

City of Taunton, Massachusetts

Wastewater Treatment Facility Improvements

Phase I

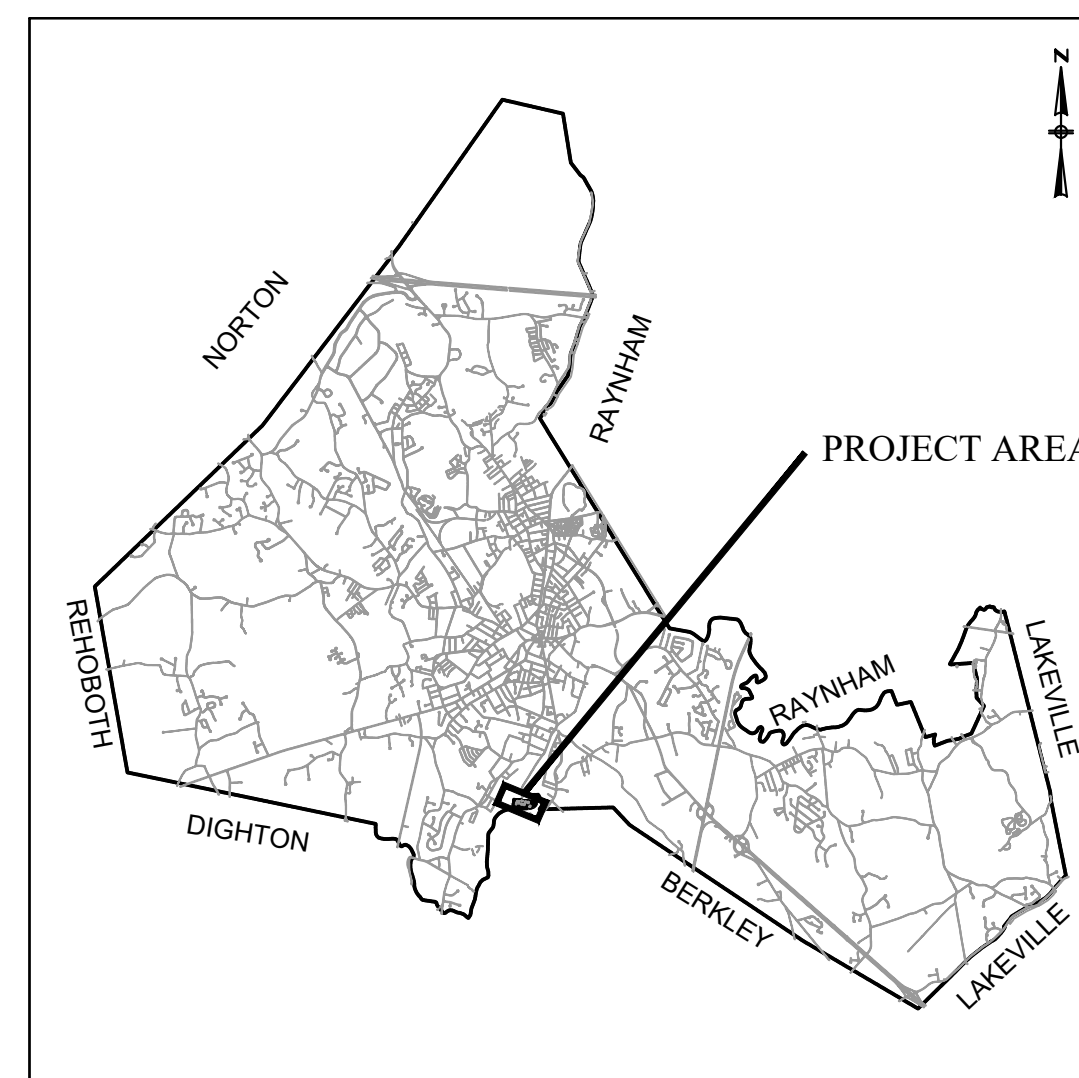


Mayor
Shaunna O'Connell

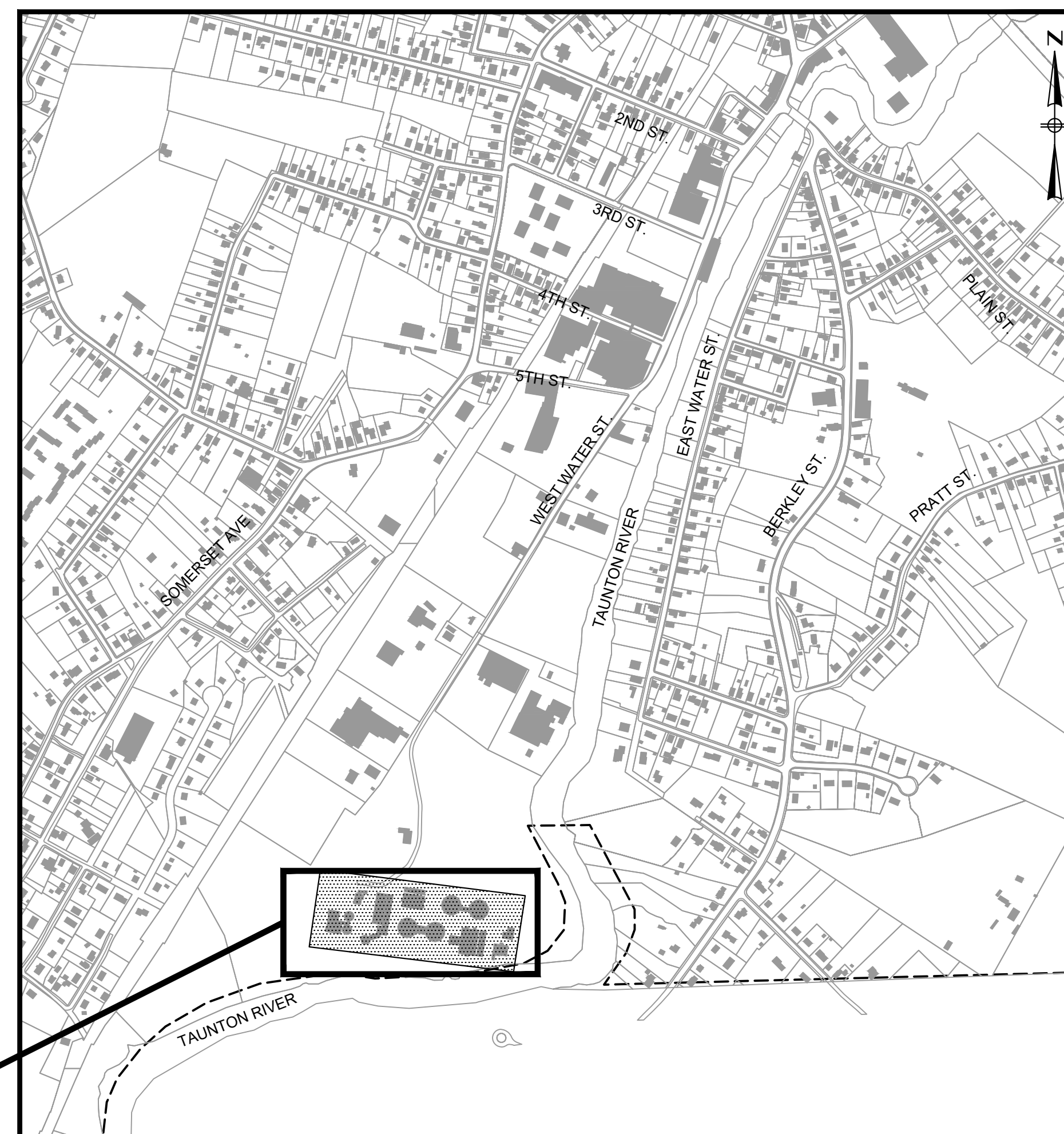
Department of Public Works
Frederic J. Cornaglia - Commissioner
Anthony Abreau - Assistant Commissioner

City Engineer
Michael Patneaude, P.E.

City Council
Deborah Carr
Donald L. Cleary
Chris Coute
Gerald Croteau
Phillip Duarte
John M. McCaul
Jeff Postell
David W. Pottier
Barry Sanders



LOCATION MAP
NOT TO SCALE



Project
Location

PROJECT LOCATION

LOCUS MAP
NOT TO SCALE

ISSUED FOR CONSTRUCTION

Contract S-2021-1
CWSRF No. 4605

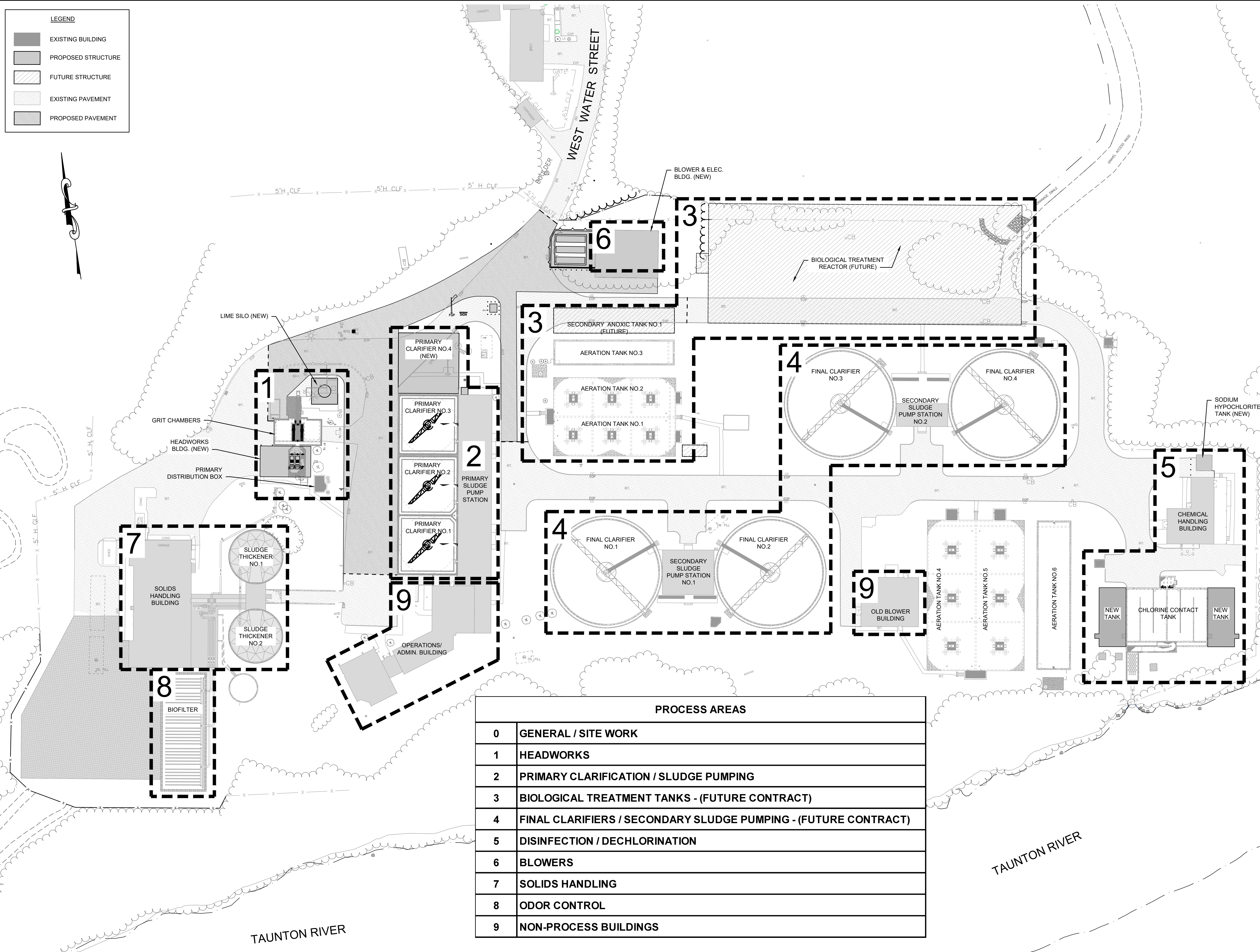
Issue Date:

February 14, 2022



Prepared By:





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BETA
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REGISTERED PROFESSIONAL

 Joseph P. Fedrigo, Jr.

SUBCONSULTANT

PROJECT
Taunton Wastewater Treatment Facility Improvements Phase 1
 Taunton, MA

TITLE
WWTF Process Areas Key Plan

PROCESS AREAS	
0	GENERAL / SITE WORK
1	HEADWORKS
2	PRIMARY CLARIFICATION / SLUDGE PUMPING
3	BIOLOGICAL TREATMENT TANKS - (FUTURE CONTRACT)
4	FINAL CLARIFIERS / SECONDARY SLUDGE PUMPING - (FUTURE CONTRACT)
5	DISINFECTION / DECHLORINATION
6	BLOWERS
7	SOLIDS HANDLING
8	ODOR CONTROL
9	NON-PROCESS BUILDINGS

NO.	REVISIONS	DATE

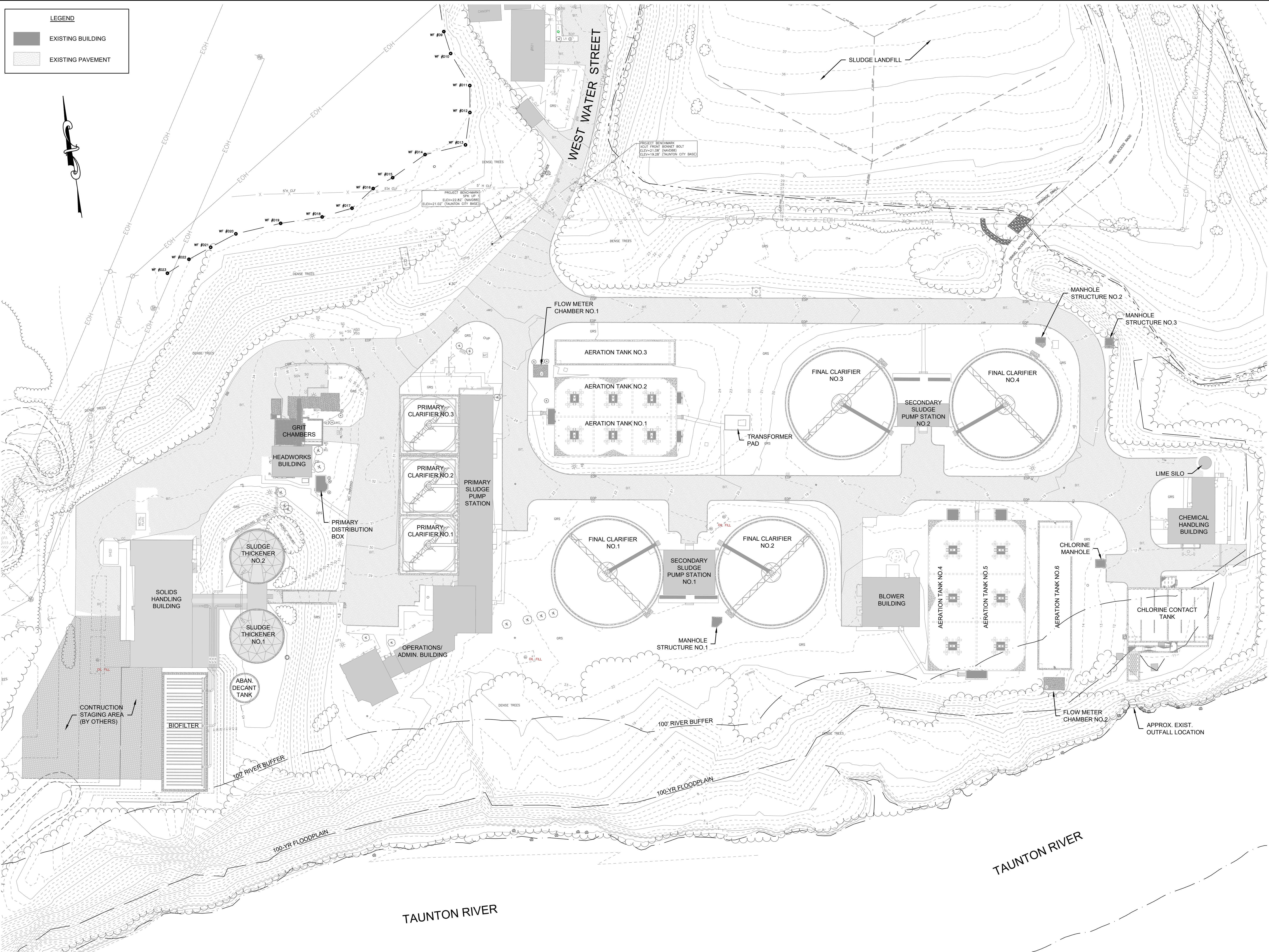
DRAWN BY: BM
 DESIGNED BY: MA
 CHECKED BY: SR
 ISSUE DATE: 7/2/2021
 BETA JOB NO.: 6050

SCALE

 SCALE IN FEET: 1"=40'
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.
G-1.5

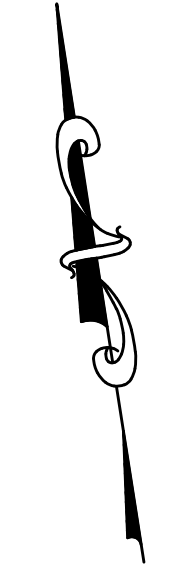
7/2/2021 10:15 AM J:\TAUNTON\WWTF DESIGN\AUTOCAD\PLAN SET\PHASE 1\WWTF PROCESS AREAS DWG (BETA STD BW.CTB)



7/2/2021 10:16 AM J:\TAUNTON\WTF DESIGN\AUTOCAD\PLAN SET\PHASE 1\WTF SITE PLAN - EXIST.DWG (BETA STD BW.CTB)

LEGEND

- EXISTING BUILDING
- EXISTING PAVEMENT




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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA


TITLE

WWTF Existing Site Plan

NO.	REVISIONS	DATE

DRAWN BY:	BM
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ISSUE DATE:	7/2/2021
BETA JOB NO.:	6050

SCALE



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SHEET NO.

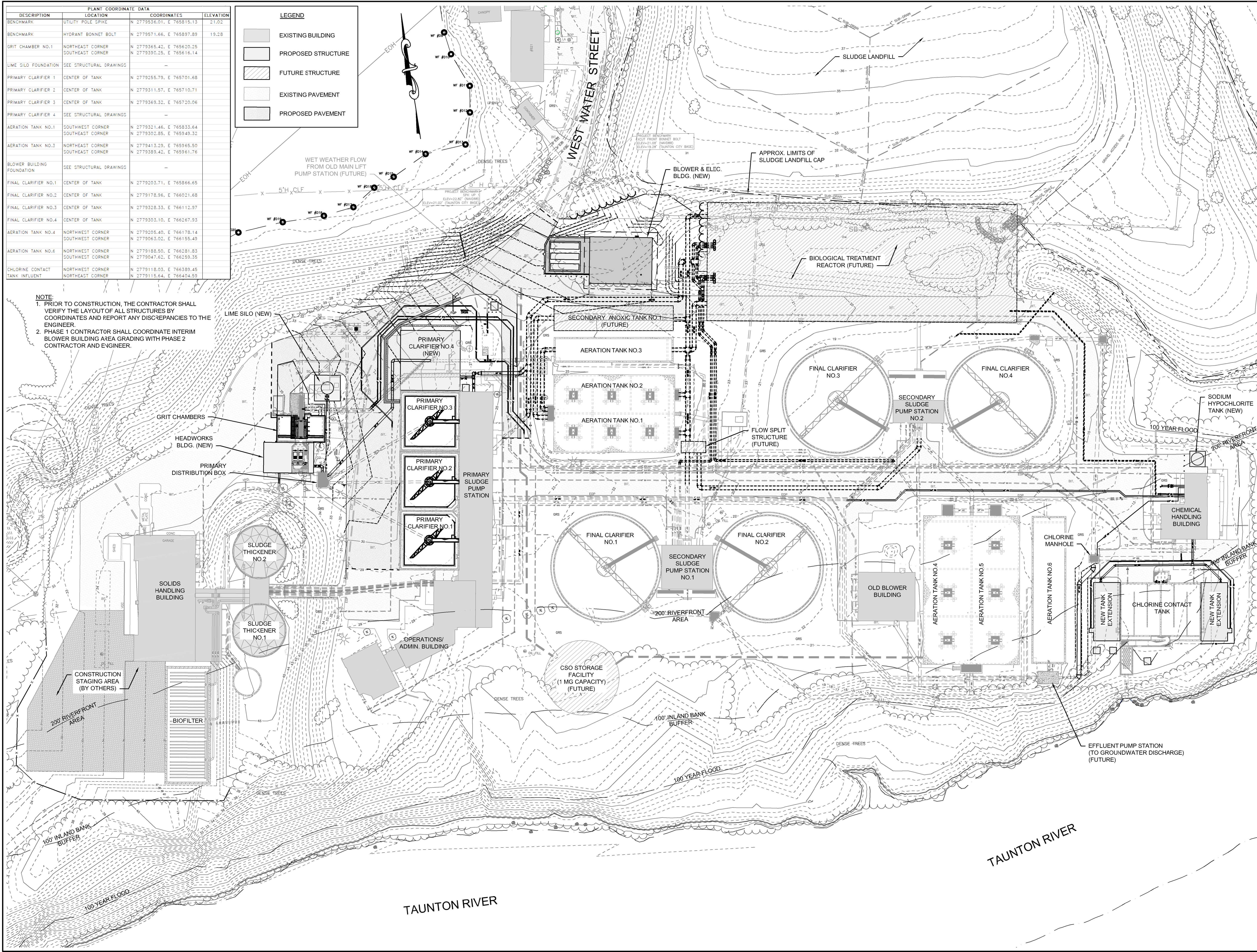
C-1.1

1:29/2021 1:33 PM J:\TAUNTON\WWT DESIGN\AUTOCAD\PIAN SET\PHASE 1\FINAL - CONSTRUCTION SET\WWT PROP SITE PLAN - BLOWER BUILDING RELOCATION.DWG (BETA STB BW) (STB)


DESCRIPTION	LOCATION	COORDINATES	ELEVATION
BENCHMARK	UTILITY POLE SPIKE	N 2779536.01, E 765815.13	21.02
BENCHMARK	HYDRANT BONNET BOLT	N 2779571.66, E 765897.89	19.28
GRIT CHAMBER NO.1	NORTHEAST CORNER	N 2779365.42, E 765620.25	
	SOUTHEAST CORNER	N 2779390.25, E 765616.14	
LIME SILO FOUNDATION	SEE STRUCTURAL DRAWINGS		
PRIMARY CLARIFIER 1	CENTER OF TANK	N 2779255.79, E 765701.68	
PRIMARY CLARIFIER 2	CENTER OF TANK	N 2779311.57, E 765710.71	
PRIMARY CLARIFIER 3	CENTER OF TANK	N 2779369.32, E 765720.06	
PRIMARY CLARIFIER 4	SEE STRUCTURAL DRAWINGS		
AERATION TANK NO.1	SOUTHWEST CORNER	N 2779321.46, E 765833.64	
	SOUTHEAST CORNER	N 2779302.85, E 765949.32	
AERATION TANK NO.3	NORTHEAST CORNER	N 2779413.29, E 765965.50	
	SOUTHWEST CORNER	N 2779389.42, E 765961.76	
BLOWER BUILDING FOUNDATION	SEE STRUCTURAL DRAWINGS		
FINAL CLARIFIER NO.1	CENTER OF TANK	N 2779203.71, E 765866.65	
FINAL CLARIFIER NO.2	CENTER OF TANK	N 2779178.96, E 766021.68	
FINAL CLARIFIER NO.3	CENTER OF TANK	N 2779328.33, E 766112.97	
FINAL CLARIFIER NO.4	CENTER OF TANK	N 2779303.10, E 766267.93	
AERATION TANK NO.4	NORTHWEST CORNER	N 2779205.40, E 766178.14	
	SOUTHWEST CORNER	N 2779063.02, E 766155.49	
AERATION TANK NO.6	NORTHWEST CORNER	N 2779188.50, E 766281.83	
	SOUTHWEST CORNER	N 2779047.62, E 766259.35	
CHLORINE CONTACT TANK INFLUENT	NORTHWEST CORNER	N 2779118.03, E 766389.45	
	NORTHEAST CORNER	N 2779115.64, E 766404.59	

LEGEND	
	EXISTING BUILDING
	PROPOSED STRUCTURE
	FUTURE STRUCTURE
	EXISTING PAVEMENT
	PROPOSED PAVEMENT

NOTE:
 1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LAYOUT OF ALL STRUCTURES BY COORDINATES AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
 2. PHASE 1 CONTRACTOR SHALL COORDINATE INTERIM BLOWER BUILDING AREA GRADING WITH PHASE 2 CONTRACTOR AND ENGINEER.




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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE


WWTF Proposed Site Plan

AS RE-ISSUED PER RFI #15

NO.	REVISIONS	DATE
1	RFI #15 BLOWER BUILDING RELOCATION	11/2021

DRAWN BY: BM
 DESIGNED BY: BM
 CHECKED BY: SR
 ISSUE DATE: 7/2/2021
 BETA JOB NO.: 6050

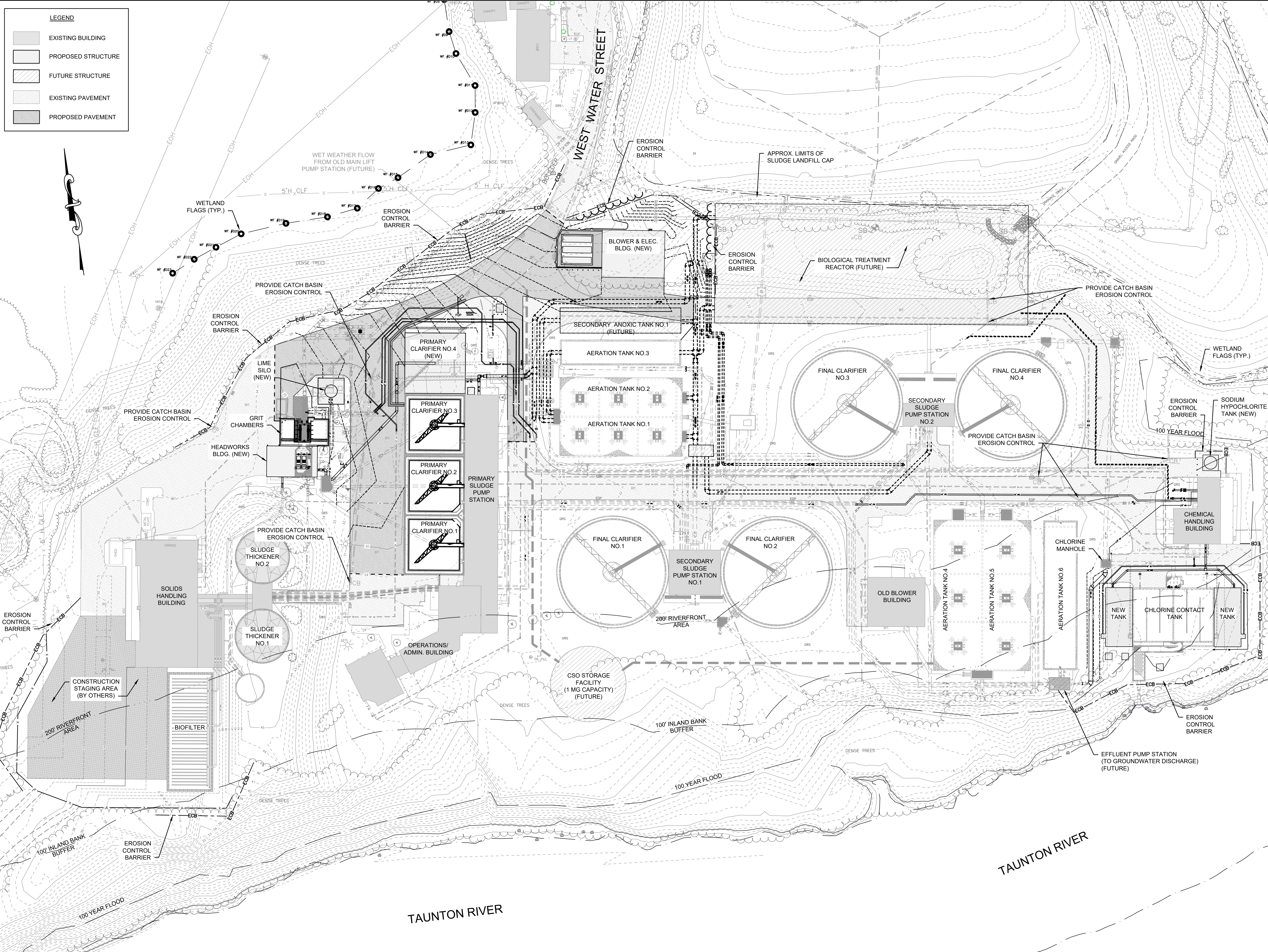
SCALE



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SHEET NO.

C-1.4



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PROJECT
Taunton Wastewater Treatment Facility Improvements Phase 1
 Taunton, MA

TITLE
Erosion Control Plan

NO.	REVISIONS	DATE

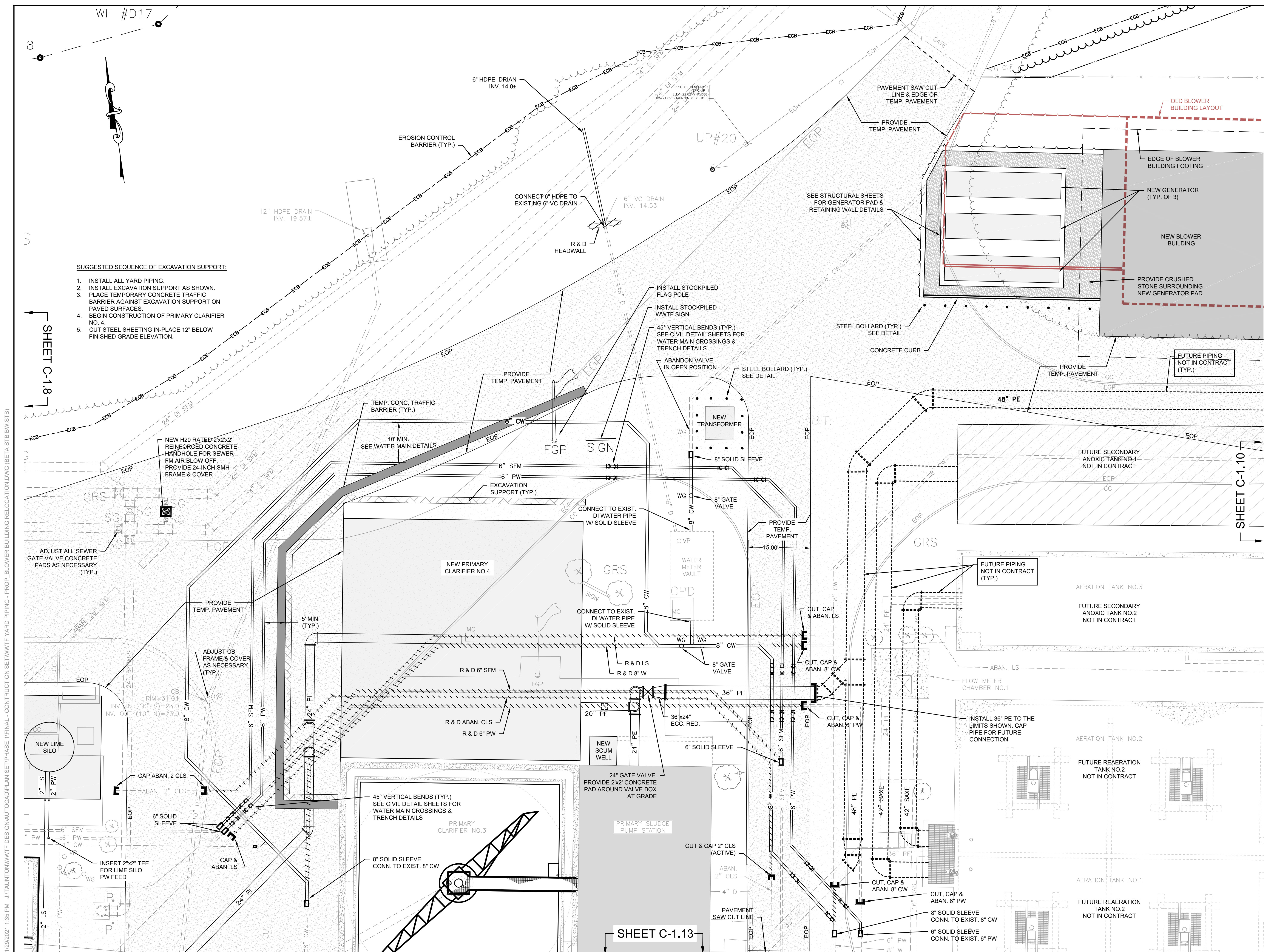
DRAWN BY: BM
 DESIGNED BY: BM
 CHECKED BY: SR
 ISSUE DATE: 7/2/2021
 BETA JOB NO.: 6050

SCALE

 SCALE IN FEET: 1"=40'
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SHEET NO.
C-15


9/15/2021 4:29 PM J:\TAUNTON\WTF DESIGN\AUTOCAD\PLAN SET\PHASE 1\WTF PROP SITE PLAN - ALT 1.DWG (BETA STB BW STB)



- SUGGESTED SEQUENCE OF EXCAVATION SUPPORT:**
1. INSTALL ALL YARD PIPING.
 2. INSTALL EXCAVATION SUPPORT AS SHOWN.
 3. PLACE TEMPORARY CONCRETE TRAFFIC BARRIER AGAINST EXCAVATION SUPPORT ON PAVED SURFACES.
 4. BEGIN CONSTRUCTION OF PRIMARY CLARIFIER NO. 4.
 5. CUT STEEL SHEETING IN-PLACE 12" BELOW FINISHED GRADE ELEVATION.

