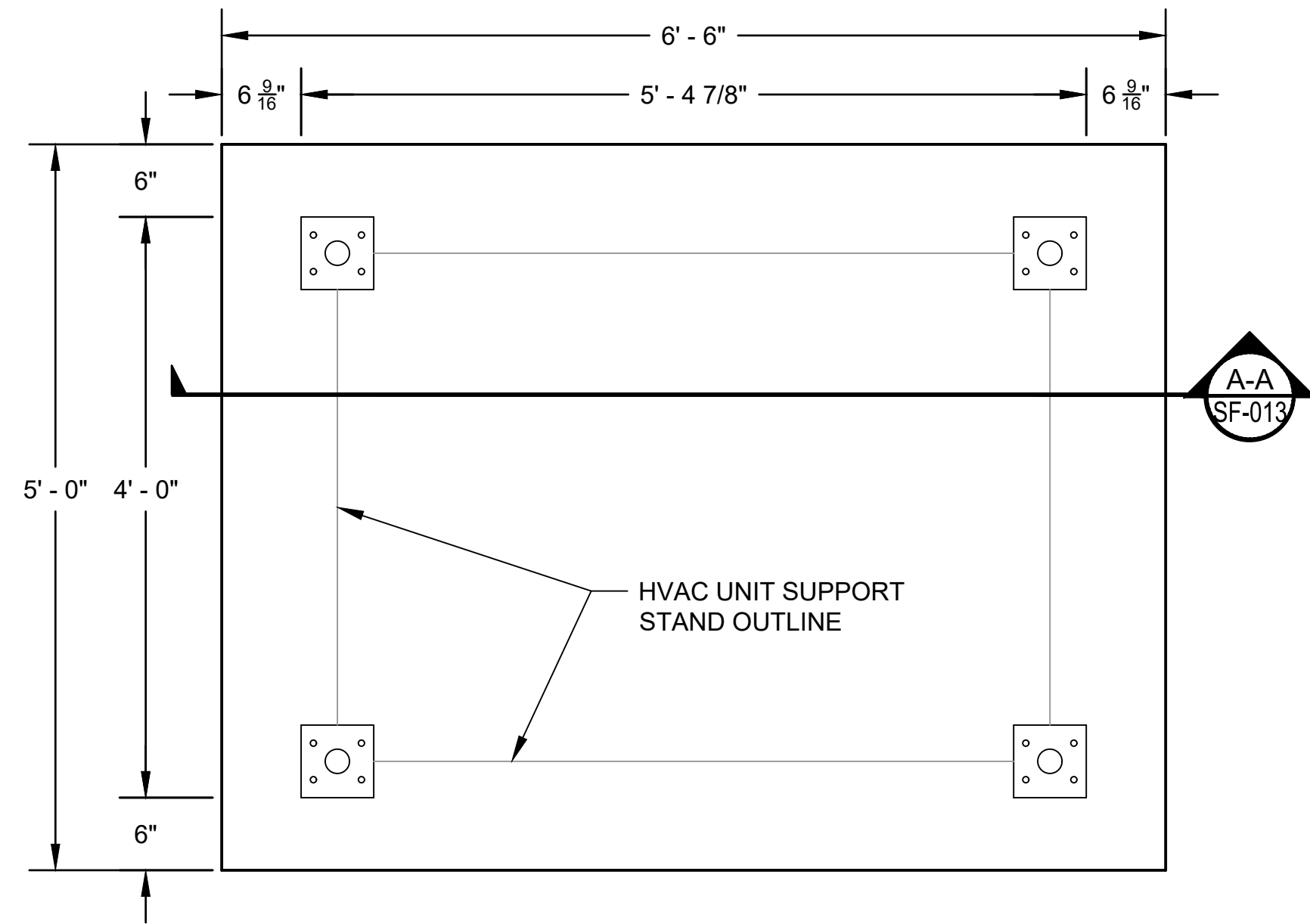
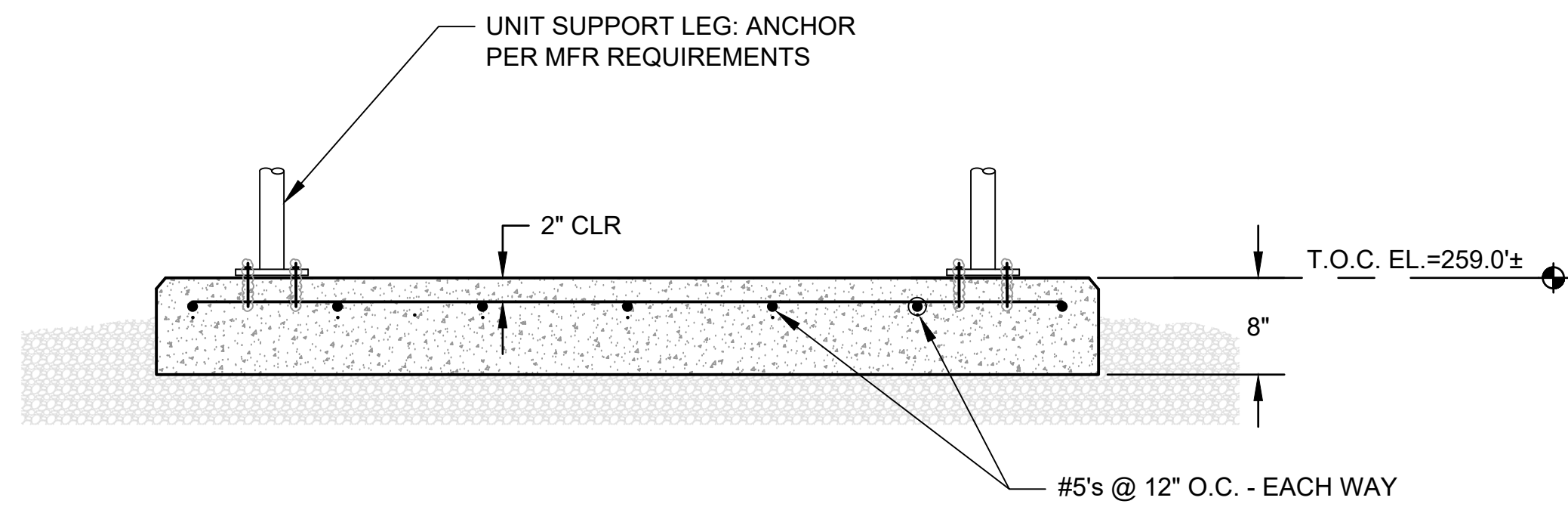


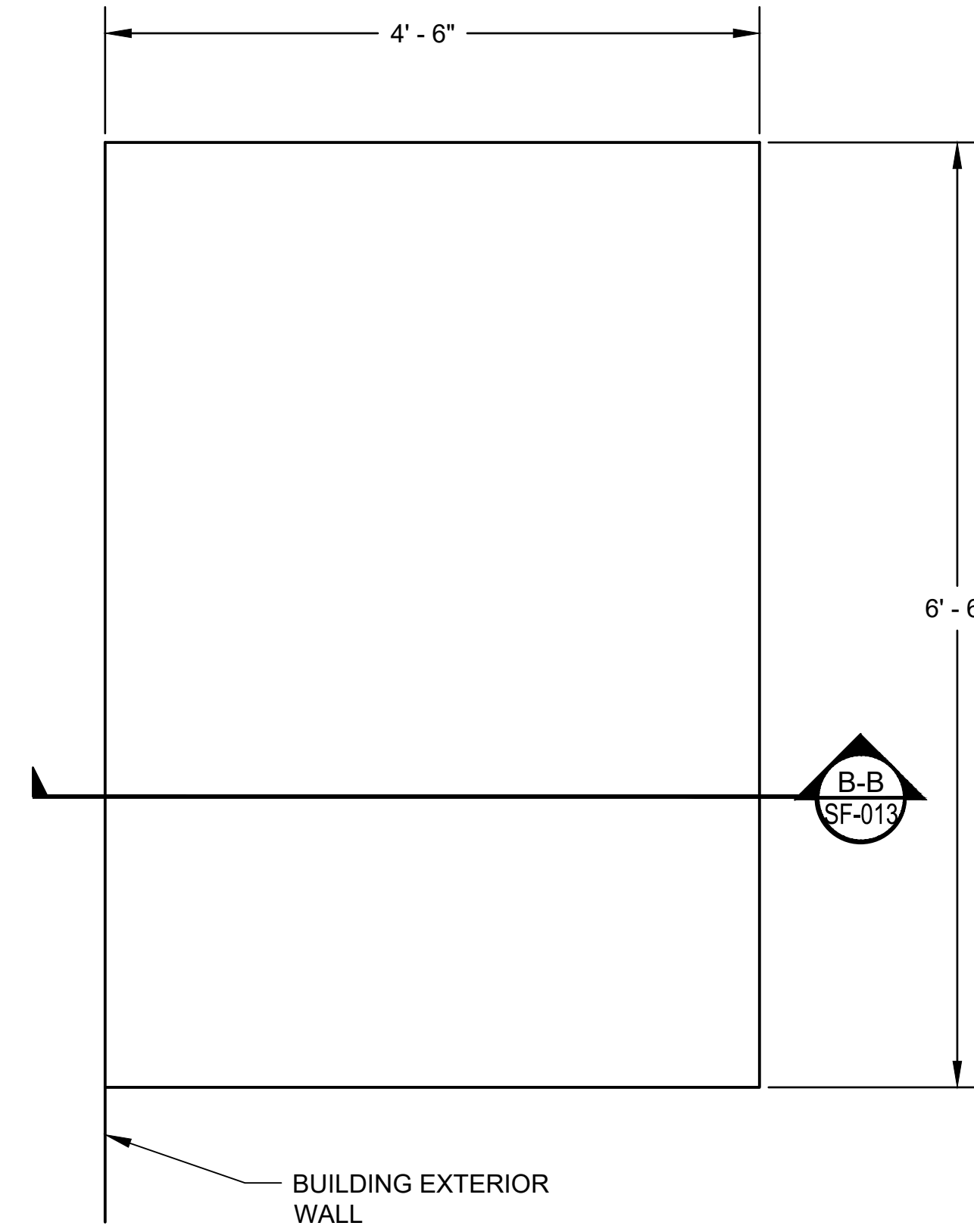
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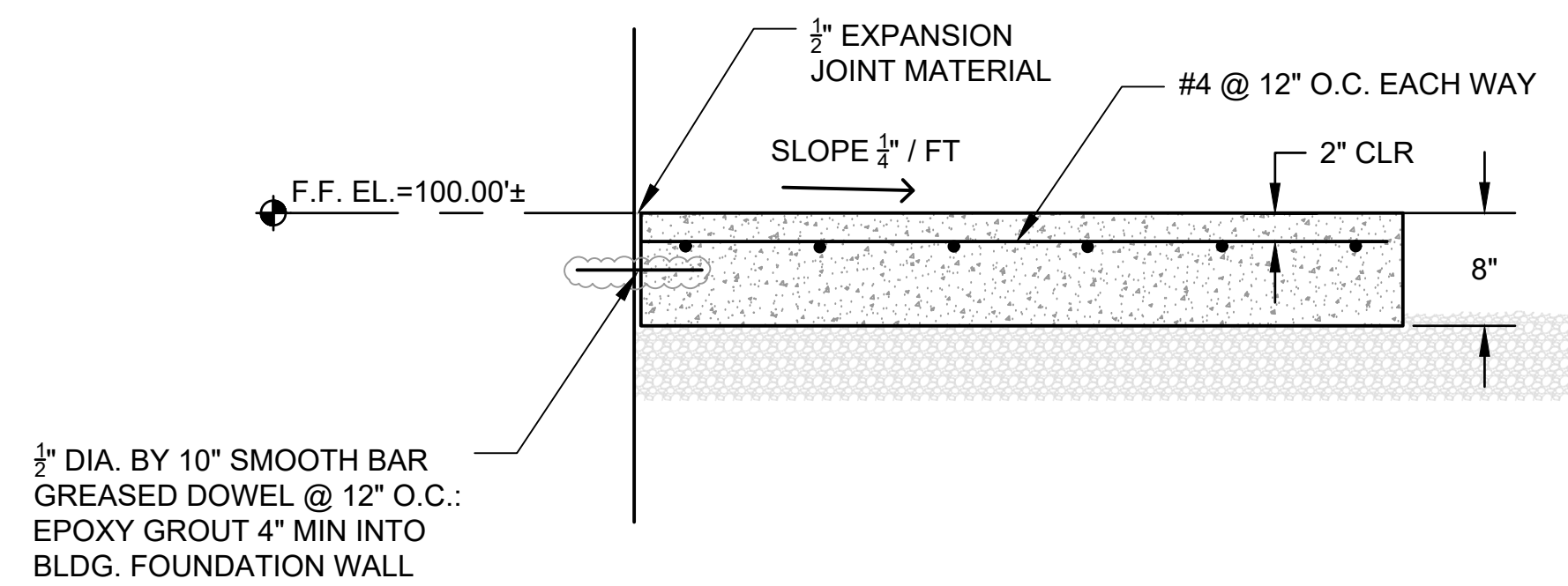
**PLAN VIEW - HVAC UNIT FOUNDATION**  
1" = 1'-0"



**A-A SF-013**  
**SECTION VIEW - HVAC UNIT FOUNDATION**  
1" = 1'-0"



**PLAN VIEW - EXTERIOR DOOR STOOP**  
1" = 1'-0"



**B-B SF-013**  
**SECTION VIEW - EXTERIOR DOOR STOOP**  
1" = 1'-0"

**GENERAL NOTES:**

- SEE STRUCTURAL FOUNDATION NOTE SHEET SF-001 FOR MATERIAL REQUIREMENTS.
- SEE ARCHITECTURAL DRAWINGS FOR STOOP LOCATIONS AT EXTERIOR DOORS.

REV	DATE	DESCRIPTION	BY



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907-374-9275

WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**HVAC UNIT FOUNDATION - ACCU-1**  
**STRUCTURAL DRAWING**  
SEC. 31; TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.50206.01  
DATE 06/02/23

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SHEET

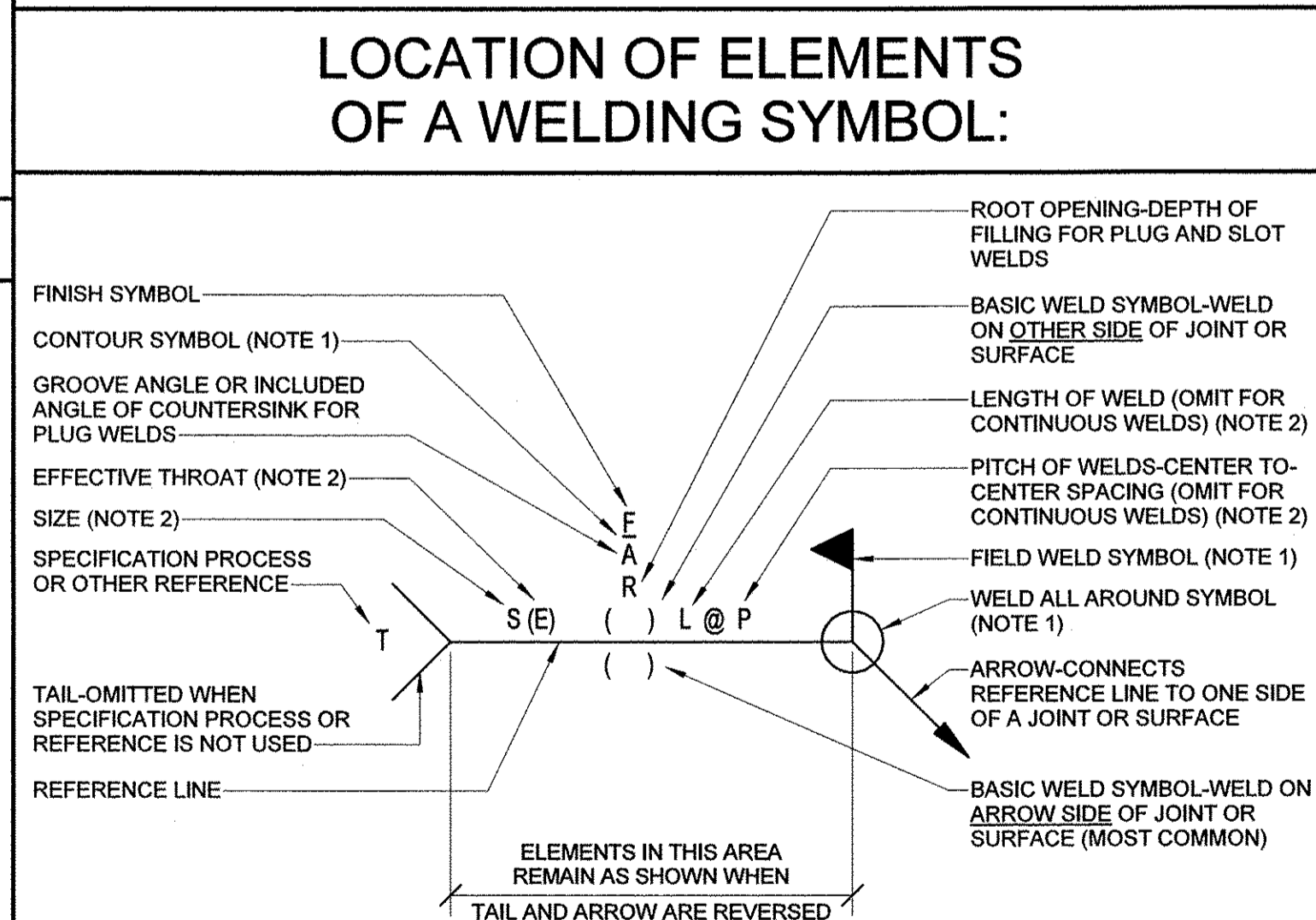
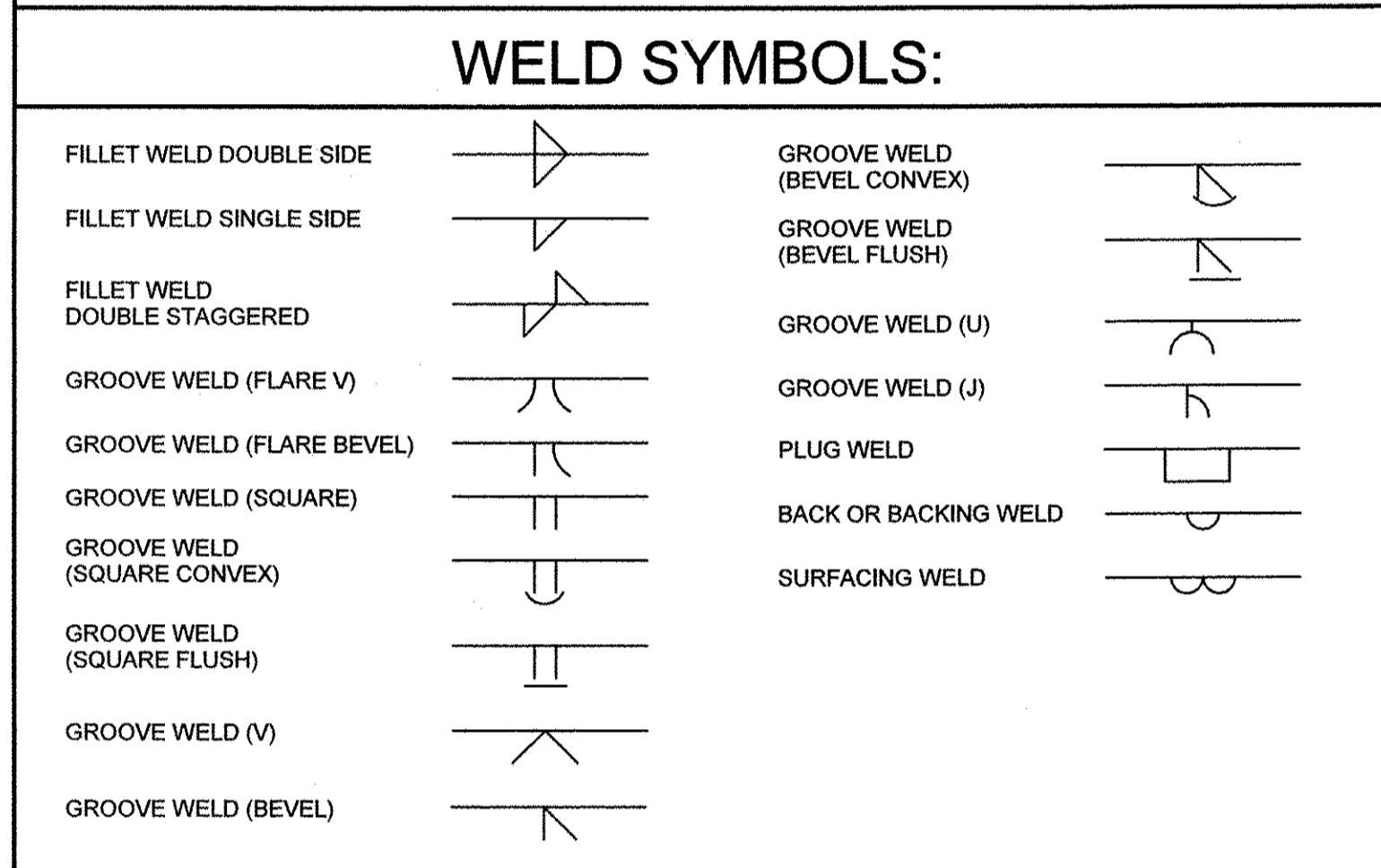
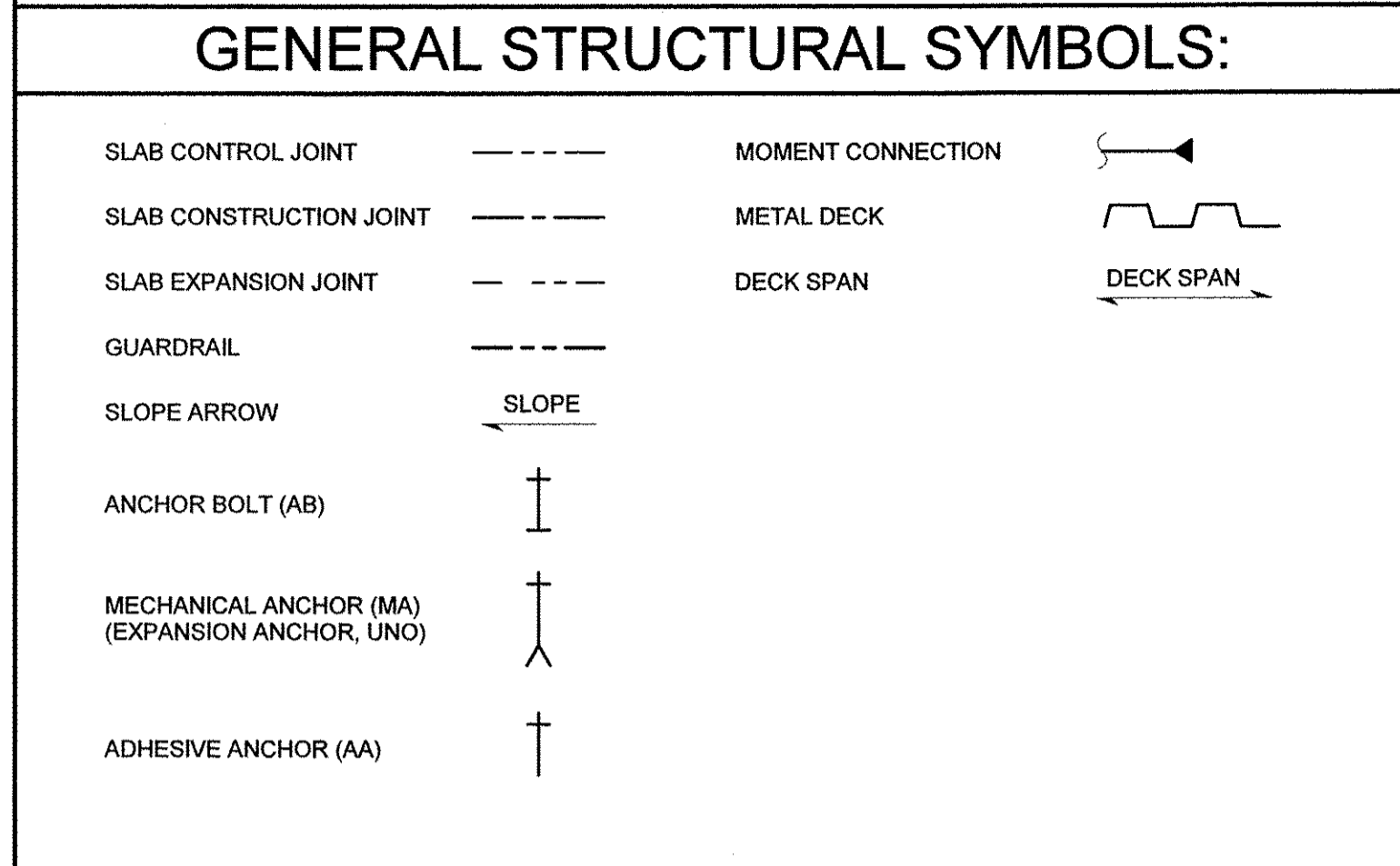
**SF-013**

### STRUCTURAL DESIGN CRITERIA:

- BUILDING CODE: INTERNATIONAL BUILDING CODE (IBC) 2018; PUBLISHED BY INTERNATIONAL CODE COUNCIL, INC.
- ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES; PUBLISHED BY AMERICAN SOCIETY OF CIVIL ENGINEERS.
- STEEL DESIGN CODE: AISC 360-16 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, ALLOWABLE STRESS DESIGN (ASD), 341-10 SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS; PUBLISHED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- CONCRETE DESIGN CODE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318-14; PUBLISHED BY AMERICAN CONCRETE INSTITUTE.
- MASONRY DESIGN CODE: TMS 602-16, SPECIFICATION FOR MASONRY STRUCTURES; PUBLISHED BY THE MASONRY SOCIETY.
- STRUCTURAL STEEL: SEE SPECIFICATION.
- CONCRETE COMPRESSIVE STRENGTH: 4000 PSI AT 28 DAYS.
- MASONRY COMPRESSIVE STRENGTH (fm): 2000 PSI.
- REINFORCING STEEL: ASTM A706, GRADE 60.
- EQUIPMENT PLATFORM LIVE LOADS:
  - UNIFORM LIVE LOAD: 125 PSF
- PEMB ROOF LIVE LOAD: 20 PSF
- PEMB ROOF SNOW LOAD:
  - RISK CATEGORY: III
  - SNOW IMPORTANCE FACTOR (I): 1.1
  - GROUND SNOW LOAD (Pg): 60 PSF
  - SNOW EXPOSURE FACTOR (Ce): 1.1
  - THERMAL FACTOR (Ct): 1.1
  - FLAT ROOF SNOW LOAD (P<sub>f</sub>): 55 PSF
- PEMB WIND DESIGN DATA:
  - RISK CATEGORY: III
  - BASIC WIND SPEED (3 SEC GUST): 147 MPH
  - WIND EXPOSURE: D
  - BUILDING ENCLOSURE: ENCLOSED
  - GUST EFFECT FACTOR: 0.85
  - TOPOGRAPHIC FACTOR, (Kzt): 1.00
  - INTERNAL PRESSURE COEFFICIENT (GCpi): + 0.18, - 0.18
- EARTHQUAKE DESIGN DATA:
  - RISK CATEGORY: III
  - SEISMIC IMPORTANCE FACTOR (I): 1.25
  - SHORT PERIOD SPECTRAL RESPONSE ACCELERATION (S<sub>s</sub>): 0.249
  - 1 SECOND SPECTRAL RESPONSE ACCELERATION (S<sub>1</sub>): 0.255
  - SITE CLASS: C
  - SHORT PERIOD SPECTRAL RESPONSE PARAMETER (S<sub>DS</sub>): 0.216
  - 1 SECOND SPECTRAL RESPONSE PARAMETER (S<sub>01</sub>): 0.255
  - SEISMIC DESIGN CATEGORY (SDC): D
  - ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE
  - EQUIPMENT PLATFORM SEISMIC DESIGN PARAMETERS:
    - BASIC SEISMIC-FORCE-RESISTING SYSTEM: SPECIAL MASONRY REINFORCED SHEAR WALLS
    - RESPONSE MODIFICATION FACTOR (R): 5
    - SEISMIC RESPONSE COEFFICIENT (Cs): 0.05
    - DESIGN BASE SHEAR (V): 21.5 K
- FLOOD DESIGN DATA:
  - FLOOD HAZARD AREA: NONE
- SYSTEMS AND COMPONENTS REQUIRING SPECIAL INSPECTION:
  - EQUIPMENT PLATFORM CONCRETE SLAB
  - MASONRY WALLS

### FIELD MEASUREMENT NOTES:

- ALL DIMENSIONS OF EXISTING CONSTRUCTION ARE APPROXIMATE. CONTRACTOR SHALL MAKE ALL NECESSARY FIELD MEASUREMENTS OF EXISTING STRUCTURES, BREACHING AND EQUIPMENT TO VERIFY DIMENSIONS SHOWN ON DRAWINGS AND TO PROVIDE DIMENSIONS NOT SHOWN, PRIOR TO FABRICATION. COSTS FOR MODIFICATIONS OF NEW CONSTRUCTION, DUE TO LACK OF CONFIRMATION OF DIMENSIONS BY FIELD MEASUREMENTS SHALL BE BORNE BY CONTRACTOR.
- CONTRACTOR'S STRUCTURAL STEEL DETAILER SHALL MAKE NECESSARY FIELD MEASUREMENTS OF EXISTING STRUCTURAL STEEL CONNECTIONS TO ENSURE NEW CONNECTION DETAILS SHOWN ON SHOP DRAWINGS ARE COMPATIBLE WITH EXISTING CONNECTIONS AND ARE CONSTRUCTIBLE AS DETAILED.



**NOTES:**

- SUPPLEMENTARY SYMBOL.
- SHOWN ON SAME SIDE OF REFERENCE LINE AS THE WELD SYMBOL. IF "WELD BOTH SIDES", DIMENSIONS ARE REQUIRED ON BOTH SYMBOLS, EVEN IF SAME DIMENSIONS.

### BUILDING STABILITY:

- THE BUILDING STEEL STRUCTURE IS NOT A SELF-SUPPORTING FRAME. THE FOLLOWING COMPONENTS OF THE BUILDING STRUCTURE FORM A PART OF THE BUILDING LATERAL STABILITY SYSTEM. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AS REQUIRED FOR LATERAL STABILITY UNTIL THESE COMPONENTS ARE COMPLETELY INSTALLED AND CONCRETE (WHERE APPLICABLE) HAS ACHIEVED DESIGN STRENGTH:
  - ROOF DECKS WHICH FUNCTION AS HORIZONTAL DIAPHRAGMS.
- BUILDING CMU WALLS ARE NOT SELF-SUPPORTING WALLS. THE FOLLOWING COMPONENTS OF THE BUILDING STRUCTURE FORM A PART OF THE WALL LATERAL STABILITY SYSTEM. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AS REQUIRED FOR LATERAL STABILITY UNTIL THESE COMPONENTS ARE COMPLETELY INSTALLED:
  - BUILDING LATERAL STABILITY SYSTEM.
  - PERPENDICULAR CONNECTED CMU WALLS.
  - ROOM CEILING SLABS WHICH FUNCTION AS HORIZONTAL DIAPHRAGMS.

### REINFORCING STEEL NOTES:

- CONFORM WITH ACI 318 AND ACI STANDARD FOR "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT."
- REINFORCING SHALL BE CONTINUOUS AROUND ALL CORNERS UNLESS SHOWN OTHERWISE.
- SHIFT REINFORCING BARS TO CLEAR ANCHOR BOLTS AND EMBEDDED ITEMS; OBTAIN ENGINEER'S APPROVAL AND ADD EXTRA REINFORCING BAR IF REQUESTED BY ENGINEER. CUTTING OF REINFORCING BARS NOT PERMITTED.
- REINFORCING SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS UNLESS SHOWN OTHERWISE.
- LOCATE SPLICES WHERE SHOWN. WHERE NO SPLICES ARE SHOWN, TOP REINFORCING IN SLABS AND BEAMS MAY BE SPLICED IN MIDDLE ONE-HALF OF SPAN BETWEEN SUPPORTS AND BOTTOM REINFORCING MAY BE SPLICED OVER OR NEAR SUPPORTS.
- CONCRETE REINFORCEMENT SHALL BE PLACED WITHIN FOLLOWING TOLERANCE RELATIVE TO FORMED OR UNFORMED CONCRETE SURFACE:

SPECIFIED COVER	TOLERANCE	
	D ≤ 12"	D > 12"
3/4"	-1/8", +1/4"	-1/8", +3/8"
1"	+/-1/4"	-1/4", +3/8"
1 1/2" OR GREATER	+/-3/8"	-3/8", +1/2"

NOTE: TOLERANCES APPLY ONLY AT LOCAL ANOMALIES. SIZE CHAIRS AND SPACERS FOR SPECIFIED COVER.

### MASONRY NOTES:

- CELL (VERTICAL) REINFORCEMENT:
  - MATERIAL: DEFORMED BARS CONFORMING TO SPECIFICATIONS. BAR SIZE: #5@48" OC FOR 8" CMU UNLESS NOTED OTHERWISE.
  - REINFORCED CELL HORIZONTAL SPACING: 4'-0" MAXIMUM. PLACE ADDITIONAL CELL REINFORCEMENT AS FOLLOWS:
    - IN CELL IMMEDIATELY ON EACH SIDE OF CONTROL AND EXPANSION JOINTS.
    - IN TWO ADJACENT CELLS LOCATED IMMEDIATELY ON EACH SIDE OF OPENINGS.
    - AT ALL CORNER CELLS.
    - AT ALL OTHER LOCATIONS WHERE NOTED ON DRAWINGS.
  - LAP REINFORCING BARS AS FOLLOWS:

REINFORCING BAR LAP/DEVELOPMENT LENGTH $l_d$ IN 8" CMU (INCHES)						
BAR SIZE	#3	#4	#5	#6	#7	#8
BAR LOCATED WITH MINIMUM COVER	19	34	45	54	63	72
BAR LOCATED IN CENTER OF FULLY GROUTED CELL	12	14	21	39	53	72

$f_y = 60,000$  PSI,  $f_m = 2000$  PSI

- BOND BEAM REINFORCEMENT:
  - 2-#5 BARS, UNLESS NOTED OTHERWISE.
- REFERENCE SPECIFICATION SECTION 04 22 00.
- ALL MASONRY CONSTRUCTION SHALL CONFORM TO THE LATEST NCMA "SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF LOAD-BEARING CONCRETE MASONRY" AND BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES.
- SIZE OF CONCRETE MASONRY UNITS SHALL BE 16" LONG BY 8" HIGH NORMAL FACE DIMENSIONS. UNO PROVIDE SPECIAL SHAPES AS REQUIRED. UNITS SHALL BE HOLLOW - ASTM C90 GRADE N.
- ALL MASONRY SHALL CONFORM TO THE FOLLOWING DESIGNATIONS, UNO
  - CONCRETE MASONRY UNITS     ASTM C-90 TYPE-1  $f_m = 2000$  psi
  - MORTAR                         ASTM C-270 TYPE-S
  - REINFORCING                 ASTM A-706  $F_y = 60,000$  psi
- CORES CONTAINING VERTICAL REINFORCING, BOLTS OR ANCHORS WILL BE GROUTED SOLID WITH CORE FILL CONCRETE. FILLING CORES WITH MORTAR IS NOT ACCEPTABLE. REINFORCING SHALL BE PLACED PRIOR TO GROUTING.
- GROUT CORES IN 4'-0" MAXIMUM LIFTS UNLESS CLEAN-OUTS ARE PROVIDED, IN WHICH CASE 8'-0" MAXIMUM LIFTS MAY BE USED.
- LAY ALL WALLS IN RUNNING BOND UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE DRAWINGS.
- HOLES CUT IN CMU WALLS FOR PIPING, CONDUIT, ETC. SHALL MISS ALL VERTICAL AND HORIZONTAL REINFORCING. HOLLOW AREAS IN BLOCKS AND SPACES BETWEEN PIPING, CONDUIT, ETC. SHALL BE COMPLETELY FILLED WITH GROUT AND PROPERLY SEALED WITH APPROVED SEALANT. ALUMINUM PIPING OR CONDUIT MAY NOT BE EMBEDDED IN ANY CONCRETE, BRICK OR CONCRETE BLOCK, BUT MAY BE SLEEVED.

### POST-INSTALLED ANCHORS NOTES:

- POST-INSTALLED ANCHORS ARE TO BE OF TYPE, DIAMETER, AND EMBEDMENT AS INDICATED ON THE DRAWINGS.
- ADHESIVE ANCHORS SHALL BE SUPPLIED AS AN ENTIRE SYSTEM.
- ADHESIVE ANCHORS SHALL BE INSTALLED BY QUALIFIED AND TRAINED PERSONNEL.
- POST-INSTALLED ANCHORS INSTALLATION PROCEDURES SHALL FOLLOW THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII).
- POST-INSTALLED ANCHORS SHALL BE INSTALLED IN HOLES DRILLED WITH A ROTARY IMPACT HAMMER DRILL OR ROCK DRILL. DIAMOND CORE DRILLING IS NOT PERMITTED.
- POST-INSTALLED ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH (FC) OF 2,500 PSI.
- ADHESIVE ANCHORS SHALL NOT BE INSTALLED PRIOR TO THE CONCRETE CURING FOR 21 DAYS. CONCRETE SHALL BE DRY AND HAVE A MINIMUM TEMPERATURE AT THE TIME OF ADHESIVE ANCHOR INSTALLATION IN ACCORDANCE TO THE MPII.
- WHERE EXISTING CONCRETE REINFORCING CONFLICTS WITH POST-INSTALLED ANCHORS, THE ENGINEER OF RECORD MUST GIVE WRITTEN PERMISSION BEFORE CUTTING EXISTING REBAR.

### GENERAL NOTES:

- ALL SYMBOLS SHOWN ON THIS LEGEND MAY NOT APPEAR ON THIS SET OF DRAWINGS.
- FOR CONCRETE NOTES AND ADDITIONAL REINFORCING NOTES SEE SF001.
- FOR GENERAL LEGEND AND ABBREVIATIONS, SEE "GG" DRAWINGS.

**BID DOCUMENTS**

**AGENCY SUBMITTAL - NOT FOR CONSTRUCTION**

PROJECT 1528.5026.01  
DATE 10/18/2022

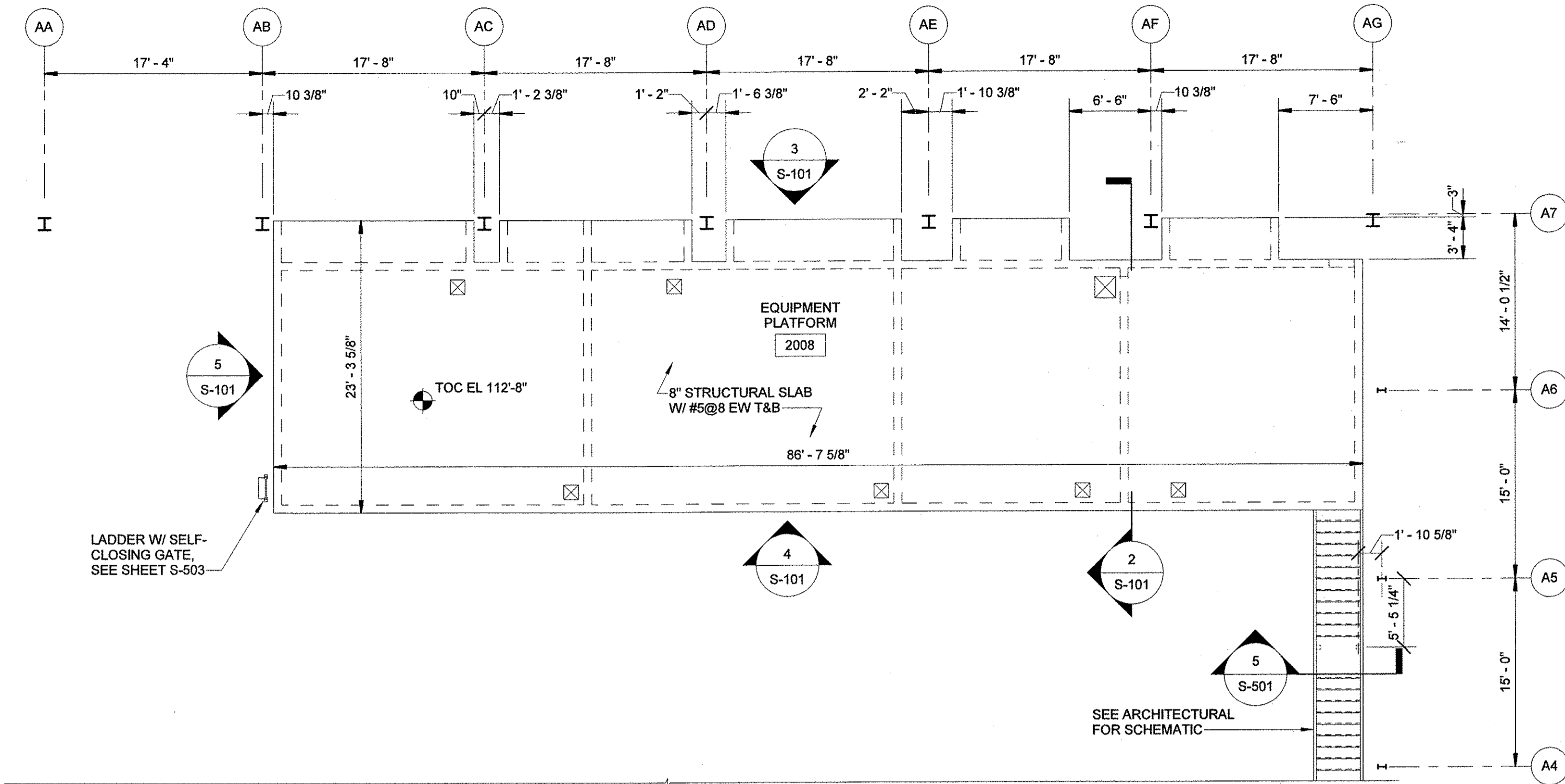
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SHEET

**S-001**

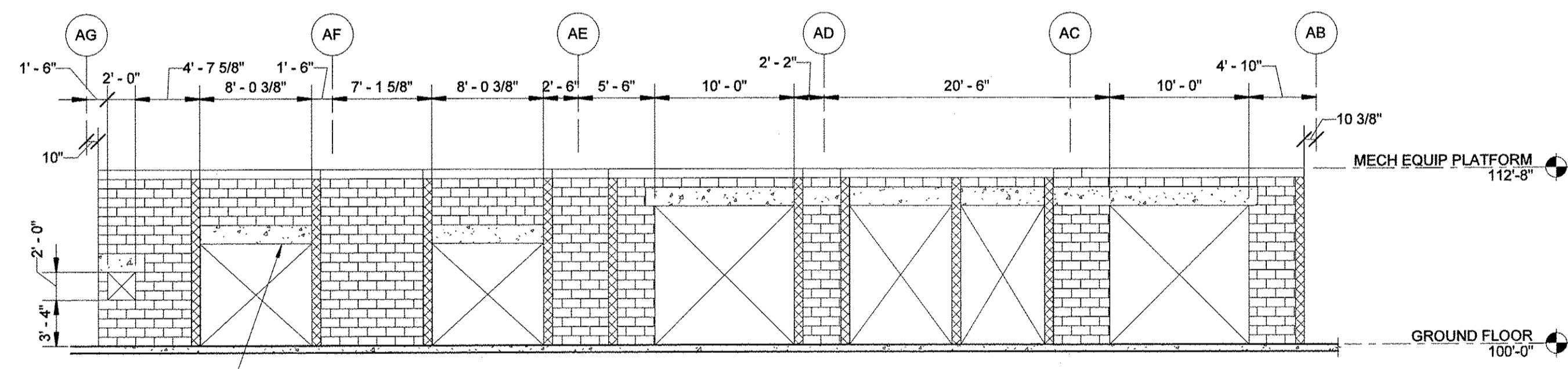
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
STRUCTURAL NOTES AND LEGEND  
SHEET 1

SEC. 31, TOWNSHIP 62S, RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

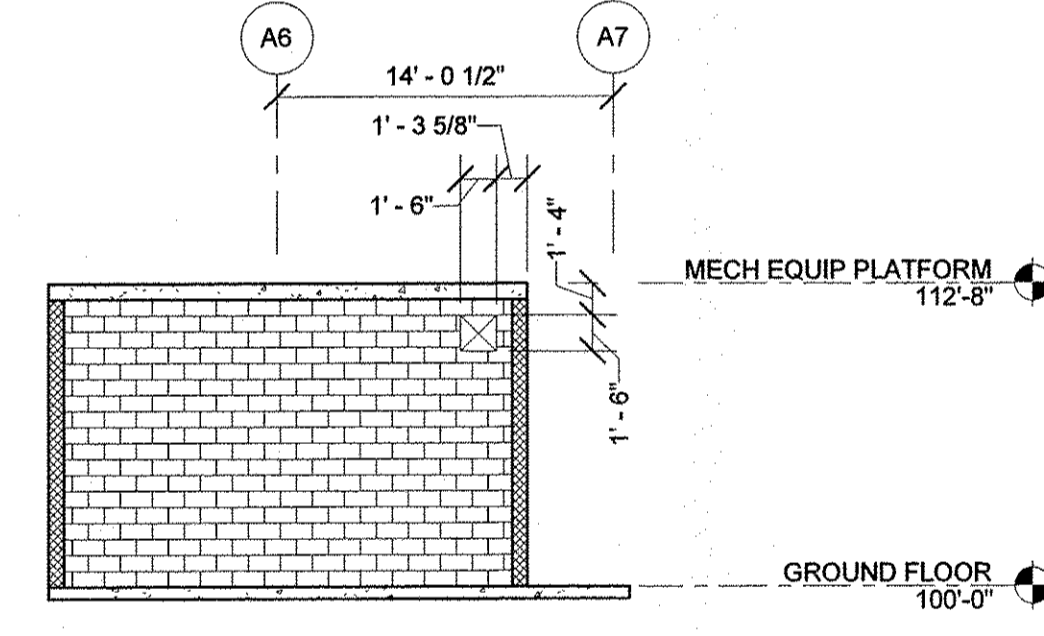
REVISIONS  
BY  
DESCRIPTION  
DATE  
REV



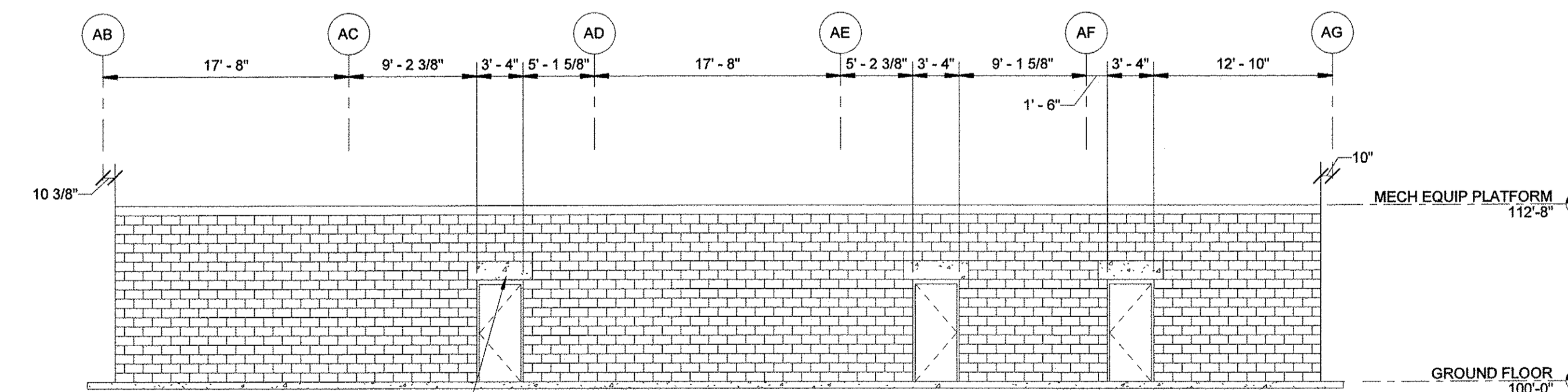
**STRUCTURAL MEZZANINE PLAN**  
SCALE: 1/8" = 1'-0"



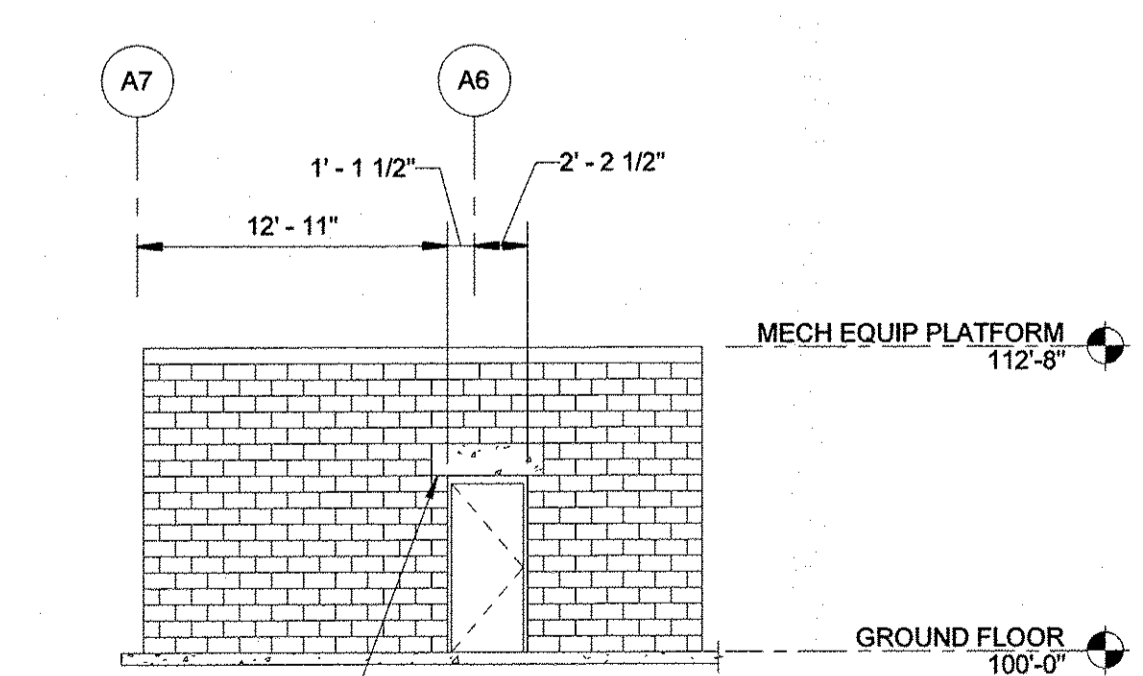
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SCALE: 1/8" = 1'-0"  
S-101



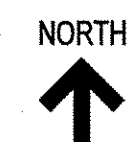
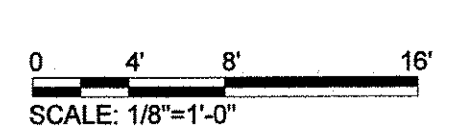
**SECTION 2-S-101**  
SCALE: 1/8" = 1'-0"  
S-101



**ELEVATION 4-S-101**  
SCALE: 1/8" = 1'-0"  
S-101



**ELEVATION 5-S-101**  
SCALE: 1/8" = 1'-0"  
S-101



**GENERAL NOTES:**

1. CONTRACTOR TO PROVIDE VERTICAL CONTROL JOINTS IN MASONRY AT MAXIMUM SPACING OF 25'-0".
2. ALL MASONRY OPENINGS SHOWN IN DETAILS ON THIS SHEET.

