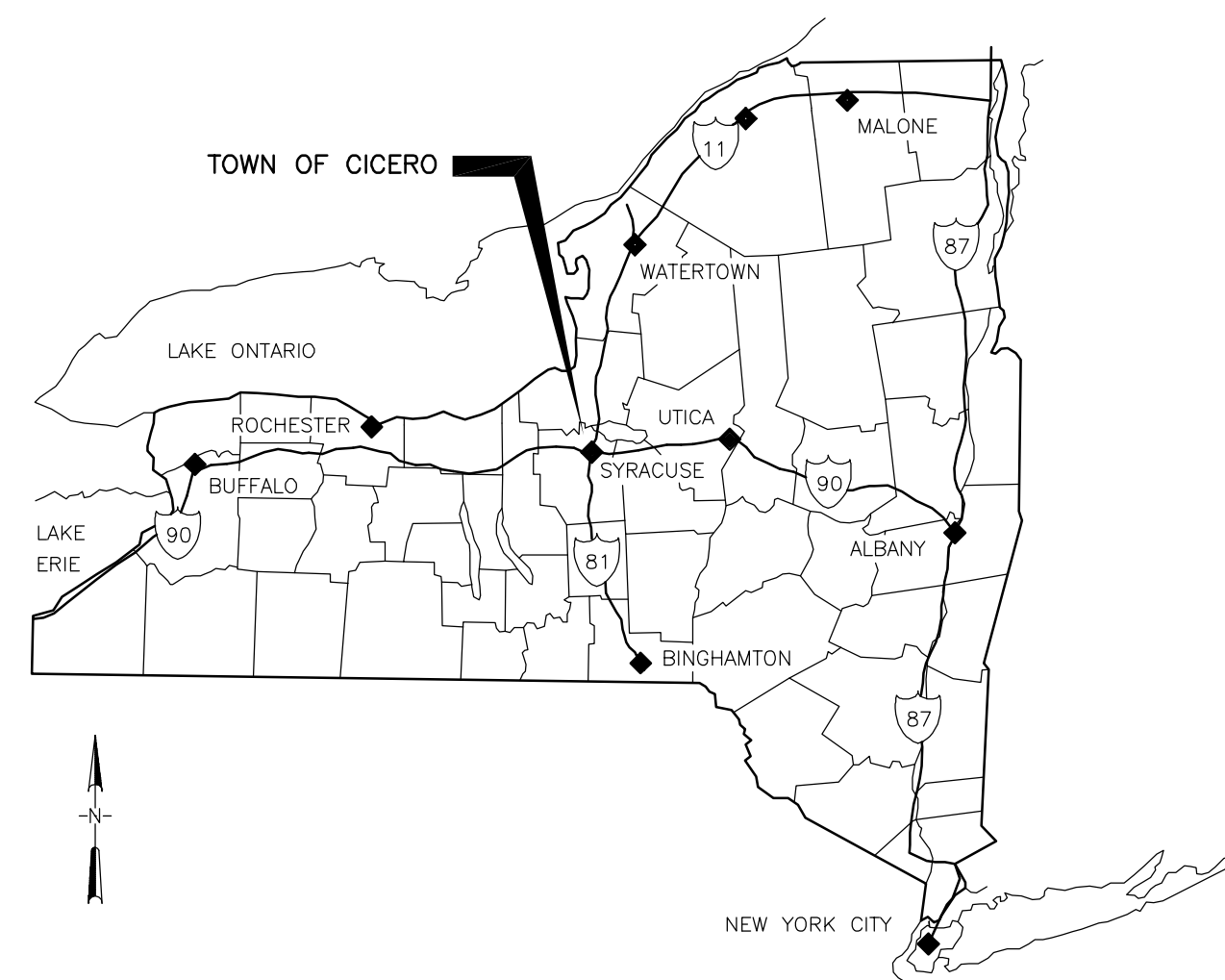
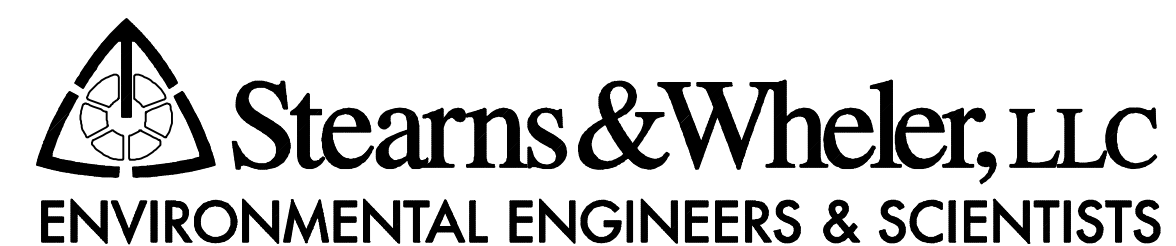


CONTRACT DRAWINGS

BREWERTON WATER POLLUTION CONTROL FACILITY UPGRADE

CONTRACT 1A — GENERAL
 CONTRACT 1B — ELECTRICAL
 CONTRACT 1C — HVAC

2000



ONONDAGA COUNTY
 DEPARTMENT OF DRAINAGE AND SANITATION
 SYRACUSE, NEW YORK

COMMISSIONER:
 RICHARD L. ELANDER, P.E.

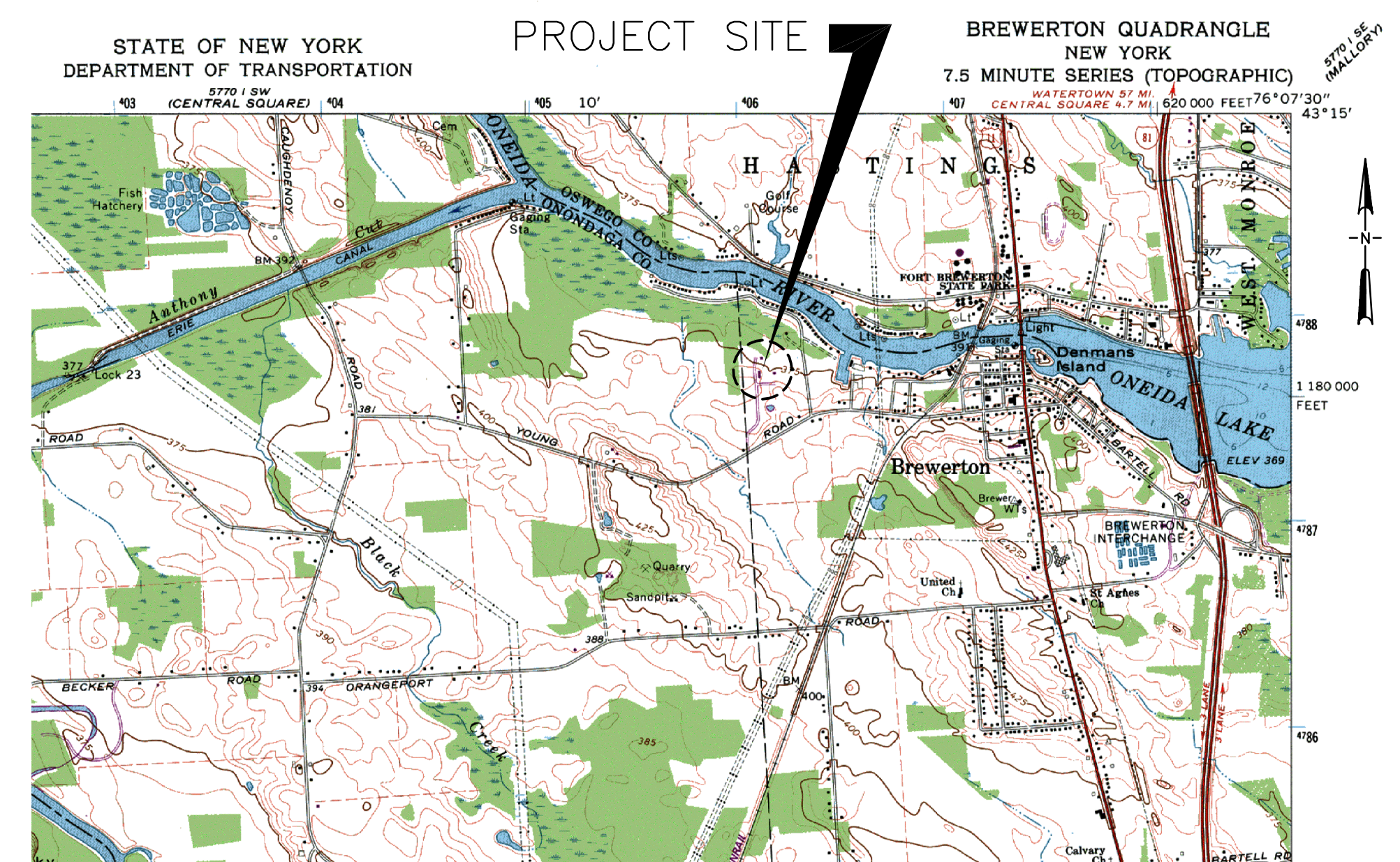
BID REFERENCE NO. 4631

PROJECT NUMBER: 587351

RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: _____ PER: _____



PROJECT LOCATION MAP
 SCALE: 1"=2000'

MAY 2000

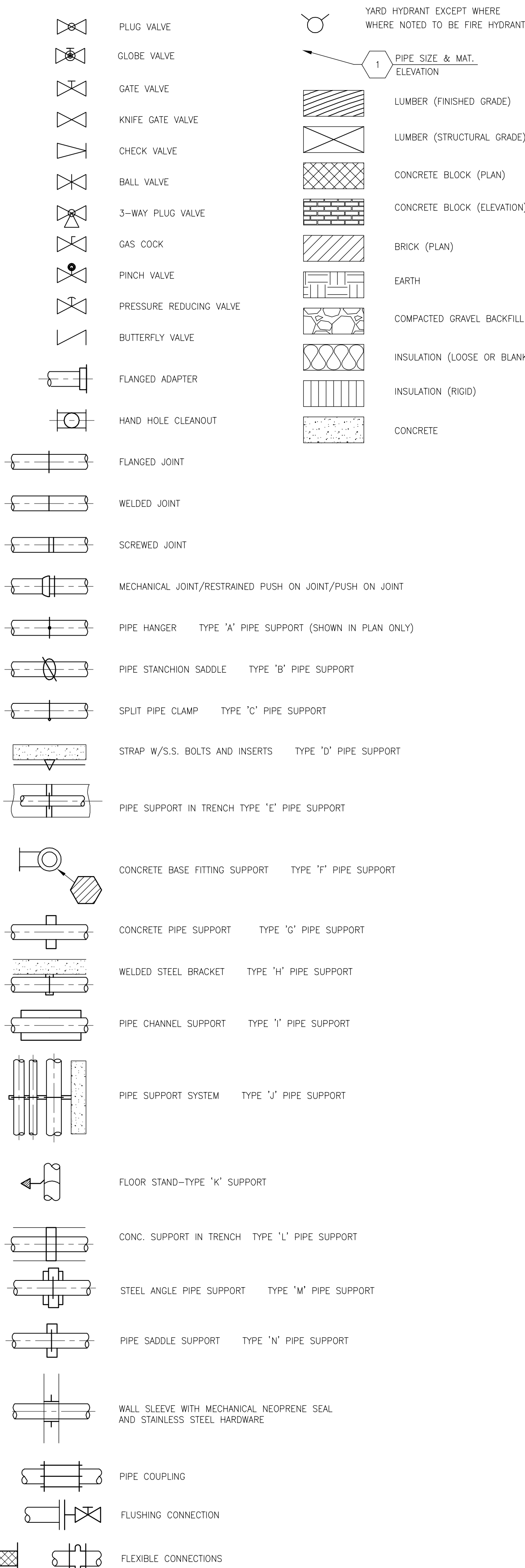
STEARNS & WHEELER PROJECT NUMBER: 9012030

01/20/00 10:00 AM C:\PROJECTS\587351\DRAWINGS\DWG\DWG001.DWG

ABBREVIATIONS

A.B.	ANCHOR BOLT	F.C.	FOOT CANDLE/FLUSHING CONNECTION	O.C.	ON CENTERS	U.N.O.	UNLESS NOTED OTHERWISE
A.C.	ASBESTOS CEMENT	F.D.	FLOOR DRAIN	O.D.	OUTSIDE DIAMETER	UR.	URINAL
ADD'L	ADDITIONAL	FD	FIRE DOOR	O.F.	OUTSIDE FACE	V.	VINYL OR VERTICAL
A.F.F.	ABOVE FINISHED FLOOR	F.E.	FIRE EXTINGUISHER	O.T.	OPEN TRUSS	V.A.T.	VINYL ASBESTOS TILE
A.T.	ASPHALT	F.F.	FAR FACE/ FINISHED FLOOR	OPNG.	OPENING	V.T.	VITRIFIED TILE
AC.T.	ACOUSTIC TILE	FG.	FIBERGLASS	OPP.	OPPOSITE	VERT.	VERTICAL
ADJ.	ADJUSTABLE	F.M.	FORCE MAIN	ORIG.	ORIGINAL	W.	WATER
ADGR.	ADGRATE	F.A.G.	FABRICATE	OPER.	OPERABLE	W/	WITH
ALLOW.	ALLOWANCE	FDN.	FOUNDATION	O.R.P.	OXIDATION REDUCTION POTENTIAL	W.I.	WROUGHT IRON
ALT.	ALTERNATE	FIN.	FINISH			W.G.	WEIR GATE
ALUM.	ALUMINUM	FIN.RAD.	FIN RADIATOR	P.C.F.	POUNDS PER CUBIC FOOT	W.L.	WATER LEVEL
ARCH.	ARCHITECT OR ARCHITECTURAL	FITG.	FITTING	P.R.V.	PRESSURE RELIEF VALVE	W.O.	WINDOW OPENING
ASB.	ASBESTOS	FIX.	FIXTURE	P.S.F.	POUNDS PER SQUARE FOOT	W/O	WITHOUT
ASPH.	ASPHALT	FL.	FLASHING/FLANGE	P.V.	PLUG VALVE	W.S.	WATER SURFACE
ASSY.	ASSEMBLY	FLG.	FLOORING	PSI.	POUNDS PER SQUARE INCH	W.W.F.	WELDED WIRE FABRIC
ACDUS.	ACOUSTICAL (SOUND DEADENING)	FLR.	FLOOR	PVC.	POLYVINYL CHLORIDE	WC.	WOOD CLOSET
		FLUOR.	FLUORESCENT	POLY.	POLYETHYLENE	WD.	WOOD
BET.	BETWEEN	F.O.C.	FACE OF COLUMN	PAR.	PARALLEL	W.P.T.	WORKING POINT
B.F.	BLIND FLANGE	FPRF.	FIREPROOF	PARTN.	PARTITION	WS.	WATERSTOP
B.L. OR B	BUILDING LINE	F.R.P.	FIBERGLASS REINFORCED PLASTIC	PAT.	PATTERN	WT.	WEIGHT
B.M.	BENCH MARK	F.S.	FOOTING STEP	PAVT.	PAVEMENT	W.ST.	WELDED STEEL PIPE
BM.	BEAM	FST	FINAL SETTling TANK	PC.	PIECE	W.V.	WATER VALVE
B.O.F.	BOTTOM OF FOOTING	FT.	FEET	PERF.	PERFORATED	W.H.	WALL HYDRANT
B.U.	BUILT UP	FTG.	FOOTING	PERP.	PERPENDICULAR	W.P.	WHITE PINE
B.V.	BUTTERFLY VALVE	FURR.	FURRING/FURRED	PL.	PLATE/PROPERTY LINE		
BO.	BOARD	F&C	FRAME AND COVER	PLAST.	PLASTER		
BIT.	BITUMINOUS	F&G	FRAME AND GRATING	PLAS.LAM.	PLASTIC LAMINATE		
BLDG.	BUILDING			PLBG.	PLUMBING		
BLK.	BLOCK	G.C.	GENERAL CONTRACTOR	PLR.	PILASTER		
B.P.	BASE PLATE	G.I.	GALVANIZED IRON	PLYWD.	PLYWOOD		
BRG.	BEARING	G.P.M.	GALLONS PER MINUTE	PNL.	PANEL		
BRK.	BRICK	G.V.	GATE VALVE	P.W.	POTABLE WATER		
BRZ.	BRONZE	G.W.F.	GLAZED WALL FINISH	POR.	PORCELAIN		
BOT. OR B	BOTTOM	GA.	GAUGE	PR	PAIR		
		GAL.	GALLON	PREFAB.	PREFABRICATED		
C.B.	CATCH BASIN	GALV.	GALVANIZED	PT.	POINT/PAINT		
C.C.	CENTER TO CENTER	GEN.	GENERATOR	P.S.T.	PRIMARY SETTLING TANKS		
C.F.	CUBIC FEET	GL.	GLASS	P.R.S.	PRESSURE REDUCING STATION		
C.F.M.	CUBIC FEET PER MINUTE	GR.	GRADE				
C.I.	CAST IRON	GRAN.	GRANITE	Q.T.	QUARRY TILE		
C.I.P.	CAST IRON PIPE	GYP.	GYPSPUM				
C.J.	CONSTRUCTION JOINT	GYP.BD.	GYPSPUM BOARD	RAS	RETURN ACTIVE SLUDGE		
C.M.P.	CORRUGATED METAL PIPE	G.M.U.	GLAZED MASONRY UNIT	R.	RISER, REACTION, RADIUS		
C.O.	CLEANOUT			R.D.	ROOF DRAIN		
CONN.	CONNECTION	H. & V.	HEATING AND VENTILATING	R.O.	ROUGH OPENING		
C.P.	CONCRETE PLANK	H.D.	HEAVY DUTY	R.O.B.	RUN OF BANK		
CRS.	COURSE	HDBD.	HARDBOARD	RAD.	RADIUS/RADIATOR		
C.T.	CERAMIC TILE	H.EXCH.	HEAT EXCHANGER	RD.	ROAD		
C.V.	CHECK VALVE	H.W.L.	HIGH WATER LEVEL	R.E.	RIGHT END		
C.W.	COLD WATER/CIRCULAR WASHER	HDWR.	HARDWARE	REC.	RECESS/RECORD		
C.Y.	CUBIC YARD	HGT. OR HT.	HEIGHT	RECIR.	RECIRCULATION		
CAB.	CABINET	HM.	HOLLOW METAL	RED.	REDUCER		
CAT.	CATALYTIC	HORIZ. OR H.	HORIZONTAL	REF.	REFERENCE/REFRIGERATOR		
CEM.	CEMENT	H.P.	HORSEPOWER	R.C.P.	REINFORCED CONCRETE PIPE		
CER.	CERAMIC	H.P.T.	HIGH POINT	REG.	REGISTER		
CL2	CHLORINE	HTR.	HEATER	REINF.	REINFORCING		
CL	CLEAR	HYD.	HYDRANT	REM.	REMOVE		
⊕	CENTER LINE			REP.	REPAIR		
CLG.	CEILING	I.	IRON	REQ'D.	REQUIRED		
CLKG.	CAULKING	I.F.	INSIDE FACE	REV.	REVISE		
CL.F.	CHAIN LINK FENCE	I.D.	INSIDE DIAMETER	RF	ROOF		
COL.	COLUMN, COLOR	INCIN.	INCINERATOR	RFG.	ROOFING		
COMB.	COMBINATION	INCL.	INCLUDE	R.L.	ROOF LEADER		
CONC.	CONCRETE	INF.	INFLUENT	RM.	ROOM		
CONST.	CONSTRUCTION	INSUL.	INSULATION	RUB.	RUBBER		
CONT.	CONTINUOUS	INT.	INTERIOR	RES. FLR.	RESILIENT FLOORING		
CONTR.	CONTRACTOR	INV.	INVERT				
COND.	CONDUIT	I.P.S.	INTERNAL PIPE SIZE	S.	SOUTH		
COR.	CORRIDOR	JCT.	JUNCTION	"S"	SUCTION		
CPLE.	COUPLING	JST.	JOIST	S.F.	SAND FINISH		
C.R.F.	CORROSION RESISTANT FINISH	JST.	JOIST	S.G.	SLIDE GATE		
CL. JT.	CONTROL JOINT	JT.	JOINT	S.J.	STEEL JOIST		
CTR.	CONTRACT	JAN.CLO.	JANITOR'S CLOSET	S.P.	STOP PLATE		
CU.	COPPER			S.S.	STAINLESS STEEL		
CU. IN.	CUBIC INCH	K.C.	KEENE'S CEMENT	S.W.D.	SIDE WATER DEPTH		
				SAD.	SADDLE		
D.F.	DRINKING FOUNTAIN	L.E.	LEFT END	SAN.	SANITARY		
D.J.	DOUBLE JOIST	L.L.	LIVE LOAD	SCH.	SCHEDULE		
D.L.	DEAD LOAD	L.L.V./H.)	LONG LEG VERT./HORIZ.)	SECT.	SECTION		
DET.	DETAIL	L.W.L.	LOW WATER LEVEL	S.E.C.	SEVERE ENVIRONMENTAL CONDITION		
DIA. ⌀	DIAMETER	LAM.	LAMINATE	SEL.	SELECTION		
DIAG.	DIAGONAL	LAV.	LAVATORY	SEW.	SEWER		
DEFL.	DEFLECTION	LT.WT.	LIGHTWEIGHT	SH.	SHEET		
DIM.	DIMENSION	LG.	LENGTH/LONG	SIM.	SIMILAR		
DIST.	DISTRIBUTION, DISTANCE	L.P.T.	LOW POINT	S.O.I.	SPRAYED ON INSULATION		
D.I.P.	DUCTILE IRON PIPE	LT.	LIGHT	SPEC.	SPECIFICATION		
DOZ.	DOZEN	LV.	LOUVER	SQ.	SQUARE		
DN.	DOWN			ST.	STREET		
DR.	DOOR	M.	MOTOR	STL.	STEEL		
DWG.	DRAWING	M.C.C.	MOTOR CONTROL CENTER	STOR.	STORAGE		
DWL.	DOWEL	M.G.D.	MILLION GALLONS PER DAY	STD.	STANDARD		
DH	DECK HYDRANT	MH	MANHOLE	STIRR.	STIRRUPS		
		M.J.	MECHANICAL JOINT	STRUC.	STRUCTURAL OR STRUCTURE		
E.	EAST	M.O.	MASONRY OPENING	SUR.	SURFACE		
E.F.	EACH FACE	MAS.	MASONRY	SUSP.	SUSPENDED/SUSPENSION		
E.J.	EXPANSION JOINT	MAT.	MATERIAL	SYM.	SYMMETRICAL		
E.W.	EACH WAY	MAX.	MAXIMUM	S.C.P.	STRUCTURAL CLAY PIPE		
EA.	EACH	MECH.	MECHANICAL				
ECC.	ECCENTRIC	MEMB.	MEMBRANE	T.	TILE, TREAD OR TOP		
EFF.	EFFLUENT	MET.	METAL	T.D.H.	TOTAL DYNAMIC HEAD		
EL. OR ELEV.	ELEVATION	MEZZ.	MEZZANINE	T/D	TOP OF DECK		
ELB.	ELBOW	MFR.	MANUFACTURER	T/F	TOP OF FOOTING		
ELEC.	ELECTRIC	MIN.	MINIMUM	T/G	TOP OF GROUT		
ENAM.	ENAMEL	MIR.	MIRROR	T/M	TOP OF MASONRY		
ENG.	ENGINE	MISC.	MISCELLANEOUS	T/S	TOP OF SLAB		
ENGR.	ENGINEER	MTD.	MOUNTING	T/W	TOP OF WALL		
ENT.	ENTRANCE	MULT.	MULTIPLE	THK.	THICK		
EQUIP.	EQUIPMENT			T & B	TOP AND BOTTOM		
EX. EXIST.	EXISTING	N.	NORTH	T & C	TONGUE AND GROOVE		
EXC.	EXCAVATE	N.F.	NEAR FACE	TEL.	TELEPHONE		
EXH.	EXHAUST	N.I.C.	NOT IN CONTRACT	TEMP.	TEMPERATURE		
EXP.	EXPANSION	N.P.T.	NATIONAL PIPE THREAD	T.R.	TOILET ROOM		
EXT.	EXTERIOR	N.P.W.	NON POTABLE WATER	TOL.	TOLERANCE		
EXTEND.OPER.	EXTENDED OPERATOR	N.T.S.	NOT TO SCALE	TRANS.	TRANSFORMER		
EXTR.	EXTRUDE	NO. OR #	NUMBER	TK.	TANK		
		NAT.	NATURAL	TYP.	TYPICAL		
		NS	NO SMOKING				

SYMBOLS



LIST OF DRAWINGS

GENERAL - CONTRACT NO. 1A

- G-1 ABBREVIATIONS, SYMBOLS AND LIST OF DRAWINGS
- G-2 SITE PLAN, DETAILS AND PARTIAL YARD PIPING PLAN

ARCHITECTURAL - CONTRACT NO. 1A

- A-1 DETAILS AND SECTIONS
- A-2 THICKENER BUILDING PLANS, ELEVATIONS AND SECTIONS

STRUCTURAL - CONTRACT NO. 1A

- S-1 STANDARD DETAILS AND RAW SEWAGE PUMPING STATION PLAN, SECTIONS, ELEVATION AND DETAIL
- S-2 NEW THICKENER BUILDING PLANS AND SECTIONS

MECHANICAL - CONTRACT NO. 1A

- M-1 RAW SEWAGE PUMPING STATION MODIFICATIONS INFLUENT AREA BAR SCREEN PLAN AND SECTIONS
- M-2 NEW THICKENER BUILDING PLAN AND SECTIONS
- M-3 SOUTH GALLERY PUMP MODIFICATIONS - NEW TRUCK LOADING STATION, PLAN AND SECTIONS
- M-4 CHEMICAL PIPING SCHEMATICS & MISCELLANEOUS DETAILS

ELECTRICAL - CONTRACT NO. 1B

- E-1 ELECTRICAL - ABBREVIATIONS, SYMBOLS, SITE PLAN - GENERAL NOTES AND ONE-LINE DIAGRAM
- E-2 ELECTRICAL - THICKENER BUILDING PLANS AND SOUTH GALLERY PLAN
- E-3 ELECTRICAL RAW SEWAGE PUMPING STATION PLANS
- E-4 ELECTRICAL DIAGRAMS AND SCHEDULES

HVAC - CONTRACT NO. 1C

- H-1 SCHEDULES, NOTES, SYMBOLS, ABBREVIATIONS, PLAN & DETAILS
- H-2 RAW SEWAGE PUMPING STATION PLANS

NOTES:

- EXISTING FACILITIES SHOWN LIGHT, NEW FACILITIES SHOWN DARK.
- EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE BASED ON INFORMATION OBTAINED FROM CONTRACT DRAWINGS BY BARTON, BROWN, CLYDE & LOGGIDICE, DATED MAY 1969, BREWERTON WATER POLLUTION CONTROL PLANT.

RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: _____ PER: _____

9/1/02 CAS JRH
M:\012030\REC\0901\GEN\9012005

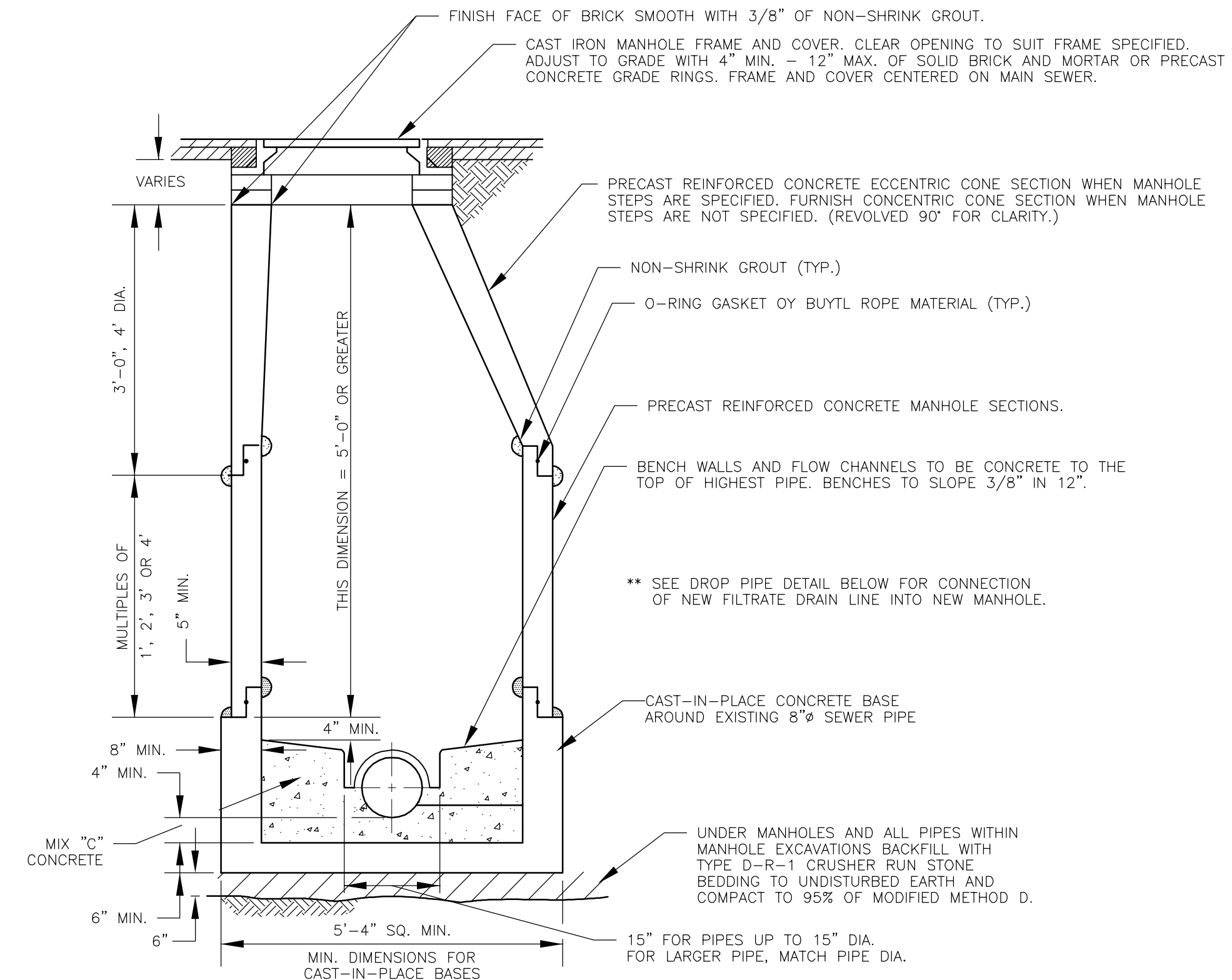
NOTES: Underground facilities, structures, and utilities have been plotted from available surveys and records, and therefore their locations must be considered approximate only. There may be others, the existence of which is presently not known. It is a violation of New York State Education Law for any person, unless acting under the direction of a licensed professional engineer, to alter an item on this drawing in any way, if an item is altered, the altering engineer shall affix to the item his/her seal and the notation "altered by" followed by his/her signature and the date of such alteration, and a specific description of the alteration.	3	FOR CONSTRUCTION	JRH	5/2000	TWF	JRH	RB	5/00						
	2	FOR APPROVAL	JRH	1/2000	TWF	JRH	RB	3/2000						
	1	FOR APPROVAL	JRH	10/99	TWF	JRH	RB	11/99						
	ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	4						
	PROJECT SUPERVISOR	DEPARTMENT SUPERVISOR						RECORD DRAWING	HCC	9/01	TWF	JRH	RB	9/01
							ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	

Stearns & Wheeler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS

CAZENOVIA, NEW YORK

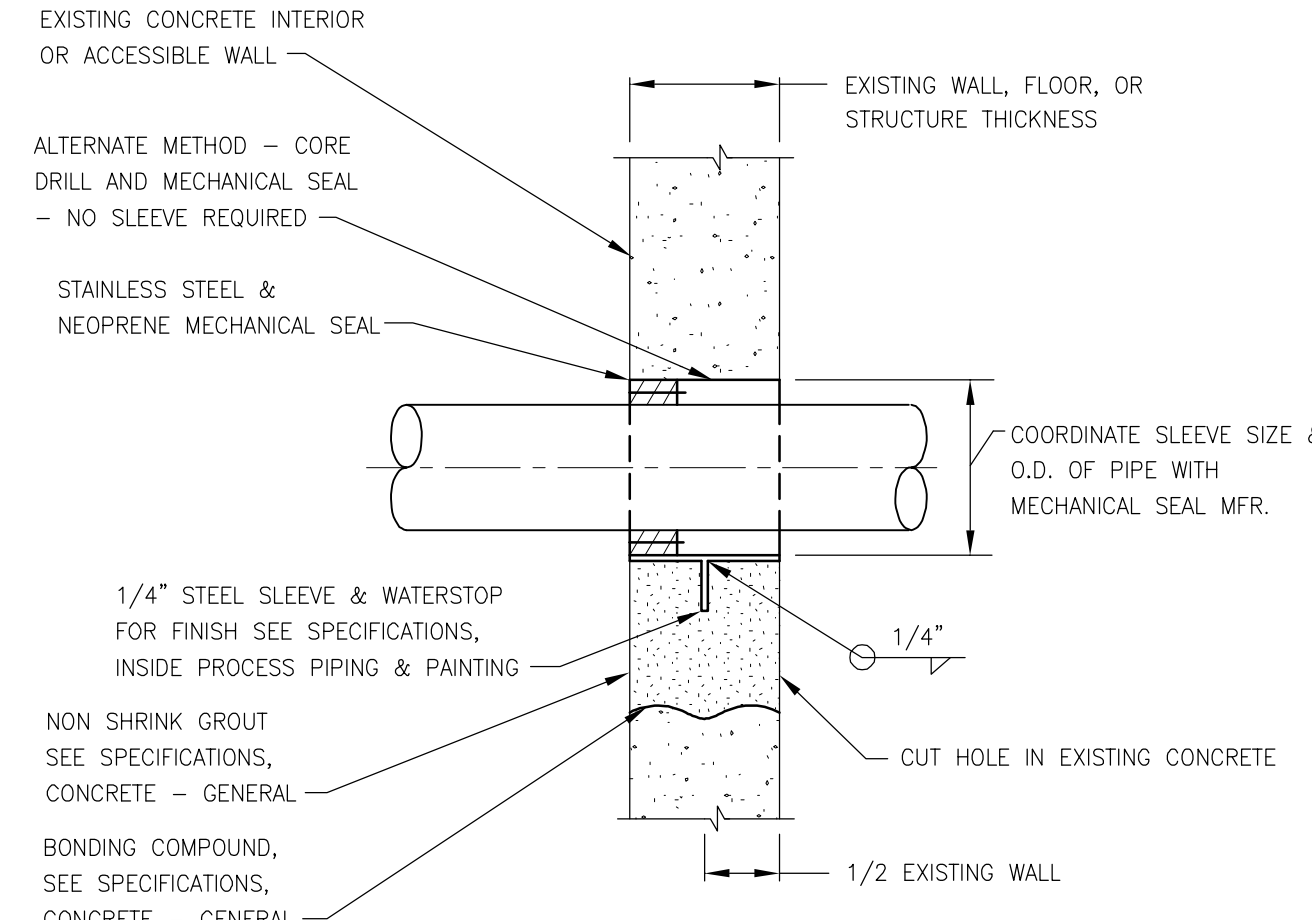
ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
ABBREVIATIONS, SYMBOLS AND LIST OF DRAWINGS			
JOB NO.	9012030	CONTRACT	SHEET G-1

NOTE: ALL ELEVATIONS SHOWN ARE REFERENCE ELEVATIONS TAKEN FROM EXISTING DRAWINGS, AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION BY THE CONTRACTOR.

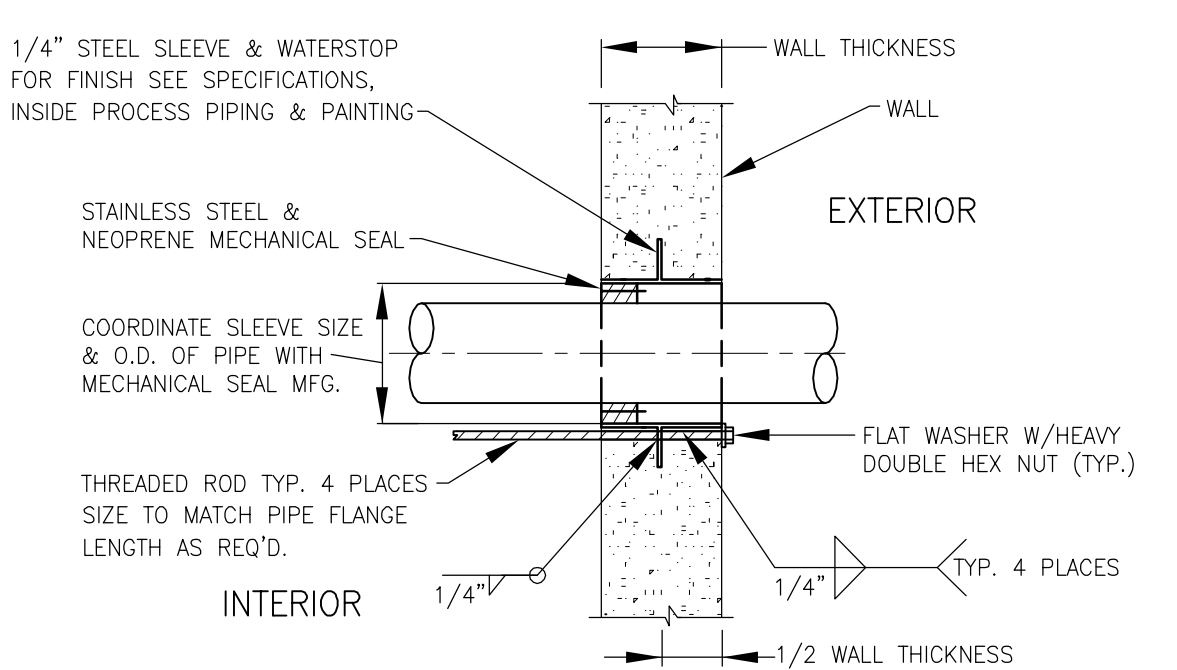


TYPE A - 4' DIAMETER MANHOLE
USE NON-SHRINK GROUT

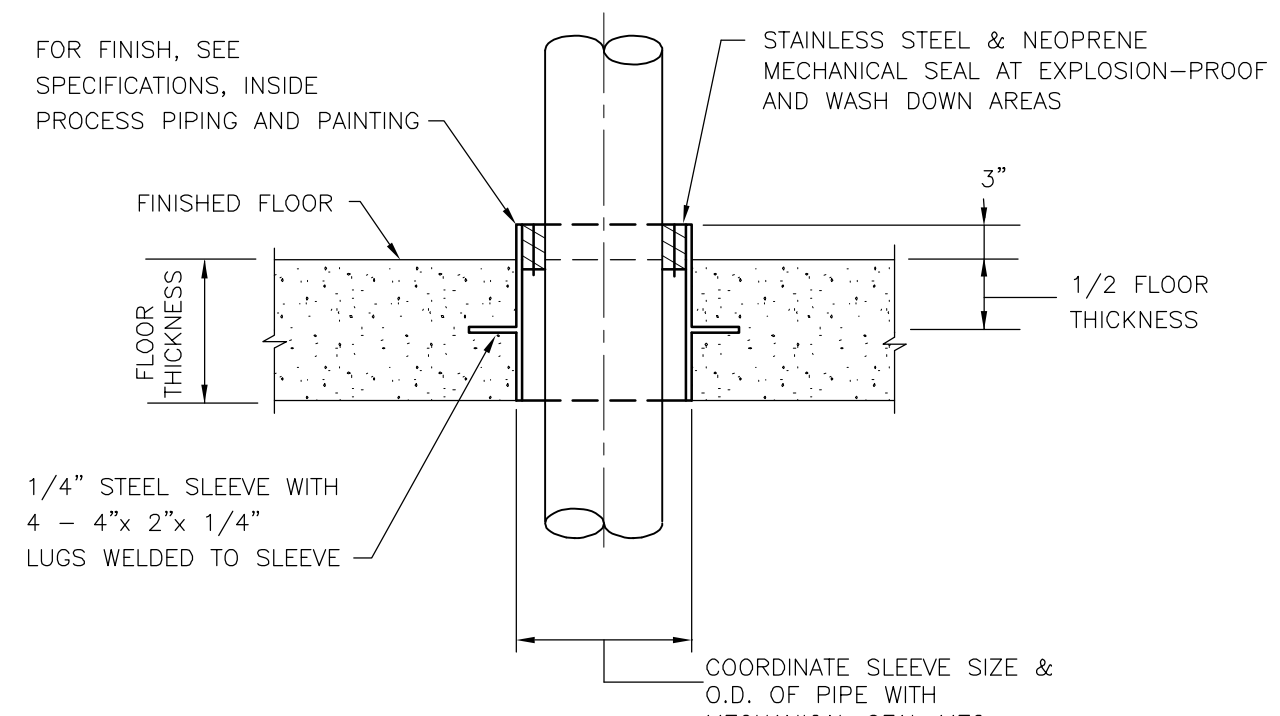
MANHOLE DETAIL
NTS



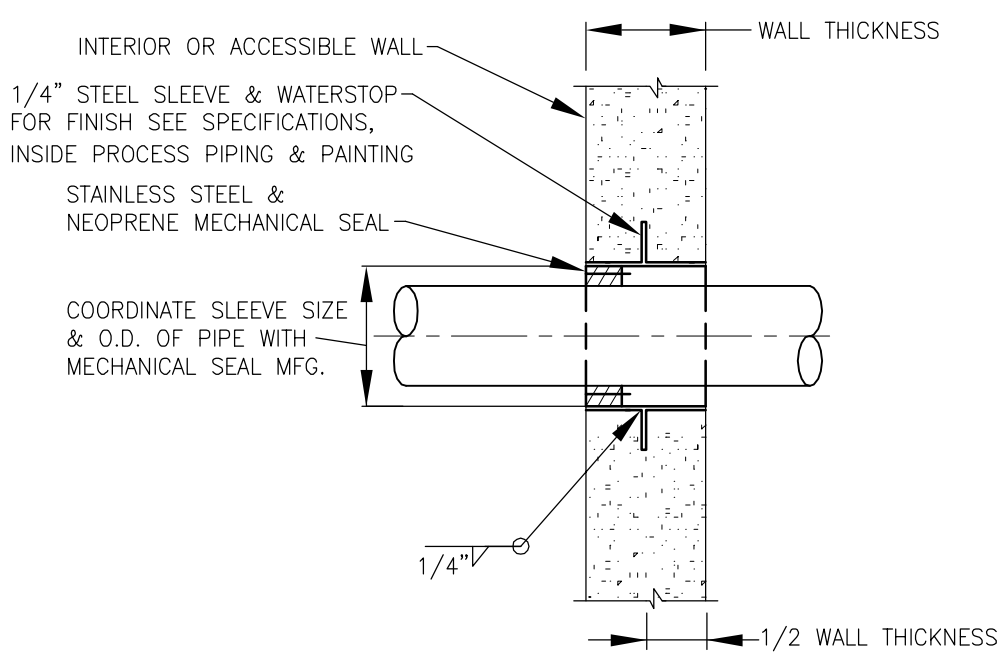
TYPICAL SLEEVE THRU EXISTING STRUCTURE DETAIL
NOT TO SCALE



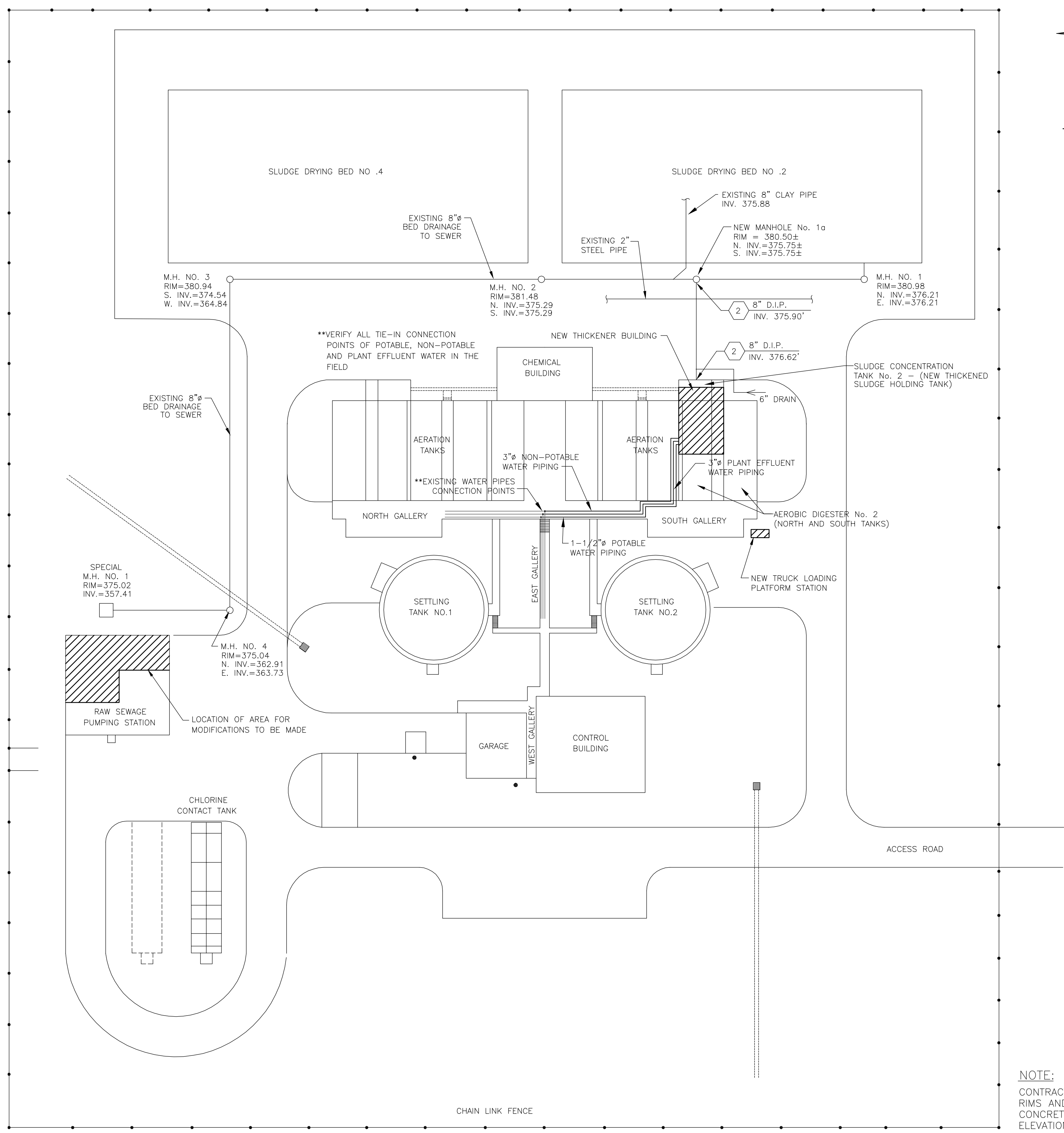
TYPICAL PIPE RESTRAINT AT SLEEVE DETAIL
NOT TO SCALE



TYPICAL FLOOR AND DECK SLEEVE DETAIL
NOT TO SCALE



TYPICAL WALL SLEEVE DETAIL
NOT TO SCALE



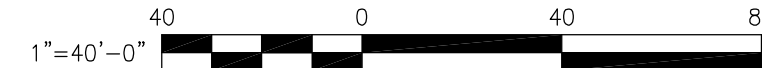
RECORD DRAWING

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DATE: _____ PER: _____

SITE PLAN AND PARTIAL YARD PIPING PLAN

SCALE: 1" = 40'-0"



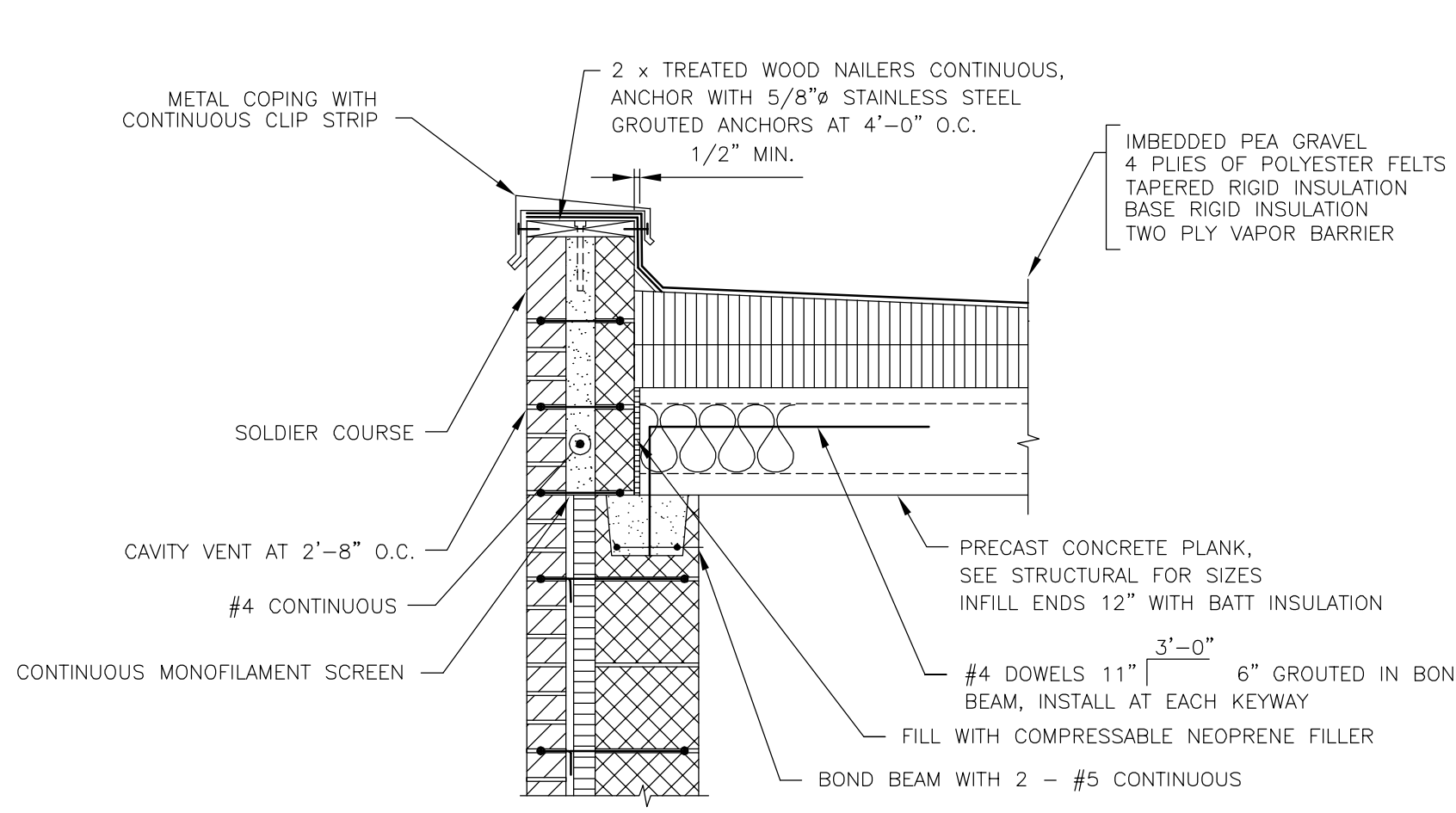
NOTE:
CONTRACTOR TO VERIFY ALL MANHOLE RIMS AND INVERT ELEVATIONS, TOPS OF CONCRETE WALLS AND GRADE ELEVATIONS IN WORK AREA PRIOR TO START OF CONSTRUCTION AND NOTIFY OWNER OF ANY DISCREPANCIES.

NOTES:
Underground facilities, structures, and utilities have been plotted from available surveys and records, and therefore their locations must be considered approximate only. There may be others, the existence of which is presently not known.
It is a violation of New York State Education Law for any person, unless acting under the direction of a licensed professional engineer, to alter an item on this drawing in any way. If an item is altered, the altering engineer shall affix to the item his/her seal and the notation "altered by" followed by his/her signature and the date of such alteration, and a specific description of the alteration.