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PROJECT
Taunton Wastewater Treatment Facility Improvements Phase 1
 Taunton, MA

TITLE
Site & Yard Piping Plan II
 AS RE-ISSUED PER RFI #15

NO.	REVISIONS	DATE
1	RFI #15 BLOWER BUILDING RELOCATION	11/2021

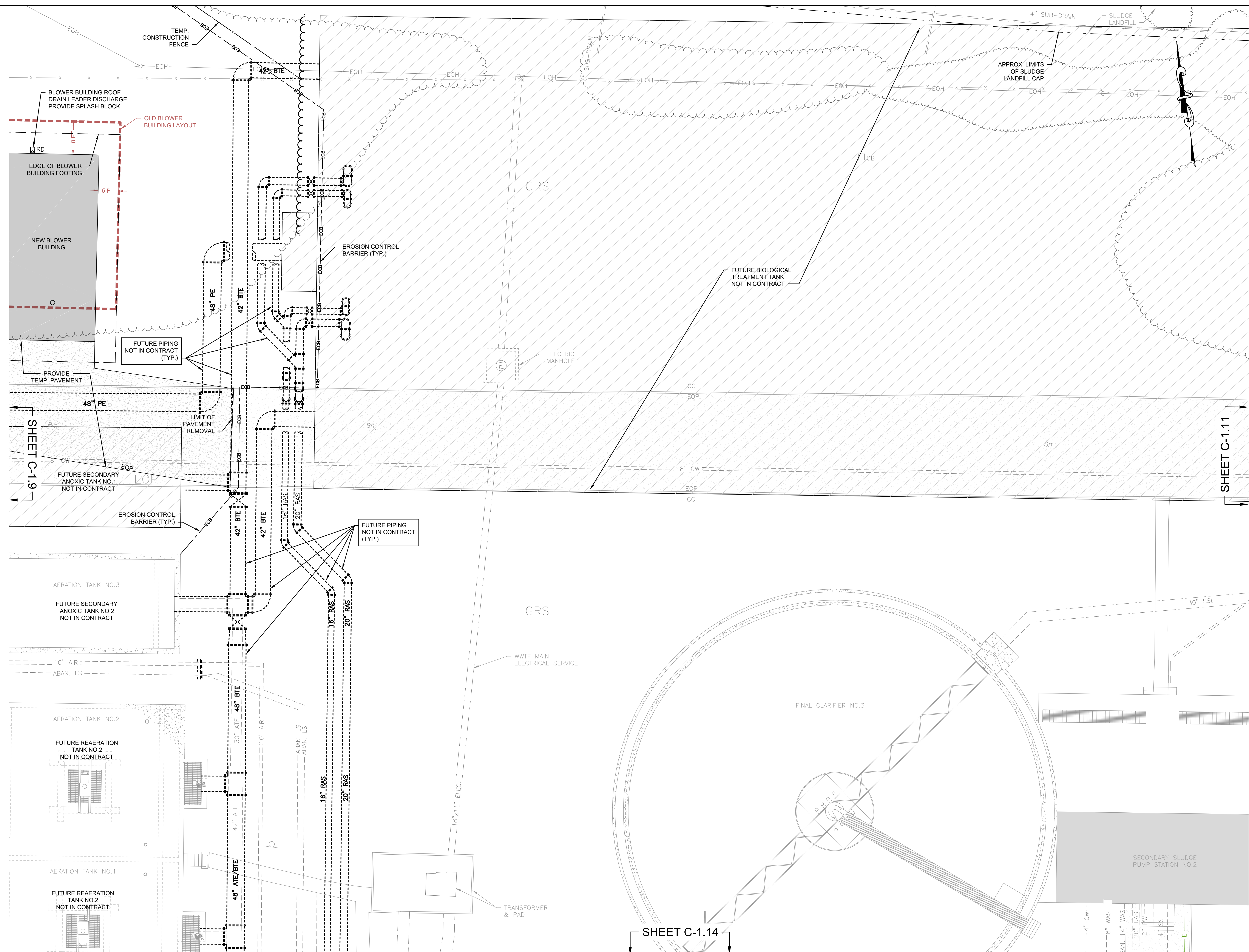
DRAWN BY: BM
 DESIGNED BY: BM
 CHECKED BY: SR
 ISSUE DATE: 7/2/2021
 BETA JOB NO.: 6050

SCALE

 SCALE IN FEET: 1"=10'
 UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION


SHEET NO.
C-1.9

11/29/2021 1:35 PM J:\TAUNTON\WTF DESIGN\AUTOCAD\PLAN SET\PHASE 1\FINAL - CONSTRUCTION SET\WTF YARD PIPING - PROP. BLOWER BUILDING RELOCATION.DWG (BETA STB BW STB)

11/29/2021 1:35 PM J:\TAUNTON\WTF DESIGN\AUTOCAD\PLAN SET\PHASE 1\FINAL - CONSTRUCTION SET\WTF YARD PIPING - PROP. BLOWER BUILDING RELOCATION.DWG (BETA STB BW STB)



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PROJECT
Taunton Wastewater Treatment Facility Improvements Phase 1
 Taunton, MA

TITLE
Site & Yard Piping Plan III
 AS RE-ISSUED PER RFI #15

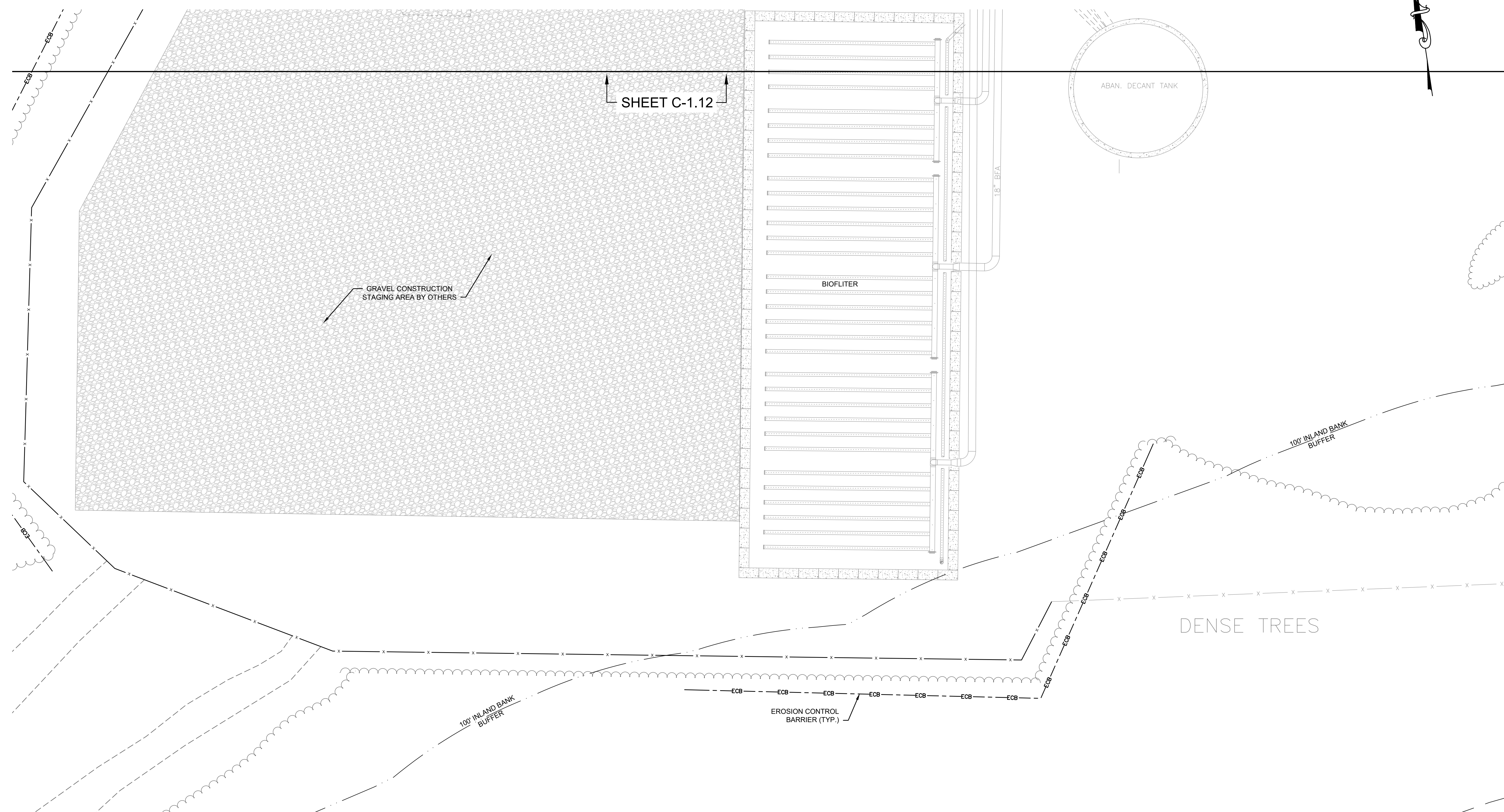
NO.	REVISIONS	DATE
1	RFI #15 BLOWER BUILDING RELOCATION	11/2021

DRAWN BY: BM
 DESIGNED BY: BM
 CHECKED BY: SR
 ISSUE DATE: 7/2/2021
 BETA JOB NO.: 6050

SCALE

 SCALE IN FEET: 1"=10'
 UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.
C-1.10

J:\TAUNTON\WWTF DESIGN\AUTOCAD\PLAN SET\PHASE 1\WWTF YARD PIPING - PROP.DWG (BETA STD BYV.CTB)



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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Site & Yard Piping Plan IX

NO.	REVISIONS	DATE

DRAWN BY: BM

DESIGNED BY: BM

CHECKED BY: SR

ISSUE DATE: 7/2/2021

BETA JOB NO.: 6050

SCALE

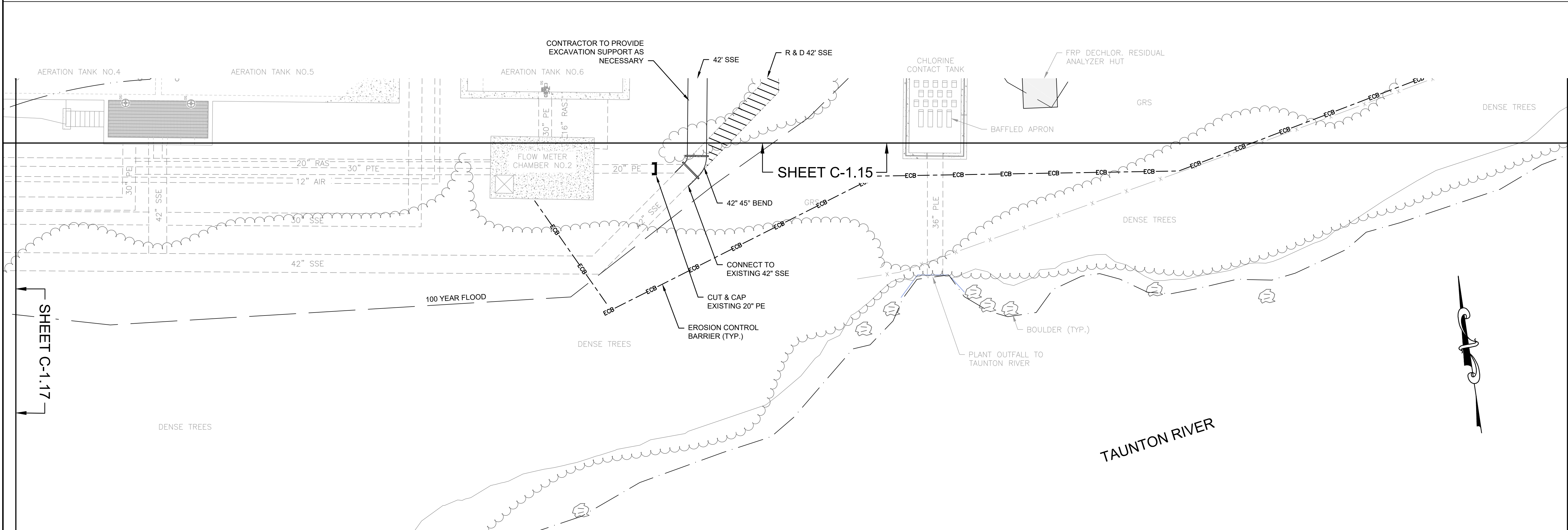
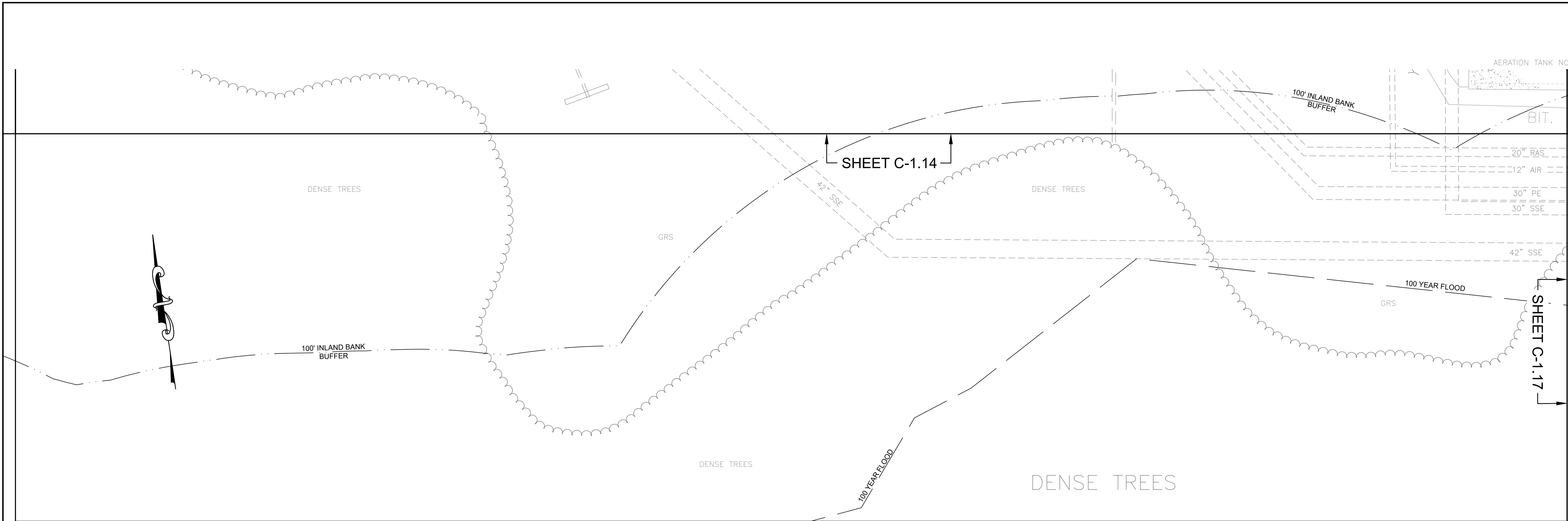


SCALE IN FEET: 1"=10'


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PROJECT
Taunton Wastewater Treatment Facility Improvements Phase 1
 Taunton, MA

TITLE
Site & Yard Piping Plan X

NO.	REVISIONS	DATE

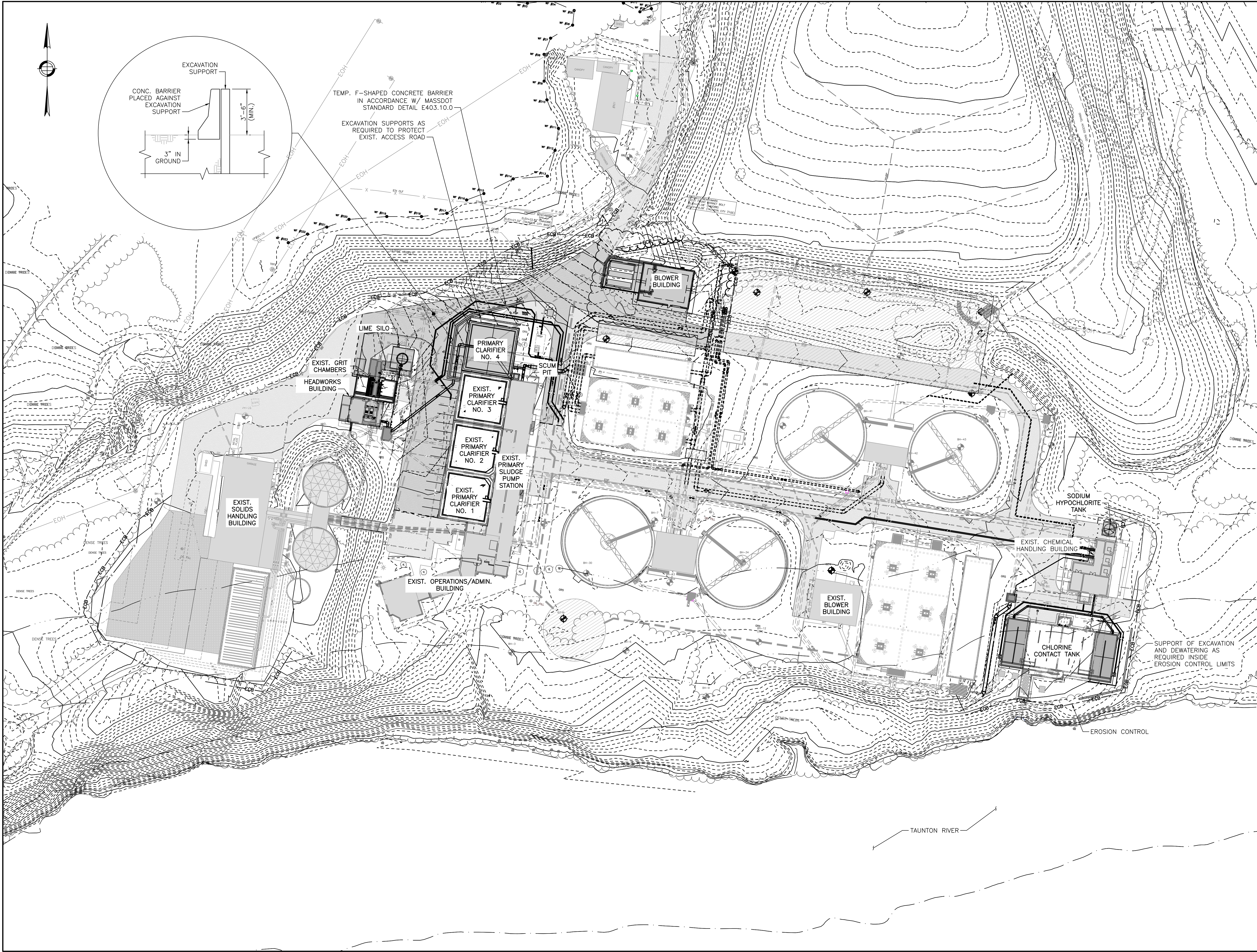
NO. REVISIONS DATE
 DRAWN BY: BM
 DESIGNED BY: BM
 CHECKED BY: SR
 ISSUE DATE: 7/2/2021
 BETA JOB NO.: 6050

SCALE


SHEET NO.
C-1.17

7/2/2021 10:18 AM J:\TAUNTON\WWTF DESIGN\AUTOCAD\PLAN SET\PHASE 1\WWTF YARD PIPING - PROP.DWG (BETA STD BW.CTB)

12/7/2021 5:13 PM N:\60605\6060 - TAUNTON WWT FIDRAWING FILES\PLANSET\PHASE 1_REV3 (PER RFI #1516060_SG5 - P1_REV3.DWG (BETA STB.BV.STB))



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Taunton Wastewater Treatment Facility Improvements Phase 1
TAUNTON, MA

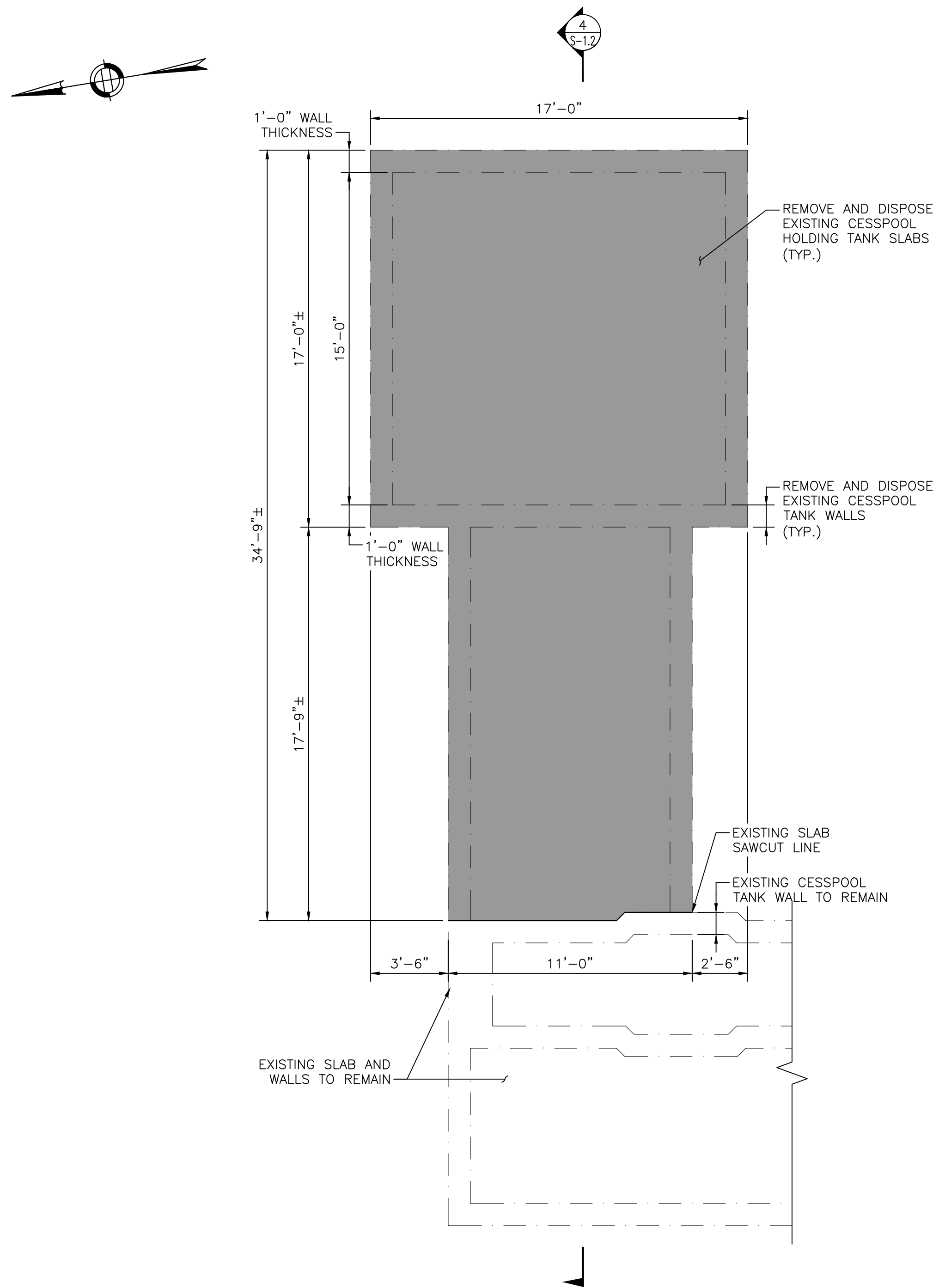
TITLE
Phase 1 Site Plan
AS RE-ISSUED PER RFI #15

1	BLOWER BUILDING RELOCATION	12/21

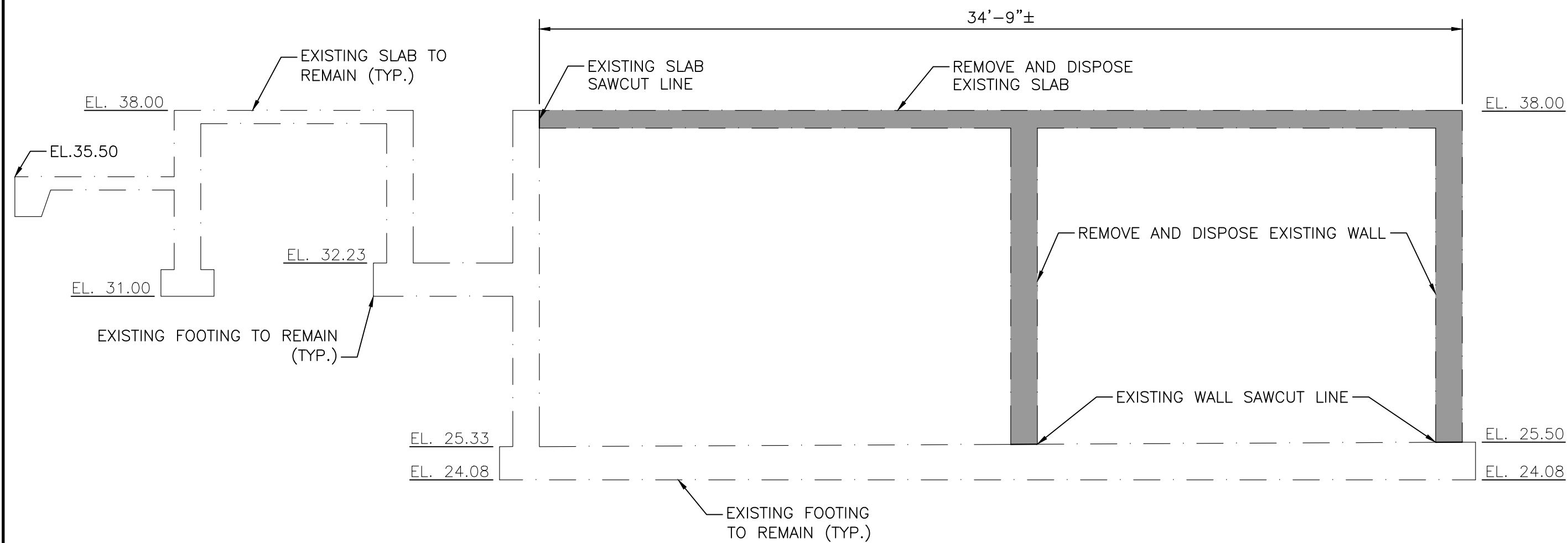
NO.	REVISIONS	DATE

SCALE
AS SHOWN
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO. **SG-5**



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



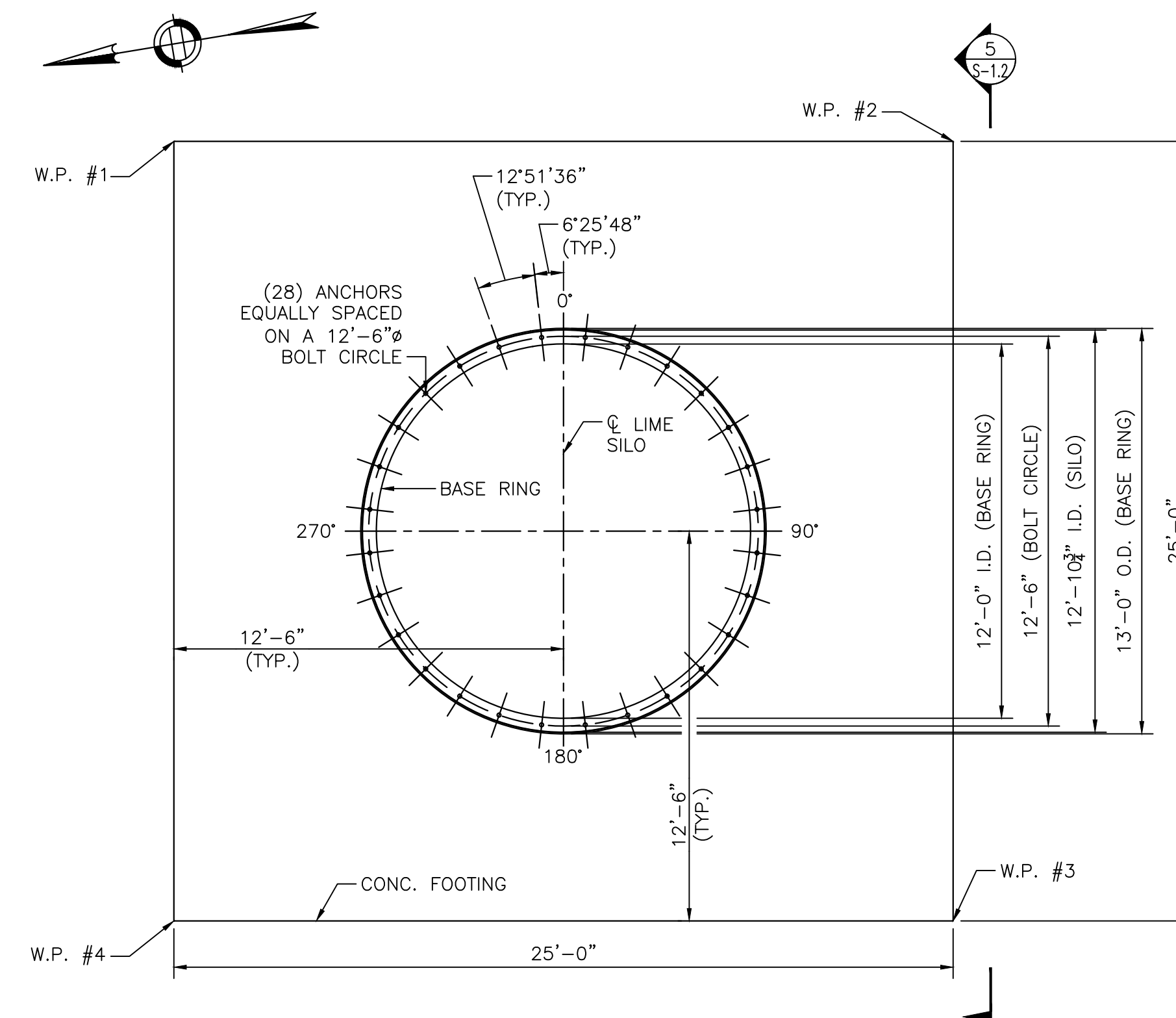
SECTION 4
SCALE: 1/4" = 1'-0"

TABLE 1 - BASE REACTIONS	
DEAD LOAD:	38,000 LBS
LIVE LOAD:	314,000 LBS
WIND LOADING:	
OVERTURNING:	1,798,000 FT-LBS
SHEAR:	58,000 LBS
SEISMIC LOADING:	
OVERTURNING:	1,160,000 FT-LBS
SHEAR:	39,000 LBS
ANCHOR BOLT:	
NUMBER OF BOLTS:	28 EA
LOAD PER BOLT:	20.2 KIPS

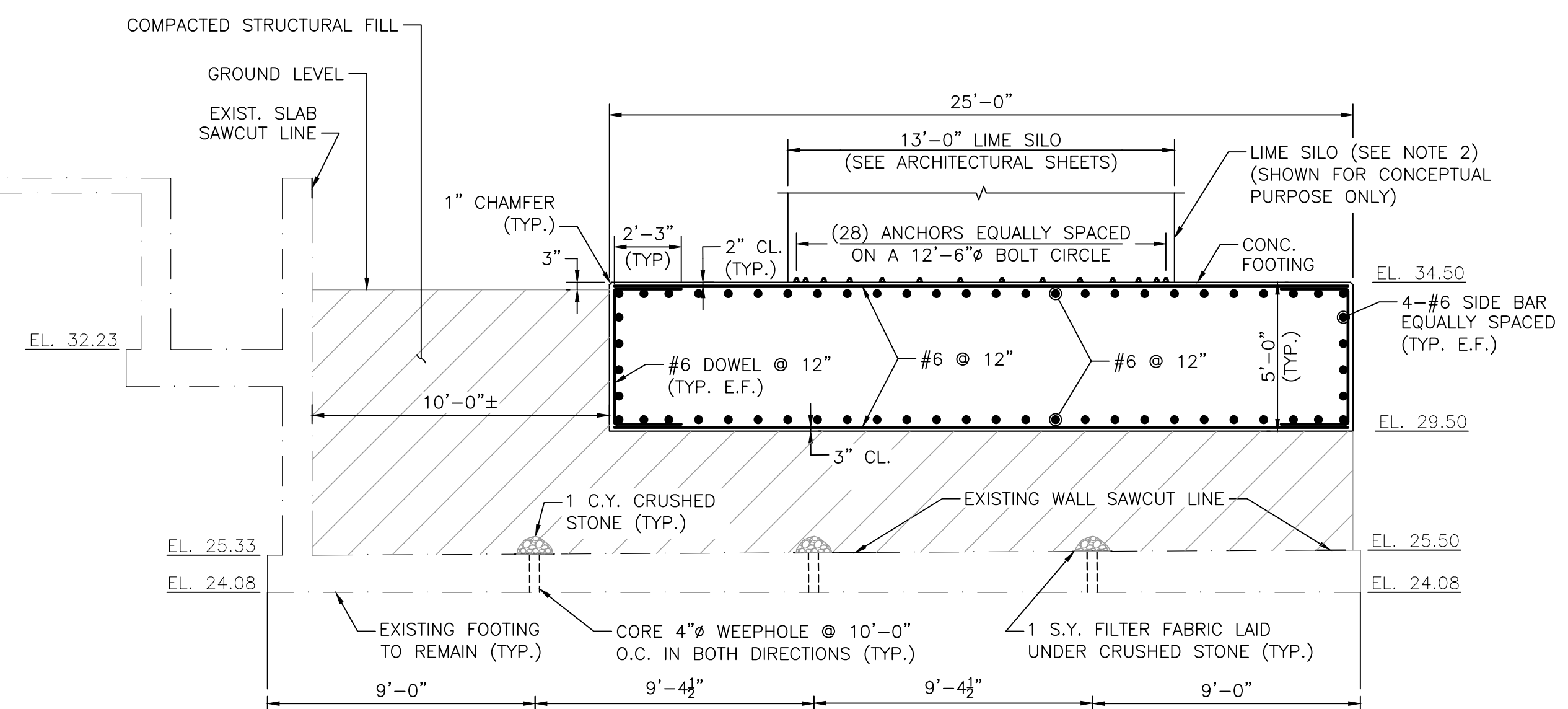
NOTES:

- FOOTING SHOWN IS BASED ON THE DESIGN VALUES SHOWN IN TABLE 1 AND MAY NOT REPRESENT ACTUAL LIME SILO.
- LIME SILO TO BE PROVIDED BY THE CONTRACTOR. IF SILO LOADING IS GREATER THAN THE VALUES PROVIDED IN TABLE 1, THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AN ALTERNATE FOOTING DESIGN PERFORMED BY A MASSACHUSETTS REGISTERED STRUCTURAL ENGINEER.
- DENOTES AREA TO BE DEMOLISHED

	NORTHING	EASTING
W.P. #1	33353122.44	9187696.25
W.P. #2	33352826.47	9187647.22
W.P. #3	33352875.51	9187351.25
W.P. #4	33353171.47	9187400.29



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



SECTION 5
SCALE: 1/4" = 1'-0"

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Taunton Wastewater Treatment Facility Improvements Phase 1

TAUNTON, MA

TITLE

Lime Silo

NO. REVISIONS DATE

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DESIGNED BY:	BN
CHECKED BY:	TMW
ISSUE DATE:	7/2/2021
BETA JOB NO.:	6050

SCALE

AS SHOWN

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SHEET NO.