REV	DATE	DESCRIPTION	BY



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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**MEZZANINE - STRUCTURAL PLAN  
AND CMU WALL ELEVATIONS**  
SEC. 31; TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA



PROJECT 1528.5026.01  
DATE 10/18/2022

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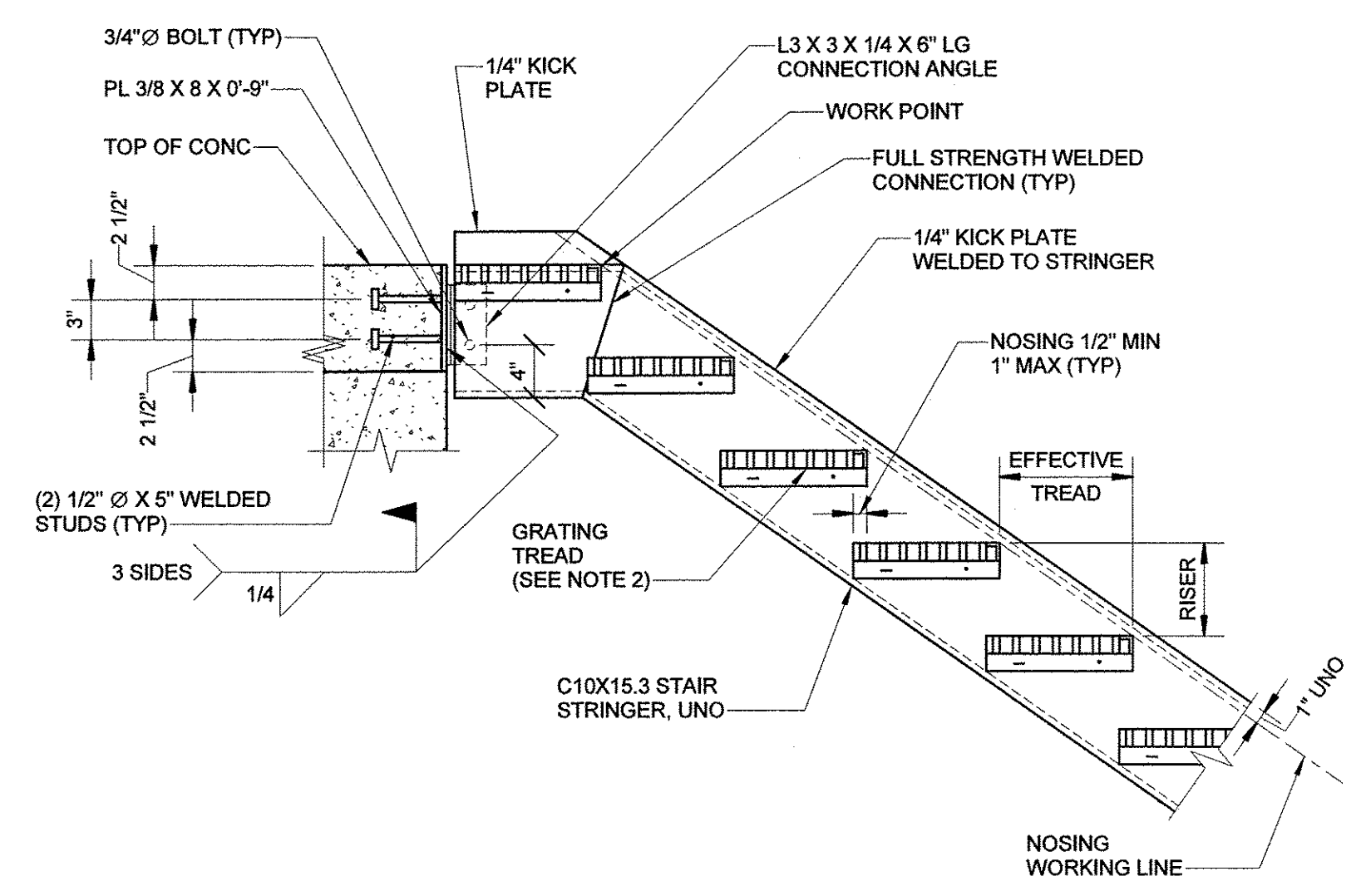
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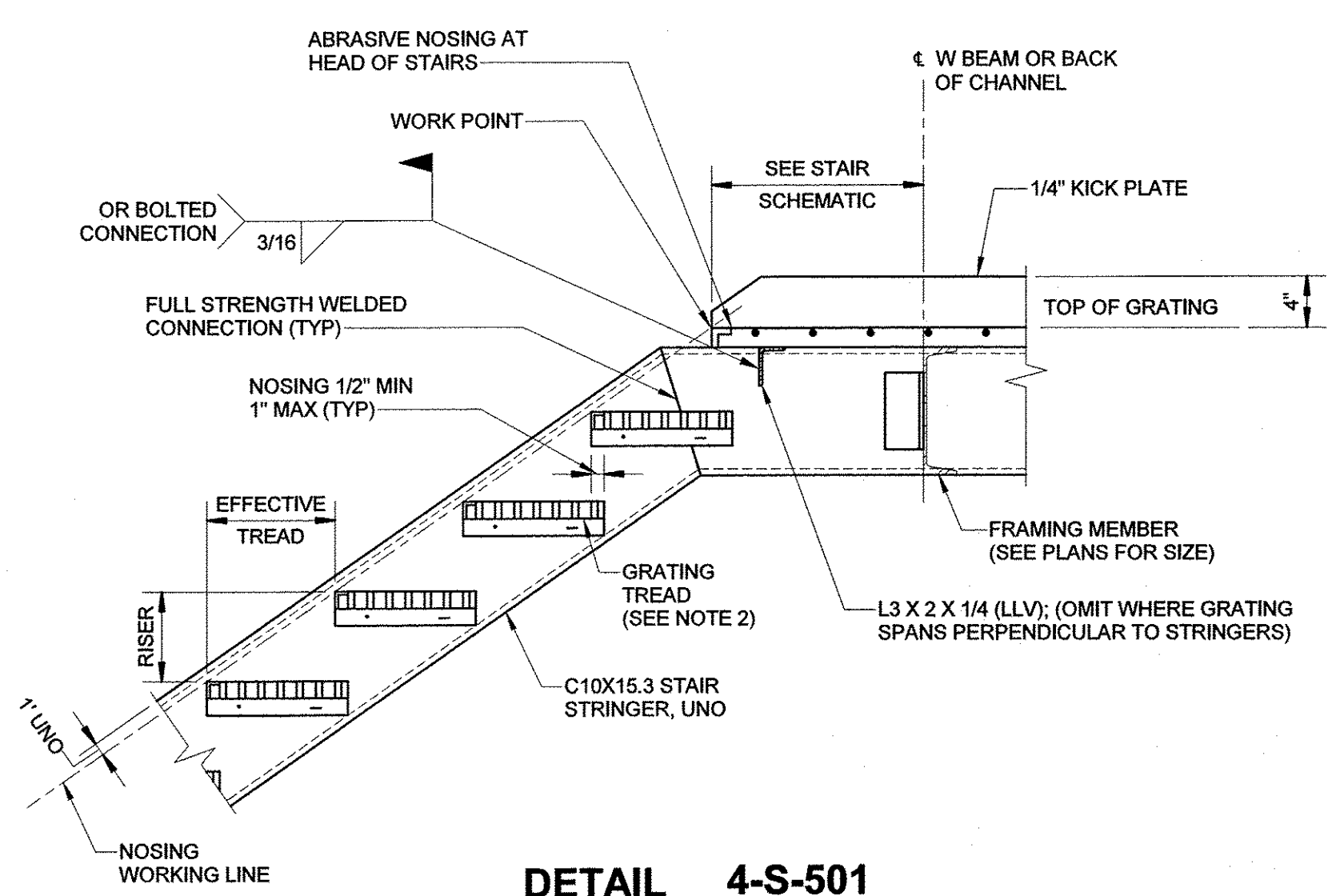
**GENERAL NOTES:**

1. CONNECTIONS MAY BE MODIFIED TO SUIT SPECIAL CONDITIONS. BOLTED CONNECTIONS MAY BE SUBSTITUTED FOR WELDED CONNECTIONS AND VICE VERSA. (SUBJECT TO ERECTORS AND ENGINEERS REVIEW.)
2. USE GRATING TREADS WITH ABRASIVE NOSINGS SIZE: WIDTH ≤ 36" : 1" X 3/16"  
36" < WIDTH ≤ 48" : 1 1/4" X 3/16"  
48" < WIDTH ≤ 63" : 1 1/2" X 3/16"
3. ADHESIVE ANCHORS TO BE HILTI HIT-HY 200 V3 + HIT-Z OR APPROVED EQUAL.

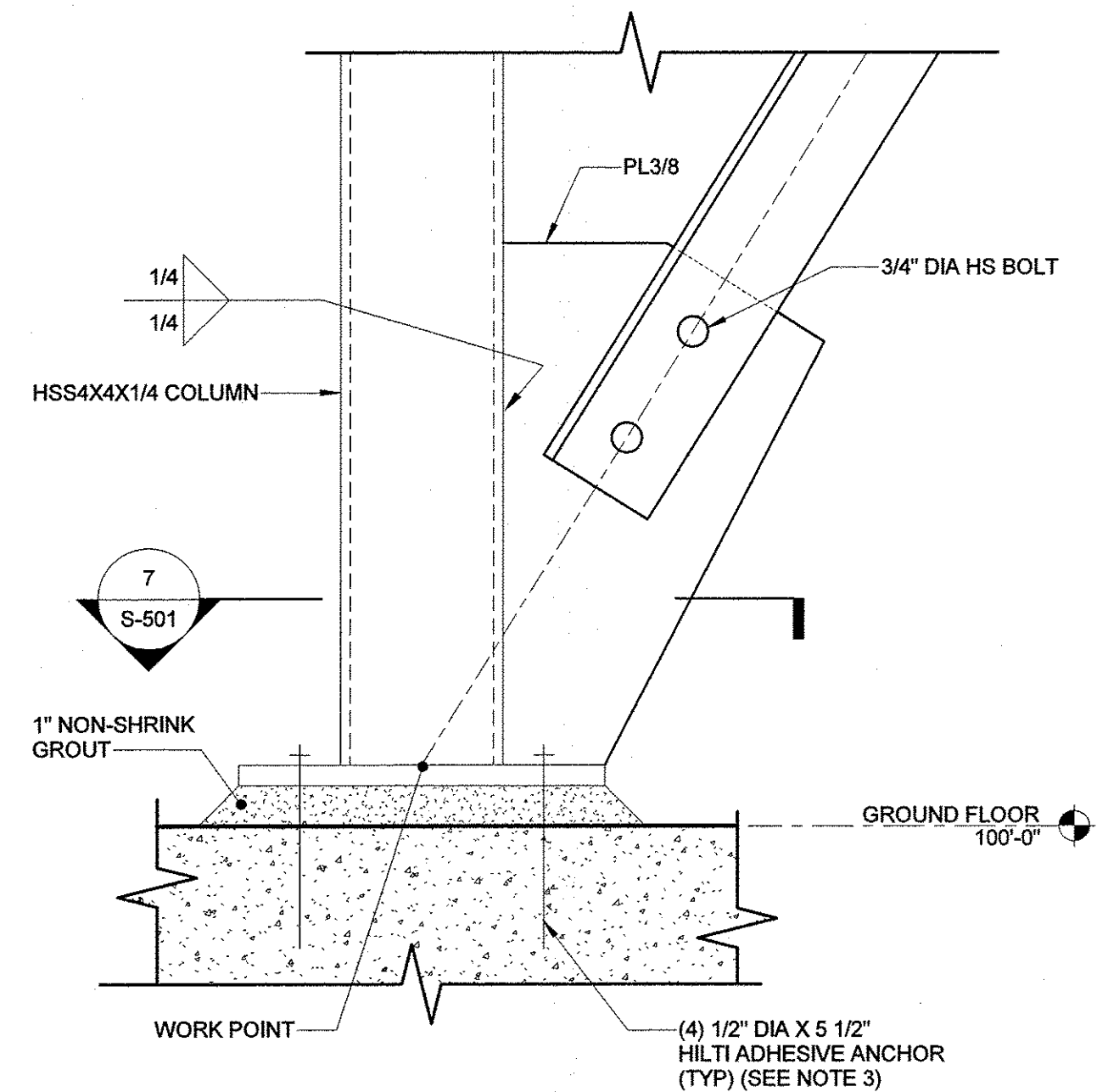
REV	DATE	DESCRIPTION	BY



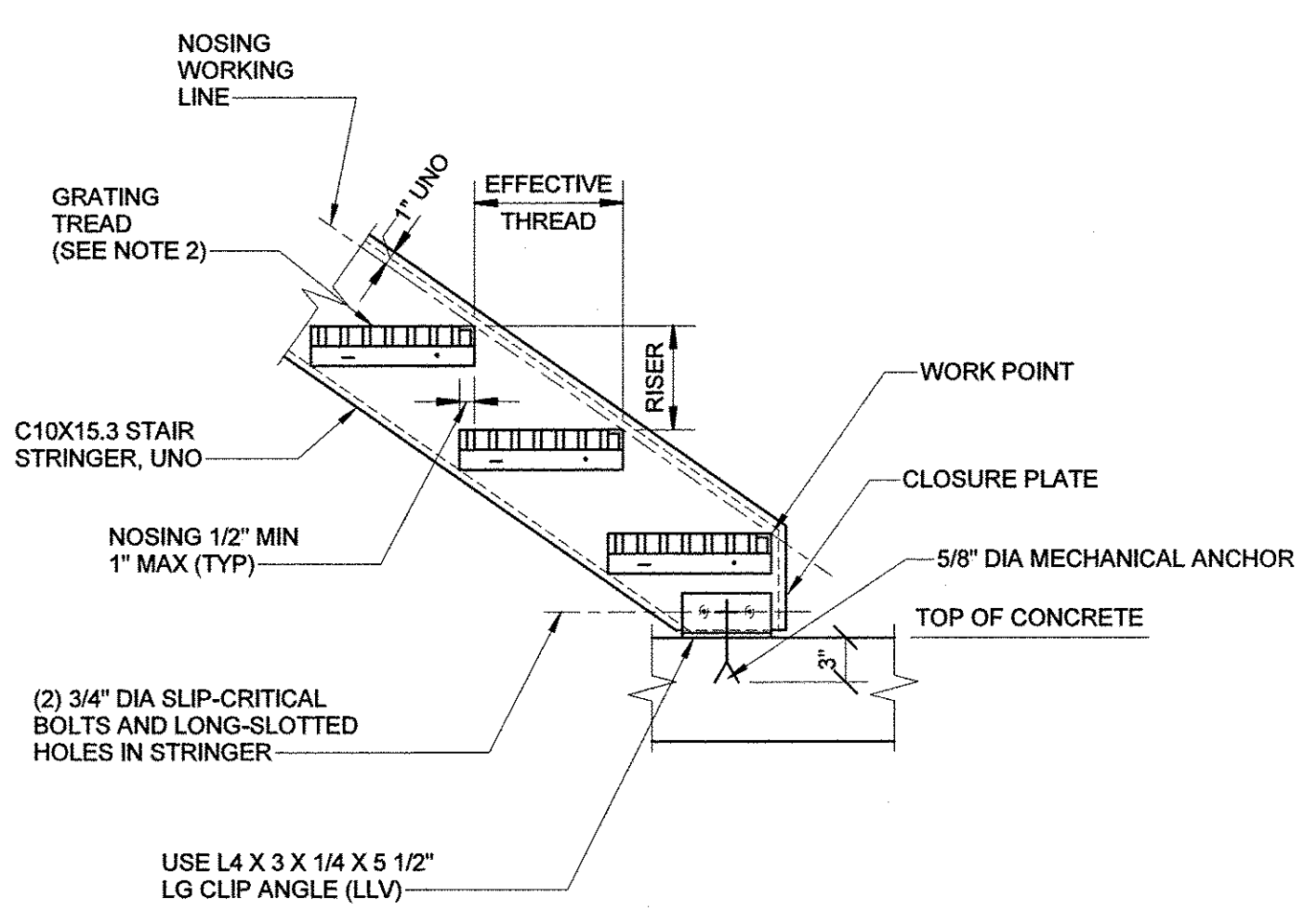
**DETAIL 1-S-501**  
SCALE: 1" = 1'-0" A-311



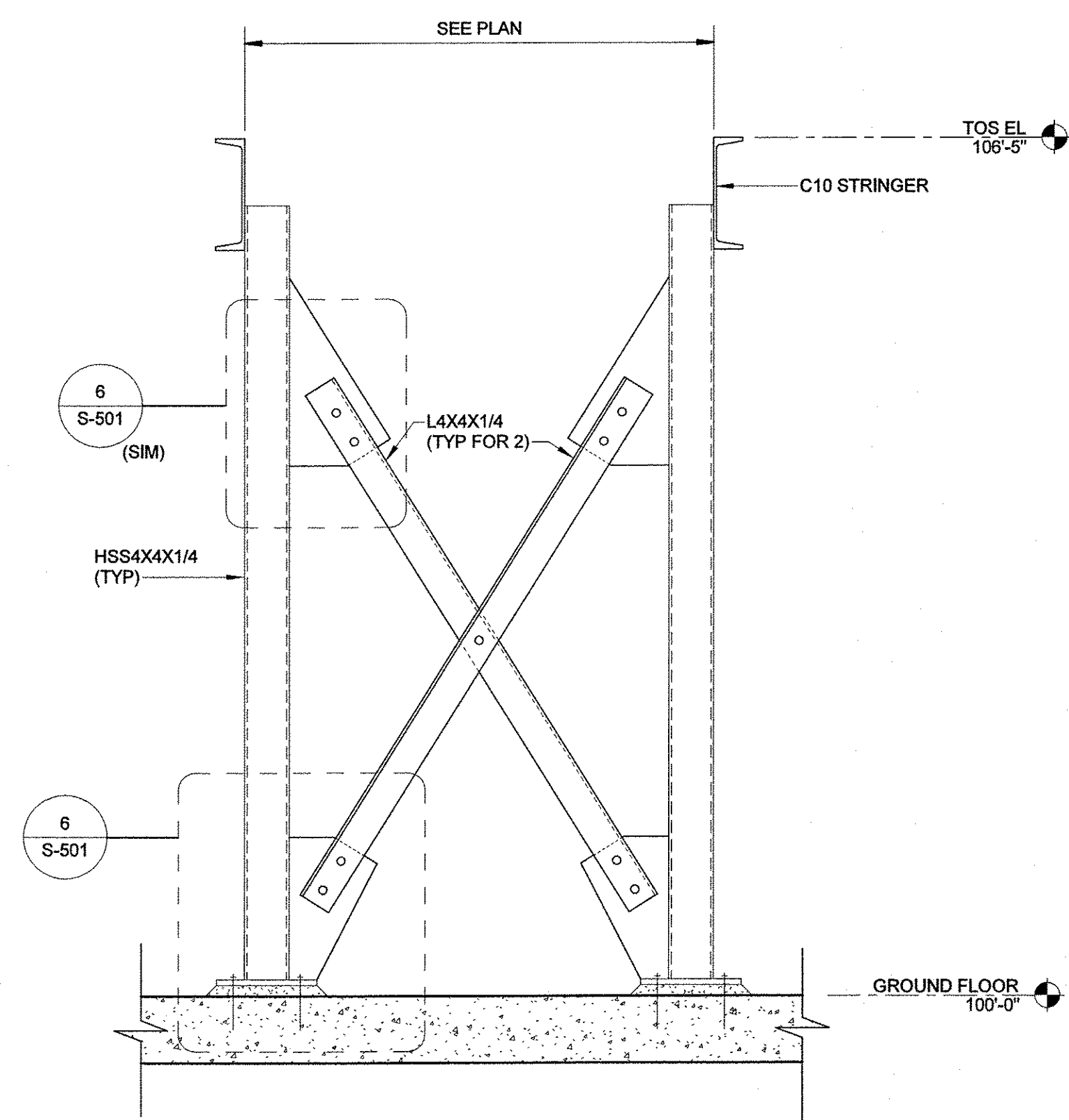
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SCALE: 1" = 1'-0" A-311



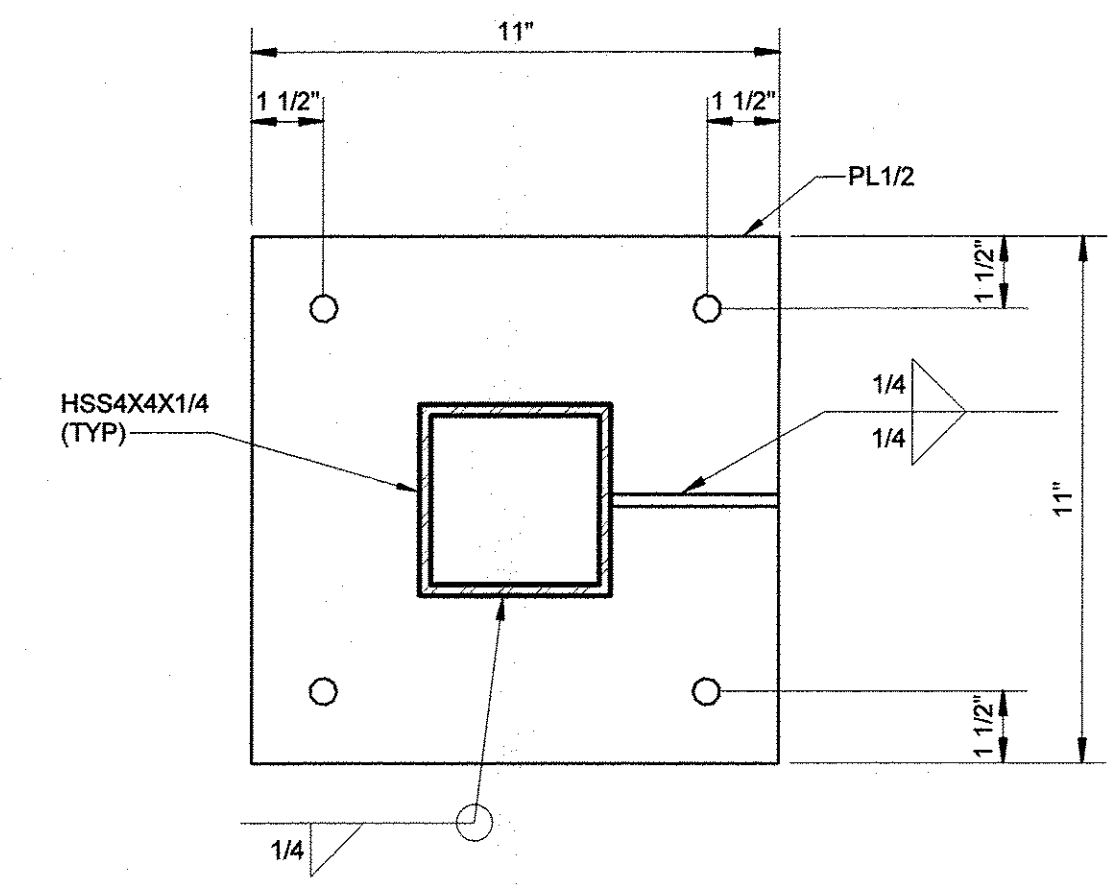
**DETAIL 6-S-501**  
SCALE: 3" = 1'-0" S-501



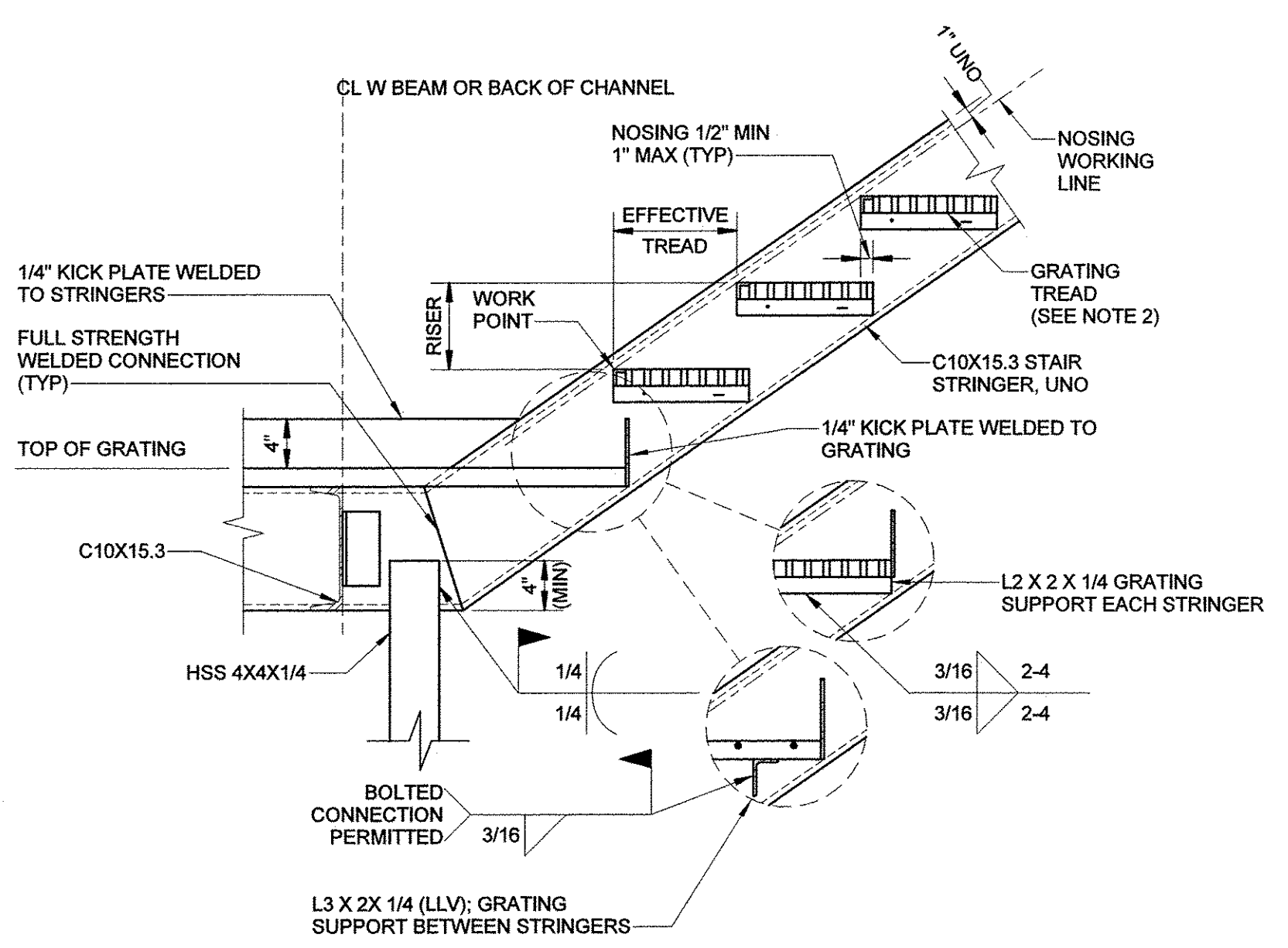
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SCALE: 1" = 1'-0" A-311



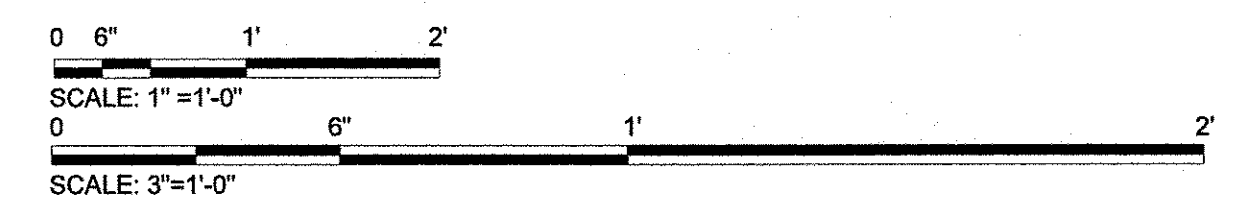
**SECTION 5-S-501**  
SCALE: 1" = 1'-0" S-101



**SECTION 7-S-501**  
SCALE: 3" = 1'-0" S-501



**DETAIL 3-S-501**  
SCALE: 1" = 1'-0" A-311



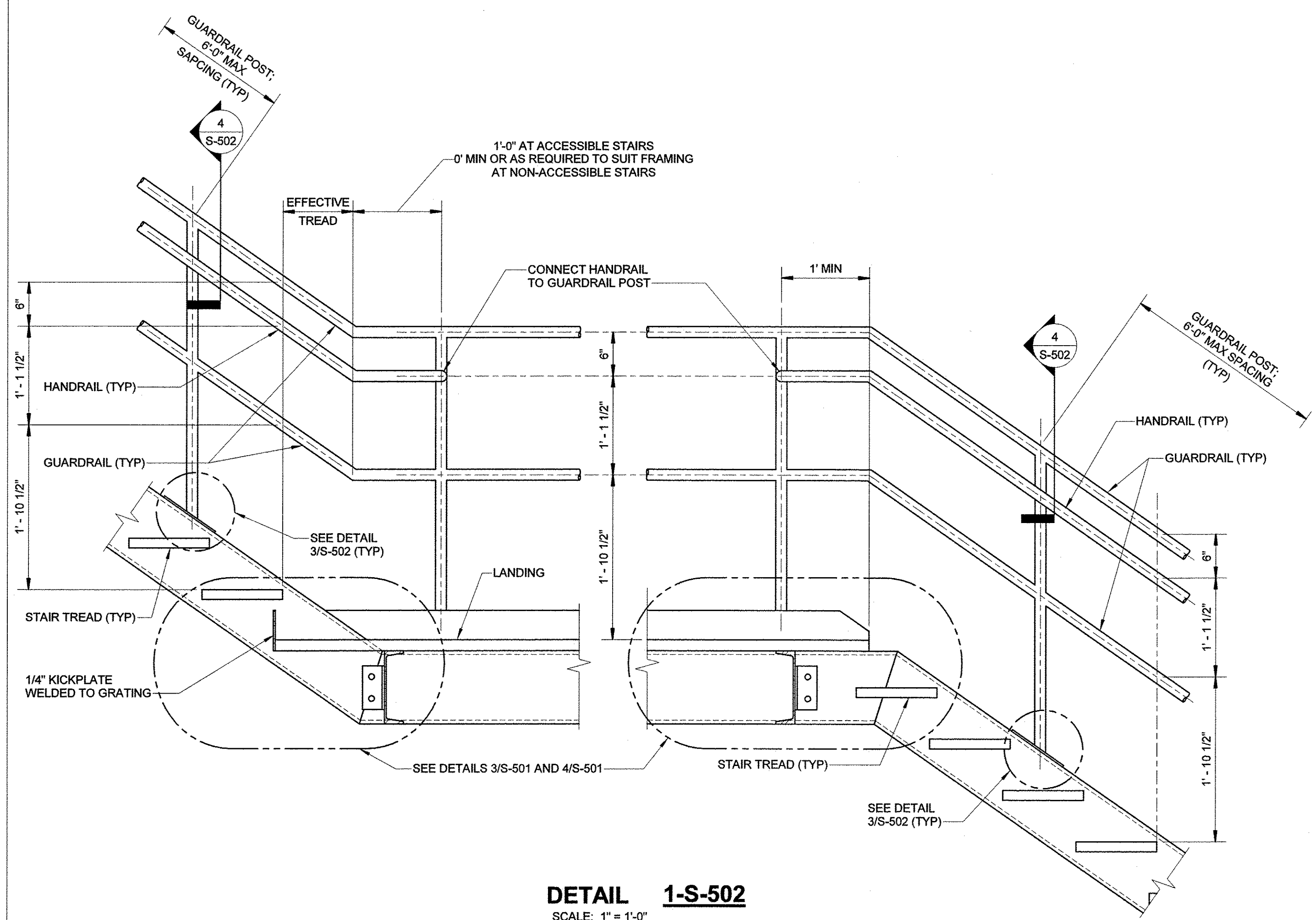
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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**STRUCTURAL STAIR DETAILS**  
**SHEET 1**  
SEC. 31: TOWNSHIP 62S, RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

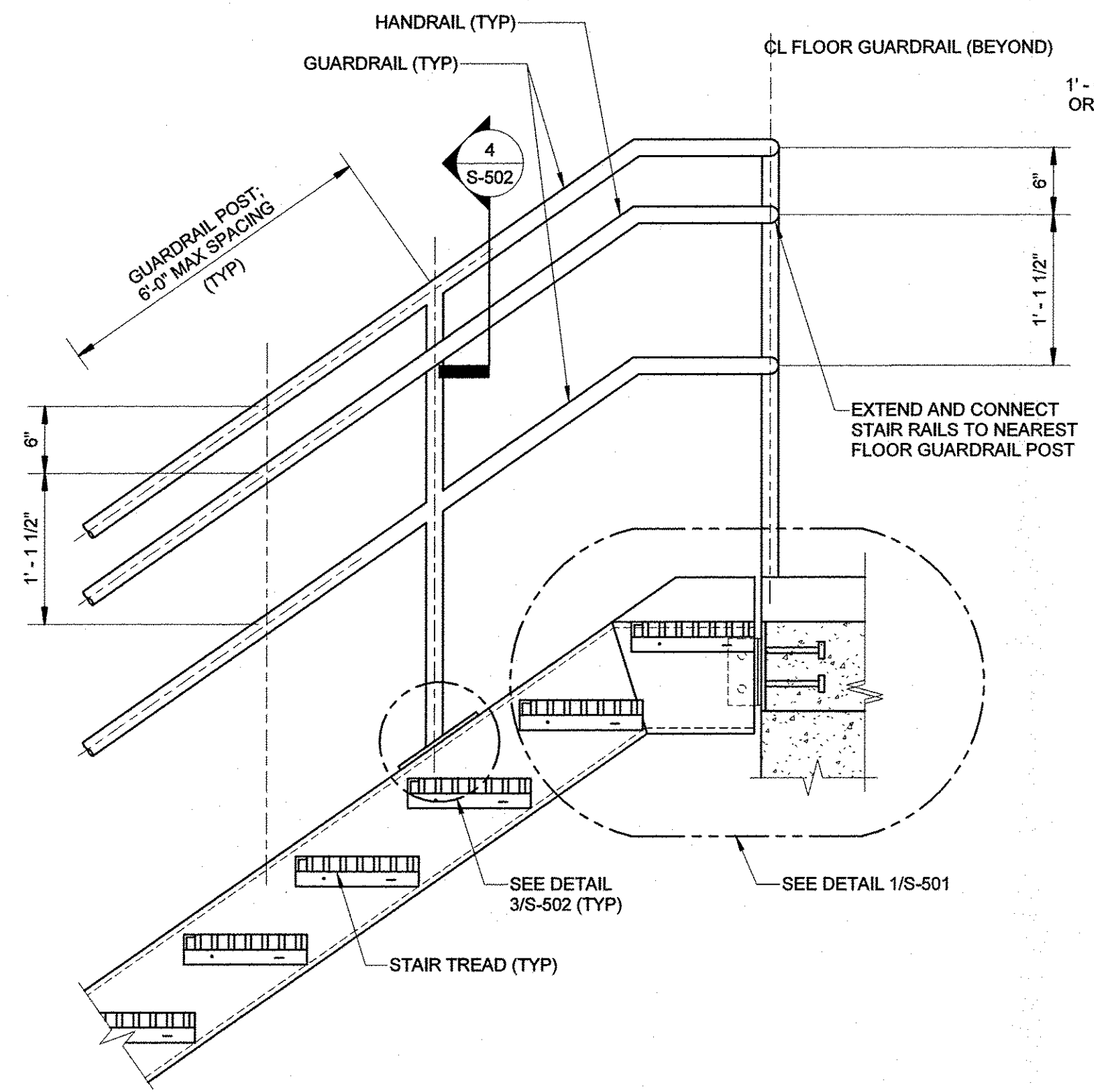
PROJECT 1528.5026.01  
DATE 10/18/2022  
SHEET  
**S-501**

BID DOCUMENTS  
AGENCY SUBMITTAL - NOT FOR CONSTRUCTION

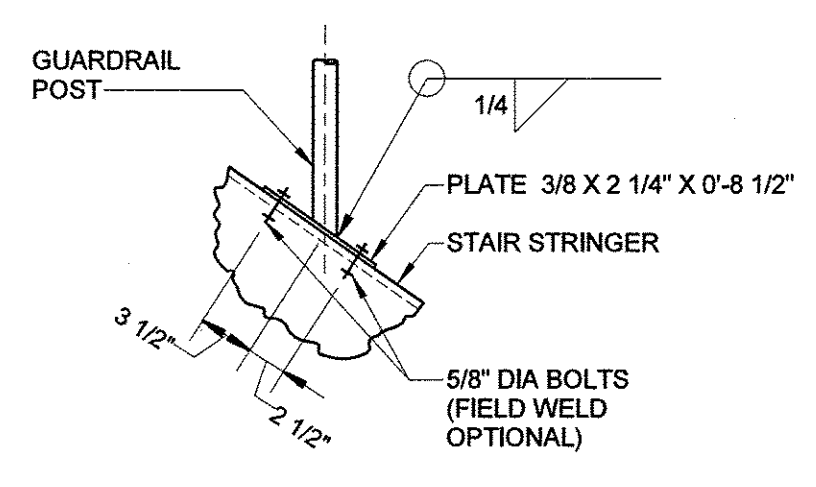
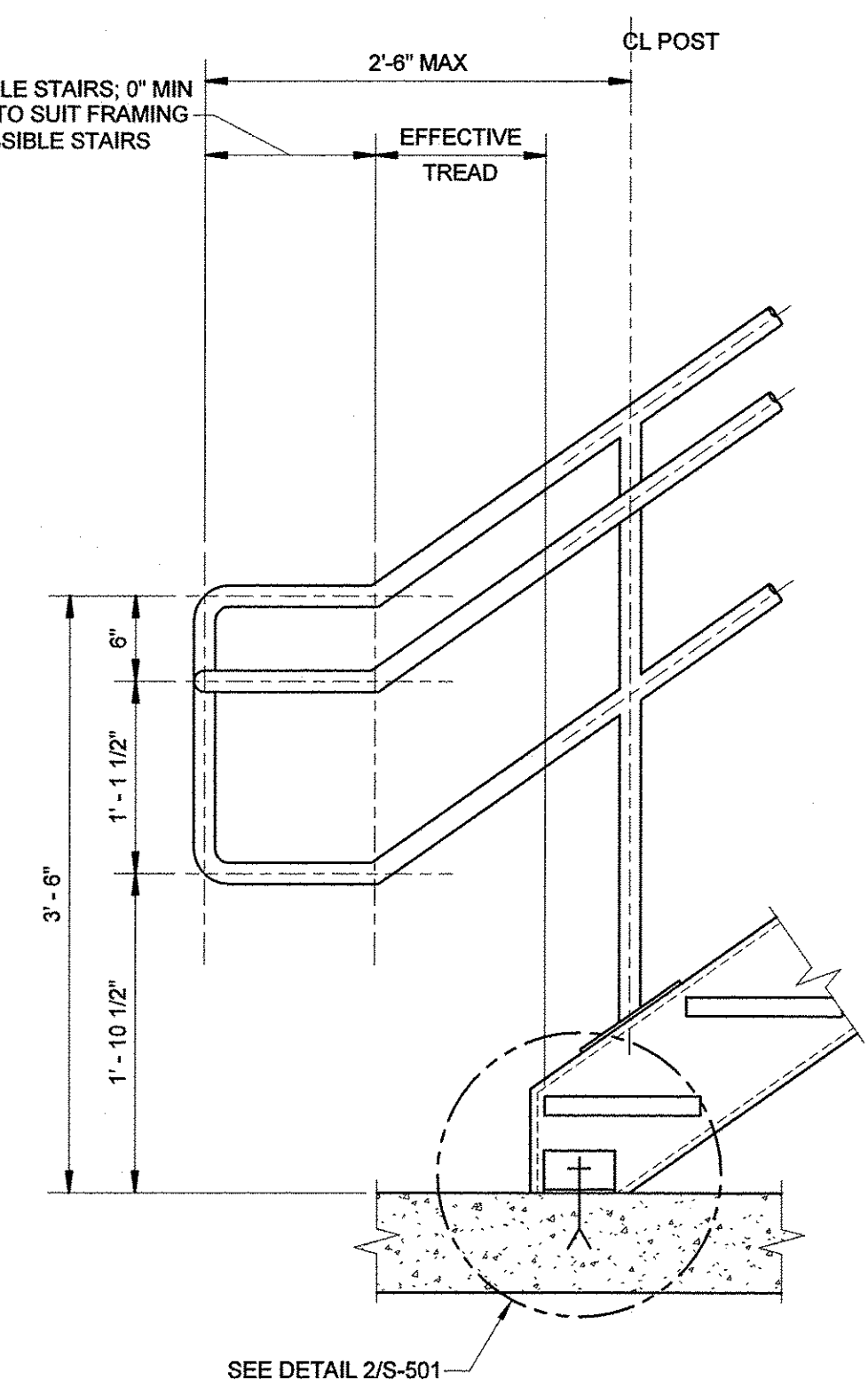
**GENERAL NOTES:**  
 1. ADHESIVE ANCHORS TO BE HILTI HIT-HY 200 V3 + HIT-Z OR APPROVED EQUAL.