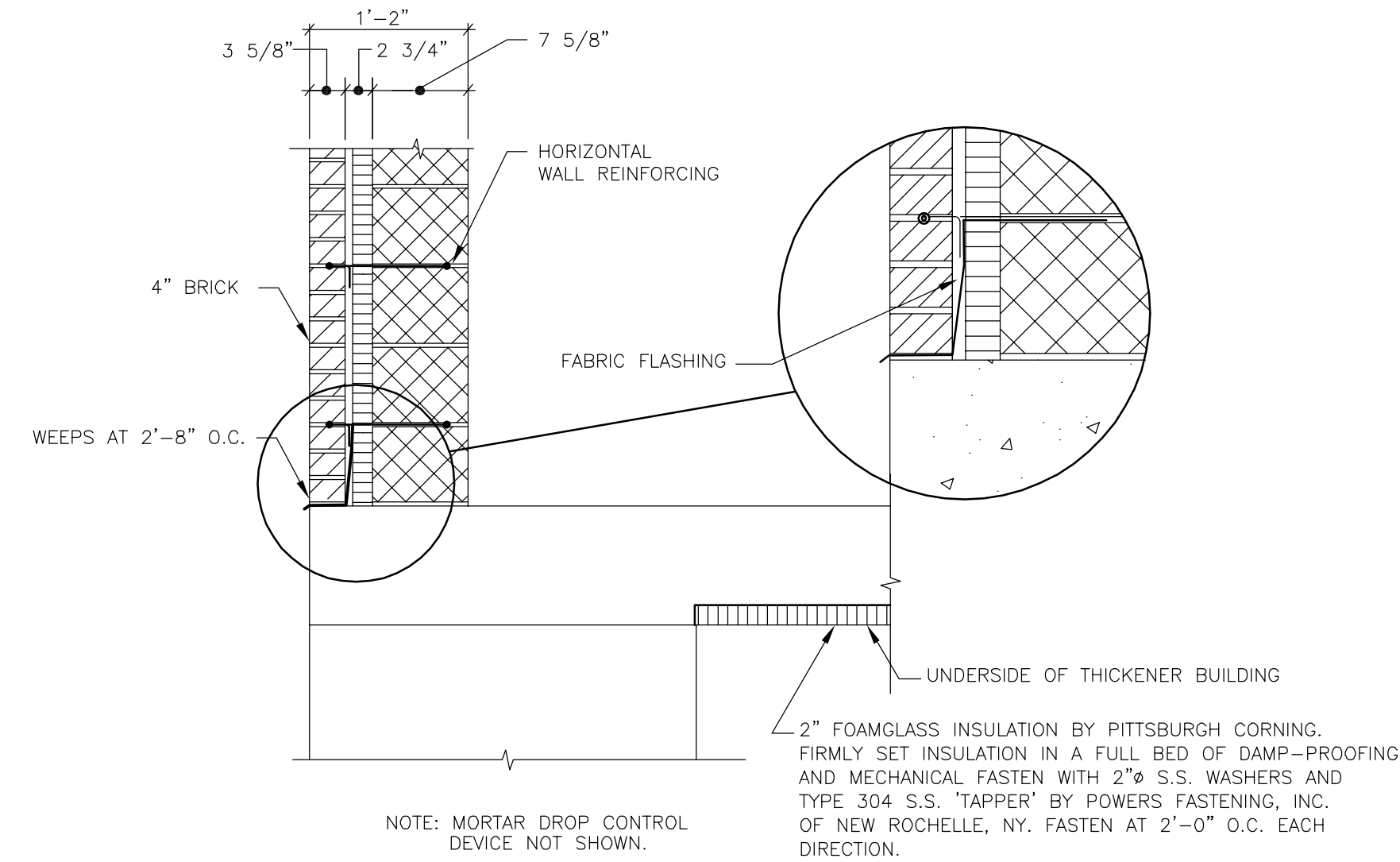
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	JRH	5/2000								TWF	JRH
	FOR APPROVAL										
2	JRH	1/2000	TWF	JRH	RB	3/2000					
	FOR APPROVAL										
1	JRH	9/99	TWF	JRH	RB	11/99					
	FOR APPROVAL										
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE					
PROJECT SUPERVISOR	DEPARTMENT SUPERVISOR				4	RECORD DRAWING					
	HCC	9/01	TWF	JRH	RB	9/01					
	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE					

Stearns & Wheeler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS
CAZENOVIA, NEW YORK

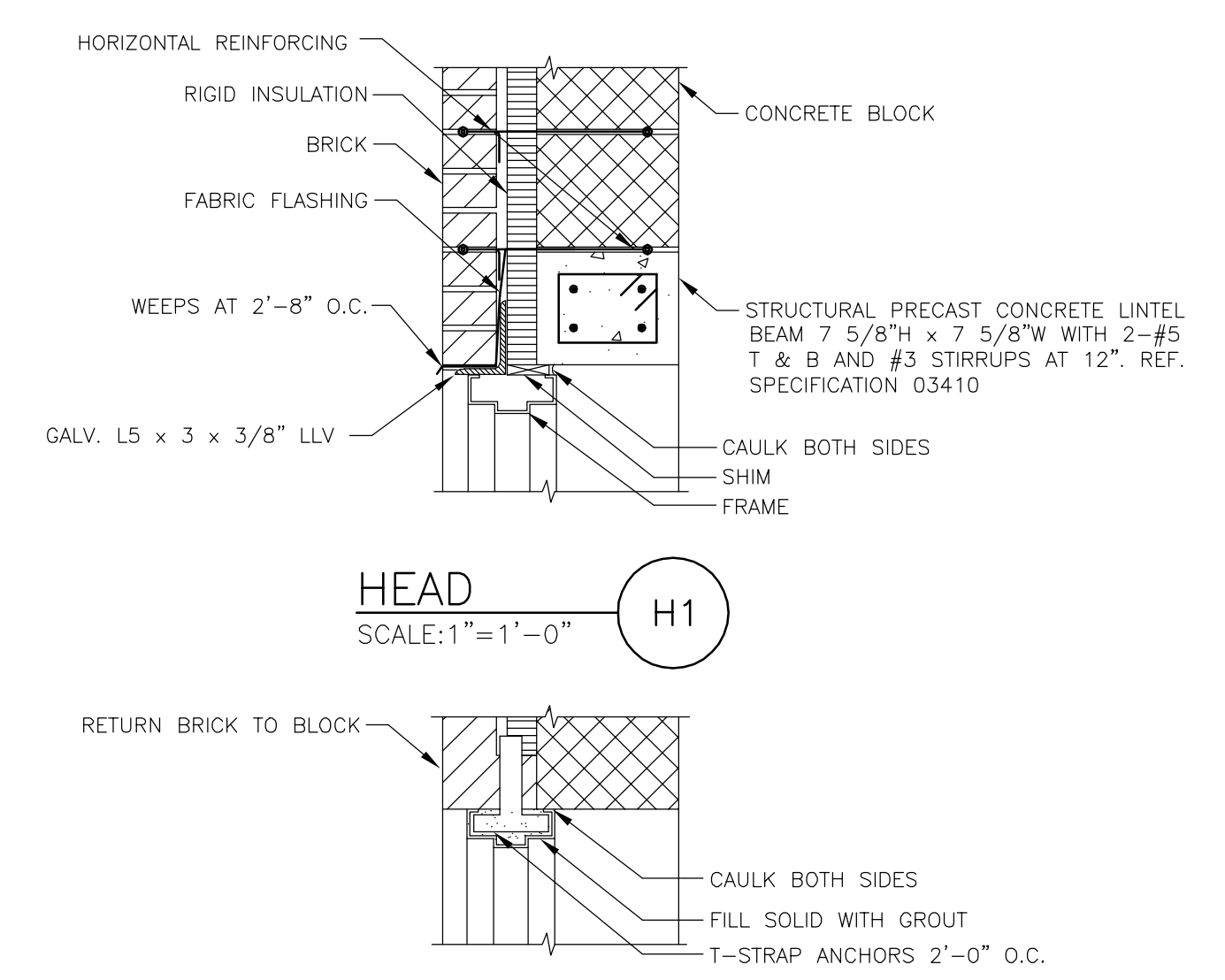
ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
SITE PLAN, DETAILS AND PARTIAL YARD PIPING PLAN			
JOB NO.	9012030	CONTRACT	1A
SHEET	G-2		



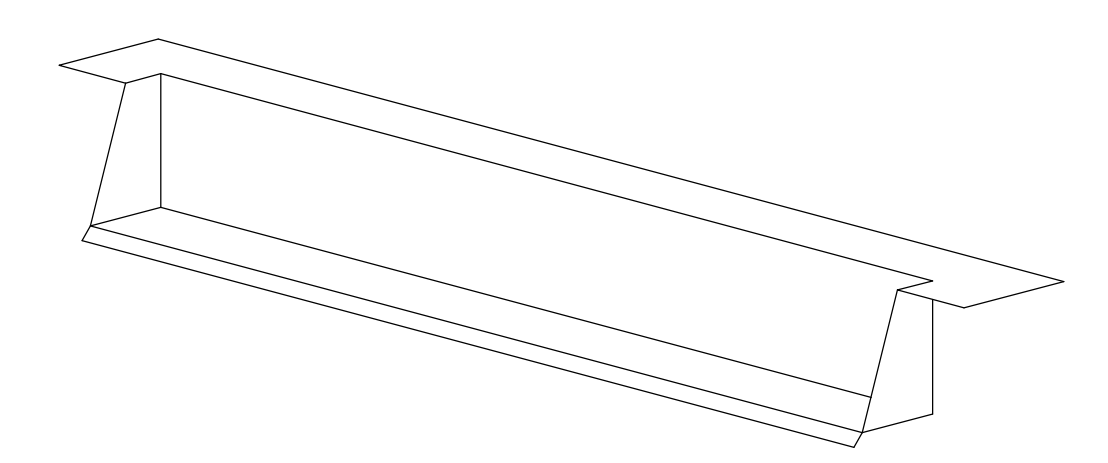
SECTION 1
SCALE: 3/4"=1'-0"



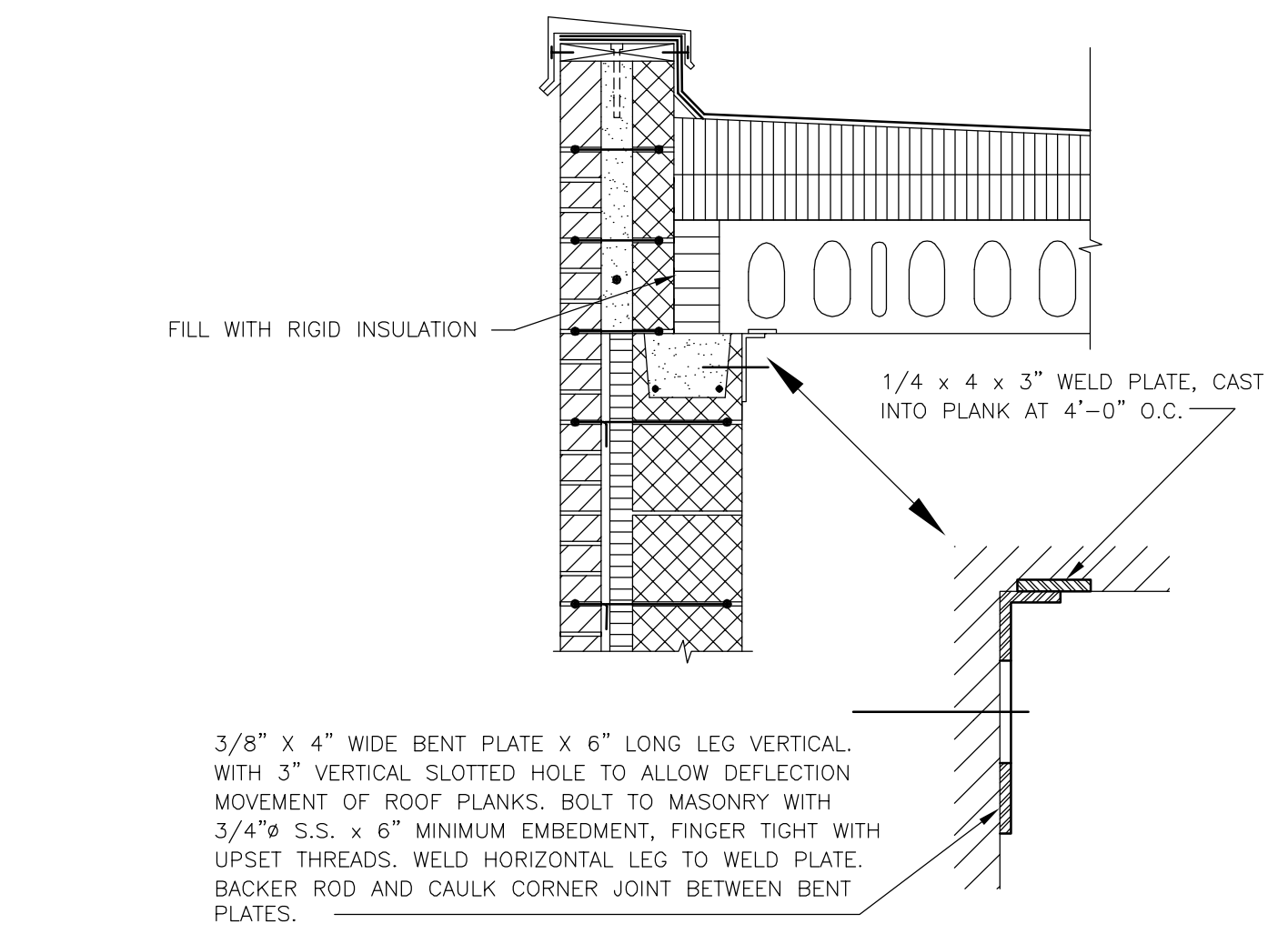
MASONRY WALL DETAIL
SCALE: 3/4"=1'-0"



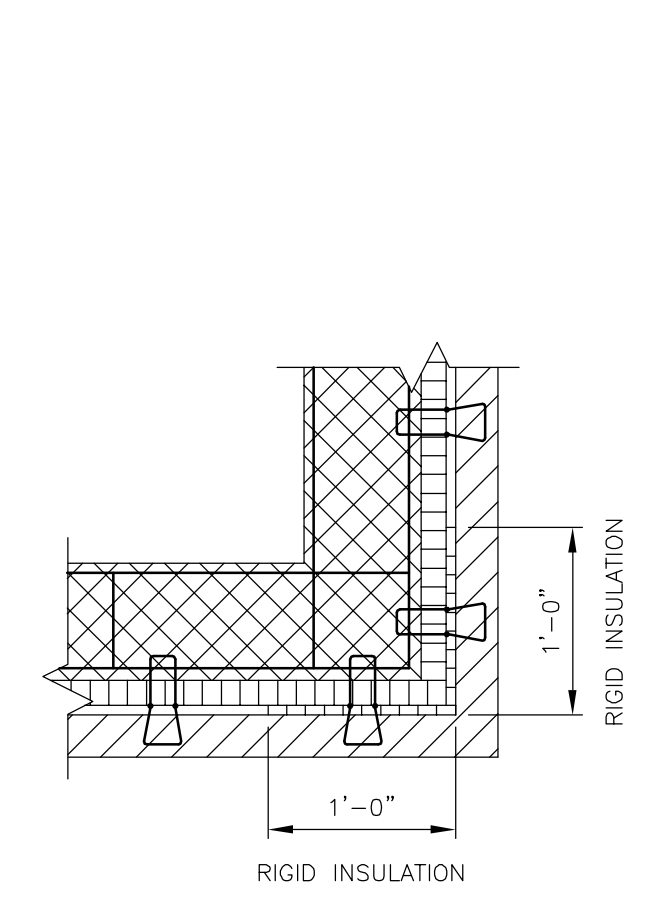
HEAD
SCALE: 1"=1'-0" H1



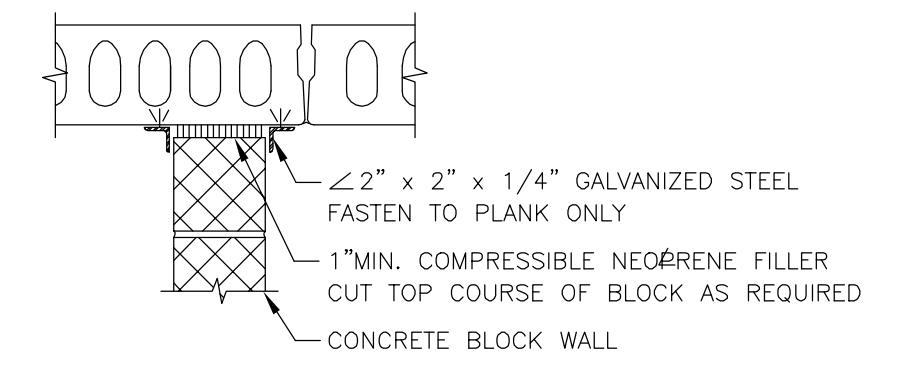
FABRIC FLASHING DAM DETAIL AT HEAD
SCALE: 1"=1'-0"



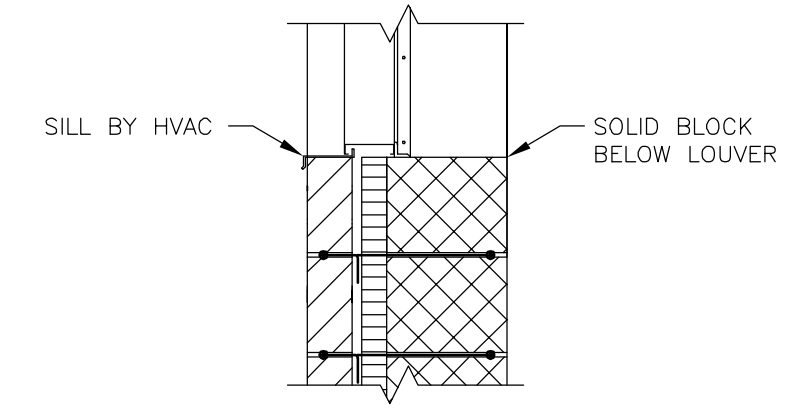
SECTION 2
SCALE: 3/4"=1'-0"



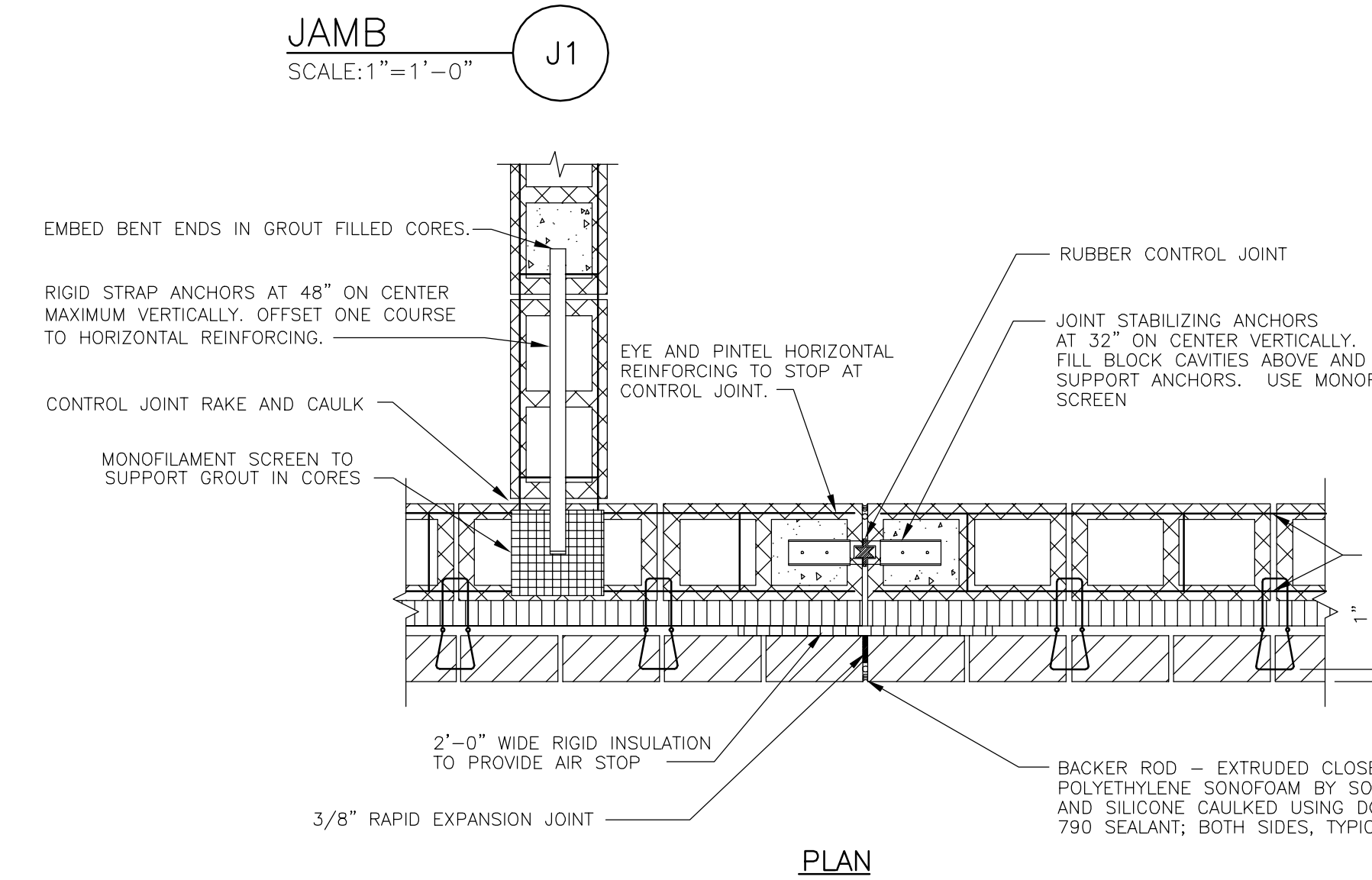
MASONRY WALL CORNER DETAIL
SCALE: 3/4"=1'-0"



NON LOAD BEARING WALL/ROOF TRIM DETAIL
SCALE: 3/4"=1'-0"



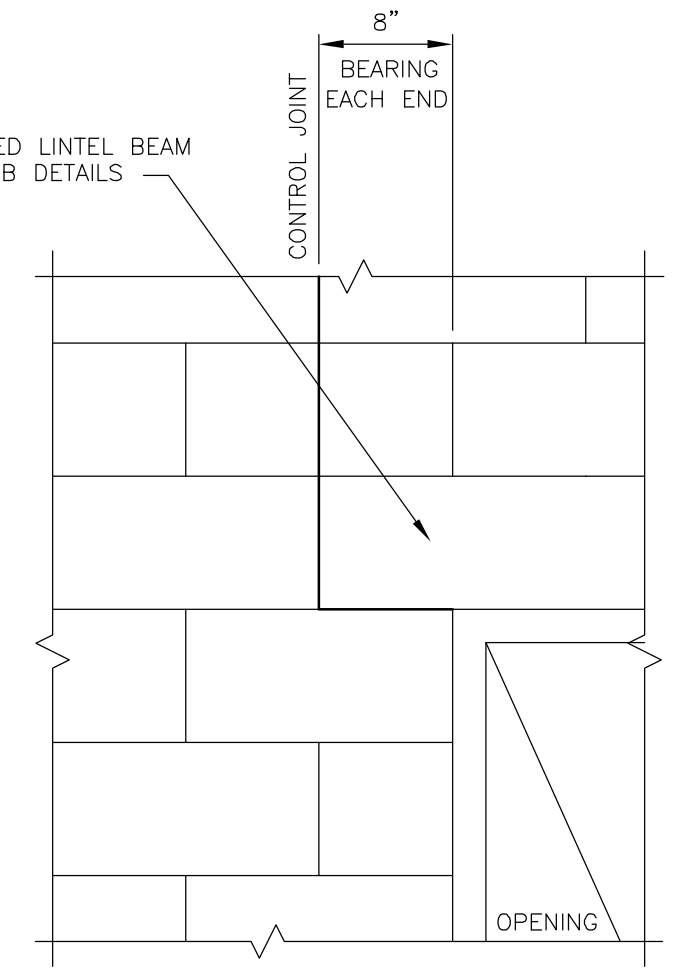
LOUVER SILL DETAIL
SCALE: 3/4"=1'-0"



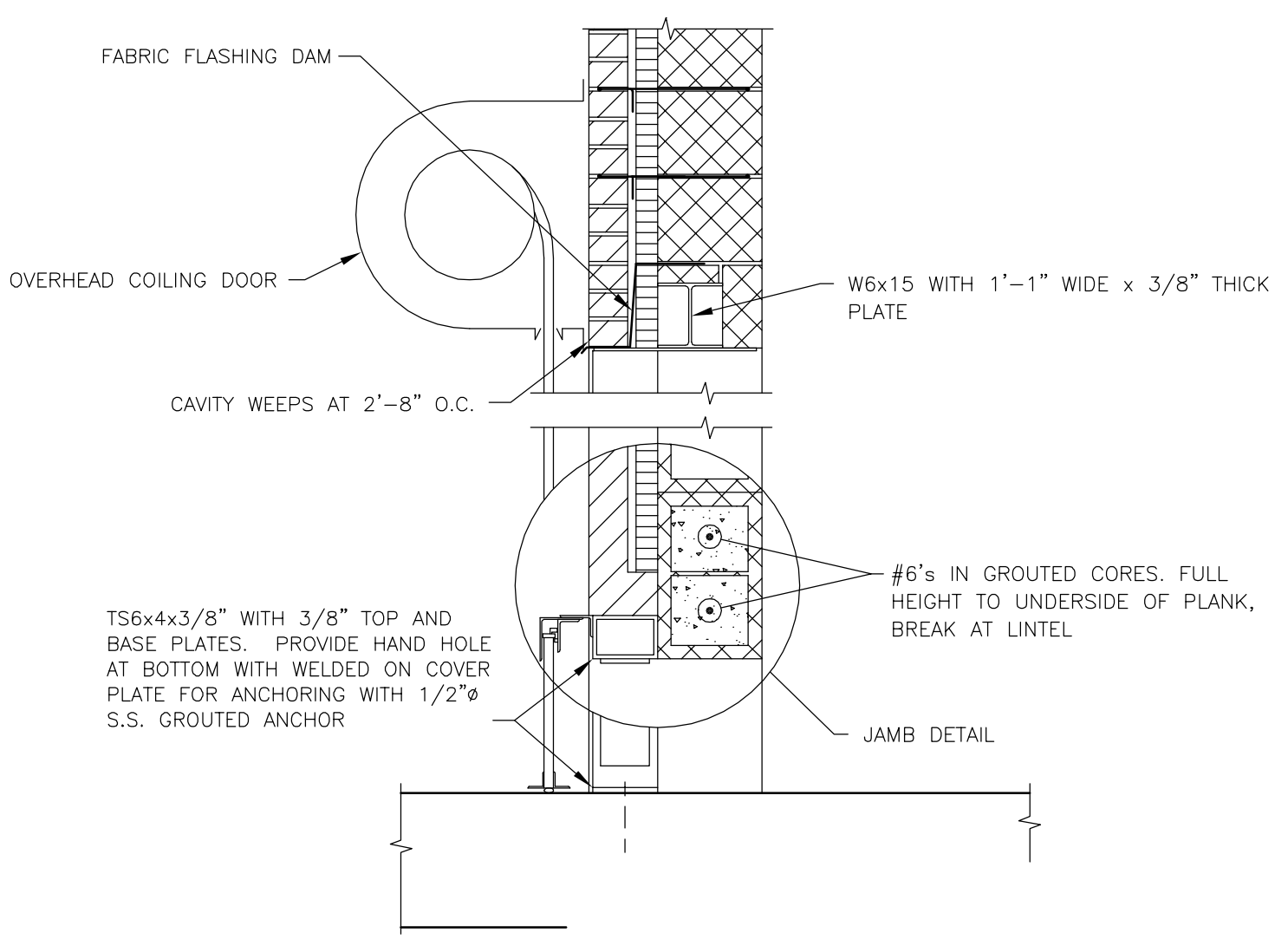
JAMB
SCALE: 1"=1'-0" J1

PLAN

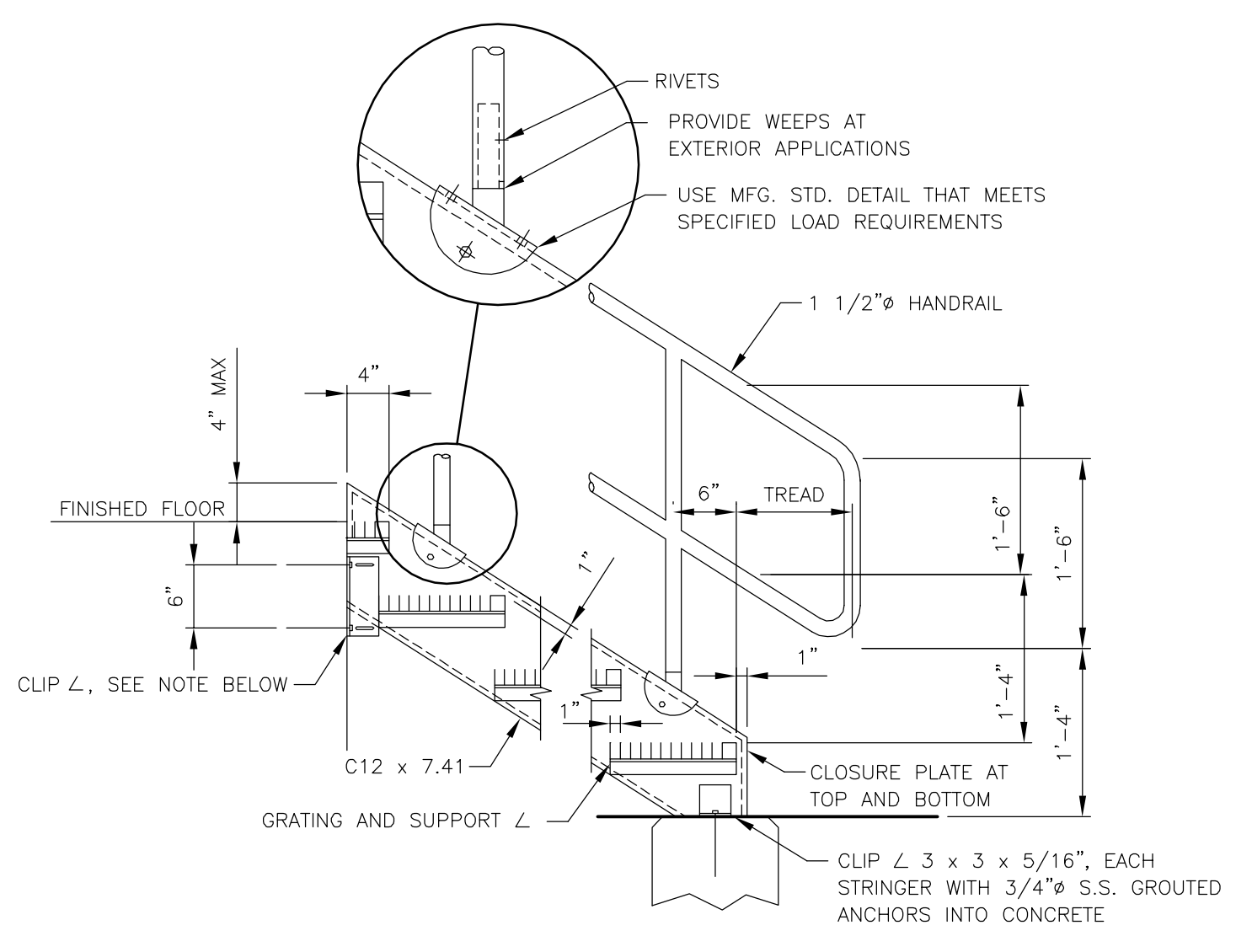
CONTROL JOINT DETAIL
SCALE: 1"=1'-0"



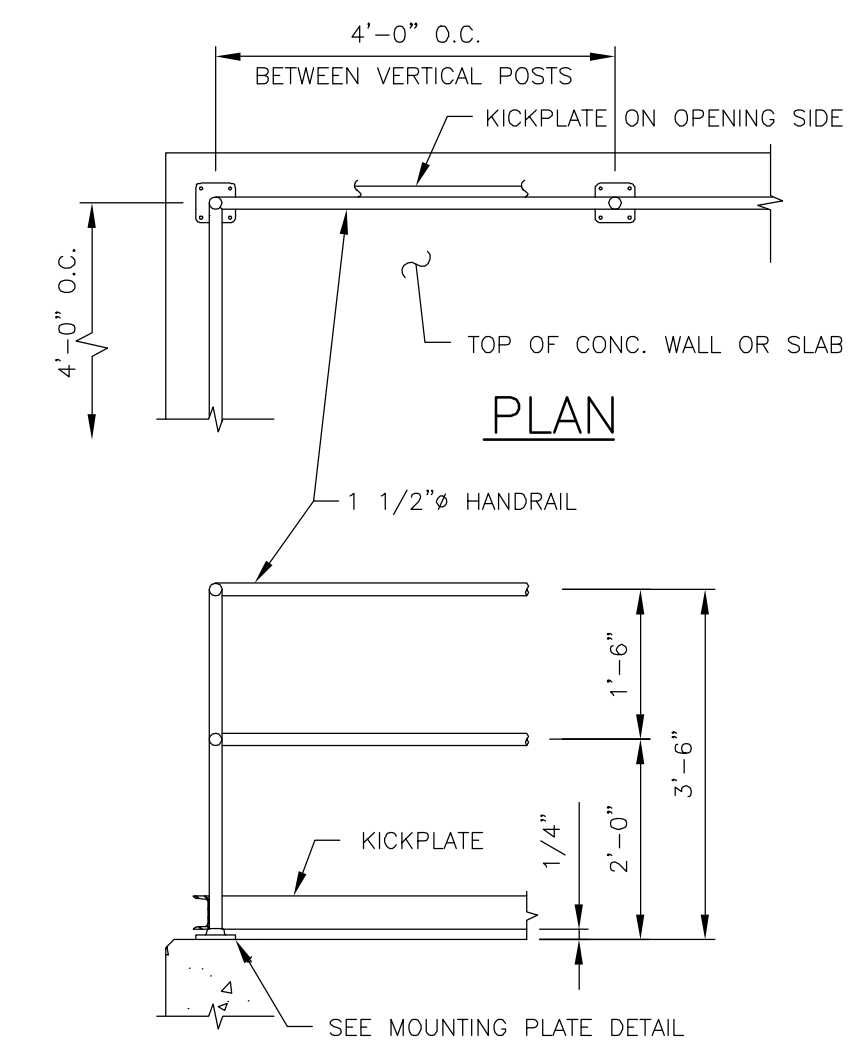
ELEVATION (INTERIOR)



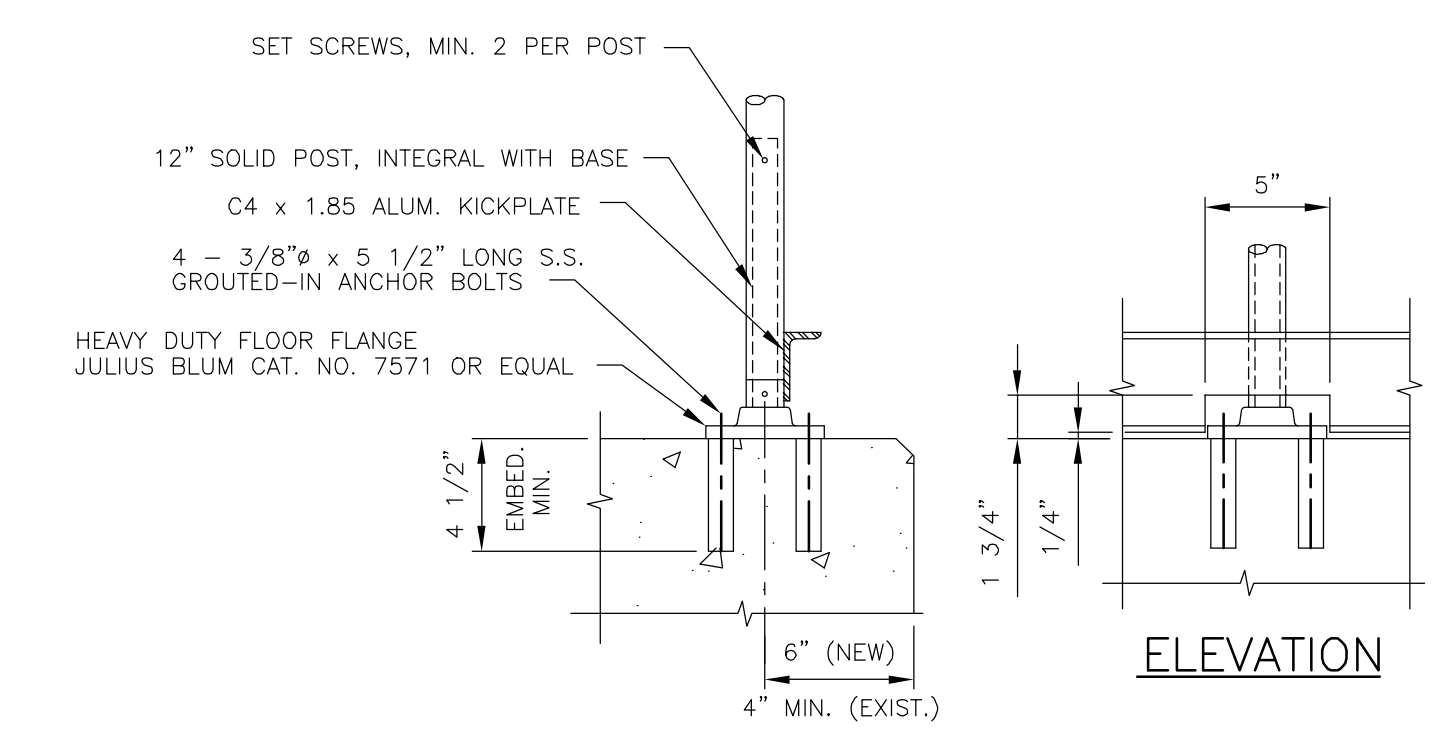
OVERHEAD DOOR DETAIL
SCALE: 3/4"=1'-0"



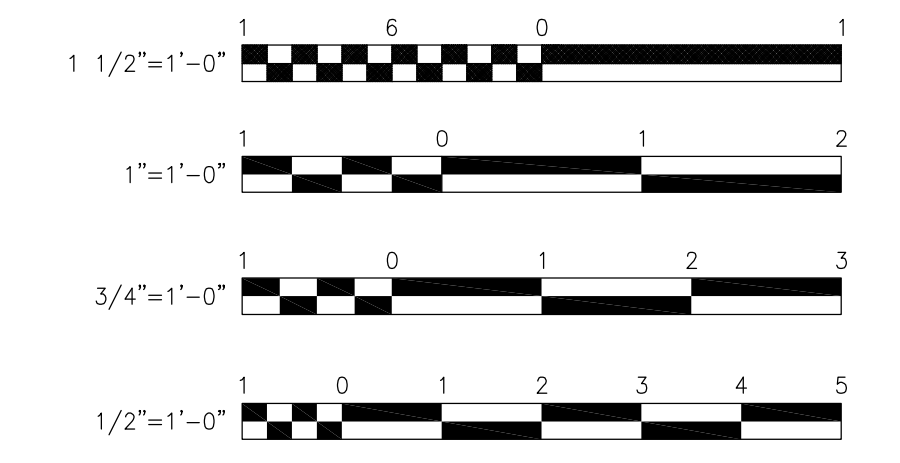
ALUMINUM STAIR DETAIL
SCALE: 3/4"=1'-0"



HANDRAIL DETAIL
SCALE: 1/2"=1'-0"



SECTION
MOUNTING PLATE DETAIL
SCALE: 1 1/2"=1'-0"



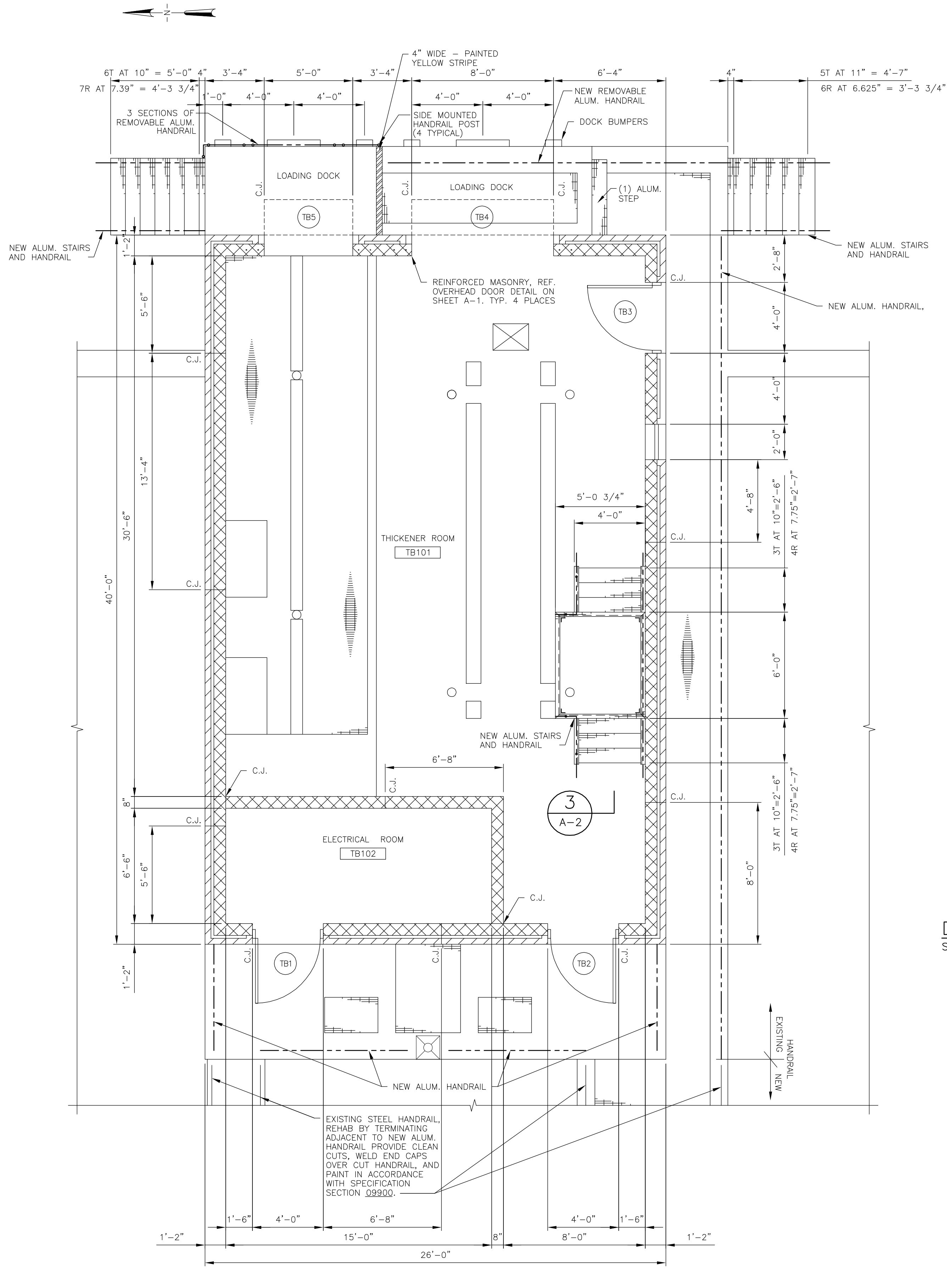
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3	FOR CONSTRUCTION	HCC/JRH	5/2000	JDB	JDB	RB	5/00
2	FOR APPROVAL	HCC	1/2000	JDB	JDB	RB	3/2000
1	FOR APPROVAL	HCC	9/99	JDB	JDB	RB	11/99
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	
	PROJECT SUPERVISOR			DEPARTMENT SUPERVISOR			

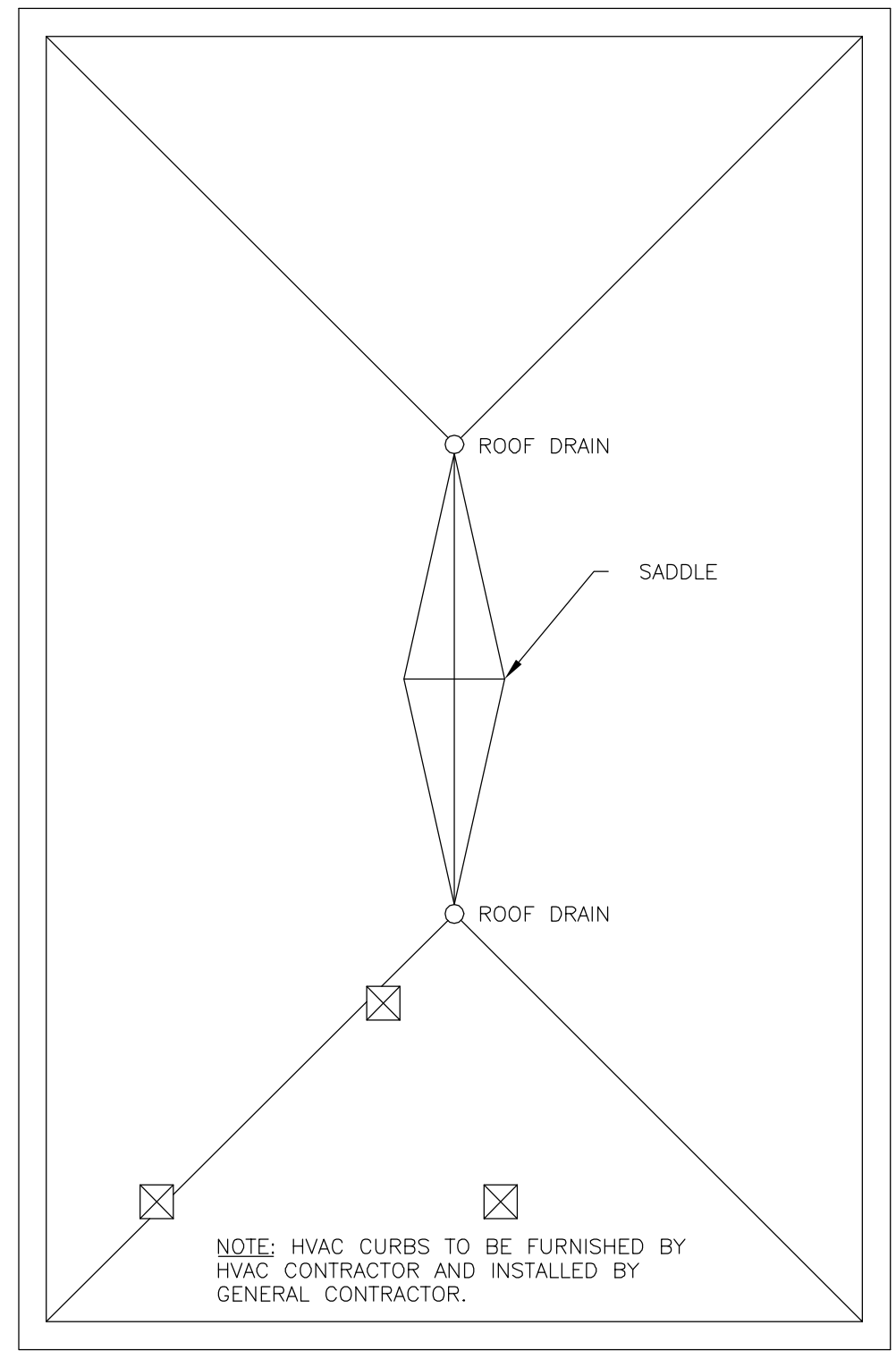
4	RECORD DRAWING	HCC	9/01	JDB	JRH	RB	9/01
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	

Stearns & Wheeler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS
CAZENOVIA, NEW YORK

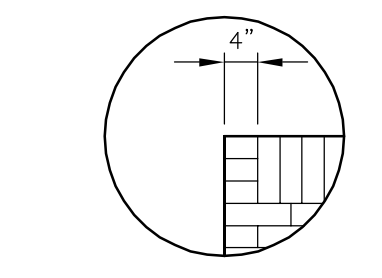
ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
DETAILS AND SECTIONS			
JOB NO.	9012030	CONTRACT	1A
SHEET			A-1



1
A-1

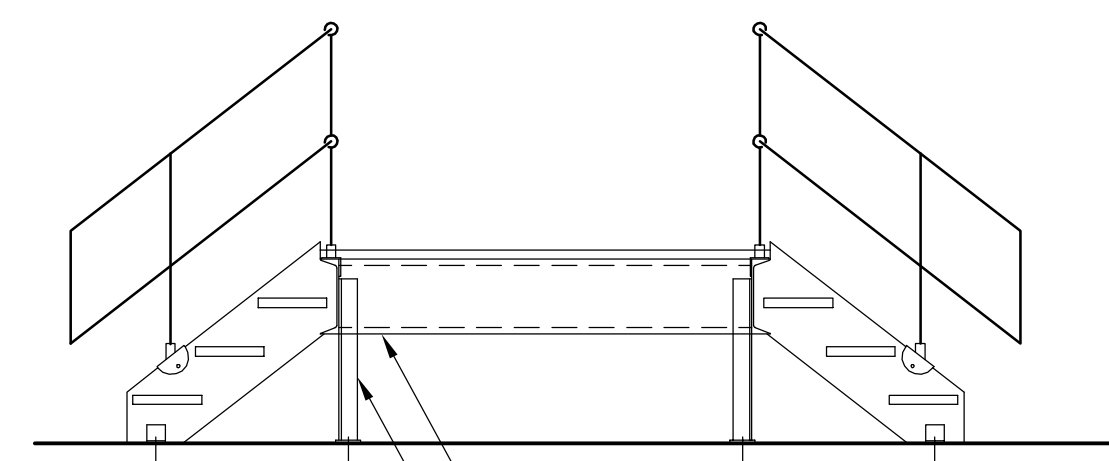


2
A-1



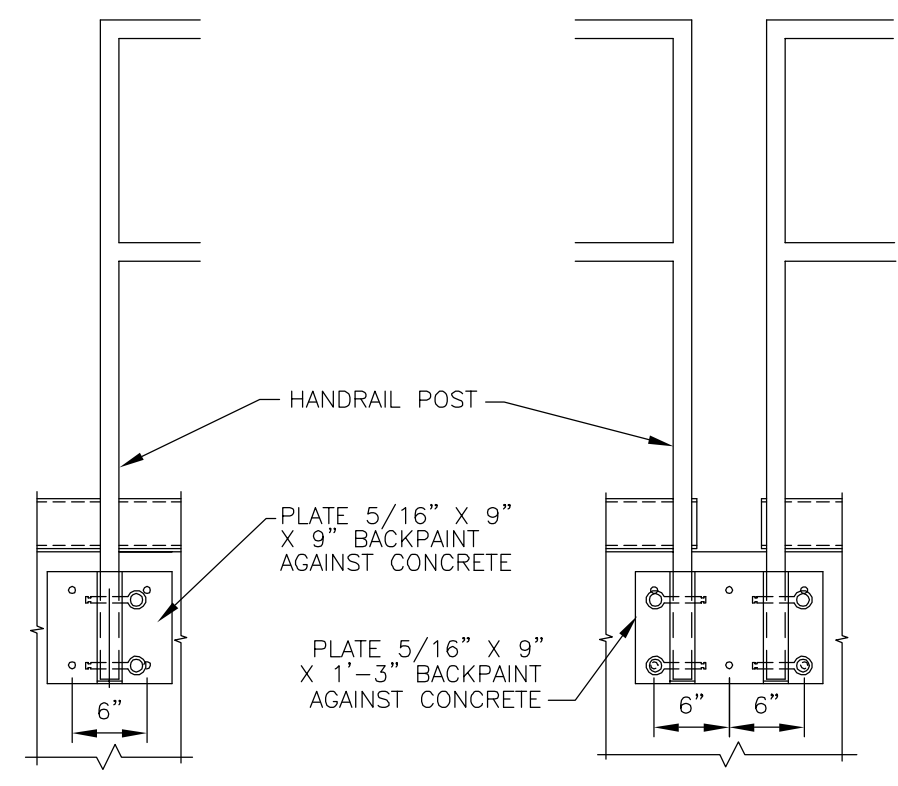
4
A-2

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

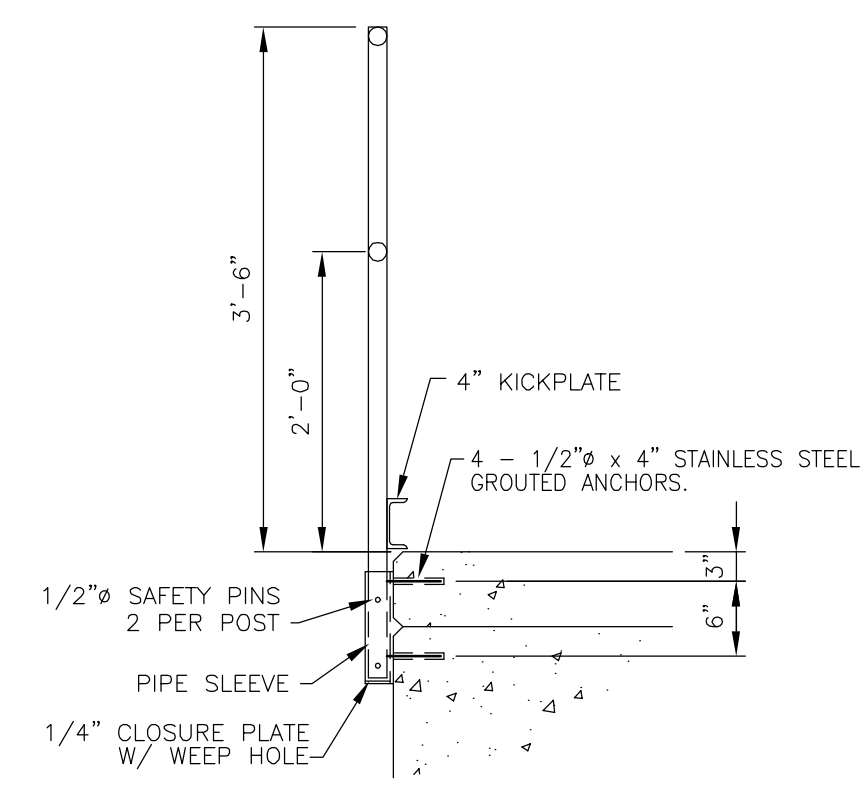


SECTION
SCALE: 3/8" = 1'-0"

