

LOTT CLEAN WATER ALLIANCE

THURSTON COUNTY

WASHINGTON



SUPPLEMENTAL CARBON SYSTEM UPGRADE

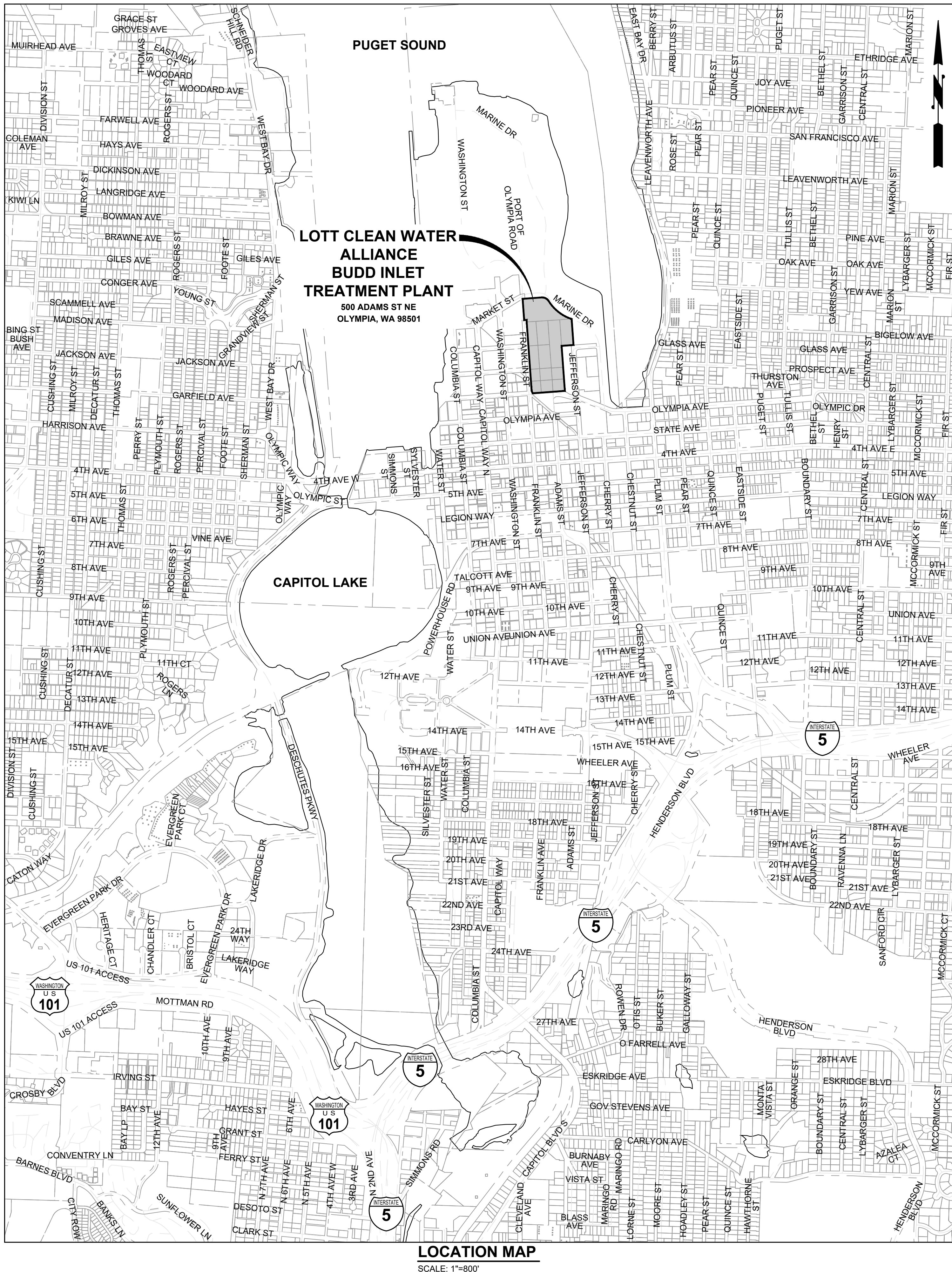
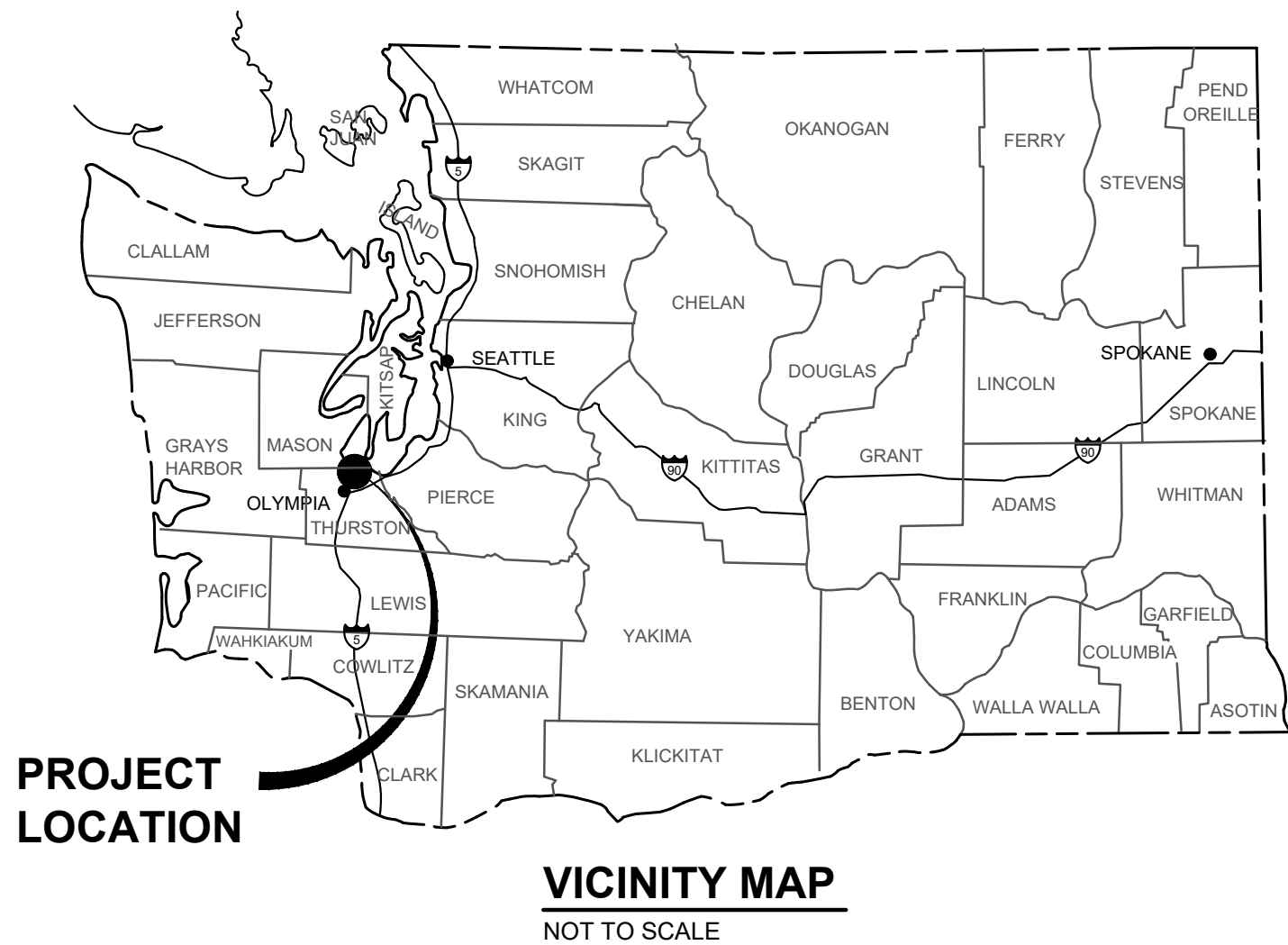
LOTT PROJECT NO. BI2205
CONTRACT NO.: 568-03-08

ISSUED FOR BID

JULY 2026
G&O JOB #25258



L:\LOTT\25255.00 Supplemental Carbon Feed Upgrade\01 Design\Plans\General\VIC-LOC.dwg, 7/13/2026 3:50 PM, SHARI GAER



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MICHAEL B. JOHNSON
REGISTERED PROFESSIONAL ENGINEER
36498
7/17/26

LOTT Clean Water Alliance
LOT CLEAN WATER ALLIANCE SUPPLEMENTAL CARBON FEED UPGRADE
500 ADAMS ST NE
OLYMPIA, WA 98501

No.	DATE	REVISION
ISSUED FOR:		
BID		
ISSUE DATE:		JULY 2026
APPROVED BY:		MBJ
CHECKED BY:		SLG
DRAWN BY:		TAR
DESIGNER:		SLG
G & O JOB NO.:		25258
FILE:		VIC-LOC.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

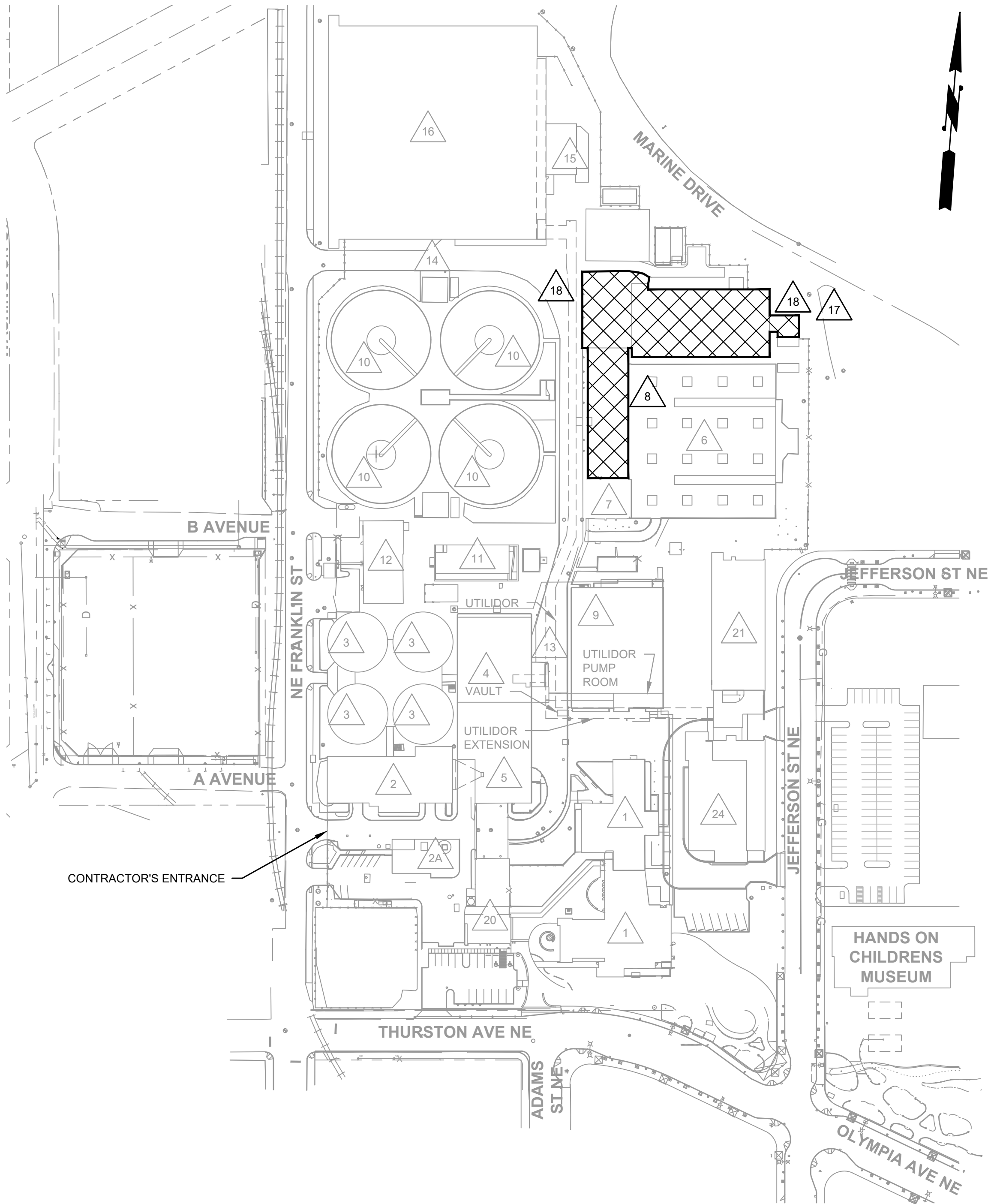
GENERAL

VICINITY MAP AND LOCATION MAP

DRAWING: **G00-001**

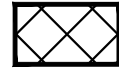
SHEET: **2** OF: **34**

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AREA MAP
SCALE: 1"=100'

LEGEND

 PROJECT AREA

AREA IDENTIFICATION	
	ADMINISTRATION BUILDING, LABORATORY
	HEADWORKS BUILDING, GYM (UPSTAIRS)
	SOUTH SCRUBBER
	DIGESTER NOS. 1, 2, 3 AND 4
	SOLIDS HANDLING BUILDING
	MAINTENANCE BUILDING
	FIRST ANOXIC BASINS
	CENTRATE STORAGE TANKS (ABANDONED)
	BLOWER BUILDING
	CENTRATE HANDLING
	SECONDARY SEDIMENTATION TANK NOS. 1, 2, 3 AND 4, NORTH AND SOUTH RAS PUMP STATIONS
	ULTRAVIOLET DISINFECTION BASIN
	FINAL EFFLUENT PUMP BUILDING
	UTILIDOR AND SHED
	DIVERSION STRUCTURE
	INTERMEDIATE PUMP STATION
	FIRST AERATION BASIN
	MIXED LIQUOR VAULT, SPLITTER BOX AND METER VAULT
	SECOND ANOXIC BASIN AND FINAL AERATION BASIN
	METHANOL STORAGE
	CLA PLANT/SAND FILTERS
	PRIMARY SEDIMENTATION TANKS
	WWTF PLANT (FENCES, GATES, ETC)
	PRIMARIES SCUM HANDLING
	PRIMARIES ODOR CONTROL/CHEMICALS

SHEET INDEX		
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3	G00-002	AREA MAP AND SHEET INDEX
4	G00-003	ABBREVIATIONS, SYMBOLS, GENERAL NOTES, NUMBERING SYSTEM, PROCESS FLOW DIAGRAM AND DESIGN CRITERIA
5	G00-004	STAGING PLAN
6	G00-005	SURVEY CONTROL PLAN
CIVIL		
7	C18-001	EXISTING SITE PLAN
8	C18-002	EXISTING DEMOLITION SITE PLAN
9	C18-003	PROPOSED SITE AND GRADING PLAN
10	C18-004	PROPOSED PIPING PLAN
11	C18-005	TRENCH AND DRAIN DETAILS
12	C18-006	RESTORATION DETAILS
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13	S00-001	GENERAL STRUCTURAL NOTES, STRUCTURAL ABBREVIATIONS, STRUCTURAL LEGEND, AND TYPICAL DETAILS
14	S00-002	SPECIAL INSPECTION SCHEDULES
15	S18-001	TANK FOUNDATION PLAN AND DETAIL
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16	M00-001	PIPE SYMBOLS, PROCESS PIPING, IDENTIFICATIONS, AND PIPING MATERIAL
17	M00-002	MISCELLANEOUS DETAILS
18	M00-003	PIPE SUPPORTS
19	M08-001	BLOWER BUILDING PIPING PLAN
20	M18-001	SUPPLEMENTAL CARBON STORAGE TANKS MECHANICAL PLAN
21	M18-002	SUPPLEMENTAL CARBON STORAGE TANK SECTION
22	M18-003	SUPPLEMENTAL CARBON STORAGE TANK SECTION
23	M18-004	SUPPLEMENTAL CARBON PUMP BUILDING PIPING PLAN
24	M18-005	SUPPLEMENTAL CARBON PUMP BUILDING PIPING SECTION
25	M18-006	SUPPLEMENTAL CARBON PIPE ROUTING PLAN AND PHOTOS
26	M18-007	SUPPLEMENTAL CARBON PIPE ROUTING SECTIONS
27	M18-008	SUPPLEMENTAL CARBON PIPE ROUTING PLAN, SECTIONS, AND PHOTOS
ELECTRICAL		
28	E00-001	ELECTRICAL SYMBOLS, ABBREVIATIONS, AND NOTES
29	E00-002	ELECTRICAL SHEET LIST AND TAG LIST
30	E00-003	ELECTRICAL DETAILS AND CABLE AND CONDUIT SCHEDULES
31	E08-001	MODIFIED [MCC-6A] ELEVATION
32	E08-002	MODIFIED [MCC-6A] ONE LINE DIAGRAM
33	E08-003	BLOWER BUILDING ELECTRICAL PLAN
34	E18-001	ELECTRICAL SITE PLAN AND SUPPLEMENTAL CARBON TANKS AND BUILDING ELECTRICAL PLAN

GENERAL

**AREA MAP AND SHEET
INDEX**

DRAWING: **G00-002**

SHEET: **3** OF: **34**

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ABBREVIATIONS

AVE	AVENUE
AC	ASBESTOS CEMENT PIPE
ADJ	ADJUST
ALT	ALTERNATE
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AP	ANGLE POINT
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
ASSY	ASSEMBLY
BF	BLIND FLANGE
BLDG	BUILDING
BLK	BLOCK
BO	BLOW OFF
BOC	BOTTOM OF CURB
CTR	CENTER
CAP	CORRUGATED ALUMINUM PIPE
CB	CATCH BASIN
CI	CAST IRON
CL	CATCH LINE
CLR	CLEARANCE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
C	CONDUIT
CONN	CONNECTION
CONTR	CONTRACTOR
CONT	CONTINUOUS
CPLG	COUPLING
CY	CUBIC YARD
CONT	CONTINUED
CL	CLASS
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
DC	DEGREE OF CURVATURE
DI	DUCTILE IRON
DIA	DIAMETER
DOT	DEPARTMENT OF TRANSPORTATION
DIM	DIMENSION
DWGS	DRAWING(S)
D	DRAIN
EOA	EDGE OF ASPHALT
E	EAST
EA	EACH
EL	ELEVATION
EL	ELBOW
ELEC	ELECTRICAL
EXIST	EXISTING
FA	FOUL AIR
FG	FINISHED GRADE
FIG	FIGURE
FIN	FINISHED
FL	FLANGE
FT	FEET
F	FORCE MAIN
GA	GAUGE
GALV	GALVANIZED
GI	GALVANIZED IRON
GV	GATE VALVE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INV	INVERT
IN	INCH
L	LENGTH
LB	POUND
LF	LINEAR FEET
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MISC	MISCELLANEOUS
N	NORTH
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PI	POINT OF INTERSECTION
PP	POWER POLE
PVI	POLYVINYL CHLORIDE
PE	PLAIN END
PERF	PERFORATED
PVC	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENT
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
QTY	QUANTITY
RET	RETAINING
RR	RAILROAD
R	RADIUS
RED	REDUCER
REINF	REINFORCE
REQD	REQUIRED
R/W	RIGHT-OF-WAY
SL	SLOPE
S	SOUTH
SA	SERVICE AIR
SC	SUPPLEMENTAL CARBON
SCH	SCHEDULE
SF	SQUARE FEET
SHT	SHEET
SPECS	SPECIFICATIONS
SQ	SQUARE
STA	STATION
STD	STANDARD
TC	TOP OF CURB
TEL	TELEPHONE
THRD	THREADED
THRU	THROUGH
TOC	TOP OF CURB
TYP	TYPICAL
VERT	VERTICAL
W	WEST
WP	POTABLE WATER
W/	WITH
W/O	WITHOUT

LINETYPES

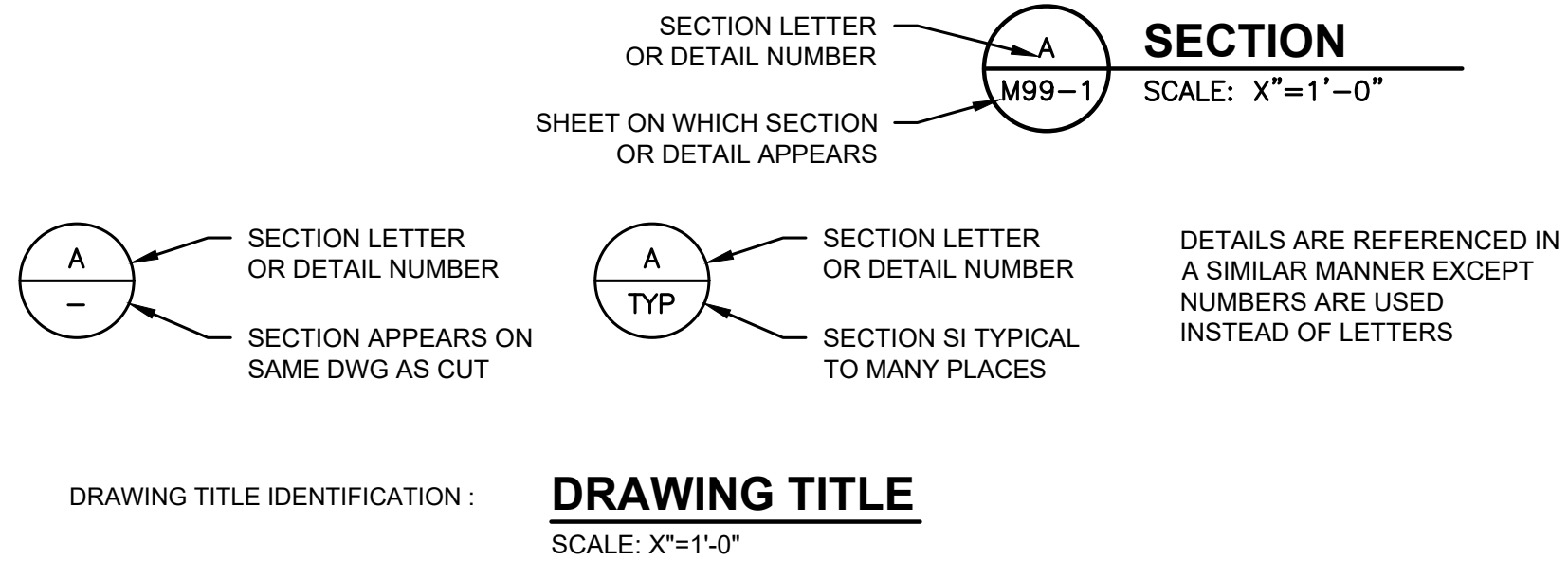
EXISTING	PROPOSED	DESCRIPTION
		CURB
		ASPHALT PAVEMENT
		CSTC SURFACING
		CONCRETE SURFACING
		BUILDING
		CONTOUR LINE
		SAWCUT LINE (APPROX LOCATION)
		POWER MANHOLE
		CATCH BASIN
		AREA DRAIN
		GATE VALVE
		FINISHED ELEVATION
		DEMOLISH AND WASTEHAUL

GENERAL NOTES :

- IN GENERAL, EXISTING STRUCTURES AND FACILITIES ARE NOTED AS "EXISTING" AND ARE SHOWN IN LIGHT LINE WEIGHTS OR AS SCREENED BACKGROUND. NEW CONSTRUCTION, STRUCTURES, FACILITIES, AND FEATURES ARE SHOWN IN HEAVY LINE WEIGHTS.
- MANY OF THE SYMBOLS SHOWN ON THIS LEGEND ARE USED ONLY WHERE THEY PROVIDE CLARITY AND ARE NOT NECESSARILY USED IN ALL APPLICATIONS. SOME CONTRACT DRAWINGS MAY HAVE ADDITIONAL LEGENDS APPLICABLE FOR THAT SPECIFIC DRAWING. SYMBOLS SHOWN ON SPECIFIC DRAWINGS GOVERN.
- THE CONTRACTOR SHALL VERIFY ALL PLANIMETRIC FEATURES AND DIMENSIONS PRIOR TO STARTING WORK AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- ALL DIMENSIONS SHOWN ON THE CONTRACT DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS REFER TO THE HORIZONTAL AND VERTICAL PROJECTED PLANES, UNLESS OTHERWISE INDICATED.

EXAMPLE OF SECTION NUMBERING SYSTEM AND PLAN/DRAWING TITLES

FOR DETAILS, SUBSTITUTE DETAIL NUMBER FOR SECTION LETTER



DESIGN CRITERIA

SUPPLEMENTAL CARBON FEED

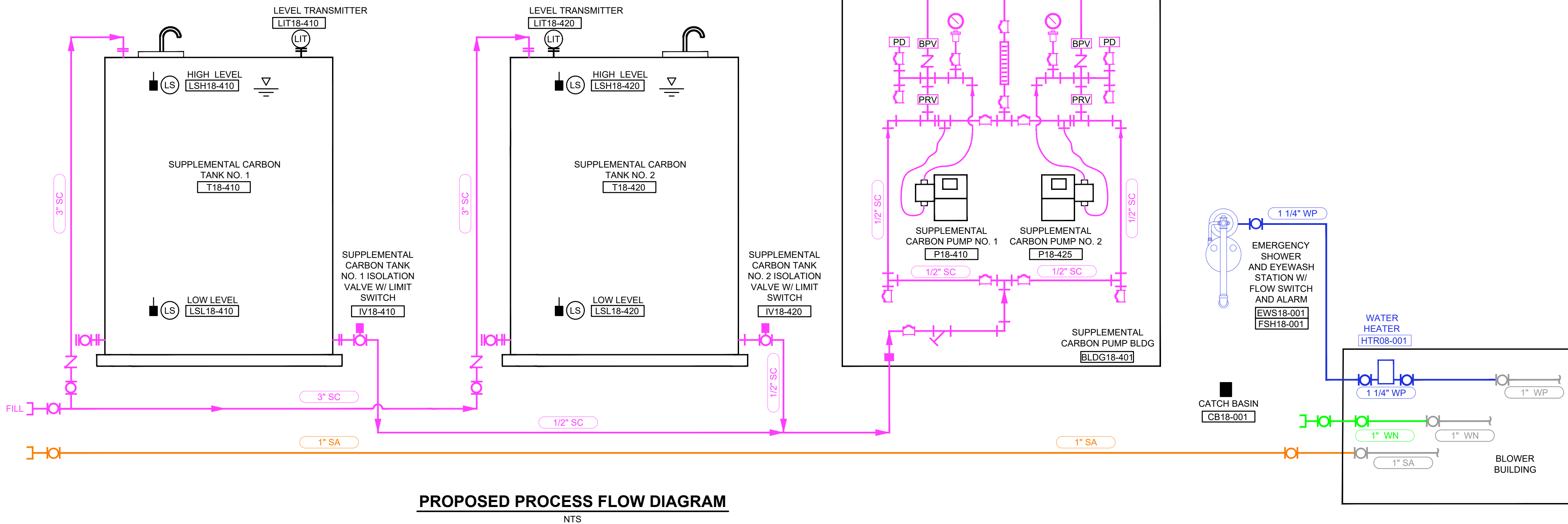
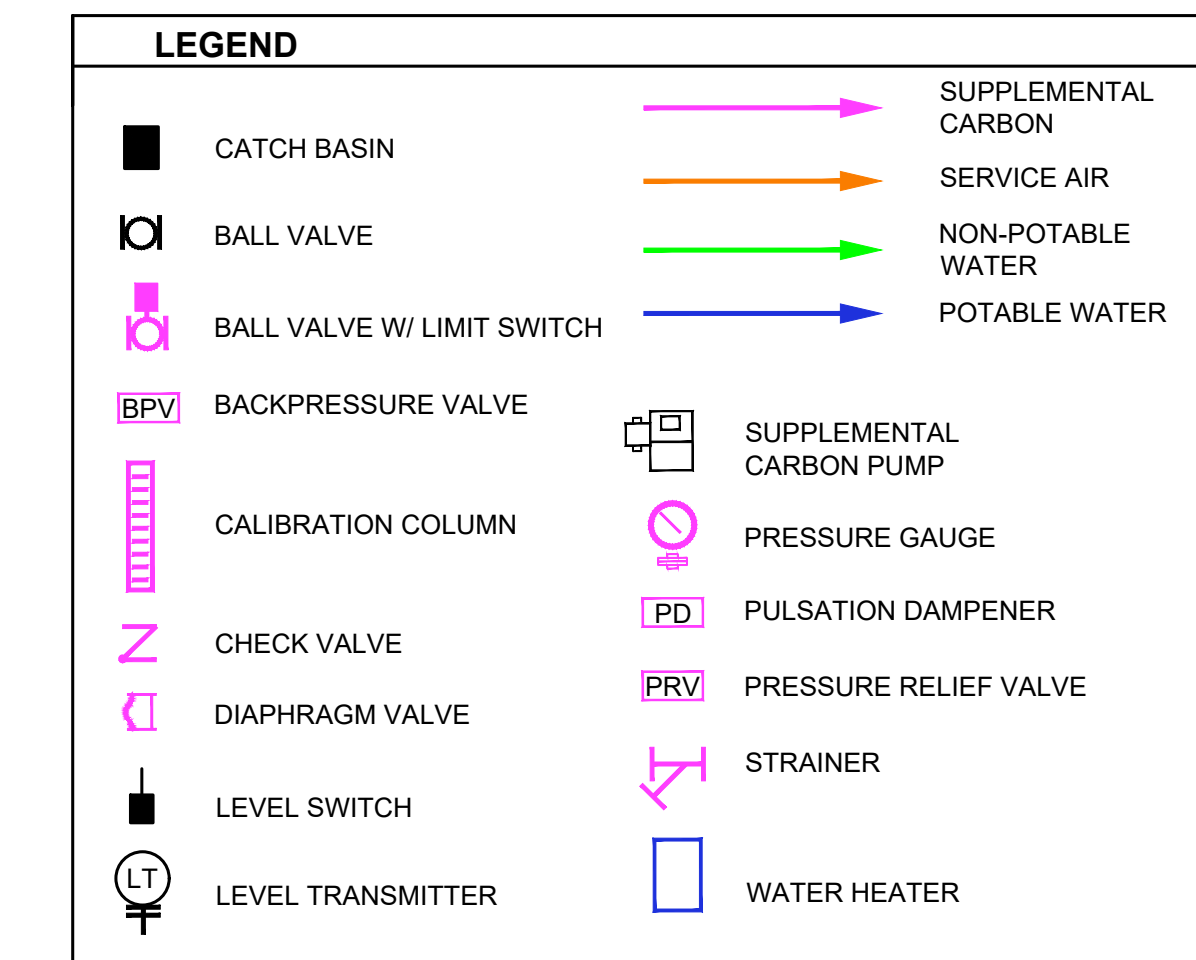
CHEMICAL	MicroC 2000
TARGET SUPPLEMENTAL CARBON DOSE	200-300 GALLONS/DAY (AVERAGE DAY DEMAND) 600 GALLONS/DAY (PEAK DAY DEMAND)

SUPPLEMENTAL CARBON STORAGE TANK

NUMBER	2 (EACH)
VOLUME	6,000 GALLONS
MATERIAL	POLYETHYLENE

SUPPLEMENTAL CARBON FEED PUMPS

TYPE	PERISTALTIC METERING
NUMBER	2 (EACH)
CAPACITY	120 LPH (EACH)



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OLYMPIA, WA 98501

No.	DATE	REVISION
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ISSUE DATE:	JULY 2026
APPROVED BY:	MBJ
CHECKED BY:	SLG
DRAWN BY:	TAR
DESIGNER:	SLG
G & O JOB NO.:	25258
FILE:	LEGEND.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
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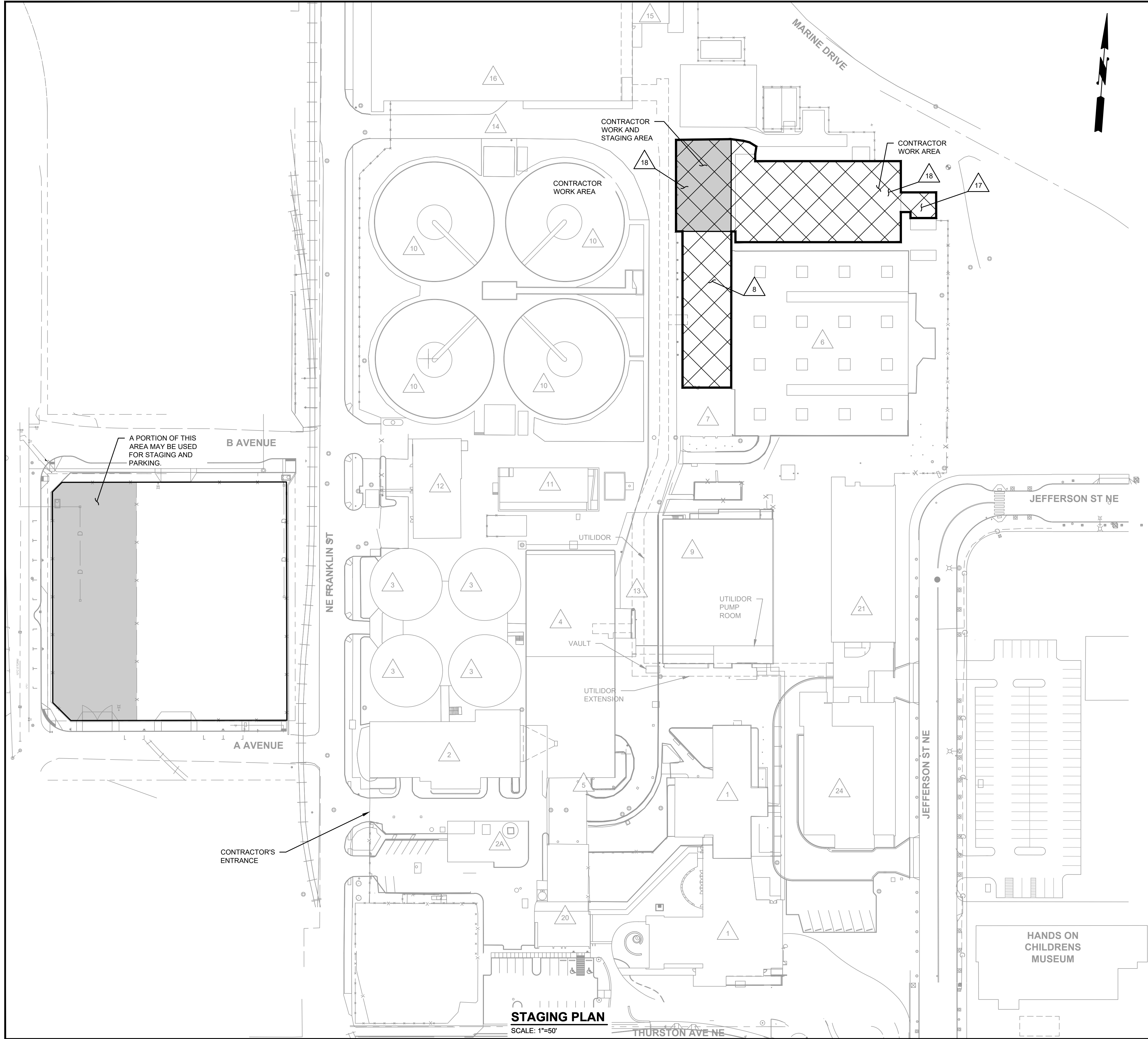
GENERAL

ABBREVIATIONS, SYMBOLS, GENERAL NOTES, NUMBERING SYSTEM, PROCESS FLOW DIAGRAM AND DESIGN CRITERIA

DRAWING: **G00-003**

SHEET: **4** OF: **34**

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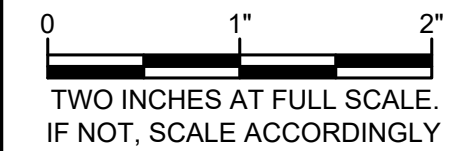
AREA IDENTIFICATION

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2	HEADWORKS BUILDING, GYM (UPSTAIRS)
2A	SOUTH SCRUBBER
3	DIGESTER NOS. 1, 2, 3 AND 4
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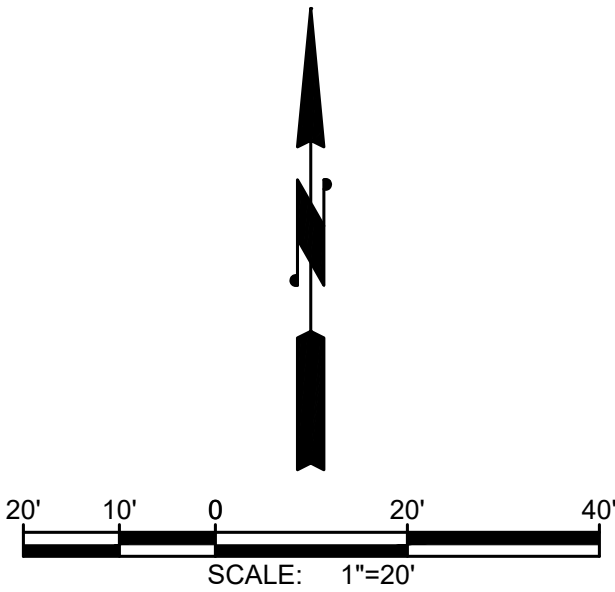
LEGEND

	CONTRACTOR WORK AREA AND STAGING AREA
	CONTRACTOR WORK AREA

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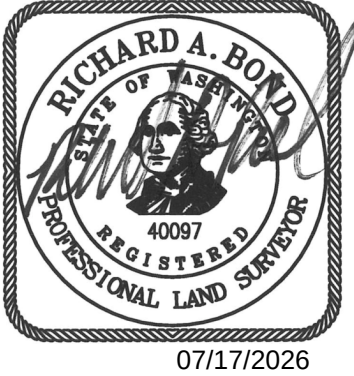


SURVEY CONTROL & MONUMENTATION				
HORIZONTAL DATUM:		NAD83/91		
WASHINGTON PLANE COORDINATE SYSTEM, SOUTH ZONE, GRID NORTH				
HOLDING CONTROL PER PROVIDED PUBLISHED COORDINATES FROM LOTT PLAN CONTROL MAP				
VERTICAL DATUM:		NGVD29		
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
104	635199.26	1042274.60	10.86	SFM=FOUND SURFACE MONUMENT, 3" ALUMINUM DISC W/ PUNCH "LOTT TP-3 M2C 2012." N SIDE OF NORTHERLYMOST DRIVEWAY TO WWTP ON FRANKLIN ST. 3' OFF OF CURB LINE.
105	635198.13	1042600.81	14.16	SFM, 3" ALUMINUM DISC W/ PUNCH "LOTT TP-2 M2C 2012." 14' SSW OF SW BUILDING CORNER.