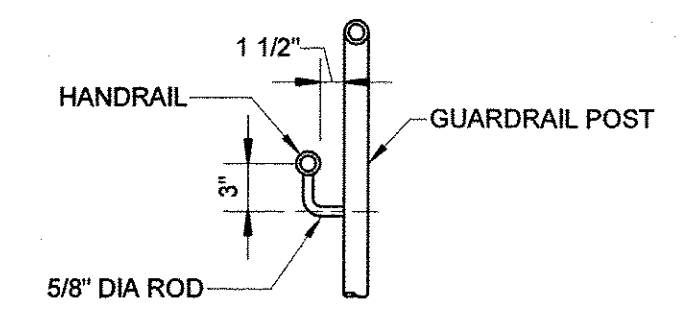
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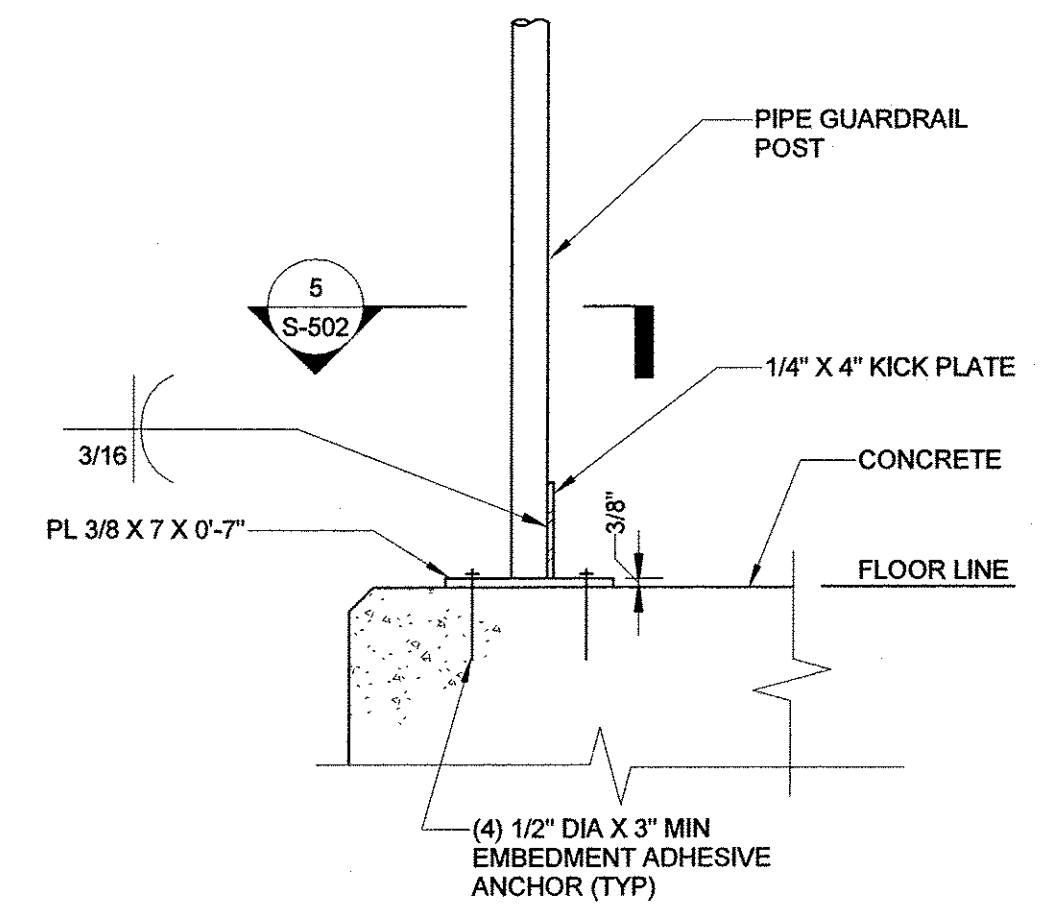
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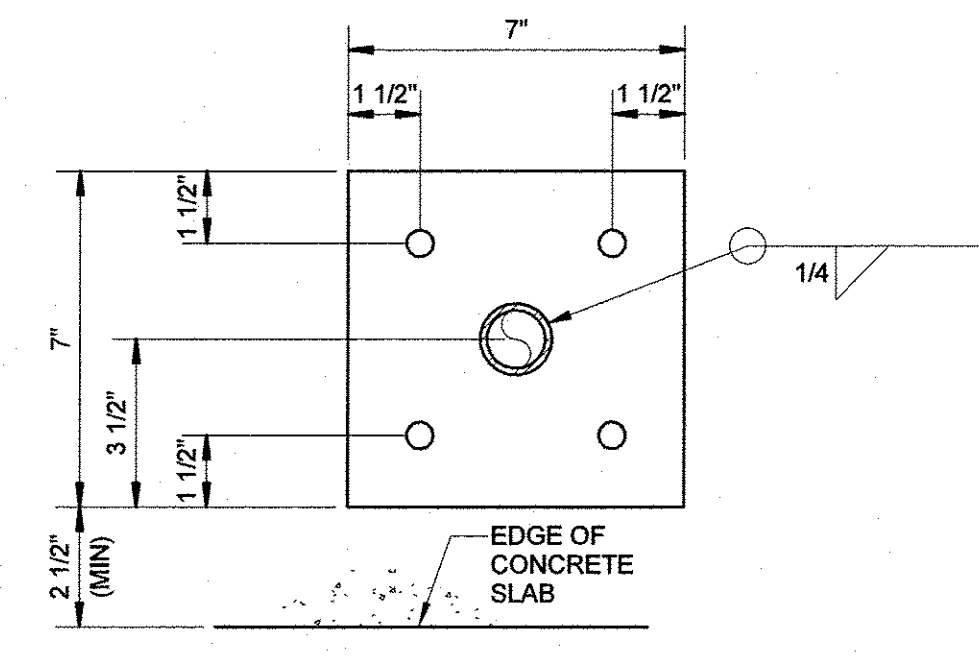
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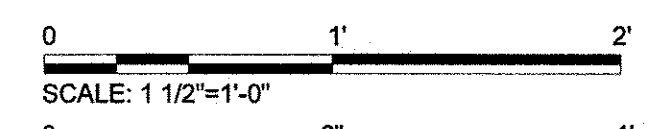
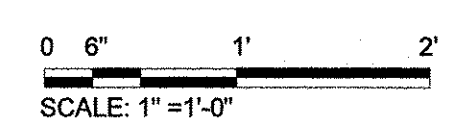
**SECTION 4-S-502**  
 SCALE: 1" = 1'-0"



**TYPICAL GUARDRAIL AND KICK PLATE AT CONCRETE SLABS**  
 SCALE: 1 1/2" = 1'-0"



**SECTION 5-S-502**  
 SCALE: 3" = 1'-0"



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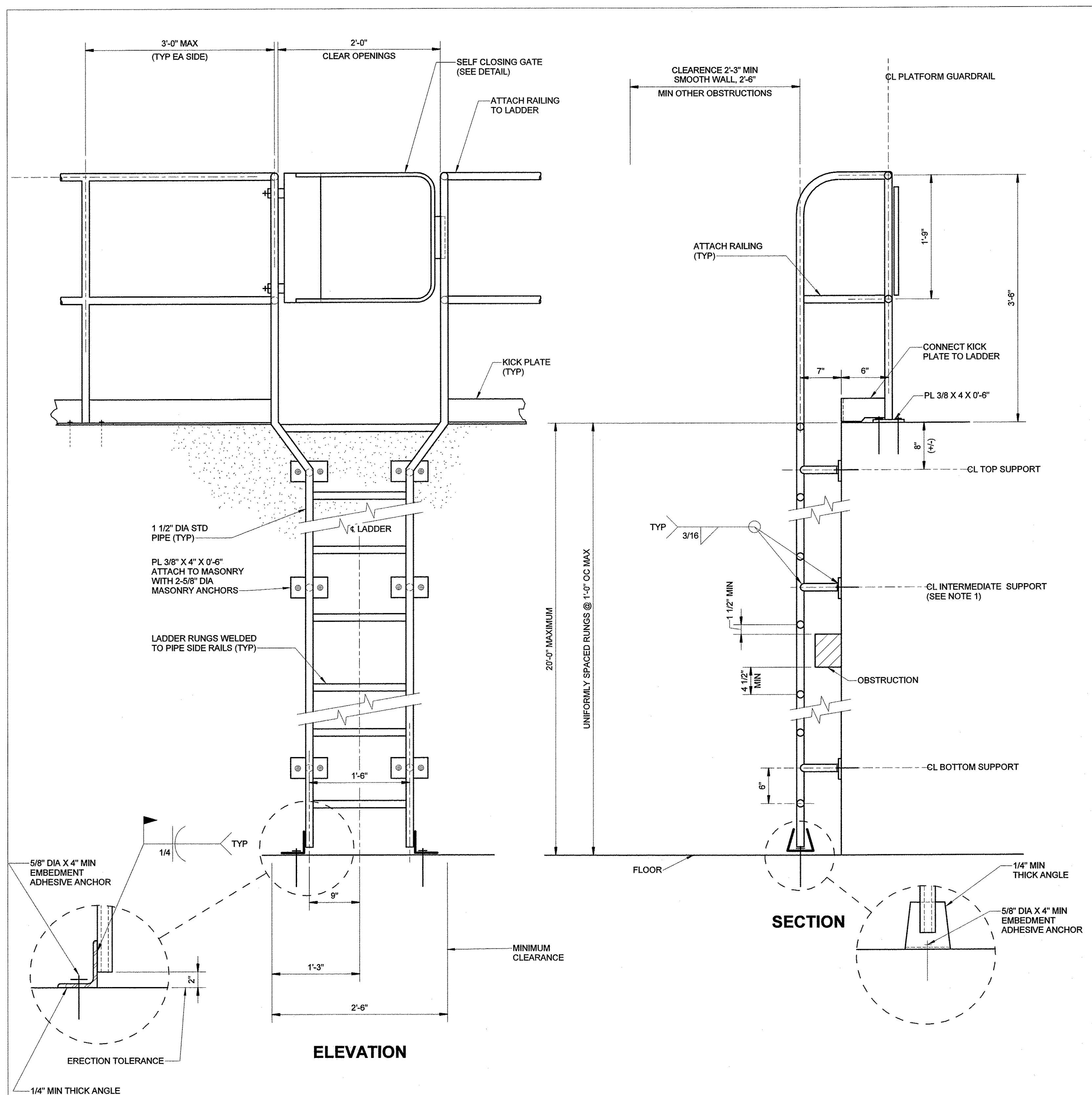
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**STRUCTURAL STAIR DETAILS**  
**SHEET 2**  
 SEC. 31, TOWNSHIP 62S, RANGE 94E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.5026.01  
 DATE 10/18/2022

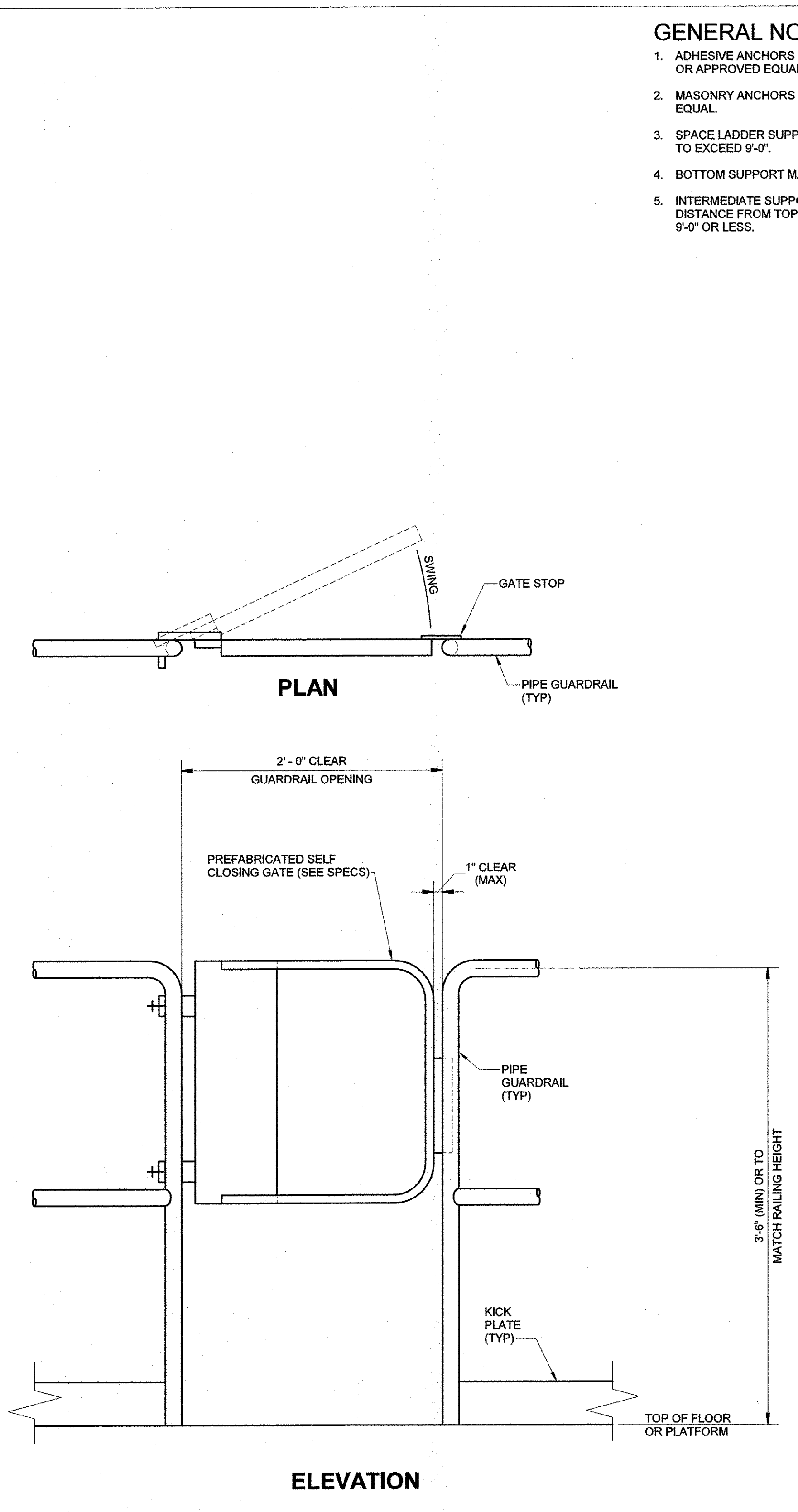
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 SHEET

**S-502**

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**THROUGH LADDER AT CONCRETE WALL**  
SCALE: 1 1/2" = 1'-0"



**SELF CLOSING GATE**  
SCALE: 1 1/2" = 1'-0"

- GENERAL NOTES:**
- ADHESIVE ANCHORS TO BE HILTI HIT-HY 200 V3 + HIT-Z OR APPROVED EQUAL.
  - MASONRY ANCHORS TO BE HILTI HIT-HY 270 OR APPROVED EQUAL.
  - SPACE LADDER SUPPORTS AT EQUAL SPACES BUT NOT TO EXCEED 9'-0".
  - BOTTOM SUPPORT MAY EITHER BE FROM FLOOR OR WALL.
  - INTERMEDIATE SUPPORT IS NOT REQUIRED WHEN TOTAL DISTANCE FROM TOP SUPPORT TO BOTTOM SUPPORT IS 9'-0" OR LESS.

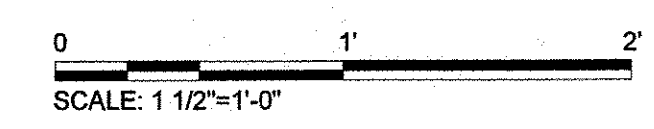
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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**STRUCTURAL LADDER DETAILS**  
SEC. 31: TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

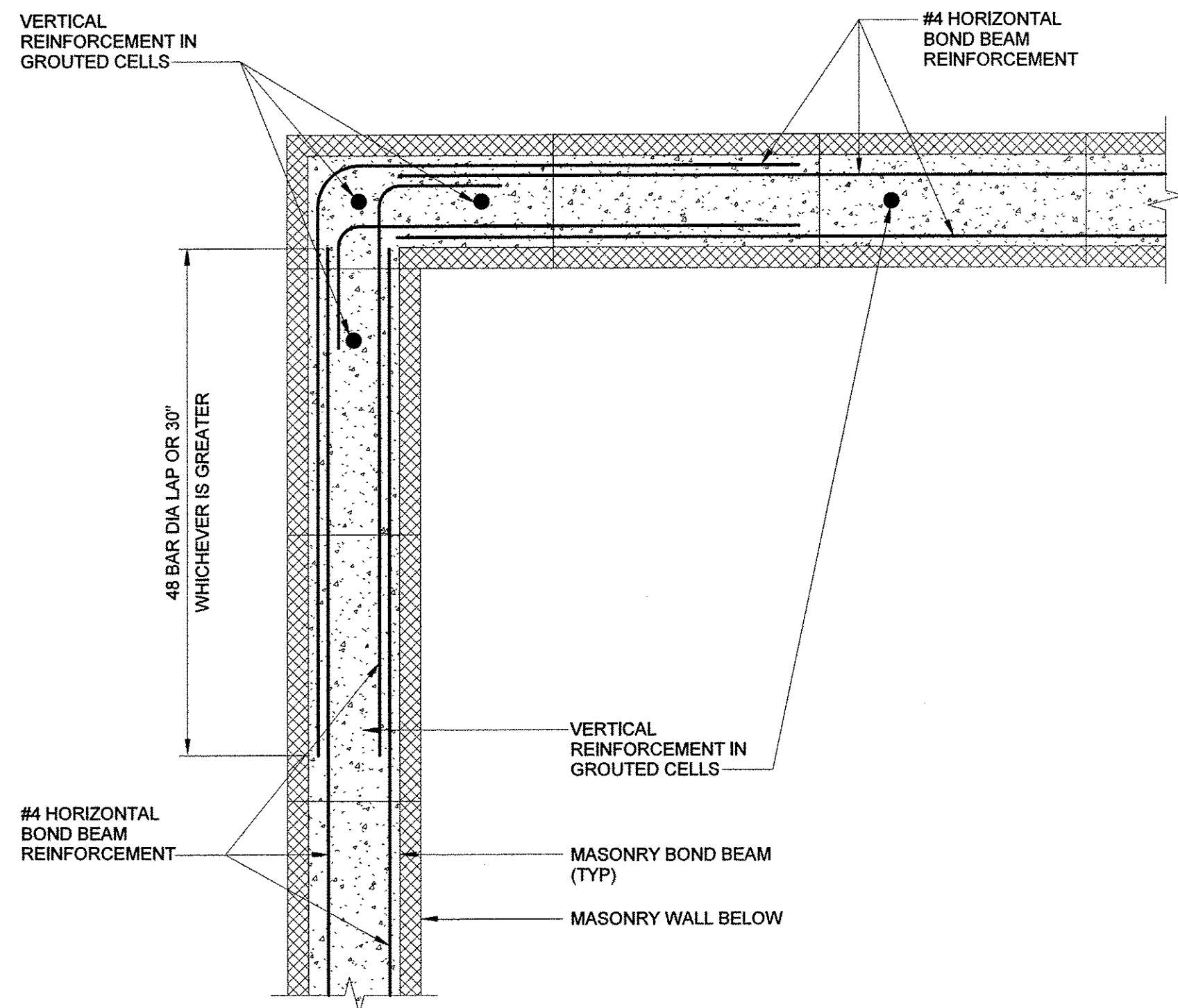
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DATE 10/18/2022



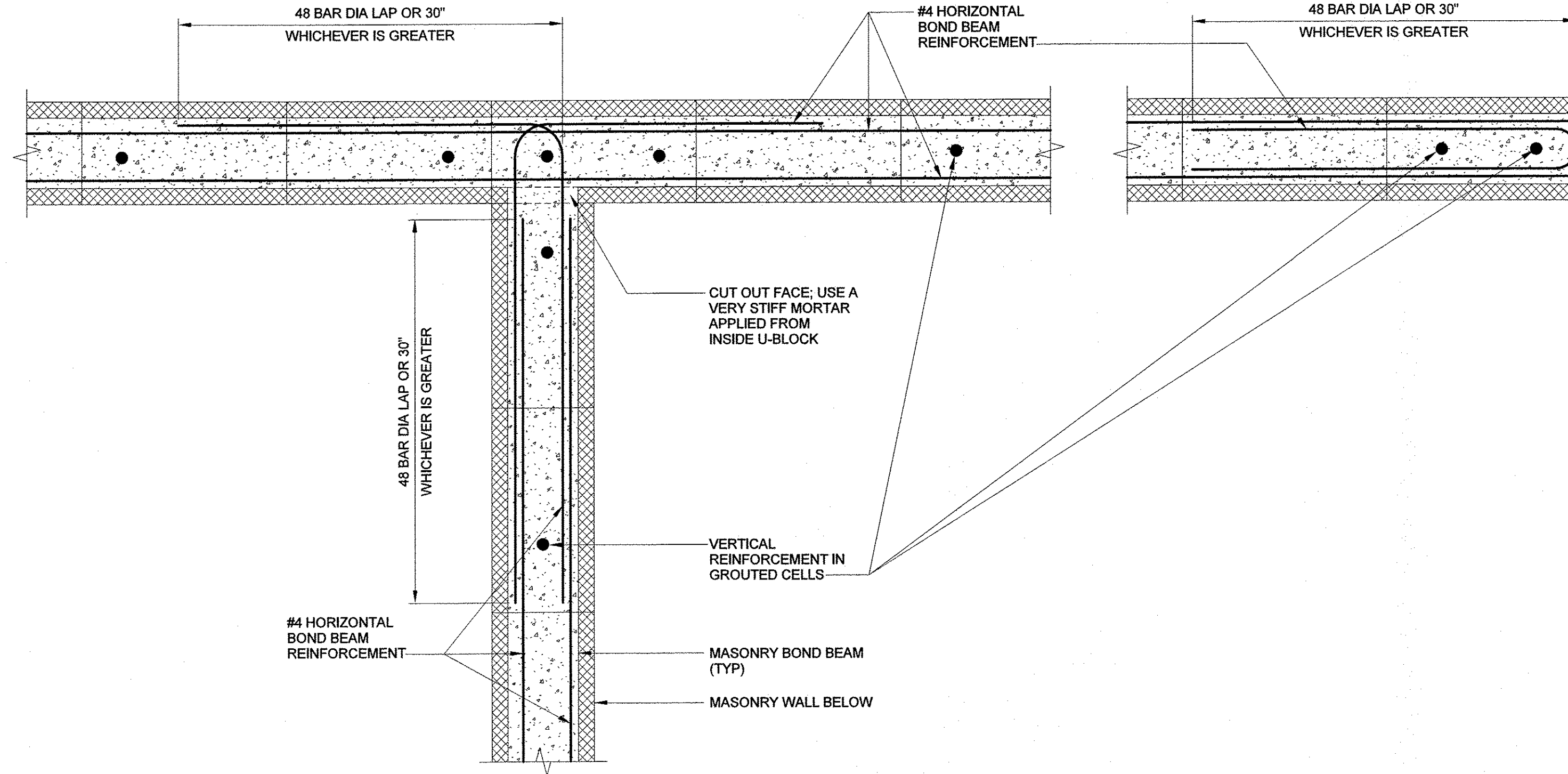
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**S-503**



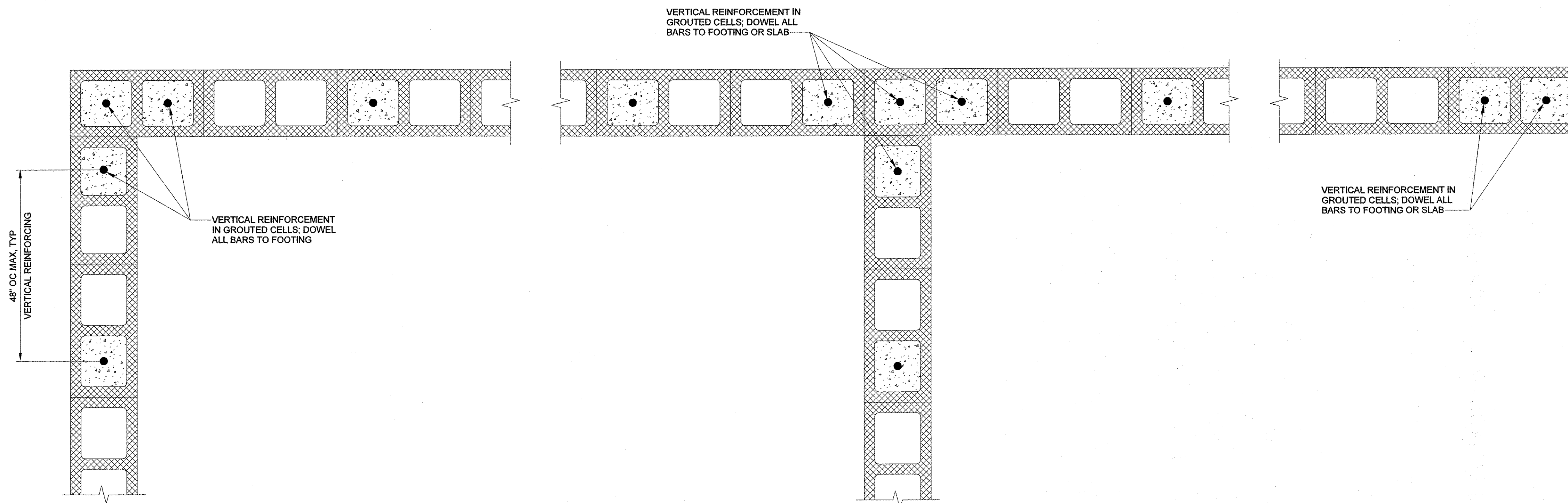
**CORNER**



**TEE**

**END, OPENING OR JAMB**

**TYPICAL BOND BEAM INTERSECTION REINFORCING DETAILS**  
SCALE: 1 1/2" = 1'-0"

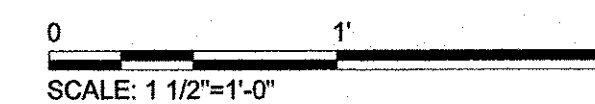


**CORNER**

**TEE**

**END, OPENING OR JAMB**

**TYPICAL WALL INTERSECTION AND REINFORCING DETAILS**  
SCALE: 1 1/2" = 1'-0"



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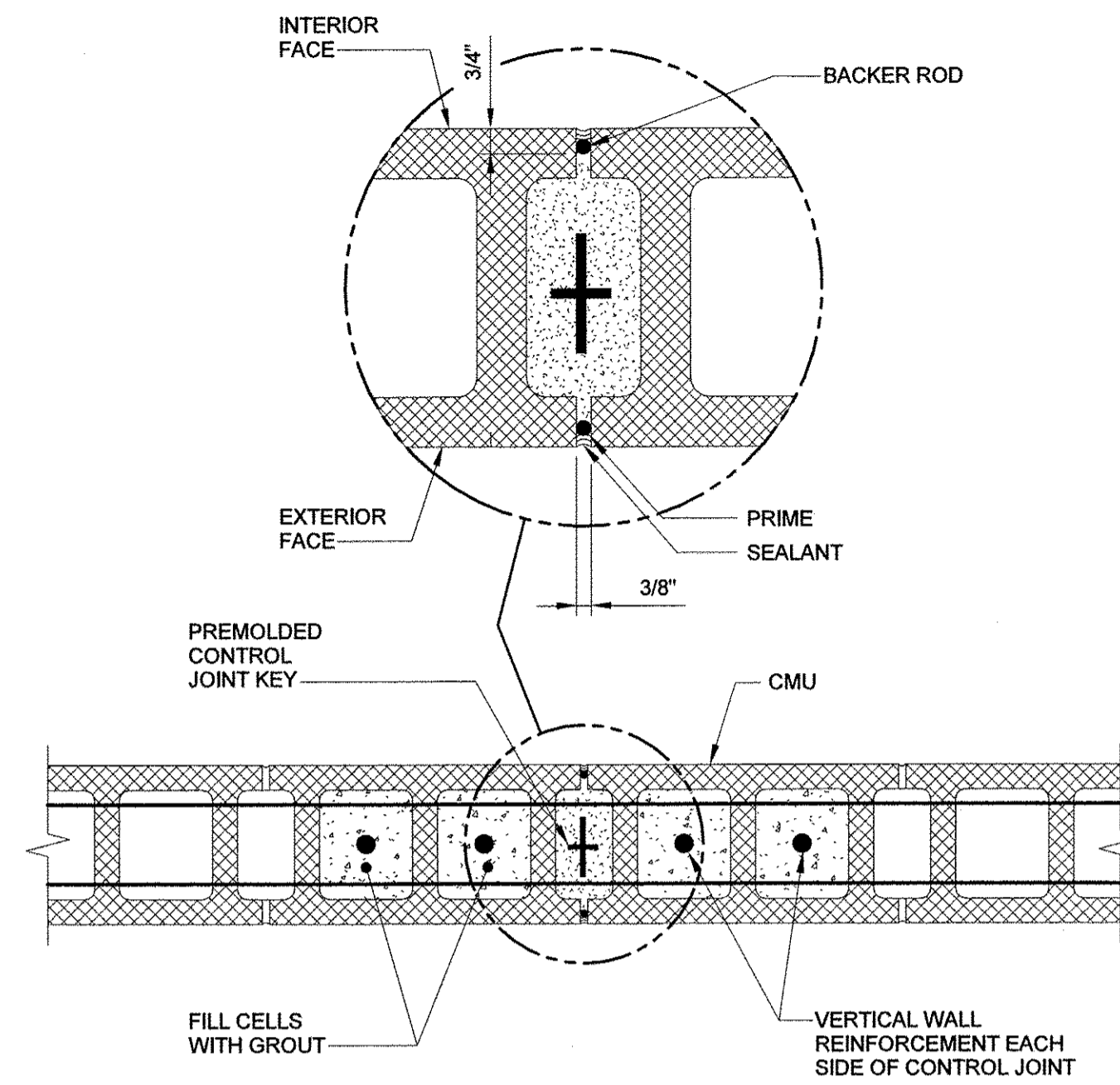
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**CMU WALL DETAILS - SHEET 1**  
SEC. 31: TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA



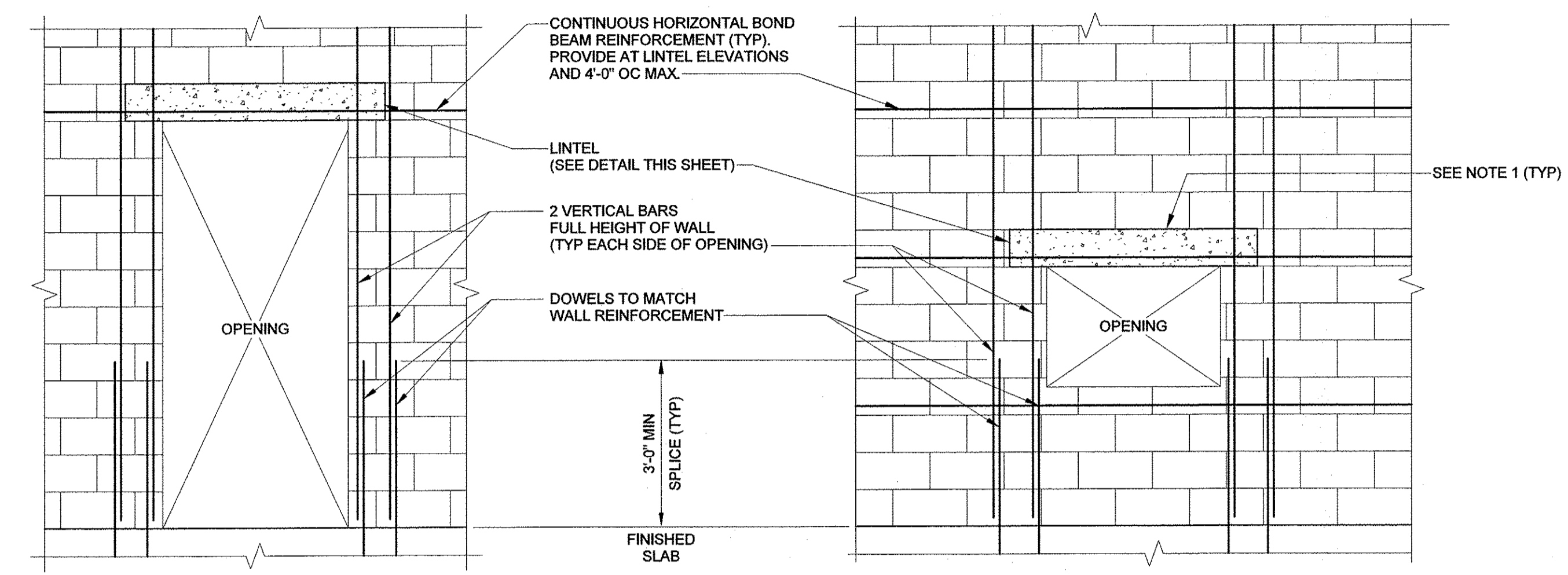
PROJECT	1528.5026.01
DATE	10/18/2022
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<b>S-504</b>	

**GENERAL NOTES:**  
 1. LINTELS TO HAVE 8" MIN BEARING.

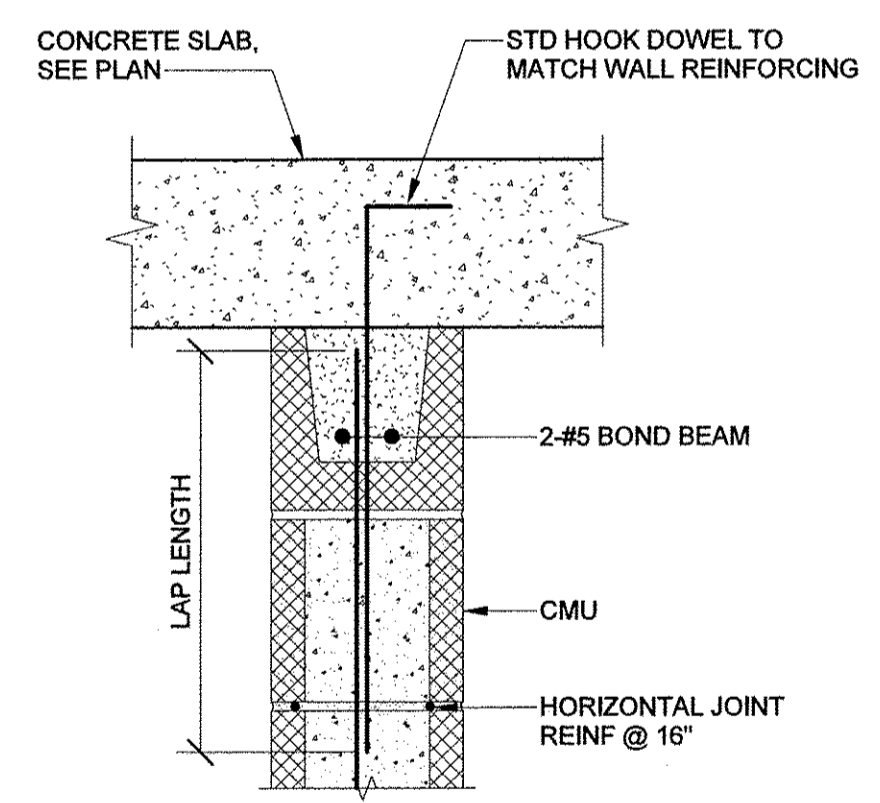
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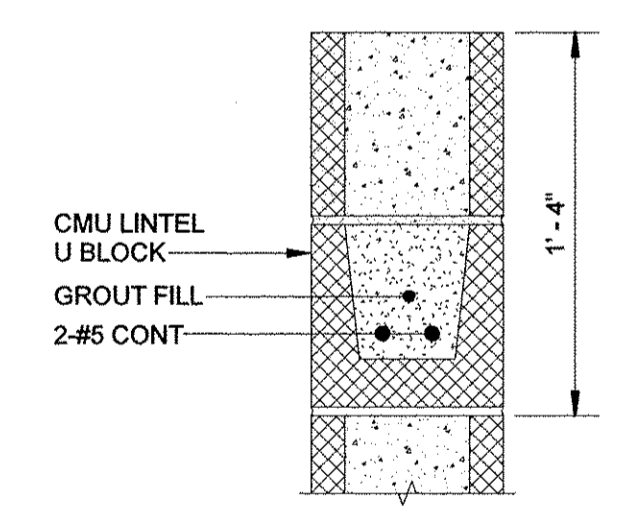
**TYPICAL WALL CONTROL JOINT (WCJ) DETAIL**  
 SCALE: 1 1/2" = 1'-0"



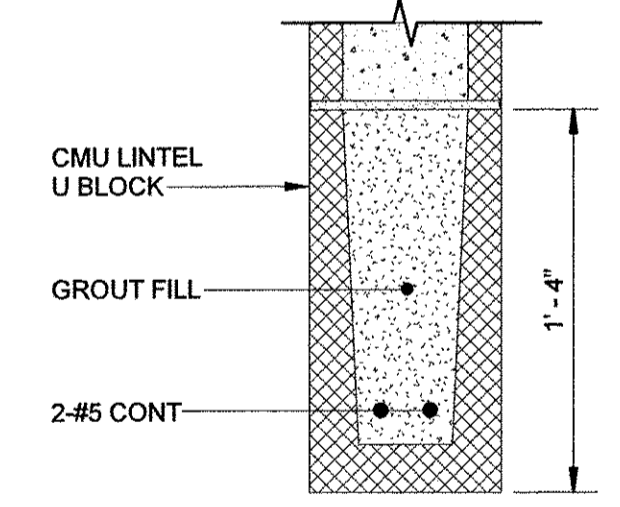
**ADDITIONAL REINFORCING AROUND OPENINGS IN CMU WALL**  
 SCALE: 1/2" = 1'-0"



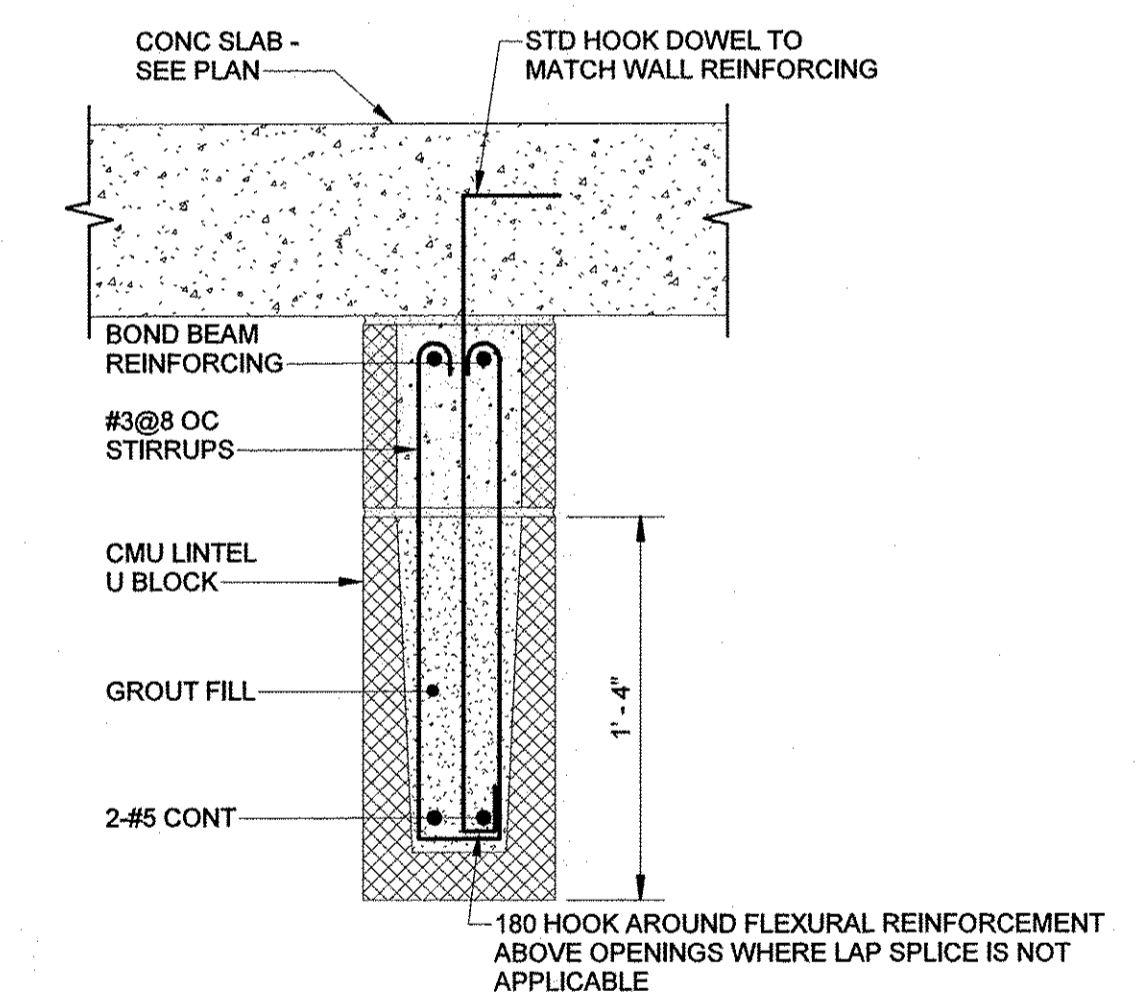
**TYPICAL TOP OF BEARING WALL DETAIL**  
 SCALE: 1 1/2" = 1'-0"



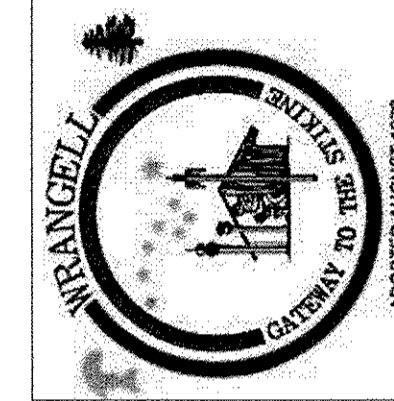
**MASONRY BOND BEAM DETAIL**  
 SCALE: 1 1/2" = 1'-0"



**SINGLE-SPAN MASONRY LINTEL DETAIL**  
 SCALE: 1 1/2" = 1'-0"



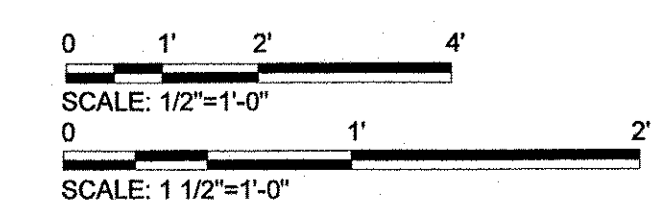
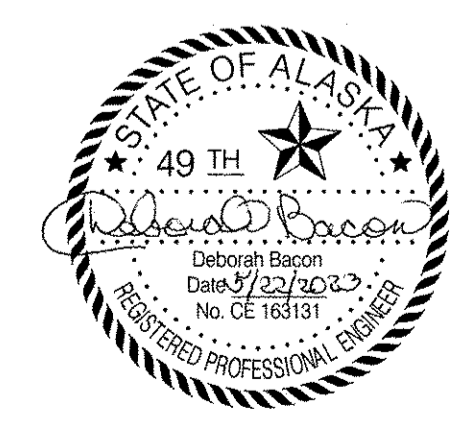
**MULTI-SPAN MASONRY LINTEL DETAIL**  
 SCALE: 1 1/2" = 1'-0"



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**CMU WALL DETAILS - SHEET 2**  
 SEC. 31, TOWNSHIP 69S, RANGE 84E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

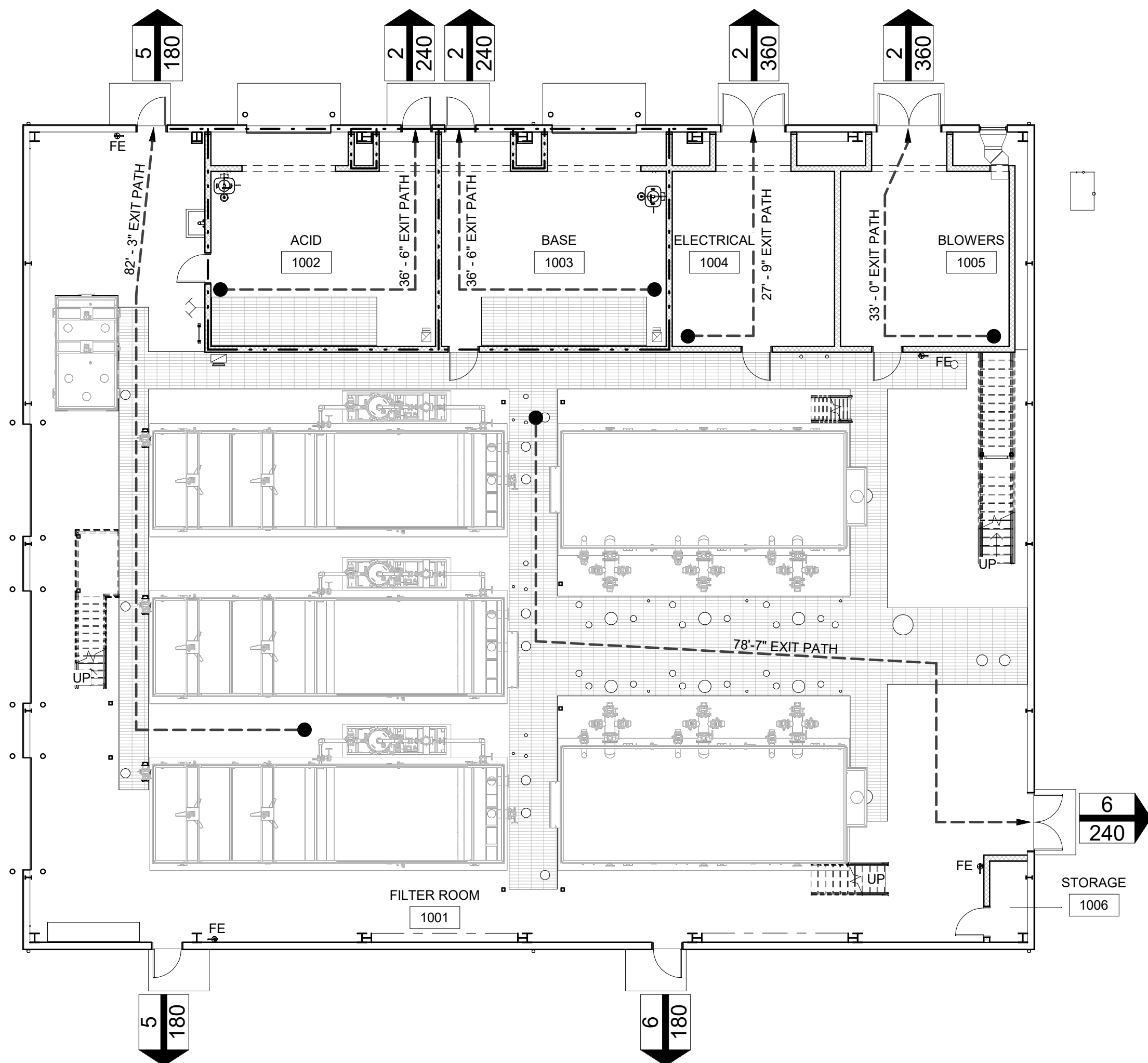
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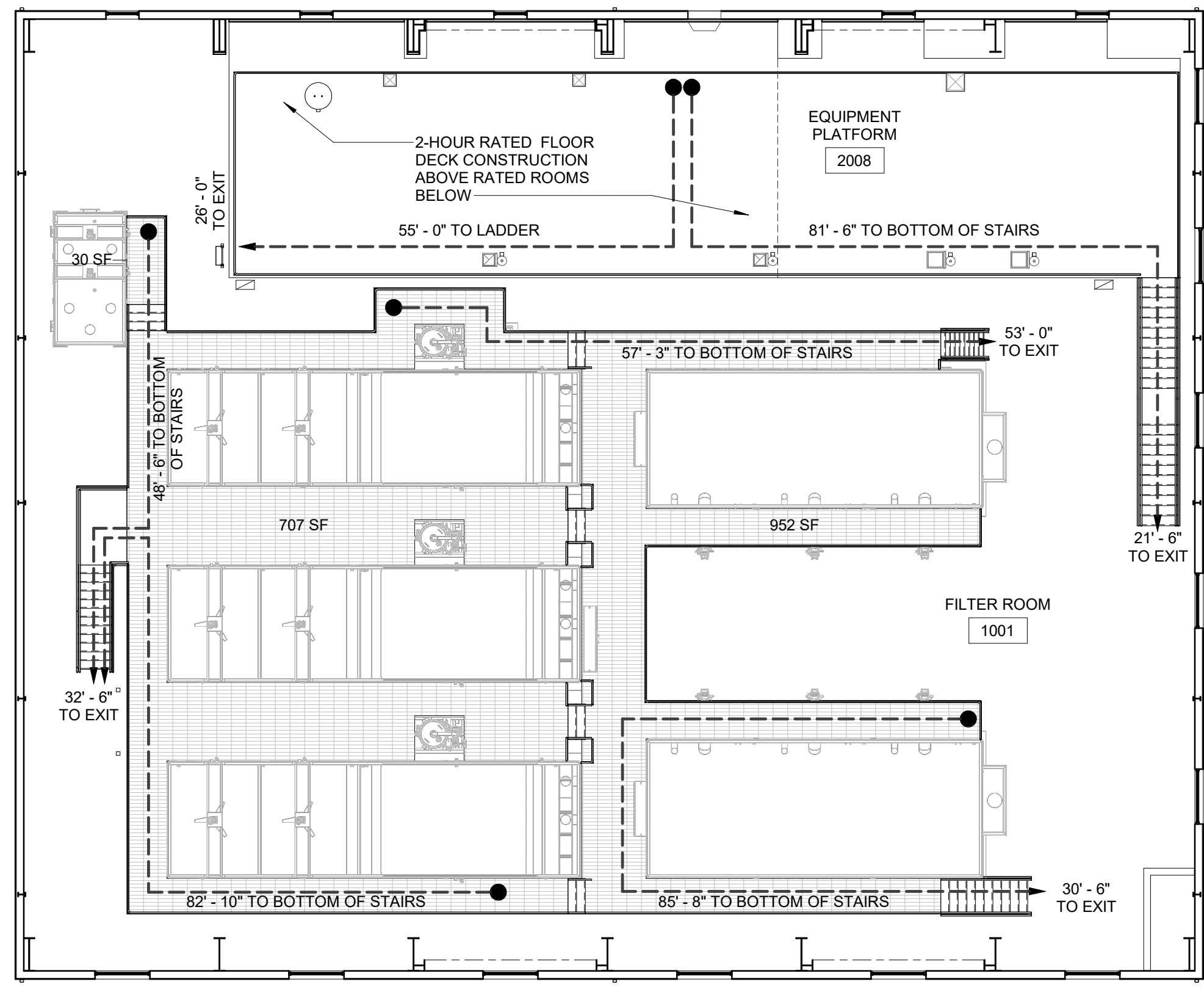
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**S-505**

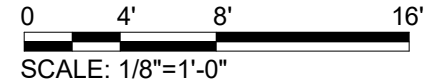




**GROUND FLOOR EGRESS PLAN**  
SCALE: 3/32" = 1'-0"



**PLATFORM EGRESS PLAN**  
SCALE: 3/32" = 1'-0"



**APPLICABLE BUILDING CODES**

IBC	INTERNATIONAL BUILDING CODE	2018
IECC	INTERNATIONAL ENERGY CONSERVATION CODE	2018
IFC	INTERNATIONAL FIRE CODE	2018
IMC	INTERNATIONAL MECHANICAL CODE	2018
UPC	UNIFORM PLUMBING CODE	2018
ADA	AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES	2010
NFPA 13	INSTALLATION OF SPRINKLER SYSTEMS	2019
NFPA 70	NATIONAL ELECTRICAL CODE	2017
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE	2019
NFPA 90A	STANDARD FOR THE INSTALLATION OF AIR-CONDITIONING AND VENTILATING SYSTEMS	2018
NFPA 101	LIFE SAFETY CODE	2018

**USE GROUP / OCCUPANCY - Chapter 3 (IBC 2018)**

F-1	MODERATE HAZARD FACTORY INDUSTRIAL	8,307 SF (GROSS AREA)
H-4	HIGH HAZARD GROUP H-4	1,197 SF (GROSS AREA)
TOTAL BUILDING		9,504 SF (GROSS AREA)

**HEIGHT / STORIES - Chapter 5 (IBC 2018)**

ALLOWABLE HEIGHT (TABLE 504.3):	F-1 @ NS, H-4 @ S = 55'-0"	DESIGNED HEIGHT:	29' +/-
ALLOWABLE STORIES (TABLE 504.4):	F-1 @ NS = 2 / H-4 @ S = 4	DESIGNED STORIES:	1

**AREA - Chapter 5 (IBC 2018)**

ALLOWABLE AREA (TABLE 503):	F-1 @ NS = 15,500 SQ. FT.	DESIGNED AREA:	8,306 SQ. FT.
	H-4 @ S = 17,500 * 300% SQ. FT.	DESIGNED AREA:	1,197 SQ. FT.

