET SECTION**  
 M3.3 SCALE: 1/8" = 1'-0"

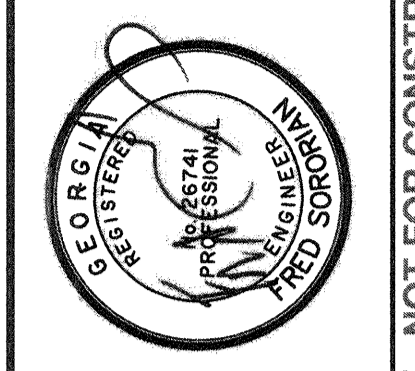


**2 8" D.I.P. DRAIN SECTION**  
 M3.3 SCALE: 1/8" = 1'-0"



**5 PIPE BRACKET**  
 M3.3 SCALE: 1/8" = 1'-0"

- NOTES:**
1. DETAILS ARE TYPICAL AND ARE SHOWN FOR BIDDING PURPOSES ONLY.
  2. ALL DETAILS ARE BASED UPON CROM TANK SUPPLIER. CONTRACTOR TO COORDINATE WITH TANK MANUFACTURER IF DIFFERENT TANK IS USED.



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 EQUALIZATION TANK PIPING DETAILS

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DRAWN:	CDR
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APPROVED:	FS
SCALE:	AS NOTED

**M3.3**

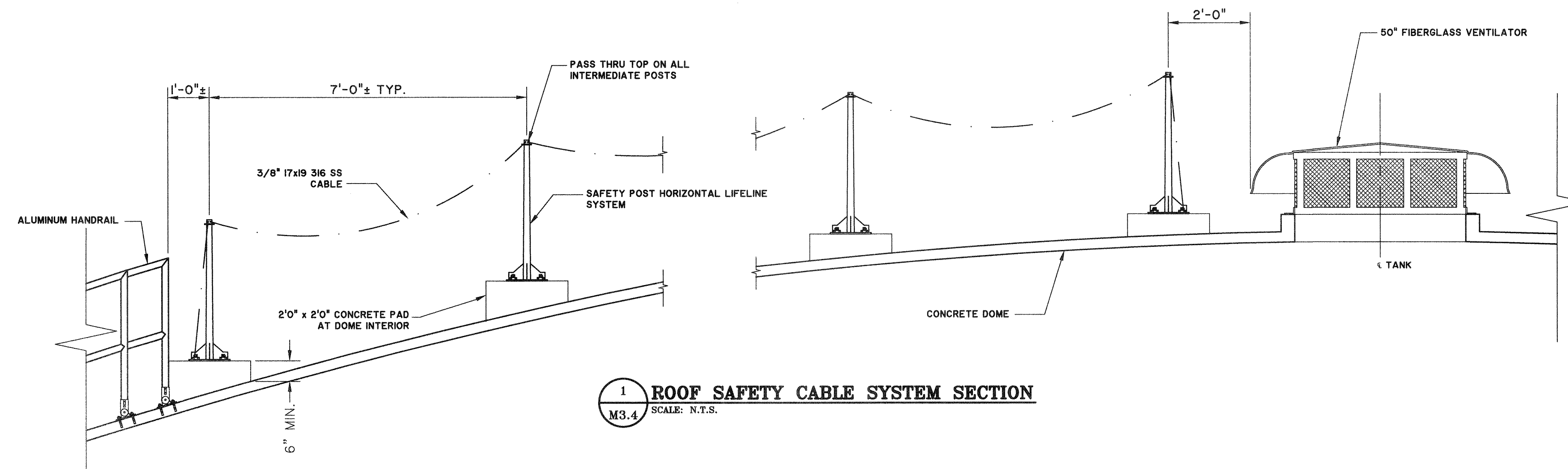
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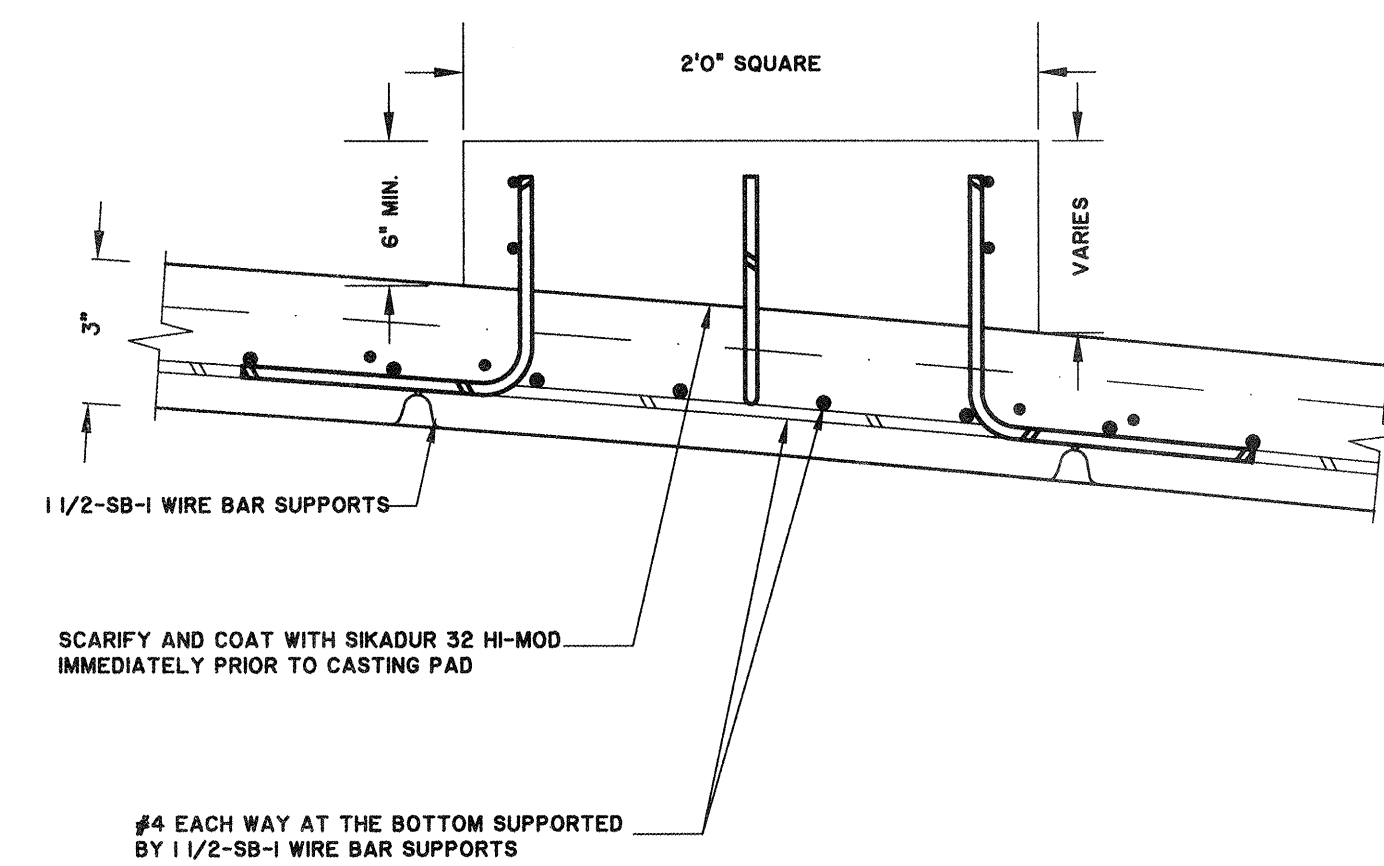
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**NOTES:**

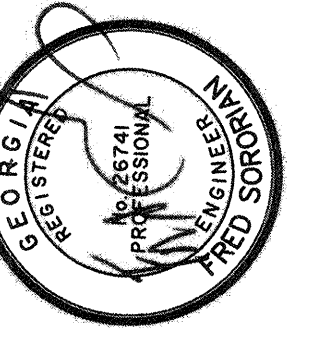
1. DETAILS ARE TYPICAL AND ARE SHOWN FOR BIDDING PURPOSES ONLY.
2. ALL DETAILS ARE BASED UPON CROM TANK SUPPLIER. CONTRACTOR TO COORDINATE WITH TANK MANUFACTURER IF DIFFERENT TANK IS USED.



**1 ROOF SAFETY CABLE SYSTEM SECTION**  
M3.4 SCALE: N.T.S.



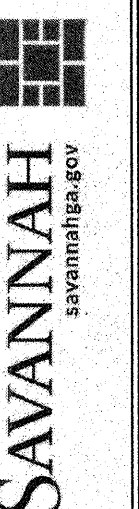
**2 CONCRETE PAD AT DOME INTERIOR**  
M3.4 SCALE: 1-1/2\"/>



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**EQUALIZATION TANK DETAILS**

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DATE:	1-16-19
DRAWN:	CDR
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APPROVED:	FS
SCALE:	AS NOTED

**M3.4**



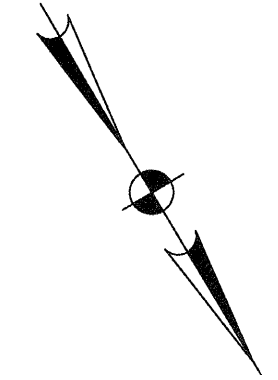
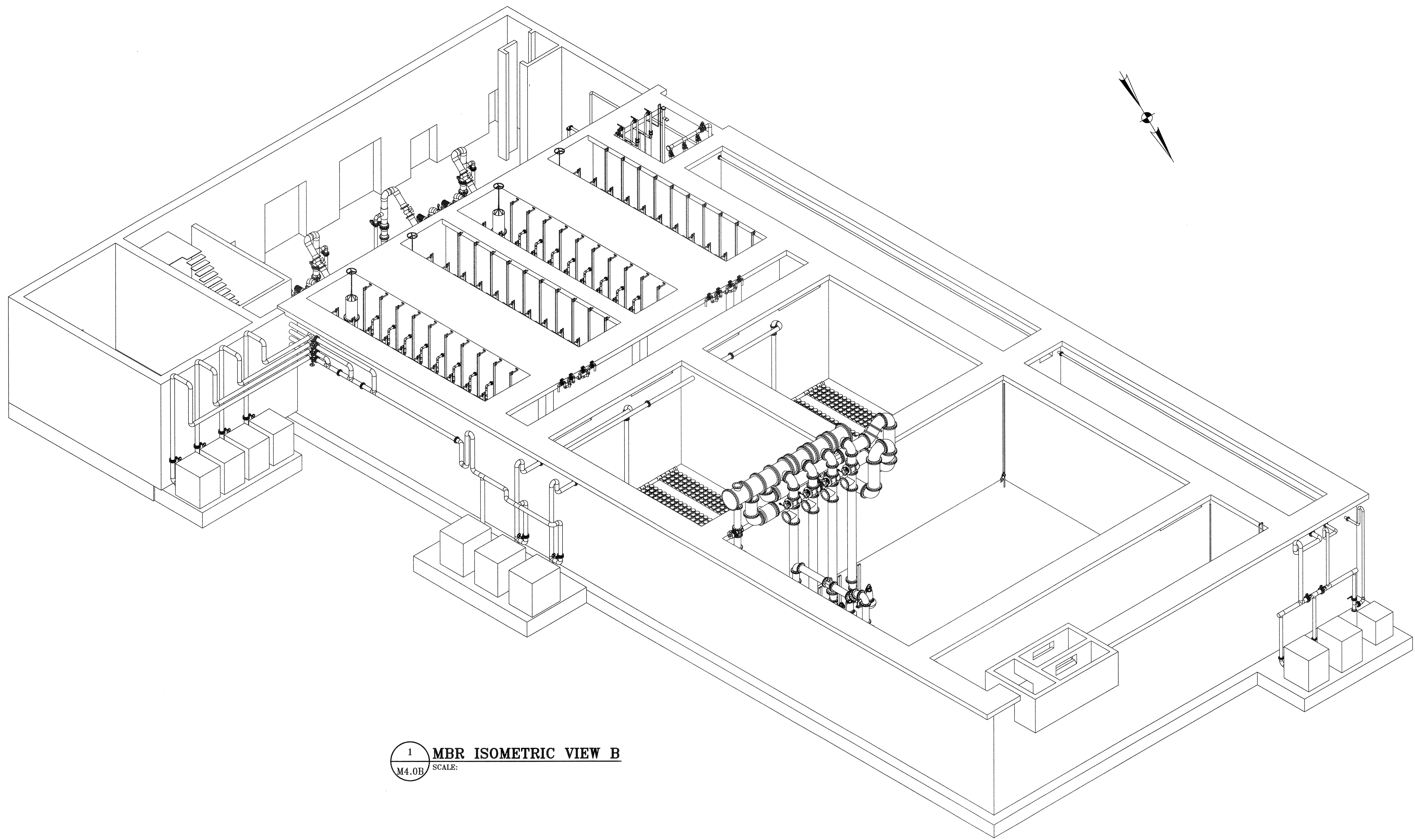




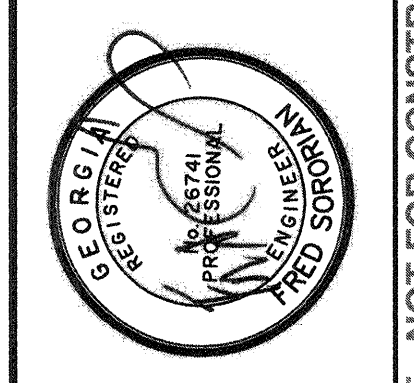




3. SAVANNAH WATER RECLAMATION FACILITY



1 MBR ISOMETRIC VIEW B  
M4.0B SCALE:



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TRAVIS FIELD WATER RECLAMATION FACILITY  
**MBR ISOMETRIC VIEW B**

JOB NO: J-26963.0000  
 DATE: 1-16-19  
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 DESIGNED: KI  
 REVIEWED: FS  
 APPROVED: FS  
 SCALE:

**M4.0B**

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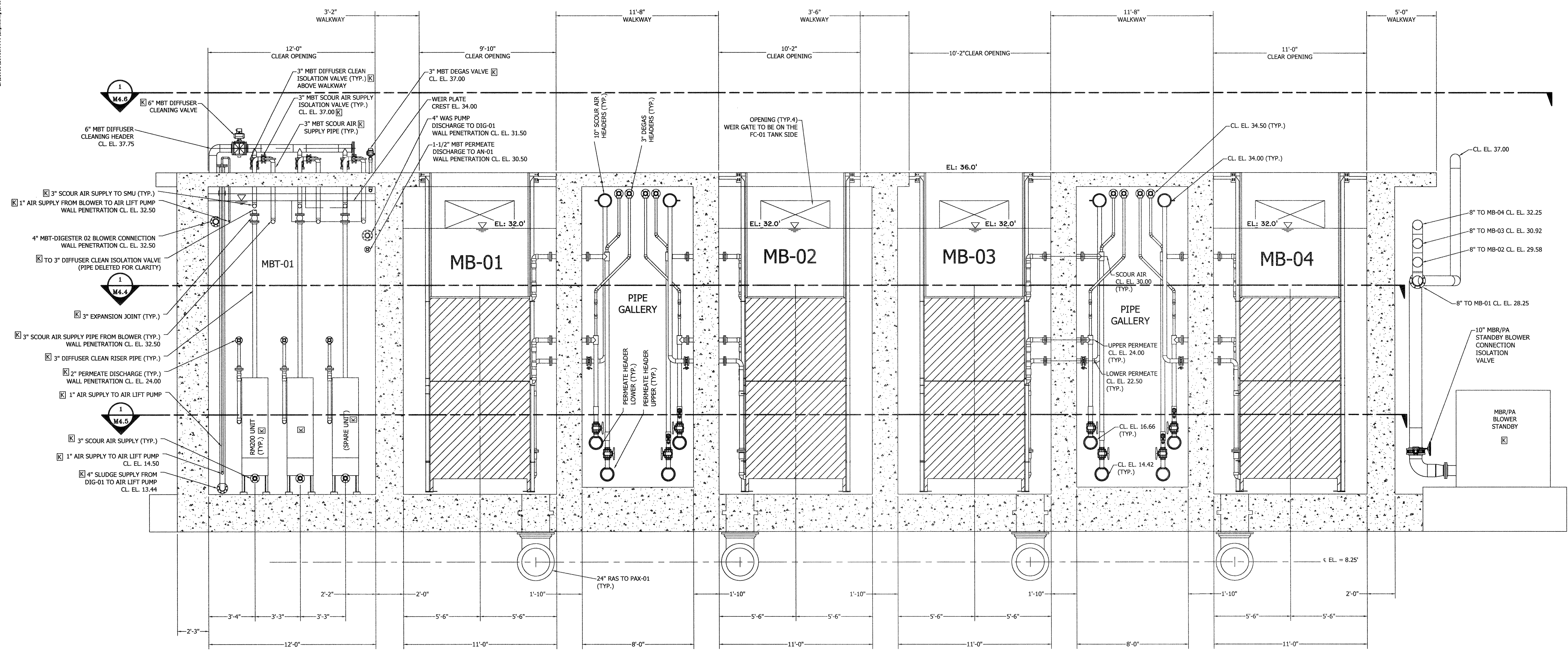






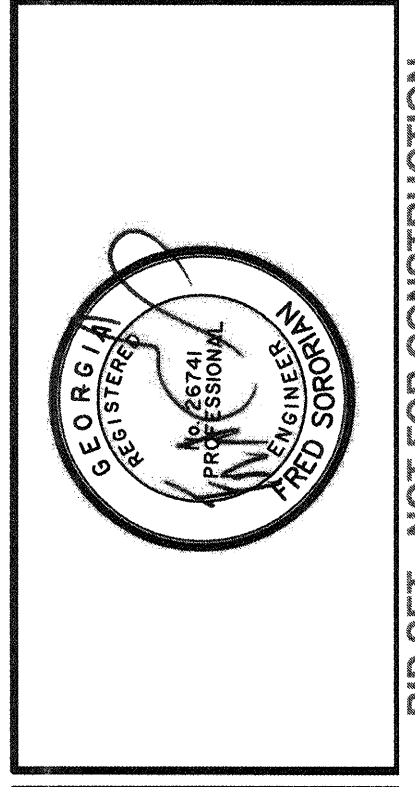


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**1**  
**M4.1 M4.3**  
**MBR AND MBT SECTION VIEW**  
 SCALE: 1/4" = 1'-0"

FOR CLARITY, FEED FORWARD PIPINGS ARE NOT SHOWN  
 [ ] - PROVIDED BY KUBOTA



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**MBR AND MBT SECTION VIEW**

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DESIGNED:	KI
REVIEWED:	FS
APPROVED:	FS
SCALE:	1/4" = 1'-0"

**M4.3**

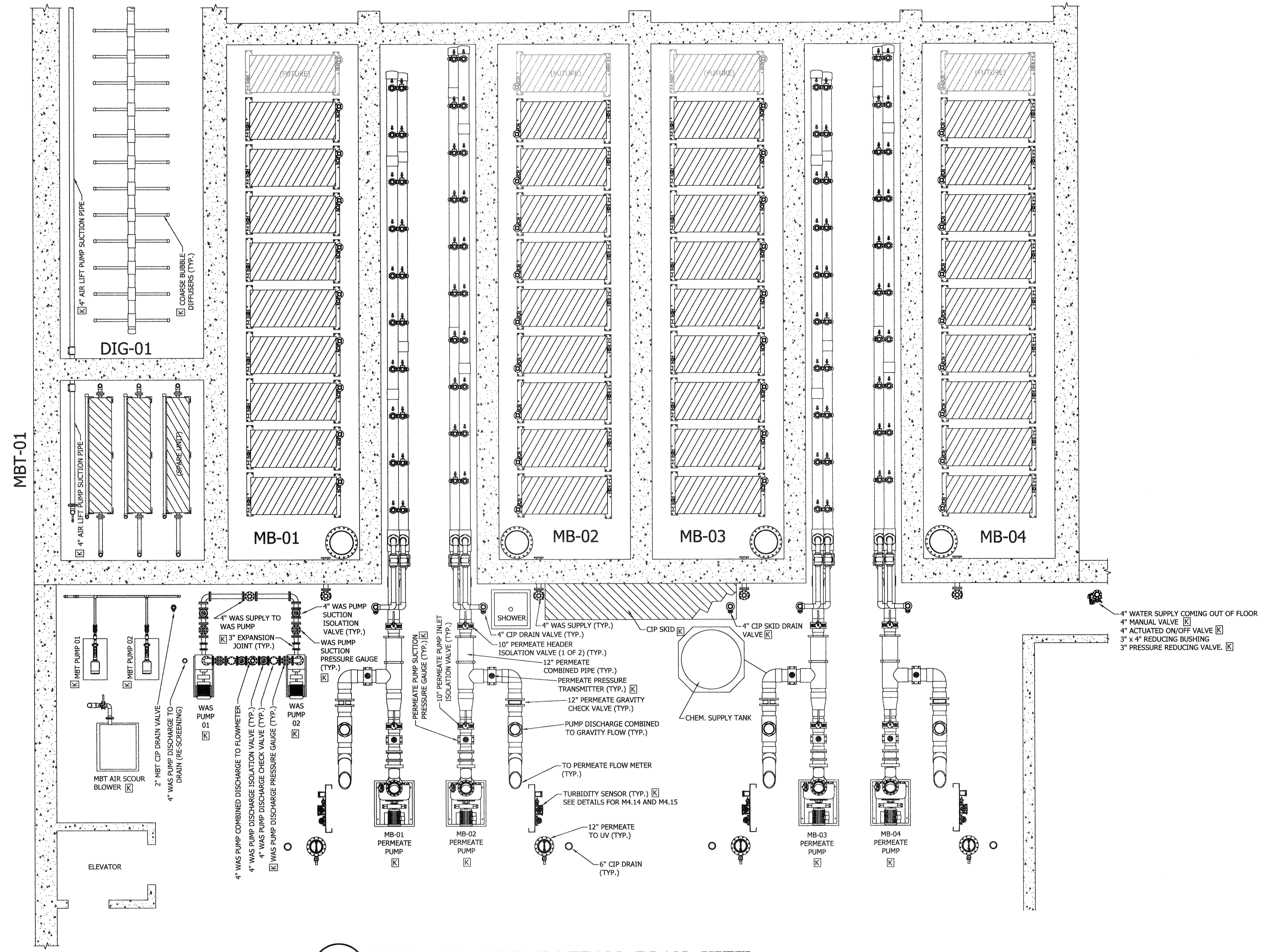
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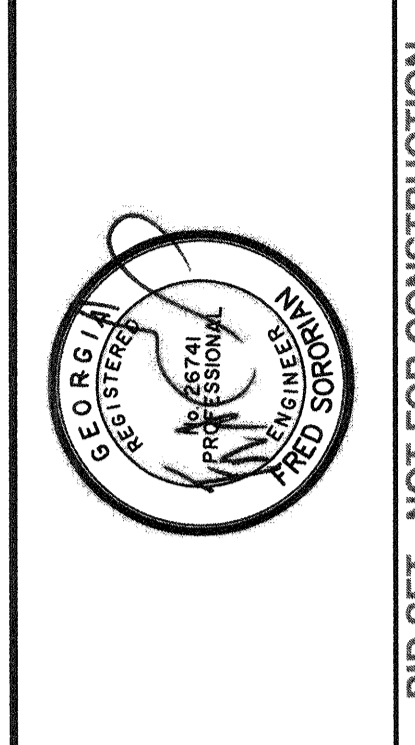


25.00000.0000 Engineering/Design/Construction Plans/00000000 - M4.5 MBR and MBT System - 10/16/19



**1**  
**M4.5** **MBR AND MBT BOTTOM PLAN VIEW**  
 SCALE: 3/16" = 1'-0"

- SEE SHEET M4.16 FOR DETAILED LABELS FOR MBT SYSTEM.
- DRAIN SUMMARY**
- FOUR (4) 6" CIP DRAIN (ONE (1) PER PERMEATE PUMP) TO DISCHARGE WASTE CHEMICAL IN PERMEATE BEFORE SENDING THE PERMEATE TO UV SYSTEM.
  - FOUR (4) 4" CIP DRAIN (ONE (1) PER MEMBRANE TANK) TO DISCHARGE RESIDUAL CHEMICAL INSIDE THE CIP SUPPLY PIPE AND FLUSH WATER.
  - ONE (1) 2" MBT CIP DRAIN TO DISCHARGE RESIDUAL CHEMICAL INSIDE THE CIP SUPPLY PIPE AND FLUSH WATER.
  - ONE (1) 4" CIP DRAIN FROM CIP SKID TO DISCHARGE RESIDUAL CHEMICAL INSIDE THE CIP SKID AND FLUSH WATER.
  - ONE (1) 4" WAS DRAIN FOR RE-SCREENING.
  - [Symbol] - PROVIDED BY KUBOTA



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**MBR AND MBT BOTTOM PLAN VIEW**

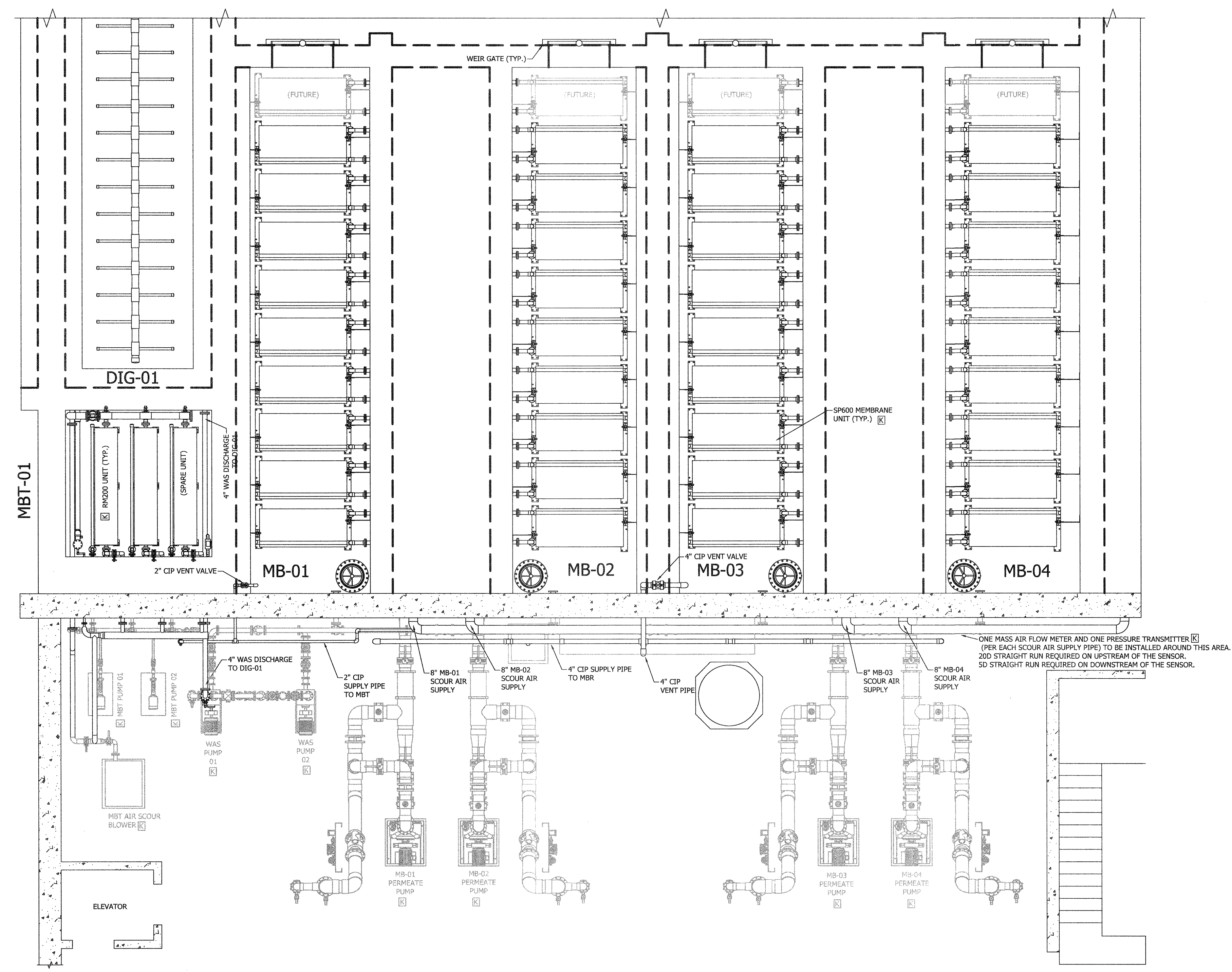
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APPROVED:	FS
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**M4.5**

BID SET - NOT FOR CONSTRUCTION

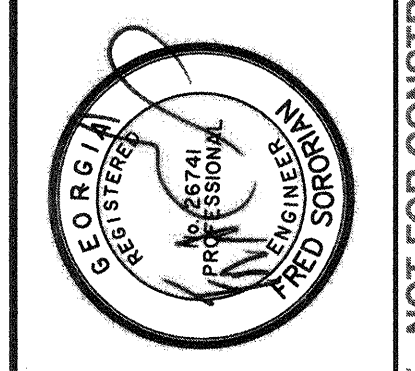


2/15/2018 10:00:00 AM C:\Users\jgibson\Documents\Projects\2018\20180215\20180215.dwg - Apr 24, 2018 - 10:00:00 AM



**1**  
**MBR AND MBT TOP PLAN VIEW**  
 SCALE: 3/16"=1'-0"

SEE SHEET M4.16 FOR DETAILED LABELS FOR MBT SYSTEM.  
 [ ] - PROVIDED BY KUBOTA



NO.	ISSUED FOR	BY	DATE
0	ISSUED FOR BIDS		
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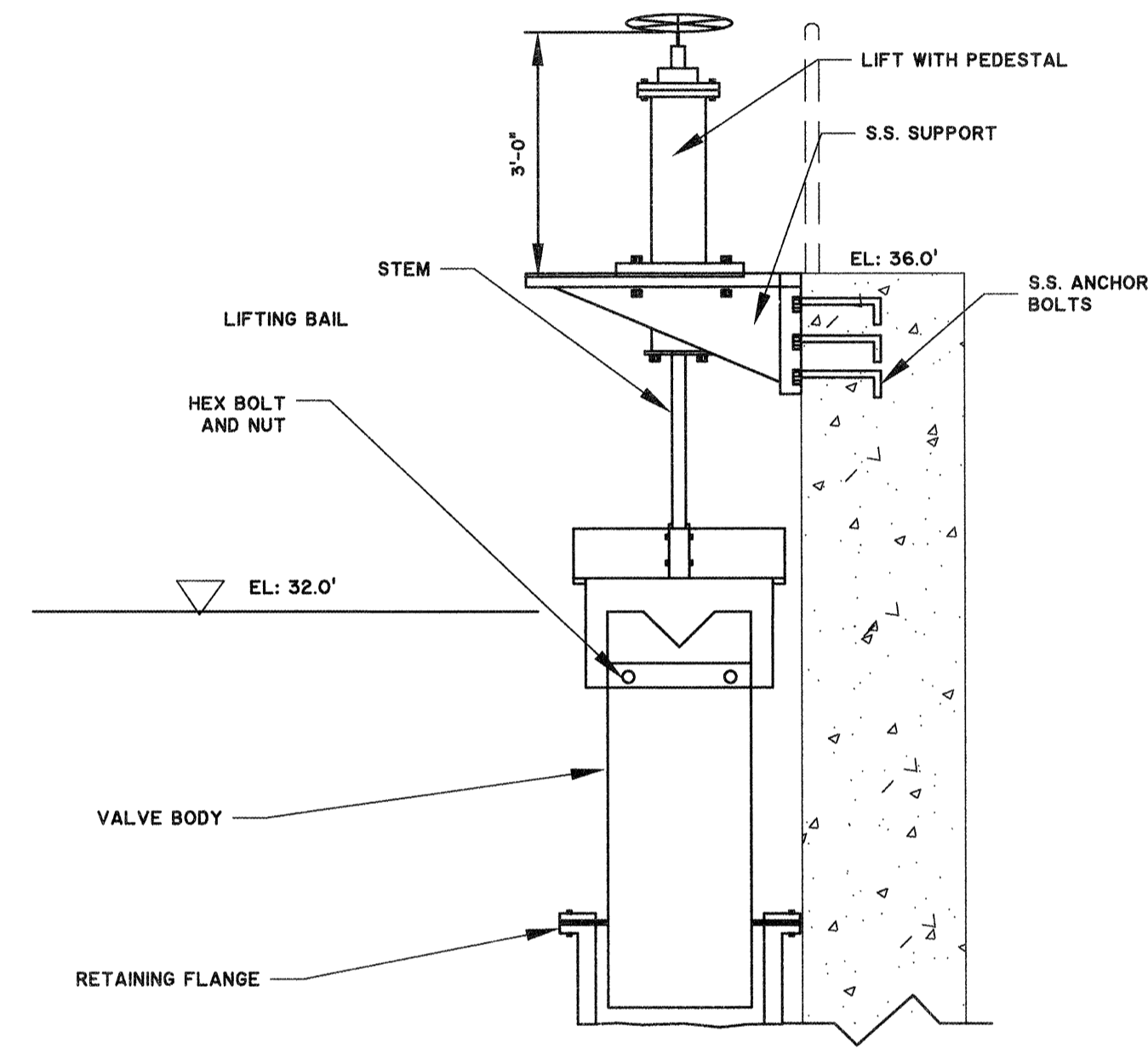
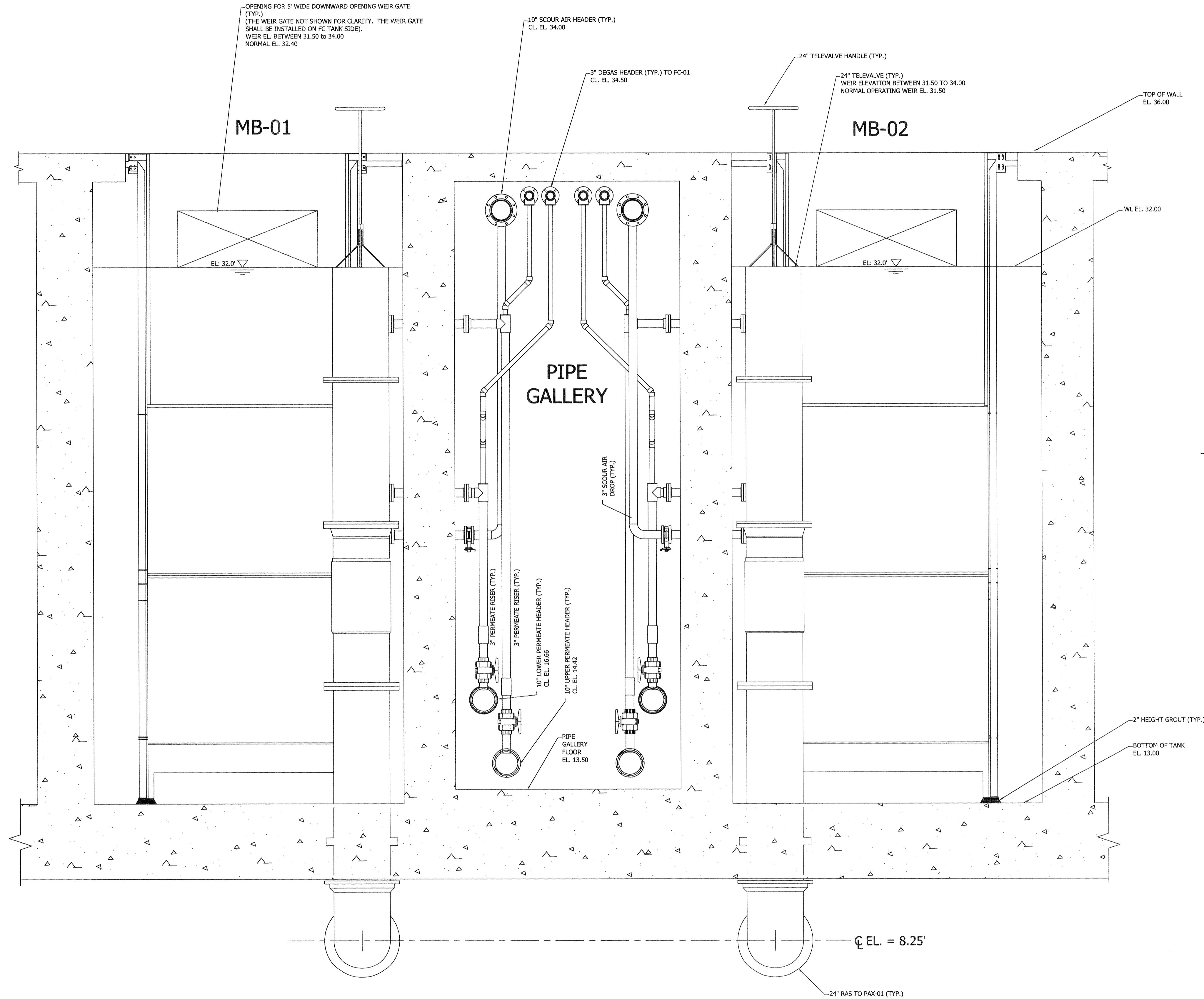
TRAVIS FIELD WATER RECLAMATION FACILITY  
**MBR AND MBT TOP PLAN VIEW**

JOB NO: J-26963.0000  
 DATE: 1-16-19  
 DRAWN: KI  
 REVIEWED: FS  
 APPROVED: FS  
 SCALE: 3/16"=1'-0"

**M4.6**

BID SET - NOT FOR CONSTRUCTION

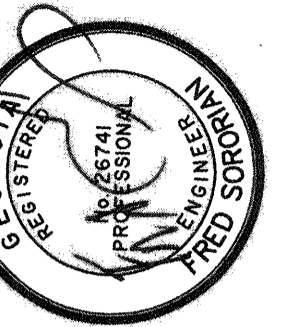




**TYPICAL TELESCOPING VALVE DETAIL**  
SCALE: 1/2"=1'-0"

**1 MB-01 AND MB-02 SECTION VIEW**  
SCALE: 1/2"=1'-0"

FOR CLARITY, FEED FORWARD PIPINGS ARE NOT SHOWN  
TYP. FOR MB-03 AND MB-04  
SEE M4.8 FOR ELEVATION OF THE PENETRATIONS.  
K - PROVIDED BY KUBOTA



BID SET - NOT FOR CONSTRUCTION

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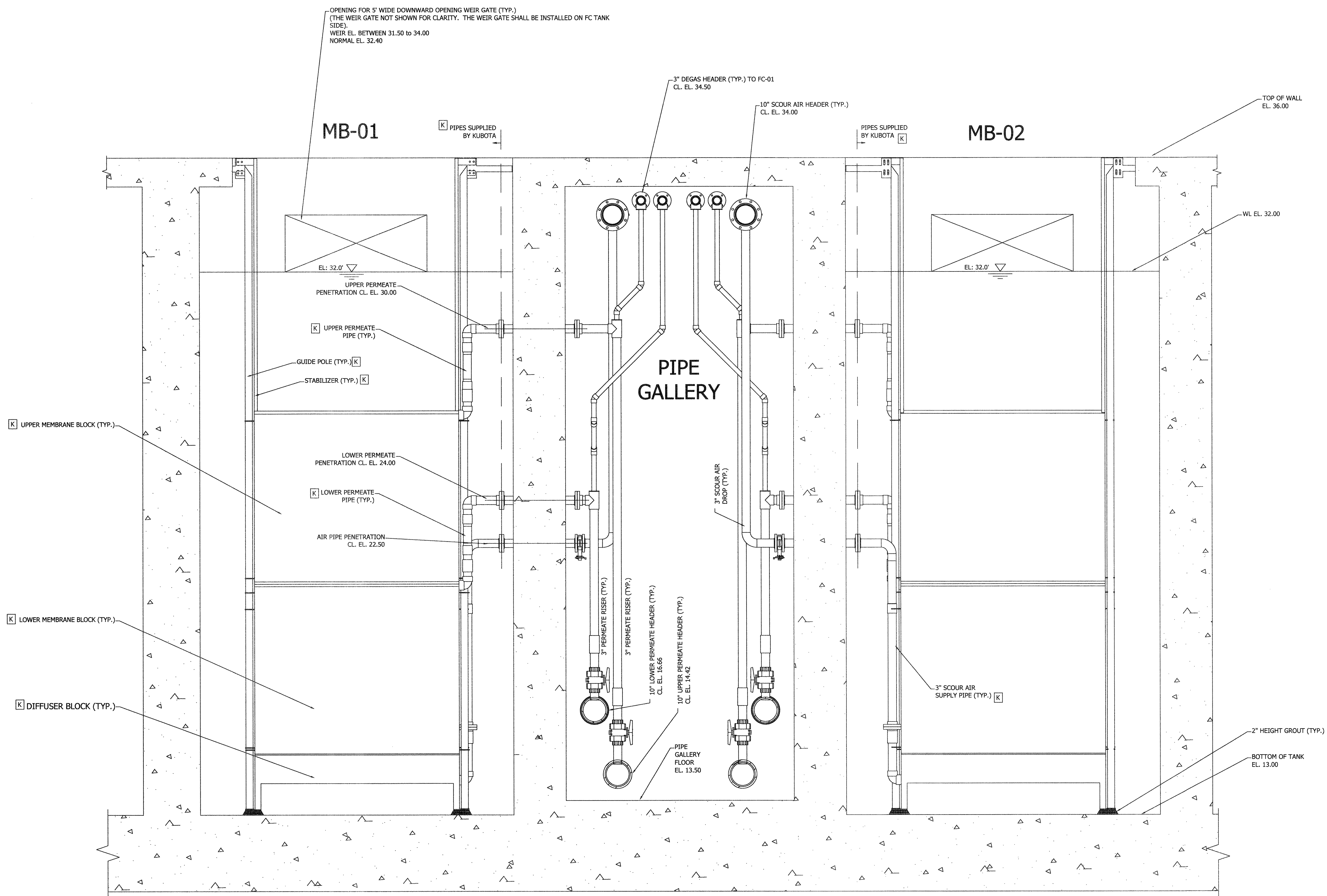
TRAVIS FIELD WATER RECLAMATION FACILITY  
**MB-01 & MB-02 SECTION VIEW**

JOB NO:	J-26963.0000
DATE:	1-16-19
DRAWN:	KI
DESIGNED:	KI
REVIEWED:	FS
APPROVED:	FS
SCALE:	1/2"=1'-0"

**M4.7**

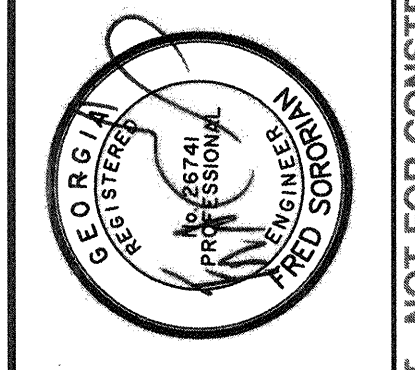


20190520 10:53:00 AM C:\Users\jgibson\Documents\Projects\Travis Field Water Reclamation Facility\Drawings\MB-01 & MB-02 Section View.dwg - 1/24/19 - 10:53:00 AM



**1 MB-01 AND MB-02 SECTION VIEW**  
 SCALE: 1/2"=1'-0"

FOR CLARITY, FEED FORWARD PIPINGS ARE NOT SHOWN TYP. FOR MB-03 AND MB-04  
 K - PROVIDED BY KUBOTA



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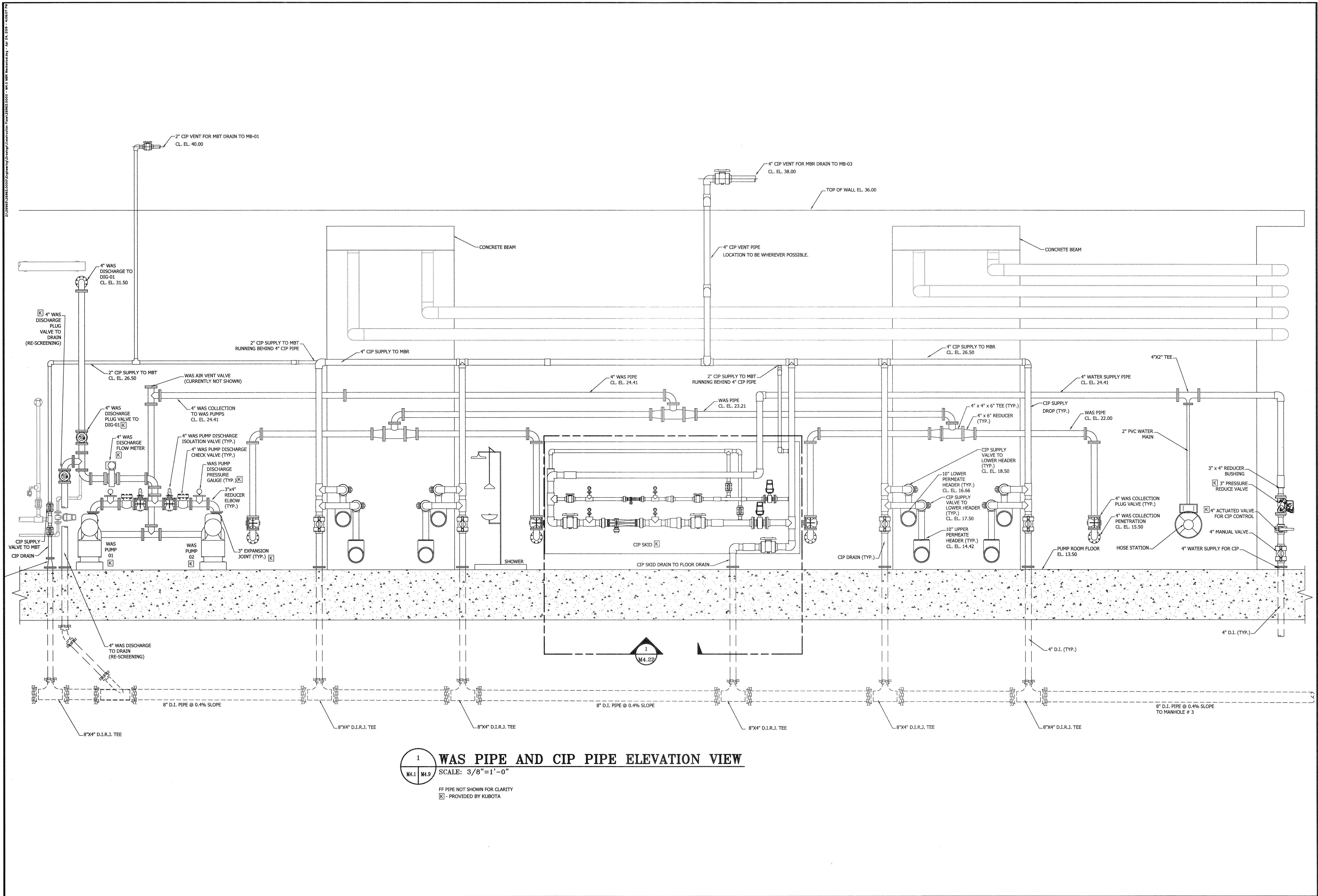
**SAVANNAH** savannahga.gov  
 TRAVIS FIELD WATER RECLAMATION FACILITY  
**MB-01 & MB-02 SECTION VIEW**

JOB NO:	J-26963.0000
DATE:	1-16-19
DRAWN:	KI
DESIGNED:	KI
REVIEWED:	FS
APPROVED:	FS
SCALE:	1/2"=1'-0"

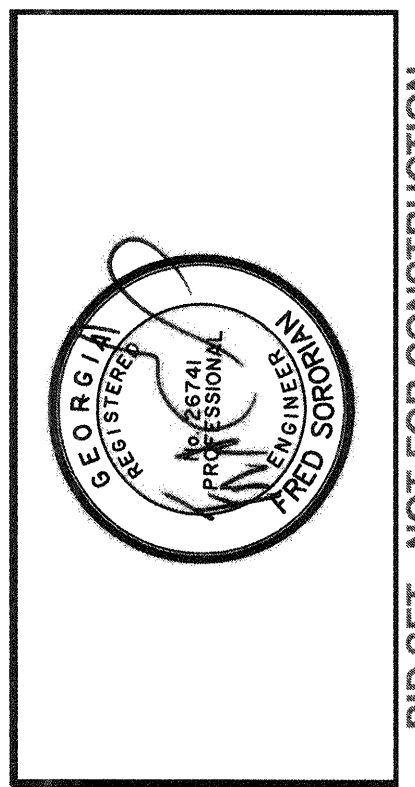
**M4.8**

BID SET - NOT FOR CONSTRUCTION





**1 WAS PIPE AND CIP PIPE ELEVATION VIEW**  
 SCALE: 3/8"=1'-0"  
 FF PIPE NOT SHOWN FOR CLARITY  
 [K] - PROVIDED BY KUBOTA



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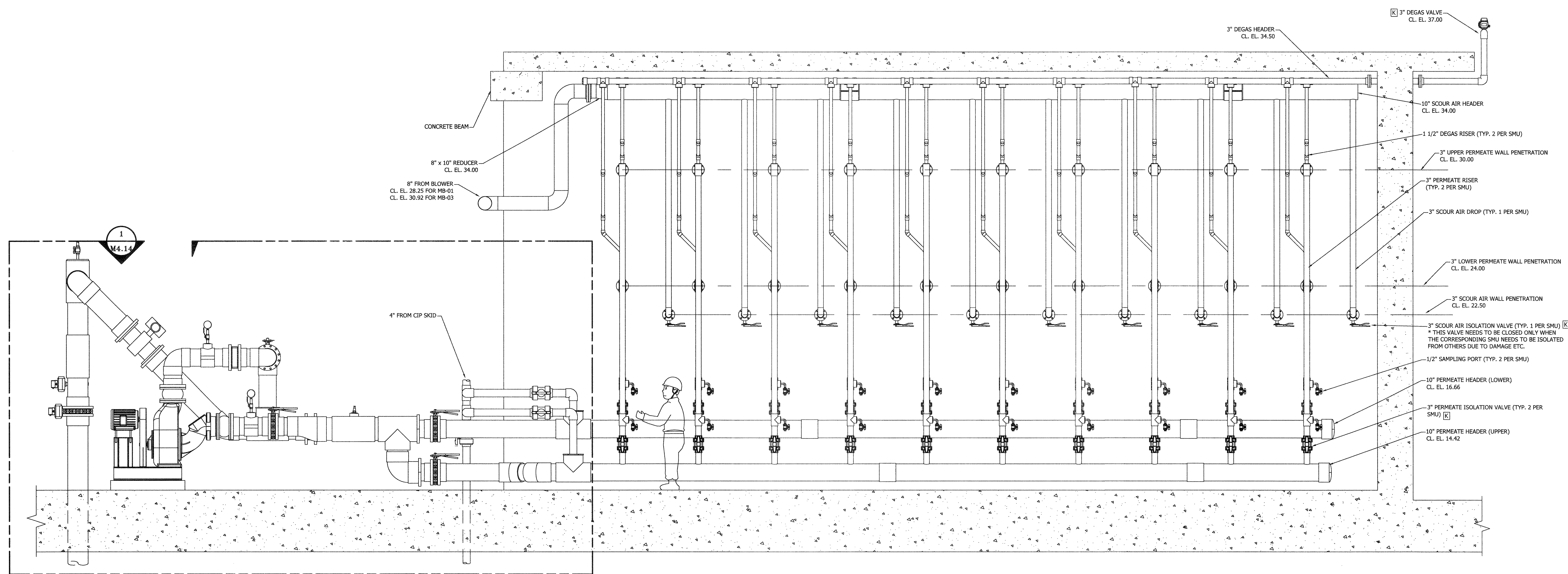
TRAVIS FIELD WATER RECLAMATION FACILITY  
**WAS PIPE AND CIP PIPE ELEVATION**

JOB NO: J-26963.0000  
 DATE: 1-16-19  
 DRAWN: KI  
 DESIGNED: KI  
 REVIEWED: FS  
 APPROVED: FS  
 SCALE: 3/8"=1'-0"

**M4.9**

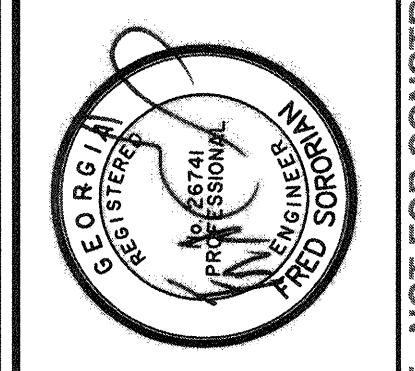
BID SET - NOT FOR CONSTRUCTION

23/08/2019 10:00 AM C:\Users\jdoyle\Documents\Projects\2019\20190823\MB-01 Pipe Gallery Section View.dwg - Mr. J. L. ... - 4/20/2019 PM



**1**  
**MB-01 PIPE GALLERY SECTION VIEW**  
 SCALE: 3/8"=1'-0"  

 WAS PUMP/PIPE, CIP PIPE, MBT PERMEATE PIPE ARE NOT SHOWN FOR CLARITY.  
 TYP. FOR MB-03  
 [K] PROVIDED BY KUBOTA



NO.	ISSUED FOR BIDS	REVISIONS	DATE
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**MB-01 PIPE GALLERY SECTION VIEW**

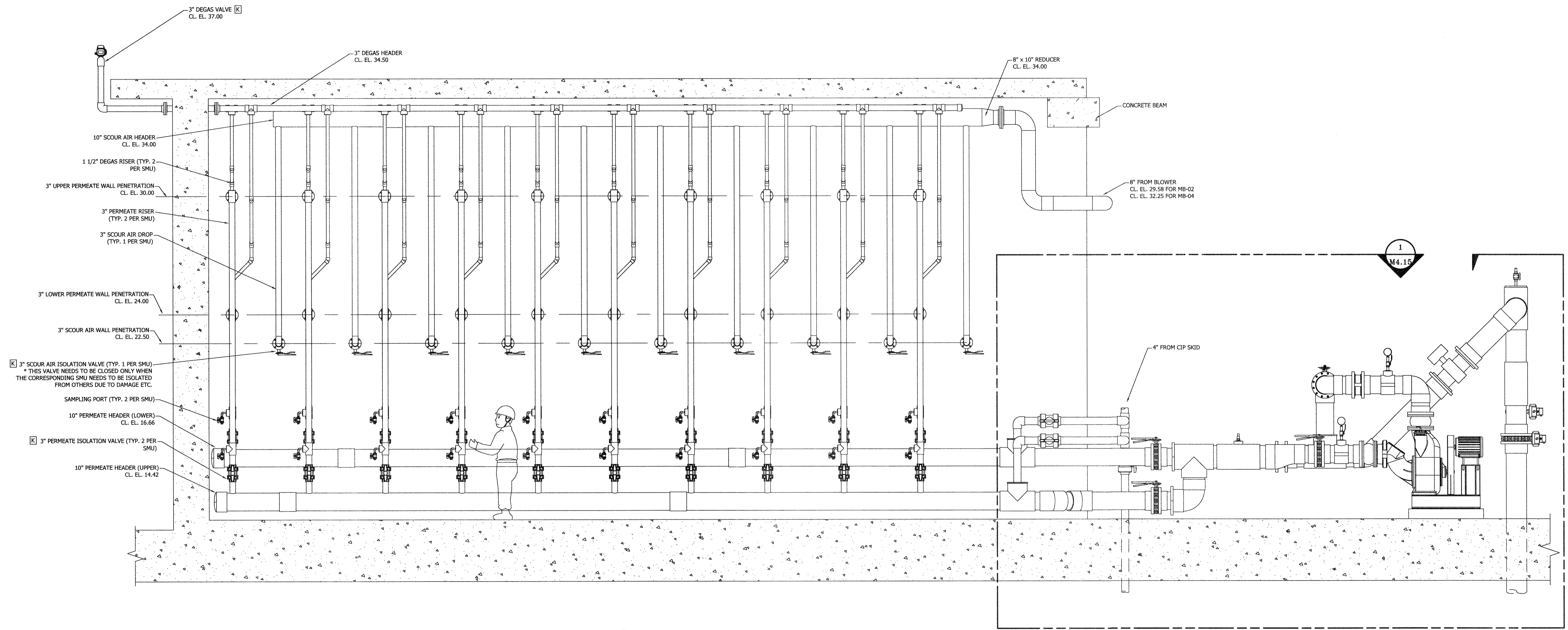
JOB NO:	J-26563.0000
DATE:	1-16-19
DRAWN:	KI
DESIGNED:	KI
REVIEWED:	FS
APPROVED:	FS
SCALE:	3/8"=1'-0"

**M4.10**

BID SET - NOT FOR CONSTRUCTION

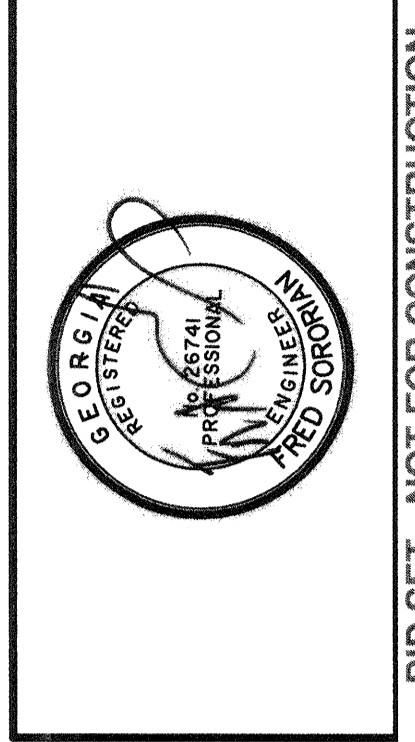


Z:\PROJECTS\2019\20190501\TravisFieldWaterReclamation\Drawings\MB-02 Pipe Gallery Section View.dwg - 24/05/19 - 10:00 AM