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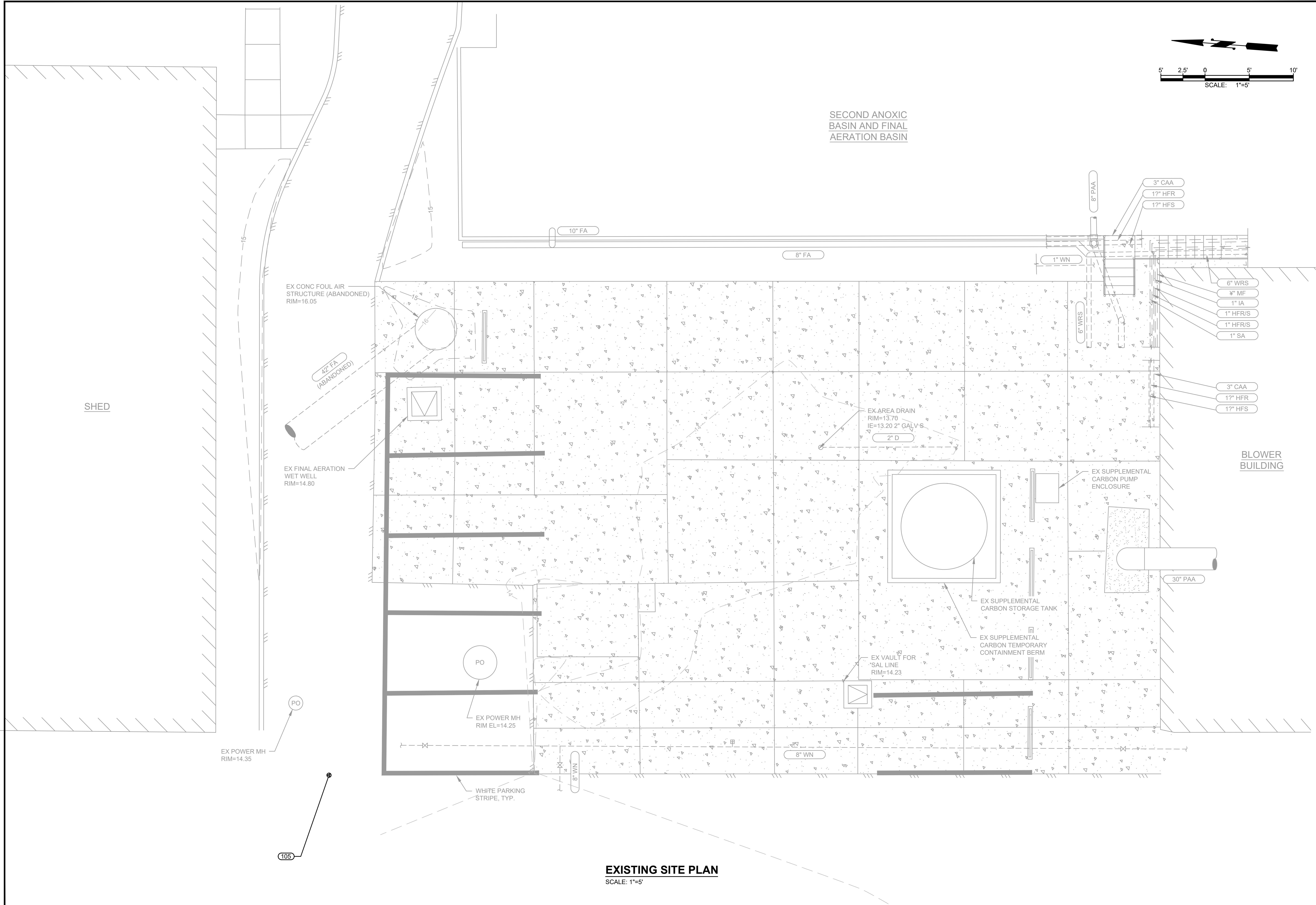
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CIVIL

SURVEY CONTROL
PLAN

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EXISTING SITE PLAN
SCALE: 1"=5'

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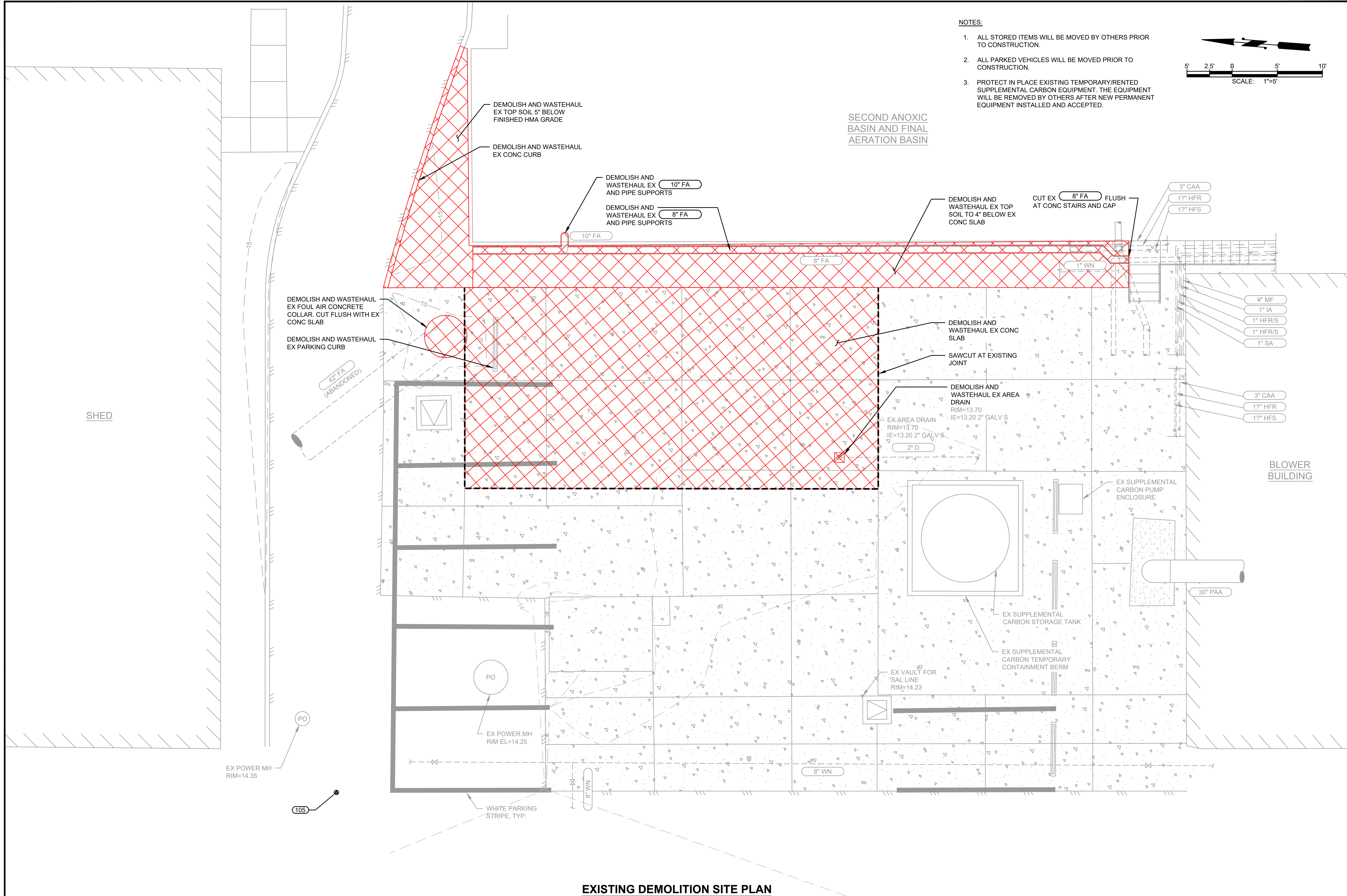
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EXISTING SITE PLAN

DRAWING: **C18-001**

SHEET: **7** OF: **34**

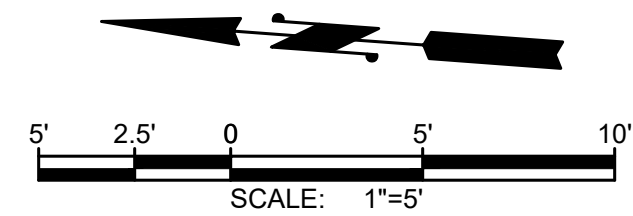
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EXISTING DEMOLITION SITE PLAN
SCALE: 1"=5'

NOTES:

1. ALL STORED ITEMS WILL BE MOVED BY OTHERS PRIOR TO CONSTRUCTION.
2. ALL PARKED VEHICLES WILL BE MOVED PRIOR TO CONSTRUCTION.
3. PROTECT IN PLACE EXISTING TEMPORARY/RENTED SUPPLEMENTAL CARBON EQUIPMENT. THE EQUIPMENT WILL BE REMOVED BY OTHERS AFTER NEW PERMANENT EQUIPMENT INSTALLED AND ACCEPTED.





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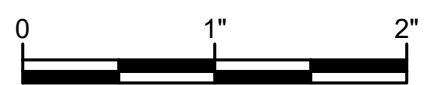
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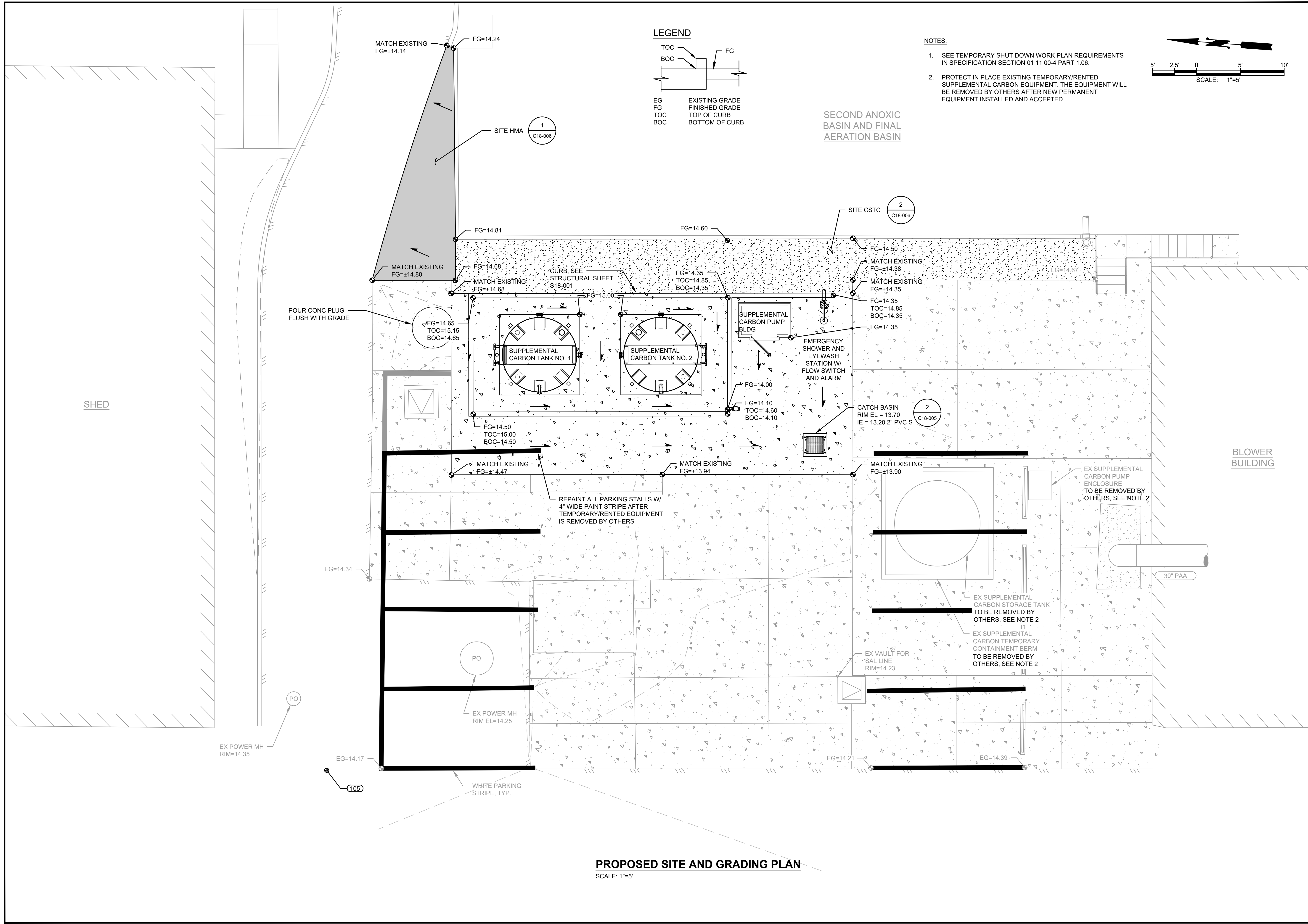
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EXISTING DEMOLITION SITE PLAN

DRAWING: **C18-002**

SHEET: **8** OF: **34**

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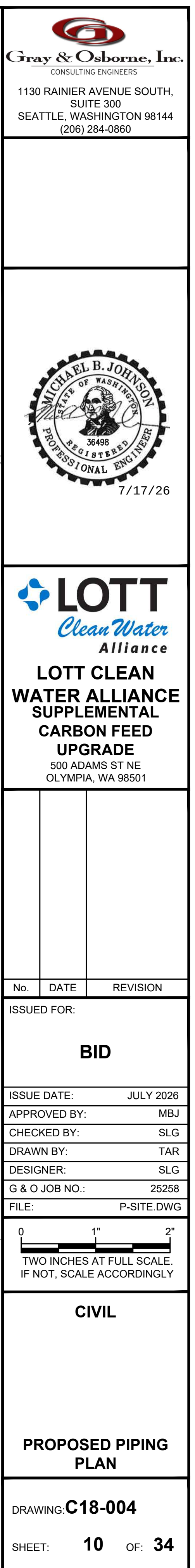
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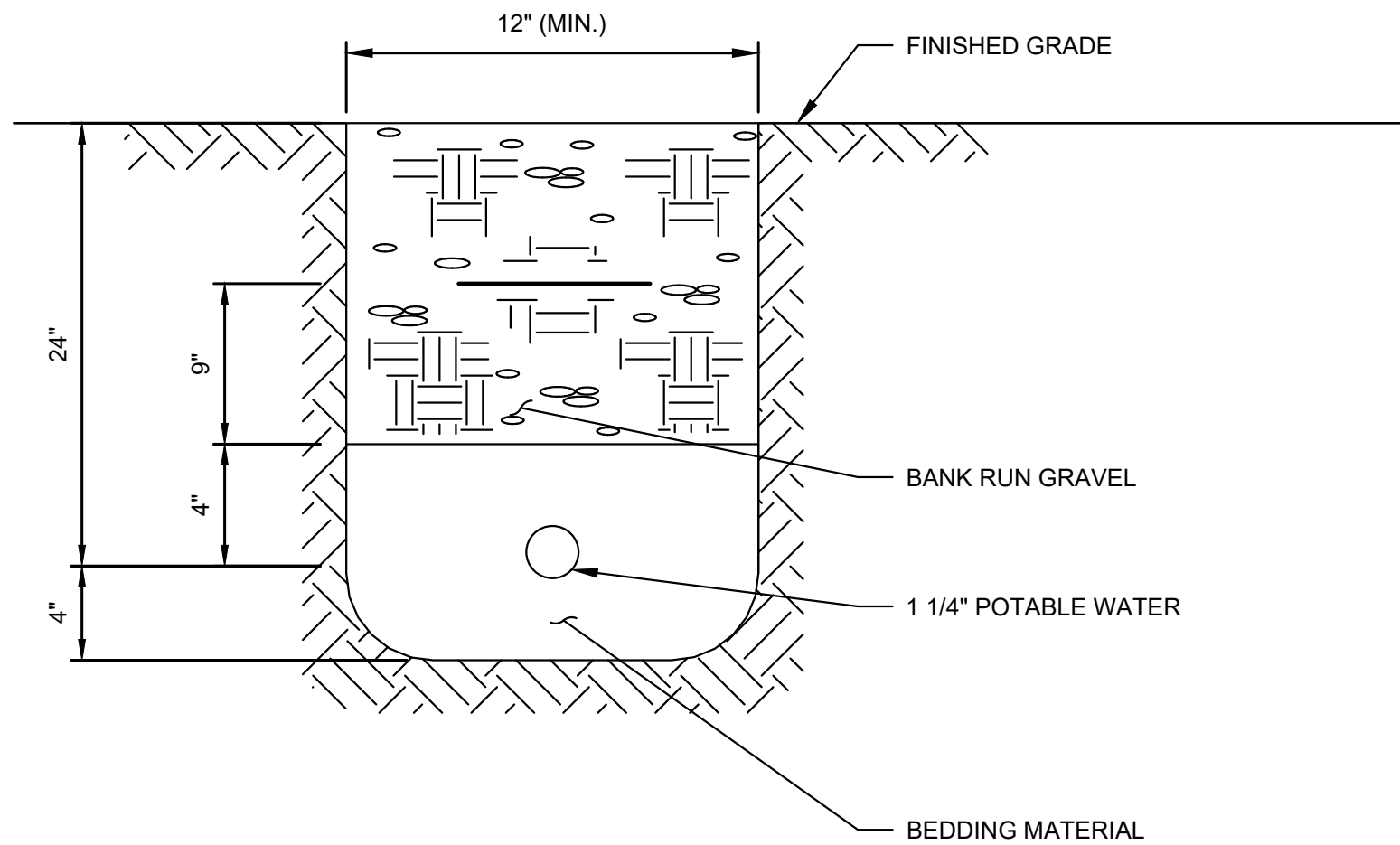
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PROPOSED SITE AND GRADING PLAN

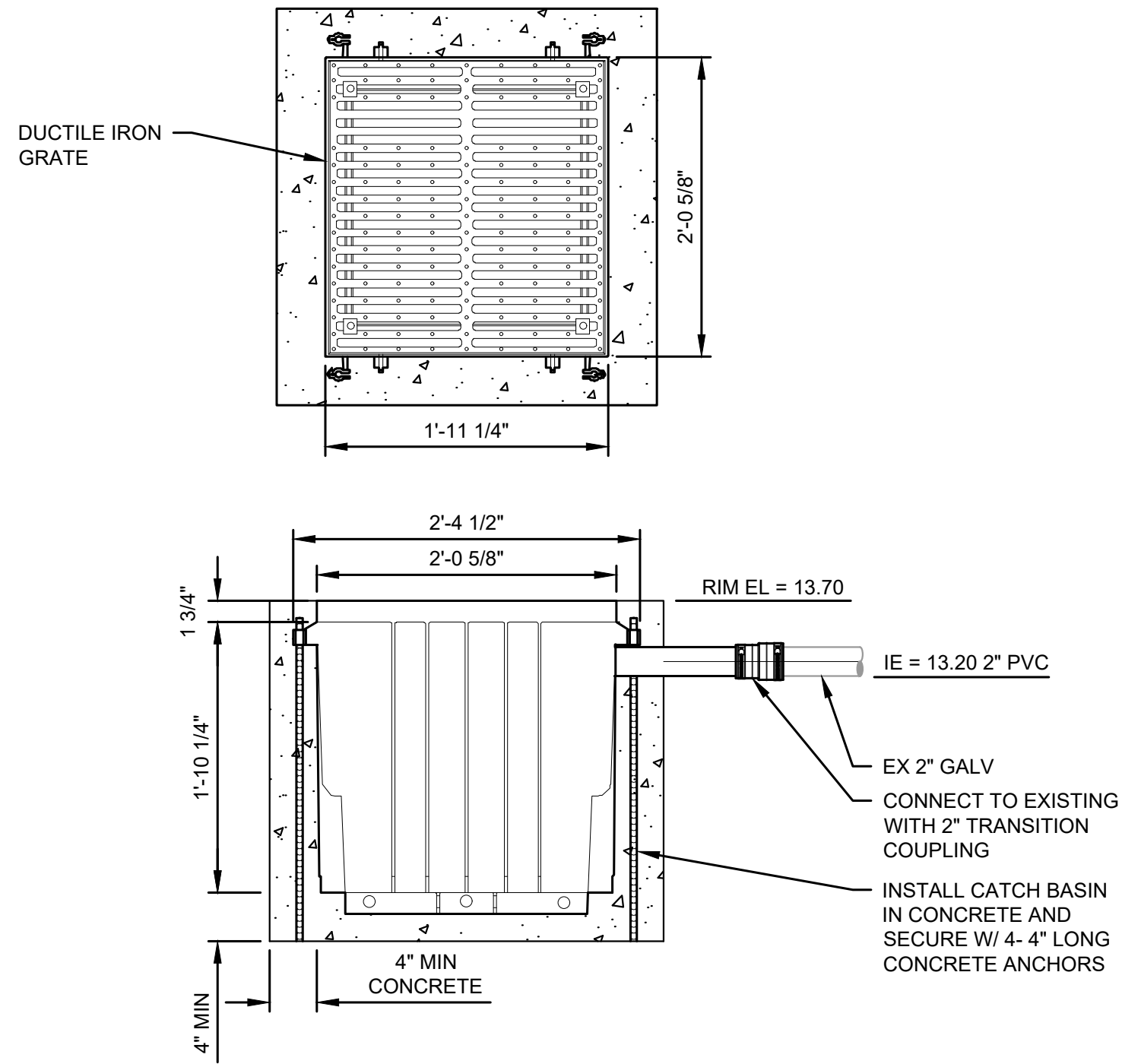
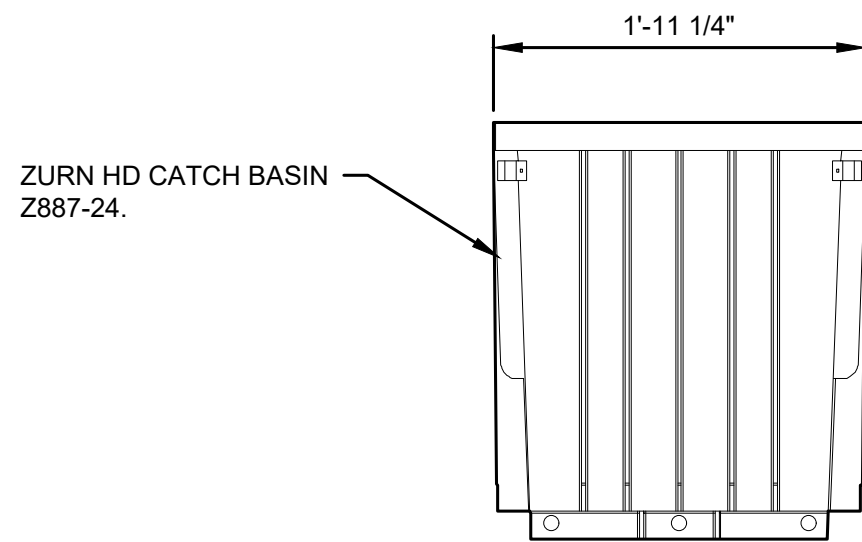
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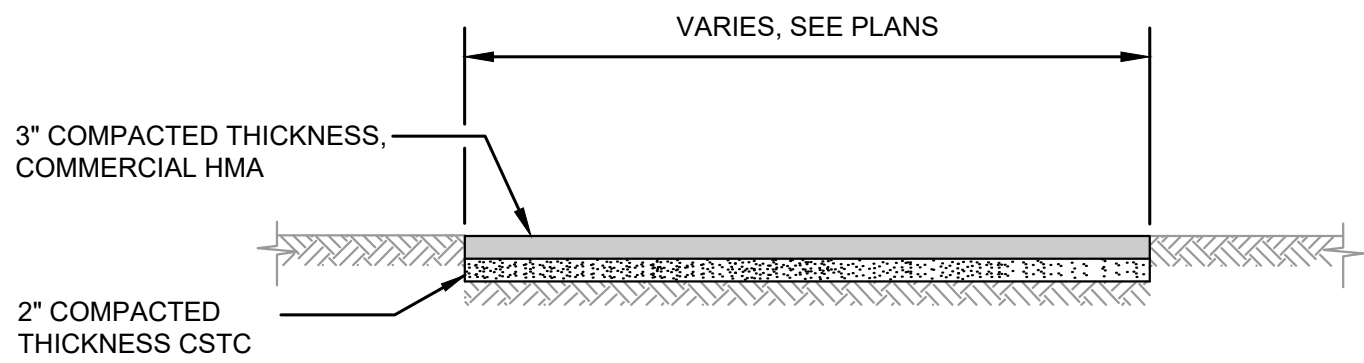


**POTABLE WATER
TRENCHING DETAIL**
1
TYP NOT TO SCALE

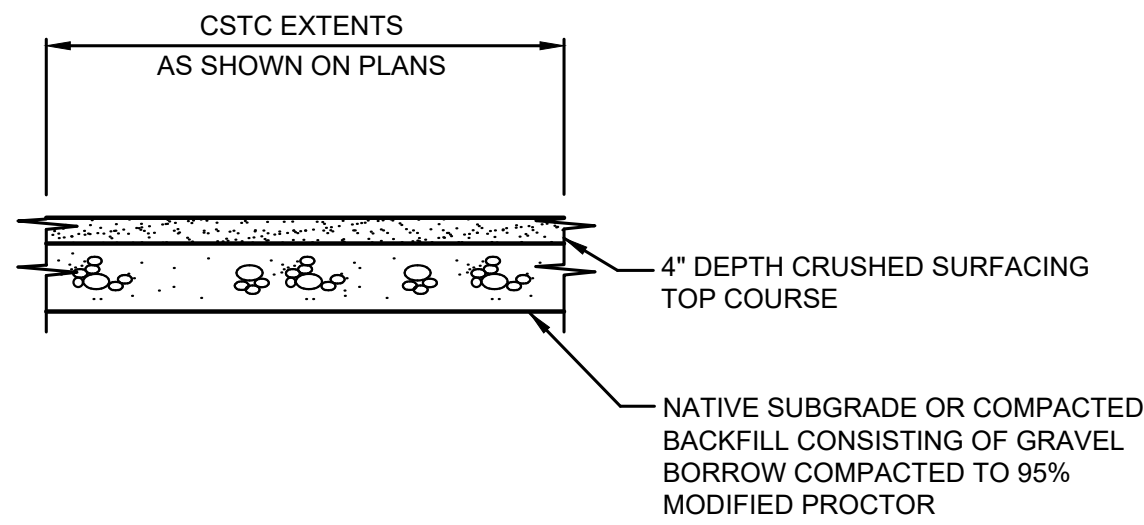


CATCH BASIN DETAIL
2
TYP SCALE: 1" = 1'-0"

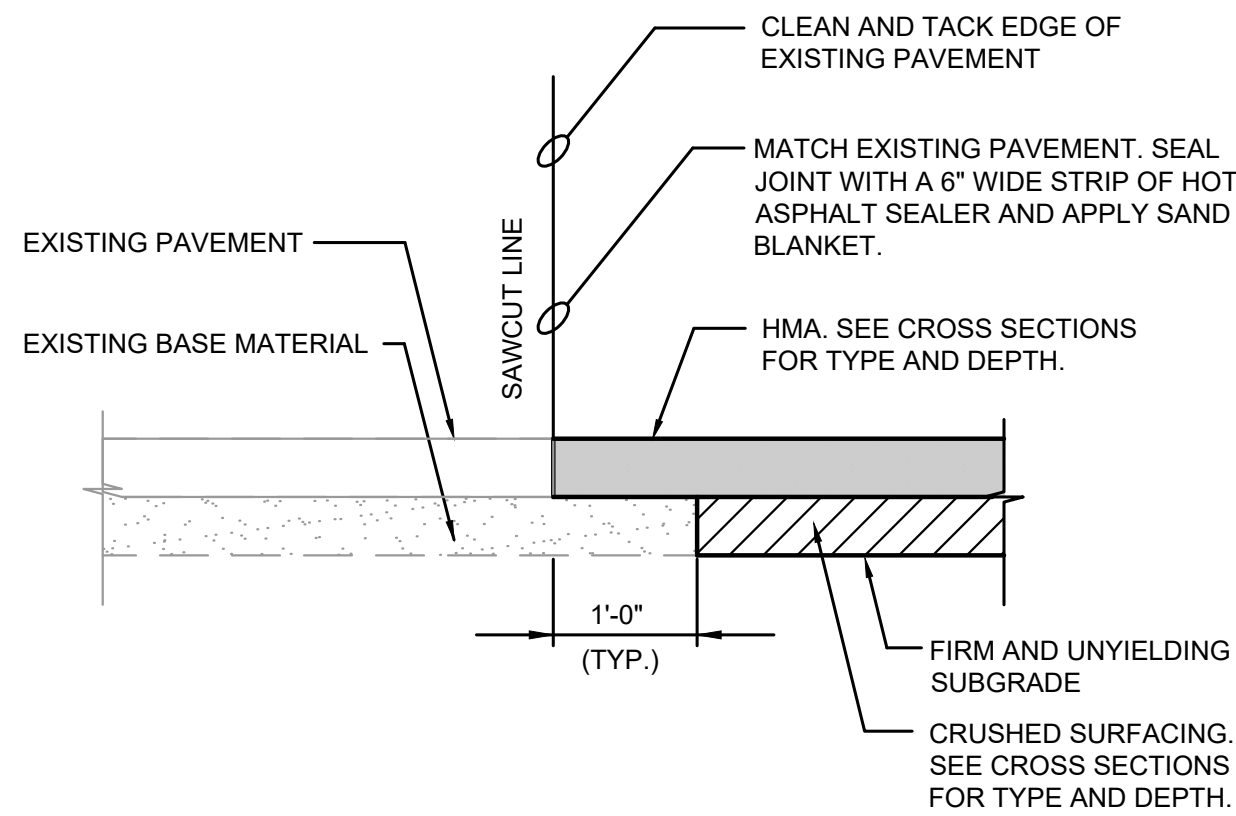
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1
-
SITE HMA
NOT TO SCALE



2
-
SITE CSTC
NOT TO SCALE



3
TYP
BUTT JOINT DETAIL
NOT TO SCALE

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FILE:	GEN_DETAILS.DWG



CIVIL

**RESTORATION
DETAILS**

DRAWING: **C18-006**

SHEET: **12** OF: **34**

GENERAL STRUCTURAL NOTES

GENERAL
THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY. USE DETAIL MARKED "TYPICAL" WHEREVER APPLICABLE. CHANGES, OMISSIONS OR SUBSTITUTIONS ARE NOT PERMITTED WITHOUT WRITTEN APPROVAL OF THE ENGINEER. REFER TO THE SPECIFICATIONS FOR FURTHER REQUIREMENTS. DO NOT SCALE THE DRAWINGS.

ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2021 EDITION OF THE INTERNATIONAL BUILDING CODE.

THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC., IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND HAS NOT BEEN CONSIDERED BY THE ENGINEER OF RECORD. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO ITS COMPLETION. THE CONTRACTOR SHALL PROVIDE THE NECESSARY BRACING TO PROVIDE STABILITY PRIOR TO THE COMPLETION OF THE STRUCTURE.

THE GENERAL NOTES APPLY TO ALL STRUCTURES UNLESS NOTED OTHERWISE (U.N.O.). LOCATION AND SIZE OF ANCHOR BOLTS FOR SPECIFIC EQUIPMENT SHALL BE SPECIFIED BY THE VENDOR. CONTRACTOR SHALL COORDINATE LOCATIONS OF STRUCTURAL OPENINGS, PENETRATIONS AND EMBEDDED ITEMS WITH THE MECHANICAL, ARCHITECTURAL, ELECTRICAL, PLUMBING AND VENTILATION SECTIONS OF THE DRAWINGS AND WITH SUPPLIERS AND SUBCONTRACTORS AS MAY BE REQUIRED.

SPECIAL INSPECTION & TESTING
SPECIAL INSPECTIONS SHALL MEET THE REQUIREMENTS OF IBC CHAPTER 17.
OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH APPROVED DRAWINGS AND SPECIFICATIONS.

FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND ENGINEER. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION; THEN, IF NOT CORRECTED, TO THE BUILDING OFFICIAL AND ENGINEER. SUBMIT A FINAL REPORT STATING THE WORK WAS IN CONFORMANCE WITH THE APPROVED DRAWINGS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF IBC.

SPECIAL INSPECTION REQUIRED:
CONCRETE: IN ACCORDANCE WITH SECTION 1705.3 AND TABLE 1705.3
SOIL: IN ACCORDANCE WITH SECTION 1705.6 AND TABLE 1705.6

SHOP DRAWINGS
SHOP DRAWINGS, WHERE REQUIRED, SHALL BE CHECKED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING FOR ENGINEER REVIEW. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW OF DESIGN INTENT, PRIOR TO FABRICATION. GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND COORDINATION OF DIMENSIONS AND DETAILS FOR EACH SUBCONTRACTOR.

DESIGN LOADS	
ROOF SNOW LOAD:	
DESIGN SNOW LOAD, Ps.....	20 PSF
GROUND SNOW LOAD, Pg.....	15 PSF
FLAT ROOF SNOW LOAD, Pf.....	12 PSF
SNOW EXPOSURE FACTOR, Ce.....	1.0
SNOW LOAD IMPORTANCE FACTOR, Is.....	1.1

WIND DESIGN DATA:	
ULTIMATE WIND SPEED (3-SECOND GUST), Vult.....	103 MPH
NOMINAL WIND SPEED, Vasd.....	90 MPH
RISK CATEGORY.....	III
WIND EXPOSURE.....	CATEGORY D

EARTHQUAKE DESIGN DATA	
MAPPED SPECTRAL RESPONSE ACCELERATIONS	
SS.....	1.413 g
S1.....	0.523 g
SITE CLASS.....	D
SPECTRAL RESPONSE COEFFICIENT	
SDS.....	1.130 g
SD1.....	0.628 g
SEISMIC IMPORTANCE FACTOR, IE.....	1.25
RISK CATEGORY.....	III
SEISMIC DESIGN CATEGORY.....	D

FOUNDATION DATA ASSUMED PER IBC.

ALLOWABLE BEARING PRESSURE:.....2000 PSF

ABOVE ARE ASSUMED PER DATA PROVIDED, CONTRACTOR MUST VERIFY IN FIELD.

BOTTOM OF ALL STRUCTURAL SLABS TO BEAR ON 12" MINIMUM PROPERLY COMPACTED CRUSHED SURFACING BASE COURSE OVER NATIVE, INORGANIC, UNDISTURBED SOIL. NO STRUCTURAL SLAB SHALL BEAR HIGHER THAN 1 VERTICAL TO 1.5 HORIZONTAL SLOPE ABOVE ANY EXCAVATION, EXISTING OR PLANNED. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING TO PREVENT MOVEMENT OF WALLS IF BACKFILL IS PLACED BEFORE FLOOR SYSTEM IS IN PLACE. THERE SHALL BE 95% COMPACTION (ASTM D1557 MODIFIED PROCTOR DENSITY) OF ALL BACKFILL SOIL UNDER SLABS ON GRADE.

CAST-IN-PLACE CONCRETE
CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:
28-DAY STRENGTH f'c=4,000 PSI
AIR ENTRAINMENT: 5%-7%
MAXIMUM SLUMP: 3" FOR SLABS FOOTINGS, 4" FOR WALLS, COLUMNS AND BEAMS. CONSTRUCTION TO BE IN ACCORDANCE WITH ACI 318.

SUBMIT MIX DESIGN FOR REVIEW AND PROVIDE NOT LESS THAN 6 SACKS OF CEMENT PER CUBIC YARD FOR ALL CONCRETE WITH MAXIMUM W/C=0.45.