**OCCUPANCY SEPARATION - Chapter 5 - Table 508.4 (IBC 2018)**

SEPARATION OF F-1 @ NS AND H-4 @ S OCCUPANCY = 2 HOUR

**CONSTRUCTION TYPE - Chapter 6 (IBC 2018)**

TYPE IIB

**FIRE RESISTANCE RATINGS - Chapter 6 - Table 601 (IBC 2018)**

STRUCTURAL FRAME	0
BEARING WALLS	0
INTERIOR	0
NON-BEARING WALLS AND PARTITIONS	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION	0

**EXTERIOR WALL RATINGS - Chapter 6 - Table 602 (IBC 2018)**

FIRE SEPARATION DISTANCE	TYPE OF CONSTRUCTION	REQUIRED	DESIGNED
GREATER THAN 30'	IIB	0	0

**FIRE SUPPRESSION - Chapter 9 (IBC 2018)**

903.2.5.1 AN AUTOMATIC SPRINKLER SYSTEM SHALL BE INSTALLED IN GROUP H OCCUPANCIES.

NO SPRINKLERS REQUIRED FOR F-1 OCCUPANCY.

**OCCUPANCY CALCULATIONS - Chapter 10 (Table 1004.5) - IBC 2018**

**OCCUPANT ANALYSIS**

MARK	NAME	AREA	AREA PER OCC	OCC COUNT	COMMENT
1	Room	452 SF			
1001	FILTER ROOM	4623 SF	300	16	
1002	ACID	449 SF	300	2	
1003	BASE	449 SF	300	2	
1004	ELECTRICAL	325 SF	300	2	
1005	BLOWERS	337 SF	300	2	
1006	STORAGE	35 SF	0		
2008	EQUIPMENT PLATFORM	1664 SF	300	6	EQUIPMENT PLATFORM AREA NOT INCLUDED IN BUILDING AREA. NUMBER OF STORIES, OR FIRE AREA PER 2012 IBC 505.3
TOTAL		9725 SF		20	

505.3.1 THE AGGREGATE AREA OF ALL EQUIPMENT PLATFORMS WITHIN A ROOM SHALL BE NOT GREATER THAN TWO-THIRDS OF THE AREA OF THE ROOM IN WHICH THEY ARE LOCATED.

1,664 + 945 + 707 + 30 = 3,346 SF EQUIPMENT PLATFORM  
7,166 SF \* 2/3 = 4,777 SF  
3,346 SF < 4,777 SF

**EXIT ACCESS TRAVEL DISTANCE - Chapter 10 - Table 1017.2 (IBC 2018)**

F-1 OCCUPANCY	NON-SPRINKLERED	200 FEET
	FULLY SPRINKLERED	250 FEET
	COMMON PATH OF EGRESS TRAVEL	75 FEET
H-4 OCCUPANCY	NON-SPRINKLERED	NOT PERMITTED
	FULLY SPRINKLERED	175 FEET
	COMMON PATH OF EGRESS TRAVEL	75 FEET

**EXIT WIDTH REQUIREMENTS - Chapter 10 - Section 1005 (IBC 2018)**

	# of Occ.	Inches/Occ.	Min. Width	# of Exits	Min. Width / Exit	Design Width
Door Egress (Non-sprinklered)	27	0.2"	5.4"	6	36"	288"
Door Egress (Sprinklered)	4	0.15"	6"	2	36"	72"
Stair Egress	6	0.3"	1.8"	1	36"	36"

**PLUMBING FIXTURES - Chapter 29 - Table 2902.1 (IBC 2018)**

REQUIRED PLUMBING FIXTURES ARE PROVIDED IN ADJACENT BUILDING - 48'-0" TRAVEL DISTANCE.

**THERMAL ENVELOPE REQUIREMENTS - Chapter 4 (CE) - Table C402.1.3 (IECC 2018)**

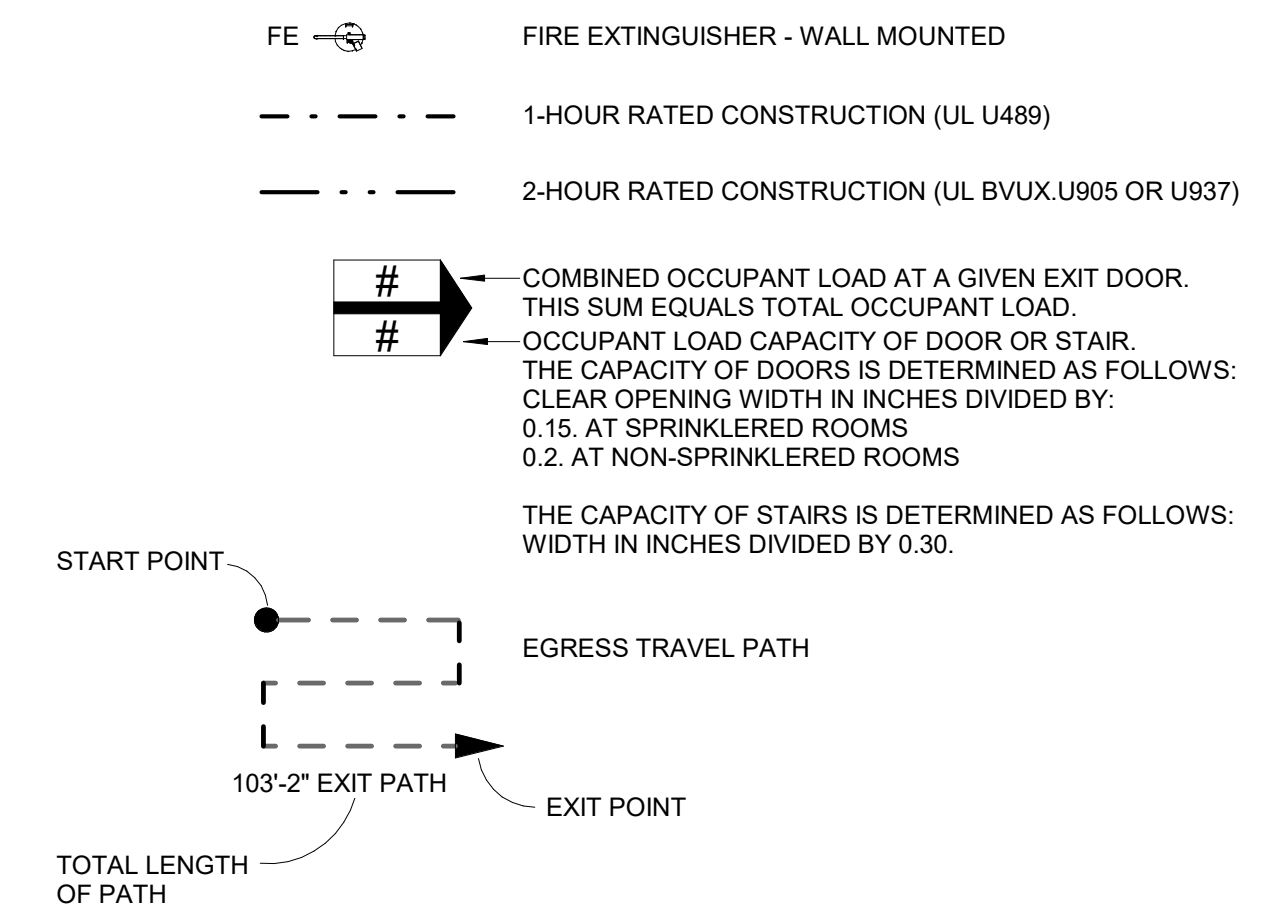
CLIMATE ZONE: 7

ROOFS: METAL BUILDING (WITH R-5 THERMAL BLOCKS) - R-30 + R-11 LINER SYSTEM

WALLS: METAL BUILDING - R-13 + R-13 CONTINUOUS INSULATION

SLAB-ON-GRADE FLOORS: UNHEATED SLABS - R 15 FOR 24" FROM EXTERIOR SLAB EDGE

**EGRESS LEGEND**



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WRANGELL, ALASKA  
**BUILDING CODE AND LIFE SAFETY ANALYSIS**  
SEC. 31, TOWNSHIP 62S, RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

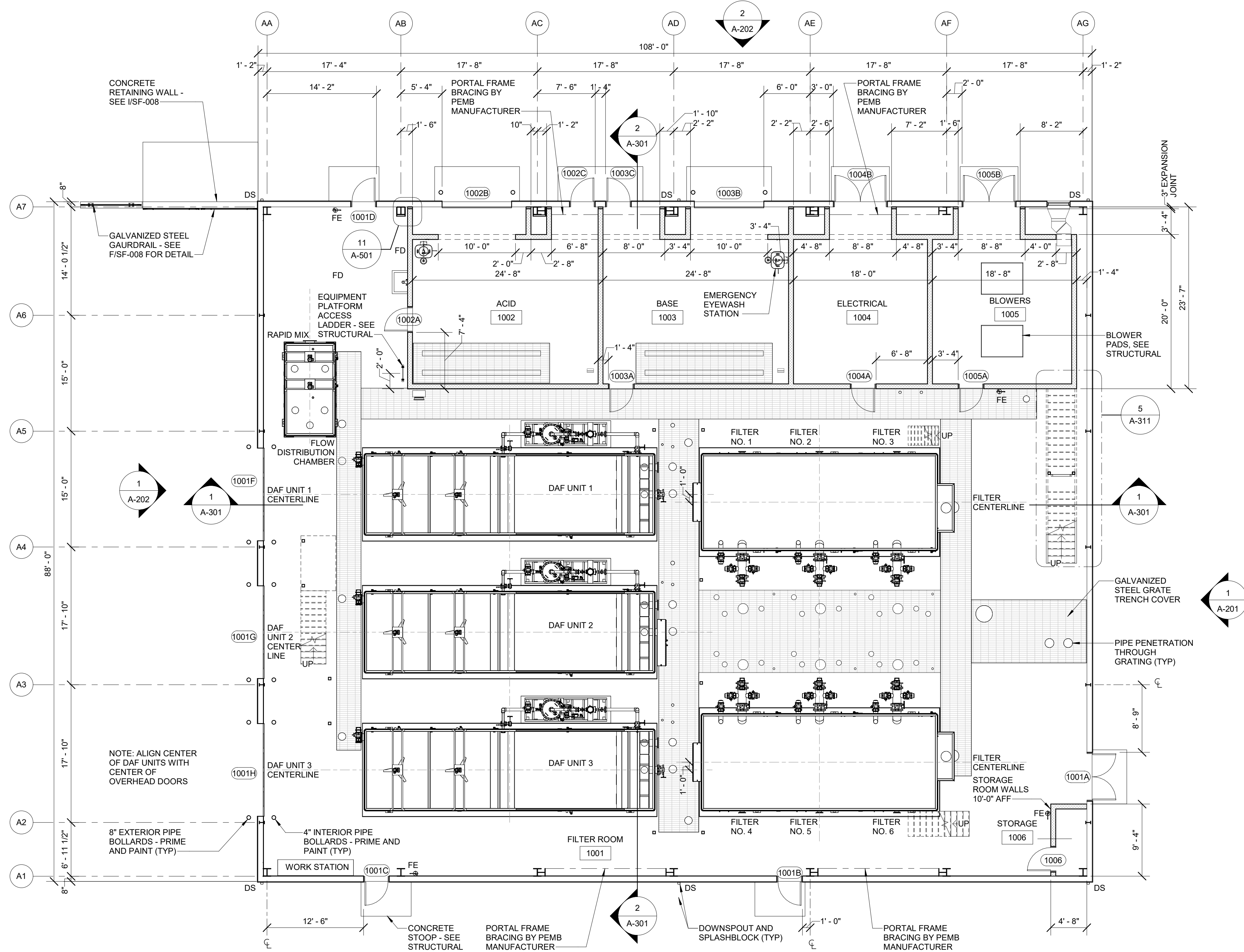
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**A-100**

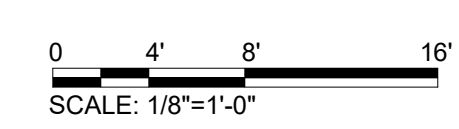


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- GENERAL NOTES:**
- COORDINATE BUILDING PLAN WITH SITE PLAN.
  - DIMENSIONS ARE TO FACE OF CMU OR FACE OF STRUCTURAL STEEL UNLESS NOTED OTHERWISE.
  - WALL PENETRATIONS:
    - ALLOW FOR EXPANSION WHEN REQUIRED OR AS INDICATED BY OTHER DISCIPLINES.
  - INTERIOR PARTITIONS ARE 8" CMU UNLESS NOTED OTHERWISE. INTERIOR PARTITIONS EXTEND TO BOTTOM OF STRUCTURE UNLESS NOTED OTHERWISE.
  - DOOR RETURN - MINIMUM OF 4" ON HINGE SIDE.
  - FLOOR DRAINS: NOT ALL FLOOR DRAINS ARE SHOWN ON ARCHITECTURAL PLANS. SEE PLUMBING DRAWINGS FOR LOCATION AND TYPE OF FLOOR DRAINS.
  - FOR FIRE RATING, SEE SHEET A-100.
  - SEAL PENETRATIONS THROUGH FIRE RATED CONSTRUCTION WITH APPROPRIATE FIRE SAFING / SEALANT.
  - SEAL PENETRATIONS THROUGH EXTERIOR WALLS FOR AN AIRWATER TIGHT CONSTRUCTION.
  - SIDEWALK, DOOR PADS AND STEPS, PAVEMENT GRADES AND ELEVATIONS MUST BE COORDINATED WITH CIVIL DRAWINGS.
  - DIMENSIONS TO CMU ARE NOMINAL MASONRY DIMENSIONS UNLESS NOTED OTHERWISE.
  - BUILDING ELEVATION 100'-0" = SITE ELEVATION 260'-0".

**GROUND FLOOR PLAN**  
SCALE: 1/8" = 1'-0"



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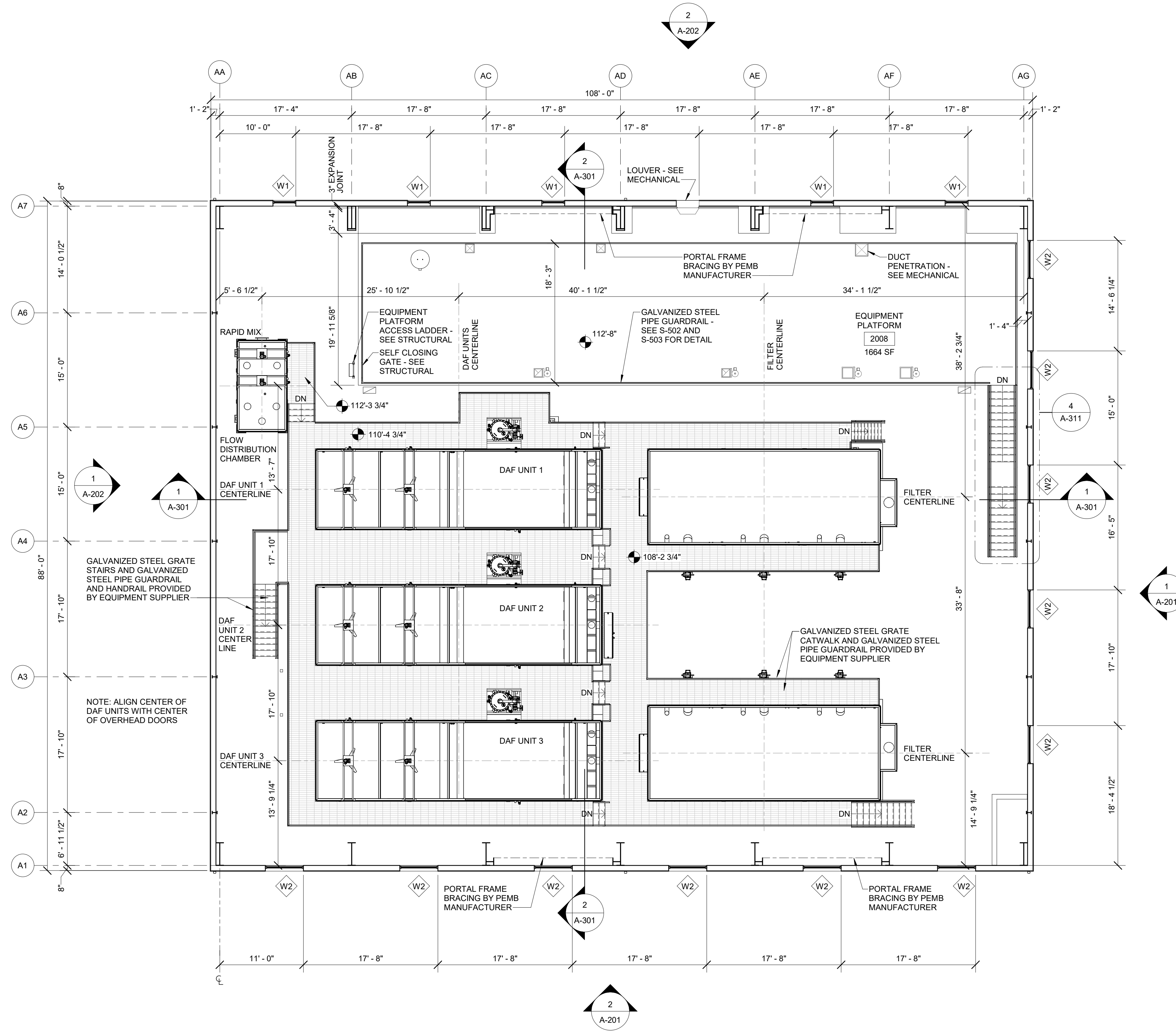
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WRANGELL, ALASKA  
**GROUND FLOOR PLAN**  
SEC. 31, TOWNSHIP 62S, RANGE 94E  
CITY AND BOROUGH OF WRANGELL, ALASKA



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DATE 06/02/2023

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**A-101**



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

**GENERAL NOTES:**

1. DIMENSIONS ARE TO FACE OF CMU OR FACE OF STRUCTURAL STEEL UNLESS NOTED OTHERWISE.
2. WALL PENETRATIONS:
  - A. ALLOW FOR EXPANSION WHEN REQUIRED OR AS INDICATED BY OTHER DISCIPLINES.
3. INTERIOR PARTITIONS ARE 8" CMU UNLESS NOTED OTHERWISE. INTERIOR PARTITIONS EXTEND TO BOTTOM OF STRUCTURE UNLESS NOTED OTHERWISE.
4. DOOR RETURN - MINIMUM OF 4" ON HINGE SIDE.
5. FLOOR DRAINS: NOT ALL FLOOR DRAINS ARE SHOWN ON ARCHITECTURAL PLANS. SEE PLUMBING DRAWINGS FOR LOCATION AND TYPE OF FLOOR DRAINS.
6. FOR FIRE RATING, SEE SHEET A-100.
7. SEAL PENETRATIONS THROUGH FIRE RATED CONSTRUCTION WITH APPROPRIATE FIRE SAFING / SEALANT.
8. SEAL PENETRATIONS THROUGH EXTERIOR WALLS FOR AN AIRWATER TIGHT CONSTRUCTION.
9. BUILDING ELEVATION 100'-0" = SITE ELEVATION 260'-0".

REV	DATE	DESCRIPTION	BY



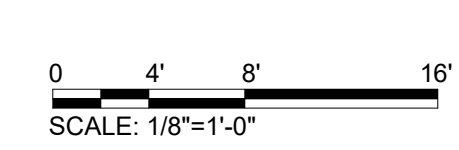
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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**PLATFORM PLAN**

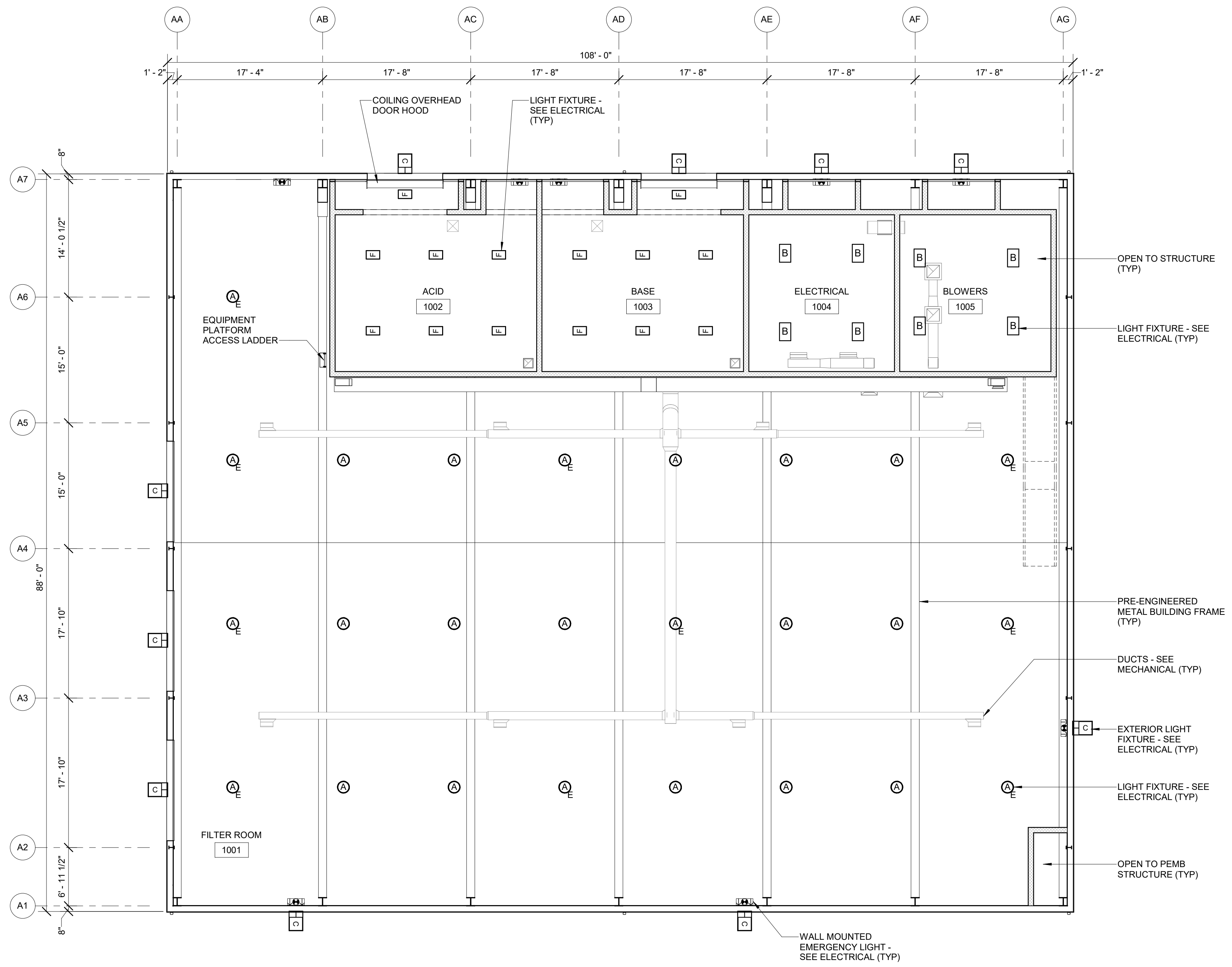
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**A-102**



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- RCP NOTES:**
1. REFLECTED CEILING PLAN SHOWN FOR LAYOUT AND COORDINATION PURPOSES ONLY. COORDINATE MECHANICAL ELECTRICAL AND FIRE PROTECTION CEILING MOUNTED UTILITIES WITH RESPECTIVE DISCIPLINE DRAWINGS.
  2. EQUALLY SPACE LIGHT FIXTURES IN BOTH DIRECTIONS UNLESS NOTED OTHERWISE ON ELECTRICAL DRAWINGS.
  3. REFERENCE ROOM FINISH SCHEDULE FOR CEILING TYPES AND HEIGHTS.
  4. EQUIPMENT AND CATWALK HIDDEN IN THIS VIEW FOR CLARITY.

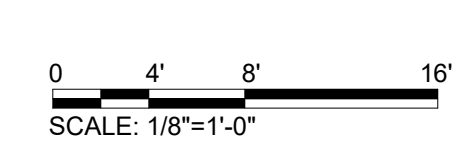
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WRANGELL, ALASKA  
**REFLECTED CEILING PLAN**

SEC. 31, TOWNSHIP 62S, RANGE 64E  
CITY AND BOROUGH OF WRANGELL, ALASKA

**GROUND FLOOR REFLECTED CEILING PLAN**  
SCALE: 1/8" = 1'-0"



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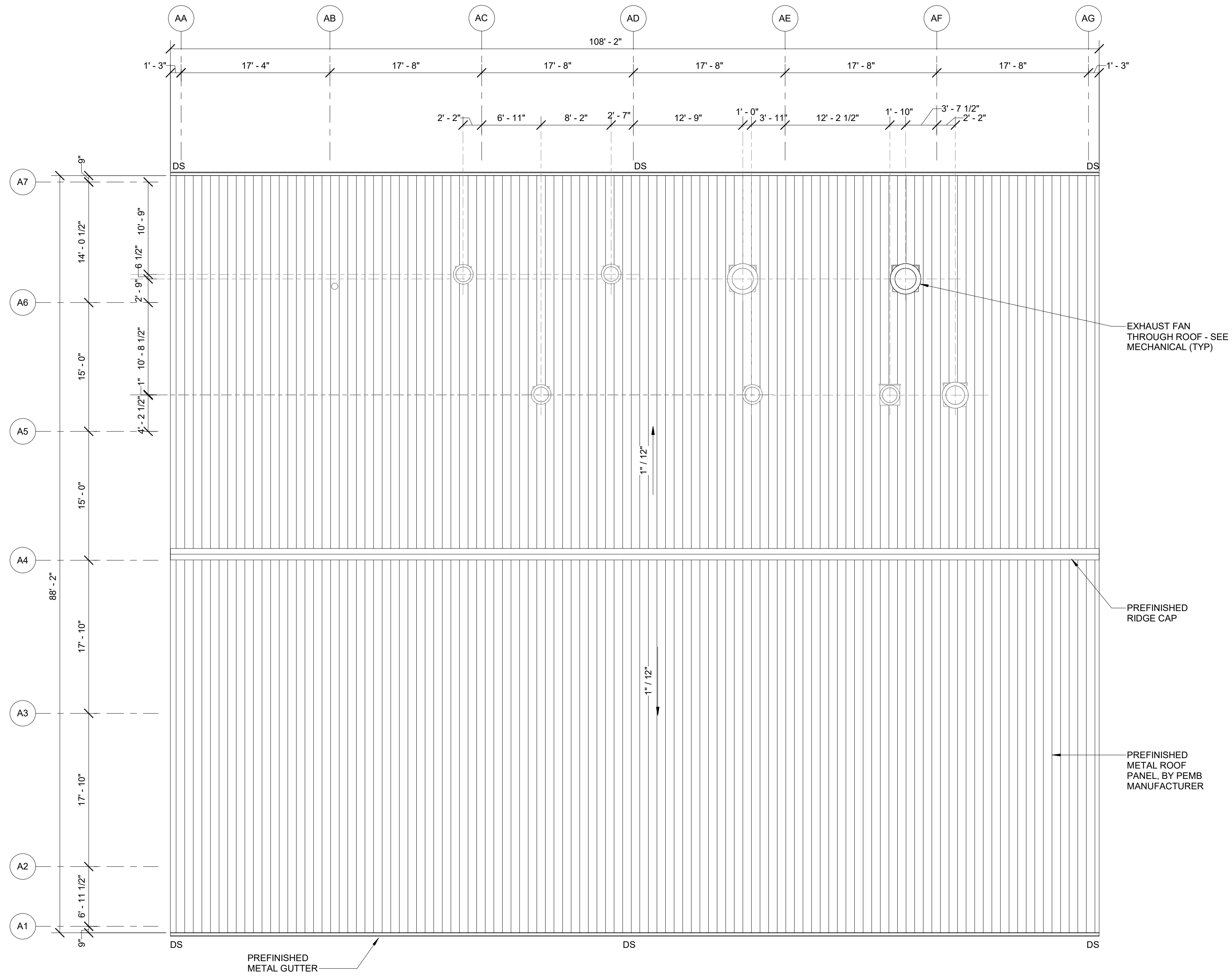
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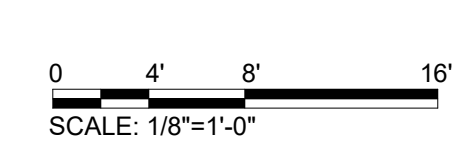
A-111

**ROOF PLAN NOTES:**

1. COORDINATE ACTUAL LOCATIONS AND SIZE OF CURBS AND PENETRATIONS WITH STRUCTURAL ROOF FRAMING PLAN AND DISCIPLINE DRAWINGS.
2. PIPE PENETRATIONS SMALLER THAN 6" MAY NOT BE SHOWN. COORDINATE WITH DISCIPLINE DRAWINGS.
3. SOME MISCELLANEOUS ROOF PENETRATIONS NOT SPECIFICALLY SHOWN ON THIS DRAWING SHALL BE FLASHED AND SEALED ACCORDING TO DETAILS SHOWN, AND PER ROOFING MANUFACTURER'S RECOMMENDED GUIDE DETAILS.



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



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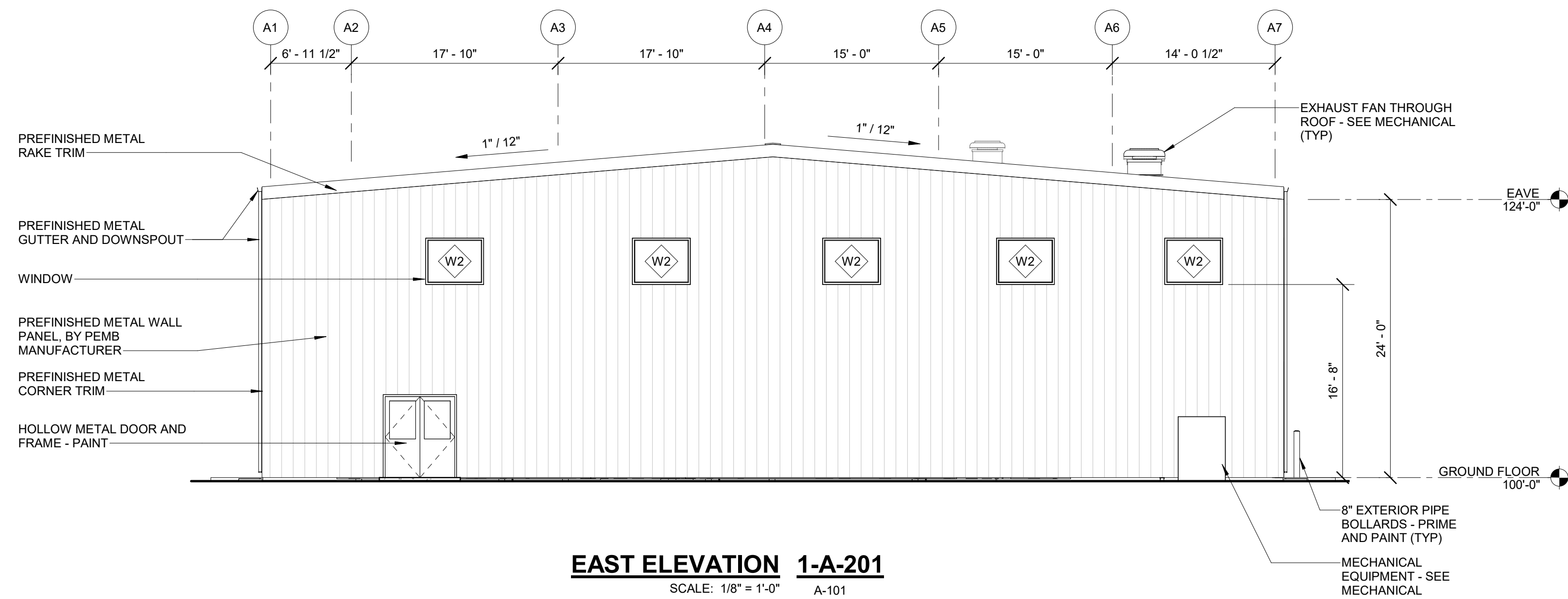
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**ROOF PLAN**  
SEC. 31, TOWNSHIP 62S, RANGE 64E  
CITY AND BOROUGH OF WRANGELL, ALASKA

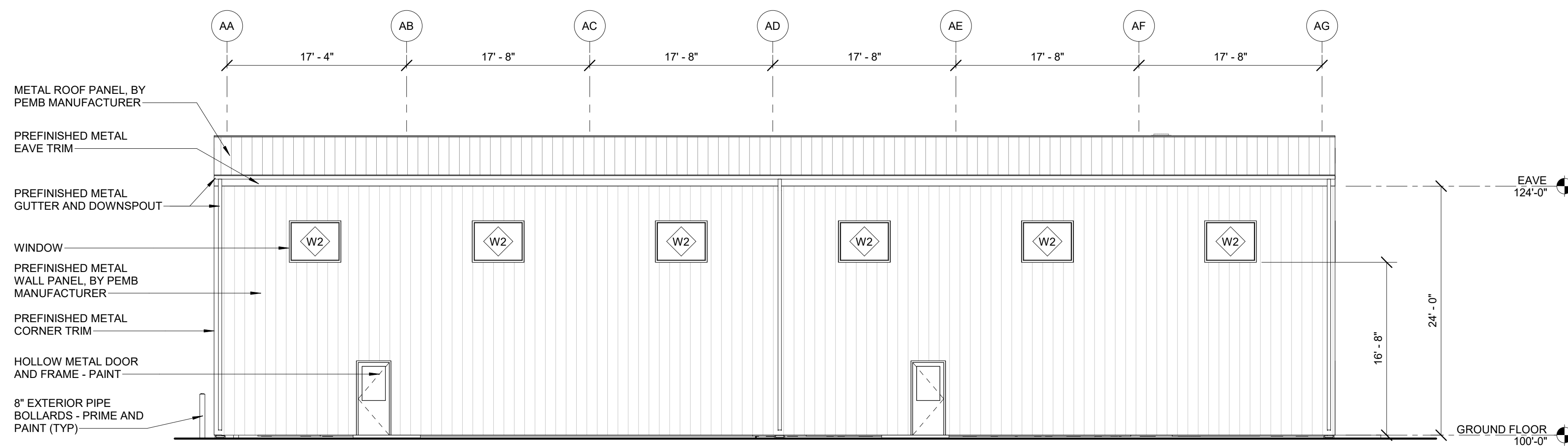
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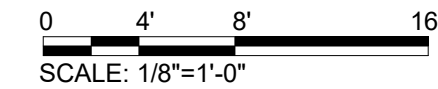
A-121



**EAST ELEVATION 1-A-201**  
SCALE: 1/8" = 1'-0" A-101



**SOUTH ELEVATION 2-A-201**  
SCALE: 1/8" = 1'-0" A-101



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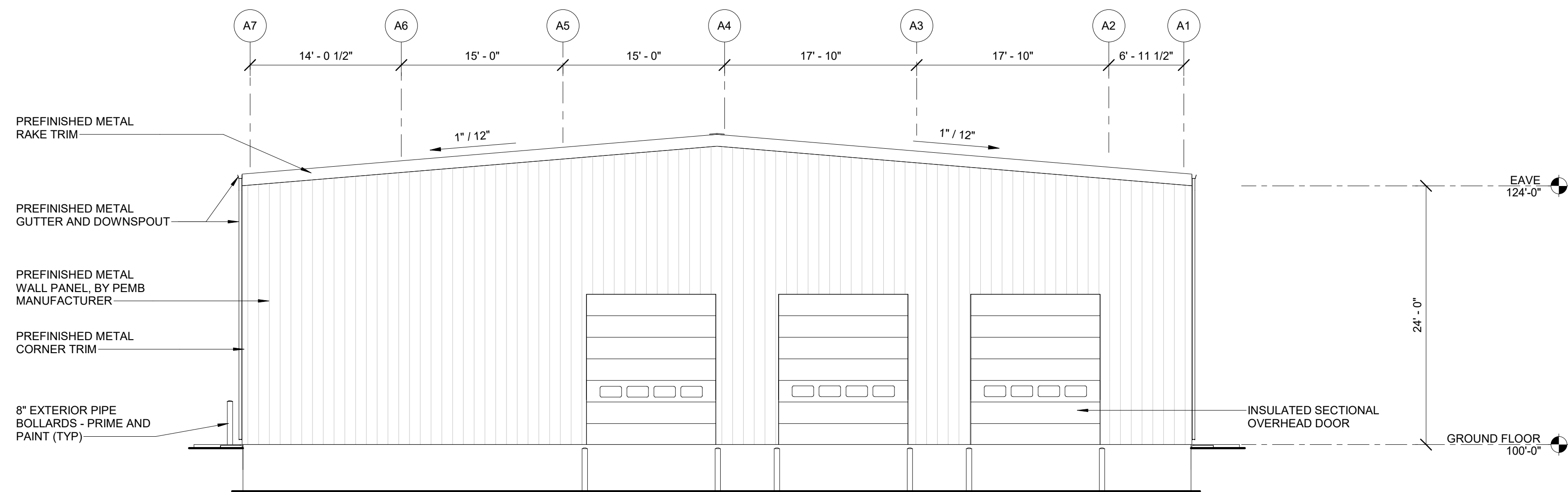
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WRANGELL, ALASKA  
**EXTERIOR ELEVATIONS**

SEC. 31, TOWNSHIP 62S, RANGE 54E  
CITY AND BOROUGH OF WRANGELL, ALASKA

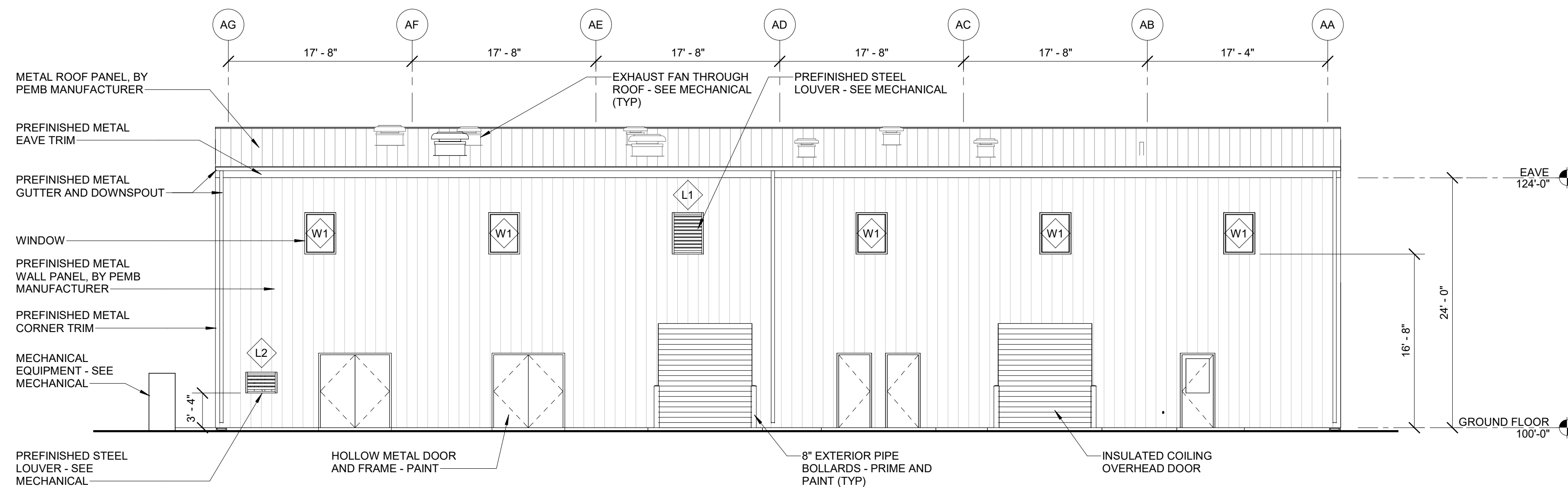
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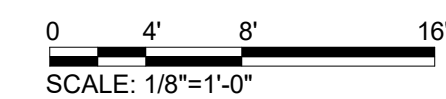
A-201



**WEST ELEVATION 1-A-202**  
SCALE: 1/8" = 1'-0" A-101



**NORTH ELEVATION 2-A-202**  
SCALE: 1/8" = 1'-0" A-101



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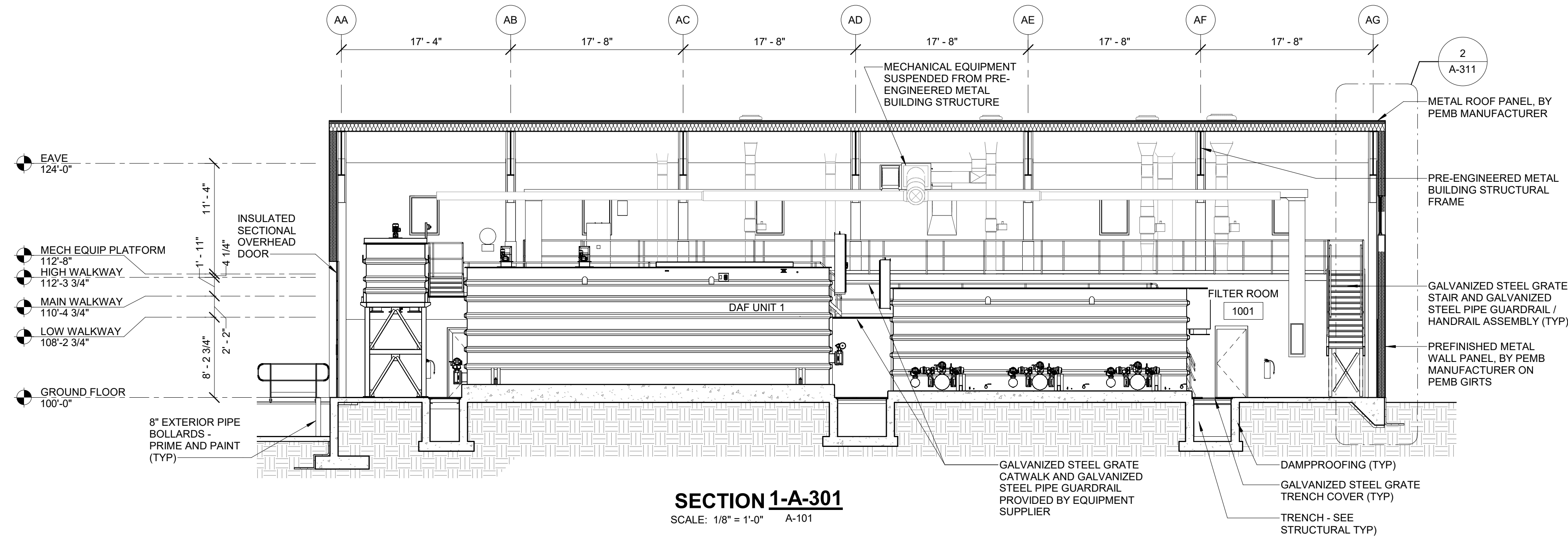
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WRANGELL, ALASKA  
**EXTERIOR ELEVATIONS**  
SEC. 31, TOWNSHIP 62S, RANGE 94E  
CITY AND BOROUGH OF WRANGELL, ALASKA

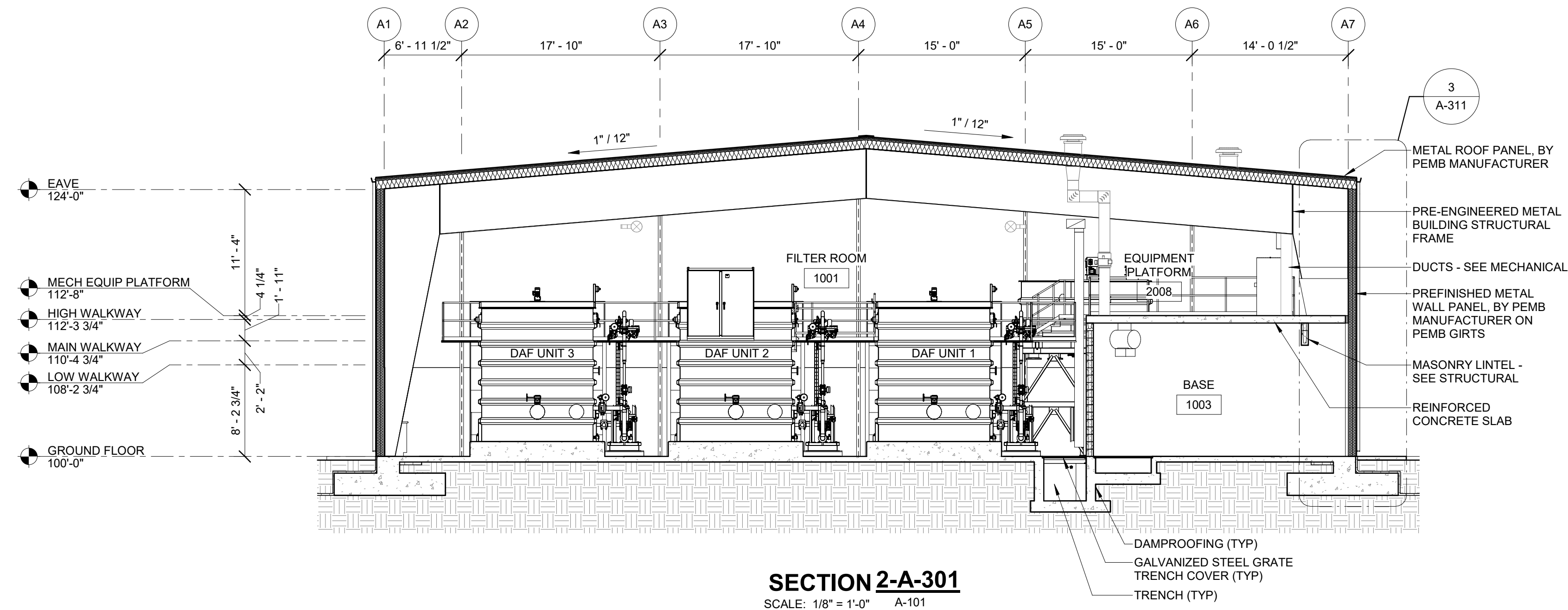
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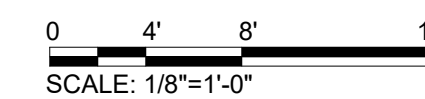
**A-202**



**SECTION 1-A-301**  
SCALE: 1/8" = 1'-0" A-101



**SECTION 2-A-301**  
SCALE: 1/8" = 1'-0" A-101



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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**BUILDING SECTIONS**  
SEC. 31, TOWNSHIP 62S, RANGE 94E  
CITY AND BOROUGH OF WRANGELL, ALASKA