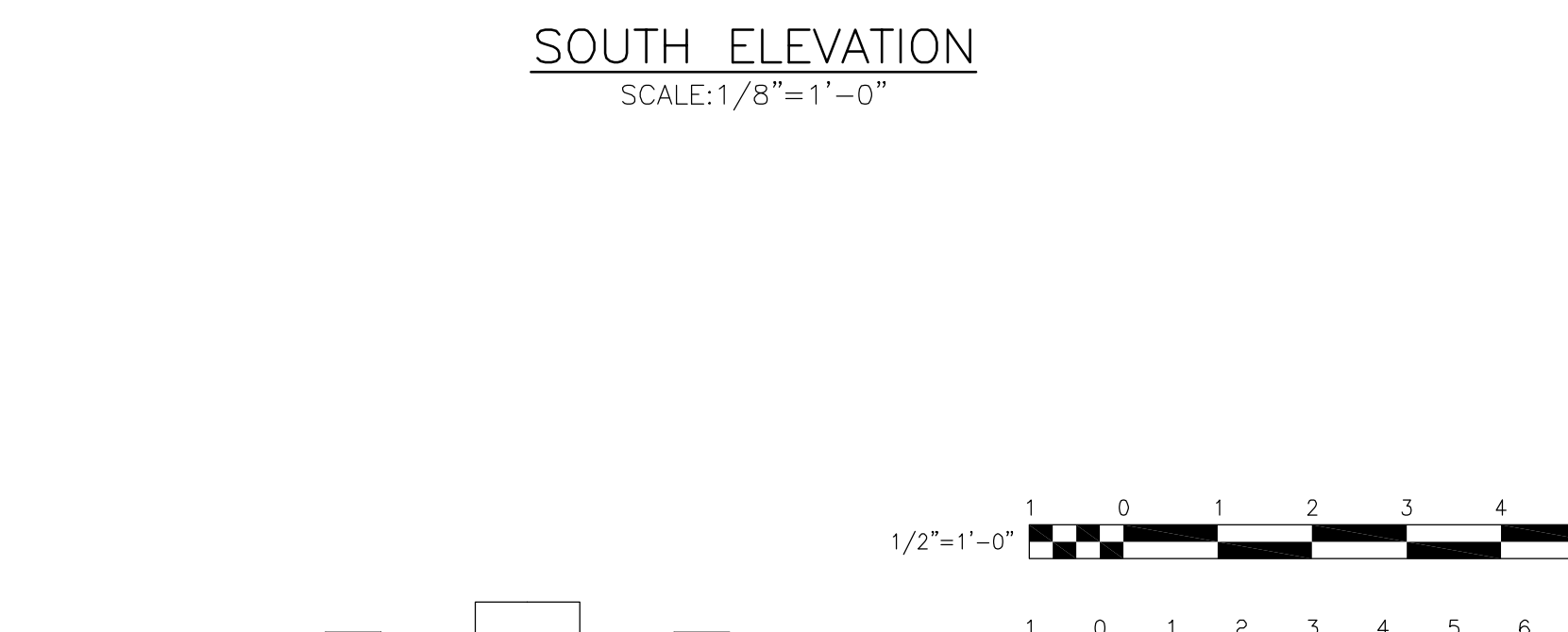
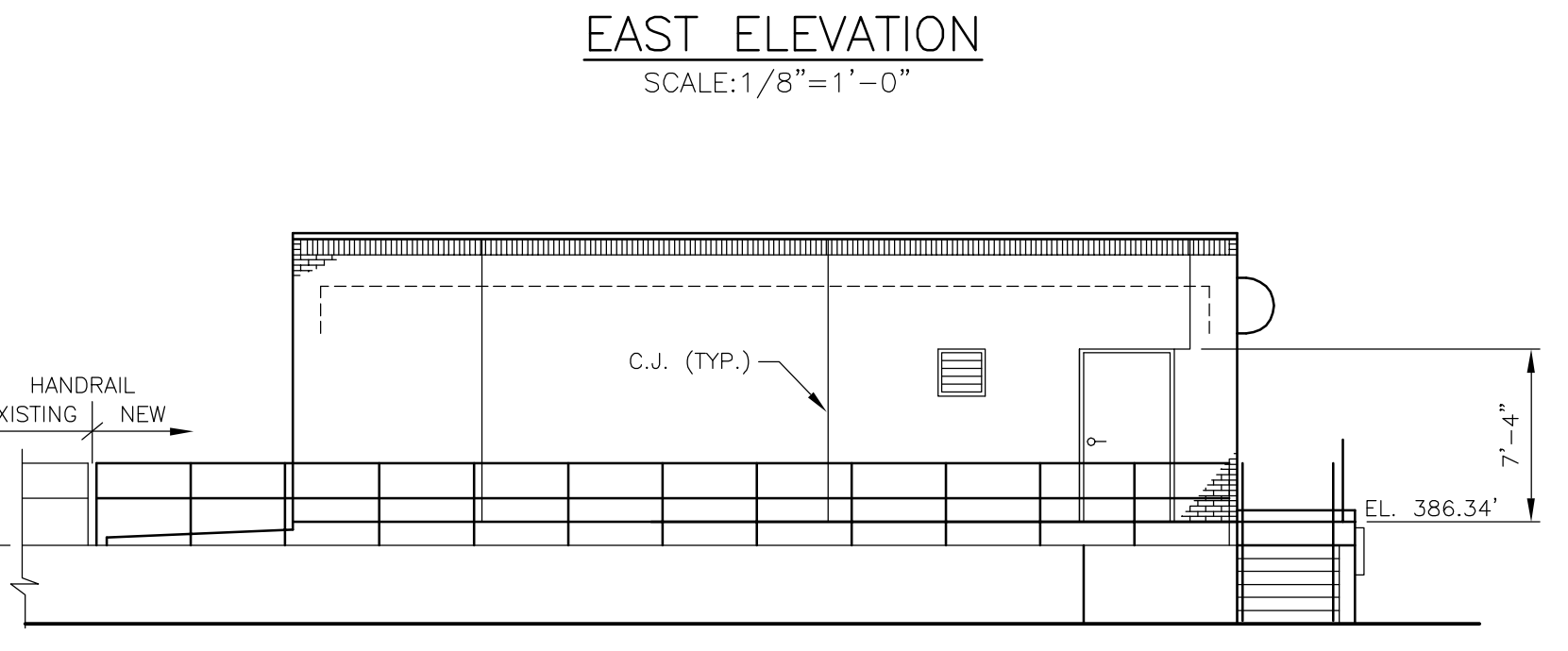
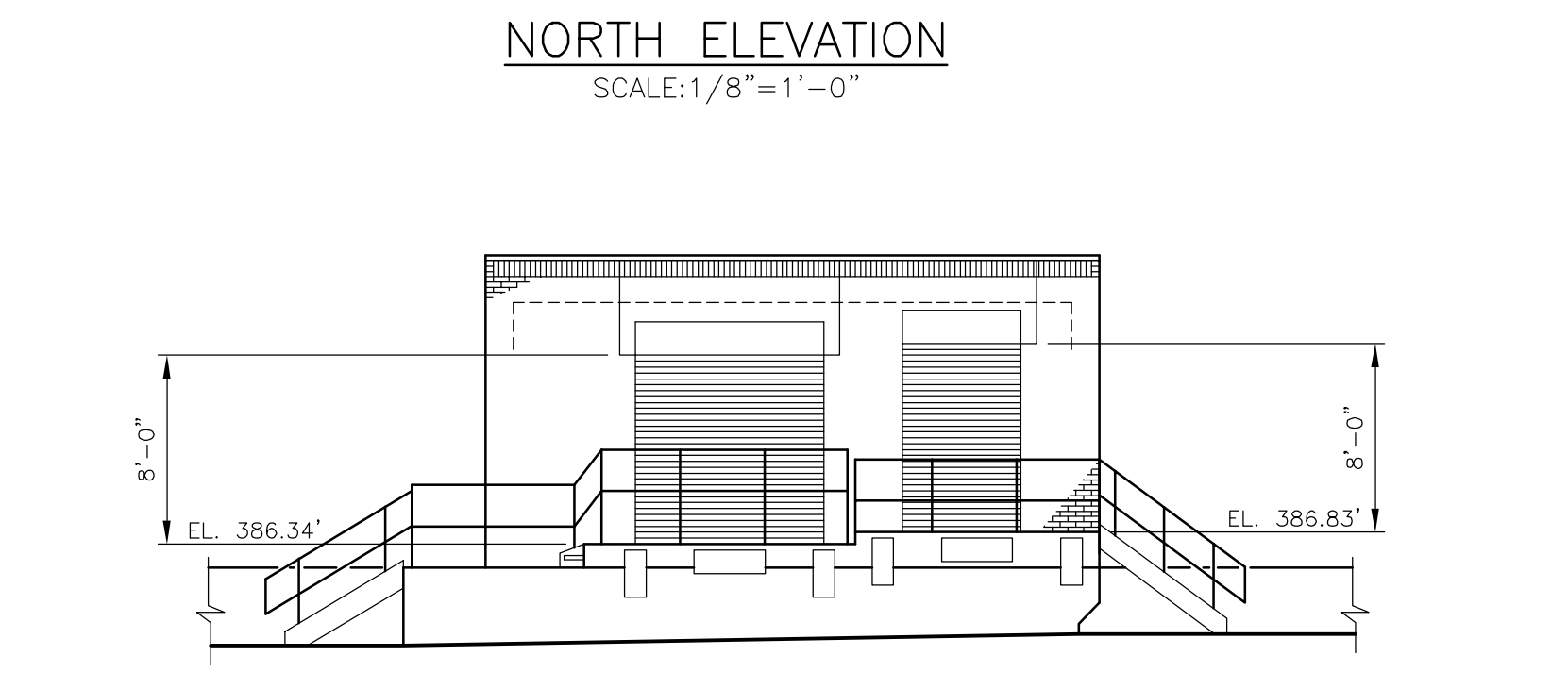
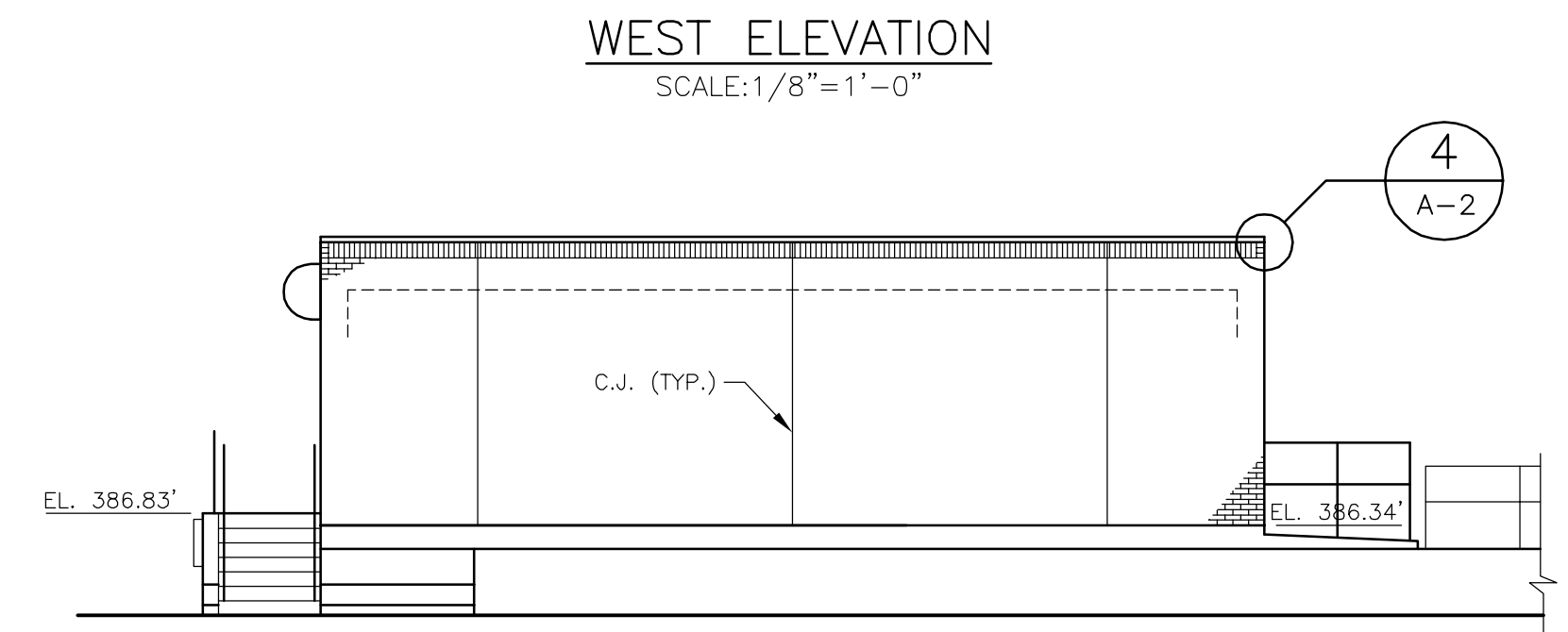
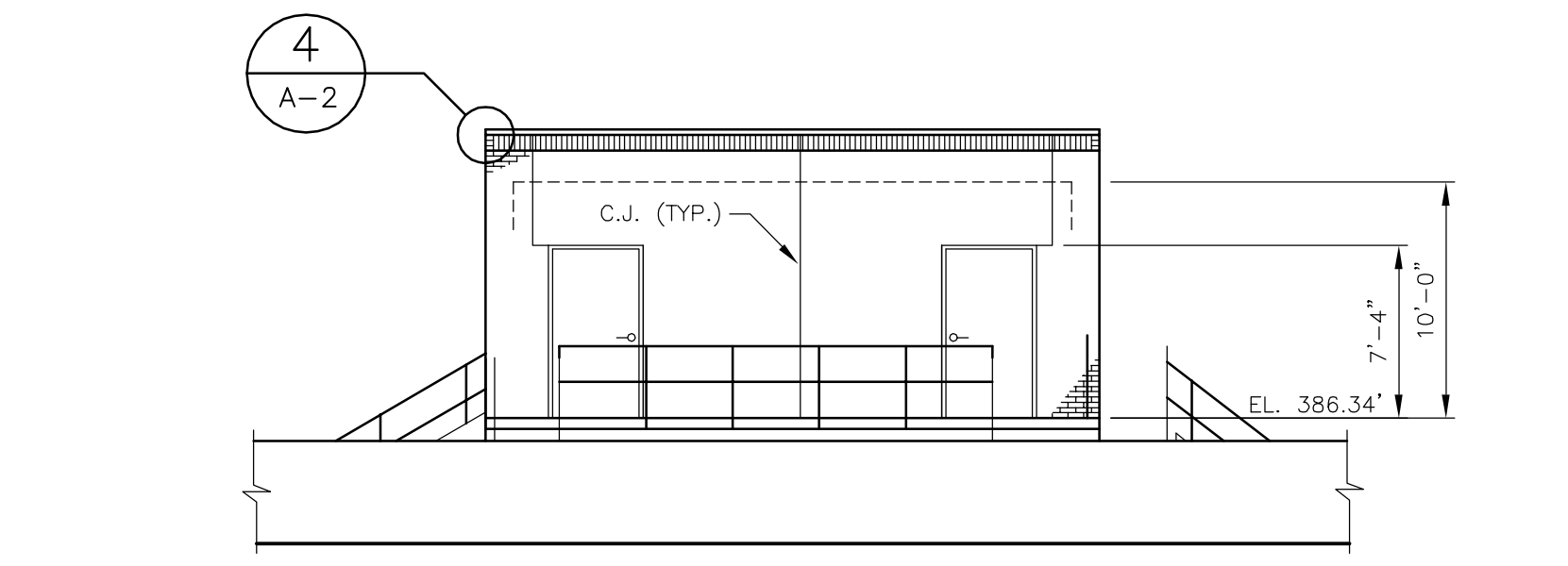
3
A-2



REMOVABLE HANDRAIL DETAIL
SCALE: 3/4" = 1'-0"



SECTION



KEY PLAN
NOT TO SCALE

RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: _____ PER: _____

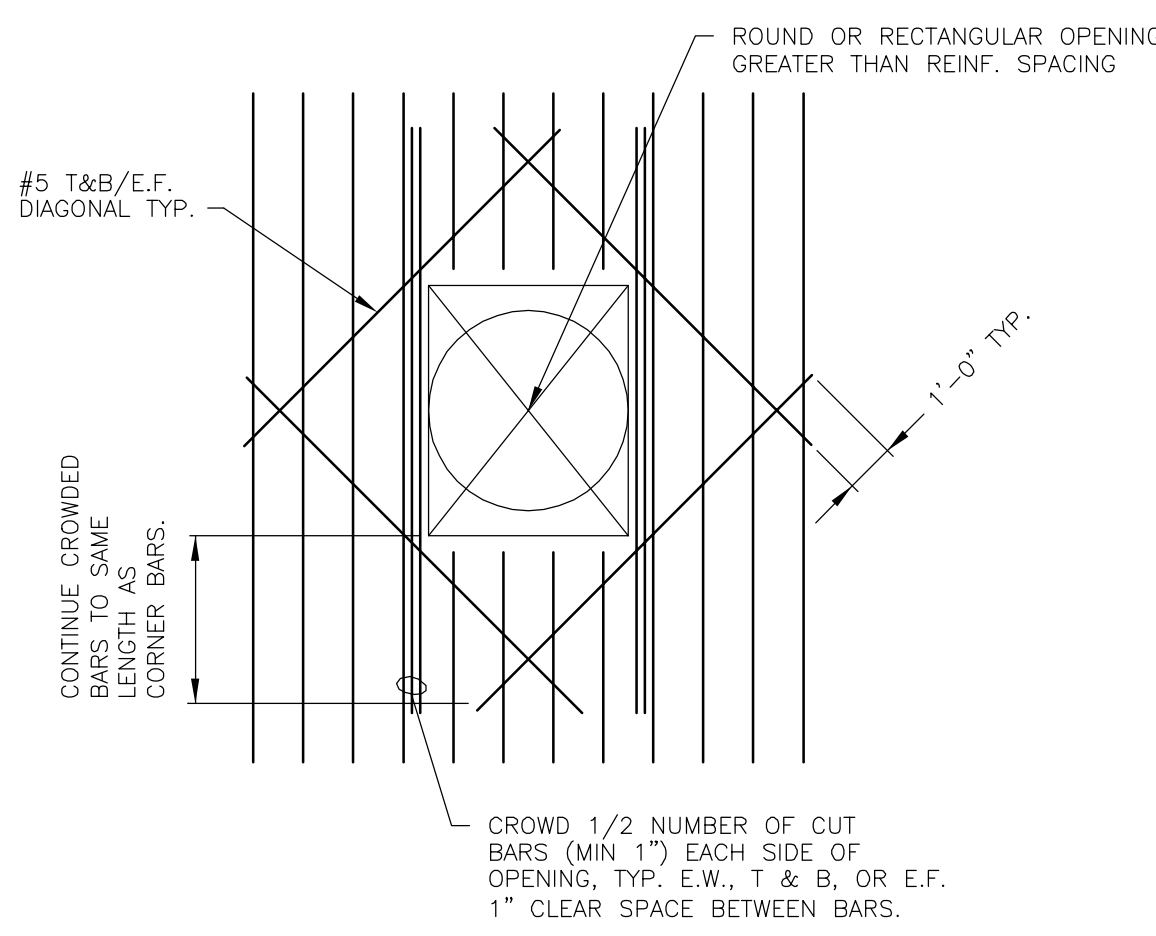
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2	FOR APPROVAL	HCC	1/2000	JDB	JDB	RB	3/2000
1	FOR APPROVAL	HCC	9/99	JDB	JDB	RB	11/99
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	
PROJECT SUPERVISOR	DEPARTMENT SUPERVISOR						

4	RECORD DRAWING	HCC	9/01	JDB	JRH	RB	9/01
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	

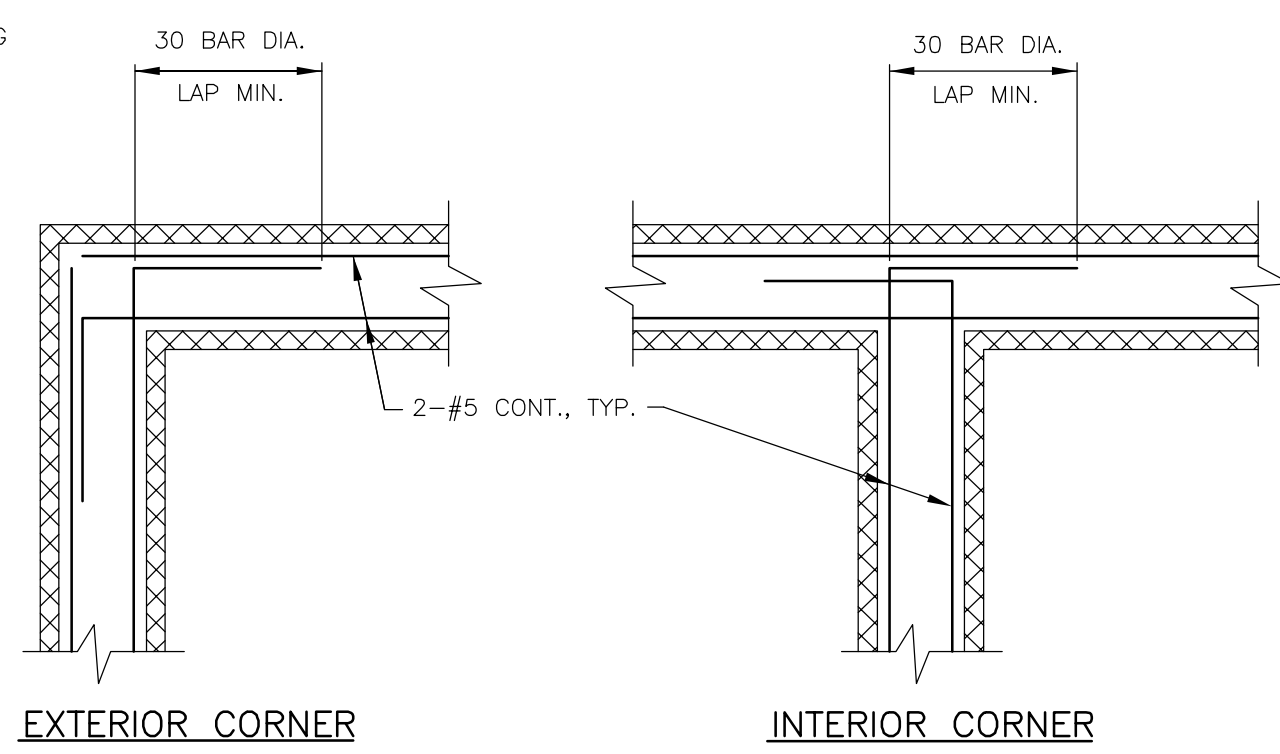
Stearns & Wheeler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS
CAZENOVIA, NEW YORK

ONONDAGA COUNTY		
BREWERTON WASTEWATER TREATMENT FACILITY		
THICKENER BUILDING PLANS, ELEVATIONS AND SECTION		
JOB NO.	9012030	CONTRACT 1A SHEET A-2

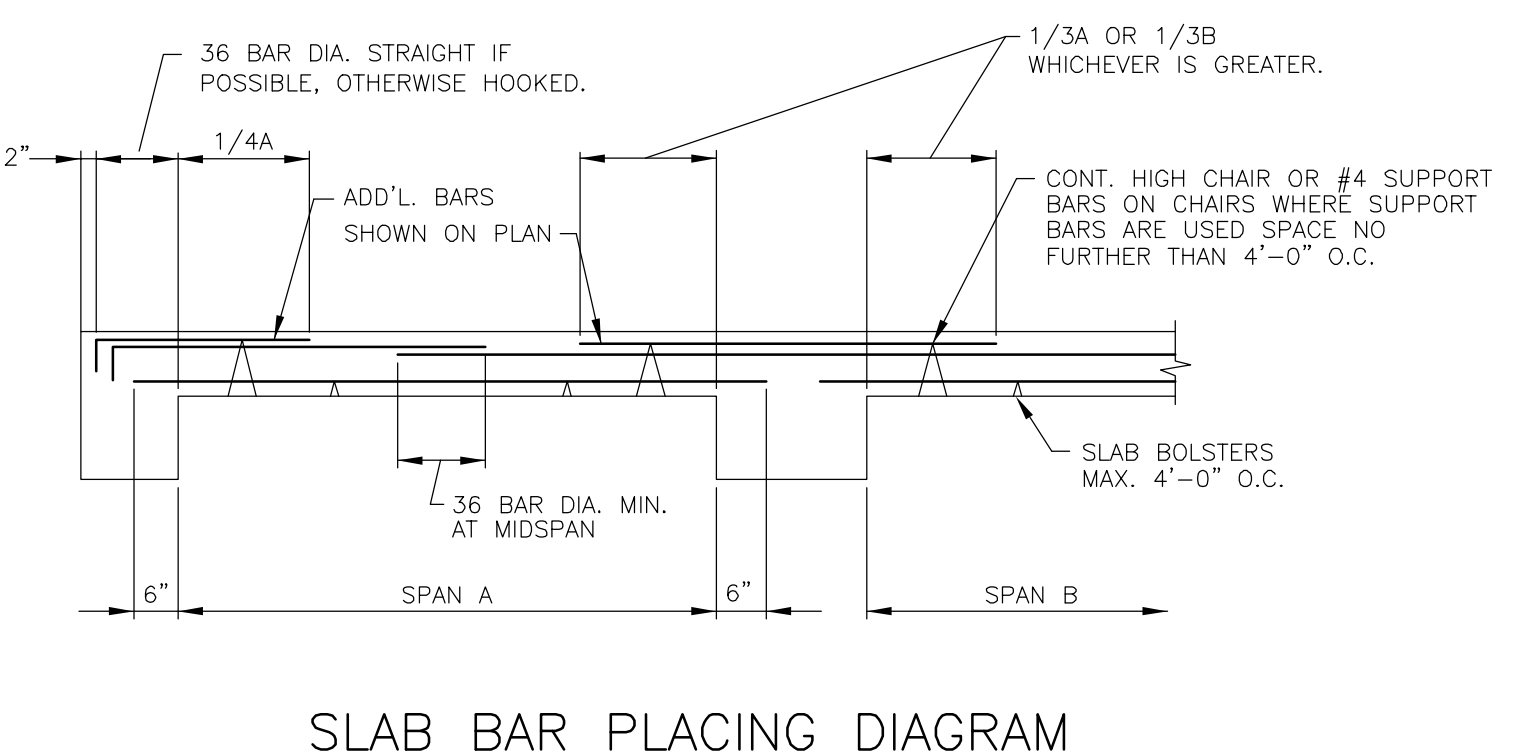


NOTE: 1. BARS SHOWN IN ONE DIRECTION FOR CLARITY. TREAT BARS IN OTHER DIRECTION IN SAME MANNER.
2. DETAIL TO BE USED AT ALL ELECTRICAL DUCTBANK WALL PENETRATIONS MEETING OPENING CRITERIA ABOVE.

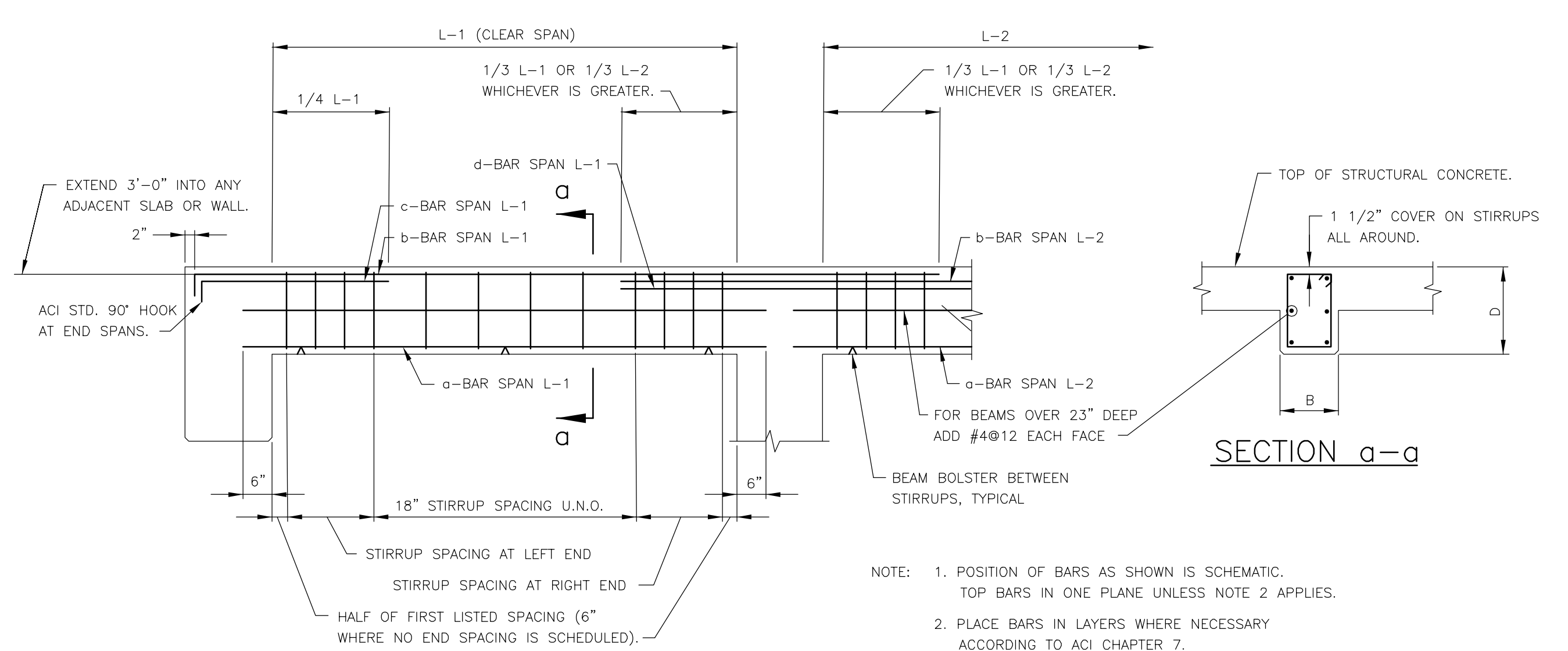
WALL/SLAB OPENING DETAIL
NOT TO SCALE



BOND BEAM REINFORCING PLACEMENT DETAIL
NOT TO SCALE

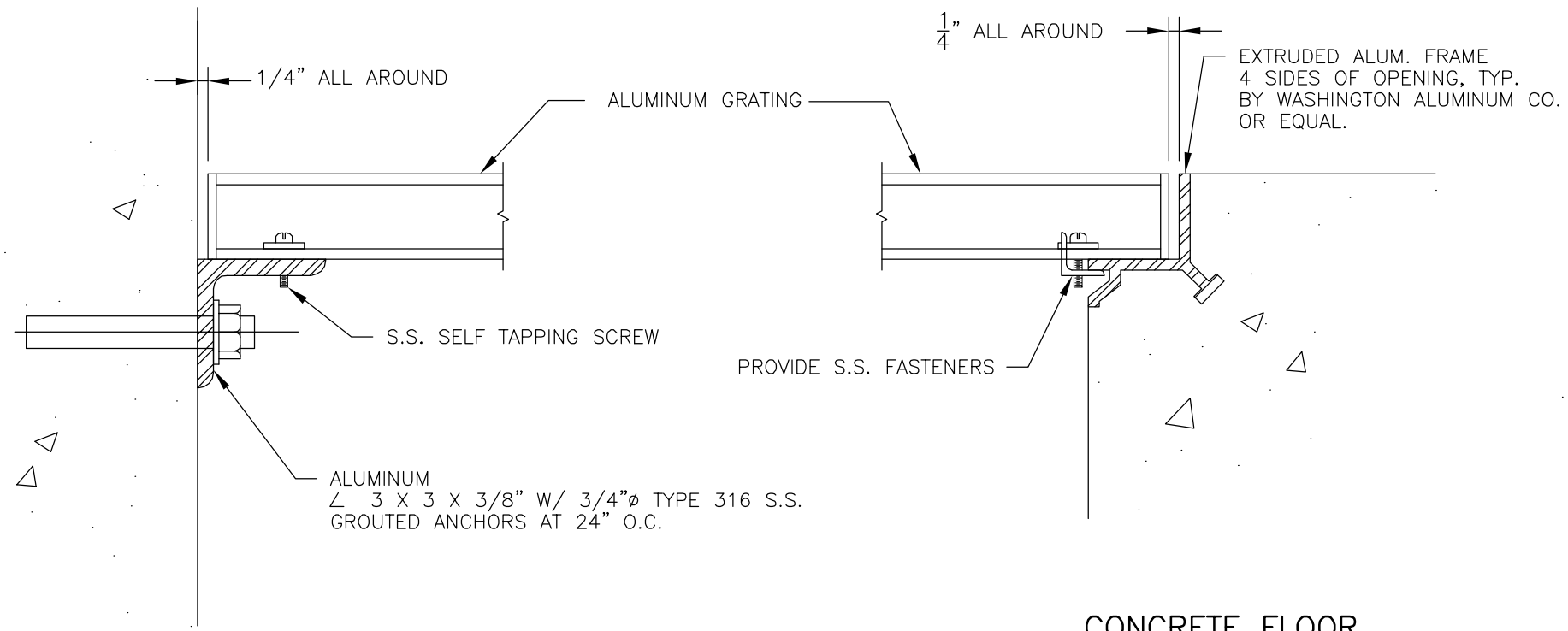


SLAB BAR PLACING DIAGRAM
NOT TO SCALE



BEAM BAR PLACING DIAGRAM
NOT TO SCALE

NOTE: 1. POSITION OF BARS AS SHOWN IS SCHEMATIC. TOP BARS IN ONE PLANE UNLESS NOTE 2 APPLIES.
2. PLACE BARS IN LAYERS WHERE NECESSARY ACCORDING TO ACI CHAPTER 7.



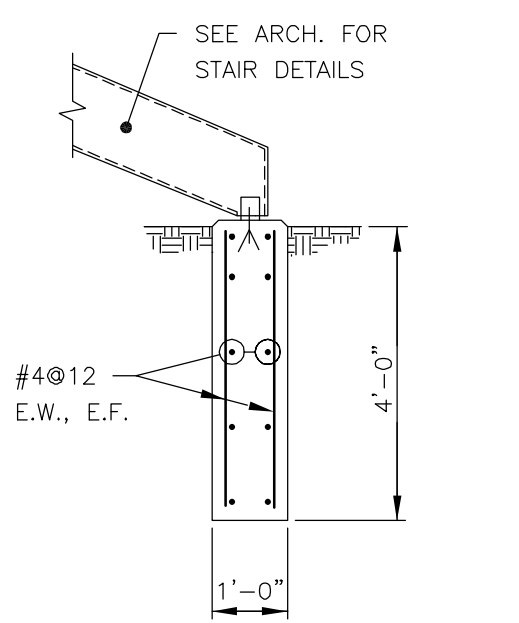
CONCRETE FLOOR TOP OF WALL

GRATING	
SPAN	ALUM. DEPTH
6" TO 2'-0"	1"
2'-1" TO 4'-0"	1 1/2"
4'-1" TO 6'-0"	2"

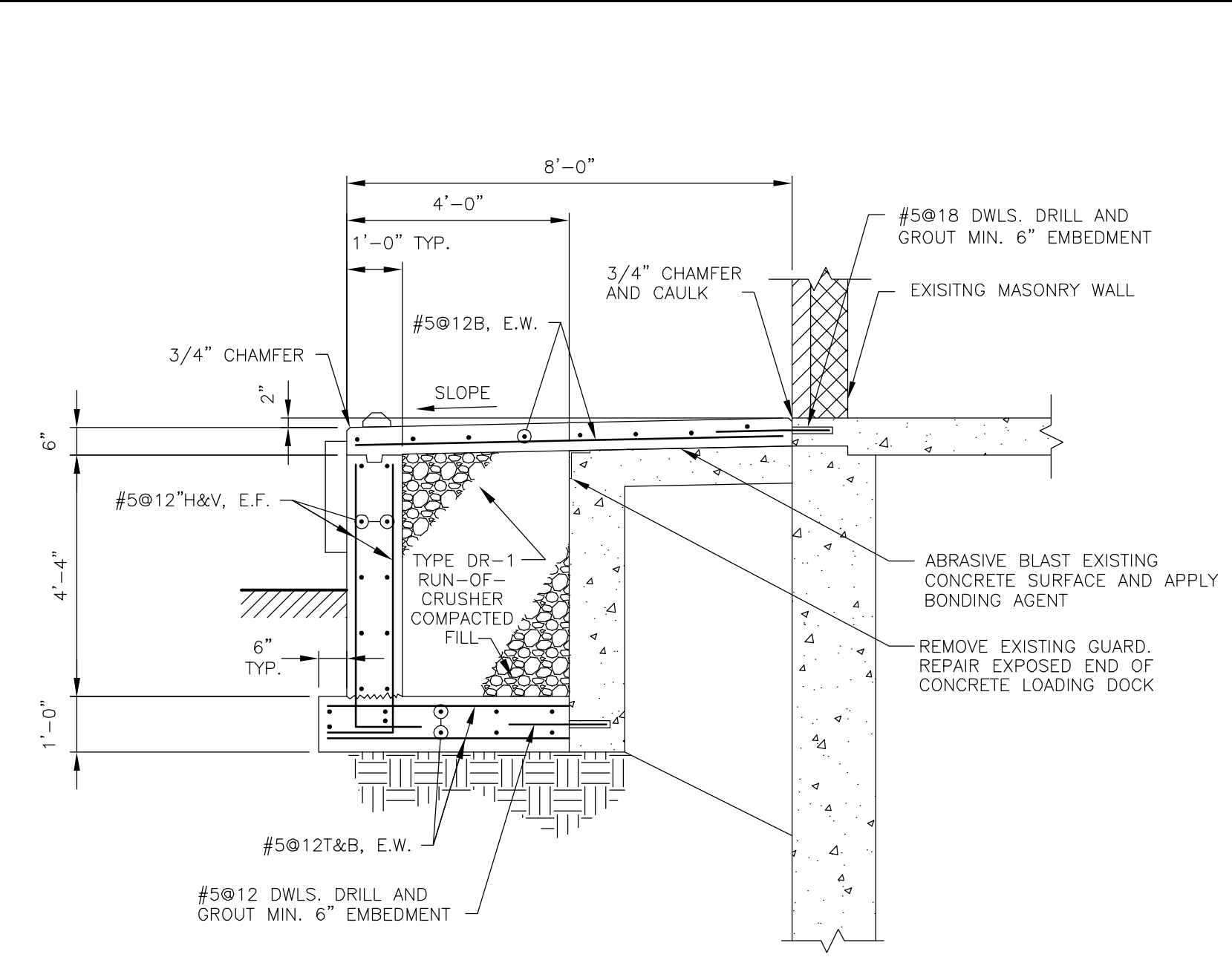
CONCRETE WALL

- MATERIALS:
 - GRATING AND FRAME ARE ASTM B221 ALLOY 6063-T3 ALUMINUM WITH STAINLESS STEEL ANCHORS, MILL FINISH.
 - DEPTH OF GRATING PER SCHEDULE UNLESS NOTED OTHERWISE ON DRAWINGS.
- EDGE BAND AT ALL OPENINGS & PERIMETER OF EACH GRATING SECTION.
- ALL FRAME JOINTS SHALL BE MITERED AND SHOP WELDED BOTH SIDES, GRIND EXPOSED WELD SMOOTH. FRAMES TO BE 4 SIDED WHERE PRACTICAL.
- GRATING TO BE NAAMM MBG 531, I BAR TYPE, AS MANUFACTURED BY OHIO GRATINGS INC., OR EQUAL
- MECHANICALLY CUT ALUMINUM FINISH SURFACES. DO NOT FLAME CUT.
- ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL BE PROTECTED WITH 5 MILS OF TNEC 66 - GRAY HI-BUILD EPOXOLINE, OR EQUAL

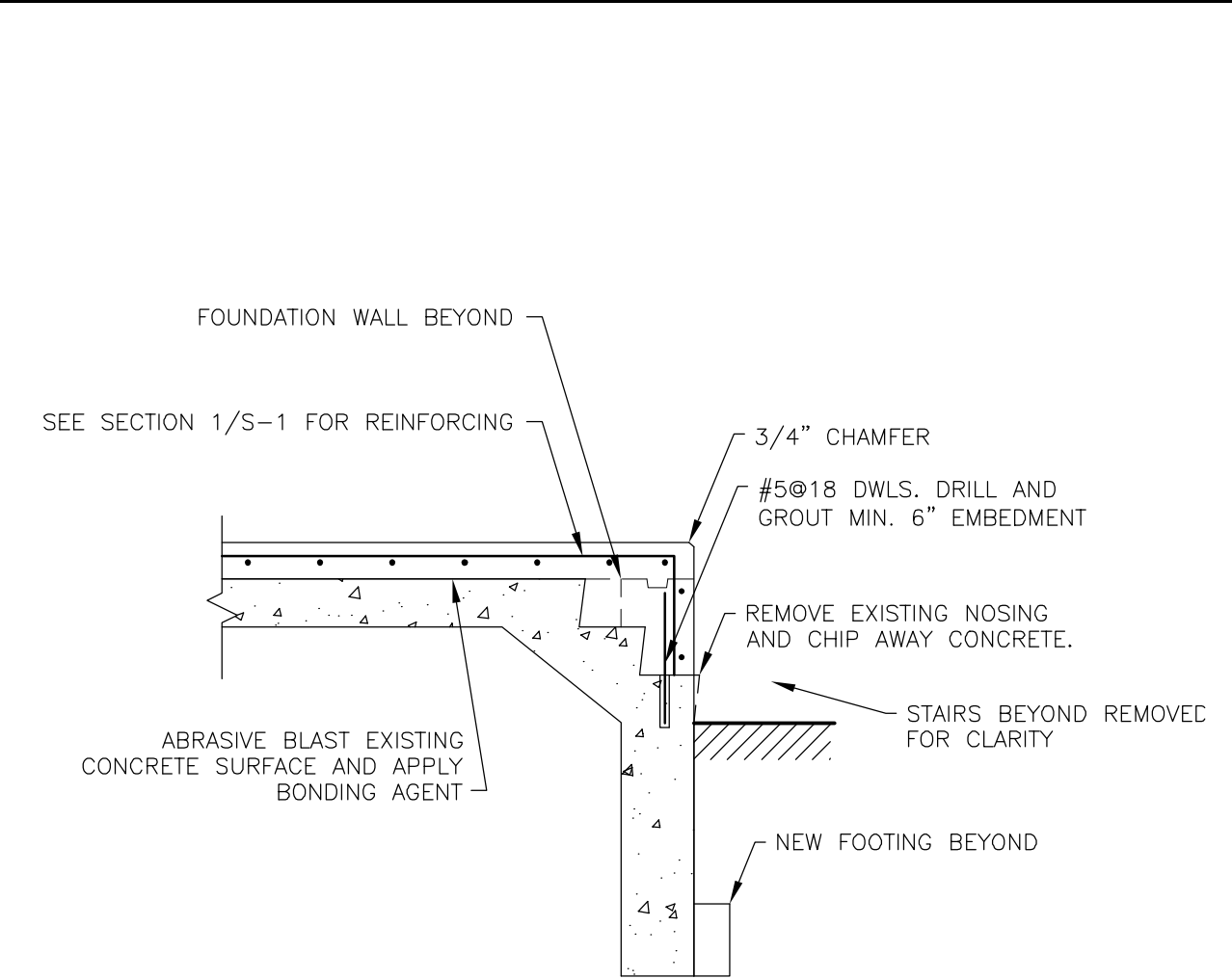
GRATING DETAIL
NOT TO SCALE



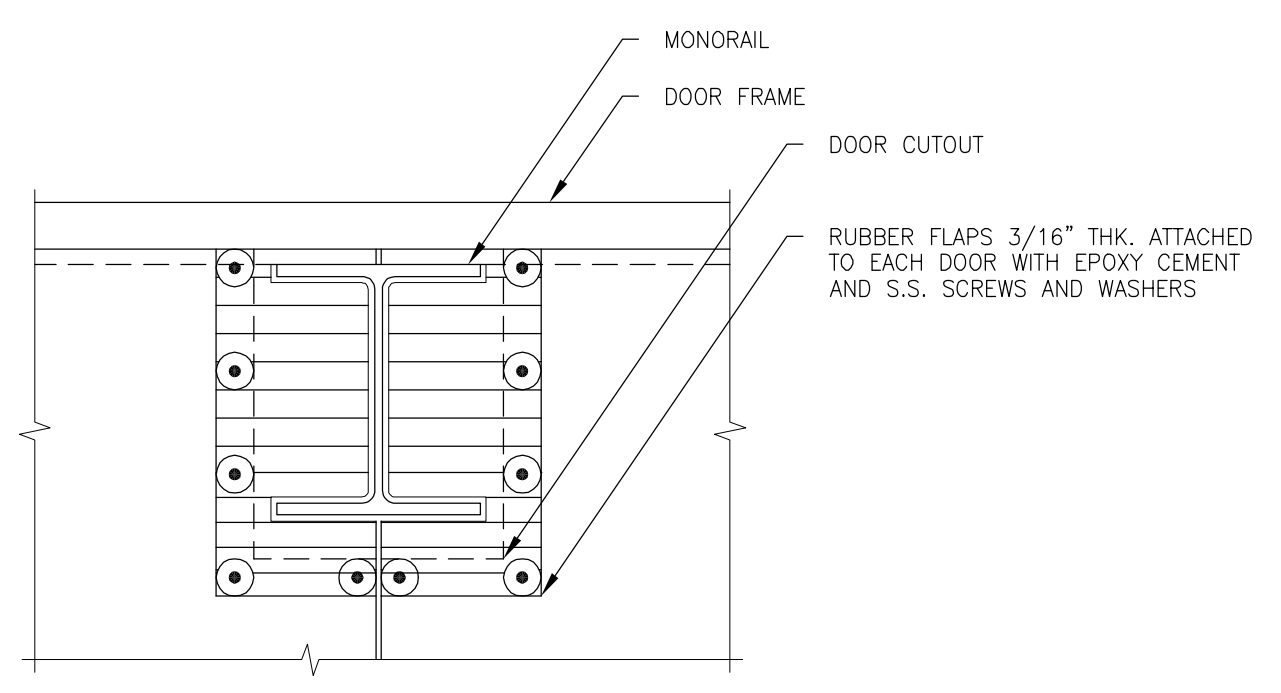
EXTERIOR STAIR SUPPORT DETAIL
NOT TO SCALE



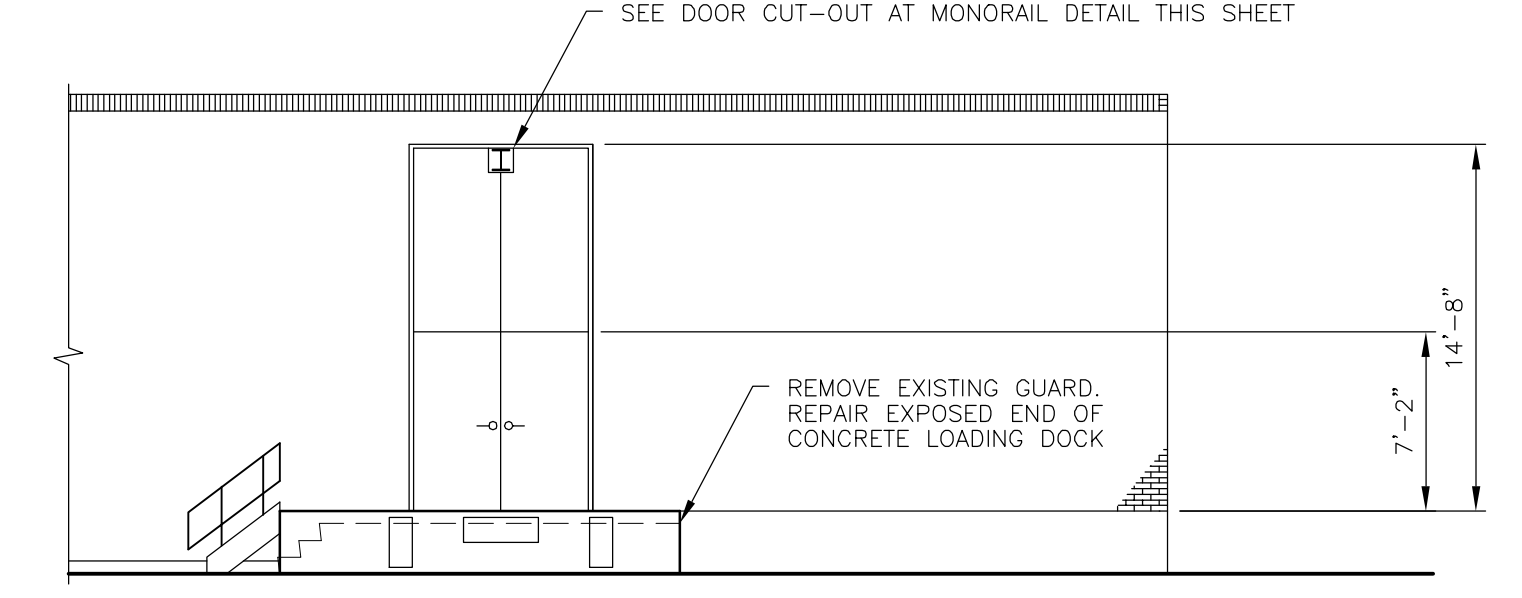
SECTION 1
SCALE: 3/8"=1'-0"