S-1.2

Taunton Wastewater Treatment Facility Improvements Phase 1

Primary Clarifier Plans and Elevations

AS RE-ISSUED PER ADDENDUM

1	CONCRETE PIPE ENCASUREMENT	07/21
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NO.	REVISIONS	DATE

DRAWN BY:	BN
DESIGNED BY:	BN
CHECKED BY:	TMW
ISSUE DATE:	7/2/2021
BETA JOB NO.:	6050

SCALE

AS SHOWN

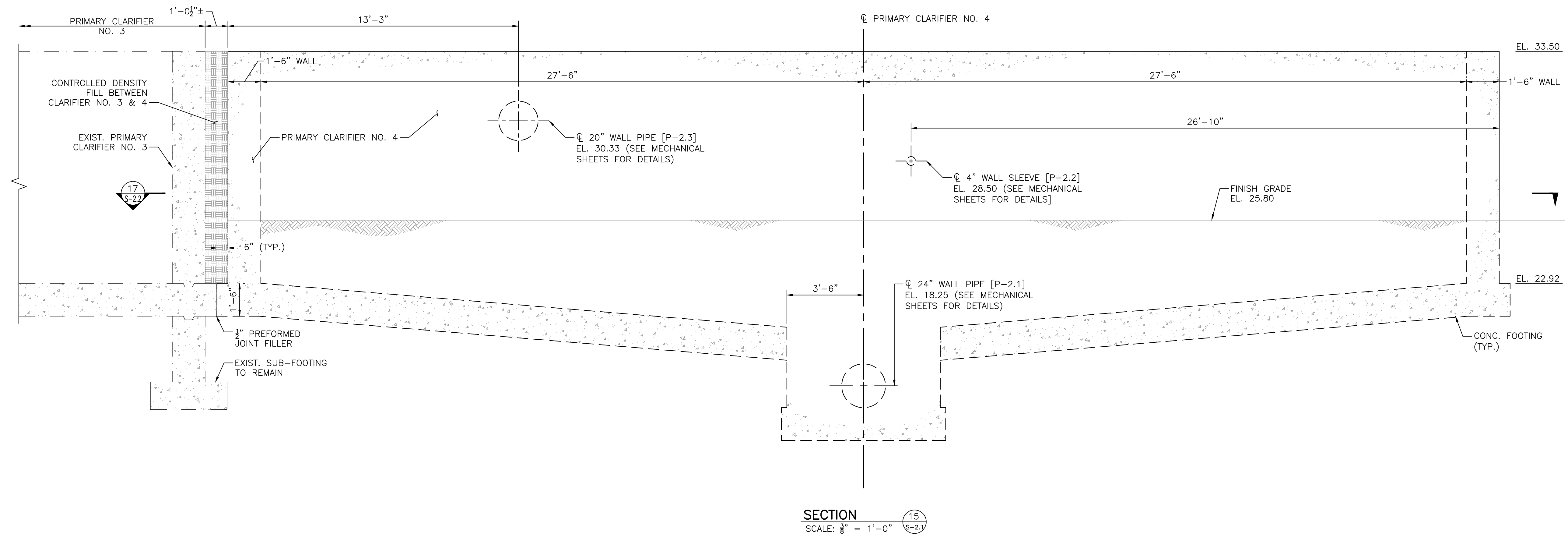
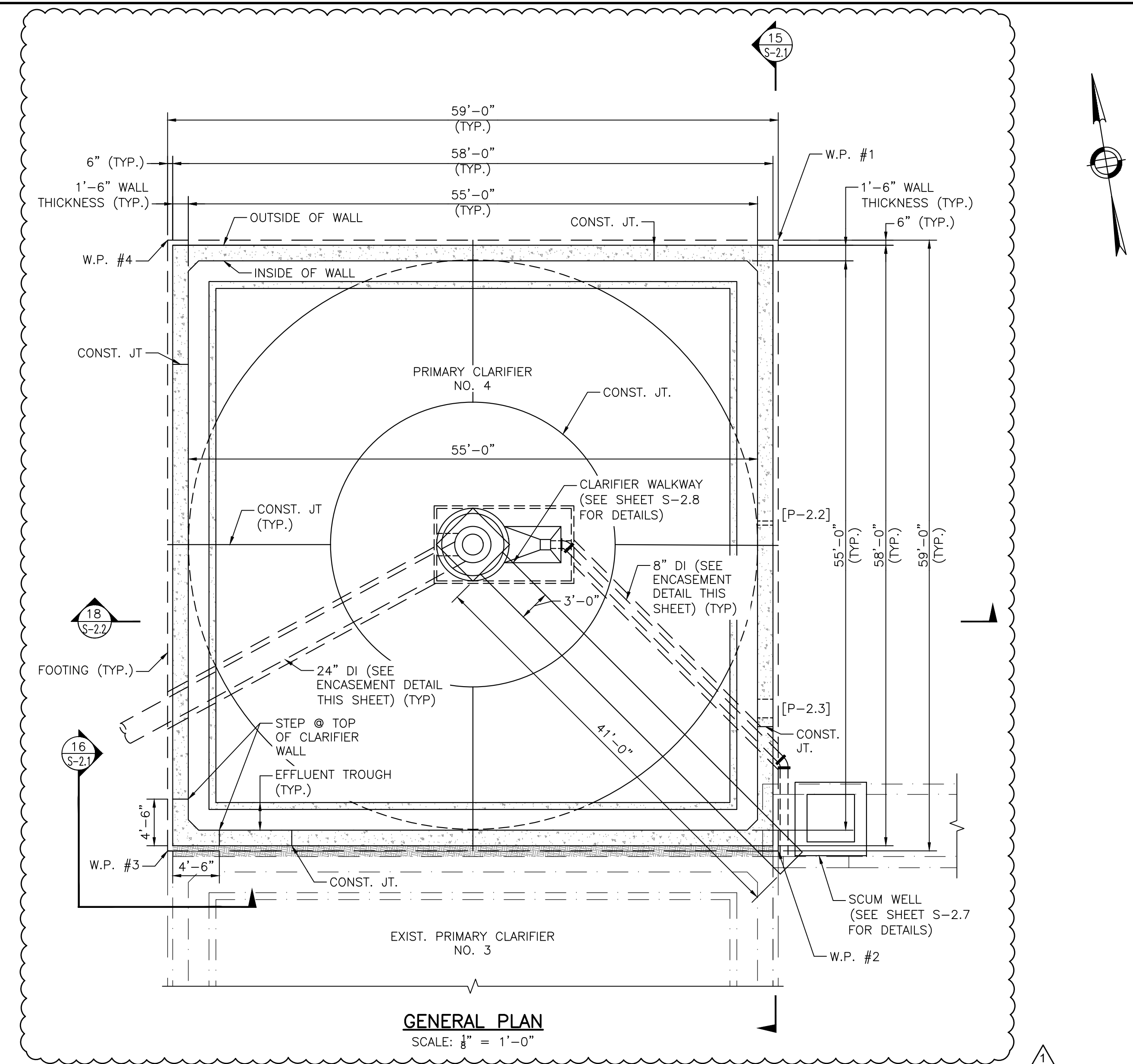
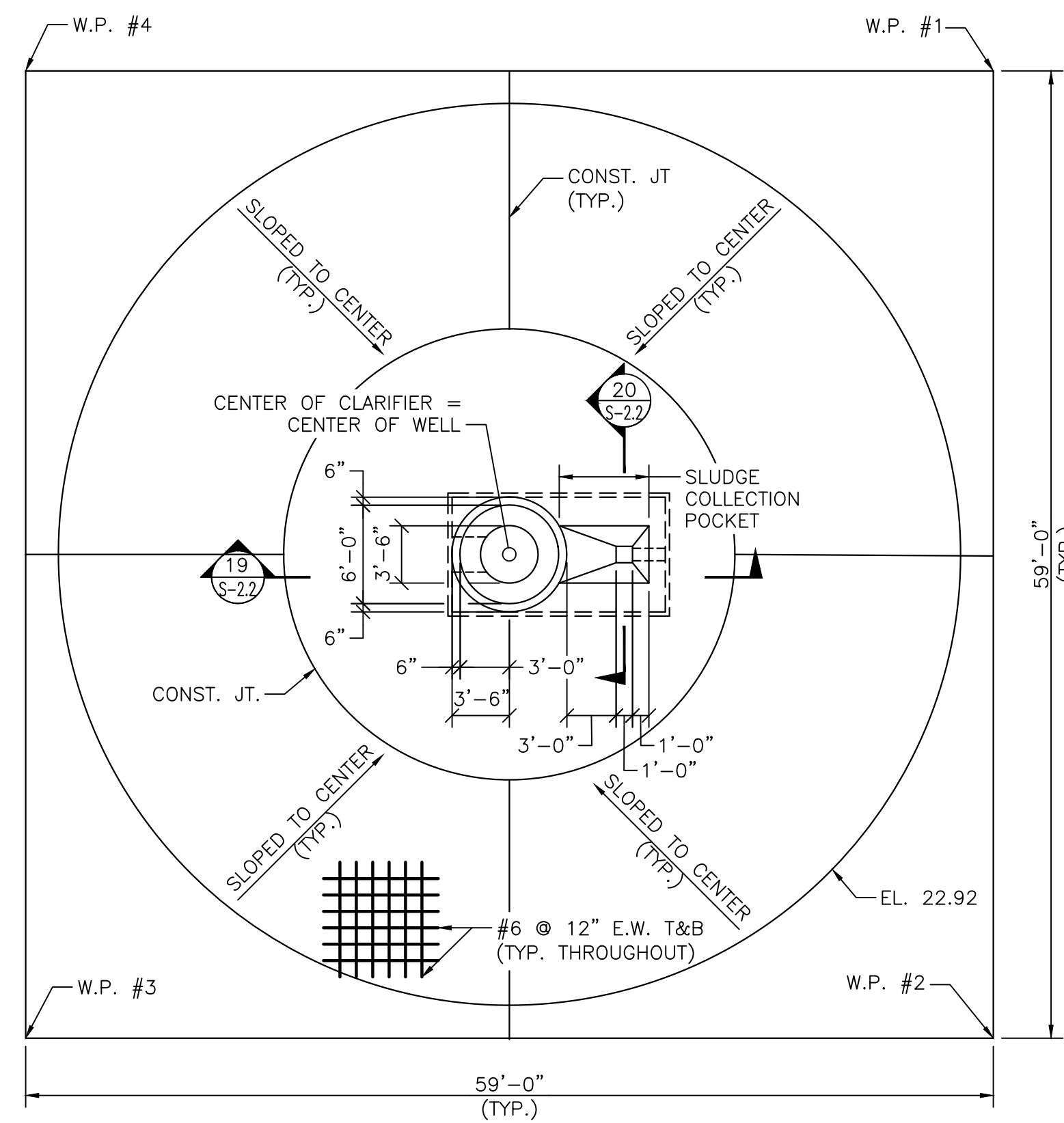
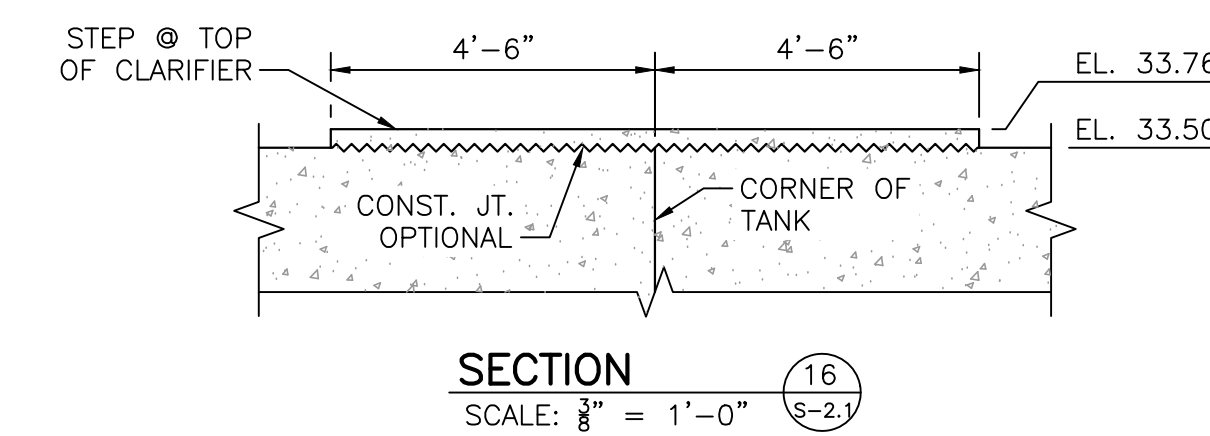
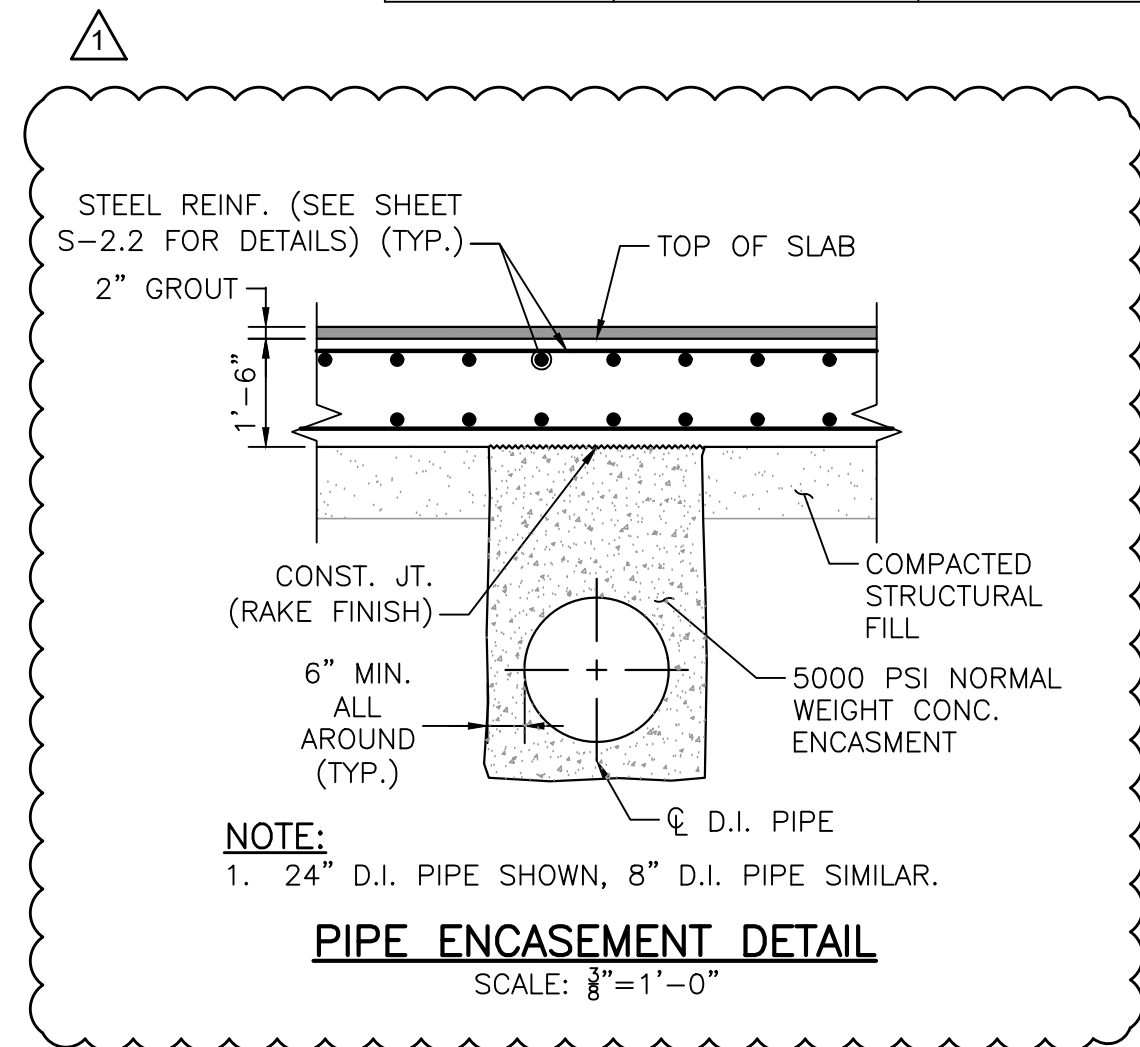
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SHEET NO.	S-2.1
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NOTES:

- SEE MECHANICAL SHEETS FOR EQUIPMENT DETAILS

	NORTHING	EASTING
W.P. #1	33353424.08	9189159.93
W.P. #2	33352725.18	9189046.79
W.P. #3	33352838.31	9188347.89
W.P. #4	33353537.22	9188461.03



7/22/2021 4:00 PM N:\6050\6050-TAUNTON WWT\DRAWING FILES\PLANS\PHASE 1-P1_REV1.DWG (BETA STB BW STB)

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

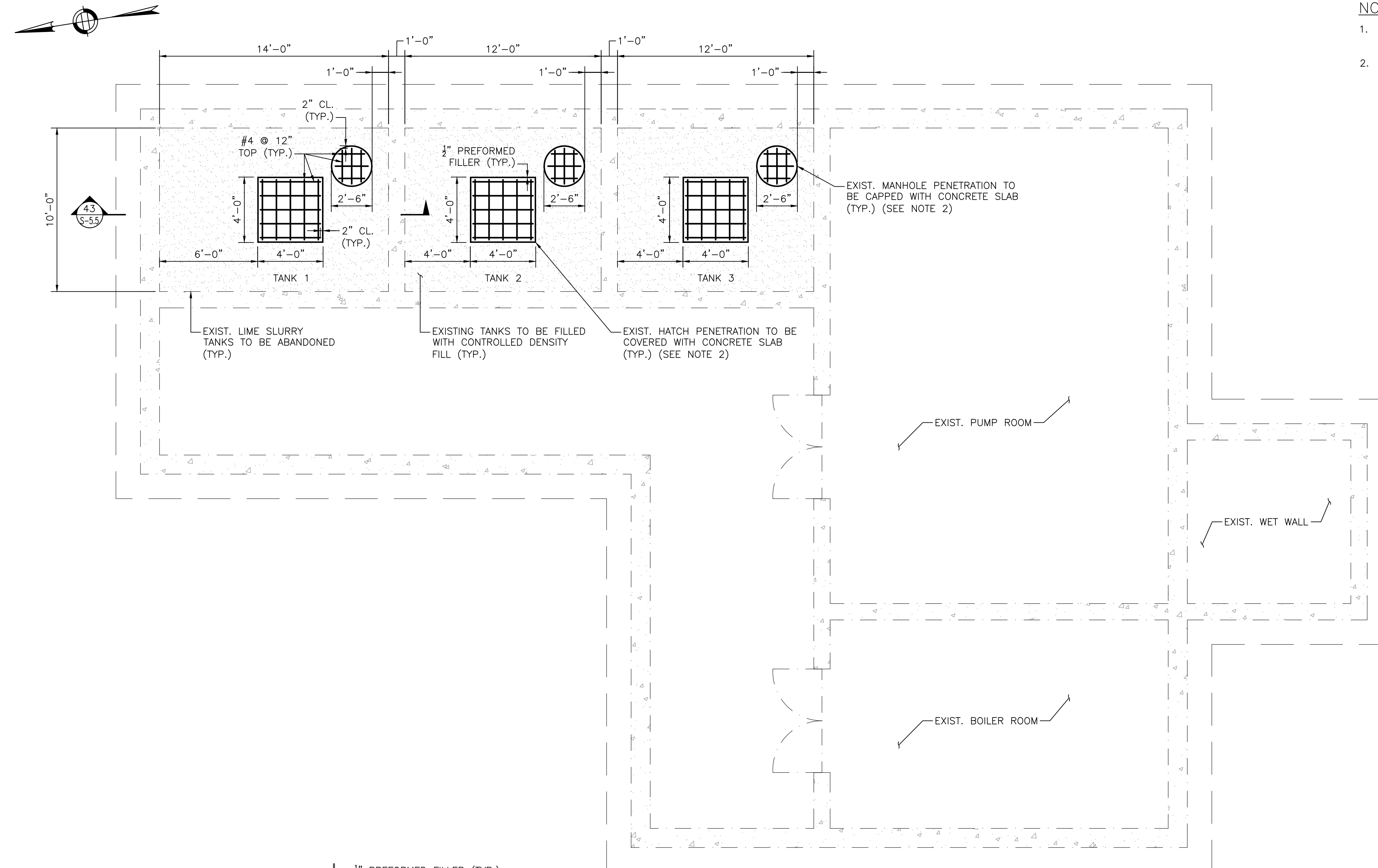
TAUNTON, MA

TITLE

Chemical Handling Building

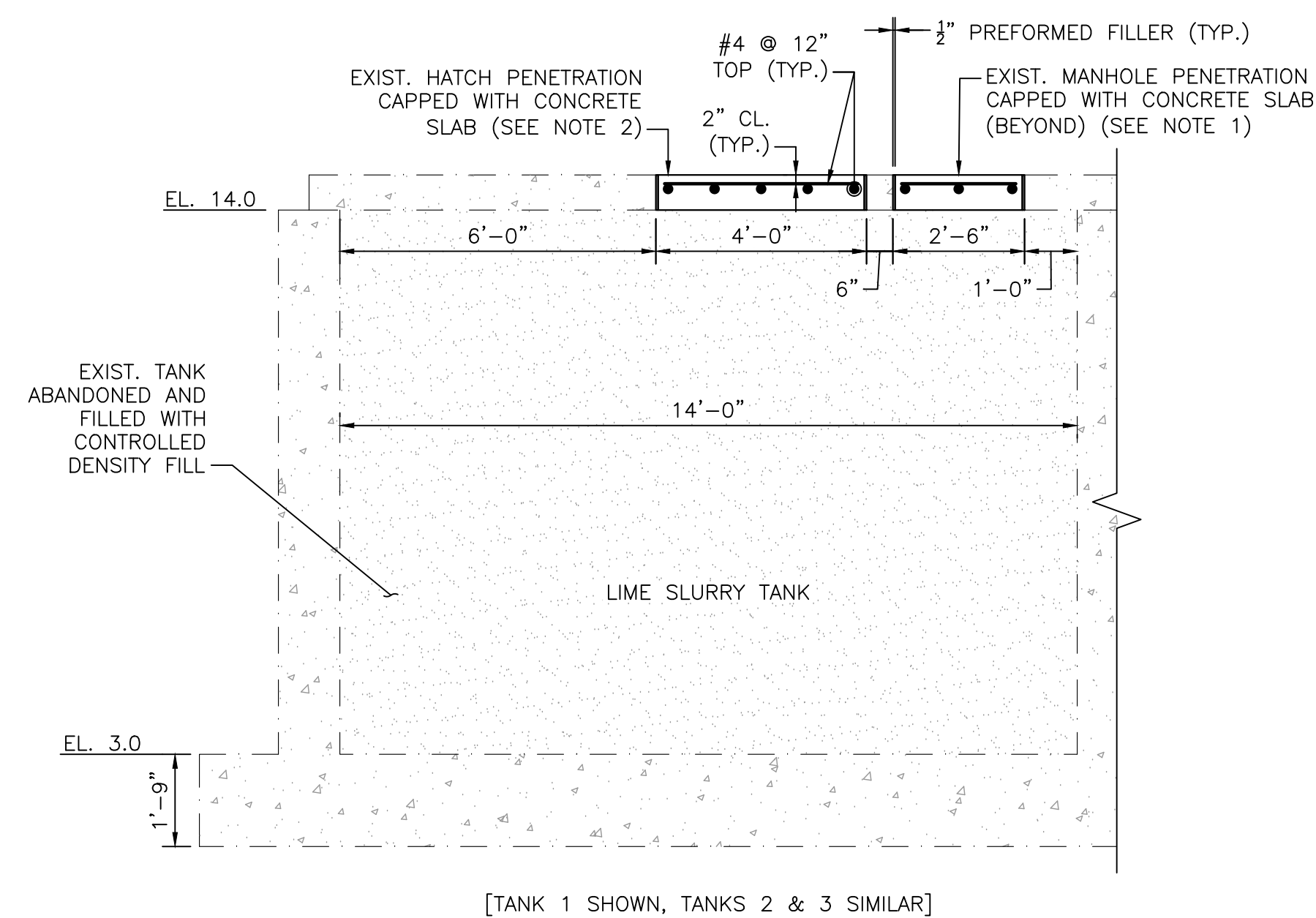
NOTES:

- 1. SEE SPECIFICATIONS FOR CONTROL DENSITY FILL MATERIAL REQUIREMENTS.
- 2. 6" TOP SLAB TO BE 5000 PSI CONCRETE AND SHALL RECEIVE A TOP SURFACE FINISH TO MATCH THE ADJACENT FLOOR SLAB.



CHEMICAL BUILDING PLAN

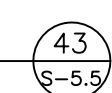
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[TANK 1 SHOWN, TANKS 2 & 3 SIMILAR]

SECTION

SCALE: 3/8" = 1'-0"



7/2/2021 11:56 AM N:\6060516060 - TAUNTON WWT FIDRAWING FILES\PLANSET\PHASE 1\6060_SRS.5 - P1.DWG (BETA-STB BW.STB)

NO. REVISIONS DATE

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DESIGNED BY: BN

CHECKED BY: TMW

ISSUE DATE: 7/2/2021

BETA JOB NO.: 6050

SCALE

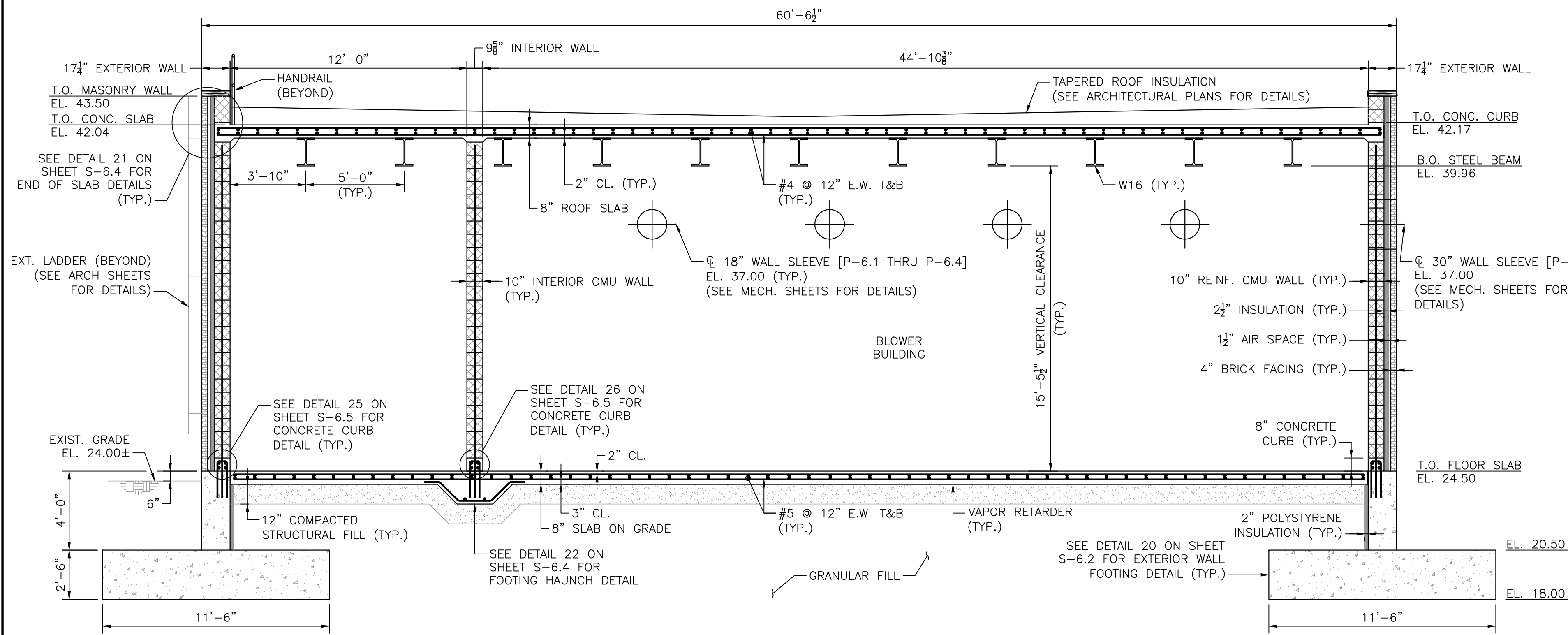
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UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

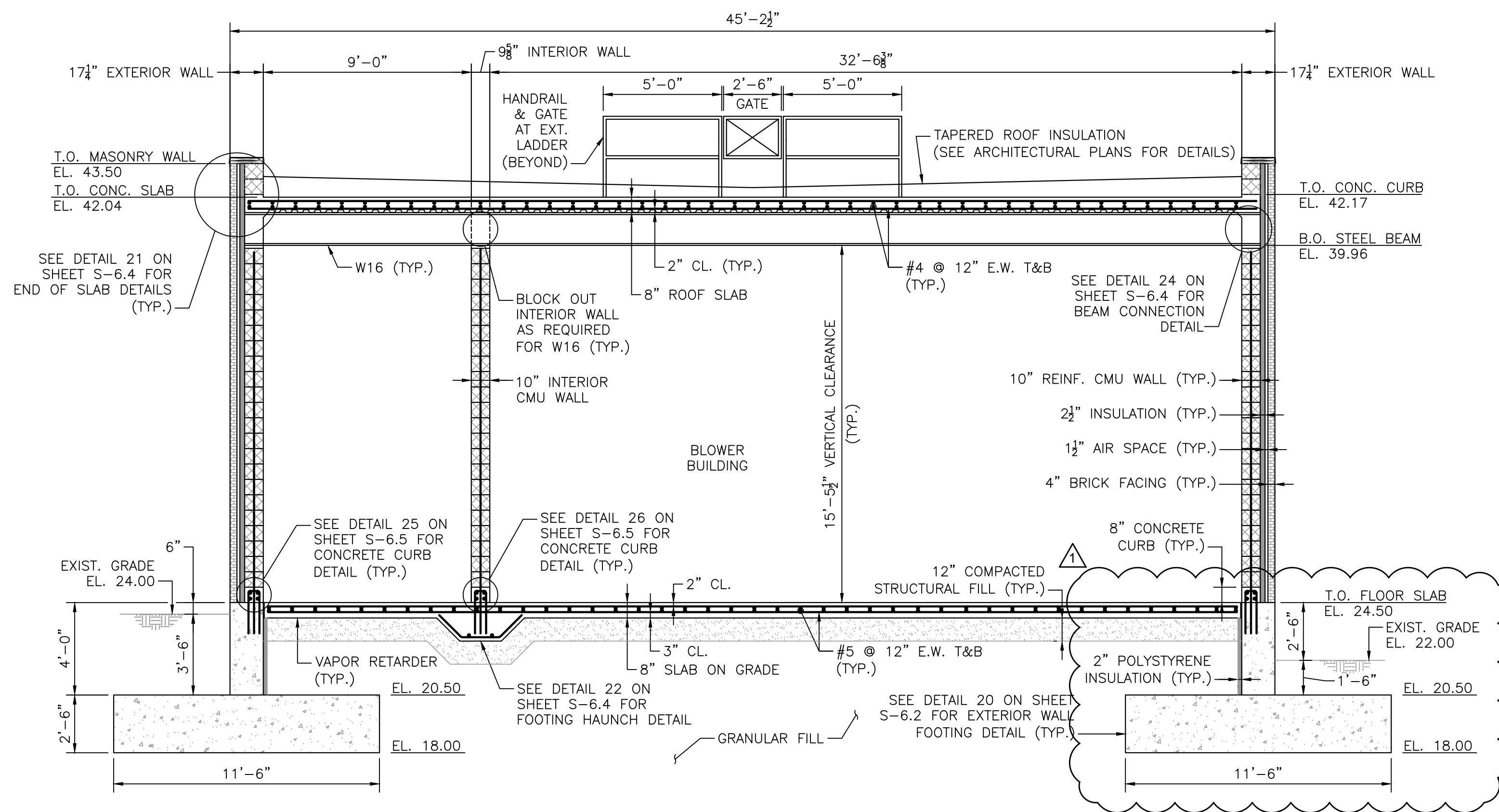
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S-5.5

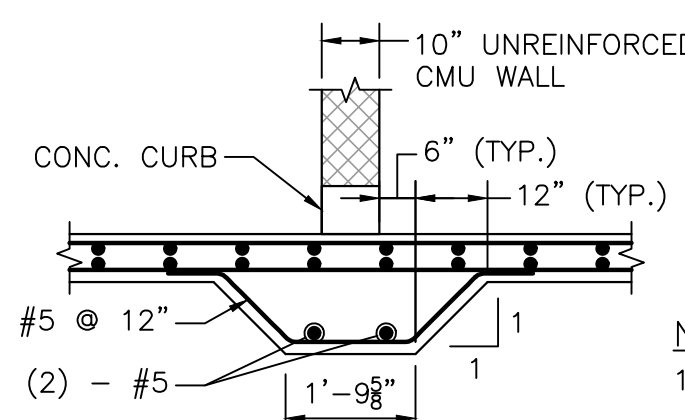
12/7/2021 4:59 PM N:\0005\6050 - TAUNTON WWT FLOWING FILES\PLANS\PHASE 1_REV\3 (PER RFI #15)\6050_S-6.4 - P1_REV\3.DWG (BETA STB BW STB)



SECTION 44
SCALE: 1/4" = 1'-0" (S-6.1)

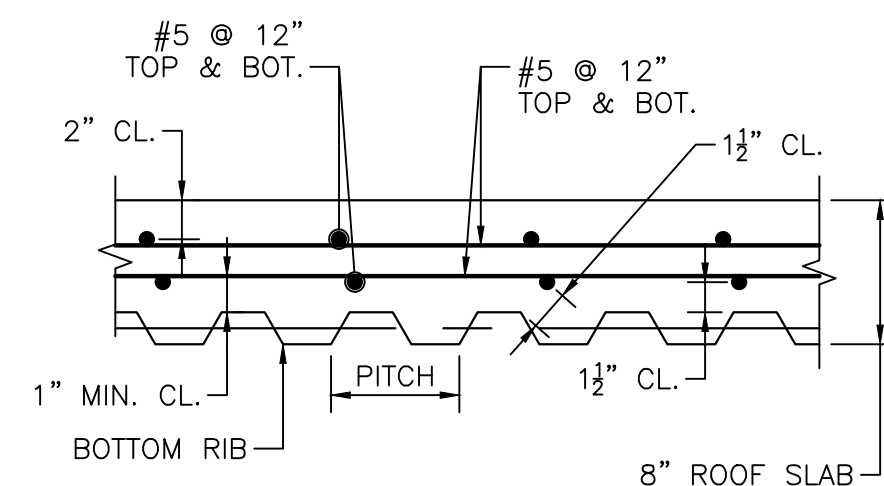


SECTION 45
SCALE: 1/4" = 1'-0" (S-6.1)

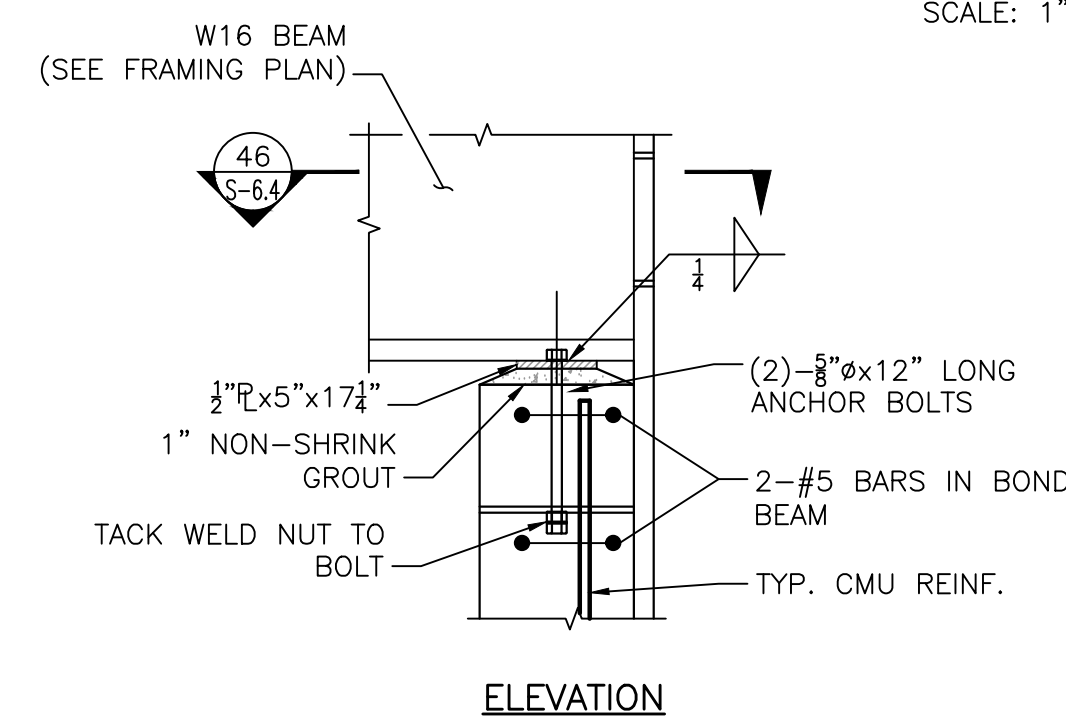


DETAIL 22
SCALE: 3/8" = 1'-0" (S-6.4)

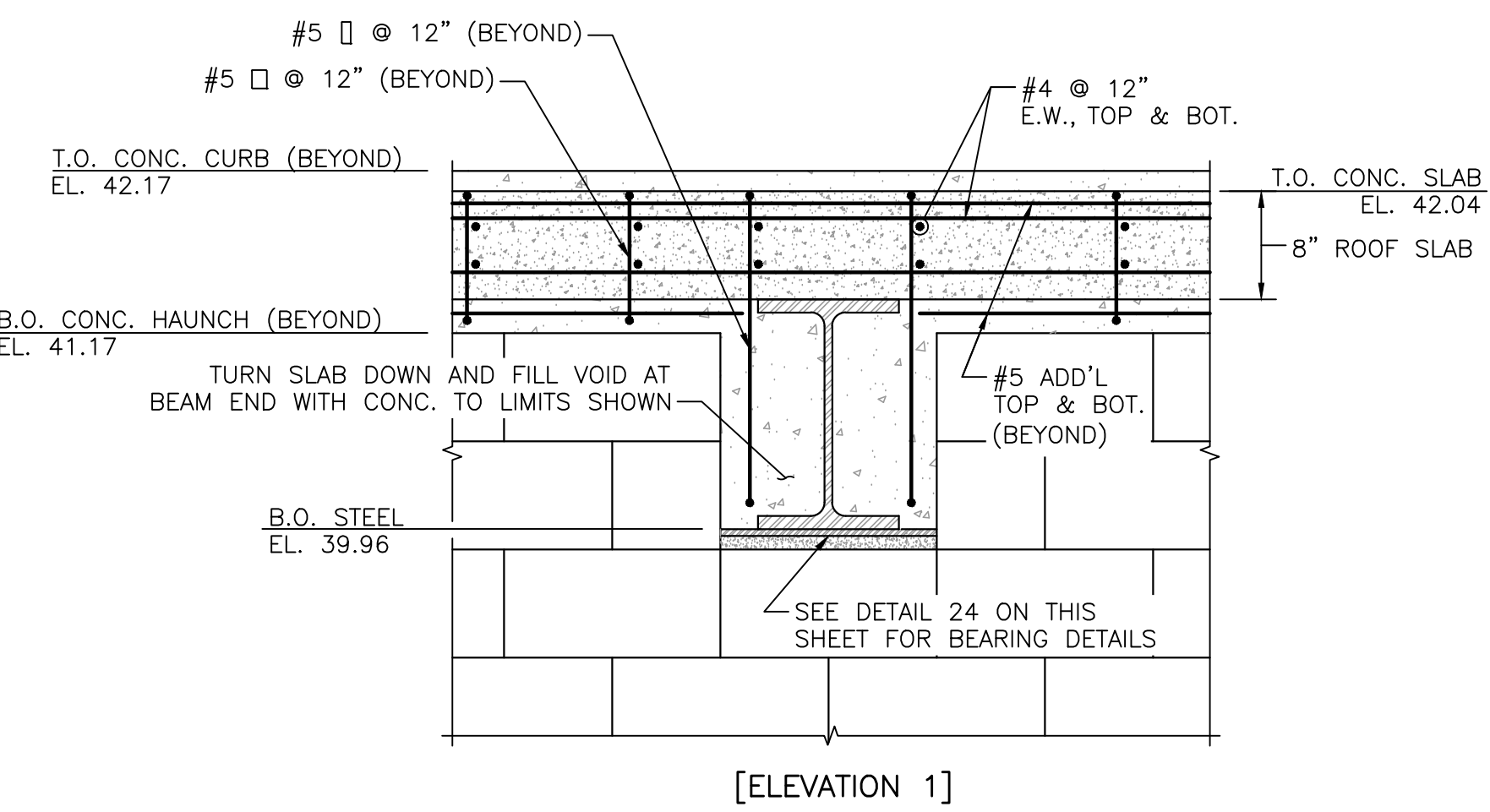
NOTE:
1. CURB REINFORCING NOT SHOWN FOR CLARITY