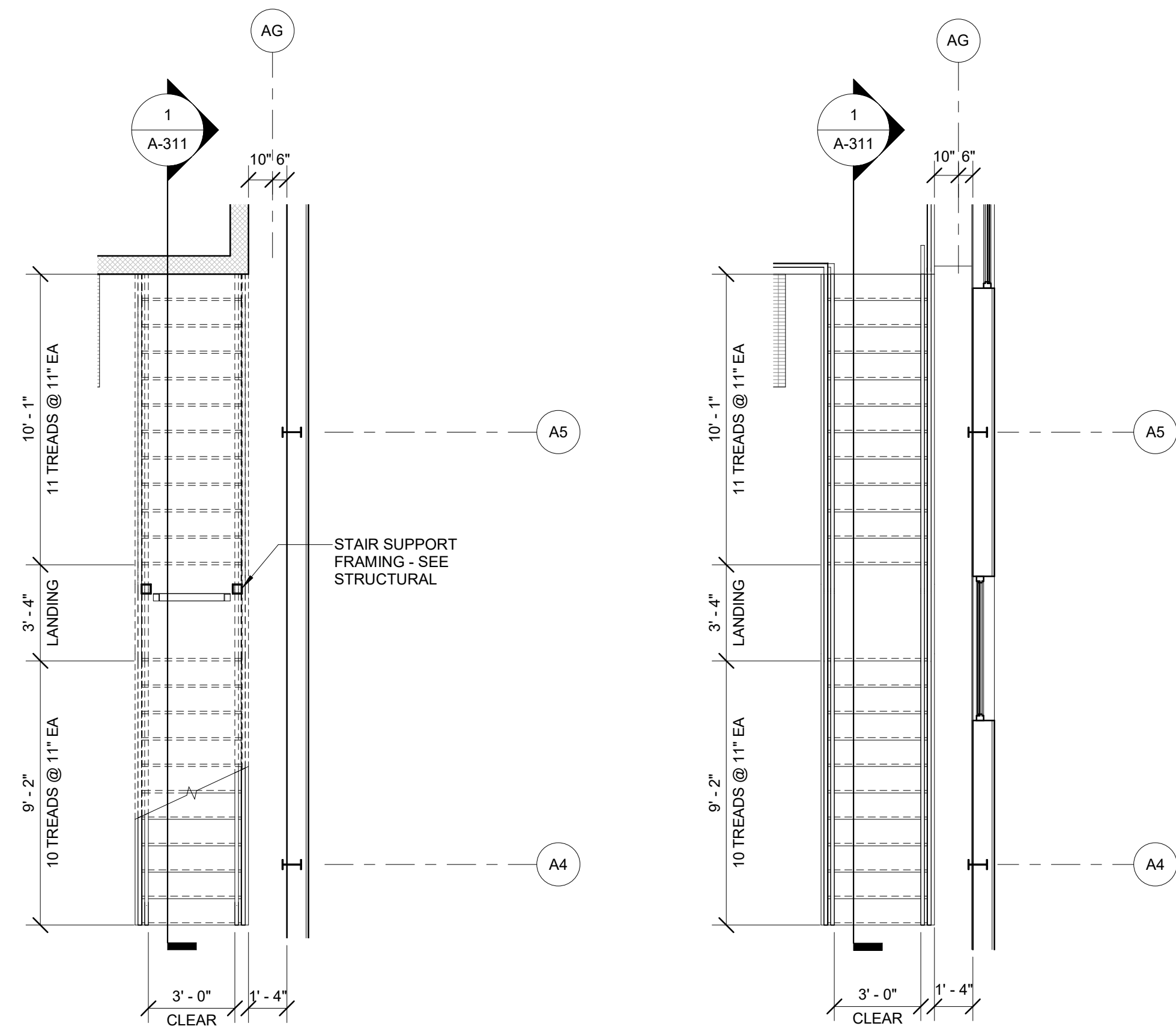
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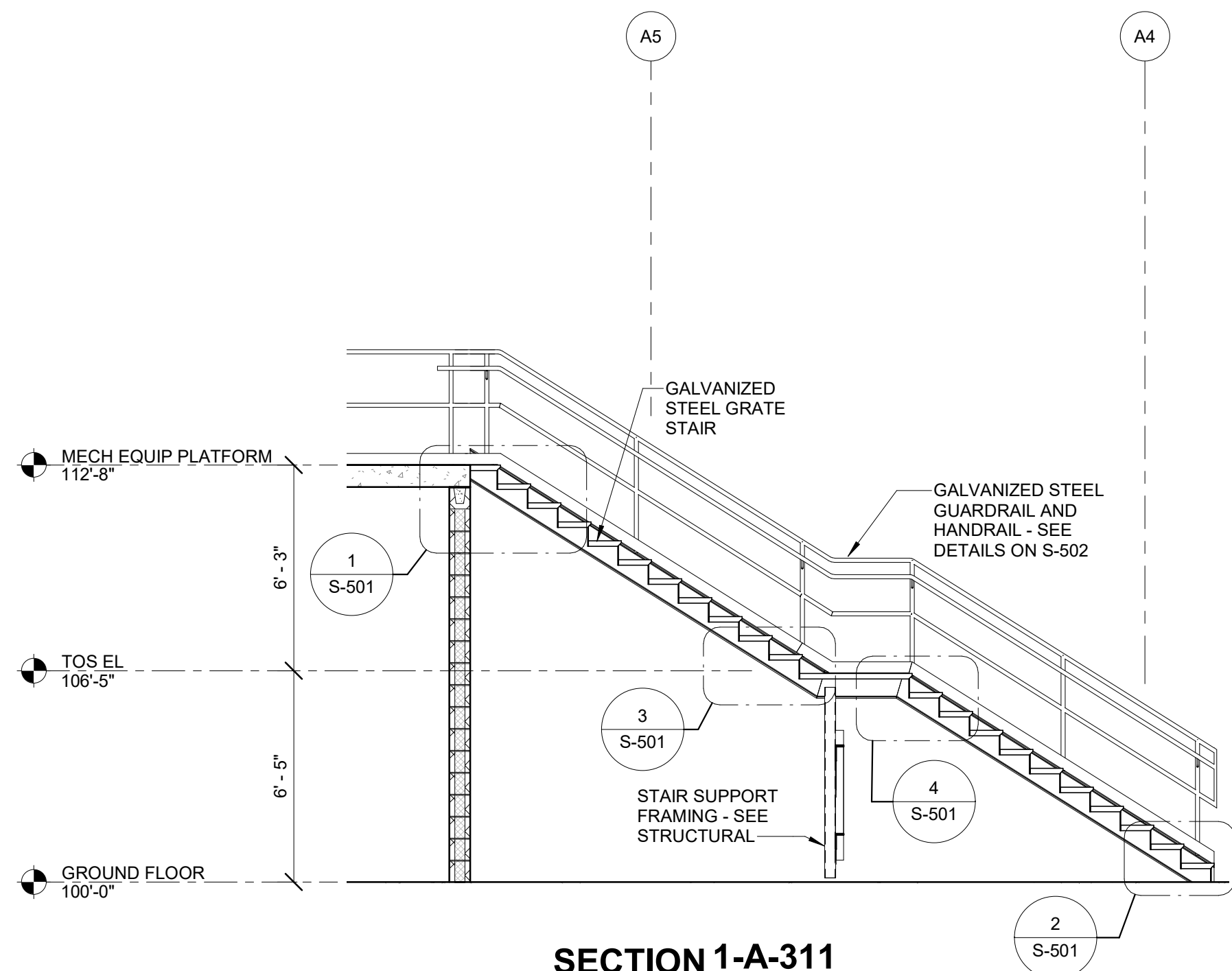
**A-301**



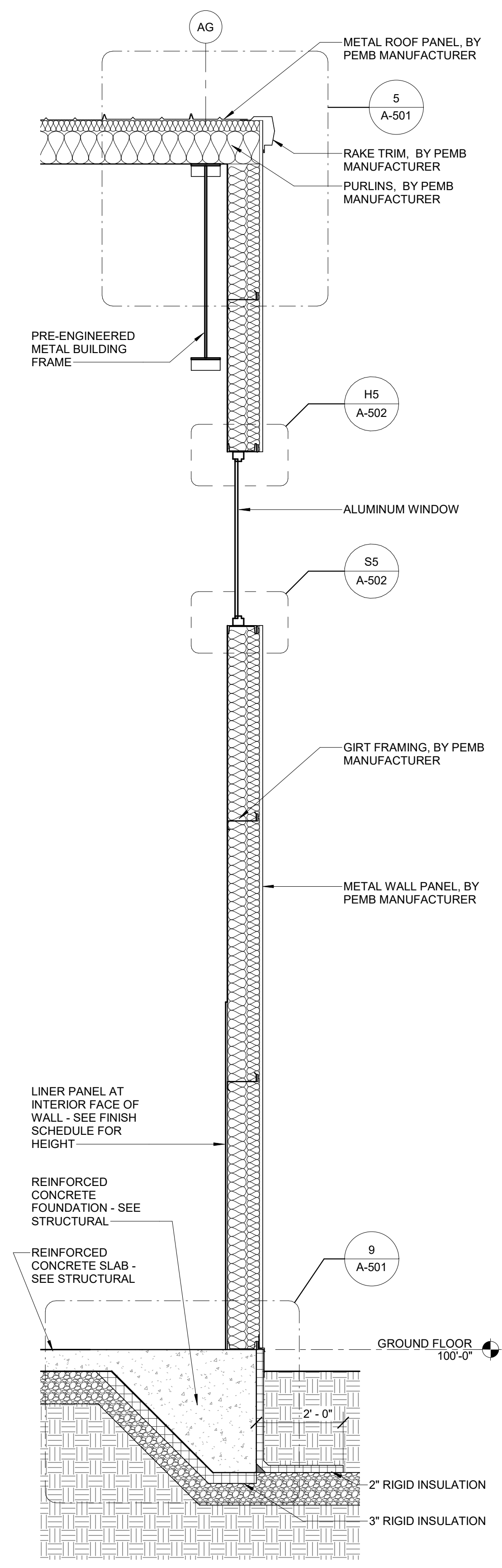


**GROUND FLOOR STAIR PLAN 5-A-311**  
SCALE: 1/4" = 1'-0" A-101

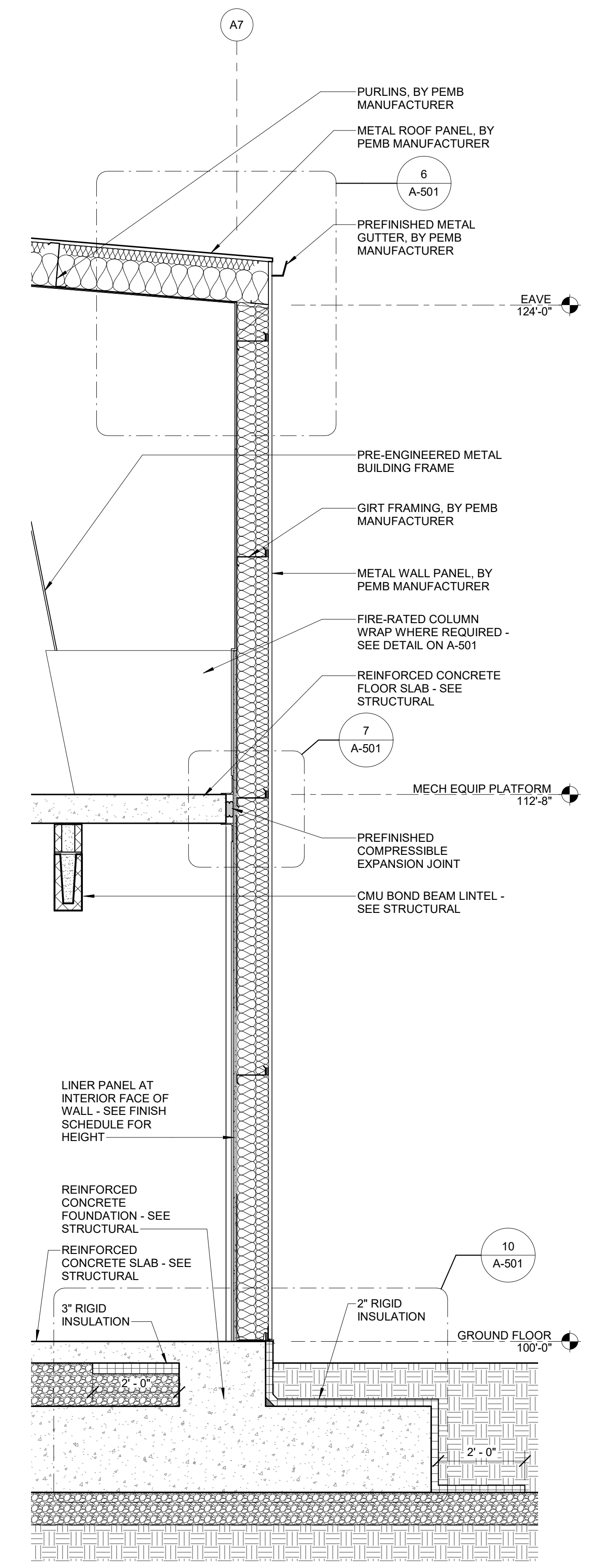
**PLATFORM LEVEL STAIR PLAN 4-A-311**  
SCALE: 1/4" = 1'-0" A-102



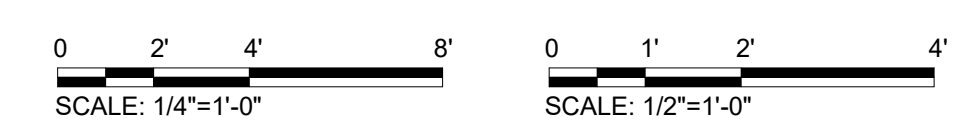
**SECTION 1-A-311**  
SCALE: 1/4" = 1'-0" A-311



**SECTION 2-A-311**  
SCALE: 1/2" = 1'-0" A-301



**SECTION 3-A-311**  
SCALE: 1/2" = 1'-0" A-301



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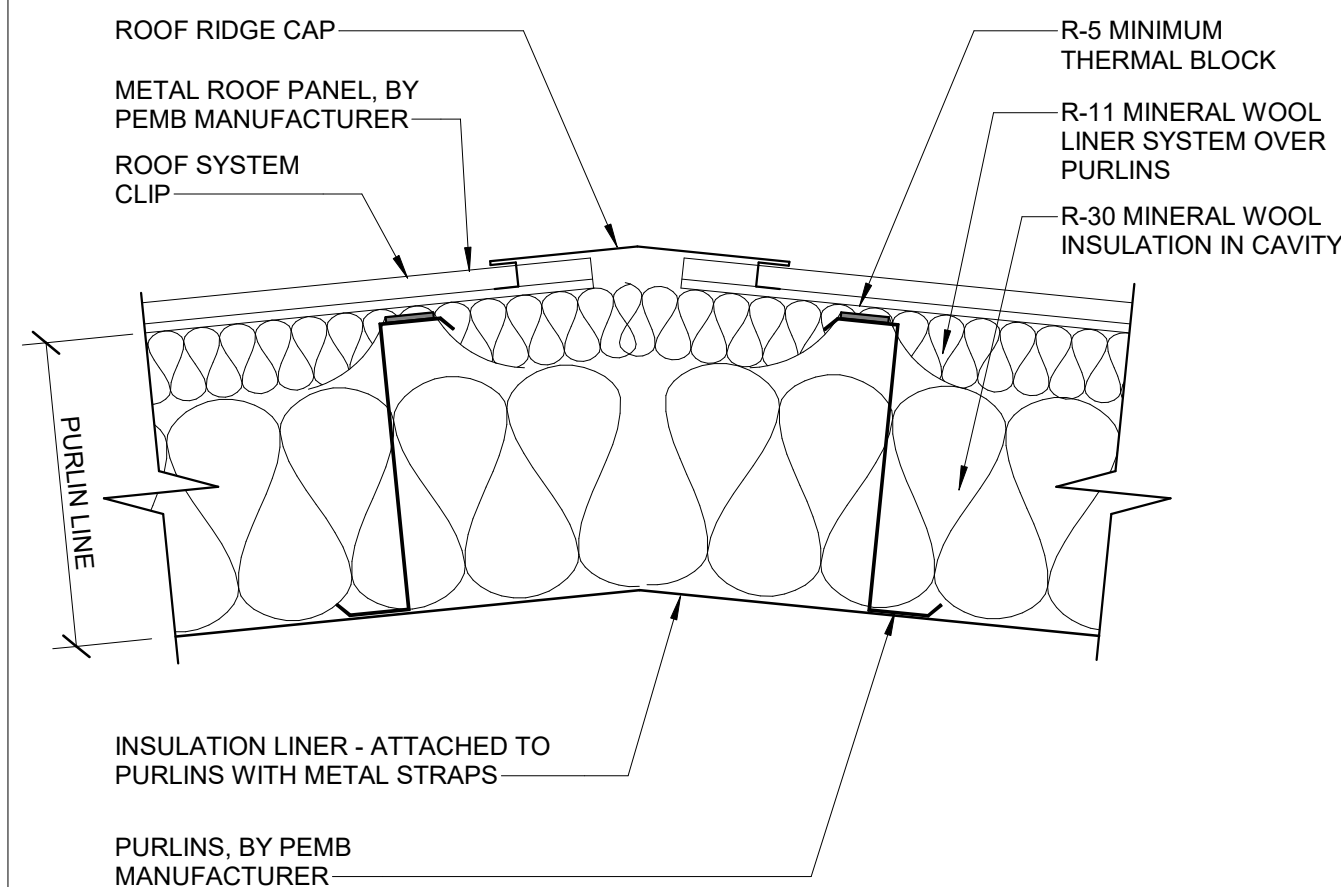
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**WRANGELL WATER TREATMENT PLANT IMPROVEMENTS**  
**WRANGELL, ALASKA**  
**WALL SECTIONS**

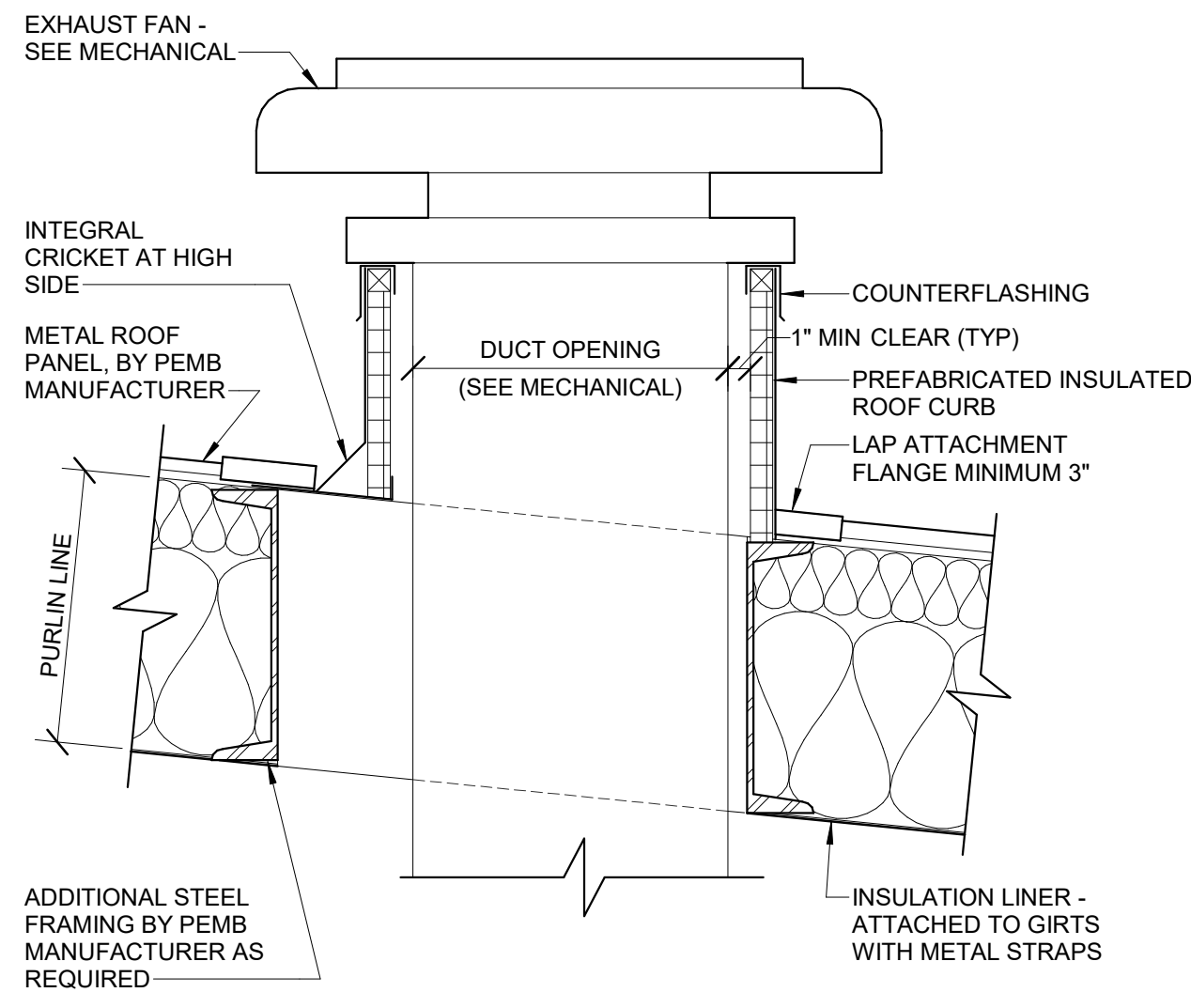
PROJECT 1528.5026.01  
DATE 06/02/2023



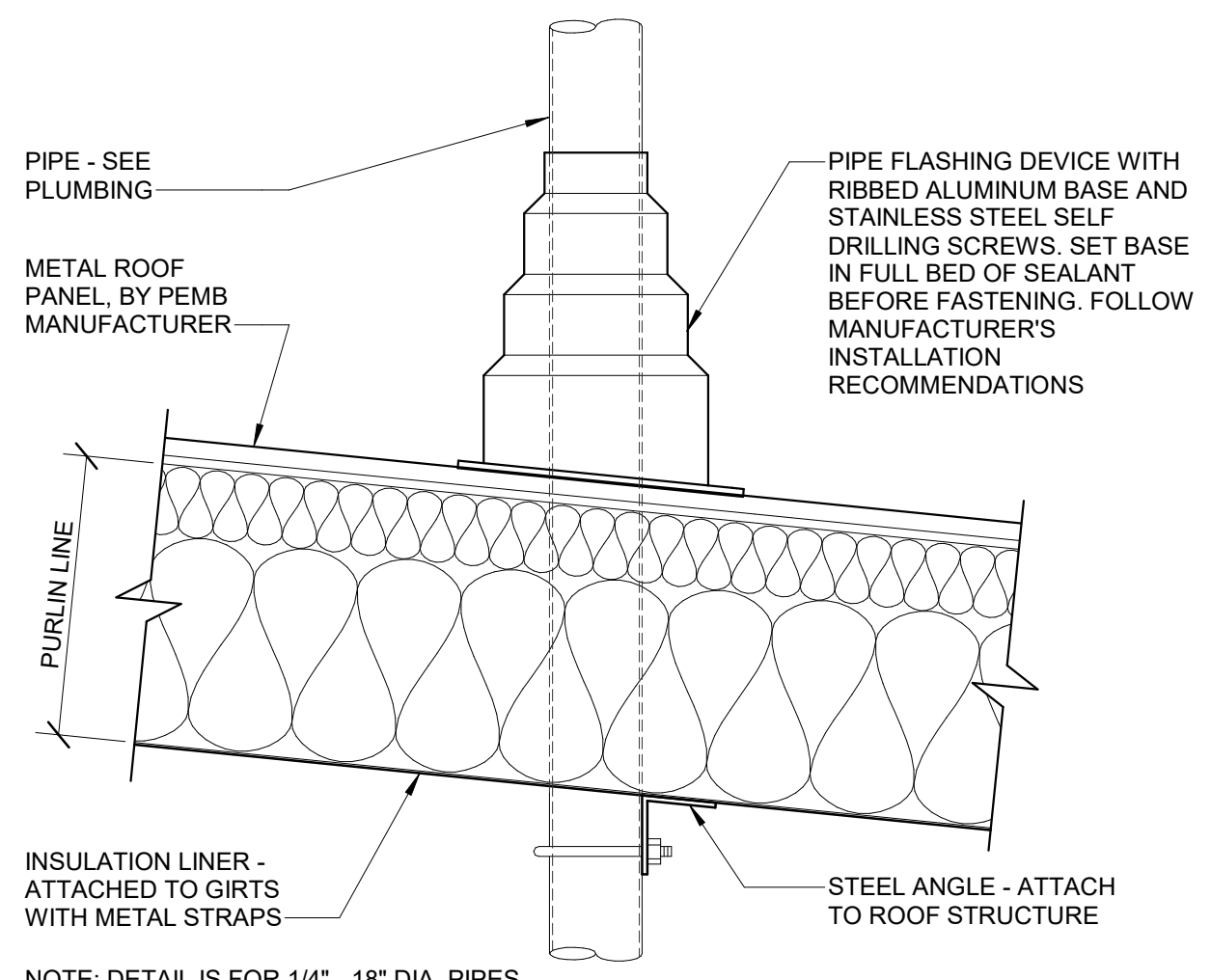
**BID DOCUMENTS**  
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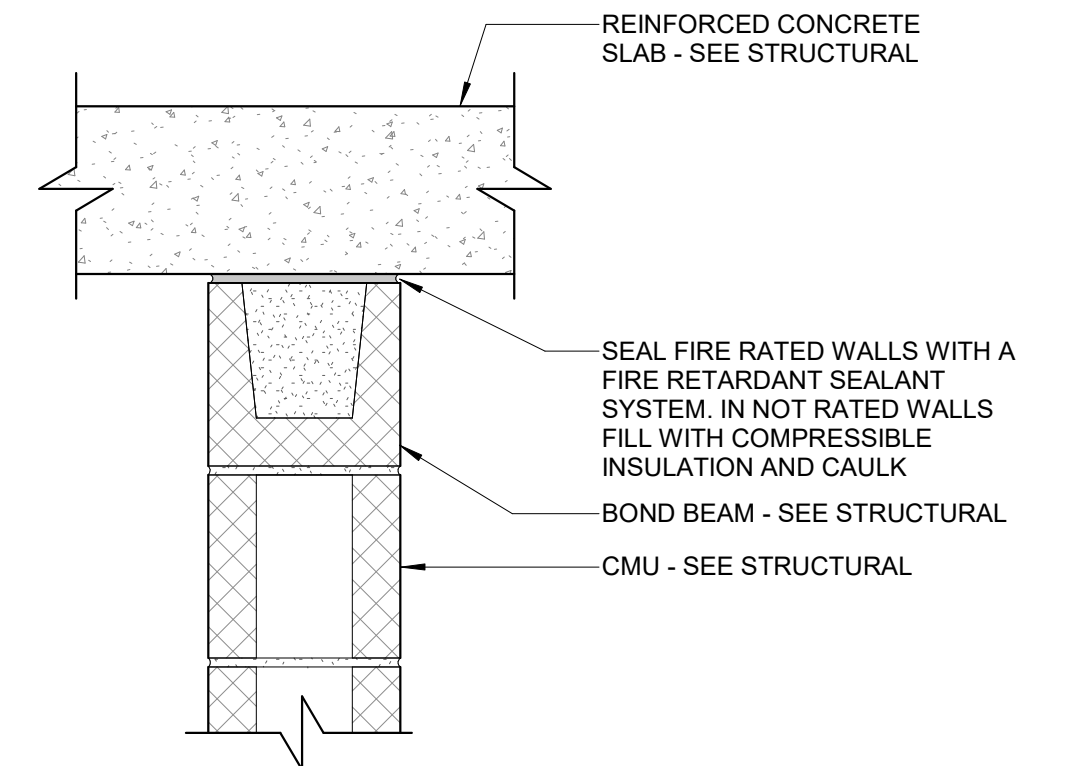
**RIDGE CAP 1-A-501**  
SCALE: 1 1/2" = 1'-0"



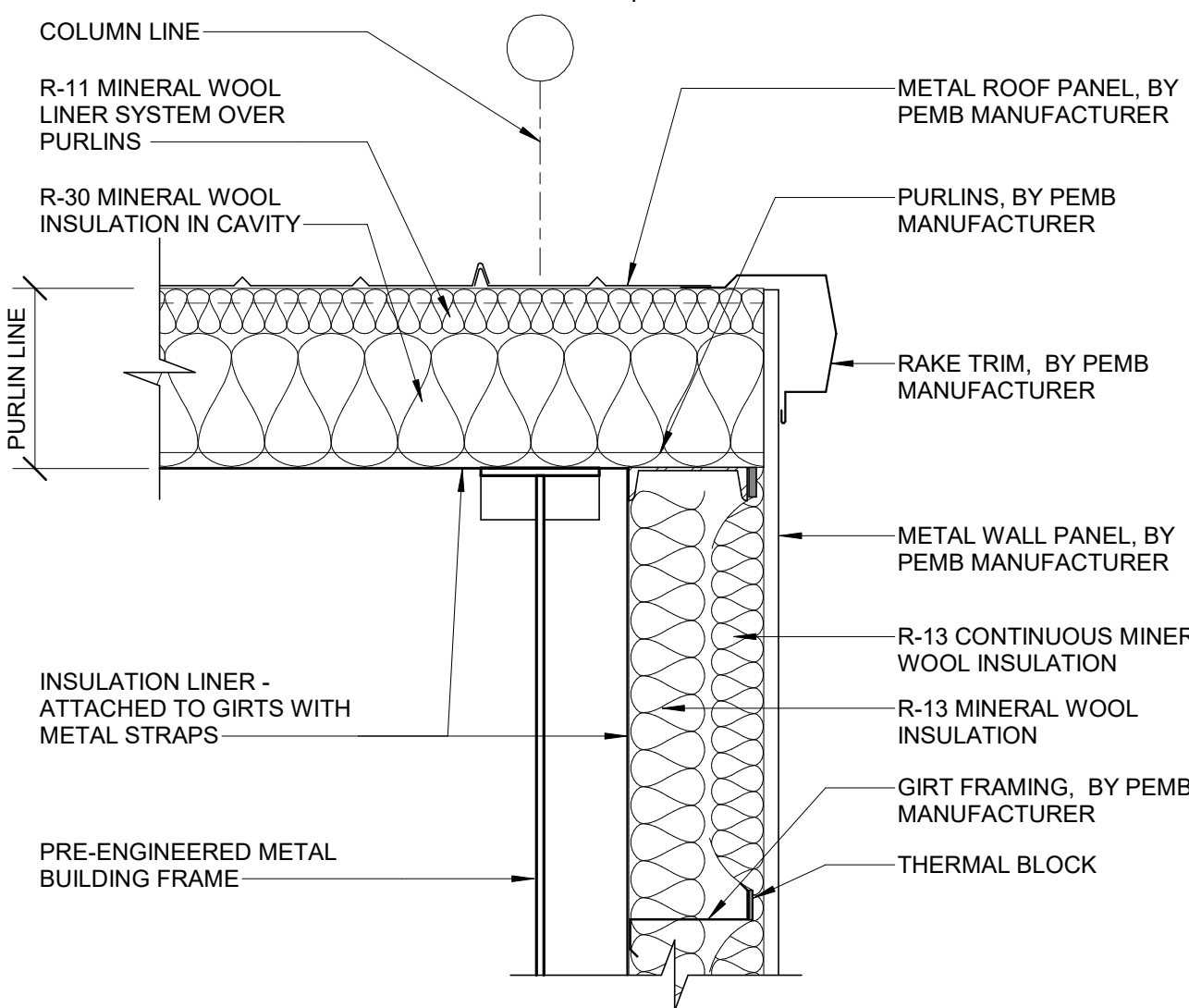
**ROOF EXHAUST FAN PENETRATION 2-A-501**  
SCALE: 1 1/2" = 1'-0"



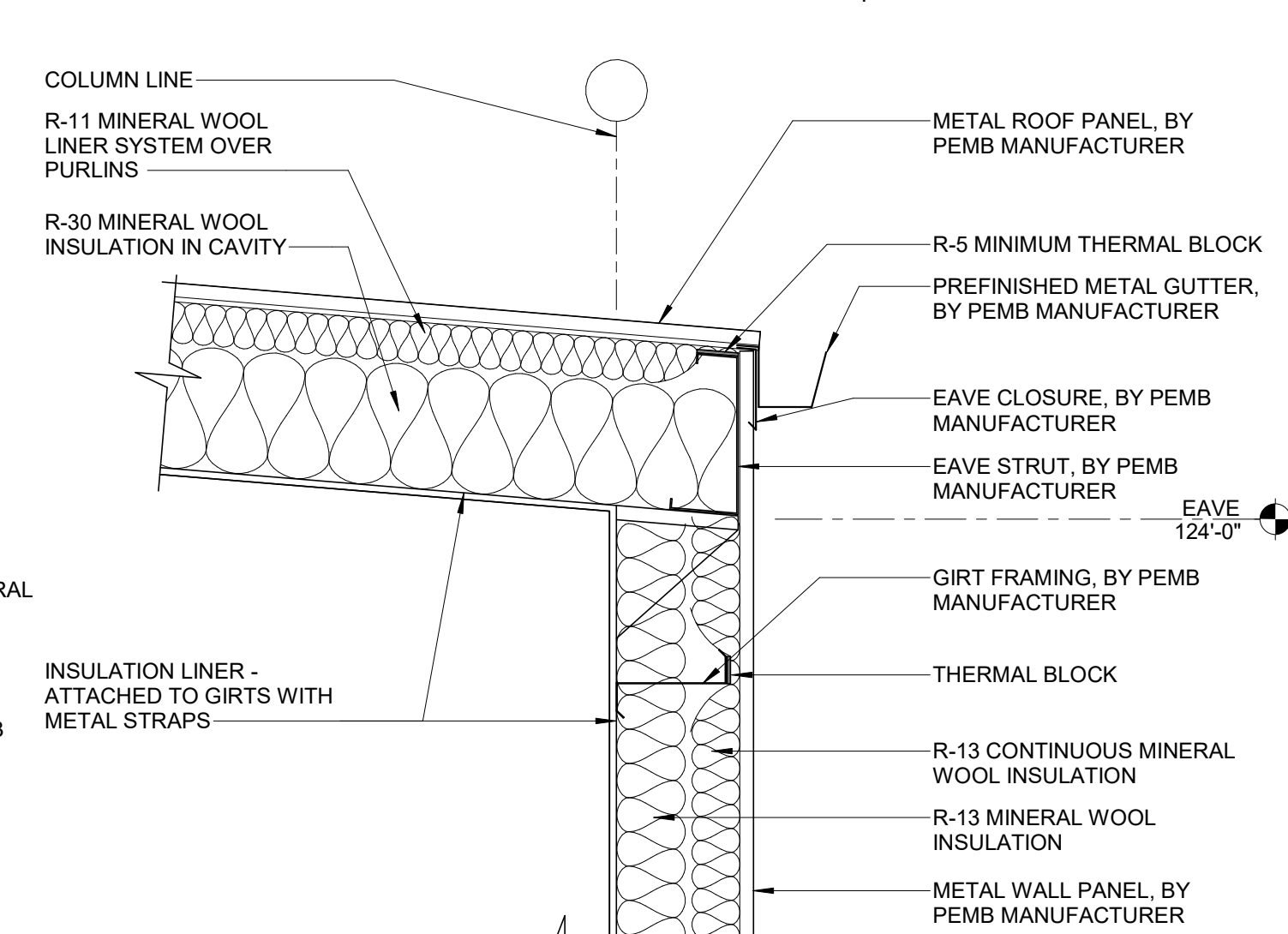
**PIPE THRU ROOF 3-A-501**  
SCALE: 1 1/2" = 1'-0"



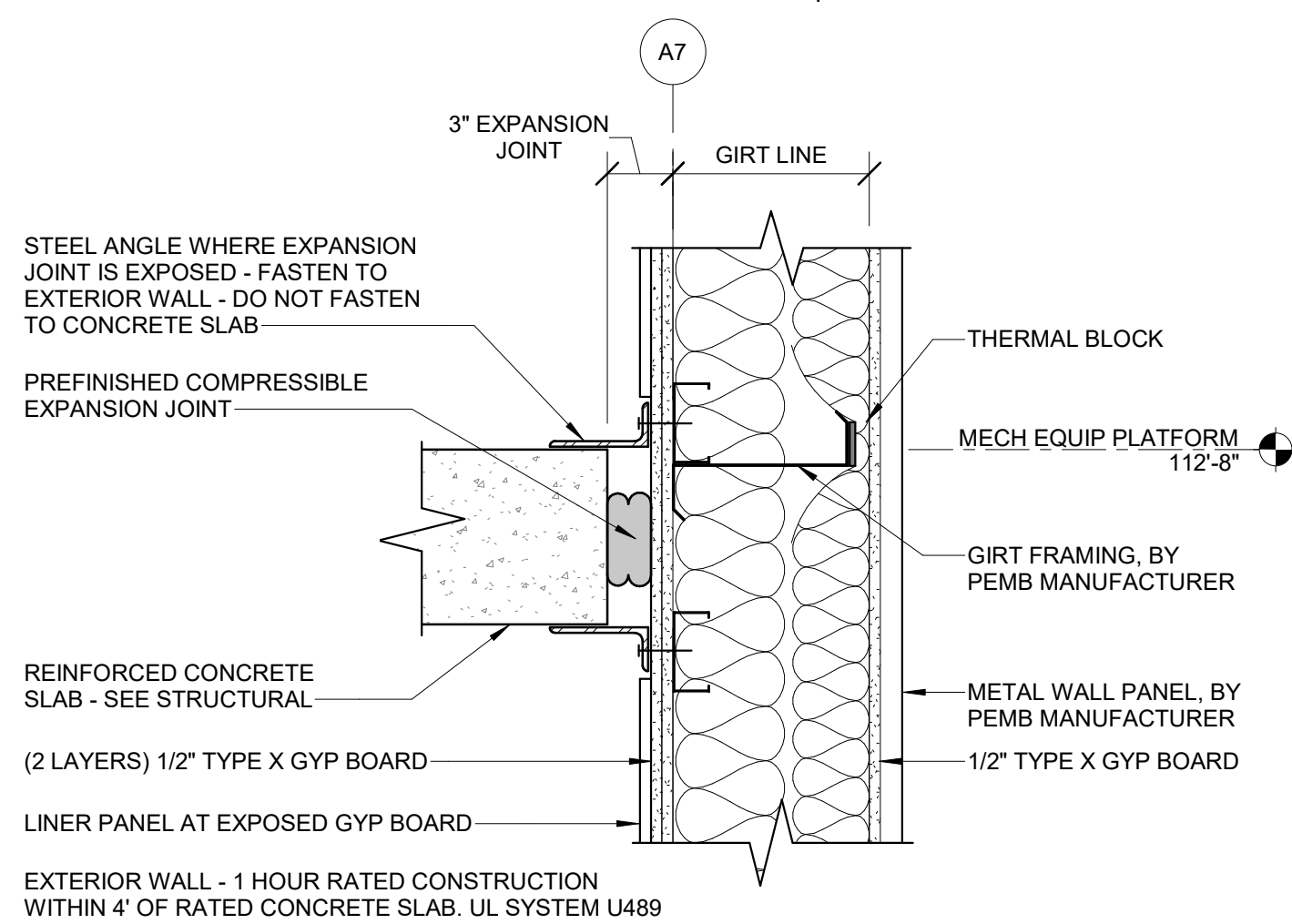
**CMU TOP OF WALL 4-A-501**  
SCALE: 1 1/2" = 1'-0"



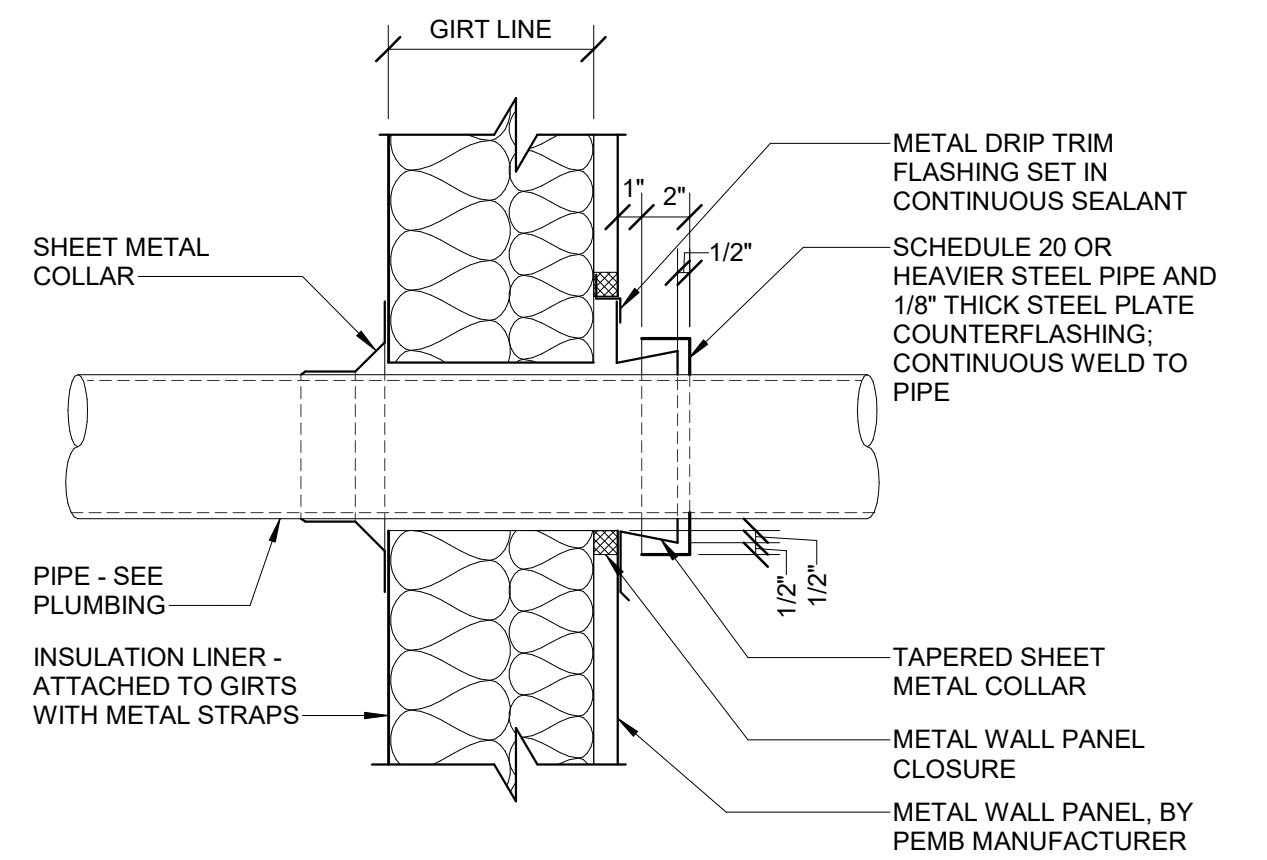
**TYPICAL END WALL EAVE 5-A-501**  
SCALE: 1" = 1'-0"



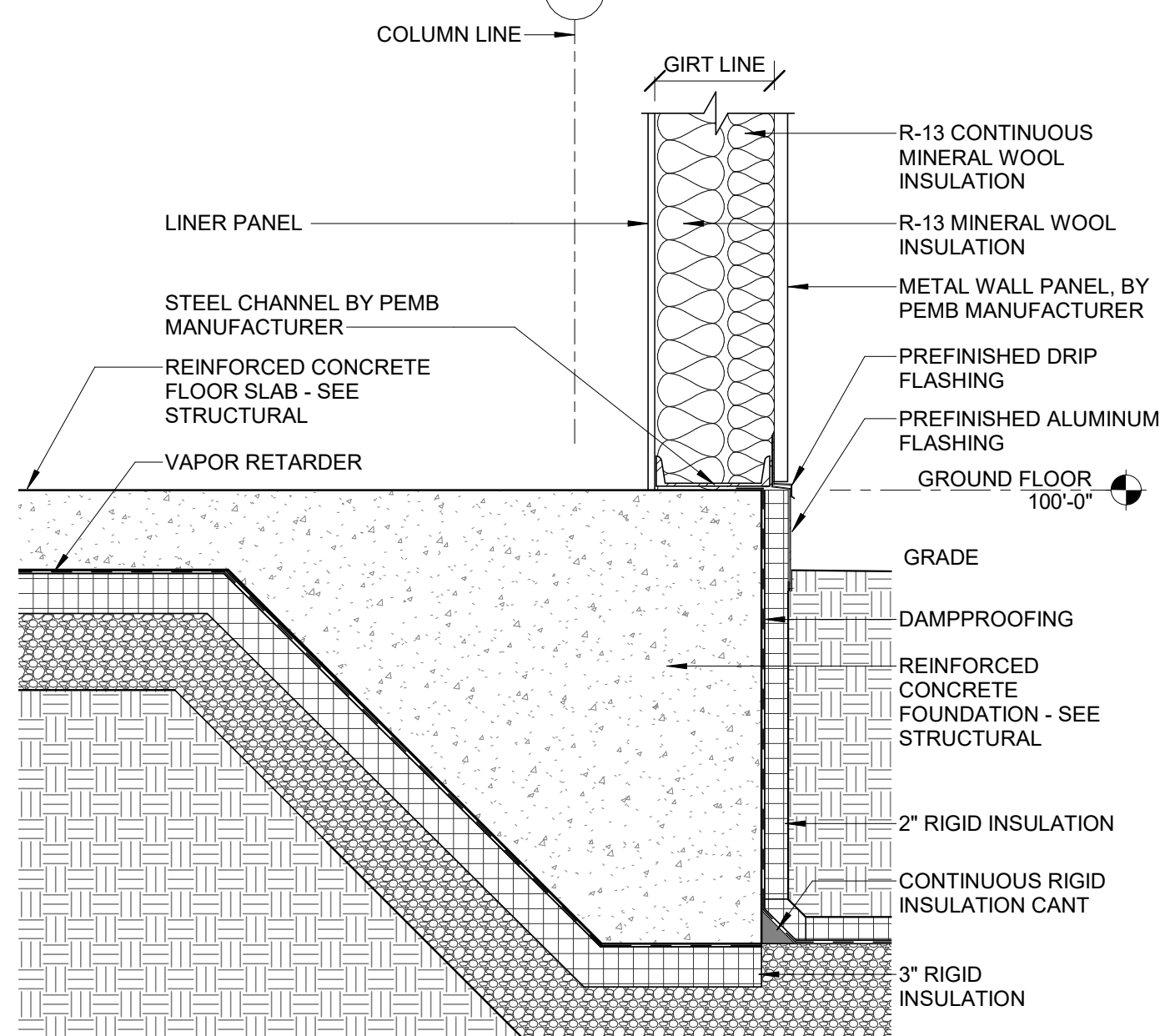
**TYPICAL SIDE WALL EAVE 6-A-501**  
SCALE: 1" = 1'-0"



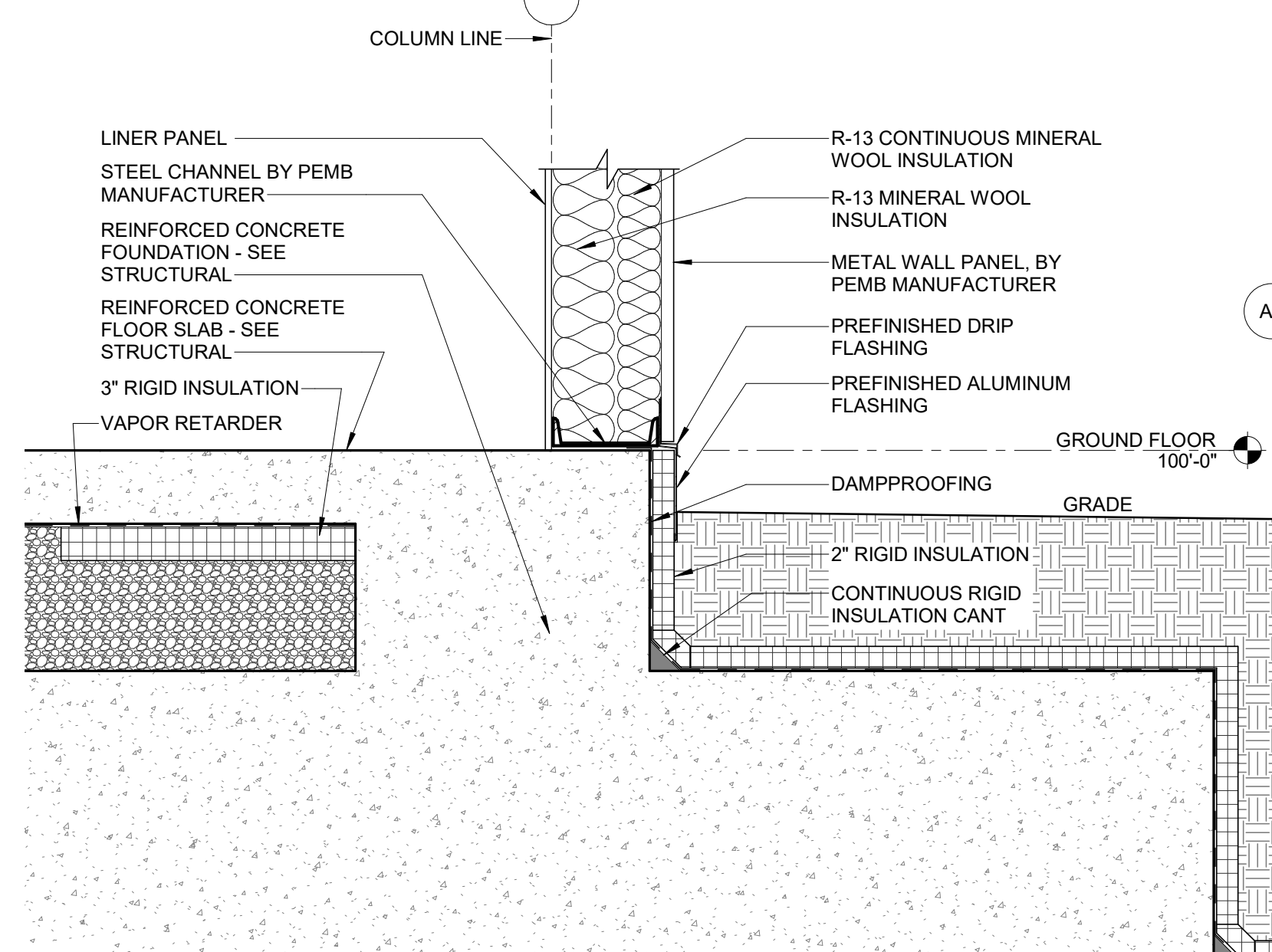
**EXPANSION JOINT AT MECH EQUIP PLATFORM 7-A-501**  
SCALE: 1 1/2" = 1'-0"