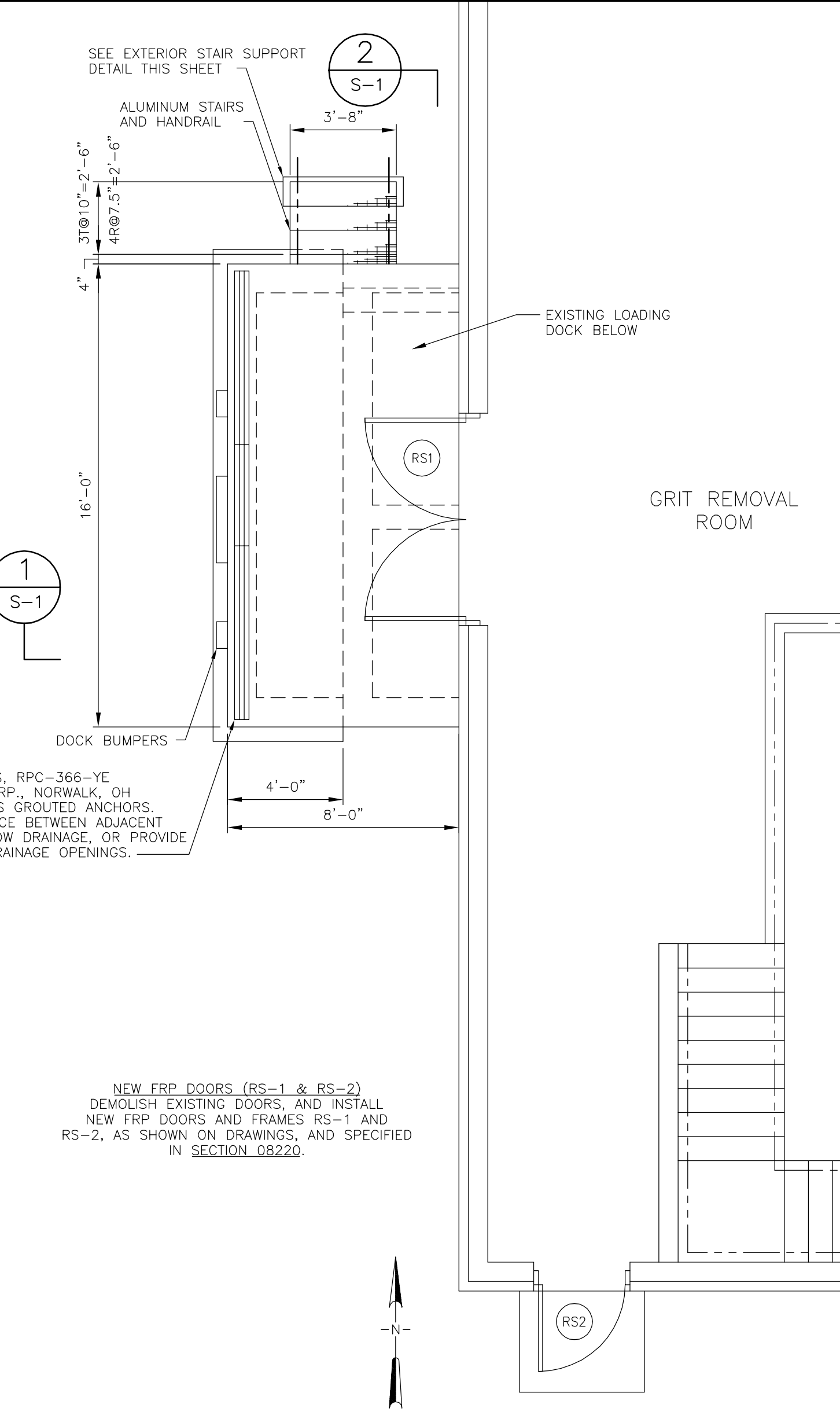
SECTION 2
SCALE: 3/8"=1'-0"



DOOR CUT-OUT AT MONORAIL
SCALE: 1 1/2"=1'-0"



PARTIAL WEST ELEVATION
SCALE: 1/8"=1'-0"



PARTIAL PLAN AT LOADING DOCK
SCALE: 1/4"=1'-0"

RECORD DRAWING

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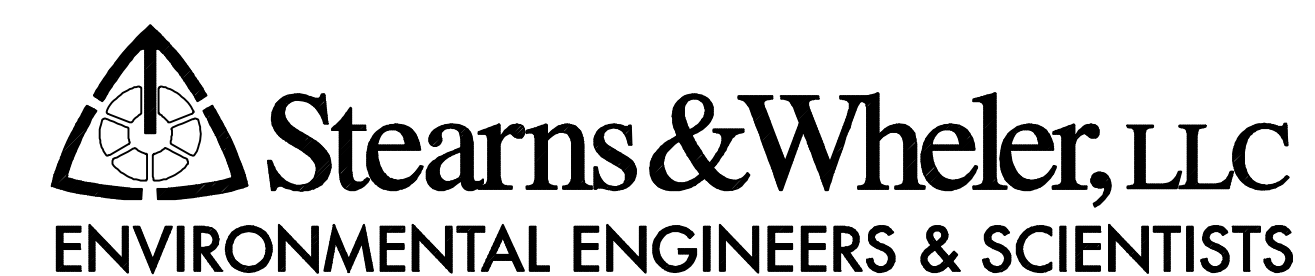
DATE: _____ PER: _____

RAW SEWAGE PUMPING STATION

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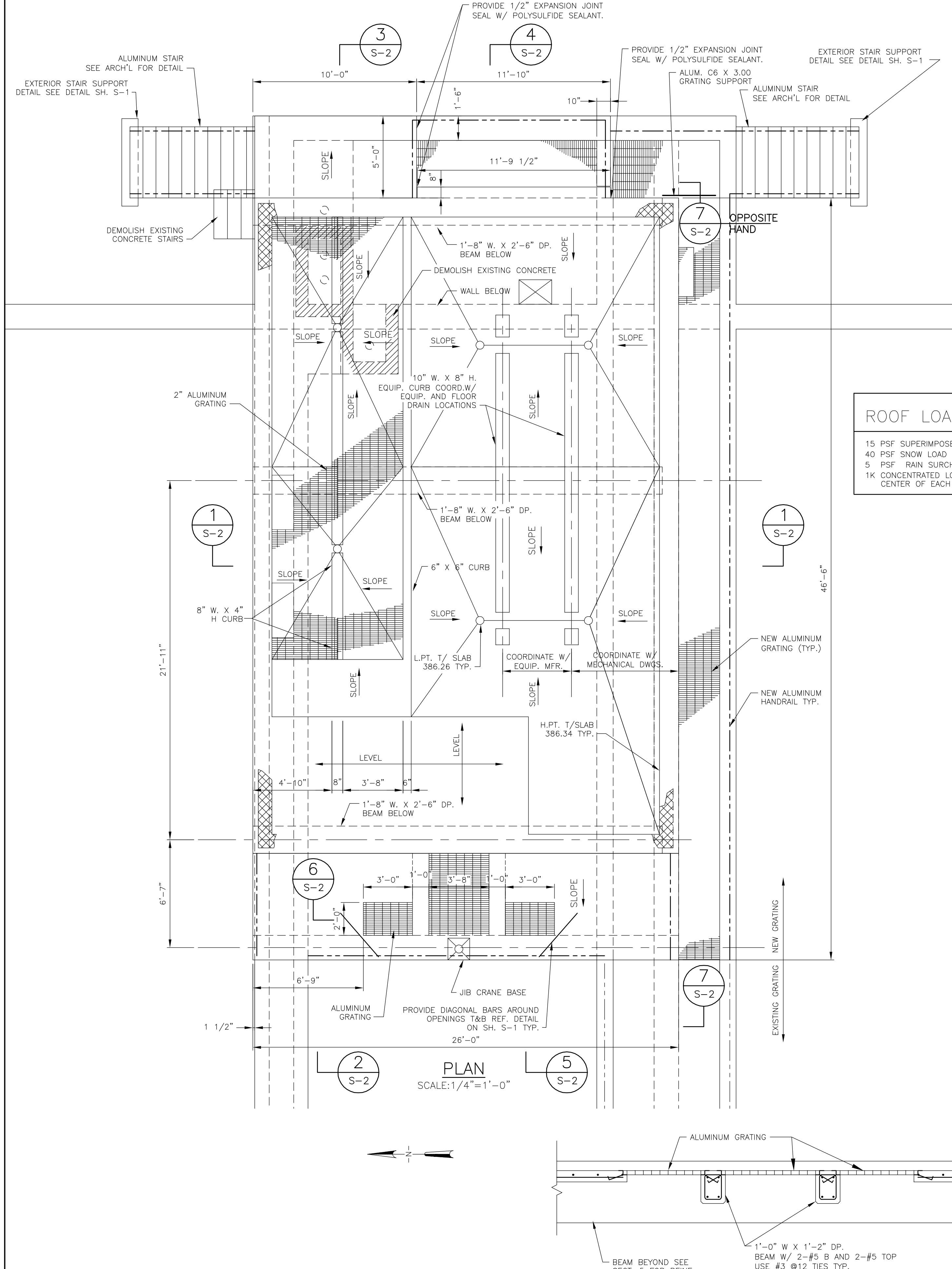
3	FOR CONSTRUCTION	MJL/JRH	5/2000	CMK	MEL	RB	5/00
2	FOR APPROVAL	MJL	1/2000	CMK	MEL	RB	3/2000
1	FOR APPROVAL	MJL	10/99	CMK	MEL	RB	11/99
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	
	PROJECT SUPERVISOR			DEPARTMENT SUPERVISOR			

4	RECORD DRAWING	HCC	9/01	CMK	JRH	RB	9/01
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	



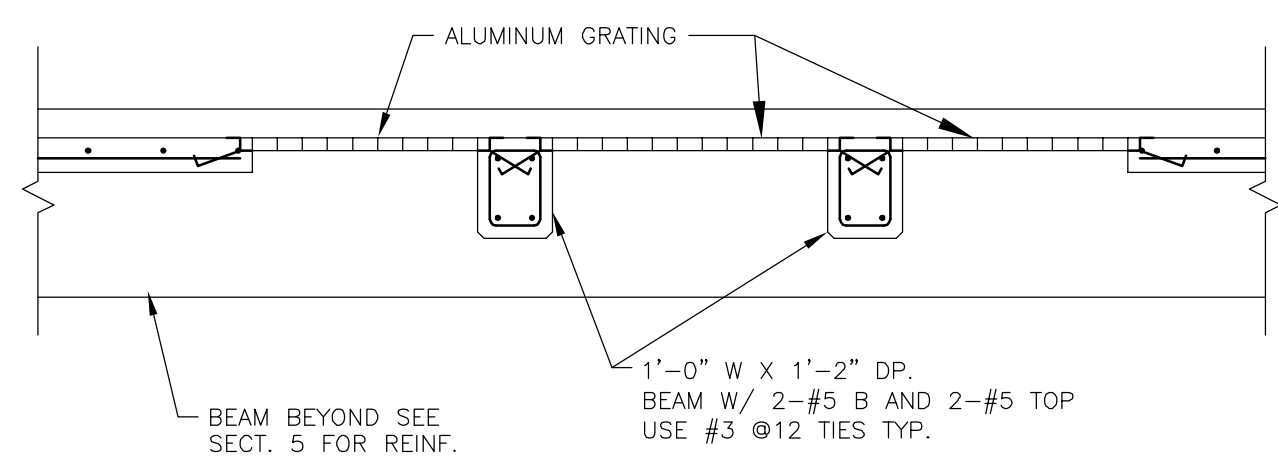
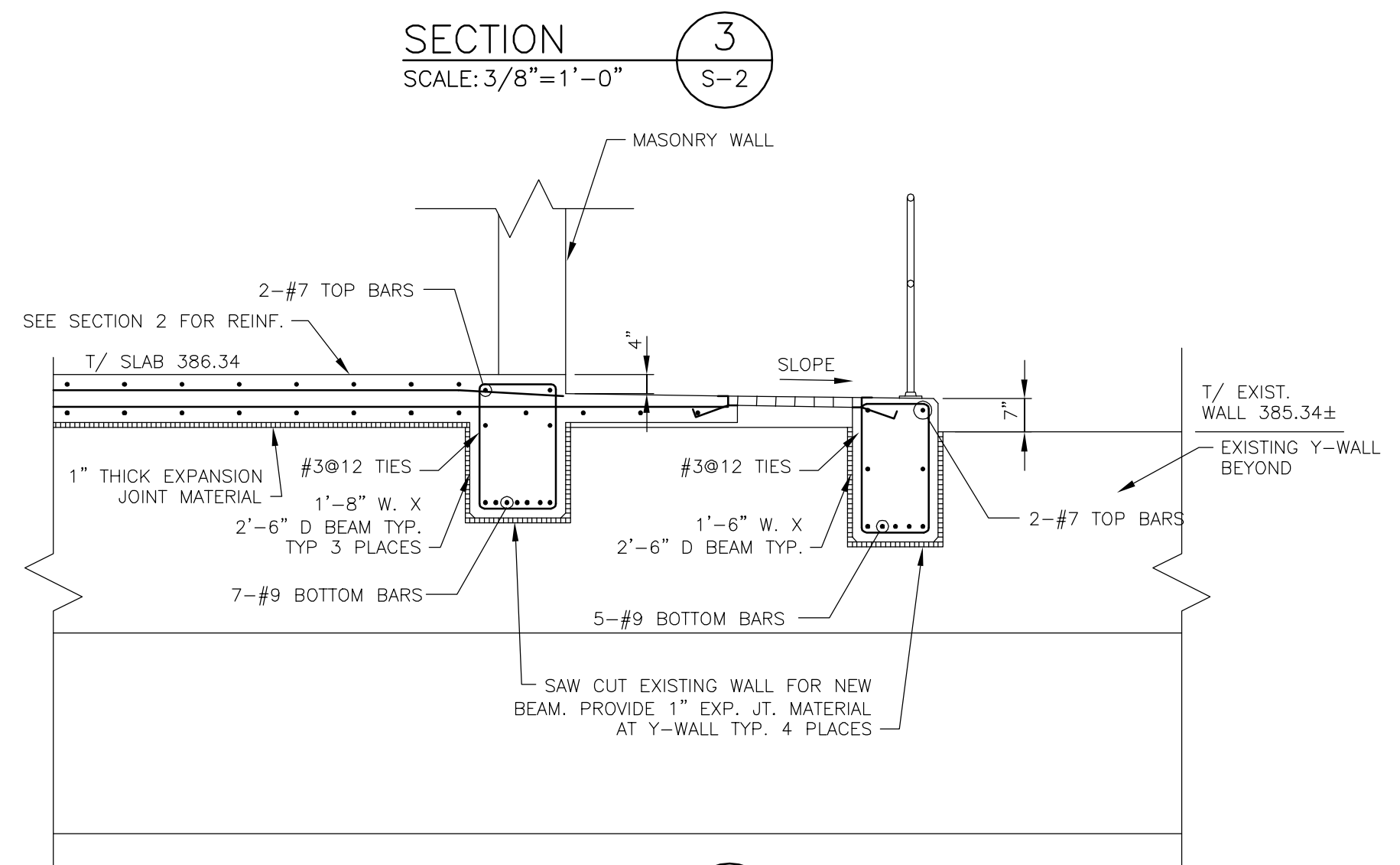
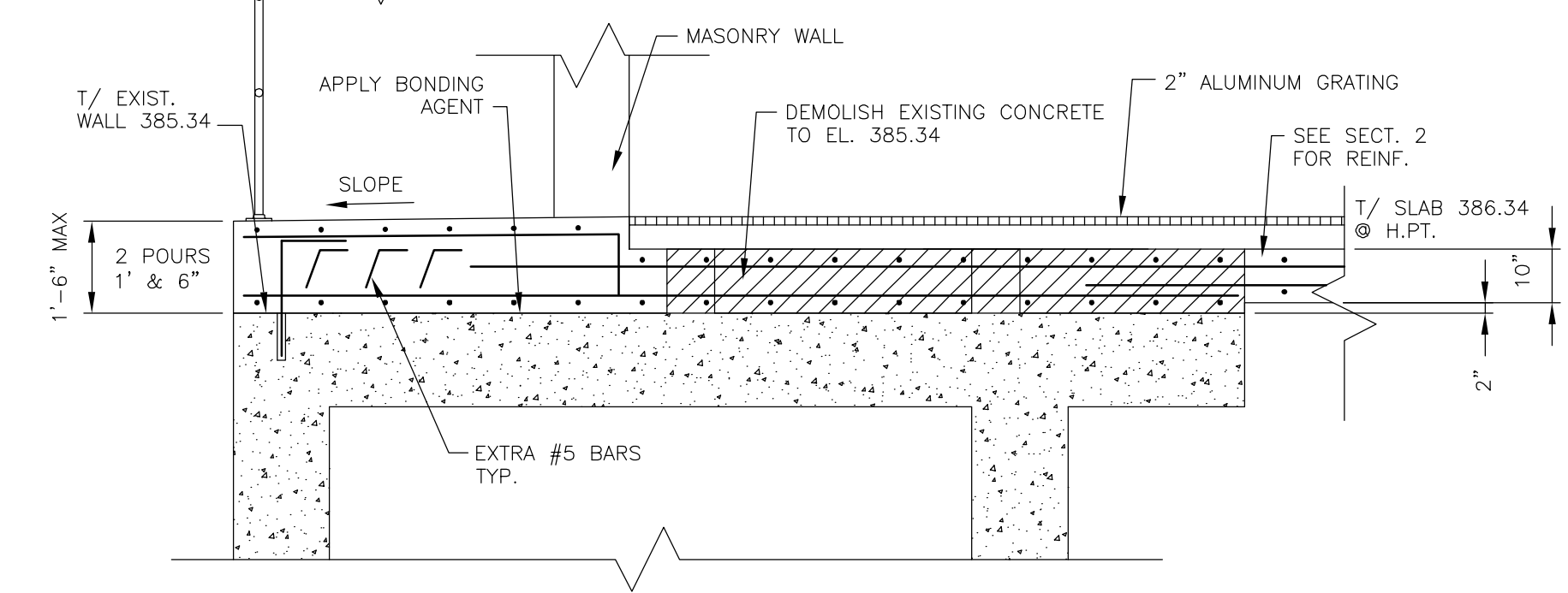
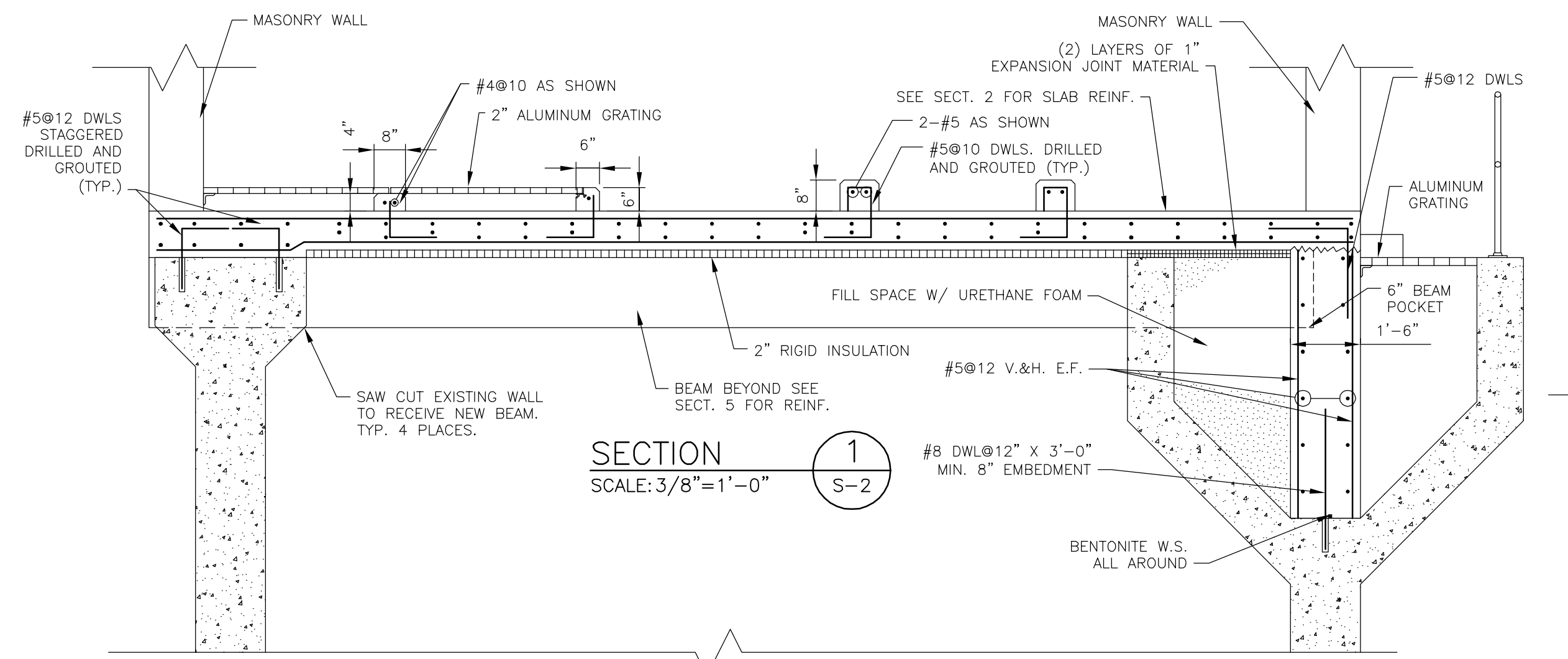
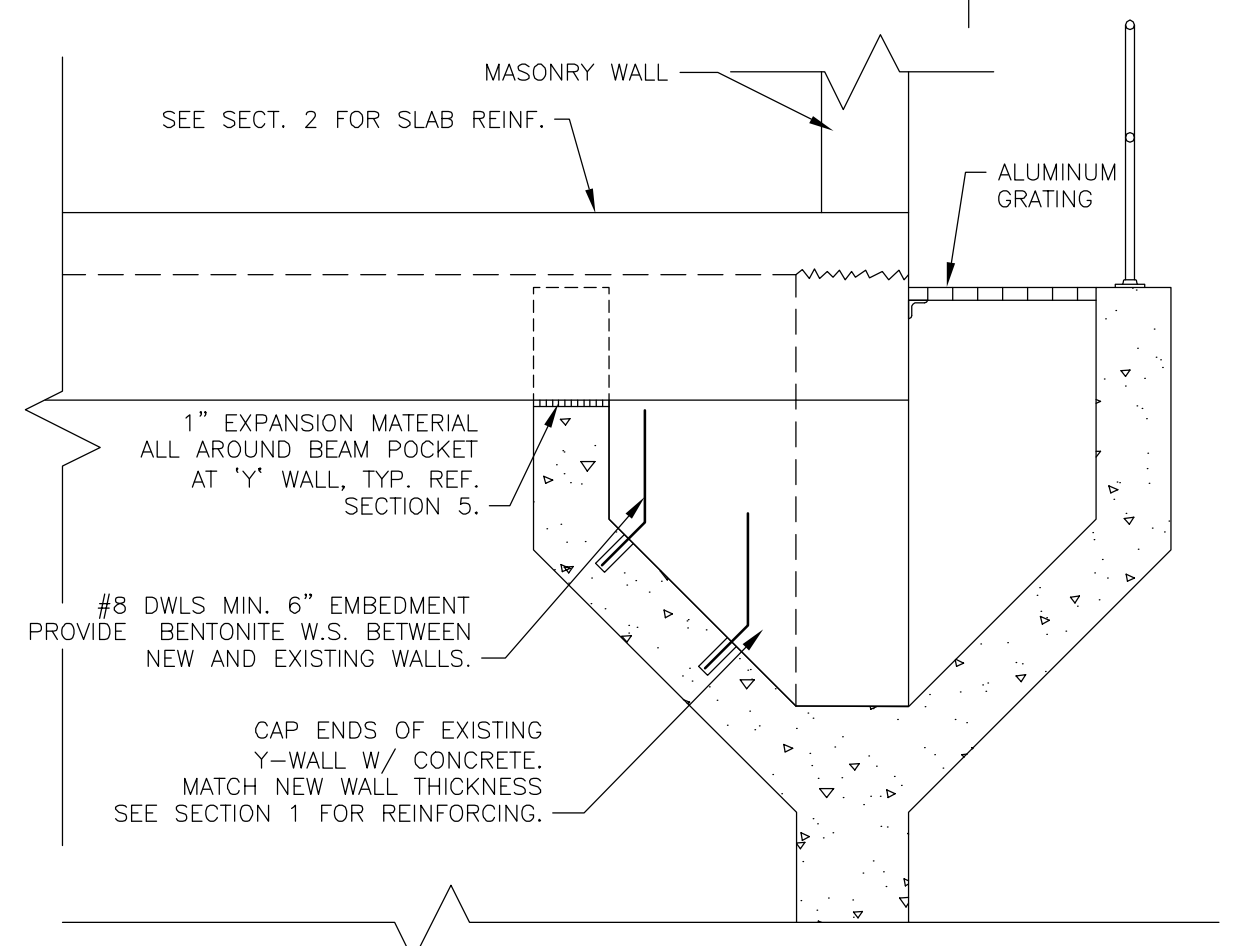
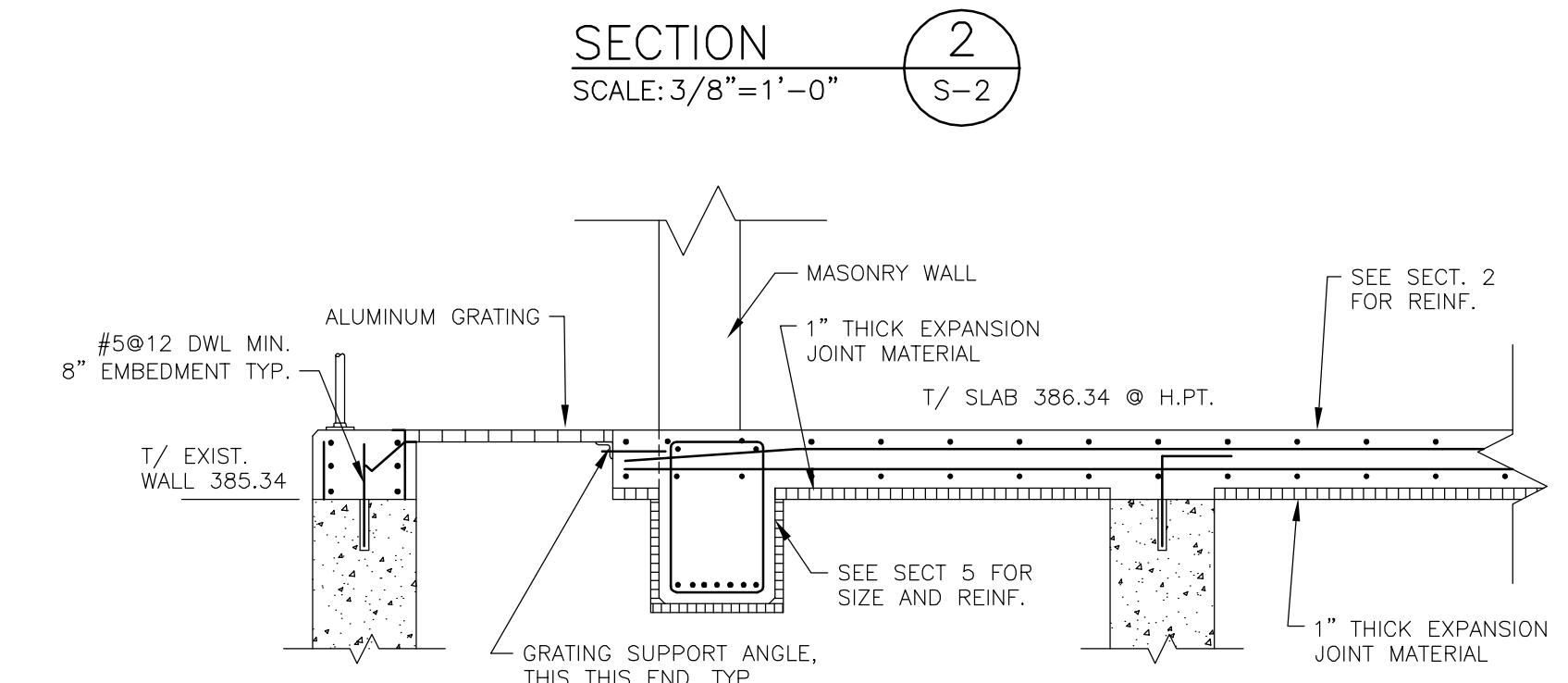
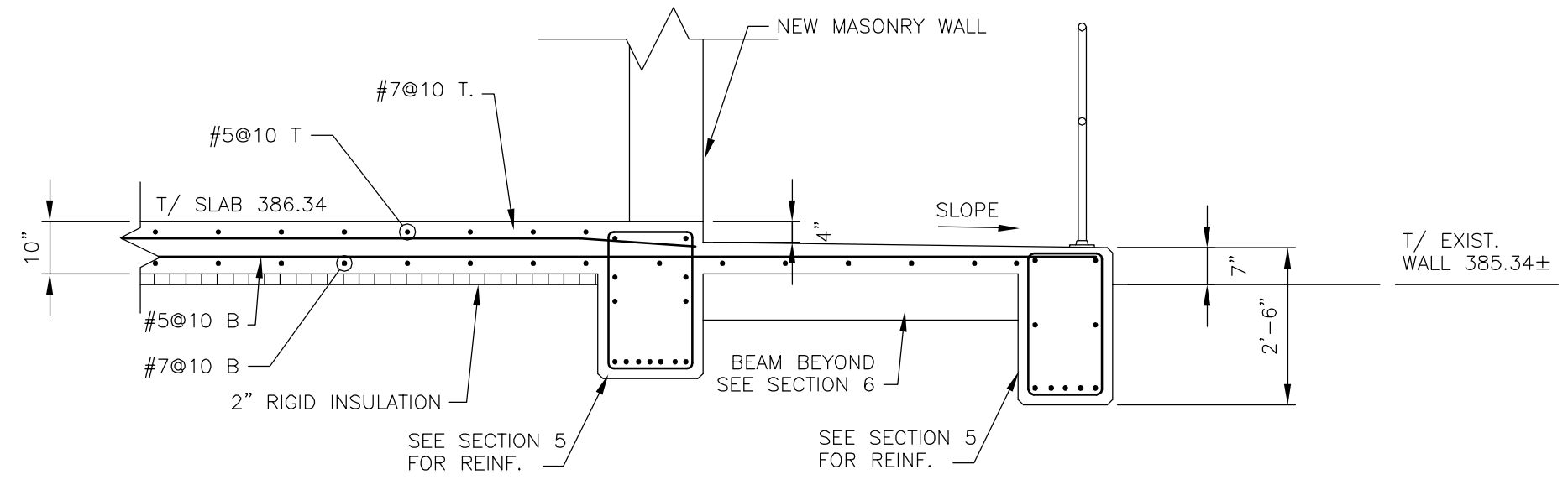
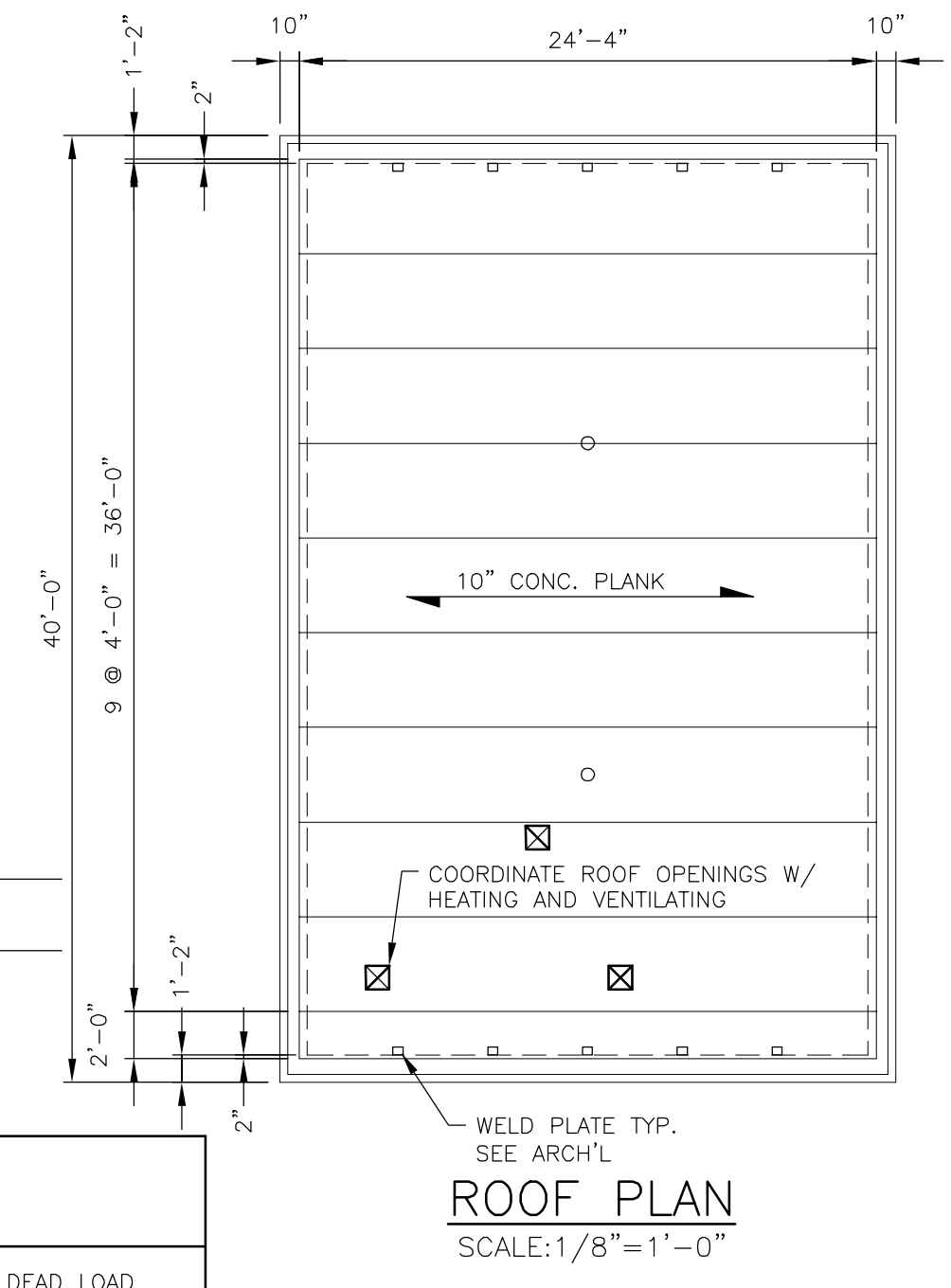
CAZENOVIA, NEW YORK

ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
STANDARD DETAILS AND RAW SEWAGE PUMPING STATION PLAN, SECTIONS, ELEVATION, AND DETAIL			
JOB NO.	9012030	CONTRACT	1A
SHEET			S-1



ROOF LOAD

15 PSF SUPERIMPOSED DEAD LOAD
40 PSF SNOW LOAD
5 PSF RAIN SURCHARGE
1K CONCENTRATED LOAD AT CENTER OF EACH PLANK



RECORD DRAWING

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DATE: _____ PER: _____

NOTES:

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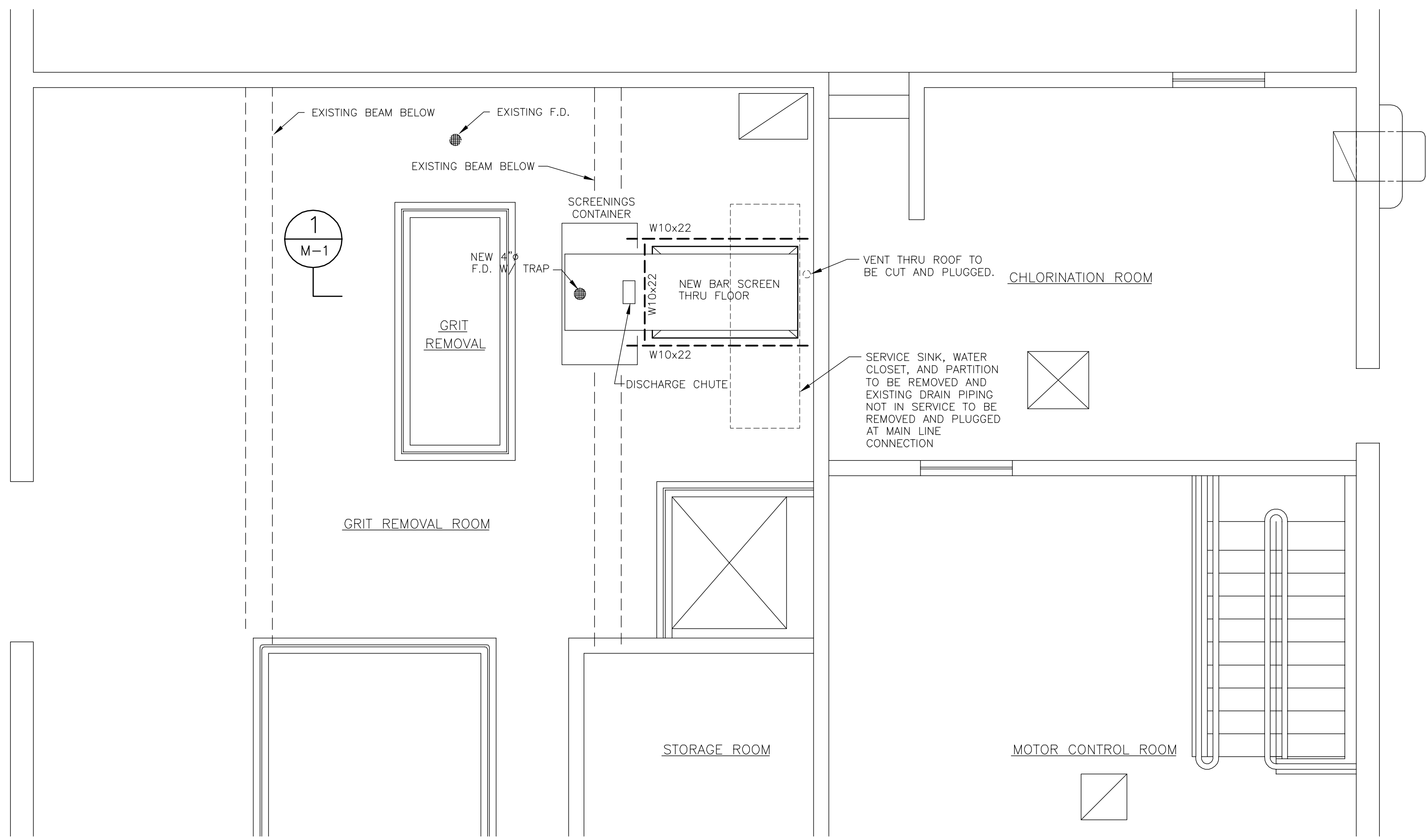
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3	FOR CONSTRUCTION	MJL/JRH	5/2000	CMK	MEL	RB	5/00
2	FOR APPROVAL	MJL	1/2000	CMK	MEL	RB	3/2000
1	FOR APPROVAL	MJL	10/99	CMK	MEL	RB	11/99
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	
PROJECT SUPERVISOR				DEPARTMENT SUPERVISOR			

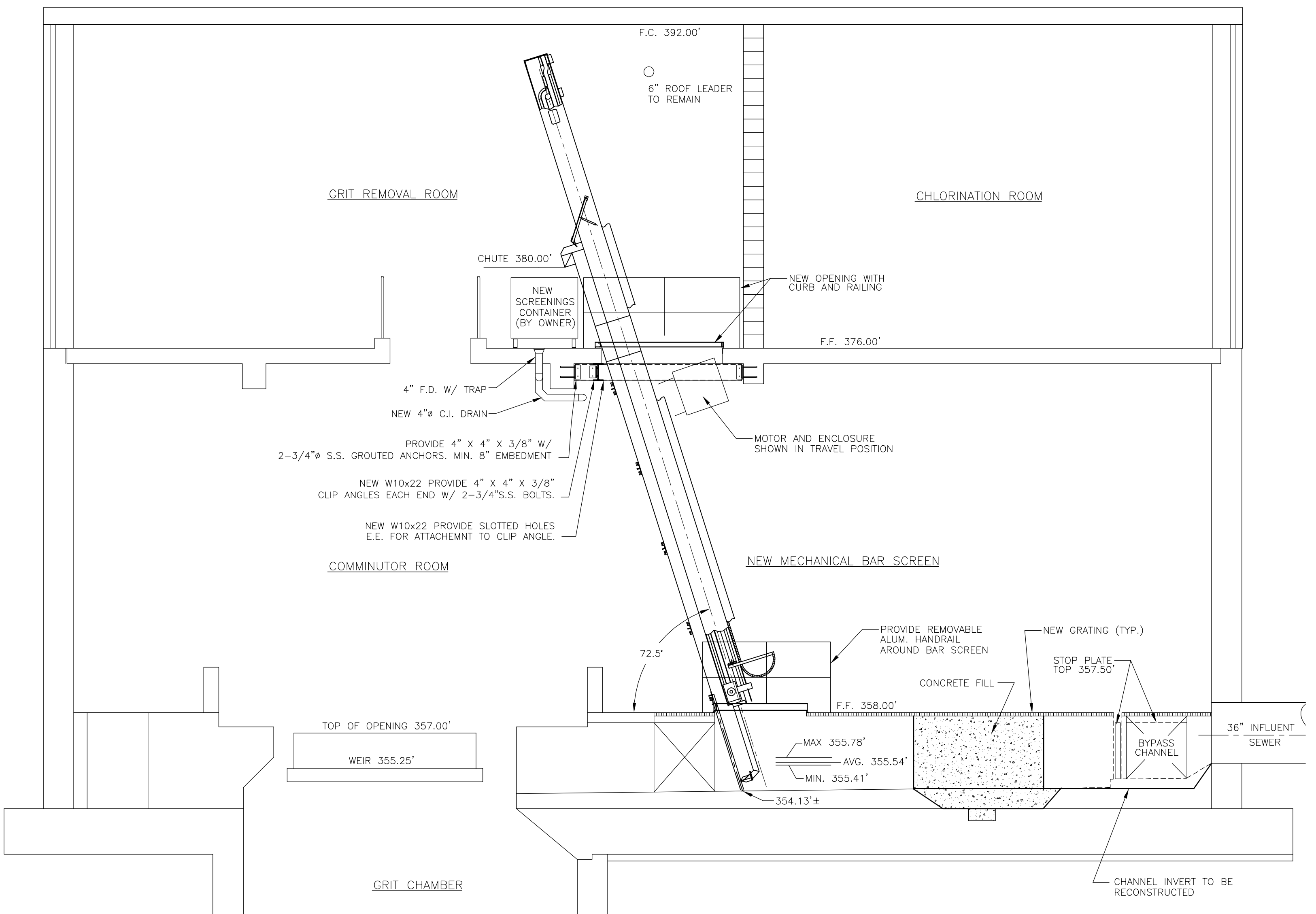
4	RECORD DRAWING	HCC	9/01	CMK	JRH	RB	9/01
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	

Stearns & Wheeler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS
 CAZENOVIA, NEW YORK

ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
NEW THICKENER BUILDING PLANS AND SECTIONS			
JOB NO.	9012030	CONTRACT	1A
SHEET	S-2		

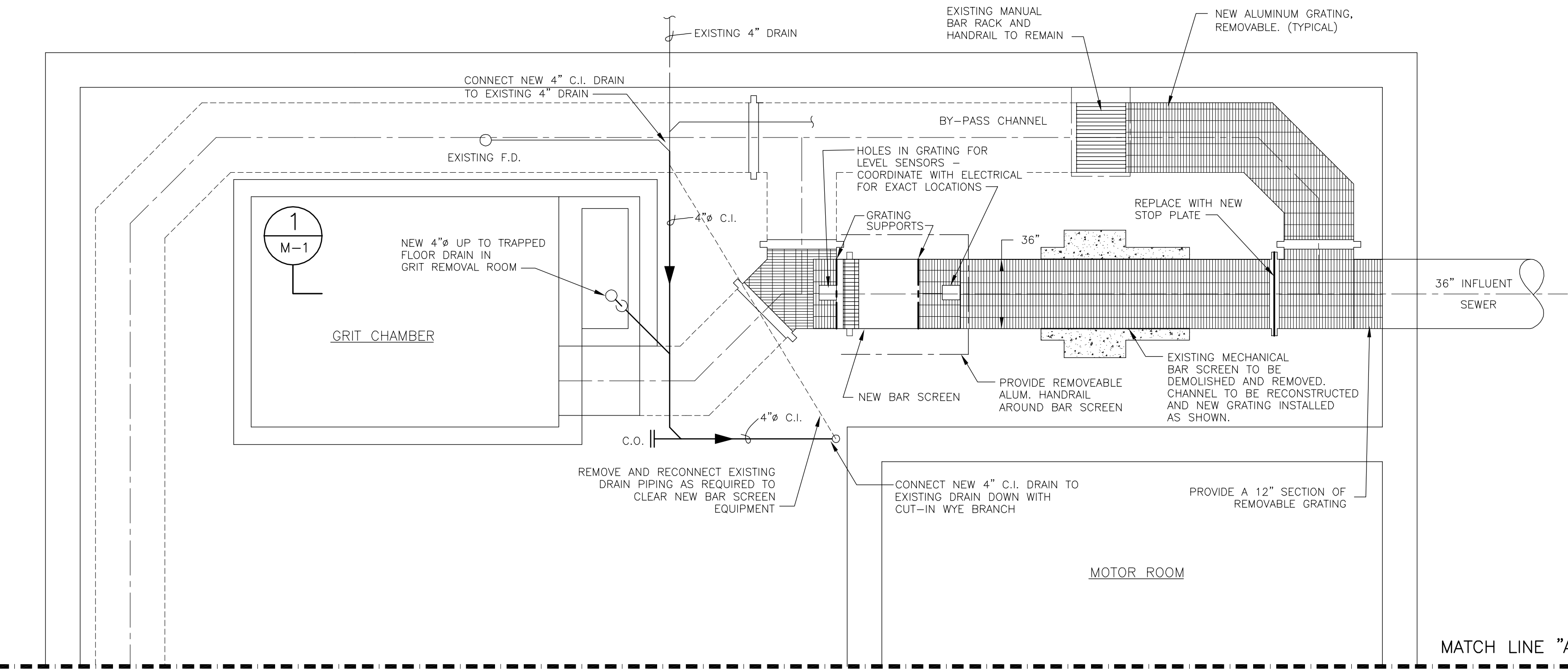


SCREEN AREA - UPPER PLAN
SCALE: 1/4" = 1'-0"

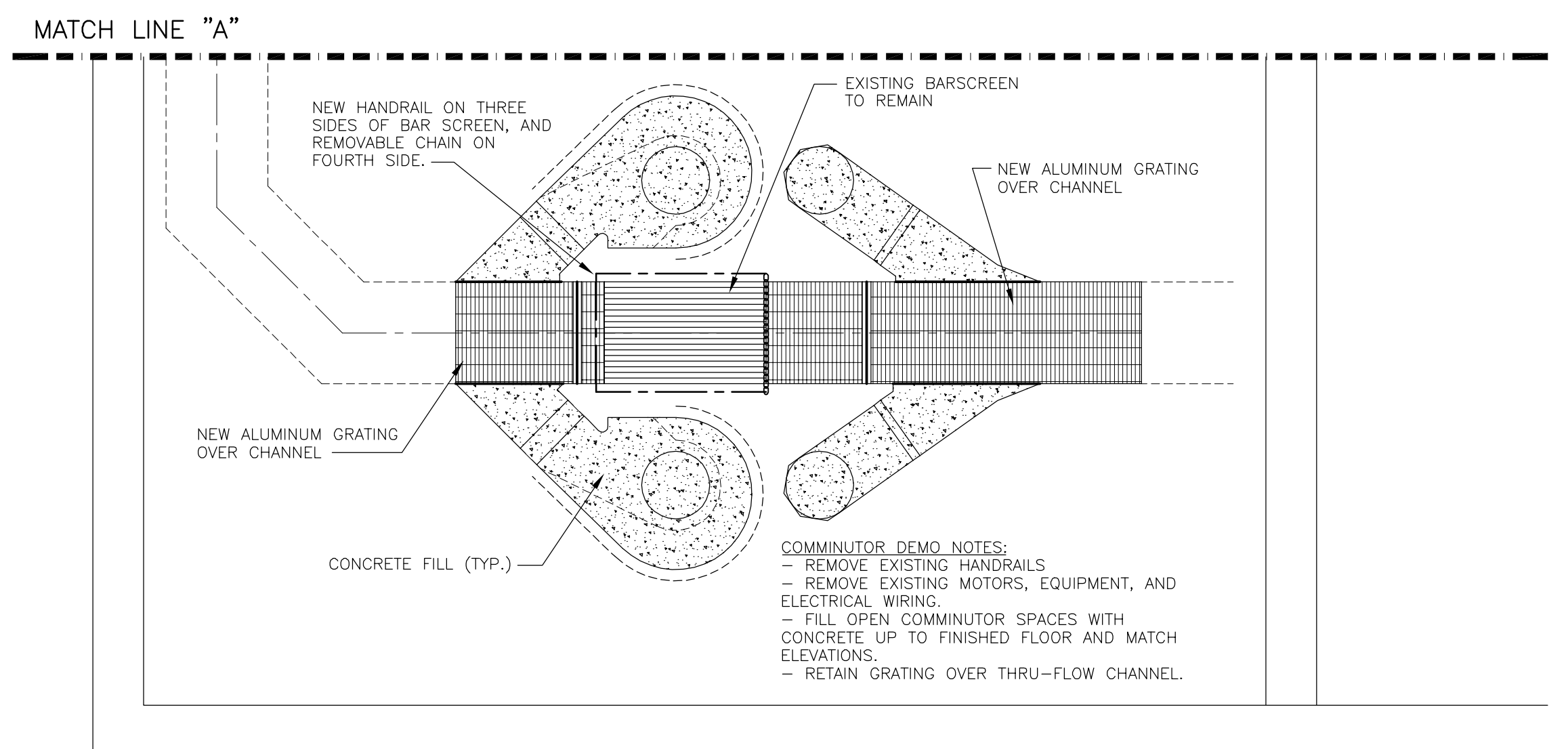


SECTION 1
SCALE: 1/4" = 1'-0"

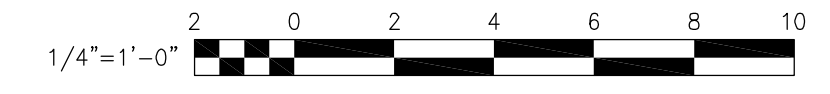
NOTE: ALL ELEVATIONS SHOWN ARE REFERENCE ELEVATIONS TAKEN FROM EXISTING DRAWINGS, AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION BY THE CONTRACTOR.