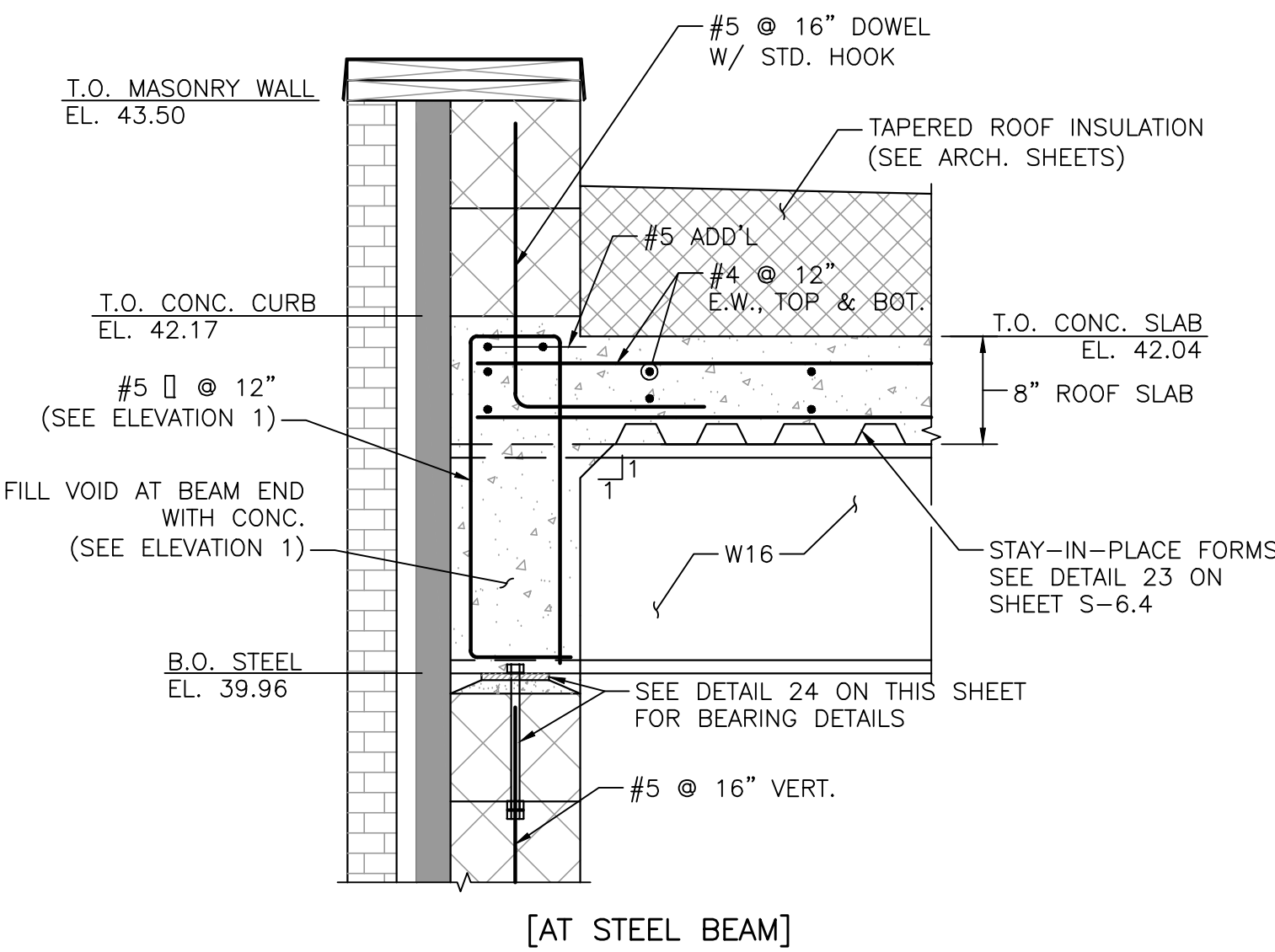
DETAIL 23
SCALE: 1" = 1'-0" (S-6.4)



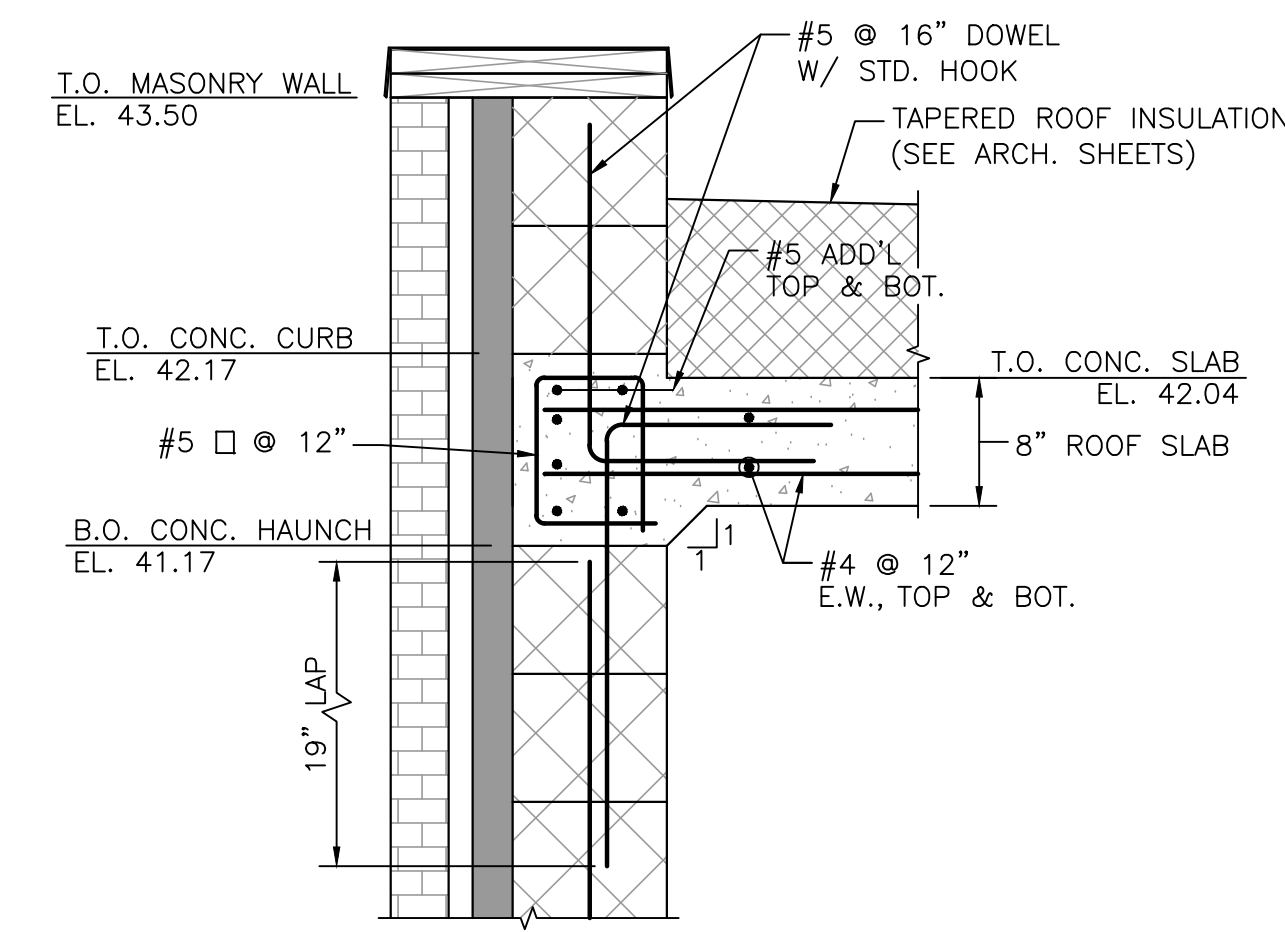
DETAIL 24
SCALE: 1" = 1'-0" (S-6.4)



[ELEVATION 1]

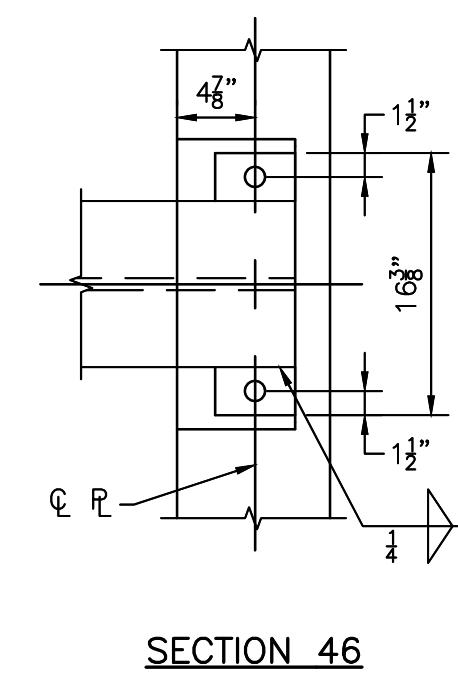


[AT STEEL BEAM]



[BETWEEN BEAMS]

DETAIL 21
SCALE: 1" = 1'-0" (S-6.4)

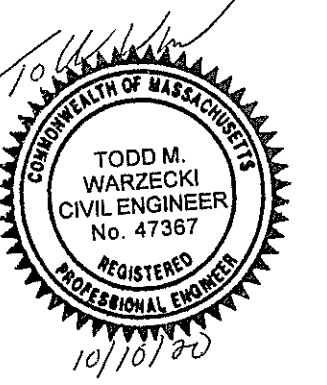


SECTION 46

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SUBCONSULTANT

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

TAUNTON, MA

TITLE

Blower Building Sections and Details

AS RE-ISSUED PER RFI #15

1 BLOWER BUILDING RELOCATION 12/21

NO. REVISIONS DATE

DRAWN BY: BN

DESIGNED BY: BN

CHECKED BY: TMW

ISSUE DATE: 7/2/2021

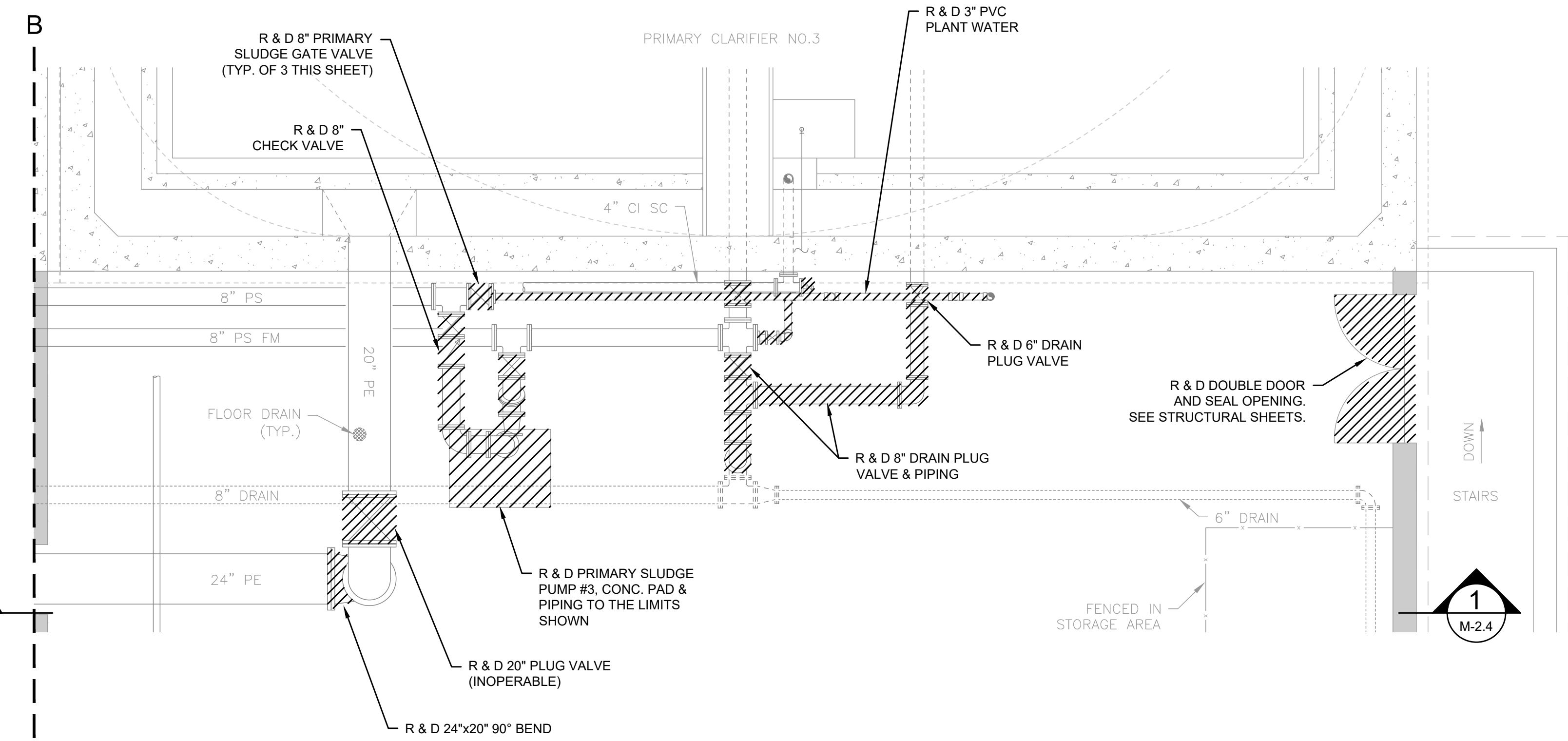
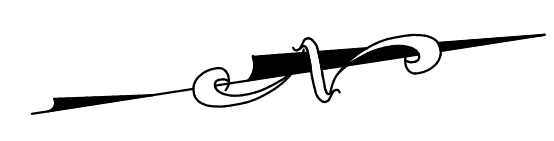
BETA JOB NO.: 6050

SCALE

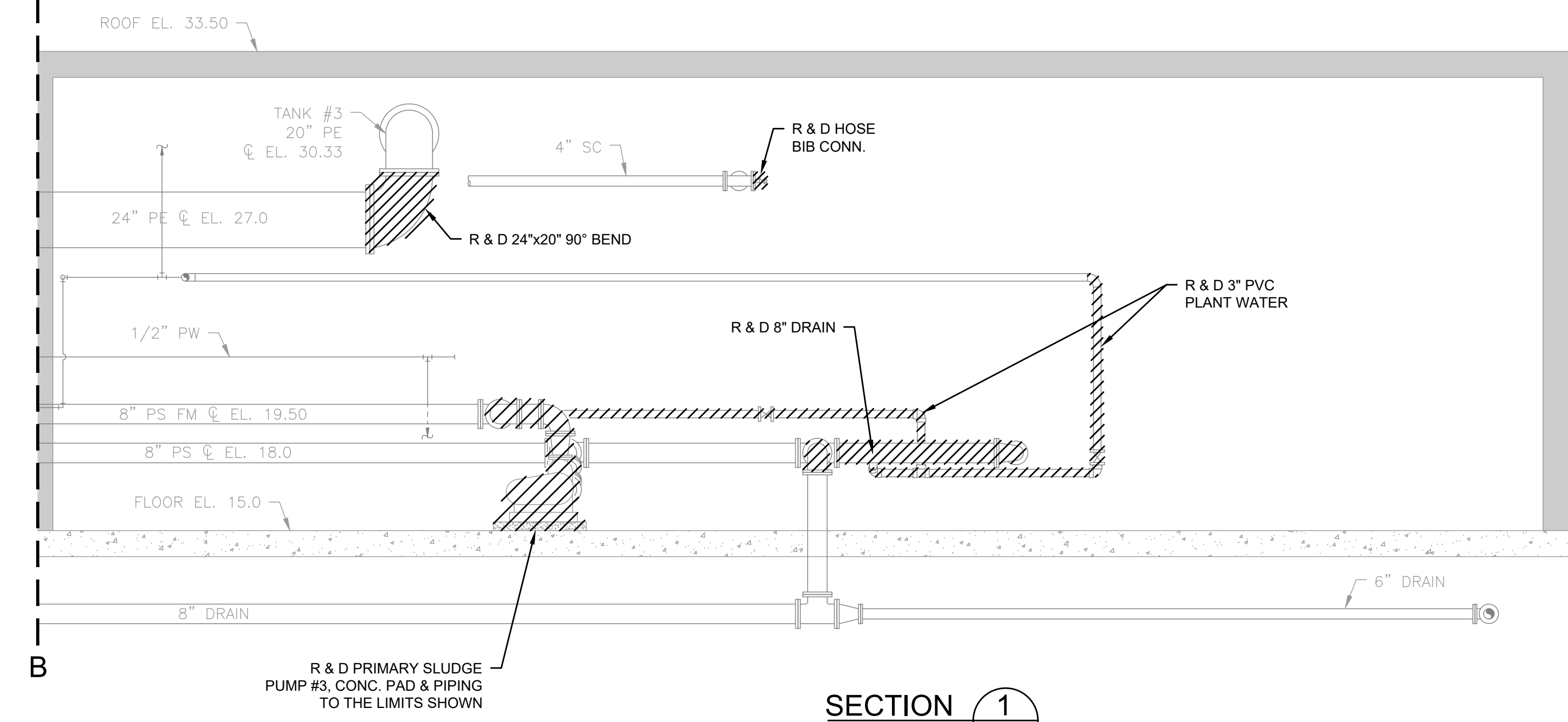
AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO. S-6.4




PLAN (EL. 32.0)
SCALE: 1/4" = 1'-0"



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


MATCH LINE A-A SHEET M-2.3

PREPARED BY



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REGISTERED PROFESSIONAL



Joseph F. Fedrigo, Jr.

SUBCONSULTANT

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Primary Sludge Pump Station Demolition Plans & Sections II

NO.	REVISIONS	DATE

DRAWN BY: BM

DESIGNED BY: JD

CHECKED BY: SR

ISSUE DATE: 7/2/2021

BETA JOB NO.: 6050

SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

M-2.4

6/30/2021 9:57 AM - W:\PROJECTS\18009 00 - TAUNTON WWTU UPGRADE\HVAC DEPARTMENT\PHASE 1\18009-00 HVAC LEGEND SCHEDULE AND DETAILS\PHASE 1.DWG (BETA STB BVS) (STB)

GENERAL NOTES

- 1. HVAC WORK IS INDICATED DIAGRAMMATICALLY. EXACT LOCATIONS OF ALL COMPONENTS ARE TO BE DETERMINED IN THE FIELD AND BY THE ACTUAL BUILDING CONDITIONS. EXISTING DUCTS, PIPING OR EQUIPMENT INTERFERING WITH OTHER INSTALLATIONS SHALL BE RELOCATED AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER. EXACT LOCATIONS MUST HAVE THE APPROVAL OF THE ARCHITECT.

DEMOLITION NOTES

- 1. UNLESS OTHERWISE NOTED, ALL EXISTING HVAC SYSTEMS WITHIN HATCH MARKS (HOT WATER SUPPLY, HOT WATER RETURN, SUPPLY DUCTWORK, EXHAUST DUCTWORK, ETC) AND ASSOCIATED EQUIPMENT IS TO BE DEMOLISHED OR SALVAGED. REMOVE THE EQUIPMENT TO BE DEMOLISHED OR SALVAGED PER SECTION 02050. ALL CONTROL DEVICES ASSOCIATED WITH THE DEMOLISHED EQUIPMENT SHALL BE REMOVED.

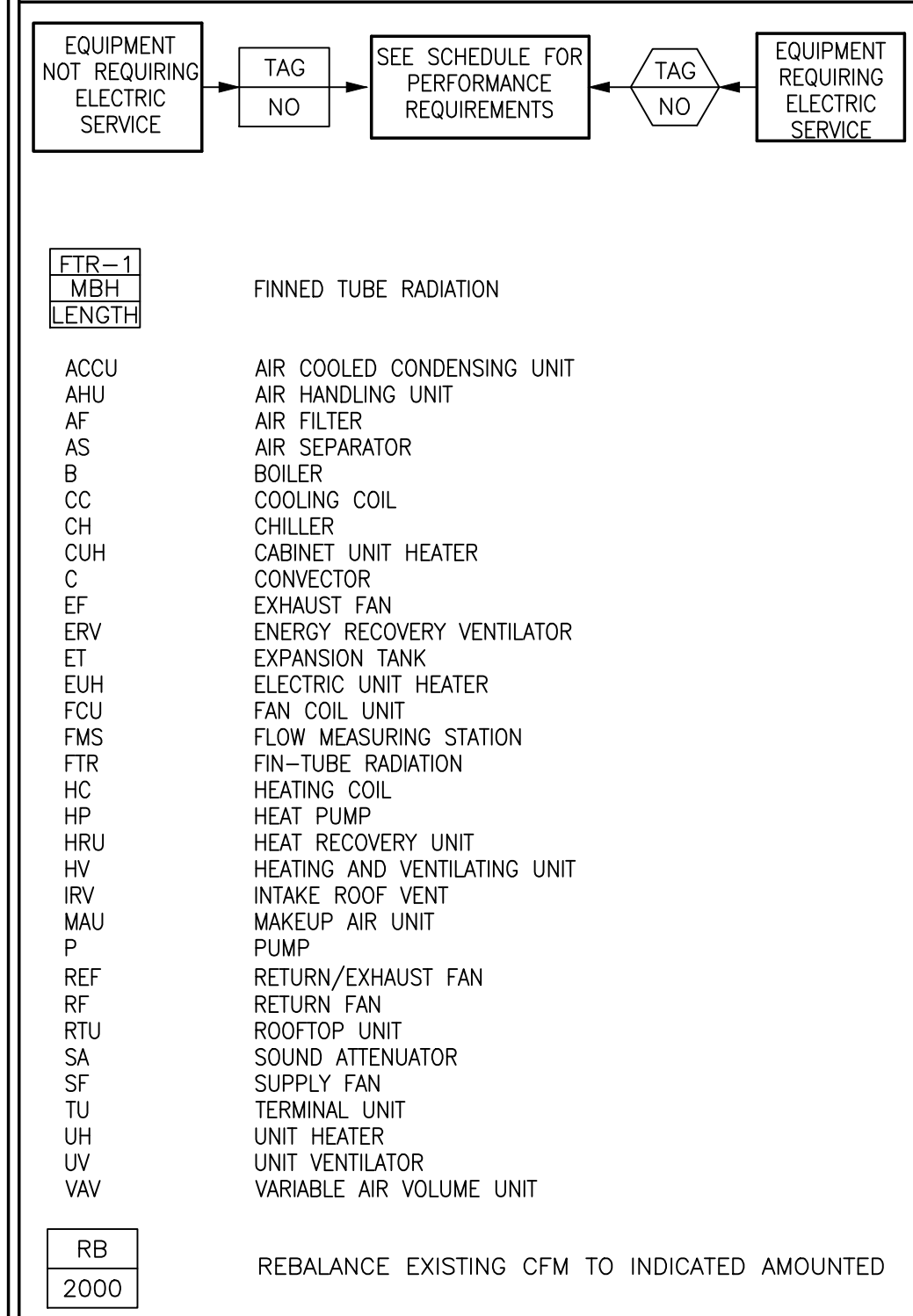
ABBREVIATIONS

Table with 2 columns: Abbreviation and Description. Includes items like ACD (AUTOMATIC CONTROL DAMPER), AFF (ACCESS DOOR), and V (VOLTS).

PIPING LEGEND

Table with 2 columns: Piping Symbol and Description. Includes CD (CONDENSATE DRAIN), HWS (HOT WATER SUPPLY), and RL (REFRIGERANT LIQUID).

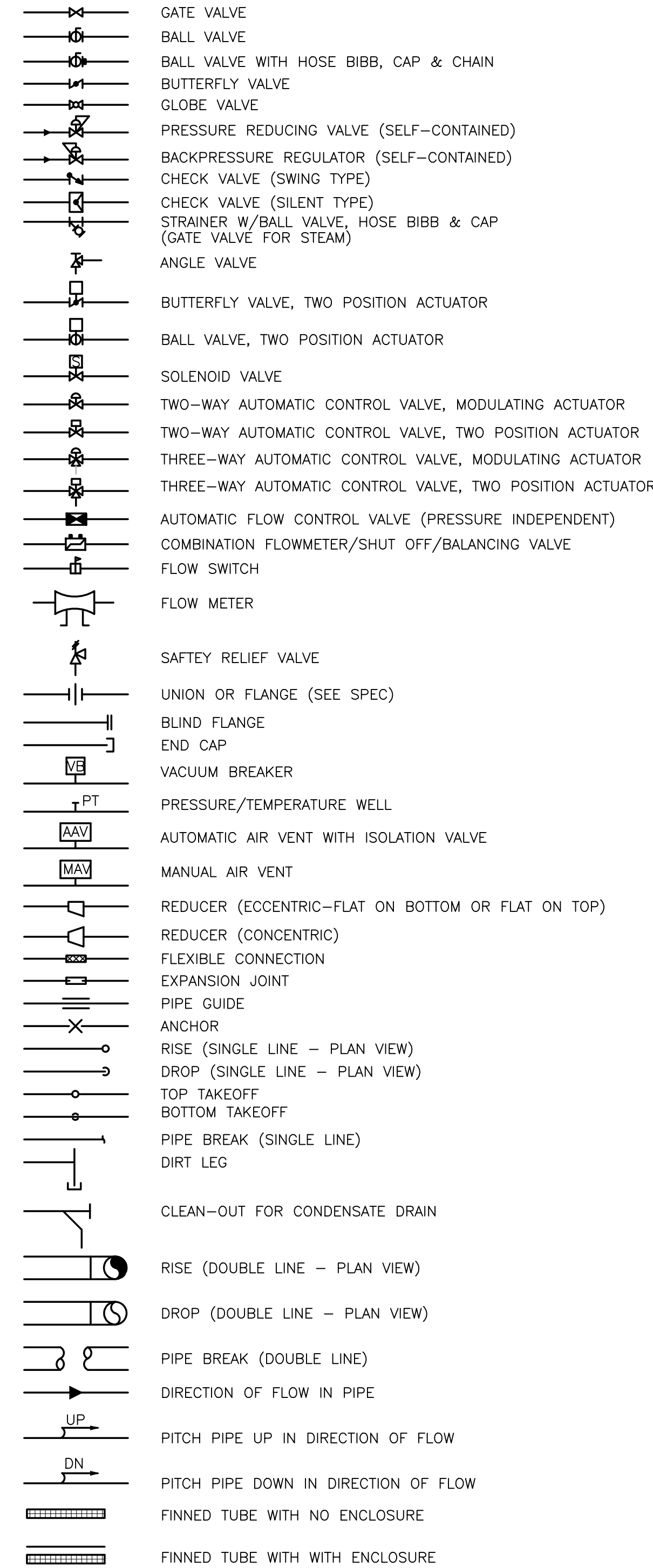
EQUIPMENT TAG SYMBOLS & ABBREVIATIONS



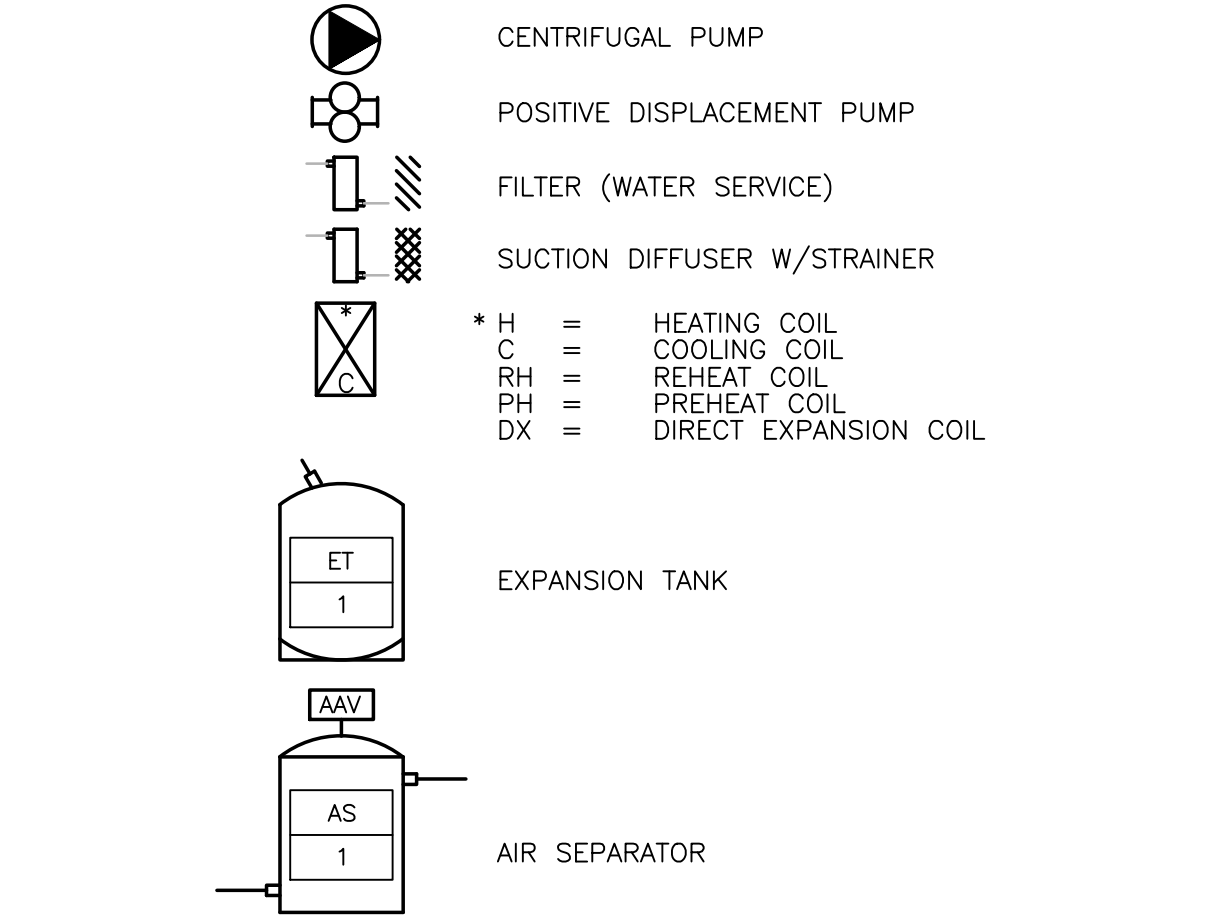
INSTRUMENTATION

Table with 2 columns: Instrumentation Symbol and Description. Includes PI (LOCAL PRESSURE GAUGE), CO2 (CARBON DIOXIDE DETECTOR), and TI (LOCAL TEMPERATURE INDICATION).

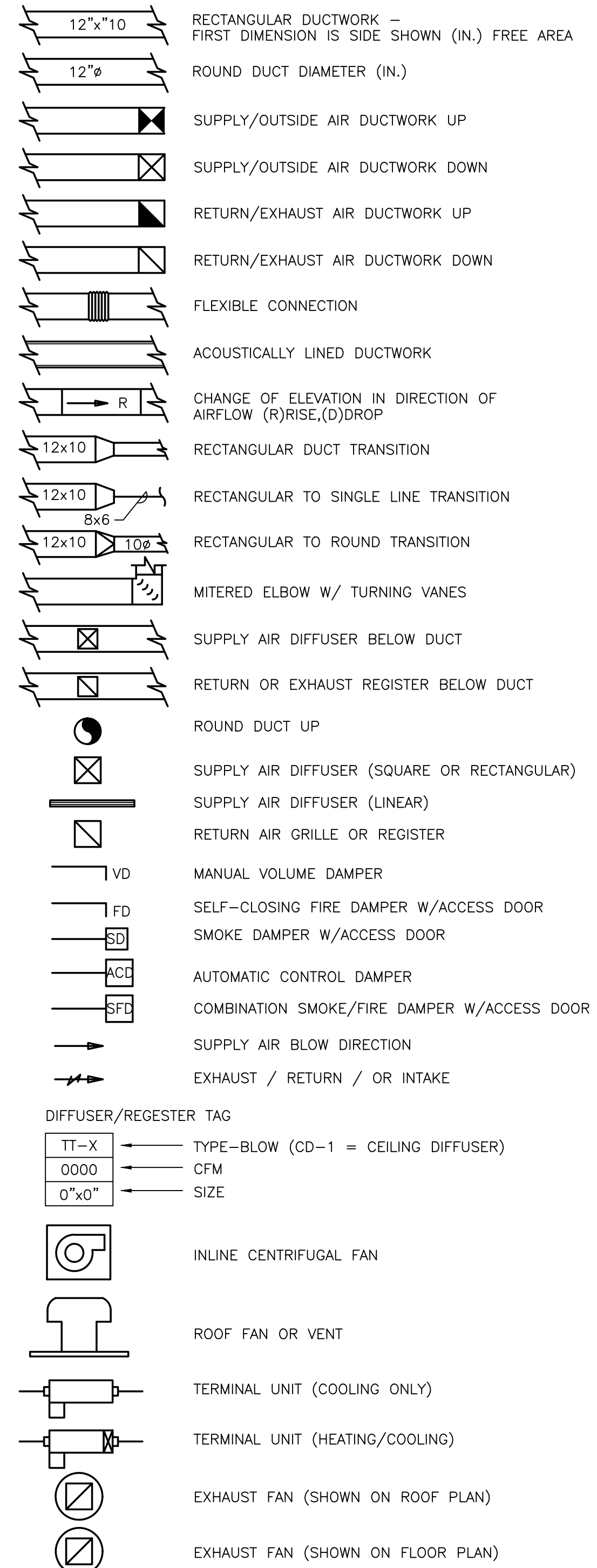
VALVES AND ACCESSORIES



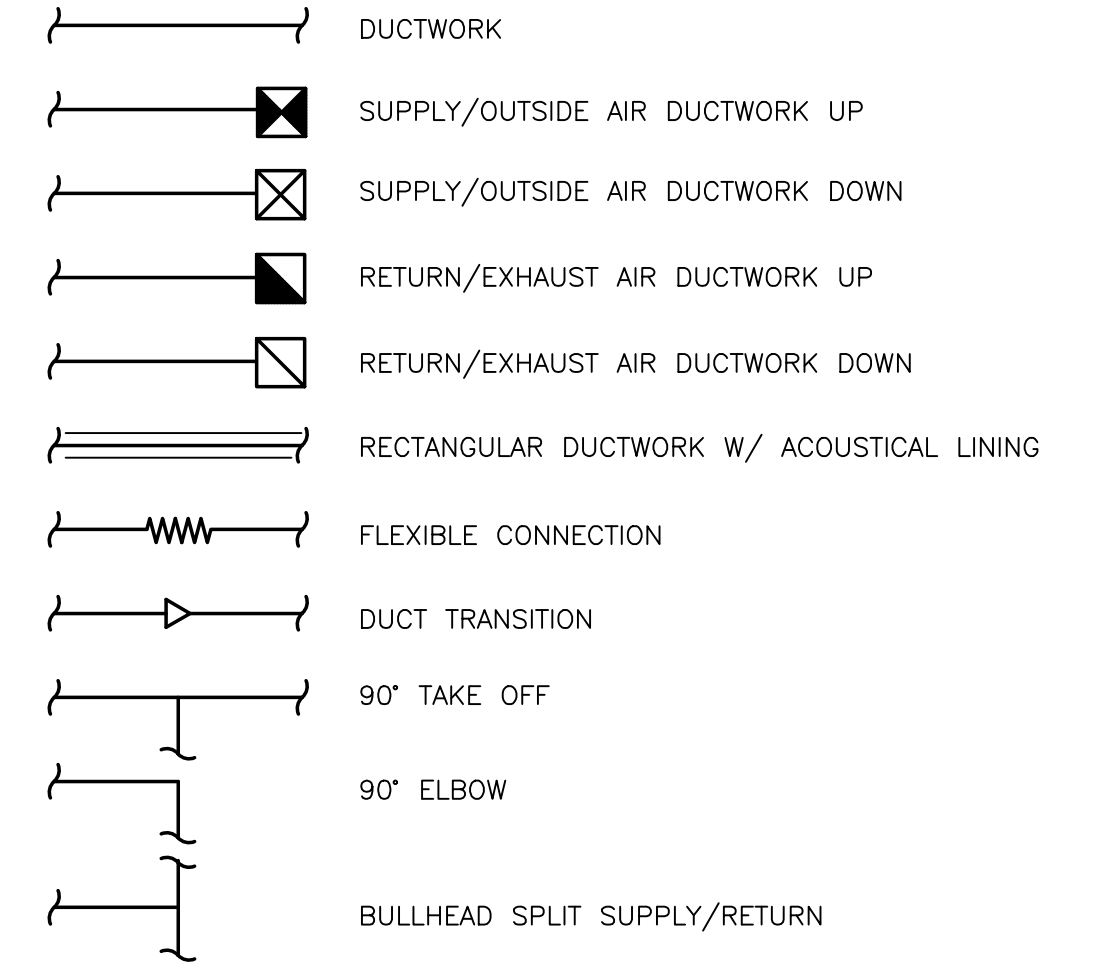
FLOW DIAGRAM EQUIPMENT SYMBOLS



DUCTWORK LEGEND/SYMBOLS



SINGLE LINE DUCTWORK



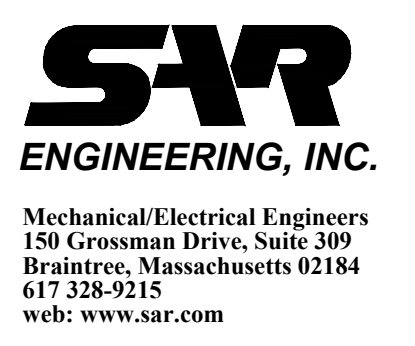
PREPARED BY



REGISTERED PROFESSIONAL



SUBCONSULTANT



PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Hvac Legend and General Notes

Table with 3 columns: NO., REVISIONS, DATE

Table with 2 columns: Field Name and Value. Includes DRAWN BY: RLB, DESIGNED BY: RHB, CHECKED BY: RHB, ISSUE DATE: 7/2/21, BETA JOB NO.: 6050

SCALE

NONE

SHEET NO.