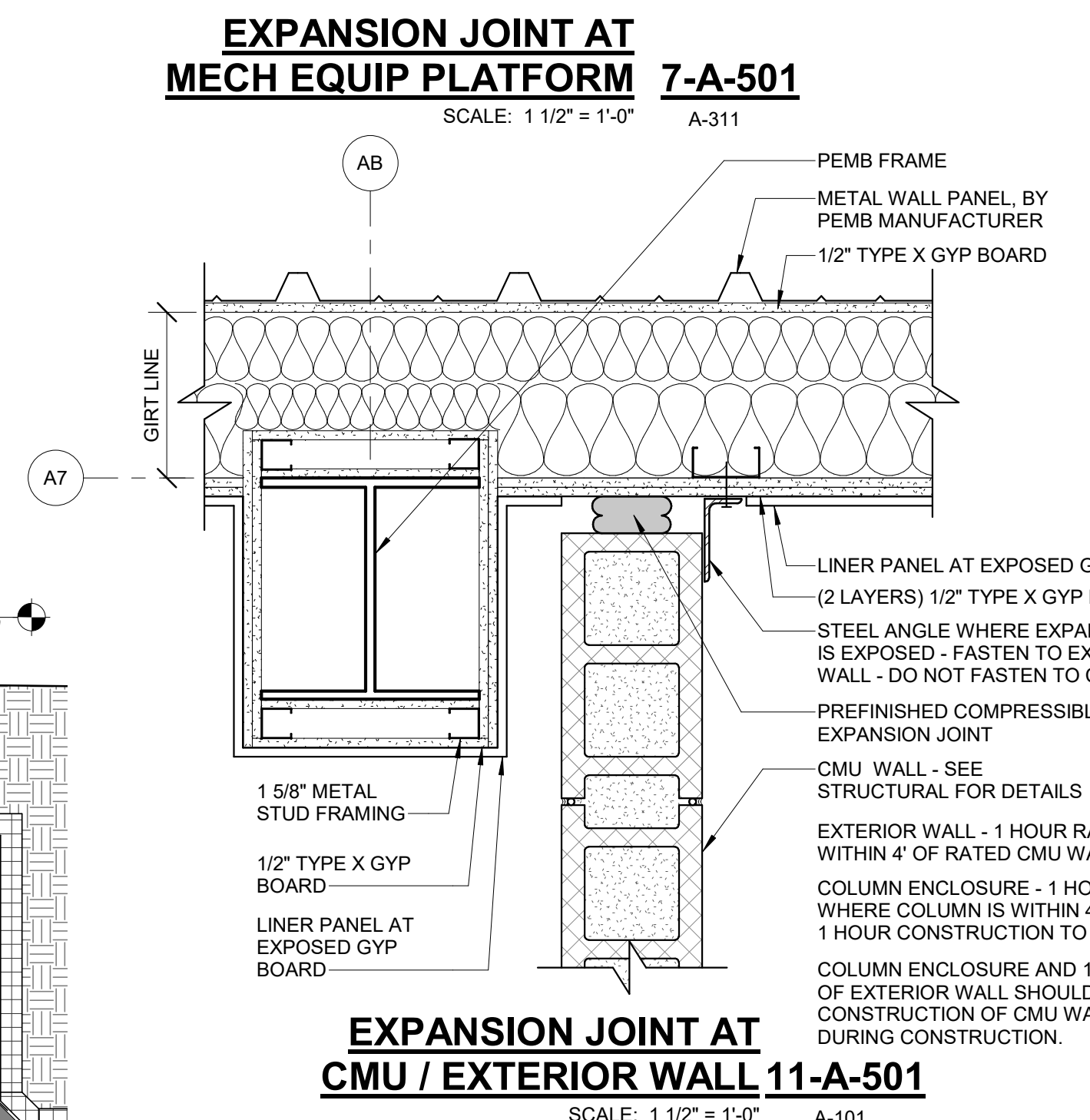
**PIPE THRU EXTERIOR WALL 8-A-501**  
SCALE: 1 1/2" = 1'-0"



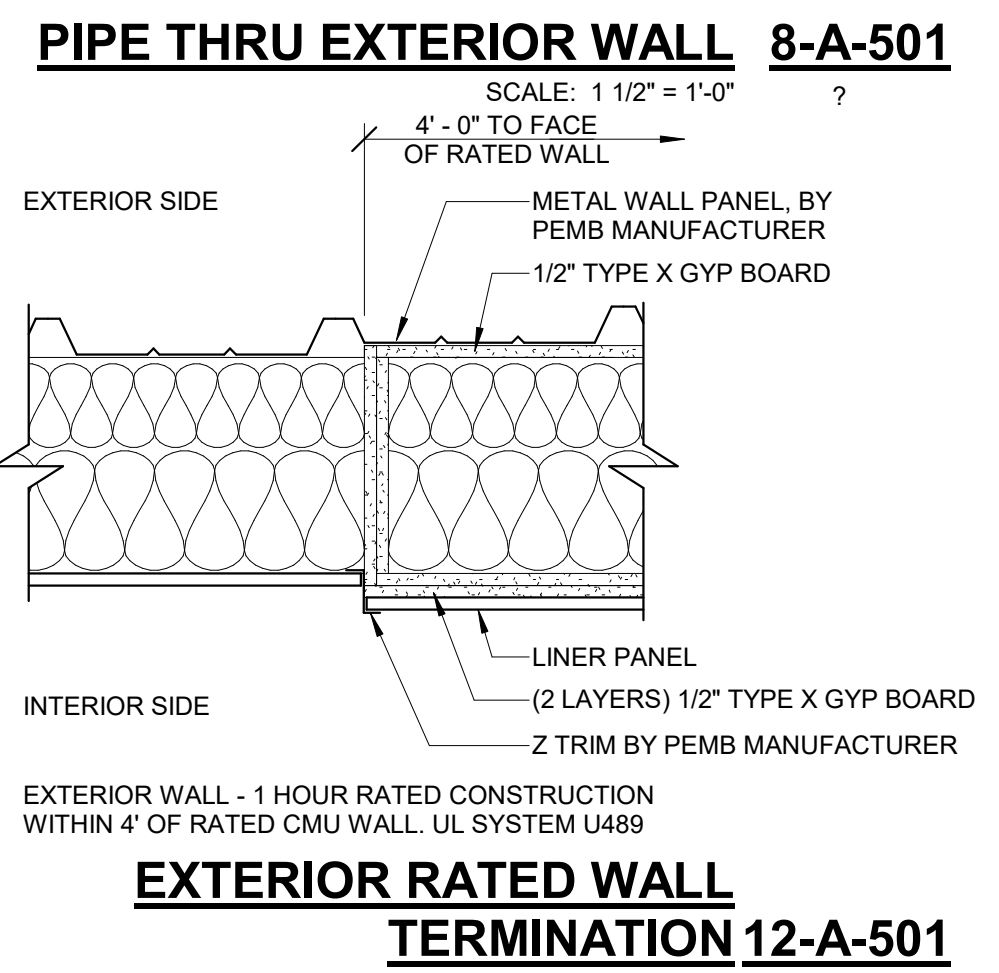
**TYPICAL BASE OF WALL 9-A-501**  
SCALE: 1" = 1'-0"



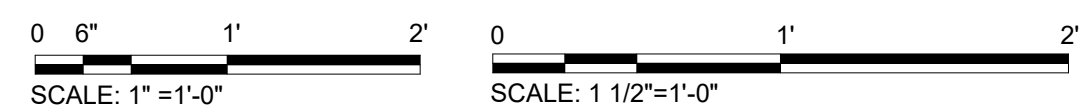
**BASE OF WALL AT COLUMN 10-A-501**  
SCALE: 1" = 1'-0"



**EXPANSION JOINT AT CMU / EXTERIOR WALL 11-A-501**  
SCALE: 1 1/2" = 1'-0"



**EXTERIOR RATED WALL TERMINATION 12-A-501**  
SCALE: 1 1/2" = 1'-0"

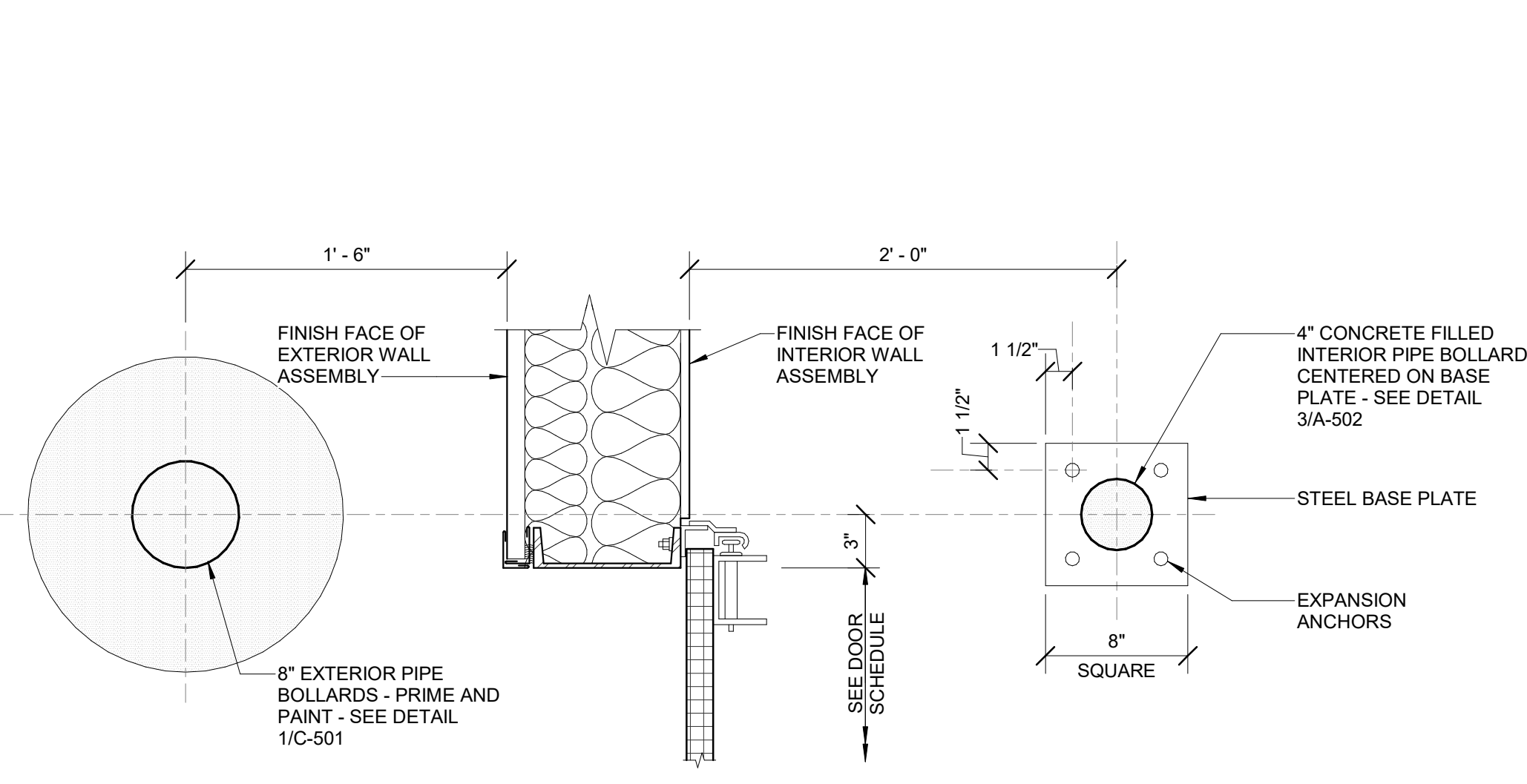
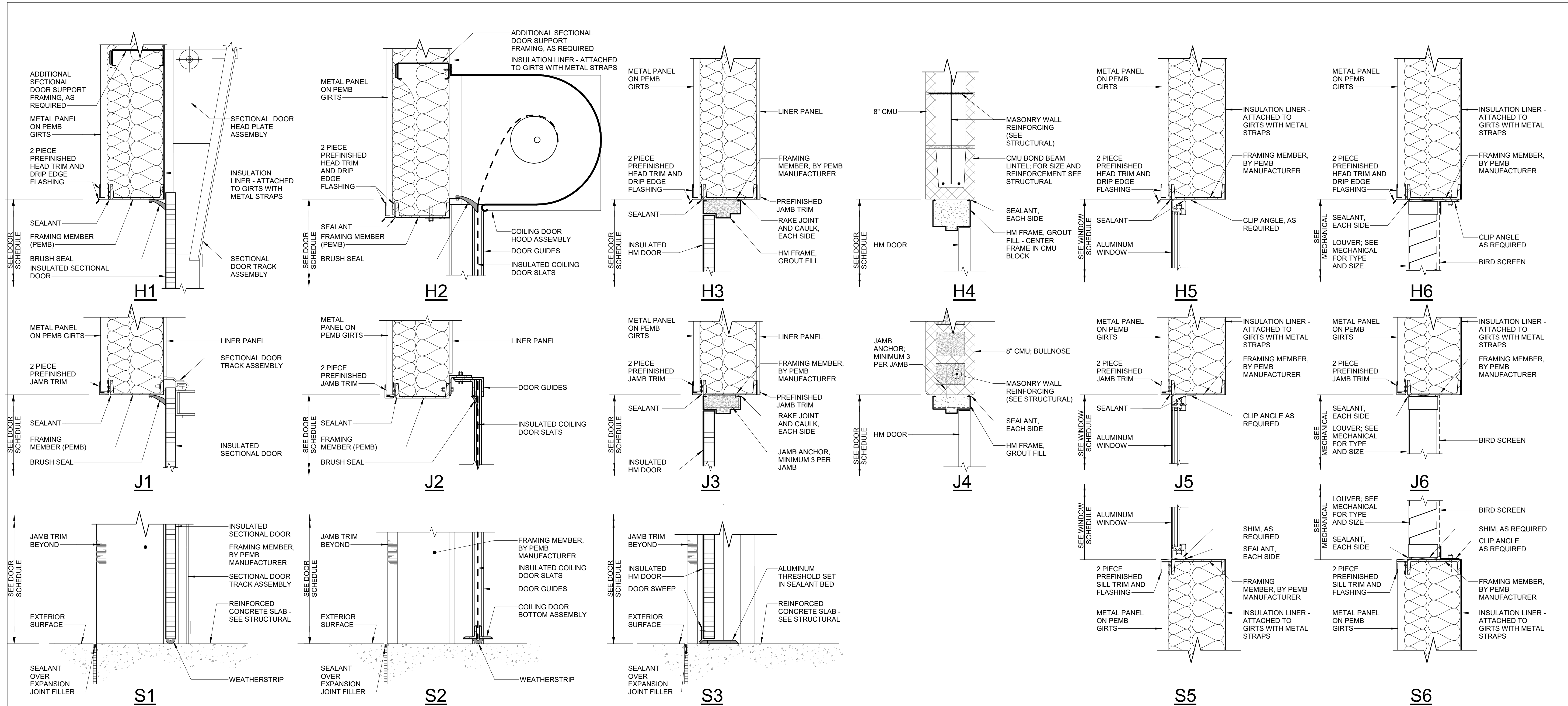


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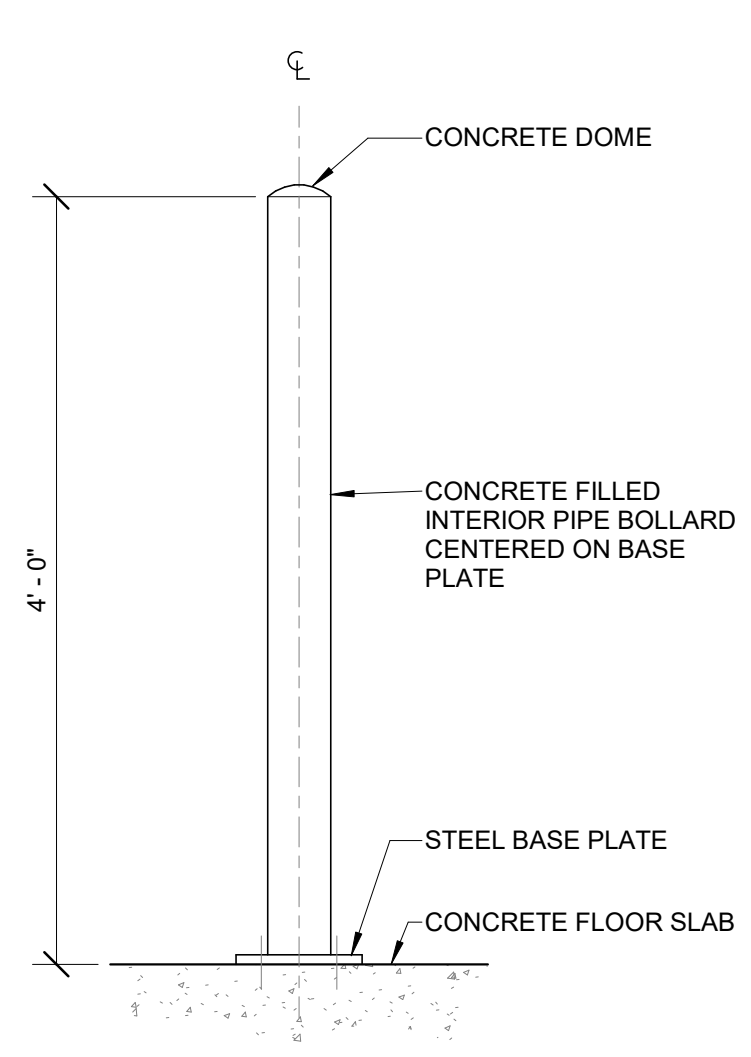
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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**EXTERIOR WALL DETAILS**



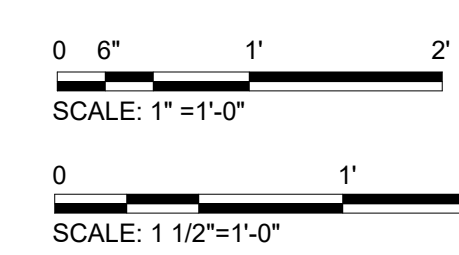
**TYPICAL BOLLARD LOCATION 2-A-502**

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



**TYPICAL INTERIOR PIPE BOLLARD DETAIL 3-A-502**

SCALE: 1" = 1'-0"



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WRANGELL, ALASKA  
**OPENING DETAILS**

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DATE 06/02/2023

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**A-502**

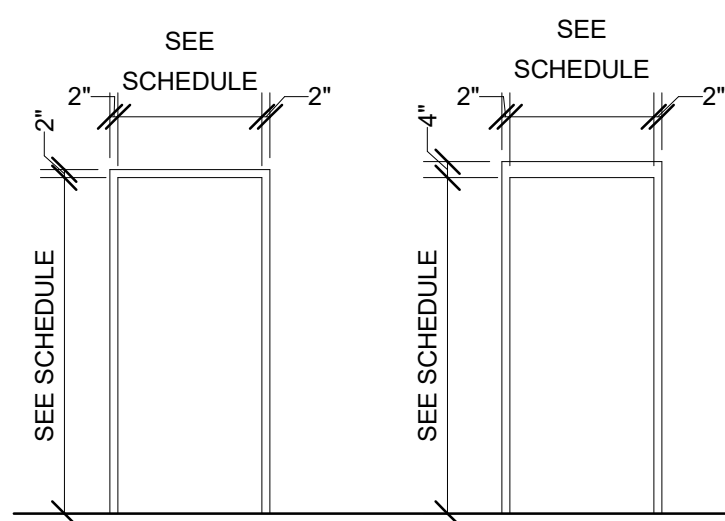
SEC. 31, TOWNSHIP 62S, RANGE 94E  
CITY AND BOROUGH OF WRANGELL, ALASKA

DOOR NO.	DOOR				FRAME		DETAILS			FIRE RATING (in min)	GLAZING TYPE	HARDWARE SET	COMMENTS
	WIDTH	HEIGHT	LEAF COUNT	TYPE	MATL	TYPE	MATL	HEAD	JAMB				
1001A	3'-0"	7'-0"	2	HG	HM	1	HM	H3	J3	S3			
1001B	3'-0"	7'-0"	1	HG	HM	1	HM	H3	J3	S3			
1001C	3'-0"	7'-0"	1	HG	HM	1	HM	H3	J3	S3			
1001D	3'-0"	7'-0"	1	HG	HM	1	HM	H3	J3	S3			
1002A	3'-0"	7'-0"	1	F	HM	2	HM	H4	J4	-	90		
1002C	3'-0"	7'-0"	1	F	HM	1	HM	H3	J3	S3	45		
1003A	3'-0"	7'-0"	1	F	HM	2	HM	H4	J4	-	90		
1003C	3'-0"	7'-0"	1	F	HM	1	HM	H3	J3	S3	45		
1004A	3'-0"	7'-0"	1	F	HM	2	HM	H4	J4	-			
1004B	3'-4"	7'-0"	2	F	HM	1	HM	H3	J3	S3			
1005A	3'-0"	7'-0"	1	F	HM	2	HM	H4	J4	-			
1005B	3'-4"	7'-0"	2	F	HM	1	HM	H3	J3	S3			
1006	3'-0"	7'-0"	1	F	HM	2	HM	H4	J4	-			

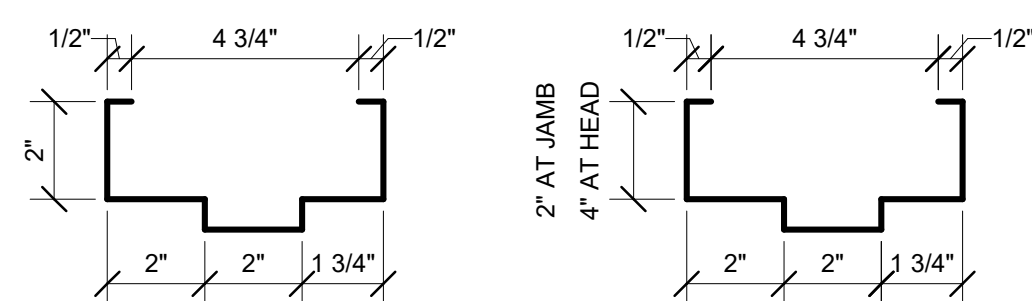
MARK	DOOR			FRAME		FIRE RATING (in min)	DETAILS			COMMENTS	
	WIDTH	HEIGHT	TYPE	MATERIAL	TYPE		MATERIAL	HEAD	JAMB		SILL
1001F	12'-0"	14'-0"	SE	STL	-	-	H1	J1	S1	1	
1001G	12'-0"	14'-0"	SE	STL	-	-	H1	J1	S1	1	
1001H	12'-0"	14'-0"	SE	STL	-	-	H1	J1	S1	1	
1002B	9'-0"	10'-0"	CO	STL	-	-	45	H2	J2	S2	1
1003B	9'-0"	10'-0"	CO	STL	-	-	45	H2	J2	S2	1

**DOOR SCHEDULE LEGEND:**  
 HM HOLLOW METAL  
 STL STEEL

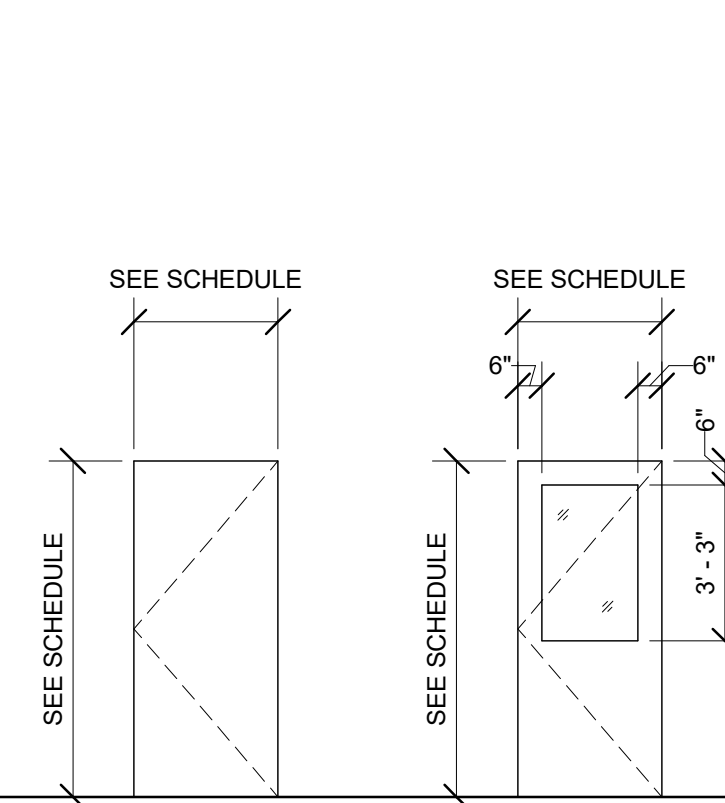
- DOOR SCHEDULE NOTES:**
- MOTOR-OPERATED.
  - FOR DOOR DETAILS, SEE SHEET A-502.
  - FOR HARDWARE SETS, SEE SPECIFICATION SECTION 08 70 00.
  - FOR GLAZING TYPES, SEE SPECIFICATION SECTION 08 80 00.



**DOOR FRAME TYPES**  
 SCALE: 1/4" = 1'-0"

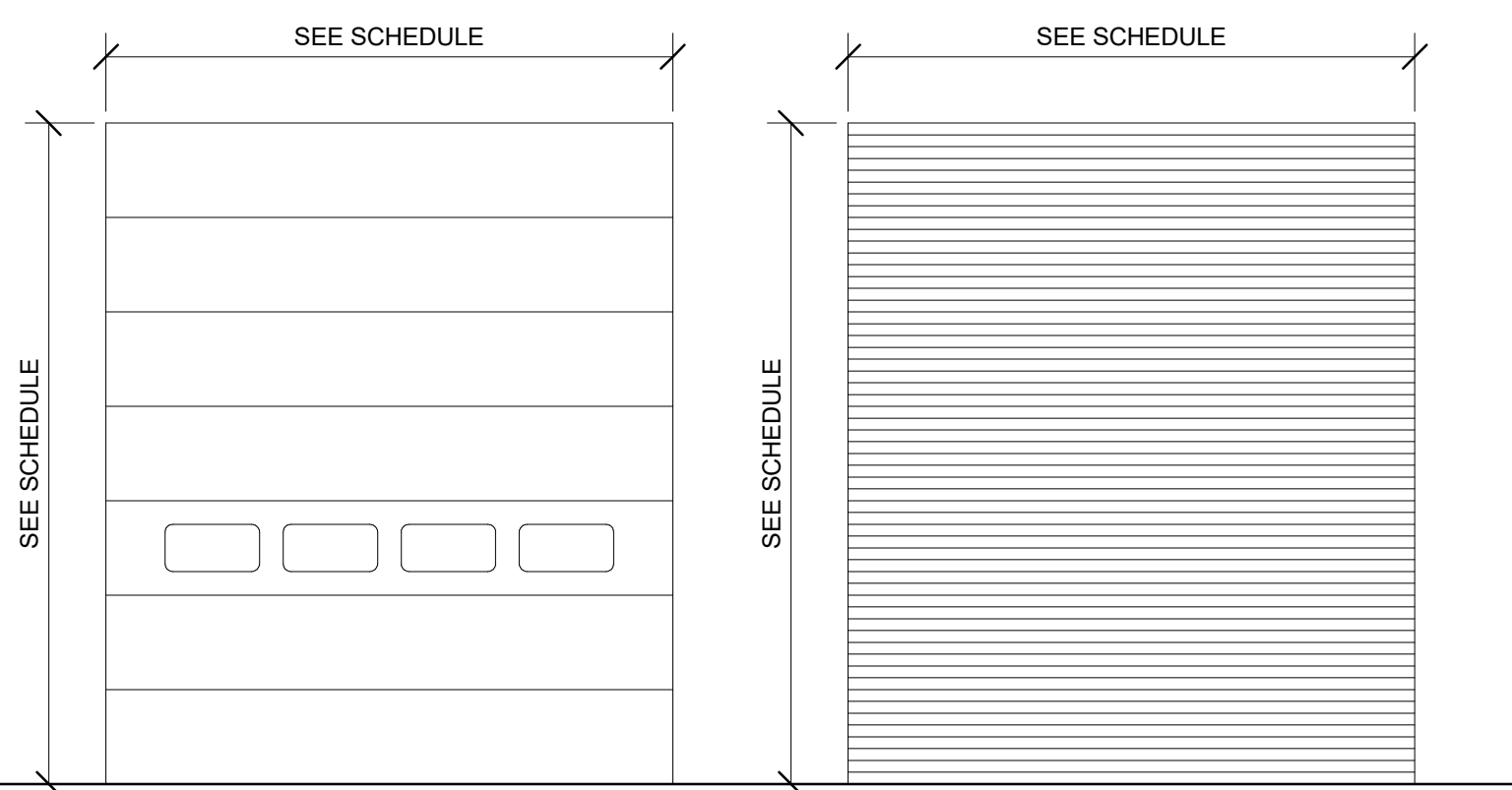


**FRAME SECTION**  
 SCALE: 3" = 1'-0"



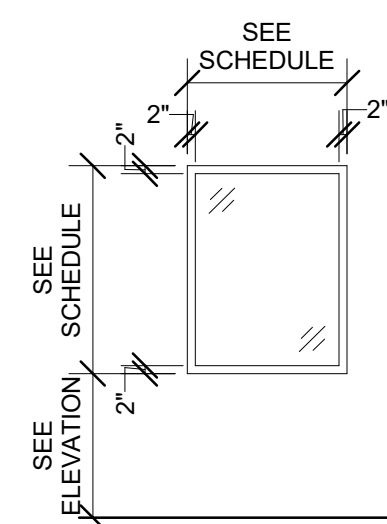
**F** FLUSH  
**HG** HALF GLASS

**DOOR ELEVATION TYPES**  
 SCALE: 1/4" = 1'-0"

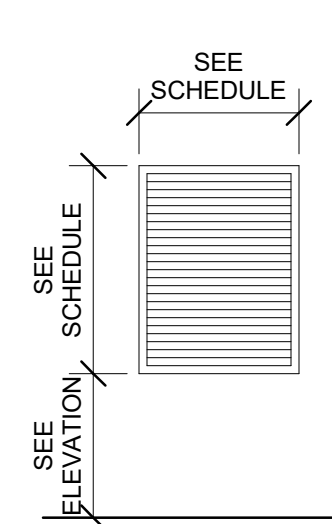


**SE** INSULATED SECTIONAL OVERHEAD DOOR

**CO** INSULATED COILING OVERHEAD DOOR

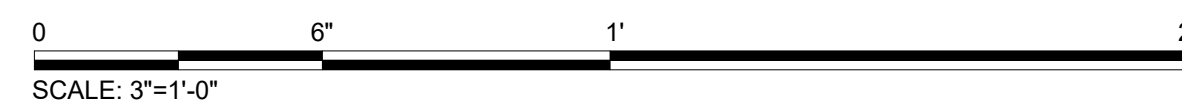
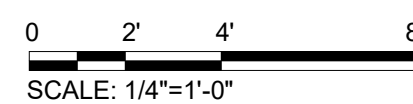


**W1 / W2**



**L1 / L2**

**WINDOW AND LOUVER TYPES**  
 SCALE: 1/4" = 1'-0"



ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS	CEILING		COMMENTS
					MATL	HEIGHT	
1001	FILTER ROOM	SC	-	LP / IL	IL	VARIES	LINER PANEL TO 8'-0" AFF
1002	ACID	SC	-	CMU / LP	EXP	12'-0"	LINER PANEL TO UNDERSIDE OF STRUCTURE
1003	BASE	SC	-	CMU / LP	EXP	12'-0"	LINER PANEL TO UNDERSIDE OF STRUCTURE
1004	ELECTRICAL	SC	-	CMU / LP	EXP	12'-0"	LINER PANEL TO UNDERSIDE OF STRUCTURE
1005	BLOWERS	SC	-	CMU / LP	EXP	12'-0"	LINER PANEL TO UNDERSIDE OF STRUCTURE
1006	STORAGE	SC	-	CMU / LP	IL	VARIES	LINER PANEL TO 8'-0" AFF
2008	EQUIPMENT PLATFORM	SC	-	LP / IL	IL	VARIES	LINER PANEL TO 8'-0" AFF

**FINISH LEGEND:**  
 CMU CONCRETE MASONRY UNIT - PAINT  
 EXP EXPOSED STRUCTURE - PAINTED  
 IL INSULATION LINER  
 LP LINER PANEL  
 SC SEALED CONCRETE

- FINISH SCHEDULE NOTES:**
- LINER PANEL AT EXTERIOR PEMB WALLS TO 8'-0" AFF HAVE EXPOSED INSULATION LINER ABOVE UNLESS NOTED OTHERWISE.
  - EXPOSED STRUCTURE MUST BE PAINTED UNLESS NOTED OTHERWISE.

MARK	WIDTH	HEIGHT	MATL	DETAILS			GLAZING TYPE	COMMENTS
				HEAD	JAMB	SILL		
W1	3'-0"	4'-0"	AL	H5	J5	S5	TYPE 1	
W2	5'-0"	4'-0"	AL	H5	J5	S5	TYPE 1	

**WINDOW SCHEDULE LEGEND:**  
 AL ALUMINUM

- WINDOW SCHEDULE NOTES:**
- FOR WINDOW DETAILS, SEE SHEET A502.
  - FOR GLAZING TYPES, SEE SPECIFICATION SECTION 08 80 00.

MARK	WIDTH	HEIGHT	DETAILS			COMMENTS
			HEAD	JAMB	SILL	
L1	3'-0"	4'-0"	H6	J6	S6	
L2	3'-0"	2'-0"	H6	J6	S6	



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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**ROOM FINISH AND OPENING SCHEDULES**  
 SEC. 31, TOWNSHIP 62S, RANGE 94E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

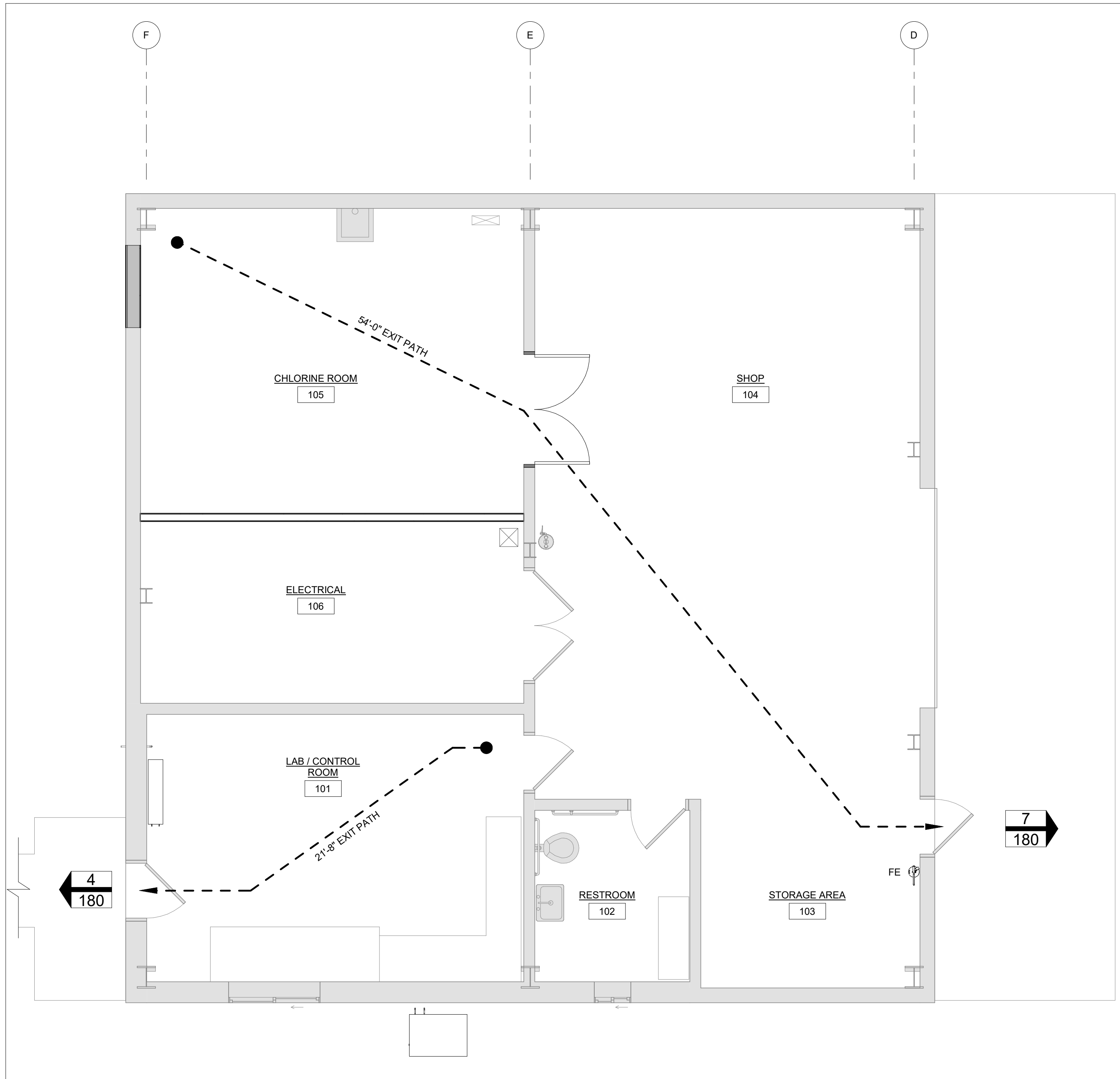


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**A-601**

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



**APPLICABLE BUILDING CODES**

IBC	INTERNATIONAL BUILDING CODE	2018
IECC	INTERNATIONAL ENERGY CONSERVATION CODE	2018
IFC	INTERNATIONAL FIRE CODE	2018
IMC	INTERNATIONAL MECHANICAL CODE	2018
UPC	UNIFORM PLUMBING CODE	2018
ADA	AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES	2010
NFPA 13	INSTALLATION OF SPRINKLER SYSTEMS	2019
NFPA 70	NATIONAL ELECTRICAL CODE	2017
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE	2019
NFPA 90A	STANDARD FOR THE INSTALLATION OF AIR-CONDITIONING AND VENTILATING SYSTEMS	2018
NFPA 101	LIFE SAFETY CODE	2018

**USE GROUP / OCCUPANCY - Chapter 3 (IBC 2018)**

F-2 LOW-HAZARD FACTORY INDUSTRIAL ENTIRE BUILDING 1,943 SF (GROSS AREA)

**CONSTRUCTION TYPE - Chapter 6 (IBC 2018)**

TYPE IIB

**FIRE SUPPRESSION - Chapter 9 (IBC 2018)**

NO SPRINKLERS REQUIRED FOR F-2 OCCUPANCY.

**HEIGHT / STORIES - Chapter 5 (IBC 2018)**

ALLOWABLE HEIGHT (TABLE 503): F-2 @ NS = 55'-0" DESIGNED HEIGHT: 14' +/-  
DESIGNED STORIES: 1

**AREA - Chapter 5 (IBC 2018)**

ALLOWABLE AREA (TABLE 503): F-2 @ NS = 23,000 SQ. FT. DESIGNED AREA: 1,943 SQ. FT.

**FIRE RESISTANCE RATINGS - Chapter 6 - Table 601 (IBC 2018)**

STRUCTURAL FRAME	0
BEARING WALLS	0
INTERIOR	0
EXTERIOR	0
NON-BEARING WALLS AND PARTITIONS	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION	0

**EXTERIOR WALL RATINGS - Chapter 6 - Table 602 (IBC 2018)**

FIRE SEPARATION DISTANCE BETWEEN 10' AND 30'	TYPE OF CONSTRUCTION	REQUIRED	DESIGNED
	IIB	0	0

**OCCUPANCY CALCULATIONS - Chapter 10 (Tables 1004.5) - IBC 2018**

OCCUPANT ANALYSIS					
MARK	NAME	AREA	AREA PER OCC	OCC COUNT	COMMENT
101	LAB / CONTROL ROOM	302 SF	100	4	
102	RESTROOM	79 SF	0		
103	STORAGE AREA	124 SF	300	1	
104	SHOP	681 SF	300	3	
105	CHLORINE ROOM	350 SF	300	2	
106	ELECTRICAL	209 SF	300	1	
107	PIPE GALLERY	775 SF			
TOTAL		2520 SF		11	

**EXIT ACCESS TRAVEL DISTANCE - Chapter 10 - Table 1017.2 (IBC 2018)**

F-2 OCCUPANCY	NON-SPRINKLERED	200 FEET
	FULLY SPRINKLERED	250 FEET
	COMMON PATH OF EGRESS TRAVEL	75 FEET

**EXIT WIDTH REQUIREMENTS - Chapter 10 - Section 1005 (IBC 2018)**

Door Egress	# of Occ.	Inches/Occ.	Min. Width	# of Exits	Min. Width / Exit	Design Width
	11	0.2"	2.2"	2	36"	72"

**PLUMBING FIXTURES - Chapter 29 - Table 2902.1 (IBC 2018)**

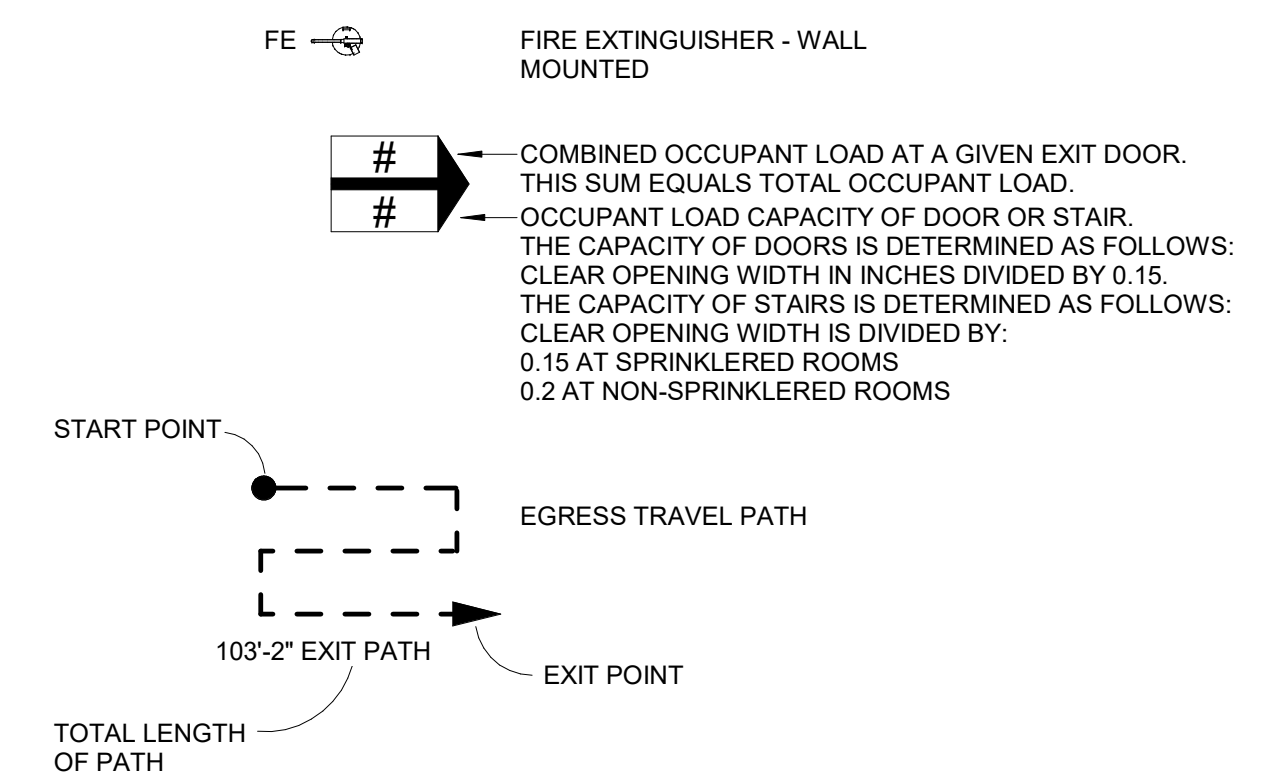
OCCUPANTS FROM AN ADJACENT BUILDING WILL BE INCLUDED IN THE FIXTURE COUNTS FOR THE PLUMBING FIXTURE COUNTS IN THIS BUILDING.

30 OCCUPANTS FROM THE NEW FILTER BUILDING ARE INCLUDED IN THIS CALCULATION.

2902.1.1 EXCEPTION - THE TOTAL OCCUPANT LOAD SHALL NOT BE REQUIRED TO BE DIVIDED IN HALF WHERE APPROVED STATISTICAL DATA INDICATE A DISTRIBUTION OF THE SEXES OTHER THAN 50 PERCENT OF EACH SEX.