**1** MB-02 PIPE GALLERY SECTION VIEW  
 SCALE: 3/8"=1'-0"

WAS PIPE, AND CIP PIPE ARE NOT SHOWN FOR CLARITY.  
 TYP. FOR MB-04  
 [K] PROVIDED BY KUBOTA



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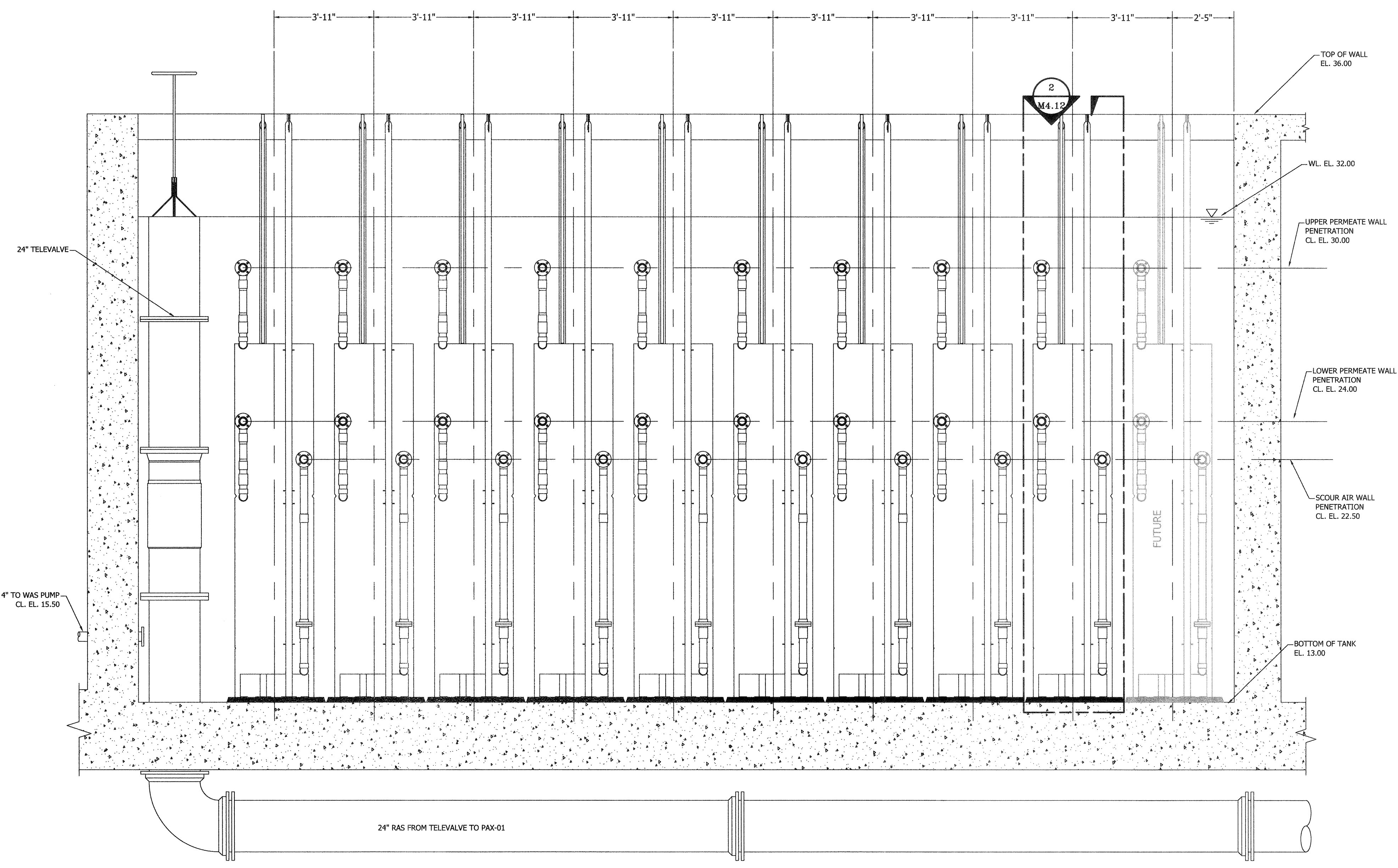
TRAVIS FIELD WATER RECLAMATION FACILITY  
**MB-02 PIPE GALLERY SECTION VIEW**

JOB NO:	J-26563.0000
DATE:	1-16-19
DRAWN:	KI
DESIGNED:	KI
REVIEWED:	FS
APPROVED:	FS
SCALE:	3/8"=1'-0"

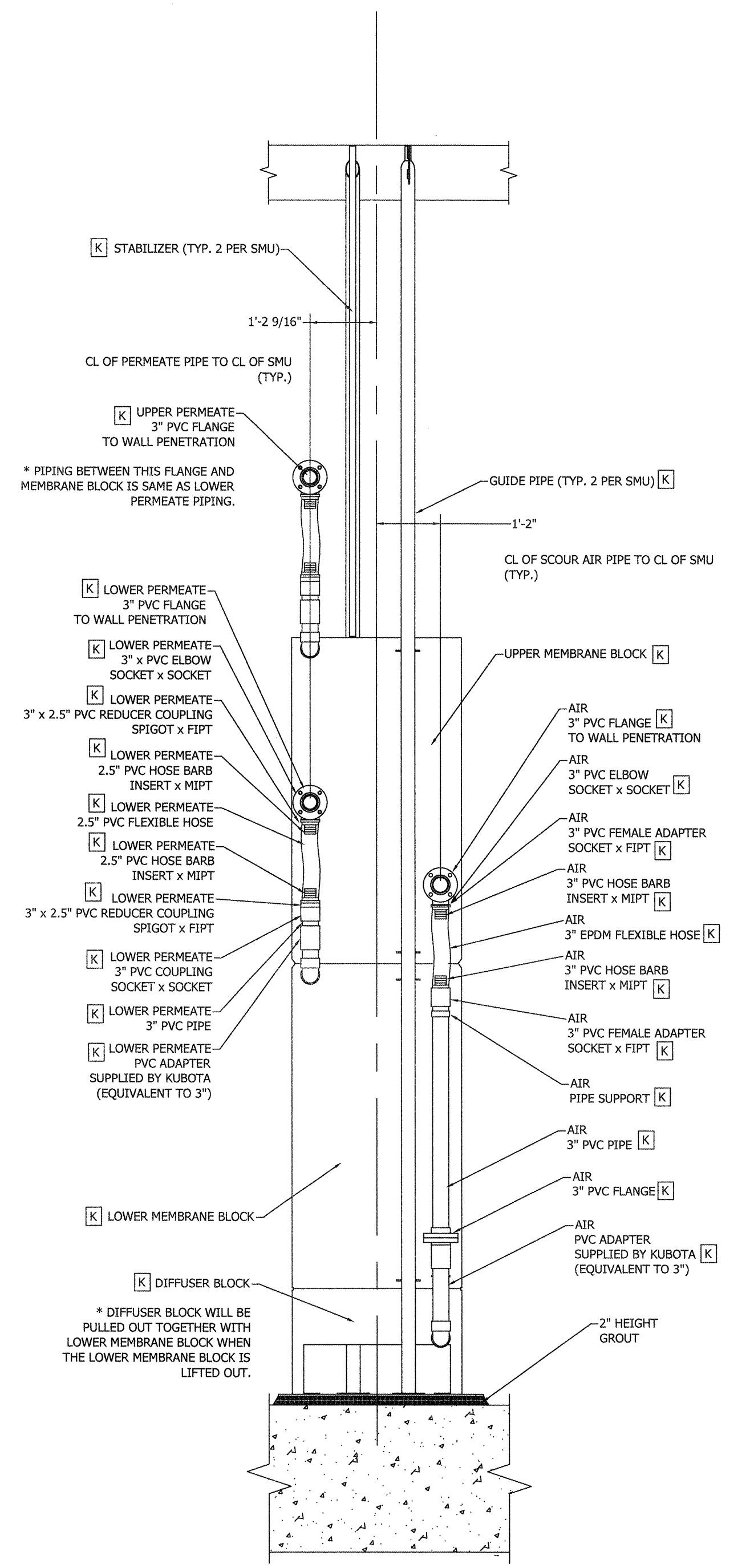
**M4.11**

BID SET - NOT FOR CONSTRUCTION

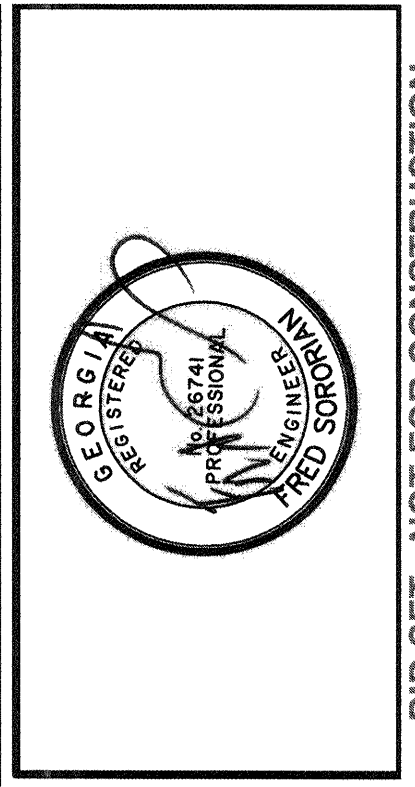
J:\0185132883.0000\Engineering\Drawings\Construction Plans\M4.12\0000 - M4.12 MB-01 Basin Piping - 10/24/19.dwg



**1**  
**M4.12 MB-01 IN BASIN PIPING**  
 SCALE: 3/8"=1'-0"  
 TYP. FOR MB-03  
 [K]- PROVIDED BY KUBOTA



**2**  
**M4.12 TYPICAL SMU PIPING SECTION VIEW**  
 SCALE: 1/2"=1'-0"  
 ALL PIPES SHOWN IN THIS SECTION ARE TO BE SUPPLIED BY KUBOTA  
 [K]- PROVIDED BY KUBOTA



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0			

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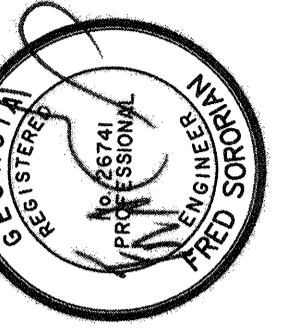
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 TRAVIS FIELD WATER RECLAMATION FACILITY  
**MB-01 BASIN PIPING AND DETAILS**

JOB NO:	J-26963.0000
DATE:	1-16-19
DRAWN:	KI
DESIGNED:	KI
REVIEWED:	FS
APPROVED:	FS
SCALE:	AS SHOWN

**M4.12**

BID SET - NOT FOR CONSTRUCTION





BID SET - NOT FOR CONSTRUCTION

NO.	ISSUED FOR BIDS	REVISIONS	BY	DATE
0				

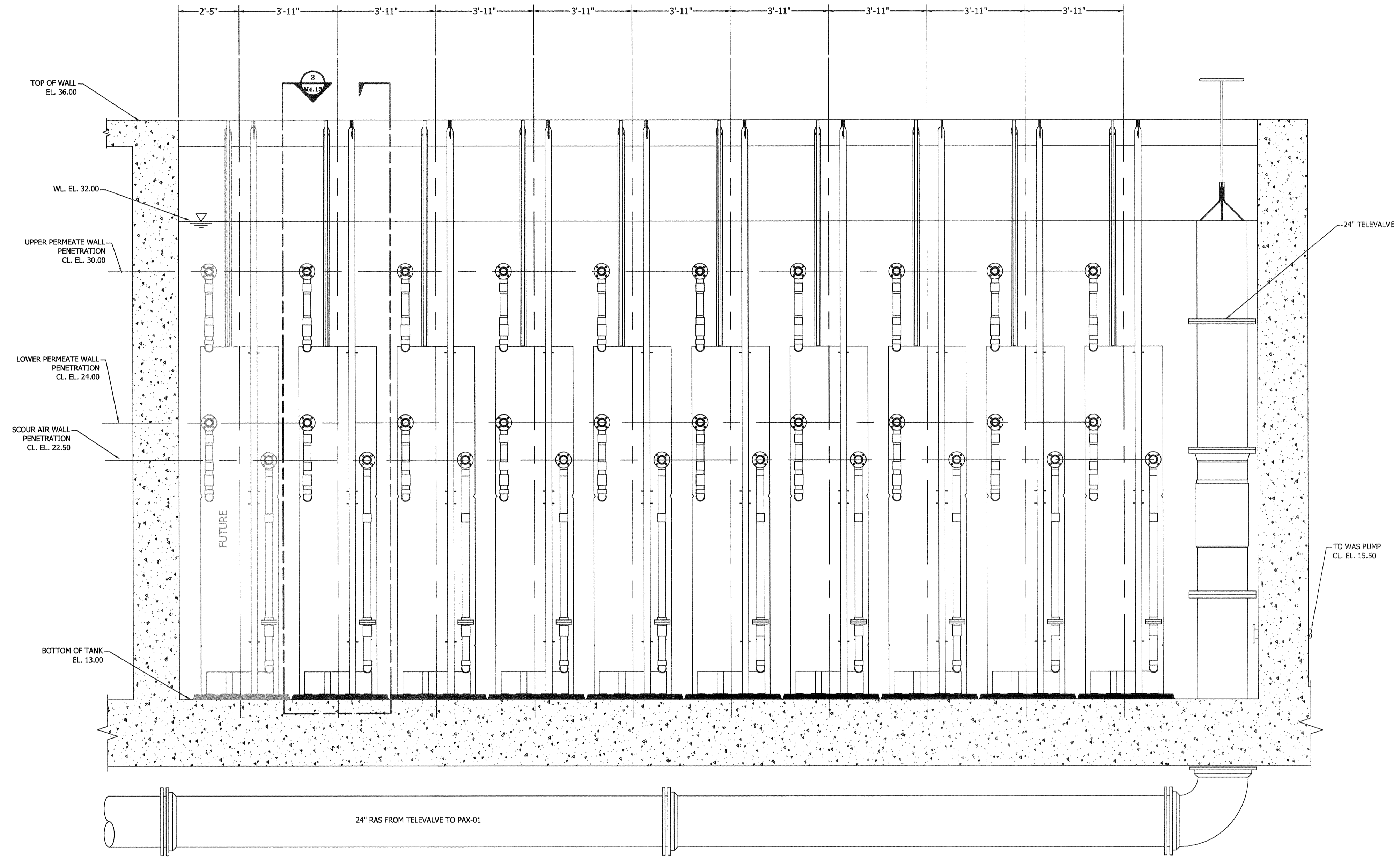
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 MB-02 BASIN PIPING AND DETAILS

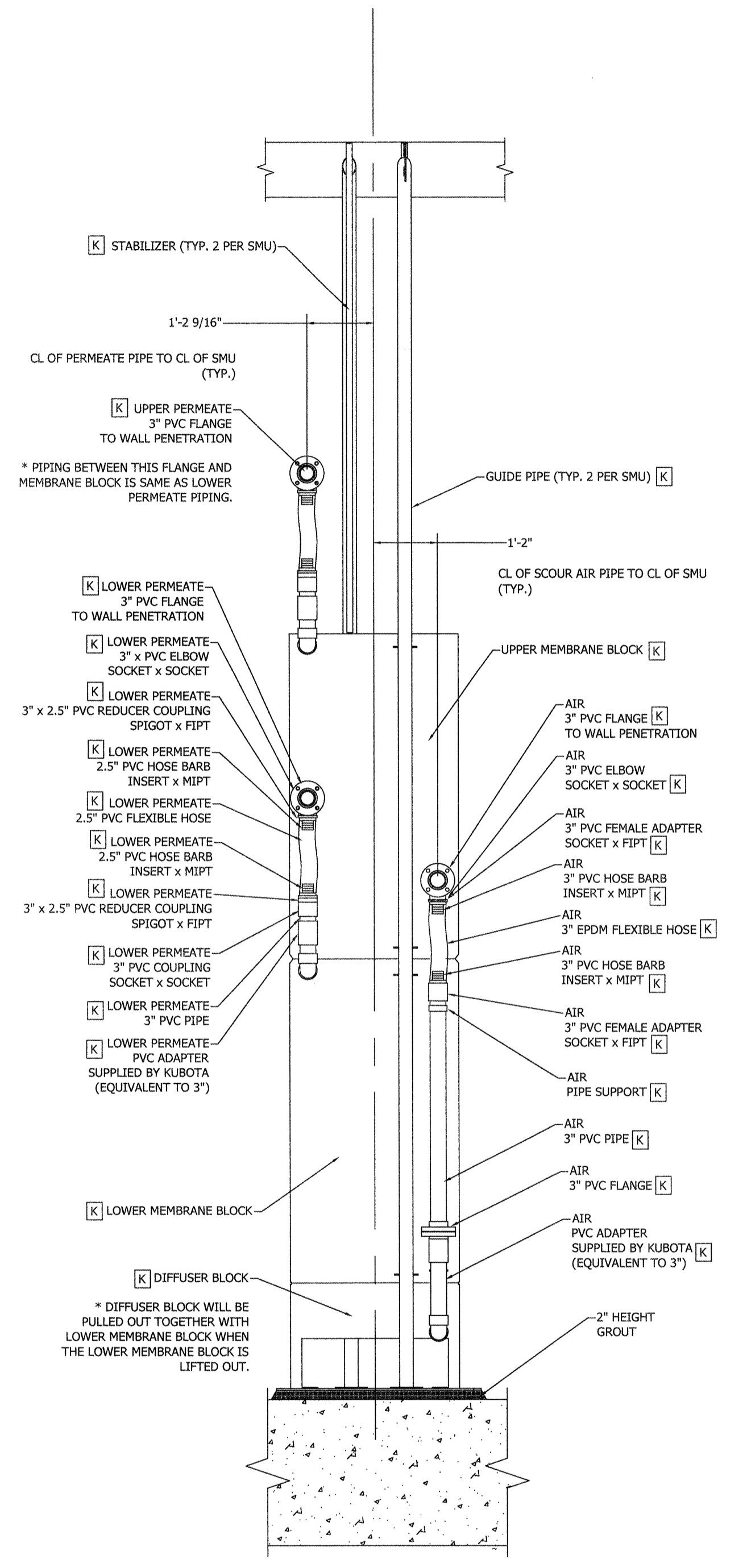
JOB NO:	J-26563.0000
DATE:	1-16-19
DRAWN:	KI
DESIGNED:	KI
REVIEWED:	FS
APPROVED:	FS
SCALE:	AS SHOWN

**M4.13**



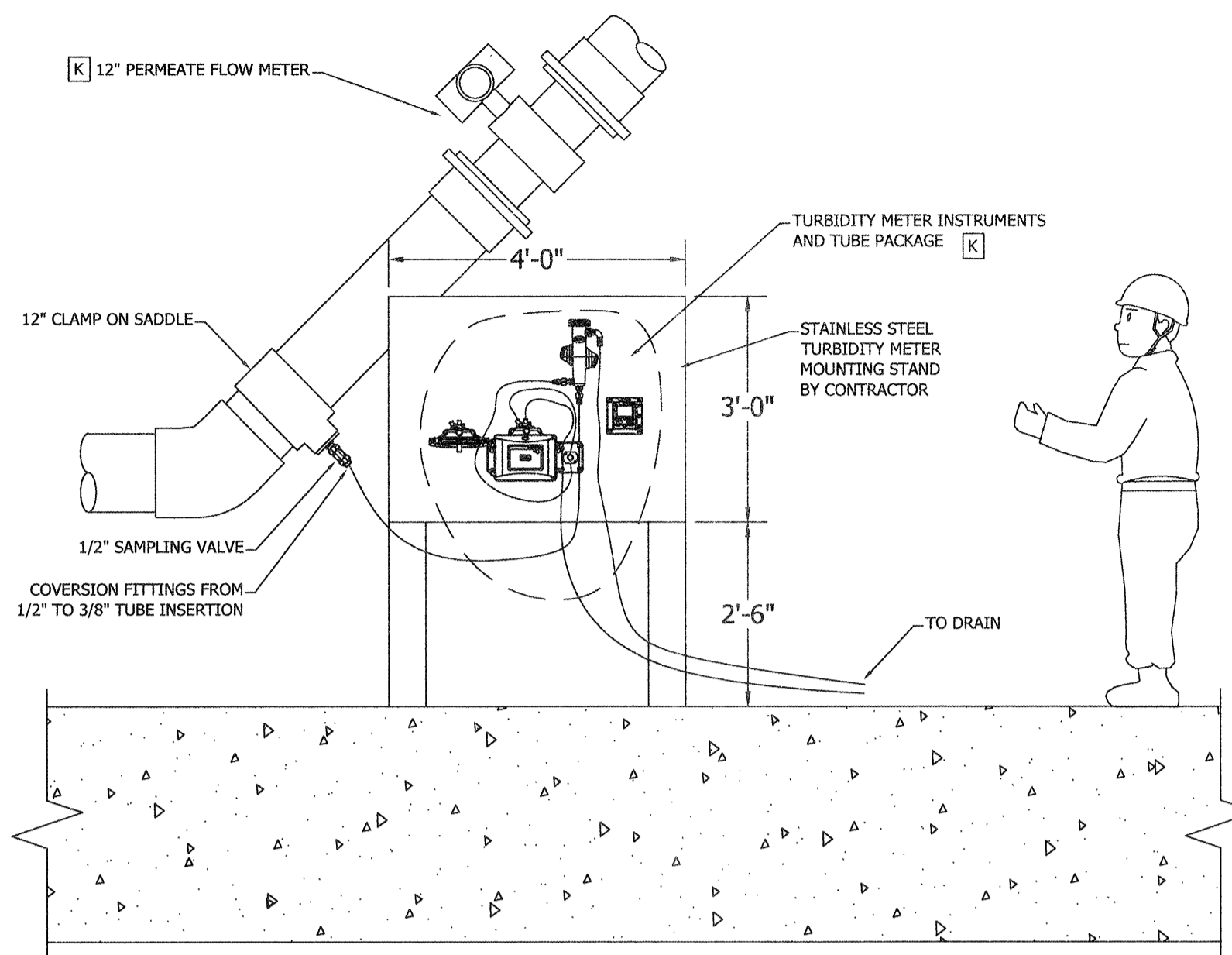
**1 MB-02 IN BASIN PIPING**  
 SCALE: 3/8"=1'-0"

TYP. FOR MB-04  
 [K]- PROVIDED BY KUBOTA

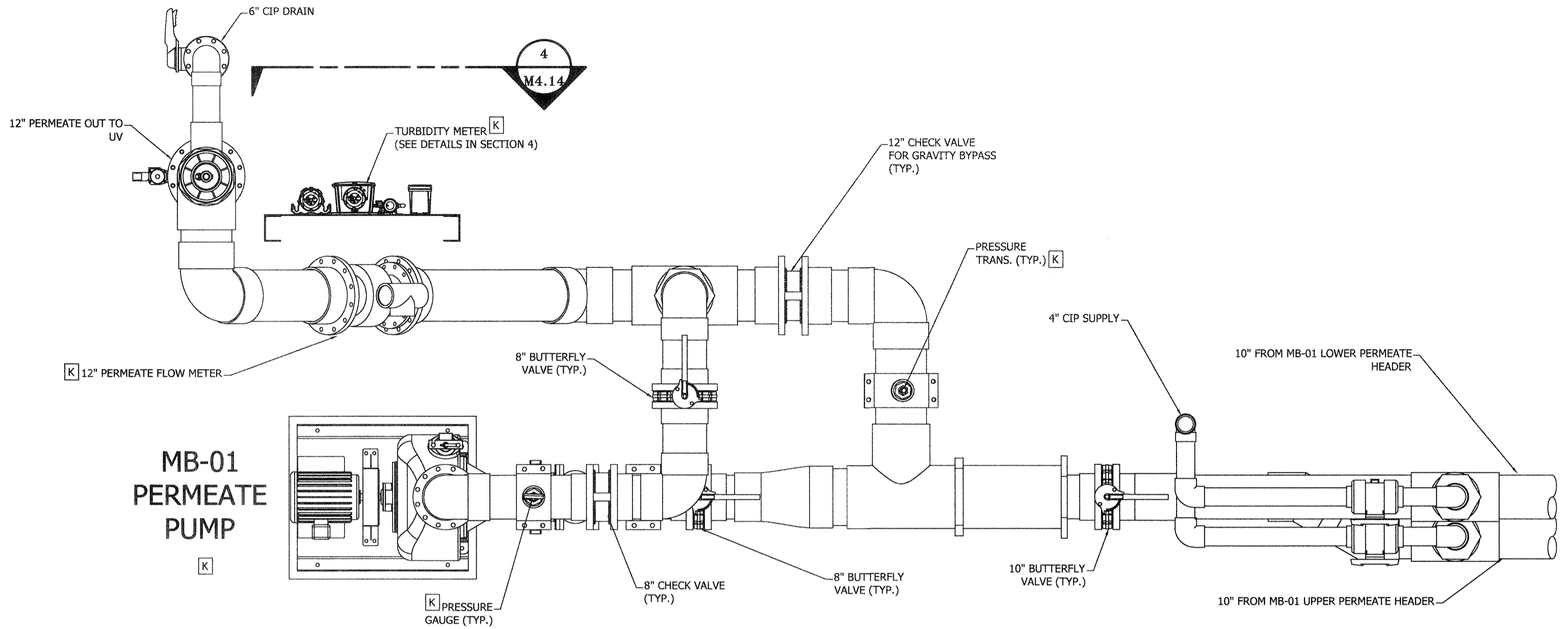


**2 TYPICAL SMU PIPING SECTION VIEW**  
 SCALE: 1/2"=1'-0"

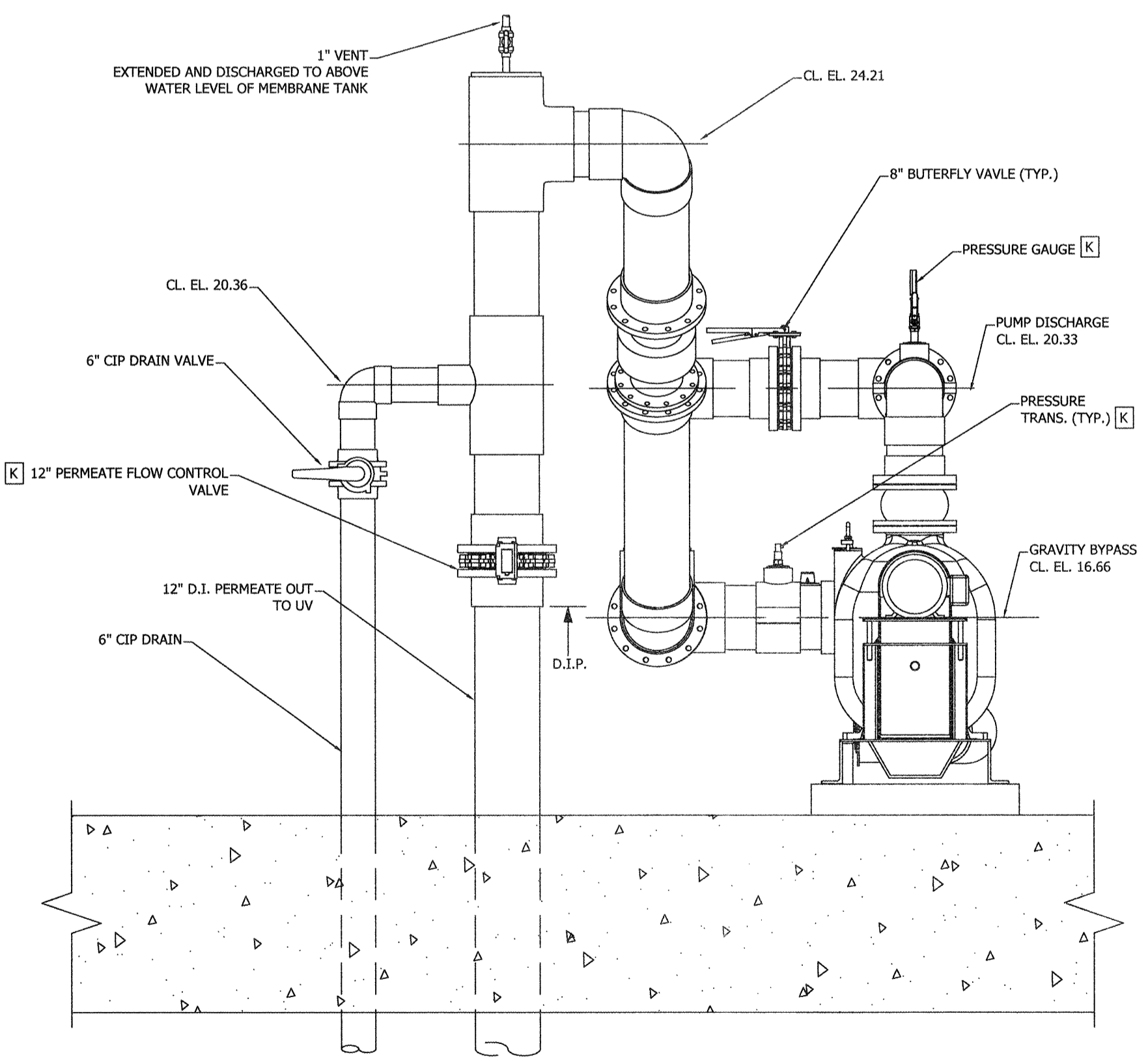
ALL PIPES SHOWN IN THIS SECTION ARE TO BE SUPPLIED BY KUBOTA  
 [K]- PROVIDED BY KUBOTA



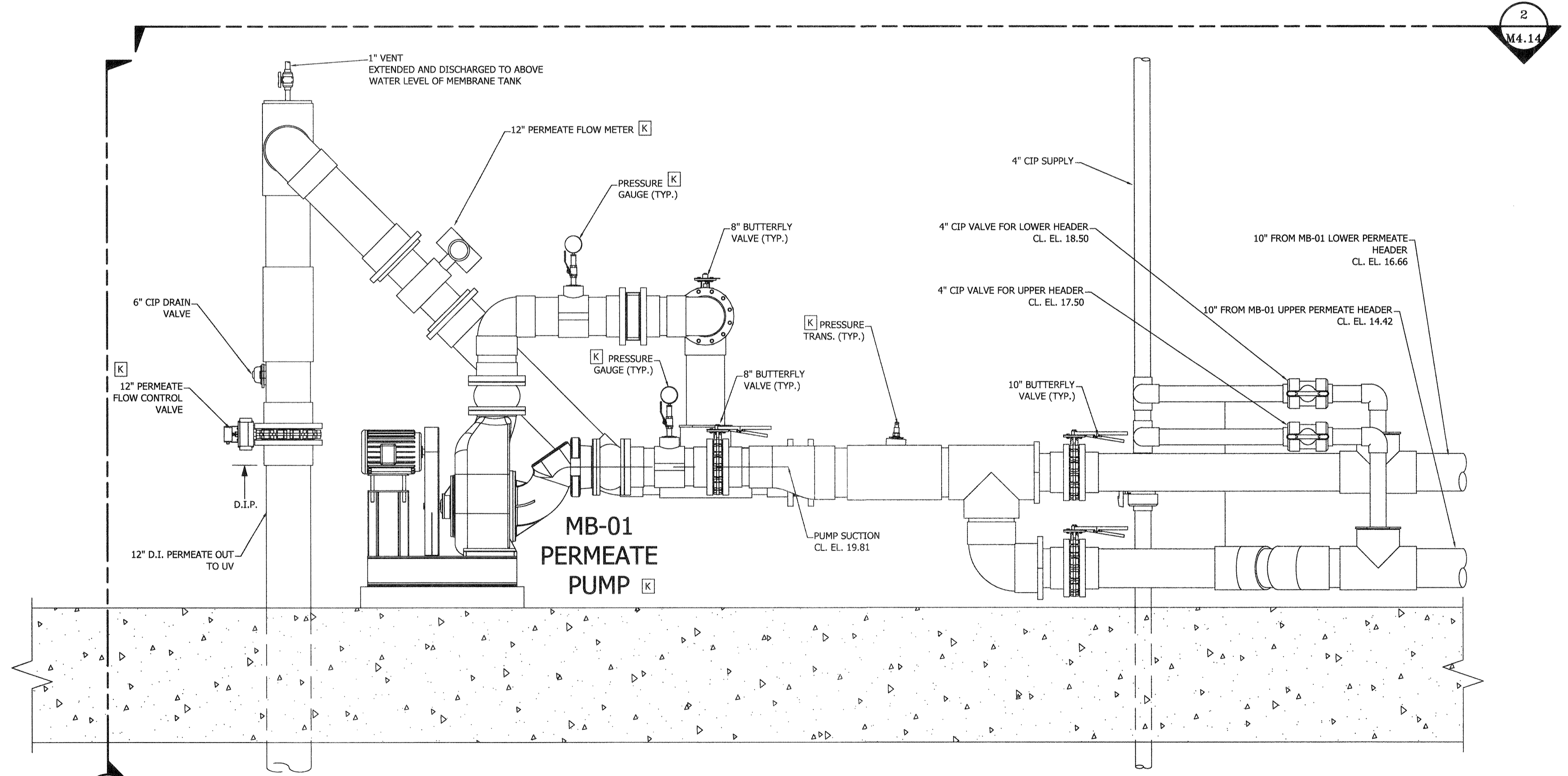
**4 TURBIDITY METER DETAILS**  
 SCALE: 1/2"=1'-0"  
 TYP. FOR MB-03 PERMEATE PUMP NOT SHOWN FOR CLARITY  
 [K] - PROVIDED BY KUBOTA



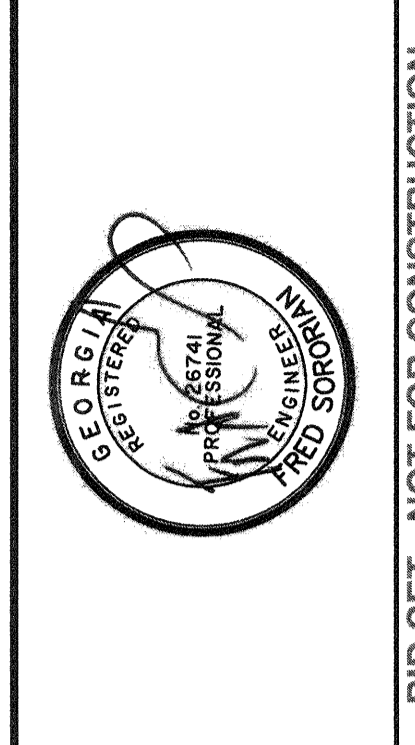
**2 MB-01 PERMEATE PUMP PLAN DETAIL**  
 SCALE: 1/2"=1'-0"  
 TYP. FOR MB-03 WAS PUMP/PIPE NOT SHOWN FOR CLARITY  
 [K] - PROVIDED BY KUBOTA



**3 MB-01 PERMEATE PUMP SECTION DETAIL**  
 SCALE: 1/2"=1'-0"  
 TYP. FOR MB-03 WAS PUMP/PIPE AND CIP PIPE NOT SHOWN FOR CLARITY  
 TURBIDITY METER NOT SHOWN FOR CLARITY  
 [K] - PROVIDED BY KUBOTA



**1 MB-01 PERMEATE PUMP SECTION DETAIL**  
 SCALE: 1/2"=1'-0"  
 TYP. FOR MB-03 WAS PUMP/PIPE NOT SHOWN FOR CLARITY  
 TURBIDITY METER NOT SHOWN FOR CLARITY  
 [K] - PROVIDED BY KUBOTA



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**MB-01 PERMEATE PUMP PLAN & SECTION**

JOB NO:	J-25663.0000
DATE:	1-16-19
DRAWN:	KI
DESIGNED:	KI
REVIEWED:	FS
APPROVED:	FS
SCALE:	1/2"=1'-0"

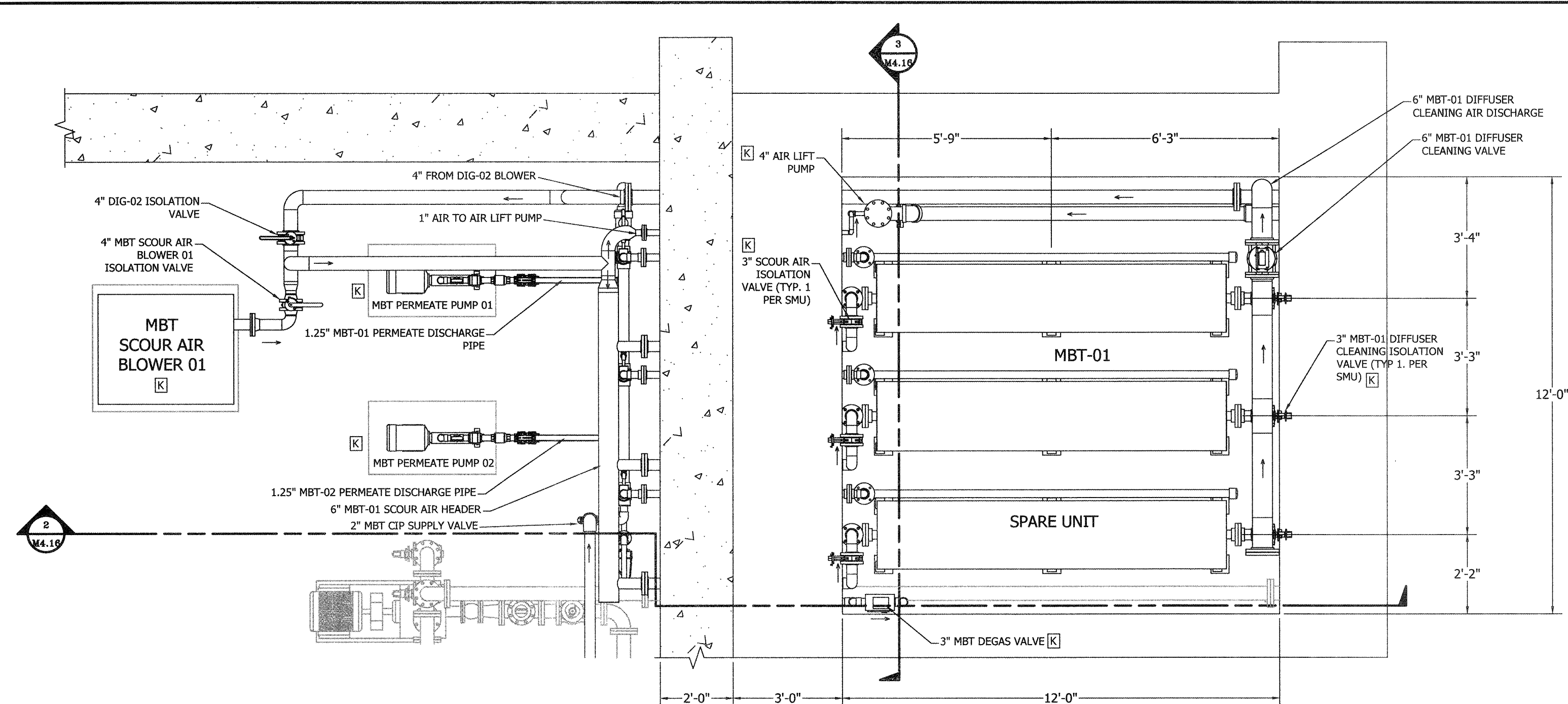
**M4.14**

BID SET - NOT FOR CONSTRUCTION

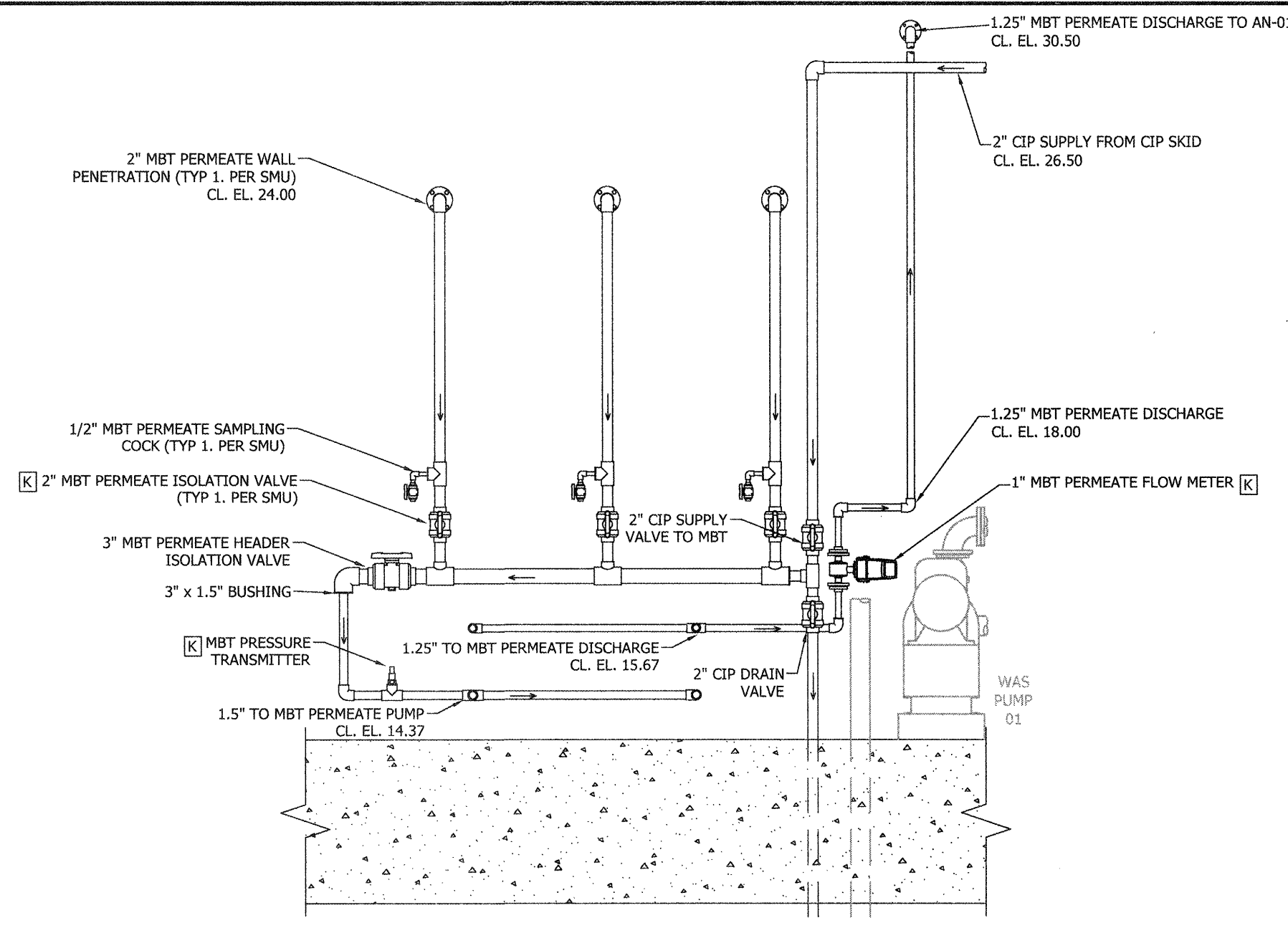




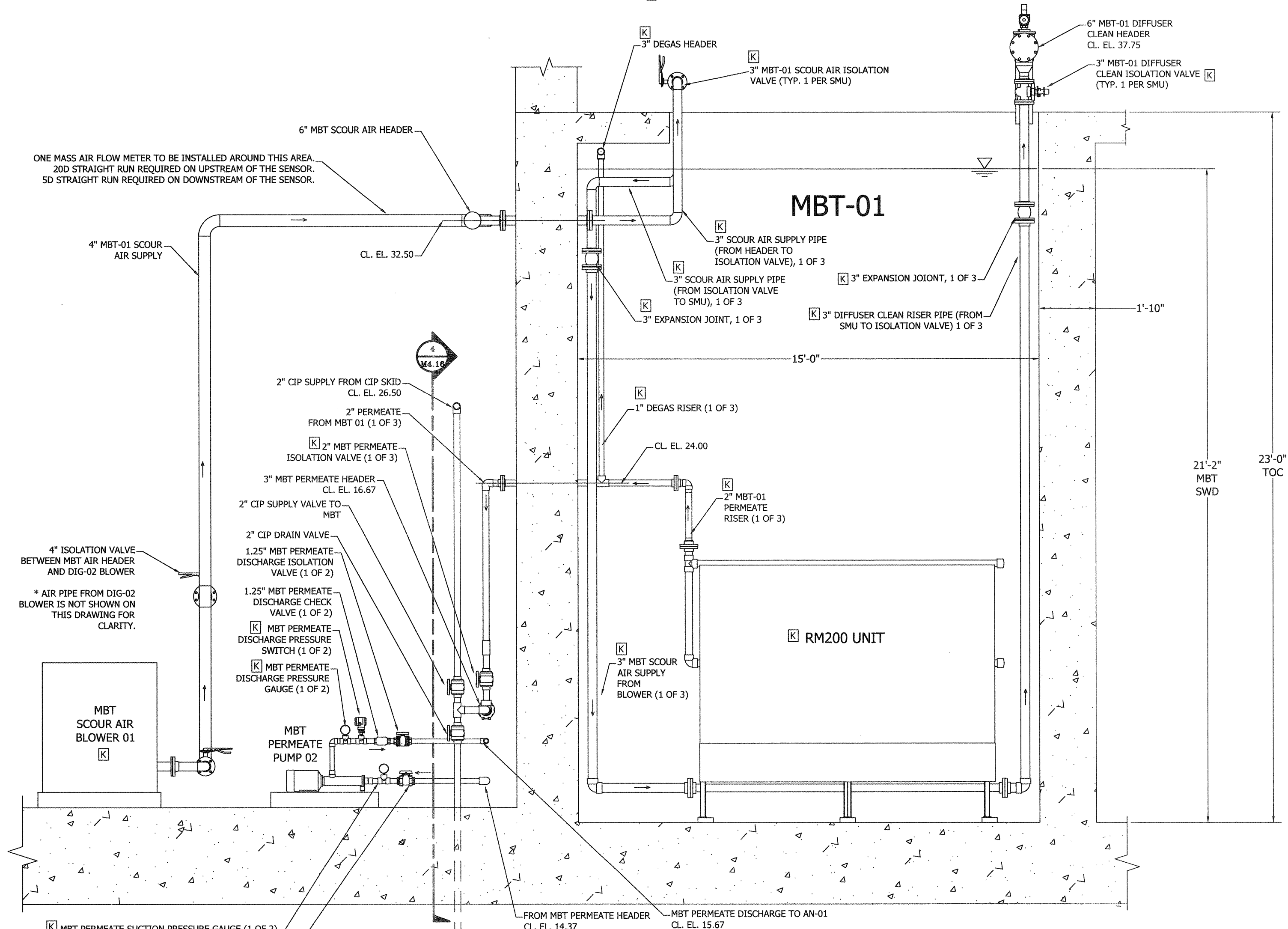




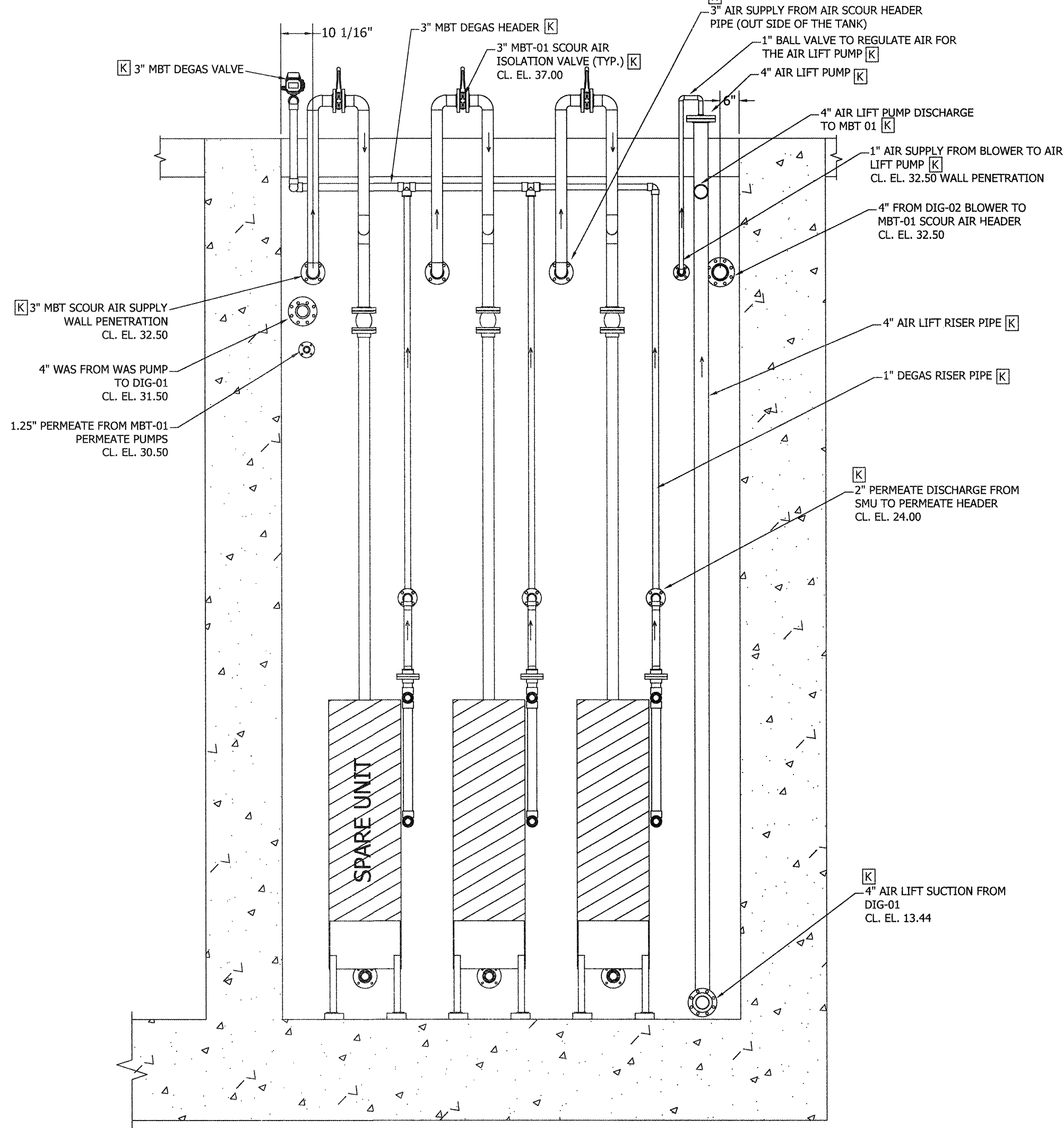
**1 MBT PLAN DETAIL VIEW**  
 SCALE: 3/8"=1'-0"  
 ARROWS SHOW DIRECTION OF FLOW  
 [K] - PROVIDED BY KUBOTA



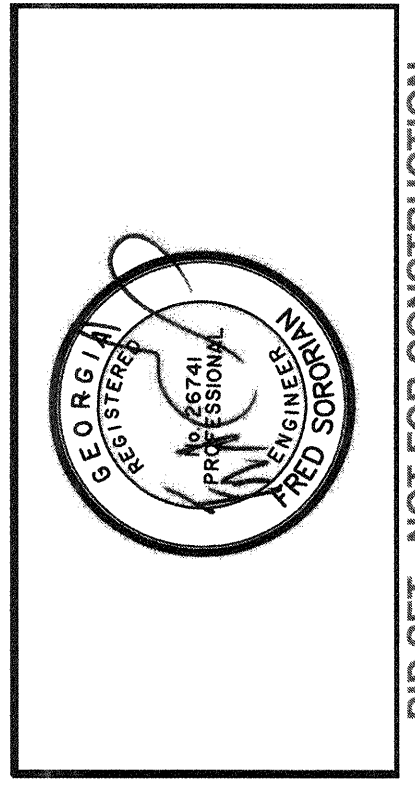
**4 MBT SECTION DETAIL VIEW**  
 SCALE: 3/8"=1'-0"  
 WAS DISCHARGE PIPING NOT SHOWN FOR CLARITY  
 ARROWS SHOW DIRECTION OF FLOW  
 [K] - PROVIDED BY KUBOTA



**2 MBT SECTION DETAIL VIEW**  
 SCALE: 3/8"=1'-0"  
 WAS PUMP/PIPE, AIR LIFT PUMP, AND DIG-02 TO MBT AIR PIPE NOT SHOWN FOR CLARITY  
 ARROWS SHOW DIRECTION OF FLOW  
 [K] - PROVIDED BY KUBOTA



**3 MBT SECTION DETAIL VIEW**  
 SCALE: 3/8"=1'-0"  
 ARROWS SHOW DIRECTION OF FLOW  
 [K] - PROVIDED BY KUBOTA



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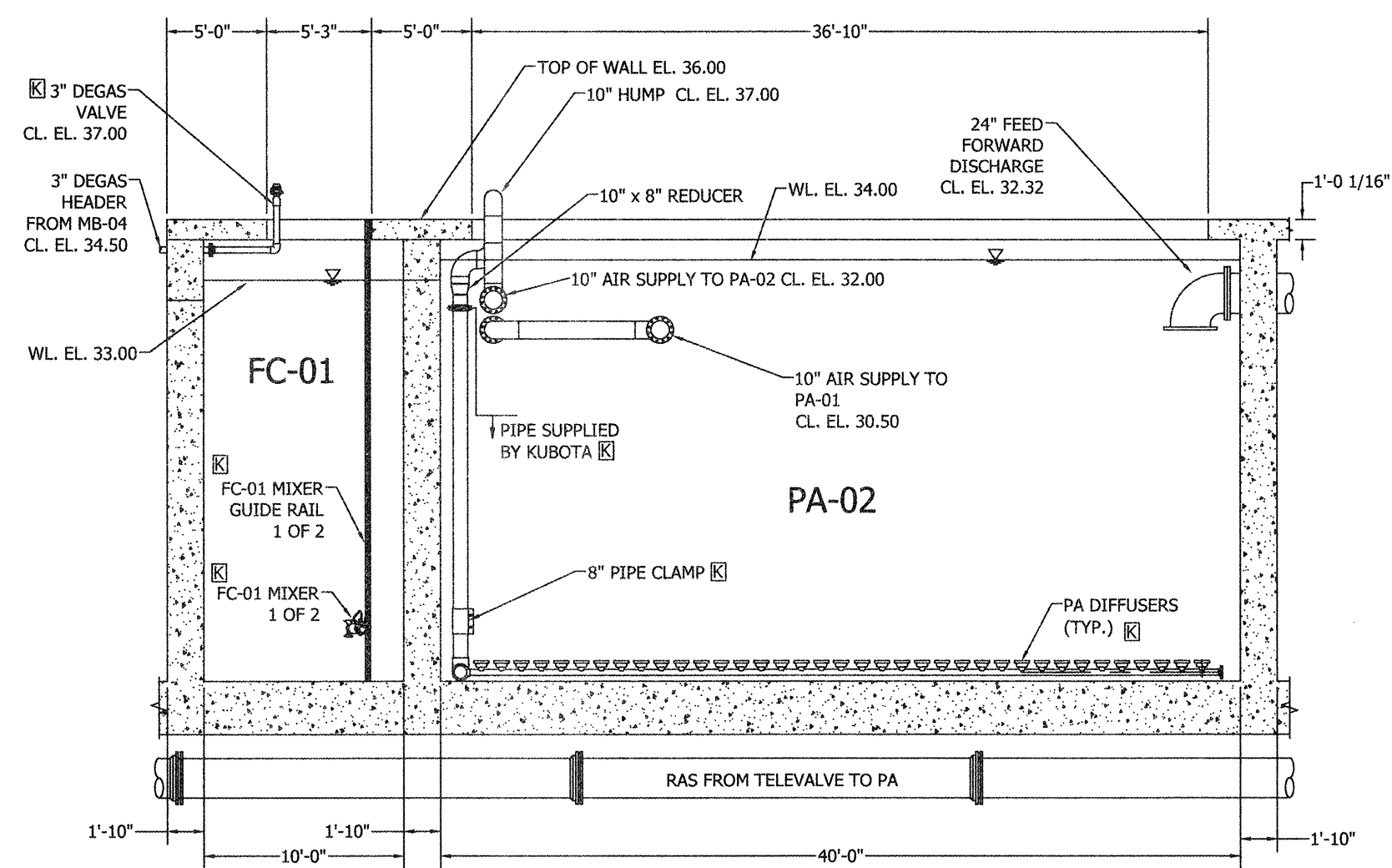
TRAVIS FIELD WATER RECLAMATION FACILITY  
**MBT SECTION VIEW AND DETAILS**

JOB NO.:	J-26563.0000
DATE:	1-16-19
DRAWN:	KI
DESIGNED:	KI
REVIEWED:	FS
APPROVED:	FS
SCALE:	3/8"=1'-0"