H-0.1

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

ENERGY RECOVERY UNIT SCHEDULE (PART 1)

TAG NO.	BUILDING	SUPPLY AIR PERFORMANCE							EXHAUST AIR NORMAL PERFORMANCE					DX COOLING COIL							HOT WATER HEATING COIL							ELECTRIC HEATER DATA					ELECTRICAL DATA															
		SUPPLY IN CFM	MIN. OA IN CFM	ESP (IN WC)	TSP (IN WC)	FAN RPM	OPERATING POWER HP	MOTOR SIZE HP	EXH./RET. OUT CFM	E.S.P. IN (W.C.)	TOTAL SP IN (W.C.)	FAN RPM	OPERATING POWER HP	MOTOR SIZE HP	REFRIG TYPE	TOTAL MBH	SENSIBLE MBH	ROWS	EAT (DB °F)	EAT (WB °F)	LAT (DB °F)	LAT (WB °F)	CAPACITY (MBH)	GPM	EAT (DB °F)	LAT (DB °F)	EWT (DB °F)	LWT (DB °F)	% GLYCOL	WPD (FT)	APD (IN WC)	KW	ENT. °F	LVG. °F	AMPS	CONTROL	V	PHASE	HZ	MCA	MOCP	V	PHASE	HZ				
2ERV-1	PIPE GALLERY BUILDING	11,343	11,343	1.0	3.016	1961	(2) 4.88	(2) 5	11,343	0.65	2.226	2055	(2) 5.43	(2) 7.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	415.1	44.6	41.6	75.4	180	160	40% P.G.	9.1	0.051	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35.7	45	480	3	60
2ERV-2	PIPE GALLERY BUILDING	13,505	13,505	1.0	3.099	2050	(2) 4.94	(2) 5	13,505	1.0	2.528	1588	(2) 2.77	(2) 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	765.1	85.5	41.2	95.6	180	160	40% P.G.	7.5	0.474	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	29.8	35	480	3	60	
5ERV-1	CHEMICAL HANDLING BUILDING	2,825	950	1.5	3.126	2820	(1) 2.36	(1) 5	950	1.0	1.606	1699	(1) 0.53	(1) 5	R-410a	68.3	60.9	4	76.0	63.6	56.3	5.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20	67.7	90.1	-	SCR	480	3	60	23.9	30	480	3	60					
6ERV-1	BLOWER BUILDING	6,000	6,000	1.0	3.388	2039	(1) 5.5	(1) 7.5	6,000	1.0	2.329	2089	(1) 5.64	(1) 7.5	R-410a	339.8	205.3	6	80.4	68.0	49.3	49.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	48.0	69.0	-	SCR	480	3	60	76.6	90	480	3	60					
7ERV-1	SOLID HANDLING BLDG. 1ST FLOOR	13,500	13,500	1.5	3.76	2265	(2) 7.46	(2) 7.5	13,500	1.5	3.282	2465	(2) 9.39	(2) 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	787.9	84.7	46.7	100.6	180	160	40% P.G.	9.4	0.144	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	48.2	60	480	3	60		
7ERV-2	SOLID HANDLING BLDG. 1ST FLOOR	11,900	11,900	1.5	3.385	2120	(2) 6.29	(2) 7.5	11,900	1.5	3.006	2252	(2) 7.18	(2) 7.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	717.6	77.2	48.8	104.5	180	160	40% P.G.	7.9	0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	41.9	50	480	3	60			
7ERV-3	SOLID HANDLING BLDG. 2ND FLOOR	9,100	9,100	0.90	2.7	2197	(2) 3.52	(2) 5	9,100	0.60	2.521	2342	(2) 4.24	(2) 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	343.6	37.0	53.1	87.9	180	160	40% P.G.	6.2	0.037	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28.7	35	480	3	60			
7ERV-4	SOLID HANDLING BLDG. 2ND FLOOR	9,100	9,100	0.90	2.7	2197	(2) 3.52	(2) 5	9,100	0.60	2.521	2342	(2) 4.24	(2) 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	343.6	37.0	53.1	87.9	180	160	40% P.G.	6.2	0.037	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28.7	35	480	3	60			
9ERV-1	ADMINISTRATION BUILDING	3,200	3,200	1.5	3.408	1935	(1) 2.79	(1) 3	3,200	1.5	2.809	3297	(1) 3.41	(1) 5	R-410a	192.9	114.4	6	80.9	68.5	48.4	48.3	168.5	18.1	45.9	94.5	180	160	40% P.G.	1.3	0.133	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12.4	15	480	3	60			

ENERGY RECOVERY UNIT SCHEDULE (PART 2)

TAG NO.	ENERGY RECOVERY WHEEL PERFORMANCE												WEIGHT LBS	SUPPLY FILTER	OUTDOOR FILTER	MANUFACTURER MODEL NUMBER	REMARKS
	WINTER CONDITIONS DESIGN						SUMMER CONDITIONS DESIGN										
	OUTDOOR			INDOOR			OUTDOOR			INDOOR							
	DB °F	WB °F	RH%	DB °F	WB °F	RH%	DB °F	WB °F	RH%	DB °F	WB °F	RH%					
2ERV-1	7.4	5.3	46.7	50	90.8	76.2	80.7	50	5,379	MERV-6	MERV-8	GREENHECK RVE-120-74-30H	①②③④⑤⑥⑦⑧⑨⑩				
2ERV-2	7.4	5.3	46.7	50	90.8	76.2	80.7	50	7,604	MERV-6	MERV-8	GREENHECK RVE-180-81-30H	①②③④⑤⑥⑦⑧⑨⑩				
5ERV-1	7.4	5.3	63.5	50	90.8	76.2	80.7	50	3,108	MERV-6	MERV-8	GREENHECK RVE-40-30-30L-5D	①②③④⑤⑥ ⑧⑨⑩⑪				
6ERV-1	7.4	5.3	63.5	50	90.8	76.2	80.7	50	4,949	MERV-6	MERV-8	GREENHECK RVE-85-52-30H-30D	①②③④⑤⑥⑦⑧⑨⑩⑪				
7ERV-1	7.4	5.3	46.7	50	90.8	76.2	80.7	50	5,307	MERV-6	MERV-8	GREENHECK RVE-120-74-30H	①②③④⑤⑥⑦⑧ ⑩ ⑫				
7ERV-2	7.4	5.3	48.8	50	90.8	76.2	80.2	50	5,259	MERV-6	MERV-8	GREENHECK RVE-120-74-30H	①②③④⑤⑥⑦⑧ ⑩ ⑫				
7ERV-3	7.4	5.3	53.1	50	90.8	76.2	79.2	50	5,089	MERV-6	MERV-8	GREENHECK RVE-120-74-30H	①②③④⑤⑥⑦⑧ ⑩ ⑫				
7ERV-4	7.4	5.3	53.1	50	90.8	76.2	79.2	50	5,089	MERV-6	MERV-8	GREENHECK RVE-120-74-30H	①②③④⑤⑥⑦⑧ ⑩ ⑫				
9ERV-1	7.4	5.3	63.5	50	90.8	76.2	80.7	50	2,525	MERV-6	MERV-8	GREENHECK RVE-40-36-30H	①②③④⑤⑥⑦⑧⑨⑩				

- ① BASE RAILS ② LOW LEAKAGE DAMPERS ③ RECIRC. DAMPER ④ FACTORY SUPPLY & EXHAUST FAN VFD ⑤ ENERGY BYPASS WHEEL DAMPER
- ⑥ FACTORY MOUNTED DISCONNECT ⑦ SINGLE POINT POWER CONNECTION ⑧ COORDINATE SUPPLY & EXHAUST BOTTOM DISCHARGE WITH FLOOR PLANS
- ⑨ INSTALLED OUTDOORS ⑩ AIR FLOW STATIONS ⑪ TWO POINT POWER CONNECTION (ONE FOR UNIT AND ONE FOR ELECTRIC HEAT)
- ⑫ INSTALLED INDOORS

EXHAUST FAN SCHEDULE

TAG NO.	BUILDING	CFM	ESP (IN WC)	SPEED (RPM)			ELECTRICAL DATA				MANUFACTURER & MODEL #	REMARKS
				FAN	MOTOR	DRIVE	HP	V	PH	HZ		
5EF-1	CHEMICAL HANDLING BUILDING	450	0.45	1353	1725	DIRECT	1/4	120	1	60	GREENHECK SE1-12-432-VG	
5EF-2	CHEMICAL HANDLING BUILDING	125	0.45	1014	1350	DIRECT	1/4	120	1	60	GREENHECK AER-E20C-605-VG	
9LEF-1	ADMIN BUILDING LAB EXHAUST	660	2.50	3687	3600	DIRECT	1.5	480	3	60	GREENHECK VEKTOR-H-9	

MAKE-UP AIR UNIT SCHEDULE

TAG NO.	LOCATION	SUPPLY BLOWER					HEATING COIL							ELECTRICAL DATA					WEIGHT LBS	MANUFACTURER MODEL NUMBER	REMARKS	
		OA CFM	TSP (IN WC)	ESP (IN WC)	FAN BHP	FAN HP	CAPACITY (MBH)	GPM	EAT (DB °F)	LAT (DB °F)	EWT (DB °F)	LWT (DB °F)	% GLYCOL	WPD (FT)	FLA	MOP	V	PH				HZ
7MUA-1	SOLID HANDLING BLDG. 1ST FLOOR	4,000	1.71	1.4	3.29	5	372.7	32.6	7	83	180	160	40% P.G.	13	7.6	20	480	3	60	-	GREENHECK LFC-85-FC-50	①②③④⑤⑥

- ① BASE RAILS ② FACTORY MOUNTED DISCONNECT ③ SINGLE POINT POWER CONNECTION ④ VFD RATED MOTOR ⑤ INSTALLED INDOORS ⑥ AIR FLOW STATION

PREPARED BY



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REGISTERED PROFESSIONAL



SUBCONSULTANT



Mechanical/Electrical Engineers
150 Grossman Drive, Suite 309
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617.328.9215
web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Hvac Schedules

NO.	REVISIONS	DATE

DRAWN BY: RLB

DESIGNED BY: RHB

CHECKED BY: RHB

ISSUE DATE: 7/2/21

BETA JOB NO.: 6050

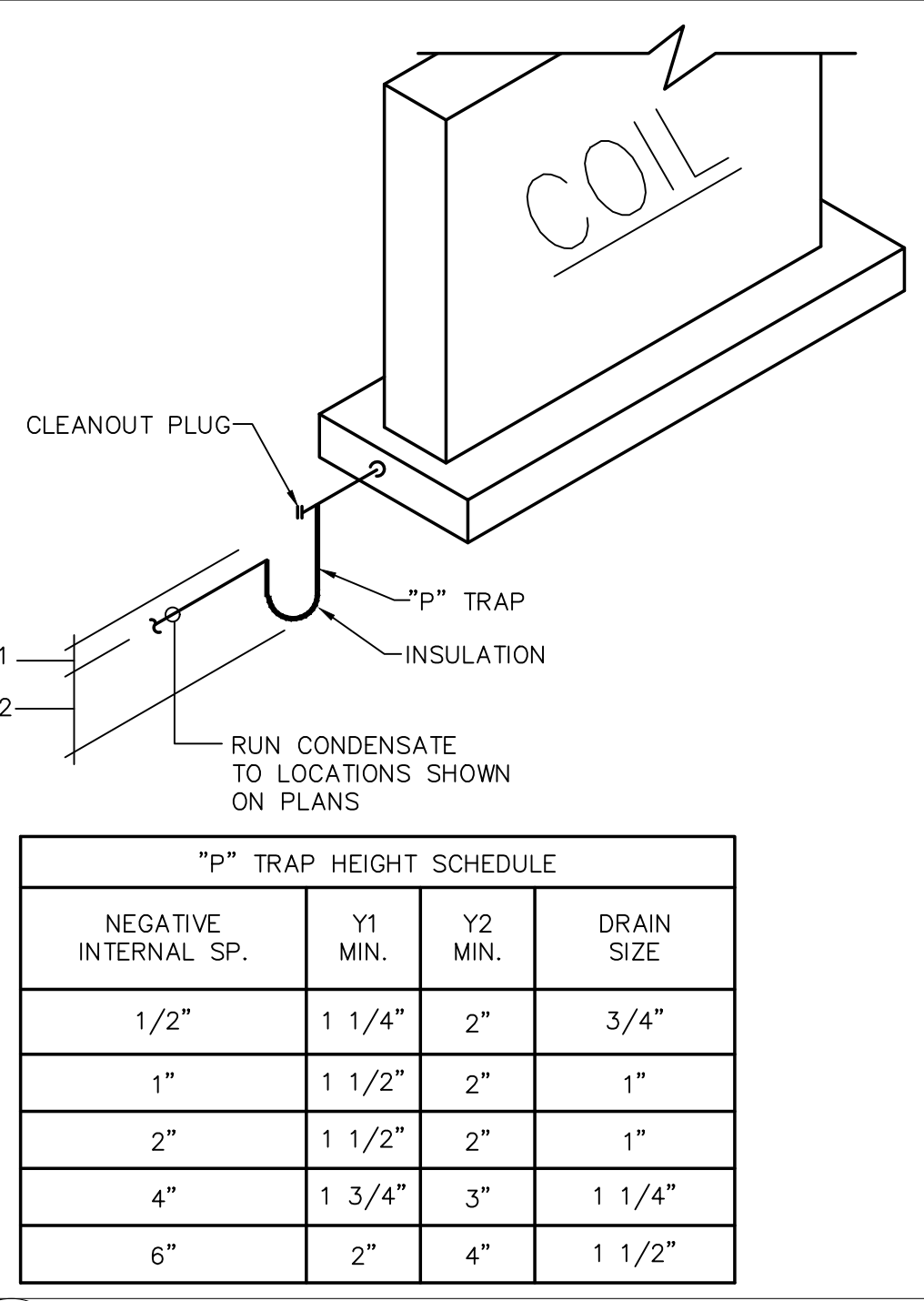
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SHEET NO.

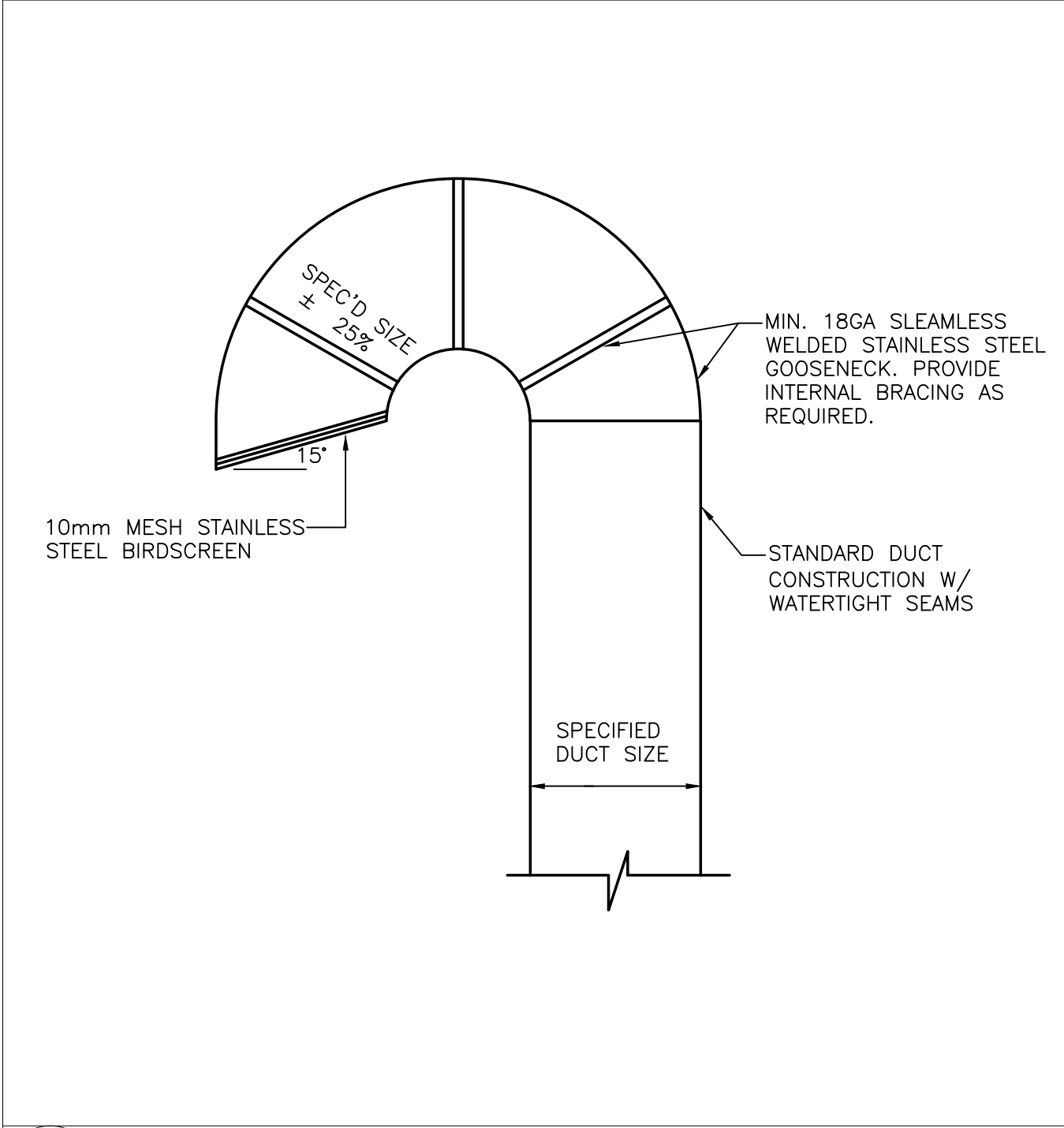
H-0.2



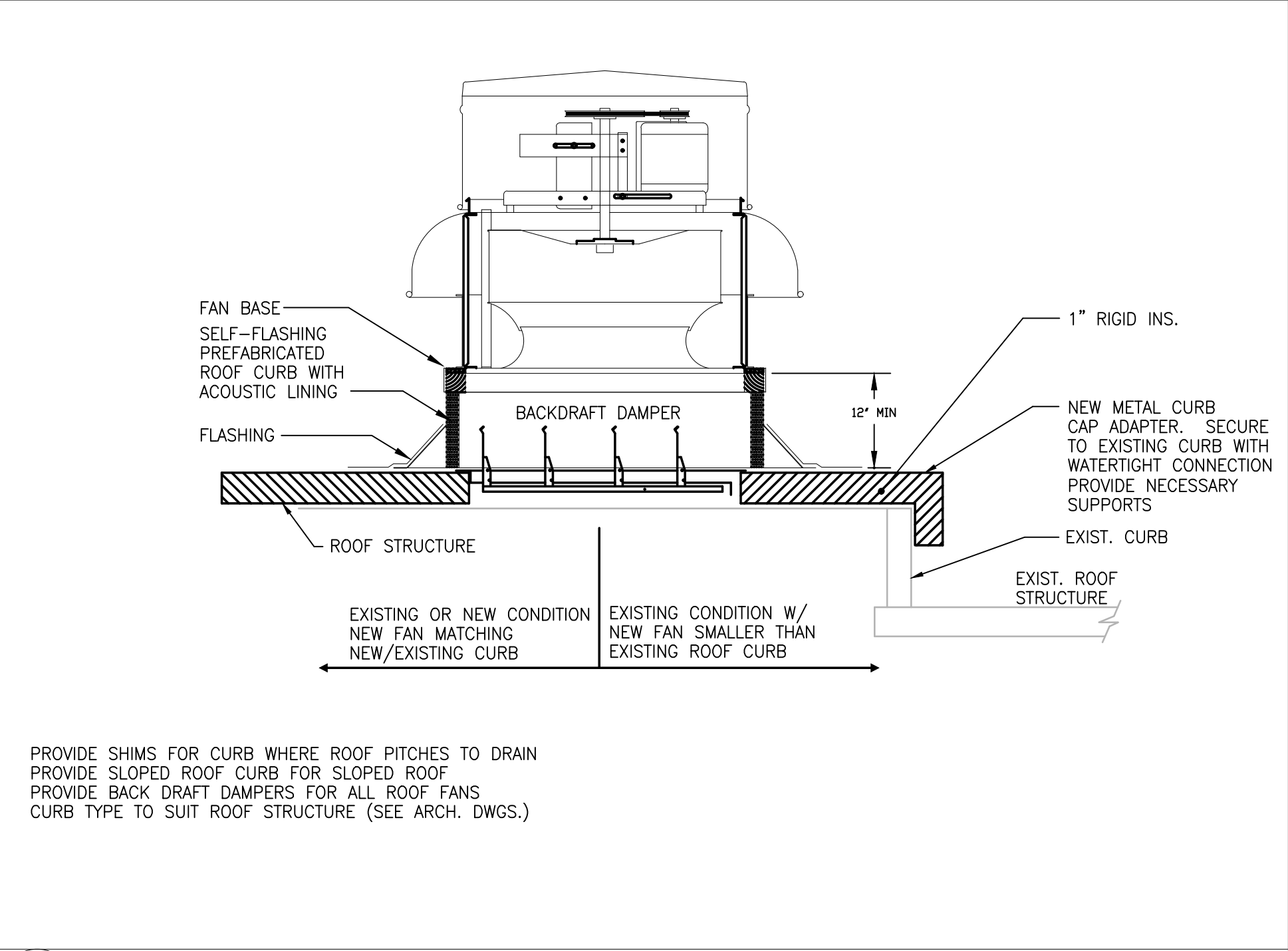
"P" TRAP HEIGHT SCHEDULE

NEGATIVE INTERNAL SP.	Y1 MIN.	Y2 MIN.	DRAIN SIZE
1/2"	1 1/4"	2"	3/4"
1"	1 1/2"	2"	1"
2"	1 1/2"	2"	1"
4"	1 3/4"	3"	1 1/4"
6"	2"	4"	1 1/2"

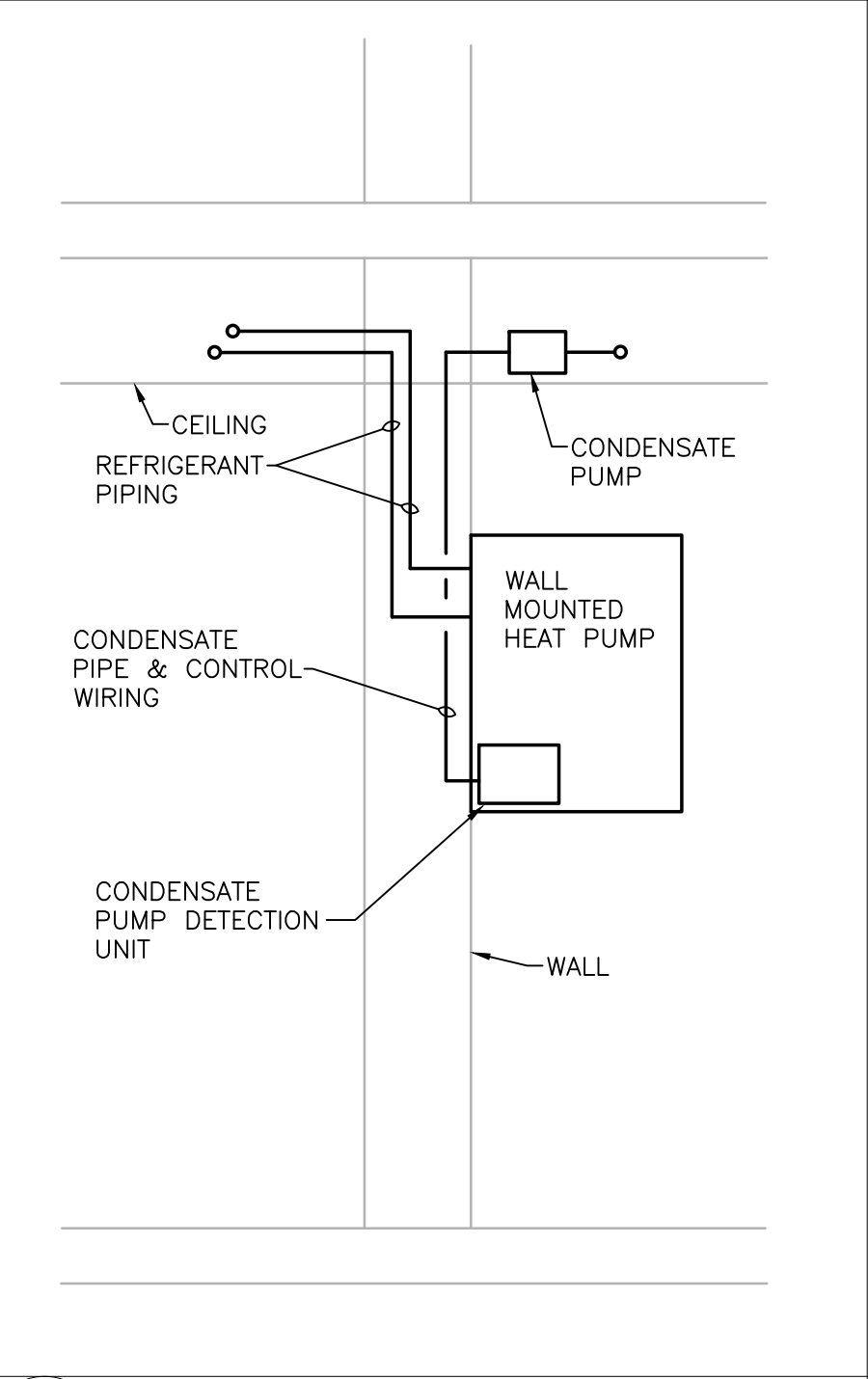
9 "P" TRAP DETAIL
NO SCALE



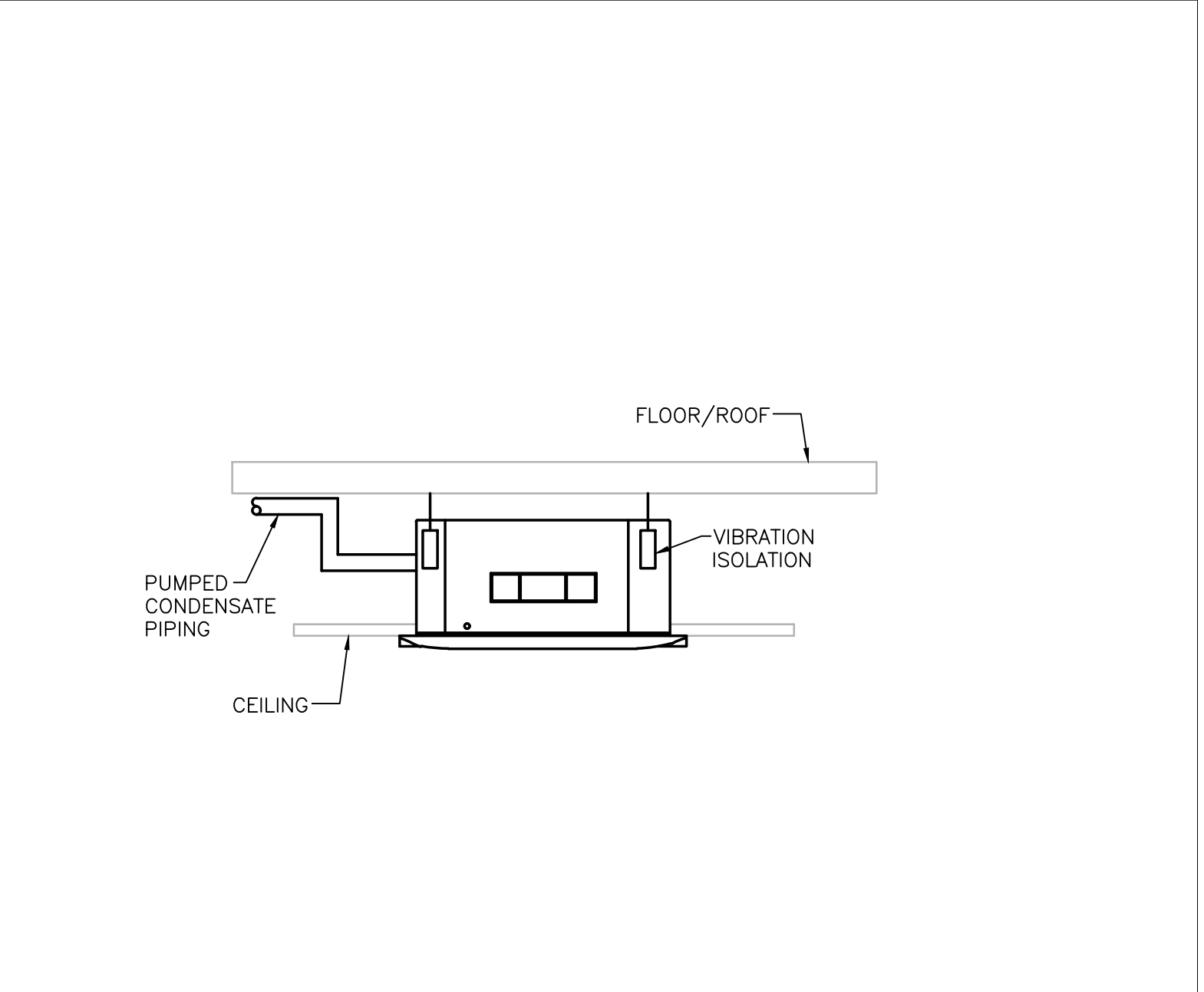
10 GOOSENECK DETAIL
NO SCALE



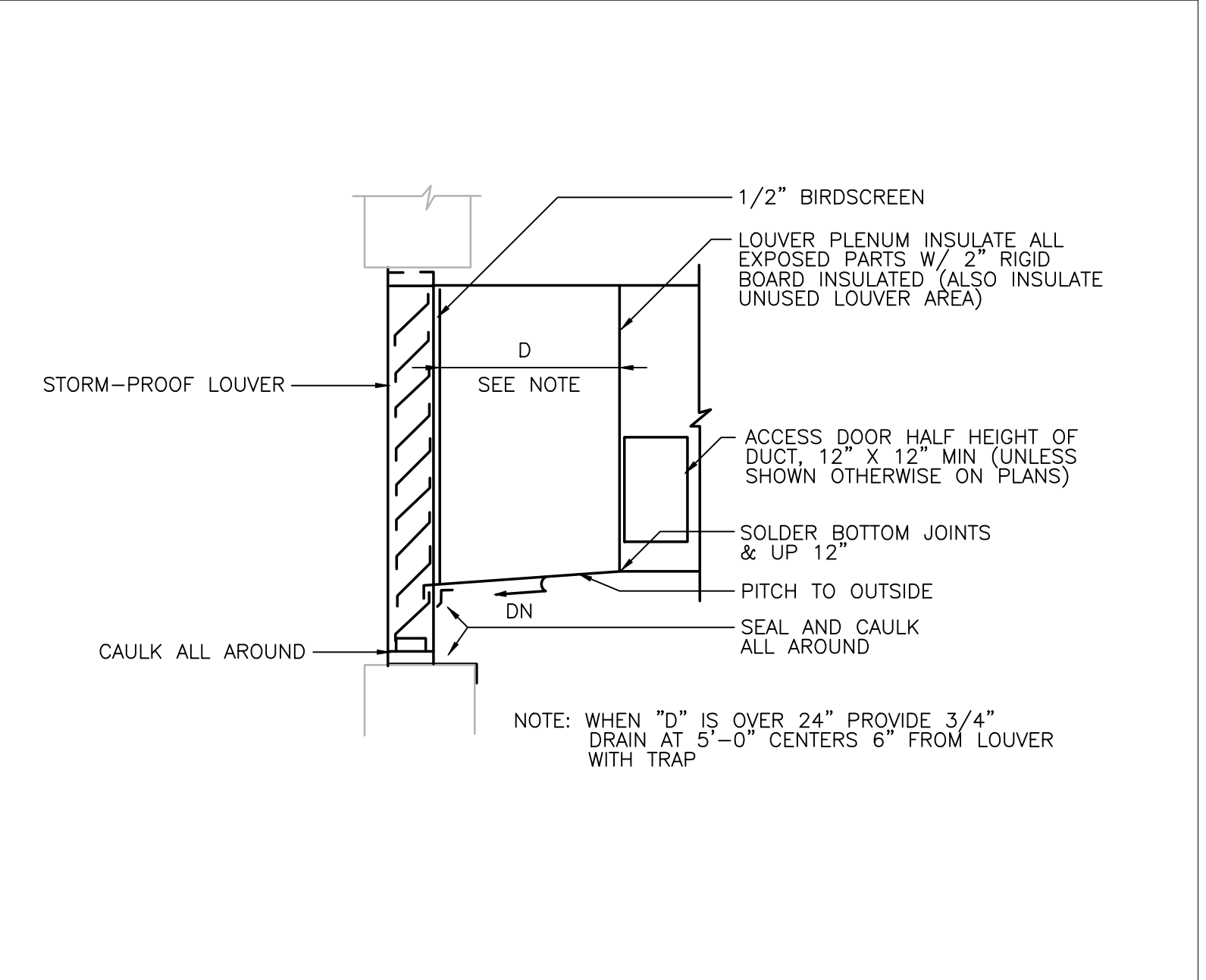
11 ROOF EXHAUST FAN MOUNTED ON EXISTING CURB
NO SCALE