PLUMBING FIXTURE COUNT												
FIXTURE USER	WATER CLOSETS			URINALS			LAVATORIES			DRINKING FOUNTAINS		
	REQUIRED	EXISTING	NEW	REQUIRED	EXISTING	NEW	REQUIRED	EXISTING	NEW	REQUIRED	EXISTING	NEW
MALE: 41	1	1	0	0	0	0	1	1	0			
FEMALE: 0	0	0	0				0	0	0			
COMBINED	1	1	0				1	1	0	1	1	

**EGRESS LEGEND**



REVISIONS		BY
REV	DATE	DESCRIPTION



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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**CONTROL BUILDING CODE AND  
LIFE SAFETY ANALYSIS**  
SEC. 31, TOWNSHIP 62S, RANGE 94E  
CITY AND BOROUGH OF WRANGELL, ALASKA

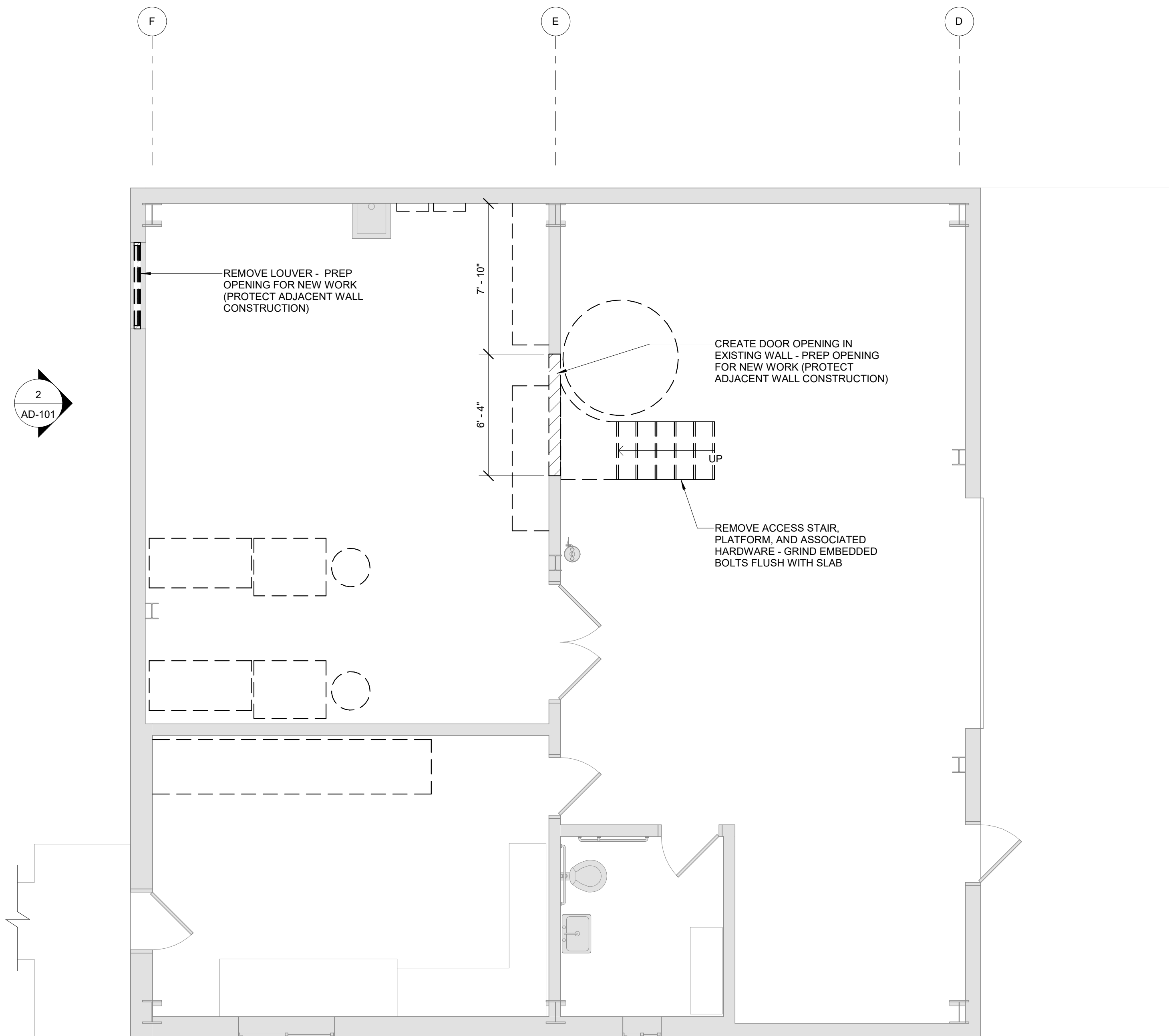


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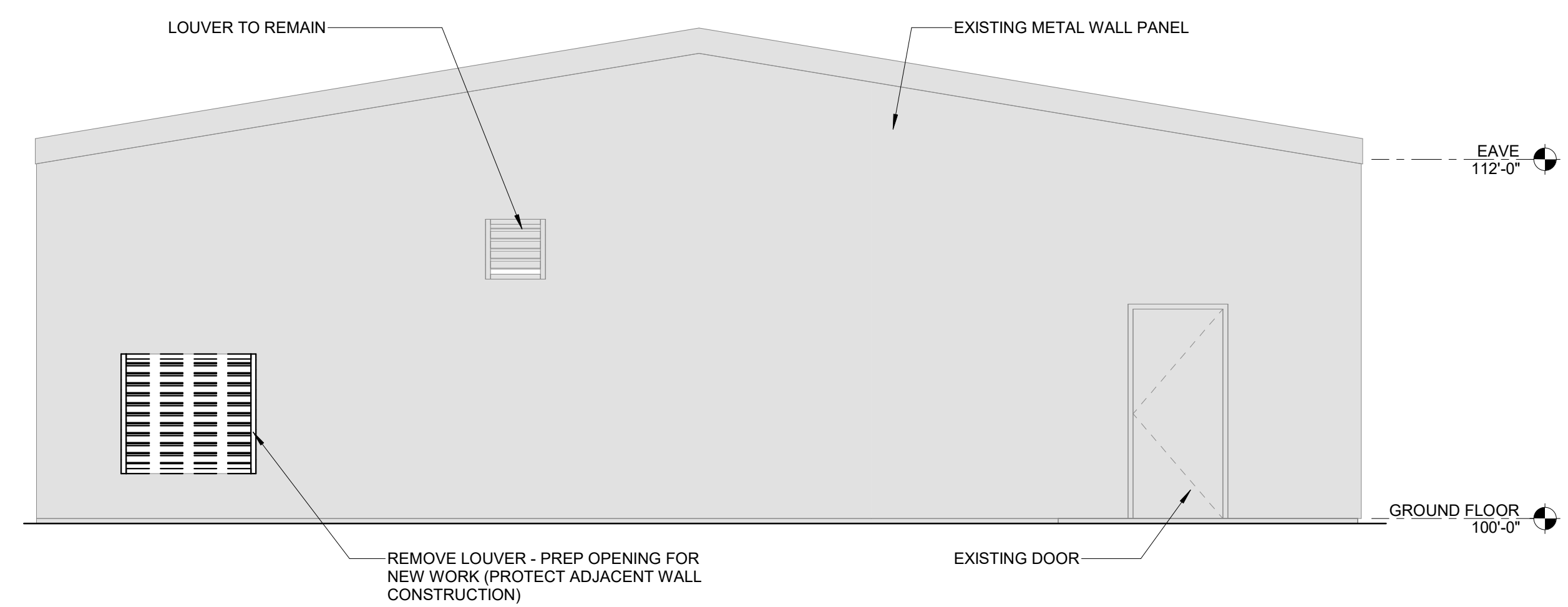
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AD-100

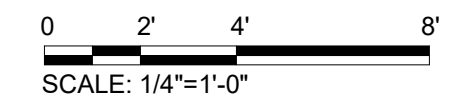


**CONTROL BUILDING DEMO PLAN**  
SCALE: 1/4" = 1'-0"

**NOTE:**  
DASHED EQUIPMENT IS TO BE DEMOLISHED. SEE SHEET X-101 AND E-02 THROUGH E-05 FOR FULL DETAIL OF DEMOLISHED EQUIPMENT.



**ELEVATION 2-AD-101**  
SCALE: 1/4" = 1'-0" AD-101



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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**CONTROL BUILDING DEMO PLAN**

PROJECT 1528.5026.01  
DATE 06/02/2023

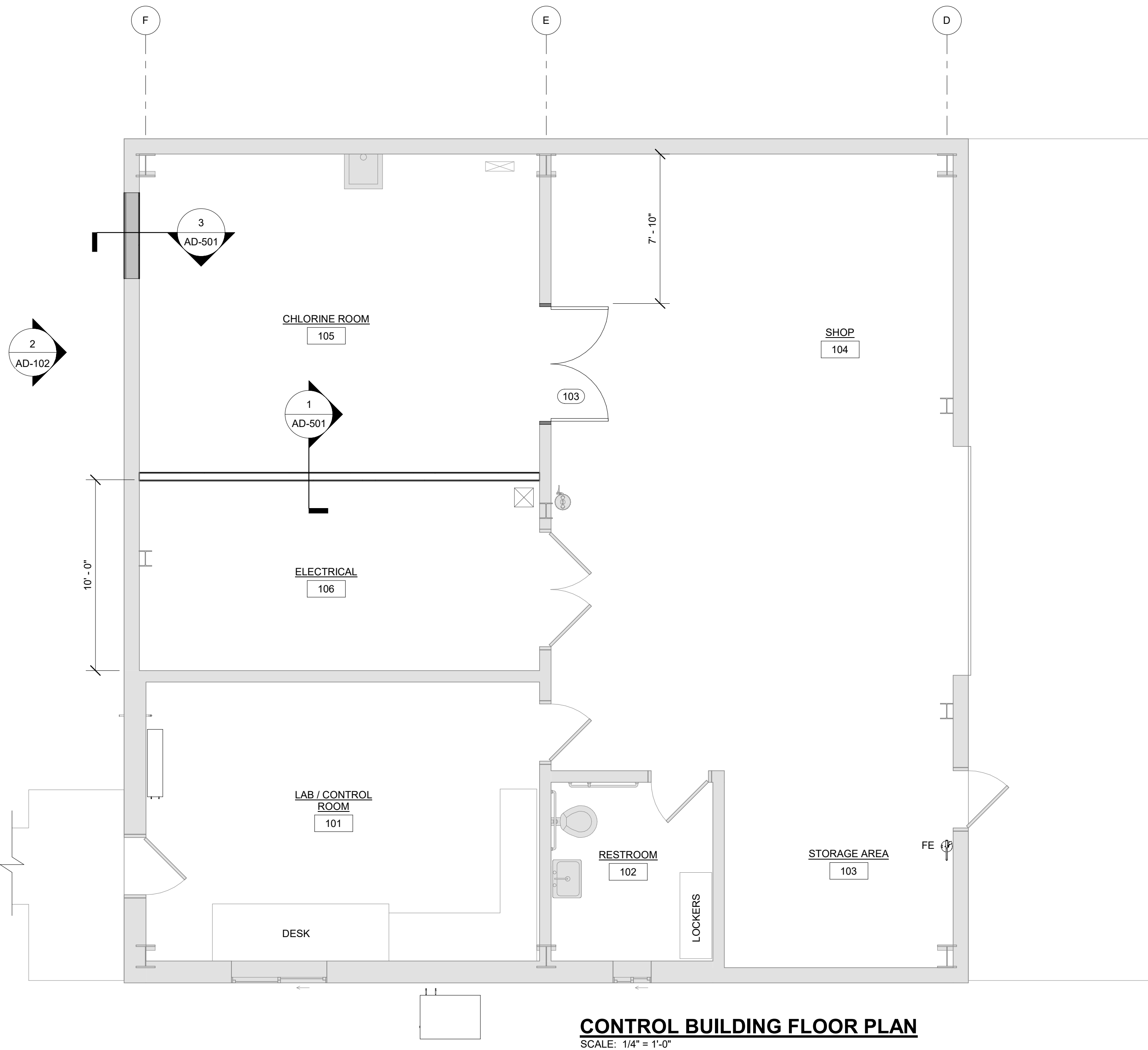
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**AD-101**

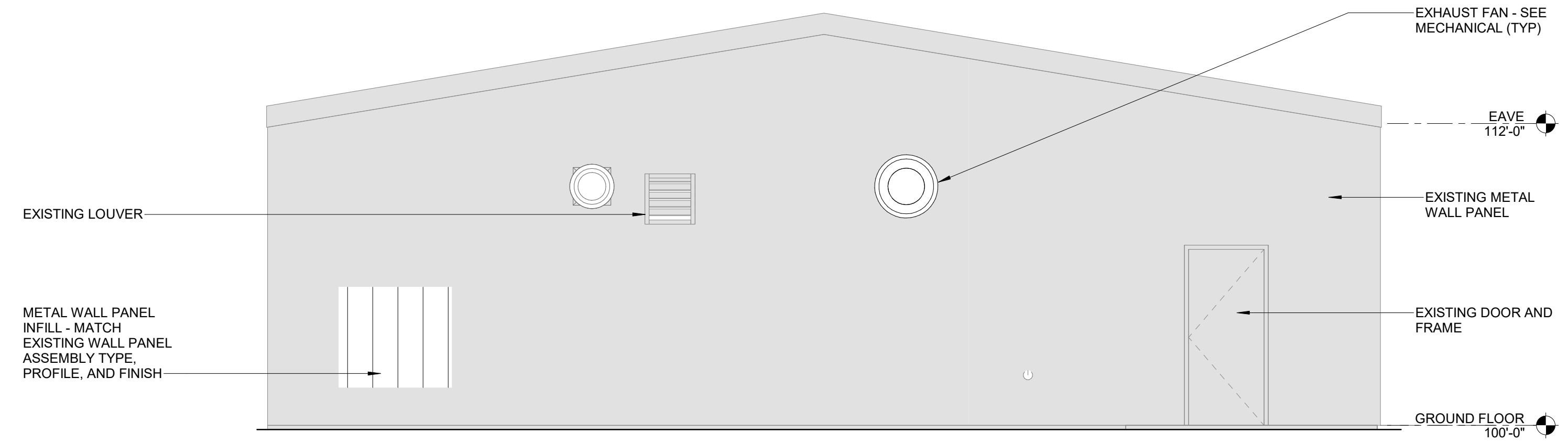
SEC. 31, TOWNSHIP 62S, RANGE 94E  
CITY AND BOROUGH OF WRANGELL, ALASKA

**GENERAL FLOOR PLAN NOTES:**

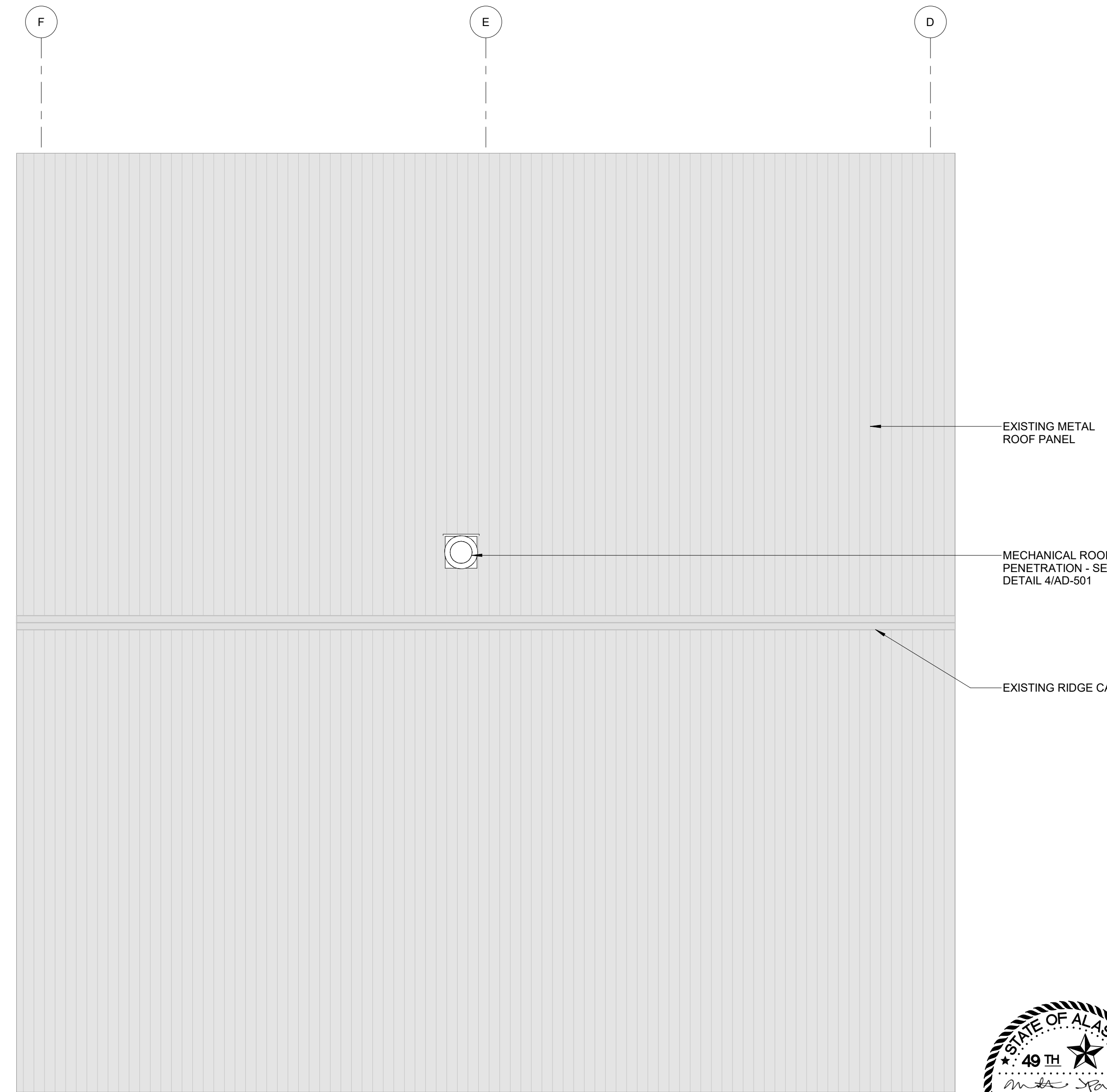
- COORDINATE BUILDING PLAN WITH SITE PLAN.
- DIMENSIONS ARE TO FACE STUD AT NEW WALLS OR FINISH FACE OF EXISTING WALLS UNLESS NOTED OTHERWISE.
- WALL PENETRATIONS:
  - ALLOW FOR EXPANSION WHEN REQUIRED OR AS INDICATED BY OTHER DISCIPLINES.
- INTERIOR PARTITIONS EXTEND TO BOTTOM OF STRUCTURE UNLESS NOTED OTHERWISE.
- SEAL PENETRATIONS THROUGH EXTERIOR WALLS FOR AN AIR/WATER TIGHT CONSTRUCTION.
- SIDEWALK, DOOR PADS AND STEPS, PAVEMENT GRADES AND ELEVATIONS MUST BE COORDINATED WITH CIVIL DRAWINGS.
- BUILDING ELEVATION 100'-0" = SITE ELEVATION 260'-0".



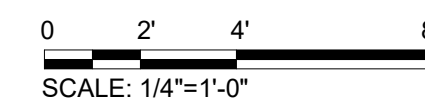
**CONTROL BUILDING FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



**ELEVATION 2-AD-102**  
SCALE: 1/4" = 1'-0" AD-102



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



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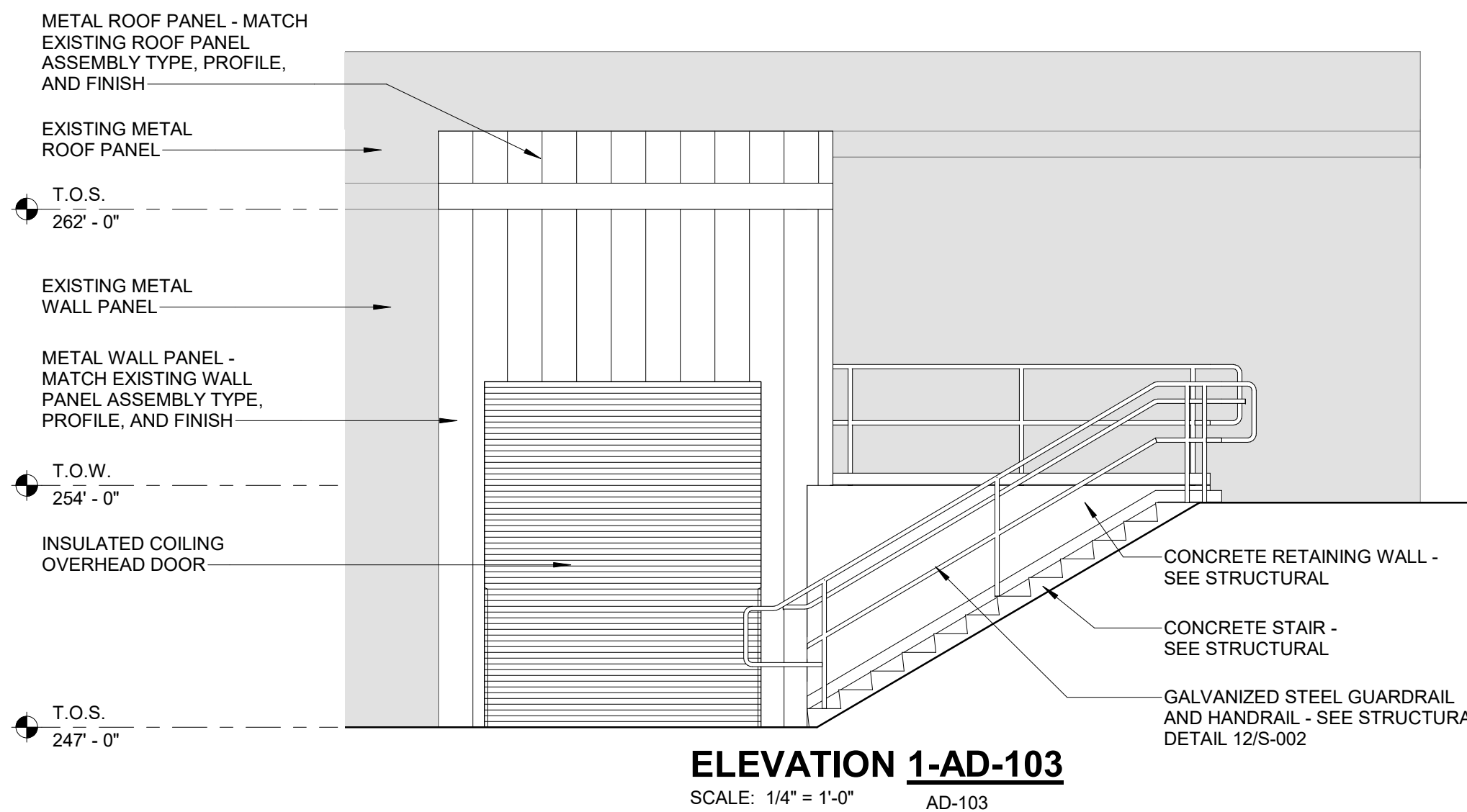
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**CONTROL BUILDING FLOOR PLAN**

PROJECT 1528.5026.01  
DATE 06/02/2023

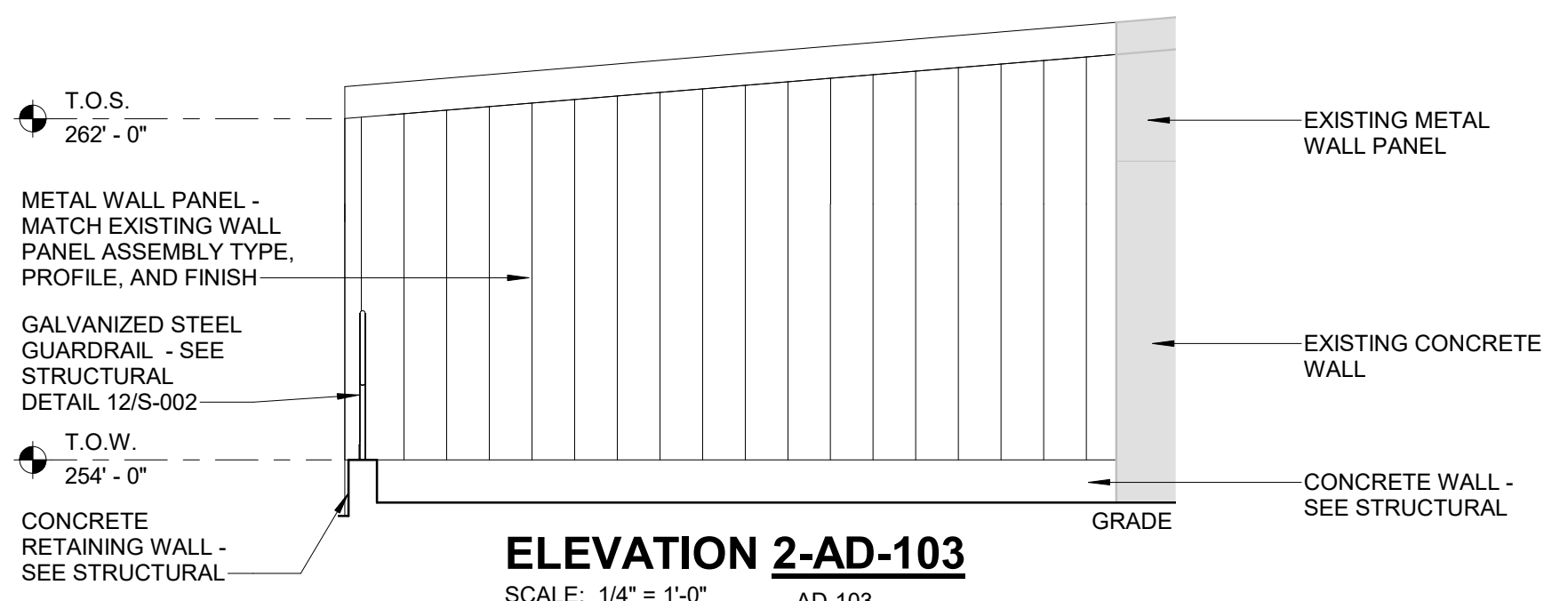


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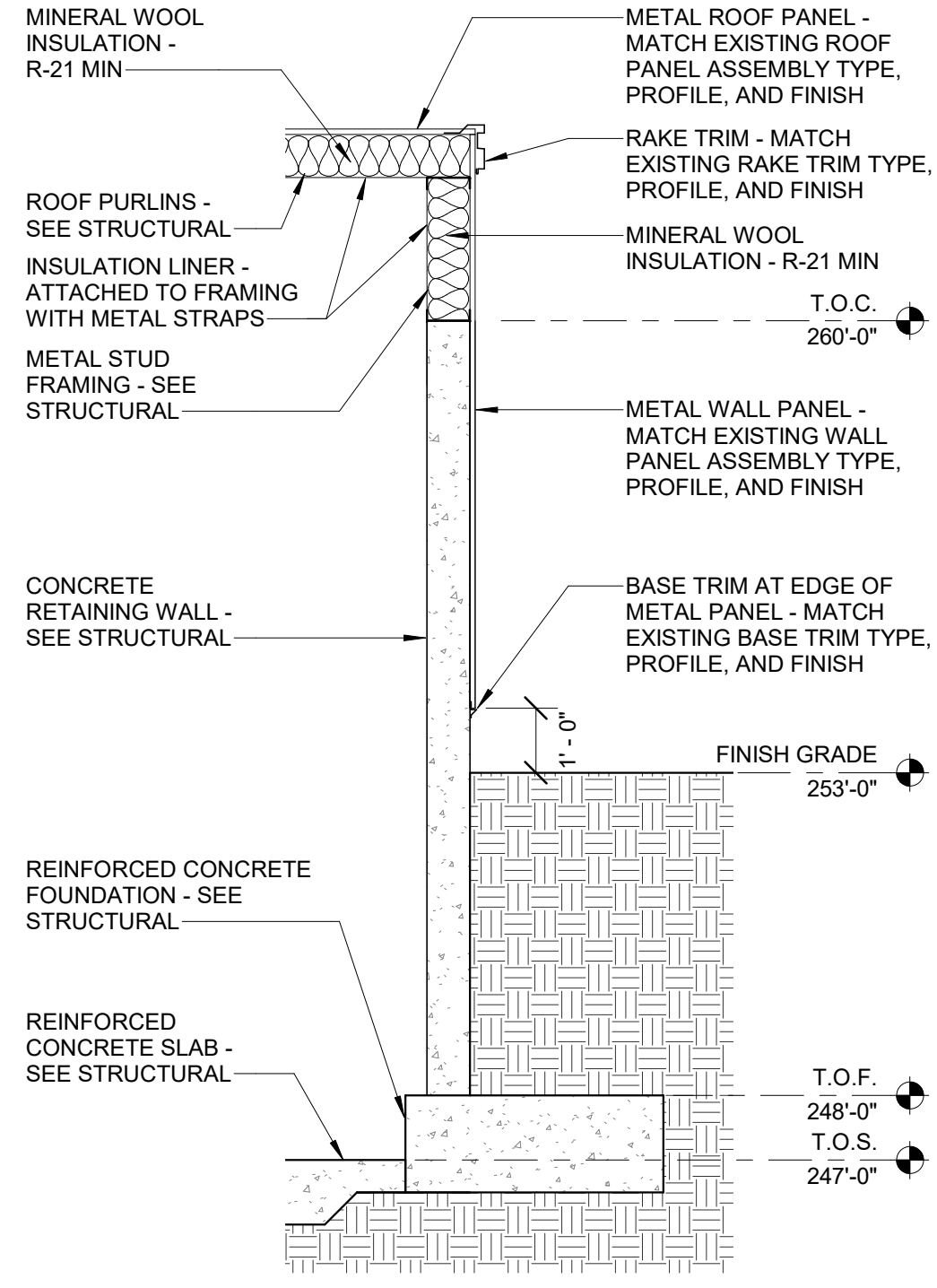
AD-102



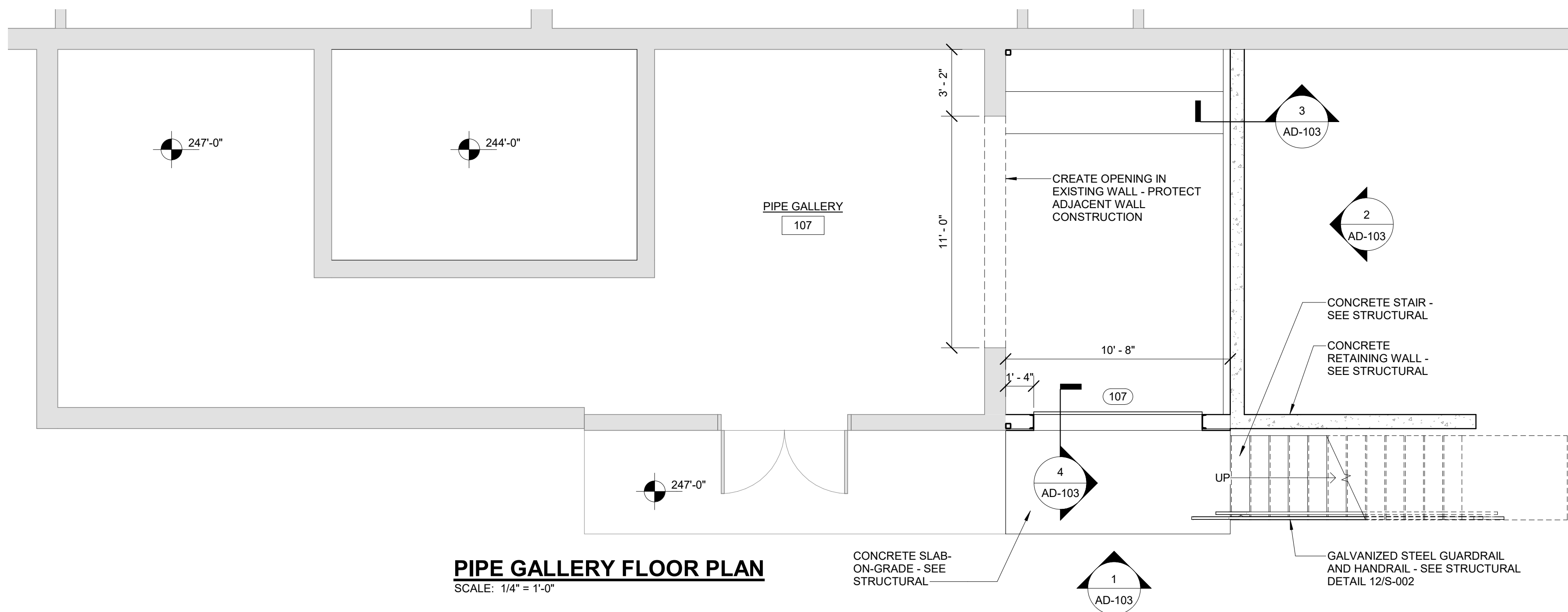
**ELEVATION 1-AD-103**  
SCALE: 1/4" = 1'-0" AD-103



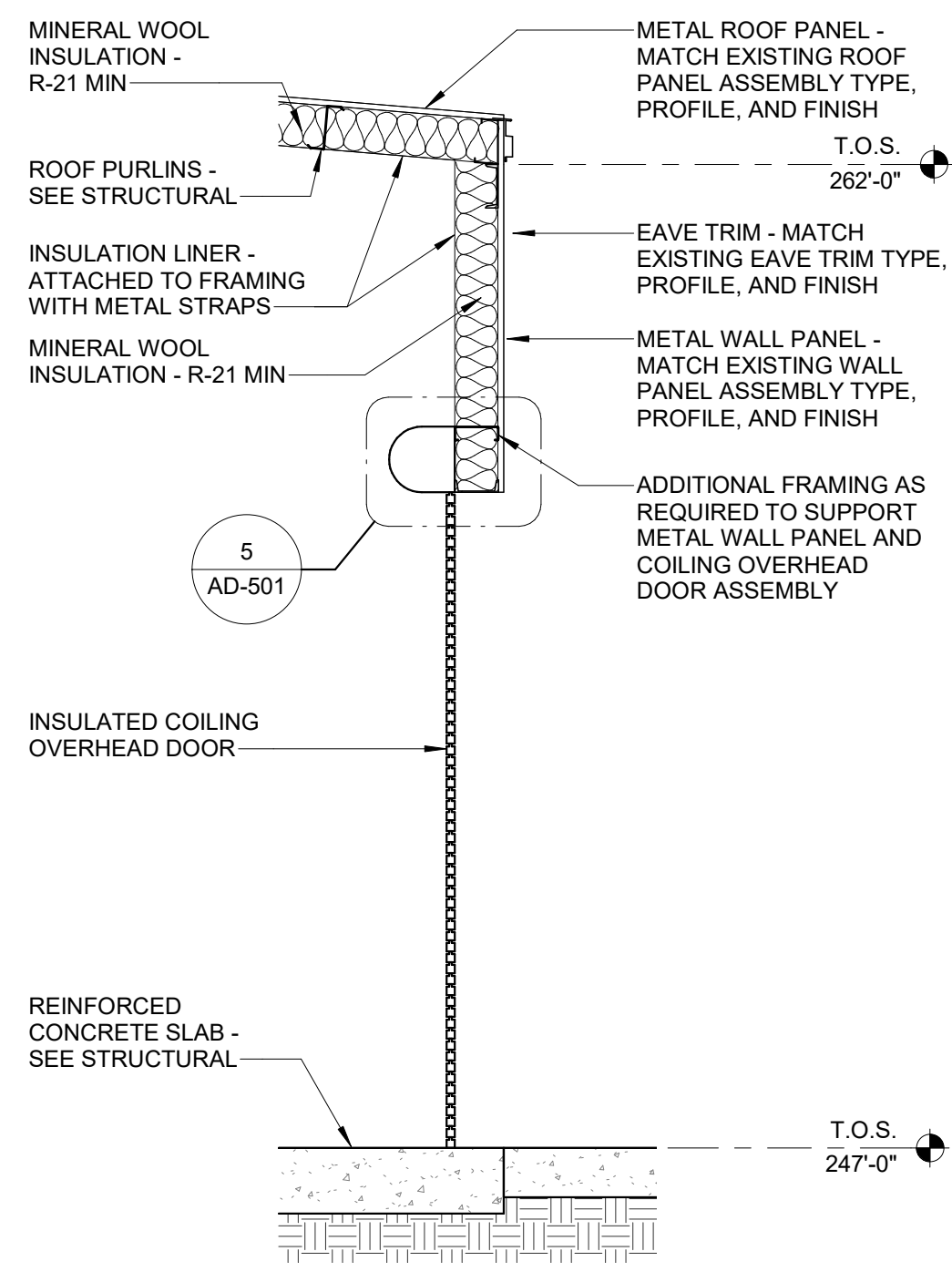
**ELEVATION 2-AD-103**  
SCALE: 1/4" = 1'-0" AD-103



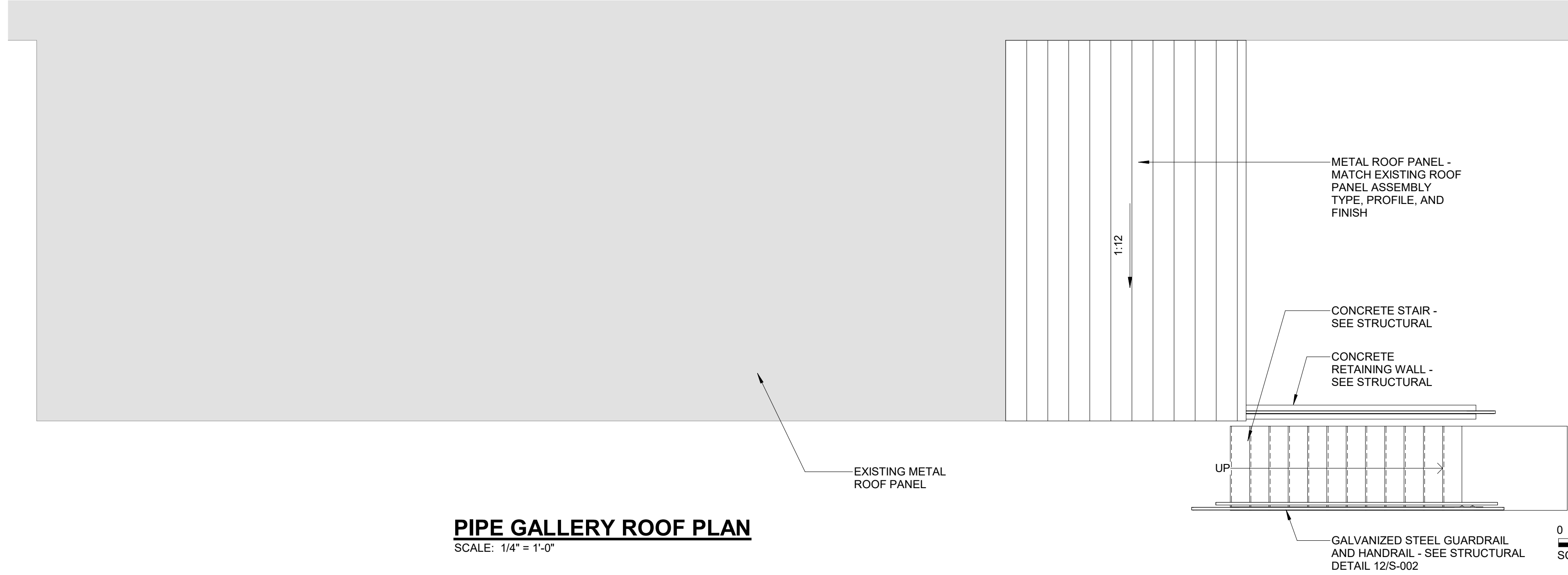
**SECTION 3-AD-103**  
SCALE: 3/8" = 1'-0" AD-103



**PIPE GALLERY FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



**SECTION 4-AD-103**  
SCALE: 3/8" = 1'-0" AD-103



**PIPE GALLERY ROOF PLAN**  
SCALE: 1/4" = 1'-0"



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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**PIPE GALLERY PLANS,  
ELEVATIONS, AND SECTIONS**  
SEC. 31, TOWNSHIP 62S, RANGE 94E  
CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.5026.01  
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**AD-103**



DOOR SCHEDULE													
DOOR NO.	DOOR			FRAME			DETAILS			FIRE RATING (in min)	GLAZING TYPE	HARDWARE SET	REMARKS
	WIDTH	HEIGHT	LEAF COUNT	TYPE	MATL	TYPE	MATL	HEAD	JAMB				
103	3'-0"	7'-0"	2	F	HM	1	H7/AD-501	J7/AD-501	-	-	-	-	
107	8'-0"	10'-0"	-	CO	STL	-	H8/AD-501	J8/AD-501	S8/AD-501	-	-	-	1

**DOOR SCHEDULE LEGEND:**

HM HOLLOW METAL  
STL STEEL

**DOOR SCHEDULE NOTES:**

- MANUAL OPERATION.
- FOR DOOR DETAILS, SEE AD-501 AND A-502.
- FOR HARDWARE SETS, SEE SPECIFICATION SECTION 08 71 00.

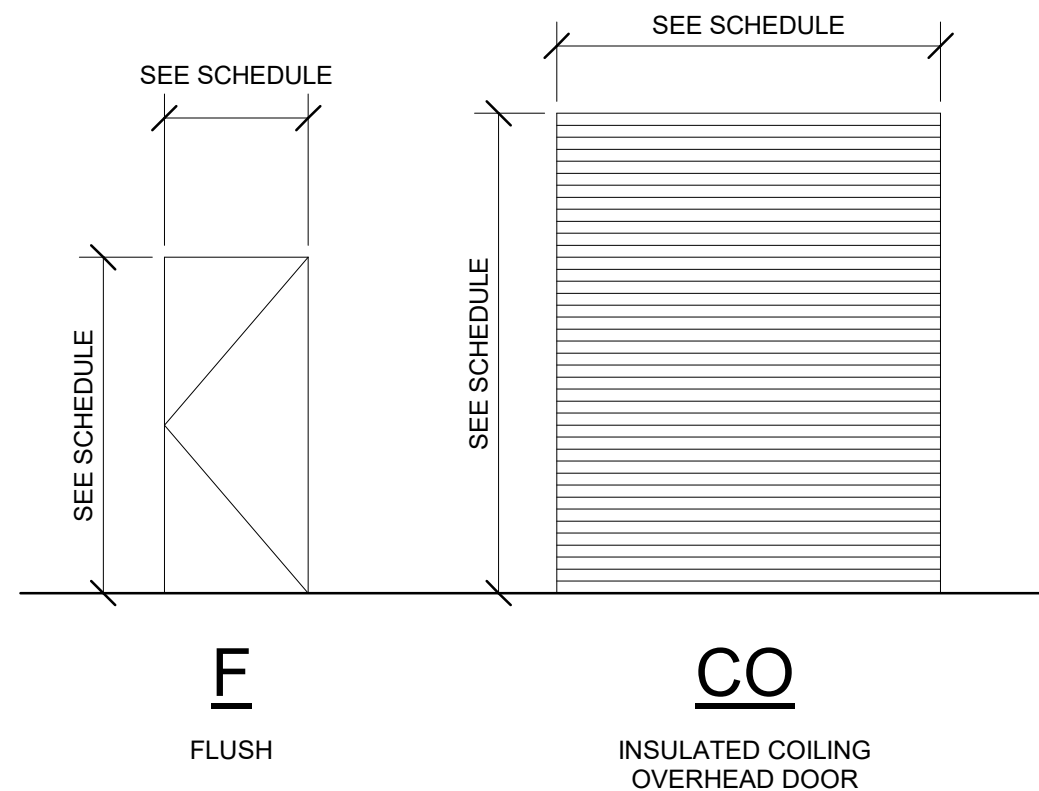
ROOM FINISH SCHEDULE							
ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS	CEILING		REMARKS
					MATL	HEIGHT	
101	LAB / CONTROL ROOM	EXIST	EXIST	EXIST	EXIST	10'-0"	
102	RESTROOM	EXIST	EXIST	EXIST	EXIST	8'-0"	
103	STORAGE AREA	EXIST	-	EXIST	EXIST	8'-0"	
104	SHOP	EXIST	-	EXIST	EXIST	VARIES	
105	CHLORINE ROOM	EXIST	-	LP / EXIST	EXIST	VARIES	1
106	ELECTRICAL	EXIST	-	LP / EXIST	EXIST	VARIES	1
107	PIPE GALLERY	EXIST / SC	-	EXIST / EXP	EXIST / EXP	VARIES	

**FINISH LEGEND:**

EXIST EXISTING  
EXP EXPOSED STRUCTURE, PAINTED  
LP LINER PANEL  
SC SEALED CONCRETE

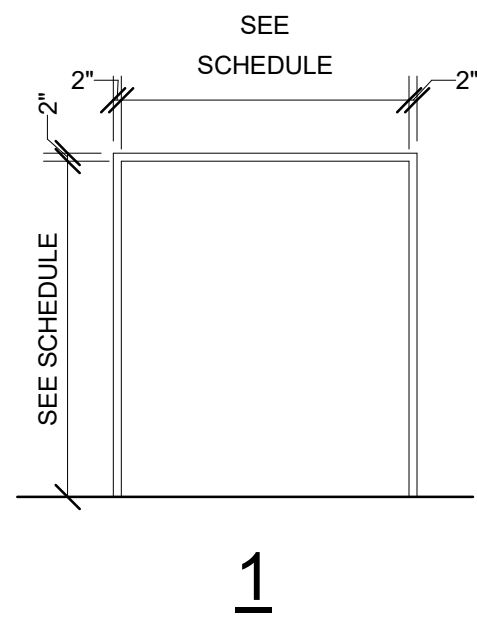
**FINISH SCHEDULE NOTES:**

- LINER PANEL AT NEW WALLS ONLY.