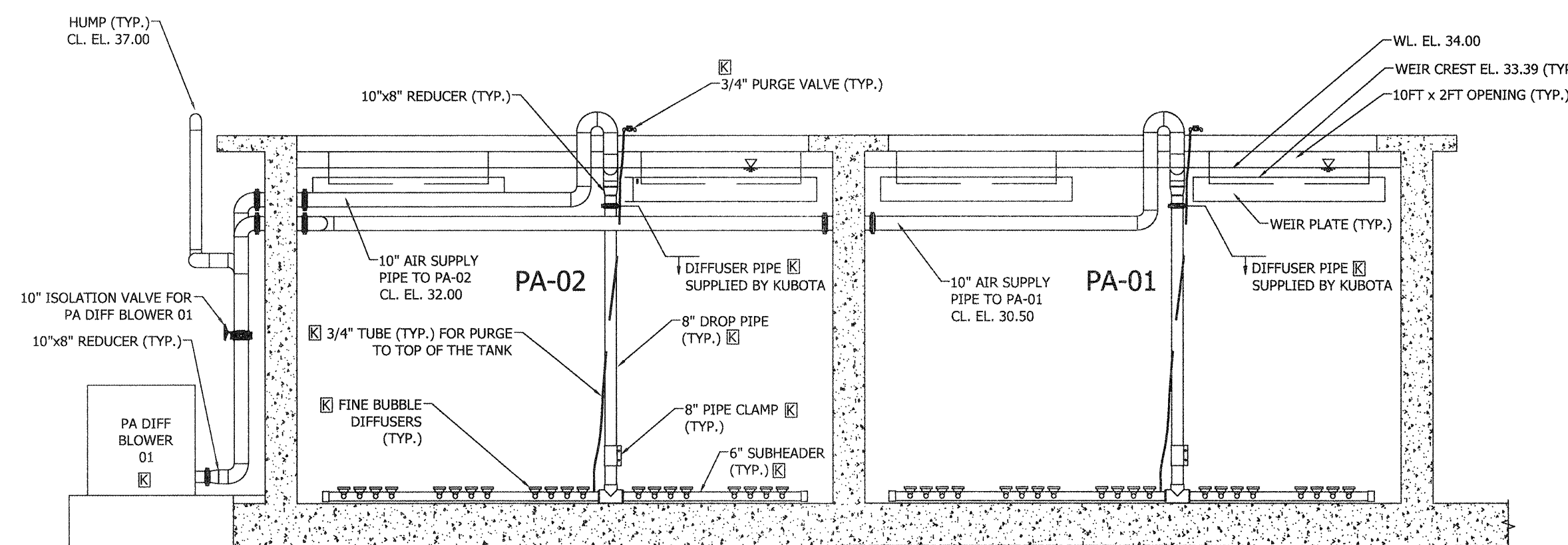
**M4.16**

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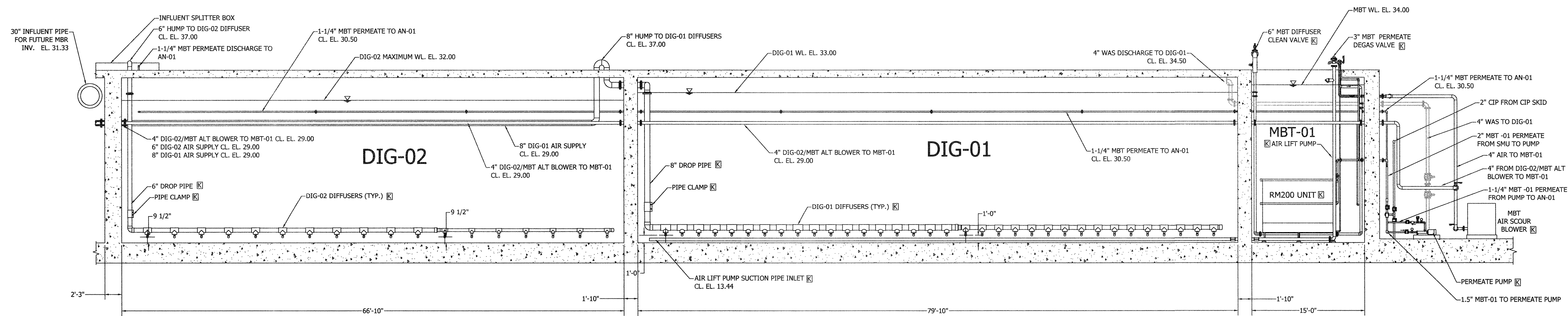




**1 PA TANK AND SW TANK SECTION VIEW**  
 SCALE: 1/8"=1'-0"

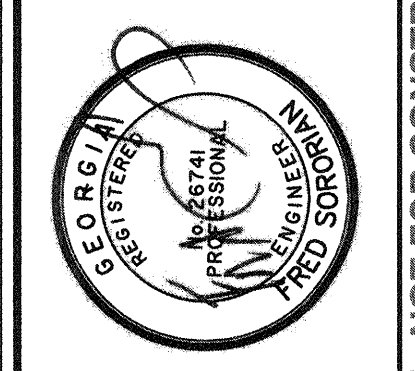


**3 PA TANK SECTION VIEW**  
 SCALE: 1/8"=1'-0"



**2 MBT AND DIGESTER TANKS SECTION VIEW**  
 SCALE: 1/8"=1'-0"

FF PIPES, RAS PIPE, MB BLOWER PIPES, MB PERMEATE PUMPS/PIPES AND WAS PMPs/PIPES ARE NOT SHOWN FOR CLARITY  
 [K] - PROVIDED BY KUBOTA



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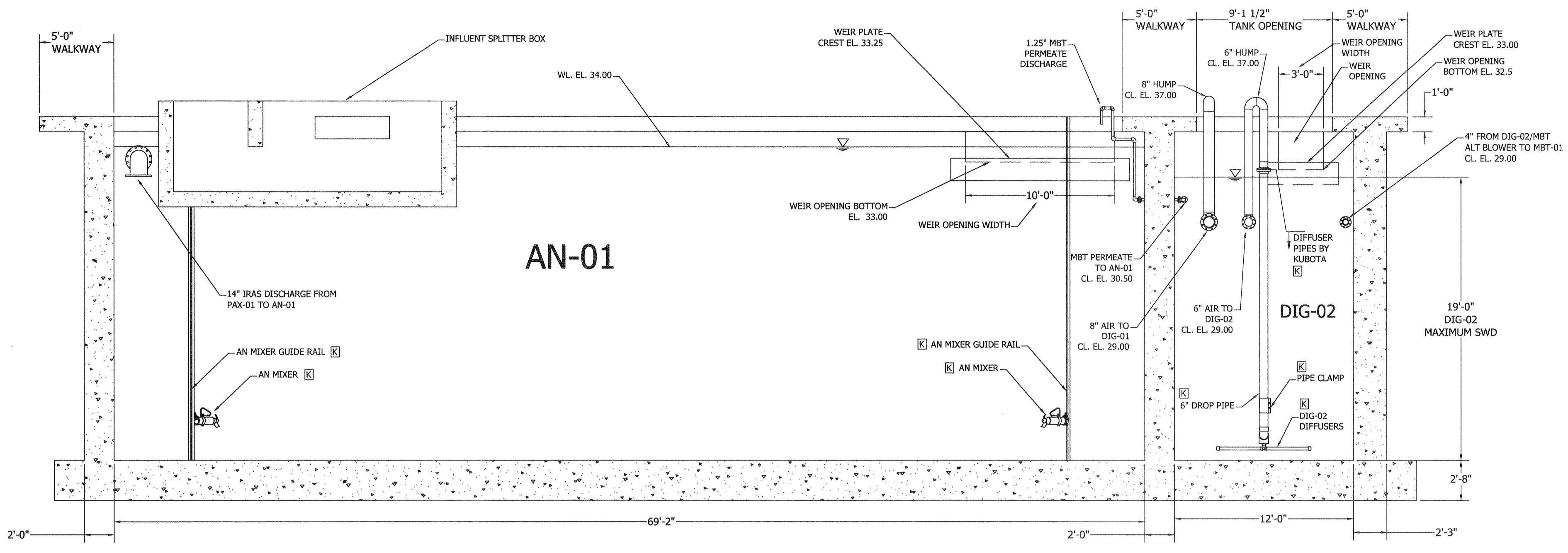
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**TANK SECTION VIEWS**

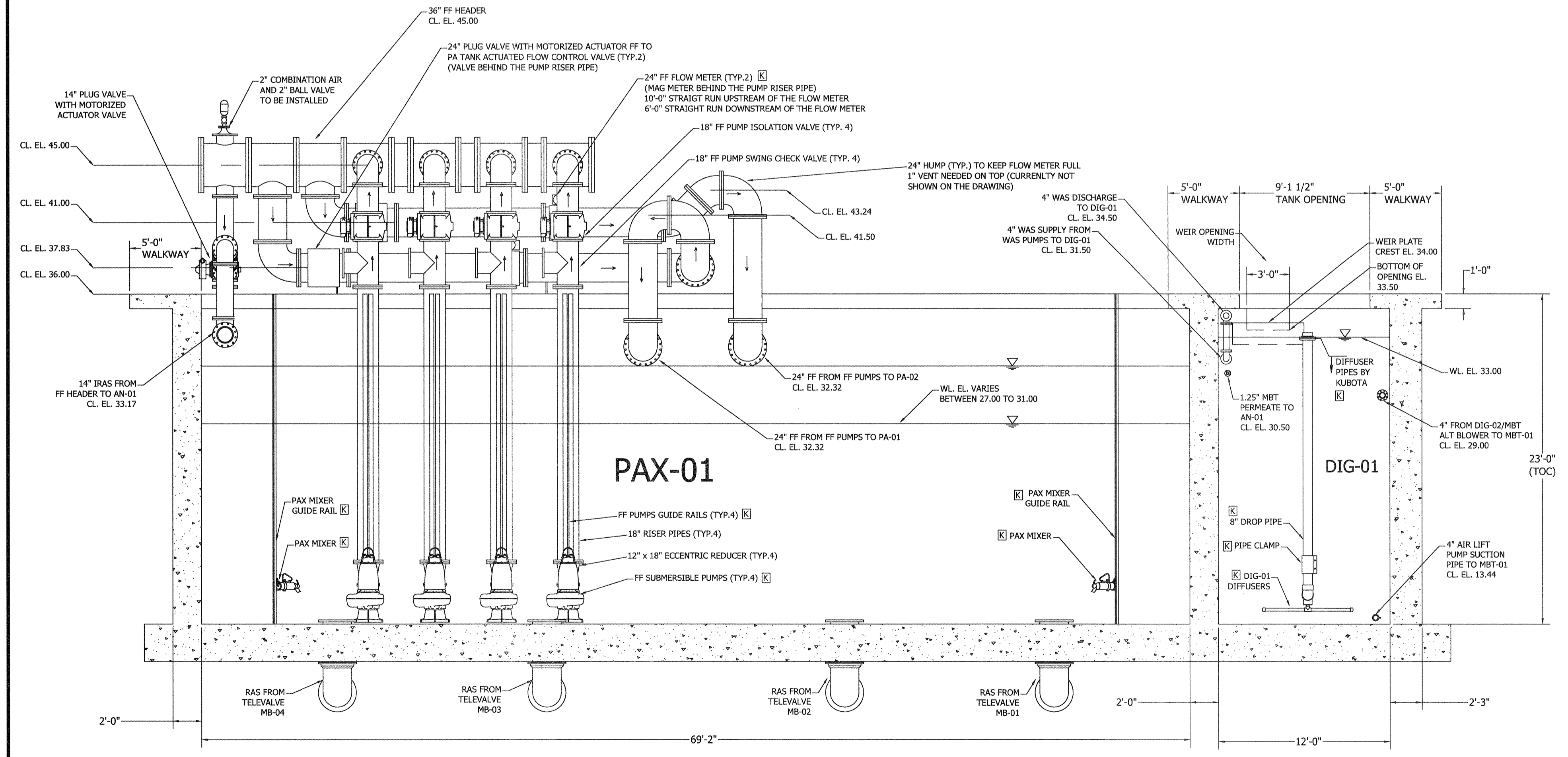
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DATE:	1-16-19
DRAWN:	KI
DESIGNED:	KI
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APPROVED:	FS
SCALE:	1/8"=1'-0"

**M4.17**

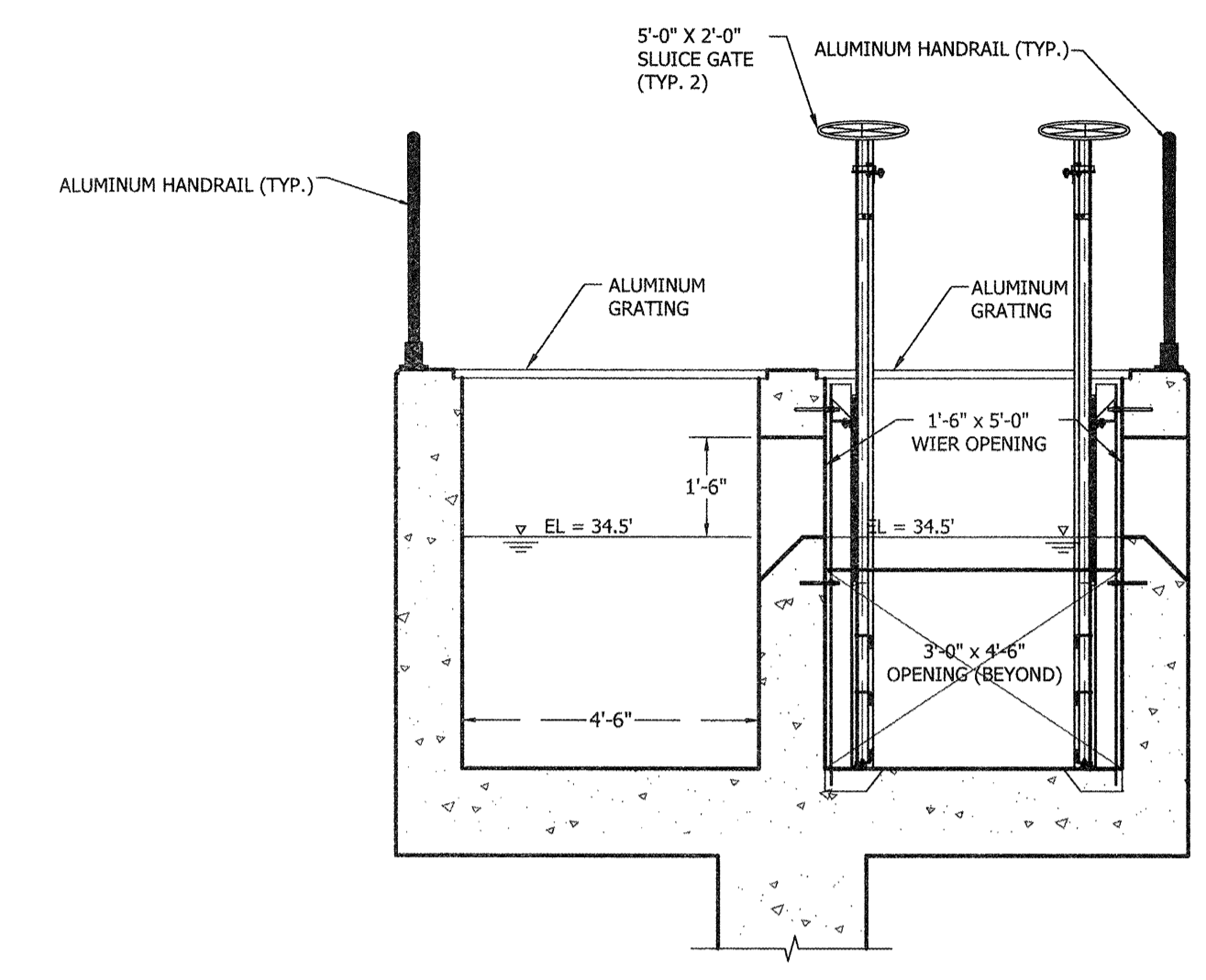
BID SET - NOT FOR CONSTRUCTION



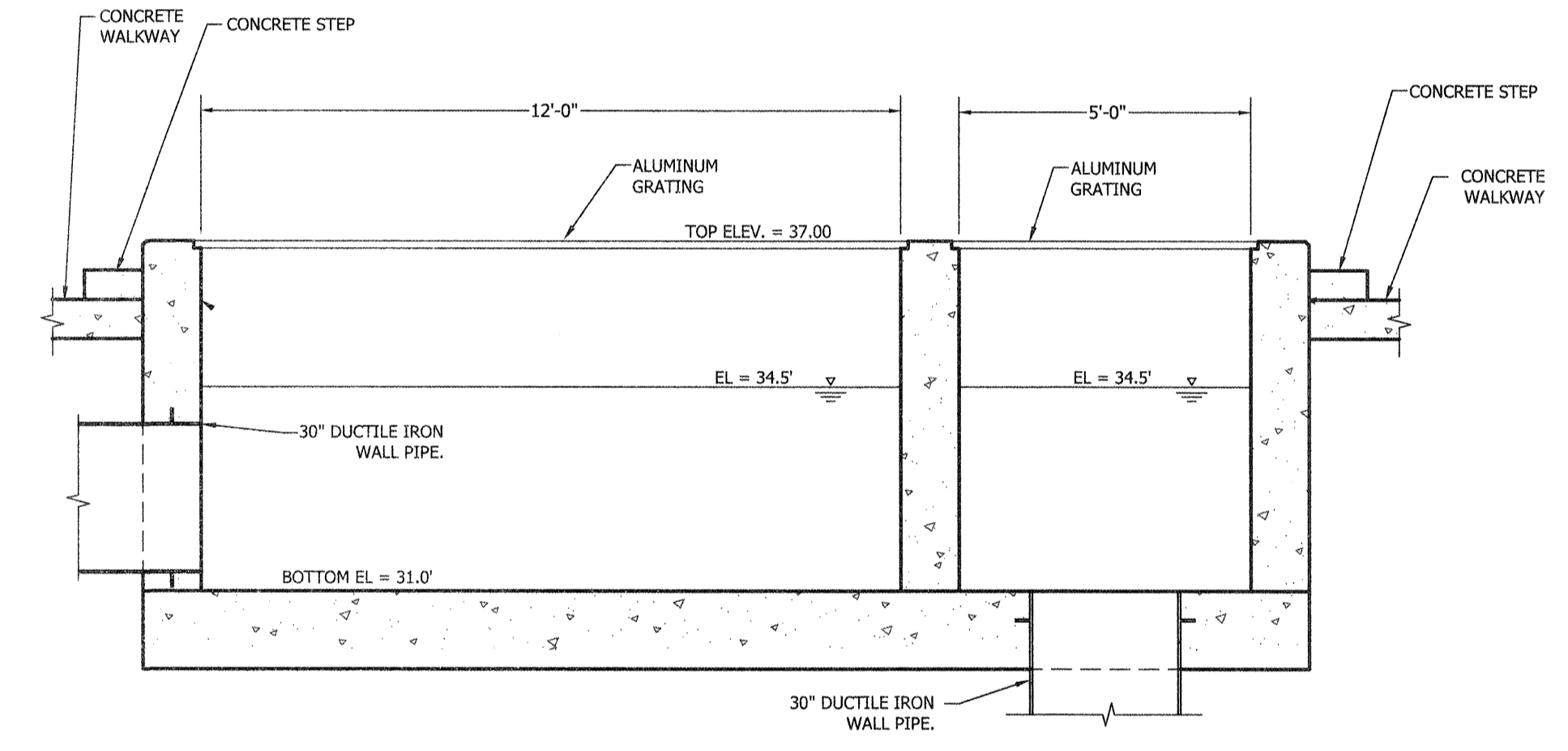
**1 AN-01 TANK AND DIG-02 TANK SECTION VIEW**  
 SCALE: 3/16"=1'-0"  
 FF PIPES, RAS PIPE, MB BLOWER PIPES, AND PA BLOWER PIPES ARE NOT SHOWN FOR CLARITY  
 [K] PROVIDED BY KUBOTA



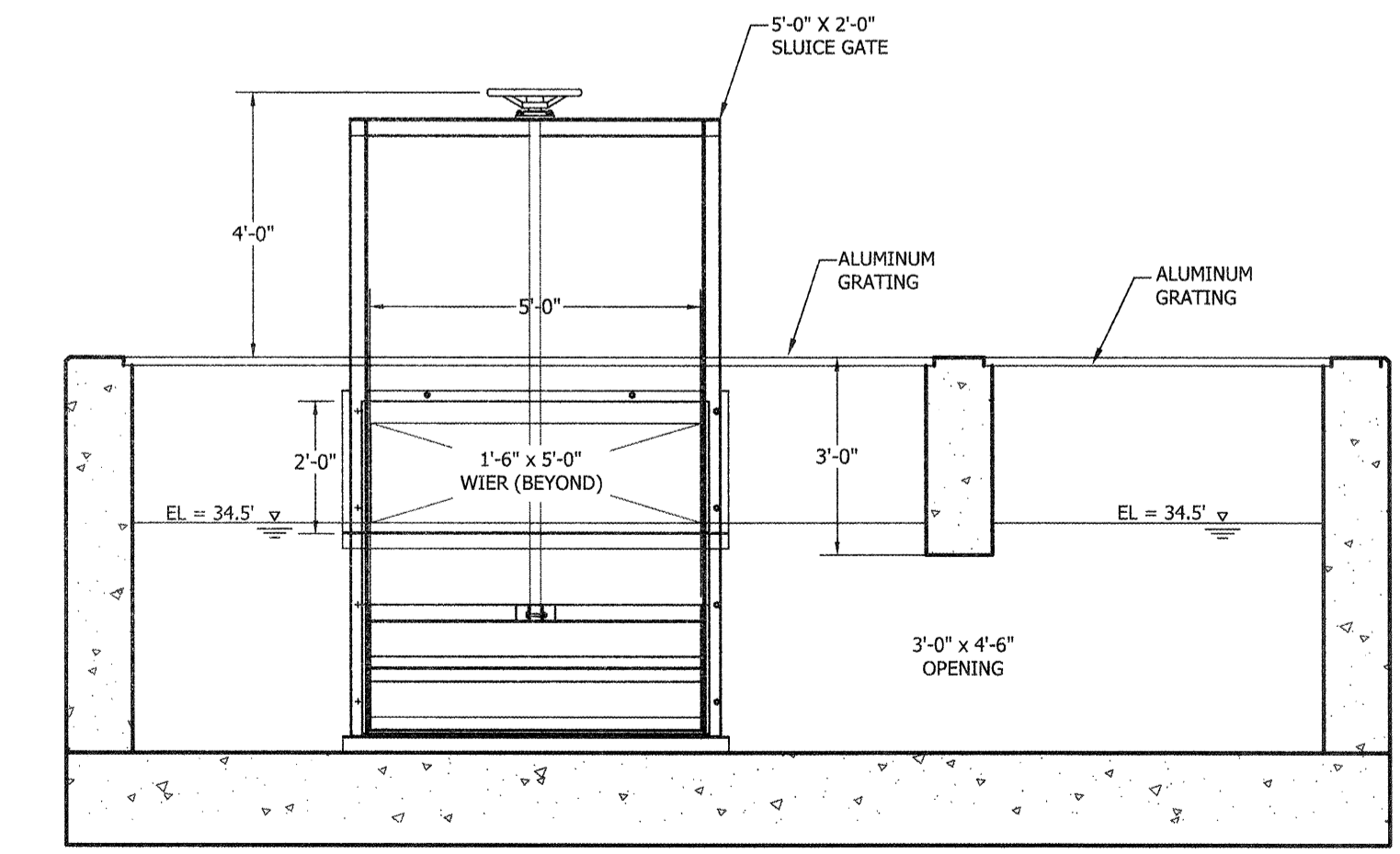
**2 PAX-01 TANK AND DIG-01 TANK SECTION VIEW**  
 SCALE: 3/16"=1'-0"  
 MB BLOWER PIPES, AND PA BLOWER PIPES ARE NOT SHOWN FOR CLARITY  
 ARROWS SHOW DIRECTION OF FLOW  
 [K] PROVIDED BY KUBOTA



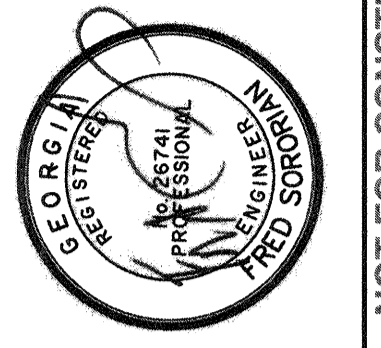
**3 SPLITTER BOX SECTION**  
 SCALE: 3/8"=1'-0"



**4 SPLITTER BOX SECTION**  
 SCALE: 3/8"=1'-0"



**5 SPLITTER BOX SECTION**  
 SCALE: 3/8"=1'-0"



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**TANK SECTION VIEWS**

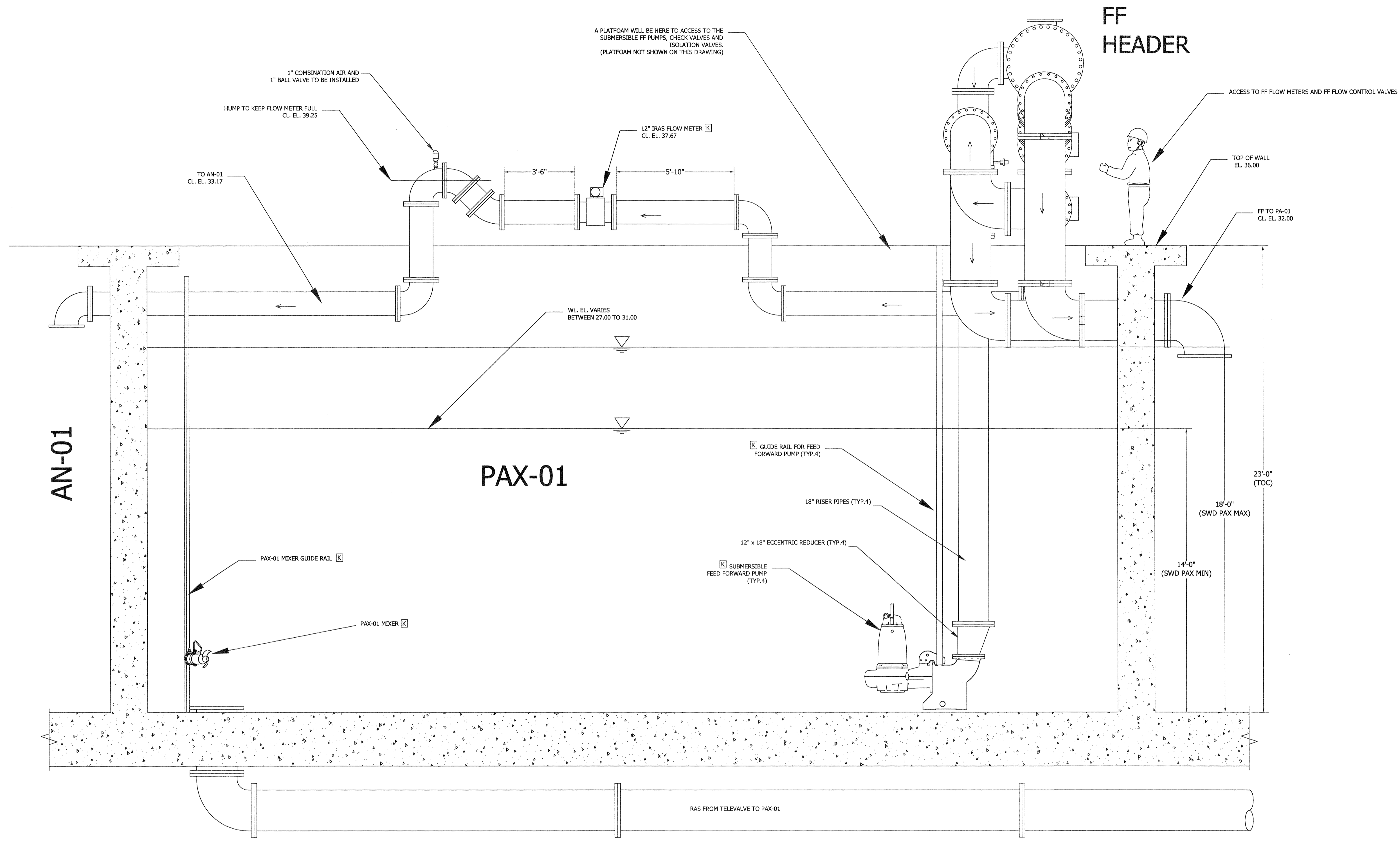
JOB NO:	J-26963.0000
DATE:	1-16-19
DRAWN:	KI
DESIGNED:	KI
REVIEWED:	FS
APPROVED:	FS
SCALE:	3/16"=1'-0"

**M4.18**

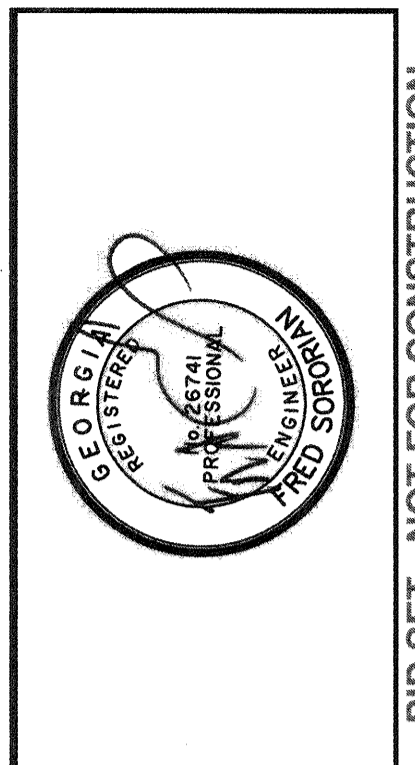
BID SET - NOT FOR CONSTRUCTION



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**1**  
**M4.19** **PAX-01 SECTION VIEW**  
 SCALE: 3/8" = 1'-0"  
 ARROWS SHOW DIRECTION OF FLOW.  
 [K] - PROVIDED BY KUBOTA



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**PAX-01 TANK SECTION VIEW**

JOB NO:	J-26963.0000
DATE:	1-16-19
DRAWN:	KI
DESIGNED:	KI
REVIEWED:	FS
APPROVED:	FS
SCALE:	3/8" = 1'-0"

**M4.19**

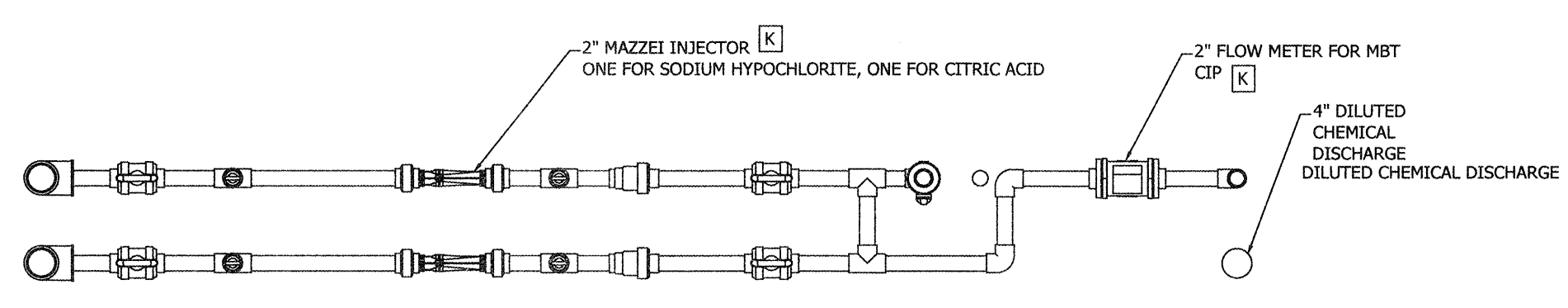
BID SET - NOT FOR CONSTRUCTION



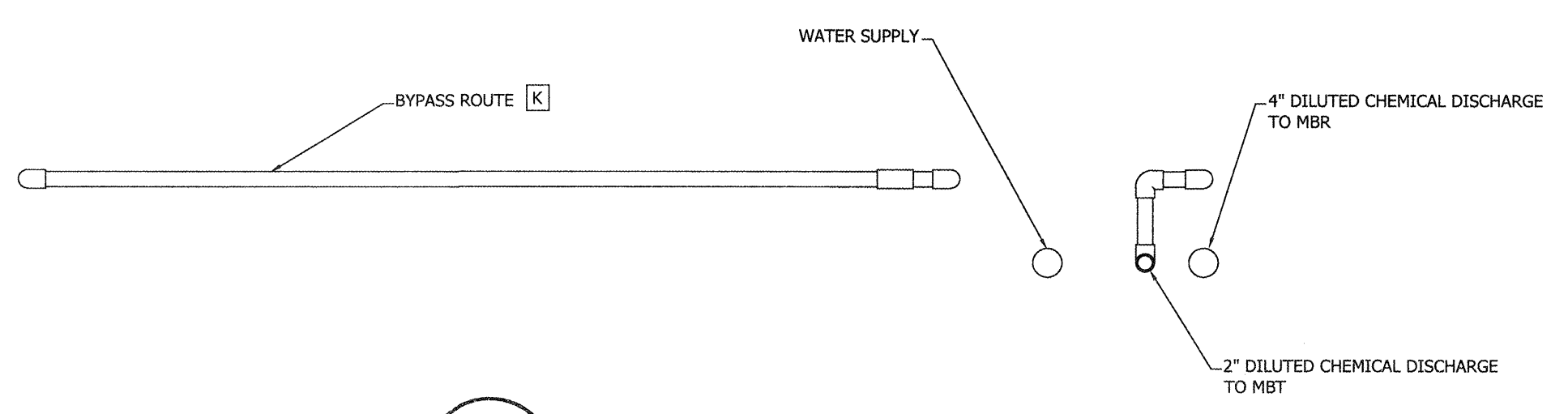




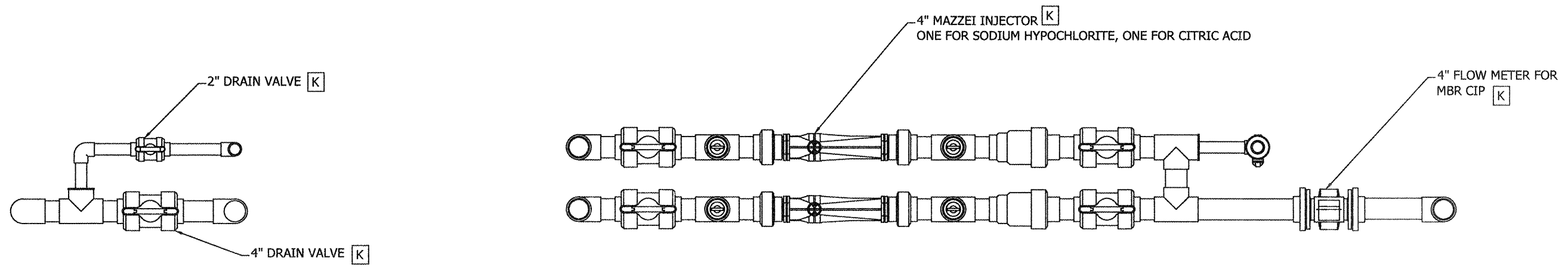
23/04/2019 08:55:00 (Engineering) Drawing: Travis Field Water Reclamation Facility - M4.22 - MBR Skid Detail - Apr 14, 2019 - 08:55:00 PM



**4 CIP SKID DETAIL**  
 SCALE: 1/2"=1'-0"

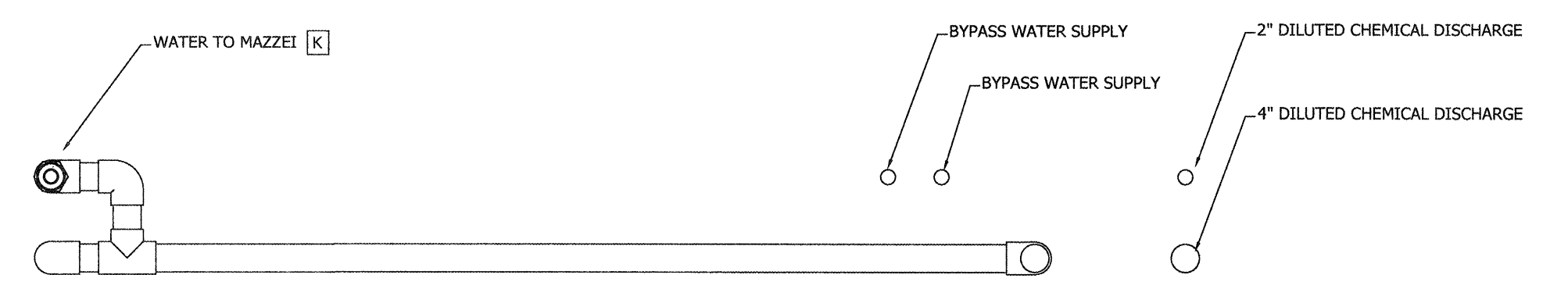


**6 CIP SKID DETAIL**  
 SCALE: 1/2"=1'-0"

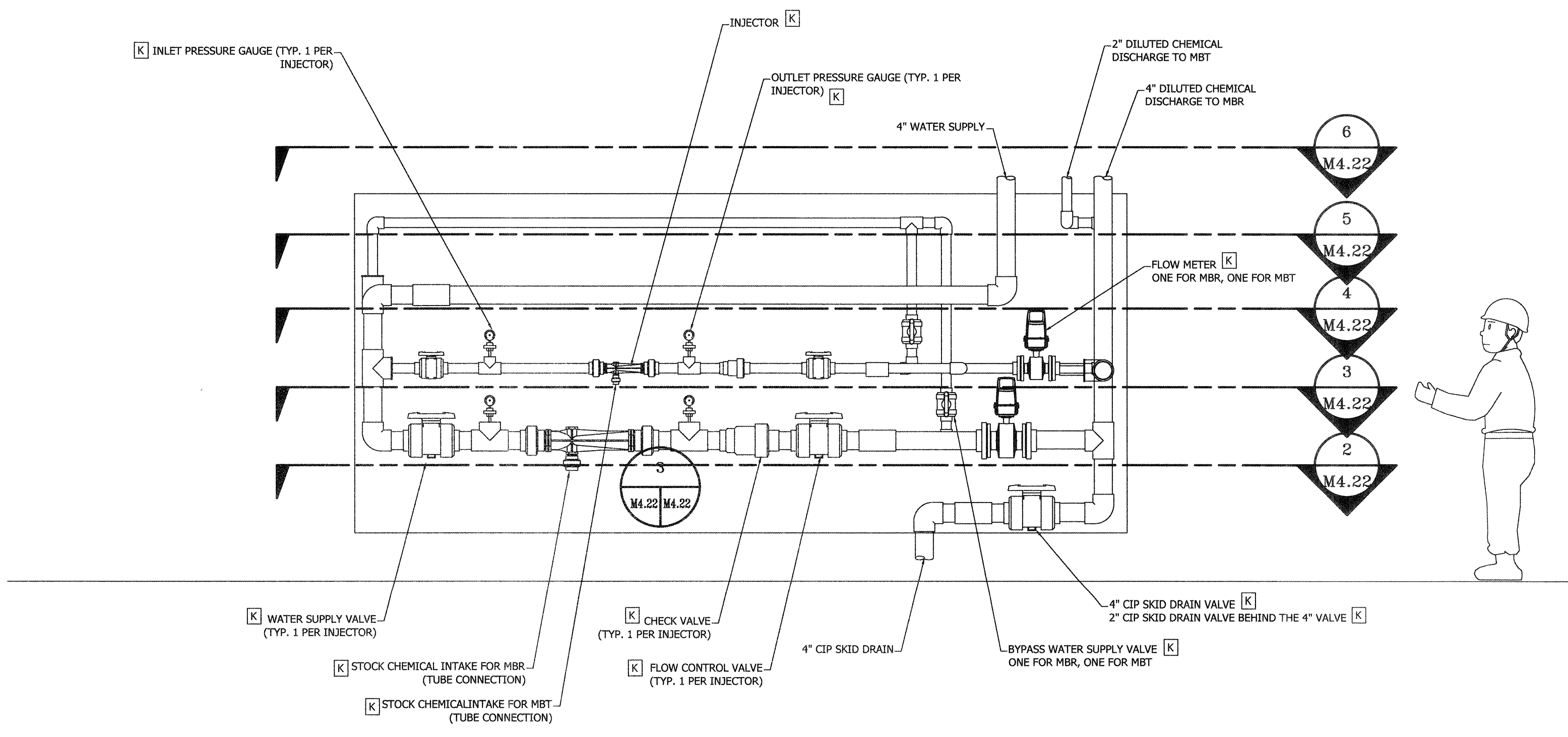


**2 CIP SKID DETAIL**  
 SCALE: 1/2"=1'-0"

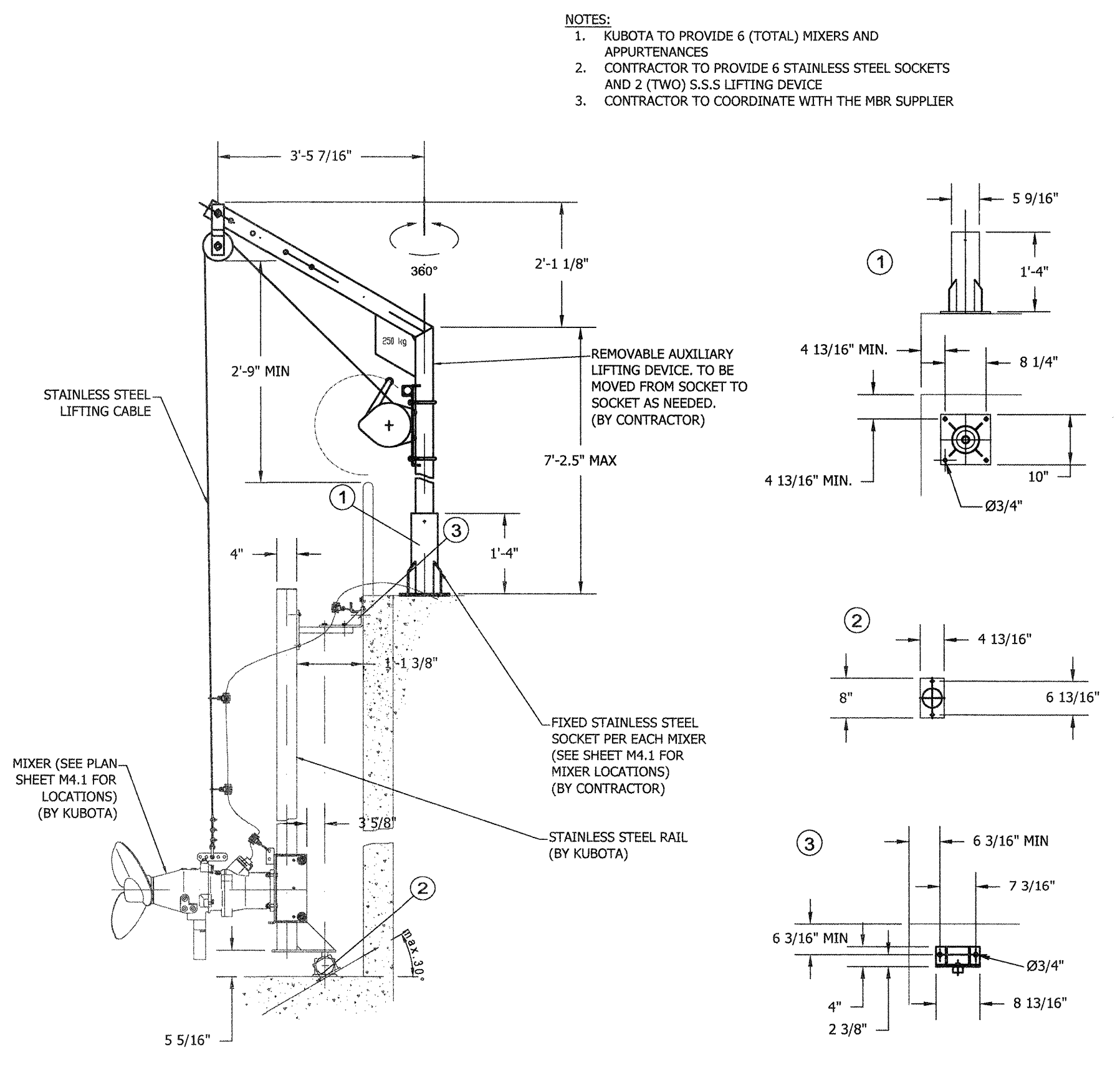
**3 CIP SKID DETAIL**  
 SCALE: 1/2"=1'-0"



**5 CIP SKID DETAIL**  
 SCALE: 1/2"=1'-0"

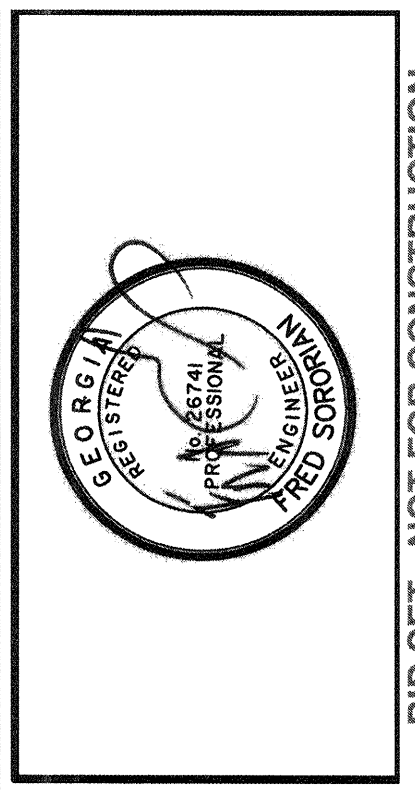


**1 CIP SKID DETAIL**  
 SCALE: 1/2"=1'-0"  
 PROVIDED BY KUBOTA



**6 MIXER WINCH DETAIL**  
 SCALE: 1/2"=1'-0"

- NOTES:
1. KUBOTA TO PROVIDE 6 (TOTAL) MIXERS AND APURTENANCES
  2. CONTRACTOR TO PROVIDE 6 STAINLESS STEEL SOCKETS AND 2 (TWO) S.S.S LIFTING DEVICE
  3. CONTRACTOR TO COORDINATE WITH THE MBR SUPPLIER



NO.	ISSUED FOR	BY	DATE
0	ISSUED FOR BIBS		
	REVISIONS		

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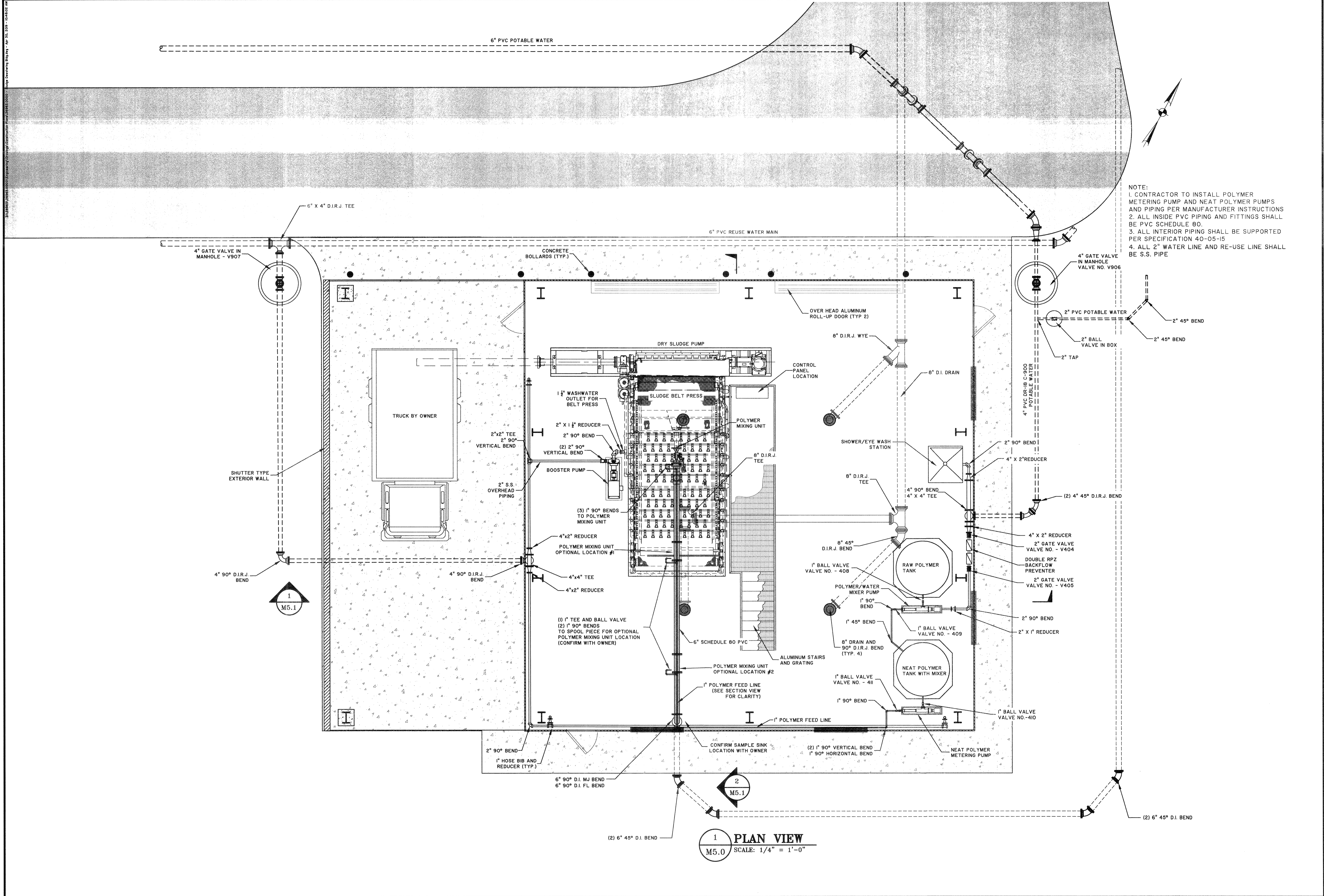
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**CIP SKID DETAIL**

JOB NO:	J-26963.0000
DATE:	1-16-19
DRAWN:	KI
DESIGNED:	KI
REVIEWED:	FS
APPROVED:	FS
SCALE:	3/8"=1'-0"

**M4.22**

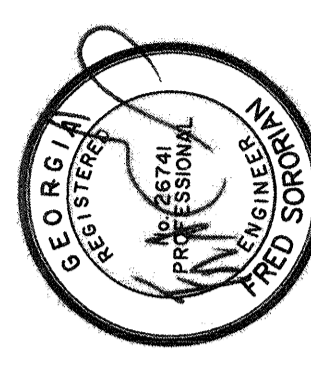
BID SET - NOT FOR CONSTRUCTION





NOTE:  
 1. CONTRACTOR TO INSTALL POLYMER METERING PUMP AND NEAT POLYMER PUMPS AND PIPING PER MANUFACTURER INSTRUCTIONS  
 2. ALL INSIDE PVC PIPING AND FITTINGS SHALL BE PVC SCHEDULE 80.  
 3. ALL INTERIOR PIPING SHALL BE SUPPORTED PER SPECIFICATION 40-05-15  
 4. ALL 2" WATER LINE AND RE-USE LINE SHALL BE S.S. PIPE

1 PLAN VIEW  
 M5.0 SCALE: 1/4" = 1'-0"



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 TRAVIS FIELD WATER RECLAMATION FACILITY  
 SLUDGE DEWATERING BUILDING PLAN AND SECTION VIEWS

JOB NO:	J-26963.0000
DATE:	1-16-19
DRAWN:	CDR
DESIGNED:	CDR
REVIEWED:	FS
APPROVED:	FS
SCALE:	AS NOTED

**M5.0**

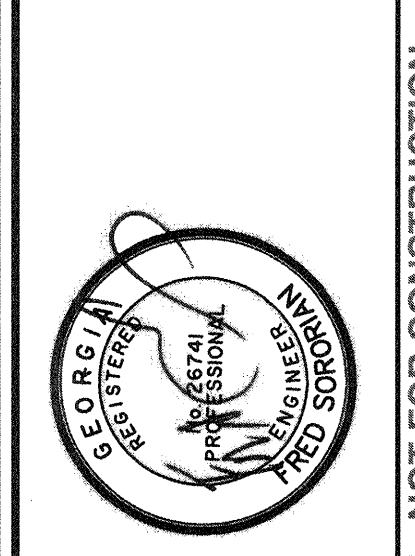
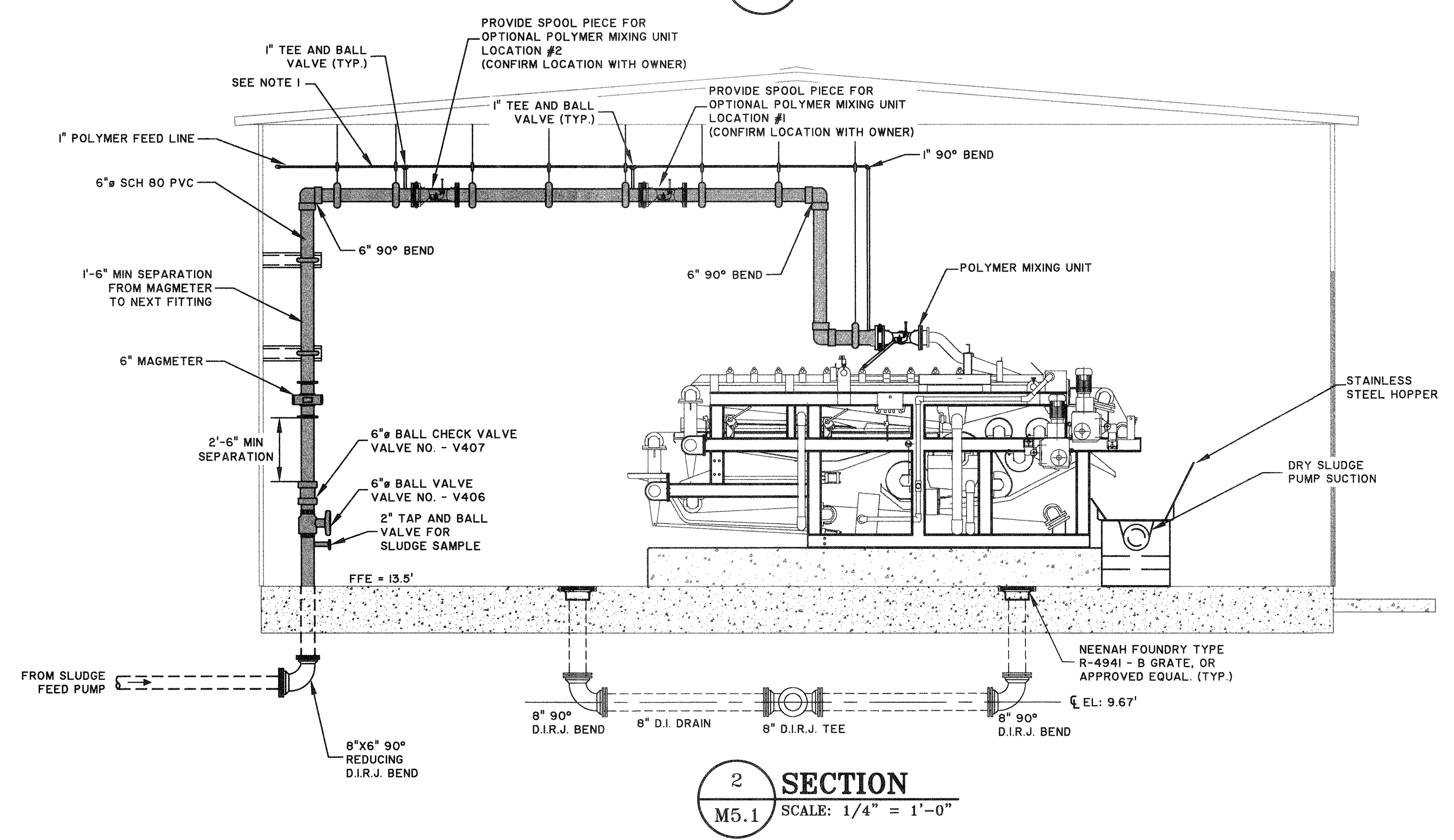
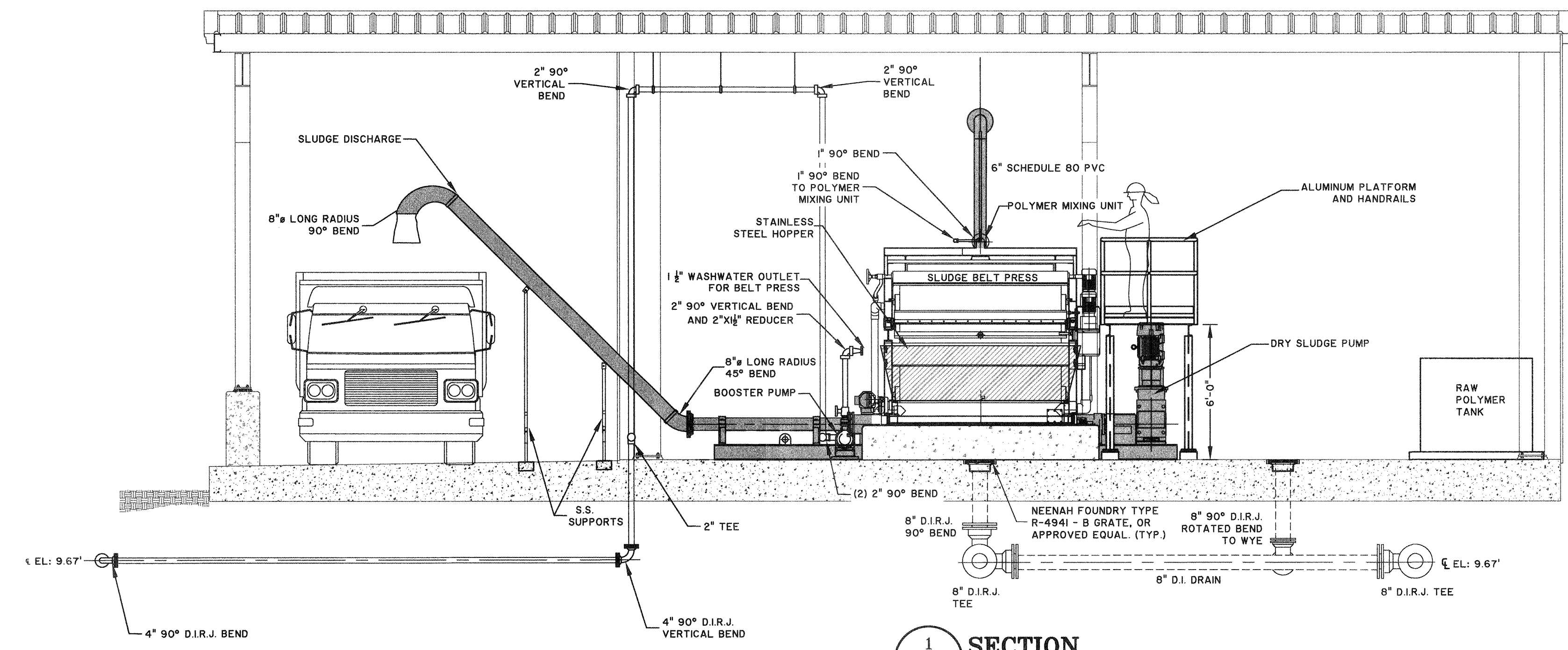
BID SET - NOT FOR CONSTRUCTION