SCREEN AREA - LOWER PLAN
SCALE: 1/4" = 1'-0"



COMMUNUTOR DEMO PLAN
SCALE: 1/4" = 1'-0"



RECORD DRAWING
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3	FOR CONSTRUCTION	JRH	5/2000	TWF	JRH	RB	5/00
2	FOR APPROVAL	JRH	1/2000	TWF	JRH	RB	3/2000
1	FOR APPROVAL	JRH	9/99	TWF	JRH	RB	11/99
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	
PROJECT SUPERVISOR	DEPARTMENT SUPERVISOR						4
ISSUE NO.	HCC	9/01	TWF	JRH	RB	9/01	
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	

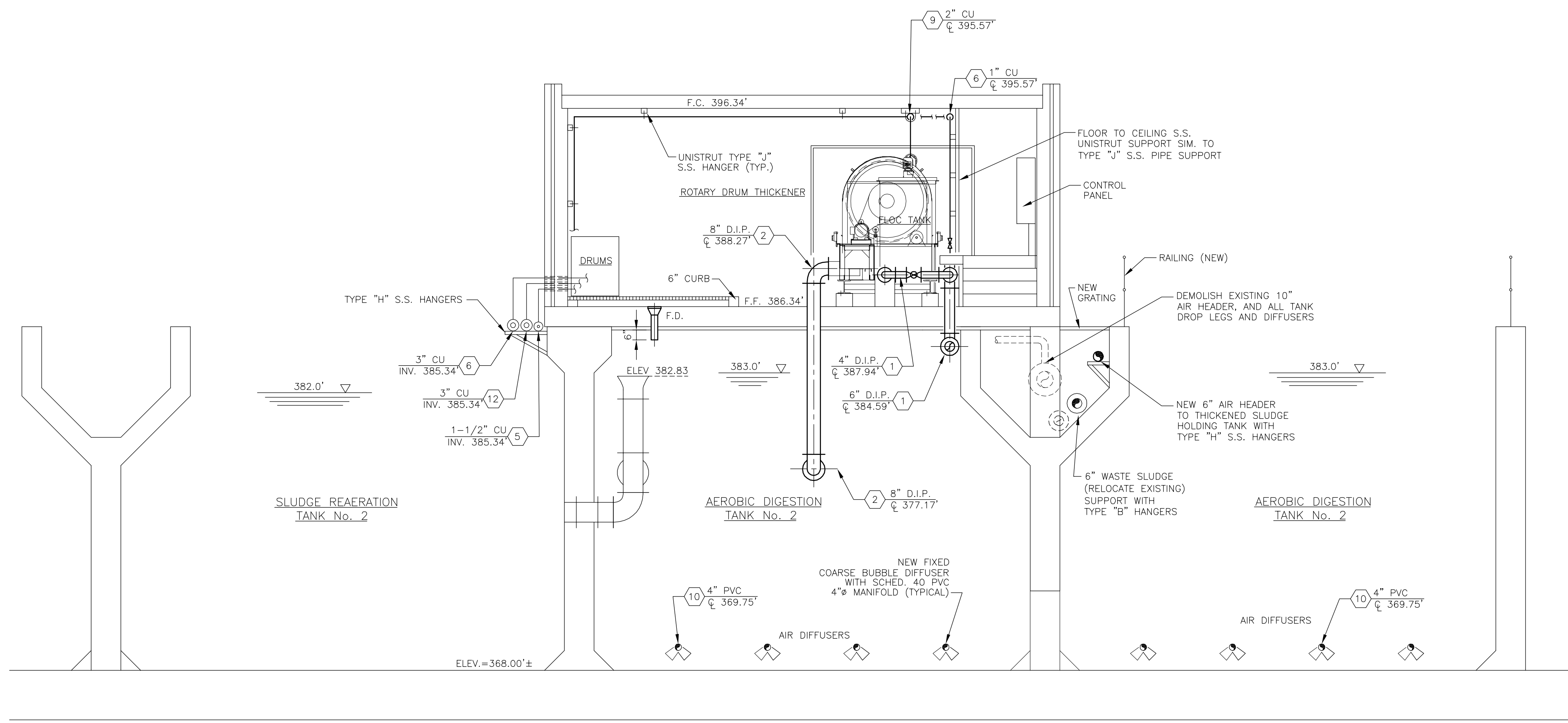
Stearns & Wheeler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS
CAZENOVIA, NEW YORK

ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
RAW SEWAGE PUMPING STATION MODIFICATIONS INFLUENT AREA / BAR SCREEN PLANS AND SECTIONS			
JOB NO.	9012030	CONTRACT	1A
SHEET	M-1		

PIPE LEGEND

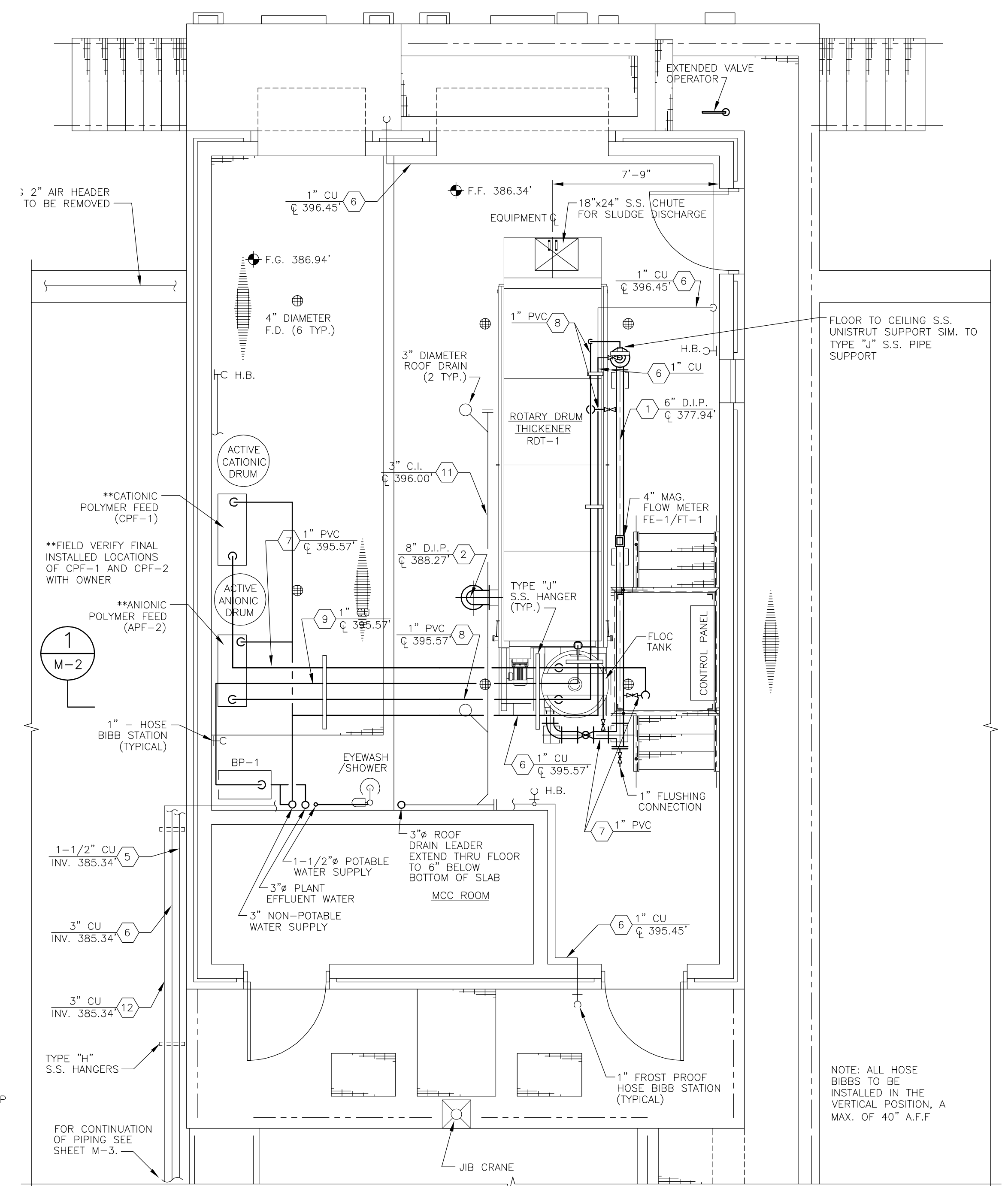
- 1 UNTHICKENED SLUDGE
- 2 FILTRATE DRAIN
- 3 THICKENED SLUDGE
- 4 ROOF DRAIN
- 5 POTABLE WATER
- 6 PLANT WATER (NON-POTABLE)
- 7 POLYMER (CATIONIC)
- 8 POLYMER (ANIONIC)
- 9 BOOSTER WATER
- 10 AERATION PIPING
- 11 ROOF DRAIN PIPING
- 12 PLANT EFFLUENT WATER

NOTE: ALL ELEVATIONS SHOWN ARE REFERENCE ELEVATIONS TAKEN FROM EXISTING DRAWINGS, AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION BY THE CONTRACTOR.

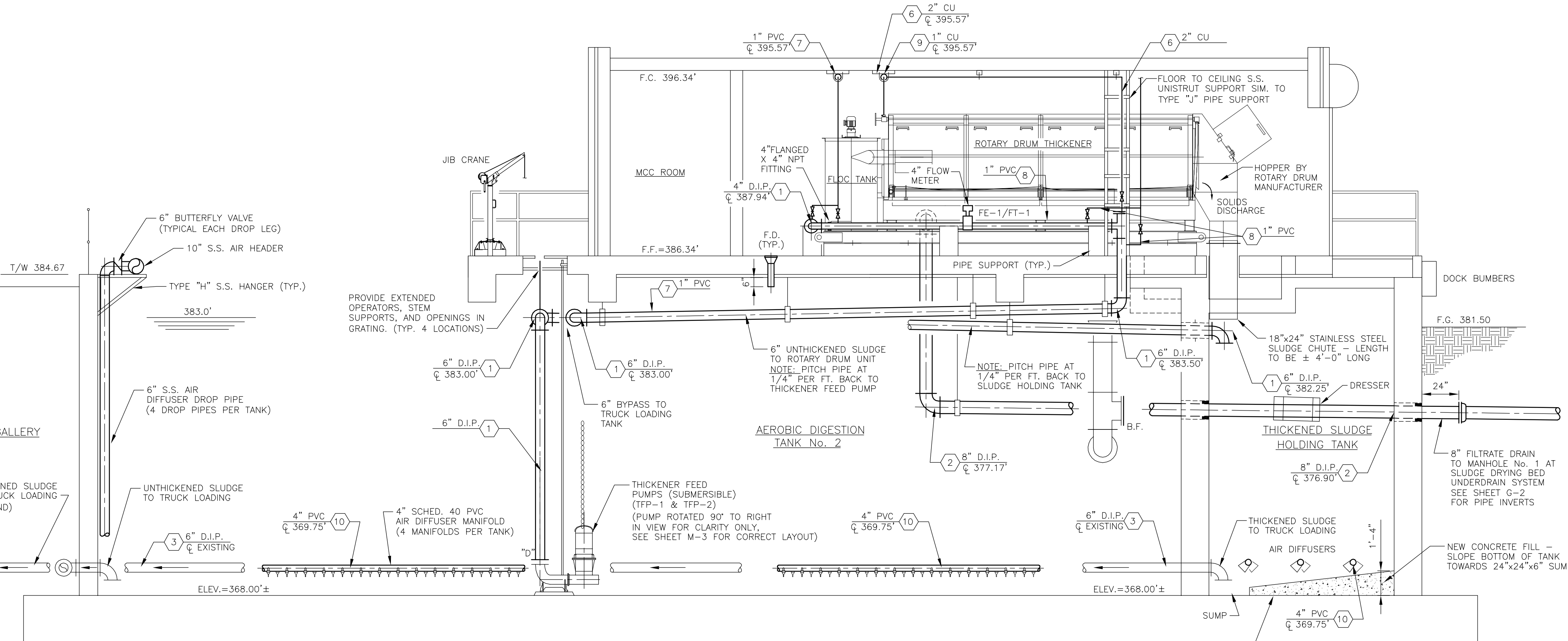


SECTION 1
SCALE: 1/4"=1'-0" M-2

NOTE: ALL METALLIC PIPE SUPPORTS INSIDE THICKENER ROOM AND EXTERIOR PIPE SUPPORTS SHALL BE STAINLESS STEEL.



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

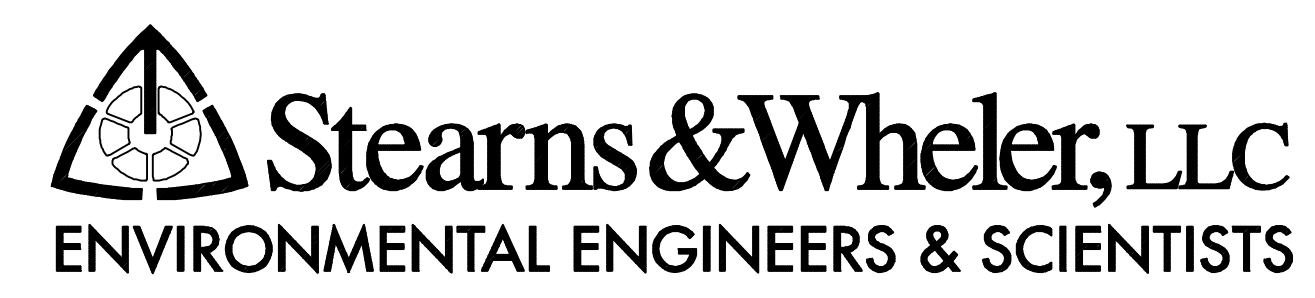


SECTION 2
SCALE: 1/4"=1'-0" M-2

RECORD DRAWING
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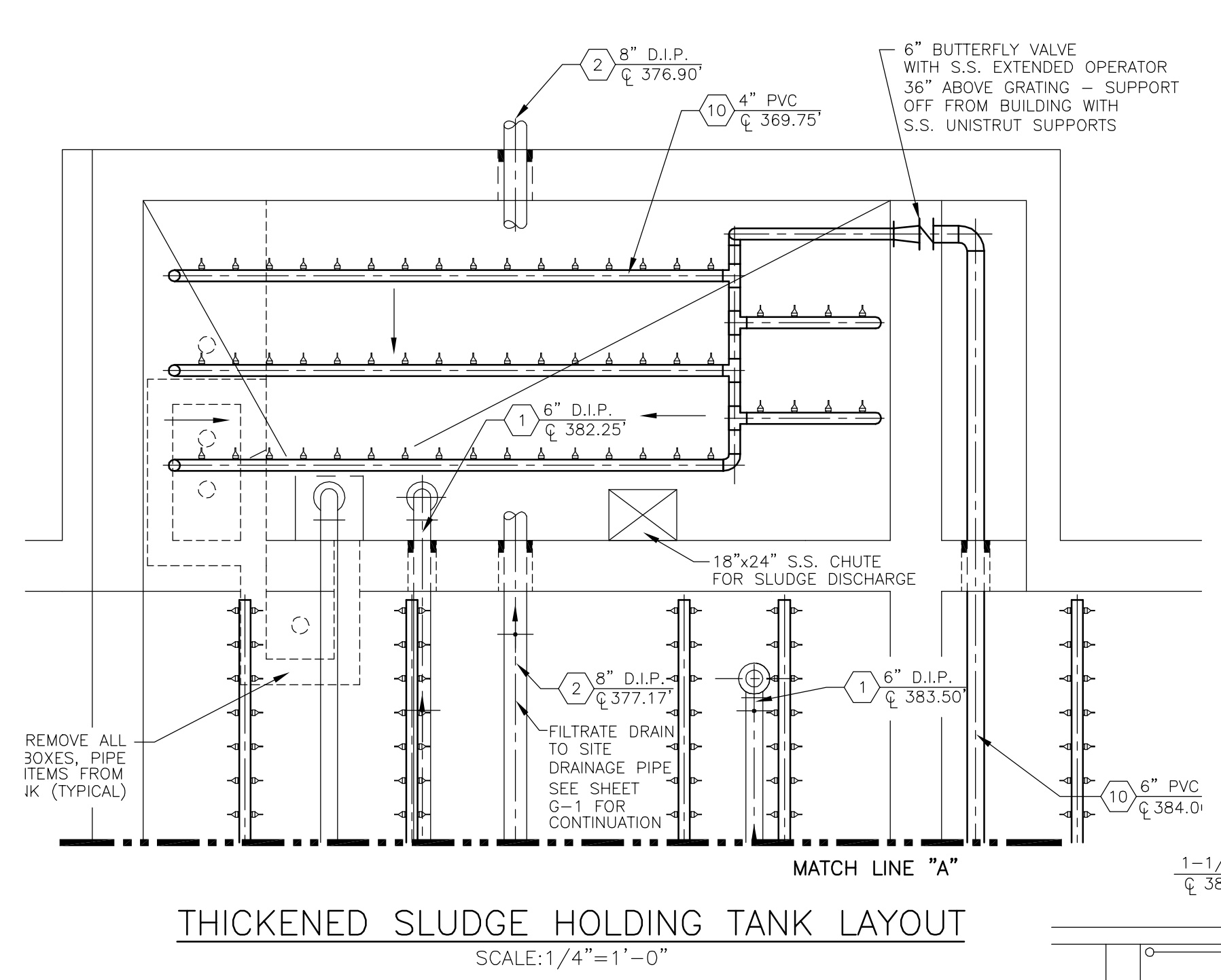
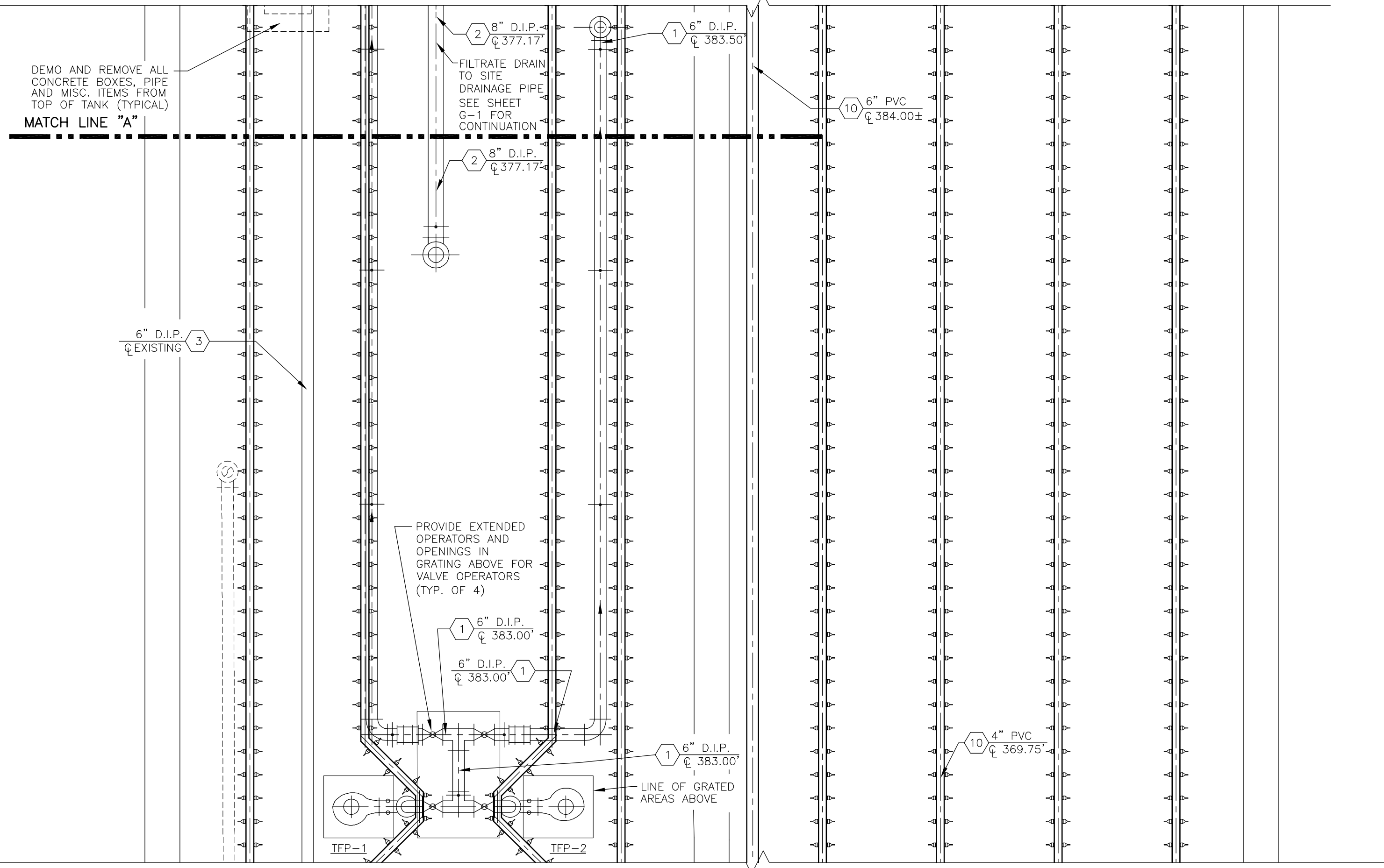
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ISSUE NO.	DATE	CHECKED	DESIGNER	APPROVED	DATE		
3	FOR CONSTRUCTION	JRH	5/2000	TWF	JRH	RB	5/00
2	FOR APPROVAL	JRH	1/2000	TWF	JRH	RB	3/2000
1	FOR APPROVAL	JRH	9/99	TWF	JRH	RB	11/99
4	RECORD DRAWING	HCC	9/01	TWF	JRH	RB	9/01



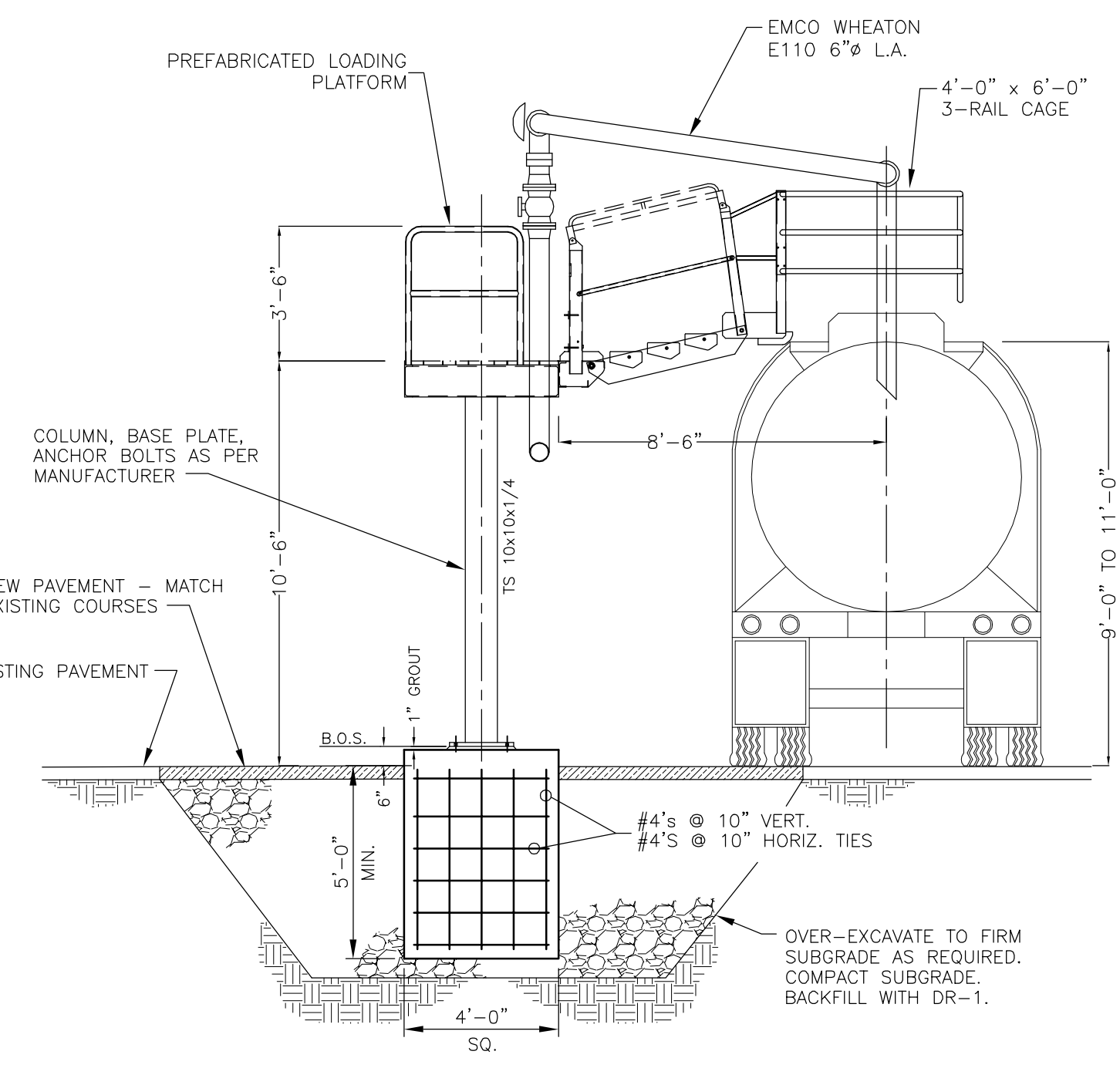
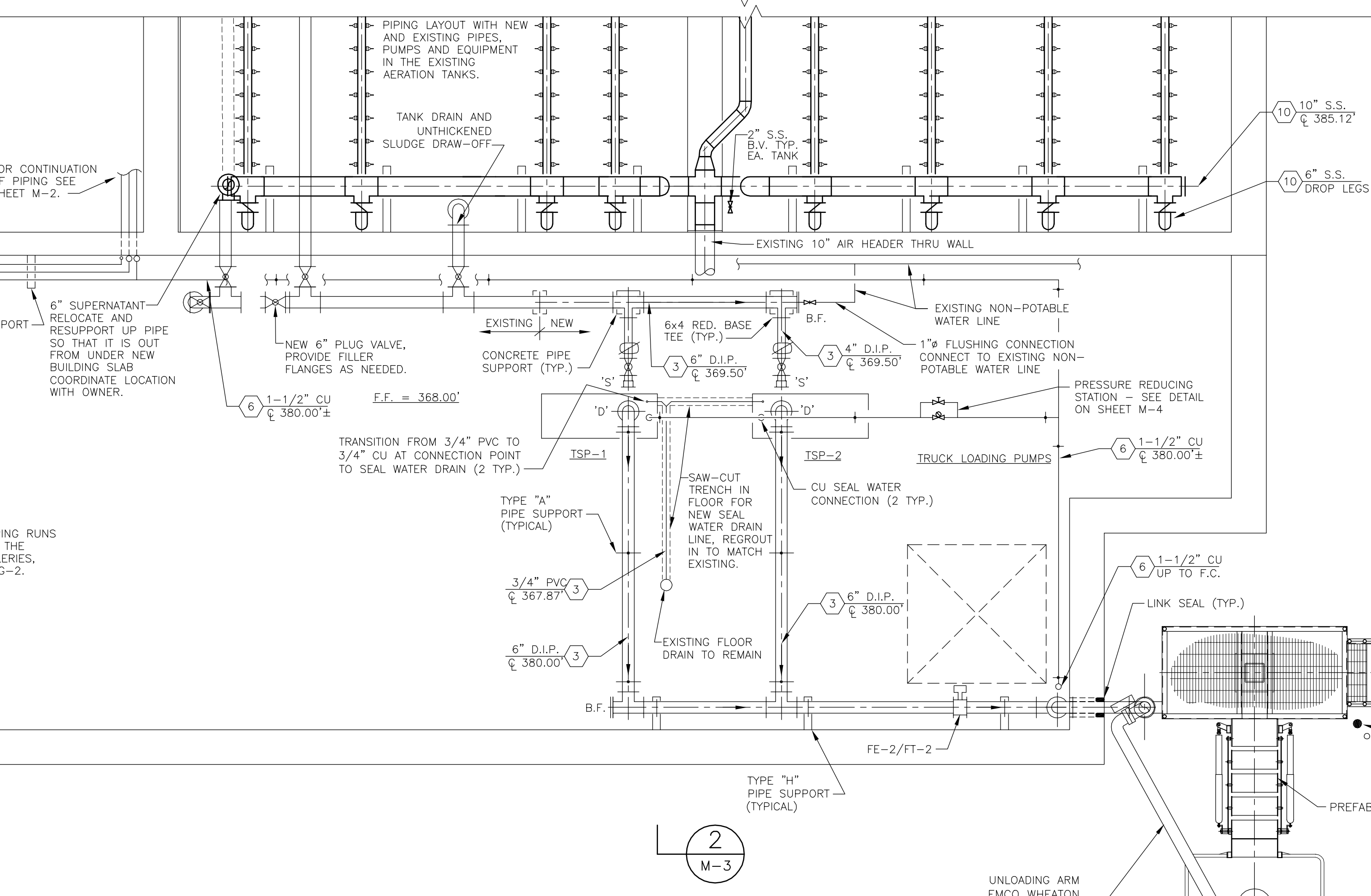
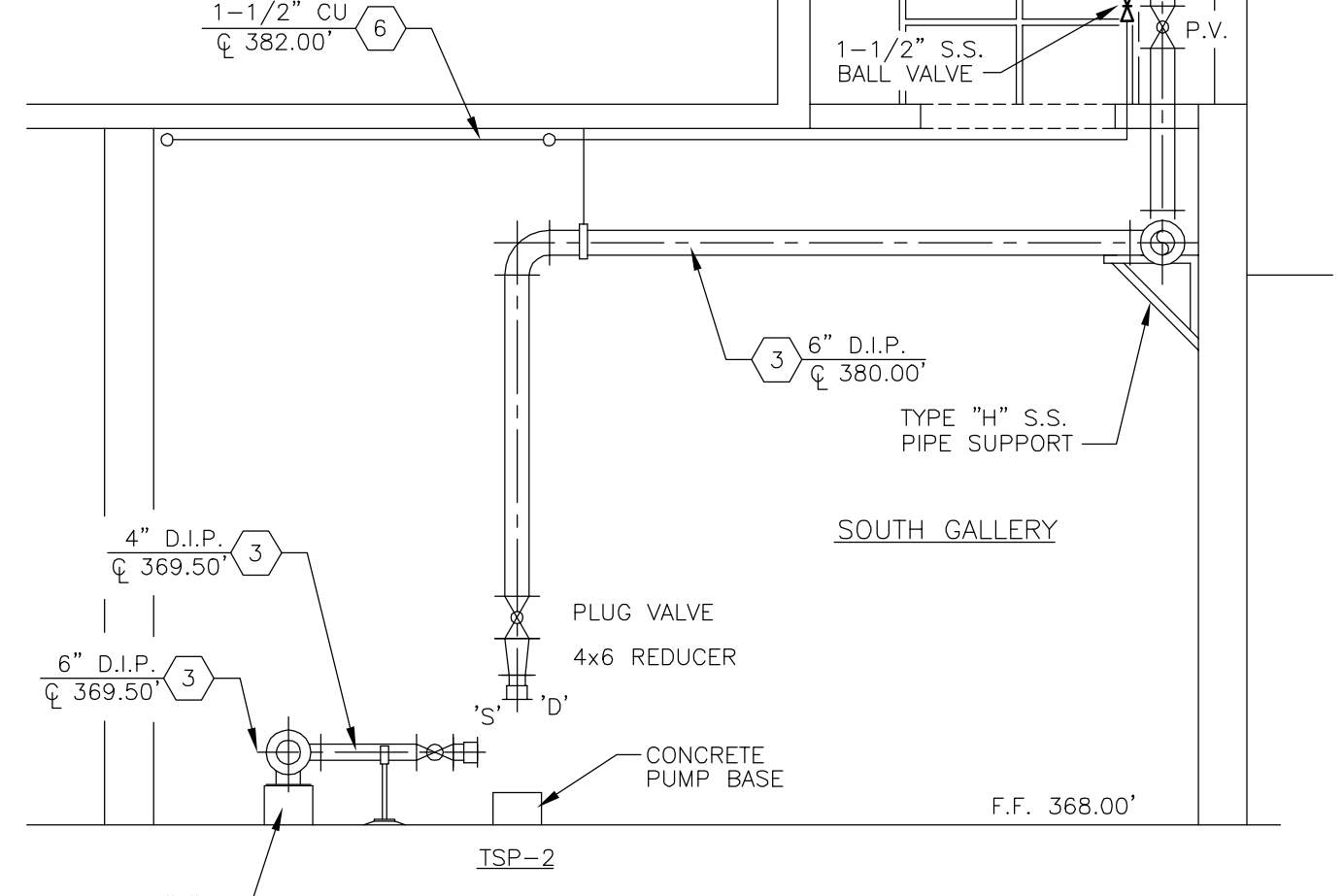
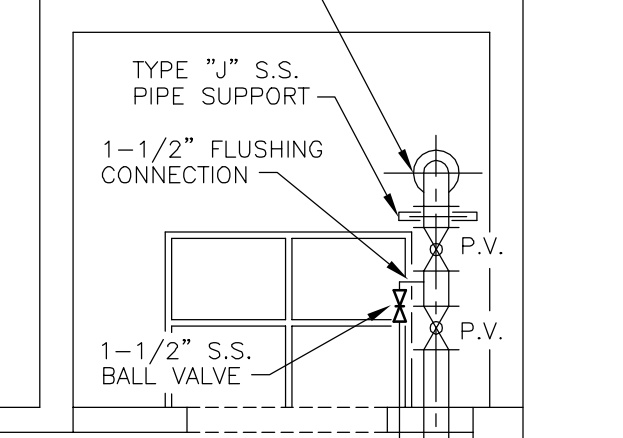
CAZENOVIA, NEW YORK

ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
NEW THICKENING BUILDING PLAN AND SECTIONS			
JOB NO.	9012030	CONTRACT	1A
SHEET	M-2		



NOTE: ALL ELEVATIONS SHOWN ARE REFERENCE ELEVATIONS TAKEN FROM EXISTING DRAWINGS, AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION BY THE CONTRACTOR.

FIELD DETERMINE PIPE LOCATION BASED ON TRUCK LOADING PLATFORM DIMENSIONS FROM MANUFACTURER. PIPING MUST ALLOW LOADING ARM TO FREE DRAIN BACK TO TANKS.



PIPE LEGEND

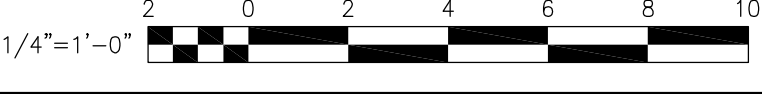
- 1 UNTHICKENED SLUDGE
- 2 FILTRATE DRAIN
- 3 THICKENED SLUDGE
- 4 ROOF DRAIN
- 5 POTABLE WATER
- 6 PLANT WATER (NON-POTABLE)
- 7 POLYMER (CATIONIC)
- 8 POLYMER (ANIONIC)
- 9 BOOSTER WATER
- 10 AERATION PIPING
- 11 ROOF DRAIN PIPING
- 12 PLANT EFFLUENT WATER

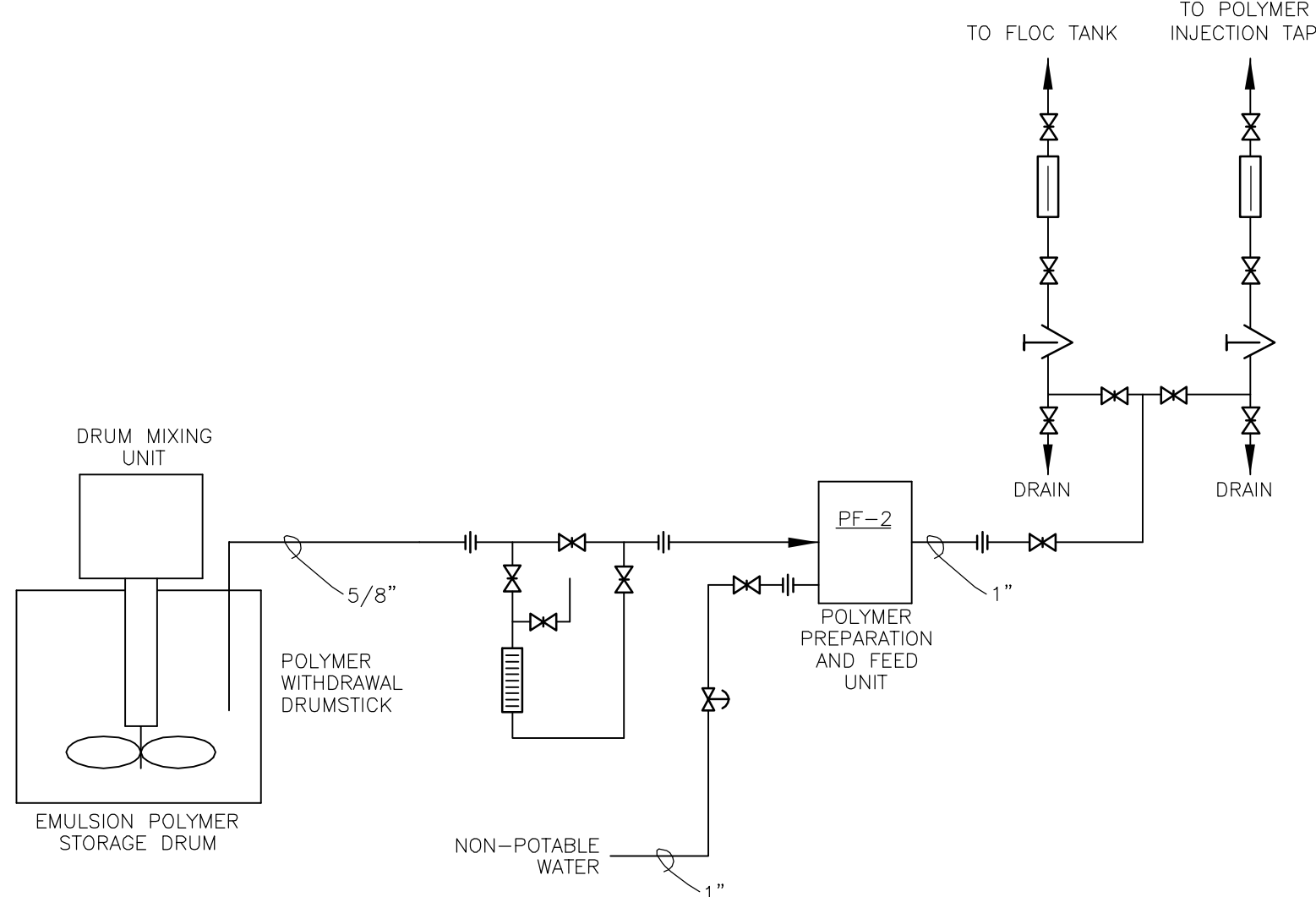
NOTES:
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ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE
3	JRH	5/2000	TWF	JRH	RB	5/00
2	JRH	1/2000	TWF	JRH	RB	3/2000
1	JRH	9/99	TWF	JRH	RB	11/99
4	HCC	9/01	TWF	JRH	RB	9/01

Stearns & Wheeler, LLC
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CAZENOVIA, NEW YORK

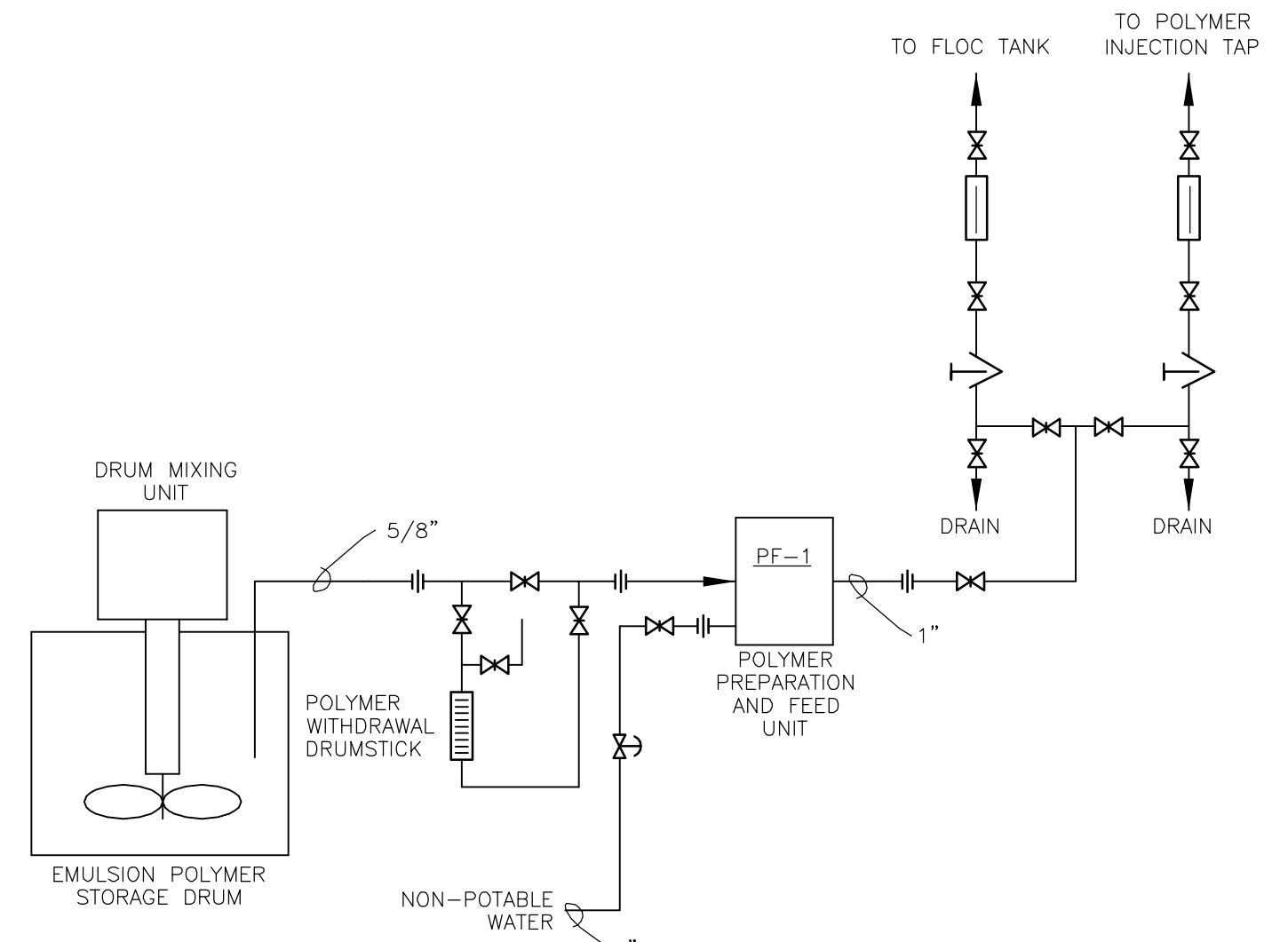
ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
SOUTH GALLERY PUMP MODIFICATIONS NEW TRUCK LOADING STATION PLAN AND SECTIONS			
JOB NO.	9012020	CONTRACT	1A
SHEET			M-3





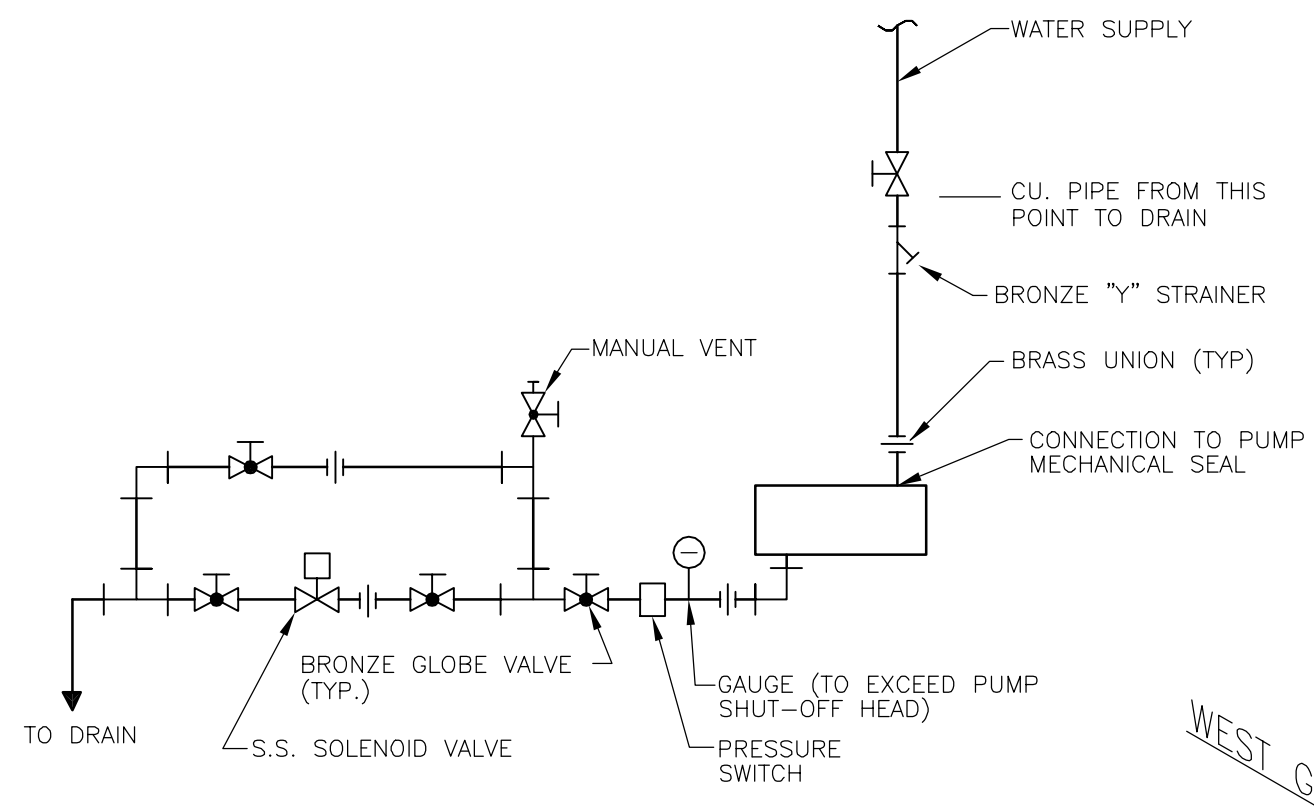
**SLUDGE DEWATERING SYSTEM
POLYMER SCHEMATIC (ANIONIC)**
N.T.S.

NOTE: ALL PIPING AND VALVES TO BE SCHEDULE 80 PVC (TYPICAL)



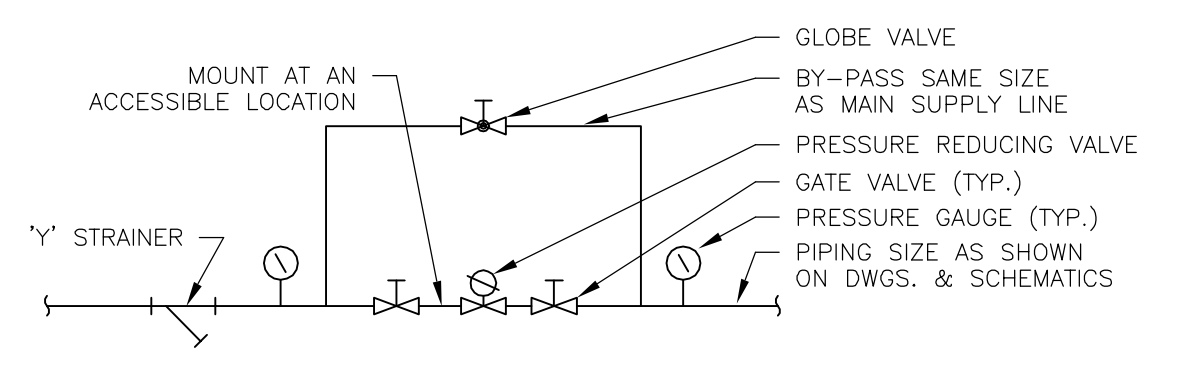
**SLUDGE DEWATERING SYSTEM
POLYMER SCHEMATIC (CATIONIC)**
N.T.S.

NOTE: ALL PIPING AND VALVES TO BE SCHEDULE 80 PVC (TYPICAL)



- NOTES:**
1. WATER SUPPLY LINE SAME SIZE AS STUFFING BOX CONNECTION WITH MIN. 3/8" CU.
 2. PIPE SUPPORTS & HANGERS PER SPECIFICATIONS, INSIDE PROCESS PIPING.
 3. BRONZE OR BRASS PIPING TO PUMP CONNECTION

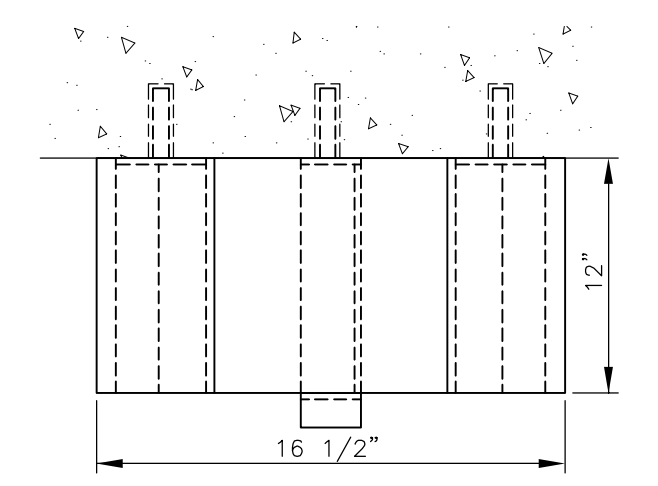
**TYPICAL MECHANICAL
WATERSEAL CONNECTION**
NOT TO SCALE



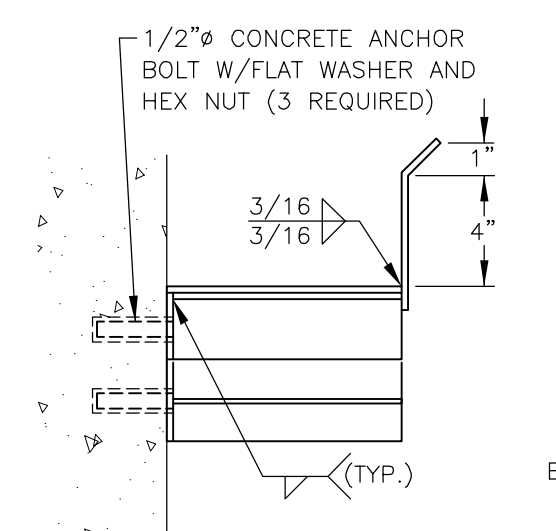
WATER PRESSURE REDUCING STATION DETAIL

NOTES:

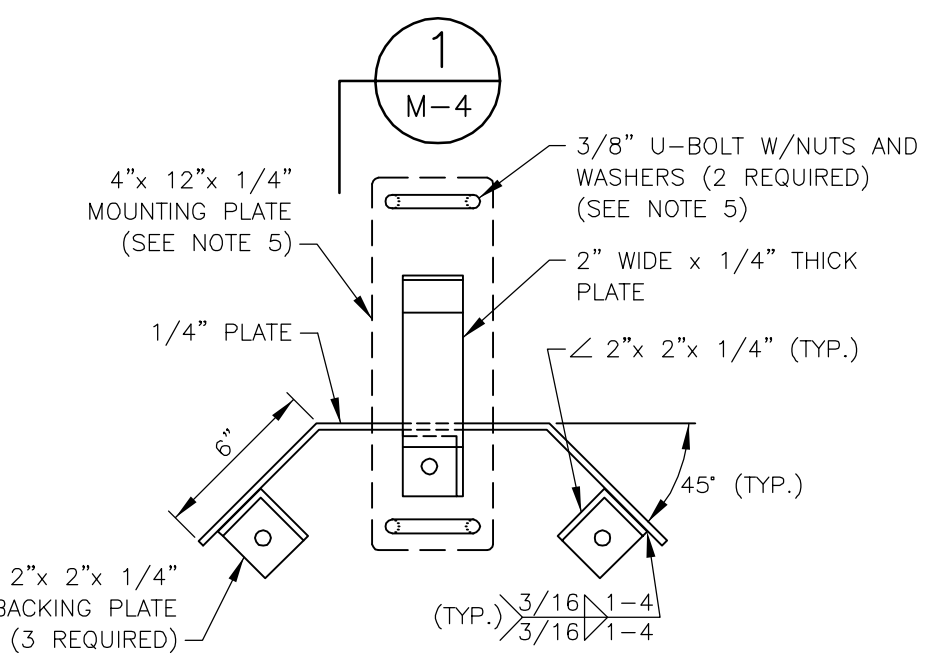
1. ANGLES AND PLATES SHALL BE 6061-T6 ALUMINUM.
2. MILL FINISH.
3. ALL HARDWARE SHALL BE STAINLESS STEEL.
4. PAINT ALUMINUM IN CONTACT WITH CONCRETE PER SPECIFICATIONS.
5. FOR COLUMN OR HANDRAIL MOUNTING, OMIT BACKING PLATES. PROVIDE MOUNTING PLATE AND U-BOLTS AS SHOWN.