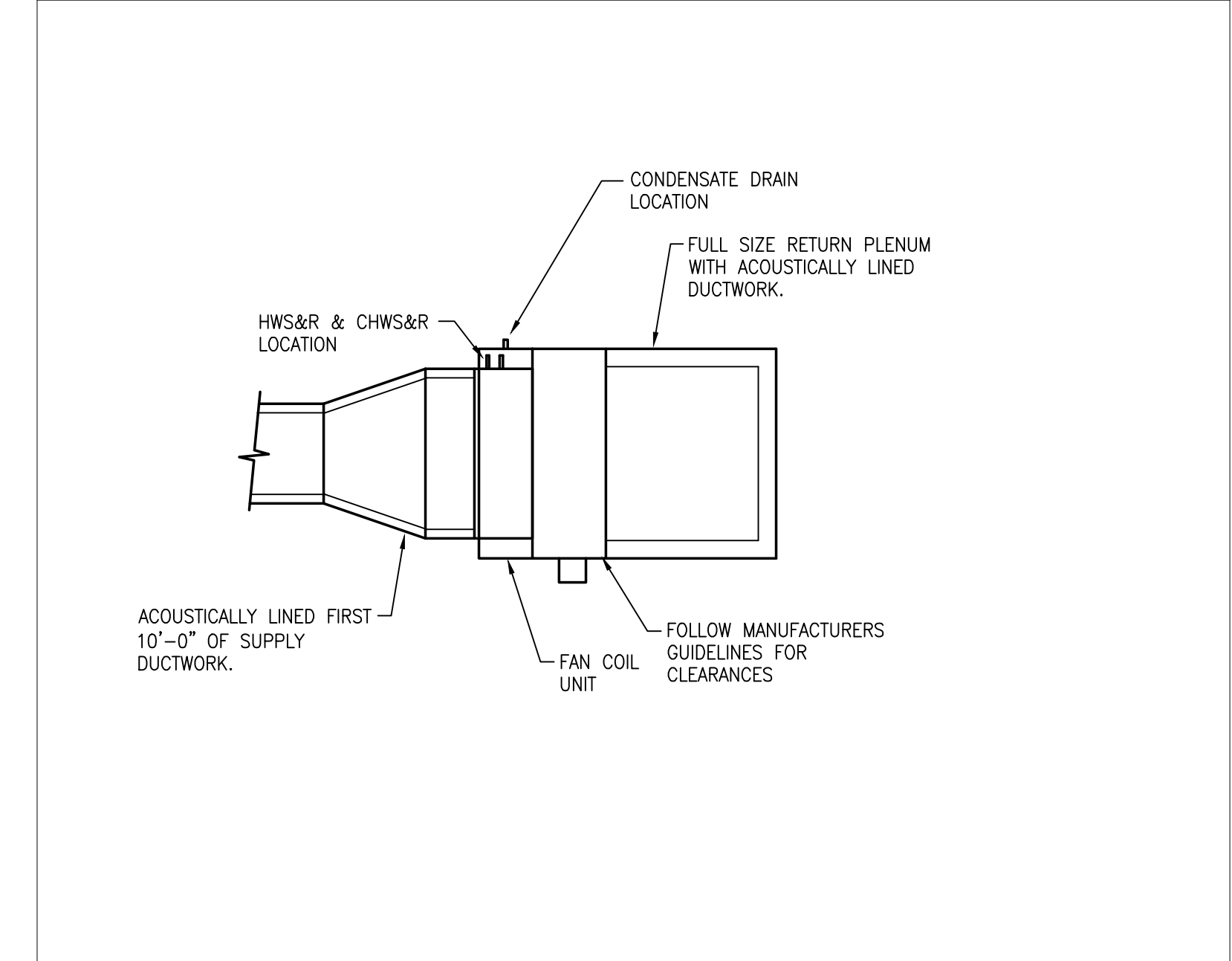
12 WALL MOUNTED HP DETAIL
NO SCALE



13 SPLIT-SYSTEM INDOOR UNIT (CASSETTE) INSTALLATION
NO SCALE



14 LOUVER CONNECTION
NO SCALE



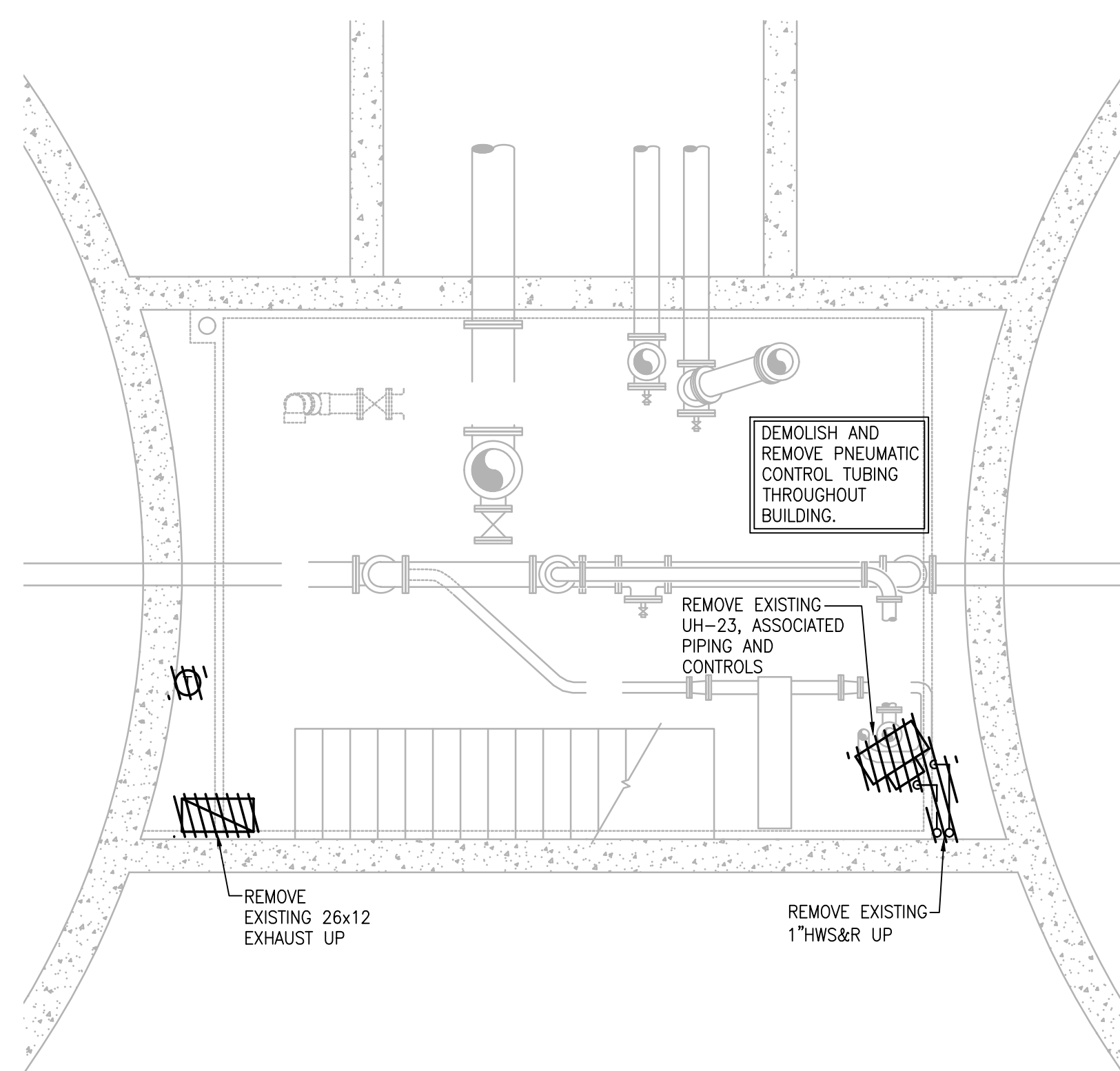
15 FAN COIL UNIT DETAIL
NO SCALE

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	RHB
CHECKED BY:	RHB
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

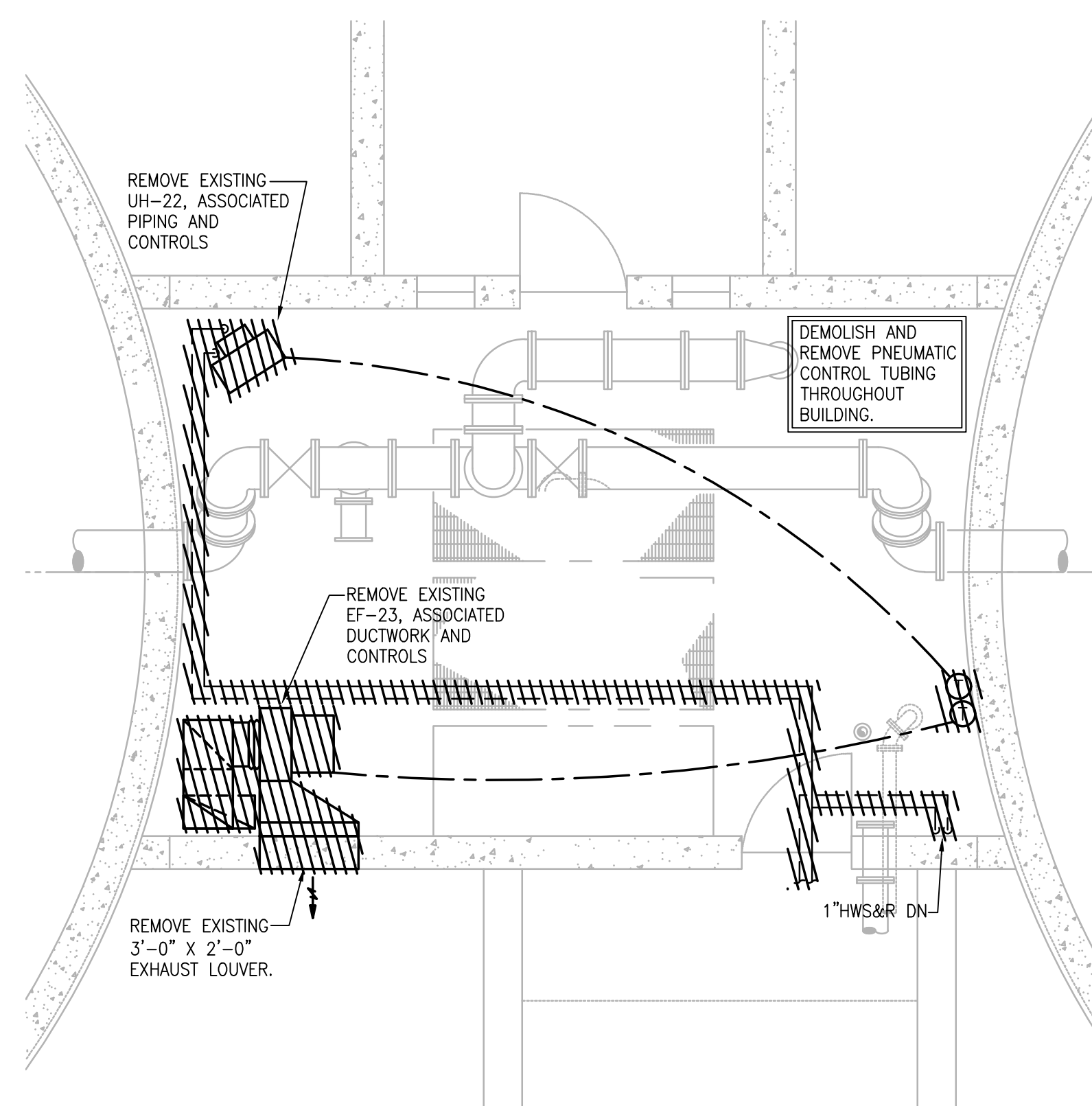
SCALE
NONE
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6/30/2021 9:59 AM I:\IT-PROJECTS\18009.00 - TAUNTON WWTF UPGRADE\HVAC DEPARTMENT\PHASE 1\18009.00 HVAC LEGEND SCHEDULE AND DETAILS\PHASE 1.DWG (BETA STB.BW.STB)



LOWER LEVEL - PLAN

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



UPPER LEVEL - PLAN

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

PREPARED BY



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REGISTERED PROFESSIONAL



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150 Grossman Drive, Suite 309
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web: www.sar.com

PROJECT

**Taunton Wastewater
Treatment Facility
Improvements
Phase 1**

Taunton, MA

TITLE

**Hvac Demolition
Solids Handling
Building
Plans**

NO. REVISIONS DATE

DRAWN BY: RLB

DESIGNED BY: RHB

CHECKED BY: RHB

ISSUE DATE: 7/2/21

BETA JOB NO.: 6050

SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

H-7.3

OIL FIRED WATER HEATER SCHEDULE

DESIGNATION	MANUFACTURER	MODEL	LOCATION	GALS.	RECOVERY		GPH #2 FUEL OIL	OIL CONN. SIZE	FLUE CONN. SIZE	REMARKS
					G.P.H.	Δ TEMP °F				
9DWH-1	AO SMITH	COF-199*	ADMIN BLDG	86	191	100	1.42	1/2"	8"	-

* MANUFACTURERS NAMES AND MODEL NUMBERS ARE SHOWN ONLY TO REPRESENT TYPE, STYLE AND LEVEL OF QUALITY EXPECTED, REFER TO SPECIFICATIONS FOR ACCEPTABLE EQUAL MANUFACTURERS.

ELECTRIC WATER HEATER SCHEDULE

DESIGNATION	MANUFACTURER	MODEL	LOCATION	GALS.	RECOVERY		KW	VOLTS	PHASE	HZ.	REMARKS
					G.P.H.	Δ TEMP °F					
5DWH-1	A.O. SMITH	DRE-120-15	CHEMICAL BLDG	120	61	100	15	480	3	60	-
9DWH-2	A.O. SMITH	ENT-30	ADMIN BLDG	30	48	100	4.5	208	1	60	SERVICES LAB SYSTEMS

* MANUFACTURERS NAMES AND MODEL NUMBERS ARE SHOWN ONLY TO REPRESENT TYPE, STYLE AND LEVEL OF QUALITY EXPECTED, REFER TO SPECIFICATIONS FOR ACCEPTABLE EQUAL MANUFACTURERS.

CIRCULATING PUMP SCHEDULE

DESIGNATION	LOCATION	WATER HEATER SERVED	MODEL	CAPACITY (GPM)	HEAD (FEET)	TYPE	ELECTRICAL REQUIREMENTS				REMARKS
							RPM	HP	VOLTS	Φ	
5.DWP-1	MECH ROOM	5DWH-1	TACO 006B	2	6	INLINE	3250	1/40	115	1	SERVES 120° HW SYSTEM
9.DWP-1	ADMIN BLDG	5DWH-1	TACO 006B	2	6	INLINE	3250	1/40	115	1	SERVES 120° HW SYSTEM
9.DWP-2	ADMIN BLDG	5DWH-1	TACO 006B	2	6	INLINE	3250	1/40	115	1	SERVES 120° HW LAB SYSTEM

* MANUFACTURERS NAMES AND MODEL NUMBERS ARE SHOWN ONLY TO REPRESENT TYPE, STYLE AND LEVEL OF QUALITY EXPECTED, REFER TO SPECIFICATIONS FOR ACCEPTABLE EQUAL MANUFACTURERS.

PLUMBING FIXTURE SCHEDULE

DESIGNATION	FIXTURE DESCRIPTION	CONNECTION SIZE							REMARKS
		W1	HW1	BLW	SAN	V	NPW1	NPHW1	
WC-1	WATER CLOSET	1"	-	-	4"	2"	-	-	WALL HUNG - CARRIER SUPPORTED
WC-1A	WATER CLOSET	1"	-	-	4"	2"	-	-	WALL HUNG - CARRIER SUPPORTED
UR-1	URINAL	3/4"	-	-	2"	2"	-	-	WALL HUNG - CARRIER SUPPORTED
LAV-1	LAVATORY	1/2"	1/2"	-	2"	2"	-	-	WALL HUNG - CARRIER SUPPORTED
LAV-1A	LAVATORY	1/2"	1/2"	-	2"	2"	-	-	WALL HUNG - CARRIER SUPPORTED
KS-1	KITCHEN SINK	1/2"	1/2"	-	2"	2"	-	-	DROP IN
SS-1	JANITOR SINK	1/2"	1/2"	-	3"	2"	-	-	FAUCET SHALL HAVE INTEGRAL CHECK VALVES
SH-1	SHOWER	1/2"	1/2"	-	3"	2"	-	-	-
SH-1A	SHOWER	1/2"	1/2"	-	3"	2"	-	-	-
HB	HOSE BIBB	1/2"	-	-	-	-	-	-	-
EWU-1	EMERGENCY SHOWER/EYEWASH	-	-	1 1/4"	-	-	-	-	INTERIOR MOUNTED, CORROSION RESISTANT, EMERGENCY SHOWER/EYEWASH (COMBINATION UNIT) WITH HORN, STROBE AND FLOW SWITCH
EWU-2	EMERGENCY SHOWER/EYEWASH	-	-	1 1/4"	-	-	-	-	EXTERIOR MOUNTED, CORROSION RESISTANT, EMERGENCY SHOWER/EYEWASH (COMBINATION UNIT) WITH HORN, STROBE AND FLOW SWITCH

SUMP PUMP SCHEDULE

DESIGNATION	LOCATION	MODEL	CAPACITY (GPM)	HEAD (FEET)	TYPE	ELECTRICAL REQUIREMENTS				REMARKS
						RPM	HP	VOLTS	Φ	
SSP-1	CHEMICAL HANDLING UNITS	WEIL 2443	20	40	DUPLEX SUBMERSIBLE	1750	1/2	480	3	AUTOMATIC WITH FLOAT

SHOCK ABSORBER SCHEDULE

PDI RATING SYMBOL	A	B	C	D	E
PRECISION PLUMBING PRODUCTS	SC-500	SC-750	SC-1000	SC-1250	SC-1500
WATTS REGULATOR COMPANY	0750030	0750053	0750060	0750070	0750090
WADE	5-P	10-P	20-P	50-P	75-P

* MANUFACTURERS NAMES AND MODEL NUMBERS ARE SHOWN ONLY TO REPRESENT TYPE, STYLE AND LEVEL OF QUALITY EXPECTED, REFER TO SPECIFICATIONS FOR ACCEPTABLE EQUAL MANUFACTURERS.
** PROVIDE WITH SHUT-OFF VALVE.

DRAIN SCHEDULE

DESIGNATION	TYPE	MANUFACTURER	MODEL	OUTLET	STRAINER	REMARKS
FD'A'	FD	J.R. SMITH	2005Y-A-P050	NO HUB	NICK-BRZ	FINISHED AREAS
FD'B'	FD	J.R. SMITH	9700C-CFBM-NB	CAULK	NICK-BRZ	CLASSIFIED OR HAZARDOUS AREAS
FD'C'	FD	J.R. SMITH	2005Y-B-P050	CAULK	NICK-BRZ	SHOWERS
RD'A'	RD	ZURN	Z121	NO HUB	CAST IRON DOME	REPLACE DRAIN TO ACCOMMODATE NEW ROOF

* ALL FLOOR DRAINS SHALL BE PROVIDED WITH AUTOMATIC TRAP PRIMERS. REFER TO DETAIL FOR PIPING ARRANGEMENT.
* MANUFACTURERS NAMES AND MODEL NUMBERS ARE SHOWN ONLY TO REPRESENT TYPE, STYLE AND LEVEL OF QUALITY EXPECTED, REFER TO SPECIFICATIONS FOR ACCEPTABLE EQUAL MANUFACTURERS.

PREPARED BY



REGISTERED PROFESSIONAL



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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Plumbing Schedules

NO. REVISIONS DATE

DRAWN BY: RLB

DESIGNED BY: RHB

CHECKED BY: RHB

ISSUE DATE: 7/2/21

BETA JOB NO.: 6050

SCALE

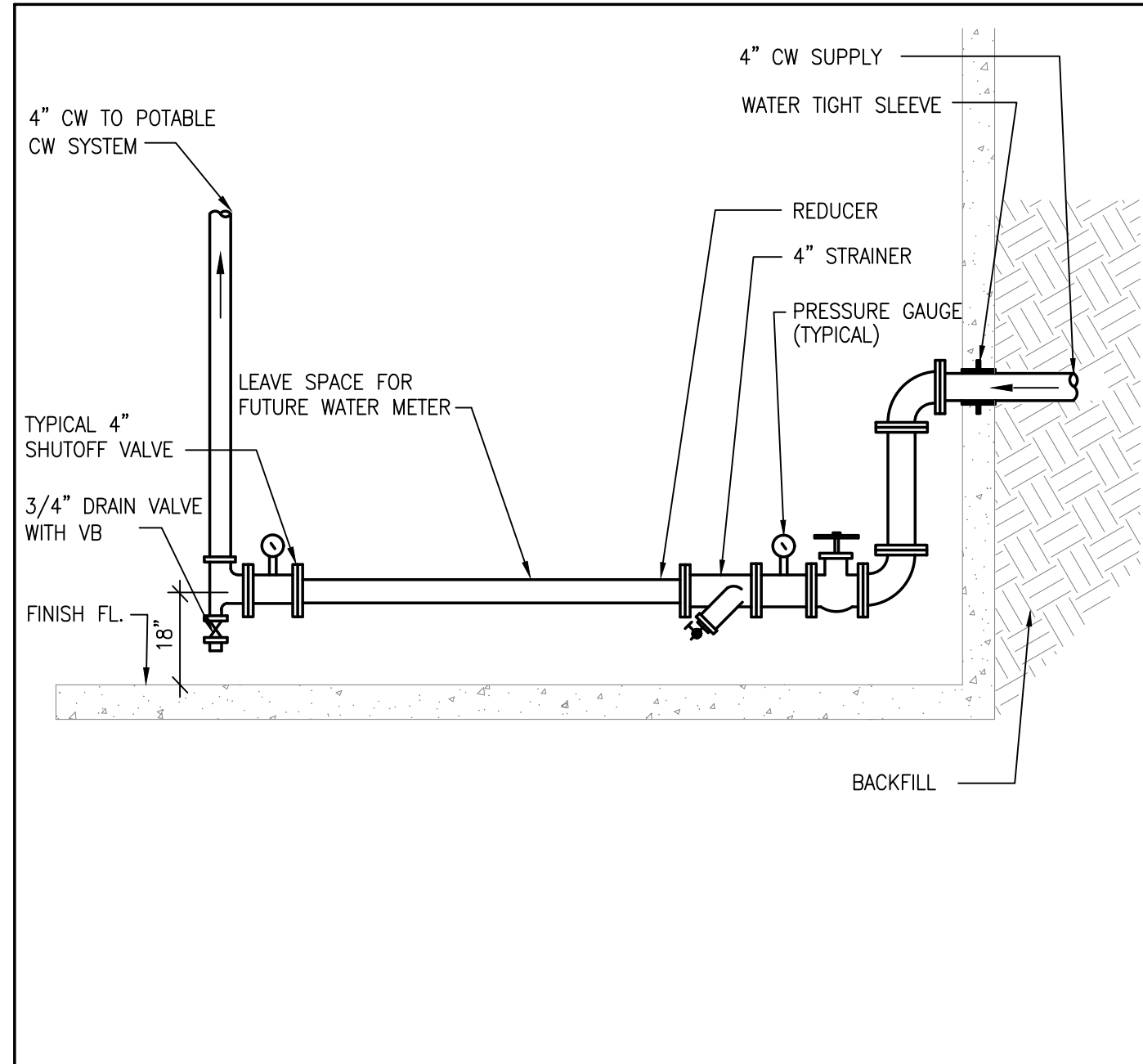
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UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

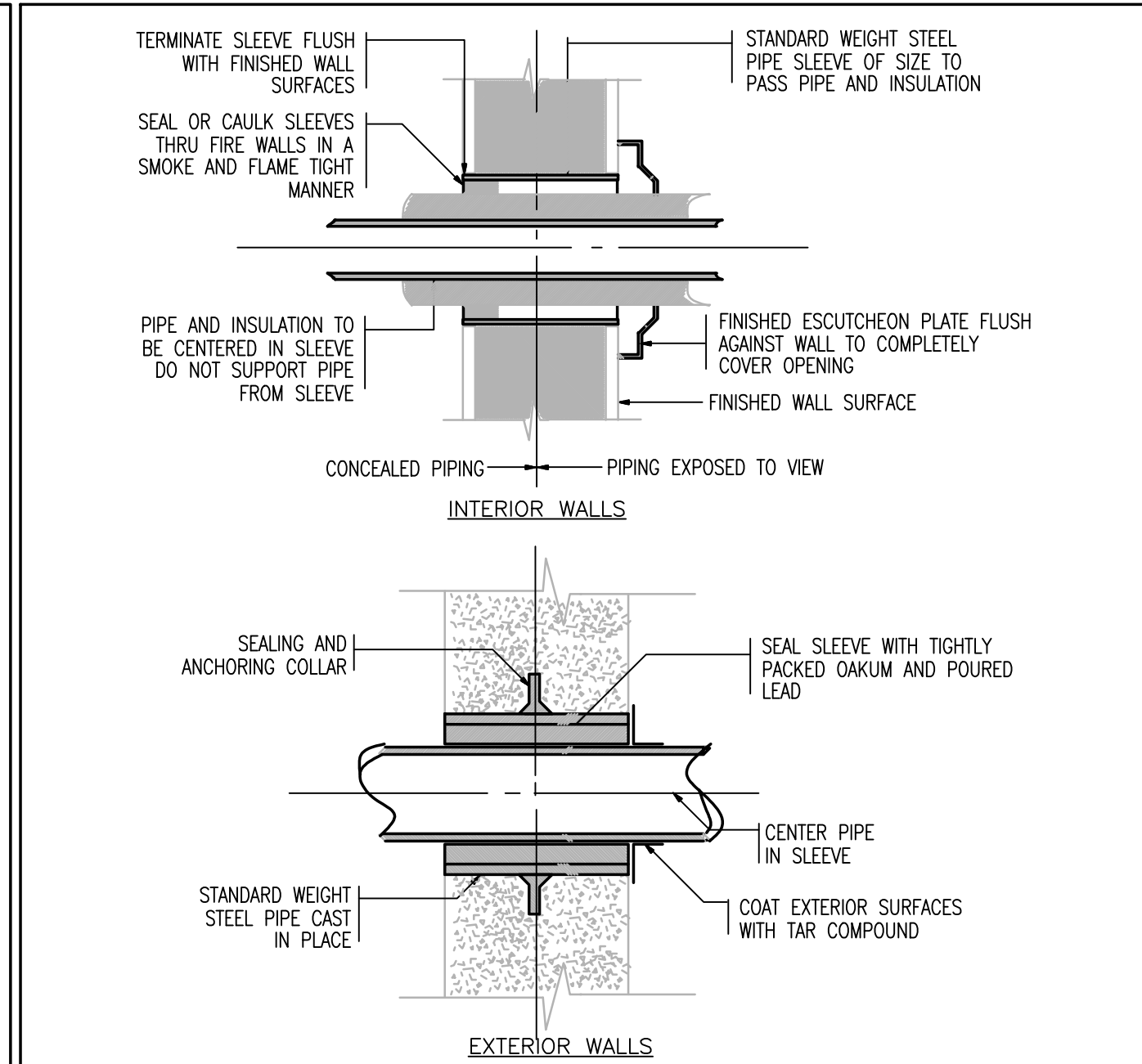
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P-0.2

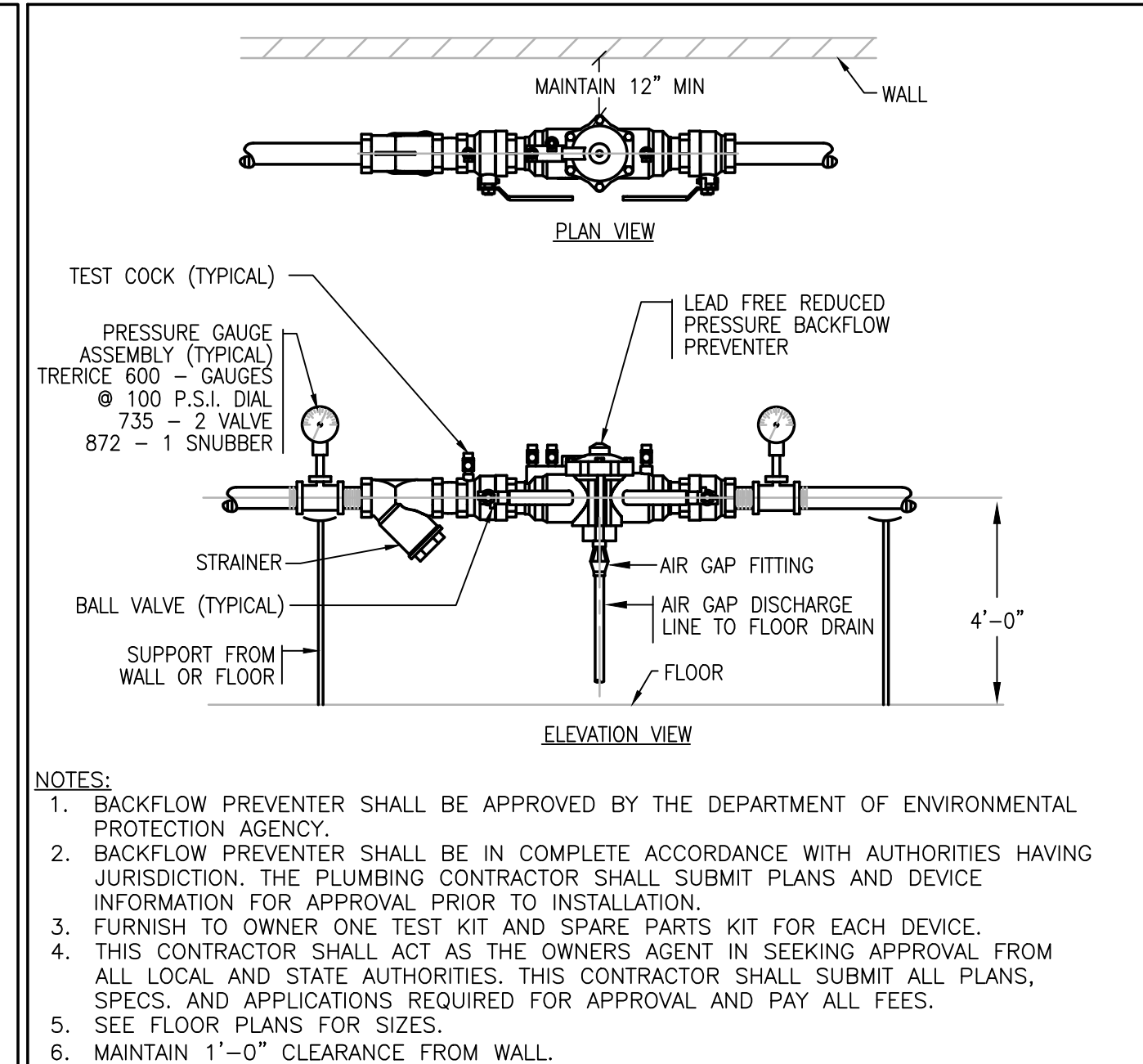
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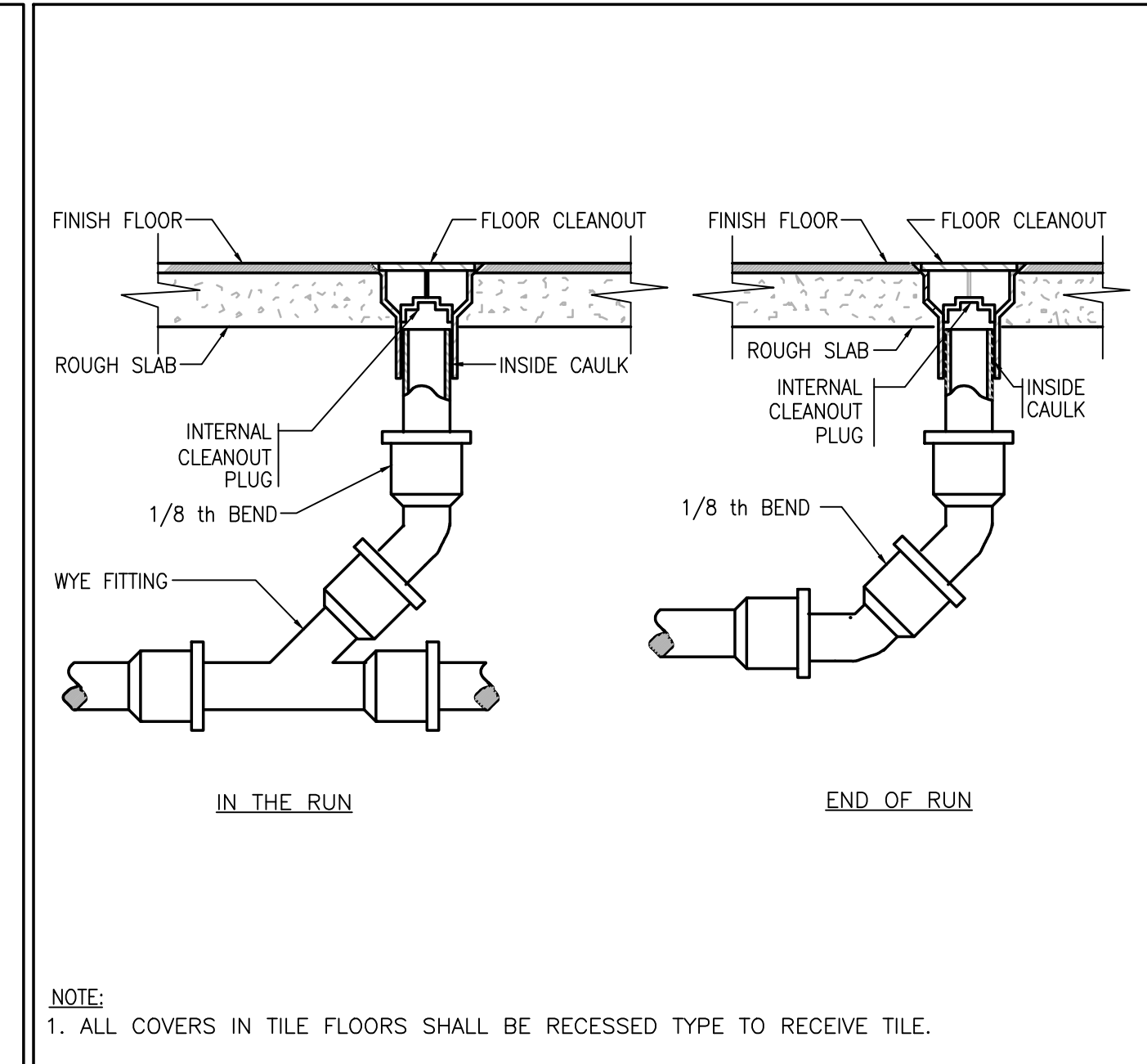
1 DOMESTIC WATER METER DETAIL NTS