REINFORCING STEEL
WELDED WIRE FABRIC (W.W.F.): ASTM A82 AND A185
DEFORMED BARS: ASTM A615, GRADE 60 (GRADE 40 FOR #3).
UNLESS OTHERWISE NOTED ON THESE DRAWINGS, MINIMUM CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS:
CONCRETE CAST AGAINST SOIL=3".
FORMED CONCRETE AGAINST SOIL=2".
WALLS, COLUMNS AND BEAMS EXPOSED TO WATER, SEWAGE & WEATHER=2".
WALLS, COLUMNS AND BEAMS DRY CONDITION=1 1/2".

PROVIDE 2-#5 MIN. U.N.O. TRIM BARS AROUND ALL OPENINGS IN CONCRETE WALLS OR SLAB EXTENDING 2'-6" PAST CORNERS, TYP. AT TIME OF CONCRETE PLACEMENT, REINFORCING SHALL BE FREE OF MUD, OIL, OR OTHER NONMETALLIC COATINGS THAT MAY DECREASE BOND.

WELDING OF REINFORCING BARS SHALL CONFORM TO ANSI/AWS D1.4.
WHERE PERMITTED, LOW HYDROGEN WELDING RODS SHALL BE USED FOR ALL WELDING OF REINFORCING BARS. SPECIAL INSPECTION IS REQUIRED FOR ALL FIELD WELDING.

SUBMIT SHOP DRAWINGS OF REINFORCING STEEL FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION. REINFORCING SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 AND 318 (LATEST EDITION).

STRUCTURAL STEEL AND MISCELLANEOUS METALS
"W" SHAPES: ASTM A992, Fy=50 KSI.
"HP" SHAPES: ASTM A572, Fy=50, KSI.
CHANNELS, ANGLES, PLATES, AND BARS: ASTM A36, Fy=36 KSI.
PIPE: ASTM A53 OR A501, Fy=35 KSI MINIMUM.
TUBING: ASTM A500, GRADE B, Fy=46 KSI.

ALL BOLTS FOR CONNECTIONS IN SUBMERGED CONDITION SHALL BE: ASTM F593C OR F593D STAINLESS STEEL (SS) BOLTS. ALL OTHERS SHALL BE GALVANIZED ASTM F3125 GRADE A325 BOLTS HIGH STRENGTH BOLTS (H.S.B.), U.N.O. AS ASTM A307 MACHINE BOLTS (M.B.), WHERE HIGH STRENGTH BOLTS ARE USED, THEY SHALL BE INSTALLED WITH LOAD INDICATOR DEVICES (LOAD INDICATOR WASHERS OR SNAP-OFF HEADS).

ADHESIVE ANCHORS: HILTI HIT-RE 500 V3 OR APPROVED EQUAL, U.N.O. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. ADHESIVE ANCHORS SHALL NOT BE INSTALLED IN FRESH CONCRETE UNTIL THE CONCRETE HAS REACHED A MINIMUM AGE OF 21 DAYS.

HEADED ANCHOR STUDS (H.A.S.): ASTM A108, Fy=50 KSI, END WELDED PER MANUFACTURER'S RECOMMENDATIONS. ALL ANCHOR BOLTS AND THREADED RODS: ASTM F1554, U.N.O., ASTM A193 GRADE B8 WHERE STAINLESS STEEL IS NOTED. ALL ANCHOR BOLTS MUST BE ACCURATELY PLACED IN THEIR FINAL LOCATION PRIOR TO POURING CONCRETE, "WET STICKING" OF ANCHOR BOLTS IS NOT ALLOWED.

WELDING ELECTRODES OR WIRES: AWS A5.1 OR A5.5, E70XX; AWS A5.17, E70S-X; AWS A5.20, E7XT-X.
FOR ALL SHOP WELDS AND FIELD WELDS OF ALL LATERAL RESISTING ELEMENTS, ELECTRODES SHALL BE E70 WITH A MINIMUM SPECIFIED CVN OF 20 FT-LBS AT -20 DEGREES FAHRENHEIT. ALL WELDS SHALL BE 3/16" MINIMUM U.N.O.

ERECTION AND FABRICATION IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS." WELDING SHALL CONFORM TO AWS "STRUCTURAL WELDING CODE - STEEL". ALL WELDING SHALL BE PERFORMED BY AWS/WABO CERTIFIED WELDERS.

ALL COLUMNS AND BEAMS TO BE FROM UNSPLICED LENGTHS U.N.O. ON THE DRAWINGS. SUBMIT SHOP DRAWINGS SHOWING SIZES, DIMENSIONS AND REQUIRED CONNECTION DETAILS FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION.

SUPPLEMENTAL STRUCTURAL ABBREVIATIONS:

ABV	ABOVE	HSB	HIGH STRENGTH BOLT (A325 UNO)
AFF	ABOVE FINISH FLOOR	HSS	HOLLOW STRUCTURAL STEEL
ADD'L	ADDITIONAL	IBC	INTERNATIONAL BUILDING CODE
ADJ	ADJACENT	IF	INSIDE FACE
AL	ALUMINUM	INT	INTERIOR
APPRX	APPROXIMATE	JST	JOIST
ARCH	ARCHITECTURAL	K	KIPS (1000 POUNDS)
@	AT	LAT	LATERAL
BEL	BELOW	LDGR	LEDGER
BF	BRACED FRAME	LLH	LONG LEG HORIZONTAL
BM	BEAM	LLV	LONG LEG VERTICAL
BN	BOUNDRY NAIL	LS	LAG SCREW
BNDRY	BOUNDRY	LSL	LAMINATED STRAND LUMBER
BO	BOTTOM OF	LT WT	LIGHT WEIGHT
BOS	BOTTOM OF SLAB	LVL	LAMINATED VENEER LUMBER
BOT	BOTTOM	MAS	MASONRY
BRDG	BRIDGE(ING)	MAT'L	MATERIAL
BRG	BEARING	MB	MACHINE BOLT (A307)
CAM	CAMBER(ED)	MFR	MANUFACTURER
CANT	CANTILEVER(ED)	MRF	MOMENT RESISTING FRAME
CDF	CONTROLLED DENSITY FILL	MTL	METAL
CG	CENTER OF GRAVITY	(N)	NEW MEMBER
CIP	CAST IN PLACE	NS	NEAR SIDE
CJ	CONTROL JOINT	OH	OVERHANG
CJP	COMPLETE JOINT PENETRATION	ORNT	ORIENTATE (ION)
COL	COLUMN	PAR	PARALLEL
CONST	CONSTRUCTION	P/C	PRECAST CONCRETE
CONT	CONTINUOUS	PERP	PERPENDICULAR
CTSK	COUNTERSINK	PSL	PARALLEL STRAND LUMBER
D	DEPTH	PT	PRESSURE TREAT(ED)
d	PENNY (NAILS)	QTY	QUANTITY
DBL	DOUBLE	REF	REFERENCE
DF	DOUGLAS FIR	REINF	REINFORCEMENT
DIAG	DIAGONAL	SHEET	SHEET
DIAPH	DIAPHRAGM	SHTG	SHEATHING
do	DITTO (DO OVER)	SIM	SIMILAR
DWG	DRAWING	SKW	SKEW(ED)
DWL	DOWEL	SPC	SPACING
EA	EACH	SS	STAINLESS STEEL
EF	EACH FACE	STGR	STAGGER
EJ	EXPANSION JOINT	STIFF	STIFFENER
EMBD	EMBED(MENT)	STIRR	STIRRUP
EN	EDGE NAIL	STRUC	STRUCTURE(AL)
ENG	ENGINEER	SYM	SYMMETRICAL
EQ	EQUAL	T	TOP
ES	EACH SIDE	T&G	TONGUE AND GROOVE
EXIST	EXISTING MEMBER	TMPRY	TEMPORARY
EXT	EXTERIOR	TN	TOE NAIL
FFE	FINISHED FLOOR ELEVATION	TO	TOP OF
FN	FACE NAIL	TOS	TOP OF SLAB
FND	FOUNDATION	TRANS	TRANSVERSE
FO	FACE OF	TYP	TYPICAL
FRM'G	FRAMING	UNO	UNLESS NOTED OTHERWISE
FS	FAR SIDE	VFY	VERIFY
FTG	FOOTING	WHS	WELDED HEADED STUD
GA	GAUGE	WP	WORK POINT
GB	GRADE BEAM	WS	WESTERN SPECIES
GLB	GLUE-LAMINATED BEAM	WTS	WELDED THREADED STUD
HAS	HEADER ANCHOR STUDS	X-STG	EXTRA STRONG
HDR	HEADER	XX-STG	DOUBLE EXTRA STRONG
HF	HEM-FIR		
HGR	HANGER		

STRUCTURAL LEGEND

	GRATING OR STRUCTURAL SPAN
	DIFFERENCE IN ELEVATIONS
	ELEVATION TARGET (REF.)
	HANDRAILING
	REMOVABLE HANDRAIL
	CENTERLINE
	PLATE



Gray & Osborne, Inc.
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(206) 284-0860

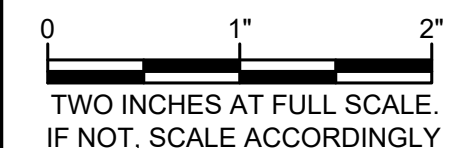


ALEX M. QUINLY
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
07/17/2026



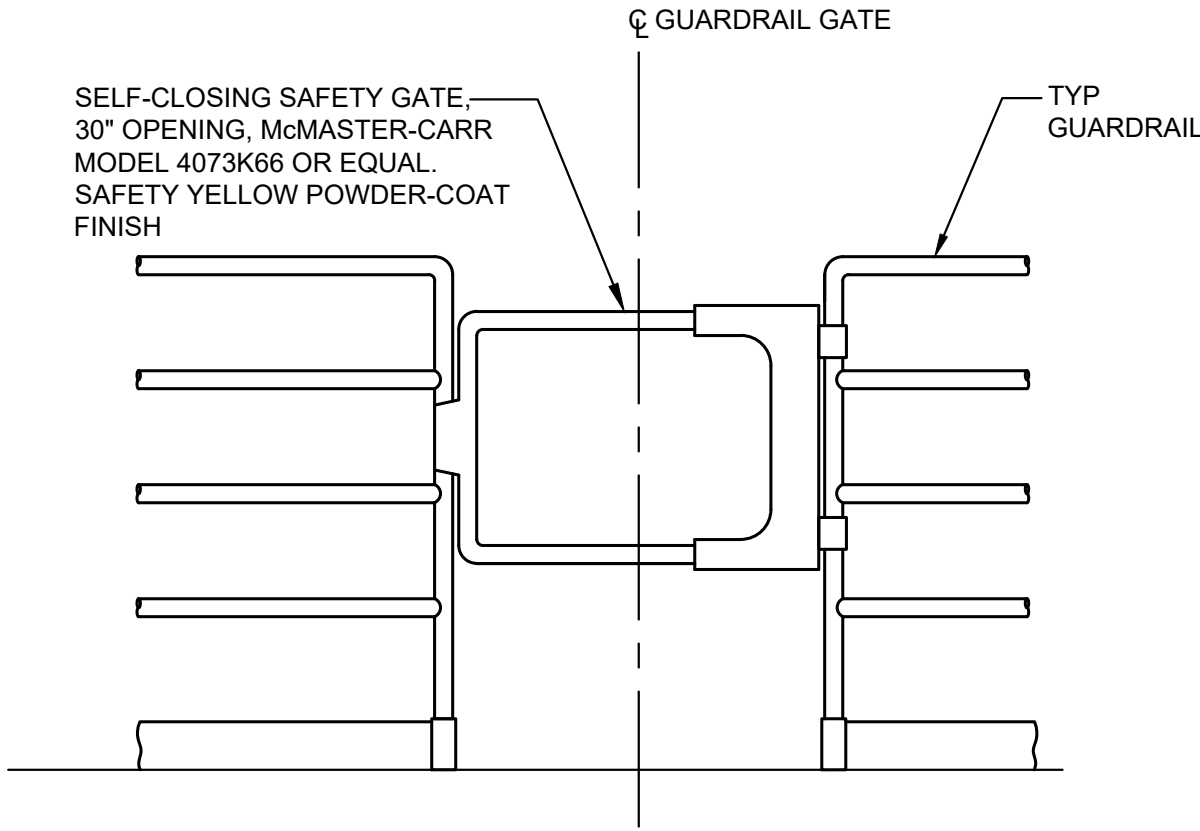
LOTT CLEAN
WATER ALLIANCE
SUPPLEMENTAL
CARBON FEED
UPGRADE

500 ADAMS ST NE
OLYMPIA, WA 98501

No.	DATE	REVISION
ISSUED FOR:		
BID		
ISSUE DATE: JULY 2026		
APPROVED BY: AQ		
CHECKED BY: MC		
DRAWN BY: RAH		
DESIGNER: MC		
G & O JOB NO.: 25258		
FILE: S_STD.DWG		
		
STRUCTURAL		
GENERAL STRUCTURAL NOTES, STRUCTURAL ABBREVIATIONS, STRUCTURAL LEGEND, AND TYPICAL DETAILS		
DRAWING: S00-001		
SHEET: 13 OF: 34		

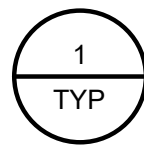
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SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION				
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	-	X	ACI 318: CH 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706; b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND; c. INSPECT ALL OTHER WELDS.	X	X	AWS D1.4 ACI 318: 26.6.4	-
3. INSPECT ANCHORS CAST IN CONCRETE.	-	X	ACI 318: 17.8.2	-
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. ^a a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	X	X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	-
5. VERIFY USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: CH19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	1908.10
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 26.5.3-26.5.5	1908.9
9. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X	ACI 318: 26.11.2	-
10.INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	ACI 318: 26.11.1.2(b)	-
SPECIAL INSPECTIONS AND TESTS OF SOILS				
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION		
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY,	-	X		
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X		
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X		
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-		
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X		



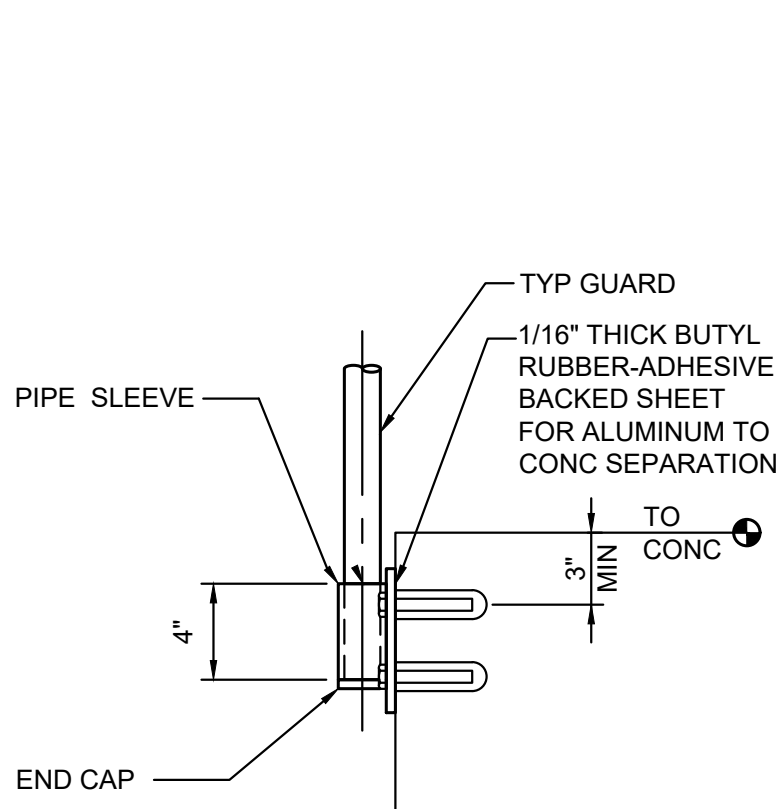
NOTE:

- SEE PLAN FOR GATE SWING ORIENTATION.

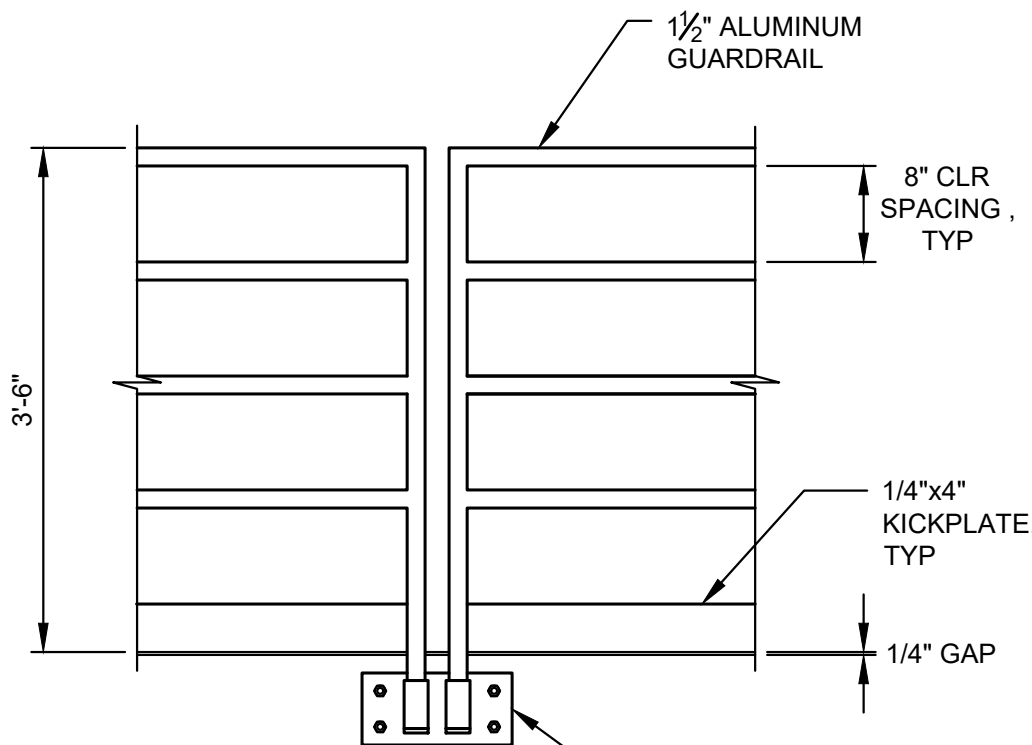


TYP GUARDRAIL GATE DETAIL

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

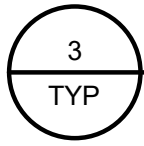


WALL FLANGE



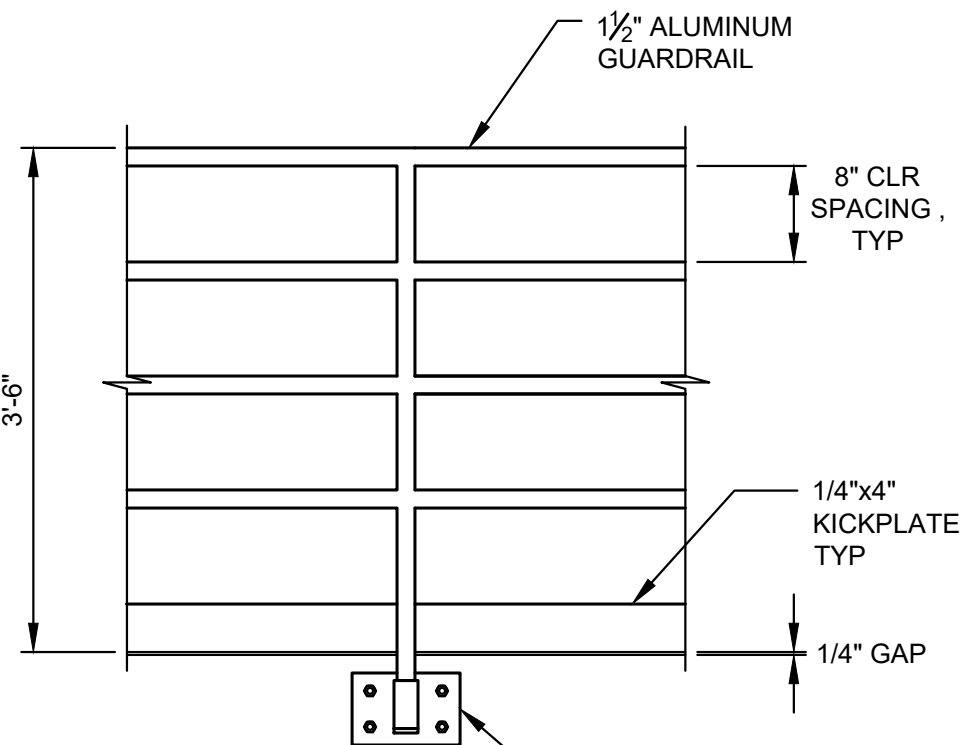
NOTE:

- CONTRACTOR SHALL PROVIDE GUARD CONNECTIONS CAPABLE OF RESISTING REACTIONS DUE TO LATERAL LOADS PER IBC.



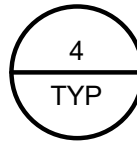
TYP REMOVABLE GUARDRAIL

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



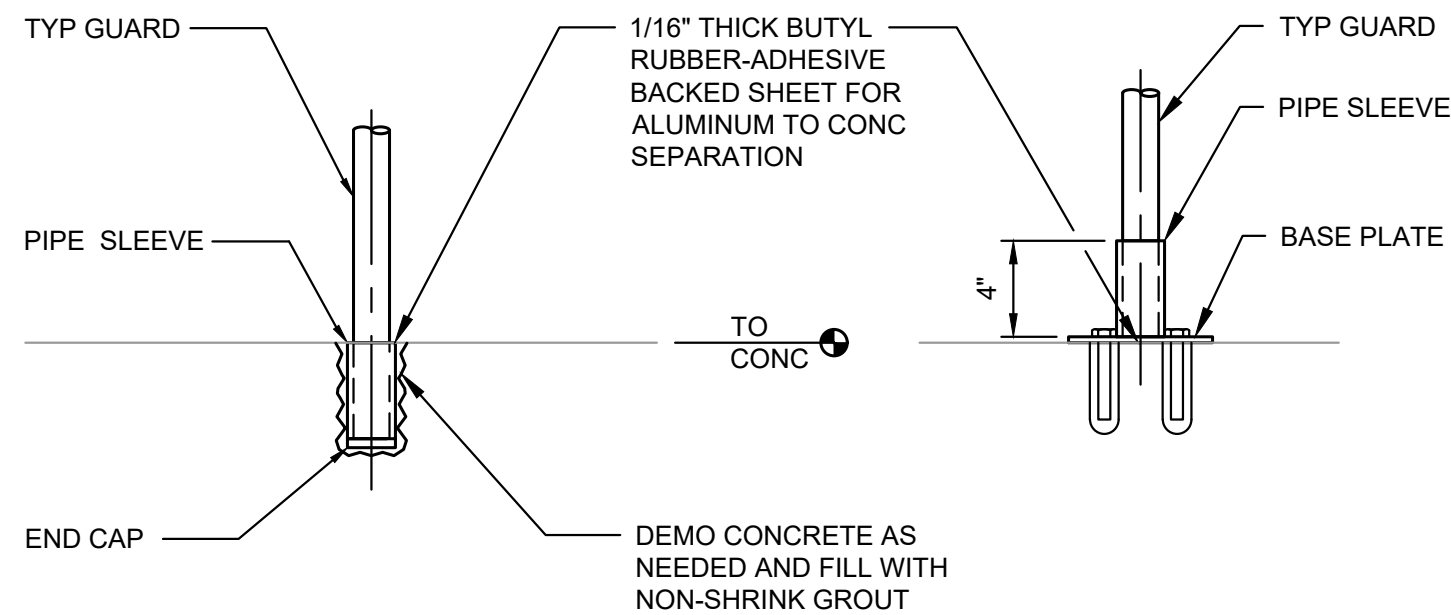
NOTE:

- CONTRACTOR SHALL PROVIDE GUARD CONNECTIONS CAPABLE OF RESISTING REACTIONS DUE TO LATERAL LOADS PER IBC.



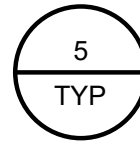
TYP GUARDRAIL

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



INSET BASE

FLANGE BASE

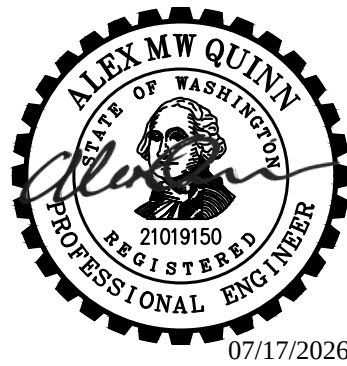


BASES AT FLOOR MOUNTED GUARDS

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

NOTE:

- USE FLANGE BASE DETAIL, UNO.



**LOTT CLEAN
WATER ALLIANCE
SUPPLEMENTAL
CARBON FEED
UPGRADE**
500 ADAMS ST NE
OLYMPIA, WA 98501

No.	DATE	REVISION
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ISSUED FOR:

BID

ISSUE DATE: JULY 2026

APPROVED BY: AQ

CHECKED BY: MC

DRAWN BY: RAH

DESIGNER: MC

G & O JOB NO.: 25258

FILE: S_STD.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

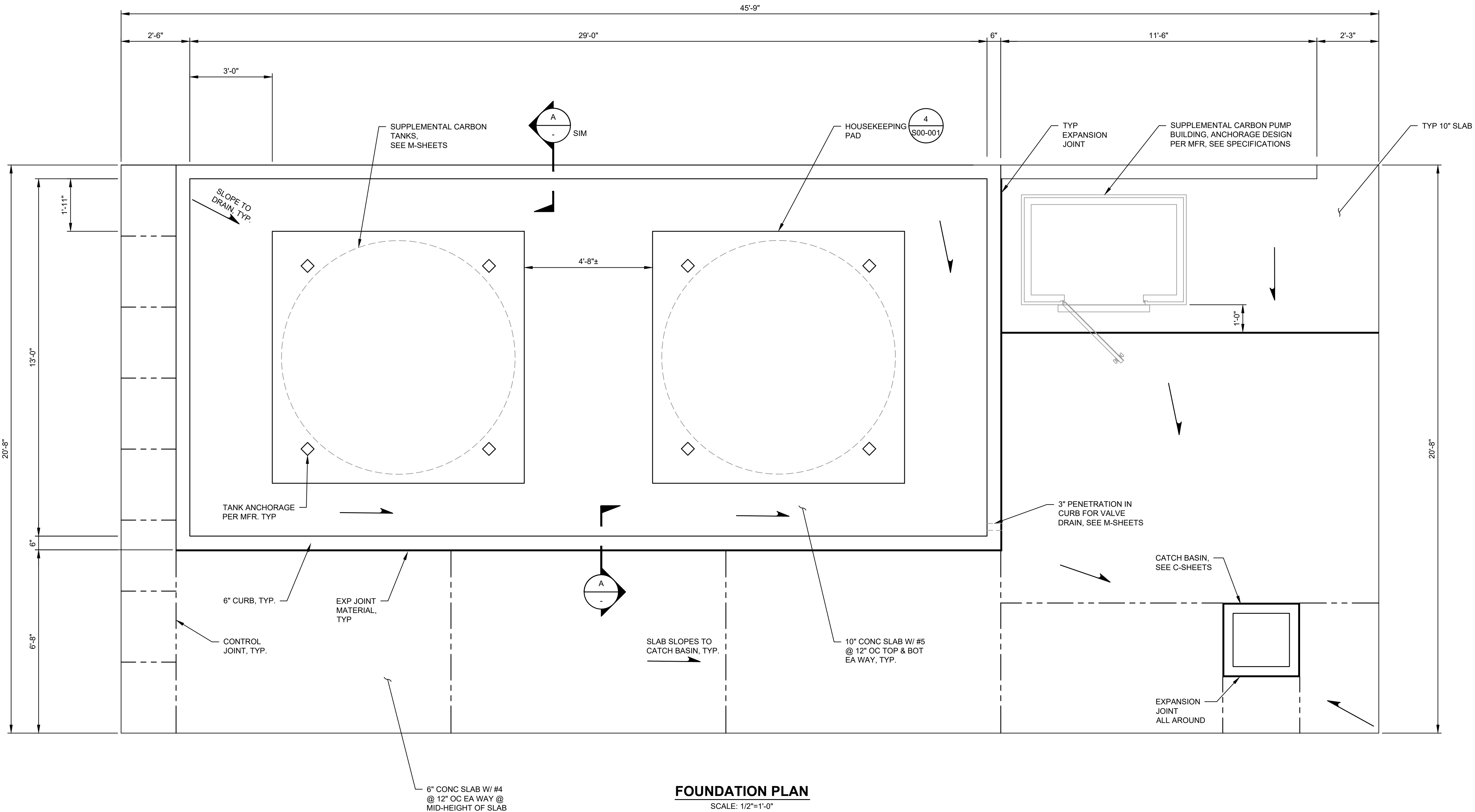
STRUCTURAL

**SPECIAL INSPECTION
SCHEDULES**

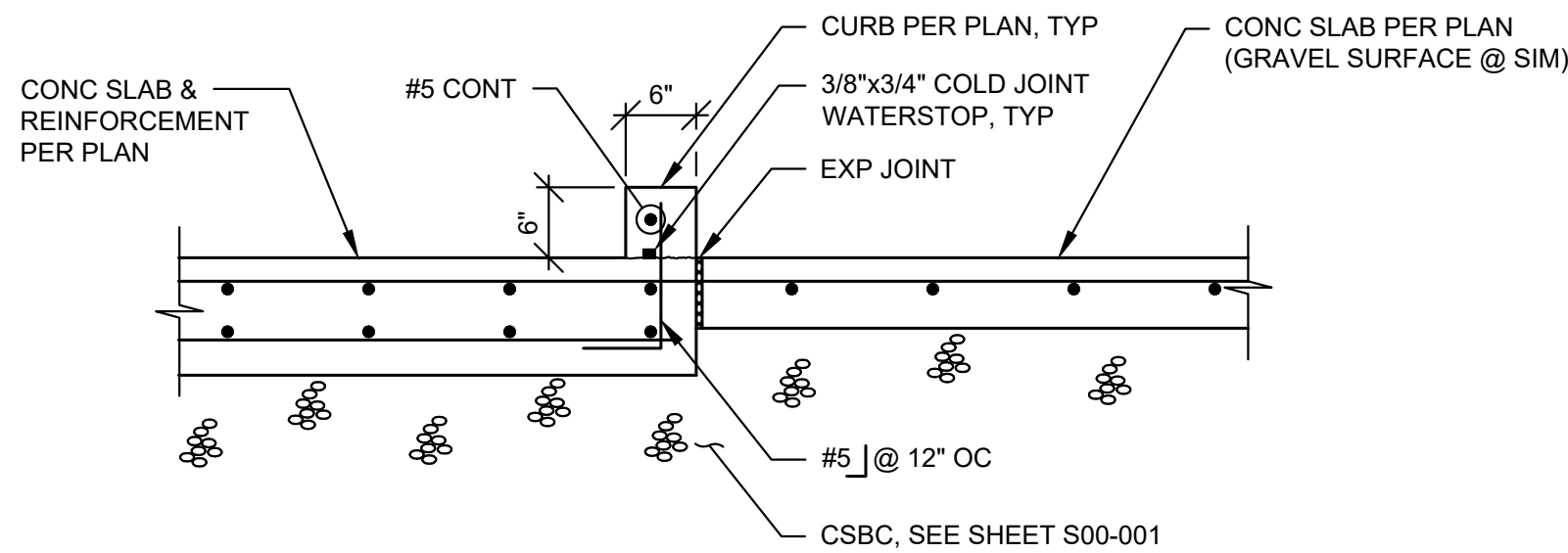
DRAWING: **S00-002**

SHEET: **14** OF: **34**

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



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

- NOTES:
- SEE SHEETS S00-001 AND S00-002 FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS
 - SEE SHEET C18-003 FOR SLAB ELEVATIONS.
 - CONTROL JOINT LAYOUT SHOWN IS APPROXIMATE. ALTERNATE CONTROL JOINT PLAN MAY BE SUBMITTED BY THE CONTRACTOR FOR REVIEW. CONTROL JOINTS SHALL CONFORM TO THE FOLLOWING:
 - MAXIMUM SPACING BETWEEN JOINTS SHALL NOT EXCEED 10'-0".
 - MAXIMUM ASPECT RATIO OF PANEL SHALL NOT EXCEED 1.25 TO 1.
 - ALIGN JOINTS WITH RE-ENTRANT CORNERS.
 - SAW CUTS SHALL BE PERFORMED AS SOON AS POSSIBLE AFTER CONCRETE PLACEMENT WITHOUT CAUSING DAMAGE TO CONCRETE EDGES.



**LOTT CLEAN
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500 ADAMS ST NE
OLYMPIA, WA 98501

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ISSUE DATE: JULY 2026

APPROVED BY: AQ

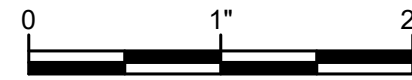
CHECKED BY: MC

DRAWN BY: RAH

DESIGNER: MC

G & O JOB NO.: 25258

FILE: S18_T_PLN.DWG



TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

STRUCTURAL

**TANK FOUNDATION
PLAN AND DETAIL**

DRAWING **S18-001**

SHEET: **15** OF: **34**

PIPING SYMBOLS

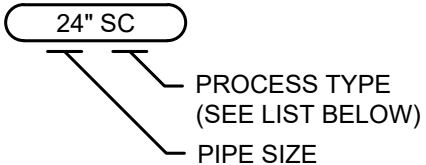
DOUBLE LINE	SINGLE LINE	
		EXISTING PIPE
		NEW PIPE
		WELDED
		SCREWED JOINT
		FLANGED
		MECHANICAL JOINT
		GROOVED COUPLING
		FLANGED COUPLING ADAPTER
		FLANGED COUPLING ADAPTER W/ THRUST TIES TO NEXT FLANGED JOINT
		FLEXIBLE COUPLING
		SOLID SLEEVE (MECHANICAL JOINT)
		ADAPTOR FLANGE
		UNION
		RESTRAINED FLEXIBLE COUPLING
		RUBBER EXPANSION JOINT
		RESTRAINED RUBBER EXPANSION JOINT
		BLIND FLANGE
		CHECK VALVE
		GATE VALVE
		PLUG VALVE
		BUTTERFLY VALVE
		BALL VALVE
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		ELBOW, 45°
		ELBOW, 90°
		ELBOW UP
		ELBOW DOWN
		TEE
		TEE UP
		TEE DOWN

DOUBLE LINE	SINGLE LINE	
		CROSS
		WYE
		BELL UP
		FLEXIBLE HOSE OR TUBING
		VALVE WITH MOTOR ACTUATOR
		SOLENOID VALVE
		PIPE SUPPORT.
		DIAPHRAGM VALVE
		PRESSURE GAUGE
		BACKPRESSURE VALVE
		PRESSURE RELIEF VALVE
		PULSATION DAMPENER
		CALIBRATION COLUMN
		DEMOLISH AND WASTEHAUL

- NOTES:
- FOR ADDITIONAL ABBREVIATIONS AND SYMBOLS SEE SHEETS G00-003.
 - FOR ADDITIONAL PIPING, VALVE AND EQUIPMENT IDENTIFICATION SEE SHEETS E00-002.

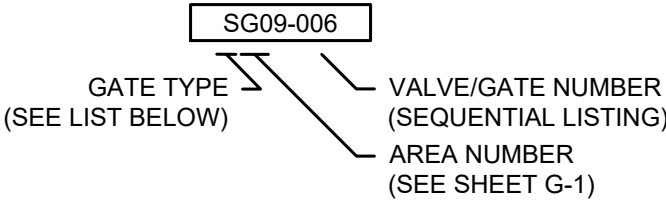
PROCESS PIPING, VALVE, GATE AND EQUIPMENT IDENTIFICATIONS

PROCESS PIPING



ABBREVIATION	PROCESS TYPE
D	DRAIN
FA	FOUL AIR
PAA	PROCESSED AERATION AIR
SA	SERVICE AIR
SC	SUPPLEMENTAL CARBON
WN	WATER, NON-POTABLE
WP	WATER, POTABLE

EQUIPMENT



ABBREVIATION	EQUIPMENT TYPE
CB	CATCH BASIN
EWS	EMERGENCY SHOWER AND EYEWASH STATION
FSH	FLOW SWITCH
HTR	WATER HEATER
IV	ISOLATION VALVE
LIT	LEVEL SENSOR/TRANSMITTER
LSH	HIGH LEVEL SWITCH
LSL	LOW LEVEL SWITCH
MCC	MOTOR CONTROL CENTER
P	PUMP
PNL	PANEL
T	TANK

PROCESS PIPING MATERIALS

PROCESS PIPING	INSIDE STRUCTURES	ABOVE GROUND	BURIED	TEST TYPE	DURATION	PSI
D	-	-	PVC	-	-	-
WN	-	GALVANIZED STEEL (INSULATED)	-	HYDROSTATIC	60 MIN	200 PSI
WP	CPVC SOLVENT WELDED	CPVC SOLVENT WELDED (INSULATED)	FLEXIBLE HDPE	HYDROSTATIC	60 MIN	200 PSI
SC	CPVC	<2" STAINLESS STEEL COMPRESSION TUBING W/ COMPRESSION FITTINGS 3" THREADED 304 STAINLESS STEEL	-	HYDROSTATIC	60 MIN	100 PSI
SA	GALVANIZED STEEL	GALVANIZED STEEL	-	STATIC AIR	60 MIN	200 PSI

CONTRACTOR SHALL PROVIDE A TESTING PLAN PER SPECIFICATION SECTION 40 23 00.