PLAN

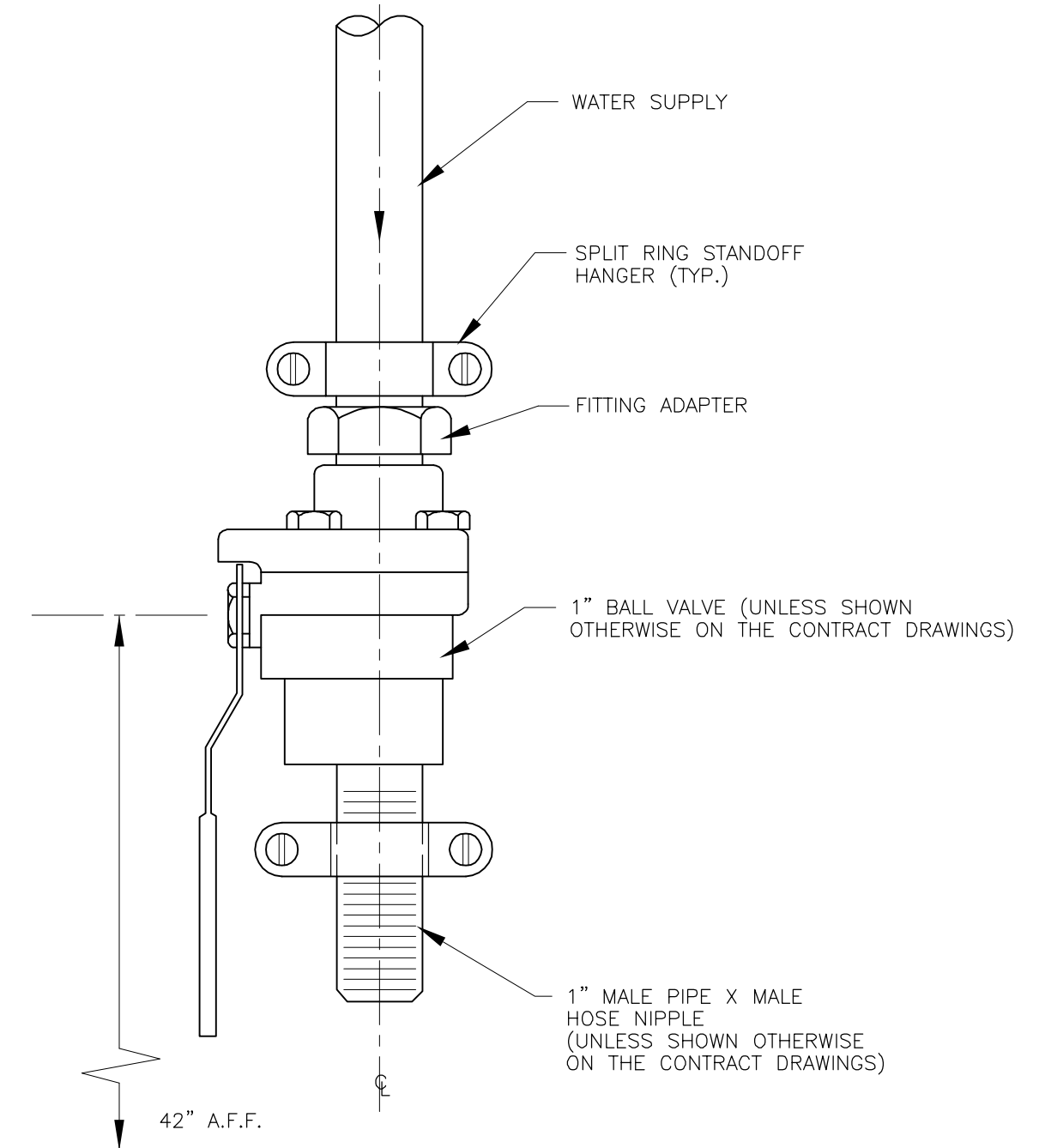


SECTION
SCALE: NTS

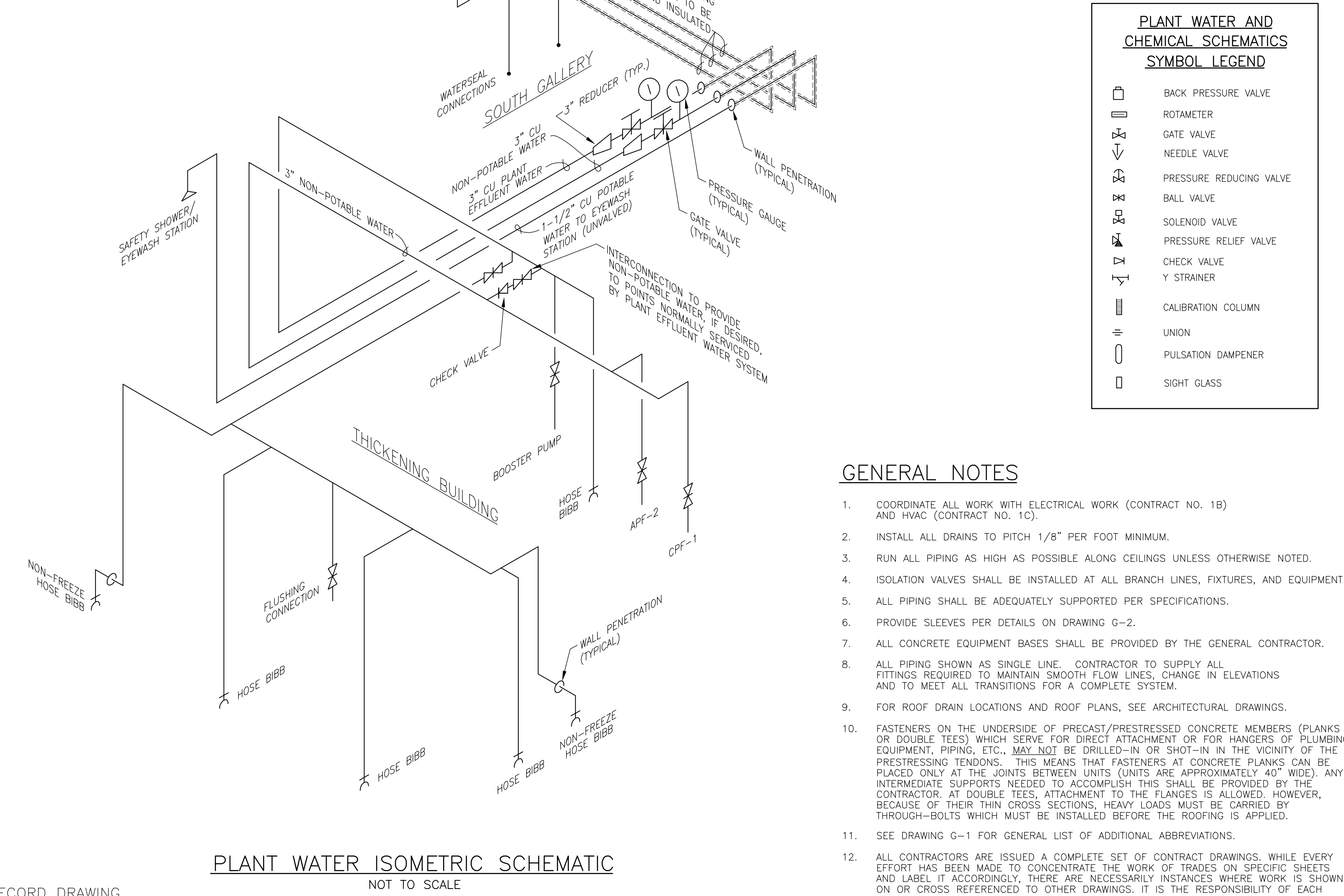


ELEVATION

HOSE RACK DETAIL



HOSE BIBB INSTALLATION DETAIL
(INSTALL IN VERTICAL AND PARALLEL TO WALL)



PLANT WATER ISOMETRIC SCHEMATIC
NOT TO SCALE

PLANT WATER AND CHEMICAL SCHEMATICS SYMBOL LEGEND

	BACK PRESSURE VALVE
	ROTAMETER
	GATE VALVE
	NEEDLE VALVE
	PRESSURE REDUCING VALVE
	BALL VALVE
	SOLENOID VALVE
	PRESSURE RELIEF VALVE
	CHECK VALVE
	Y STRAINER
	CALIBRATION COLUMN
	UNION
	PULSATION DAMPENER
	SIGHT GLASS

GENERAL NOTES

1. COORDINATE ALL WORK WITH ELECTRICAL WORK (CONTRACT NO. 1B) AND HVAC (CONTRACT NO. 1C).
2. INSTALL ALL DRAINS TO PITCH 1/8" PER FOOT MINIMUM.
3. RUN ALL PIPING AS HIGH AS POSSIBLE ALONG CEILINGS UNLESS OTHERWISE NOTED.
4. ISOLATION VALVES SHALL BE INSTALLED AT ALL BRANCH LINES, FIXTURES, AND EQUIPMENT.
5. ALL PIPING SHALL BE ADEQUATELY SUPPORTED PER SPECIFICATIONS.
6. PROVIDE SLEEVES PER DETAILS ON DRAWING G-2.
7. ALL CONCRETE EQUIPMENT BASES SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
8. ALL PIPING SHOWN AS SINGLE LINE CONTRACTOR TO SUPPLY ALL FITTINGS REQUIRED TO MAINTAIN SMOOTH FLOW LINES, CHANGE IN ELEVATIONS AND TO MEET ALL TRANSITIONS FOR A COMPLETE SYSTEM.
9. FOR ROOF DRAIN LOCATIONS AND ROOF PLANS, SEE ARCHITECTURAL DRAWINGS.
10. FASTENERS ON THE UNDERSIDE OF PRECAST/PRESTRESSED CONCRETE MEMBERS (PLANKS OR DOUBLE TEES) WHICH SERVE FOR DIRECT ATTACHMENT OR FOR HANGERS OF PLUMBING EQUIPMENT, PIPING, ETC., MAY NOT BE DRILLED-IN OR SHOT-IN IN THE VICINITY OF THE PRESTRESSING TENDONS. THIS MEANS THAT FASTENERS AT CONCRETE PLANKS CAN BE PLACED ONLY AT THE JOINTS BETWEEN UNITS (UNITS ARE APPROXIMATELY 40" WIDE). ANY INTERMEDIATE SUPPORTS NEEDED TO ACCOMPLISH THIS SHALL BE PROVIDED BY THE CONTRACTOR. AT DOUBLE TEES, ATTACHMENT TO THE FLANGES IS ALLOWED. HOWEVER, BECAUSE OF THEIR THIN CROSS SECTIONS, HEAVY LOADS MUST BE CARRIED BY THROUGH-BOLTS WHICH MUST BE INSTALLED BEFORE THE ROOFING IS APPLIED.
11. SEE DRAWING G-1 FOR GENERAL LIST OF ADDITIONAL ABBREVIATIONS.
12. ALL CONTRACTORS ARE ISSUED A COMPLETE SET OF CONTRACT DRAWINGS. WHILE EVERY EFFORT HAS BEEN MADE TO CONCENTRATE THE WORK OF TRADES ON SPECIFIC SHEETS AND LABEL IT ACCORDINGLY, THERE ARE NECESSARILY INSTANCES WHERE WORK IS SHOWN ON OR CROSS REFERENCED TO OTHER DRAWINGS. IT IS THE RESPONSIBILITY OF EACH CONTRACTOR TO REVIEW ALL DRAWINGS AND COORDINATE HIS WORK WITH OTHERS.
13. FOR FLOOR DRAIN LOCATIONS AND ELEVATIONS, SEE STRUCTURAL DRAWINGS.
14. CORE DRILL AND MECHANICAL SEAL ALL PIPING THROUGH EXISTING WALLS OR FLOORS PER DETAIL ON DWG. G-2.

RECORD DRAWING
THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.
DATE: _____ PER: _____

NOTES:
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3	FOR CONSTRUCTION	JRH	5/00	TWF	JRH	RB	5/00													
2	FOR APPROVAL	JRH	1/2000	TWF	JRH	RB	3/2000													
1	FOR APPROVAL	JRH	9/99	TWF	JRH	RB	11/99													
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE														
	PROJECT SUPERVISOR					DEPARTMENT SUPERVISOR					4	RECORD DRAWING	HCC	9/01	TWF	JRH	RB	9/01		

Stearns & Wheeler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS
CAZENOVIA, NEW YORK

ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
CHEMICAL PIPING SCHEMATICS MISC. DETAILS			
JOB NO.	9012020	CONTRACT	1A
SHEET			M-4

FAN SCHEDULE														
UNIT I.D.	BUILDING	ROOM NAME	TYPE OF EQUIPMENT	FAN					ELECTRICAL			CONTROLS		NOTES
				DRIVE	CFM	S.P. IN. W.G.	RPM	SONES	HP	RPM	VOLTS/PHASE	CONTROLLED BY	PROVIDED BY	
F-1	SLUDGE THICKENING BLDG.	THICKENER ROOM	LOUVERED PENTHOUSE SUPPLY	BELT	800	0.5	800	12.0	0.25	1725	120/1	ON/OFF SWITCH	ELEC.	2
F-2	SLUDGE THICKENING BLDG.	ELECTRICAL	CENTRIFUGAL ROOFTOP EXHAUST	BELT	250	0.375	1470	8.0	0.25	1725	120/1	ON/OFF SWITCH	ELEC.	
F-3	RAW SEWAGE PUMP BLDG.	GRIT REMOVAL ROOM	HOODED ROOFTOP SUPPLY	BELT	5,000	0.375	1550	14.0	2.00	1725	460/3	ON/OFF SWITCH	ELEC.	1,2
F-4	RAW SEWAGE PUMP BLDG.	GRIT REMOVAL ROOM	HOODED ROOFTOP SUPPLY	BELT	5,000	0.375	1550	14.0	2.00	1725	460/3	ON/OFF SWITCH	ELEC.	1,2
F-5	RAW SEWAGE PUMP BLDG.	GRIT REMOVAL ROOM	ROOFTOP PROPELLER UPBLAST	BELT	6,700	0.5	1600	16.0	2.50	1725	460/3	ON/OFF SWITCH	ELEC.	1,2

UNIT HEATER SCHEDULE											
UNIT I.D.	BUILDING	ROOM NAME	TYPE OF EQUIPMENT	ELECTRICAL		AIR DATA		MOTOR DATA			NOTES
				OUTPUT (KW)	VOLTS/PHASE	CFM	E.A.T. (F)	HP	RPM	VOLTS/PHASE	
UH-1,2	SLUDGE THICKENING BLDG.	THICKENER ROOM	CORROSION RESISTANT ELECTRICAL	10 KW	460/3	1450	65	0.01	1725	480/1	2
UH-3	SLUDGE THICKENING BLDG.	ELECTRICAL	STANDARD ELECTRICAL	5 KW	460/3	350	65	0.01	1600	480/1	
UH-4,6	RAW SEWAGE PUMP BLDG.	GRIT REMOVAL ROOM	EXPLOSION PROOF ELECTRICAL	20 KW	460/3	1825	65	0.33	1140	480/1	1,2
UH-7	RAW SEWAGE PUMP BLDG.	GRIT REMOVAL ROOM	EXPLOSION PROOF ELECTRICAL	15 KW	460/3	1228	65	0.33	1140	480/1	1,2
UH-8:11	RAW SEWAGE PUMP BLDG.	COMMUNICATOR ROOM	EXPLOSION PROOF ELECTRICAL	10 KW	460/3	800	65	0.05	1725	480/1	1,2

LOUVER DAMPER SCHEDULE									
UNIT I.D.	BUILDING	ROOM NAME	TYPE OF EQUIPMENT	DIMENSIONS (W" x H" x D")	BLADE ANGLE	OPERATOR TYPE	VOLTS/PHASE	INTERLOCKED WITH	NOTES
MOD-1	SLUDGE THICKENING BLDG.	ELECTRICAL	PARALLEL BLADE DAMPER	12" x 12"	-	POWER OPEN/SPRING RETURN	120/1	F-2	

HVAC SCHEDULE NOTES:

- UNIT SHALL BE EXPLOSION PROOF, RATED FOR NEC CLASS 1, DIVISION 1, GROUP D.
- UNIT, ASSOCIATED HARDWARE, MOTOR OPERATOR AND ANGLE MOUNTING TO BE CORROSION RESISTANT TO THE CHEMICALS AND ENVIRONMENTS NOTED BELOW.
 - HIGH HUMIDITY.
 - WET CONCENTRATIONS OF HYDROGEN SULFIDE GASES & AMMONIA.
- PROVIDE EXTERNAL 1/2", 0.08"D ALUMINUM WIRE MESH BIRSCREEN WITH REMOVABLE ALUMINUM FRAME, FRAME AND SCREEN TO MATCH LOUVER FINISH.
- PROVIDE INTERNAL STAINLESS STEEL INSECT SCREEN WITH CONTINUOUS FRAME, IF CONNECTED TO DUCTWORK PROVIDE ACCESS DOOR TO ALLOW FOR SCREEN REMOVAL.

HVAC GENERAL NOTES:

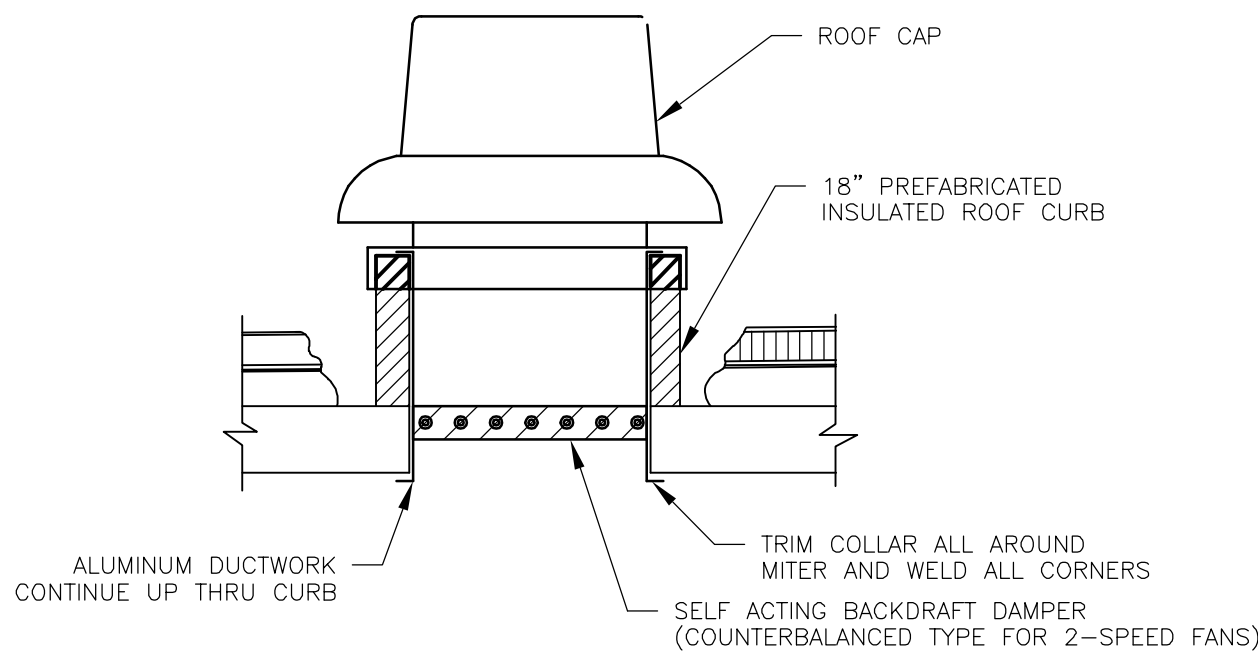
- COORDINATE ALL HVAC WORK WITH ELECTRICAL, AND GENERAL CONTRACTS.

LEGEND

- ROOF VENTILATOR, EXHAUST
- RELIEF VENT - SUPPLY OR SUPPLY FAN
- THERMOSTAT
- DAMPER MOTOR
- ROUND IN-LINE PERFORATED SUPPLY DIFFUSER
- UH UNIT HEATER
- 100 CFM AIR FLOW WITH RATE

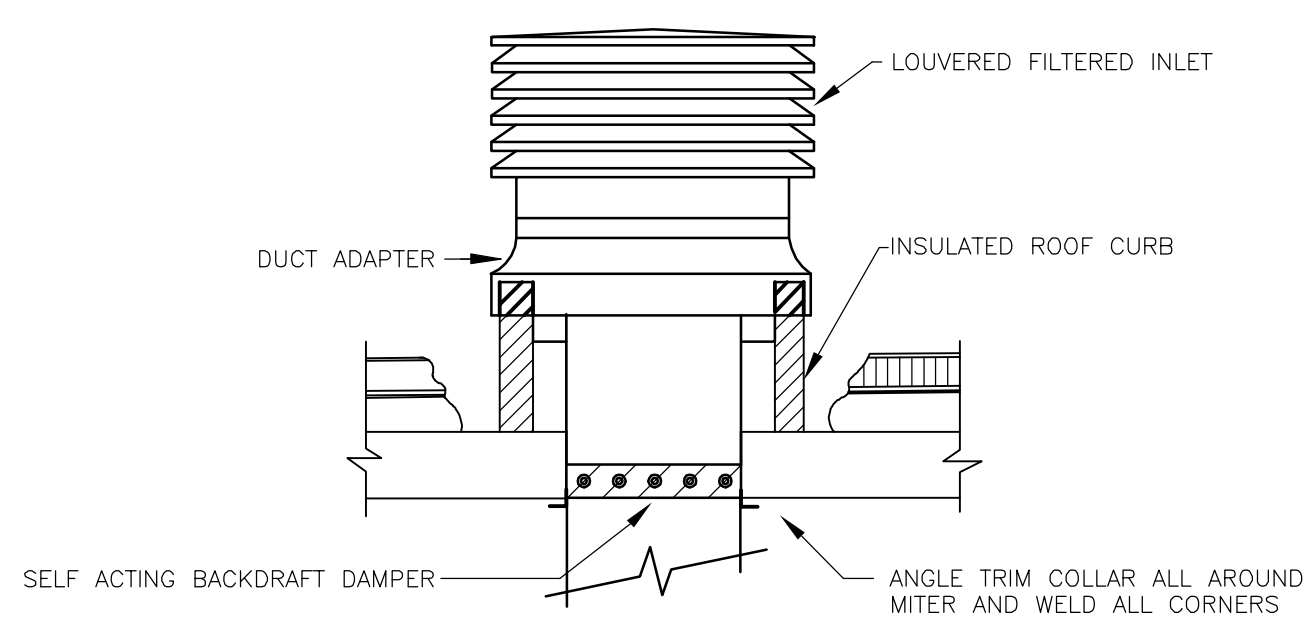
ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR	HP	HORSEPOWER
ALUM.	ALUMINUM	HOA	HAND-OFF-AUTO SWITCH
B.O.D.	BOTTOM OF DUCT	KW	KILOWATT
BTU	BRITISH THERMAL UNIT	LV-	LOUVER
CFM	CUBIC FEET PER MINUTE	MBH	THOUSAND BTUS PER HOUR
CL	CENTERLINE	MOD-	MOTOR OPERATED DAMPER
CORR. RES.	CORROSION RESISTANT	S.P.	STATIC PRESSURE
DIA.	DIAMETER	S.S.	STAINLESS STEEL
DN.	DOWN	TS-	TEMPERATURE SENSOR
E.A.T.	ENTERING AIR TEMPERATURE	T-STAT	THERMOSTAT
EL.	ELEVATION	TYP.	TYPICAL
F-	FAN	UH-	UNIT HEATER
F.F.	FINISHED FLOOR	VD	VOLUME DAMPER
FPM	FEET PER MINUTE	W.P.D.	WATER PRESSURE DROP
		W.G.	WATER GAUGE
		X-PROOF	EXPLOSION PROOF

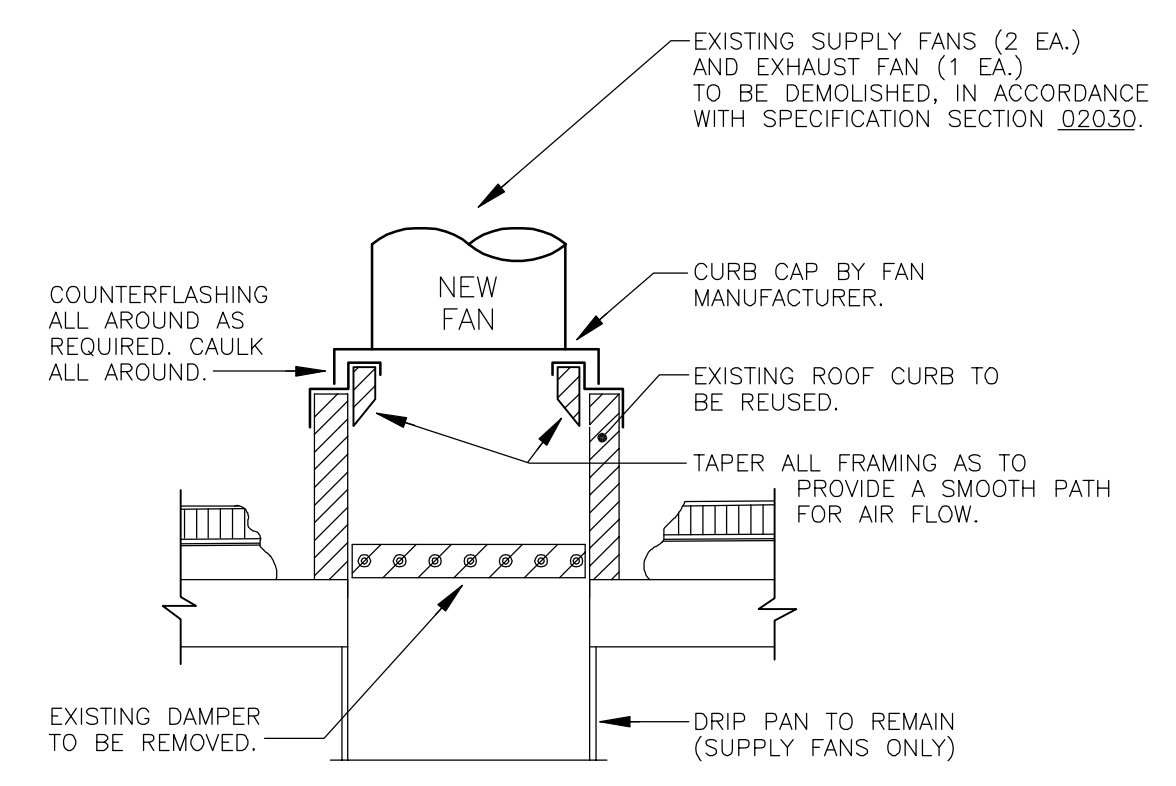


ROOFTOP EXHAUST FAN (F-2)
NOT TO SCALE

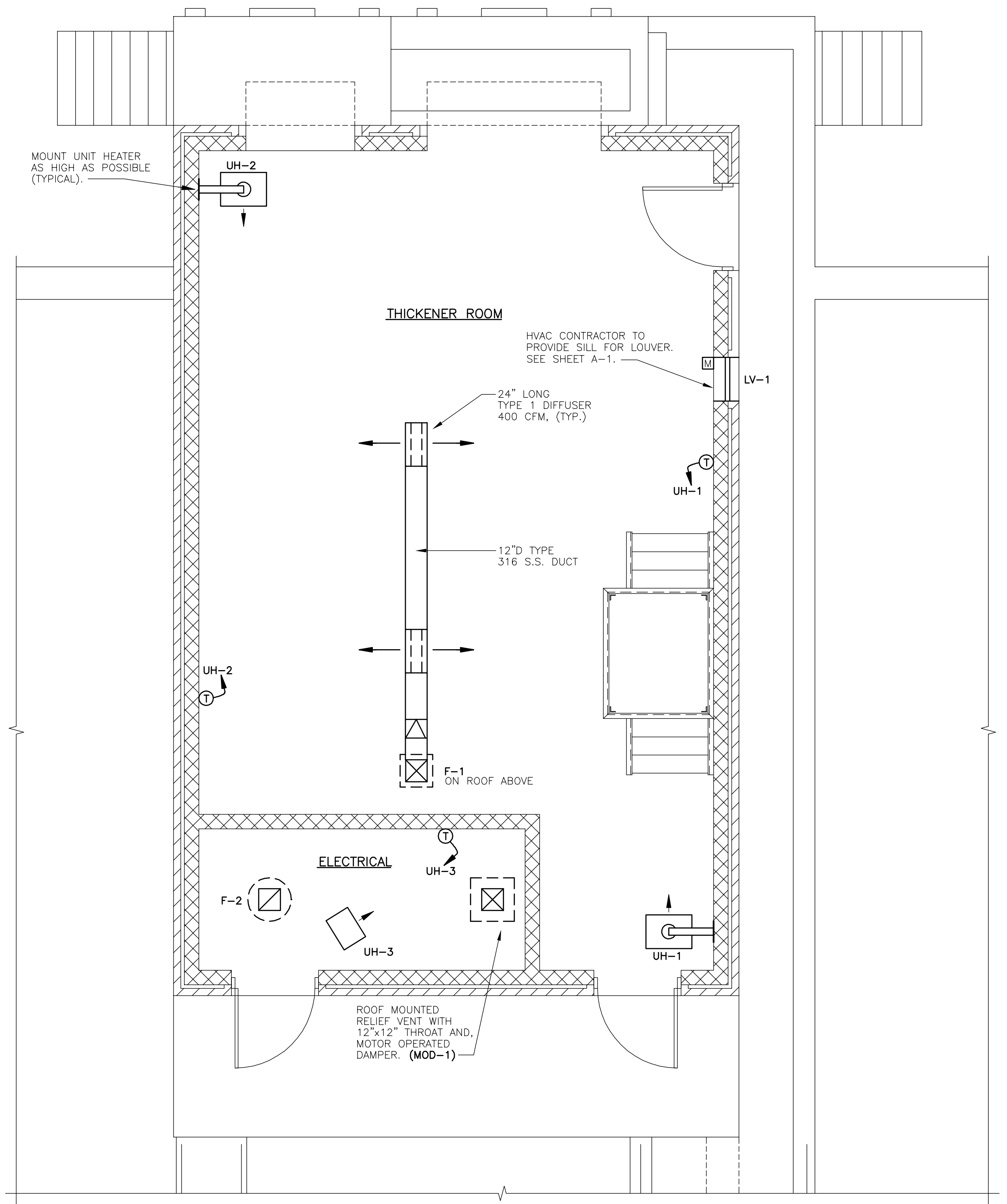
NOTE: HVAC CONTRACTOR SHALL FURNISH CURBS TO GENERAL CONTRACTOR FOR INSTALLATION.



ROOFTOP LOUVERED INLET SUPPLY FAN (F-1)
NOT TO SCALE

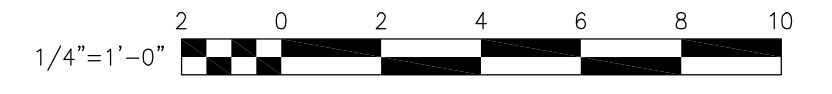


EXISTING ROOF CURB MODIFICATION DETAIL FOR RAW SEWAGE PUMP STATION
NOT TO SCALE



SLUDGE THICKENING BUILDING PLAN
SCALE: 1/4" = 1'-0"

RECORD DRAWING
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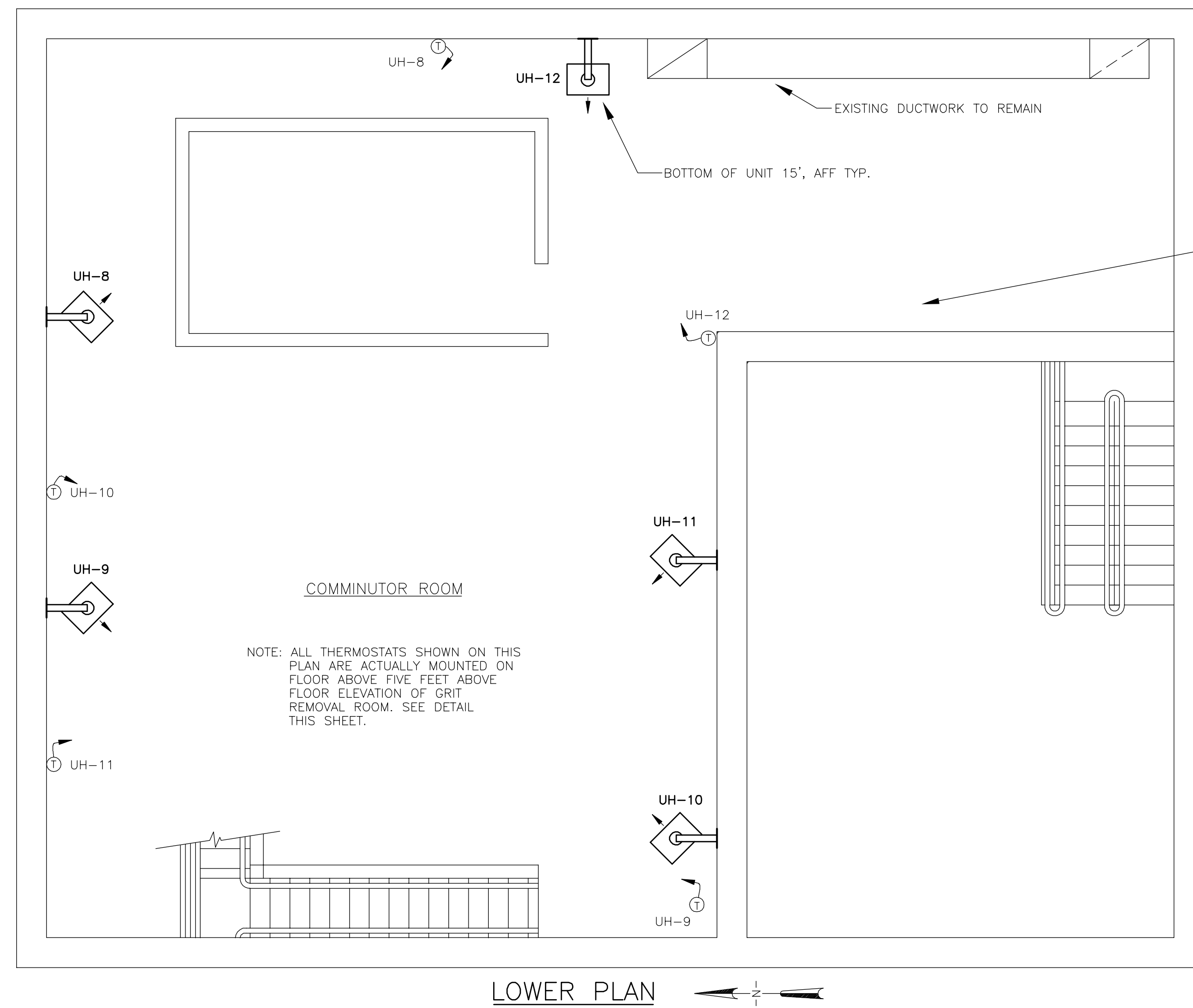
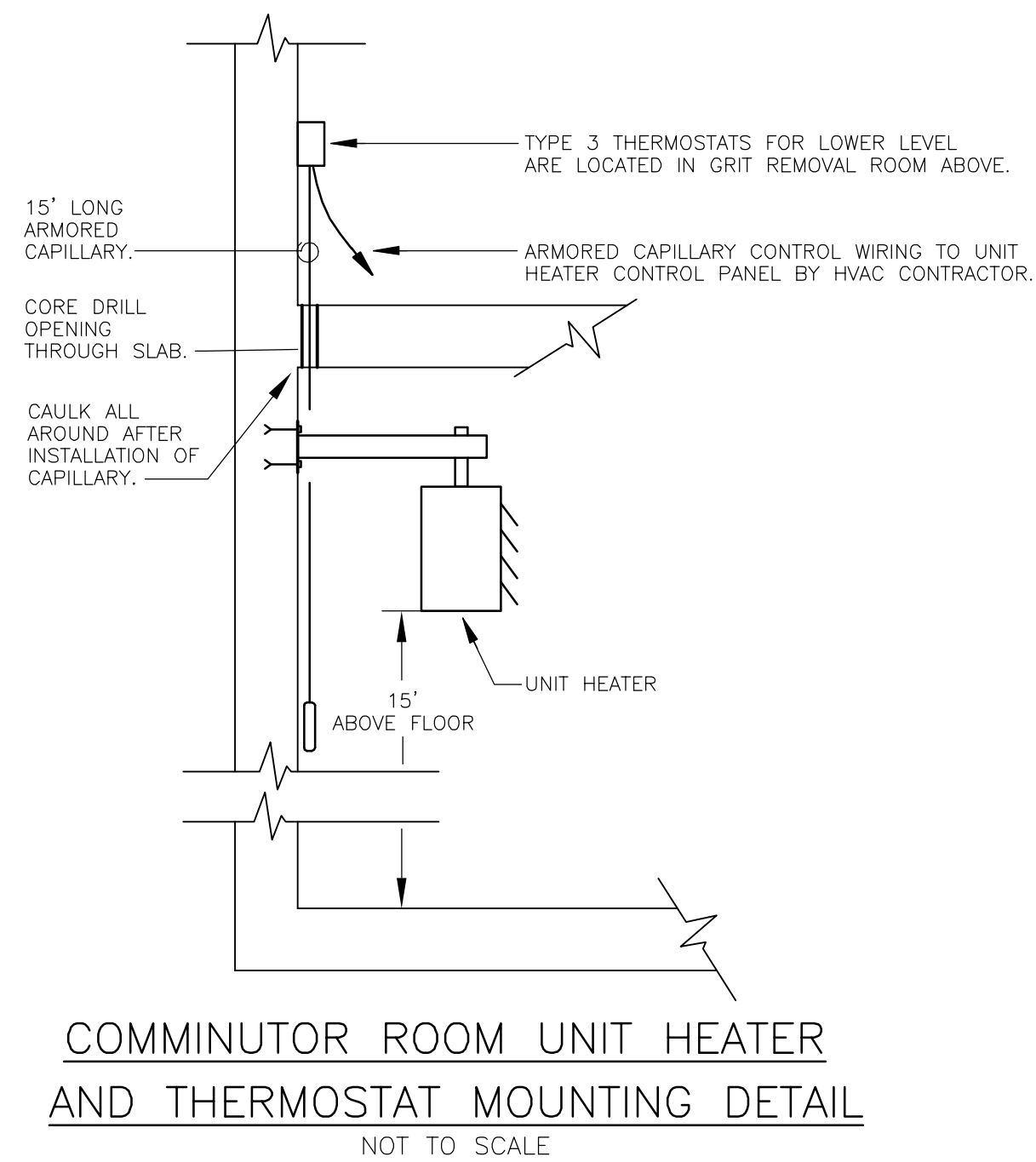


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3	FOR CONSTRUCTION	TWA/JRH	5/2000	DBP	DBP	RB	5/00
2	FOR APPROVAL	TWA	1/2000	DBP	DBP	RB	3/2000
1	FOR APPROVAL	TWA	12/99	DBP	DBP	RB	11/99
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	
	PROJECT SUPERVISOR			DEPARTMENT SUPERVISOR			
4	RECORD DRAWING	HCC	9/01	DBP	JRH	RB	9/01
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE	

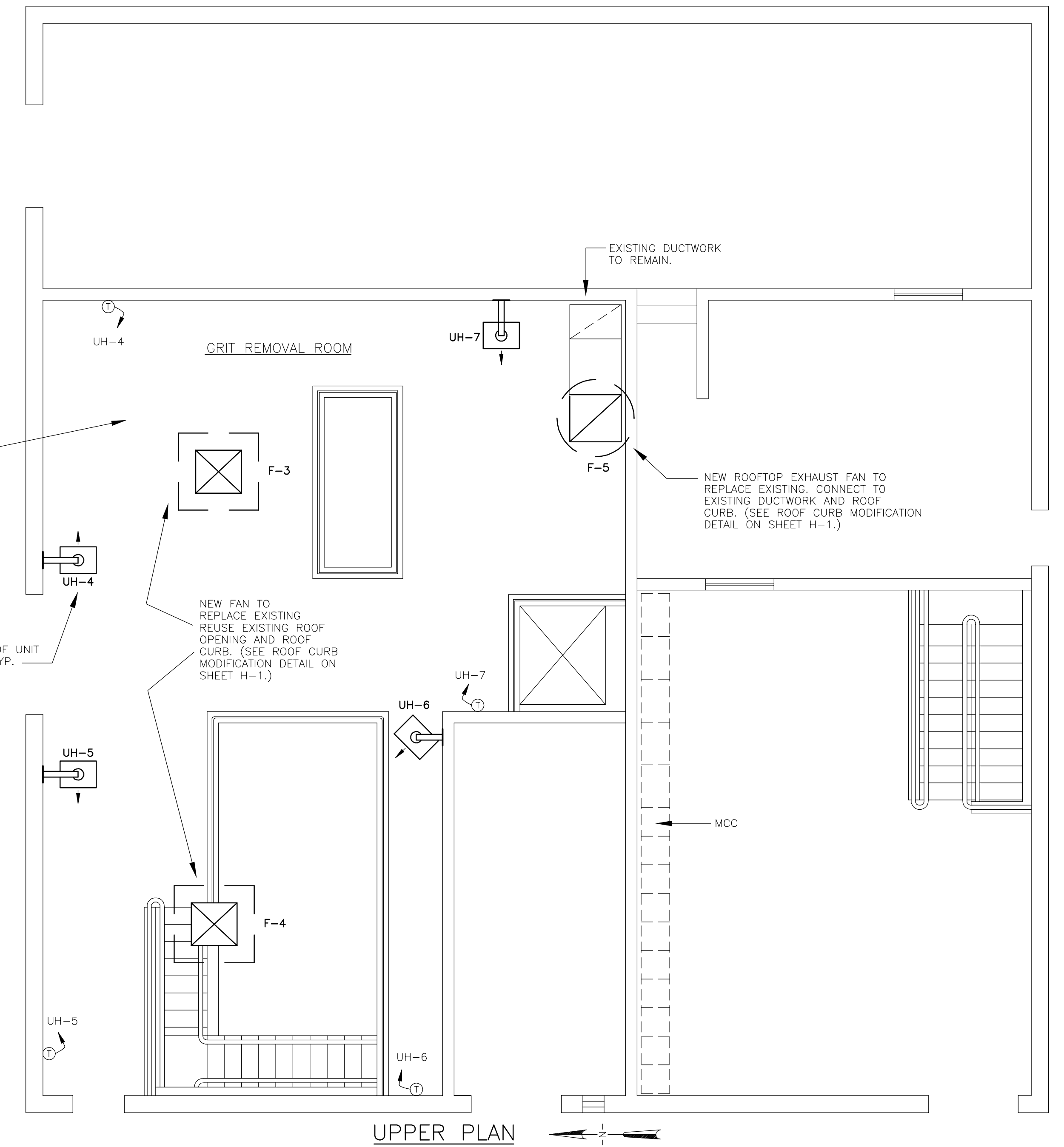
Stearns & Wheeler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS
CAZENOVIA, NEW YORK

ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
HEATING & VENTILATING SCHEDULES, NOTES, SYMBOLS, ABBREVIATIONS, PLAN & DETAILS			
JOB NO.	9012030	CONTRACT	1C
SHEET			H-1



HAZARDOUS AREA
 THIS ROOM SHALL BE CONSIDERED A CLASS I, DIVISION 1, GROUP D AREA. ALL ELECTRICAL WORK IN THIS AREA SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 501.

NOTE: REMOVE FOURTEEN (14) EXISTING WALL MOUNTED ELECTRICAL HEATING UNITS & CONTROLS LOCATED IN COMMINUTOR ROOM AND GRIT REMOVAL ROOM.
 ELECTRICAL CONTRACTOR SHALL REMOVE CONDUIT AND CONDUCTORS BACK TO MCC IN THIS BUILDING. SEAL ALL CONDUIT PENETRATIONS. REMOVE ALL SUPPORT HARDWARE AND RESTORE SURFACE TO MATCH EXISTING.



RAW SEWAGE PUMPING STATION FLOOR PLANS
 SCALE: 3/16" = 1'-0"

RECORD DRAWING

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 DATE: _____ PER: _____

9/2 TBA CAZ
 M:\0612030\RECORD\HMKV\90120402.DWG

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2	FOR APPROVAL	TWA	1/2000	DBP	DBP	RB	3/2000	
1	FOR APPROVAL	TWA	12/99	DBP	DBP	RB	11/99	
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE		
PROJECT SUPERVISOR	DEPARTMENT SUPERVISOR						4	
ISSUE NO.	HCC	9/01	DBP	JRH	RB	9/01		
	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE		

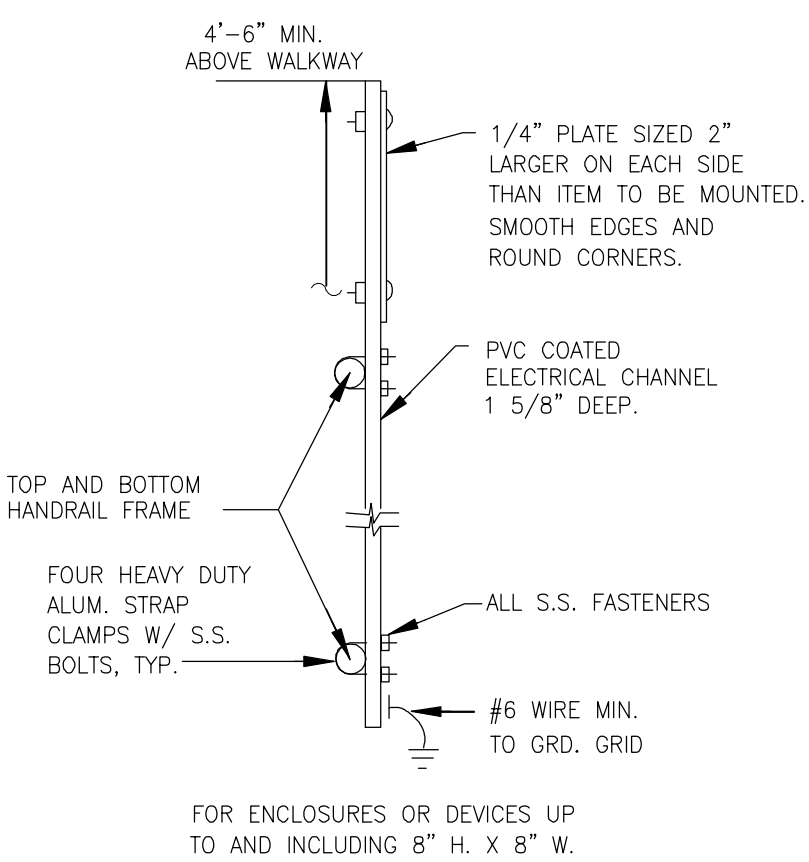
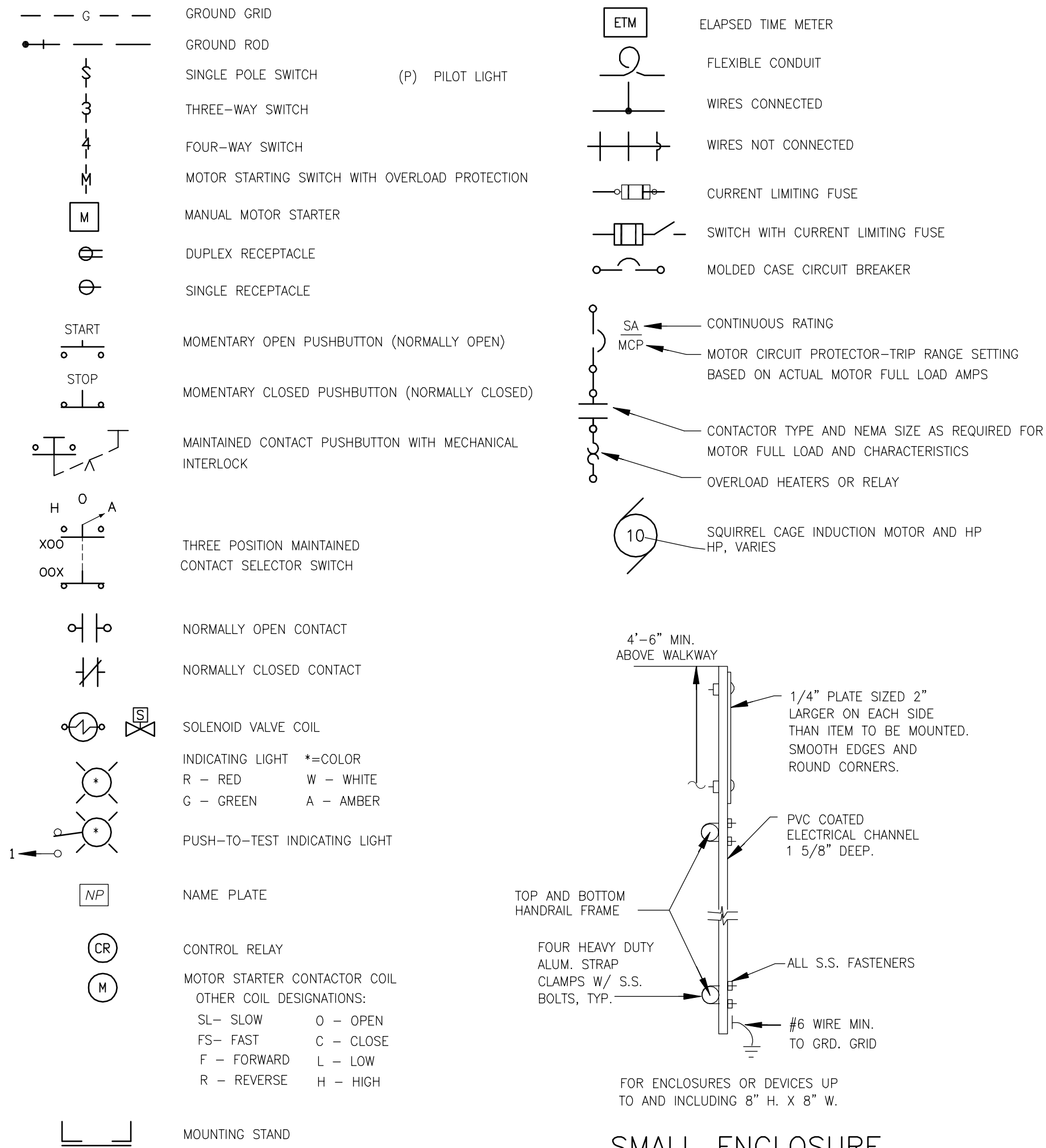
Stearns & Wheeler, LLC
 ENVIRONMENTAL ENGINEERS & SCIENTISTS
 CAZENOVIA, NEW YORK

ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
HEATING AND VENTILATING RAW SEWAGE BUILDING FLOOR PLANS			
JOB NO.	9012030	CONTRACT	1C
SHEET	H-2		

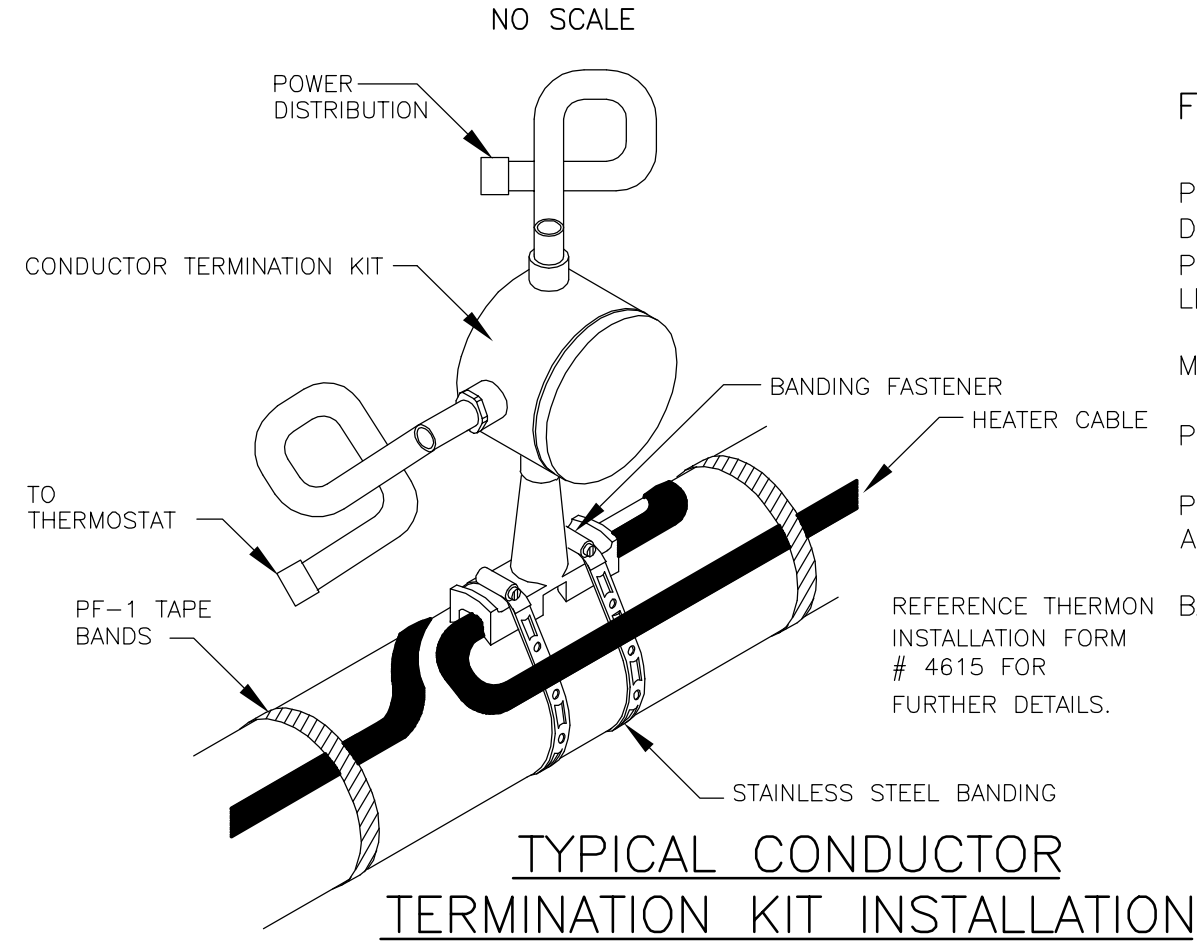
ABBREVIATIONS

A or AMP	AMPERE, AMPS
AC	ALTERNATING CURRENT
AF	AMPERE FRAME SIZE
ANC	AMPS INTERRUPTING CURRENT BREAKER
BKR	BREAKER
C or COND	CONDUIT
CA	CABLE
CB	CIRCUIT BREAKER
CIRC	CIRCUIT
COMP	COMPARTMENT
CP	CONTROL PANEL
CS	CONTROL STATION
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
DC	DIRECT CURRENT
DS	DISCONNECT SWITCH
EA	EACH
ETM	ELAPSED TIME METER
FLEX	FLEXIBLE
FVNR	FULL VOLTAGE NON REVERSING
FVR	FULL VOLTAGE REVERSING
FVTS	FULL VOLTAGE TWO SPEED
GRD	GROUND
HOA	HAND-OFF-AUTO SELECTOR SWITCH
HP	HORSE POWER
IL	INDICATING LIGHT
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KW	KILOWATT
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MIN	MINIMUM
MMS	MANUAL MOTOR STARTER
MSS	MOTOR STARTING SWITCH
MTR	MOTOR TIMING RELAY
MWTP	MOTOR WINDING THERMAL PROTECTION
Mx	MOTOR CONTACTOR AUXILIARY CONTACT
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
NO	NORMALLY OPEN
NP	NAMEPLATE
OL	OVERLOAD RELAY
Ø	PHASE
P	POLE
PB	PUSHBUTTON
PBX	PULL BOX
PF	PULLING FITTING
PLC	PROGRAMMABLE LOGIC CONTROLLER
SA	SURGE ARRESTOR
SHLD	SHIELDED
S/L	STOP/LOCKOUT SWITCH
SN	SOLID NEUTRAL
SS	STAINLESS STEEL
SW	SWITCH
TRANS	TRANSFORMER
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TYP	TYPICAL
UPS	UNINTERRUPTIBLE POWER SUPPLY
VFD	VARIABLE FREQUENCY DRIVE
W/	WEATHER PROOF, WATER PROOF
XP	EXPLOSION PROOF

SYMBOLS



SMALL ENCLOSURE RAILING MOUNTED



TYPICAL CONDUCTOR TERMINATION KIT INSTALLATION

LIGHT FIXTURE SPECIFICATIONS

FIXTURE TYPE B2

TWO-LAMP, 48" LONG, NON-METALLIC FIXTURE: PENDANT MOUNTED AT 9 FEET ABOVE FINISHED FLOOR. GLASS FIBER HOUSING WITH NEOPRENE GASKET AND ACRYLIC PRISMATIC LENS RETAINED BY SIX STAINLESS STEEL OR POLYCARBONATE LATCHES.
REFLECTOR - BAKED WHITE ENAMEL.
LAMPS - TWO 32 WATT, T-8, F032/735.
BALLAST - 120 VOLT, ELECTRONIC BALLAST.
PENDANT MATERIAL - 3/8-INCH DIAMETER, STAINLESS STEEL THREADED ROD AND RIGID STEEL CONDUIT.
MANUFACTURER: USI COLUMBIA, CAT. NO. LUN240-DMR120 ELECTRONIC: LIGHTOLIER, CAT. NO. STD240-120-SS OR EQUAL.