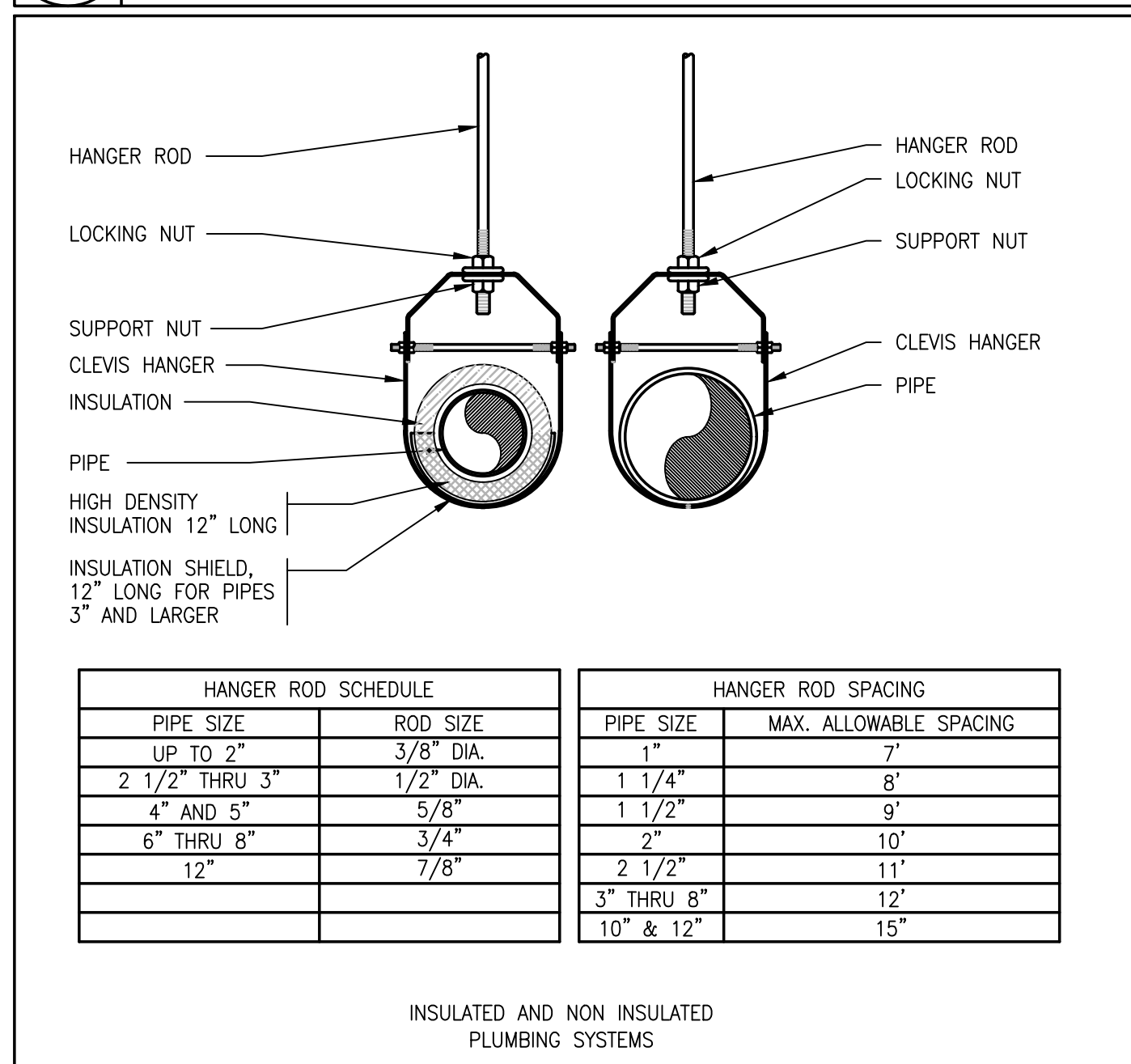
2 PIPING SLEEVE DETAIL NTS



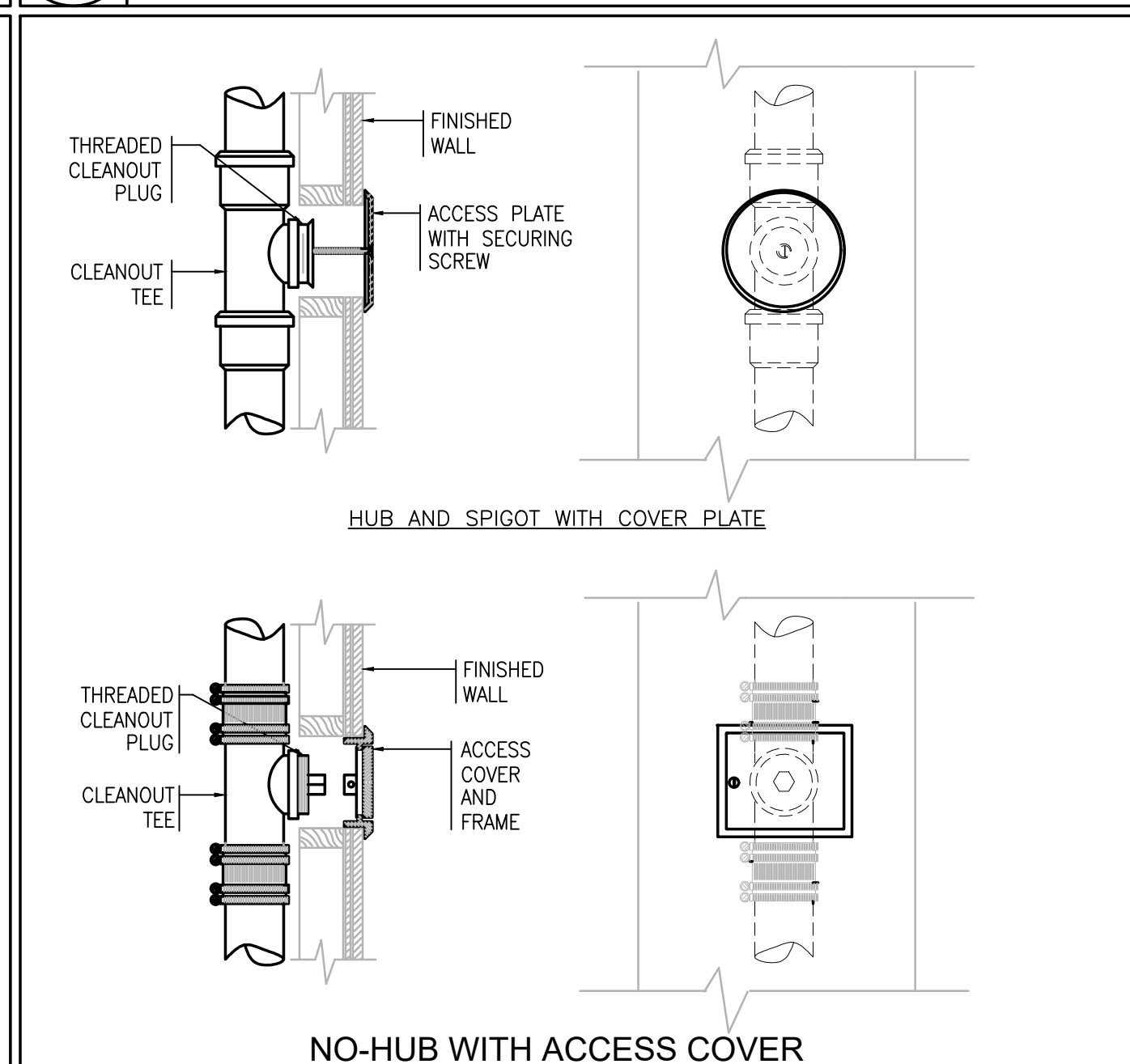
3 RPZ BACKFLOW PREVENTER DETAIL NTS



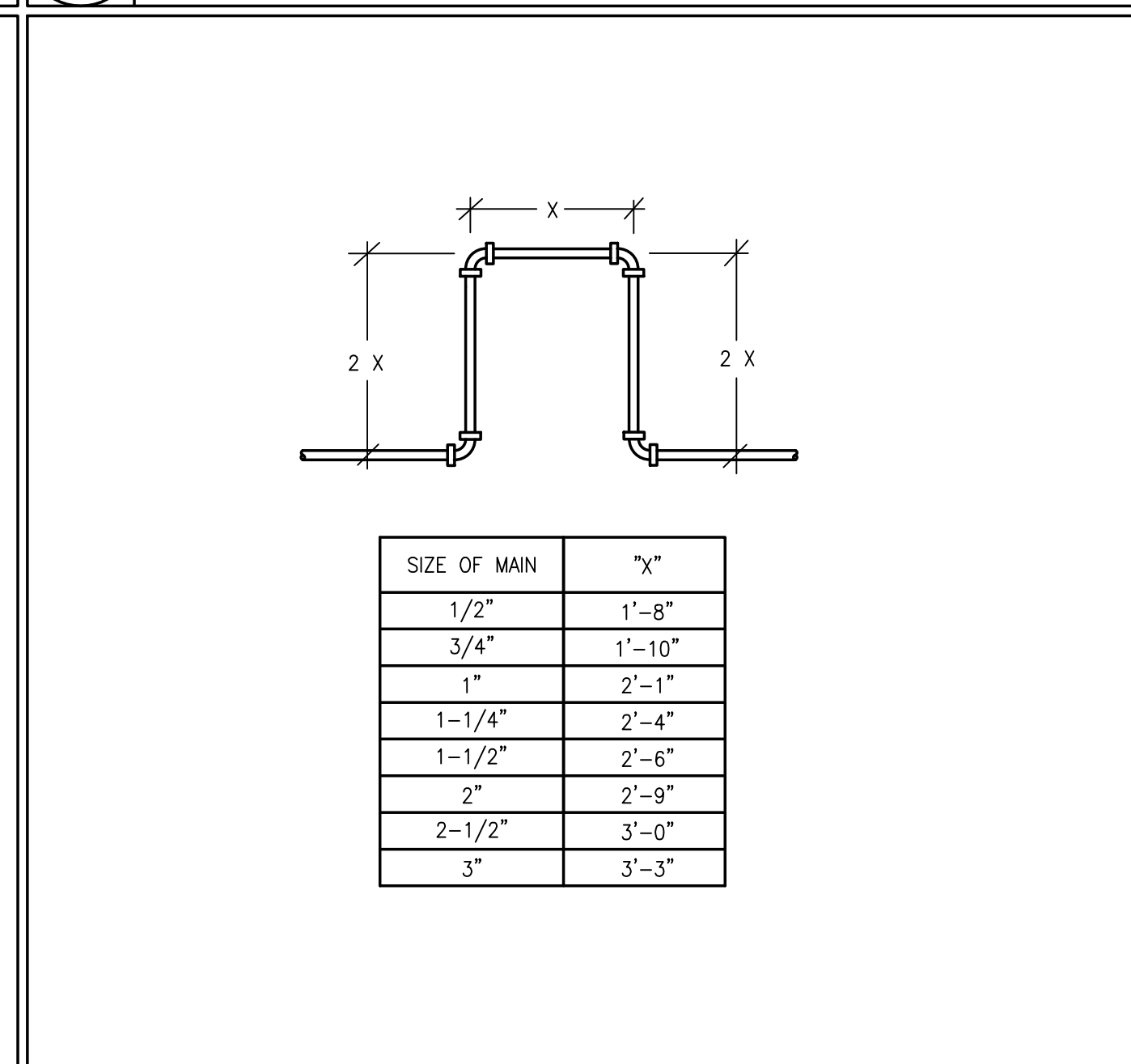
4 FLOOR CLEANOUT DETAIL NTS



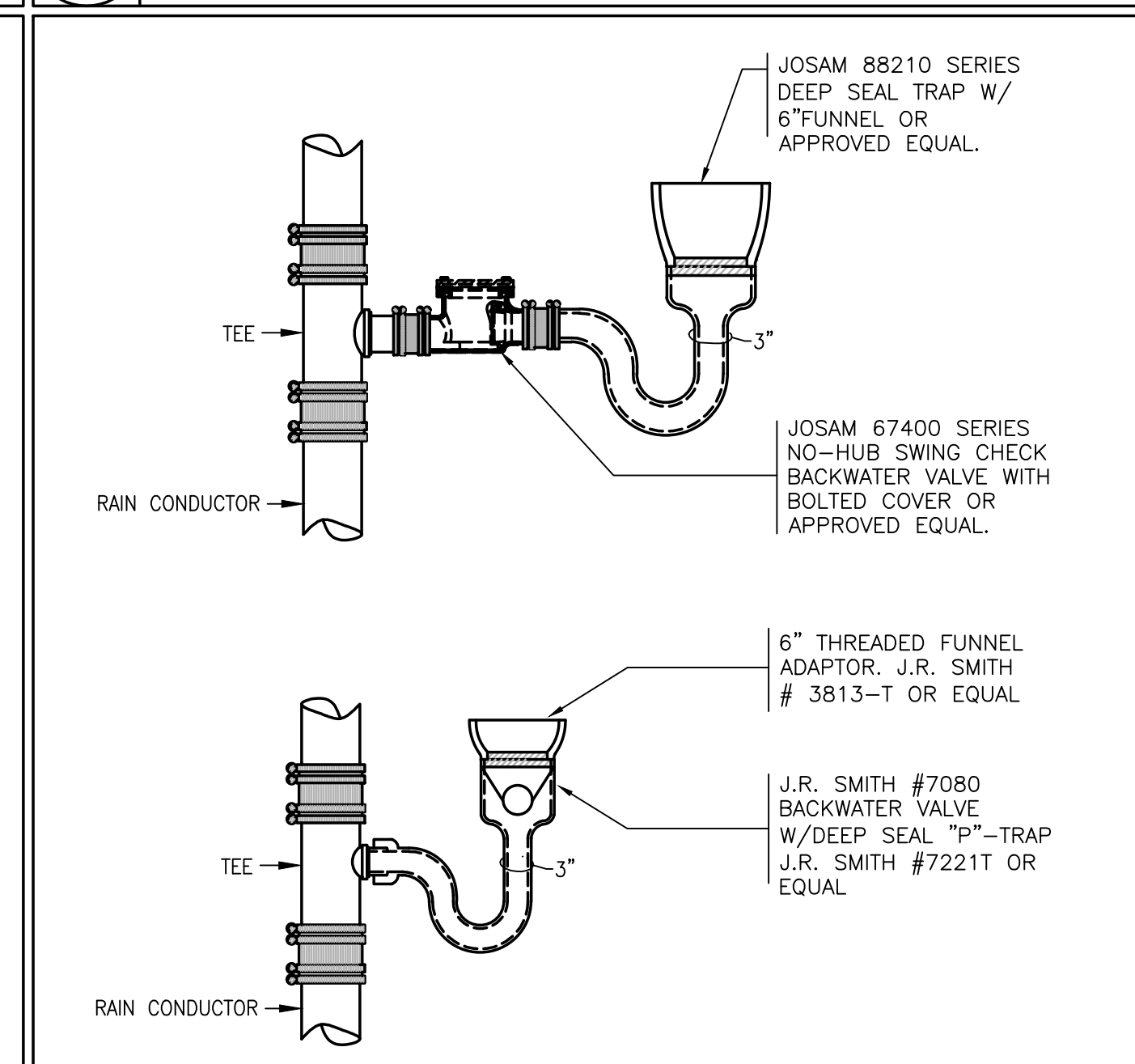
5 CLEVIS PIPE HANGER DETAIL NTS



6 WALL CLEANOUTS DETAIL NTS



7 EXPANSION LOOP DETAIL NTS



8 OPEN END DRAIN DETAIL NTS

HANGER ROD SCHEDULE		HANGER ROD SPACING	
PIPE SIZE	ROD SIZE	PIPE SIZE	MAX. ALLOWABLE SPACING
UP TO 2"	3/8" DIA.	1"	7'
2 1/2" THRU 3"	1/2" DIA.	1 1/4"	8'
4" AND 5"	5/8"	1 1/2"	9'
6" THRU 8"	3/4"	2"	10'
12"	7/8"	2 1/2"	11'
		3" THRU 8"	12'
		10" & 12"	15'

INSULATED AND NON INSULATED PLUMBING SYSTEMS

PREPARED BY



REGISTERED PROFESSIONAL



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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Plumbing Details

NO. REVISIONS DATE

DRAWN BY: RLB
DESIGNED BY: RHB
CHECKED BY: RHB
ISSUE DATE: 7/2/21
BETA JOB NO.: 6050

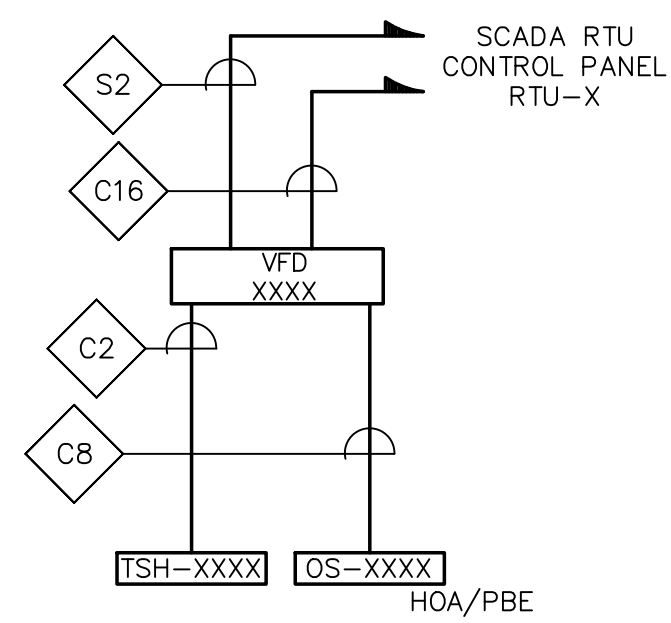
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UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

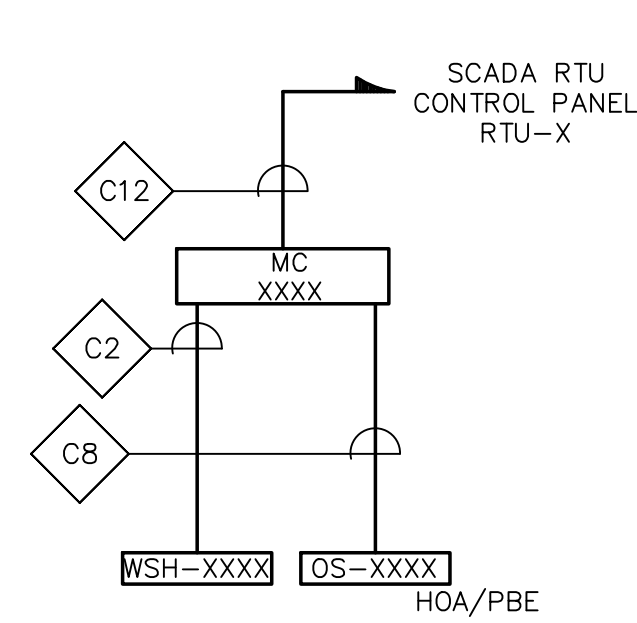
P-0.3



**CONTROL BLOCK WIRING DIAGRAM
PRIMARY SLUDGE PUMPS**
NOT TO SCALE

TYPICAL FOR:

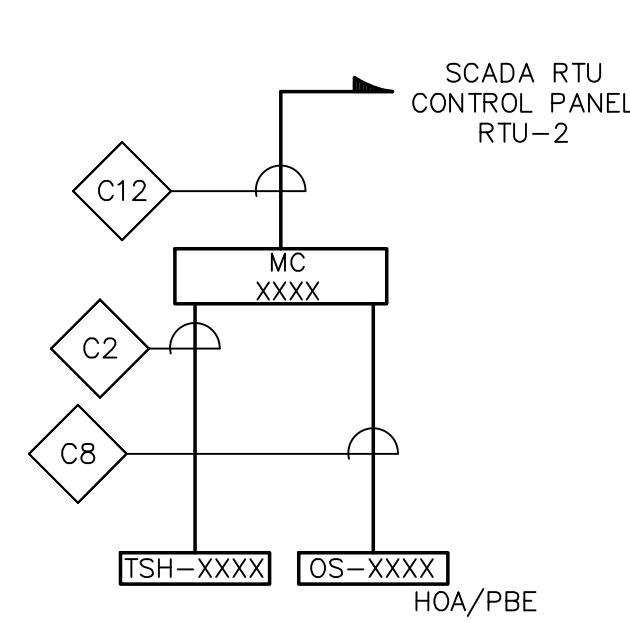
- VFD-2201/OS-2201/TSH-2201 - RTU-2
- VFD-2202/OS-2202/TSH-2202 - RTU-2
- VFD-2203/OS-2203/TSH-2203 - RTU-2
- VFD-2204/OS-2204/TSH-2204 - RTU-2



**CONTROL BLOCK WIRING DIAGRAM
PRIMARY CLARIFIER DRIVES**
NOT TO SCALE

TYPICAL FOR:

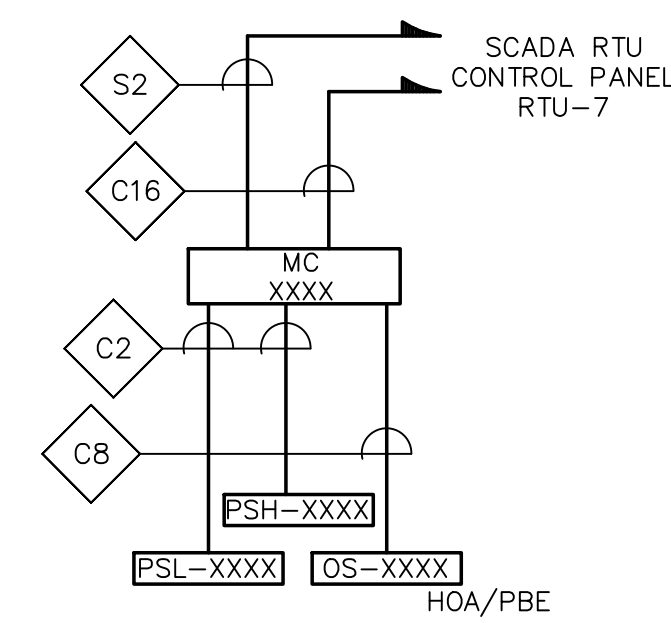
- MC-2101/OS-2101/WSH-2101 - RTU-2
- MC-2102/OS-2102/WSH-2102 - RTU-2
- MC-2103/OS-2103/WSH-2103 - RTU-2
- MC-2104/OS-2104/WSH-2104 - RTU-2



**CONTROL BLOCK WIRING DIAGRAM
PRIMARY SCUM PUMPS**
NOT TO SCALE

TYPICAL FOR:

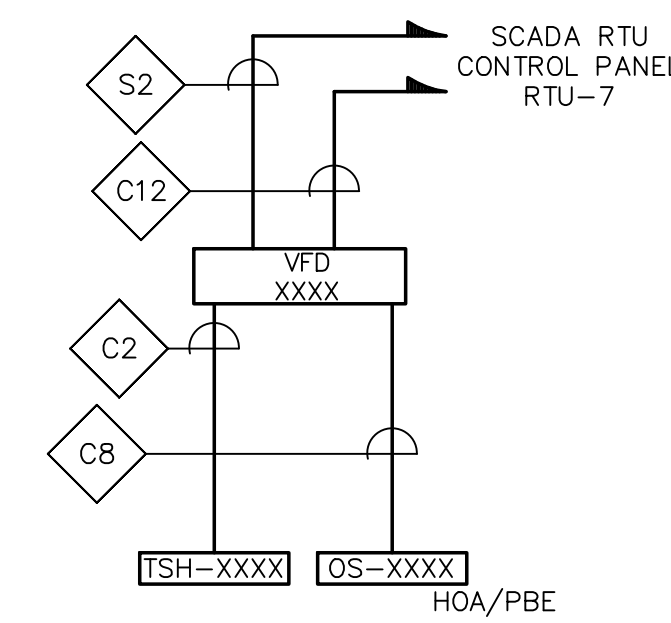
- MC-2301/OS-2301/TSH-2301
- MC-2302/OS-2302/TSH-2302



**CONTROL BLOCK WIRING DIAGRAM
GRIT BLOWERS**
NOT TO SCALE

TYPICAL FOR:

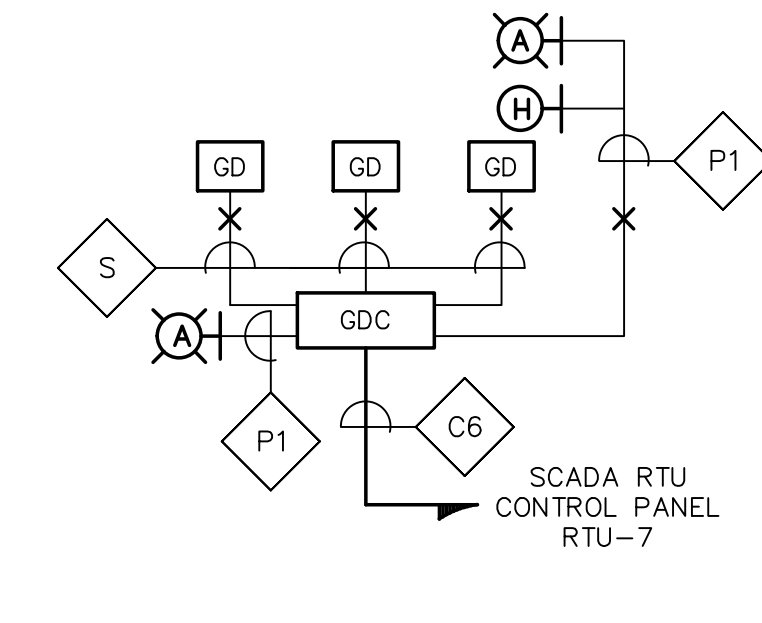
- MC-1201/OS-1201/PSL-1201/PSH-1201
- MC-1202/OS-1202/PSL-1202/PSH-1202



**CONTROL BLOCK WIRING DIAGRAM
ODOR CONTROL BLOWER**
NOT TO SCALE

TYPICAL FOR:

- VFD-8101/OS-8101/TSH-8101



**CONTROL BLOCK WIRING DIAGRAM
GAS DETECTION SYSTEM**
NOT TO SCALE

PREPARED BY



REGISTERED PROFESSIONAL



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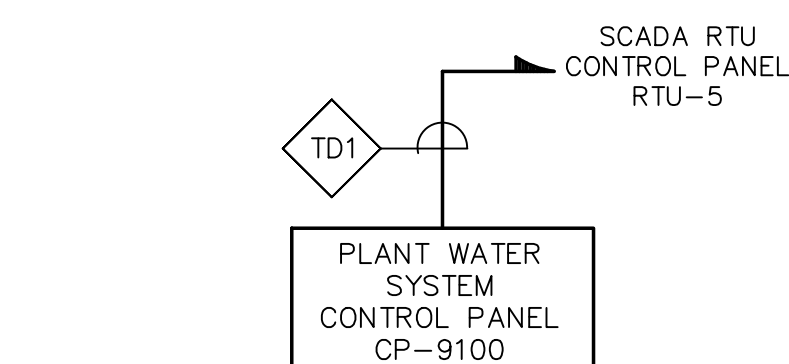
PROJECT

**Taunton Wastewater
Treatment Facility
Improvements
Phase 1**

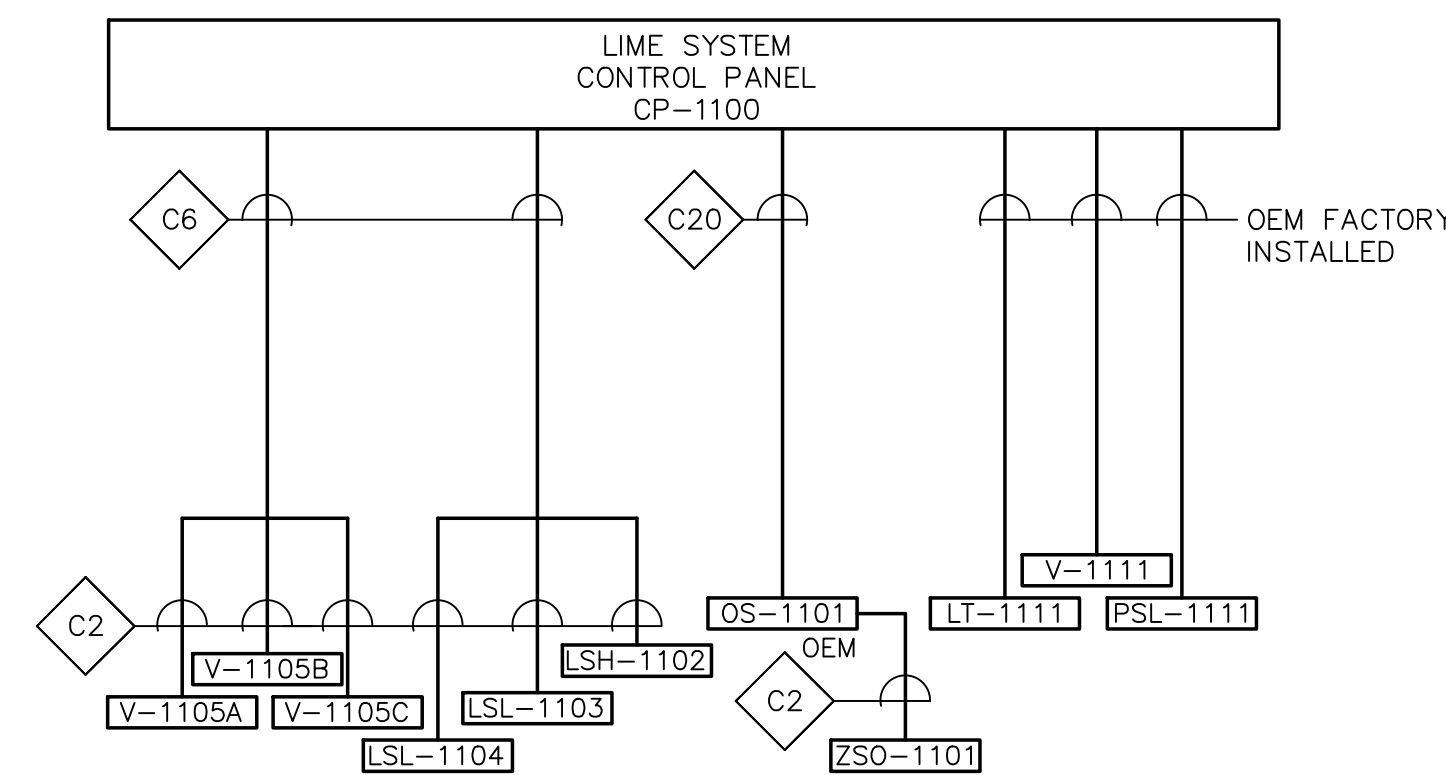
Taunton, MA

TITLE

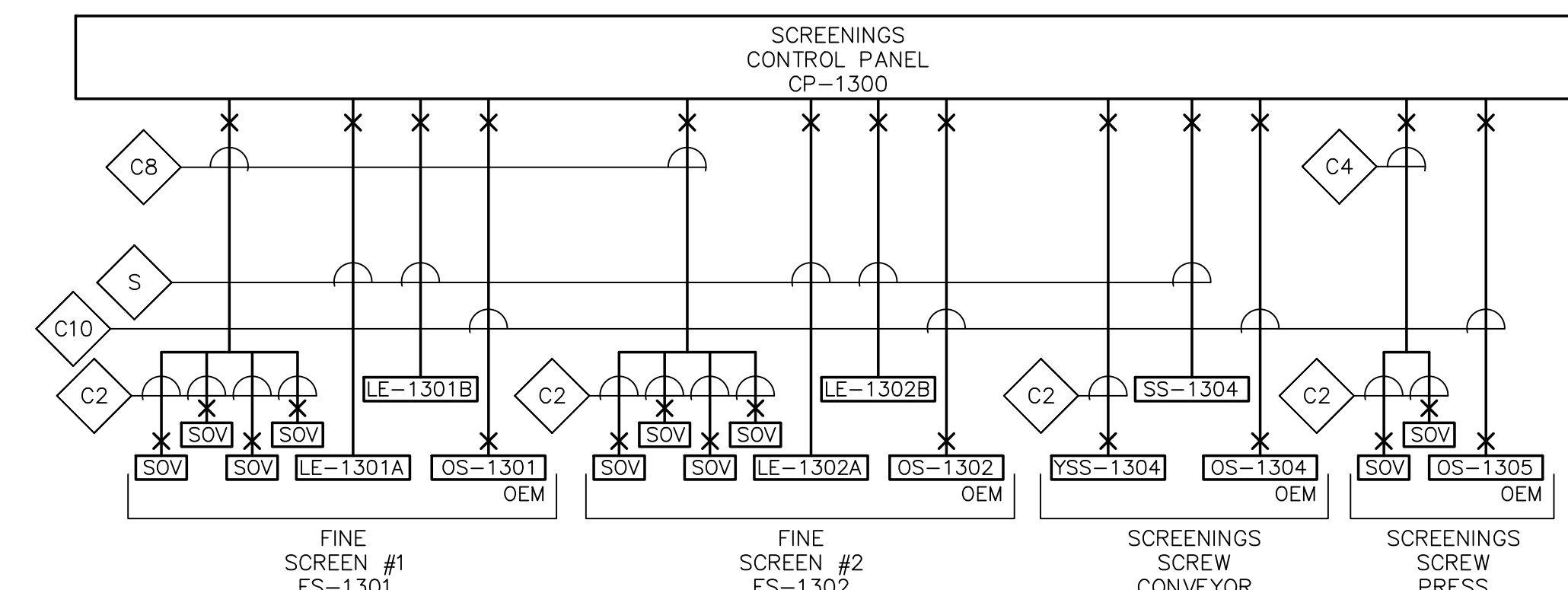
**ELECTRICAL
CONTROL BLOCK
WIRING
DIAGRAMS**



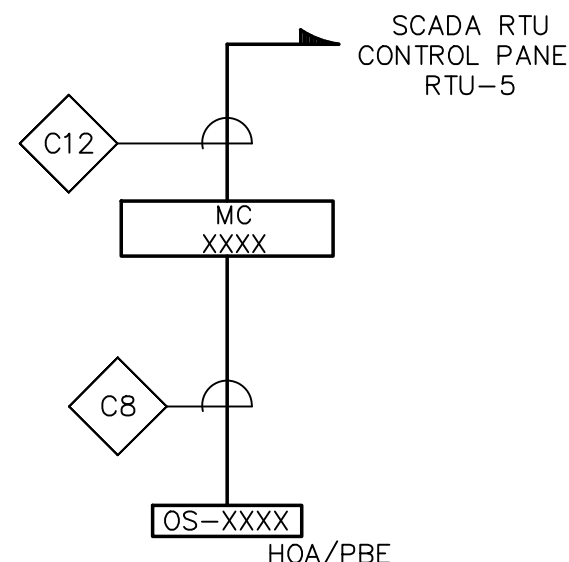
**CONTROL BLOCK WIRING DIAGRAM
PLANT WATER SYSTEM**
NOT TO SCALE



**CONTROL BLOCK WIRING DIAGRAM
LIME SYSTEM**
NOT TO SCALE



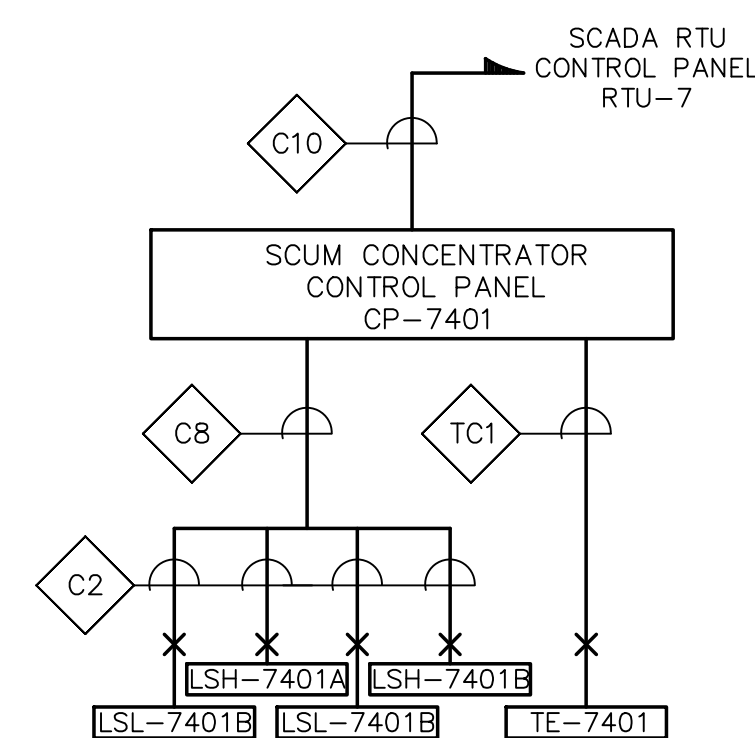
**CONTROL BLOCK WIRING DIAGRAM
HEAD WORKS SCREENINGS**
NOT TO SCALE



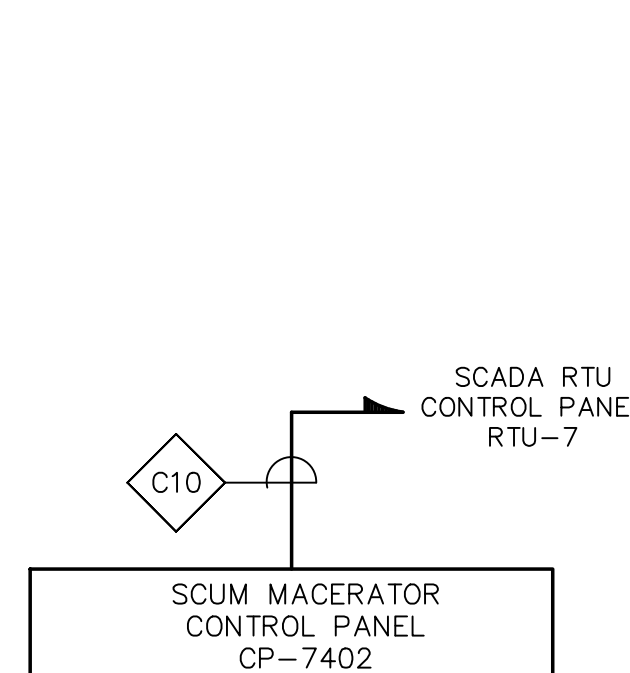
**CONTROL BLOCK WIRING DIAGRAM
SANITARY WASTE PUMPS**
NOT TO SCALE

TYPICAL FOR:

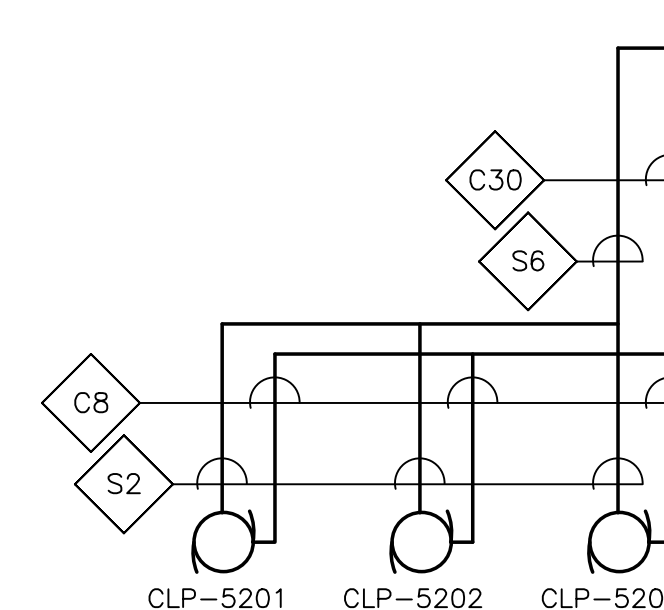
- MC-9201/OS-9201
- MC-9202/OS-9202



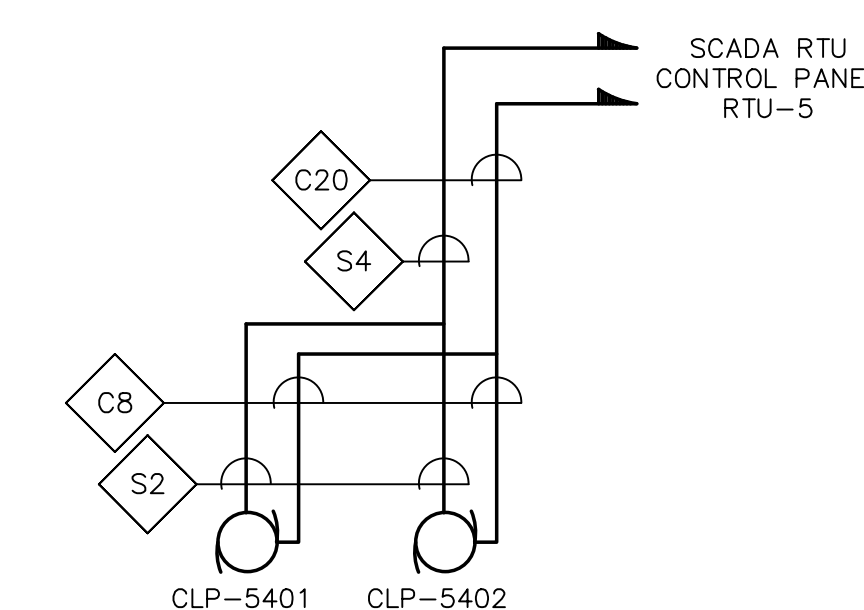
**CONTROL BLOCK WIRING DIAGRAM
SCUM CONCENTRATOR**
NOT TO SCALE