S:\Projects\2016\2016050000\Drawings\Construction\Plan\M5.0000 - Sludge Treatment Bay 1.dwg - 16:16:18 05/16/2016

- NOTE:**
- SUPPORT ALL PIPING WITH S.S. HANGERS OR CLAMPS EVERY 3' FROM CEILING AND WALL.
  - CONTRACTOR TO PROVIDE S.S. SUPPORTS FOR CHUTES
  - CONTRACTOR PROVIDE SUBMITTAL FOR ALUMINUM PLATFORM, STAIRS, AND HANDRAILS

- NOTE:**
- CONTRACTOR TO INSTALL POLYMER METERING PUMP AND NEAT POLYMER PUMPS AND PIPING REQUIREMENT BASED ON MANUFACTURER INSTRUCTIONS
  - ALL INSIDE PVC PIPING AND FITTINGS SHALL BE PVC SCHEDULE 80.
  - ALL INTERIOR PIPING SHALL BE SUPPORTED PER SPECIFICATION 40-05-15
  - ALL 2" WATER LINE AND RE-USE LINE SHALL BE S.S. PIPE
  - ALL STRUCTURAL STEEL FRAMES SHALL BE HOT DIP GALVANIZED



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TRAVIS FIELD WATER RECLAMATION FACILITY  
**SLUDGE DEWATERING SECTIONS**

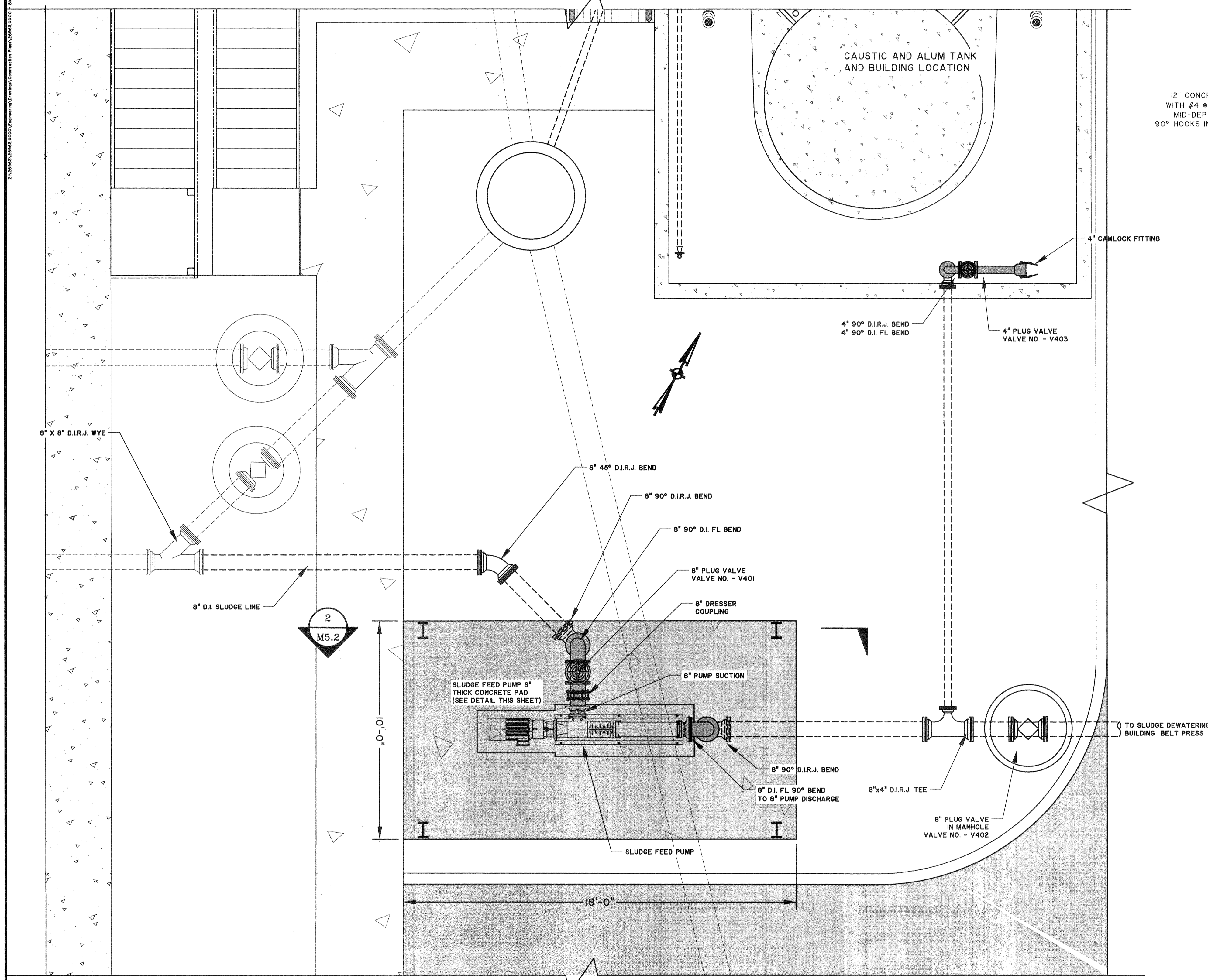
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DATE:	1-16-19
DRAWN:	CDR
DESIGNED:	CDR
REVIEWED:	FS
APPROVED:	FS
SCALE:	1" = 48"

**M5.1**

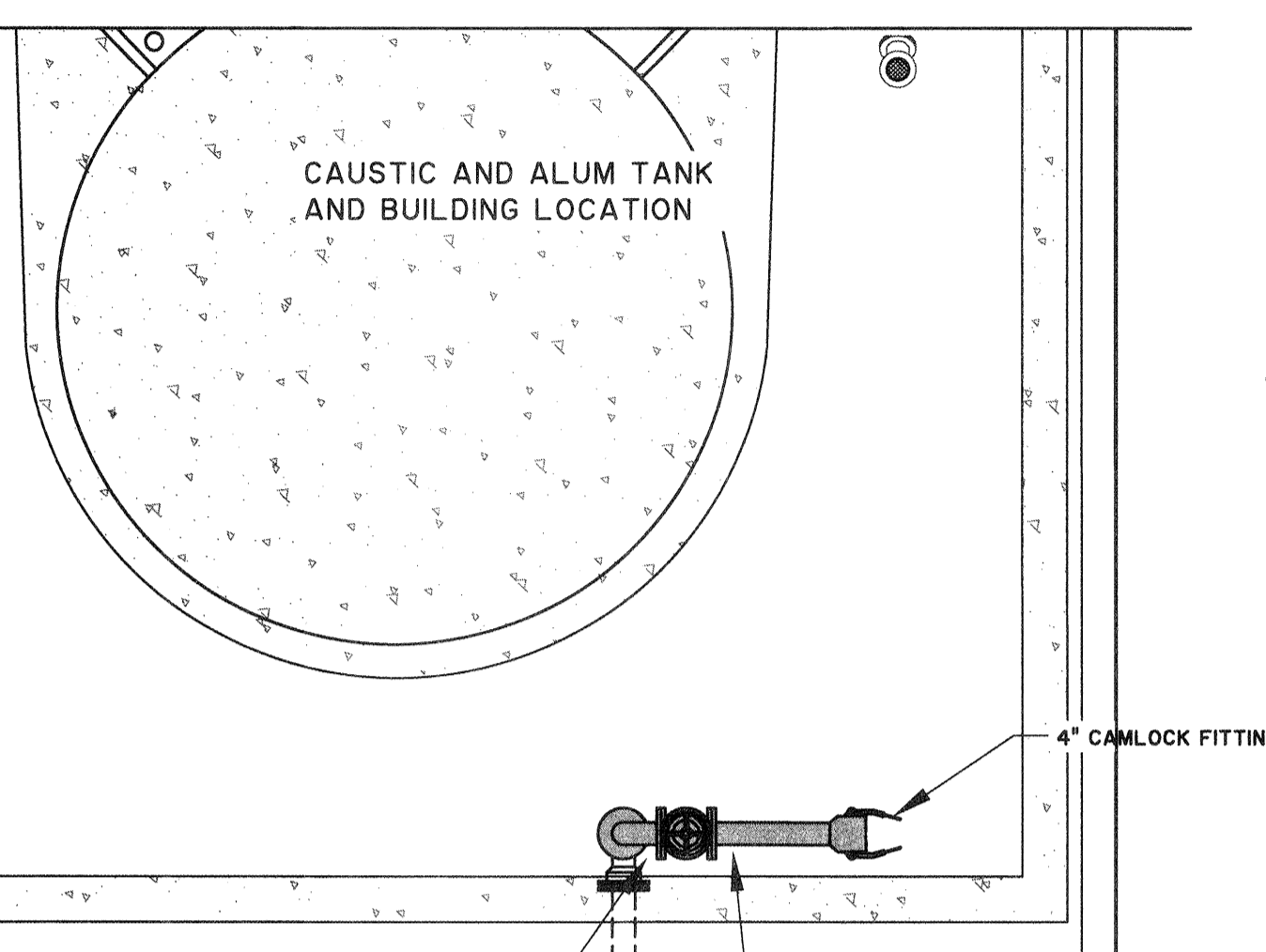
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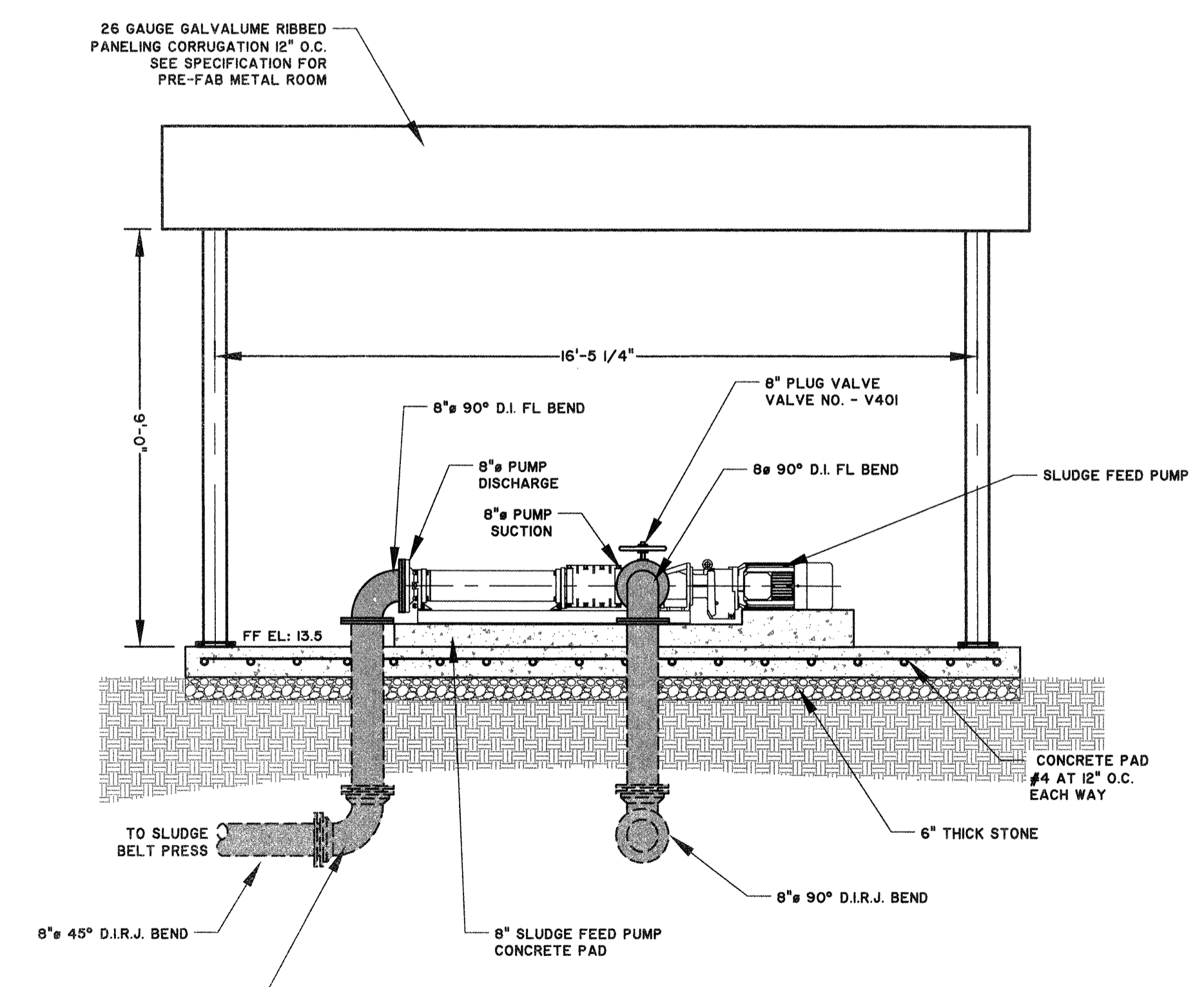
SEE SHEET GI.3 AND GI.5  
FOR PIPING CONTINUATION



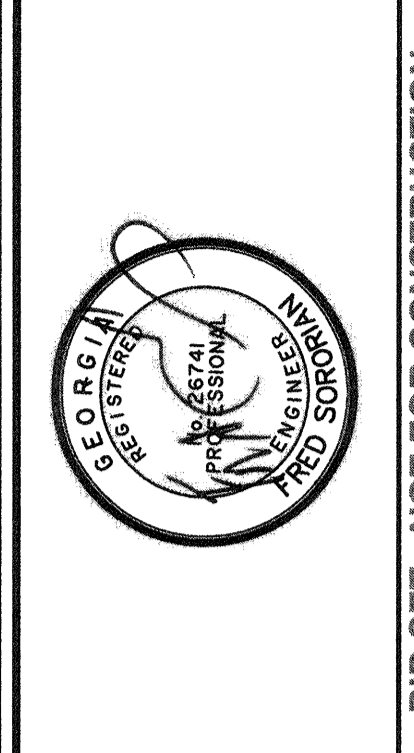
**1 SLUDGE FEED PUMP PLAN VIEW**  
SCALE: 3/8" = 1'-0"



**FOOTING DETAIL**  
SCALE: 1" = 1'-0"



**2 SLUDGE FEED PUMP SECTION VIEW**  
SCALE: 3/8" = 1'-0"



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TRAVIS FIELD WATER RECLAMATION FACILITY  
**SLUDGE FEED PUMP PLAN AND SECTION**

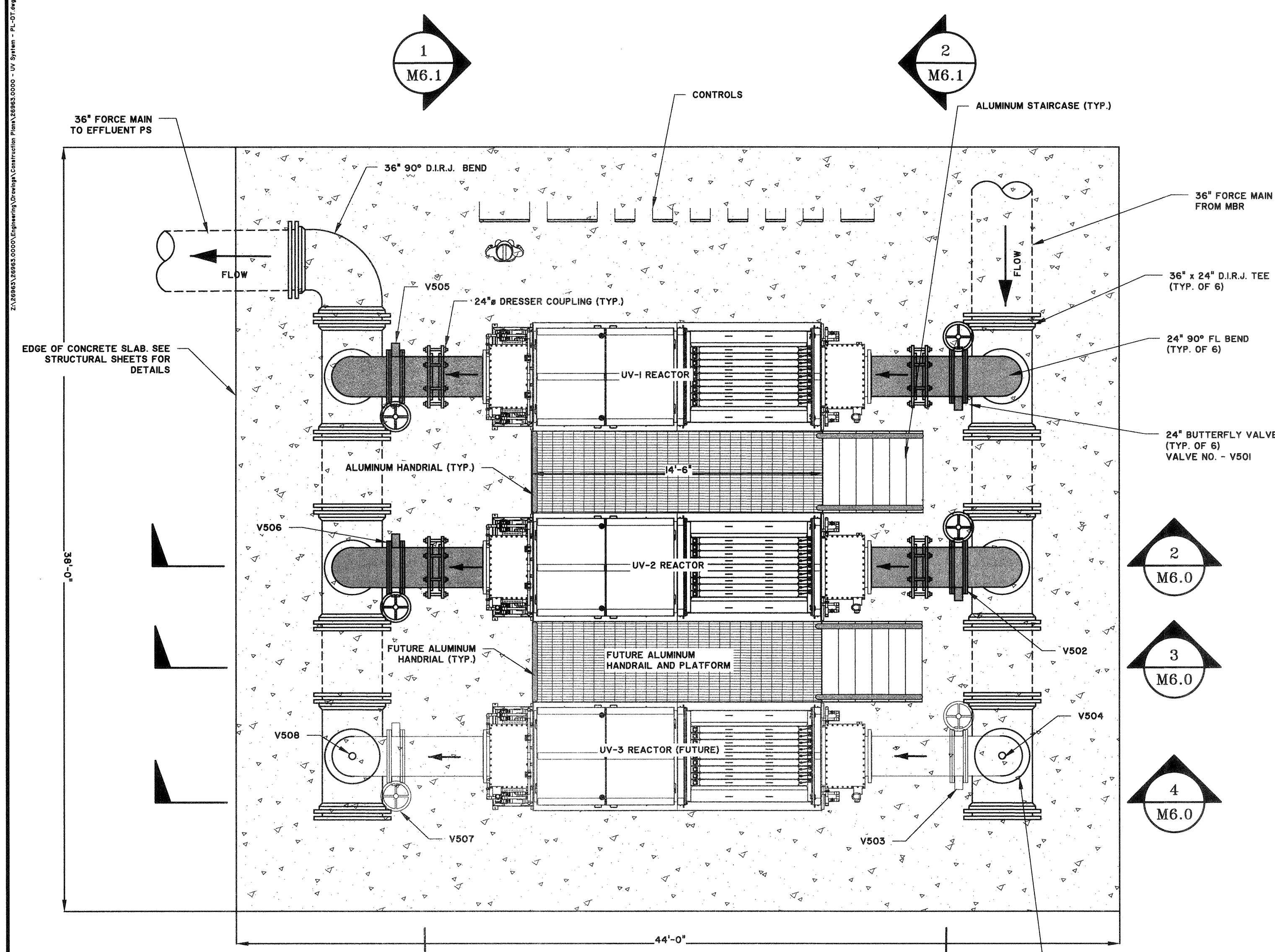
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DATE:	1-15-19
DRAWN:	CDR
DESIGNED:	CDR
REVIEWED:	FS
APPROVED:	FS
SCALE:	1" = 32"

**M5.2**

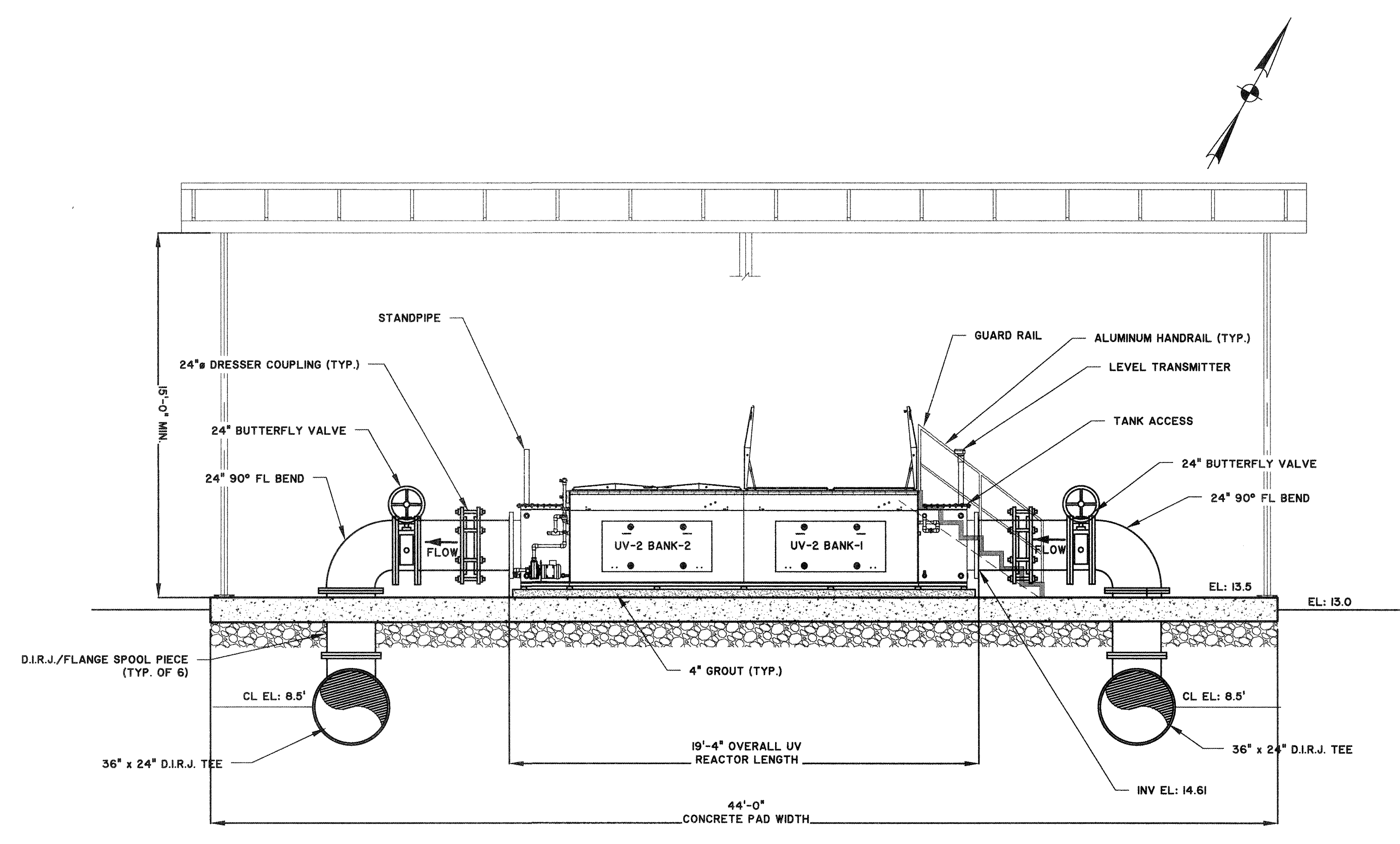
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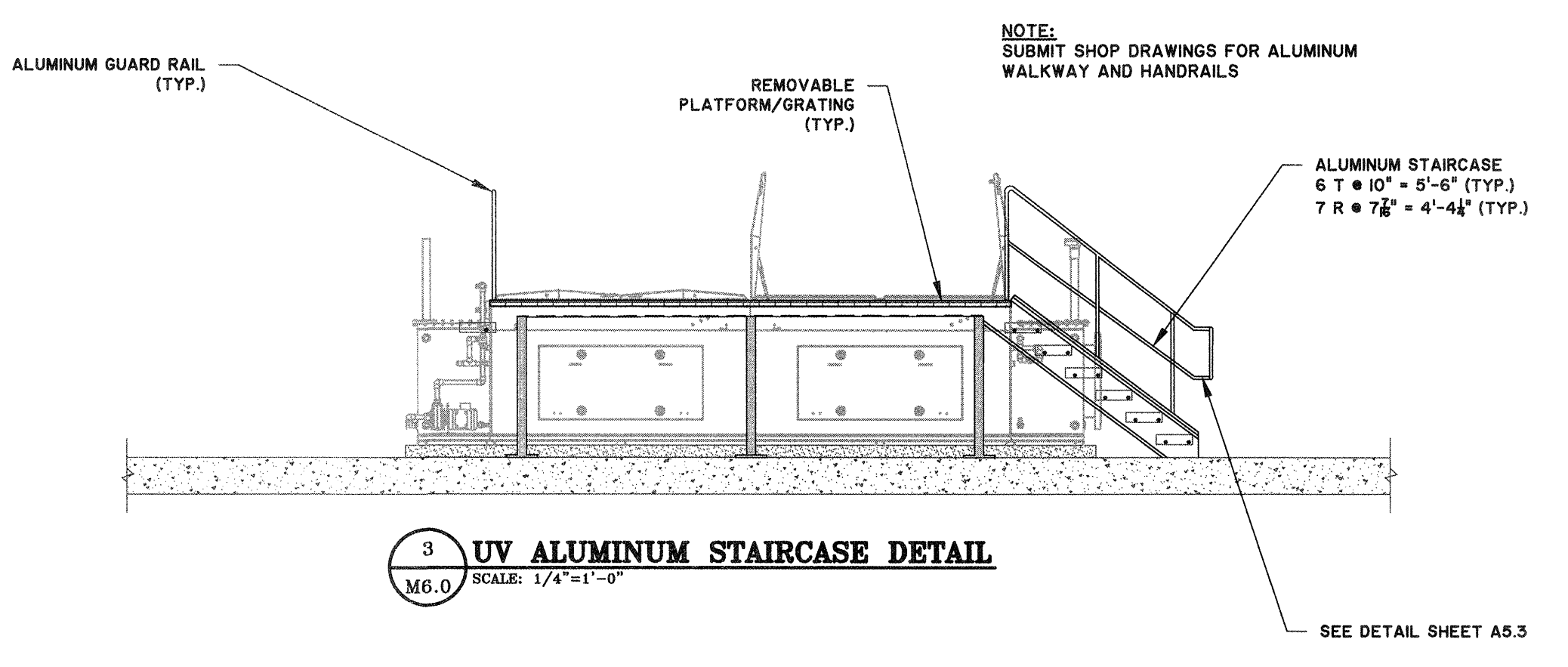
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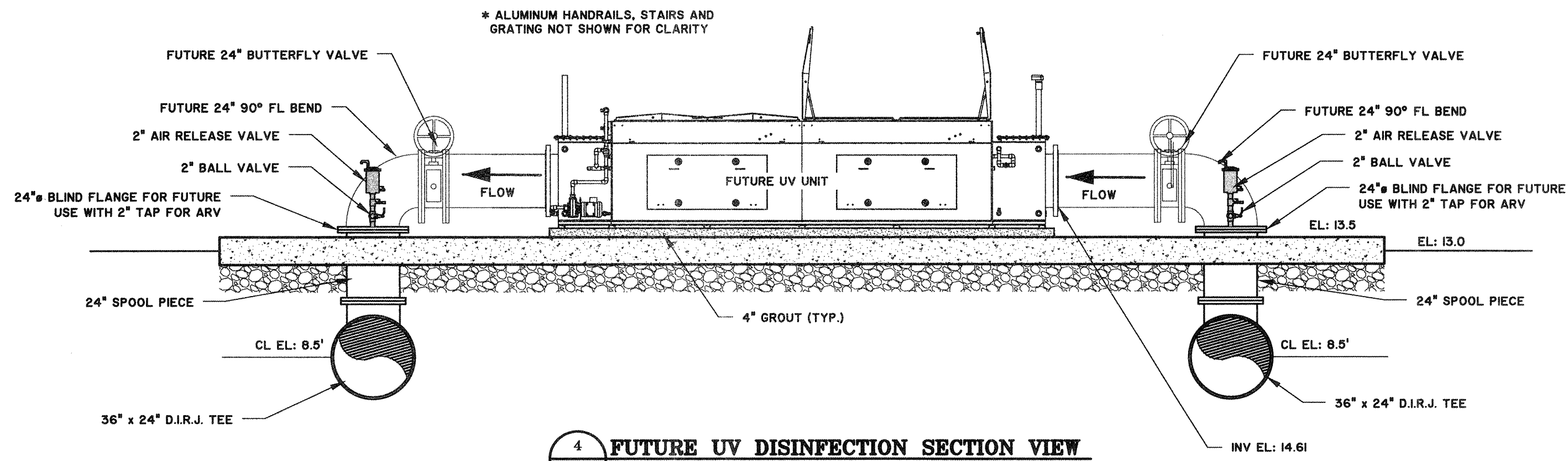
**1 UV DISINFECTION PLAN VIEW**  
 SCALE: 1/4"=1'-0"



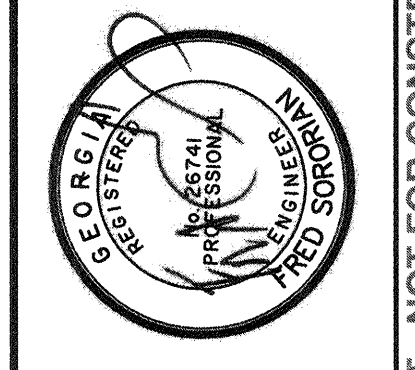
**2 UV DISINFECTION SECTION VIEW**  
 SCALE: 1/4"=1'-0"



**3 UV ALUMINUM STAIRCASE DETAIL**  
 SCALE: 1/4"=1'-0"



**4 FUTURE UV DISINFECTION SECTION VIEW**  
 SCALE: 1/4"=1'-0"



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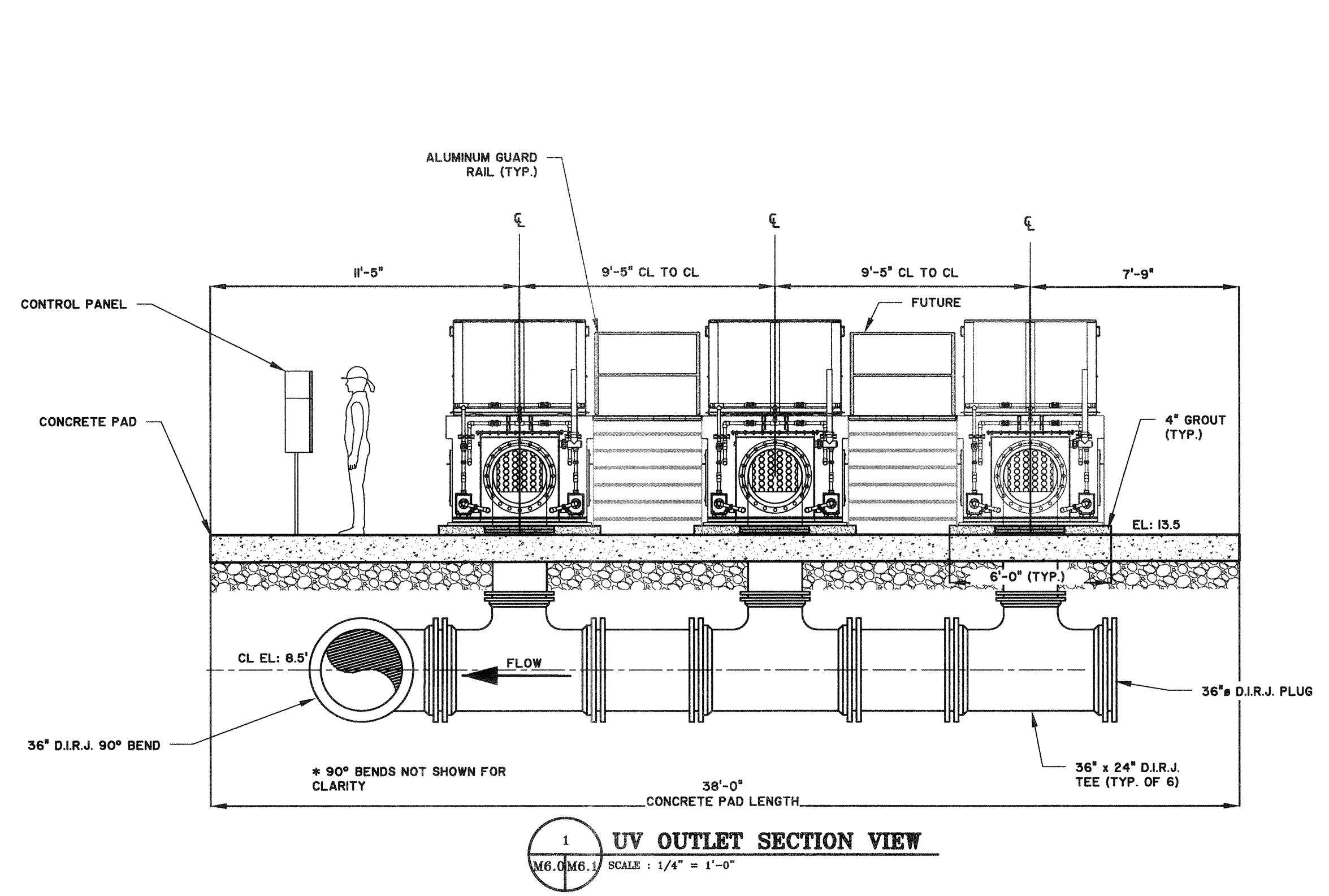
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 UV DISINFECTION SYSTEM PLAN AND SECTION VIEW

JOB NO:	J-26963.0000
DATE:	1-16-19
DRAWN:	CDR
DESIGNED:	CDR
REVIEWED:	FS
APPROVED:	FS
SCALE:	1/4"=1'-0"

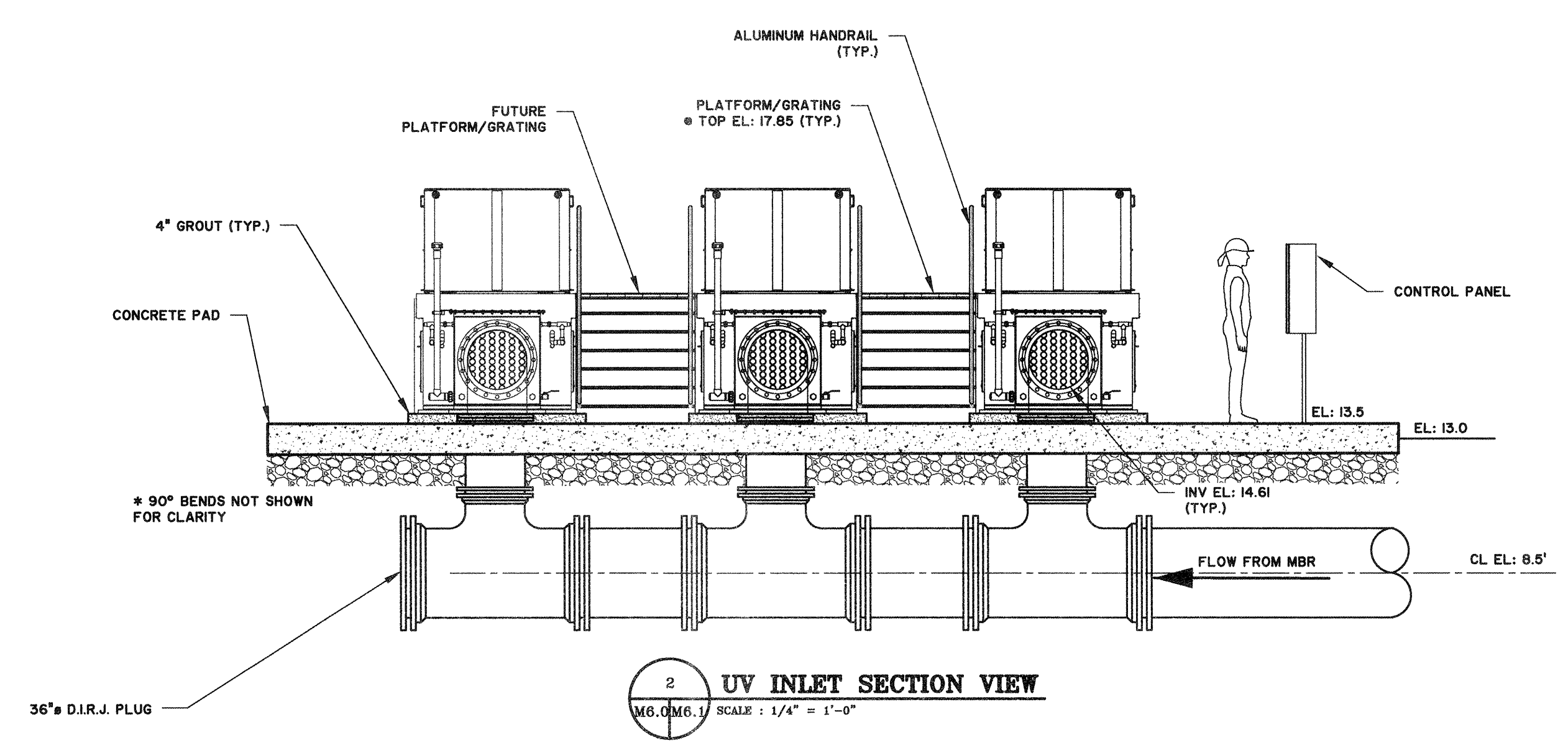
**M6.0**

BID SET - NOT FOR CONSTRUCTION

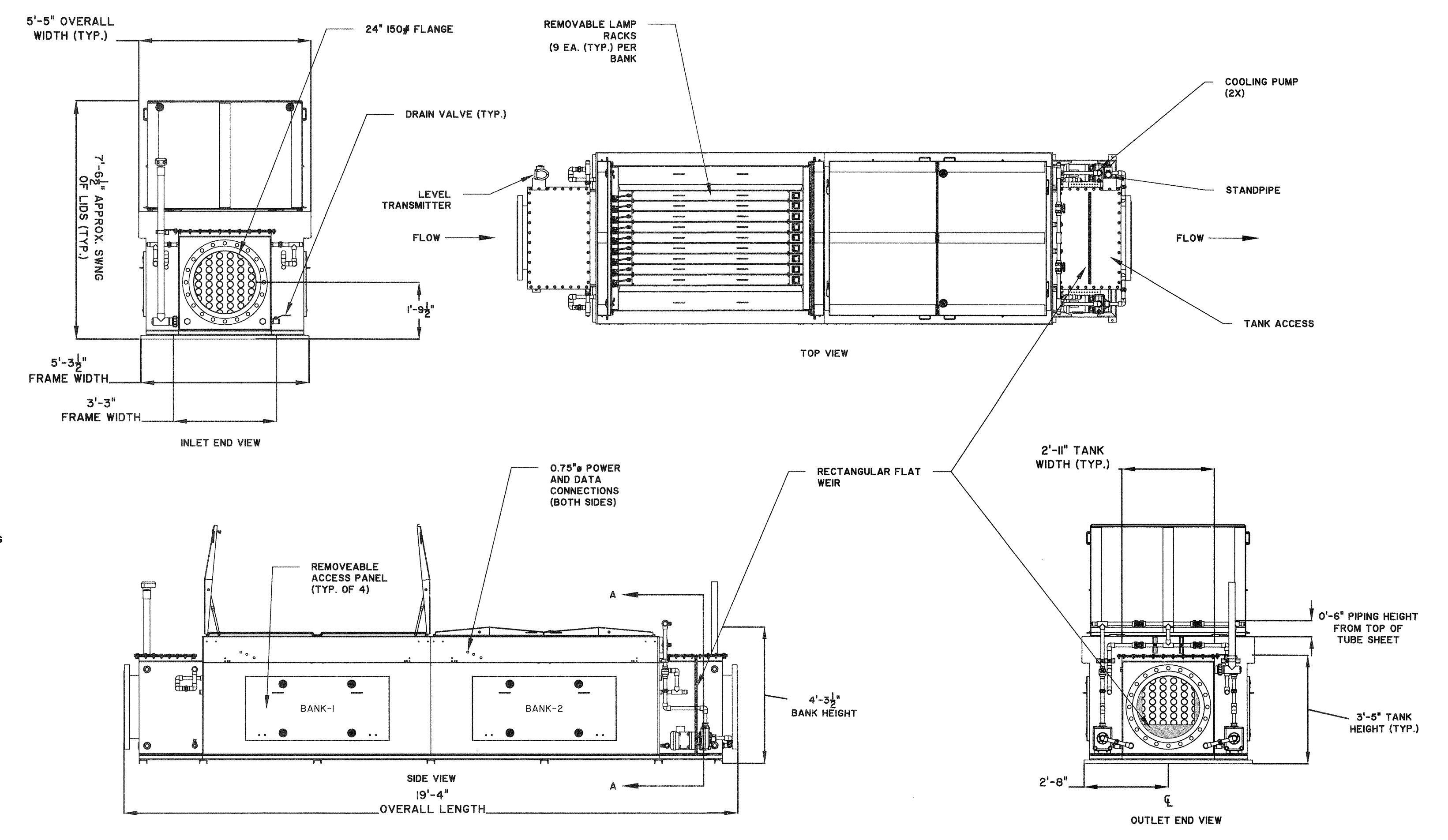




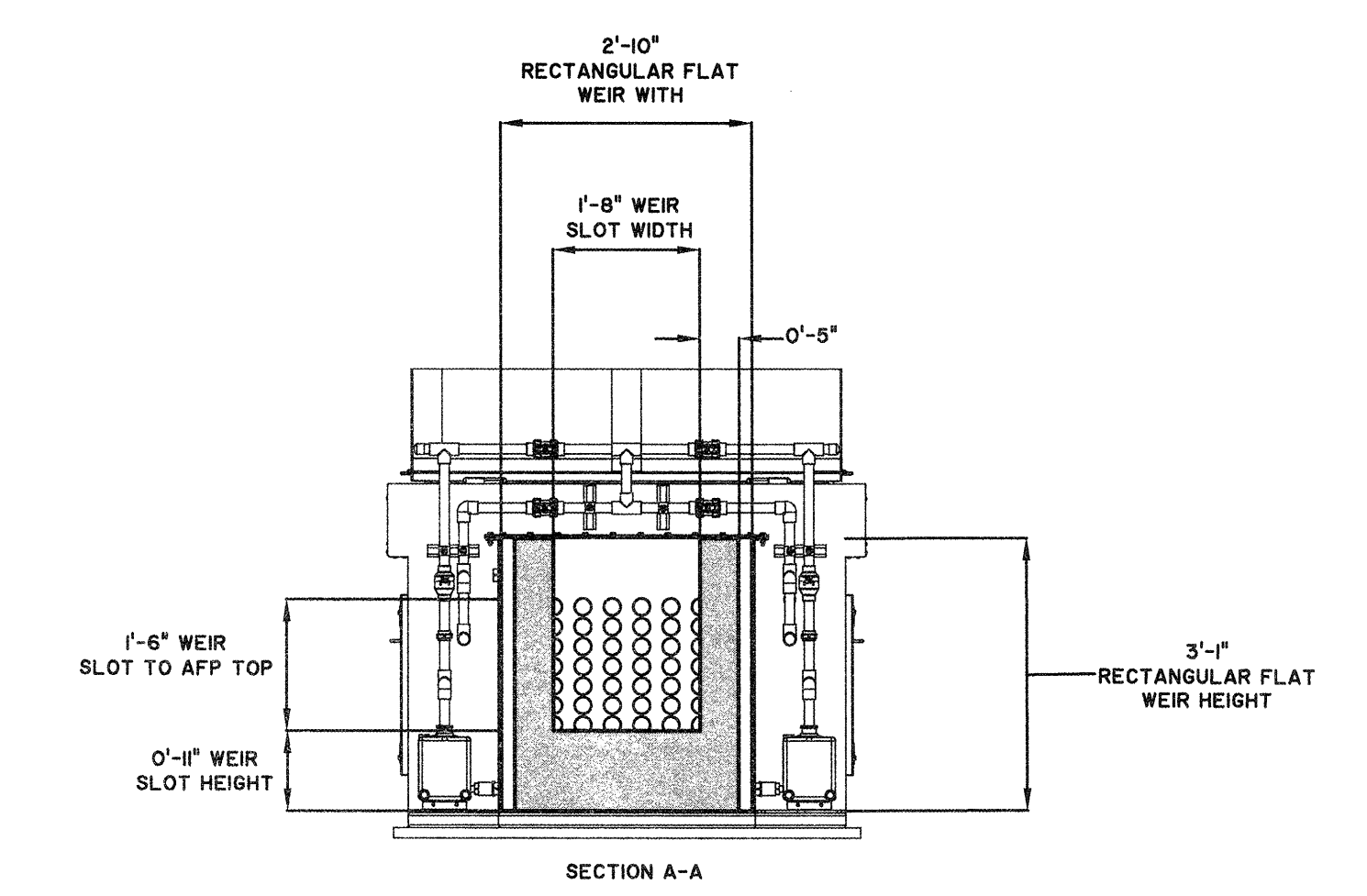
1 UV OUTLET SECTION VIEW  
M6.0/M6.1 SCALE: 1/4" = 1'-0"



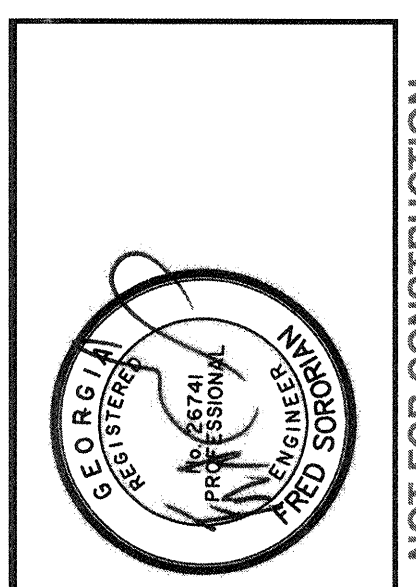
2 UV INLET SECTION VIEW  
M6.0/M6.1 SCALE: 1/4" = 1'-0"



3 UV REACTOR DETAILS  
M6.1 SCALE: 3/8" = 1'-0"



4 UV REACTOR WEIR DETAIL  
M6.1 SCALE: 1/2" = 1'-0"



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TRAVIS FIELD WATER RECLAMATION FACILITY  
 UV DISINFECTION SYSTEM SECTION AND DETAILS

JOB NO:	J-26963.0000
DATE:	1-16-19
DRAWN:	CDR
DESIGNED:	CDR
REVIEWED:	FS
APPROVED:	FS
SCALE:	AS NOTED

**M6.1**

BID SET - NOT FOR CONSTRUCTION



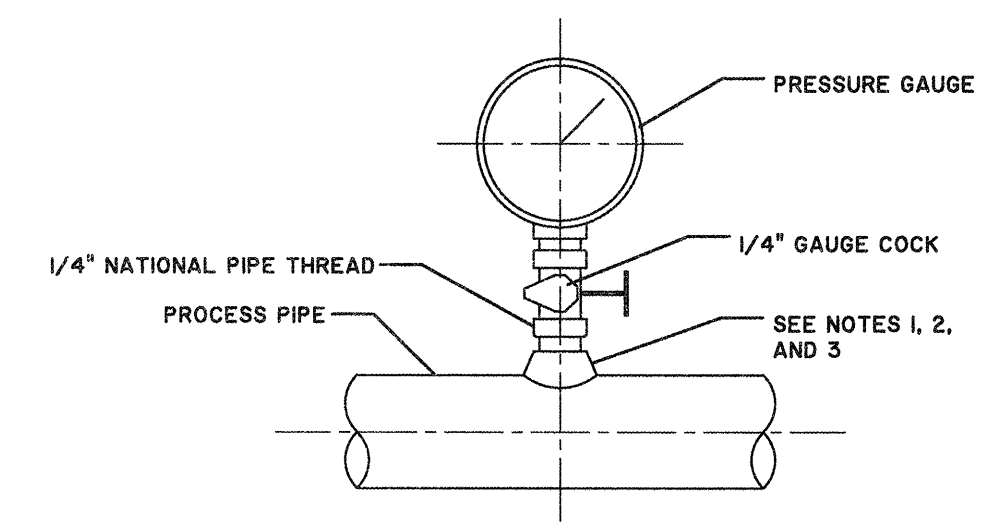
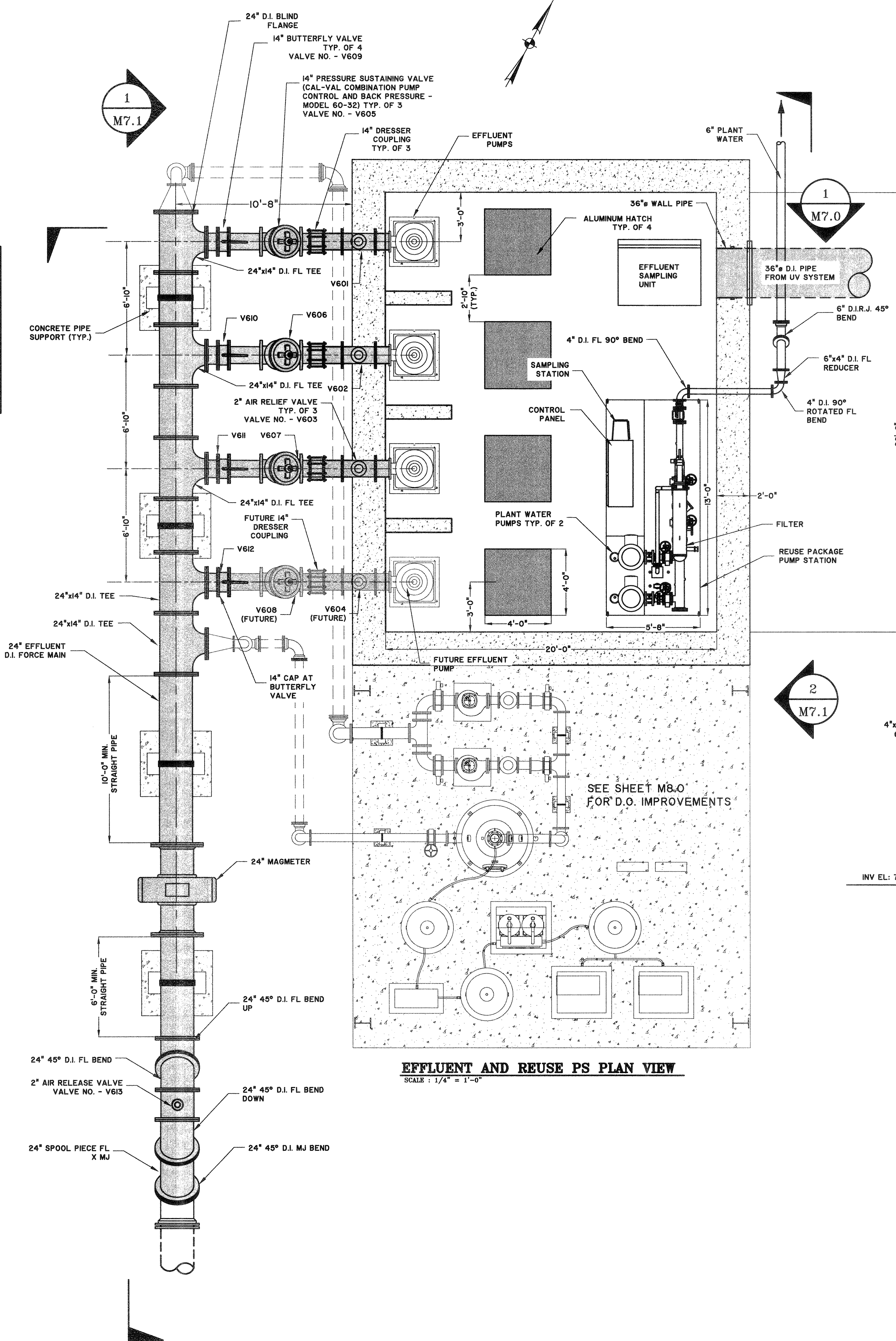
2:58963.0000/Engineer/Thomas & Hutton/Plants/26563.0000 - Effluent Pump Station - 07/14/19 - 07/25/19 - 05/23/19

**EFFLUENT PUMP DESIGN SCHEDULE**

DESCRIPTION	CONDITIONS
NO. OF PUMPS	2 DUTY, 1 STAND-BY (PHASE I)
PHASE	3 PHASE
VOLTAGE	460V
MIN. HP	150
PUMP MANUFACTURER	PEERLESS
DESIGN TOTAL DYNAMIC HEAD	98 FT

**WET WELL DESIGN SCHEDULE**

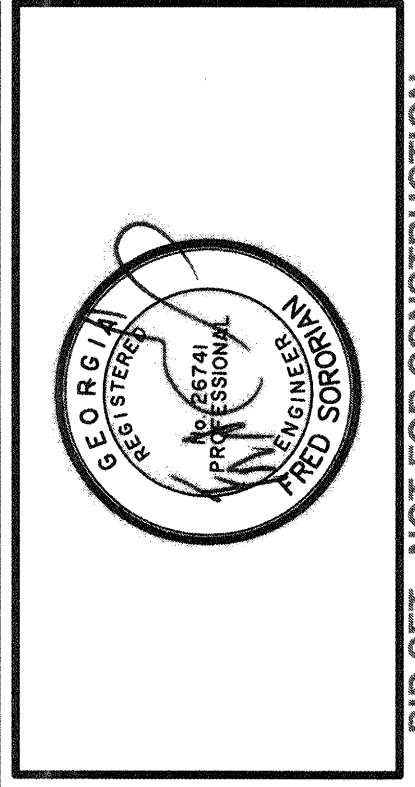
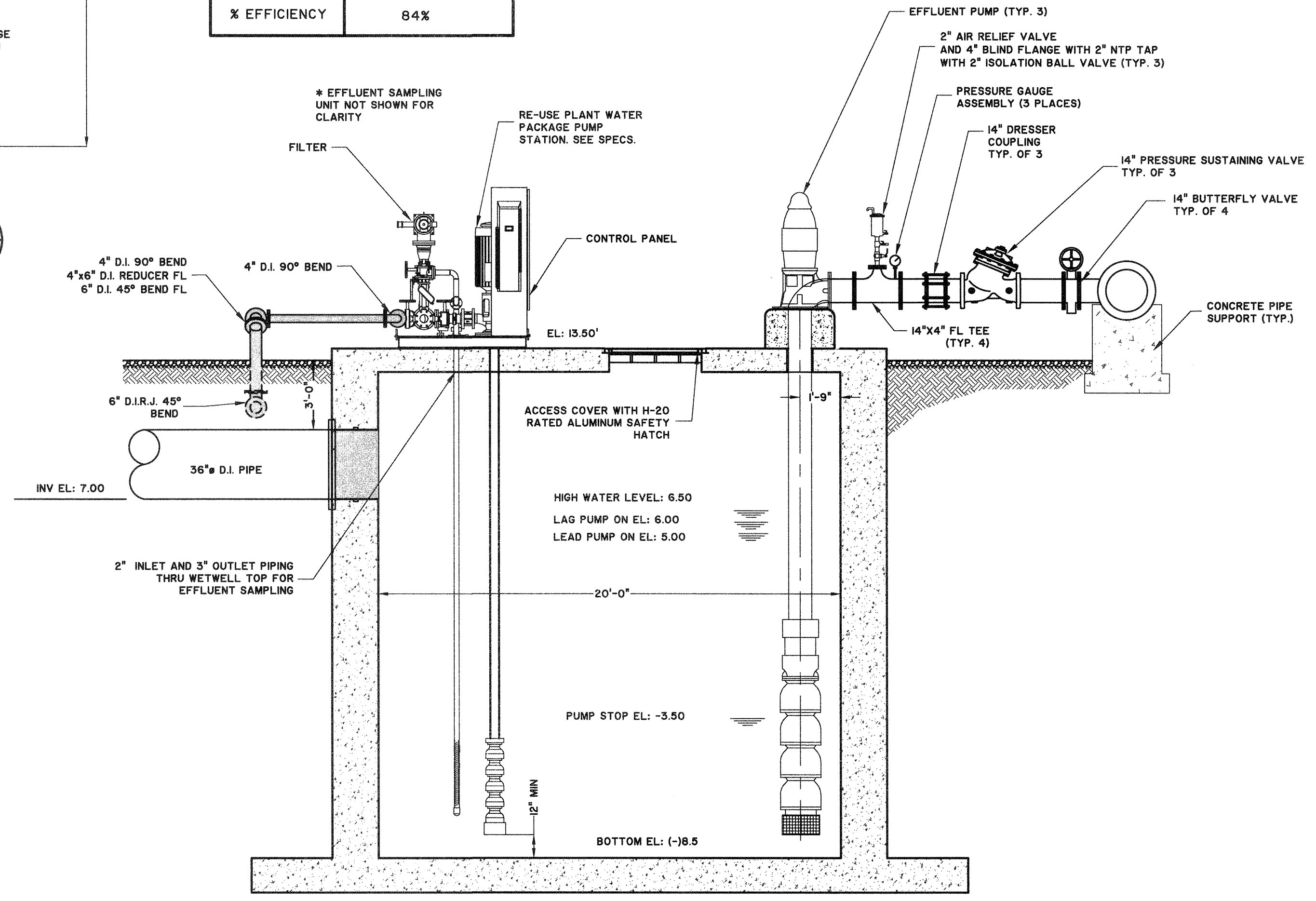
DESCRIPTION	ELEVATION
INFLUENT ELEV.	7.00'
START LEAD PUMP	5.00'
START LAG PUMP	6.00'
BOTTOM ELEV.	(-18.5')
FIN. GRADE ELEV.	13.50'
ALARM ELEV.	6.50'
STOP PUMPS	(-3.50')
WET WELL DIA.	26'-6" x 20'



- FOR STEEL, GALVANIZED STEEL, AND PVC 2-1/2" AND SMALLER USE A BUSHING IN A TEE
- FOR DUCTILE IRON AND FIBERGLASS REINFORCED PLASTIC PIPE, ALL SIZES, USE PIPE SADDLE WITH BUSHING
- FOR STEEL AND STAINLESS STEEL PIPES 3" AND LARGER, AND PRESSURE VESSELS, USE THRED-O-LET AS SHOWN
- PROVIDE SNUBBER FOR POSITIVE DISPLACEMENT PUMP INSTALLATIONS.