EQUIPMENT SCHEDULE

EQUIPMENT	ASSET ID
WATER HEATER	HTR08-001
SUPPLEMENTAL CARBON TANK NO. 1	T18-410
SUPPLEMENTAL CARBON TANK NO. 2	T18-420
SUPPLEMENTAL CARBON PUMP NO. 1	P18-410
SUPPLEMENTAL CARBON PUMP NO. 2	P18-425
SUPPLEMENTAL CARBON PUMP BUILDING	BLDG18-401
SUPPLEMENTAL CARBON PANEL	PNL18-410
EMERGENCY SHOWER AND EYEWASH STATION	EWS18-001
CATCH BASIN	CB18-001
SUPPLEMENTAL CARBON TANK NO. 1 ISOLATION VALVE	IV18-410
SUPPLEMENTAL CARBON TANK NO. 2 ISOLATION VALVE	IV18-420

INSTRUMENTATION SCHEDULE

INSTRUMENTATION	ASSET ID
LEVEL TRANSMITTER TANK NO. 1	LIT18-410
LEVEL TRANSMITTER TANK NO. 2	LIT18-420
HIGH LEVEL SWITCH TANK NO. 1	LSH18-410
HIGH LEVEL SWITCH TANK NO. 2	LSH18-420
LOW LEVEL LEVEL SWITCH TANK NO. 1	LSL18-410
LOW LEVEL LEVEL SWITCH TANK NO. 2	LSL18-420
PRESSURE GAUGE 1	PG18-410
PRESSURE GAUGE 2	PG18-420
EMERGENCY SHOWER AND EYEWASH STATION FLOW SWITCH	FSH18-001

Gray & Osborne, Inc.

CONSULTING ENGINEERS

1130 RAINIER AVENUE SOUTH,
SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

7/17/26

LOTT CLEAN
WATER ALLIANCE
SUPPLEMENTAL
CARBON FEED
UPGRADE

500 ADAMS ST NE
OLYMPIA, WA 98501

No.	DATE	REVISION
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CHECKED BY:		SLG
DRAWN BY:		TAR
DESIGNER:		SLG
G & O JOB NO.:		25258
FILE:		M-DET.DWG

TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

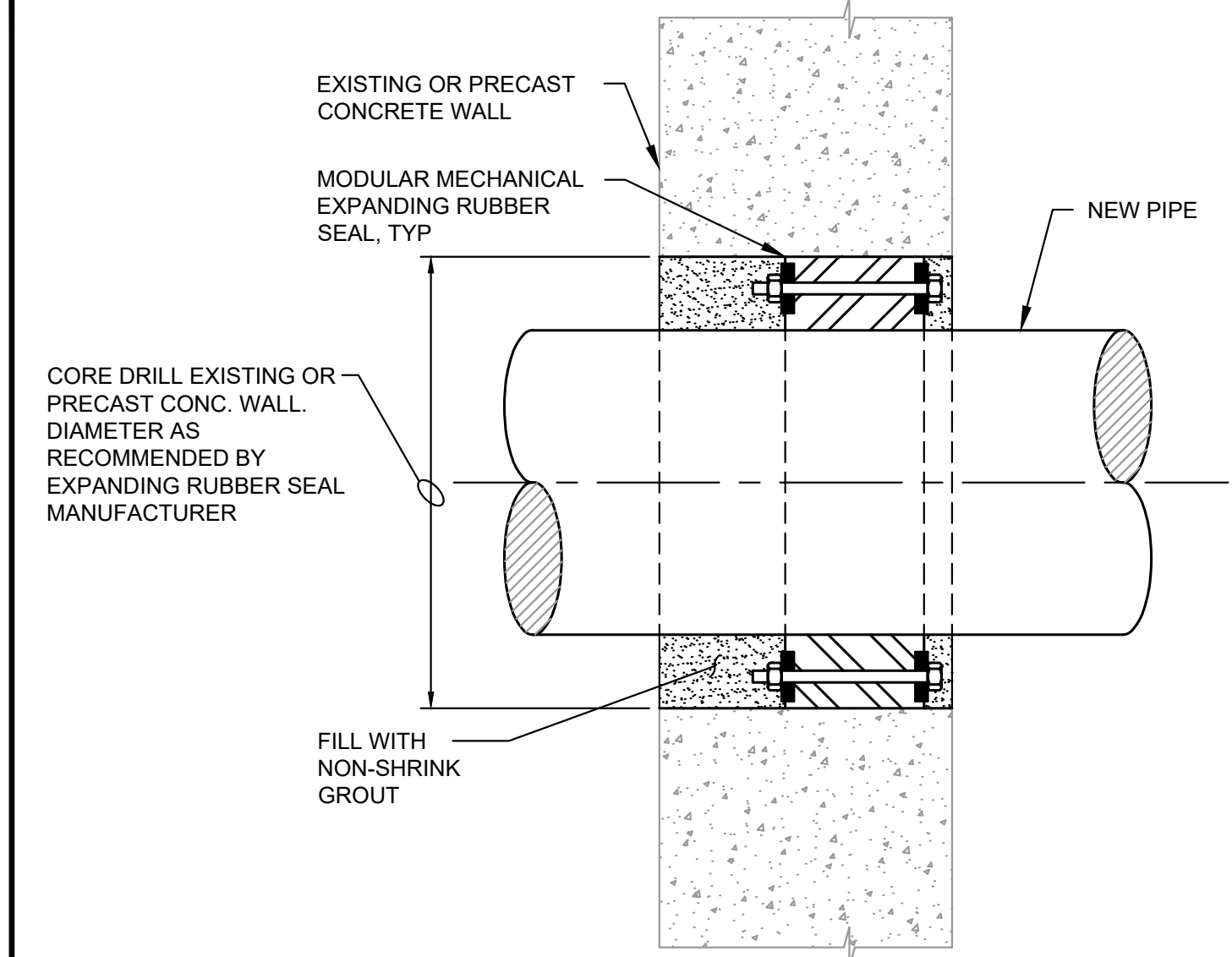
MECHANICAL

PIPE SYMBOLS,
PROCESS PIPING,
IDENTIFICATIONS, AND
PIPING MATERIAL

DRAWING: M00-001

SHEET: 16 OF: 34

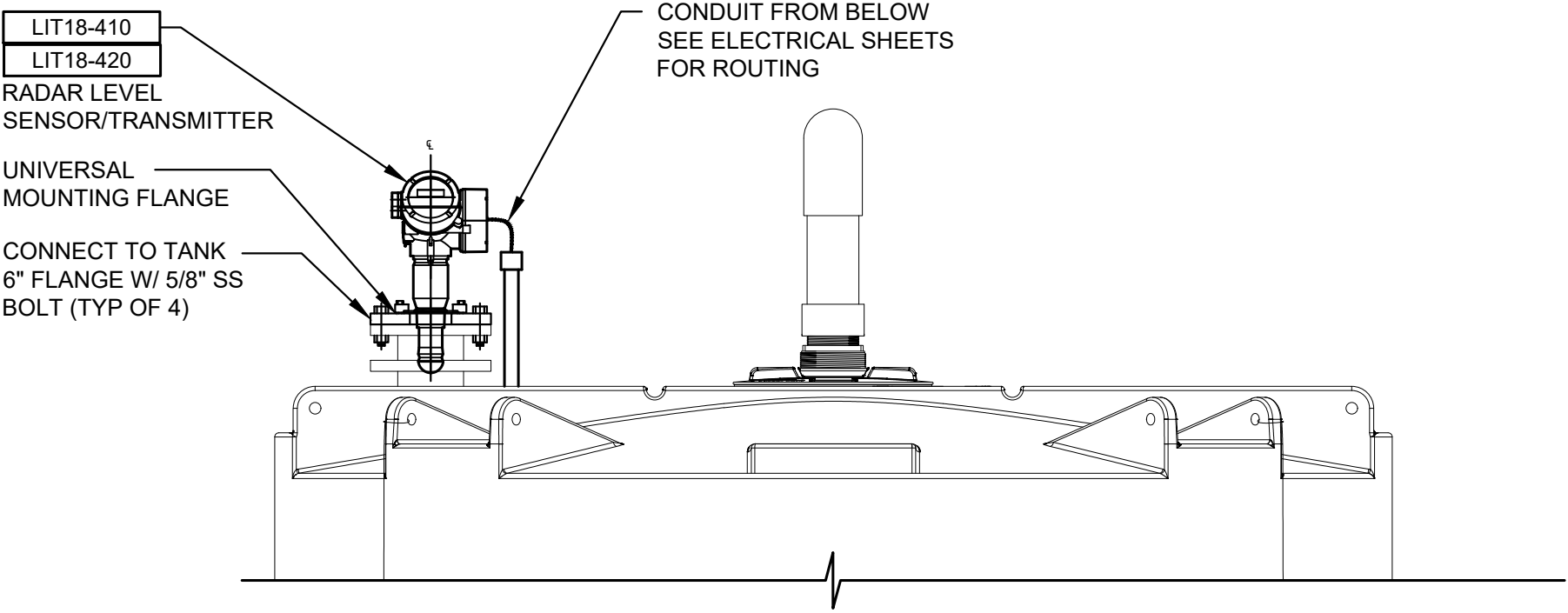
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EXISTING CONCRETE WALL PIPE PENETRATION

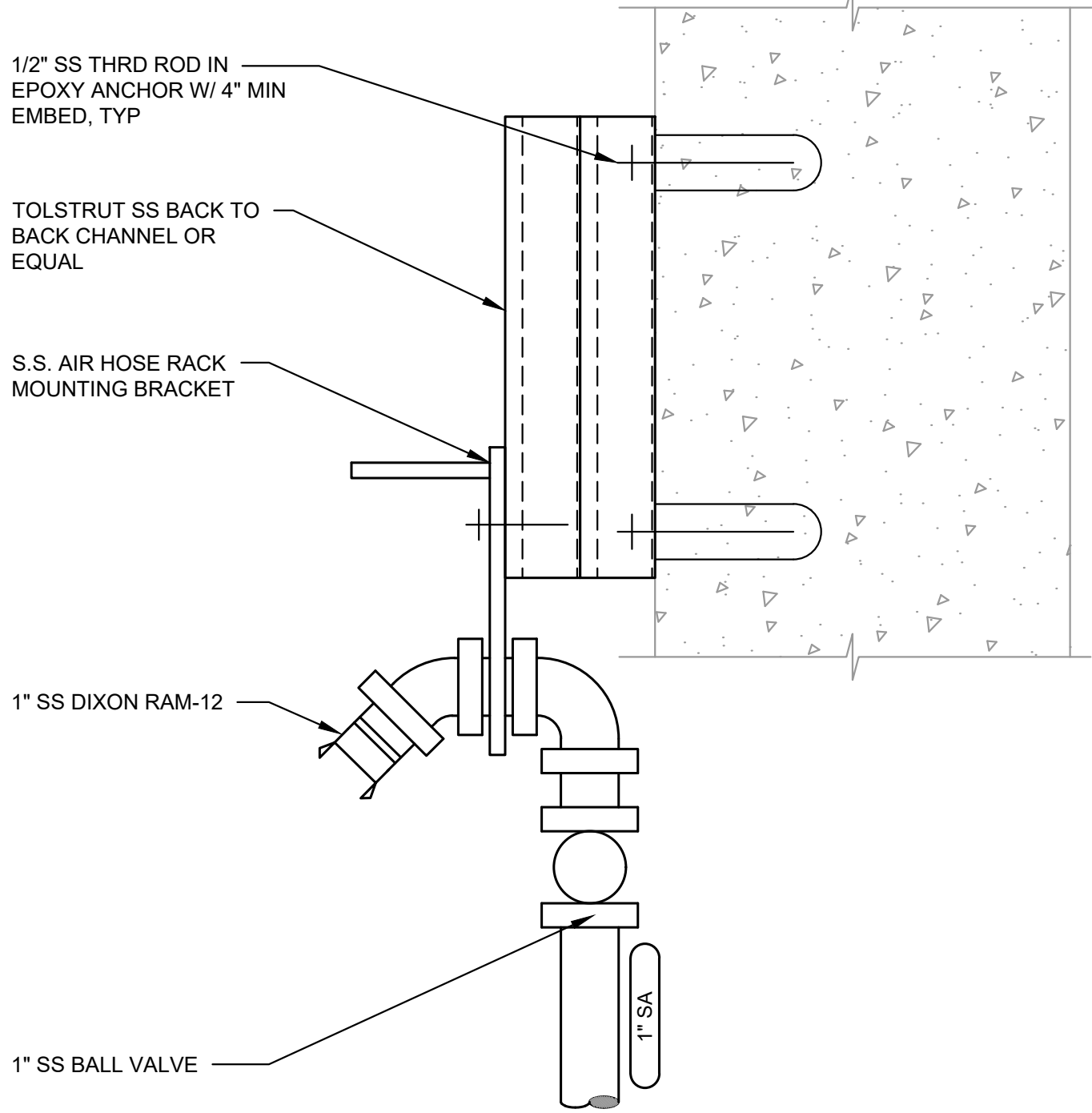
NOTES:

1. FOR EXISTING CONCRETE OR PRECAST CONCRETE, AN OPENING SHALL BE PROVIDED OF ADEQUATE SIZE TO ALLOW FOR INSTALLATION OF PENETRATION SHOWN ON THIS DETAIL. THE OPENING SHALL BE FILLED WITH NON-SHRINK GROUT AFTER PIPE INSTALLATION. IF OPENING IS PROVIDED BY CORE DRILLING, RESULTING SMOOTH CONCRETE SURFACES SHALL BE ROUGHENED BEFORE FILLING WITH GROUT.
2. FOR CMU WALLS, CORE DRILL HOLE. PROVIDE MIN. 8" THICK NON-SHRINK GROUT ENCASEMENT ALL AROUND PIPE SLEEVE IN WALL. FILL ANNULAR OPENING WITH SEALANT.
3. MODULAR MECHANICAL EXPANDING RUBBER SEALS SHALL BE USED FOR ALL NEW PENETRATIONS IN EXISTING FLOORS AND WALLS FOR ALL PIPES WITH NOMINAL DIAMETER GREATER THAN OR EQUAL TO 1/2 INCH. ALL PIPING LESS THAN 1/2 INCH NOMINAL DIAMETER SHALL HAVE ANNULAR SPACE FILLED WITH NON-SHRINK GROUT.



NOTE:

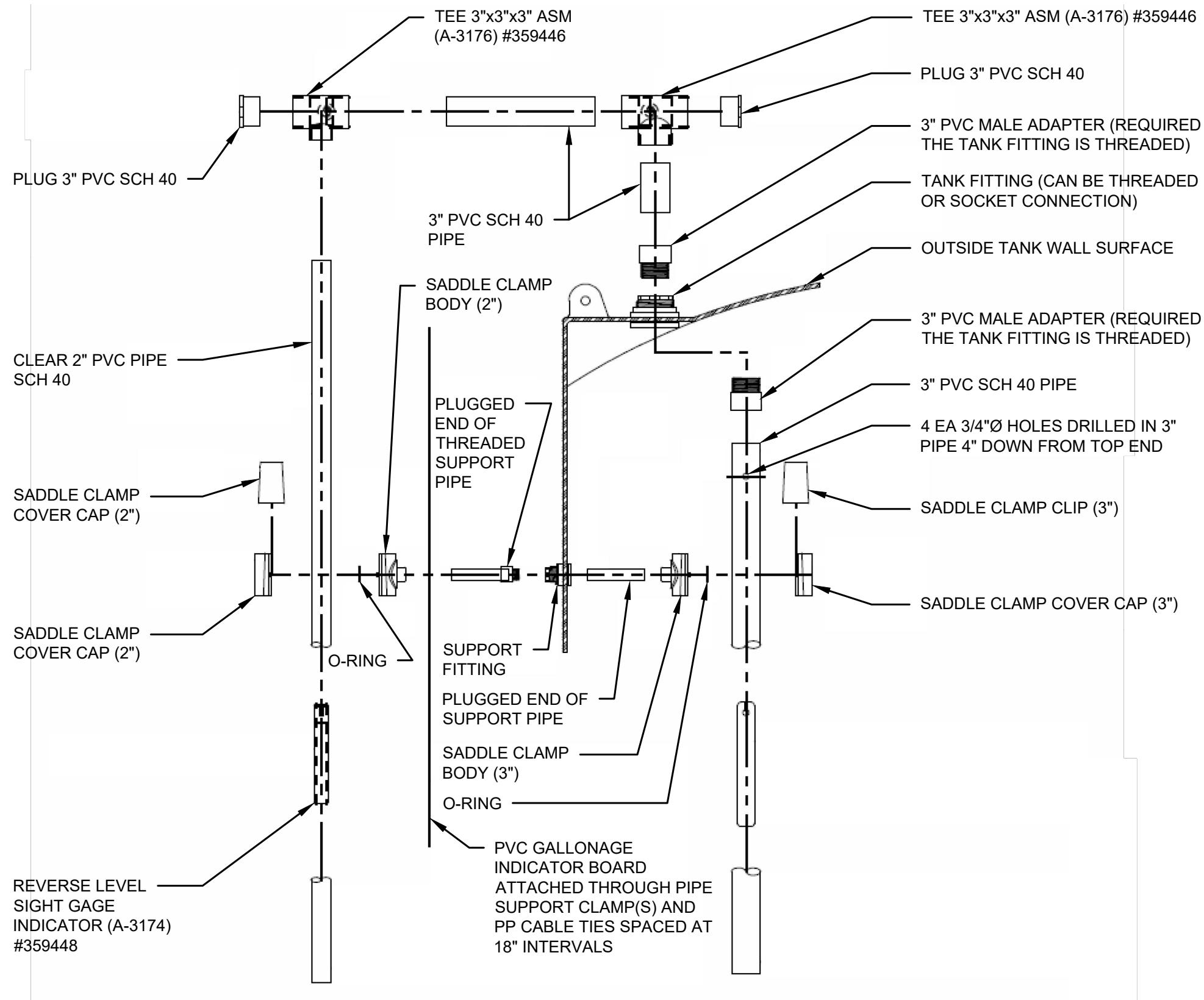
1. THE CENTER LINE OF THE TRANSMITTER FLANGE SHALL BE AT LEAST 12" FROM THE SIDE OF THE TANK TO ALLOW FOR OBSTACLE FREE BEAM TO THE BOTH OF TANK.



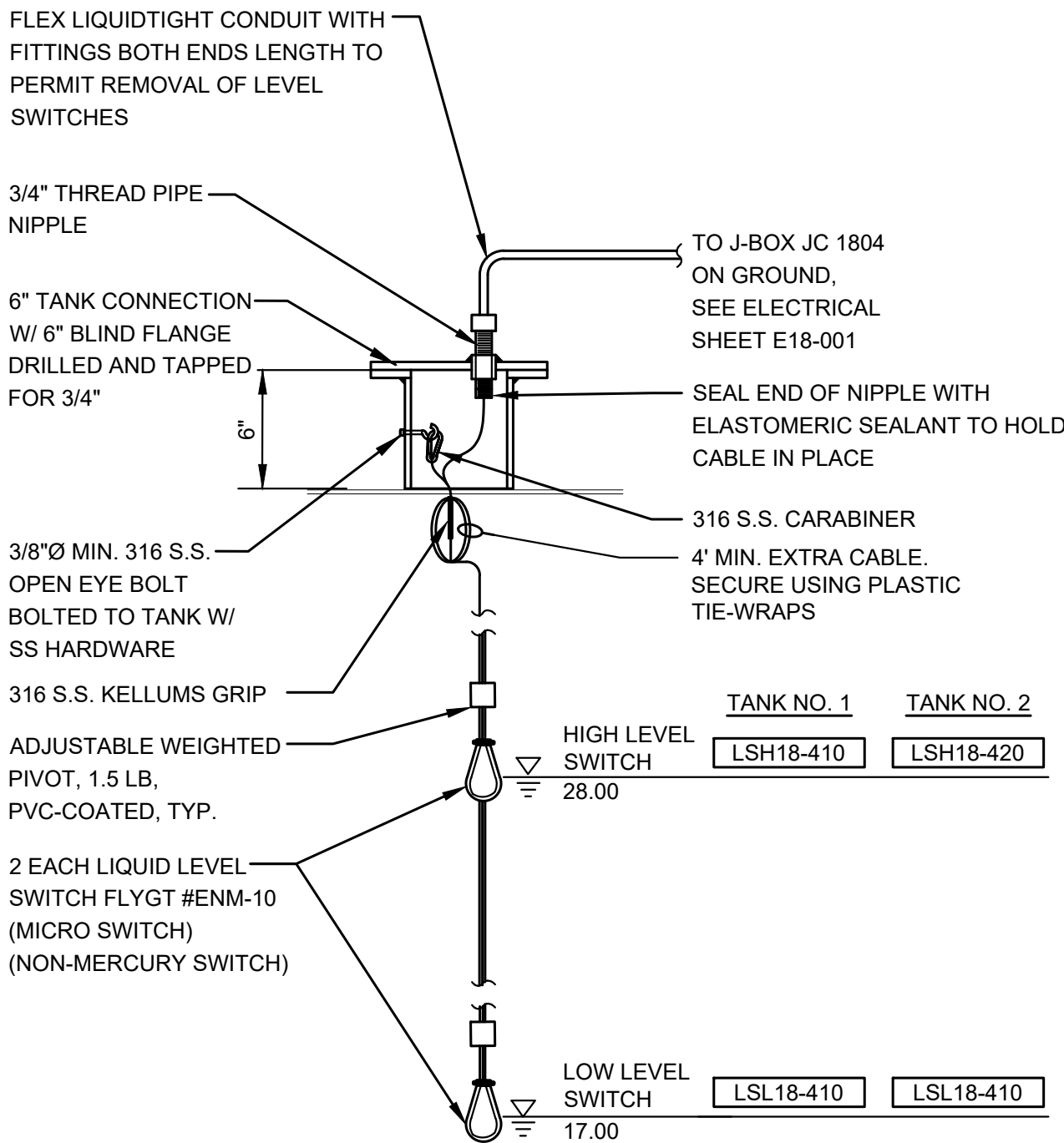
1 PIPE PENETRATIONS THROUGH CONCRETE WALLS AND FLOORS DETAILS
TYP NOT TO SCALE

2 RADAR LEVEL SENSOR/TRANSMITTER
TYP NOT TO SCALE

3 SERVICE AIR STATION
TYP NOT TO SCALE



4 REVERSE FLOAT LEVEL GAUGE
TYP NOT TO SCALE

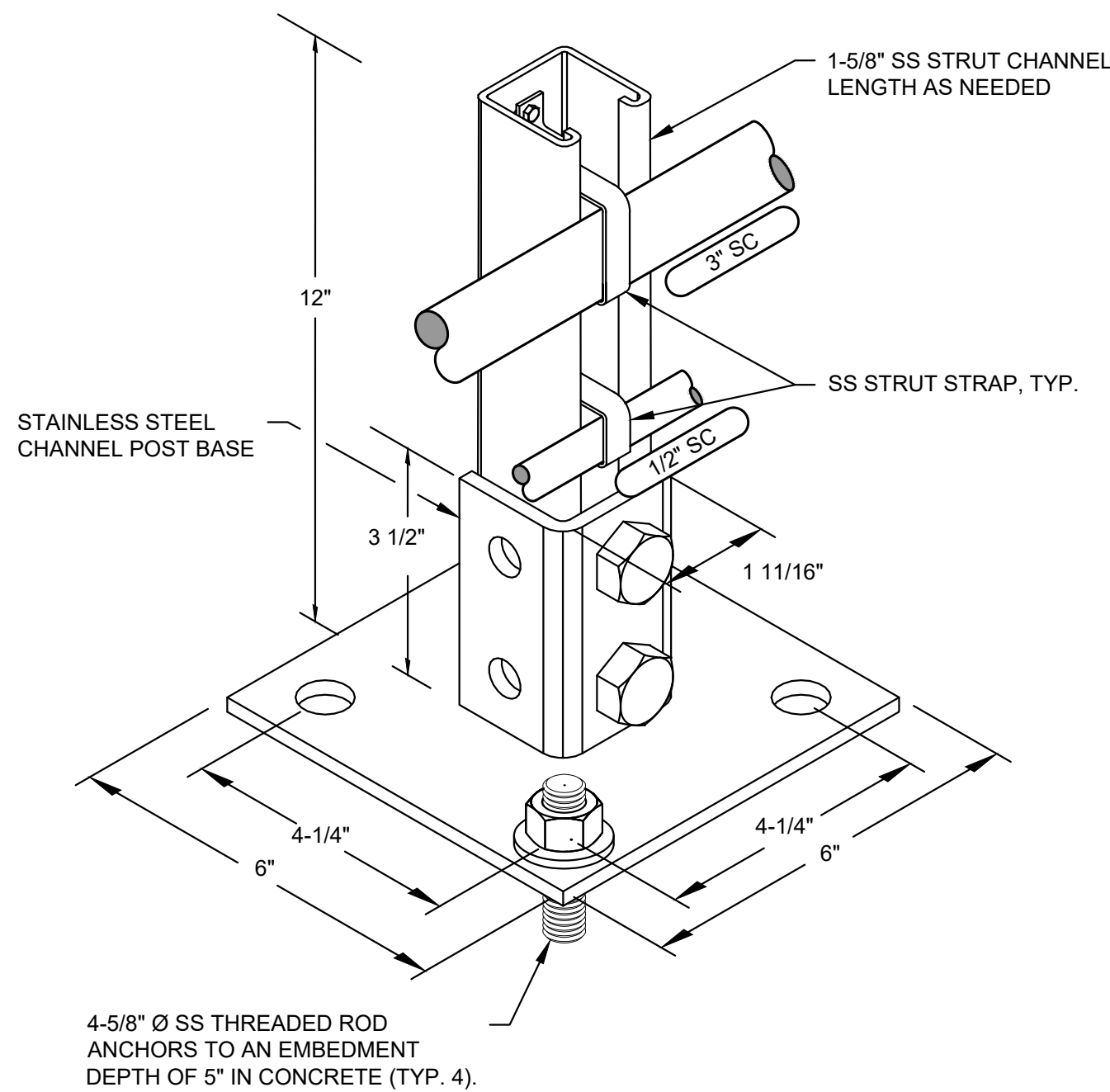


NOTE:

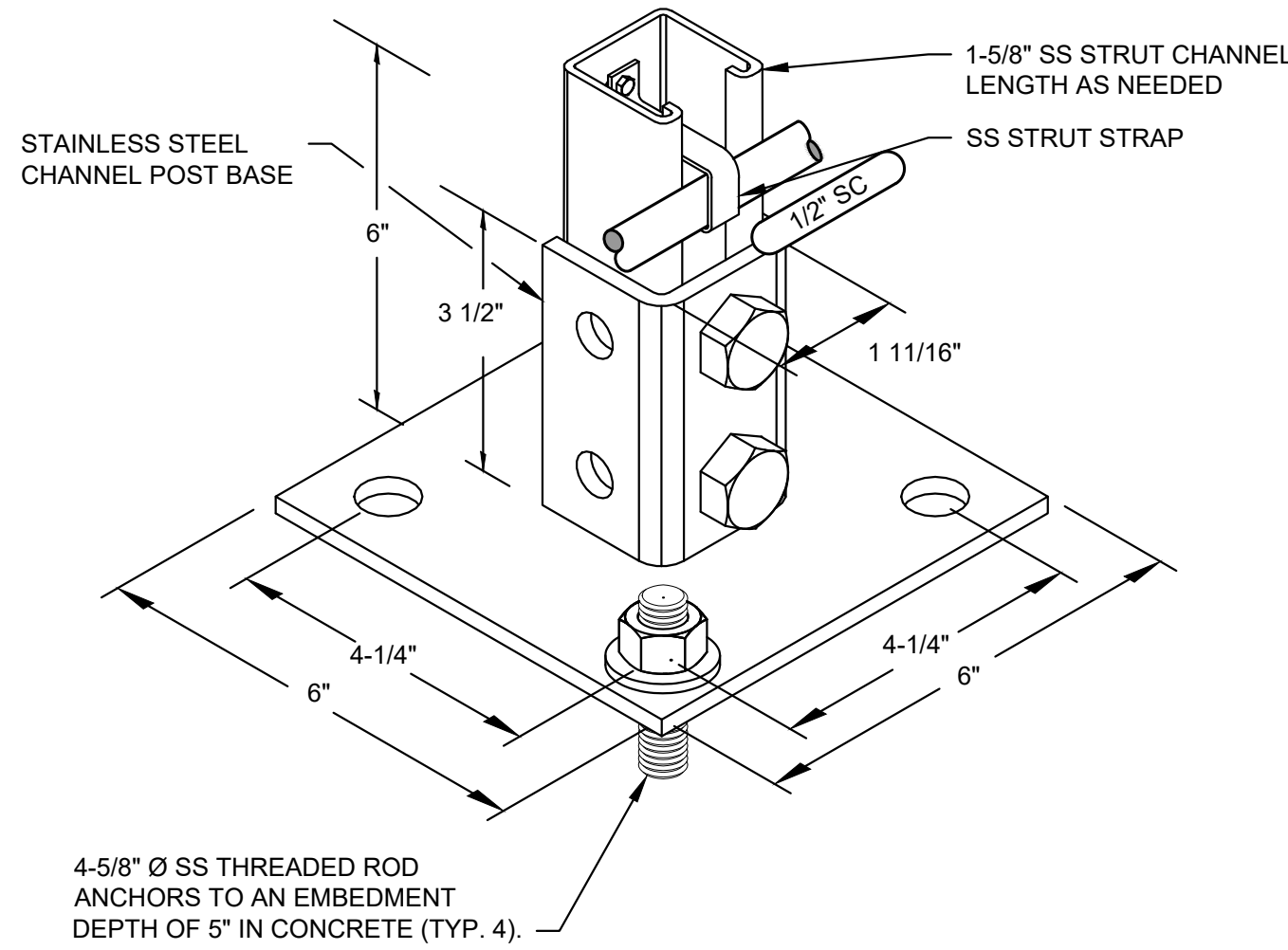
1. PROVIDE 2 SS KELLEMS TO SUPPORT FLOAT CABLES.

5 LEVEL CONTROL
TYP NOT TO SCALE

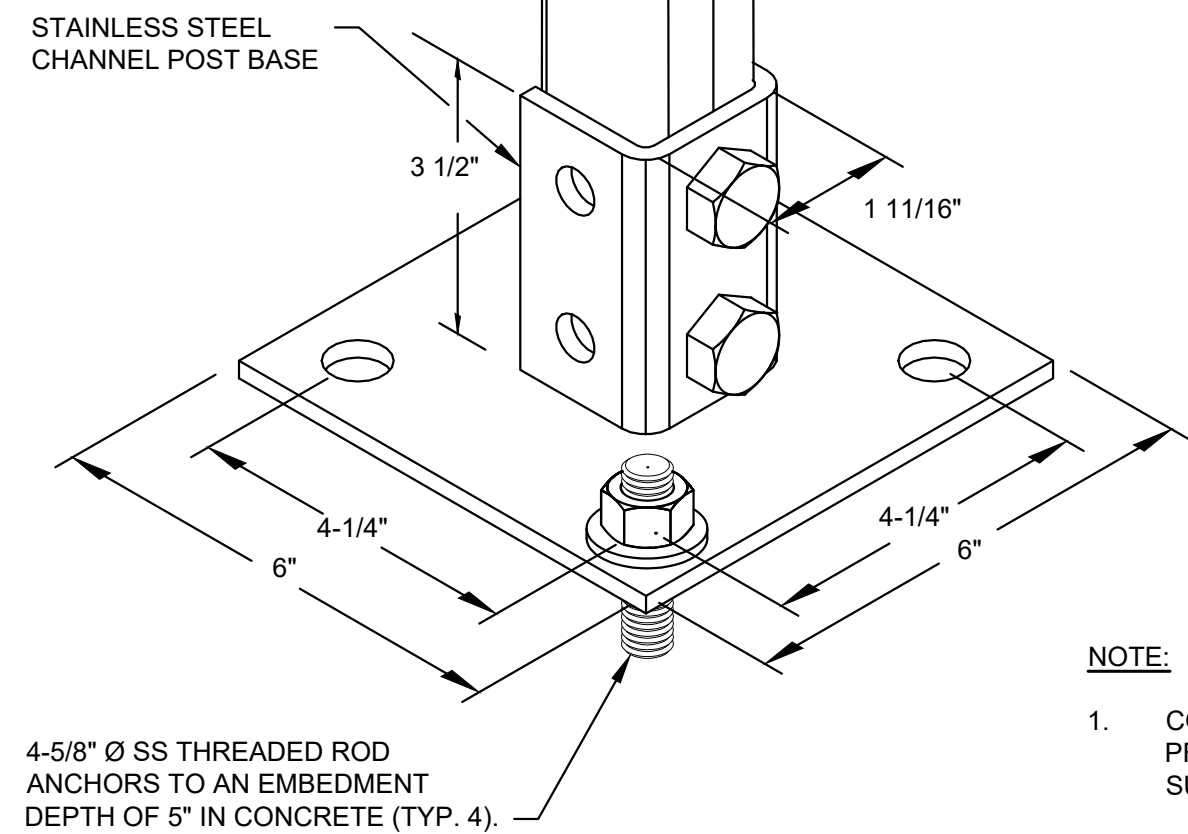
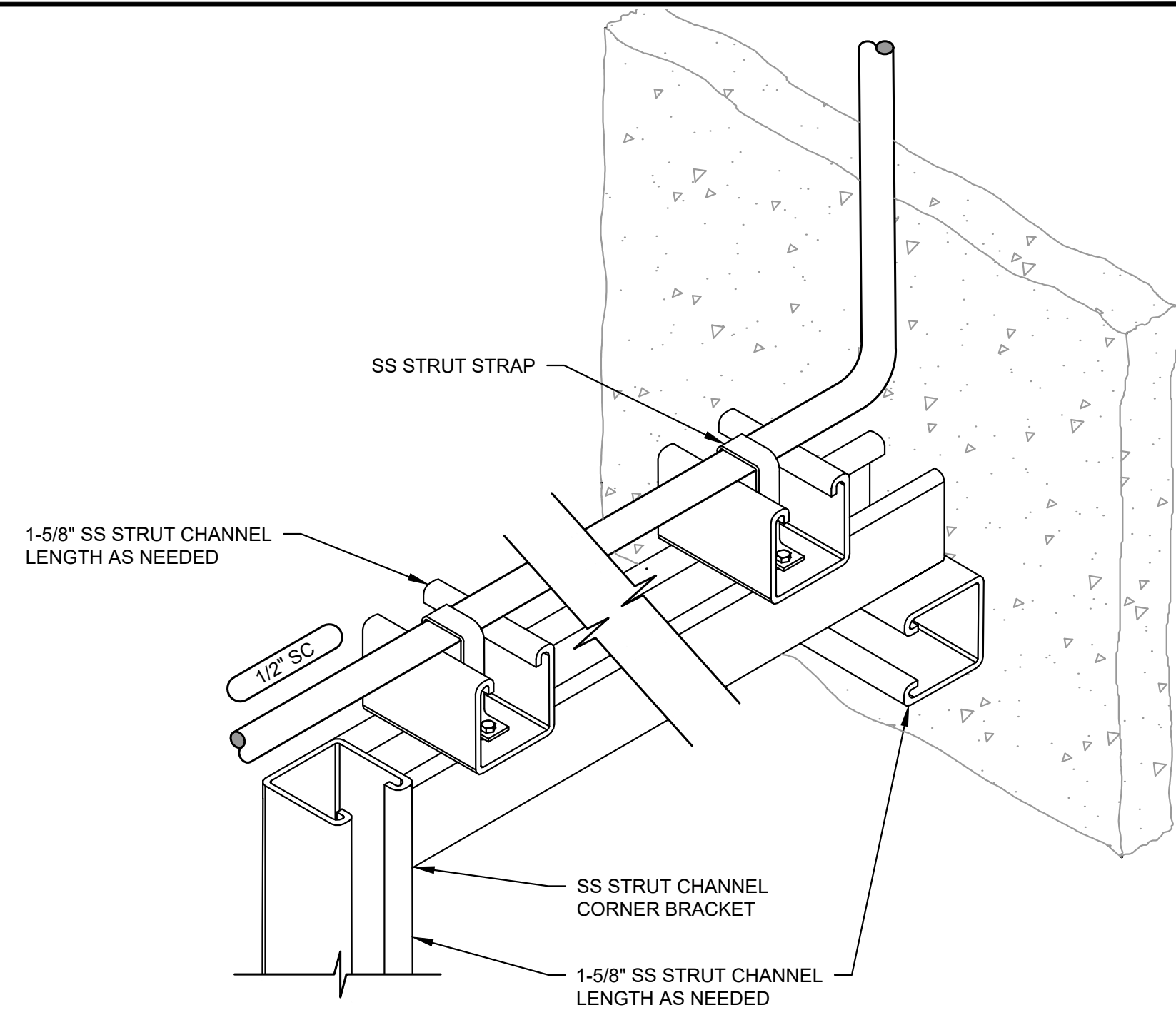
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1
TYP PIPE SUPPORT
NOT TO SCALE

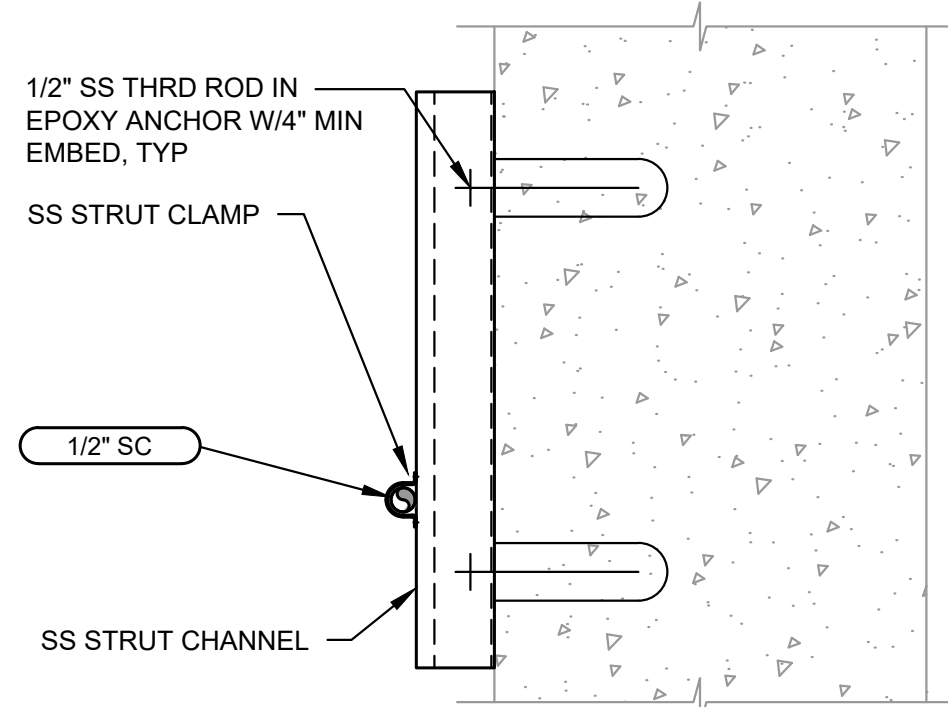


2
TYP PIPE SUPPORT
NOT TO SCALE



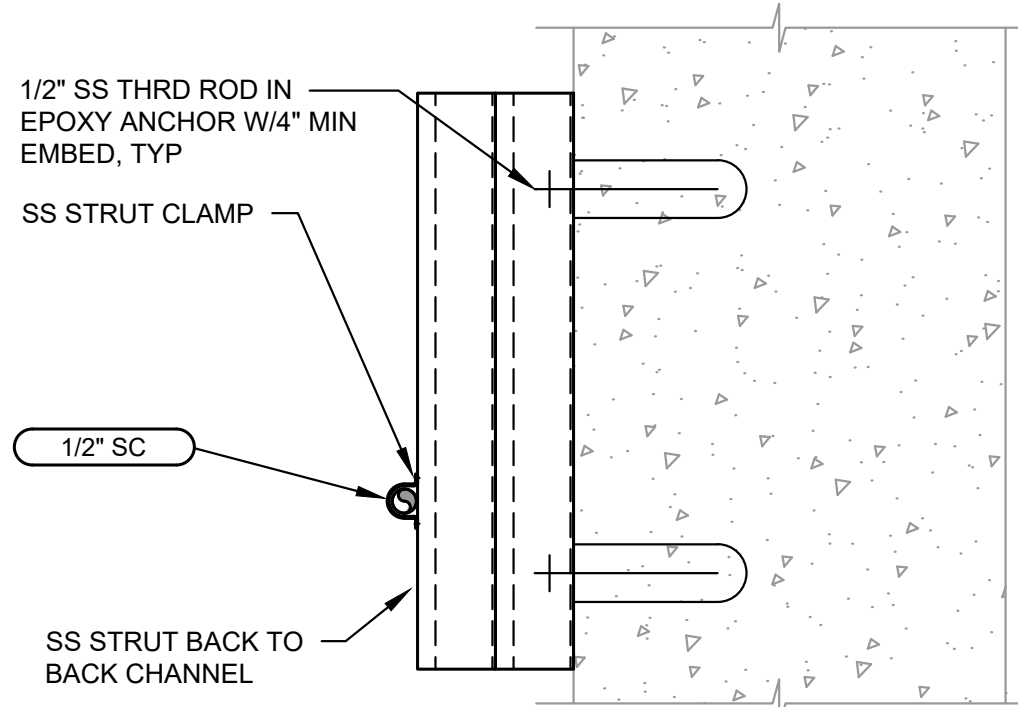
- NOTE:
- CONTRACTOR SHALL SCAN WALL FOR REBAR PRIOR TO DRILLING ANCHORS AND ADJUST SUPPORT LOCATIONS TO AVOID REBAR.