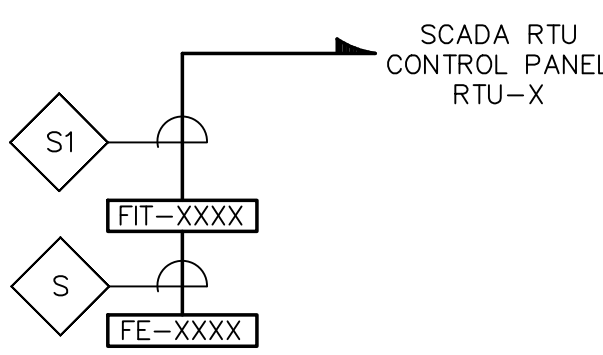
**CONTROL BLOCK WIRING DIAGRAM
SCUM MACERATOR**
NOT TO SCALE



**CONTROL BLOCK WIRING DIAGRAM
CHLOR. CHEMICAL FEED PUMPS**
NOT TO SCALE



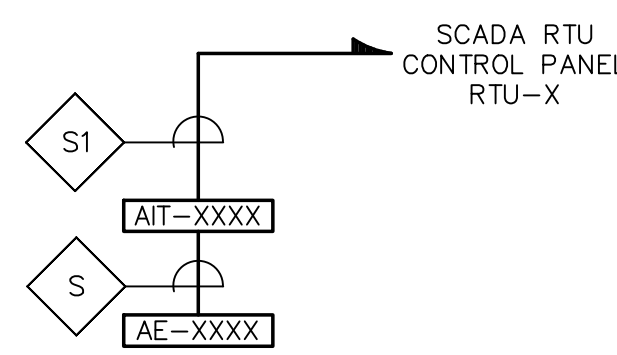
**CONTROL BLOCK WIRING DIAGRAM
DE-CHLOR. CHEMICAL FEED PUMPS**
NOT TO SCALE



**CONTROL BLOCK WIRING DIAGRAM
FLOW METERS**
NOT TO SCALE

TYPICAL FOR:

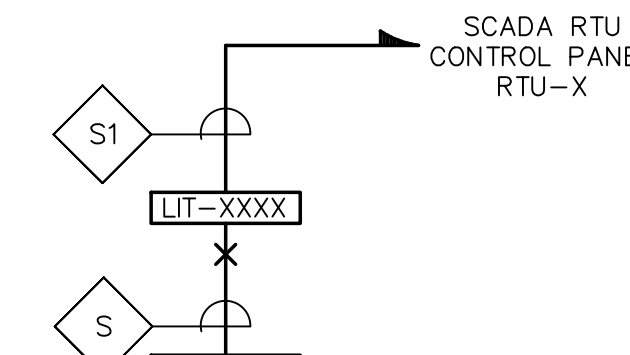
- FE-2205/FIT-2205 - RTU-2
- FE-5502/FIT-5502 - RTU-5
- FE-5503/FIT-5503 - RTU-5



**CONTROL BLOCK WIRING DIAGRAM
ANALYZERS**
NOT TO SCALE

TYPICAL FOR:

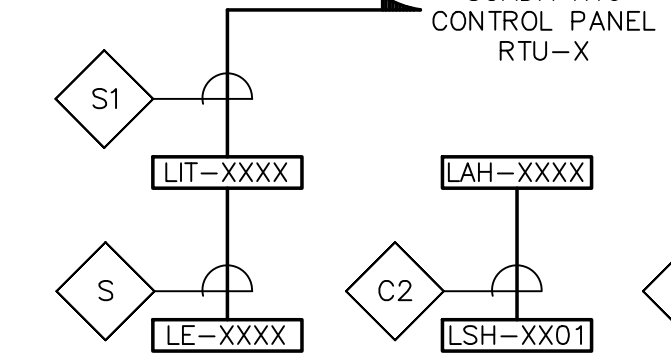
- AE-5504/AIT-5504 - RTU-5
- AE-5505/AIT-5505 - RTU-5



**CONTROL BLOCK WIRING DIAGRAM
SCUM & SANITARY WELLS ULTRASONIC LEVEL TRANSMITTERS**
NOT TO SCALE

TYPICAL FOR:

- LE-2303/LIT-2303 - RTU-2
- LE-2304/LIT-2304 - RTU-2
- LE-9203/LIT-9203 - RTU-5



**CONTROL BLOCK WIRING DIAGRAM
CHEMICAL TANKS LEVEL MONITORING**
NOT TO SCALE

TYPICAL FOR:

- LE-5101/LIT-5101/LSH-5101/LAH-5101/LSH-5102 - RTU-5
- LE-5301/LIT-5301/LSH-5301/LAH-5301/LSH-5302 - RTU-5

NO. REVISIONS DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

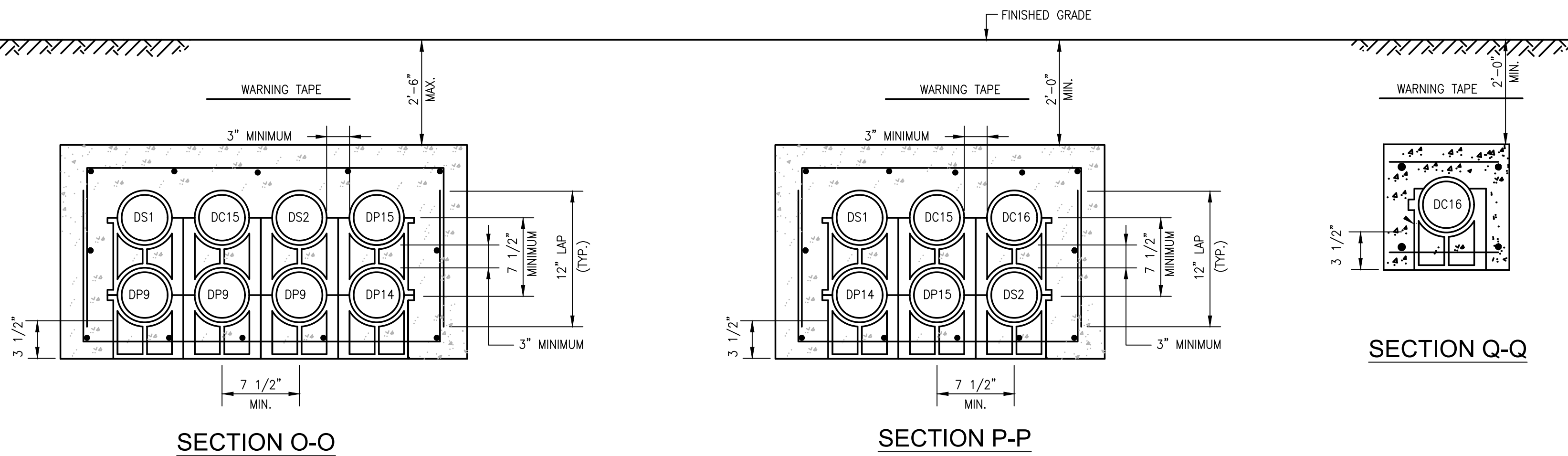
SHEET NO.

E-0.17

POWER DUCT / CABLE SCHEDULE				
DUCT NO.	SIZE	CONDUCTORS	FROM	TO
DP14	4"	(4) 250kcmil, #4 GND	7DP1	1DP1
DP15	2"	(4) #6, #10 GND	7LP1	1LP1

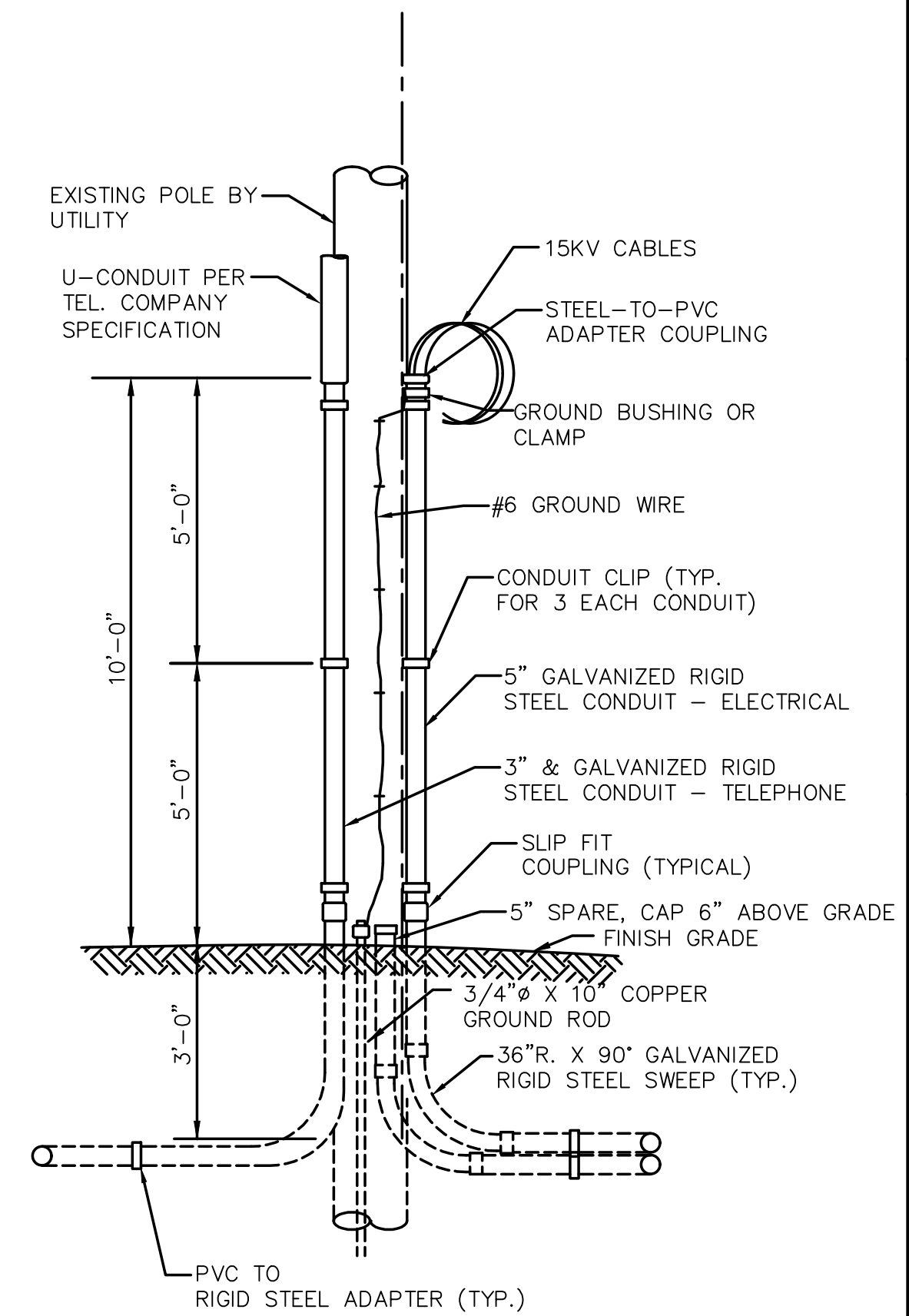
SCADA I/C DUCT / CABLE SCHEDULE				
DUCT NO.	SIZE	CONDUCTORS	FROM	TO
DS1	3"	(8) 2/C#16 TSP	HEADWORKS EQUIPMENT VIA ELECTRICAL ENCL.	RTU-7 SCADA CONTROL PANEL
DS2	3"	(60) #14	HEADWORKS EQUIPMENT VIA ELECTRICAL ENCL.	RTU-7 SCADA CONTROL PANEL

COMMUNICATION DUCT / CABLE SCHEDULE				
DUCT NO.	SIZE	CONDUCTORS	FROM	TO
DC15	3"	12 STRAND FIBER OPTIC CABLE (SCADA)	SLUDGE HANDLING BLDG. FIBER PATCH PANEL	HEADWORKS ELECTRICAL ENCL. FIBER PATCH PANEL
DC16	3"	3-SECTION INNER DUCT WITH FIRE ALARM CABLING FOR DEVICE INITIATING AND AND DEVICE ALARM CIRCUITS	SLUDGE HANDLING BLDG. 7FACP	HEADWORKS BUILDING FIRE ALARM DEVICES

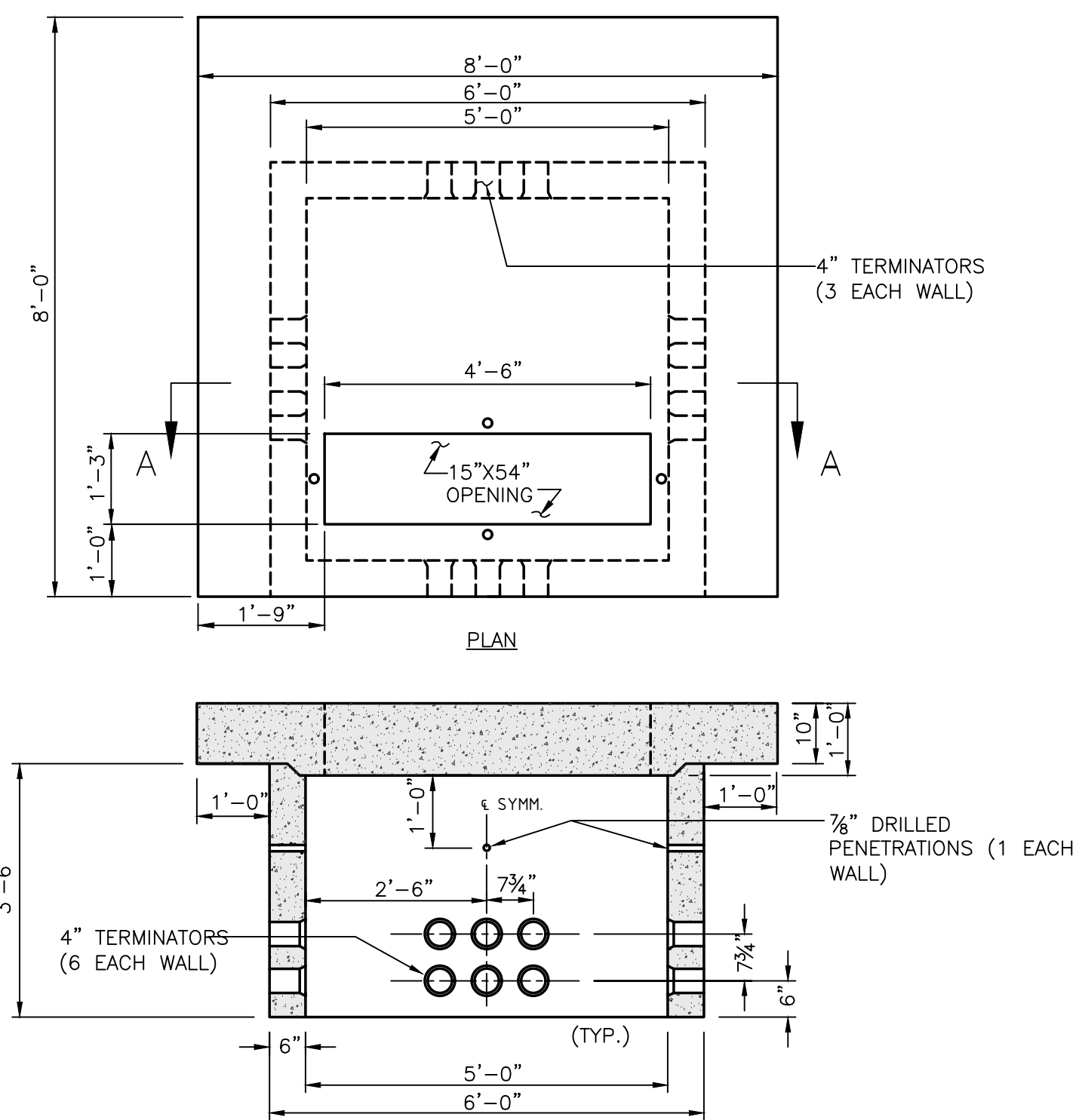


- NOTES:
- BACKFILL DUCT BANK IN LAYERS AND MANUALLY TAMP OR "PUDDLE" CONCRETE FILL. PROVIDE RED DUCT BANK MARKER TAPES, READING "CAUTION - ELECTRICAL LINES BELOW", OVER ENTIRE LENGTH OF DUCTLINE. LOCATE TAPES 12 INCHES BELOW GRADE. PROVIDE A TAPE FOR EVERY 12 INCHES OF WIDTH OF DUCTLINE.
 - A MINIMUM OF 12" SEPARATION SHALL BE KEPT BETWEEN DUCT BANK SECTIONS WITHIN SAME TRENCH.

DUCTBANK SECTIONS - PART 2
NO SCALE

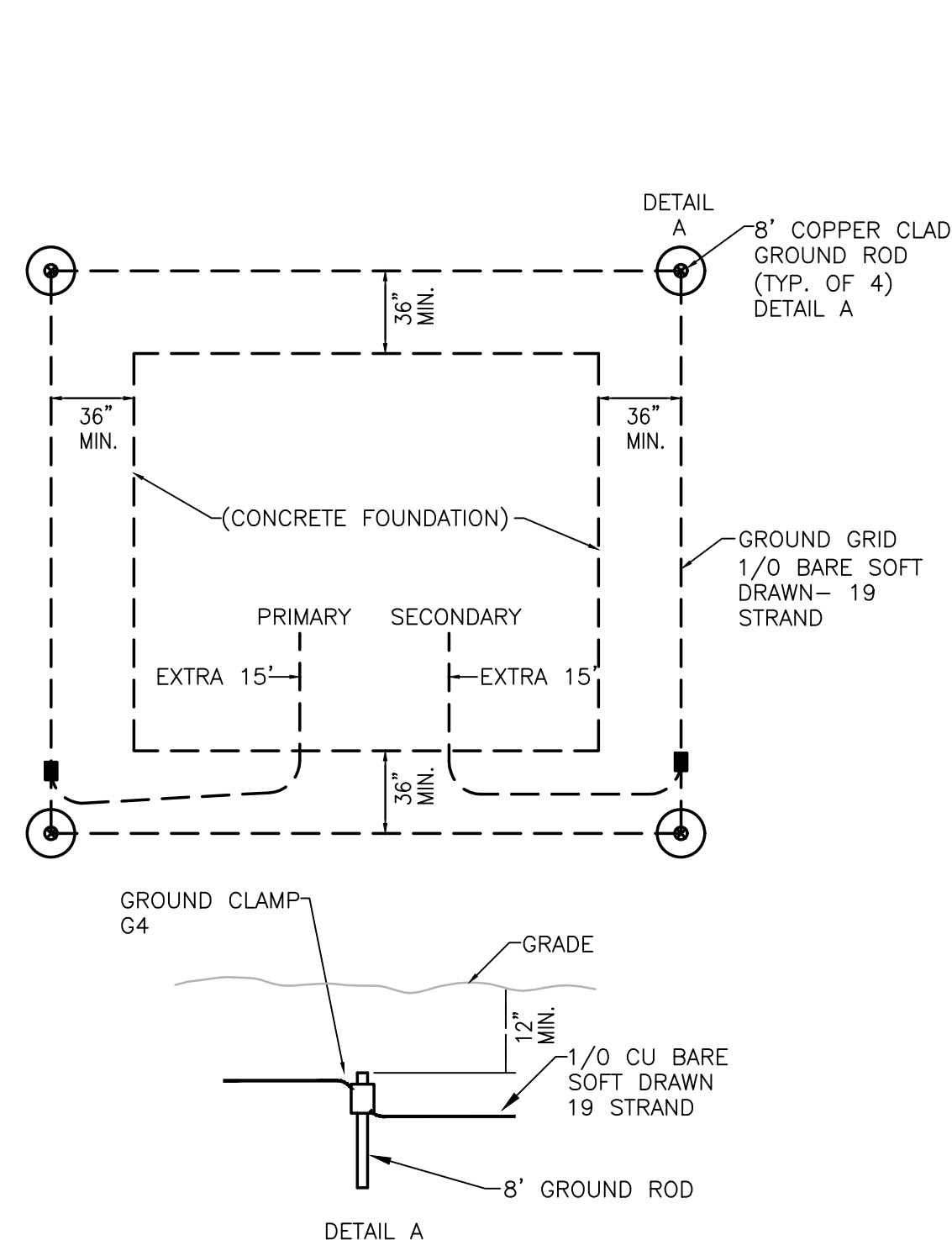


UTILITY POLE SERVICE
RISER DETAIL
NOT TO SCALE

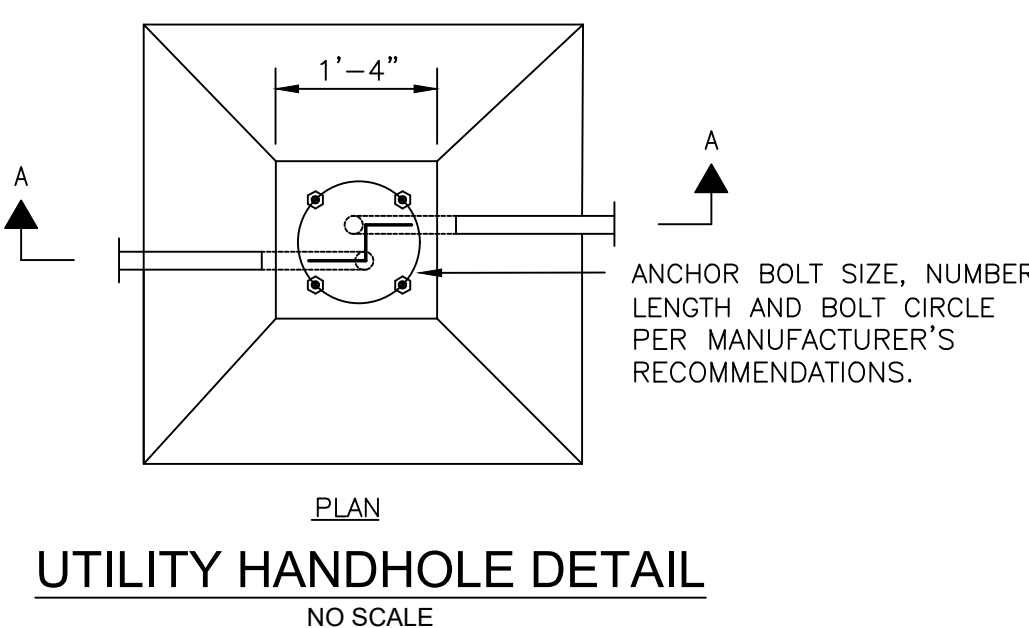
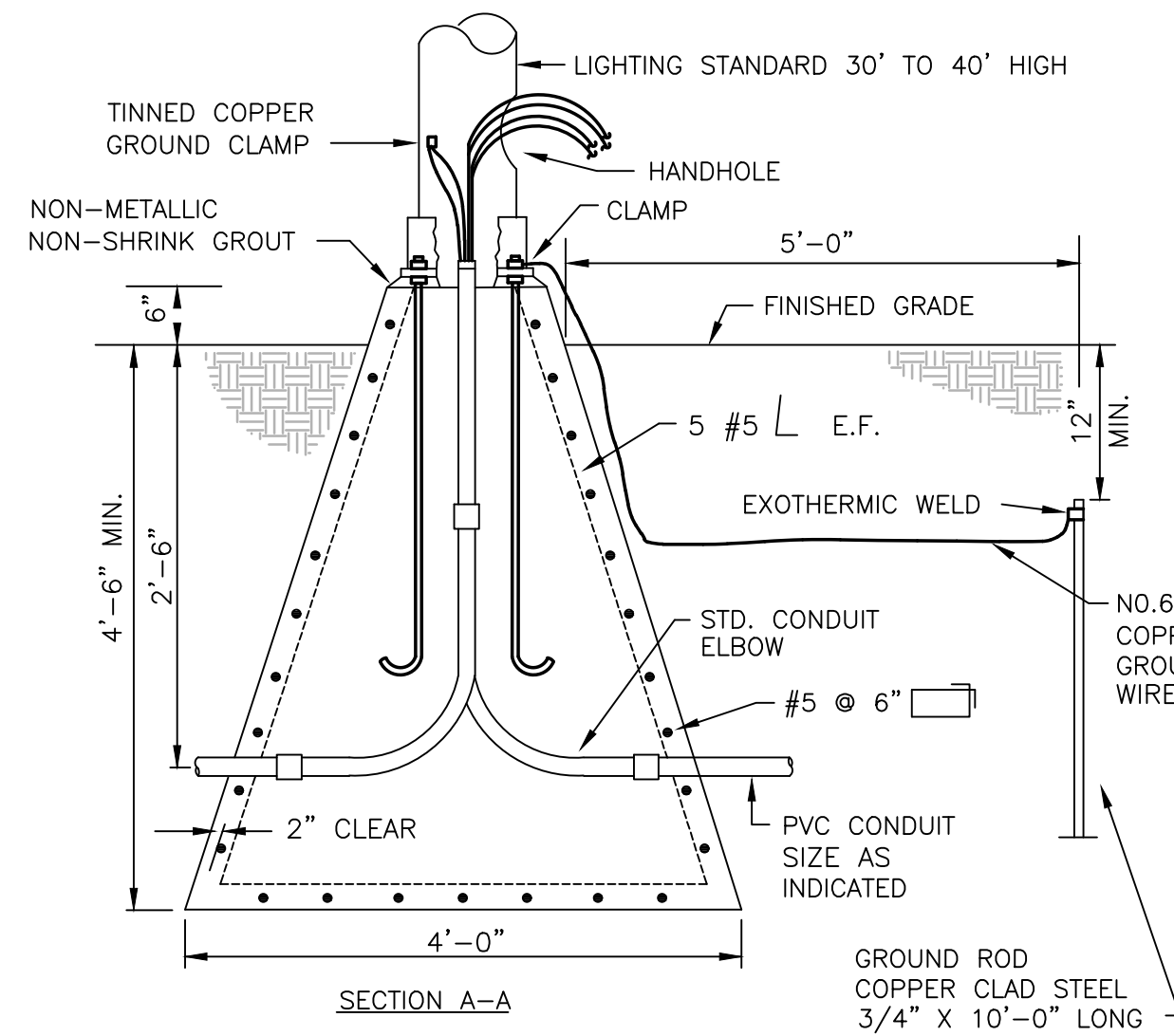


- NOTES:
- CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
 - DESIGN LOADING: AASHTO HS20-44, 0 TO 5 FEET COVER.
 - DESIGN SPECIFICATIONS - ACI 318 & AASHTO LOAD FACTOR DESIGN METHOD.
 - STEEL REINFORCEMENT CONFORMS TO ASTM A615, GRADE 60. MINIMUM STEEL COVER 1 1/2".
 - ALL TERMINATORS SHALL HAVE BELL ENDS FLUSH WITH THE INSIDE WALL.

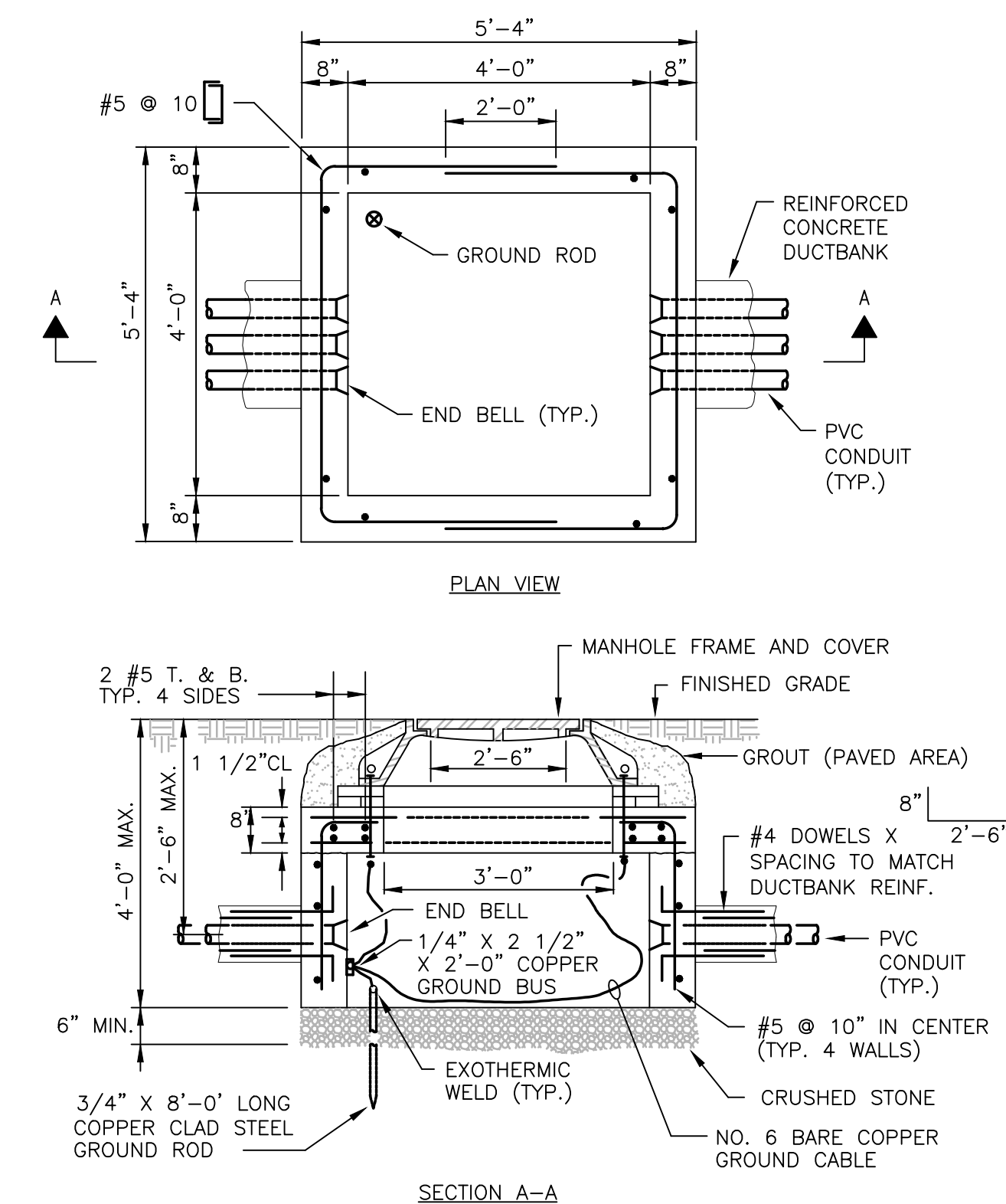
TRANSFORMER PAD
NO SCALE



PAD MOUNTED TRANSFORMER
GROUNDING PLAN
NO SCALE



UTILITY HANDHOLE DETAIL
NO SCALE



- NOTES:
- CHIMNEY HEIGHT IS KEPT TO MINIMUM TO FACILITATE PLACING COMPLETED SPLICES IN HANDHOLE FROM ABOVE GRADE.
 - CONCRETE PER SPECIFICATIONS WITH MINIMUM STRENGTH OF 5,000 PSI AT 28 DAYS.
 - PROVIDE HANDHOLE FRAME, RING AND COVER.
 - REFER TO DUCTBANK SECTIONS FOR THE REQUIRED NUMBER OF CONDUIT ENTRANCES. PROVIDE CONDUIT ENTRY SPACE ON NON-USED SIDES FOR A MINIMUM (8) 4" FUTURE CONDUITS.

UTILITY HANDHOLE DETAIL
NO SCALE

PREPARED BY



REGISTERED PROFESSIONAL



SUBCONSULTANT



Mechanical/Electrical Engineers
150 Grossman Drive, Suite 309
Braintree, Massachusetts 02184
617.328.9215
web: www.sar.com

PROJECT

**Taunton Wastewater
Treatment Facility
Improvements
Phase 1**

Taunton, MA

TITLE

**ELECTRICAL
DUCT BANK
SECTIONS & SITE
DETAILS**

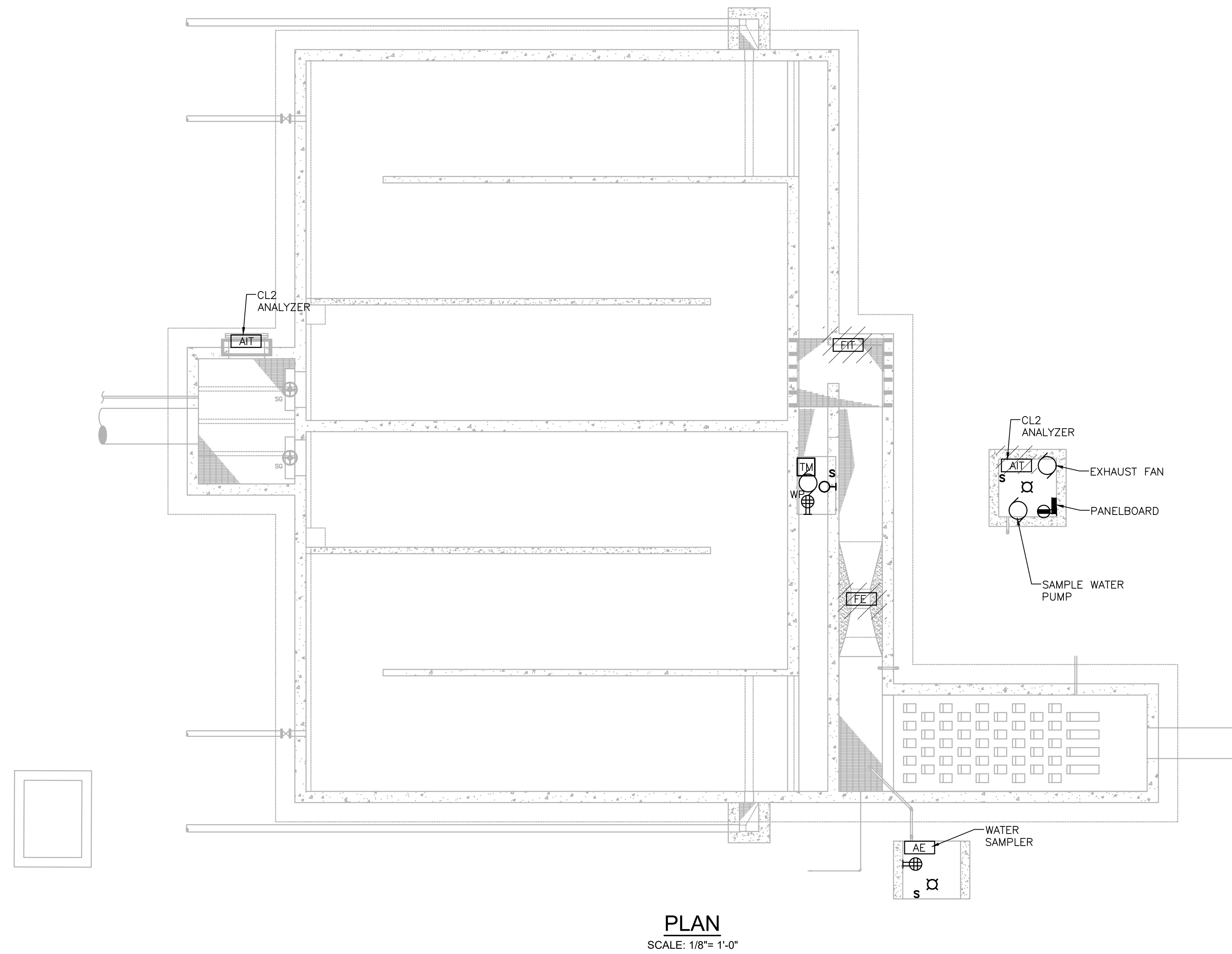
NO.	REVISIONS	DATE

DRAWN BY: RB
DESIGNED BY: MC
CHECKED BY: MC
ISSUE DATE: 7/2/21
BETA JOB NO.: 6050

SCALE

SHEET NO. E-0.24

6/30/2021 10:15 AM W:\T-PROJECTS\T-18009.00 - TAUNTON WWTF UPGRADES\ELECTRICAL DEPARTMENT\18009.00 ELEC CHLORINE CONTACT CHAMBER-PHASE 1.DWG (BETA STB BW/STB)



PREPARED BY



REGISTERED PROFESSIONAL



SUBCONSULTANT



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Braintree, Massachusetts 02184
617.328.9215
web: www.sar.com

PROJECT

**Taunton Wastewater
Treatment Facility
Improvements
Phase 1**

Taunton, MA

TITLE

**Electrical Demolition
Chlorine Contact Tank
Plan**

NO.	REVISIONS	DATE

DRAWN BY: RLB

DESIGNED BY: MC

CHECKED BY: MC

ISSUE DATE: 7/2/21

BETA JOB NO.: 6050

SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-5.10