**REUSE PUMP DESIGN SCHEDULE**

DESCRIPTION	CONDITIONS
NO. OF PUMPS	1 DUTY, 1 STAND-BY
DUTY POINT	400 GPM
RPM	1800
MIN. HP	40
% EFFICIENCY	84%



NO.	DATE	BY	REVISIONS
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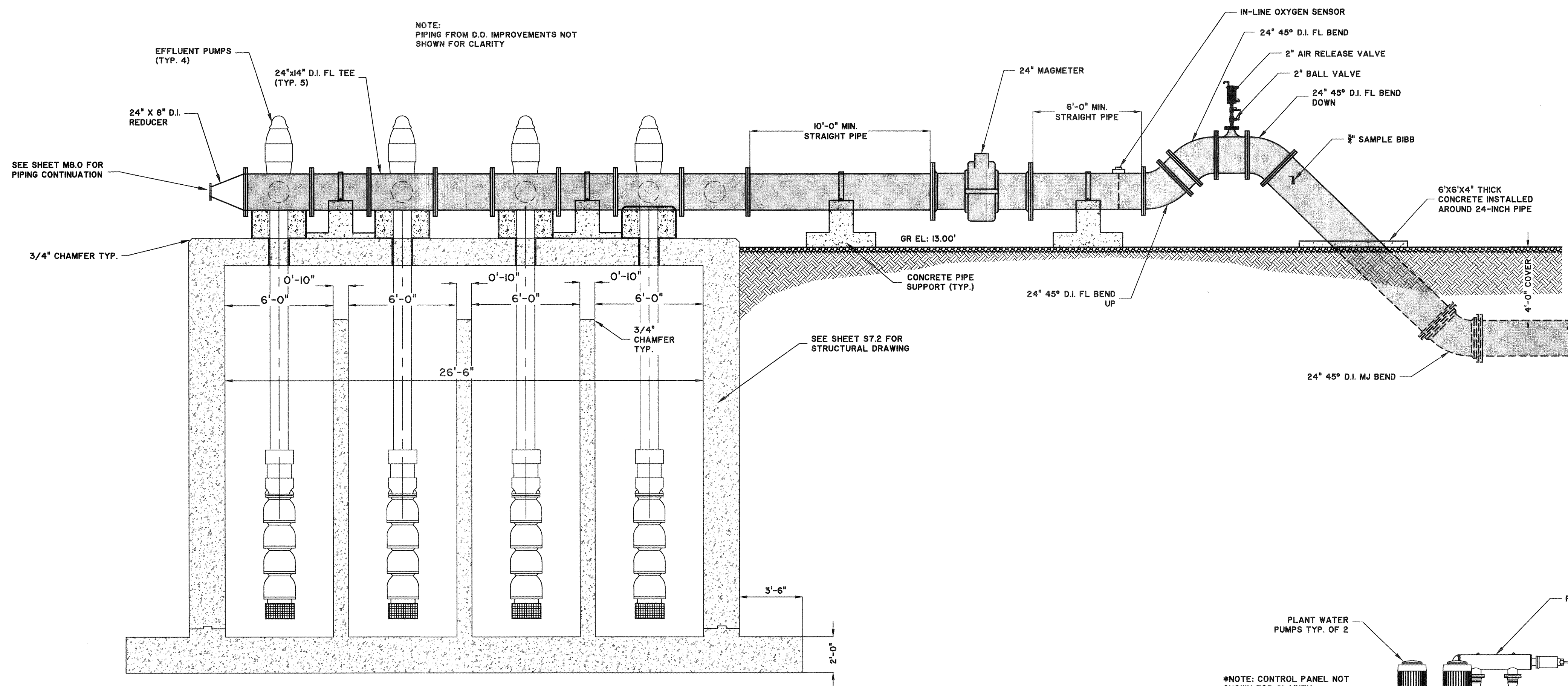
**SAVANNAH**  
 TRAVIS FIELD WATER RECLAMATION FACILITY  
 EFFLUENT PUMP STATION PLAN AND SECTION VIEW

JOB NO:	J-26563.0000
DATE:	1-16-19
DRAWN:	CDR
DESIGNED:	CDR
REVIEWED:	FS
APPROVED:	FS
SCALE:	1/4" = 1'-0"

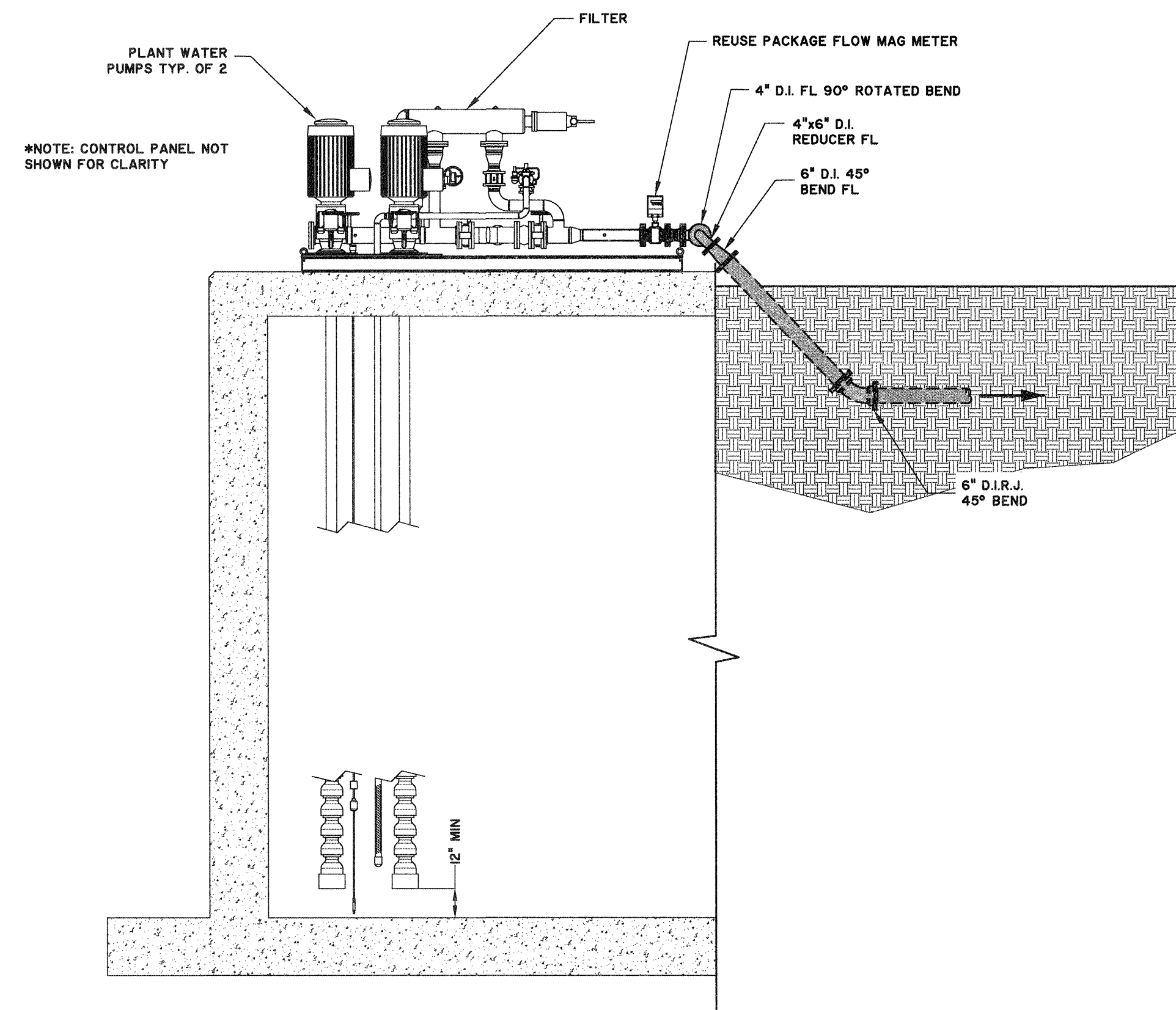
**M7.0**

BID SET - NOT FOR CONSTRUCTION

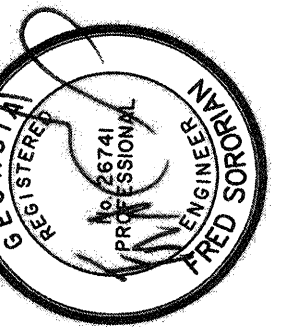




**1**  
**EFFLUENT PUMP STATION SECTION VIEW**  
M7.0/M7.1 SCALE: 1/4" = 1'-0"



**2**  
**REUSE PUMP SECTION VIEW**  
M7.0/M7.1 SCALE: 1/4" = 1'-0"



BID SET - NOT FOR CONSTRUCTION

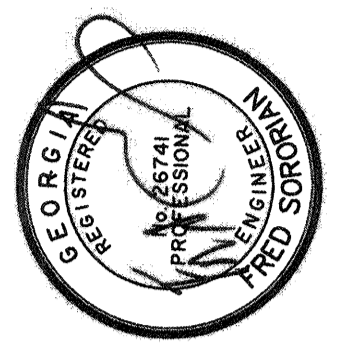
NO.	ISSUED FOR BIDS	REVISIONS	BY	DATE
0			CDR	5-01-19

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**EFFLUENT PUMP STATION SECTIONS**

JOB NO:	J-26563.0000
DATE:	1-16-19
DRAWN:	CDR
DESIGNED:	CDR
REVIEWED:	FS
APPROVED:	FS
SCALE:	1" = 48"

**M7.1**



BID SET - NOT FOR CONSTRUCTION

NO.	ISSUED FOR BIDS	REVISIONS	CDR	BY	DATE

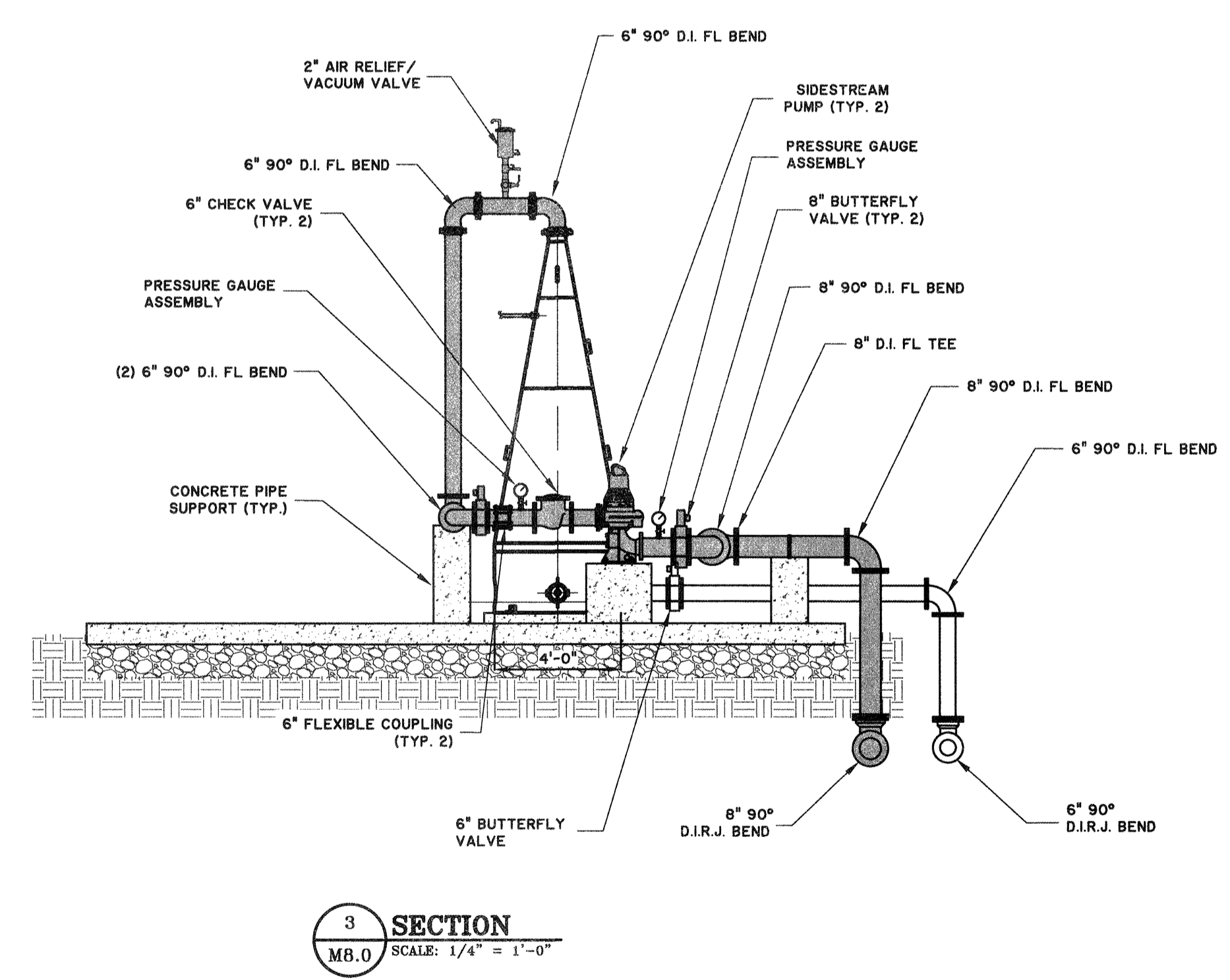
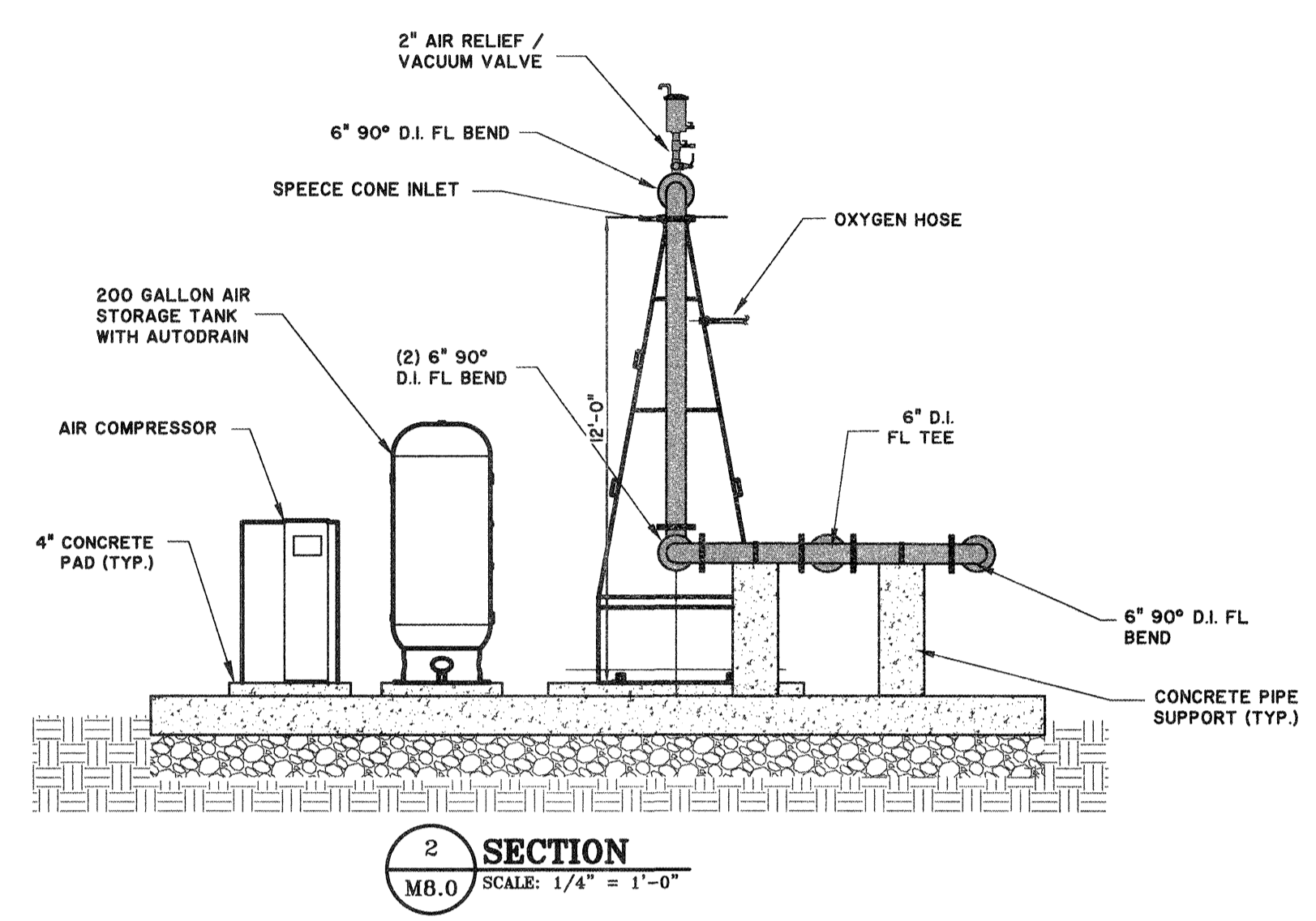
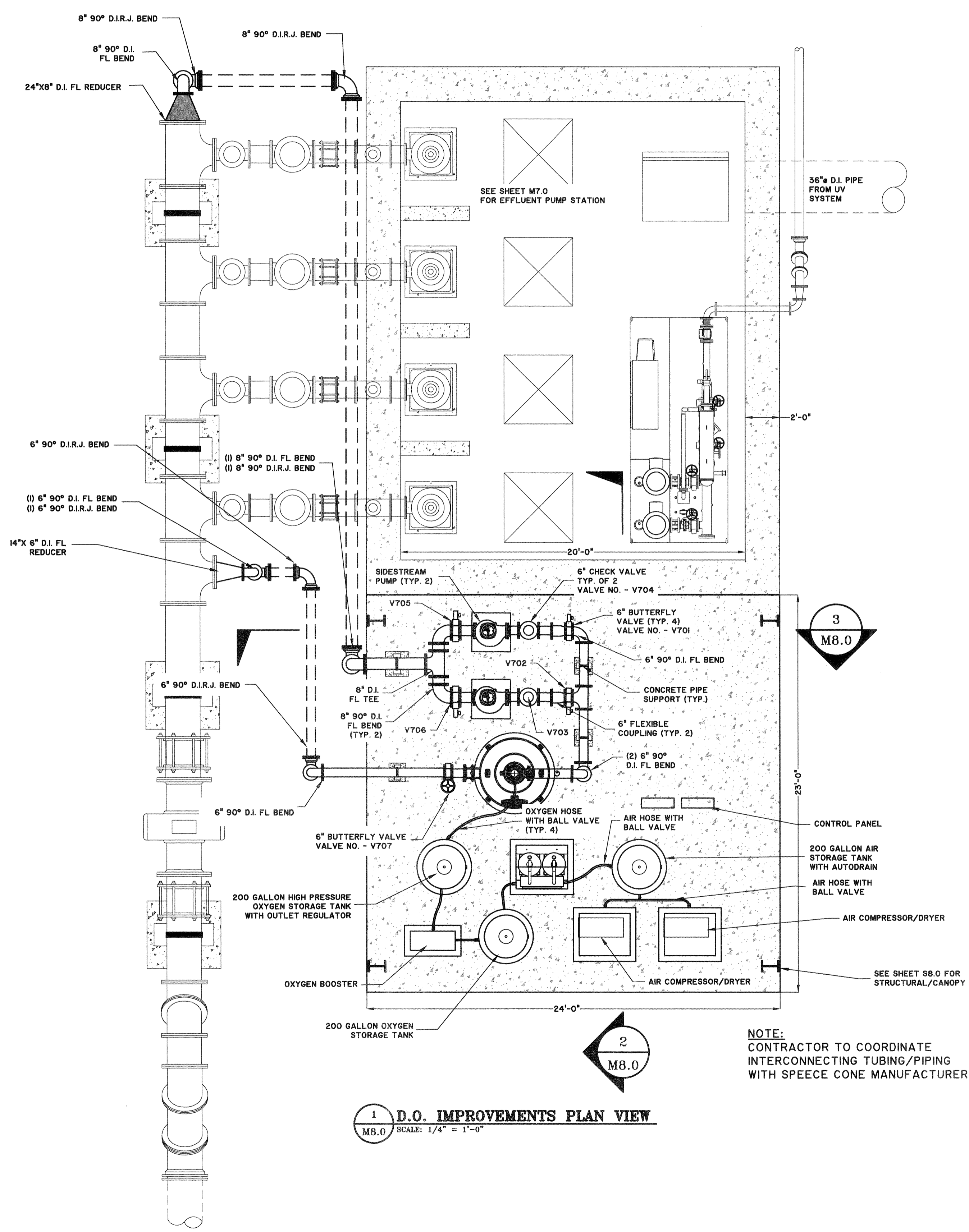
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TRAVIS FIELD WATER RECLAMATION FACILITY  
**D.O. IMPROVEMENTS PLAN AND SECTION**

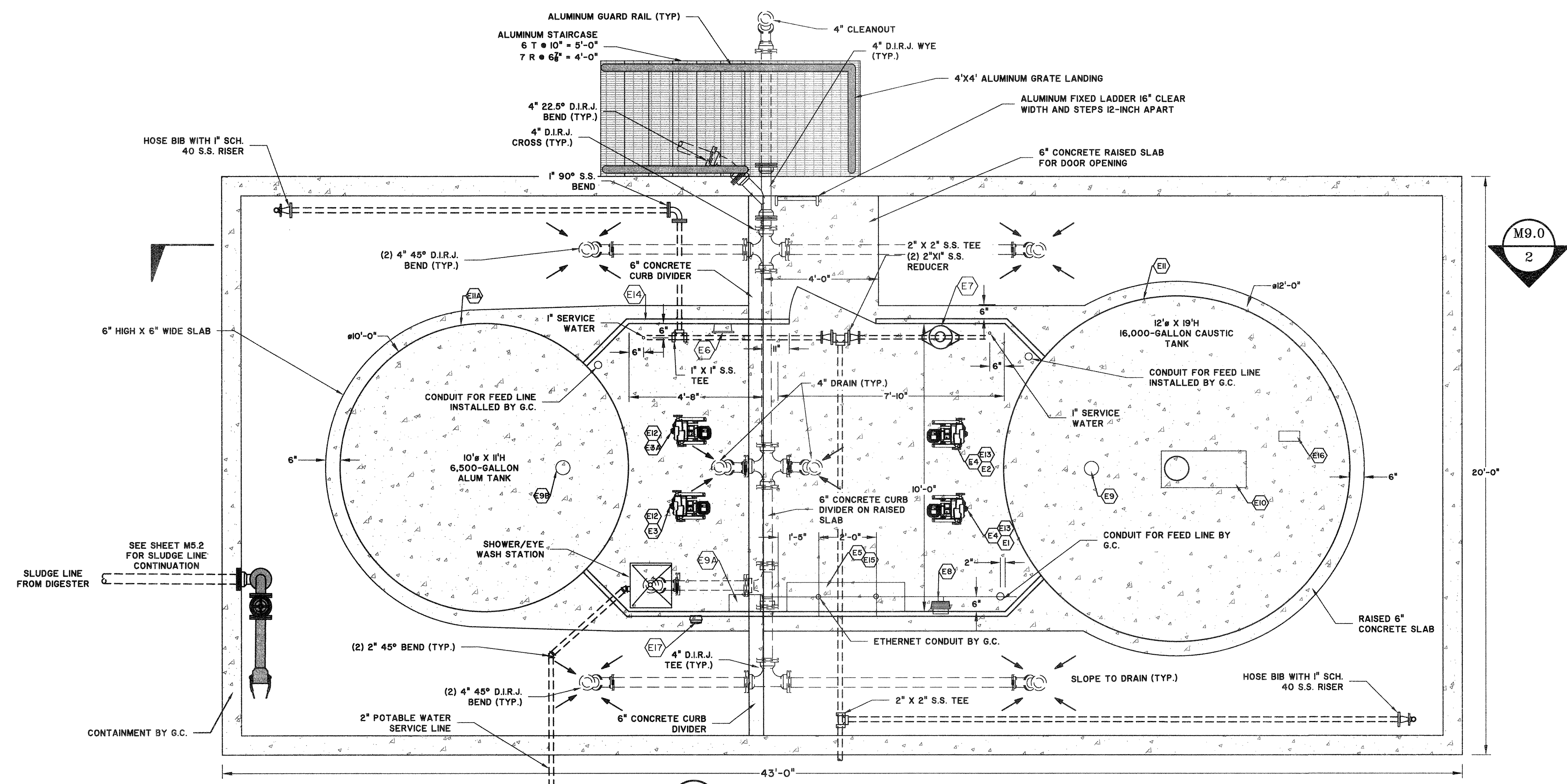
JOB NO:	J-25563.0000
DATE:	1-16-19
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DESIGNED:	CDR
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APPROVED:	FS
SCALE:	1/4"=1'-0"

**M8.0**

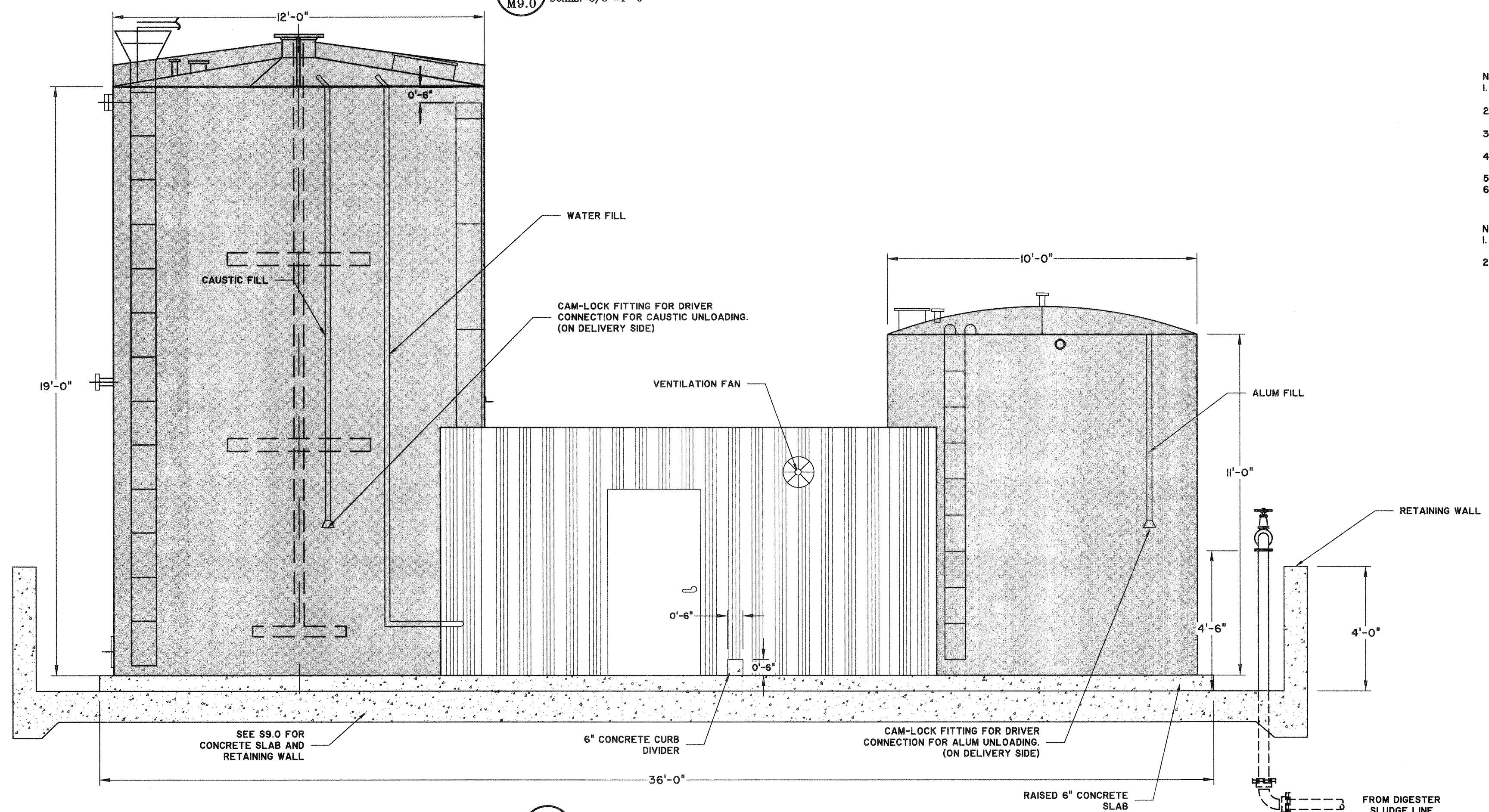




2/18/2015 11:58:00 AM C:\Users\jgibson\Documents\Projects\Travis Field Water Reclamation Facility\CAUSTIC AND ALUM SYSTEM\CAUSTIC AND ALUM SYSTEM PLAN AND SECTION.dwg - User: jgibson - Date: 2/18/2015 11:58:00 AM



**1 CAUSTIC AND ALUM SYSTEM PLAN VIEW**  
 SCALE: 3/8"=1'-0"

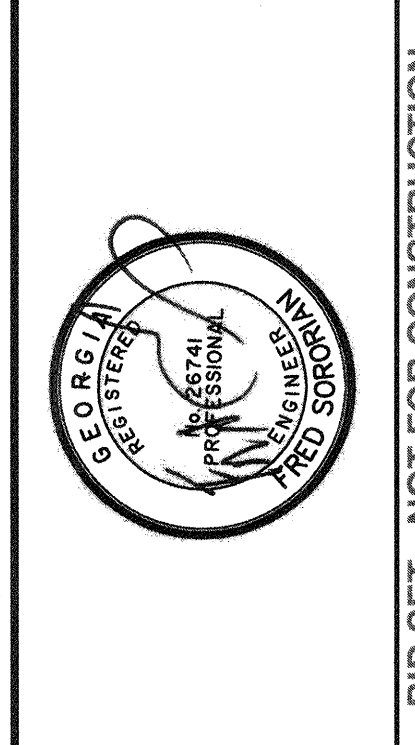


**2 CAUSTIC AND ALUM SYSTEM SECTION**  
 SCALE: 3/8"=1'-0"

EQUIPMENT LIST		
EQUIP. NO.	DESCRIPTION	QTY.
E1	FEED PUMP - GRACO MODEL SOLOTECH ID 2 CAUSTIC FEED AND 2 ALUM FEED	4
E2		
E3		
E4	NOT USED	
E5	ELECTRICAL CONTROL PANEL - LCP-LS-1 - NEMA 4X 304SS WITH ALLEN BRADLEY MICROLOGIX 1400	1
E6	HEATER - 1000 WATT CHROMALOX MODEL HVT-24II	1
E7	COLD WATER METER - POSITIVE DISPLACEMENT	1
E7A	NOT USED	
E8	EXHAUST FAN - DAYTON MODEL 1BLH6 WITH LOUVER 10" DIA. BLADE, 1/20 HP, 1550 RPM, 115 V, 1.9 AMP	1
E9	CAUSTIC LEVEL TRANSDUCER MILLTRONICS XPS 15	1
E9A	CAUSTIC LEVEL INDICATOR MILLTRONICS MULTIRANGER	1
E9B	ALUM LEVEL TRANSMITTER OMEGA LVU-B16. LEVEL INDICATION AVAILABLE VIA READ LINE ON CONTROL PANEL FRONT.	1
E10	CAUSTIC SLURRY MIXER - TESCO, INC. - MODEL NO. 16-30 10 HP, 230/460V, TFC MOTOR 2 - 42" AND 1 - 36" DIA. IMPELLERS - MX-1	1
E11	16,000-GALLON CAUSTIC SLURRY TANK 12' DIA. 19'-0" HIGH SIDEWALL, CONE ROOF, ATMOSPHERIC PRESSURE - LST-1	1
E11A	6,500-GALLON ALUM TANK 10' DIA. 11'-0" HIGH SIDEWALL, CONE ROOF, ATMOSPHERIC PRESSURE - AL-TK	1
E12	2" PINCH VALVE - ONYX SERIES CHR 125# FLANGED END FOR ALUM SERVICE	2
E13	2" ADAPTER - 6" FLANGED TANK END, 2" FLANGED OUTLET	2
E14	PREFABRICATED METAL BUILDING	1
E15	NOT USED	
E16	MIXER DISCONNECT	1
E17	HIGH LEVEL & MIXER ALARM - HORN FEDERAL SIGNAL MODEL 450E, MOUNTED EXTERIOR OF THE PUMP ENCLOSURE	1

- NOTES:
- FEED LINE CONDUIT DIRECTIONAL TURNS OUT OF SLAB ARE TO BE LONG RADIUS TURNS. PULL BOXES EVERY 50'.
  - 1" SERVICE WATER EXTENDED 10" ABOVE SLAB FOR USE BY CAUSTIC/ALUM SUPPLIER (BURNETT INC.).
  - A 6" RAISED SLAB IS REQUIRED IN THE CONTAINMENT AREA FOR THE CAUSTIC AND ALUM TANKS.
  - REMOTE SIGNAL CONTACTS SHALL BE EXTENDED TO SYSTEM CONTROL PANEL.
  - PROVIDE 480, 3-PHASE, 40 AMP SERVICE
  - CAUSTIC/ALUM EQUIPMENT AND INSTALLATION SHALL BE BY MANUFACTURER (BURNETT INC. OR ACCEPTED EQUIVALENT)

- NOTES FROM ALUM PROVIDER:
- DRIVER TO CONNECT HOSE FROM TRUCK TO TANK, UTILIZING CAM-LOCK FITTINGS FOR UNLOADING.
  - A WATER LINE FROM INSIDE THE BUILDING WILL BE UTILIZED FOR DILUTION WATER FOR CAUSTIC SLURRY. A MECHANICAL WATER METER WILL BE AVAILABLE, INDICATING AMOUNT OF WATER USED.



NO.	ISSUED FOR	BY	DATE

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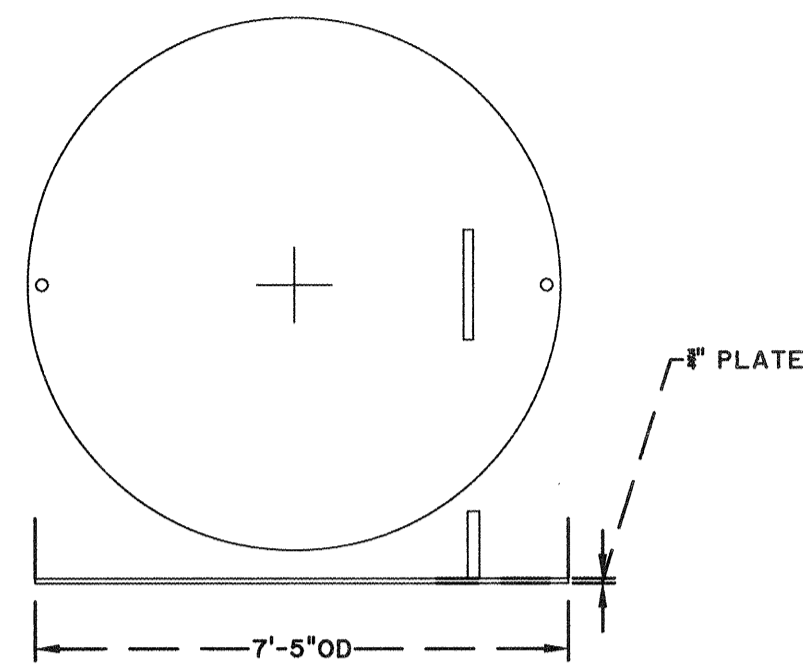
**SAVANNAH**  
 savannahga.gov  
 TRAVIS FIELD WATER RECLAMATION FACILITY  
 CAUSTIC AND ALUM SYSTEM PLAN AND SECTION

JOB NO:	J-26563.0000
DATE:	1-16-19
DRAWN:	CDR
DESIGNED:	CDR
REVIEWED:	FS
APPROVED:	FS
SCALE:	AS NOTED

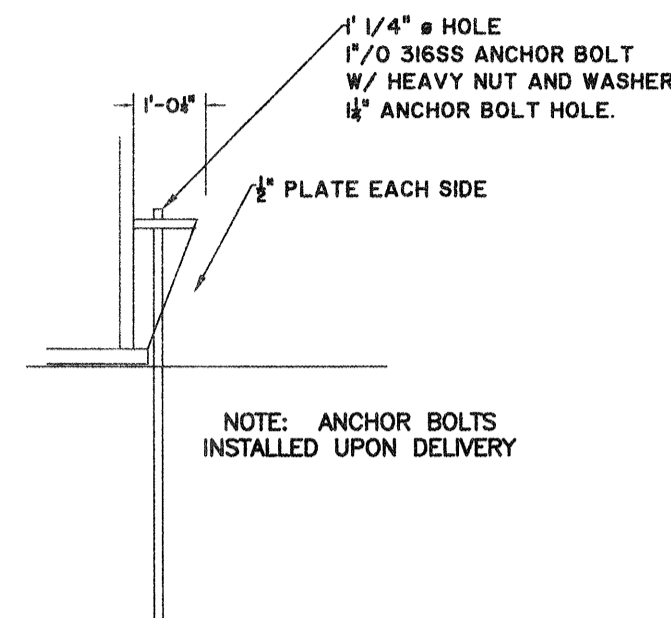
**M9.0**

BID SET - NOT FOR CONSTRUCTION

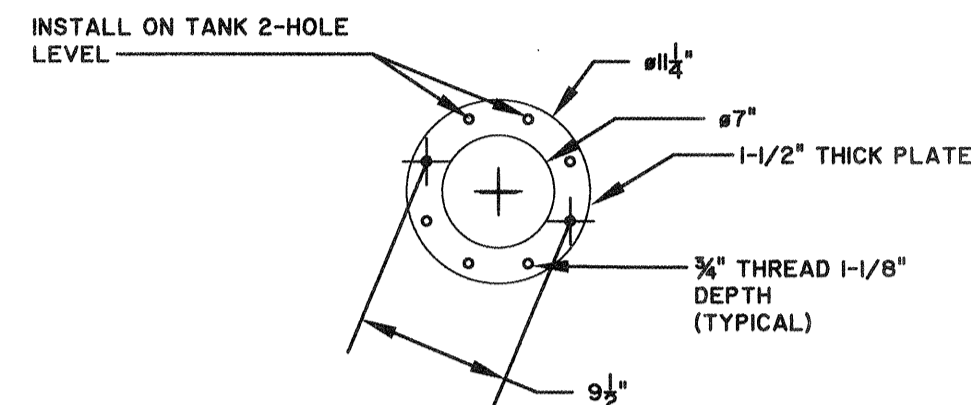




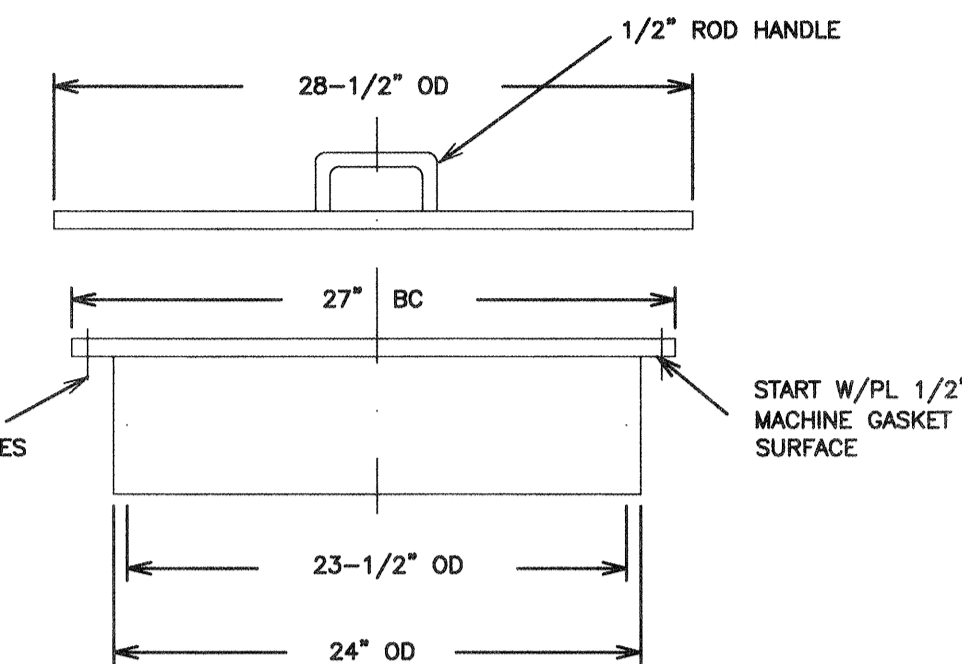
**3** **DETAIL FOR TOP MANWAY "M"**  
M9.1 SCALE: 3/8"=1'-0"



**4** **ANCHOR LUG DETAIL (TYP. 4)**  
M9.1 SCALE: 3/8"=1'-0"



**5** **ANSI 6" FLANGE HOLE PATTERN**  
M9.1 SCALE: 3/8"=1'-0"



**6** **DETAIL FOR SIDE MANWAY "N"**  
M9.1 SCALE: 3/8"=1'-0"

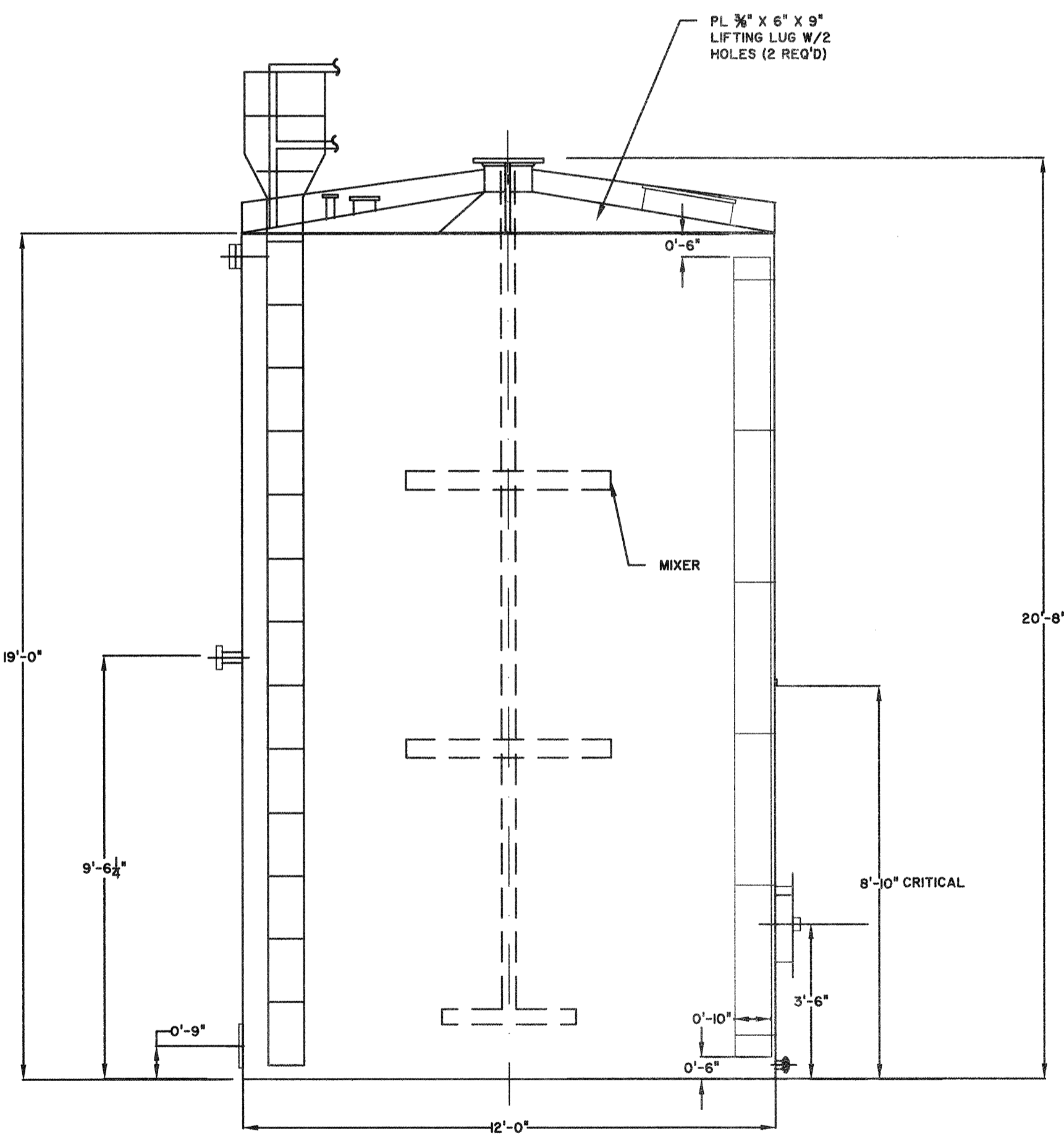
NOZZLE SCHEDULE							
ID	QTY	SIZE	RATINGS	TYPE	SCH	REINFORCED	SERVICE/REMARKS
A	1	6"	150#	PAD	40	NONE	PUMP NOZZLE
B	1	6"	150#	PAD	40	NONE	PUMP NOZZLE
C							NOT USED
D	1	3"	150#	RFSO	40	NONE	DRAIN
E	1	4"	150#	.5 CPLG	40	NONE	OVERFLOW
F	1	12"	150#	RFSO	40	NONE	MIXER
G	1	2"	150#	RFSO	40	NONE	SPARE/VENT
H	1	6"	150#	RFSO	40	NONE	LEVEL INDICATOR
J	1	2"	150#	RFSO	40	NONE	WATER FILL
K	1	2"	150#	RFSO	40	NONE	SLURRY FILL
L	1	3"	150#	RFSO	40	NONE	RECIRCULATION
M	1	24"	ATM	PL	1/4"	NONE	TOP MANWAY
N	1	24"	ATM	PL	1/4"	NONE	SIDE MANWAY

**SURFACE PREPARATION AND PAINTING:**

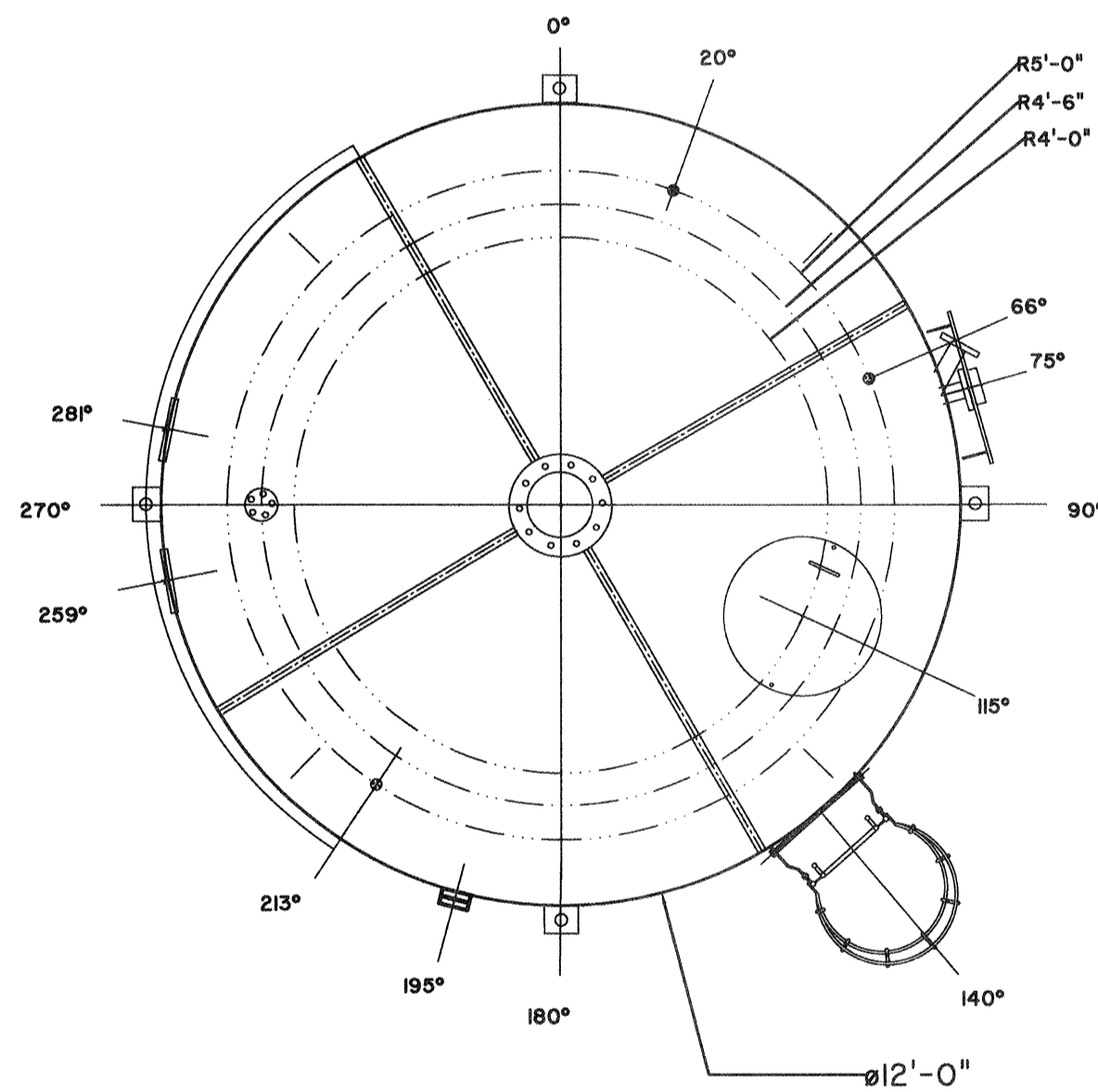
THE EXTERIOR OF THE TANK DOME, WALL, AND APPURTENANCES SHALL BE PREPARED BY COMMERCIAL SANDBLAST FOLLOWED BY ONE COAT OF MoPox™ HIGH SOLIDS EPOXY COATING 41-SERIES BY TANK MANUFACTURER. FIELD PAINTING, BY GENERAL CONTRACTOR PER SPECIFICATION.

TANK MANUFACTURER SHALL COAT THE BOTTOM OF THE TANK WITH COAL TAR EPOXY: Mo-Tar™ C-200 EPOXY COATING.

FIELD PAINTING - INTERMEDIATE COAT AND FINISH COAT BY GENERAL CONTRACTOR ACCORDING TO SPECIFICATIONS.