3
TYP PIPE SUPPORT
NOT TO SCALE



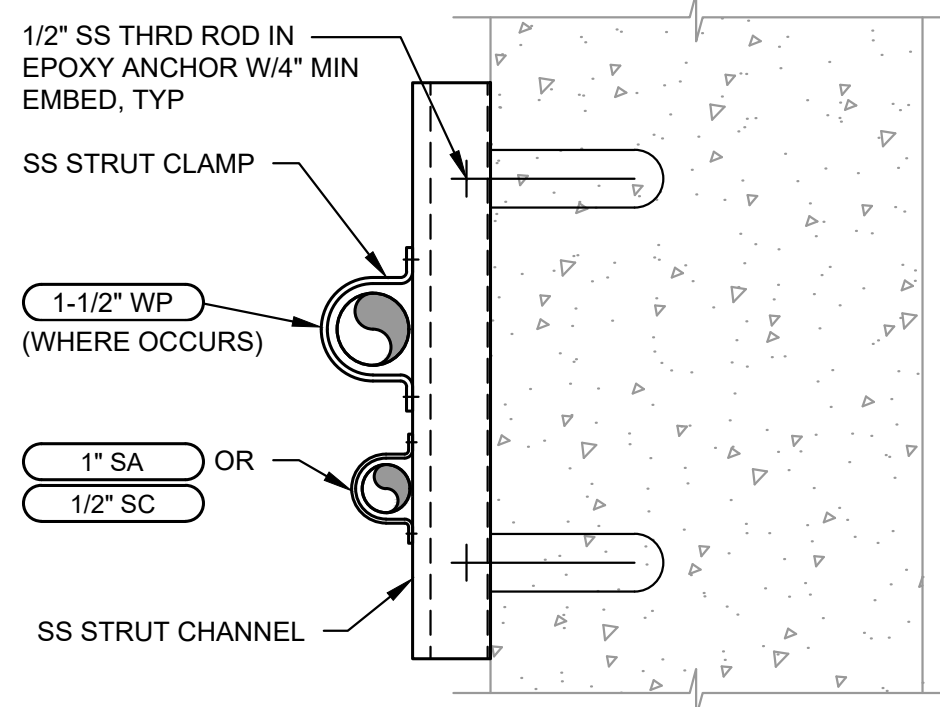
- NOTE:
- CONTRACTOR SHALL SCAN WALL FOR REBAR PRIOR TO DRILLING ANCHORS AND ADJUST SUPPORT LOCATIONS TO AVOID REBAR.

4
TYP PIPE SUPPORT DETAIL
SCALE: 3" = 1'-0"



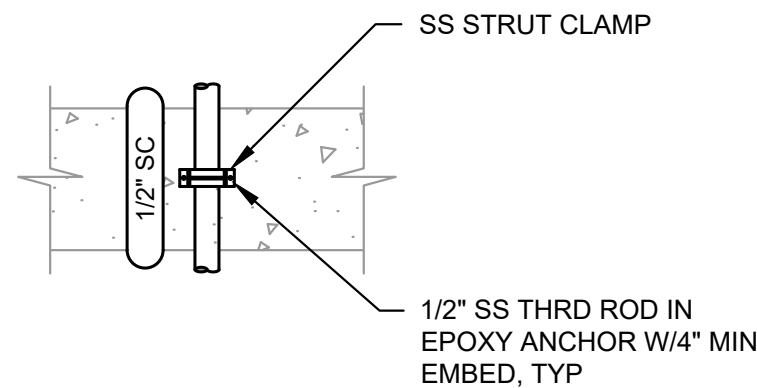
- NOTE:
- CONTRACTOR SHALL SCAN WALL FOR REBAR PRIOR TO DRILLING ANCHORS AND ADJUST SUPPORT LOCATIONS TO AVOID REBAR.

5
TYP PIPE SUPPORT DETAIL
SCALE: 3" = 1'-0"



- NOTES:
- CONTRACTOR SHALL SCAN WALL/CEILING FOR REBAR PRIOR TO DRILLING ANCHORS AND ADJUST SUPPORT LOCATIONS TO AVOID REBAR.
 - THIS DETAIL APPLIES TO BOTH WALL AND CEILING APPLICATIONS WHERE THEY OCCUR.

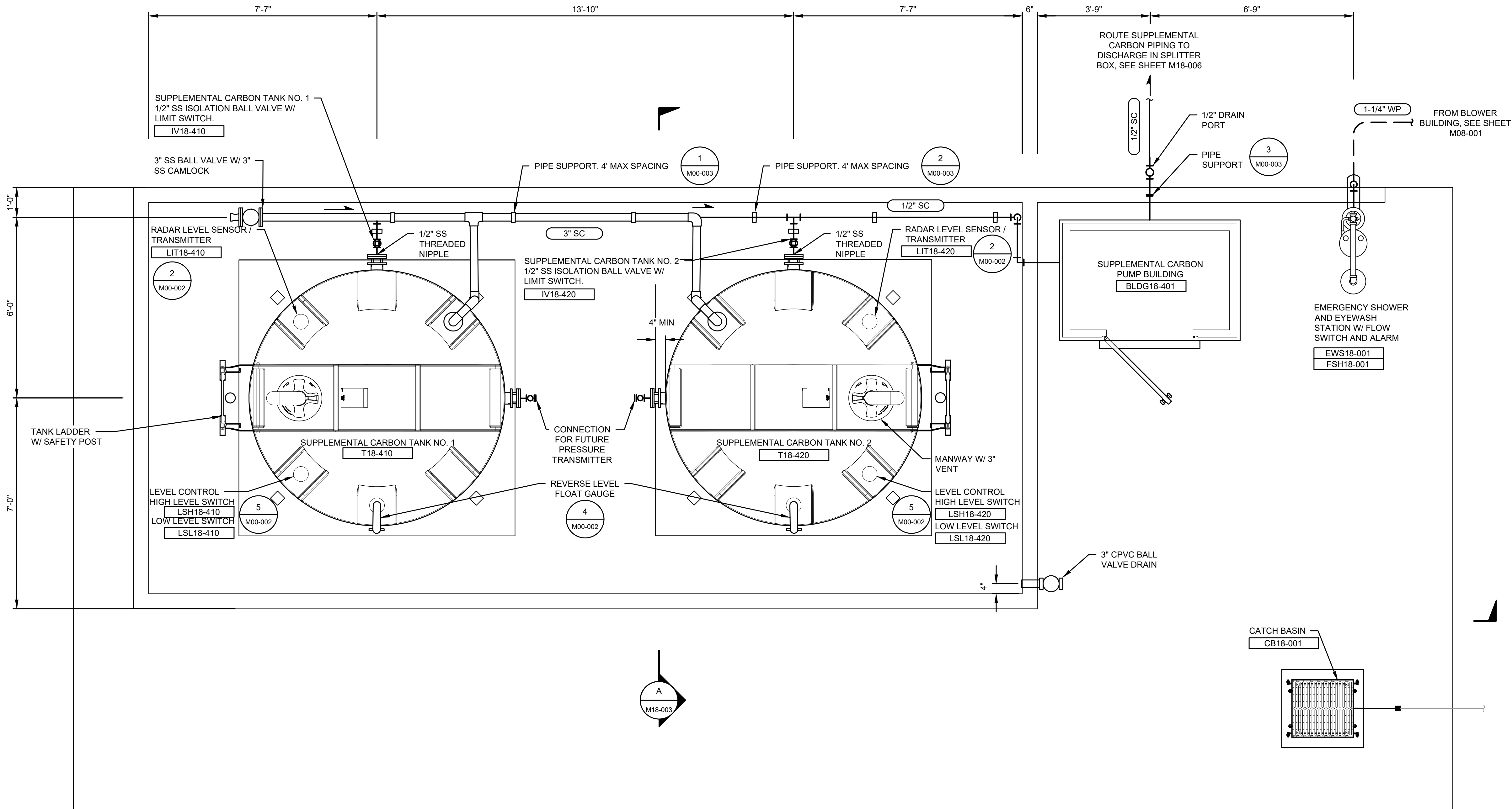
6
TYP PIPE SUPPORT DETAIL
SCALE: 3" = 1'-0"



- NOTE:
- CONTRACTOR SHALL SCAN WALL FOR REBAR PRIOR TO DRILLING ANCHORS AND ADJUST SUPPORT LOCATIONS TO AVOID REBAR.

7
TYP PIPE SUPPORT DETAIL
SCALE: 3" = 1'-0"

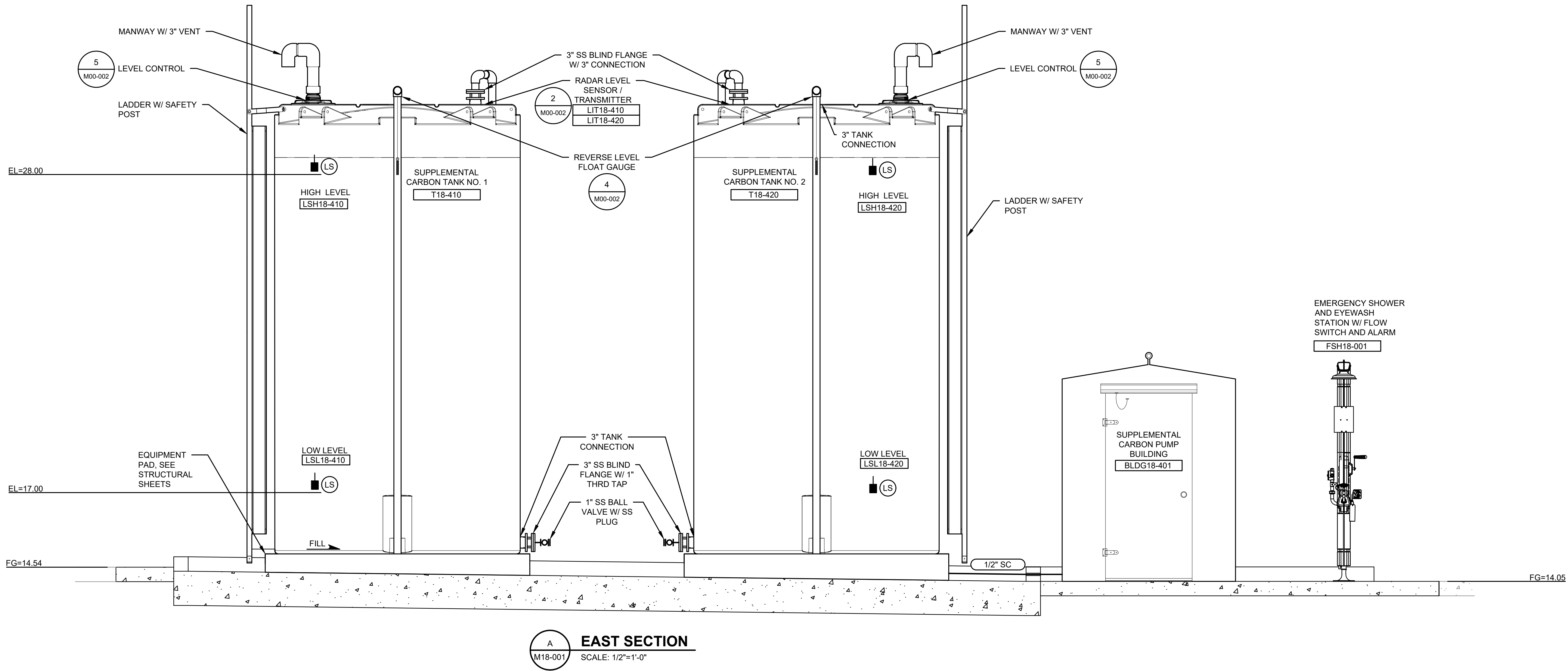
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**6,000 GALLON SUPPLEMENTAL CARBON
STORAGE TANKS MECHANICAL PLAN**

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

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

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0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

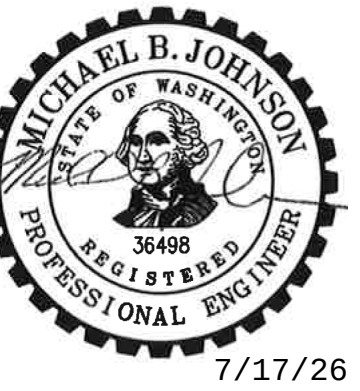
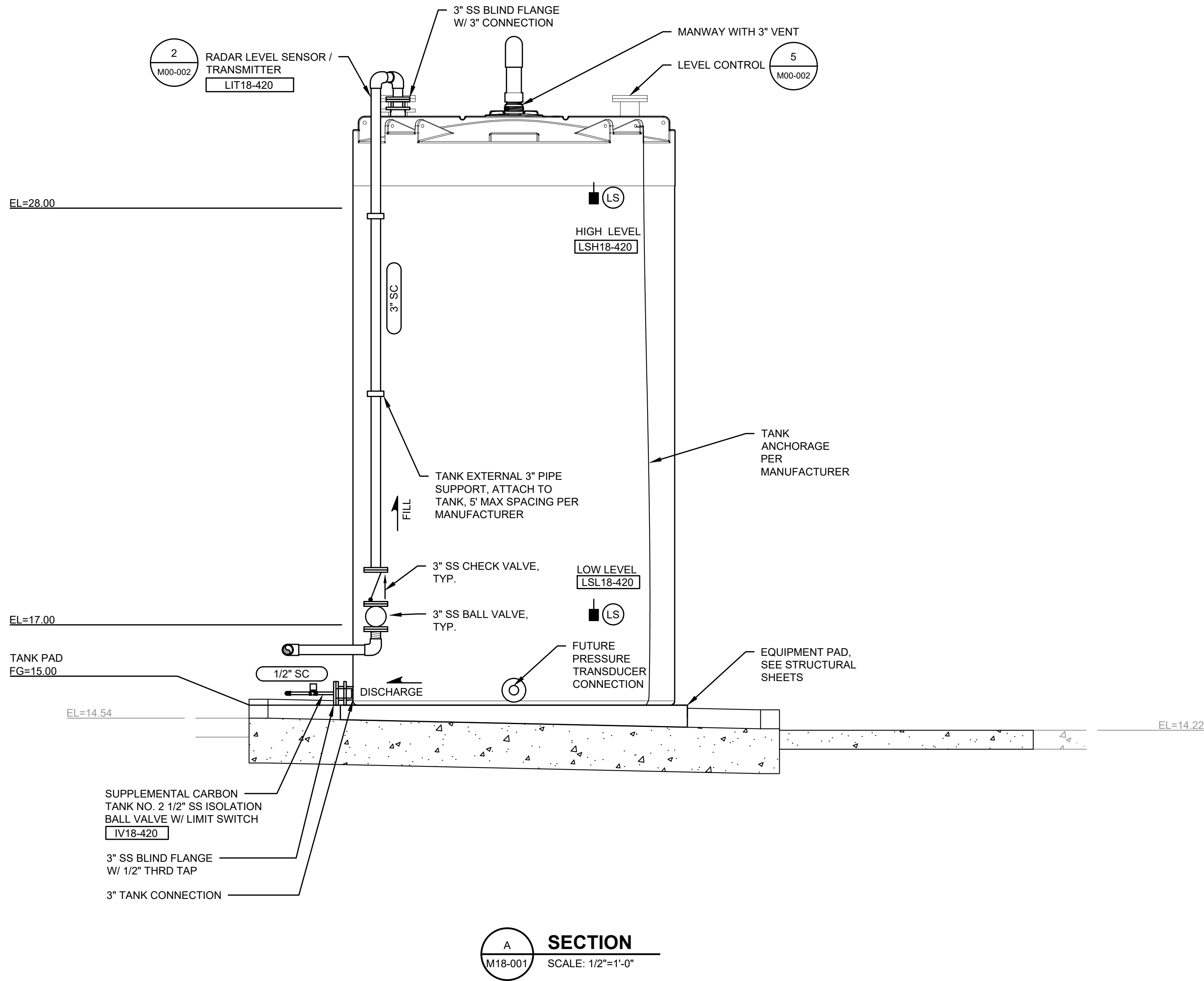
MECHANICAL

**SUPPLEMENTAL
CARBON STORAGE
TANK SECTION**

DRAWING: **M18-002**

SHEET: **21** OF: **34**

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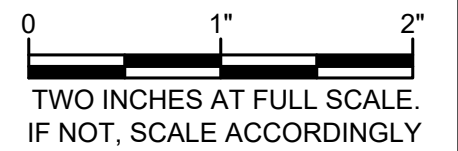
**LOTT CLEAN
WATER ALLIANCE
SUPPLEMENTAL
CARBON FEED
UPGRADE**
500 ADAMS ST NE
OLYMPIA, WA 98501

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CHECKED BY:	SLG
DRAWN BY:	TAR
DESIGNER:	SLG
G & O JOB NO.:	25258
FILE:	M18_T_PLN.DWG



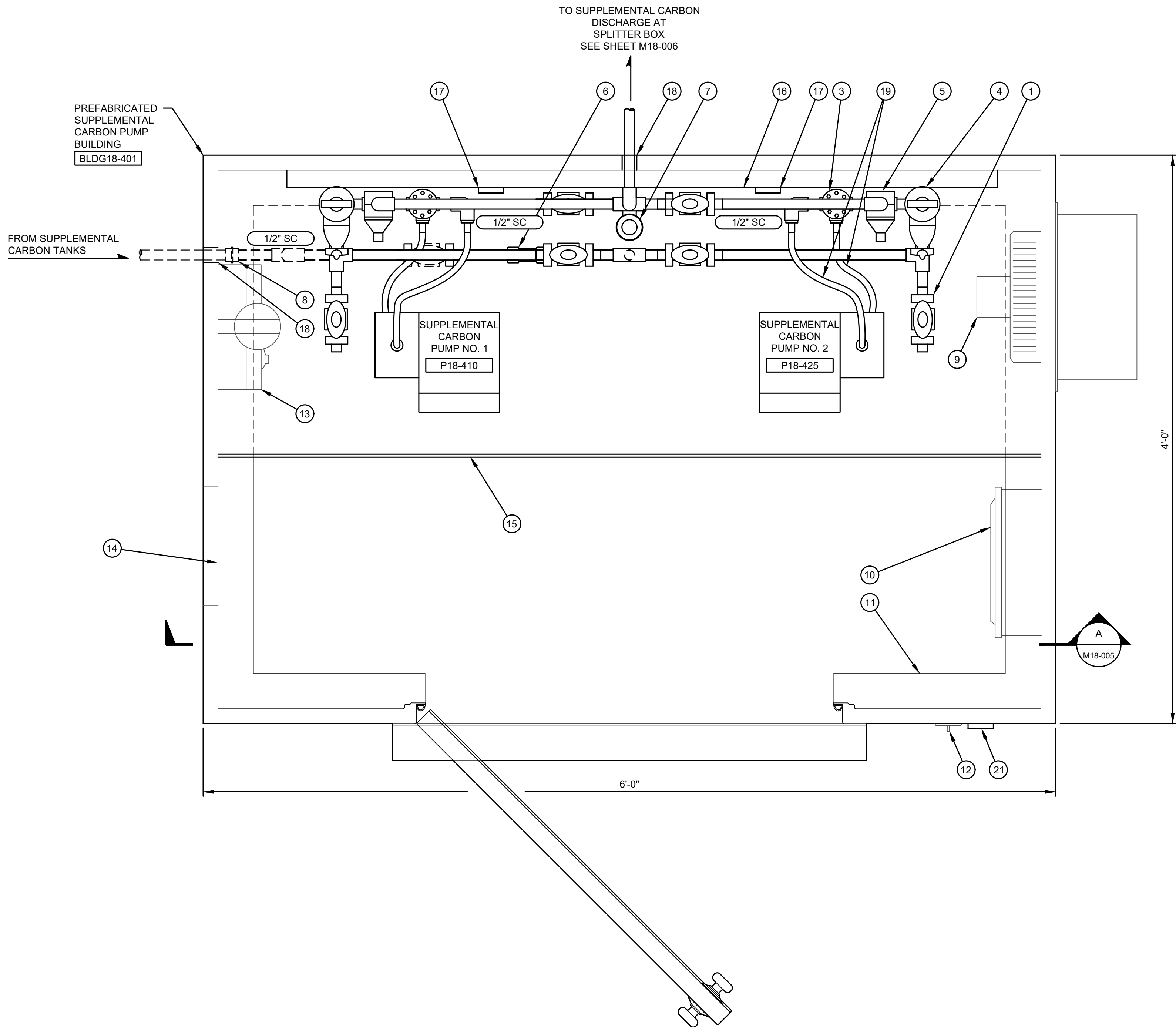
MECHANICAL

**SUPPLEMENTAL
CARBON STORAGE
TANK SECTION**

DRAWING: **M18-003**

SHEET: **22** OF: **34**

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**SUPPLEMENTAL CARBON
PUMP BUILDING PIPING PLAN**
SCALE: 2"=1'-0"

CONSTRUCTION NOTES:

- 1/2" CPVC DIAPHRAGM VALVE
- 1/2" CPVC CHECK VALVE
- 1/2" CPVC PULSATION DAMPENER
- PRESSURE GAUGE
- 1/2" CPVC PRESSURE RELIEF VALVE
- 1/2" CPVC STRAINER WYE
- 1/2" CPVC CALIBRATION COLUMN
- 1/2" CPVC TO 1/2" S.S. TRANSITION COUPLING
- 650 CFM EXHAUST FAN W/ FIBERGLASS HOOD
- 125 A, NEMA 1 MAIN LUG CIRCUIT BREAKER PANEL
- 3" INTERNAL MOUNTING FLANGE, SECURE TO FOUNDATION PER BUILDING MANUFACTURER'S RECOMMENDATION
- LIGHT / FAN SWITCH
- 1500 WATT HEATER WITH GFCI OUTLET MOUNTED ABOVE
- 10"x10" FIBERGLASS INTAKE SHUTTER W/ INSECT SCREEN
- 2'x6' FRP SHELF, SECURED TO STRUCTURE WITH SUPPORT ARMS UNDERNEATH
- 60"x42" MARINE GRADE PLYWOOD BACKER BOARD SECURED TO BUILDING, SECURE 60"x42" FRP CHEMICAL SKID TO PLYWOOD.
- (2) GFCIs RECEPTACLES FOR PUMP NO. 1 AND 2
- PIPE PENETRATION PER BUILDING MANUFACTURER'S RECOMMENDATION.
- 1/2" TYGON LFL TUBING
- 100 WATT VAPOR-LIGHT INCANDESCENT LIGHT
- OUTDOOR 5 mA GFCI DUPLEX RECEPTACLE WITH CLEAR WATERPROOF COVER

NOTE:

- SEE E18-001 FOR ELECTRICAL.



7/17/26



**LOTT CLEAN
WATER ALLIANCE
SUPPLEMENTAL
CARBON FEED
UPGRADE**
500 ADAMS ST NE
OLYMPIA, WA 98501

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BID

ISSUE DATE:	JULY 2026
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APPROVED BY:	MBJ
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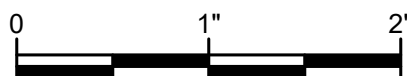
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DRAWN BY:	TAR
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DESIGNER:	SLG
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FILE:	M18_PIPE_PLN.DWG
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TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

MECHANICAL

**SUPPLEMENTAL
CARBON PUMP
BUILDING PIPING PLAN**

DRAWING: **M18-004**

SHEET: **23** OF: **34**



1. SEE E18-001 FOR ELECTRICAL.

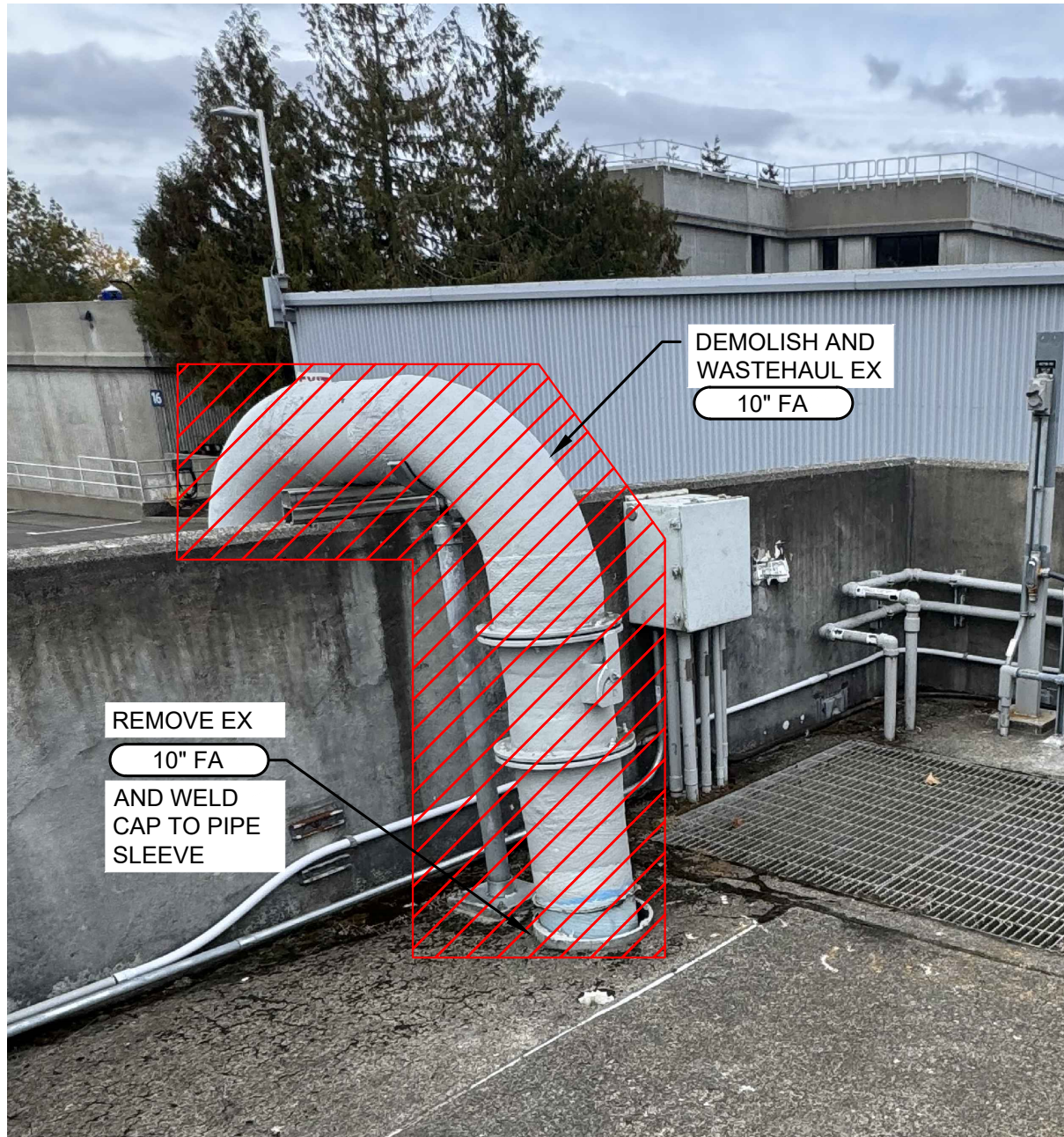


PHOTO 1
EX 10" FA DEMO



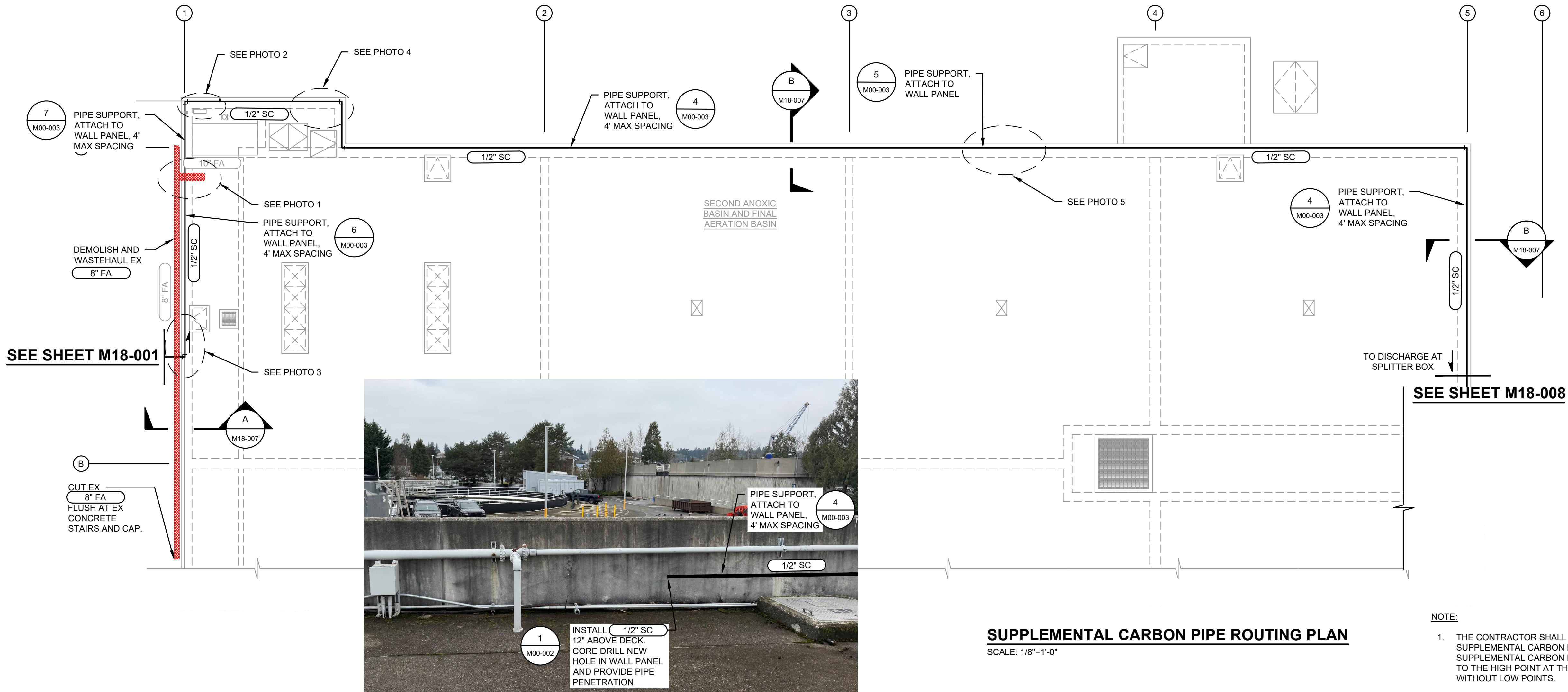
PHOTO 2
SUPPLEMENTAL CARBON PIPE ROUTING



PHOTO 4
SUPPLEMENTAL CARBON PIPE ROUTING



PHOTO 5
SUPPLEMENTAL CARBON PIPE ROUTING

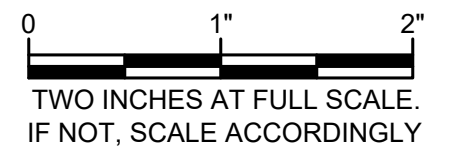


SUPPLEMENTAL CARBON PIPE ROUTING PLAN
SCALE: 1/8"=1'-0"



PHOTO 3
SUPPLEMENTAL CARBON PIPE ROUTING

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DRAWN BY: TAR		
DESIGNER: SLG		
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FILE: M18_AB_PLN_SEC.DWG		