FIXTURE TYPE EM-CR

WALL MOUNTED, SELF-CONTAINED, NEMA 4X, EMERGENCY LIGHT WITH GASKETED FRONT ACCESS PANEL AND GRAY FINISH. CIRCUITRY SHALL INCLUDE LOW VOLTAGE DISCONNECT, AUTOMATIC BROWNOUT PROTECTION, RED LED BATTERY CONDITION INDICATOR AND MOMENTARY TEST SWITCH. FURNISH WITH 6 FOOT CORD AND PLUG CAP, NEMA WD 6, TYPE 5-15 CONFIGURATION.
BATTERY: 6 VOLT LEAD CALCIUM WITH A MIN. OF 90 MINUTES BATTERY CAPACITY.
LAMPS: 6 VOLT, TWO PAR 36 LAMP IN THERMOPLASTIC HEADS.
MANUFACTURERS: DUAL-LIGHT CAT NO. N4X14 LIGHTALARM, CAT NO. 2FG2/4510.

FIXTURE TYPE EM-CR-R

WALL MOUNTED, NEMA 4X, EMERGENCY LIGHT GRAY FINISH. CONNECT TO NEAREST BATTERY PACK UNIT
LAMP: 6 VOLT, TWO PAR 36 LAMP IN THERMOPLASTIC HEADS.
MANUFACTURERS: DUAL-LIGHT CAT NO. EX-1EFG LIGHTALARM, CAT NO. EVLA12.

FIXTURE TYPE S

WALL MOUNTED, LOW WATTAGE, EXTERIOR, HIGH INTENSITY DISCHARGE. NON-CUTOFF AREA LIGHT; CAST ALUMINUM BACKPLATE; ONE-PIECE, SHOCK RESISTANT DARK BRONZE POLYCARBONATE FRONT HOUSING WITH CLEAR UV-STABILIZED, PRISMATIC REFRACTOR; INTEGRAL PHOTOCONTROL, 120 VOLT BALLAST; ONE 35 WATT, HIGH PRESSURE SODIUM LAMP.
MANUFACTURERS: GENERAL ELECTRIC Co., CAT. No. WL035-1-PE AMERICAN ELECTRIC Co., CAT. No. ES2-35.

FIXTURE TYPE U

POLE MOUNTED, COBRA HEAD STYLE ROADWAY LIGHT FIXTURE. DIE-CAST ALUMINUM HOUSING, PLUG-IN IGNITOR, 250 WATTS, HIGH PRESSURE SODIUM (HPS), 208 VOLT SINGLE PHASE, POLYCARBONATE LENS, PHOTOELECTRIC CONTROL.
MANUFACTURERS: GENERAL ELECTRIC Co., MODEL M2AR2052
POLE: 20', ROUND, TAPERED ALUMINUM
POLE ARM: 6' ALUMINUM, POLE MANUFACTURER'S STANDARD SIZED AND STYLE TO FIT FIXTURE.
BASE: CONCRETE AS RECOMMENDED BY POLE MANUFACTURER.

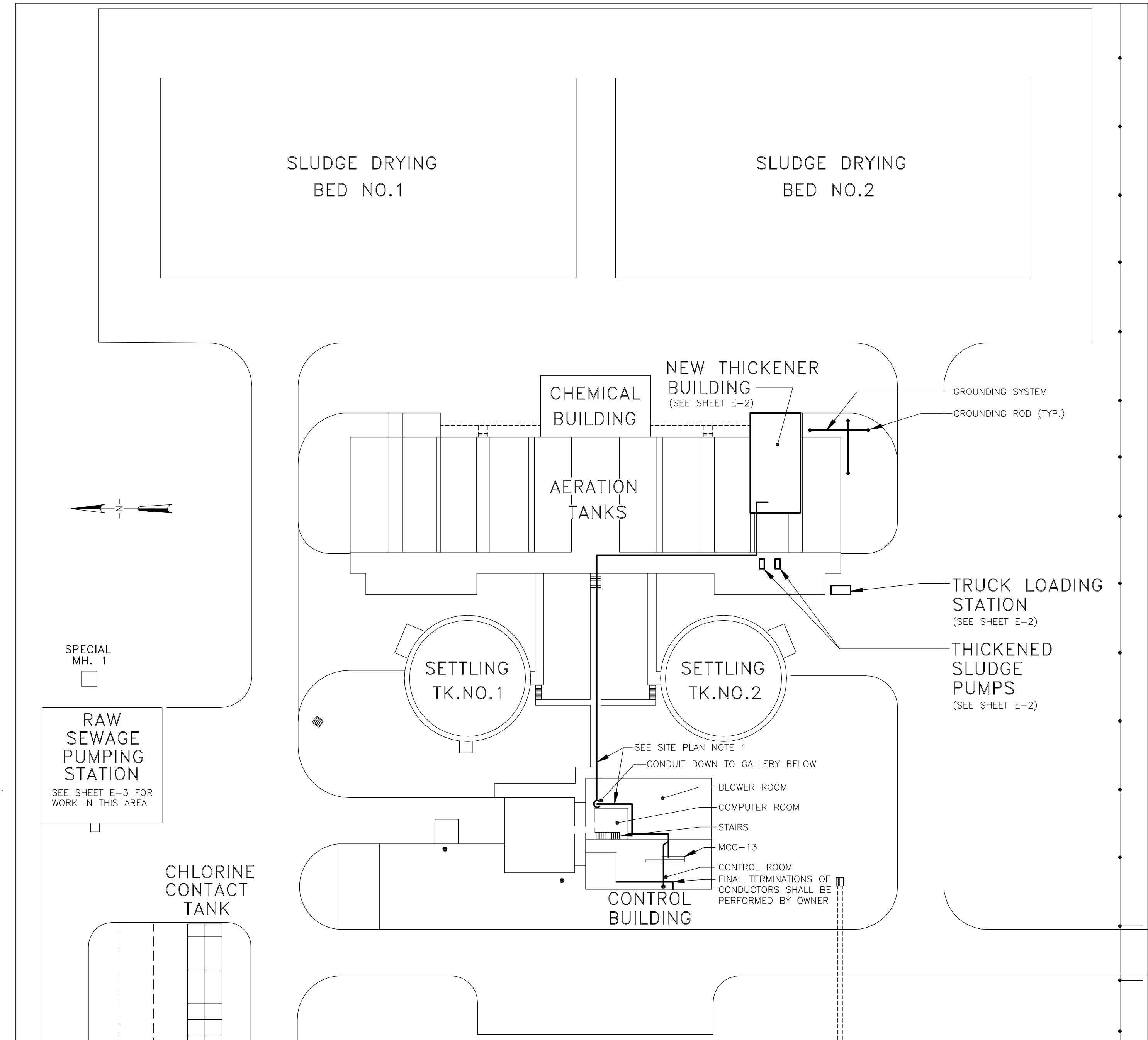
GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, THESE CONTRACT DOCUMENTS AND ALL LOCAL AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, INSPECTION AND APPROVALS REQUIRED FOR THE ELECTRICAL WORK. THE OWNER SHALL BE PROVIDED A FINAL INSPECTION CERTIFICATE FROM AN OWNER APPROVED TESTING ORGANIZATION UPON COMPLETION OF THE WORK.
- HAZARDOUS LOCATION SHALL BE DEFINED BY THE N.E.C. ALL ELECTRICAL WORK IN THESE AREAS SHALL BE IN ACCORDANCE WITH THESE ARTICLES.
- ALL INTERIOR ELECTRICAL CONDUIT SHALL BE RUN EXPOSED, PARALLEL TO BUILDING WALLS AND BEAMS UNLESS OTHERWISE SHOWN. SUPPORT ALL CONDUIT PER SPECIFICATIONS
- OUTLETS, DEVICES AND LIGHTING BOXES SHALL BE SURFACE MOUNTED.
- NOT ALL CONDUIT IS SHOWN ON THE PLANS. REFER TO SCHEMATIC DIAGRAMS FOR CONDUIT AND CONDUCTOR SIZES AND QUANTITIES. EXACT LOCATION OF CONDUIT INSTALLATION SHALL BE DETERMINED BY THE ELECTRICAL INSTALLER IN THE FIELD, UNLESS SPECIFICALLY DIMENSIONED ON THE PLANS. CONDUIT INSTALLATION SHALL BE IN ACCORDANCE WITH SPECIFICATIONS.
- EXACT EQUIPMENT LOCATION SHALL BE DETERMINED IN THE FIELD UNLESS SPECIFICALLY DIMENSIONED ON THE PLANS. COORDINATE EQUIPMENT LOCATION WITH OTHER TRADES
- TWISTED SHIELDED PAIR (TSP) AND TWISTED SHIELDED TRIAD (TSTP) CONDUCTORS CARRYING 4-20mA INSTRUMENTATION SIGNAL SHALL ONLY BE INSTALLED IN RIGID STEEL CONDUIT OR PVC, COATED RIGID STEEL CONDUIT IN CORROSIIVE AND OUTDOOR LOCATION. POWER DISTRIBUTION AND CONTROL CONDUCTORS SHALL NOT BE INSTALLED IN CONDUIT CARRYING INSTRUMENTATION CONDUCTORS.
- POWER DISTRIBUTION CONDUCTORS SHALL NOT BE INSTALLED IN CONDUIT CARRYING CONDUCTORS FOR DIRECT CURRENT INDICATING SIGNALS.
- ALL PENETRATIONS THROUGH EXISTING CONCRETE STRUCTURES WHERE SLEEVES HAVE NOT BEEN PROVIDED SHALL BE CORE DRILLED AND SIZED TO ACCEPT MECHANICAL LINK SEALS.
- ALL JUNCTION BOXES OVER 100 CUBIC INCHES SHALL BE EQUIPPED WITH TERMINAL STRIPS.
- CONDUIT PENETRATING CONCRETE FLOORS/SLABS SHALL BE PVC COATED RIGID STEEL CONDUIT UP TO 18 INCHES ABOVE THE FLOOR AND 18" BELOW THE CONCRETE AND 18" INTO CONCRETE ENCASED DUCTBANKS.
- WHERE CONFLICTS /INTERFERENCES ARISE OVER THE LOCATION OF ELECTRICAL WORK AND THE WORK OF OTHER TRADES, THE CONTRACTOR SHALL PREPARE AND SUBMIT A PROPOSED RELOCATION PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLING ELECTRICAL WORK.

RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

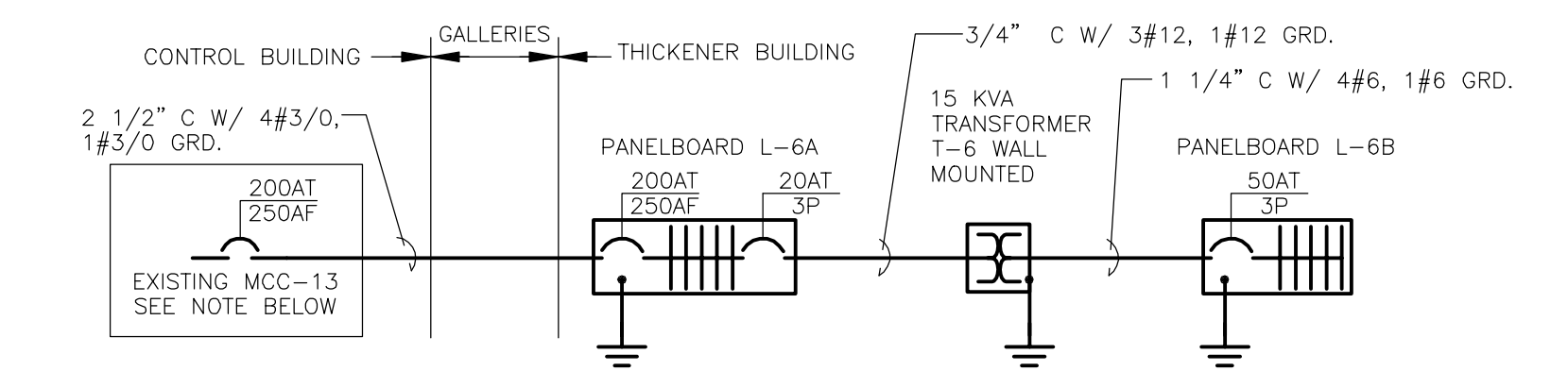
DATE: _____ PER: _____



SITE PLAN
SCALE: 1" = 40'

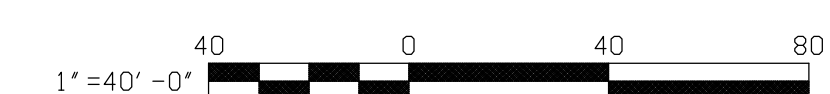
SITE PLAN NOTES:

- THE CONDUIT ROUTING SHOWN HERE IS DIAGRAMMATIC. THE FINAL CONDUIT ROUTING SHALL BE DETERMINED BY THE CONTRACTOR AND BE APPROVED BY THE OWNER.



- NOTES:
- PERFORM THE FOLLOWING MODIFICATION TO MOTOR CONTROL CENTER MCC-13. MOVE CIRCUIT BREAKER LOCATED IN SECTION 6, COMPARTMENTS E-LEFT AND E-RIGHT TO SECTION 7, COMPARTMENT A. PROVIDE ALL NECESSARY WIRE AND SPLICES AS REQUIRED. MODIFY SECTION 6 COMPARTMENTS E AND F TO HOUSE THE NEW CIRCUIT BREAKER TO FEED PANELBOARD L-6A. MODIFICATIONS SHALL INCLUDE ALL NEW, BUCKET, DISCONNECT HANDLE AND NAMEPLATE.

THICKENER BUILDING POWER DISTRIBUTION



PROCESS PIPING HEAT TRACING SCHEDULE

HEAT TRACE CIRCUIT NO.	PIPE NO.	PIPE FUNCTION	FROM	TO	PIPE SIZE	PIPE LENGTH (SEE NOTE 1)	PIPE MAT'L	PANELBOARD CIRCUIT NO.	CABLE WATTS/FT	TOTAL WATTAGE	18 VOLTAGE	POWER CONNECTION POINT	NOTE 2 CONDUIT AND WIRE
1	5	POTABLE WATER	SOUTH GALLERY	THICKENER BUILDING	1 1/2"	40'	CU	L-6B, 1	3.4	136	120	NORTH END OF TFP DECK	3/4" C W/ 2#12, 1#12 GRD
2	6	PLANT WATER (NON-POTABLE)	SOUTH GALLERY	THICKENER BUILDING	3"	40'	CU	L-6B, 2	3.4	136	120	NORTH END OF TFP DECK	3/4" C W/ 2#12, 1#12 GRD
3	12	PLANT EFFLUENT	SOUTH GALLERY	THICKENER BUILDING	3"	40'	CU	L-6B, 3	3.4	136	120	NORTH END OF TFP DECK	3/4" C W/ 2#12, 1#12 GRD

NOTES:

- THE PIPE LENGTHS SHOWN ARE PER THE DESIGN. THE ACTUAL PIPE LENGTHS MAY CHANGE DURING CONSTRUCTION. THE CONTRACTOR SHALL FIELD VERIFY ALL PIPING LENGTHS.
- CONDUCTOR SHALL BE OVERSIZED FOR LONG RUNS, SEE SPEC. SECTION 16055. CONDUIT SIZE SHALL BE ADJUSTED AS REQUIRED. SEE ALSO SHEET E-2.

DWG. 10/1/99
M:\1612030\REC\DR\VELEC\012001

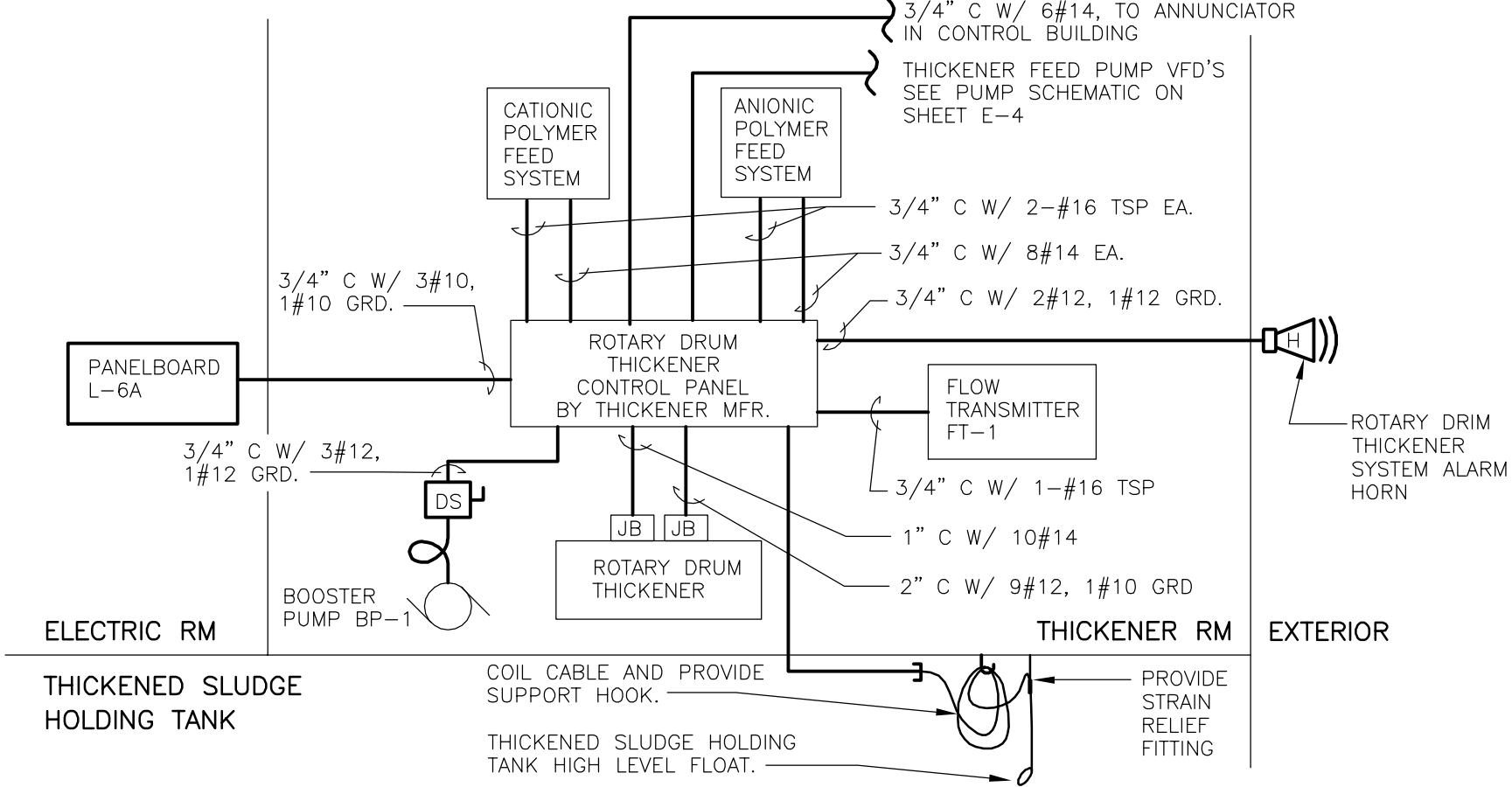
NOTES:
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It is a violation of New York State Education Law for any person, unless acting under the direction of a licensed professional engineer, to alter an item on this drawing in any way, if an item is altered, the altering engineer shall affix to the item his/her seal and the notation "altered by" followed by his/her signature and the date of such alteration, and a specific description of the alteration.

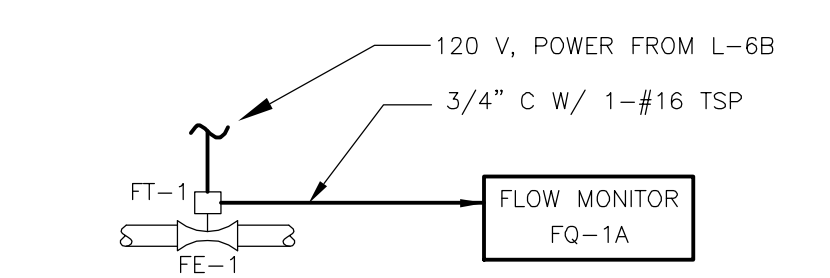
3	FOR CONSTRUCTION	CJY/TWA	5/2000	WFH	DJW	RB	5/00
2	FOR APPROVAL	DJW	1/2000	WFH	DJW	RB	3/2000
1	FOR APPROVAL	DJW	10/99	WFH	DJW	RB	11/99
4	RECORD DRAWING	HCC	9/01	WFH	JRH	RB	9/01
	PROJECT SUPERVISOR						
	DEPARTMENT SUPERVISOR						

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CAZENOVIA, NEW YORK

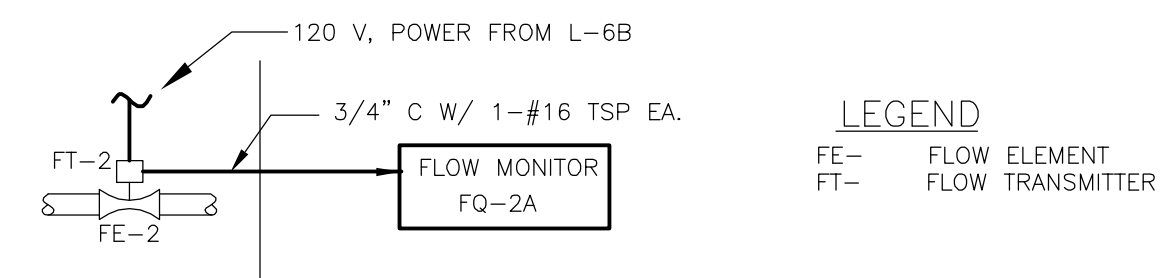
ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
ELECTRICAL ABBREVIATIONS, SYMBOLES, SITE PLAN GENERAL NOTES AND ONE-LINE DIAGRAM			
JOB NO.	9012030	CONTRACT	1B
SHEET			E-1



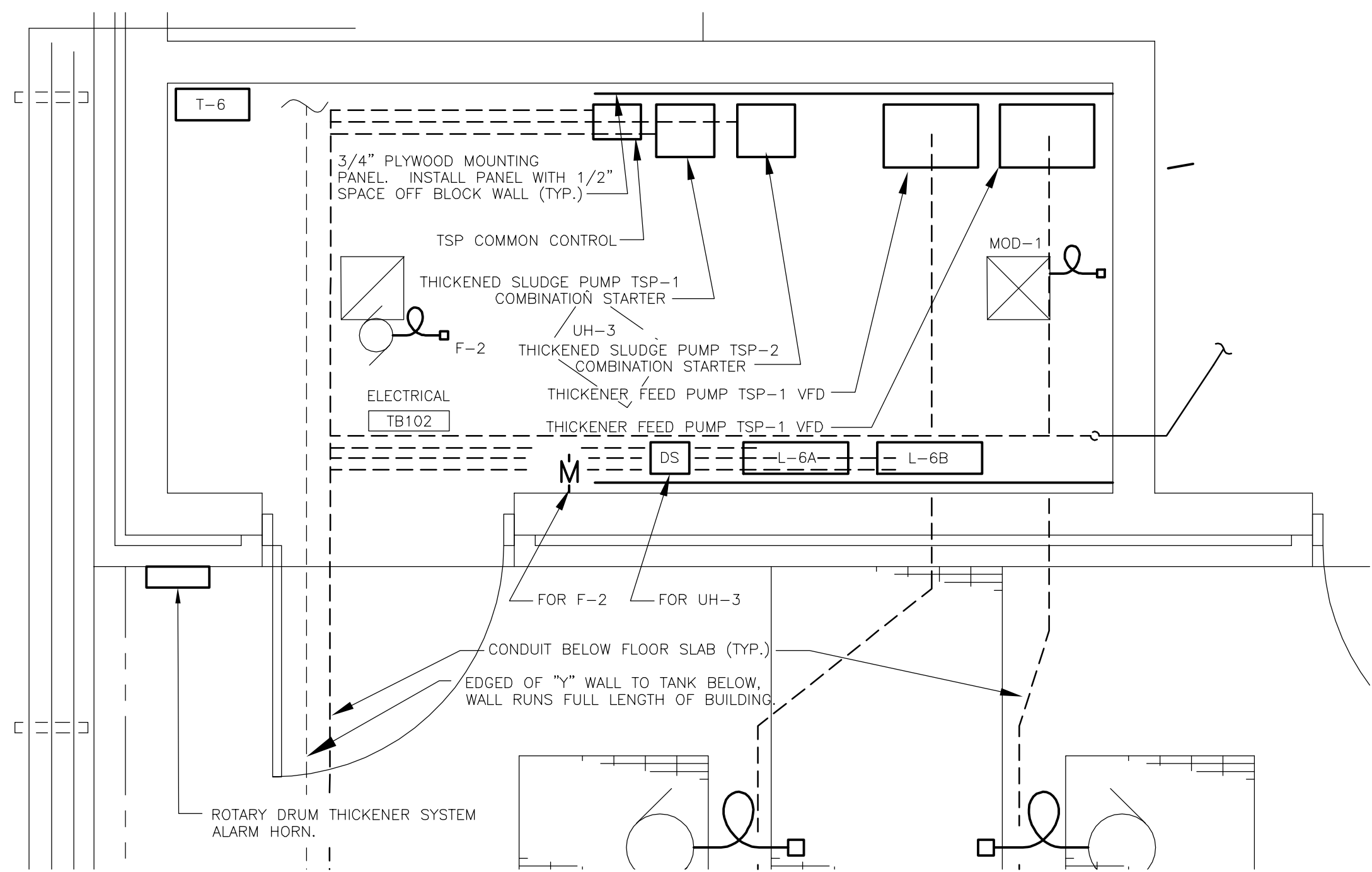
ROTARY DRUM THICKENER BLOCK DIAGRAM



UNTHICKENED SLUDGE FLOW

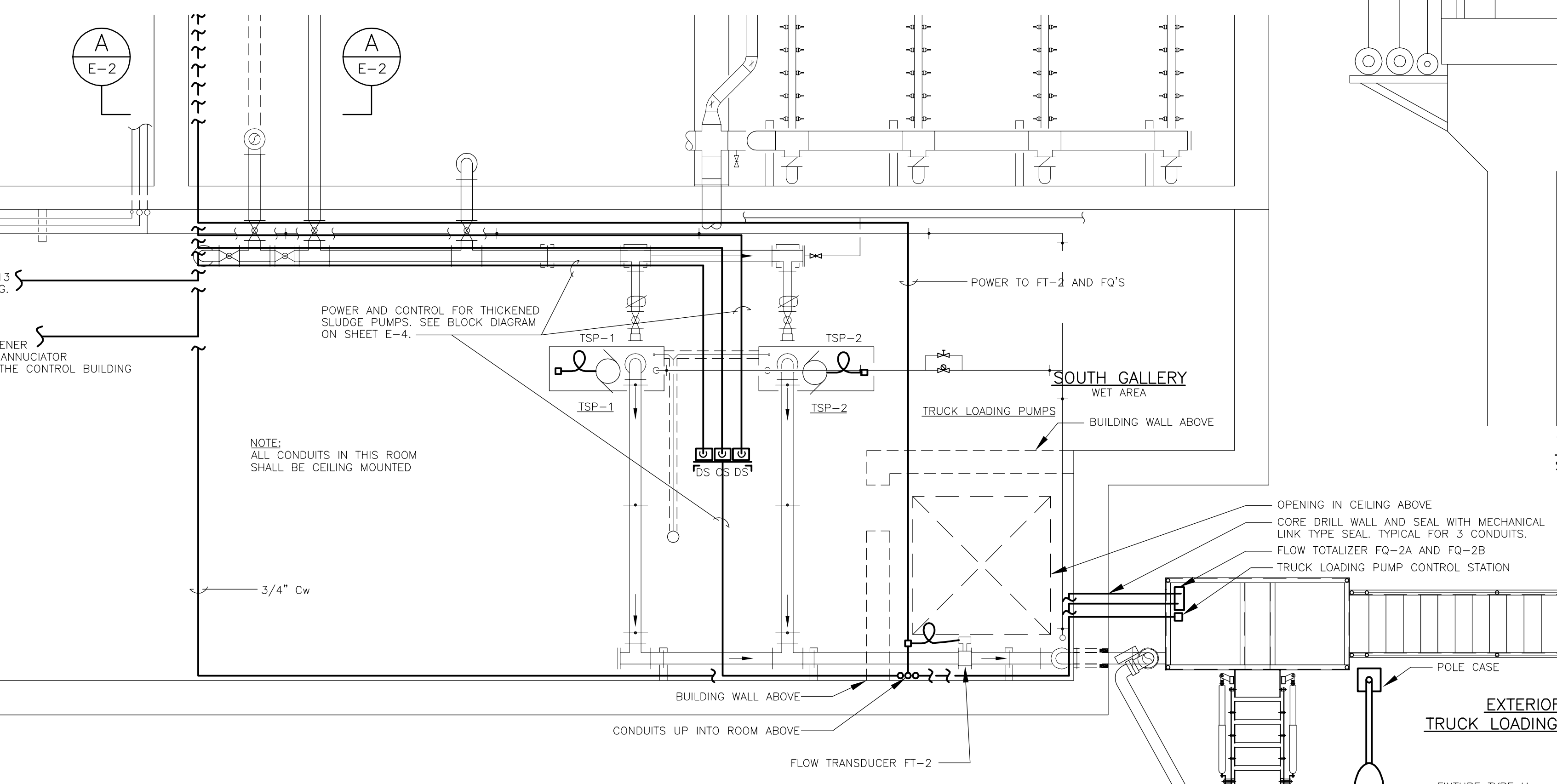


THICKENED SLUDGE FLOW



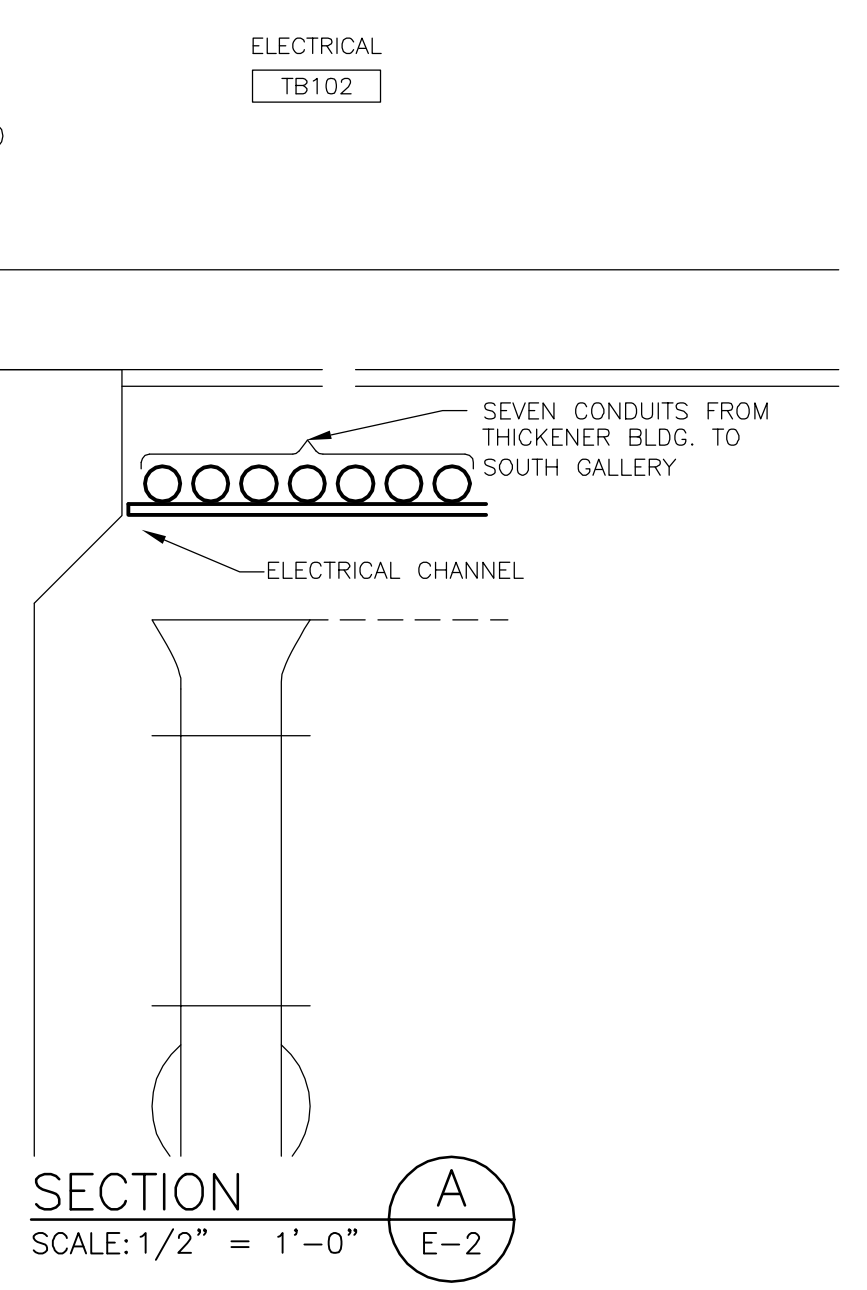
PARTIAL PLAN THICKENER BUILDING - ELECTRICAL

SCALE: 1/2" = 1'-0"



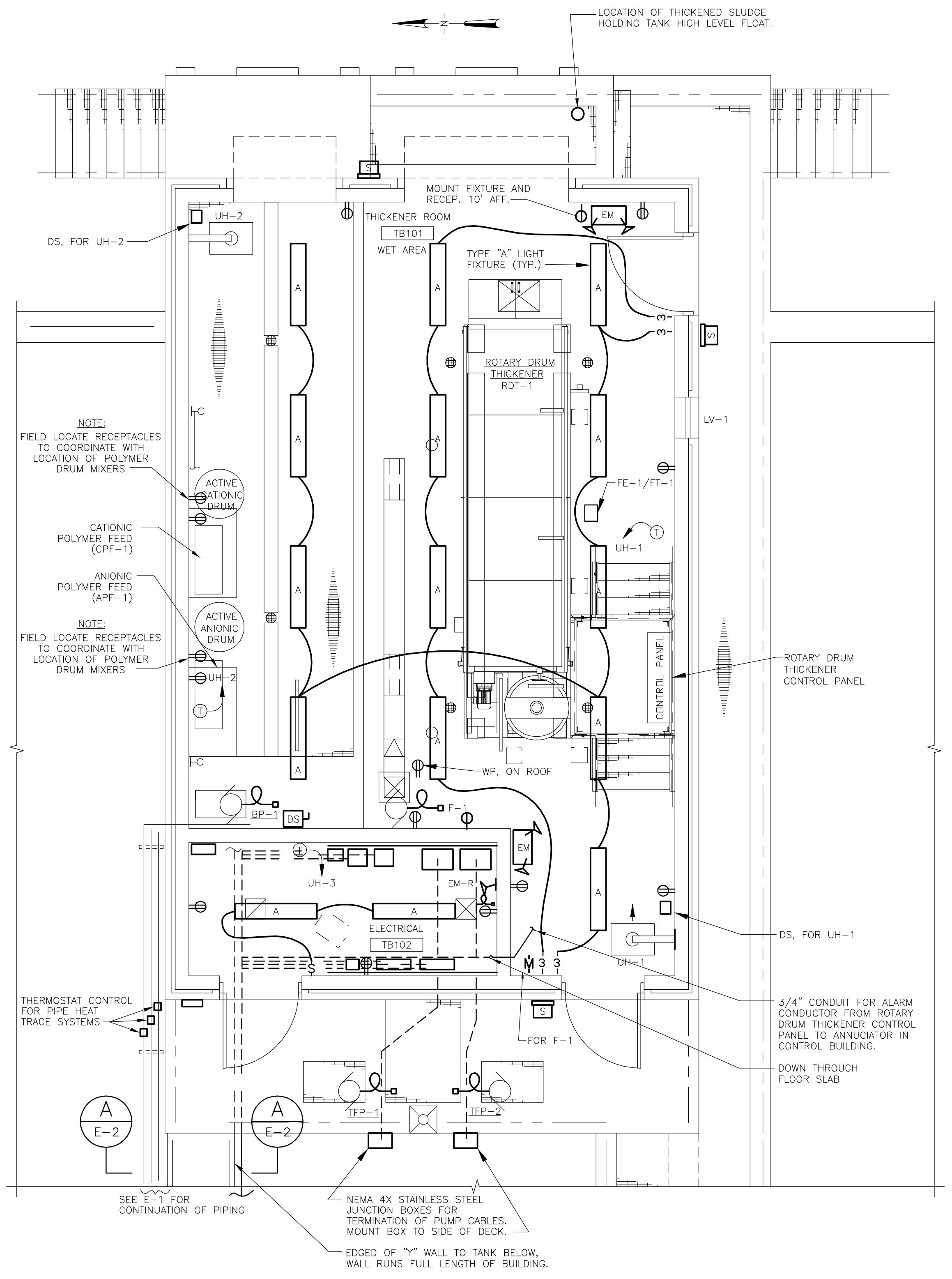
PARTIAL PLAN SOUTH GALLERY AND TRUCK LOADING STATION

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



SECTION A-E-2

SCALE: 1/2" = 1'-0"



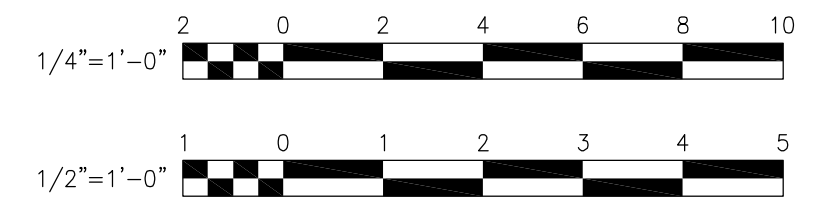
THICKENER BUILDING POWER & LIGHTING PLAN

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

RECORD DRAWING

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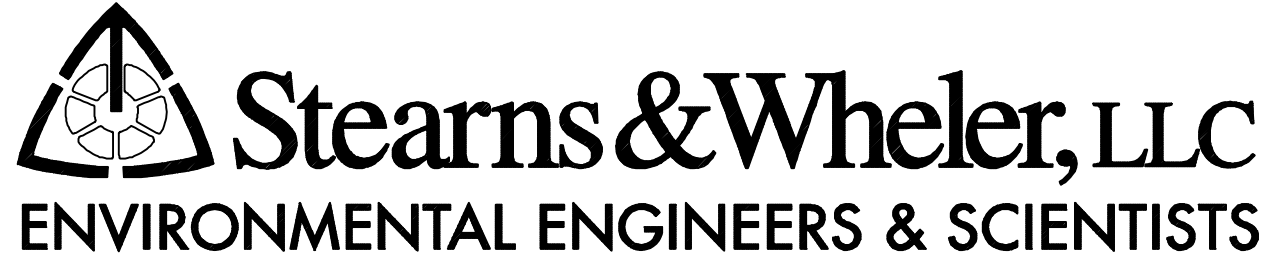
DATE: _____ PER: _____



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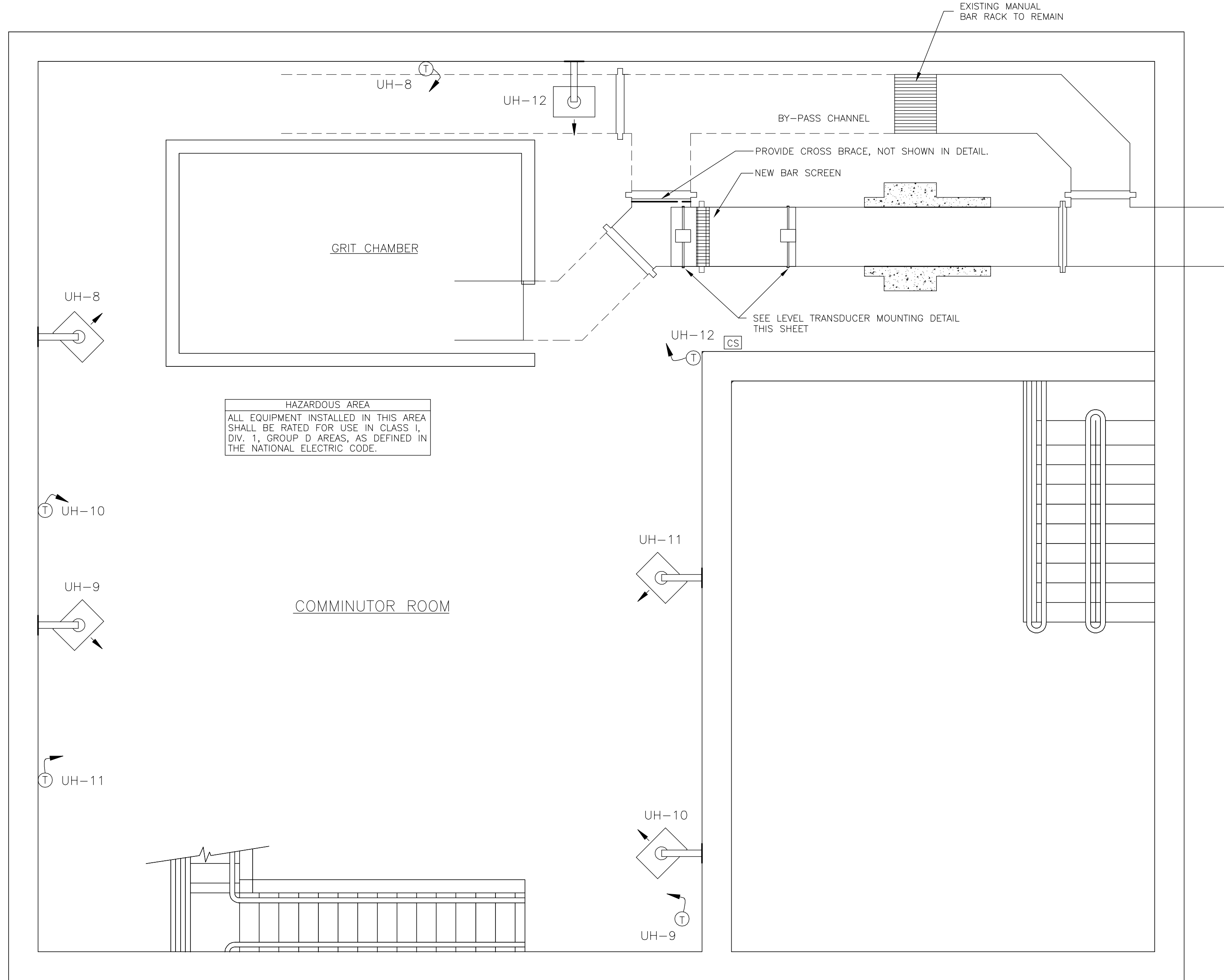
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2	FOR APPROVAL	DJW/GAK	1/2000	WFH	DJW	RB	3/2000
1	FOR APPROVAL	DJW	10/99	WFH	DJW	RB	11/99
4	RECORD DRAWING	HCC	9/01	WFH	JRH	RB	9/01

PROJECT SUPERVISOR	DEPARTMENT SUPERVISOR	ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE
		4	HCC	9/01	WFH	JRH	RB	9/01

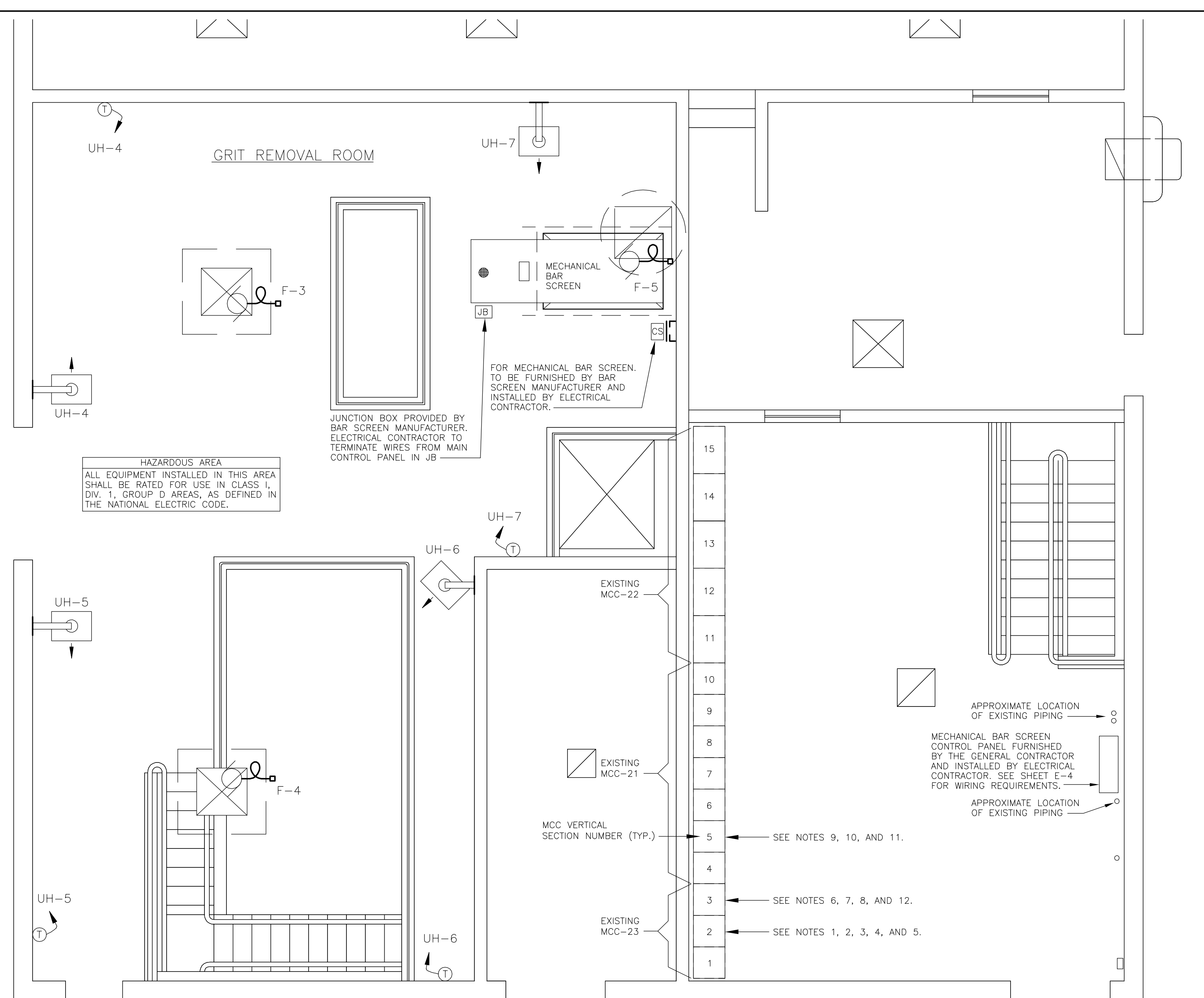


CAZENOVIA, NEW YORK

ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
ELECTRICAL THICKENER BUILDING PLANS AND SOUTH GALLERY PLAN			
JOB NO.	9012030	CONTRACT	1B
SHEET	E-2		



RAW SEWAGE PUMPING STATION - BASEMENT PLAN
SCALE: 1/4" = 1'0"



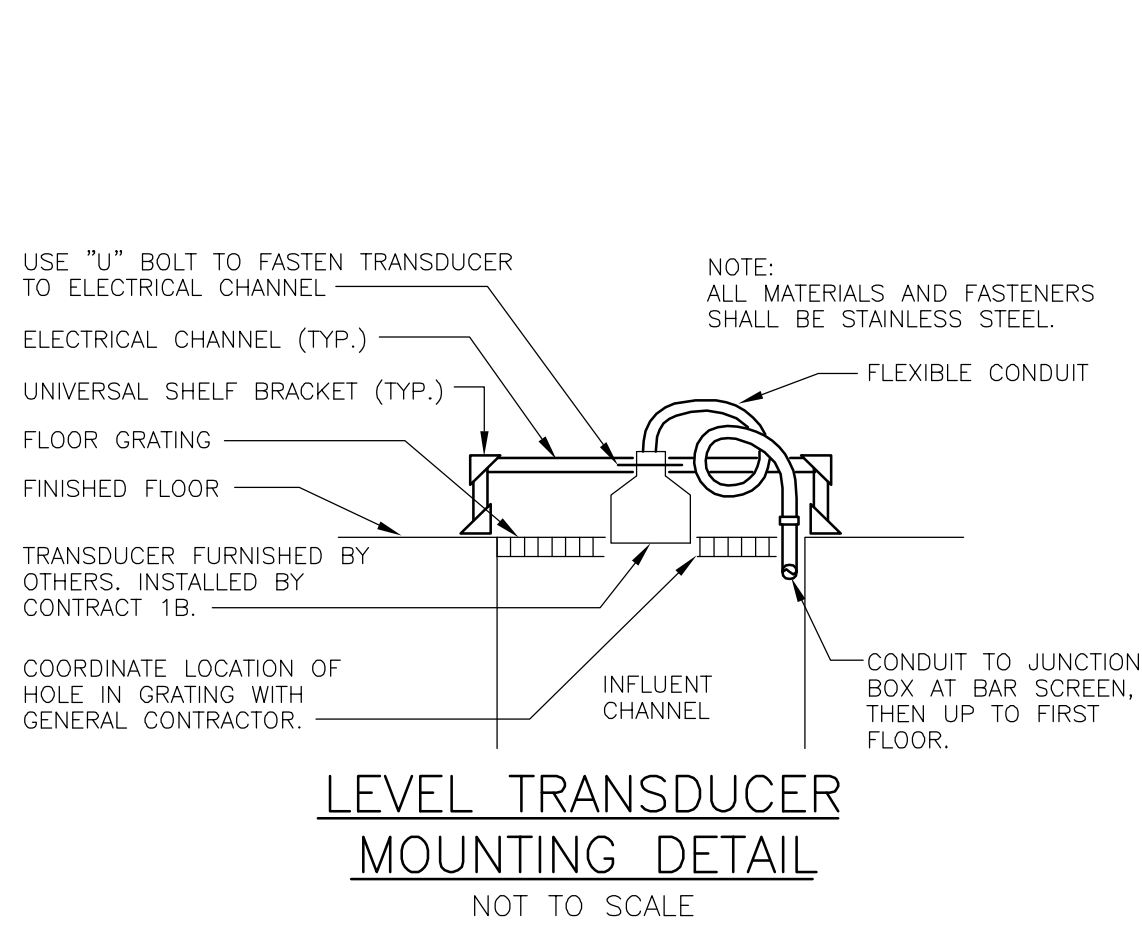
RAW SEWAGE PUMPING STATION - FIRST FLOOR PLAN
SCALE: 1/4" = 1'0"

NOTES (MODIFICATIONS TO EXISTING MCC'S)

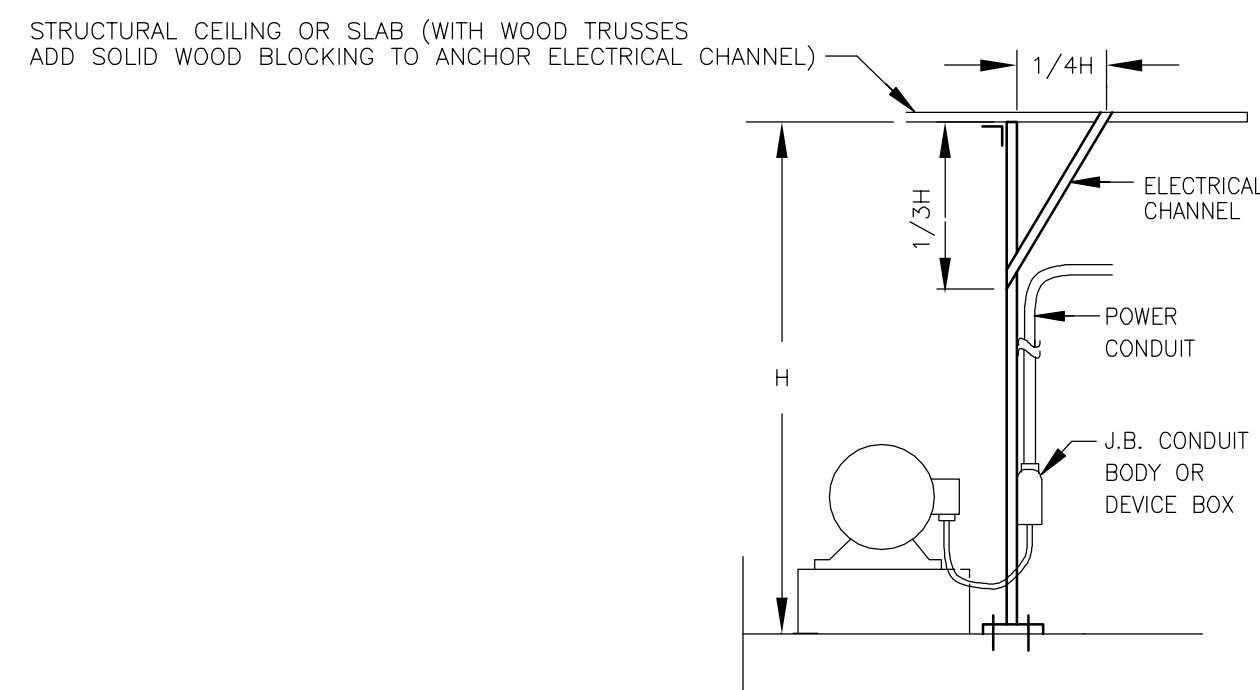
GENERAL NOTE - FOR ALL MOTOR CONTROL CENTER COMPARTMENTS TO BE MODIFIED, DISCONNECT EXISTING EQUIPMENT, AND REMOVE ALL CONDUIT AND WIRE, AND REPAIR WALL PENETRATIONS. PROVIDE NEW NAME PLATE.