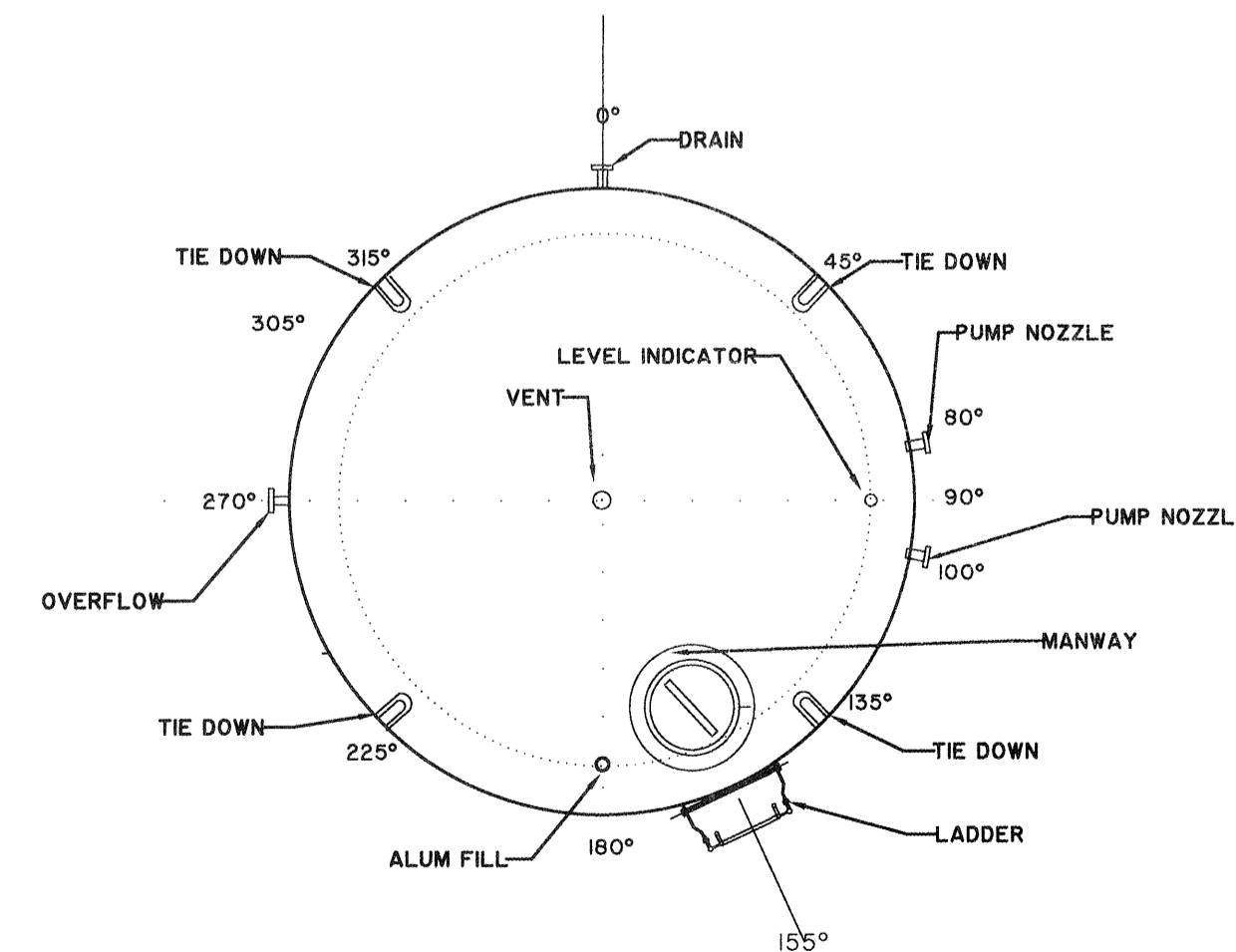


**1** **CAUSTIC TANK ELEVATION VIEW**  
M9.1 SCALE: 3/8"=1'-0"

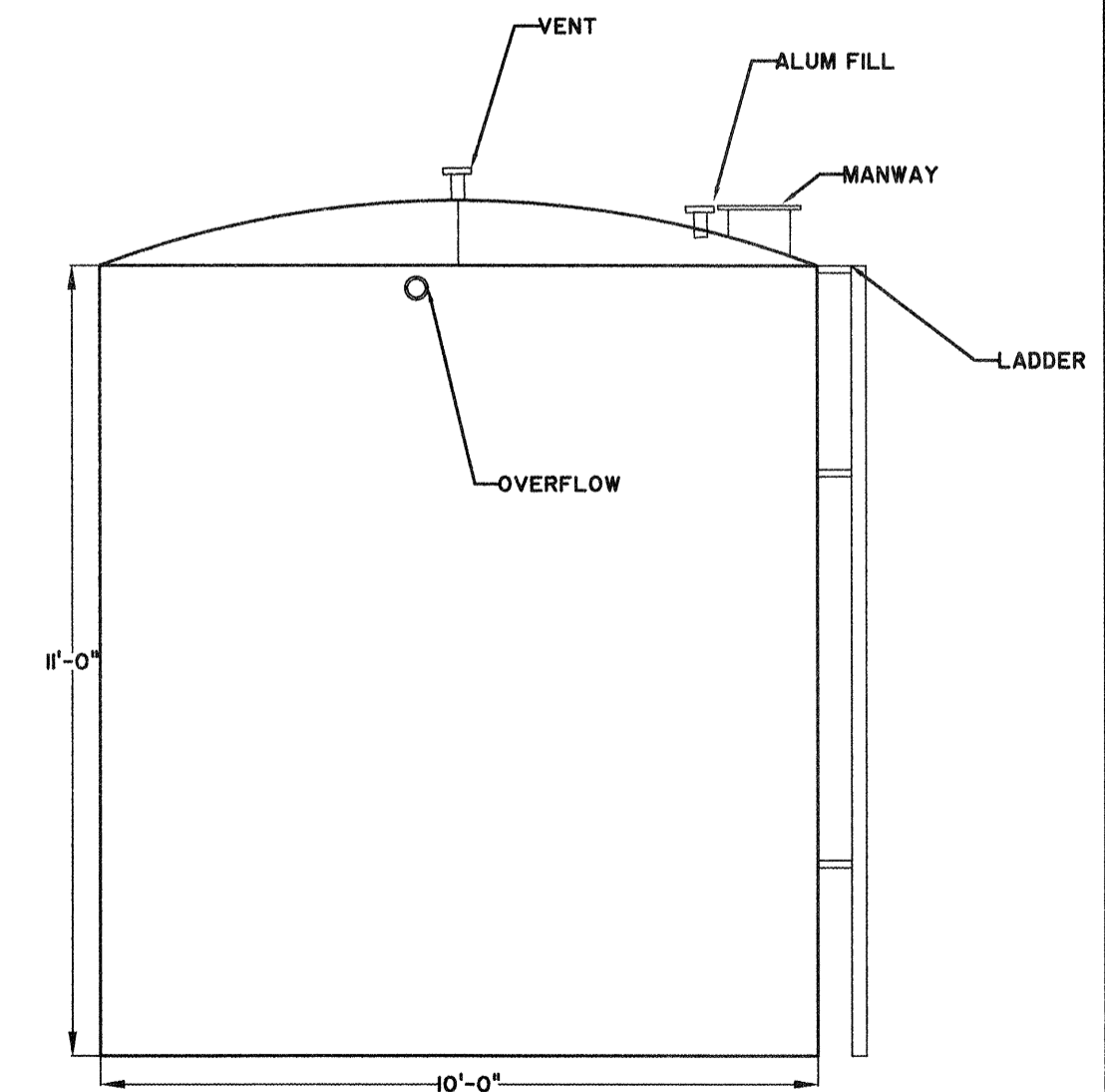


**2** **CAUSTIC TANK PLAN VIEW**  
M9.1 SCALE: 3/8"=1'-0"

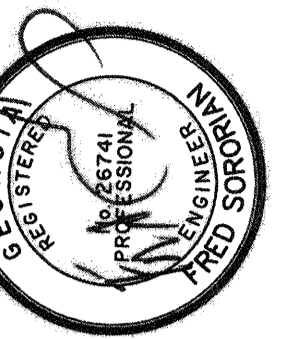
ALUM TANK NOZZLE SCHEDULE							
ID	QTY	SIZE	RATINGS	TYPE	SCH	REINFORCED	SERVICE/REMARKS
A	1	2"	150#	PAD		NONE	PUMP NOZZLE
B	1	2"					PUMP NOZZLE
D	1	2"					DRAIN
E	1	3"					OVERFLOW
G	2	2"		CPLG			VENT
K	1	2"					ALUM FILL
N	1	18"					MANWAY
P	1	2"					LEVEL SWITCH NOZZLE



**7** **ALUM TANK PLAN VIEW**  
M9.1 SCALE: 3/8"=1'-0"



**8** **ALUM TANK ELEVATION VIEW**  
M9.1 SCALE: 3/8"=1'-0"



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CAUSTIC AND ALUM PLAN AND SECTION VIEW

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DATE: 1-16-19  
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DESIGNED: CDR  
REVIEWED: FS  
APPROVED: FS  
SCALE: 3/8"=1'-0"

**M9.1**

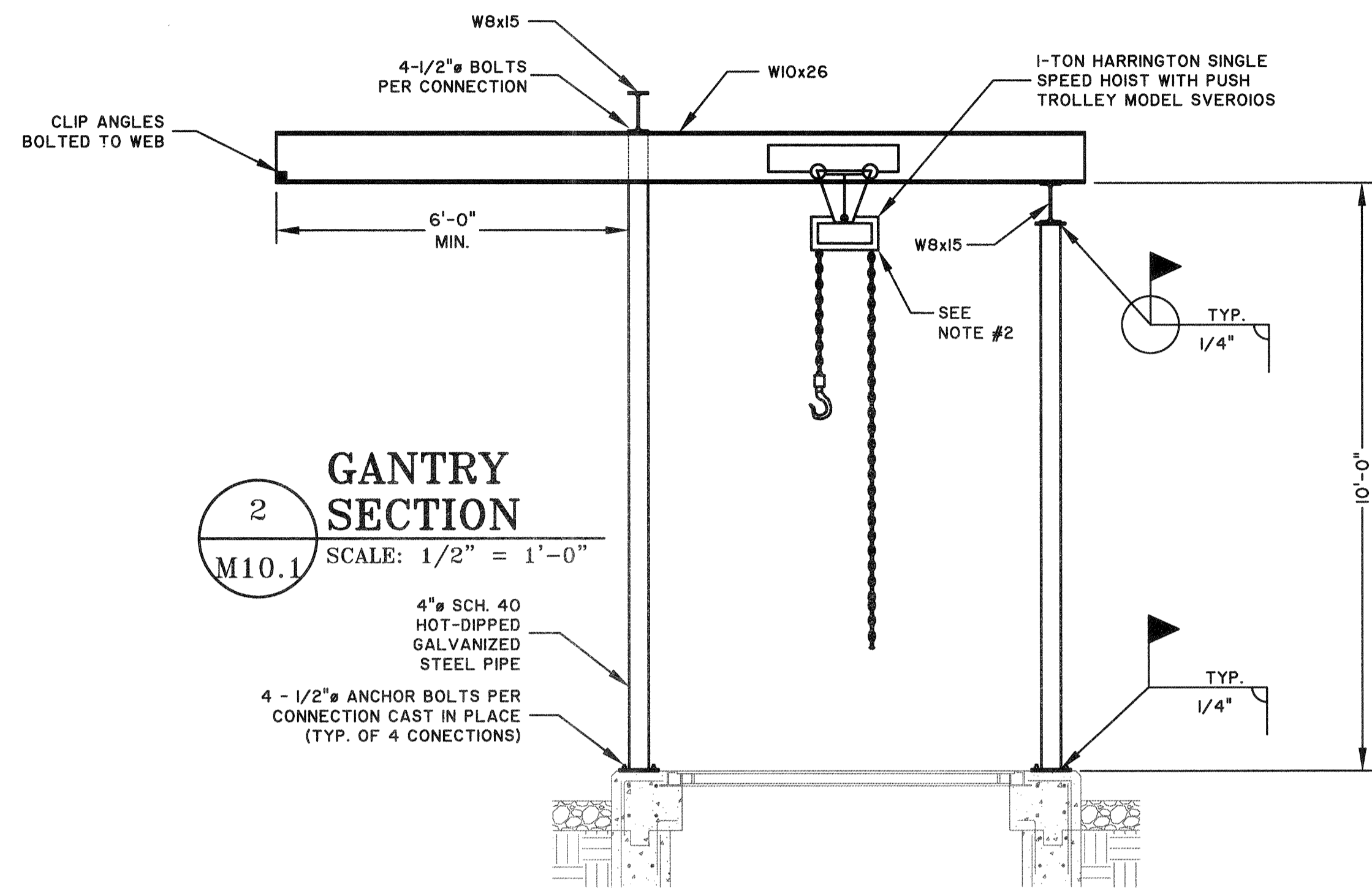
BID SET - NOT FOR CONSTRUCTION

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NO. 5-01-19  
DATE

REVISIONS



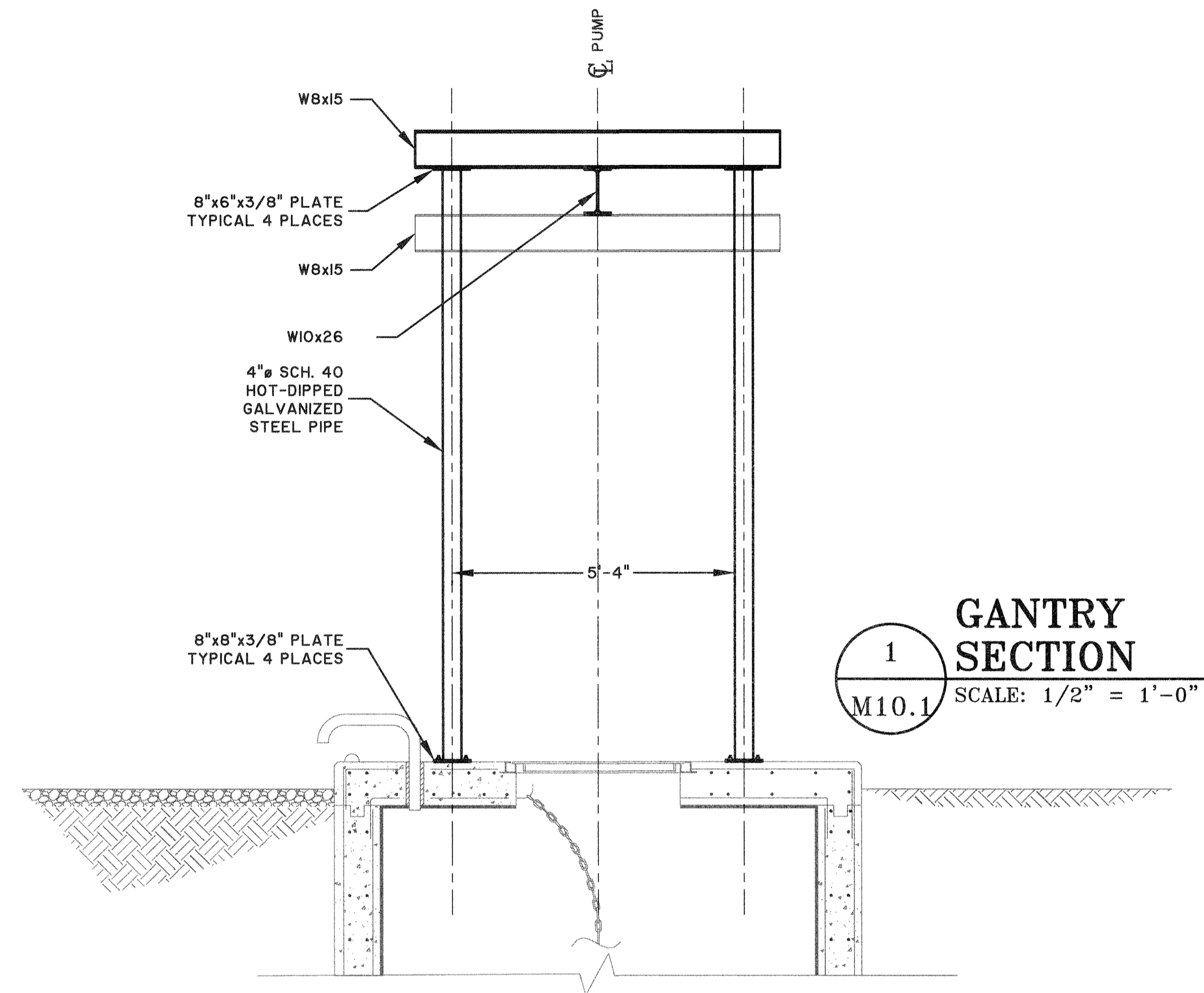




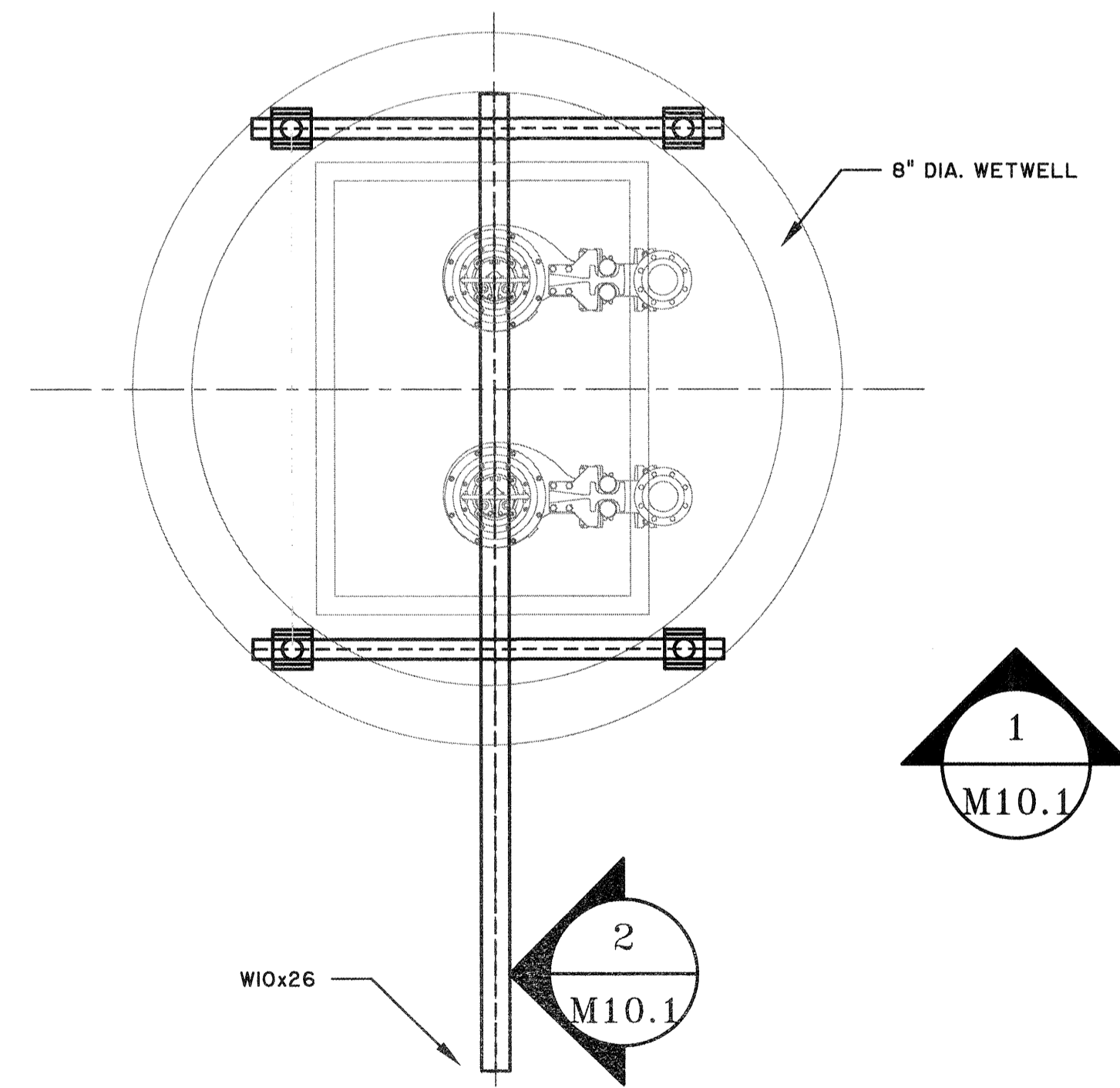
**2**  
GANTRY SECTION  
SCALE: 1/2" = 1'-0"

4" SCH. 40  
HOT-DIPPED  
GALVANIZED  
STEEL PIPE

4 - 1/2" ANCHOR BOLTS PER  
CONNECTION CAST IN PLACE  
(TYP. OF 4 CONNECTIONS)



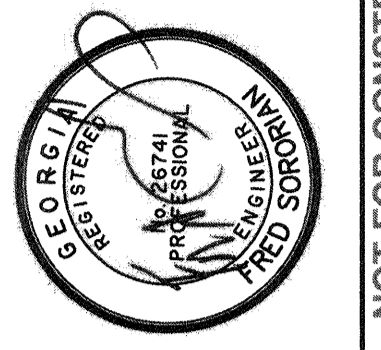
**1**  
GANTRY SECTION  
SCALE: 1/2" = 1'-0"



**GANTRY PLAN**  
SCALE: 1/2" = 1'-0"

**NOTE:**

- ALL EXPOSED STEEL FRAME SHALL BE HOT-DIPPED GALVANIZED.
- CHAIN HOIST SPECIFICATION: CONTRACTOR TO PROVIDE & INSTALL ONE CHAIN HOIST HARRINGTON SINGLE SPEED HOIST WITH MANUAL PUSH TROLLEY, 1-PHASE, 60-HZ, 208/230-VOLT, 2000-LB CAPACITY WITH MINIMUM OF 20 FT. LIFT & CANVAS CHAIN CONTAINER. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.



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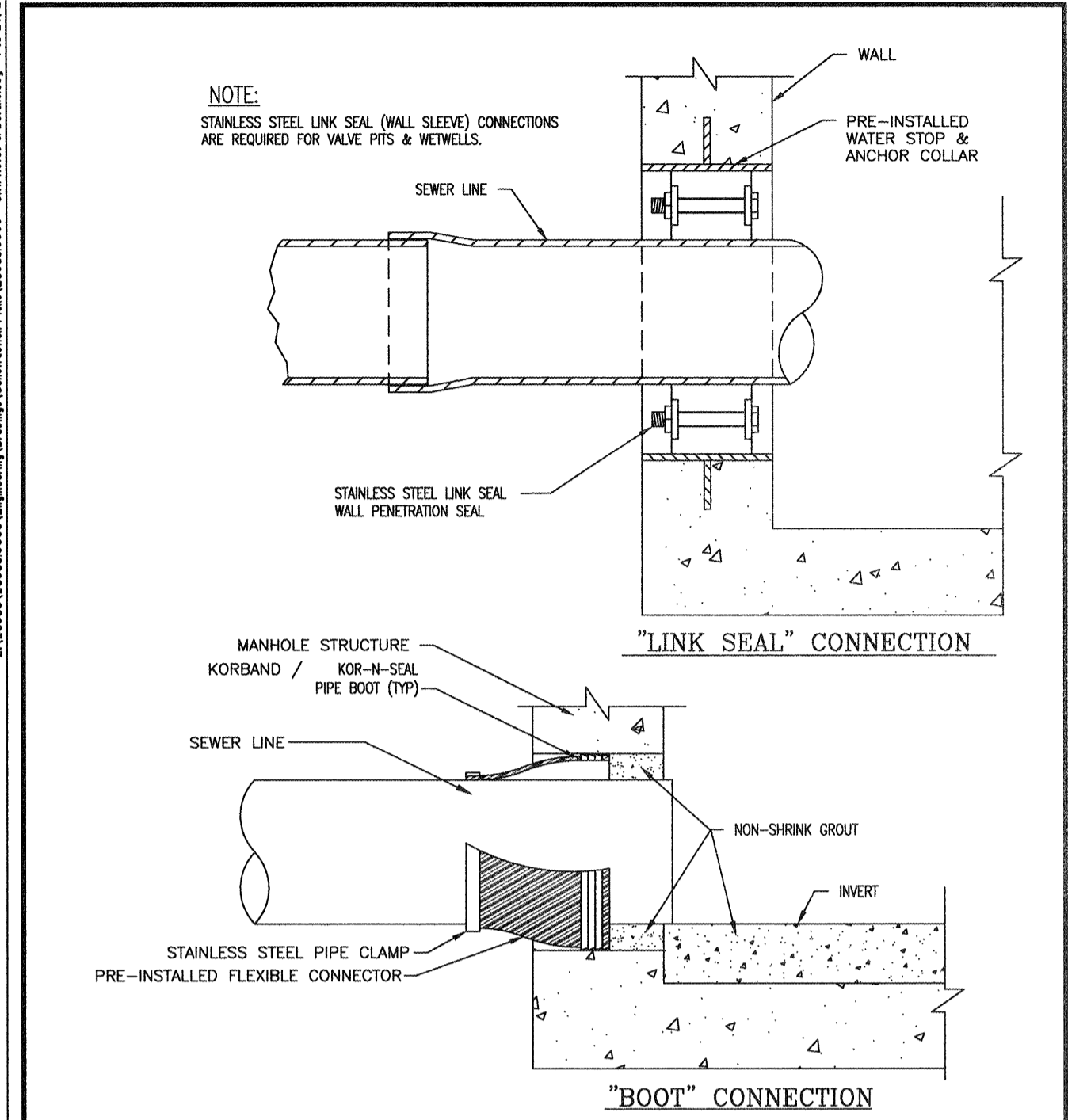
TRAVIS FIELD WATER RECLAMATION FACILITY  
**DRAIN PUMP STATION GANTRY PLAN & SECTION**

JOB NO:	J-26963.0000
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SCALE:	AS NOTED

**M10.1**

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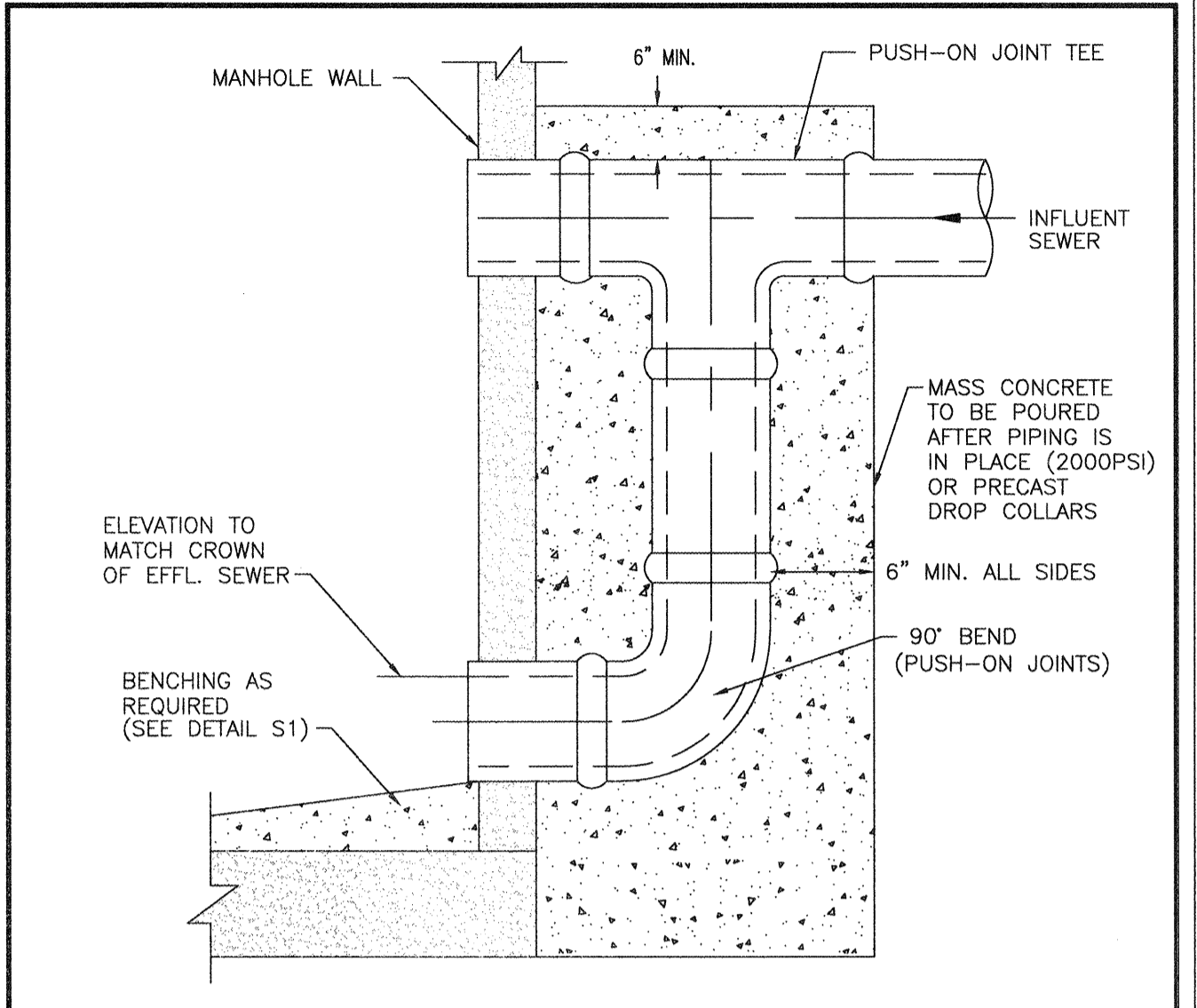


PRECAST STRUCTURE PIPE CONNECTIONS

STANDARD CONSTRUCTION DETAILS

CITY OF SAVANNAH  
WATER RESOURCES AND PUBLIC WORKS BUREAU  
Planning & Engineering

SCALE: N.T.S.  
DATE: JAN 2017  
PLATE NUMBER: S12



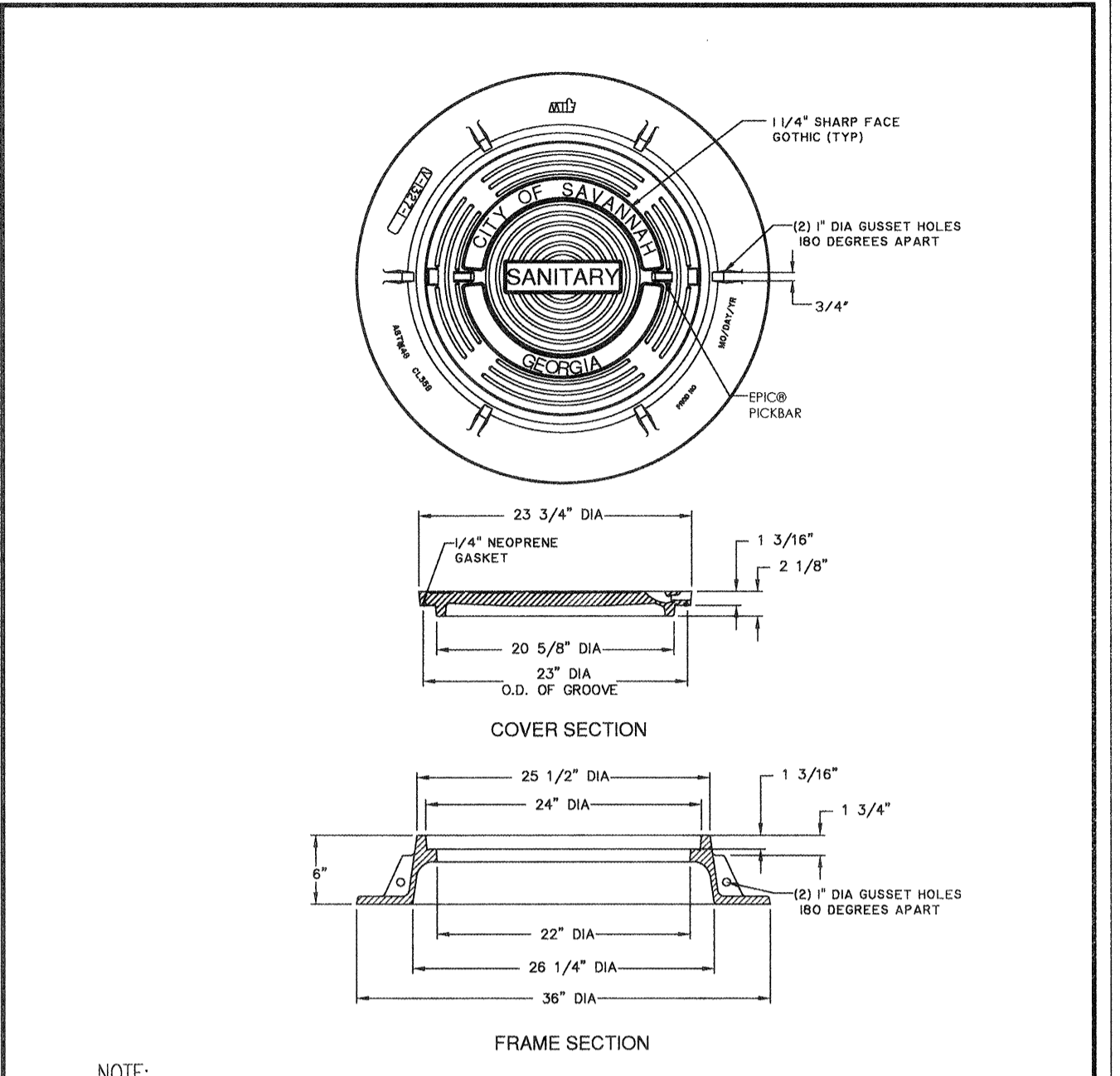
- NOTES:**
1. PIPE AND FITTINGS WITHIN CONCRETE ENCASMENT SHALL BE WRAPPED WITH 6 MIL POLYETHYLENE PRIOR TO THE CONCRETE PLACEMENT.
  2. ALL PIPE AND FITTINGS SHALL BE SDR 26 PVC.
  3. THE CONNECTIONS TO AN EXISTING MANHOLE SHALL OCCUR BY CORE-DRILLING.
  4. THE CONNECTIONS SHALL INCLUDE A WATERTIGHT BOOT (SEE DETAIL S12).

STANDARD DROP MANHOLE CONNECTION

STANDARD CONSTRUCTION DETAILS

CITY OF SAVANNAH  
WATER RESOURCES AND PUBLIC WORKS BUREAU  
Planning & Engineering

SCALE: N.T.S.  
DATE: JAN 2017  
PLATE NUMBER: S13



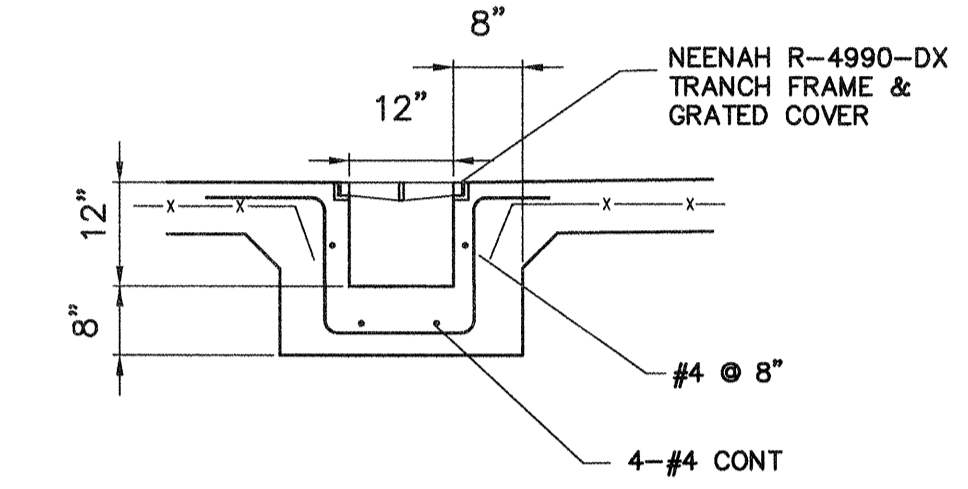
- NOTE:**
1. MANHOLE RING AND COVER SHALL BE IN COMPLIANCE TO CITY OF SAVANNAH SPECIFICATION 02554

SANITARY MANHOLE RING AND COVER

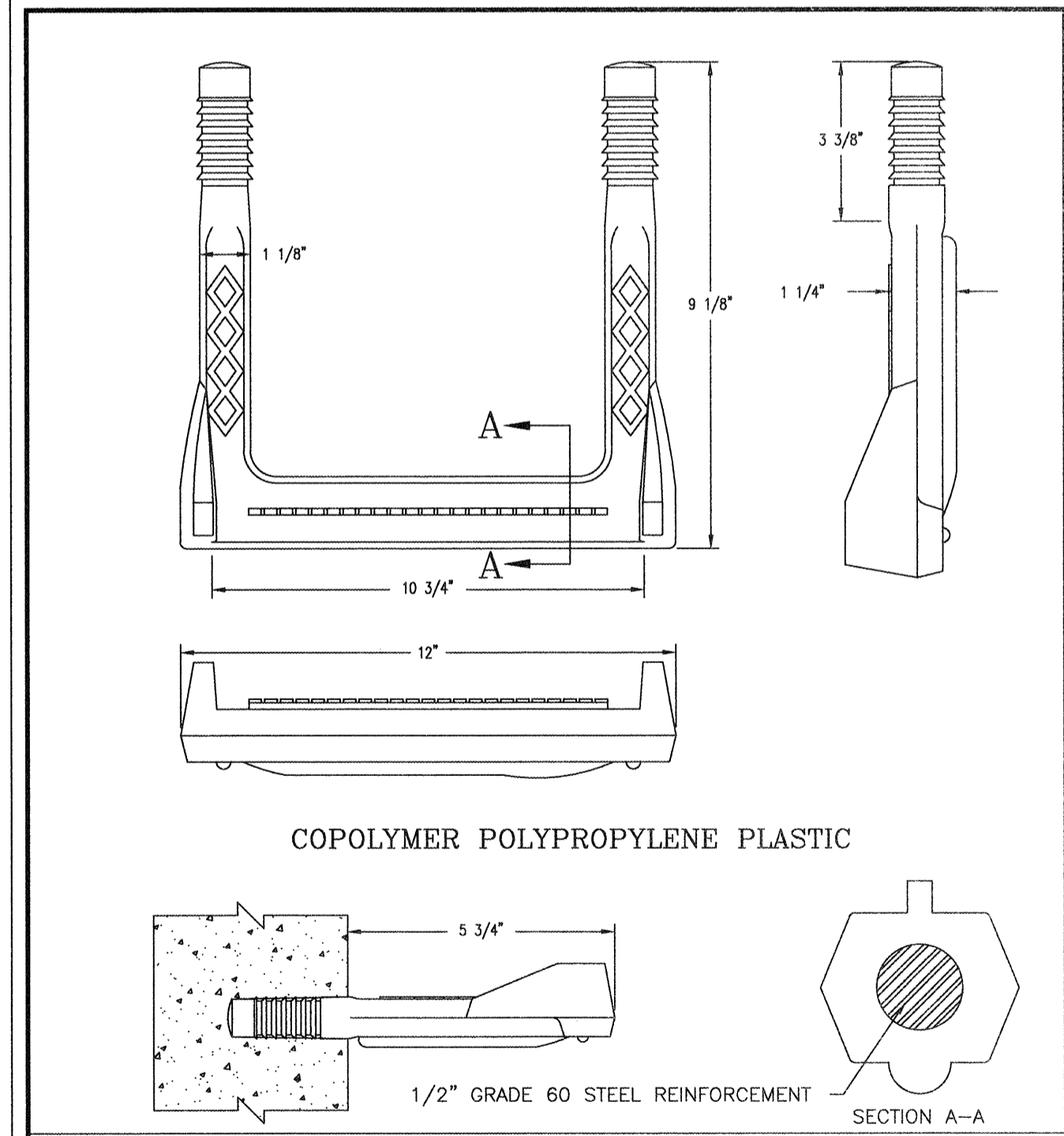
STANDARD CONSTRUCTION DETAILS

CITY OF SAVANNAH  
WATER RESOURCES AND PUBLIC WORKS BUREAU  
Planning & Engineering

SCALE: N.T.S.  
DATE: JAN 2017  
PLATE NUMBER: S10



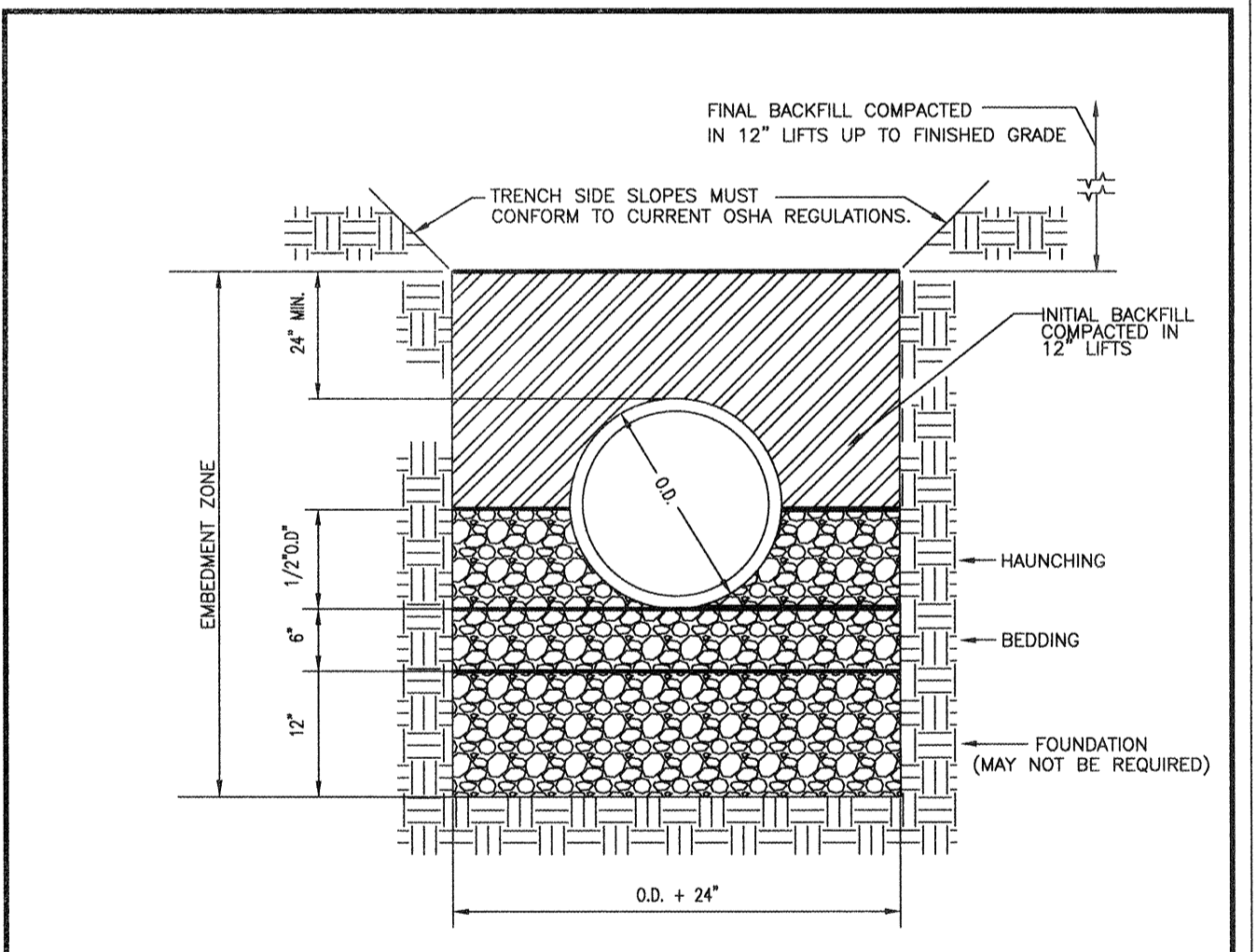
TRENCH DRAIN DETAIL  
SCALE: N.T.S.



STANDARD CONSTRUCTION DETAILS

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SCALE: N.T.S.  
DATE: JAN 2017  
PLATE NUMBER: S15



- NOTES:**
1. FOUNDATION, BEDDING AND HAUNCHING SHALL BE #57 STONE.
  2. INITIAL BACKFILL FOR GRAVITY SEWER SHALL BE CLASS II OR BETTER SELECT COMMON FILL.
  3. INITIAL BACKFILL FOR SANITARY FORCEMAIN SHALL BE CLASS III OR BETTER SELECT COMMON FILL.
  4. FINAL BACKFILL SHALL BE CLASS III OR BETTER COMMON FILL.
  5. SEE CITY OF SAVANNAH STANDARD SPECIFICATIONS SECTION 02554 PART 2.11 FOR MORE DETAILS.

STANDARD PIPE BEDDING

STANDARD CONSTRUCTION DETAILS

CITY OF SAVANNAH  
WATER RESOURCES AND PUBLIC WORKS BUREAU  
Planning & Engineering

SCALE: N.T.S.  
DATE: JAN 2017  
PLATE NUMBER: S16

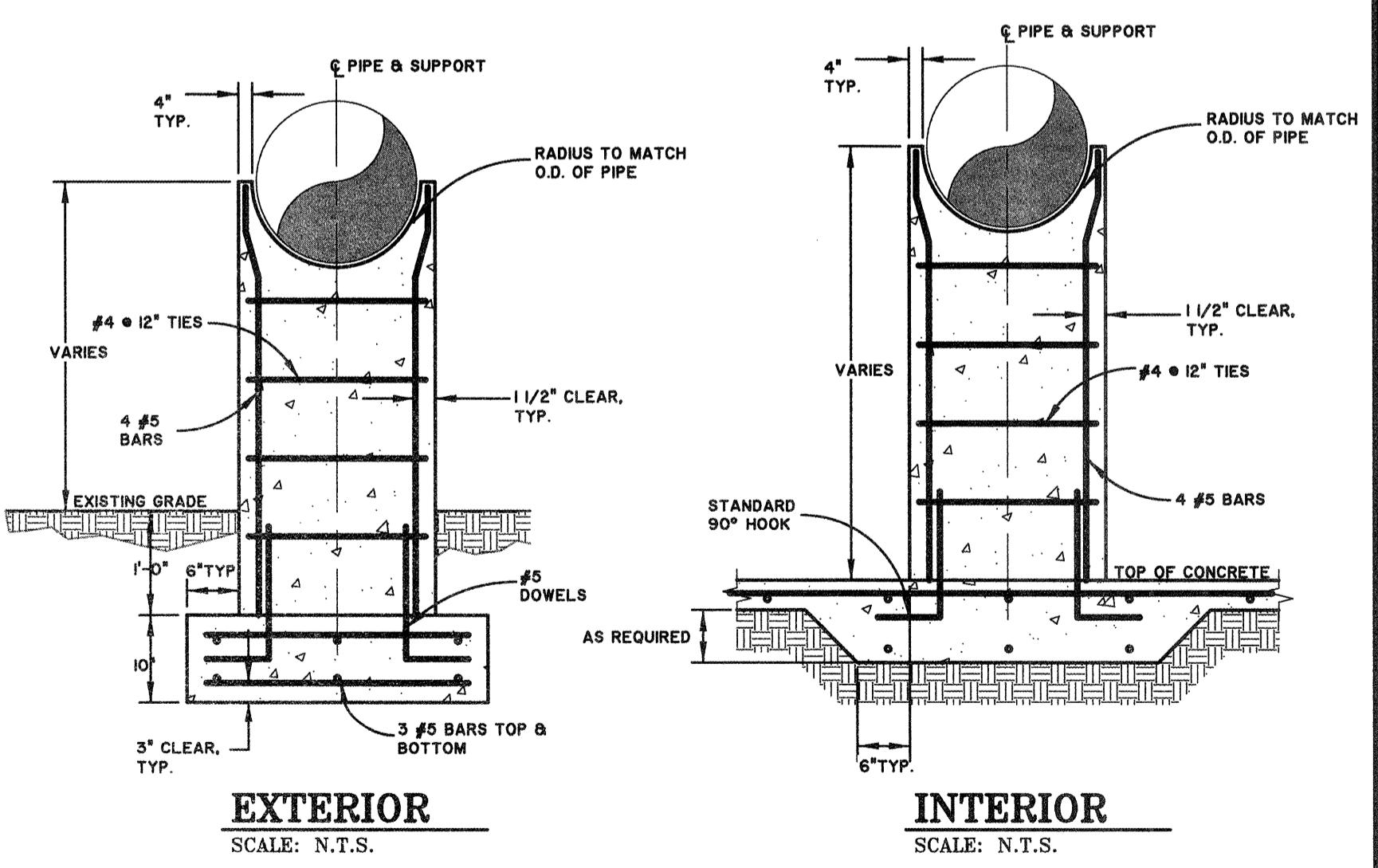
- NOTES:**
1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CITY OF SAVANNAH'S LATEST CONSTRUCTION SPECIFICATIONS AND DETAILS. THE SYSTEM SHALL BE DESIGNED AND TESTED PER THE SPECIFICATIONS AND REQUIREMENTS MAINTAINED BY THE CITY ENGINEER.
  2. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON THE SITE.
  3. ALL WATER USED FOR CONSTRUCTION SHALL BE METERED THROUGH AN APPROVED BACKFLOW-PREVENTION DEVICE AND FIRE HYDRANT METER OBTAINED FROM THE CONVEYANCE AND DISTRIBUTION DEPARTMENT.
  4. ALL ABANDONED SANITARY SEWER LINES SHALL BE PLUGGED.
  5. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE SEWER LINES ARE PLACED WITHIN THE EASEMENTS WITH A MINIMUM 7'-6" AVAILABLE FROM PIPE CENTERLINE TO EASEMENT LINE.
  6. CONTACT THE UTILITIES PROTECTION CENTER (811 IN GEORGIA OR 1-800-282-7411) FOR LOCATION OF CITY SEWER LINES A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO DIGGING.
  7. CONTRACTOR SHALL NOTIFY RESIDENTS A MINIMUM OF 24 HOURS IN ADVANCE OF ANY WORK THAT MAY IMPACT THEM, INCLUDING BUT NOT LIMITED TO: PARKING STALL IMPACT, LOSS OF SERVICE, DRIVEWAY CUTS, REMOVAL/RELOCATION OF FENCES AND MAIL BOXES, SIDEWALK IMPACTS, ETC.

SANITARY SEWER GENERAL NOTES

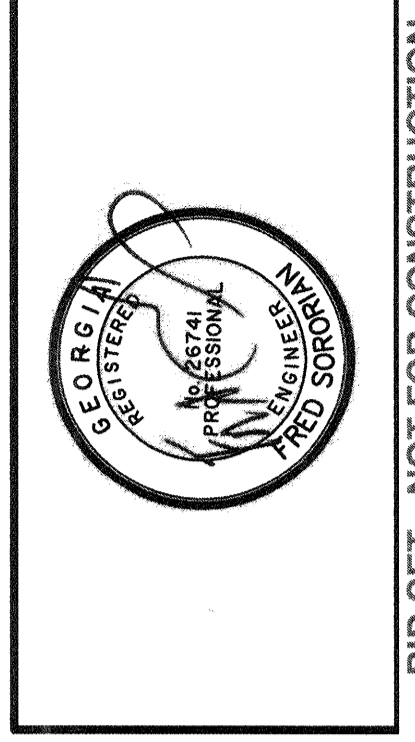
STANDARD CONSTRUCTION DETAILS

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Planning & Engineering

SCALE: N.T.S.  
DATE: JAN 2017  
PLATE NUMBER: S17



PIPE SUPPORT DETAILS  
SCALE: N.T.S.