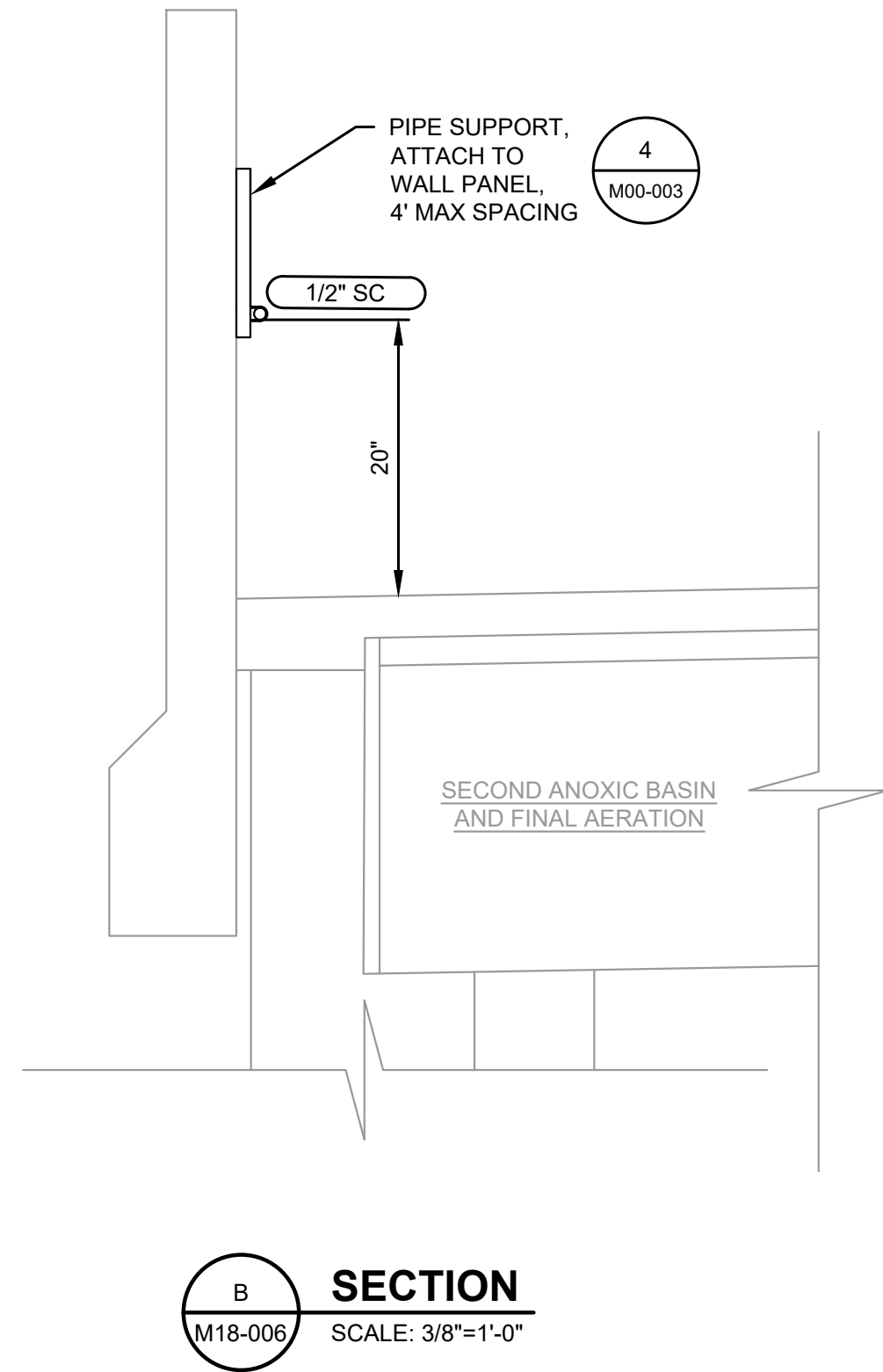
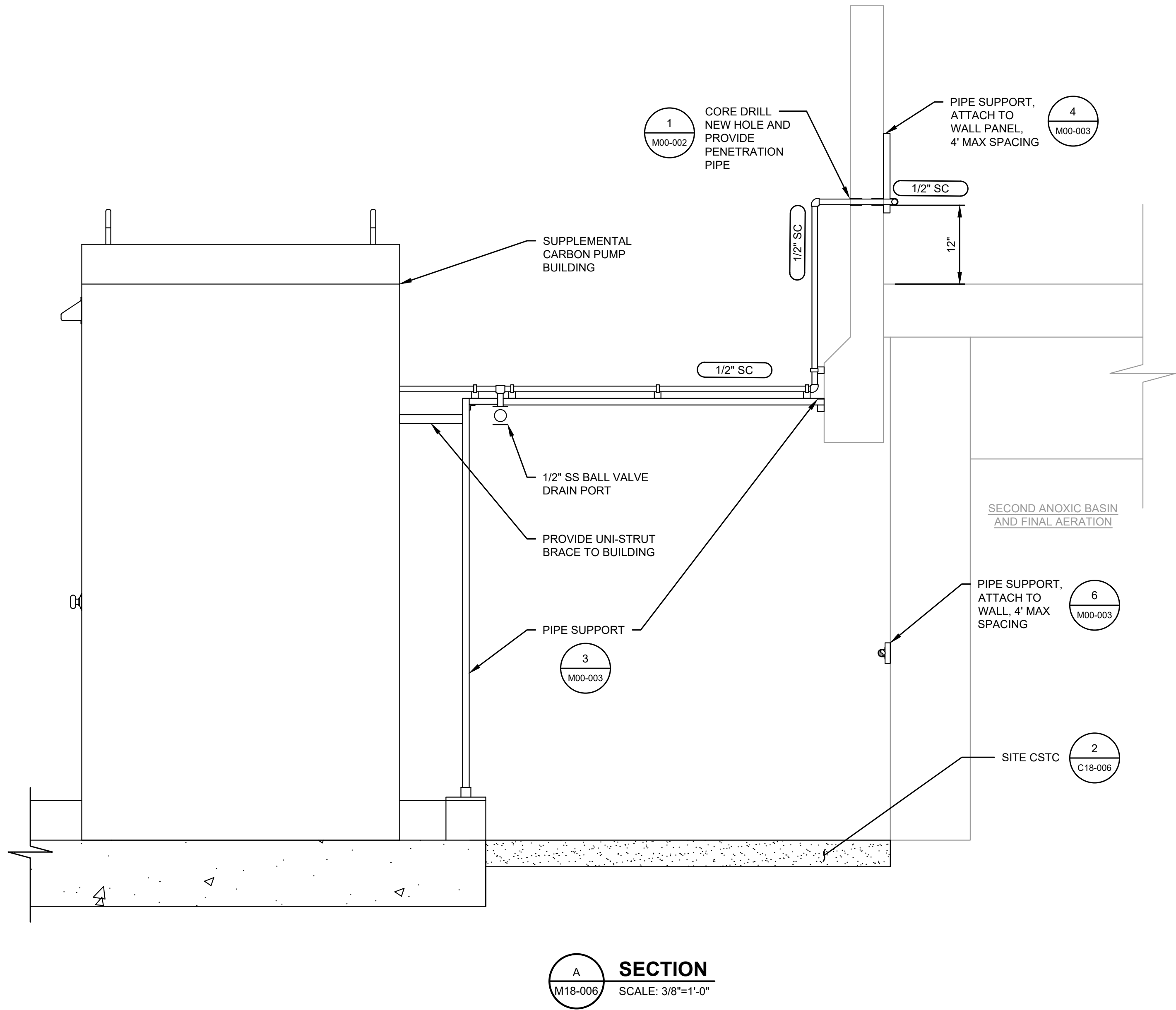
MECHANICAL

**SUPPLEMENTAL
CARBON PIPE
ROUTING PLAN AND
PHOTOS**

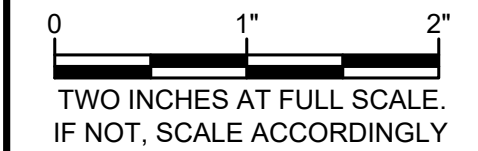
DRAWING: **M18-006**

SHEET: **25** OF: **34**

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FILE: M18_AB_PLN_SEC.DWG		



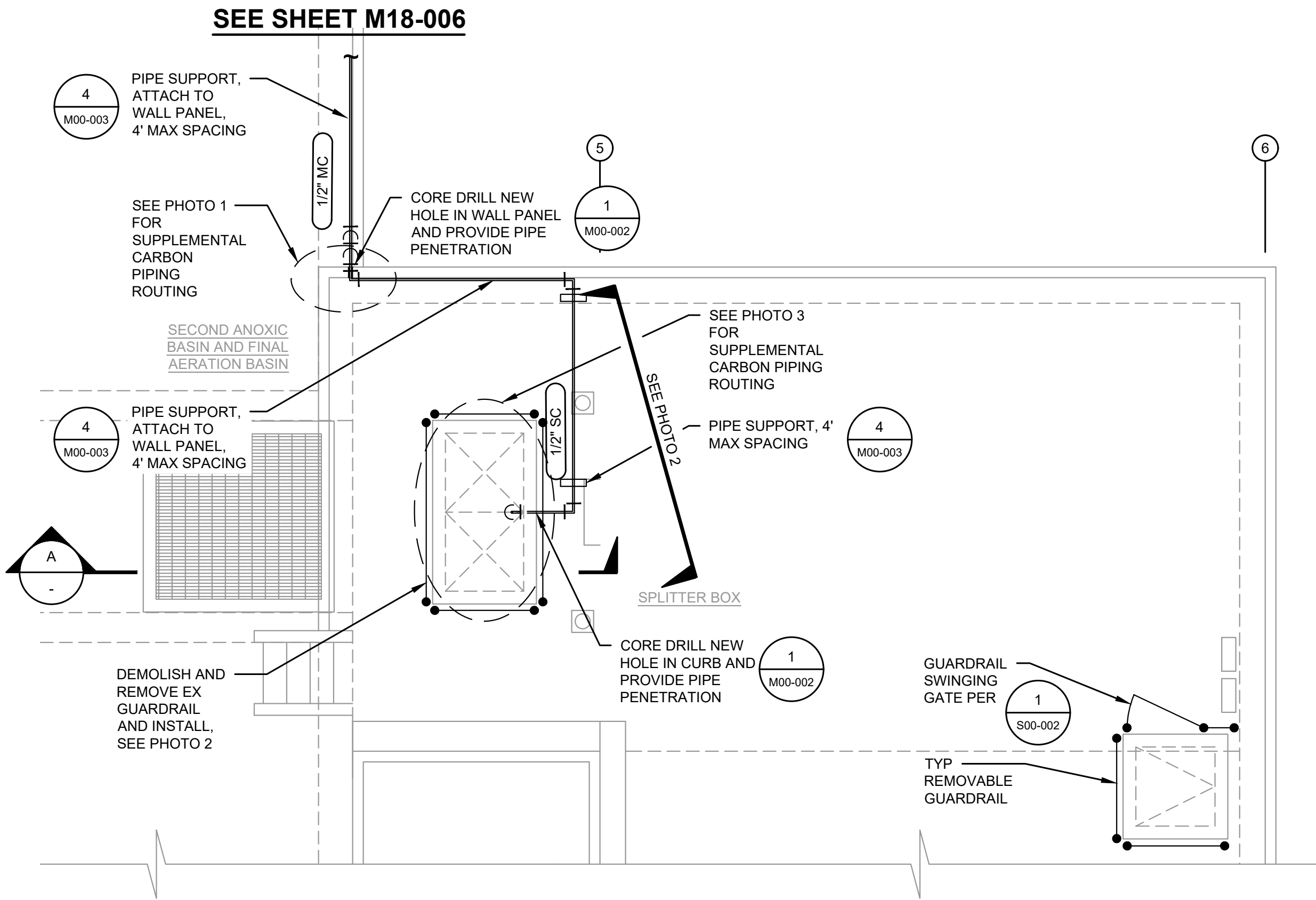
MECHANICAL

**SUPPLEMENTAL
CARBON PIPE
ROUTING SECTIONS**

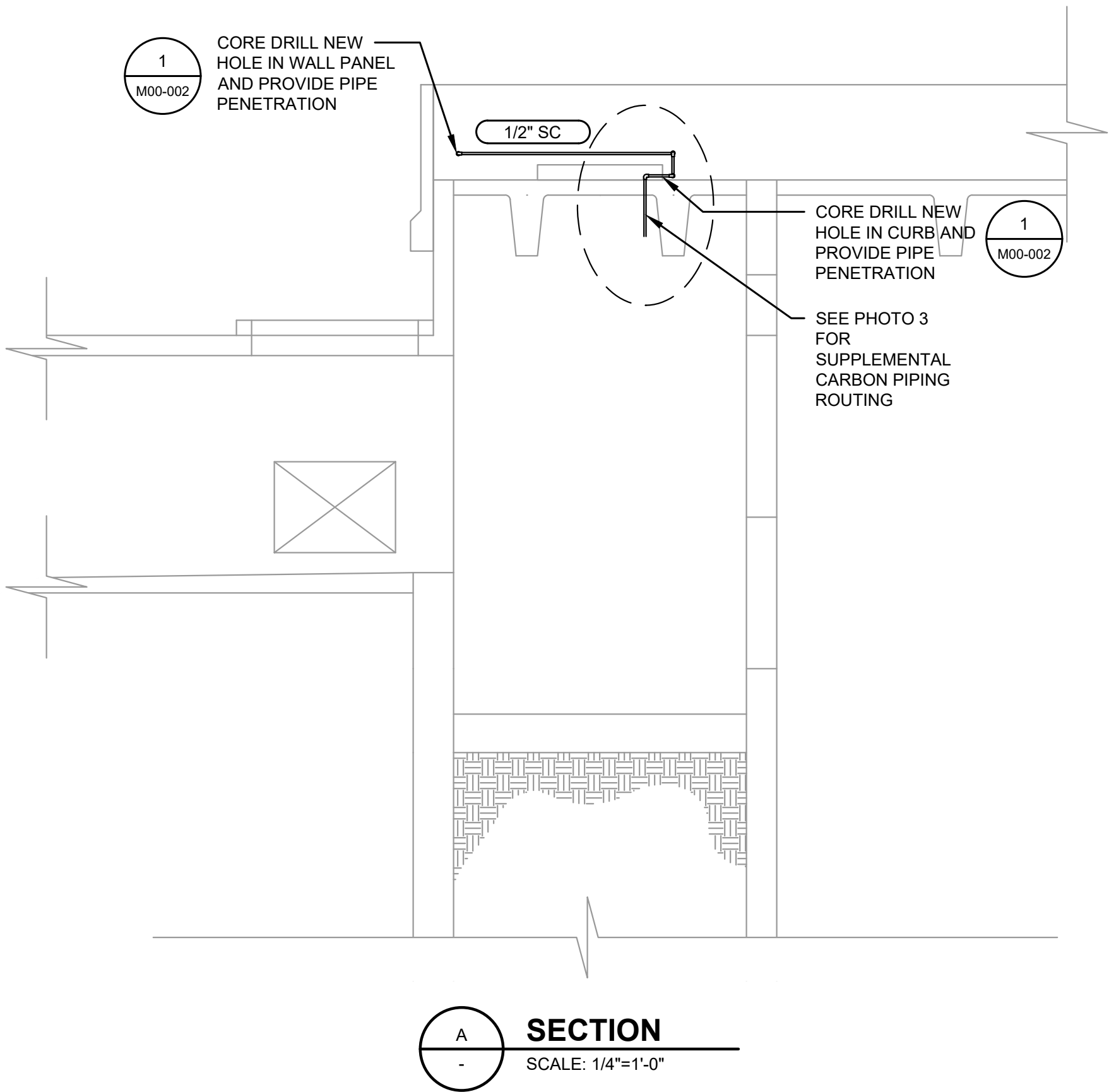


PHOTO 1
SUPPLEMENTAL CARBON PIPING ROUTING

- NOTE:**
1. CONTRACTOR SHALL SCAN WALL FOR REBAR PRIOR TO CORE DRILLING THE WALL. ADJUST LOCATION OF CORE DRILL TO MISS REBAR.



SPLITTER BOX PLAN
SCALE: 1/4"=1'-0"



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

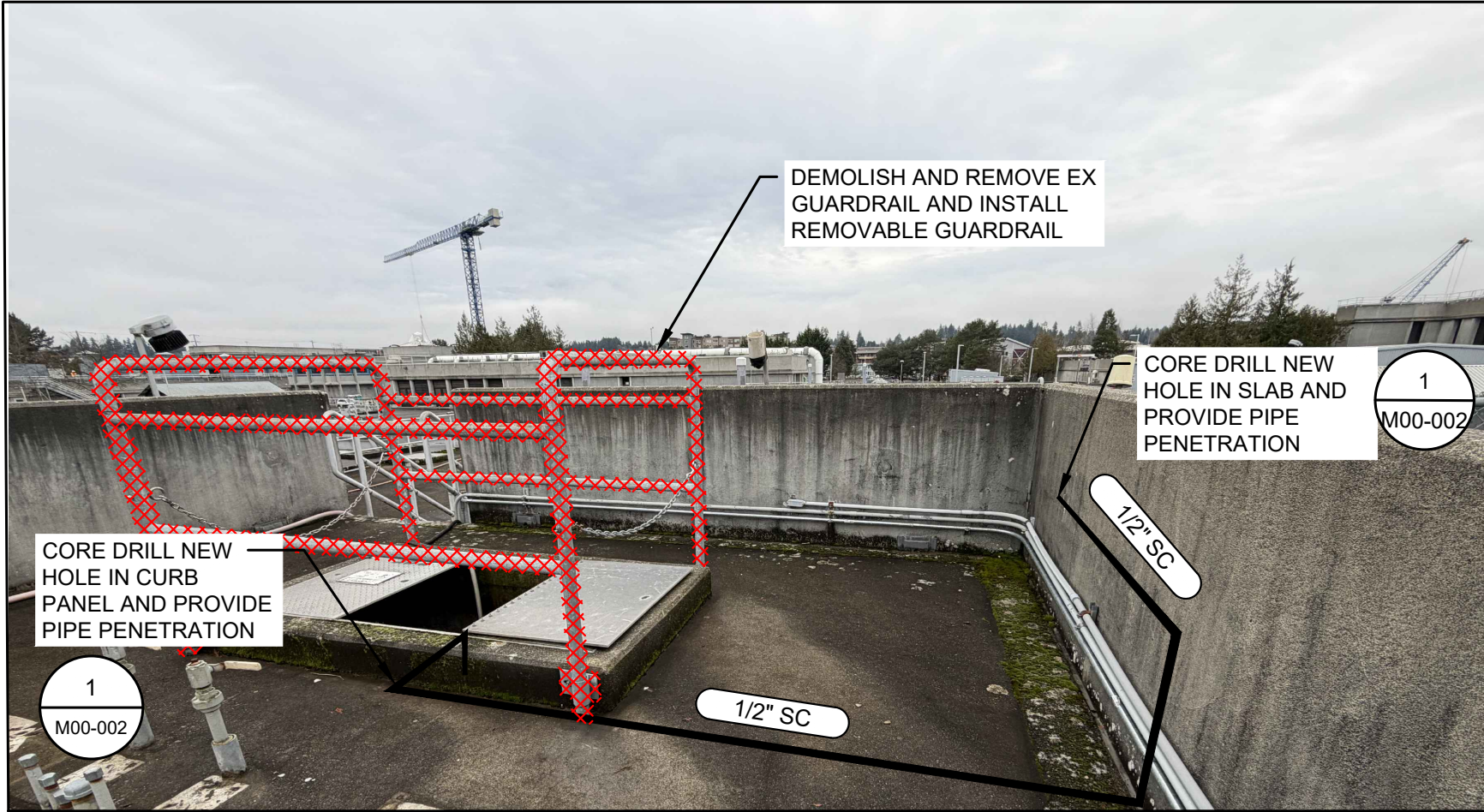


PHOTO 2
SUPPLEMENTAL CARBON PIPING ROUTING

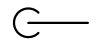
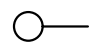
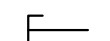
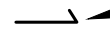
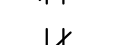
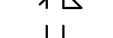
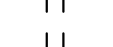
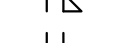
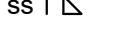
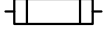
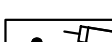
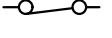
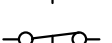
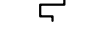
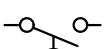
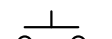
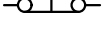
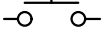
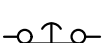
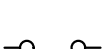
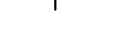
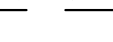
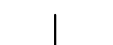
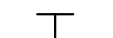
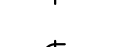
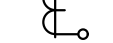
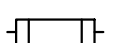
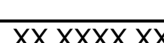
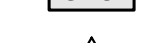
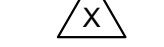
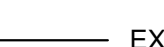
- NOTE:**
1. CONTRACTOR SHALL SCAN WALL AND CURB FOR REBAR PRIOR TO CORE DRILLING THE WALL. ADJUST LOCATION OF CORE DRILL TO MISS REBAR.



PHOTO 3
SUPPLEMENTAL CARBON PIPING ROUTING

- NOTE:**
1. CONTRACTOR SHALL SCAN WALL AND CURB FOR REBAR PRIOR TO CORE DRILLING THE WALL. ADJUST LOCATION OF CORE DRILL TO MISS REBAR.

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ABBREVIATIONS										
A AC AF AI AIC AL AM AO AT ATS AWG BATT BKR CP CPT CST CT CU DC DI DIST DO DTWV EIOM ETC ETM ENCL EXIST FDR FLA FU	AMPERE (AMP) ALTERNATING CURRENT BREAKER FRAME SIZE (IN AMPS) ANALOG INPUT AMPERES-INTERRUPTING CAPACITY ALUMINUM AMMETER ANALOG OUTPUT BREAKER TRIP (SETTING IN AMPS) AUTOMATIC TRANSFER SWITCH AMERICAN WIRE GAUGE BATTERY BREAKER CONTROL PANEL CONTROL POWER TRANSFORMER CONTROL STATION CURRENT TRANSFORMER COPPER DIRECT CURRENT DISCRETE INPUT DISTRIBUTION DISCRETE OUTPUT DISCHARGE-TO-WASTE VALVE EXTENDED I/O MODULE ELAPSED TIME/COUNTER METER ELAPSED TIME METER ENCLOSURE EXISTING FEEDER FULL LOAD AMPS FUSE	FVNR FVR FY G GEC GFCI GND H HA HIM HMI HOA HOR HP JCXXX JPXXX JSXXX KA KAIC KCM KV kVA kVAh kVAR kVARh kW kWh LA LAN LFMC LINE	FULL VOLTAGE NON REVERSING FULL VOLTAGE REVERSING FLOW COMPUTATION GROUND CONDUCTOR GROUNDING ELECTRODE CONDUCTOR GROUND FAULT CIRCUIT INTERRUPTER GROUND HORN HAND-AUTO HUMAN INTERFACE MODULE HUMAN MACHINE INTERFACE HAND-OFF-AUTO HAND-OFF-REMOTE HORSEPOWER JUNCTION BOX, CONTROL JUNCTION BOX, POWER JUNCTION BOX, SIGNAL KILOAMPERES KILOAMPERES-INTERRUPTING CAPACITY THOUSAND CIRCULAR MILLS KILOVOLT KILOVOLT-AMPERE KILOVOLT-AMPERE HOUR KILOVAR (REACTIVE KILOVOLT-AMPERE) KILOVAR-HOUR KILOWATT KILOWATT-HOUR LIGHTNING ARRESTER LOCAL AREA NETWORK LIQUIDTIGHT FLEXIBLE METAL CONDUIT POWER LINE/POWER BLOCK	LV M mA MCC MCM MCP MOV MS MSDS MTS MTU mV MW N NEC NEMA NESC NFFPA NCPD OE OIU OL OLR P PF PH PLC PMR PMU POT	LOW VOLTAGE MAGNETIC CONTACTOR MILLIAMPERES MOTOR CONTROL CENTER THOUSAND CIRCULAR MILLS MOTOR CIRCUIT PROTECTOR METAL OXIDE VARISTOR MOTOR STARTER MOTOR SAFETY DISCONNECT SWITCH MANUAL TRANSFER SWITCH MASTER TELEMETRY UNIT MILLIVOLT MEGAWATT NEUTRAL CONDUCTOR NATIONAL ELECTRICAL CODE NATIONAL ELECTRIC MANUFACTURERS ASSOC. NATIONAL ELECTRICAL SAFETY CODE NATIONAL FIRE PROTECTION AGENCY OVERCURRENT PROTECTION DEVICE OVERHEAD ELECTRIC OPERATOR INTERFACE UNIT OVERLOAD, THERMAL OVERLOAD RELAY POLE POWER FACTOR PHASE PROGRAMMABLE LOGIC CONTROL PHASE MONITOR RELAY POWER MONITOR UNIT POTENTIOMETER	PT PVC PVC-RGS RGS RVSS RTU S SHD SPD SS SUSE ENTRANCE TB TDAD TDAE TQS TSP TST T/M UPS V VA VFD VMR W WAN Wh WP XFMR	POTENTIAL TRANSFORMER POLYVINYL CHLORIDE CONDUIT PVC COATED RGS RIGID GALVANIZED STEEL CONDUIT REDUCED-VOLTAGE SOFT START REMOTE TELEMETRY UNIT SECOND SHIELDED SURGE PROTECTION DEVICE STAINLESS STEEL SUITABLE FOR USE AS A SERVICE TERMINAL BLOCK TIME DELAY AFTER DE-ENERGIZATION TIME DELAY AFTER ENERGIZATION TORQUE SWITCH TWISTED SHIELDED PAIR TWISTED SHIELDED TRIAD THERMAL MAGNETIC UNINTERRUPTIBLE POWER SUPPLY VOLT VOLT-AMPERE VARIABLE FREQUENCY DRIVE VOLTAGE MONITORING RELAY WATT WIDE AREA NETWORK WATT-HOUR WEATHER PROOF POWER TRANSFORMER			
SYMBOL LEGEND										
PLAN SYMBOLS		ELEMENTARY WIRING DIAGRAM SYMBOLS			ONE LINE SYMBOLS					
 CONDUIT DOWN  CONDUIT UP  CONDUIT STUB UP/END CAP  DISCONNECT SWITCH  FUSED DISCONNECT SWITCH  COMMUNICATION OUTLET  TELEPHONE OUTLET  SPECIAL OUTLET  SIMPLEX RECEPTACLE  DUPLEX RECEPTACLE  DUPLEX RECEPTACLE (HIDDEN)  QUAD RECEPTACLE  QUAD RECEPTACLE (HIDDEN)  FLOOR MOUNTED RECEPTACLE  LED LIGHT POLES SINGLE DUAL  #12 AWG GROUND CONDUCTOR  #12 AWG NEUTRAL CONDUCTOR  #12 AWG BRANCH CONDUCTOR CROSSMARKS INDICATE QUANTITY AND USE OF CONDUCTORS \$ x LIGHT SWITCH, X = 3 = 3-WAY K = KEY 4 = 4-WAY M = MOTION  SEAL OFF  MOTOR X = HORSE POWER  XX= CV CHECK VALVE FE FLOW ELEMENT FI FLOW INDICATOR FIT FLOW INDICATOR/TRANSMITTER FS FLOW SWITCH FT FLOW TRANSMITTER HD HEAT DETECTOR IS INFLUENT SAMPLER ISW INTRUSION SWITCH J JUNCTION BOX L LIMIT SWITCH LE LEVEL ELEMENT LI LEVEL INDICATOR LI LEVEL INDICATOR/TRANSMITTER LS LEVEL SWITCH/FLOAT LT LEVEL TRANSDUCER MDT MOTION DETECTOR MFM MAGNETIC FLOW METER MOV MOTOR OPERATOR VALVE PC PHOTO CELL PE PRESSURE ELEMENT PI PRESSURE INDICATOR PIT PRESSURE INDICATOR TRANSMITTER PS PRESSURE SWITCH PT PRESSURE TRANSMITTER SD SMOKE DETECTOR SV SOLENOID VALVE T THERMOSTAT		 CONNECTION POINT  TERMINAL POINT  SCREW TERMINAL  MOUNTED ON OUTER DOOR  MOUNTED ON INNER DOOR  LOCKABLE DEVICE  NC CONTACT  NC CONTACTOR  NO CONTACT  NO CONTACTOR  SOLID STATE CONTACTOR  -[ALT]- ALTERNATING RELAY  -[CR]- CONTROL RELAY  -[C]- CONTACTOR  -[C]BP- "BYPASS" CONTACTOR  -[C]IC- "ISOLATION" CONTACTOR  -[C]SS- SOLID STATE CONTACT RELAY  -[M]- MOTOR RELAY  -[TR]- TIME DELAY RELAY (TDAE)  -[TR]- TIME DELAY RELAY (TDAD)  LIGHT EMITTING DIODE OR  DIODE  LIGHT FIXTURE X = REFERENCE LIGHTING SCHEDULE IF APPLICABLE  "PUSH TO TEST" LED PILOT LIGHT A = AMBER R = RED B = BLUE W = WHITE G = GREEN  SELECTOR SWITCHES  HAND-OFF-AUTO SWITCHES  ON-OFF-RESET SWITCH			 GFCI DUPLEX OUTLET  DUPLEX OUTLET  FUSE  FUSED SWITCH W/ LED  N.O. TOGGLE SPST SWITCH  N.C. TOGGLE SPST SWITCH  N.O. TEMPERATURE SWITCH  N.C. TEMPERATURE SWITCH  N.O. PRESSURE SWITCH  N.C. PRESSURE SWITCH  N.O. LIMIT SWITCH  N.C. LIMIT SWITCH  N.O. FLOW SWITCH  N.C. FLOW SWITCH  N.O. FLOAT SWITCH  N.C. FLOAT SWITCH  N.O. DIFFERENTIAL PRESSURE SWITCH  N.C. DIFFERENTIAL PRESSURE SWITCH  N.O. PUSHBUTTON  N.C. PUSHBUTTON  N.O. MUSHROOM PUSHBUTTON  N.C. MUSHROOM PUSHBUTTON  TDAE, N.O., TIME DELAY CLOSE, INSTANTANEOUS RE-OPEN  TDAE, N.C., TIME DELAY OPEN, INSTANTANEOUS RE-CLOSE  TDAD, N.O., INSTANTANEOUS CLOSE, TIME DELAY RE-OPEN  TDAD, N.C., INSTANTANEOUS OPEN, TIME DELAY RE-CLOSE  GROUND EQUIPMENT/CHASSIS  GROUND, ISOLATED  RESISTOR  POTENTIOMETER  SOLENOID VALVE COIL  METAL OXIDE VARISTOR (MOV)  TRANSFORMER WINDING/ REACTOR/CHOKE			 CAPACITOR  REACTOR/CHOKE  CIRCUIT BREAKER, MAGNETIC ONLY  CIRCUIT BREAKER, THERMAL-MAGNETIC  CONNECTION POINT  CONTACTOR  CURRENT TRANSFORMER  FUSE  FUSIBLE DISCONNECT  ANALOG AMMETER  THERMAL OVERLOAD RELAY  GROUND EQUIPMENT/CHASSIS  SOLID NEUTRAL  TRANSFORMER		
GENERAL SYMBOLS										
 XXXXX CONDUIT  XX XXXX XX TAG LABEL  GFCI GFCI PANELBOARD CIRCUIT  X AREA ID TAG  XXXX DEMOLITION (DEMO)  INTRINSICALLY SAFE AREA  CLEARANCE AREA  EXPOSED CONDUIT  HIDDEN OR UNDERGROUND CONDUIT  GROUNDING ELECTRODE CONDUCTORS NOTE: UNLESS NOTED OTHERWISE. NOTE: THIS IS A GENERAL LEDGER SHEET. ALL SYMBOLS MAY NOT APPLY.										

GENERAL ELECTRICAL NOTES:

SITE AND BUILDING PLANS:

- CONDUIT ROUTING IS SHOWN FOR CLARITY. ACTUAL ROUTING MAY BE MORE DIRECT AND IS LEFT TO THE CONTRACTOR FOLLOWING SPECIFICATIONS 26 05 33. NON-ELECTRICAL BURIED PIPING HAS ROUTING PRIORITY OVER ELECTRICAL BURIALS.
- ALL TRENCHING SHALL BE PER ELECTRICAL TRENCHING DETAIL, REFERENCE DETAIL 1 ON DRAWING E00-003.
- THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO PROTECT EXISTING UTILITIES.
- THROUGHOUT THIS DOCUMENT, THE TERMS "DEMO", "DEMOLISH", OR "REMOVE" MEAN TO REMOVE, THEN WASTEHAUL OR RETURN TO THE OWNER, PER THE OWNER'S DIRECTION.
- THROUGHOUT THIS DOCUMENT, THE TERMS "PROVIDE" OR "INSTALL" MEAN TO PROVIDE AND INSTALL.

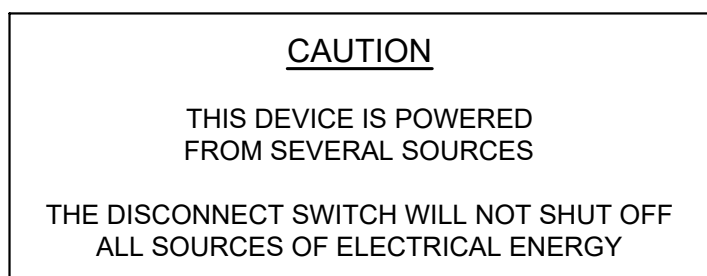
GENERAL CONTROL PANEL NOTES:

- UNLESS SPECIFICALLY NOTED OTHERWISE ON THE CONTROL PANEL DETAILS, THE FOLLOWING NOTES APPLY.
 - ALL ENCLOSURES SHALL BE PROVIDED WITH AN ENGRAVED NAMEPLATE CORRESPONDING TO THE ASSOCIATED TAG ID NUMBER AND TAG DESCRIPTION.
- WHERE PANELS CONTAIN POWER FROM MULTIPLE SOURCES, PROVIDE A YELLOW SAFETY STICKER, APPROXIMATELY 2" x 3", AS SHOWN BELOW.



NOTE: MOTOR STARTER NAMEPLATES SHALL BE BLACK WITH WHITE LETTERING, REFERENCE MCC PANEL DOOR NAMEPLATE SCHEDULE.

- WHERE PANELS CONTAIN POWER FROM MULTIPLE SOURCES, PROVIDE A YELLOW SAFETY STICKER, APPROXIMATELY 2" x 3", AS SHOWN BELOW.



INDOOR INSTALLATIONS:

- ALL EXPOSED PORTIONS OF CONDUITS FROM UNDERGROUND AND ABOVEGROUND SHALL BE RGS.
- PANELS MOUNTED ON INTERIOR WALLS SHALL BE SUPPORTED TO THE WALL WITH 1/2-INCH (MINIMUM) GALVANIZED UNISTRUT.

PULLBOX/VAULT/OUTDOOR INSTALLATIONS:

- ALL MOUNTING FASTENERS (NUTS, BOLTS SCREWS, WASHERS, ETC.) SHALL BE 316 STAINLESS STEEL.
- ALL MOUNTING BRACKETS AND BRACING SHALL BE 316L STAINLESS STEEL.
- ALL EXPOSED PORTIONS OF CONDUITS SHALL BE RGS UNLESS SPECIFICALLY NOTED OTHERWISE.
- ALL CONNECTIONS INTO ENCLOSURES SHALL BE WATERTIGHT, MADE INTO THE BOTTOM OF THE PANELS, USING MYER-TYPE HUBS. REFERENCE SPECIFICATION 26 05 33.
- PANELS MOUNTED ON VERTICAL WALLS SHALL BE SUPPORTED TO THE WALL WITH 1/2-INCH (MINIMUM) HOT DIPPED GALVANIZED UNISTRUT.
- ENCLOSURE SHALL INCLUDE WELDED MOUNTING TABS. HOLES SHALL NOT BE DRILLED THROUGH ENCLOSURE SURFACES FOR MOUNTING PURPOSE.

CABLE AND CONDUIT NOTES:

- REFERENCE SPECIFICATION 26 05 19 FOR CONDUCTORS, INSTRUMENTATION, COMMUNICATION, AND OTHER SPECIAL CABLES AND CONDUCTORS.
- REFERENCE SPECIFICATION 26 05 33 FOR RACEWAYS, BOXES, AND JUNCTION BOX TYPES, AND HANDHOLE, PULLBOX, AND VAULT CONDUIT INSTALLATION METHODS.
- CONDUIT NUMBERS ARE FORMATTED AS:

TAANN(S) WHERE: T = TYPE (P=POWER; C=CONTROL; S=SIGNAL/INSTRUMENTATION)
AA= AREA NUMBER (01-99)
NN= CONDUIT NUMBER WITHIN THE AREA (01-99)
S = SPARE CONDUIT (~ "TILDE") (IF APPLICABLE)

P0319- = AREA 03 POWER CONDUIT NO. 19, SPARE
C0112 = AREA 01 CONTROL CONDUIT NO. 12
S0521- = AREA 05 INSTRUMENTATION CONDUIT NO. 21, SPARE

- CABLE AND CONDUIT SCHEDULES:

- THE CABLE AND CONDUIT SCHEDULE PROVIDES CONDUIT NUMBER, SOURCE, DESTINATION, AND SIZE AS WELL AS CONDUCTOR AND CABLE REQUIREMENTS. REFERENCE SPECIFICATION 26 05 33 FOR CONDUIT COMPOSITION AND COATING.

- CONDUITS MARKED WITH "n" (WHERE n = 1, 2, OR 3) SHALL BE 100% CONTINUOUS PER SPECIFICATION 26 05 33.

SPECIFICALLY, CONDUITS MARKED WITH:

"1" NOT USED.

"2" NOT USED.

"3" DENOTE INSTRUMENTATION CIRCUITS THAT ARE NOT INTRINSICALLY SAFE.

- REGARDLESS OF THE TYPE OF CONDUIT BEING ROUTED TO A MOTOR, THE LAST 18 INCHES OF THE CONDUIT CONNECTING TO THE MOTOR SHALL BE LFNC.