- SECTION 2 COMPARTMENT B - MODIFY COMPARTMENT TO HOUSE A 30 AMP CIRCUIT BREAKER TO FEED NEW UNIT HEATER UH-4. PROVIDE 3/4" C W/ 3#10, 1#10 GRD FROM BREAKER TO UNIT.
- SECTION 2 COMPARTMENT C - MODIFY COMPARTMENT TO HOUSE A 30 AMP CIRCUIT BREAKER TO FEED NEW UNIT HEATER UH-5. PROVIDE 3/4" C W/ 3#10, 1#10 GRD FROM BREAKER TO UNIT.
- SECTION 2 COMPARTMENT D - MODIFY COMPARTMENT TO HOUSE A 30 AMP CIRCUIT BREAKER TO FEED NEW UNIT HEATER UH-6. PROVIDE 3/4" C W/ 3#10, 1#10 GRD FROM BREAKER TO UNIT.
- SECTION 2 COMPARTMENT E - MODIFY COMPARTMENT TO HOUSE A 20 AMP CIRCUIT BREAKER TO FEED NEW UNIT HEATER UH-7. PROVIDE 3/4" C W/ 3#12, 1#12 GRD FROM BREAKER TO UNIT.
- SECTION 2 COMPARTMENT F - MODIFY COMPARTMENT TO HOUSE A 15 AMP CIRCUIT BREAKER TO FEED NEW UNIT HEATER UH-8. PROVIDE 3/4" C W/ 3#12, 1#12 GRD FROM BREAKER TO UNIT.
- SECTION 3 COMPARTMENT A - MODIFY COMPARTMENT TO HOUSE A 15 AMP CIRCUIT BREAKER TO FEED NEW UNIT HEATER UH-9. PROVIDE 3/4" C W/ 3#12, 1#12 GRD FROM BREAKER TO UNIT.
- SECTION 3 COMPARTMENT B - MODIFY COMPARTMENT TO HOUSE A 15 AMP CIRCUIT BREAKER TO FEED NEW UNIT HEATER UH-10. PROVIDE 3/4" C W/ 3#12, 1#12 GRD FROM BREAKER TO UNIT.
- SECTION 3 COMPARTMENT C - MODIFY COMPARTMENT TO HOUSE A 15 AMP CIRCUIT BREAKER TO FEED NEW UNIT HEATER UH-11. PROVIDE 3/4" C W/ 3#12, 1#12 GRD FROM BREAKER TO UNIT.
- SECTION 6 COMPARTMENT B - MODIFY COMPARTMENT TO HOUSE CONTROLS FOR SUPPLY FAN F-3 AS SHOWN IN ELEMENTARY DIAGRAM ON SHEET E-4. PROVIDE CONDUIT AND WIRE AS SHOWN IN BLOCK DIAGRAM ON SHEET E-4.
- SECTION 6 COMPARTMENT C - MODIFY COMPARTMENT TO HOUSE CONTROLS FOR SUPPLY FAN F-4 AS SHOWN IN ELEMENTARY DIAGRAM ON SHEET E-4. PROVIDE CONDUIT AND WIRE AS SHOWN IN BLOCK DIAGRAM ON SHEET E-4.
- SECTION 6 COMPARTMENT D - MODIFY COMPARTMENT TO HOUSE CONTROLS FOR EXHAUST FAN F-5 AS SHOWN IN ELEMENTARY DIAGRAM ON SHEET E-4. PROVIDE CONDUIT AND WIRE AS SHOWN IN BLOCK DIAGRAM ON SHEET E-4.
- SECTION 3 COMPARTMENT F - MODIFY COMPARTMENT TO HOUSE A 20 AMP CIRCUIT BREAKER TO FEED THE MECHANICAL BAR SCREEN CONTROL PANEL. PROVIDE CONDUIT AND WIRE AS REQUIRED BY SYSTEM BLOCK DIAGRAM ON SHEET E-4.

1/4"=1'-0"



LEVEL TRANSDUCER MOUNTING DETAIL
NOT TO SCALE



OVERHEAD FEED TYPICAL ELECTRICAL FEED
NO SCALE

RECORD DRAWING

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3	FOR CONSTRUCTION	DJW	5/2000	WFH	DJW	RB	5/00				
2	FOR APPROVAL	DJW	1/2000	WFH	DJW	RB	3/2000				
1	FOR APPROVAL	DJW	10/99	WFH	DJW	RB	11/99				
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE					
	PROJECT SUPERVISOR			DEPARTMENT SUPERVISOR							
4	RECORD DRAWING	HCC	9/01	WFH	JRH	RB	9/01				
ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE					

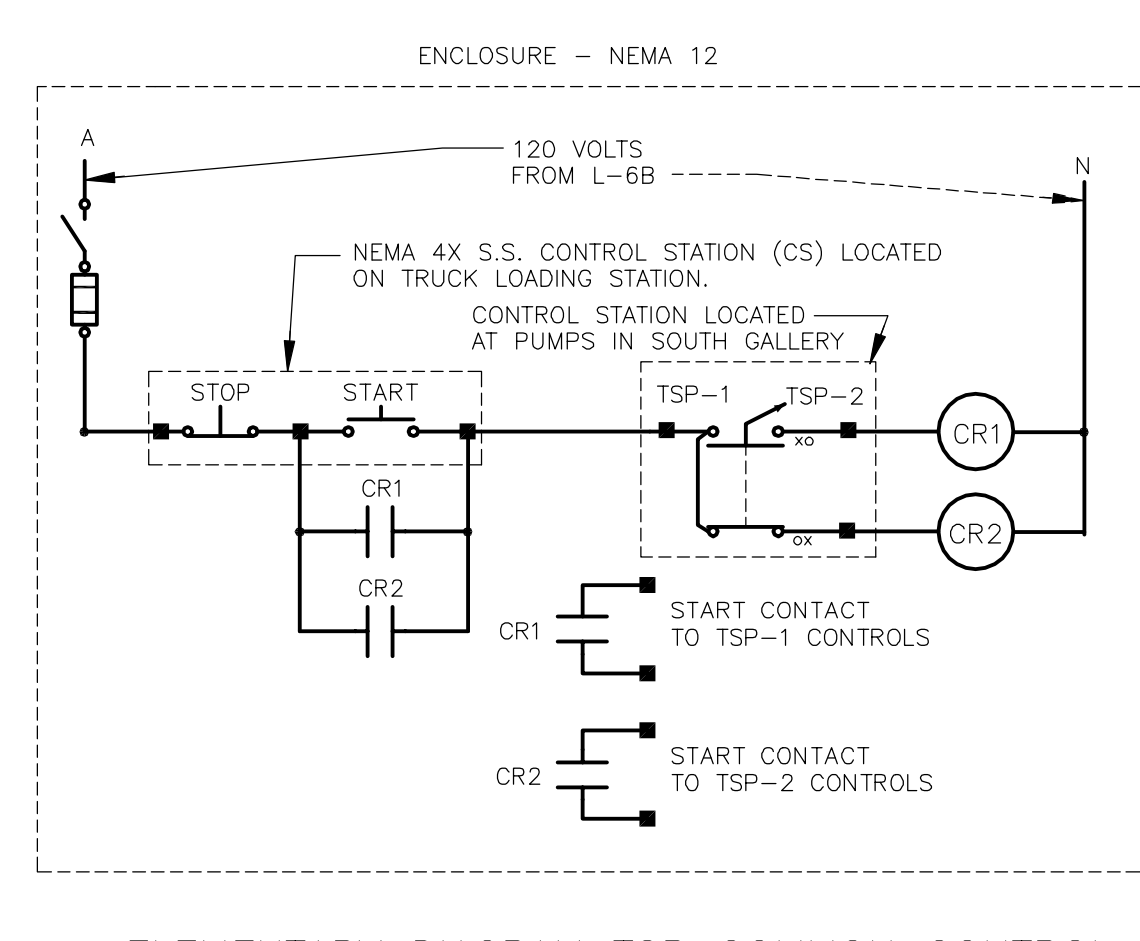
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CAZENOVIA, NEW YORK

ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
ELECTRICAL RAW SEWAGE PUMP STATION PLANS			
JOB NO.	9012030	CONTRACT	1B
SHEET			E-3

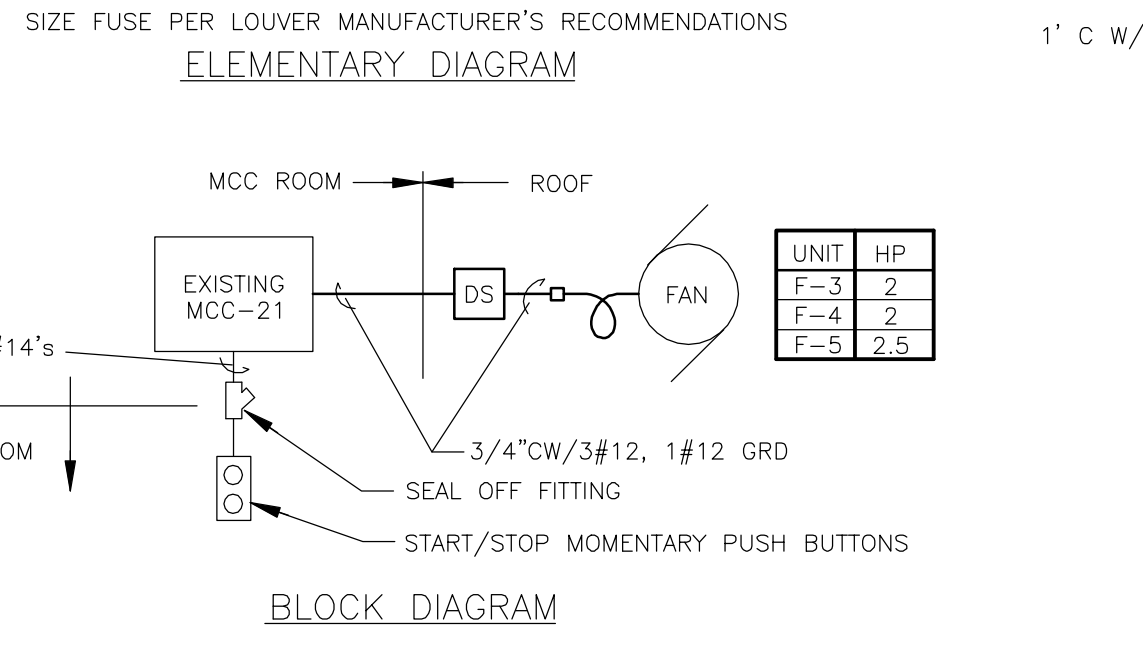
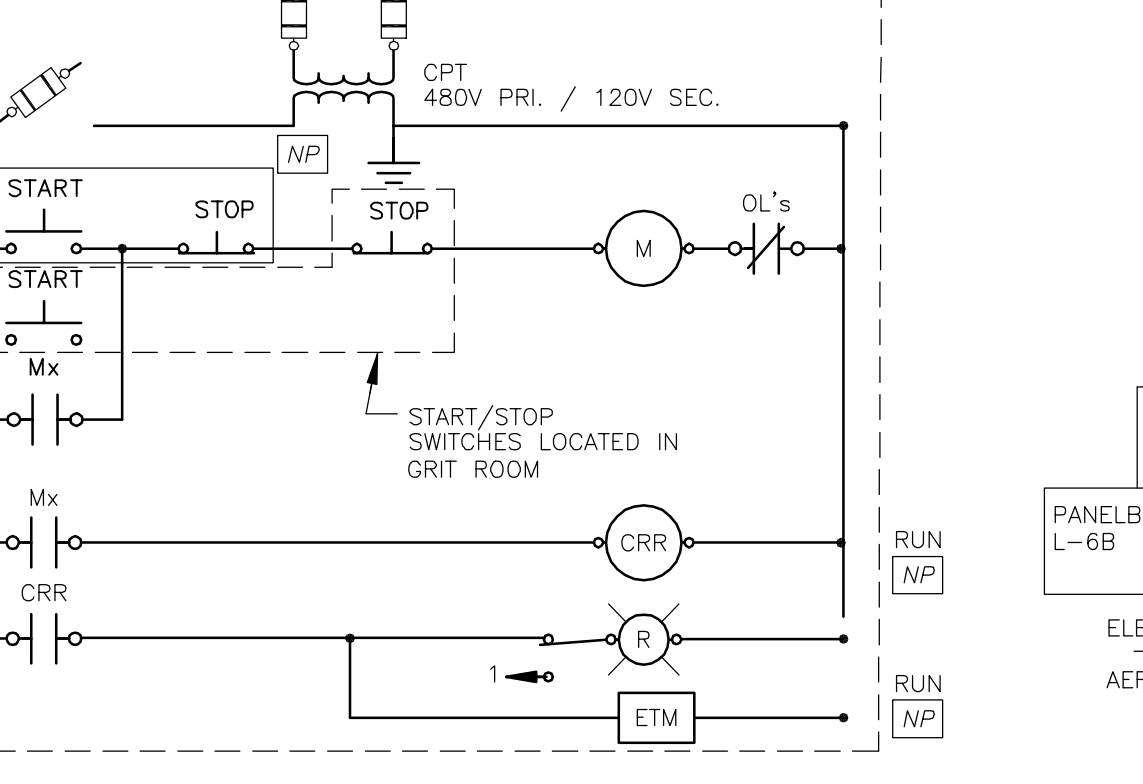
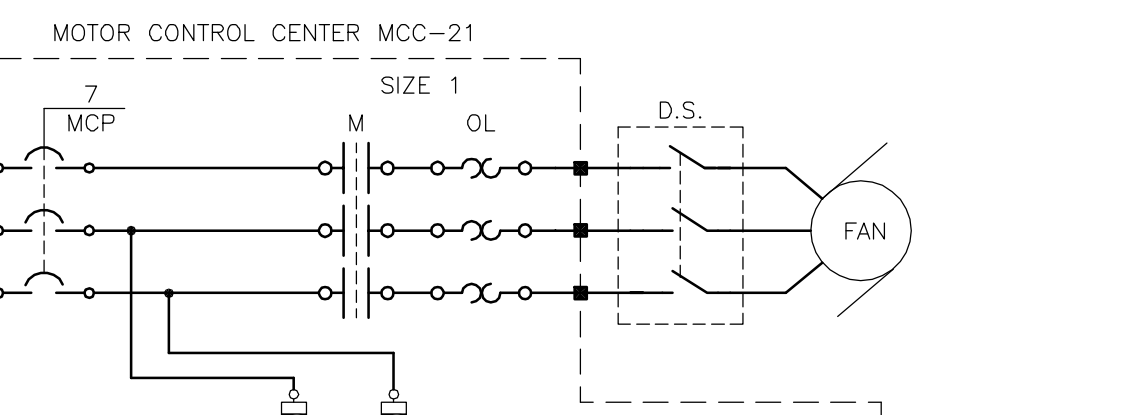
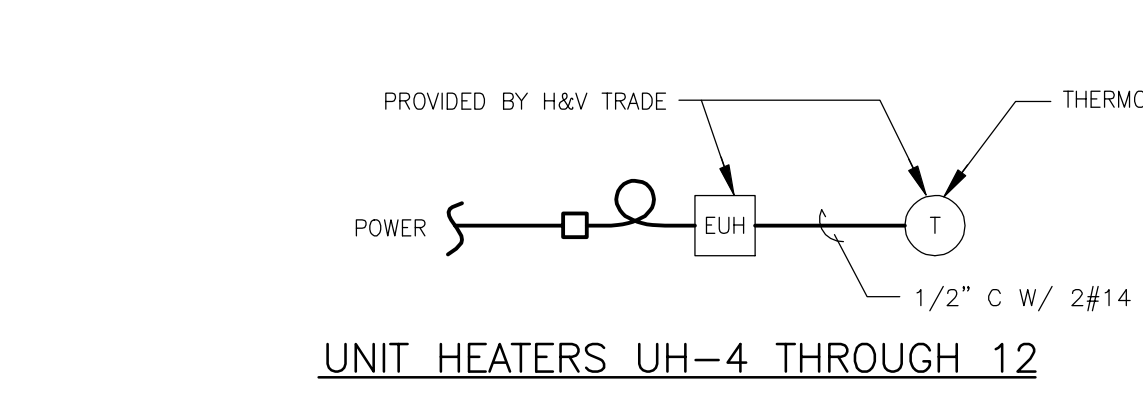
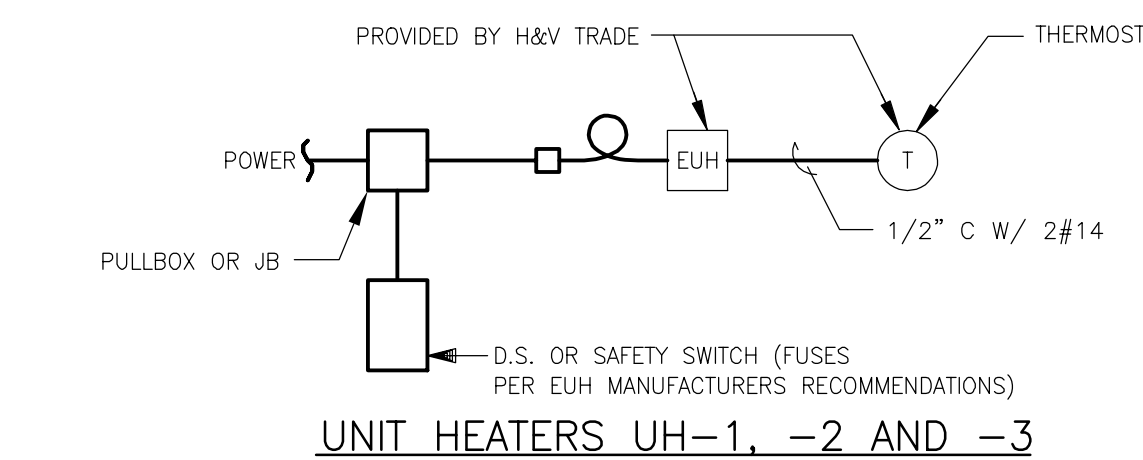
PANELBOARD L-6A SCHEDULE												
THICKENER BUILDING, ELECTRIC ROOM			FED FROM: MCC-13									
MAIN BUS RATINGS: 250 AMP, 480/277 VOLTS, 3 PHASE, 4 WIRE			ESTIMATED CONNECTED LOAD: 45 KW									
MINIMUM SHORTCIRCUIT INTERRUPTION RATING: 35,000			INCOMING FEED: 3/0 PER PHASE									
MAIN BREAKER TRIP: 200 AMP			ENCLOSURE: NEMA 1									
* INDICATES GFCI CIRCUIT BREAKER												
SEE PANELBOARD NOTES 1 THROUGH 4												
DESCRIPTION	DIAGRAM/NOTE	LOAD	CB TRIP/POLE	CIR.	A	B	C	CIR.	CB TRIP/POLE	LOAD	DIAGRAM/NOTE	DESCRIPTION
THICKENER FEED PUMP TFP-1 VFD	E-4 / 5	7.5 HP	20A/3P	3	1	2	3	4	20A/3P	7.5 HP	E-4 / 5	THICKENER FEED PUMP TFP-1 VFD
THICKENED SLUDGE PUMP TSP-1	E-4 / 5	20 HP	60A/3P	7	9	10	11	12	60A/3P	20 HP	E-4 / 5	THICKENED SLUDGE PUMP TSP-2
UNIT HEATER UH-1	E-4 / 7	10 KW	20A/3P	13	14	15	16	17	20A/3P	10 KW	E-4 / 7	UNIT HEATER UH-2
UNIT HEATER UH-3	E-4 / 7	5 KW	15A/3P	19	20	21	22	23	25A/3P	10 KW	E-2 / 8	ROTARY DRUM THICKENER C.P.
SPACE				24	25	26	27	28	20A/3P	15 KW	E-1 / -	TRANSFORMER T-6
SPACE				29				30				

PANELBOARD L-6B SCHEDULE												
LOCATION: THICKENER BUILDING, ELECTRIC ROOM			FED FROM: L-6A									
MAIN BUS RATINGS: 100 AMP, 120/208 VOLTS, 3 PHASE, 4 WIRE			ESTIMATED CONNECTED LOAD: 10 KW									
MINIMUM SHORTCIRCUIT INTERRUPTION RATING: 22,000			INCOMING FEED: 6 PER PHASE									
MAIN BREAKER TRIP: 50 AMP			ENCLOSURE: NEMA 1									
* INDICATES GFCI CIRCUIT BREAKER												
SEE PANELBOARD NOTES 1 THROUGH 4												
DESCRIPTION	DIAGRAM/NOTE	LOAD	CB TRIP/POLE	CIR.	A	B	C	CIR.	CB TRIP/POLE	LOAD	DIAGRAM/NOTE	DESCRIPTION
RECEPTACLES	- / 2	1800 W	20A/1P	1	2	3	4	5	20A/1P	1800 W	- / 2	RECEPTACLES
RECEPTACLES	- / 2	1800 W	20A/1P	3	4	5	6	7	15A/1P	360 W	- / 2	LIGHTING THICKENER ROOM
LIGHTING, ELEC & THICKENER RM	- / 2	240 W	15A/1P	5	6	7	8	9	15A/1P	160 W	- / 2	LIGHTING, EXTERIOR
FT-1	E-4 / 2	240 W	15A/1P	7	8	9	10	11	15A/1P	240 W	E-4 / 2	FT-2
ANIONIC POLYMER SYSTEM APF-1	- / 2	1/3 HP	20A/1P	9	10	11	12	13	20A/1P	1/3 HP	- / 2	CATIONIC SYSTEM CPF-1
EXHAUST FAN F-1 AND LV-1	E-4 / 7	1/4 HP	15A/1P	11	12	13	14	15	15A/1P	1/4 HP	E-4 / 7	EXHAUST FAN F-2 AND MOD-1
HEAT TRACE - POTABLE	E-1 / 5	200 W	15A/1P	13	14	15	16	17	15A/1P	200 W	E-1 / 5	HEAT TRACE - PLANT WATER
HEAT TRACE - EFFLUENT	E-1 / 5	200 W	15A/1P	15	16	17	18	19	15A/1P	240 W	E-4 / 5	TSP COMMON CONTROLS
SPARE				17	18	19	20	21	20A/1P	150 W	- / 2	FIXTURE TYPE "S"
SPARE				19	20	21	22	23	20A/1P			SPARE
				21	22	23	24	25				
				23	24	25	26	27				
				25	26	27	28	29				
				27	28	29	30					

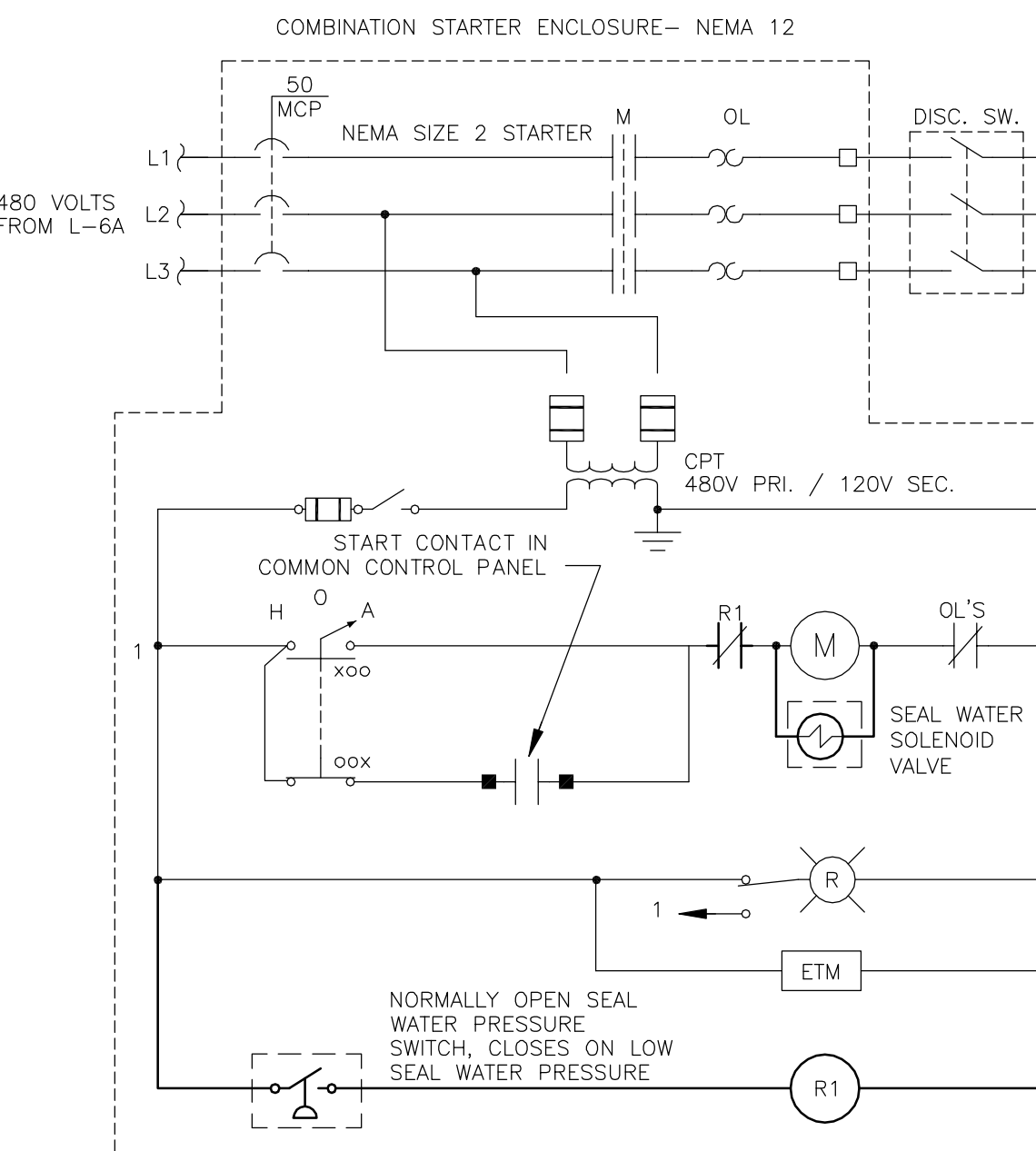
- PANELBOARD GENERAL NOTES:**
- FOR THREE PHASE CIRCUITS - PROVIDE 3/4" C W/ 3#12 & 1#12. FOR 20 AMP CIRCUITS SERVING EQUIPMENT WITHIN 60' OF PANELBOARD, UNLESS OTHERWISE NOTED, INCREASE CONDUIT AND WIRE SIZES IN ACCORDANCE WITH SPEC. SECT. 16120 AND THE N. E. C. FOR LONGER CIRCUITS OR CIRCUITS MORE THAN 20 AMPS.
 - FOR SINGLE PHASE CIRCUITS - PROVIDE 3/4" C W/ 2#12 & 1#12. FOR 20 AMP CIRCUITS SERVING EQUIPMENT WITHIN 60' OF PANELBOARD, UNLESS OTHERWISE NOTED, INCREASE CONDUIT AND WIRE SIZES IN ACCORDANCE WITH SPEC. SECT. 16120 AND THE N. E. C. FOR LONGER CIRCUITS OR CIRCUITS MORE THAN 20 AMPS.
 - CONDUIT SIZES SHOWN ARE NOT FOR USE IN DUCTBANKS.
 - ALL RECEPTACLE CIRCUITS SHALL BE POWERED THROUGH A GFCI CIRCUIT BREAKER.
 - SEE DIAGRAM FOR CONDUIT AND WIRE INFORMATION.
 - NOT USED
 - SEE SPECIFICATION SECTION 15985 FOR DESCRIPTION OF OPERATION. COMPONENTS SHOWN IN PANELBOARD SCHEDULE ARE A MINIMUM. PROVIDE ADDITIONAL COMPONENTS AS REQUIRED TO OPERATE UNIT AS INDICATED.
 - PROVIDE 3/4" C W/ 3#10, 1#10 GRD FROM EP-1 TO ROTARY DRUM THICKENER CONTROL PANEL.



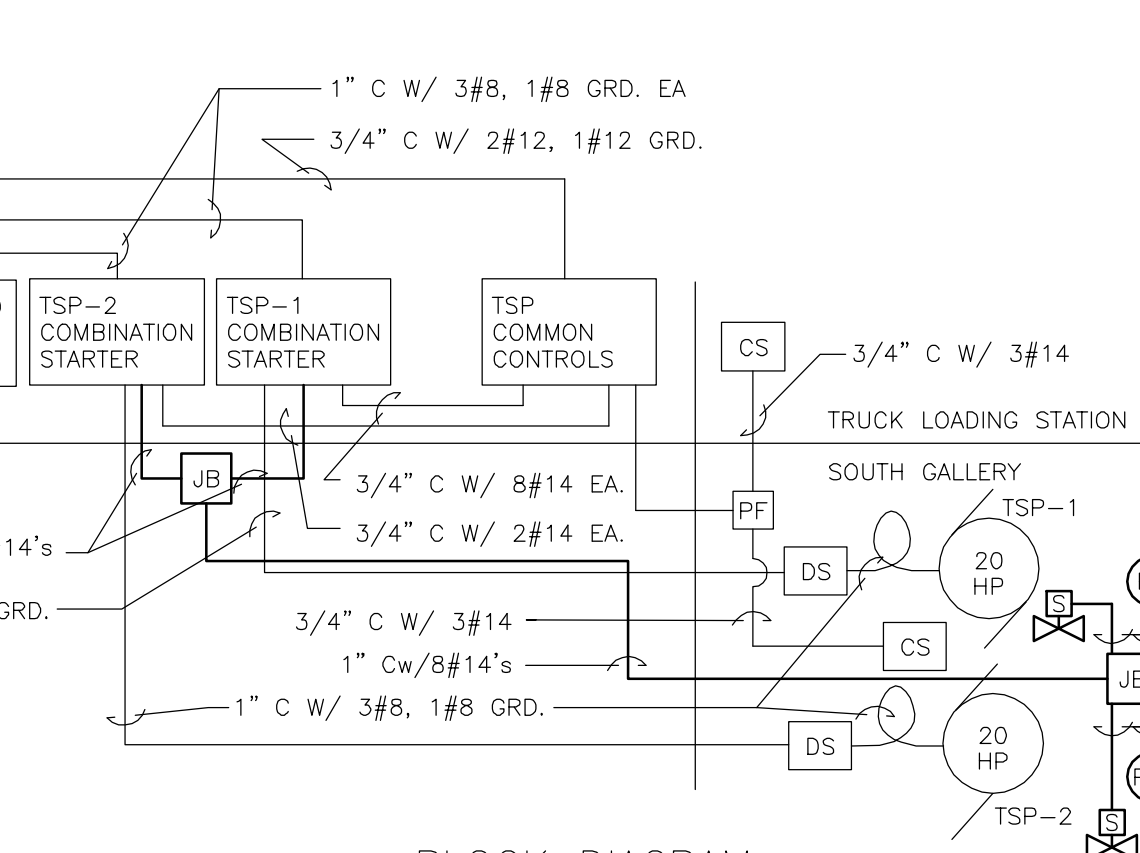
ELEMENTARY DIAGRAM TSP COMMON CONTROL



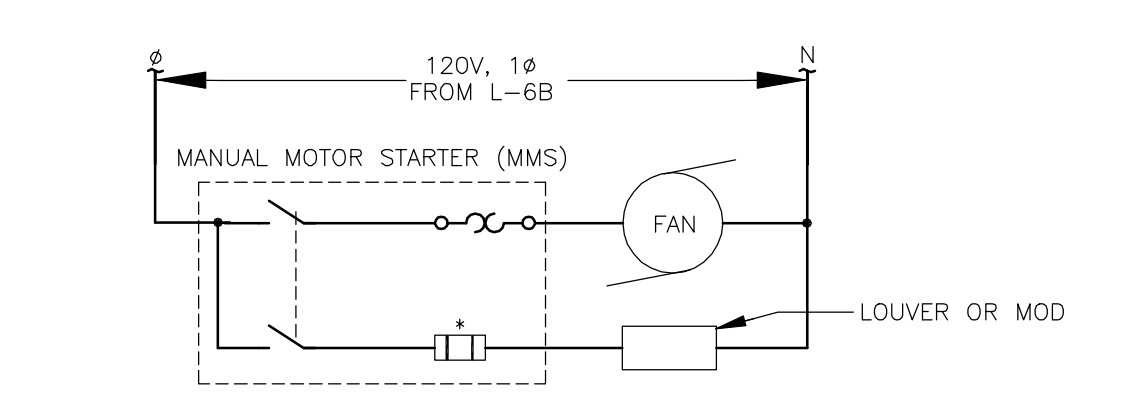
SUPPLY AND EXHAUST FANS F-3, -4 AND -5. CLASS 1, DIVISION 1, GROUP D HAZARDOUS AREA



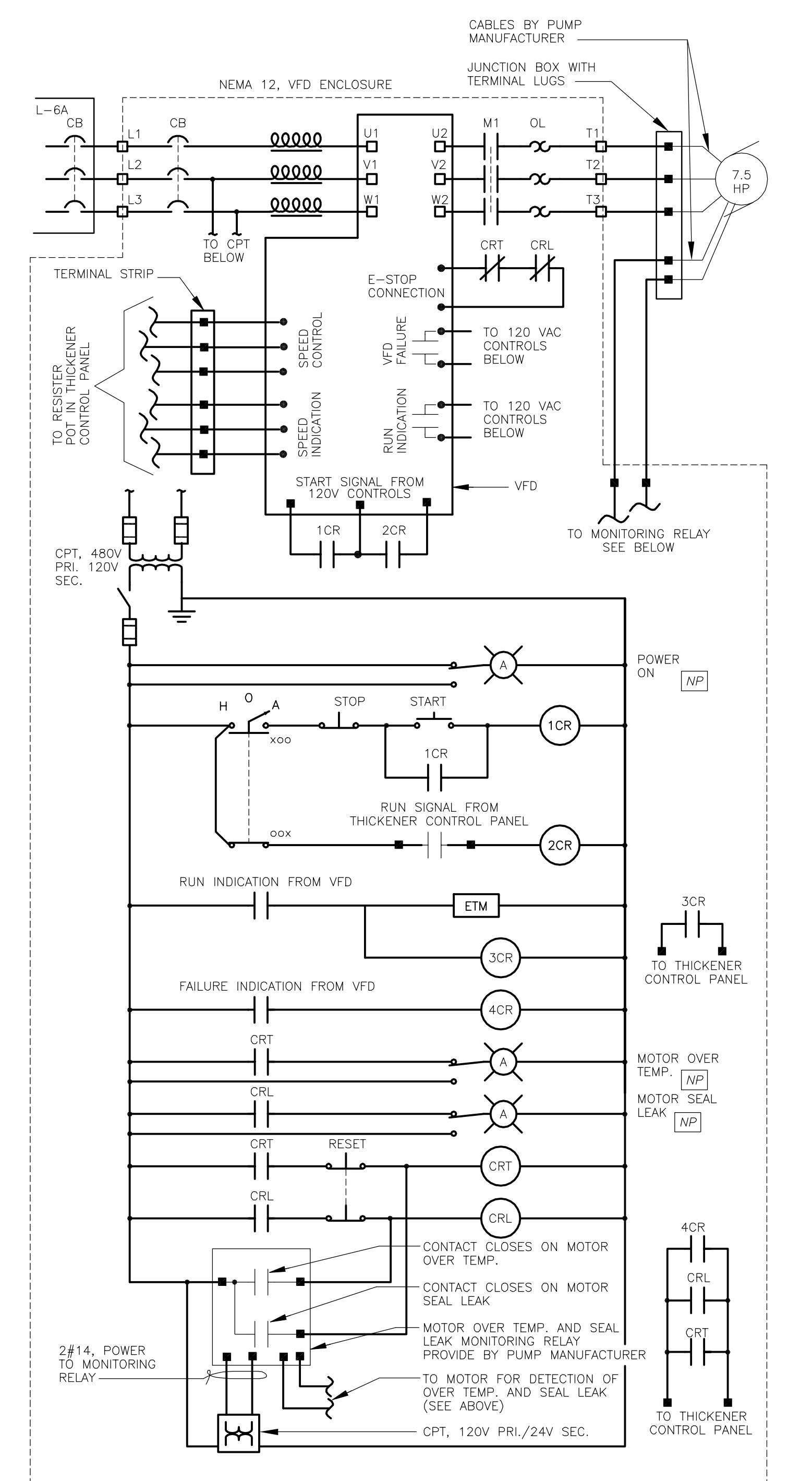
TYPICAL ELEMENTARY DIAGRAM (TSP-1 & TSP-2 COMBINATION STARTER)



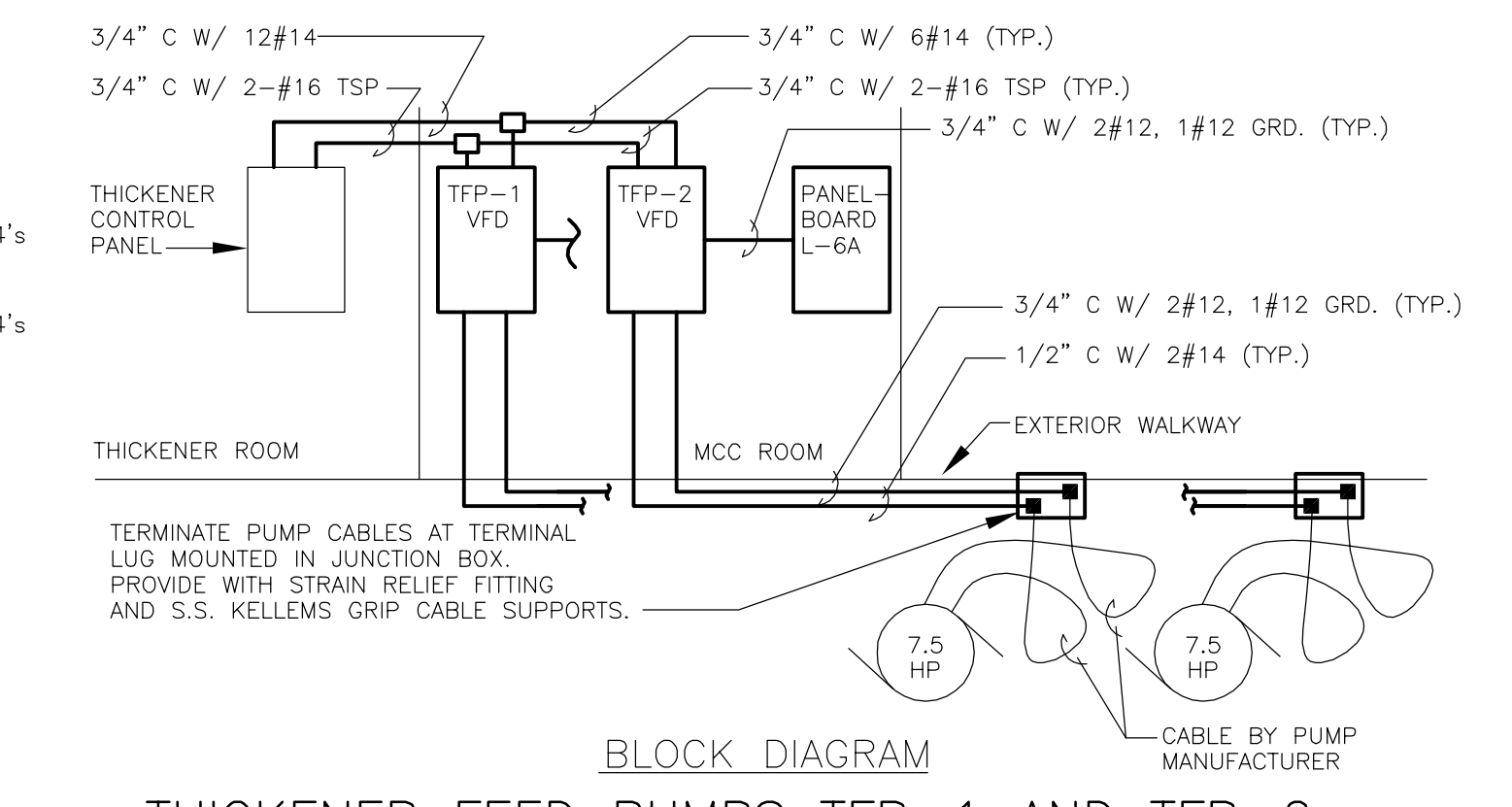
THICKENED SLUDGE PUMPS TSP-1 AND TSP-2



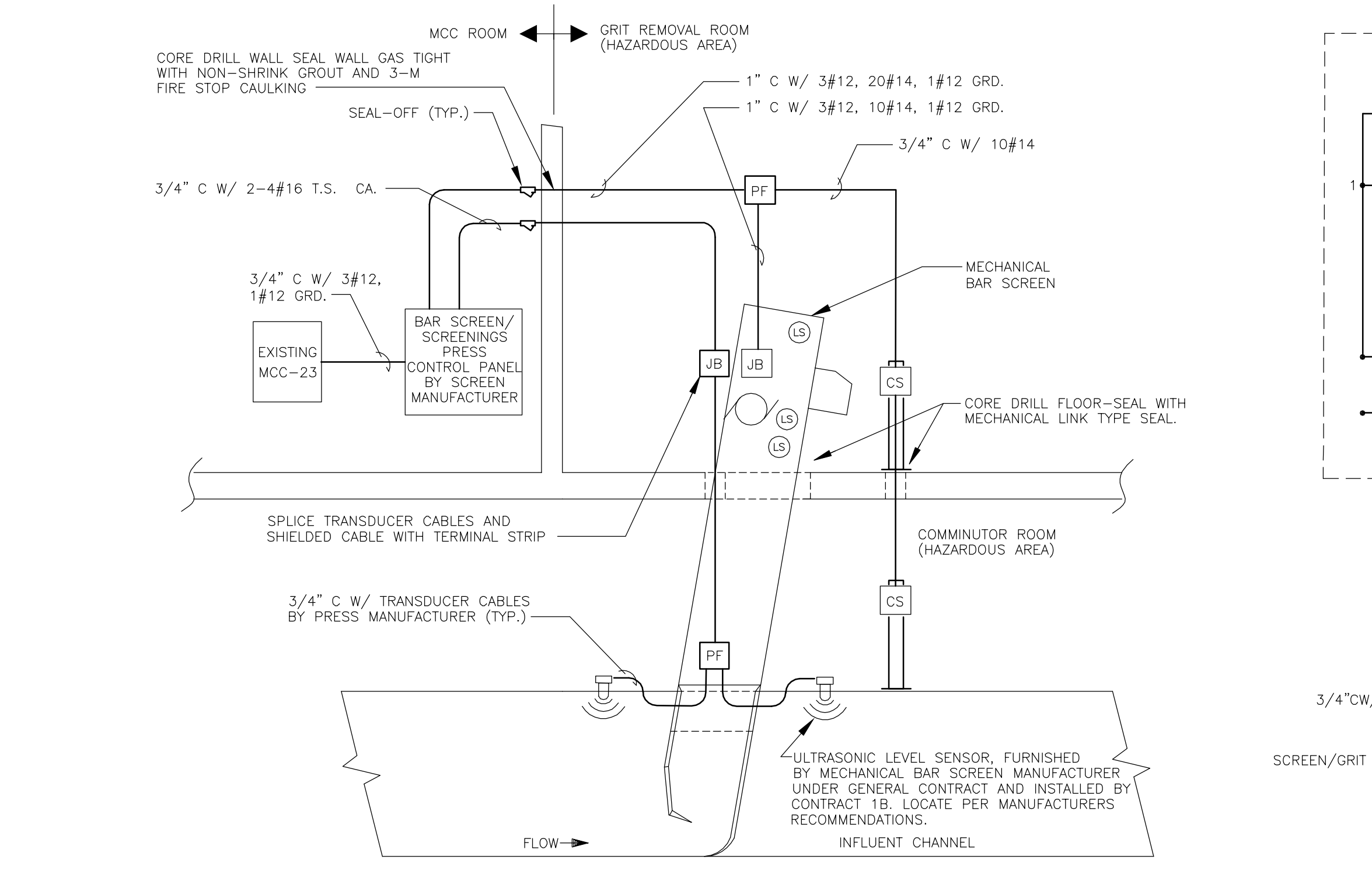
EXHAUST FAN F-1 AND F-2



ELEMENTARY DIAGRAM TYPICAL FOR TWO



THICKENER FEED PUMPS TFP-1 AND TFP-2



MECHANICAL BAR SCREEN DIAGRAM

NOTES:
Underground facilities, structures, and utilities have been plotted from available surveys and records, and therefore their locations must be considered approximate only. There may be others, the existence of which is presently not known.
It is a violation of New York State Education Law for any person, unless acting under the direction of a licensed professional engineer, to alter an item on this drawing in any way, if an item is altered, the altering engineer shall affix to the item his/her seal and the notation "altered by" followed by his/her signature and the date of such alteration, and a specific description of the alteration.

ISSUE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE
3	CJY	5/2000	WFH	DJW	RB	5/00
2	DJW	1/2000	WFH	DJW	RB	3/2000
1	DJW	10/99	WFH	DJW	RB	11/99
4	HCC	9/01	WFH	JRH	RB	9/01

Stearns & Wheeler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS
CAZENOVIA, NEW YORK

ONONDAGA COUNTY			
BREWERTON WASTEWATER TREATMENT FACILITY			
ELECTRICAL DIAGRAMS AND SCHEDULES			
JOB NO.	9012030	CONTRACT	1B
SHEET	E-4		

RECORD DRAWING
THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.
DATE: _____ PER: _____