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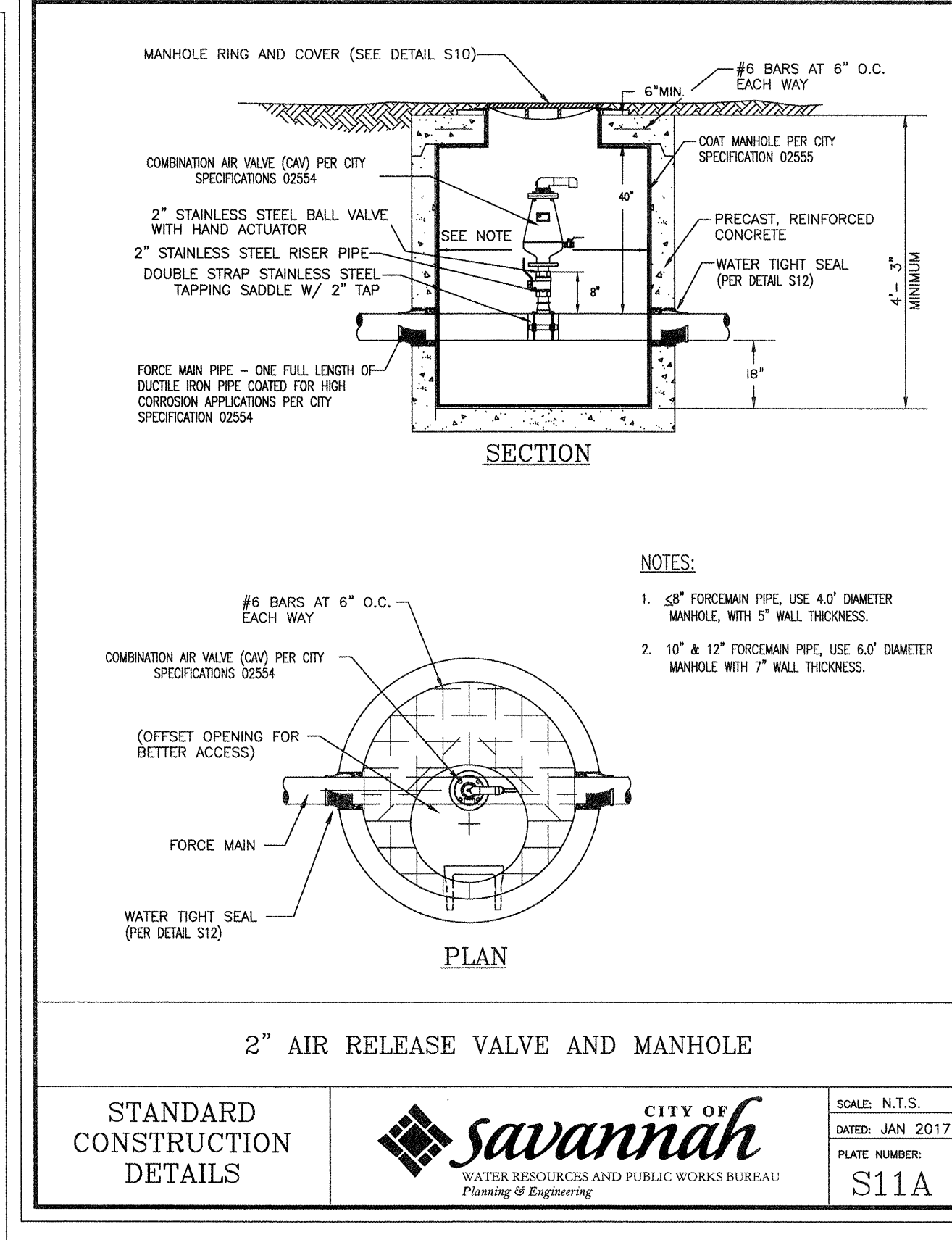
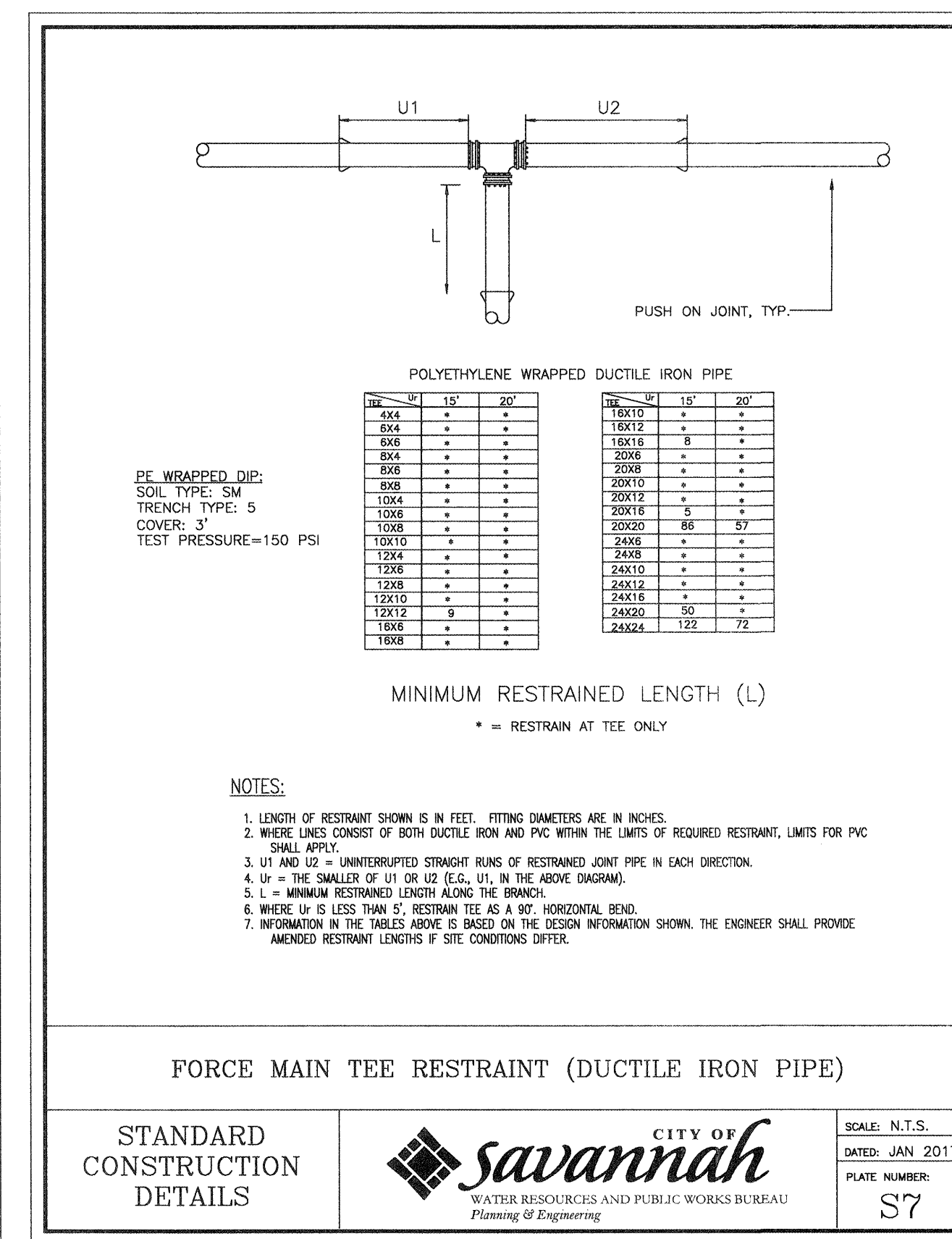
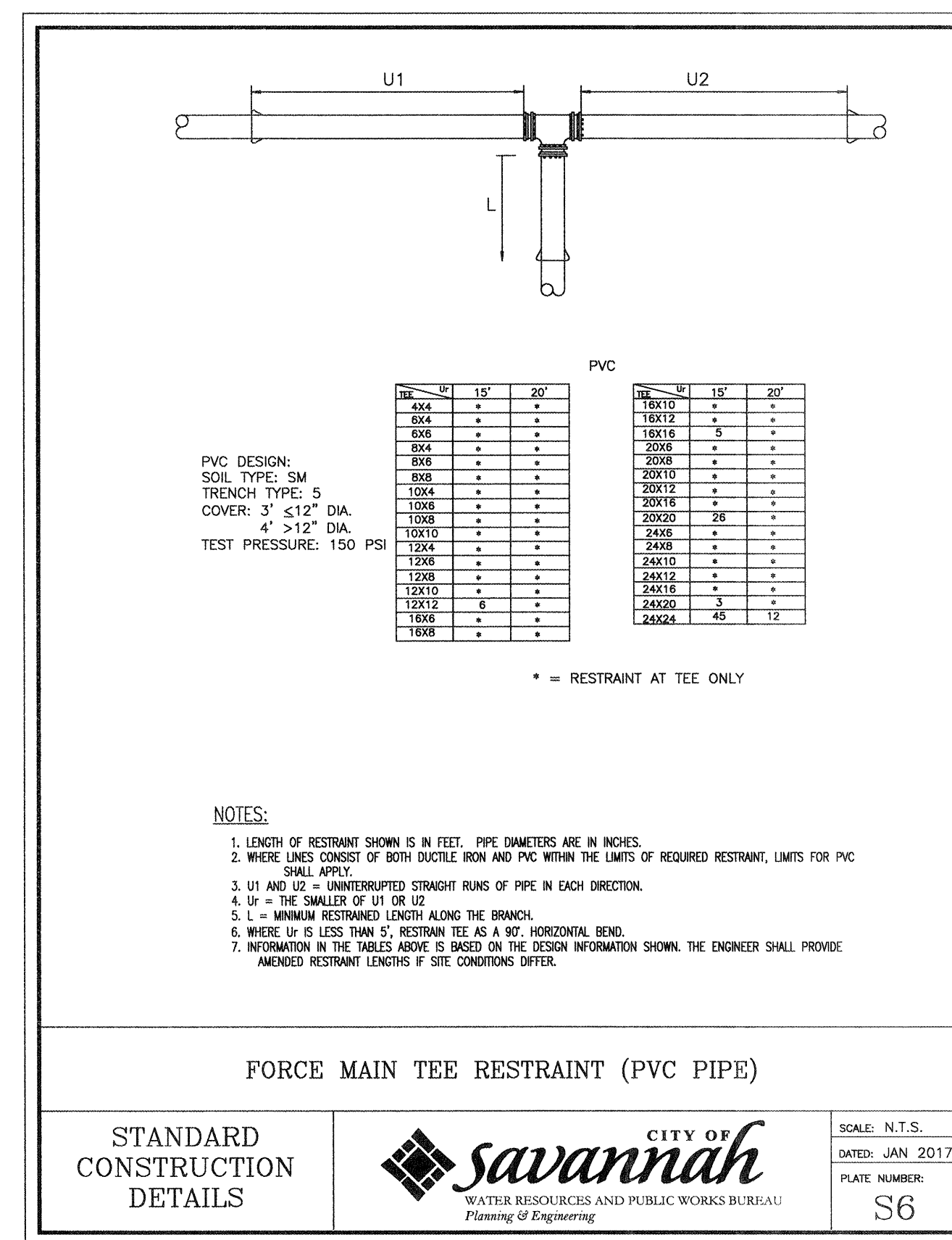
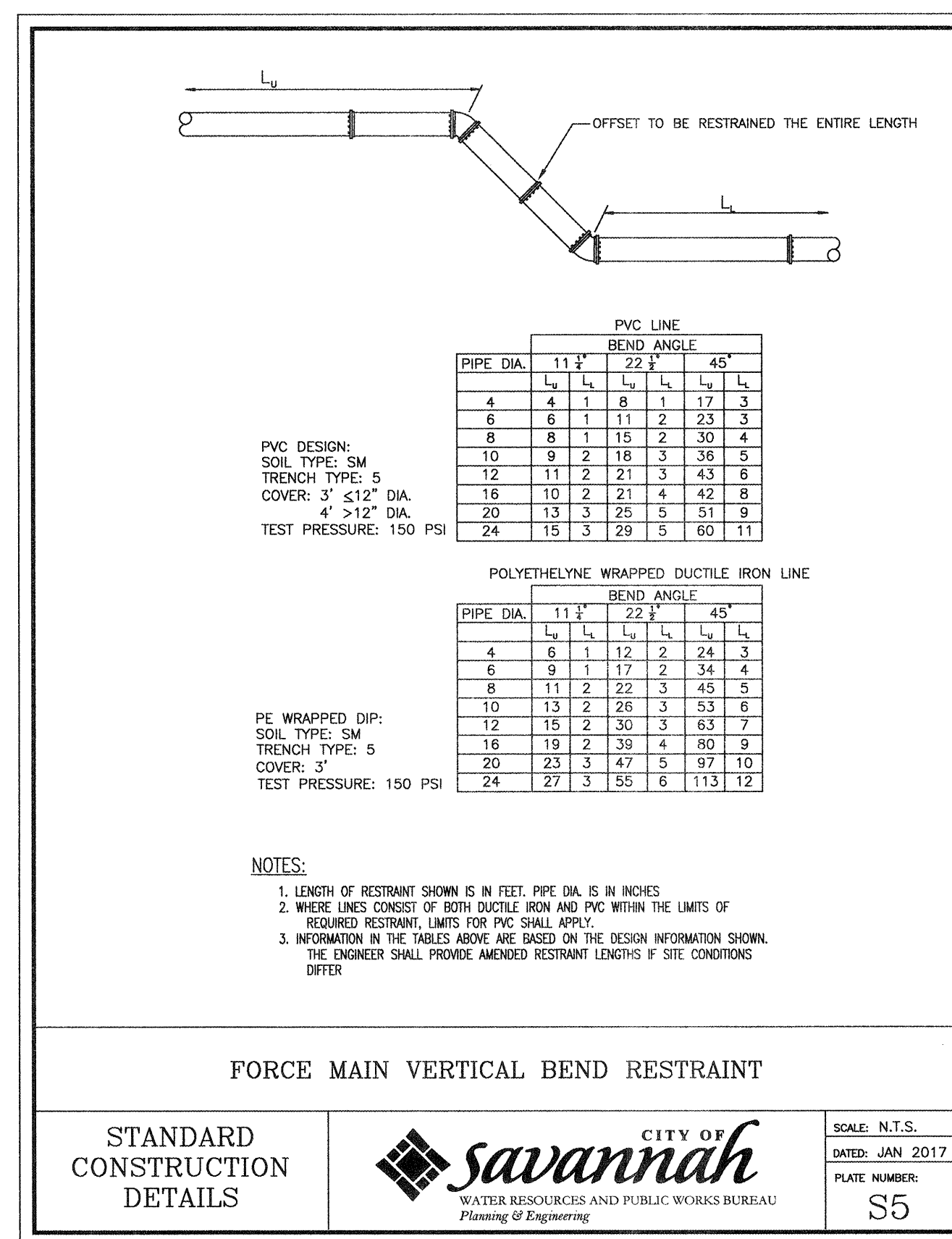
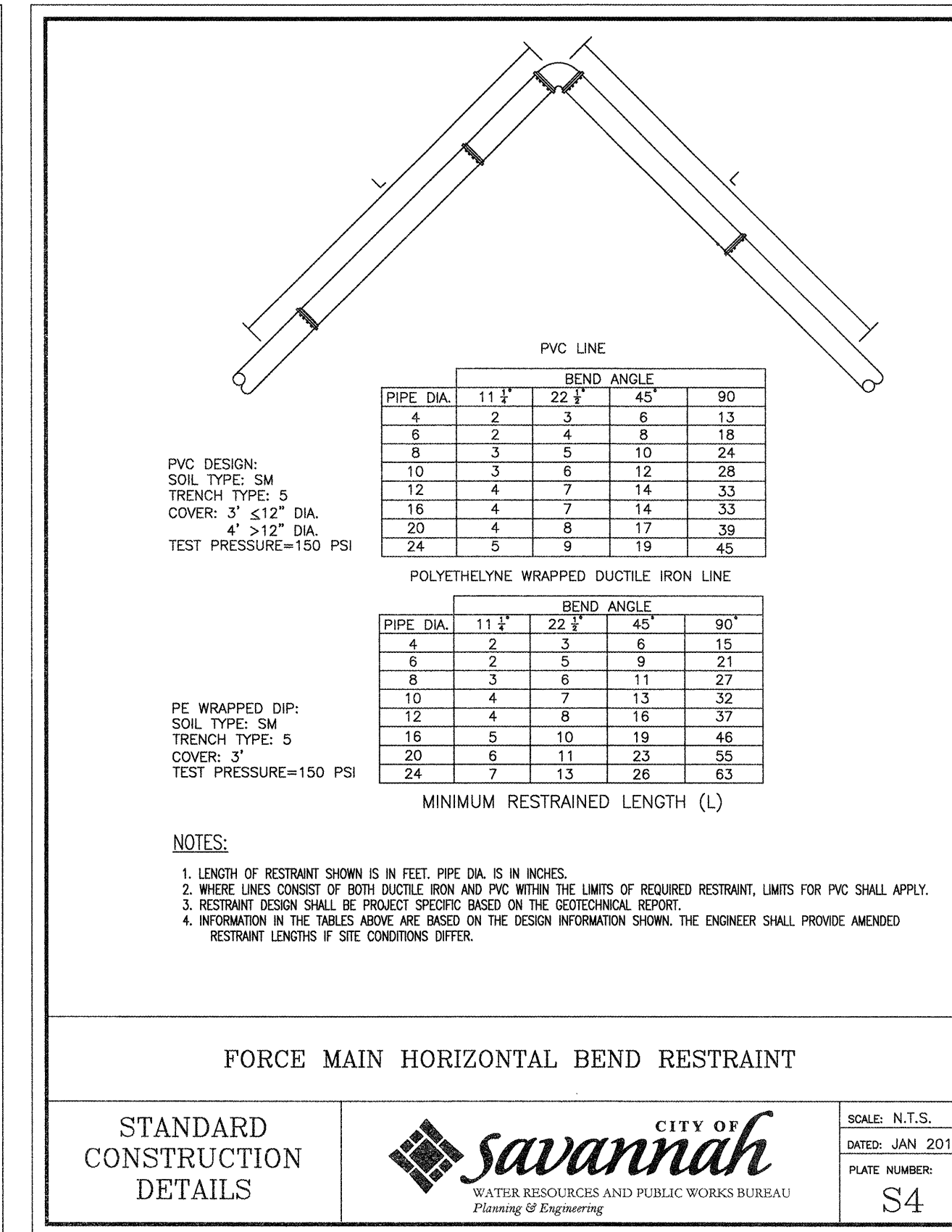
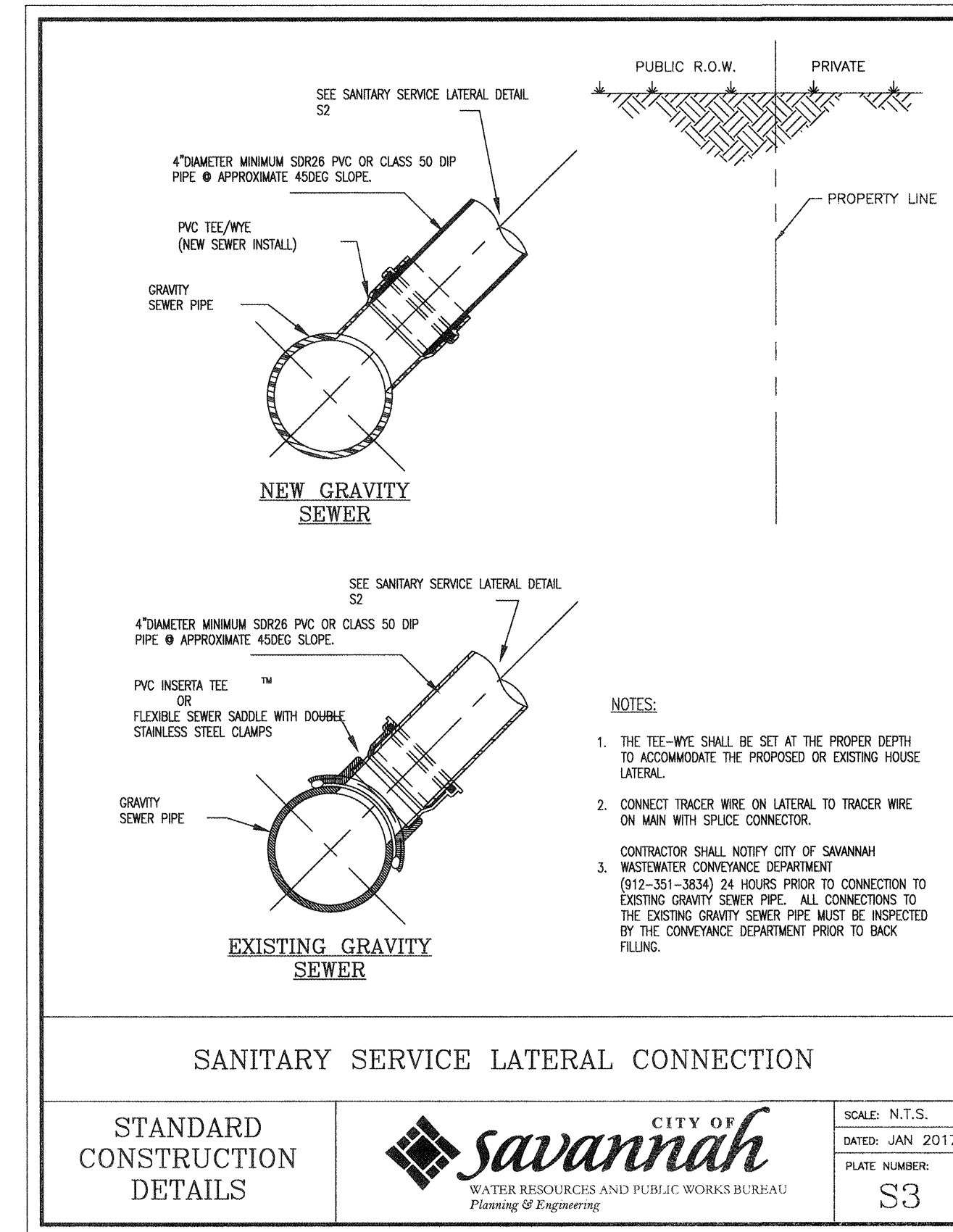
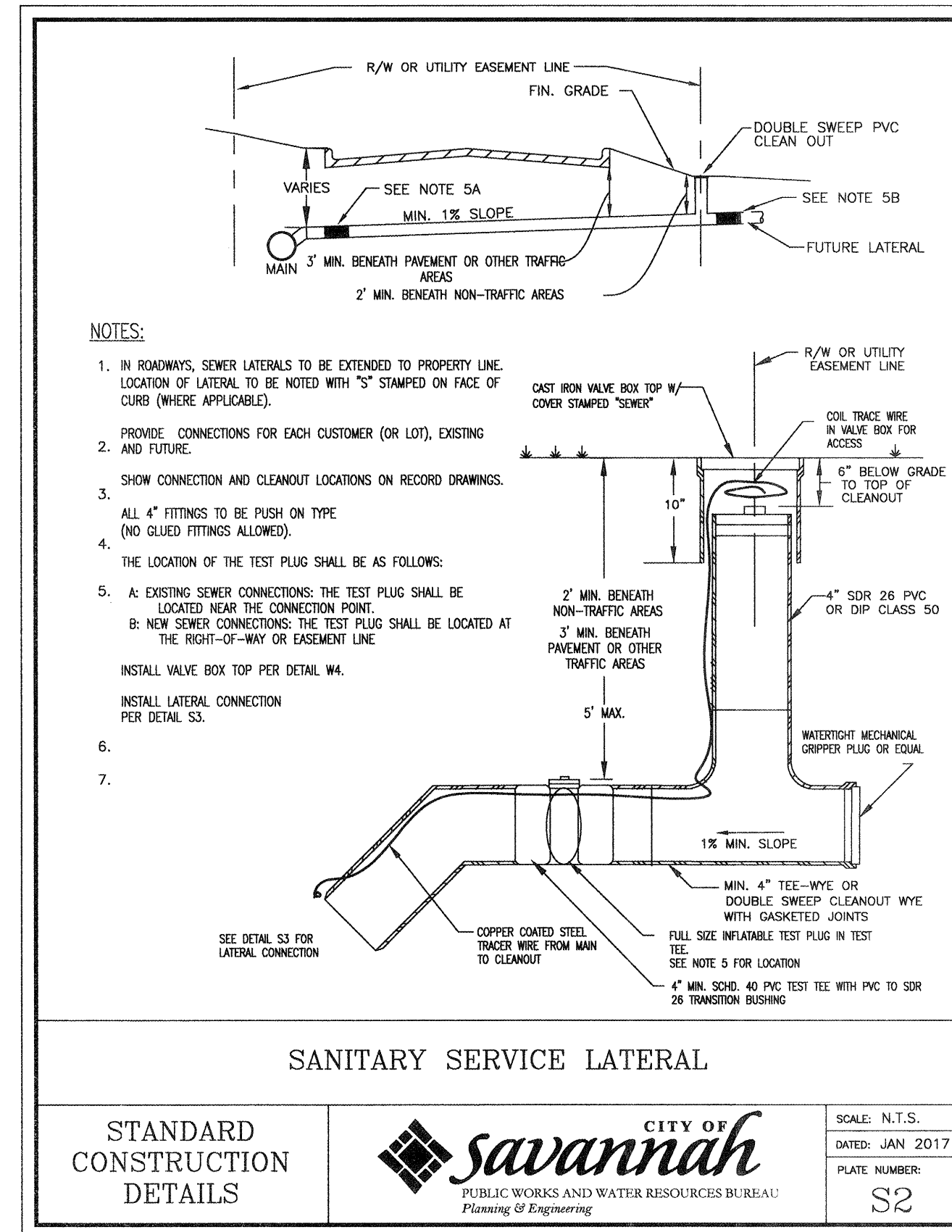
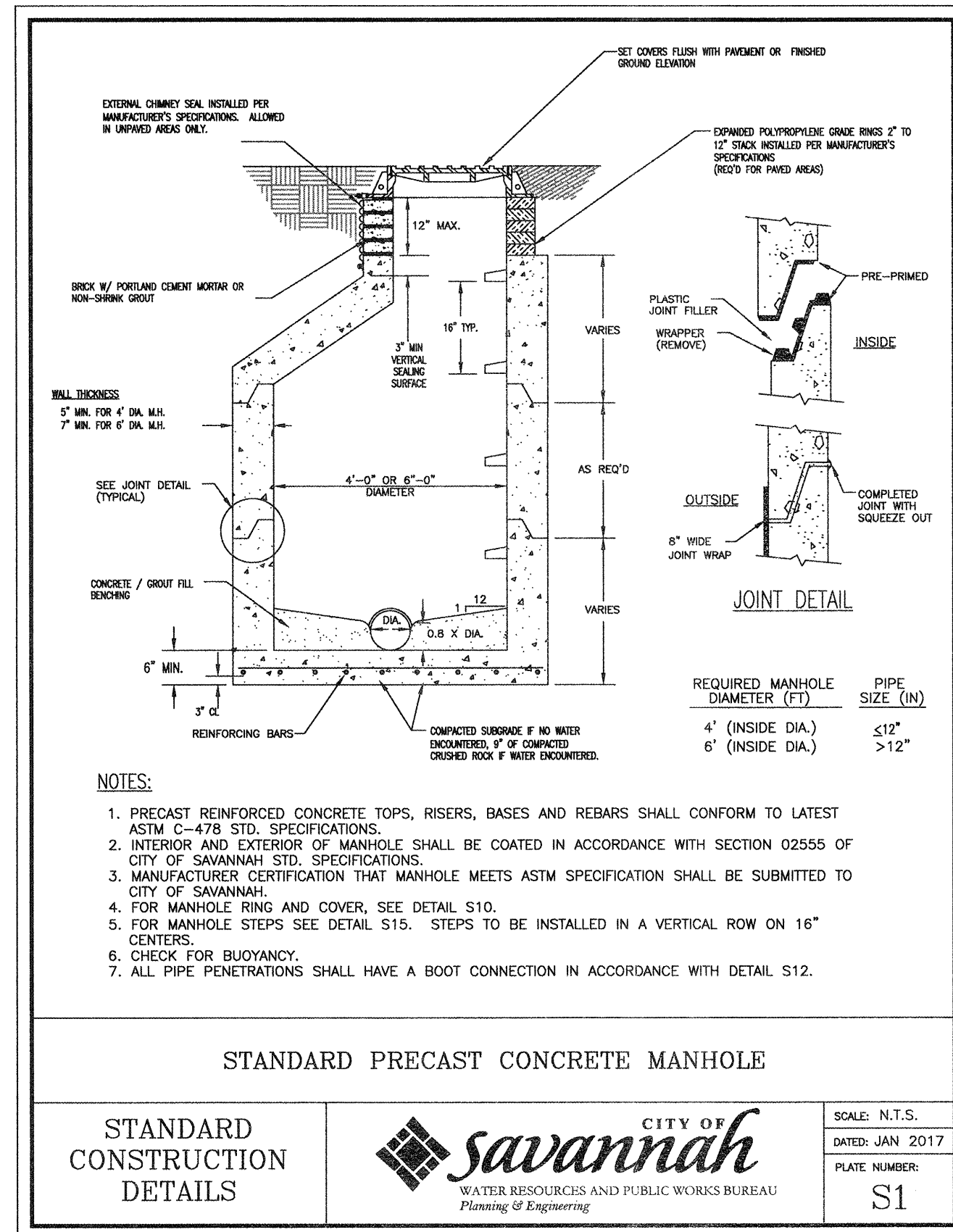
PIPING NOTES AND DETAILS

JOB NO:	J-26963.0000
DATE:	1-16-19
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**M11.1**

BID SET - NOT FOR CONSTRUCTION





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**PIPING NOTES AND DETAILS**

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APPROVED: FS  
SCALE: AS NOTED

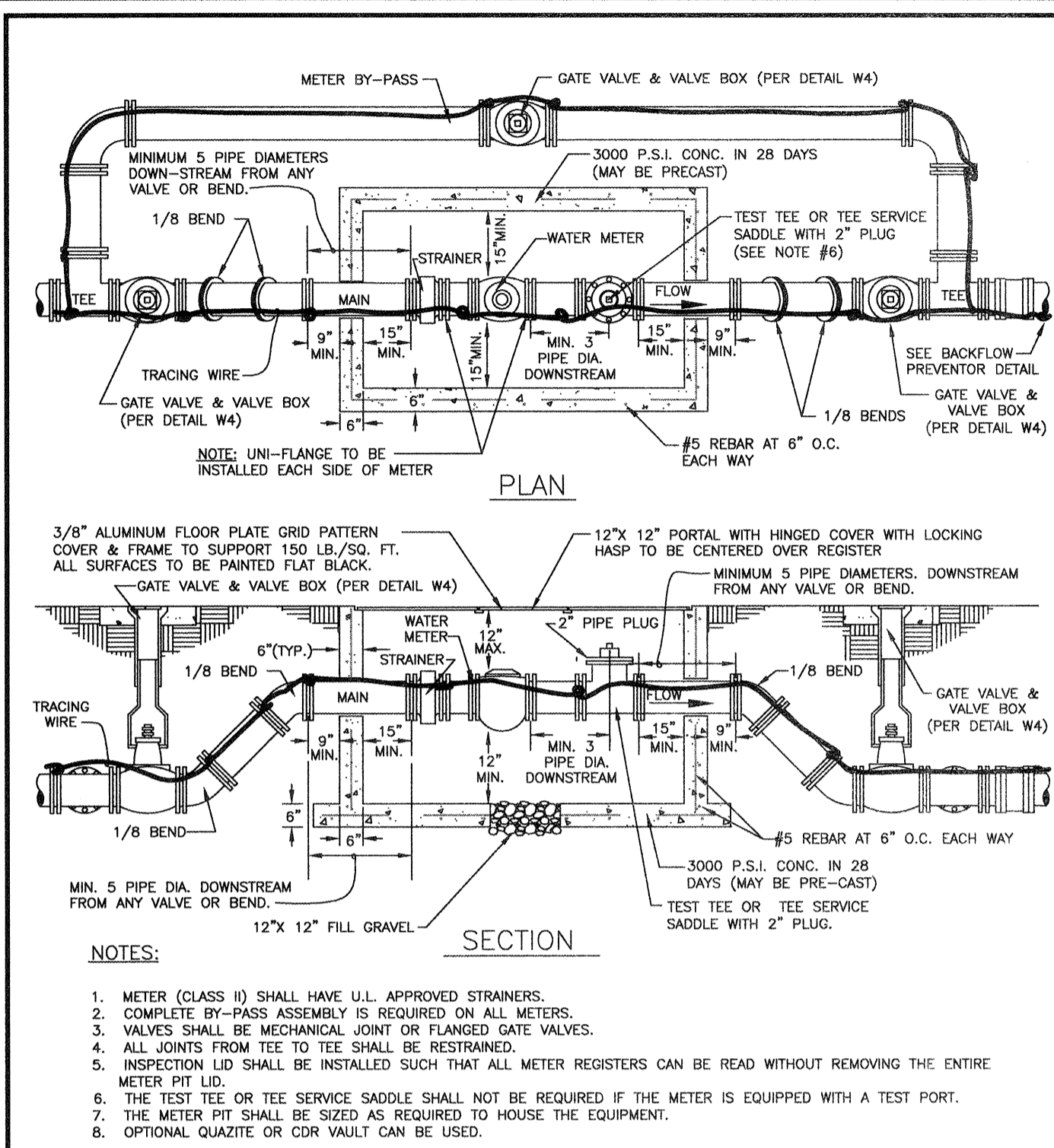
**M11.2**

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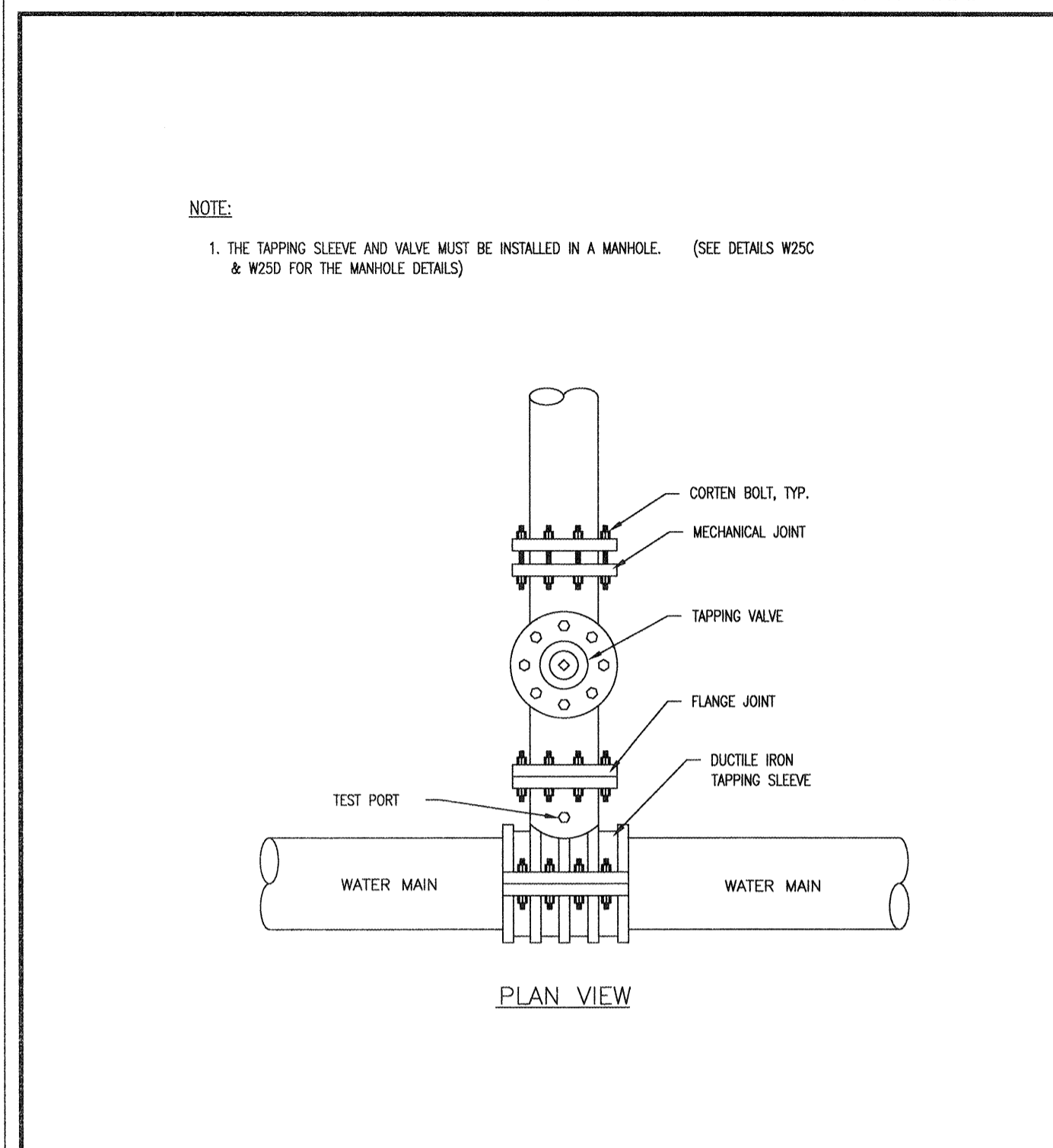


WATER METER INSTALLATION 3" AND LARGER

STANDARD CONSTRUCTION DETAILS

**savannah** CITY OF SAVANNAH WATER RESOURCES AND PUBLIC WORKS BUREAU Planning & Engineering

SCALE: N.T.S. DATE: JAN 2017 PLATE NUMBER: W5B

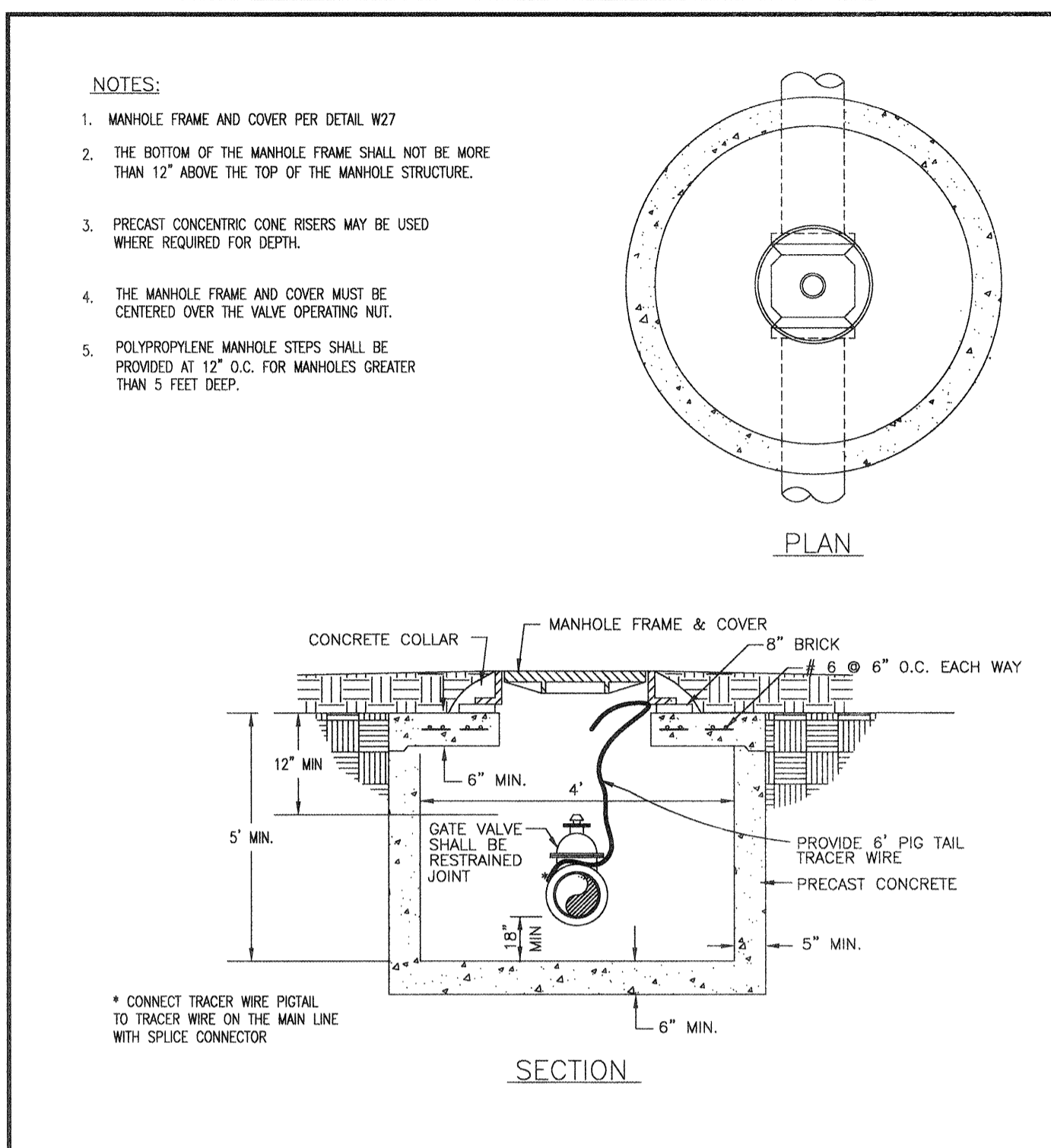


TYPICAL TAPPING SLEEVES & TAPPING VALVE

STANDARD CONSTRUCTION DETAILS

**savannah** CITY OF SAVANNAH WATER RESOURCES AND PUBLIC WORKS BUREAU Planning & Engineering

SCALE: N.T.S. DATE: JAN 2017 PLATE NUMBER: W24

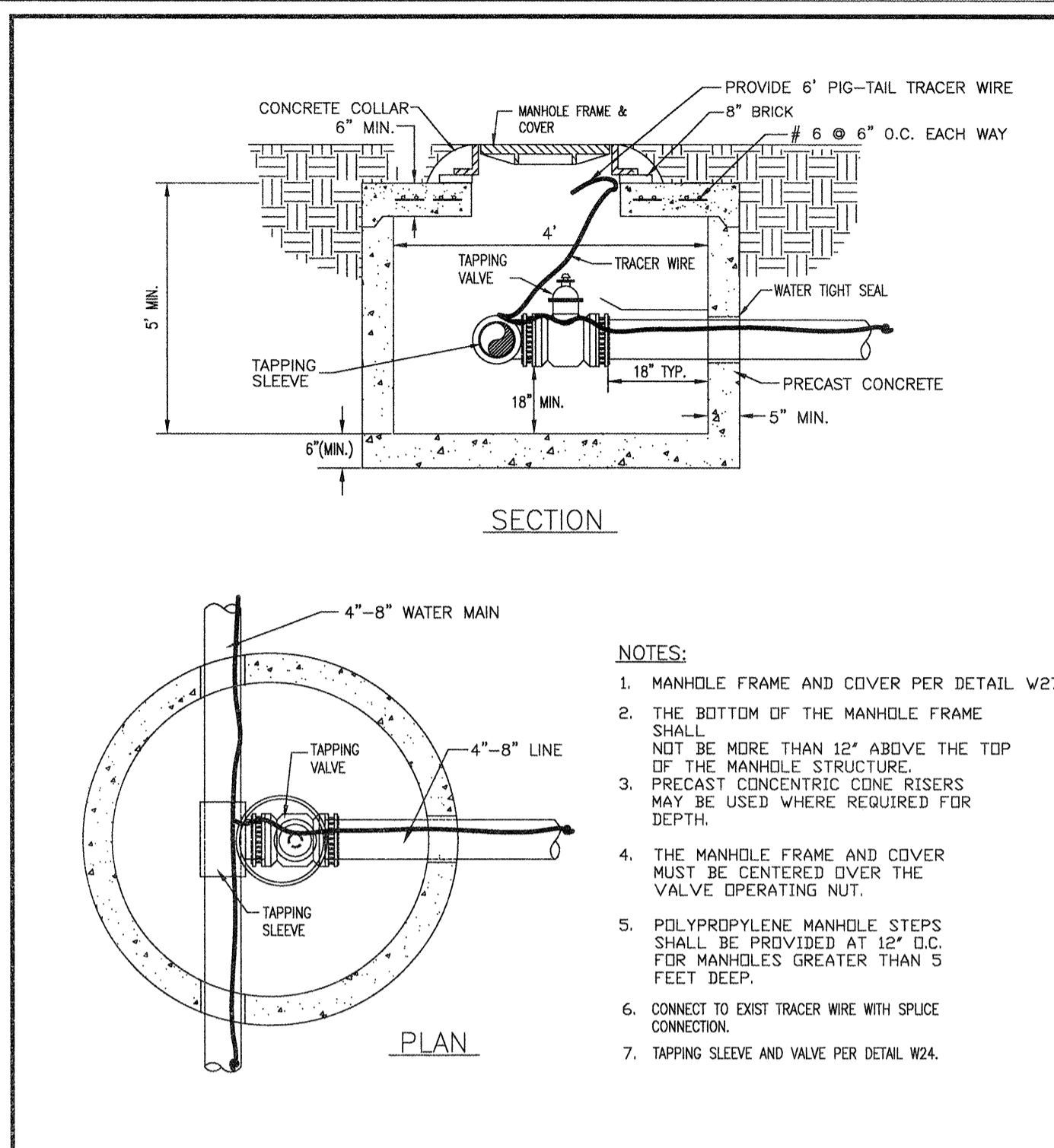


VALVE MANHOLE FOR 4"-8" GATE VALVES

STANDARD CONSTRUCTION DETAILS

**savannah** CITY OF SAVANNAH WATER RESOURCES AND PUBLIC WORKS BUREAU Planning & Engineering

SCALE: N.T.S. DATE: JAN 2017 PLATE NUMBER: W25A

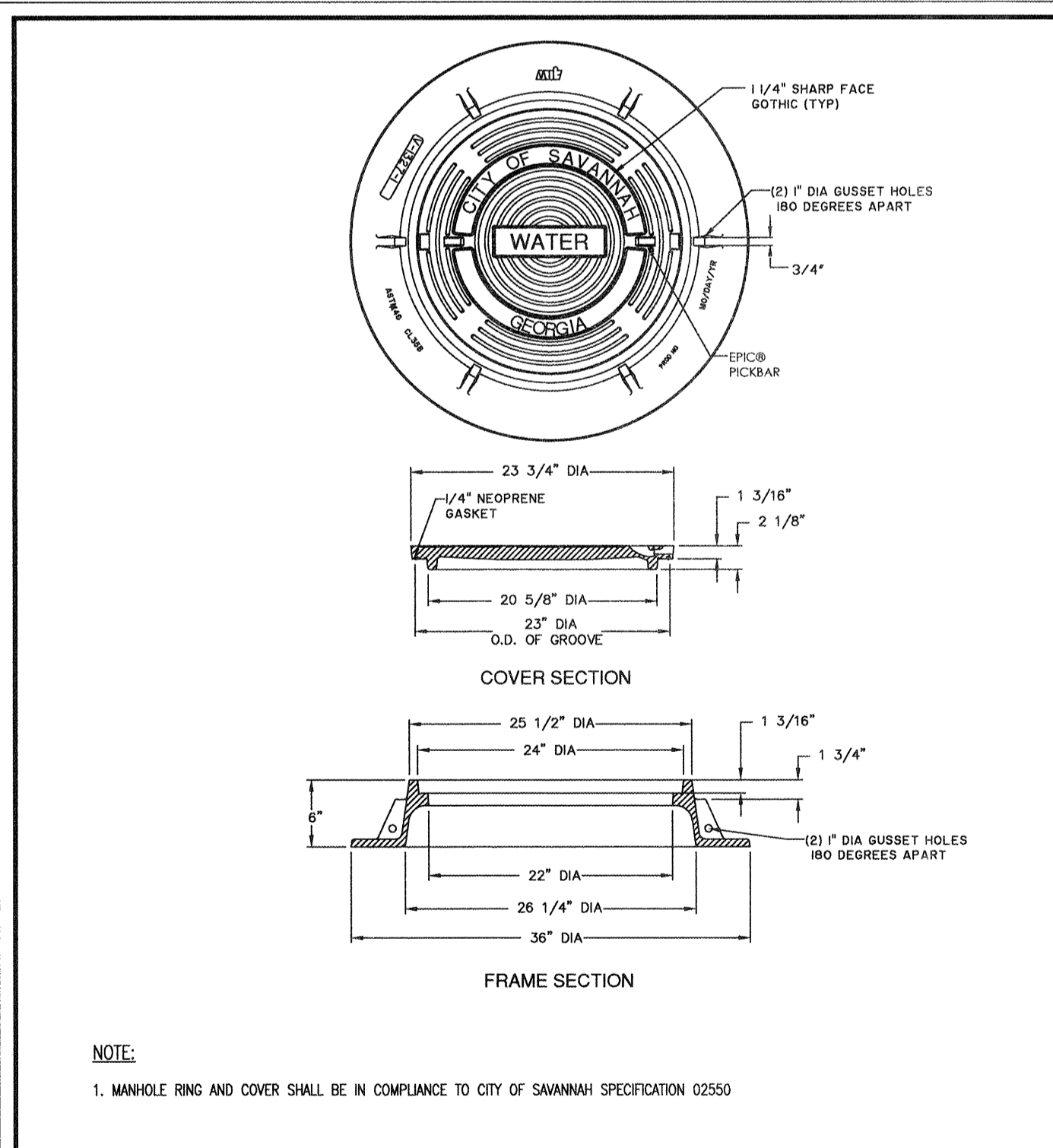


VALVE MANHOLE FOR 4"-8" TAPPING SLEEVES & VALVES

STANDARD CONSTRUCTION DETAILS

**savannah** CITY OF SAVANNAH WATER RESOURCES AND PUBLIC WORKS BUREAU Planning & Engineering

SCALE: N.T.S. DATE: JAN 2017 PLATE NUMBER: W25C

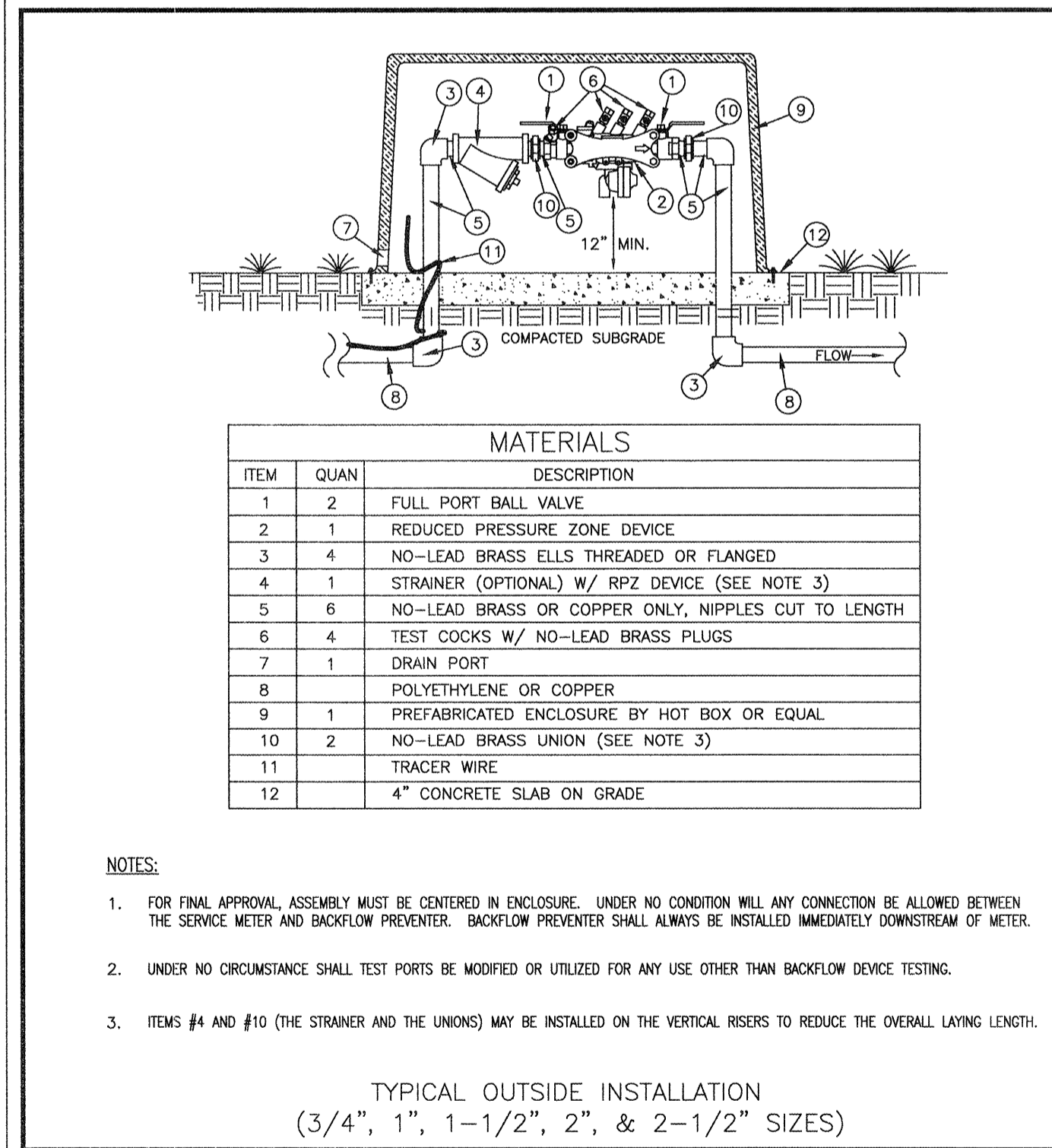


WATER MANHOLE RING & COVER

STANDARD CONSTRUCTION DETAILS

**savannah** CITY OF SAVANNAH WATER RESOURCES AND PUBLIC WORKS BUREAU Planning & Engineering

SCALE: N.T.S. DATE: JAN 2017 PLATE NUMBER: W27

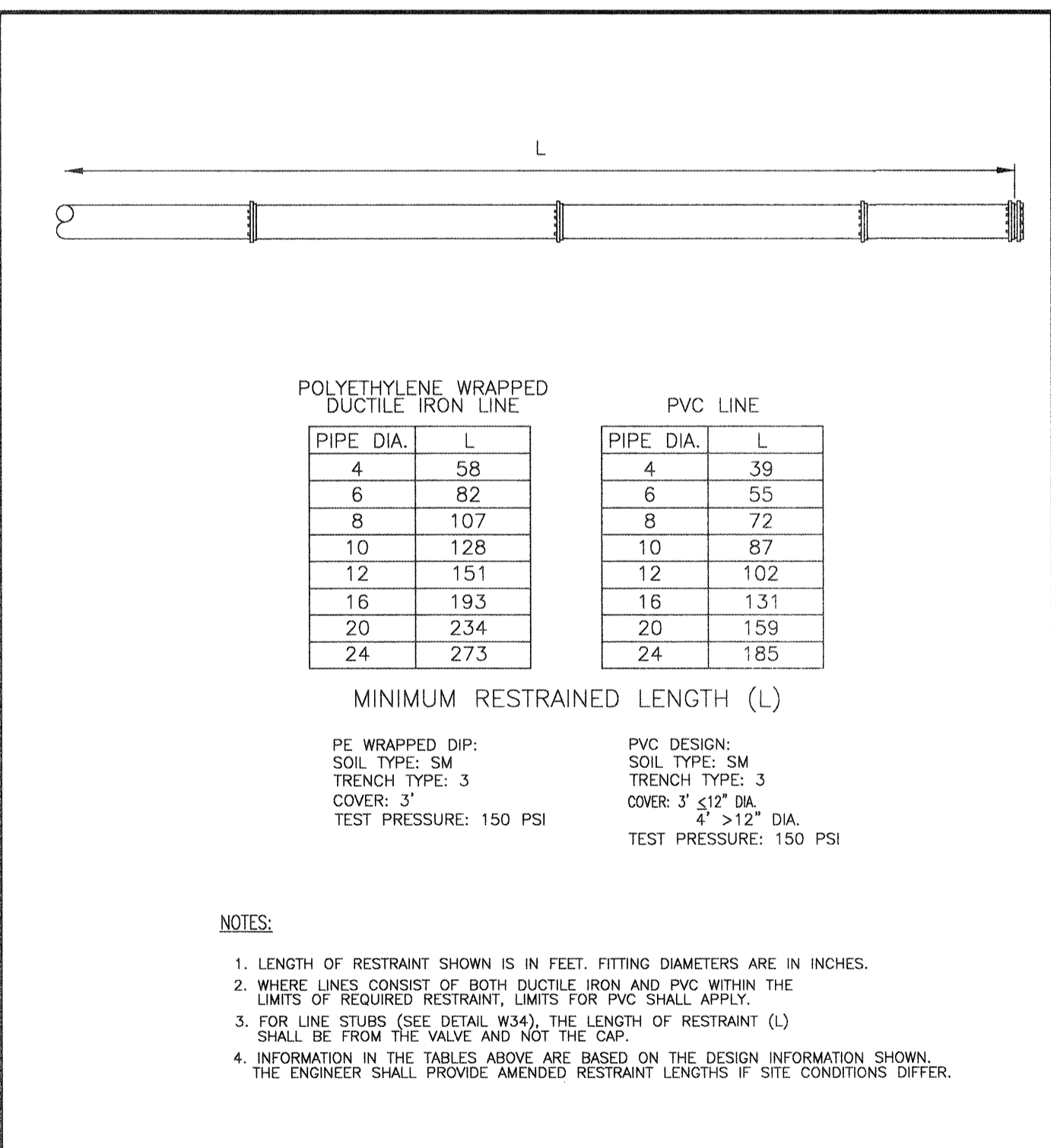


REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTER FOR DOMESTIC SYSTEM (2-1/2" AND SMALLER)

STANDARD CONSTRUCTION DETAILS

**savannah** CITY OF SAVANNAH WATER RESOURCES AND PUBLIC WORKS BUREAU Planning & Engineering

SCALE: N.T.S. DATE: JAN 2017 PLATE NUMBER: W16

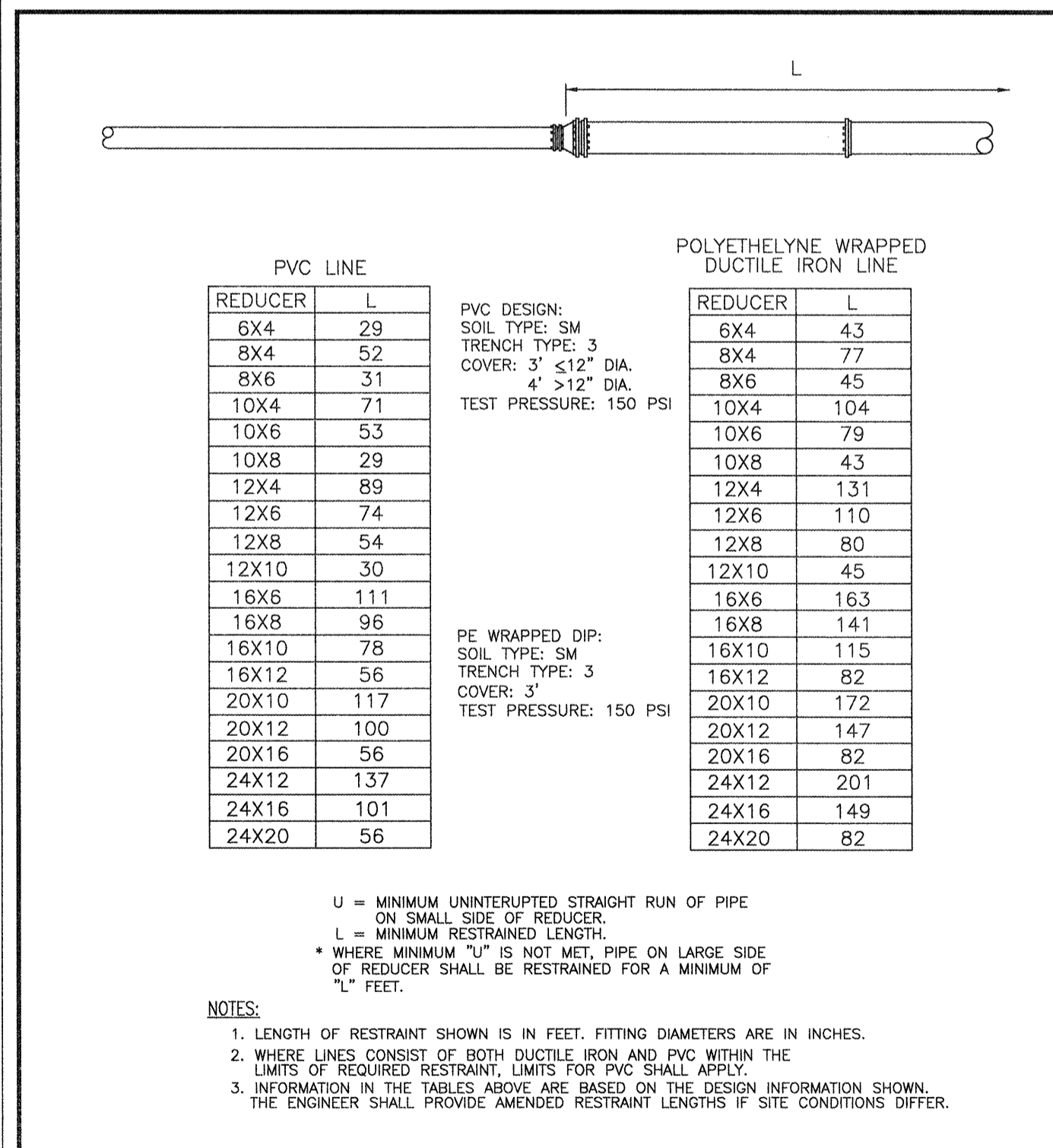


DEAD END RESTRAINT

STANDARD CONSTRUCTION DETAILS

**savannah** CITY OF SAVANNAH WATER RESOURCES AND PUBLIC WORKS BUREAU Planning & Engineering

SCALE: N.T.S. DATE: JAN 2017 PLATE NUMBER: W32

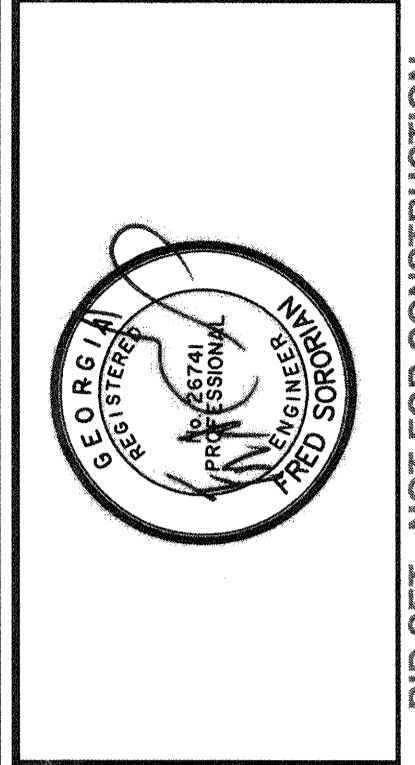


REDUCER RESTRAINT

STANDARD CONSTRUCTION DETAILS

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SCALE: N.T.S. DATE: JAN 2017 PLATE NUMBER: W33



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SCALE:	AS NOTED

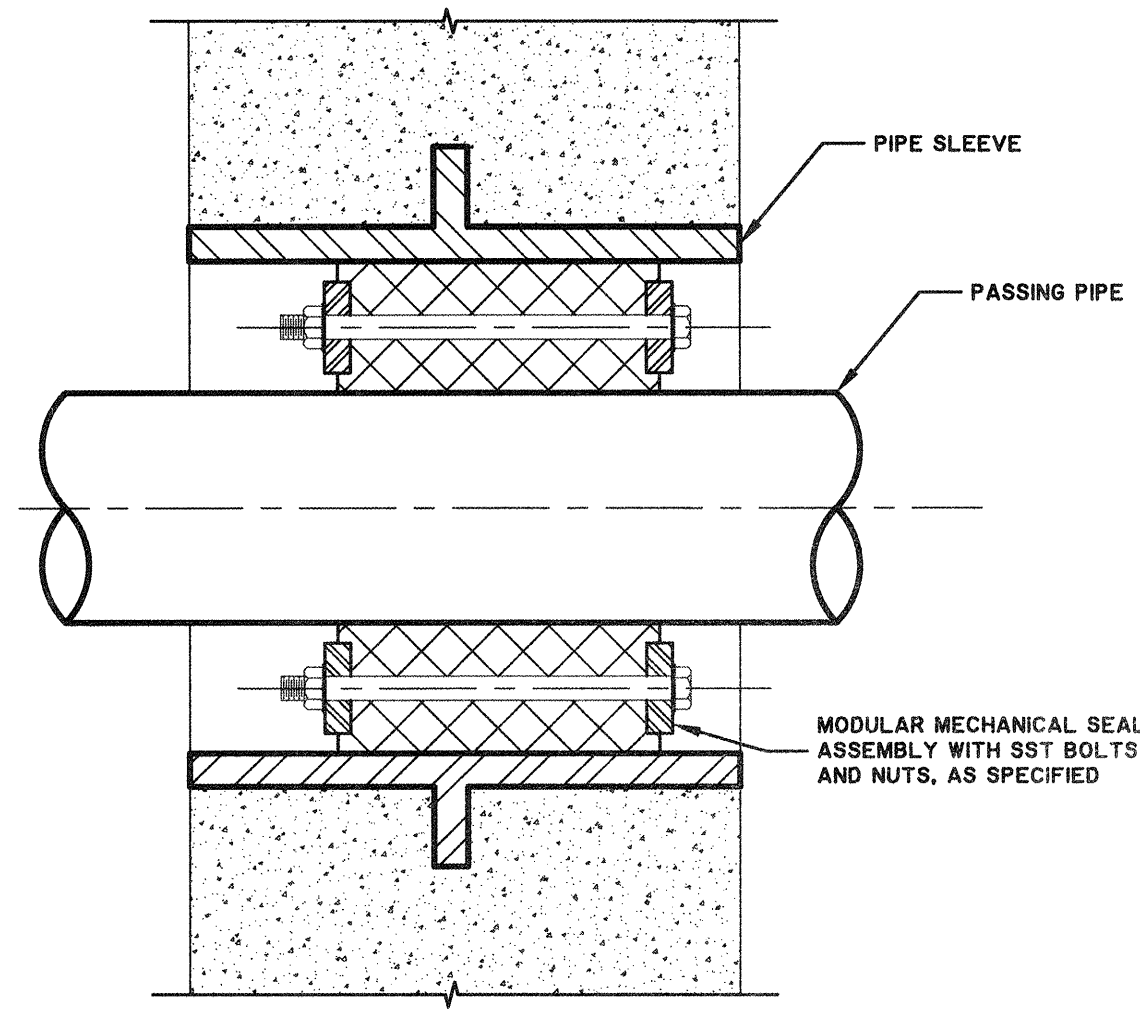
**M11.4**

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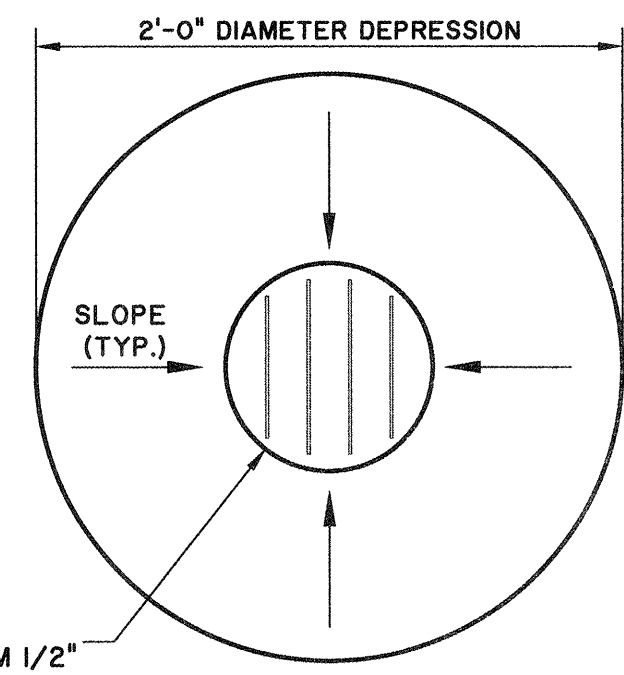






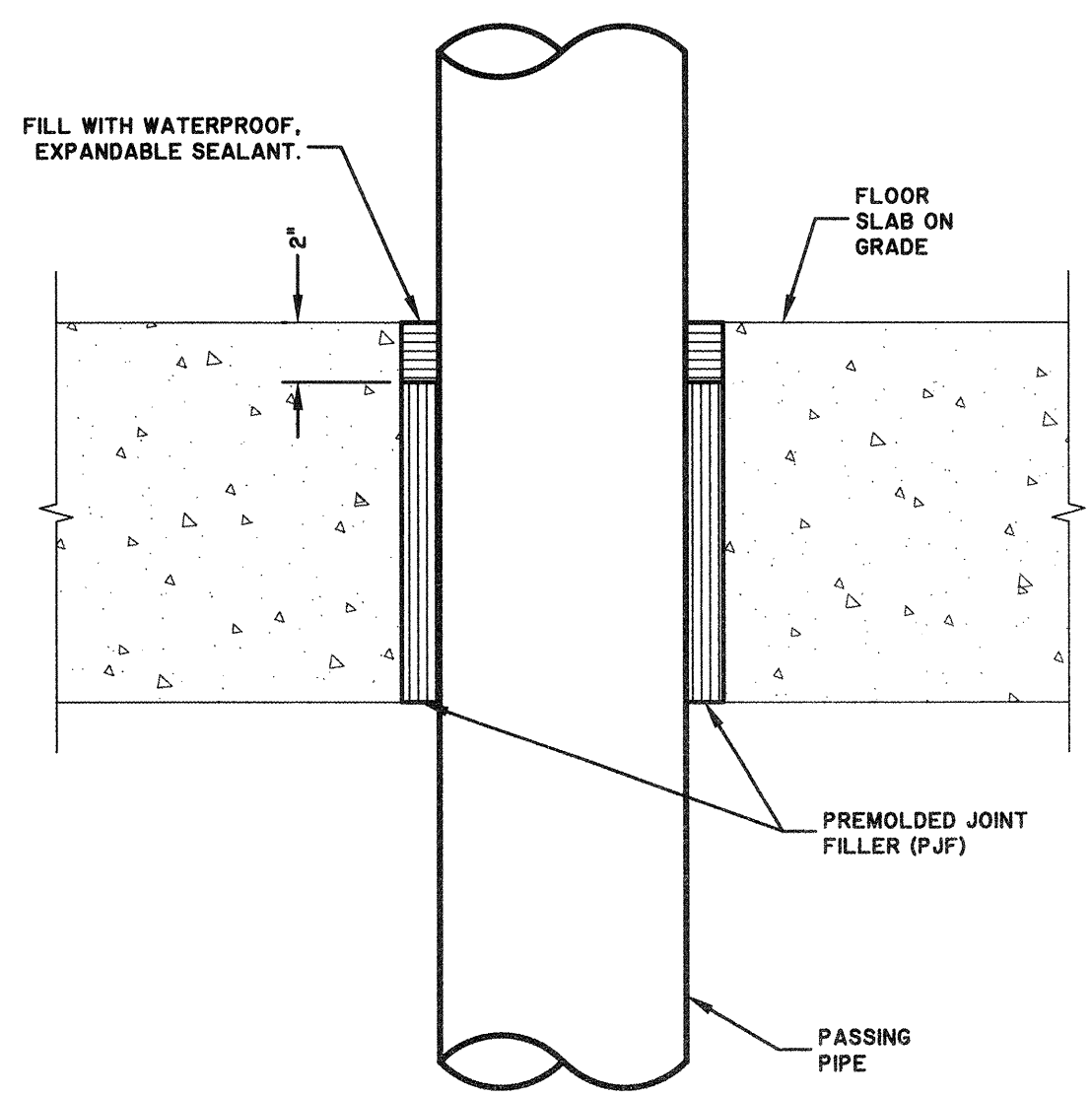


**WALL PIPE PENETRATION SEAL**  
SCALE: N.T.S.

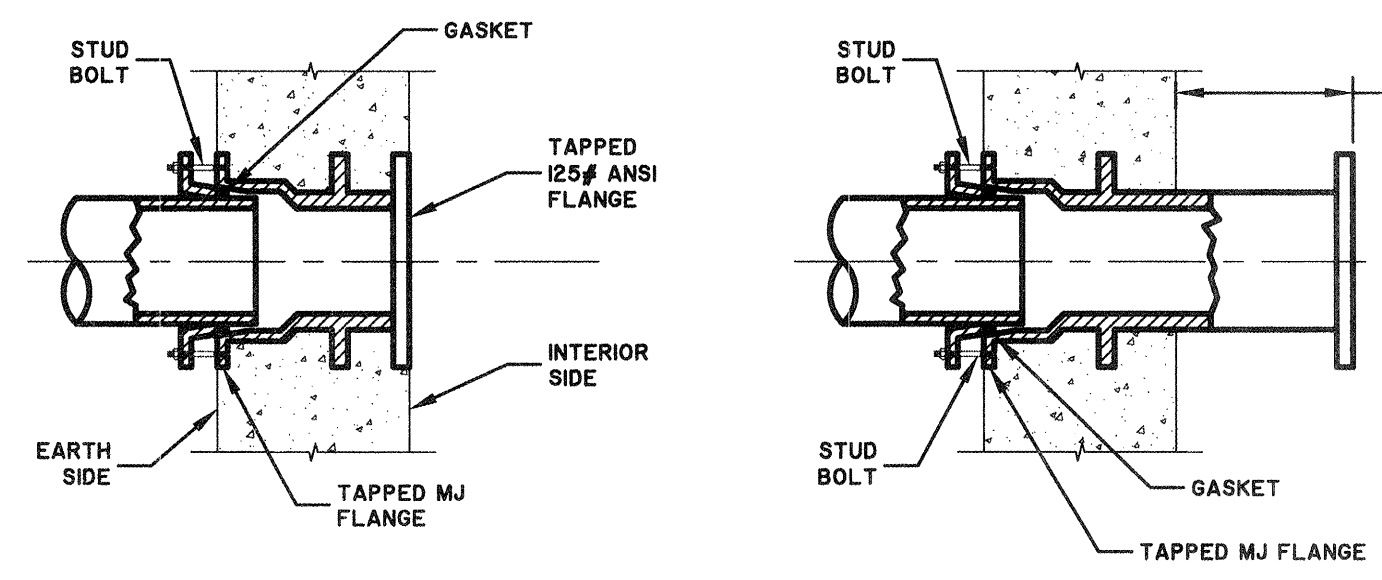


SET FLOOR DRAIN RIM 1/2" LOWER THAN ADJACENT SLAB ELEVATION

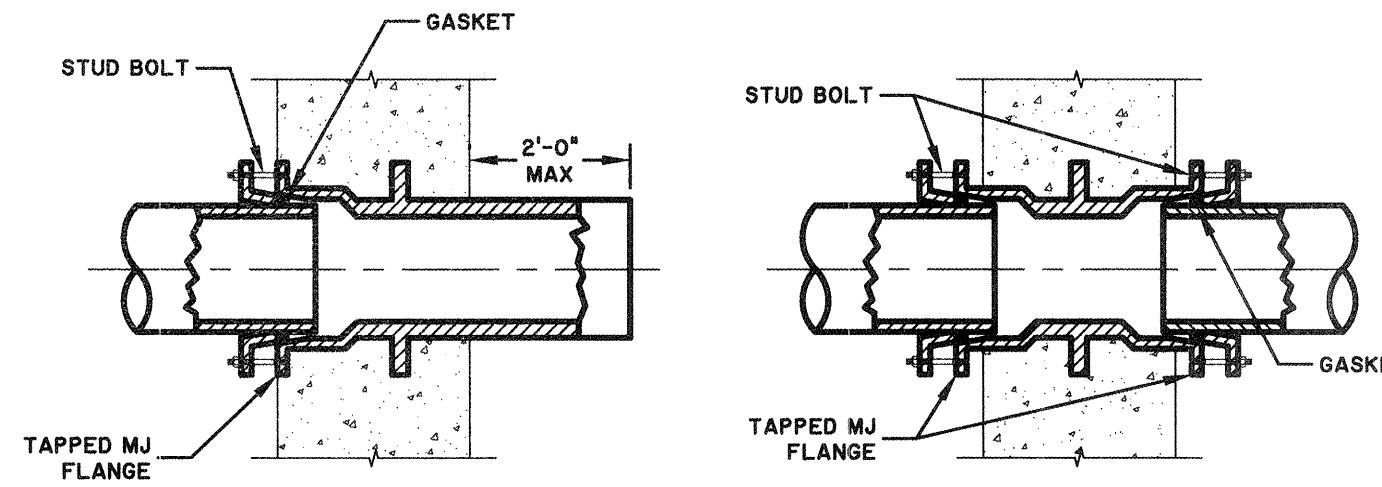
**TYP INTERIOR FLOOR DRAIN**  
SCALE: N.T.S.