READING ELECTRICAL SHEETS:

ELEMENTARY DIAGRAMS:

- ELEMENTARY DIAGRAMS ARE SHOWN IN LADDER LOGIC FORM WITH LINE NUMBERS FORMATTED AS:
SS.LL WHERE SS = SHEET NUMBER AND LL = LINE NUMBER
- RELAY COIL "TYPES" ARE INDICATED INSIDE THE COIL SYMBOL AS PER THE SYMBOL SCHEDULE ON THIS SHEET. THE COIL NUMBER IS OF THE FORMAT:
TTSS.LL.AA WHERE TT = RELAY TYPE (PER SYMBOL SCHEDULE)
SS.LL = AS DESCRIBED ABOVE
AA = ASSOCIATION WITH A DRIVE, CONTROLLER, CONTROL PANEL, ETC.
- RELAY CONTACTS ARE NUMBERED IN ASSOCIATION WITH THEIR COILS FOLLOWED BY "X" WHERE X IS THE CONTACT POLE NUMBER.

EXAMPLE: RELAY CONTACTS FOR A DPDT RELAY

POLE NUMBER	N.O. CONTACT REFERENCE	N.C. CONTACT REFERENCE
1:	12.04	NA
2:	13.04	13.05

LINE NUMBER SHEET NUMBER
N.O. = NORMALLY OPEN CONTACT
N.C. = NORMALLY CLOSED CONTACT.

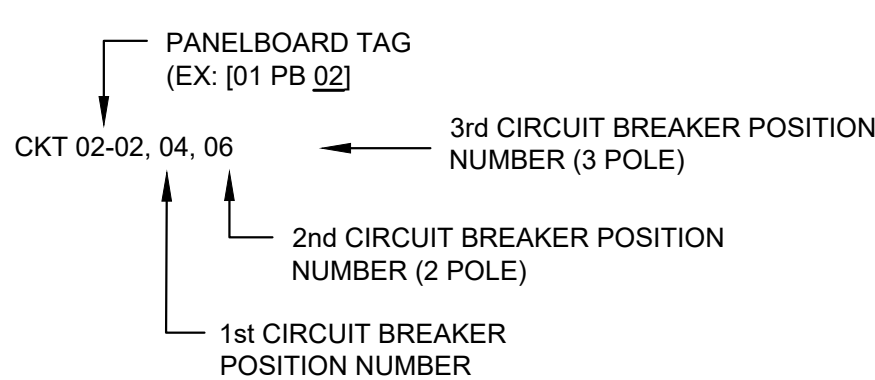
- CONTACTS AND ANALOG SIGNALS CONNECTED TO PLC I/O ARE FORMATTED AS:

*RR:SS:CC WHERE * DENOTES A PLC I/O CONNECTION
RR = PLC RACK NUMBER
SS = RACK SLOT NUMBER
CC = SLOT CHANNEL NUMBER

*TT:CC WHERE * DENOTES A PLC I/O CONNECTION
TT = I/O TYPE:
AI = ANALOG INPUT
AO = ANALOG OUTPUT
DI = DIGITAL INPUT
DO = DIGITAL OUTPUT
CC = EMBEDDED CHANNEL NUMBER

PANELBOARD CIRCUIT ASSIGNMENTS:

- LIGHTING FIXTURES AND RECEPTACLES ARE SHOWN WITH THEIR PANELBOARD CIRCUIT BREAKER NUMBER FOLLOWING THE FORMAT BELOW:

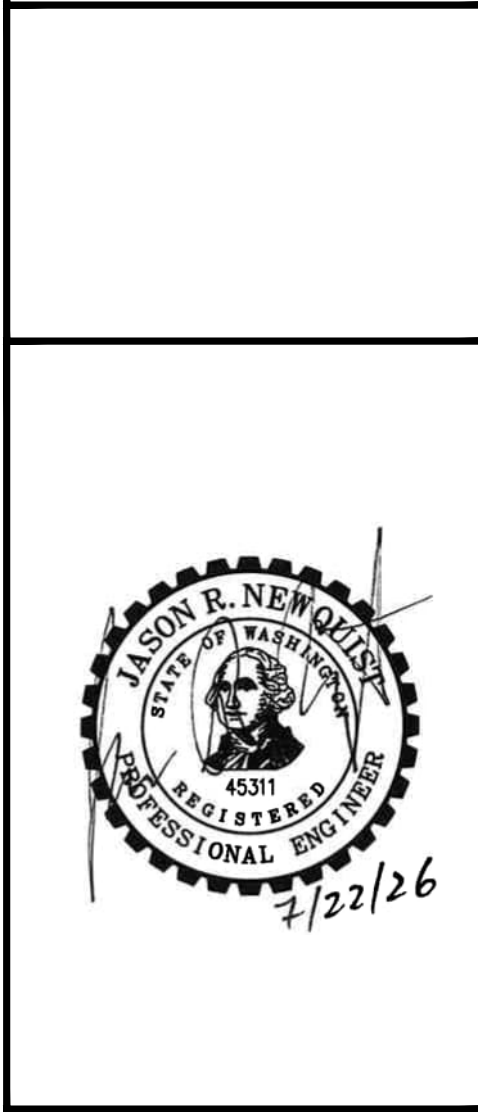


ELECTRICAL WORK SUMMARY:

THIS SUMMARY OF ELECTRICAL WORK IS INCLUDED AS A COURTESY AND IS INTENDED TO PROVIDE A GENERAL UNDERSTANDING OF ELECTRICAL DESIGN INTENT AND MAJOR ELECTRICAL CONSTRUCTION TASKS. IT IS NOT PROVIDED AS A COMPLETE LIST OF WORK AND SHALL NOT BE USED FOR BIDDING PURPOSES. REFER TO ALL PLANS AND SPECIFICATIONS.

- NEW SUPPLEMENTAL CARBON FEED SYSTEM WILL BE INSTALLED.

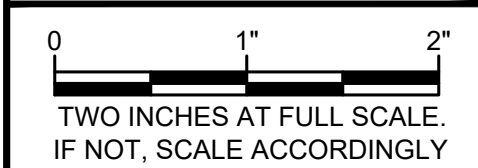

CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH,
SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860




**LOTT CLEAN
WATER ALLIANCE
SUPPLEMENTAL
CARBON FEED
UPGRADE**
500 ADAMS ST NE
OLYMPIA, WA 98501

No.	DATE	REVISION

ISSUED FOR:	
BID	
ISSUE DATE:	JULY 2026
APPROVED BY:	JRN
CHECKED BY:	JRN
DRAWN BY:	PAM
DESIGNER:	PAM
G & O JOB NO.:	25258
FILE:	E SYM ABBR.DWG



ELECTRICAL

**ELECTRICAL
SYMBOLS,
ABBREVIATIONS, AND
NOTES**

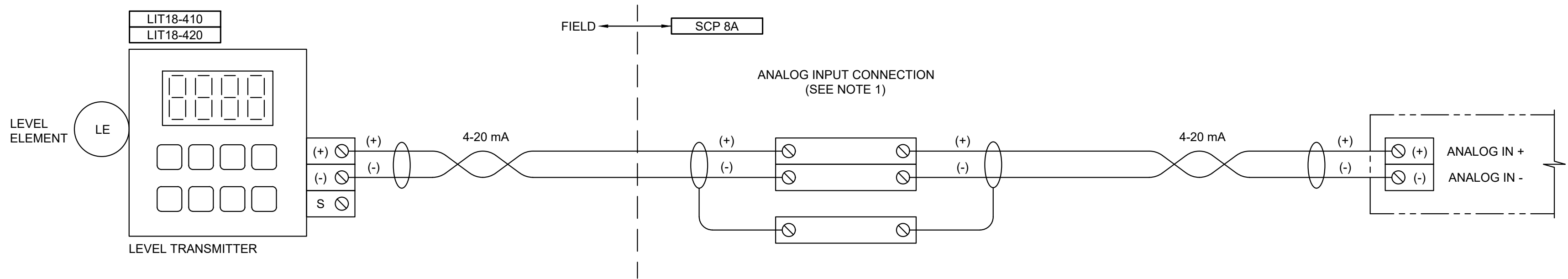
DRAWING: **E00-001**

SHEET: **28** OF: **34**

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SHEET LIST	
SHEET	SHEET DESCRIPTION
E00-001	ELECTRICAL SYMBOLS, ABBREVIATIONS, AND NOTES
E00-002	ELECTRICAL SHEET LIST AND TAG LIST
E00-003	ELECTRICAL DETAILS AND CABLE AND CONDUIT SCHEDULES
E08-001	MODIFIED [MCC-6A] ELEVATION
E08-002	MODIFIED [MCC-6A] ONE LINE DIAGRAM
E08-003	BLOWER BUILDING ELECTRICAL PLAN
E18-001	ELECTRICAL SITE PLAN AND SUPPLEMENTAL CARBON TANKS AND BUILDING ELECTRICAL PLAN

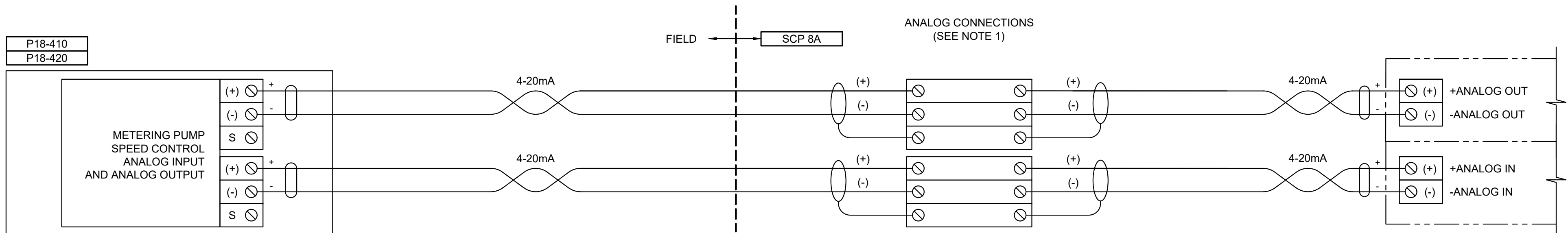
DEVICE TAG LIST		
TAG ID#	TAG DESCRIPTION	VINTAGE
BLDG08- 001	BUILDING, BLOWER	EXISTING
BLDG18-401	BUILDING, PREFABRICATED, SUPPLEMENTAL CARBON SYSTEM	NEW
EWS18-001	EYEWASH STATION	NEW
FSH18-001	SWITCH, EYEWASH STATION, FLOW AND ALARM	NEW
HTR08-001	WATER HEATER, EYEWASH STATION	NEW
IV18-410	VALVE, ISOLATION 1	NEW
IV18-420	VALVE, ISOLATION 2	NEW
LIT18-410	LEVEL TRANSMITTER, SUPPLEMENTAL CARBON TANK NO. 1	NEW
LIT18-420	LEVEL TRANSMITTER, SUPPLEMENTAL CARBON TANK NO. 2	NEW
LSH18-410	SWITCH, HIGH LEVEL, SUPPLEMENTAL CARBON TANK NO. 1	NEW
LSH18-420	SWITCH, HIGH LEVEL, SUPPLEMENTAL CARBON TANK NO. 2	NEW
LSL18-410	SWITCH, LOW LEVEL, SUPPLEMENTAL CARBON TANK NO. 1	NEW
LSL18-420	SWITCH, LOW LEVEL, SUPPLEMENTAL CARBON TANK NO. 2	NEW
MCC 6A	MOTOR CONTROL CENTER 6A	EXISTING
P18-410	PUMP NO. 1, FEED, SUPPLEMENTAL CARBON	NEW
P18-425	PUMP NO. 2, FEED, SUPPLEMENTAL CARBON	NEW
PNL18-410	PANEL, PREFABRICATED, SUPPLEMENTAL CARBON SYSTEM BUILDING	NEW
RM08-001	ROOM, WOODWORKING AND STORAGE	EXISTING
RM08-002	ROOM, SWITCHBOARD	EXISTING
SCP 8A	DISTRIBUTIVE CONTROL SYSTEM FIELD I/O TERMINATION PANEL 8A	EXISTING
T18-410	TANK NO. 1, SUPPLEMENTAL CARBON	NEW
T18-420	TANK NO. 2, SUPPLEMENTAL CARBON	NEW
XFMR08-001	TRANSFORMER, 480-240/120, 1PH, PREFABRICATED, SUPPLEMENTAL CARBON SYSTEM BUILDING	NEW



NOTES:

- REFERENCE MODIFIED DCS I/O LIST, DETAIL 2 ON DRAWING E08-001.

1 LEVEL TRANSMITTER INSTRUMENTATION CONNECTION DIAGRAM

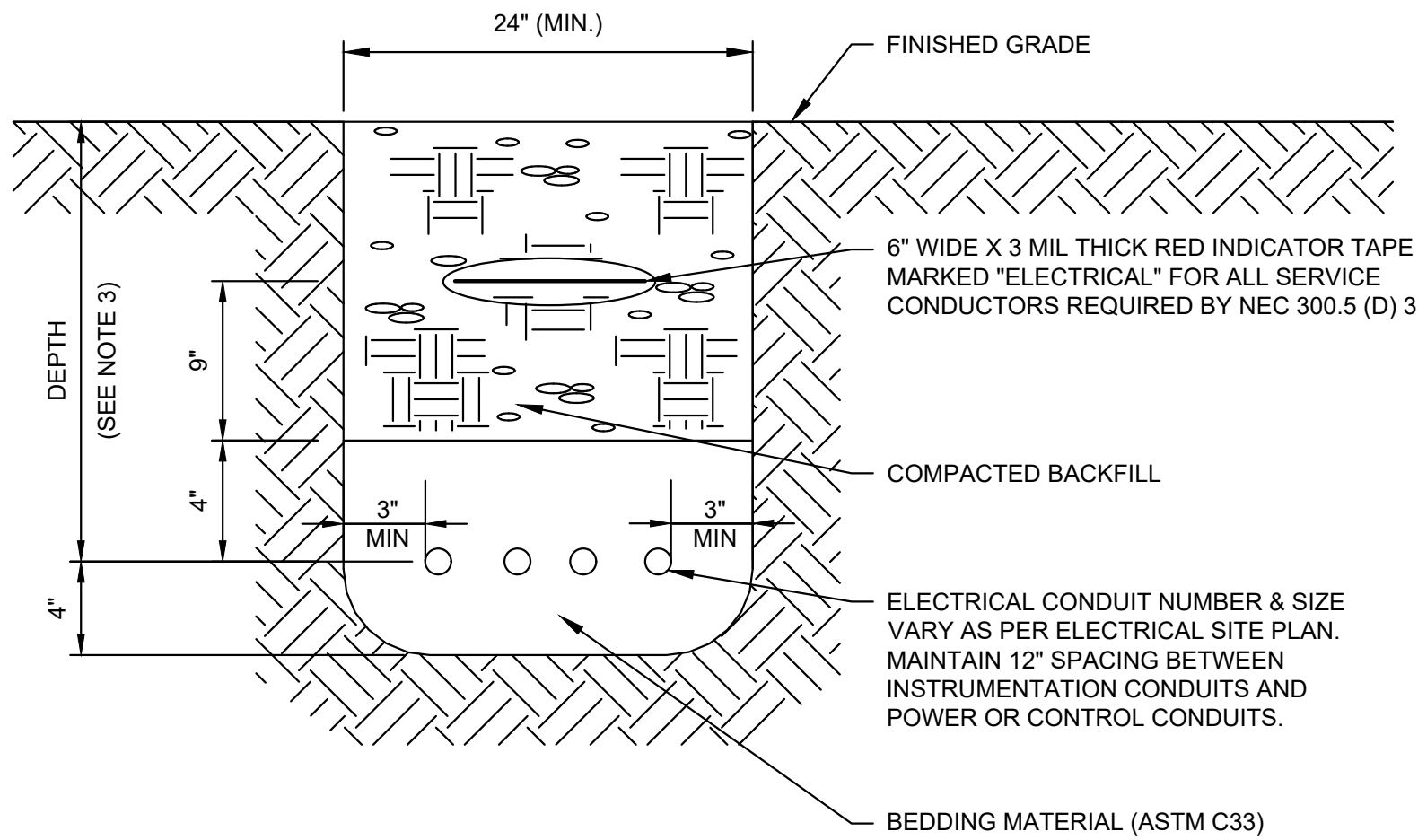


NOTES:

- REFERENCE MODIFIED DCS I/O LIST, DETAL 2 ON DRAWING E08-001.

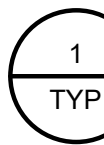
2 ANALOG INPUT/OUTPUT CONTROLS TO METERING PUMP INSTRUMENTATION CONNECTION DIAGRAM

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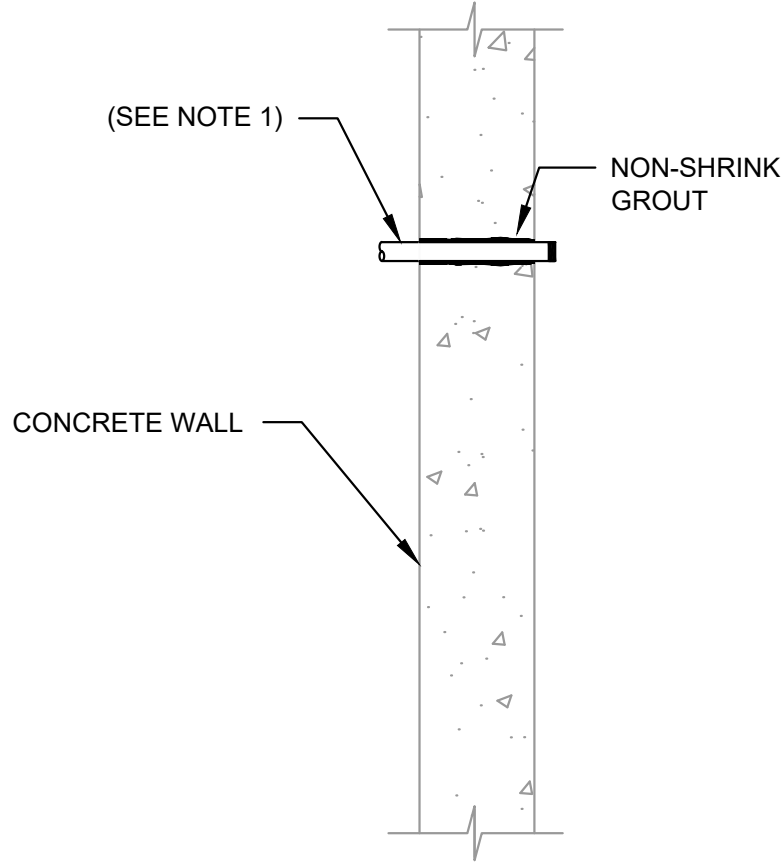
NOTE:

- SPACING BETWEEN CONDUITS AND OTHER UTILITIES SHALL BE IN COMPLIANCE WITH THE UTILITIES OR 24 INCHES MINIMUM, WHICHEVER IS THE GREATER.
- SEE CIVIL SHEETS FOR SURFACING RESTORATION.
- DEPTH IS 24 INCHES FOR ELECTRICAL CONDUITS.



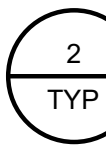
ELECTRICAL TRENCHING DETAIL

NOT TO SCALE



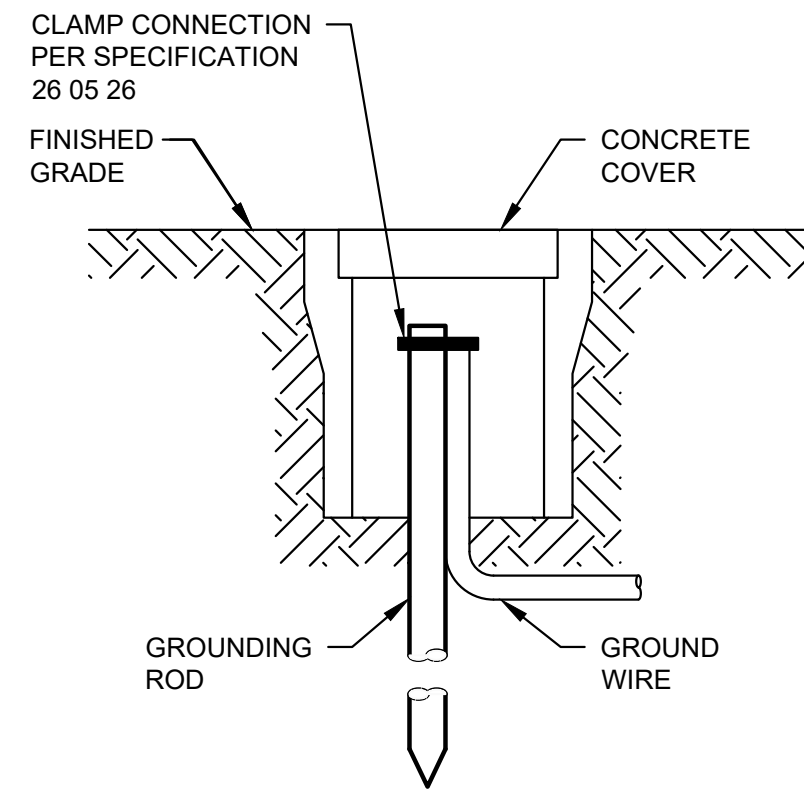
NOTE:

- DRILL OR CORE-DRILL THROUGH WALL, SEAL AROUND CONDUIT WITH NON-SHRINK GROUT AND FINISH THE SURFACE TO MATCH SURROUNDING.
- MOUNTING HARDWARE SHALL BE 316L STAINLESS STEEL.



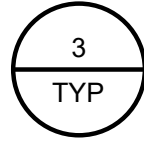
CONDUIT PENETRATION DETAIL

NOT TO SCALE



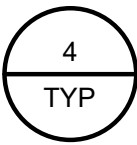
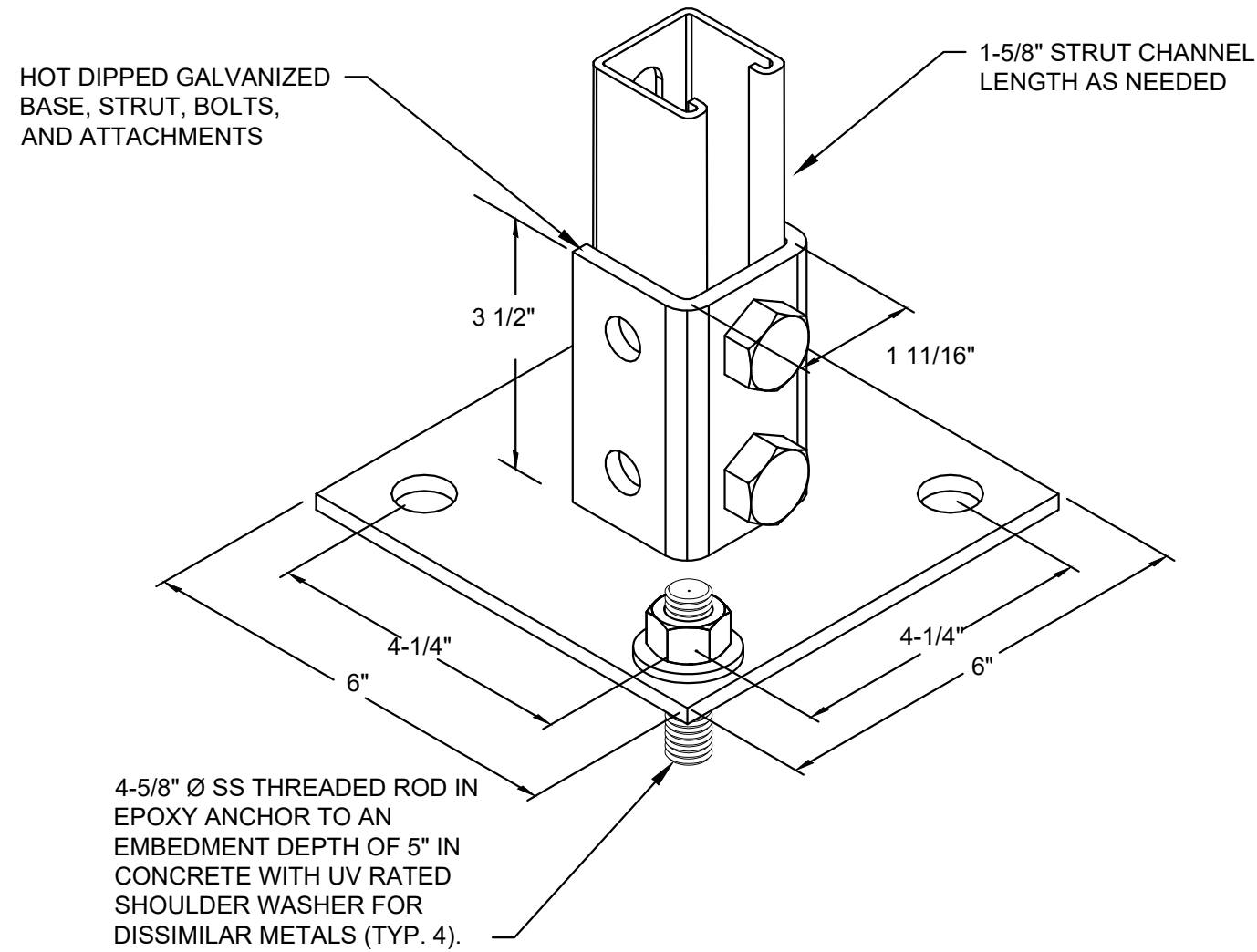
NOTES:

- GROUND ROD BOX SHALL BE FOGTITE GROUND ROD BOX WITH ROAD RATING EQUAL TO THE DEVICE OR STRUCTURE IT SUPPORTS (H20 MINIMUM).



GROUND ROD BOX DETAIL

NOT TO SCALE



POST AND BASE DETAIL

NOT TO SCALE

POWER CABLE AND CONDUIT SCHEDULE						
NUMBER	SOURCE	DESTINATION	SIZE	CONDUCTORS	E-1	NOTES
P0801	[MCC 6A], MOTOR CONTROL CENTER 6A	[HTR08-001], WATER HEATER, EYEWASH STATION	1-1/4"	3X #3 AWG XHHW-2; 1X #8 AWG XHHW-2 G		
P0802	[MCC 6A], MOTOR CONTROL CENTER 6A	[XFMR08-001], TRANSFORMER, 480-240/120, 1PH, PREFABRICATED, SUPPLEMENTAL CARBON SYSTEM BUILDING	3/4"	2X #10 AWG XHHW-2; 1X #10 AWG XHHW-2 G		
P0803	[XFMR08-001], TRANSFORMER, 480-240/120, 1PH, PREFABRICATED, SUPPLEMENTAL CARBON SYSTEM BUILDING	[PNL18-410], PANEL, PREFABRICATED, SUPPLEMENTAL CARBON SYSTEM BUILDING	3/4"	2X #8 AWG XHHW-2; 1X #8 AWG XHHW-2 N; 1X #10 AWG XHHW-2 G		
P0804	[DP-6], PANELBOARD DP-6, CIRCUIT NO. 14	[SCP 8A], DISTRIBUTIVE CONTROL SYSTEM FIELD I/O TERMINATION PANEL 8A	EXISTING	1X #12 AWG XHHW-2; 1X #12 AWG XHHW-2 N; 1X #12 AWG XHHW-2 G		POWER FOR ABH18-410 AND ABH18-420, EXISTING CONDUIT DP6-13
P1801	[PNL18-410], PANEL, PREFABRICATED, SUPPLEMENTAL CARBON SYSTEM BUILDING	JUNCTION BOX, JP1801	3/4"	1X #12 AWG XHHW-2; 1X #12 AWG XHHW-2 N; 1X #12 AWG XHHW-2 G		HEAT TRACE
P1802	[PNL18-410], PANEL, PREFABRICATED, SUPPLEMENTAL CARBON SYSTEM BUILDING	[EWS18-001], EYEWASH STATION	3/4"	2X #12 AWG XHHW-2; 2X #12 AWG XHHW-2 N; 2X #12 AWG XHHW-2 G		HEAT TRACE AND POWER AND [FSH18-001] STATUS
P1802A	[EWS18-001], EYEWASH STATION	[FSH18-001], SWITCH, EYEWASH STATION, FLOW AND ALARM	3/4"	1X #12 AWG XHHW-2; 1X #12 AWG XHHW-2 N; 1X #12 AWG XHHW-2 G; 2X #14 AWG XHHW-2		POWER AND [FSH18-001] STATUS

INSTRUMENTATION CABLE AND CONDUIT SCHEDULE						
NUMBER	SOURCE	DESTINATION	SIZE	CONDUCTORS	E-1	NOTES
S0801	[SCP 8A], DISTRIBUTIVE CONTROL SYSTEM FIELD I/O TERMINATION PANEL 8A	JUNCTION BOX IN [RM08-001]	EXISTING	10X 2-C, 1-TP, #18 AWG, OS	* 3	EXISTING CONDUIT C8-24, 1-1/4", 4X TSP ARE SPARE
S0801A	JUNCTION BOX IN [RM08-001]	JUNCTION BOX IN [RM08-002]	EXISTING	10X 2-C, 1-TP, #18 AWG, OS	* 3	EXISTING CONDUIT I8-01, 2-1/2", 4X TSP ARE SPARE
S0801B	JUNCTION BOX IN [RM08-002]	JUNCTION BOX JC1801	EXISTING	10X 2-C, 1-TP, #18 AWG, OS	* 3	4X TSP ARE SPARE
S1801	JUNCTION BOX JC1801	[P18-410], PUMP NO. 1, FEED, SUPPLEMENTAL CARBON	3/4"	1X 6-C, 3-TP, #18 AWG, OS	* 3	BELDON 1529A OR EQUAL
S1802	JUNCTION BOX JC1801	[P18-425], PUMP NO. 2, FEED, SUPPLEMENTAL CARBON	3/4"	1X 6-C, 3-TP, #18 AWG, OS	* 3	BELDON 1529A OR EQUAL
S1803	JUNCTION BOX JC1801	JUNCTION BOX, JC1803	3/4"	1X 2-C, 1-TP, #18 AWG, OS	* 3	
S1803A	JUNCTION BOX, JC1803	[LIT18-410], LEVEL TRANSMITTER, SUPPLEMENTAL CARBON TANK NO. 1	3/4"	1X 2-C, 1-TP, #18 AWG, OS	* 3	
S1804	JUNCTION BOX JC1801	JUNCTION BOX, JC1804	3/4"	1X 2-C, 1-TP, #18 AWG, OS	* 3	
S1804A	JUNCTION BOX, JC1804	[LIT18-420], LEVEL TRANSMITTER, SUPPLEMENTAL CARBON TANK NO. 2	3/4"	1X 2-C, 1-TP, #18 AWG, OS	* 3	

CONTROL CABLE AND CONDUIT SCHEDULE						
NUMBER	SOURCE	DESTINATION	SIZE	CONDUCTORS	E-1	NOTES
C0801	[SCP 8A], DISTRIBUTIVE CONTROL SYSTEM FIELD I/O TERMINATION PANEL 8A	JUNCTION BOX JC1801	1-1/4"	44X #14 AWG THHN; 1X #14 AWG THHN G		8X #14 ARE SPARE
C1801	JUNCTION BOX JC1801	[P18-410], PUMP NO. 1, FEED, SUPPLEMENTAL CARBON	3/4"	1X 10-C, #18 AWG		BELDON 28328A OR EQUAL
C1802	JUNCTION BOX JC1801	[P18-425], PUMP NO. 2, FEED, SUPPLEMENTAL CARBON	3/4"	1X 10-C, #18 AWG		BELDON 28328A OR EQUAL
C1803	JUNCTION BOX JC1801	JUNCTION BOX, JC1803	1"	6X #16 AWG THHN; 1X #14 AWG THHN G		
C1803A	JUNCTION BOX, JC1803	CONDUIT TEE	3/4"	4X #14 AWG THHN; 1X #14 AWG THHN G		
C1803B	CONDUIT TEE	[LSH18-410], SWITCH, HIGH LEVEL, SUPPLEMENTAL CARBON TANK NO. 1	3/4"	2X #14 AWG THHN; 1X #14 AWG THHN G		
C1803C	CONDUIT TEE	[LSL18-410], SWITCH, LOW LEVEL, SUPPLEMENTAL CARBON TANK NO. 1	3/4"	2X #14 AWG THHN; 1X #14 AWG THHN G		
C1803D	JUNCTION BOX, JC1803	[ZS018-410], LIMIT SWITCH, ISOLATION VALVE, SUPPLEMENTAL CARBON TANK NO. 1	3/4"	2X #14 AWG THHN; 1X #14 AWG THHN G		
C1803E~	JUNCTION BOX, JC1803		3/4"	PULL WIRE		SPARE CONDUIT.
C1804	JUNCTION BOX JC1801	JUNCTION BOX, JC1804	1"	6X #16 AWG THHN; 1X #14 AWG THHN G		
C1804A	JUNCTION BOX, JC1804	CONDUIT TEE	3/4"	4X #14 AWG THHN; 1X #14 AWG THHN G		
C1804B	CONDUIT TEE	[LSH18-420], SWITCH, HIGH LEVEL, SUPPLEMENTAL CARBON TANK NO. 2	3/4"	2X #14 AWG THHN; 1X #14 AWG THHN G		
C1804C	CONDUIT TEE	[LSL18-420], SWITCH, LOW LEVEL, SUPPLEMENTAL CARBON TANK NO. 2	3/4"	2X #14 AWG THHN; 1X #14 AWG THHN G		
C1804D	JUNCTION BOX, JC1804	[ZS018-420], LIMIT SWITCH, ISOLATION VALVE, SUPPLEMENTAL CARBON TANK NO. 2	3/4"	2X #14 AWG THHN; 1X #14 AWG THHN G		
C1804E~	JUNCTION BOX, JC1804		3/4"	PULL WIRE		SPARE CONDUIT.
C1805	JUNCTION BOX JC1801	[EWS18-001], EYEWASH STATION	3/4"	2X #14 AWG THHN		[FSH18-001] STATUS
C1806	JUNCTION BOX JC1801	JUNCTION BOX JC1806	3/4"	4X #14 AWG THHN; 1X #14 AWG THHN G		
C1806A	JUNCTION BOX JC1806	[ABH18-410], ALARM BEACON AND HORN, HIGH LEVEL, SUPPLEMENTAL CARBON TANK NO. 1	3/4"	2X #14 AWG THHN; 1X #14 AWG THHN G		
C1806B	JUNCTION BOX JC1806	[ABH18-420], ALARM BEACON AND HORN, HIGH LEVEL, SUPPLEMENTAL CARBON TANK NO. 2	3/4"	2X #14 AWG THHN; 1X #14 AWG THHN G		



**LOTT CLEAN
WATER ALLIANCE
SUPPLEMENTAL
CARBON FEED
UPGRADE**
500 ADAMS ST NE
OLYMPIA, WA 98501

No. DATE REVISION

ISSUED FOR:

BID

ISSUE DATE: JULY 2026

APPROVED BY: JRN

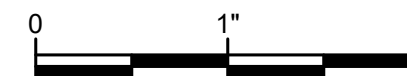
CHECKED BY: JRN

DRAWN BY: PAM

DESIGNER: PAM

G & O JOB NO.: 25258

FILE: E DETAILS.DWG



TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

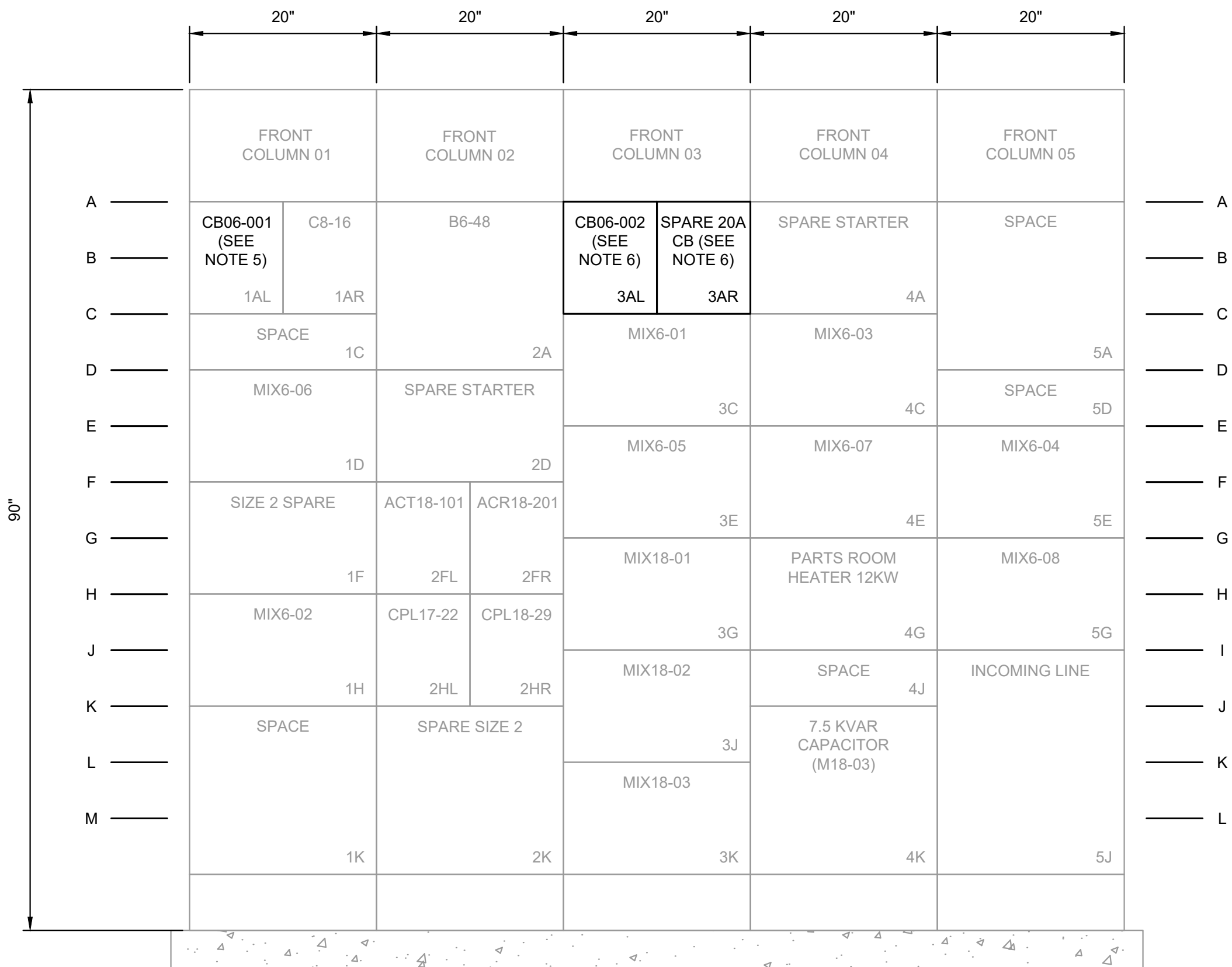
ELECTRICAL

**ELECTRICAL DETAILS
AND CABLE AND
CONDUIT SCHEDULES**

DRAWING: **E00-003**

SHEET: **30** OF: **34**

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MOTOR CONTROL CENTER [MCC-06A]	
VOLTAGE RATING:	600 VAC
CONFIGURATION:	480 VAC, 3 PH, 60 Hz
BUS BRACING:	42 kAIC
STRUCTURE:	SINGLE SIDED
MAIN LUGS ONLY:	MAIN BUS RATING, 600A

- NOTES:
- EXISTING [MCC-6A] ONE LINE DIAGRAM IS FROM PARAMETRIX INC. LOTT WASTEWATER FACILITY IMPROVEMENTS PROJECT, RECORD DRAWINGS CIRCA 1994. AND PARAMETRIX INC. BIOLOGICAL PROCESS IMPROVEMENT PROJECT, RECORD DRAWINGS CIRCA, CONTRACTOR SHALL VERIFY AS NEEDED.
 - ALL POWER DISRUPTIONS SHALL BE COORDINATED WITH THE OWNER.
 - EXISTING MCC-6A IS A WESTINGHOUSE FIVE STARE MAIN LUG ONLY MCC, 480V, 600A, 42 kAIC, AND WITH A 400A FEEDER FROM SWITCH GEAR C.
 - FADED ELECTRICAL EQUIPMENT AND CIRCUITS ARE EXISTING. NON FADED ELECTRICAL EQUIPMENT AND CIRCUITS ARE NEW.
 - USE SPARE 100A CIRCUIT BREAKER FOR [HTR08-006] FEEDER AND PROVIDE NEW DOOR LABEL.
 - PROVIDE NEW TANDEM 30A AND 20A, 42 kAIC, CIRCUIT BREAKERS AND BUCKET FOR MCC-6A, SECTION 3A.