**SLAB ON GRADE PIPE PENETRATION**  
SCALE: N.T.S.

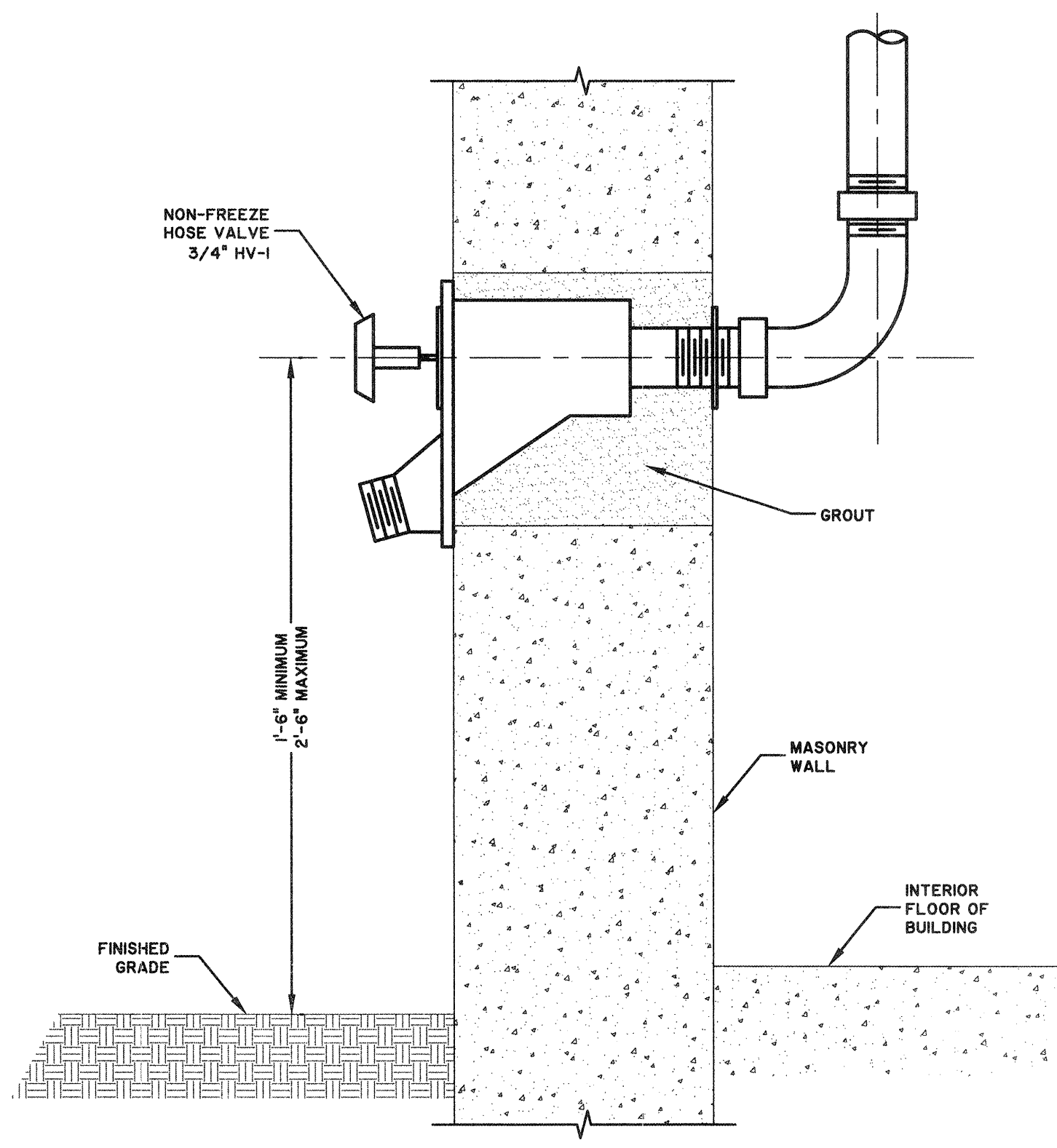


**MECHANICAL JOINT X FLUSH FLANGE**      **MECHANICAL JOINT X FLANGE**

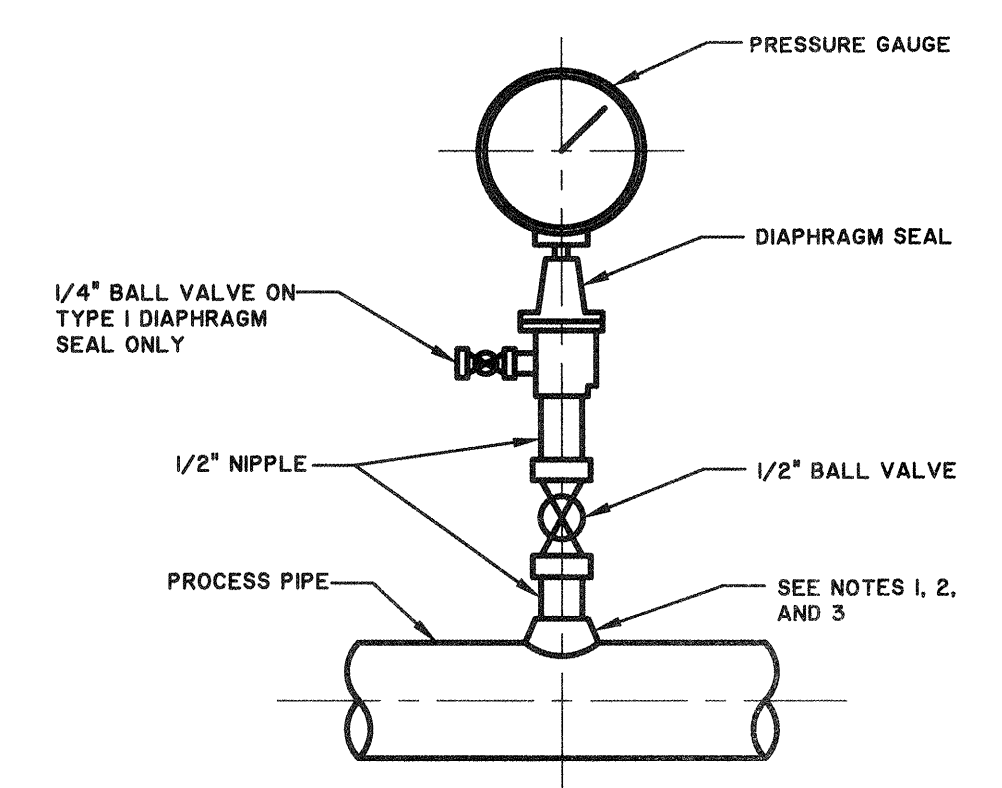


**MECHANICAL JOINT X PLAIN END**      **MECHANICAL JOINT X MECHANICAL END**

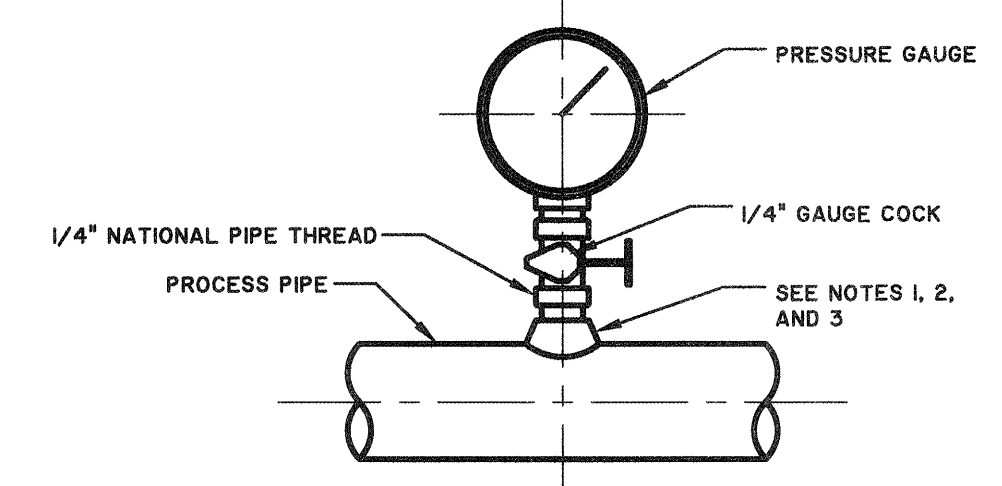
**DUCTILE IRON WALL PIPES**  
SCALE: N.T.S.



**NON-FREEZE WALL HYDRANT**  
SCALE: N.T.S.



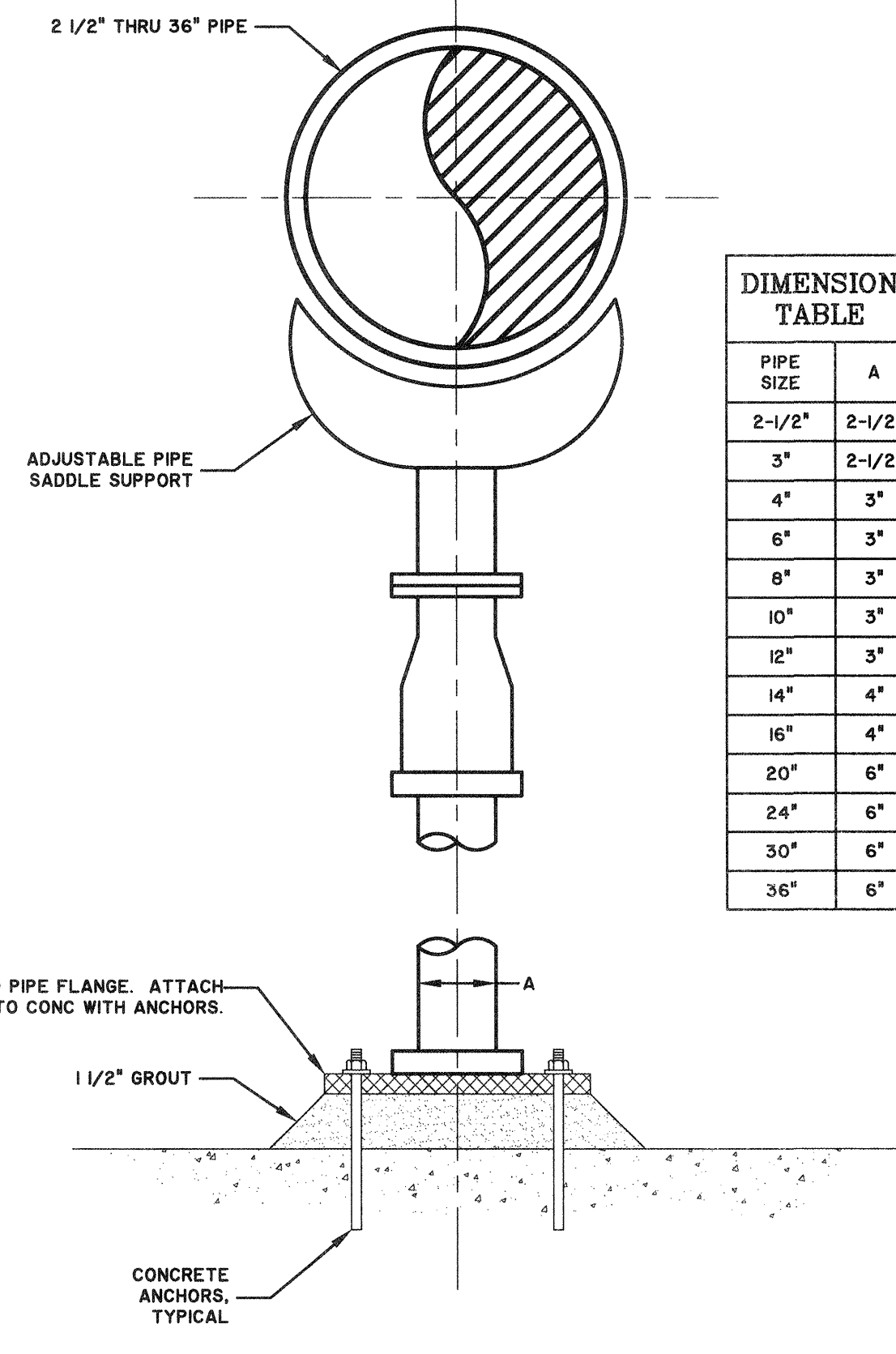
**DIAPHRAGM PRESSURE GAUGE**



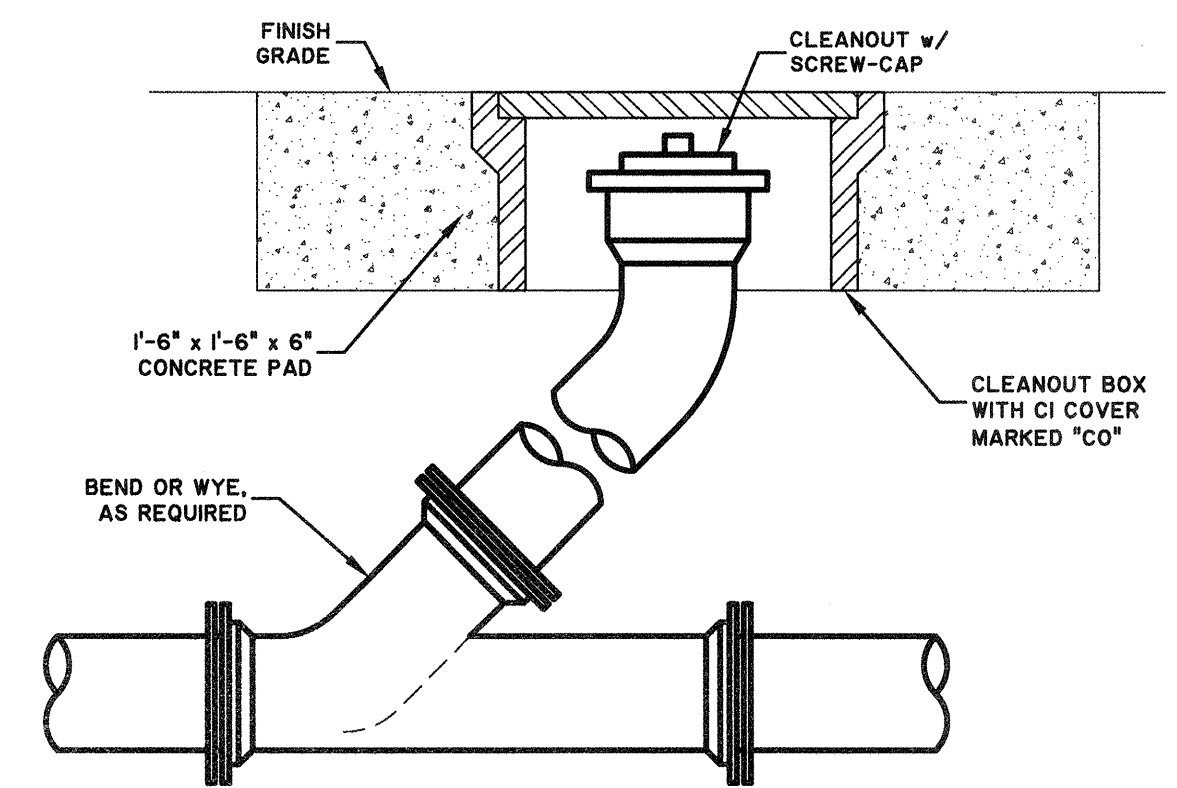
**PRESSURE GAUGE**

1. FOR STEEL, GALVANIZED STEEL, AND PVC 2-1/2" AND SMALLER USE A BUSHING IN A TEE
2. FOR DUCTILE IRON AND FIBERGLASS REINFORCED PLASTIC PIPE, ALL SIZES, USE PIPE SADDLE WITH BUSHING.
3. FOR STEEL AND STAINLESS STEEL PIPES 3" AND LARGER, AND PRESSURE VESSELS, USE THRED-O-LET AS SHOWN.
4. PROVIDE SNUBBER FOR POSITIVE DISPLACEMENT PUMP INSTALLATIONS.

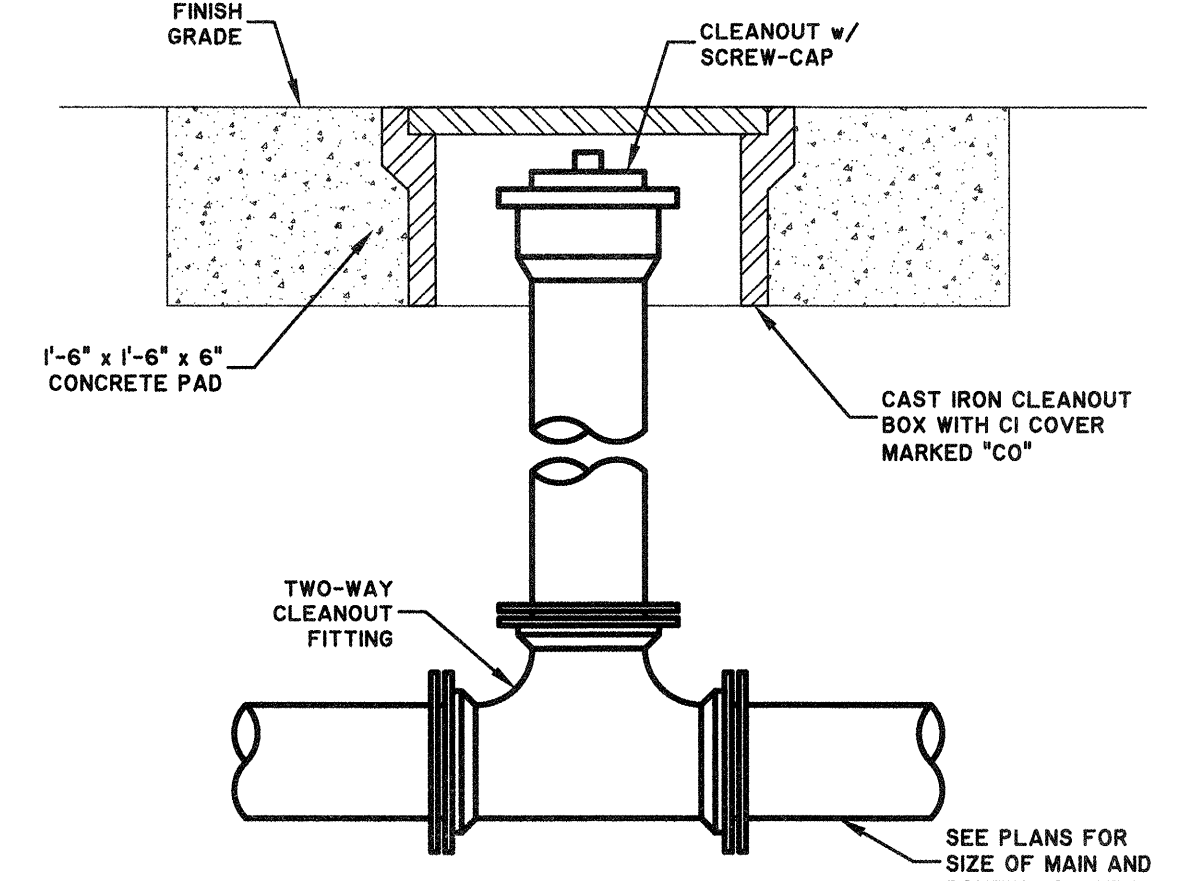
**PRESSURE GAUGE MOUNTING**  
SCALE: N.T.S.



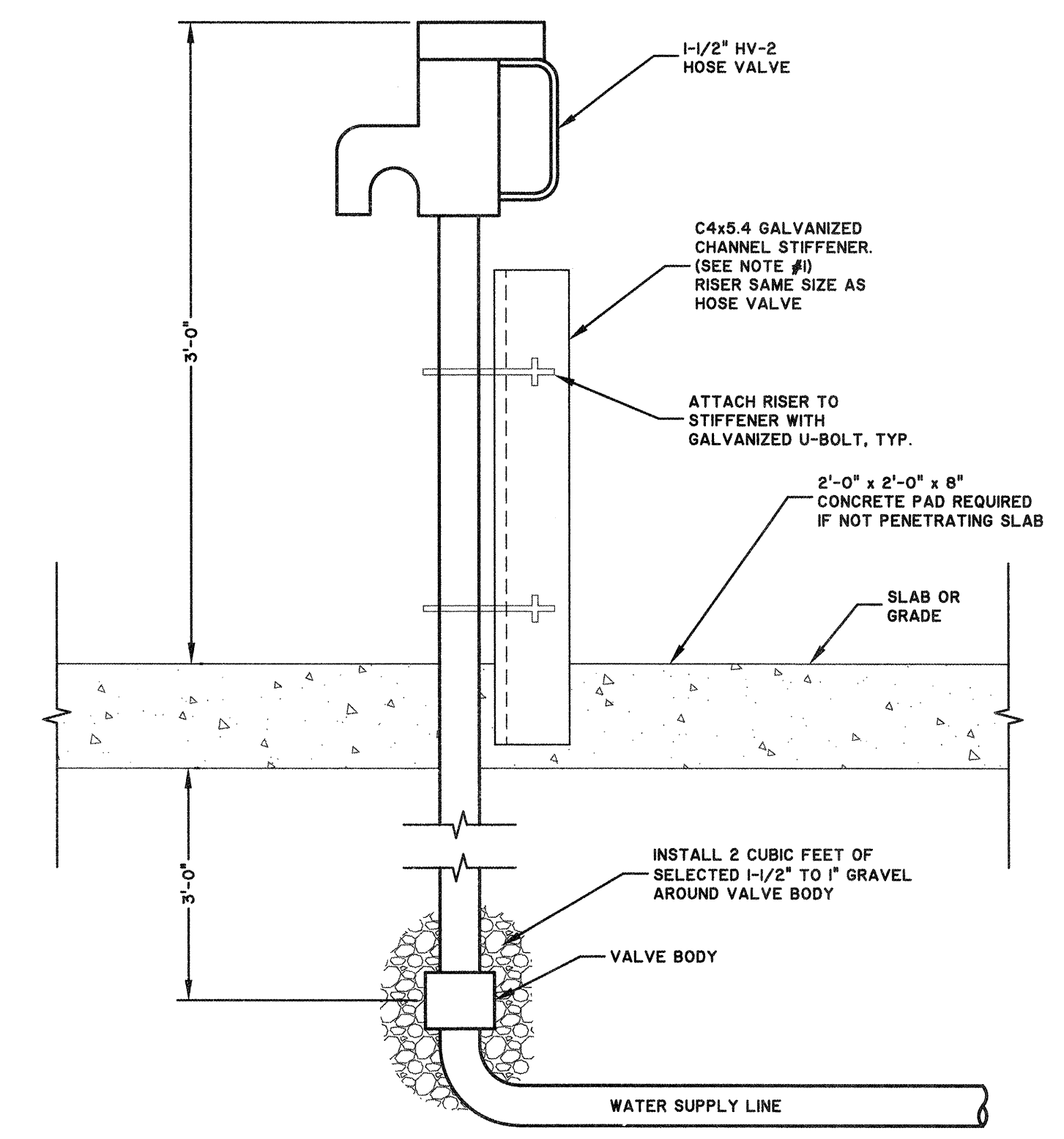
**S.S. PIPE SUPPORT**  
SCALE: N.T.S.



**EXTERIOR CLEANOUT**  
SCALE: N.T.S.

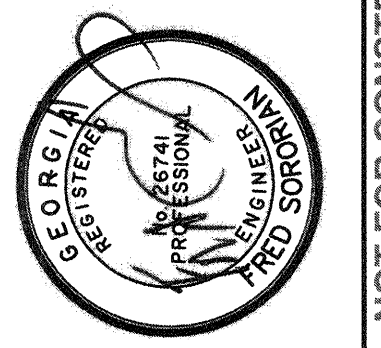


**TWO-WAY EXTERIOR CLEANOUT DETAIL**  
SCALE: N.T.S.



**NON-FREEZE POST HYDRANT**  
SCALE: N.T.S.

- NOTES:  
1. CHANNEL STIFFENER AND RISER ATTACHMENT HARDWARE SHALL BE--  
A. GALVANIZED STEEL  
B. STAINLESS STEEL  
C. AS SPECIFIED



NO.	ISSUED FOR BIDS	REVISIONS	BY	DATE

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TRAVIS FIELD WATER RECLAMATION FACILITY  
PIPING NOTES AND DETAILS

JOB NO:	J-26963.0000
DATE:	1-16-19
DRAWN:	CDR
DESIGNED:	CDR
REVIEWED:	FS
APPROVED:	FS
SCALE:	AS NOTED

**M11.6**

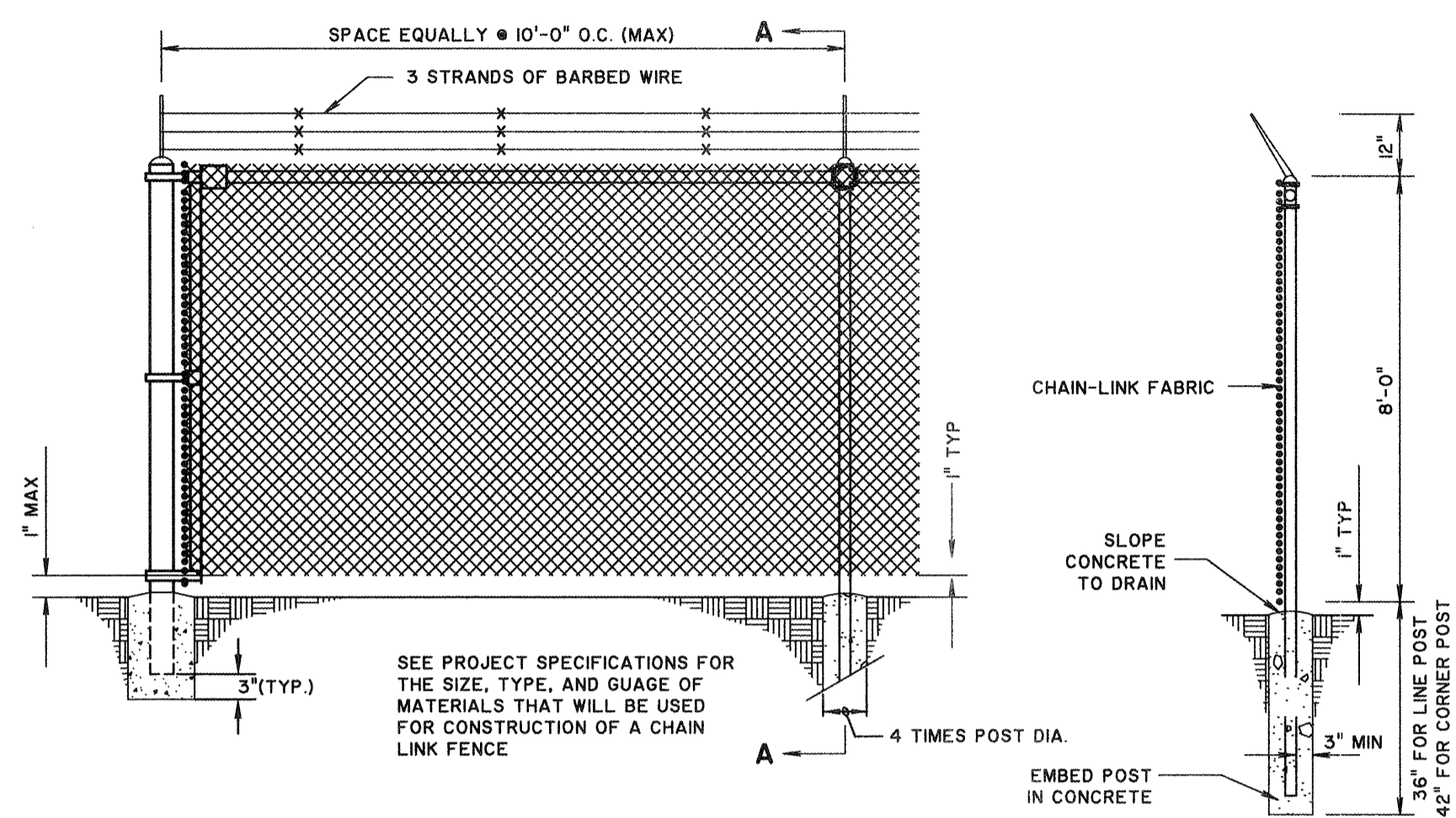
BID SET - NOT FOR CONSTRUCTION





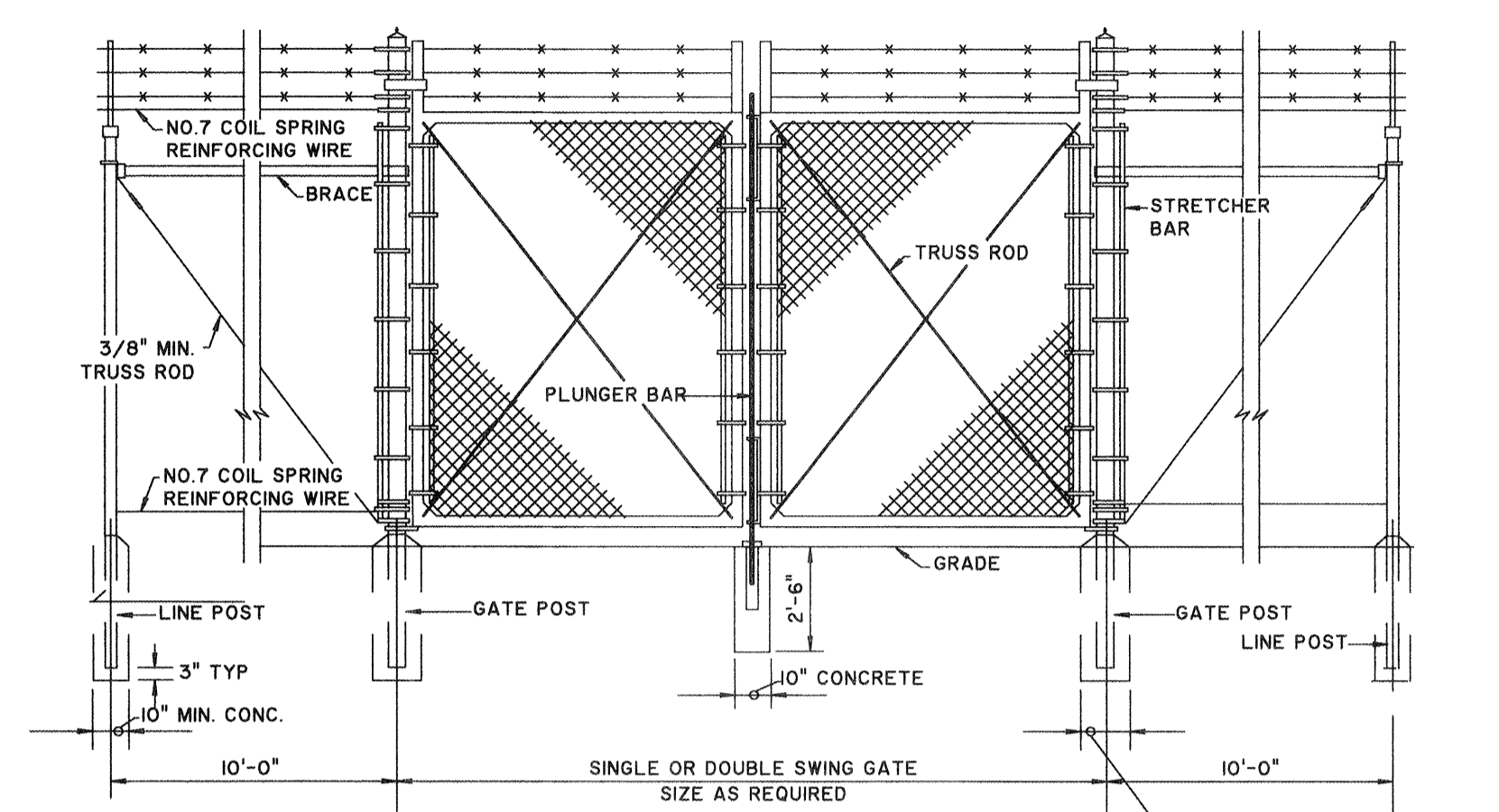


21.08953.0000 Engineering/Construction Plans 21.08953.0000 - 4 Sheets (4) - Job No. 16.000 - 16.000 TPA



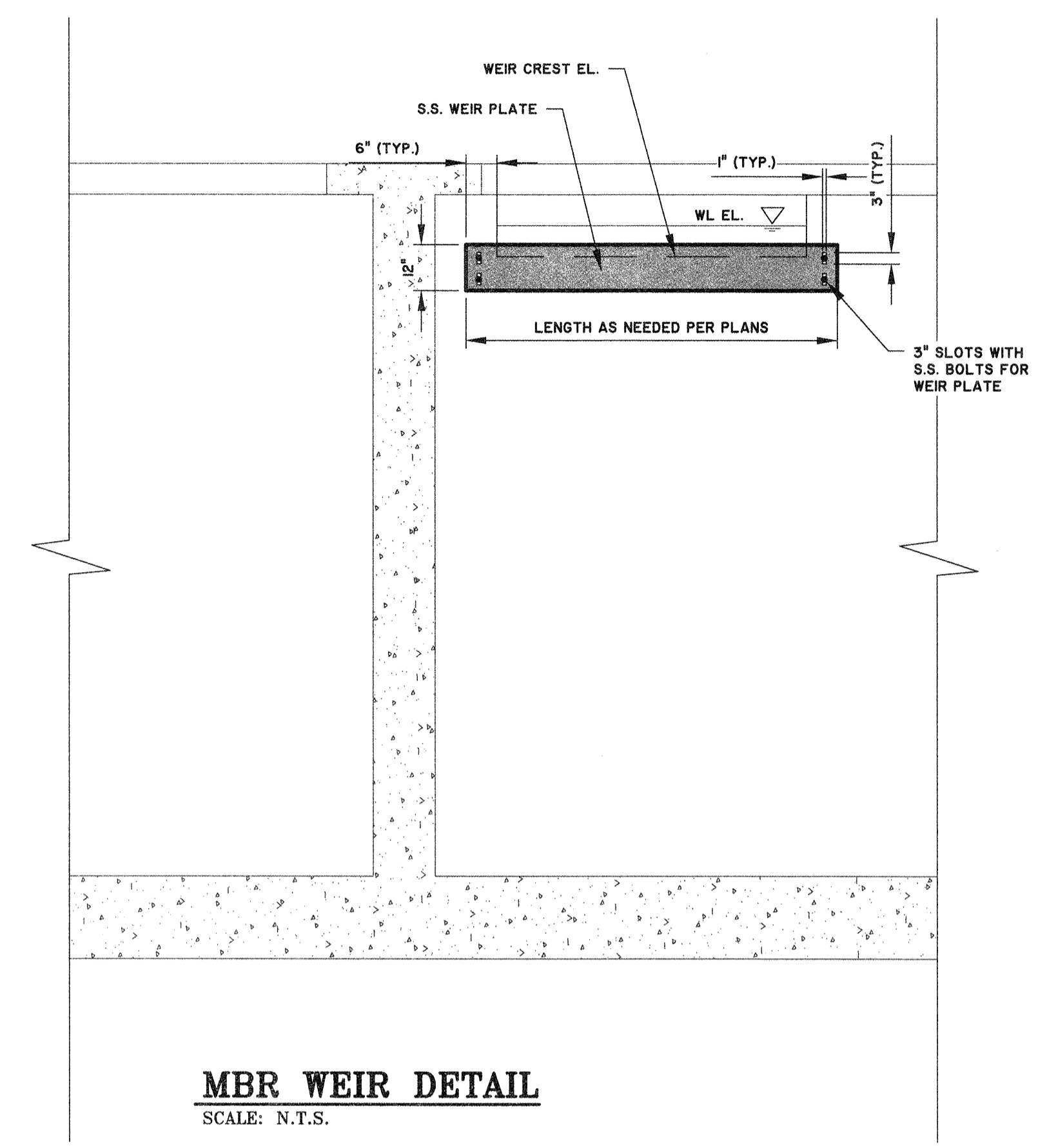
**FENCE DETAIL**  
SCALE: N.T.S.

**FENCE SECTION A-A**

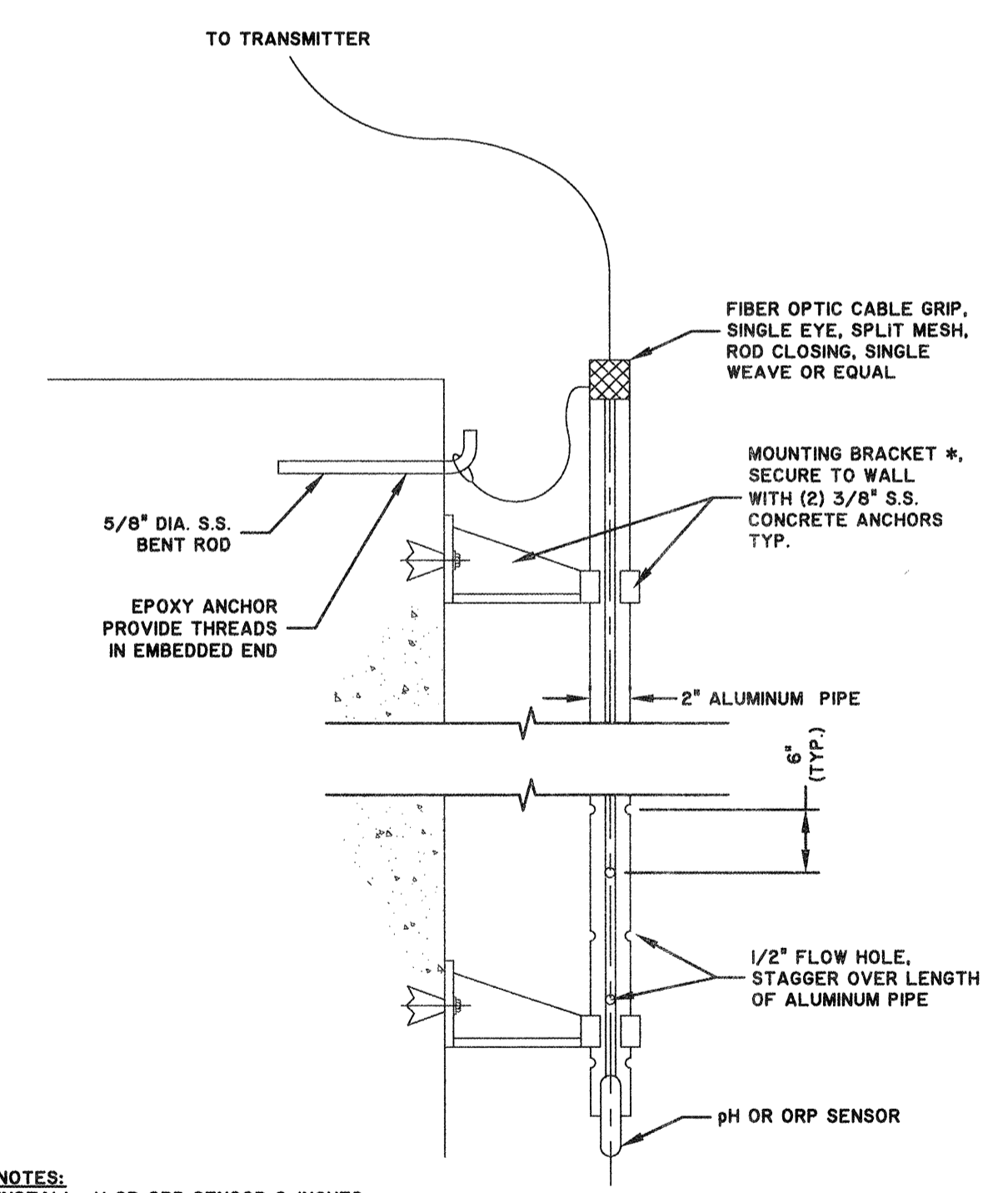


1. SEE SHEET M11 FOR GATE LOCATIONS.
2. SWING GATE TO BE ELECTRICALLY OPERATED WHERE NOTED ON THE PLANS
3. SEE SPECIFICATION 32.31.10

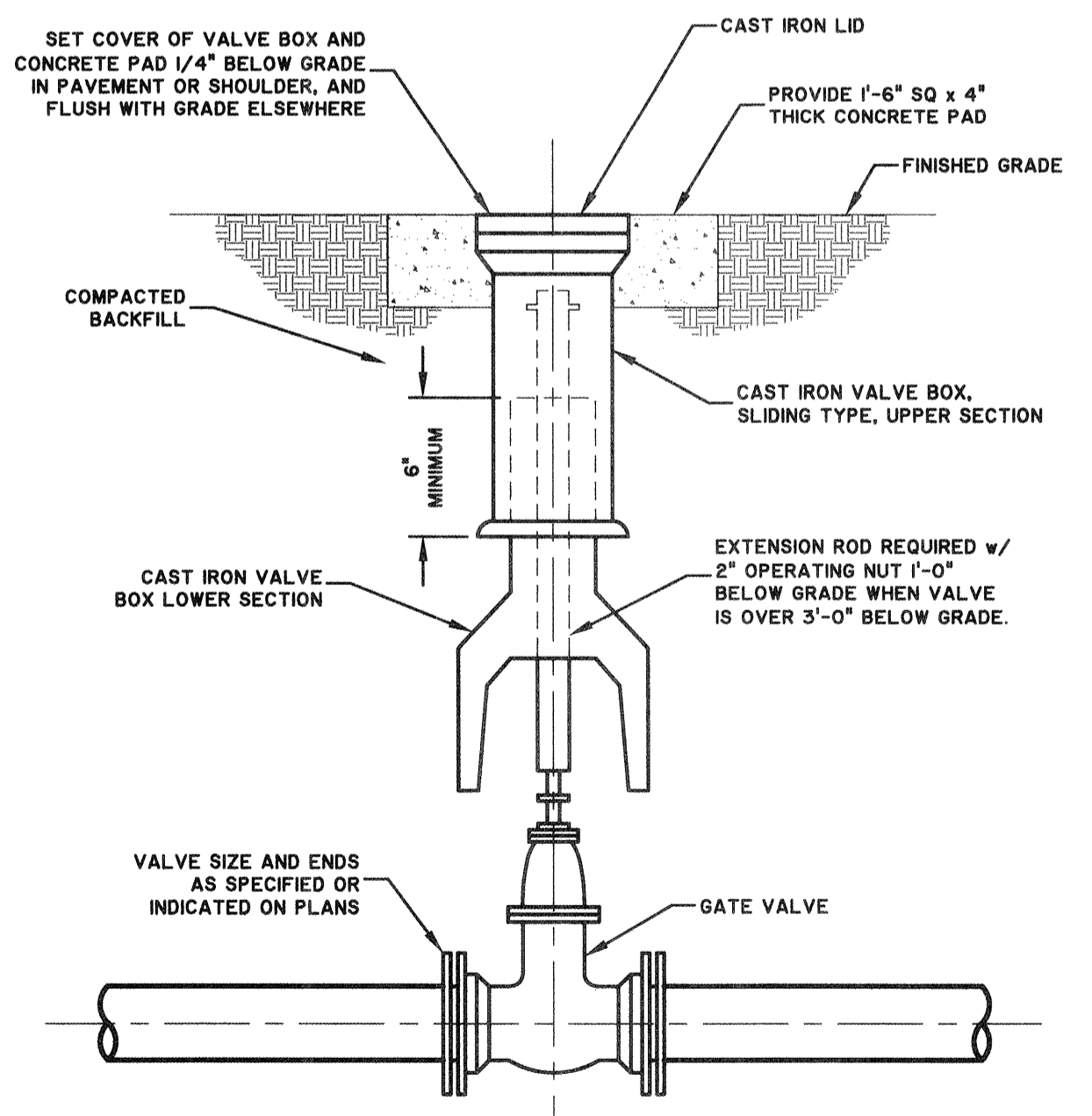
**SWING GATE DETAIL**  
SCALE: N.T.S.



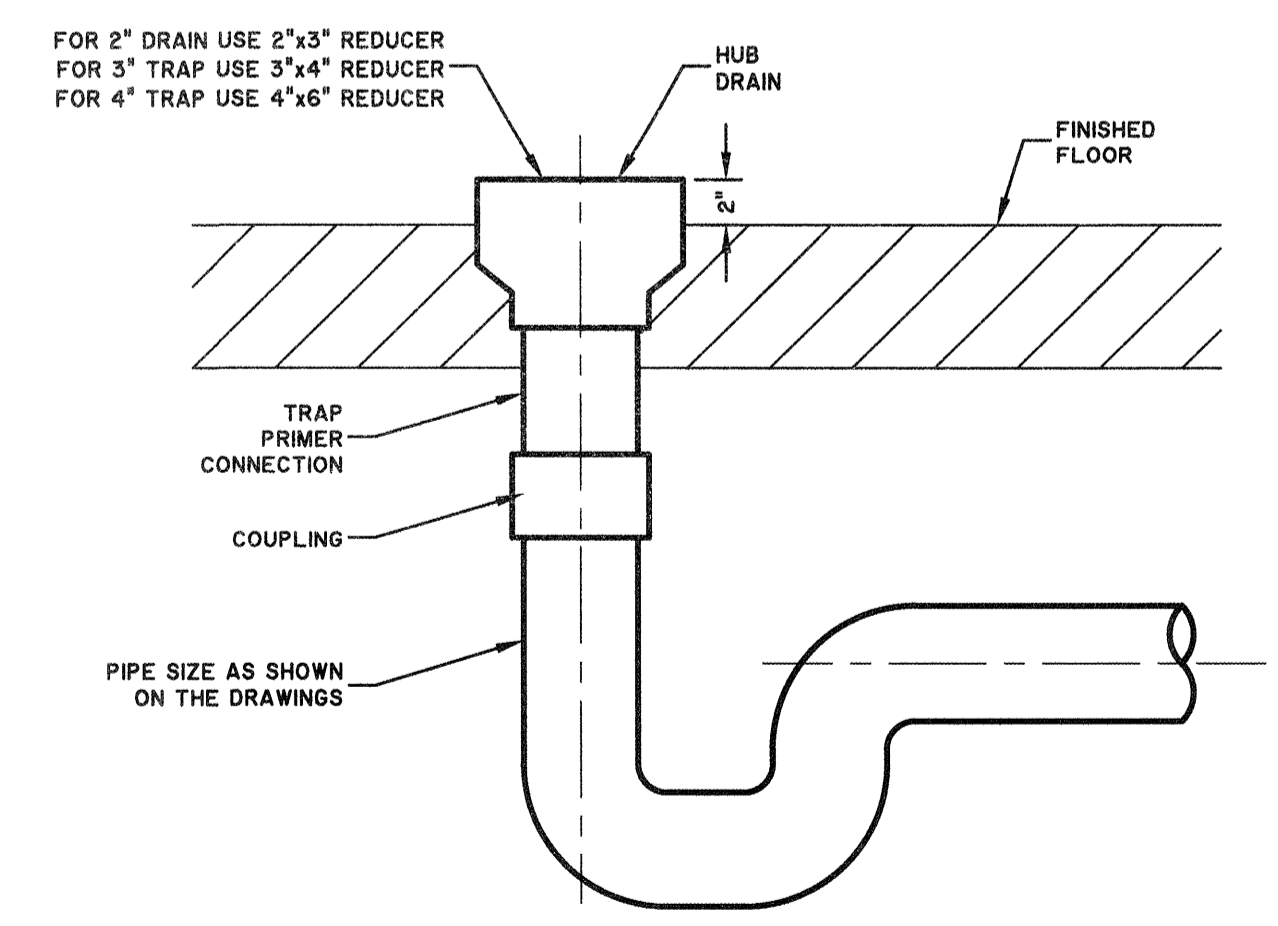
**MBR WEIR DETAIL**  
SCALE: N.T.S.



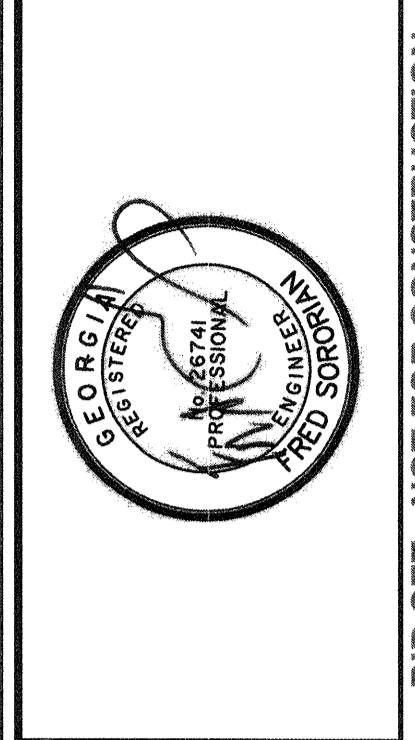
**pH/ORP SENSOR INSTALLATION**  
SCALE: N.T.S.



**BURIED GATE VALVE BOX**  
SCALE: N.T.S.



**HUB DRAIN**  
SCALE: N.T.S.



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0			CDR	5-01-19

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APPROVED:	FS
SCALE:	AS NOTED

**M11.8**

BID SET - NOT FOR CONSTRUCTION