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MODIFIED [MCC-6A] ELEVATION
NOT TO SCALE

EQUIPMENT TAG	DESCRIPTION	DCS TAG	DESCRIPTION OF COMMAND	CABINET	TERMINAL BOARD	CHANNEL	TERMINAL	TERMINAL	SHIELD
P18-410	SUPPLEMENTAL CARBON PUMP 1	242_18410MN	SUPP. CARBON PUMP 1 START CMD	SCP 8B	DO-2-42	7	7U	7L	
		242_18410MF	SUPP. CARBON PUMP 1 FAULT	SCP 8B	DI-7-42	7	7U	7L	
		242_18410MM	SUPP. CARBON PUMP 1 RUN FDBK	SCP 8B	DI-7-42	8	8U	8L	
		242_18410YS	SUPP. CARBON PUMP 1 IN REMOTE	SCP 8B	DI-7-42	9	9U	9L	
		242_18410TA	SUPP. CARBON PUMP 1 LEAK	SCP 8B	DI-7-42	10	10U	10L	
		242_18410SC	SUPP. CARBON PUMP 1 SPEED CMD	SCP 8B	AO-3-42	1	1U	1L	2U
		242_18410ST	SUPP. CARBON PUMP 1 SPEED FDBK	SCP 8B	AI-1-42	10	15U	15L	14L
LSH18-410	SUPPLEMENTAL CARBON TANK 1 HIGH LEVEL SWITCH	242_18410LH	SUPP. CARBON TANK 1 HIGH LEVEL	SCP 8B	DI-9-42	1	1U	1L	
		242_18410HH	SUPP. CARBON TANK 1 HIGH LEVEL ALARM OUT	SCP 8B	DO-2-42	8	8U	8U	
LSL18-410	SUPPLEMENTAL CARBON TANK 1 LOW LEVEL SWITCH	242_18410LL	SUPP. CARBON TANK 1 LOW LEVEL	SCP 8B	DI-9-42	2	2U	2L	
ZSO18-410	SUPPLEMENTAL CARBON TANK 1 ISOL VALVE LIMIT SWITCH	242_18410ZD	SUPP. CARBON TANK 1 ISO VLV OPEN LIMIT	SCP 8B	DI-9-42	3	3U	3L	
LIT18-410	SUPPLEMENTAL CARBON TANK 1 LEVEL TRANSMITTER	242_18410LT	SUPP. CARBON TANK 1 LEVEL	SCP 8B	AI-1-42	11	16U	16L	17U
P18-425	SUPPLEMENTAL CARBON PUMP 2	242_18425MN	SUPP. CARBON PUMP 2 START CMD	SCP 8B	DO-3-42	7	7U	7L	
		242_18425MF	SUPP. CARBON PUMP 2 FAULT	SCP 8B	DI-8-42	11	11U	11L	
		242_18425MM	SUPP. CARBON PUMP 2 RUN FDBK	SCP 8B	DI-8-42	12	12U	12L	
		242_18425YS	SUPP. CARBON PUMP 2 IN AUTO	SCP 8B	DI-8-42	13	13U	13L	
		242_18425TA	SUPP. CARBON PUMP 2 LEAK	SCP 8B	DI-8-42	14	14U	14L	
		242_18425SC	SUPP. CARBON PUMP 2 SPEED CMD	SCP 8B	AO-3-42	2	3U	3L	2L
		242_18425ST	SUPP. CARBON PUMP 2 SPEED FDBK	SCP 8B	AI-2-42	11	16U	16L	17U
LSH18-420	SUPPLEMENTAL CARBON TANK 2 HIGH LEVEL SWITCH	242_18420LH	SUPP. CARBON TANK 2 HIGH LEVEL	SCP 8B	DI-9-42	4	4U	4L	
		242_18420HH	SUPP. CARBON TANK 2 HIGH LEVEL ALARM OUT	SCP 8B	DO-3-42	8	8U	8L	
LSL18-420	SUPPLEMENTAL CARBON TANK 2 LOW LEVEL SWITCH	242_18420LL	SUPP. CARBON TANK 2 LOW LEVEL	SCP 8B	DI-9-42	5	5U	5L	
ZSO18-420	SUPPLEMENTAL CARBON TANK 2 ISOL VALVE LIMIT SWITCH	242_18420ZD	SUPP. CARBON PUMP 2 ISO VLV OPEN LIMIT	SCP 8B	DI-9-42	6	6U	6L	
LIT18-420	SUPPLEMENTAL CARBON TANK 2 LEVEL TRANSMITTER	242_18420LT	SUPP. CARBON TANK 2 LEVEL	SCP 8B	AI-2-42	12	18U	18L	17L
FSH18-401	SUPPLEMENTAL CARBON EYEWASH STATION FLOW	242_18401FS	SUPP. CARBON EYEWASH/SHOWER STATION	SCP 8B	DI-9-42	7	7U	7L	

2
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MODIFIED DCS I/O LIST
NOT TO SCALE

MCC [MCC-06A] LOAD SUMMARY					
(CALCULATIONS BASED ON 480 V)					
CONNECTED LOADS				UTILITY LOAD DEMAND	
LOAD DESCRIPTION	STARTER	HP	kVA	D.F.	kVA
[1AR], C08-016, BLOWER ROOM CRANE	FVNR	4.5	4.7	100%	4.7
[1D], MIX06-006, FIRST ANOXIC TRAIN 2 STAGE 2 MIXER	FVNR	10.0	11.2	100%	11.2
[1F], IR VALVES 2 AND 4	FVNR	2.0	2.7	100%	2.7
[1H], MIX06-002, FIRST ANOXIC TRAIN 1 STAGE 2 MIXER	FVNR	10.0	11.2	100%	11.2
[2A], B06-048, BASIN 1 PURGE BLOWER	FVNR	20.0	21.5	100%	21.5
[2FL], ACT18-101, 2ND ANOXIC TRAIN 1 STAGE 1 ISOLATION	FVNR	1.0	1.7	100%	1.7
[2FR], ACT18-201, 2ND ANOXIC TRAIN 2 STAGE 1 ISOLATION	FVNR	1.0	1.7	100%	1.7
[2HL], XPL 17-022, M. L. MFM FAULT SUMP PUMP	FVNR	5.0	6.1	100%	6.1
[2HR], CPL18-029, ANOCIC DRAIN PUMPS	FVNR	7.5	8.8	100%	8.8
[3C], MIX06-001, FIRST ANOXIC TRAIN 1 STAGE 1 MIXER	FVNR	10.0	11.2	100%	11.2
[3E], MIX06-005, FIRST ANOXIC TRAIN 2 STAGE 1 MIXER	FVNR	10.0	11.2	100%	11.2
[3G], MIX18-001, SECOND ANOXIC TRAIN 1 STAGE 1 MIXER	FVNR	15.0	16.7	100%	16.7
[3J], MIX18-002, SECOND ANOXIC TRAIN 1 STAGE 2 MIXER	FVNR	15.0	16.7	100%	16.7
[3L], MIX18-003, SECOND ANOXIC TRAIN 1 STAGE 3 MIXER	FVNR	15.0	16.7	100%	16.7
[4C], MIX06-003, FIRST ANOXIC TRAIN 1 STAGE 3 MIXER	FVNR	10.0	11.2	100%	11.2
[4E], MIX06-007, FIRST ANOXIC TRAIN 2 STAGE 3 MIXER	FVNR	10.0	11.2	100%	11.2
[4G], PARTS ROOM HEATER 12KW	NA	NA	12.0	100%	12.0
[5E], MIX06-004, FIRST ANOXIC TRAIN 1 STAGE 4 MIXER	FVNR	10.0	11.2	100%	11.2
[5G], MIX06-008, FIRST ANOXIC TRAIN 2 STAGE 4 MIXER	FVNR	10.0	11.2	100%	11.2
[BKR06-001], MCC CIRCUIT BREAKER, EYEWASH STATION, WATER HEATER			60.0	100%	60.0
[BKR06-002], MCC CIRCUIT BREAKER, 480-240/120, 1PH, SUPPLEMENTAL CARBON SYSTEM BUILDING TRANSFORMER			10.0	80%	8.0
TOTAL KVA:			268.5		266.5
RESULTING AMPACITY AT 480 VAC, 3 PH:			322.9		320.5
SYSTEM SIZED AT: 400 A					

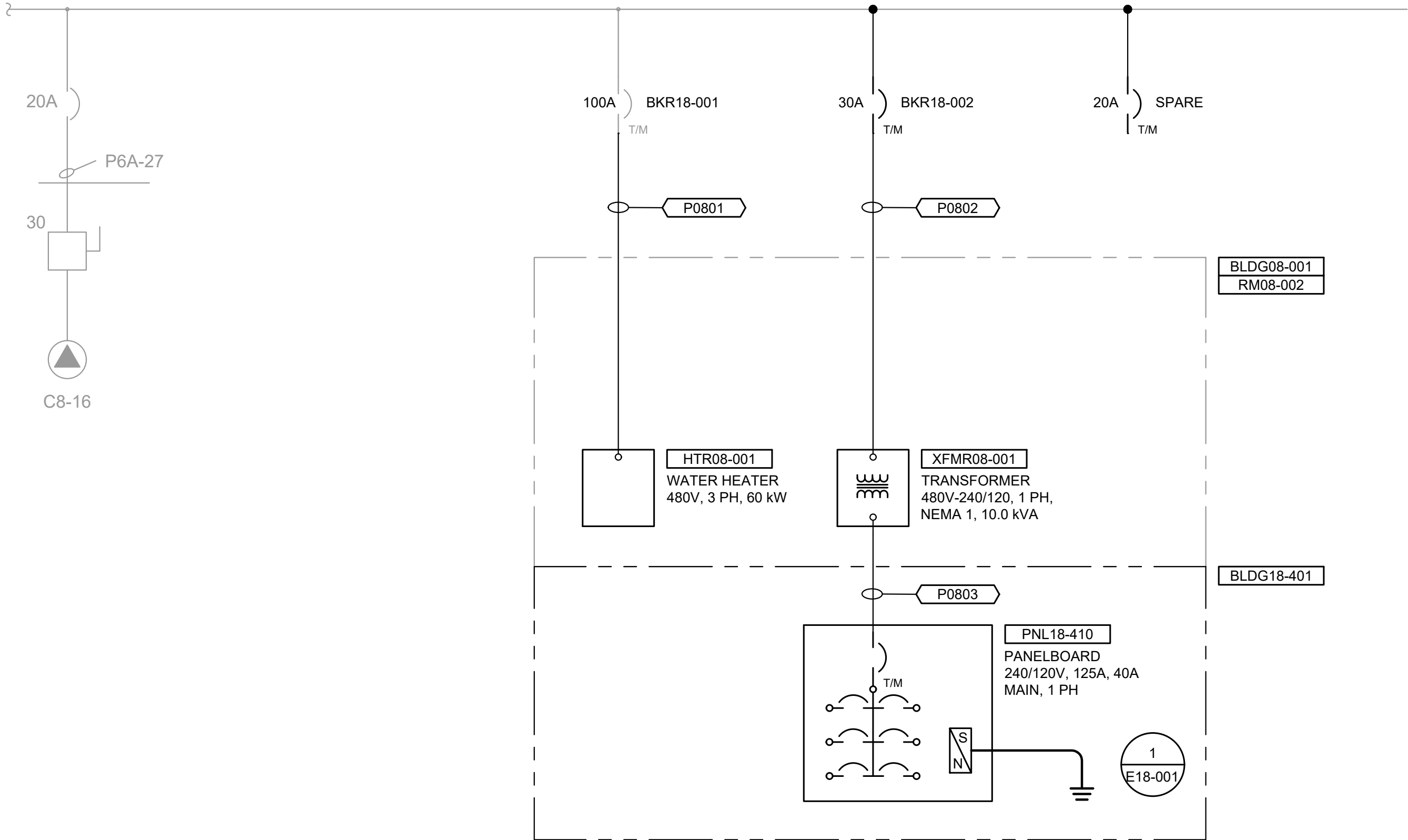
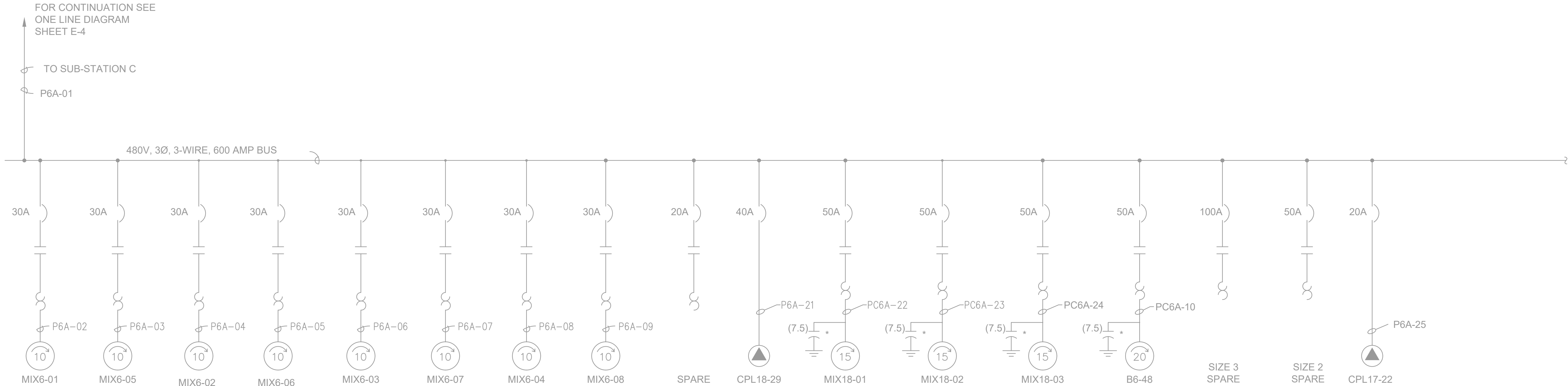
Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH,
SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

LOTT
Clean Water
Alliance

LOTT CLEAN
WATER ALLIANCE
SUPPLEMENTAL
CARBON FEED
UPGRADE
500 ADAMS ST NE
OLYMPIA, WA 98501

No.	DATE	REVISION
ISSUED FOR: BID		
ISSUE DATE: JULY 2026		
APPROVED BY: JRN		
CHECKED BY: JRN		
DRAWN BY: PAM		
DESIGNER: PAM		
G & O JOB NO.: 25258		
FILE: E MCCEL.DWG		
0 1" 2" TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY		
ELECTRICAL		
MODIFIED [MCC-6A] ELEVATION		
DRAWING: E08-001		
SHEET: 31 OF: 34		

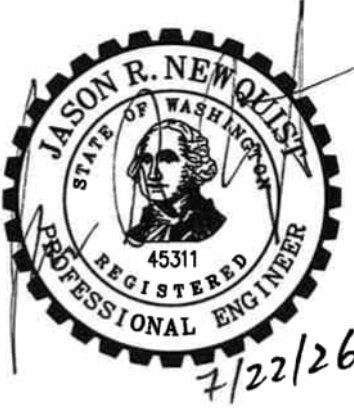
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NOTES:

- EXISTING [MCC-6A] ONE LINE DIAGRAM IS FROM PARAMETRIX INC. LOTT WASTEWATER FACILITY IMPROVEMENTS PROJECT, RECORD DRAWINGS CIRCA 1994. AND PARAMETRIX INC. BIOLOGICAL PROCESS IMPROVEMENT PROJECT, RECORD DRAWINGS CIRCA, CONTRACTOR SHALL VERIFY AS NEEDED.
- ALL POWER DISRUPTIONS SHALL BE COORDINATED WITH THE OWNER.
- EXISTING MCC-6A IS A WESTINGHOUSE FIVE STARE MAIN LUG ONLY MCC, 480V, 600A, 42 KAIC, AND WITH A 400A FEEDER FROM SWITCH GEAR C.
- FADED ELECTRICAL EQUIPMENT AND CIRCUITS ARE EXISTING. NON FADED ELECTRICAL EQUIPMENT AND CIRCUITS ARE NEW.

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MODIFIED [MCC-6A] ONE LINE DIAGRAM
NOT TO SCALE

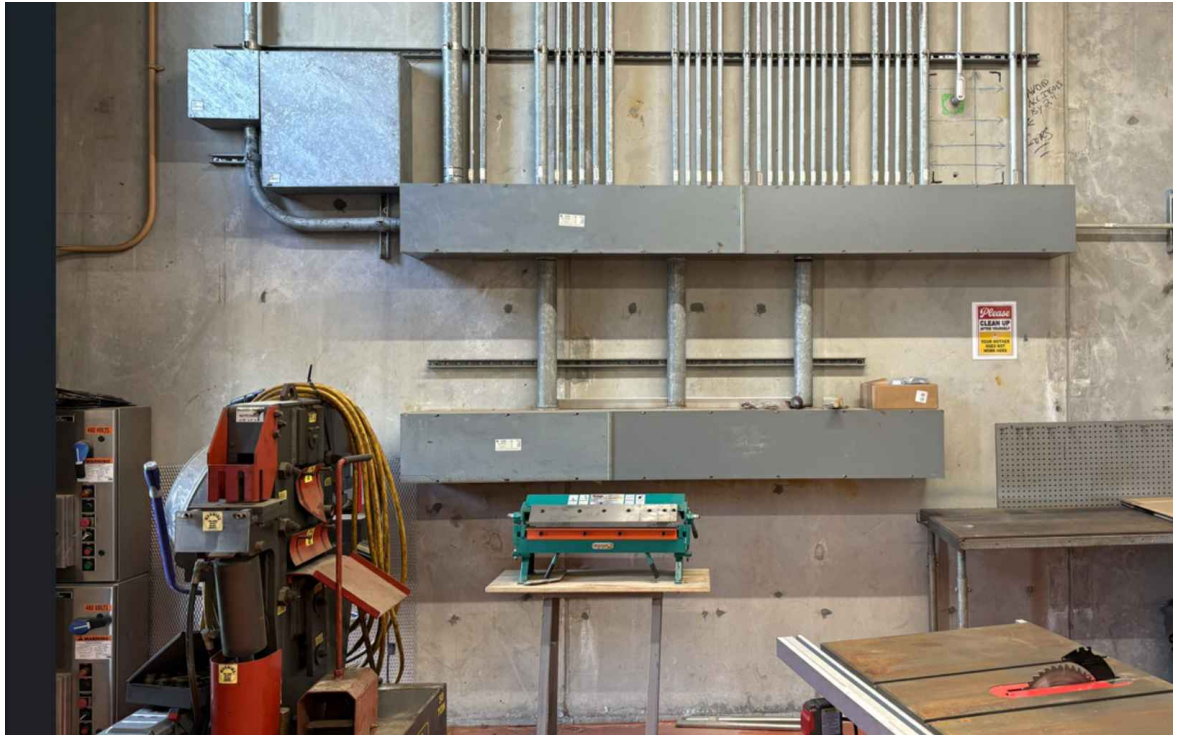
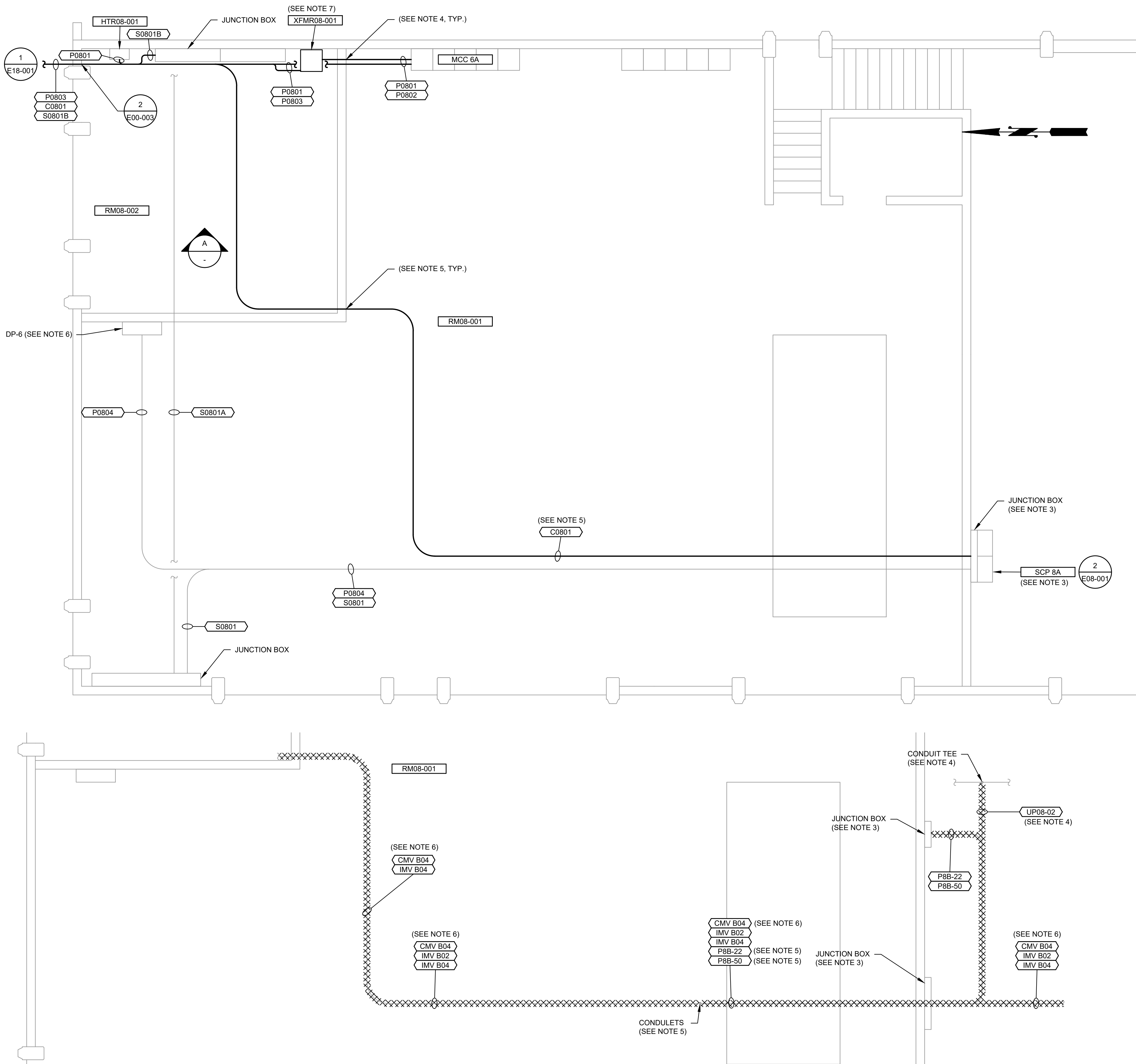


No.	DATE	REVISION
ISSUED FOR:		
BID		
ISSUE DATE:		JULY 2026
APPROVED BY:		JRN
CHECKED BY:		JRN
DRAWN BY:		PAM
DESIGNER:		PAM
G & O JOB NO.:		25258
FILE:		E OLD.DWG

ELECTRICAL

**MODIFIED [MCC-6A]
ONE LINE DIAGRAM**

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**BLOWER BUILDING
EAST WALL ELECTRICAL PLAN**
NOT TO SCALE

NOTES:

- NOT ALL EXISTING ELECTRICAL EQUIPMENT AND CIRCUITS ARE SHOWN. EXISTING ELECTRICAL EQUIPMENT LOCATIONS ARE APPROXIMATE, CONTRACTOR SHALL DETERMINE EXACT LOCATIONS AS NEEDED. EXISTING CONDUIT ROUTING IS APPROXIMATE, CONTRACTOR SHALL DETERMINE EXACT CONDUIT ROUTING AS NEEDED.
- EXISTING ELECTRICAL EQUIPMENT AND CONDUIT ARE SHOW FADED, NEW ELECTRICAL EQUIPMENT AND CONDUITS ARE SHOW NOT FADED.
- EXISTING JUNCTION BOXES ARE LOCATED ON THE SECOND FLOOR WITH MULTIPLE EXISTING CONDUITS BETWEEN THEM AND [SCP 8A] WHICH IS LOCATED ON THE FIRST FLOOR. CONDUCTOR AND CABLE ROUTING BETWEEN THE JUNCTION BOXES AND [SCP 8A] SHALL BE DETERMINED BY THE CONTRACTOR.
- CORE DRILL THROUGH CMU WALL AND FILL PENETRATION WITH NON-SHRINK GROUT.
- FOLLOW THE SAME ROUT AS THE CONDUITS THAT WERE DEMOLISHED. INCREASE THE EXISTING WALL PENETRATIONS AS NEEDED OR PROVIDE NEW PENETRATIONS. FILL NEW AND UNUSED PENETRATIONS WITH NON-SHRINK GROUT.
- TERMINATE ON SPARE CIRCUIT BREAKER IN SPACE 14, CONTRACTOR SHALL UPDATE THE PANELBOARD SCHEDULE.
- INSTALL [XFMR08-001] ON CONCRETE WALL, BOTTOM OF TRANSFORMER EVEN WITH THE TO OF THE UPPER JUNCTION BOX, PER MANUFACTURER'S DOCUMENTATION USING GALVANIZED STRUTS, OR PAINTED WALL MOUNTING BRACKETS, BOLTS, AND THREADED ROD IN EPOXY ANCHORS.

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

NOTES:

- NOT ALL EXISTING ELECTRICAL EQUIPMENT AND CIRCUITS ARE SHOWN. EXISTING ELECTRICAL EQUIPMENT LOCATIONS ARE APPROXIMATE, CONTRACTOR SHALL DETERMINE EXACT LOCATIONS AS NEEDED. EXISTING CONDUIT ROUTING IS APPROXIMATE, CONTRACTOR SHALL DETERMINE EXACT CONDUIT ROUTING AS NEEDED.
- EXISTING ELECTRICAL EQUIPMENT AND CONDUIT ARE SHOW FADED, NEW ELECTRICAL EQUIPMENT AND CONDUITS ARE SHOW NOT FADED.
- EXISTING JUNCTION BOXES ARE LOCATED ON THE SECOND FLOOR.
- DEMOLISH CONDUIT UP08-02 FROM THE CONDUIT TEE UPSTAIRS IN THE UTILITY ROOM TO THE WALL OPENING WHERE IT IS CUT OFF, APPROXIMATELY 15 FEET. PROVIDE A CONDUIT PLUG FOR THE CONDUIT TEE.
- DEMOLISH CONDUITS P8B-22 AND P8B-50 FROM THE CONDULETS, IN THE CONDUIT RACK, SOUTH TO THE JUNCTION BOX LOCATED ON THE SECOND FLOOR ABOVE [SCP 8A] PROVIDE CONDUIT PLUGS FOR THE CONDULETS.
- DEMOLISH CONDUITS IMV B04 (3/4") AND CMV B04 (1") THAT END IN ROOM RM08-002. AND THE CUT OFF CONDUIT, IN THE RACK, IMV B02 (3/4"). CONDUITS CONTINUE TO THE THE UTILITY ROOM ABOVE THE JUNCTION BOX AND 20' SOUTH WHERE THEY END.

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



**LOTT CLEAN
WATER ALLIANCE
SUPPLEMENTAL
CARBON FEED
UPGRADE**
500 ADAMS ST NE
OLYMPIA, WA 98501

No.	DATE	REVISION
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BID

ISSUE DATE: JULY 2026

APPROVED BY: JRN

CHECKED BY: JRN

DRAWN BY: PAM

DESIGNER: PAM

G & O JOB NO.: 25258

FILE: E BLDG.DWG

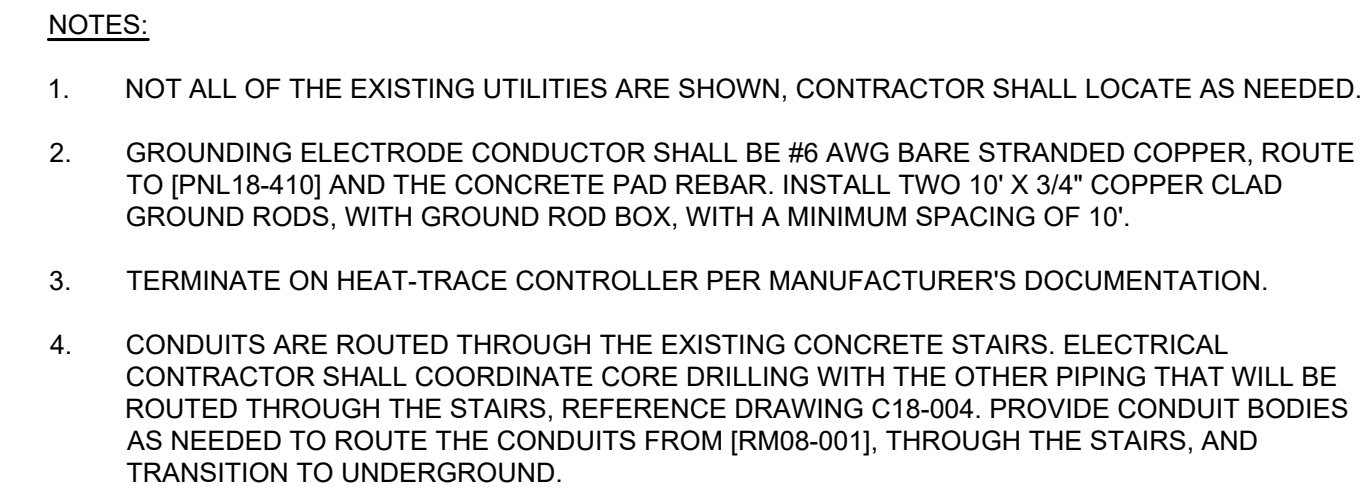
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

ELECTRICAL

**BLOWER BUILDING
ELECTRICAL PLAN**

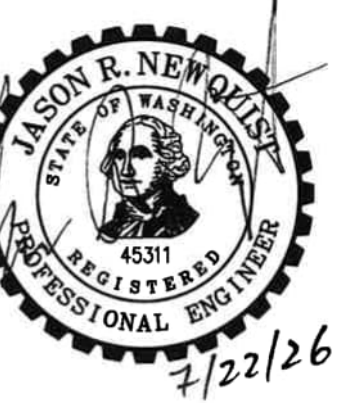
DRAWING: **E08-003**

SHEET: **33** OF: **34**

[illegible]

NOTES:

1. JUNCTION BOX SHALL BE 6" X 6" X 4", 316L STAINLESS STEEL WITH HINGED, GASKETED, LATCHING LID. INSTALL AT 12" ABOVE GRADE, REFERENCE DETAIL 4 ON DRAWING E00-003.
2. PROVIDE CONDUIT SUPPORT TO THE TOP OF THE TANK, USING TWO POST AND BASE SUPPORT STRUCTURES SPACE AT 6' APART AND PROVIDE CROSS SUPPORT EVERY 2'. REFERENCE DETAIL 4 ON DRAWING E00-003..
3. ALARM BEACON AND HORN, TWO TOTAL, SHALL BE EDWARDS 51XBFA120A, 120 VAC, AMBER, OR EQUAL. INSTALL AT TEN FEET ABOVE GRADE ON TOP OF CONDUIT AND PROVIDE TWO POST AND BASE SUPPORT STRUCTURES SPACE AT 6' APART AND PROVIDE CROSS SUPPORT EVERY 2'. REFERENCE DETAIL 4 ON DRAWING E00-003.
4. STOP CONDUITS ON WALL BEHIND PUMPS AND CONTINUE CABLES TO THE PUMPS. CONNECT PER MANUFACTURER'S DOCUMENTATION AND COORDINATE WITH THE MODIFIED DCS I/O LIST, DETAIL 2 ON DRAWING E08-001. PROVIDE GALVANIZED STEEL CGB CONNECTOR FOR THE CABLE TRANSITION FROM CONDUIT. REFERENCE DETAIL 2 ON DRAWING E00-002.
5. JUNCTION BOX AND FSH18-001 ARE PROVIDED WITH [EWS18-001], CONNECT POWER AND STATUS CIRCUITS PER MANUFACTURER'S DOCUMENTATION AND INSTALL PER-ASSEMBLED [FSH18-001] CONTROL BOX, AND ALARM BEACON PER MANUFACTURER'S DOCUMENTATION.
6. INSTALL JC1801 ABOVE INTAKE SHUTTER USING TWO POST AND BASE SUPPORT STRUCTURES, ONE AT EACH END. REFERENCE DETAIL 4 ON DRAWING E00-003. JC1801 SHALL BE 18" X 12" X 4" NEMA 4X FIBERGLASS WITH GASKETED HINGED LATCHED COVER. PROVIDE DIN-RAIL AND TERMINALS TO MATCH CONDUCTOR/CABLE COUNT WITH 10% SPARE TERMINALS.
7. INSTALL JC1806 ON ABH18-410 SUPPORT STRUCTURE 12" ABOVE GRADE. JC1806 SHALL BE 6" X 6" X 4", 316L STAINLESS STEEL WITH HINGED, GASKETED, LATCHING LID.



No.	DATE	REVISION
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ISSUED FOR:

BID

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APPROVED BY: JRN

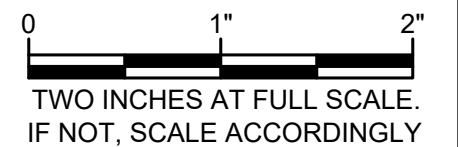
CHECKED BY: JRN

DRAWN BY: PAM

DESIGNER: PAM

G & O JOB NO.: 25258

FILE: E SP.DWG



ELECTRICAL

**ELECTRICAL SITE
PLAN AND
SUPPLEMENTAL
CARBON TANKS AND
BUILDING ELECTRICAL
PLAN**

DRAWING: **E18-001**

SHEET: **34** OF: **34**