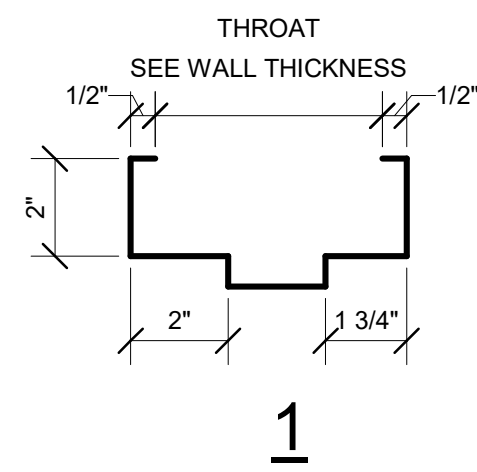
**DOOR ELEVATION TYPES**

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



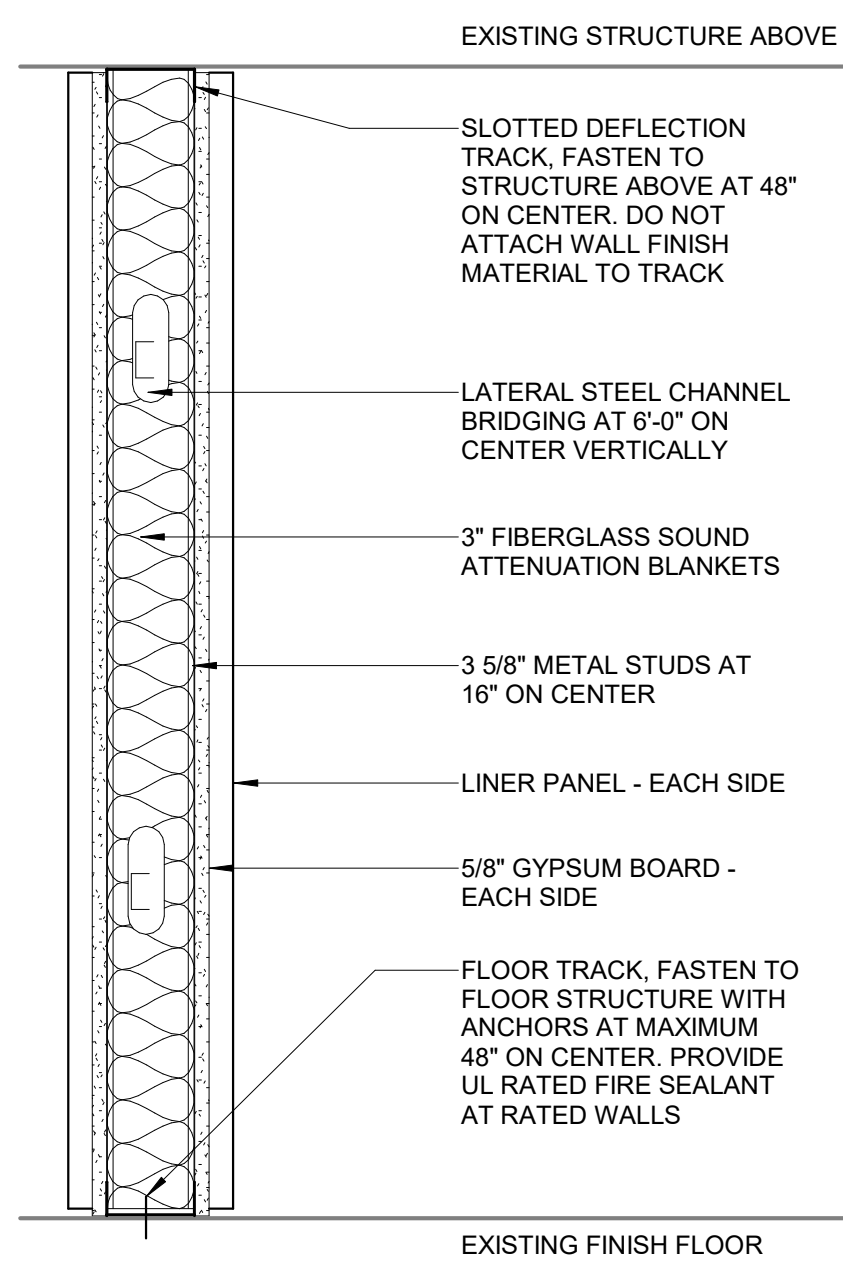
**DOOR FRAME TYPES**

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



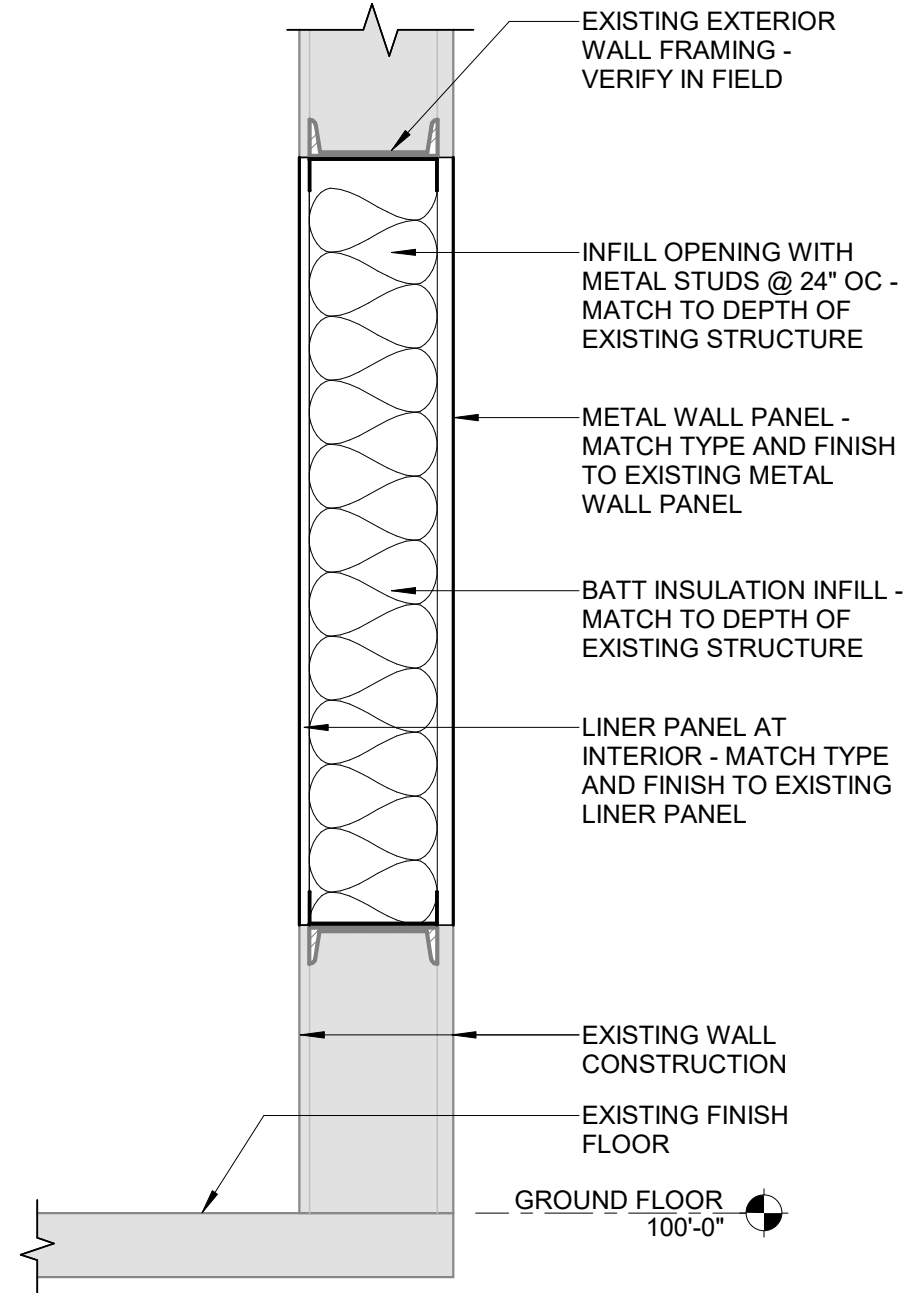
**FRAME SECTION**

SCALE: 3" = 1'-0"



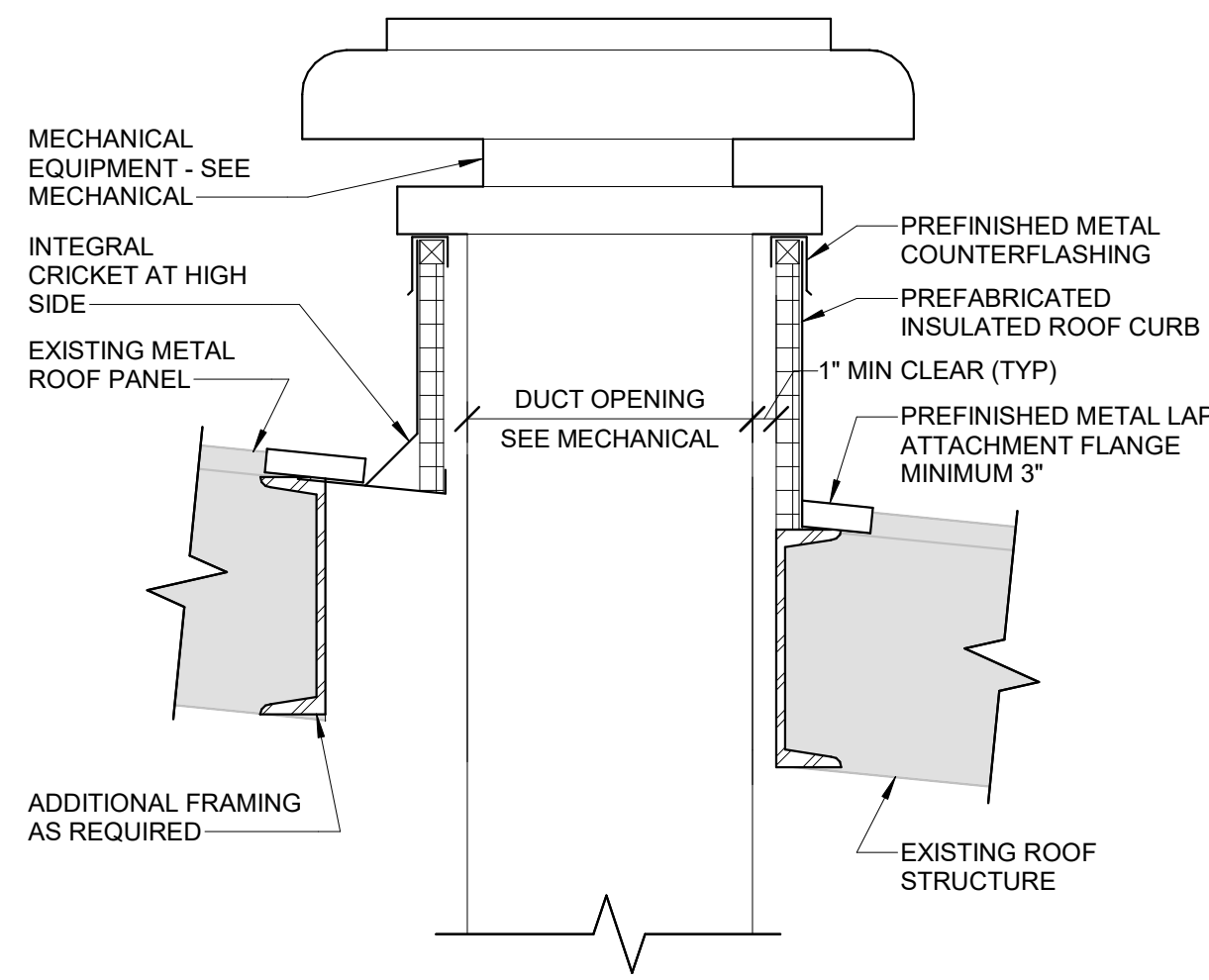
**DETAIL 1-AD-501**

SCALE: 1 1/2" = 1'-0" AD-102



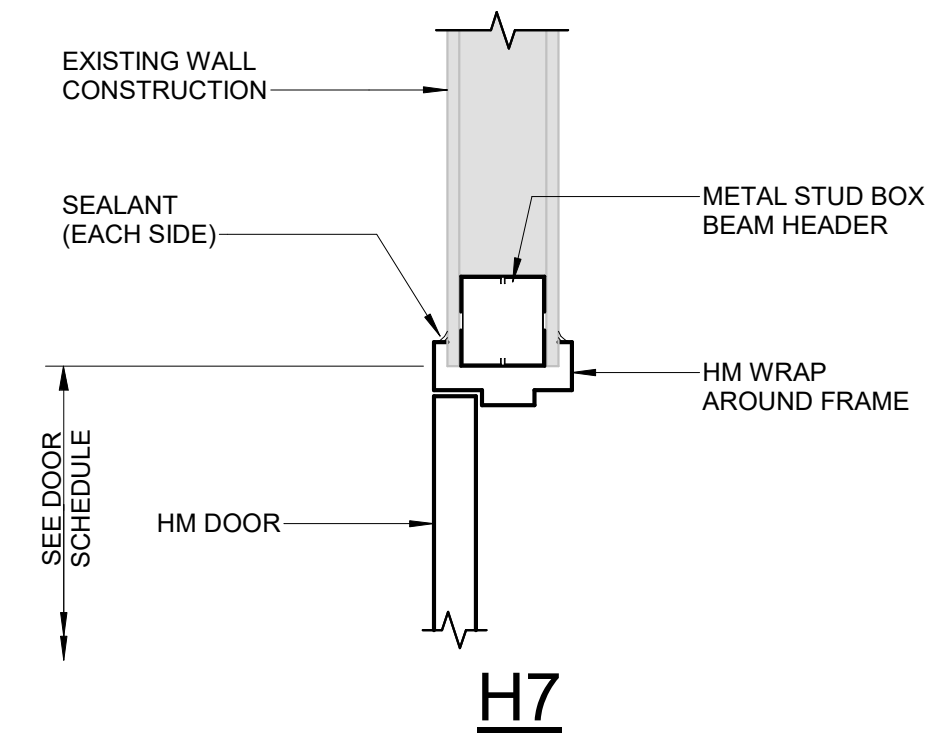
**DETAIL 3-AD-501**

SCALE: 1" = 1'-0" AD-102

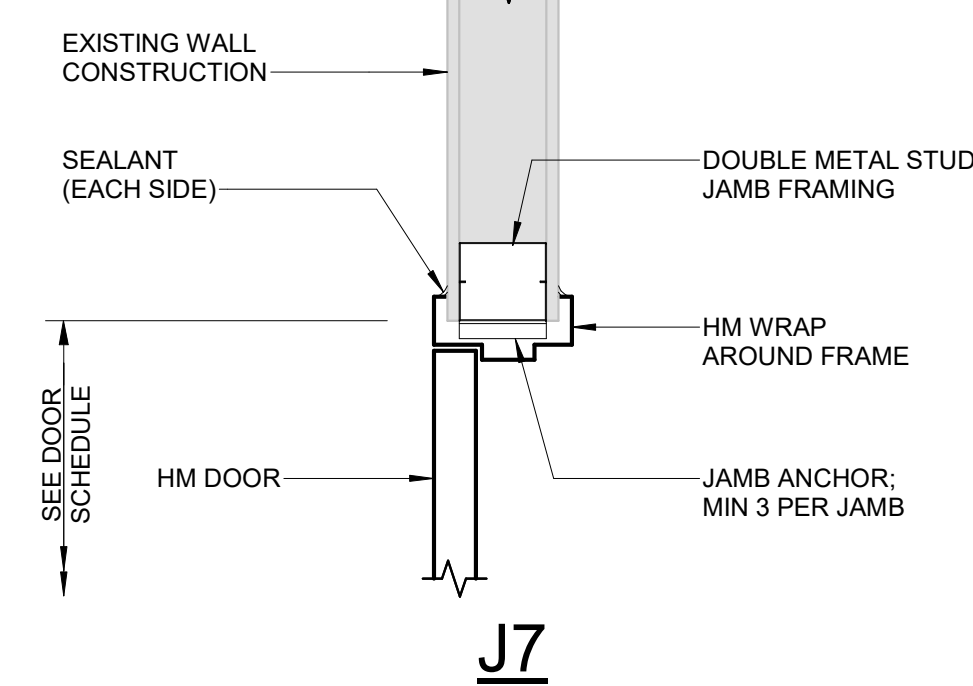


**DETAIL 4-AD-501**

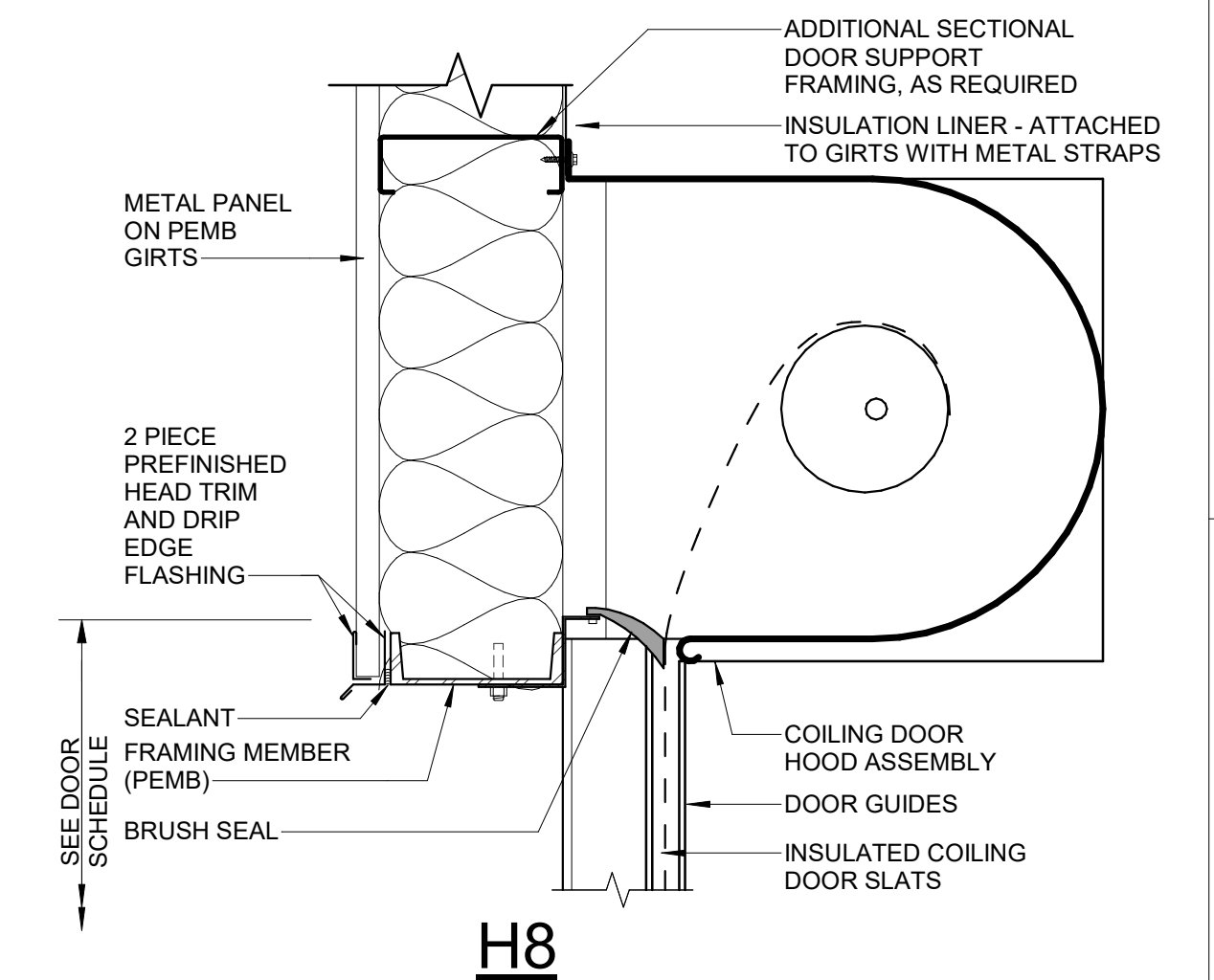
SCALE: 1 1/2" = 1'-0"



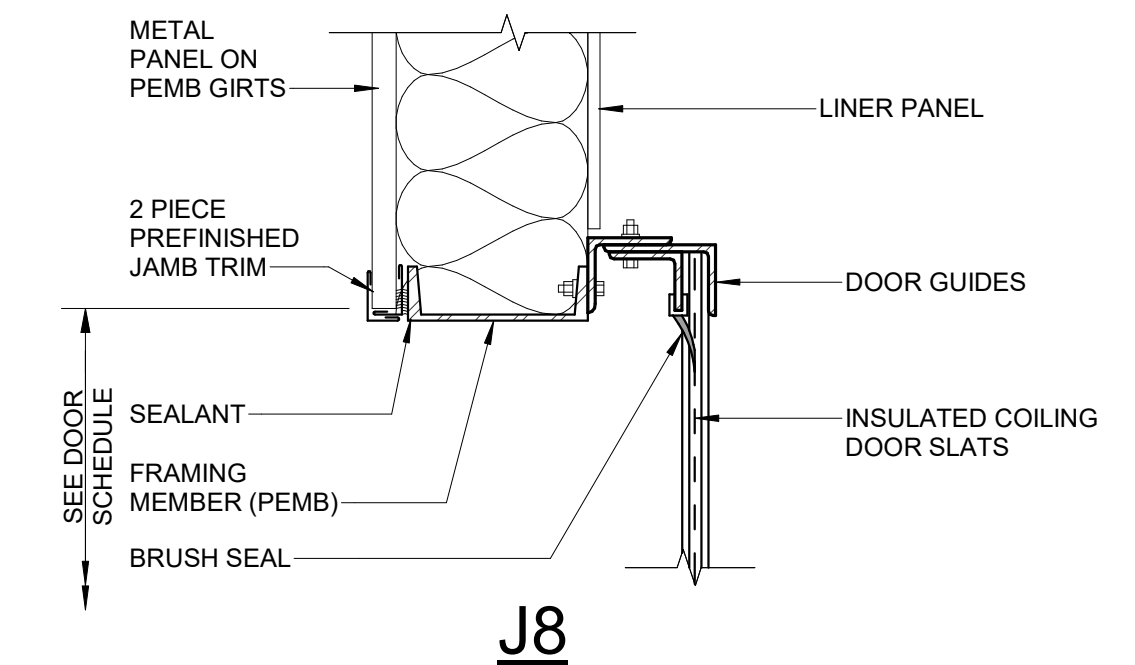
**H7**



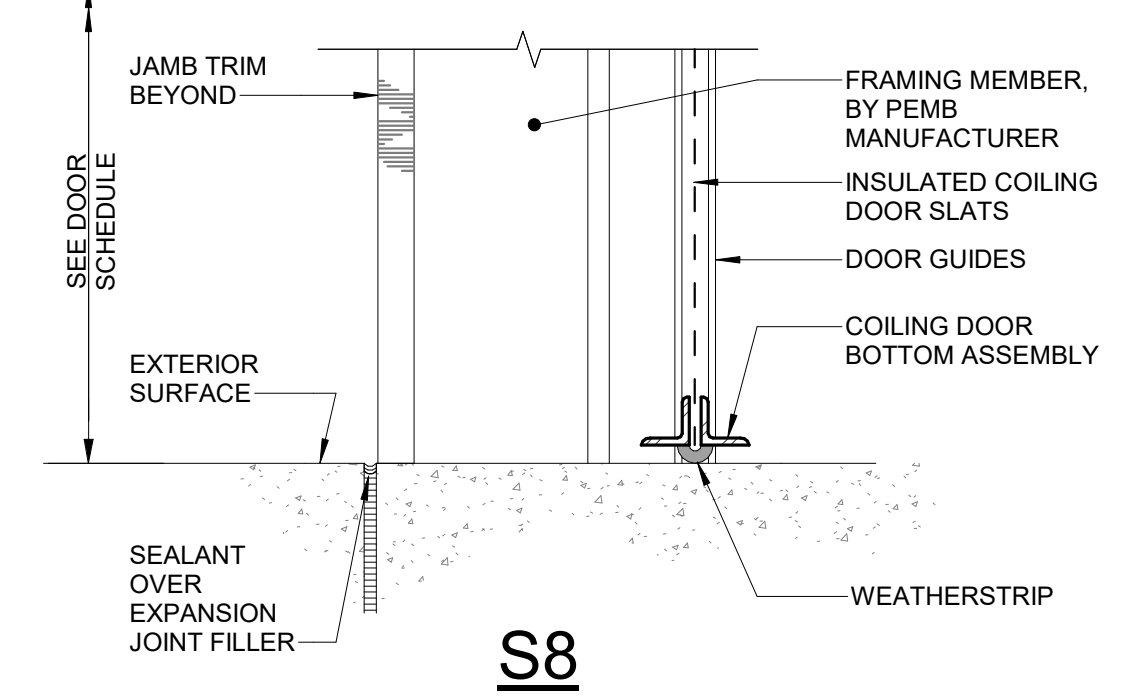
**J7**



**H8**



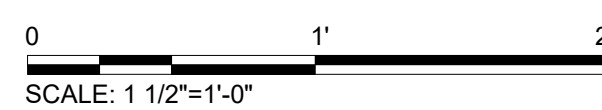
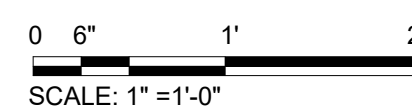
**J8**



**S8**

**DETAIL 5-AD-501**

SCALE: 1 1/2" = 1'-0" AD-103



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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**SCHEDULES AND DETAILS**

PROJECT 1528.5026.01  
DATE 06/02/2023

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**AD-501**

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VALVE & INSTRUMENTATION IDENTIFIER LETTERS

Table with columns for First-Letters, Indicating Measured or Controlled Variable, Controllers (Recording/Indicating/Blind), Valves, Readout Device, Switches and Alarm Devices, Transmitters, Solenoids Relays Computing Devices, Primary Element, Test Point, Well or Probe, Viewing Device Glass, Safety Device, and Final Element. Rows include A (Analysis), B (Burner/Combustion), C (Conductivity/Control), D (User's Choice), E (Voltage), F (Flow Rate), etc.

NOTE: THIS TABLE IS NOT ALL-INCLUSIVE  
\*A, ALARM, THE ANNUNCIATING DEVICE, MAY BE USED IN THE SAME FASHION AS, SWITCH, THE ACTING DEVICE.  
\*\* THE LETTERS H AND L MAY BE OMITTED IN THE UNDEFINED CASE.

OTHER POSSIBLE COMBINATIONS:  
FO (RESTRICTION ORIFICE)  
FRK, HIK (CONTROL STATIONS)  
FX (ACCESSORIES)  
TJR (SCANNING RECORDER)  
LLH (PILOT LIGHT)  
PFR (RATIO)  
KQI (RUNNING TIME INDICATOR)  
QOI (INDICATING COUNTER)  
WKIC (RATE-OF-WEIGHT-LOSS CONTROLLER)  
HMS (HAND MOMENTARY SWITCH)

INSTRUMENT/FUNCTION SYMBOLS

Table showing symbols for Discrete Instruments, Shared Display/Shared Control, Programmable Logic Control, Primary Location Normally Accessible to Operator, Primary Location Normally Inaccessible to Operator, Field Mounted, Auxiliary Location Normally Accessible to Operator, and Auxiliary Location Normally Inaccessible to Operator.

MISC. DETAILS

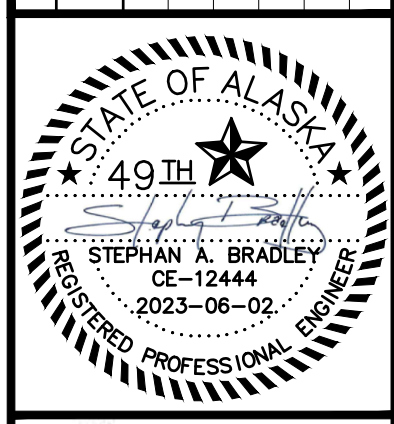
Miscellaneous details table with columns for Symbol and Description. Symbols include flow arrows, instruments sharing common housing, discrete hardware interlock, gap, sample point, gravity flow or free drain with no pockets, chemical seal, and waste drain.

MISC. DETAILS

Miscellaneous details table with columns for Symbol and Description. Symbols include purge or flushing device, interlock logic, solenoid, digital, pilot, trap, root extraction, bias, multiply, high selecting, low selecting, high limiting, low limiting, proportional, reverse proportional, summing, and dividing.

INSTRUMENTATION IDENTIFICATION TABLE diagram showing J-1, J-2, J-3, J-4, J-5, J-6 symbols and a note explaining that J-1 to J-6 are component function letters and function symbols per ANSI/ISA S5.1.

REVISIONS table with columns for REV, DATE, DESCRIPTION, and BY.



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PIPING LINETYPES

Piping Linetypes table with columns for Symbol and Description. Symbols include primary/secondary process flow lines, equipment/piping instruments, jacketed lines, electric signals, process air/pneumatic signals, hydraulic signals, internal system links, capillary tubes, and instrument supply lines.

MISC. DETAILS

Miscellaneous details table with columns for Symbol and Description. Symbols include special piping tags, insulation and tracing, insulation thickness and type, piping class break or change, and tie in.

DRAIN CONNECTORS

Drain Connectors table with columns for Symbol and Description. Symbols include open/closed drains and tie-in symbols with connector numbers (X, Y, Z).

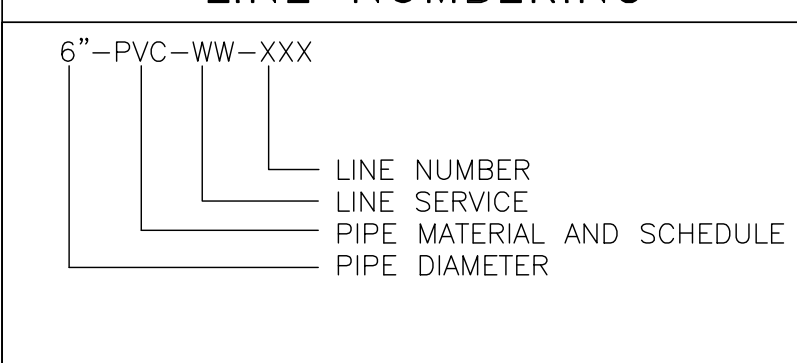
CONNECTORS AND TIE-IN

Connectors and Tie-In table with columns for Symbol and Description. Symbols include off-page connectors, lines and instruments signal connectors, and utility connectors.

NOTES:

\* THE PNEUMATIC SIGNAL SYMBOL APPLIES TO A SIGNAL USING ANY GAS AS THE SIGNAL MEDIUM. IF GAS OTHER THAN AIR IS USED, THE GAS MAY BE IDENTIFIED BY A NOTE ON THE SIGNAL SYMBOL OR OTHERWISE.  
\*\* ELECTROMAGNETIC PHENOMENA INCLUDE HEAT, RADIO WAVES, NUCLEAR RADIATION, AND LIGHT.

LINE NUMBERING



SERVICE ABBREVIATIONS

- CA - COMPRESSED AIR, NA - CAUSTIC, CG - COAGULANT, CW - CLARIFIED WATER, BR - BRINE, DW - DAF WASTE, DR - DRAIN, FBW - FILTER BACKWASH, FTW - FILTER TO WASTE, FL - FLOCCULANT, FW - FILTERED WATER, H2 - HYDROGEN GAS, HCL - HYDROCHLORIC ACID, HS - 0.8% HYPOCHLORITE SOLUTION, O2 - OXYGEN GAS, OP - ORTHOPHOSPHATE, PW - POTABLE WATER, RW - RAW WATER, SA - SATURATED AIR, SW - SOFTENED WATER

PIPE CLASS ABBREVIATIONS

- DI150 - DUCTILE IRON, CLASS 150, GSP - HOT-DIPPED GALVANIZED STEEL PIPE, HDPE11 - DR11 HIGH DENSITY POLYETHYLENE, HDPE17 - DR17 HIGH DENSITY POLYETHYLENE, PVC80 - SCHEDULE 80 POLYVINYL CHLORIDE, CLASS 150, PVCRC - REINFORCED, BRAINED PVC TUBING, PE - POLYETHYLENE TUBING, CS150 - SCHEDULE 40 CARBON STEEL, CLASS 150, SS304 - SCHEDULE 10S, 304 STAINLESS STEEL, CLASS 150

VESSEL MATERIAL ABBREVIATIONS

- SS304 - 304 STAINLESS STEEL, SS316 - 316 STAINLESS STEEL, PEX - CROSS LINKED HIGH DENSITY POLYETHYLENE, HDPE - HIGH DENSITY POLYETHYLENE, HDLPE - HIGH DENSITY LINEAR POLYETHYLENE

WRANGELL WATER TREATMENT PLANT IMPROVEMENTS, WRANGELL, ALASKA, PROCESS AND INSTRUMENT DIAGRAM LEGEND 1, SEC. 31: TOWNSHIP 62S; RANGE 84E, CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.50206.01  
DATE 06/02/23

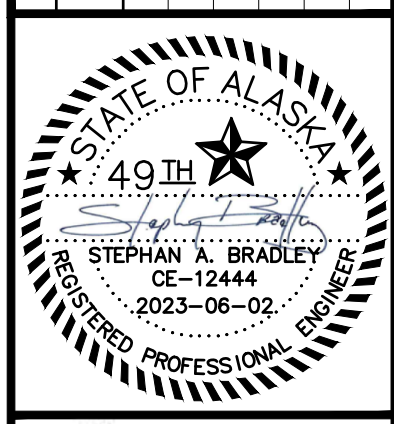
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PIPING SYMBOLS							
VALVES		SYSTEM FLOW PRIMARY ELEMENTS		PIPE FITTINGS		SPECIALTY ITEMS CONTINUED	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	GATE VALVE		RESTRICTION ORIFICE		CONCENTRIC REDUCER		STEAM TRAP
	GLOBE VALVE		MAGNETIC		ECCENTRIC REDUCER		DESUPERHEATER
	PLUG VALVE		TURBINE		HOSE		FILTER
	NEEDLE VALVE		ULTRASONIC		FLANGE CONNECTION		BREATHER OR INLET FILTER
	PINCH VALVE		VORTEX		BLIND FLANGE		DAMPER
	CHECK VALVE		PITOT TUBE		PLUG		DIVERTER VALVE
	BALL VALVE		AVERAGING PITOT TUBE		CAP		EXCESS FLOW VALVE
	BUTTERFLY VALVE		FLOW NOZZLE		WELDED CONNECTION		VENT COVER
	ANGLE VALVE		VENTURI		BLANK WITH FLANGES		FLEXIBLE HOSE
	3-WAY VALVE		WEDGE METER		CLOSED FIGURE 8 BLIND WITH FLANGES		PULSATION DAMPER
	4-WAY VALVE		FLUME		OPEN FIGURE 8 BLIND WITH FLANGES		EXHAUST HEAD
	KNIFE VALVE		WEIR		SPACER WITH FLANGES		EJECTOR / EDUCTOR
	DIAPHRAGM VALVE		POSITIVE DISPLACEMENT		CONE STRAINER		REMOVABLE SPOOL
	ROTARY VALVE		ORIFICE IN QUICK CHANGE FITTING		TEMPORARY STRAINER		INLINE MIXER
	STOP CHECK VALVE		TARGET		T - TYPE STRAINER		EXPANSION JOINT
	AIR RELEASE VALVE		ROTAMETER		DUPLEX STRAINER		DIAPHRAGM ACTUATOR
	RUPTURE DISC FOR PRESSURE RELIEF		INTEGRAL VALVE ROTAMETER		Y - TYPE STRAINER		SOLENOID ACTUATOR
	RUPTURE DISC FOR VACUUM RELIEF		FLOW CONDITIONING DEVICE		BASKET STRAINER		MOTOR ACTUATOR
	PRESSURE RELIEF VALVE				VENT SILENCER		RADAR / ULTRASONIC
	VACUUM RELIEF VALVE				INLINE SILENCER		
	PRESSURE AND VACUUM RELIEF VALVE				FLAME ARRESTOR		
	PILOT OPERATED RELIEF VALVE				INJECTION QUILL		

EQUIPMENT SYMBOLS			
PUMPS		MISCELLANEOUS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	HORIZONTAL CENTRIFUGAL PUMP		CENTRIFUGAL COMPRESSOR
	VERTICAL INLINE PUMP		RECIPROCATING COMPRESSOR
	CENTRIFUGAL SUMP PUMP OR WET WELL PUMP		SCREW COMPRESSOR
	PROGRESSIVE CAVITY PUMP		POSITIVE DISPLACEMENT BLOWER
	POSITIVE DISPLACEMENT PUMP		CENTRIFUGAL BLOWER
	LIQUID RING VACUUM PUMP		TANK
	VERTICAL CAN PUMP		DIAPHRAGM LINED TANK
	PROGRESSIVE CAVITY OR SCREW PUMP		PRESSURE VESSELS, VERTICAL (SHOWN) OR HORIZONTAL (TANKS, RECEIVERS, SEPARATORS, SUMPS ETC.)
	ELECTRIC MOTOR		PRESSURIZED GAS BOTTLE
	TURBINE DRIVE		55 GALLON DRUM
	DIESEL ENGINE		INTERMEDIATE BULK CONTAINER TOTE
	AGITATOR OR MIXER		CYCLONE SEPARATOR
			COMBINATION EYEWASH STATION

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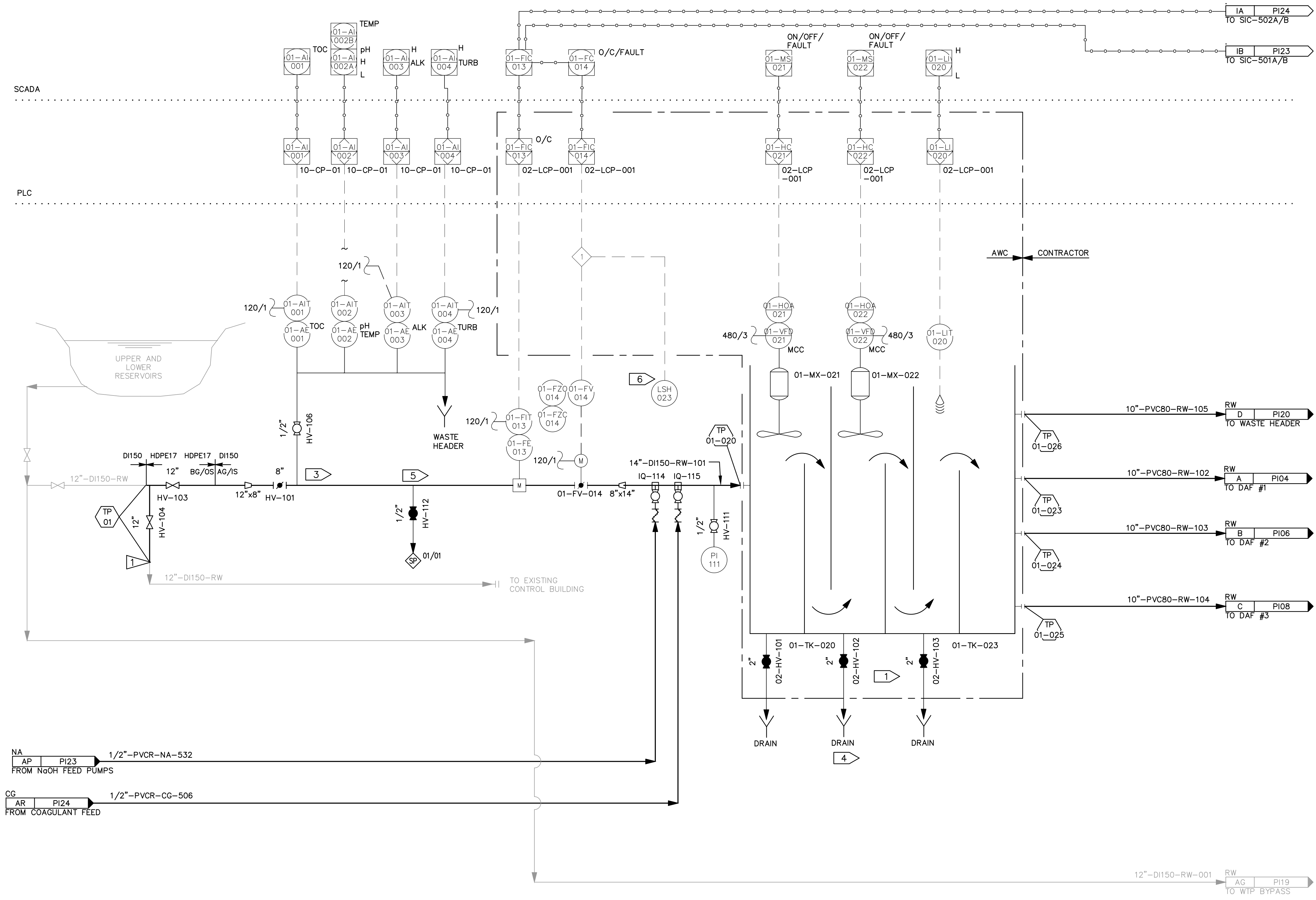
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**PROCESS AND INSTRUMENT  
DIAGRAM LEGEND 2**  
SEC. 31; TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.50206.01  
DATE 06/02/23

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GENERAL NOTES:

- 1 FOR ADDITIONAL DETAILS SEE AWC DRAWING 17805-PR-PID-001, P2 OF 2
- 2 SEE AWC DRAWINGS FOR SCOPE OF SUPPLY.
- 3 SAMPLE TAP MUST BE LOCATED 45'-90' FROM TOP OF PIPE.
- 4 THREE 2" DRAIN LINES TO BE ROUTED TO WASTE COLLECTION SYSTEM.
- 5 SAMPLE TAPS SHOULD BE LOCATED AT 90° OR 180° ALONG THE PIPELINE BEING SAMPLED. SAMPLE PIPING ROUTED TO ENSURE VALVE OPENS DOWN FOR EASE OF SAMPLE COLLECTION.
- 6 LEVEL FLOAT SWITCH LOCATED AT BOTTOM OF TRENCH.

INTERLOCK NOTES:

- 1 LEVEL DETECTED CLOSES INLET VALVE.

CONSTRUCTION NOTES:

- 1 SEE SPECIFICATION SECTION 01 10 01 FOR CONSTRUCTION SEQUENCING.

- 01-TK-020  
RAPID MIX TANK  
MATERIAL: ALUM.  
7'L X 4'W X 6'H  
CAPACITY: 8000 GAL
- 01-TK-023  
FLOW DISTRIBUTION TANK  
MATERIAL: ALUM.  
4'L X 5'W X 6'H  
CAPACITY: 750 GAL
- 01-MX-021  
COAGULANT MIXER  
TYPE: PROPELLER  
MODEL: AMX150  
MOTOR: 2HP
- 01-MX-022  
COAGULANT MIXER  
TYPE: PROPELLER  
MODEL: AMX150  
MOTOR: 2HP

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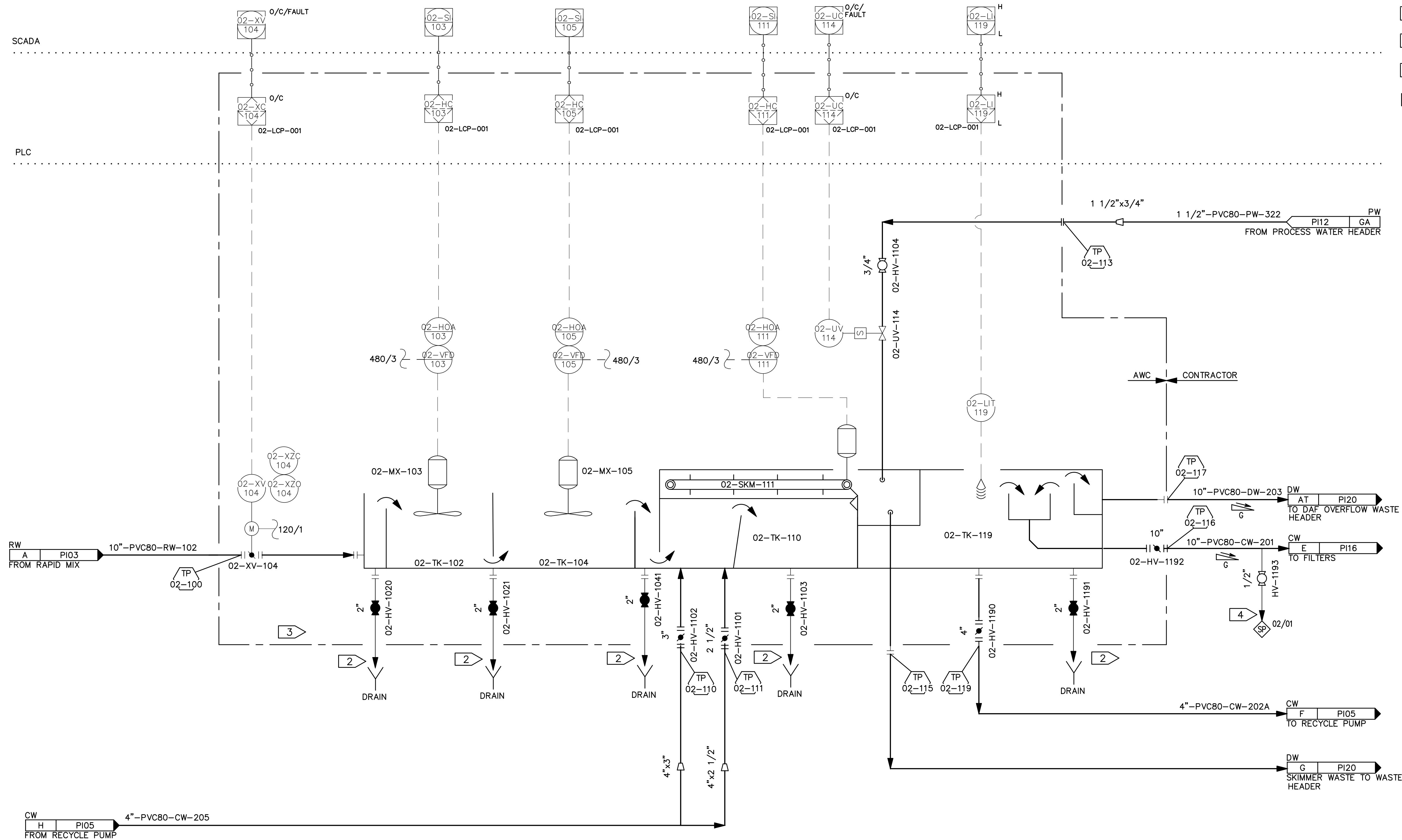
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**INLET WORKS AND RAPID MIX  
PROCESS AND INSTRUMENT DIAGRAM**  
SEC. 31; TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

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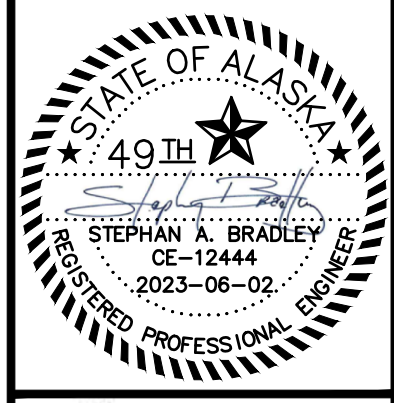
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\\bil-gis\Projects\28\_50206-01\Plant3D\CW WTP\PID DWG\P22-C-PID-04.dwg PLOT DATE 2023-05-31 10:39 SAVED DATE 2023-05-31 10:29 USER: gplatt



- GENERAL NOTES:**
- 1 SEE AWC DRAWINGS FOR FULL SCOPE OF SUPPLY.
  - 2 FOUR 2" AND ONE 2 1/2" DRAINS ROUTED TO WASTE COLLECTION SYSTEM.
  - 3 FOR DETAILS, SEE AWC DRAWING 17805-PR-PID-002M SHEET 1 OF 3.
  - 4 SAMPLE TAPS SHOULD BE LOCATED AT 90' OR 180' ALONG THE PIPELINE BEING SAMPLED. SAMPLE PIPING ROUTED TO ENSURE VALVE OPENS DOWN FOR EASE OF SAMPLE COLLECTION.

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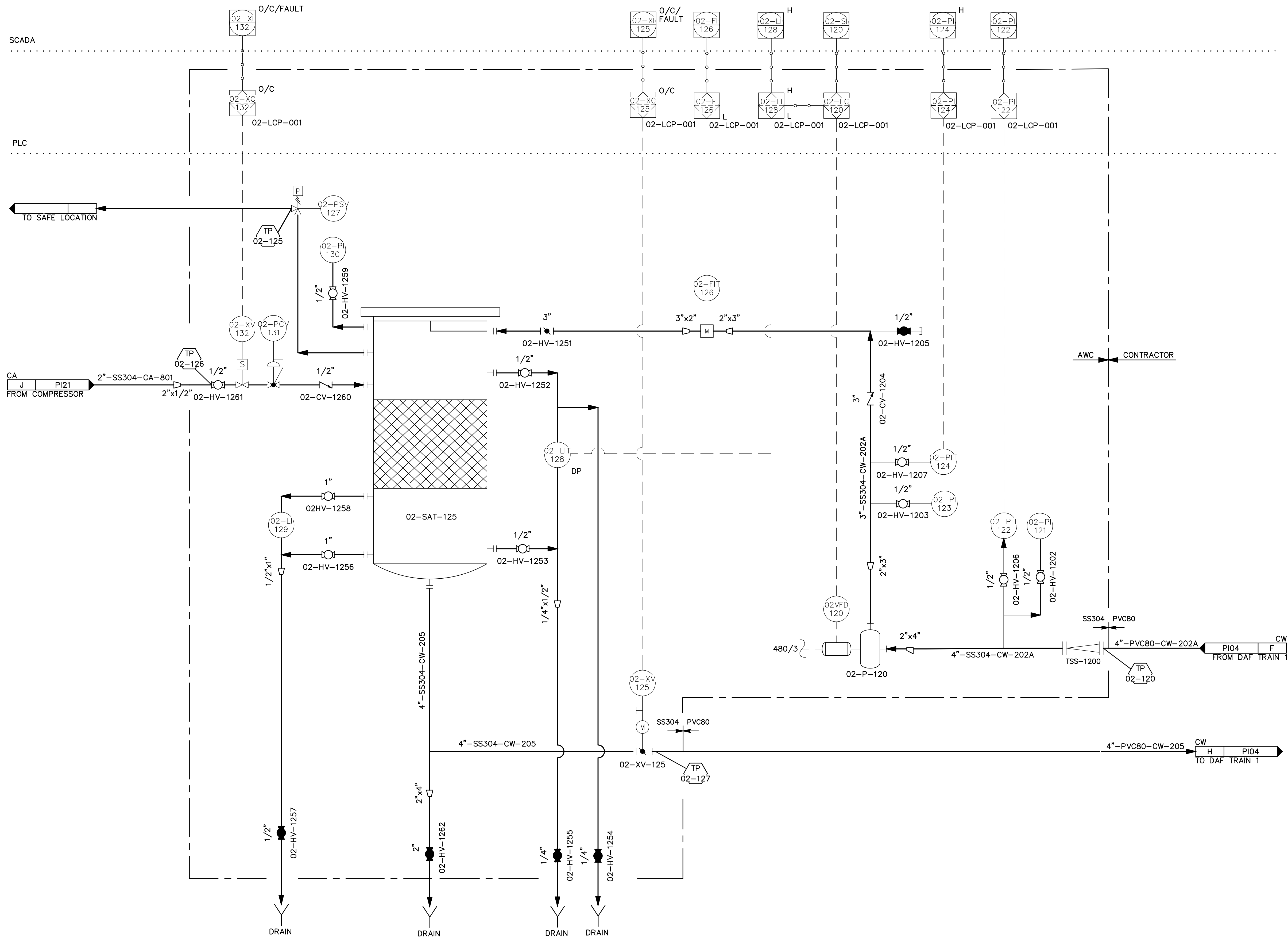
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA

**DAF UNIT #1  
PROCESS AND INSTRUMENT DIAGRAM**

SEC. 31; TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

- |   |  |   |   |   |   |  |
|---|--|---|---|---|---|--|
| <p><b>02-MX-103</b><br/>STAGE 1 FLOC MIXER<br/>MODEL: AMX37, G VALUE: 100 S-1<br/>RATING: 1/2 HP<br/>POWER: 480V/3Ph/60Hz</p> | <p><b>02-MX-105</b><br/>STAGE 2 FLOC MIXER<br/>MODEL: AMX18, G VALUE: 65 S-1<br/>RATING: 1/4 HP<br/>POWER: 480V/3Ph/60Hz</p> | <p><b>02-TK-102</b><br/>STAGE 1 FLOC TANK<br/>MATERIAL: ALUM.<br/>8'L X 12'H<br/>VOLUME: 6680 GAL</p> | <p><b>02-TK-104</b><br/>STAGE 2 FLOC TANK<br/>MATERIAL: ALUM.<br/>8'L X 12'H<br/>VOLUME: 6680 GAL</p> | <p><b>02-TK-110</b><br/>CLARIFIER TANK<br/>MATERIAL: ALUM.<br/>17'L X 12'H<br/>VOLUME: 14,200 GAL</p> | <p><b>02-SKM-111</b><br/>SKIMMER DRIVE<br/>MODEL: KA47/T R37 DR DR2S63MS4/R<br/>RATING: 1/4 HP<br/>POWER: 480V/3Ph/60Hz</p> | <p><b>02-TK-119</b><br/>EFFLUENT CHAMBER<br/>MATERIAL: ALUM.<br/>4'L X 12'H<br/>VOLUME: 3340 GAL</p> |
|---|--|---|---|---|---|--|

\\bil-gis\Bills\Projects\28\_50206-01\Plant3D\CW\WTP\PID\DWG\P22-C-PID-05.dwg PLOT DATE 2023-05-30 17:00 SAVED DATE 2023-05-26 12:12 USER: gplatt



**GENERAL NOTES:**  
 1 SEE AWC DRAWING 17805-PR-PID-003 SHEET 1 OF 3 FOR ADDITIONAL DETAILS.

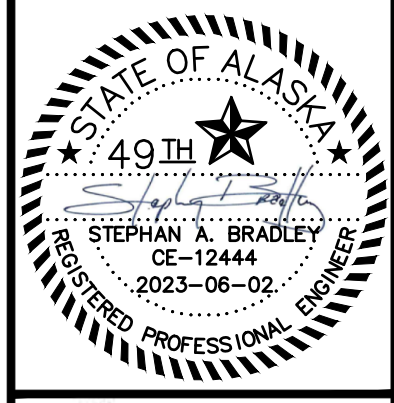
**INTERLOCK NOTES:**

**CONSTRUCTION NOTES:**

**02-SAT-125**  
 SATURATOR  
 MATERIAL: EPOXY COATED STEEL  
 24" DIA X 78 11/16"  
 MAWP: 150 PSIG @ 250°F

**02-P-120**  
 RECYCLE PUMP  
 GRUNDFOS CRI 15-4/RATING: 7.5 HP  
 80 GPM @ 200 FT TDH  
 460V/3PH/60Hz

REV	DATE	DESCRIPTION	BY



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**WRANGELL WATER TREATMENT PLANT IMPROVEMENTS**  
 WRANGELL, ALASKA  
**RECYCLE AND SATURATION - SYSTEM 1**  
**PROCESS AND INSTRUMENT DIAGRAM**

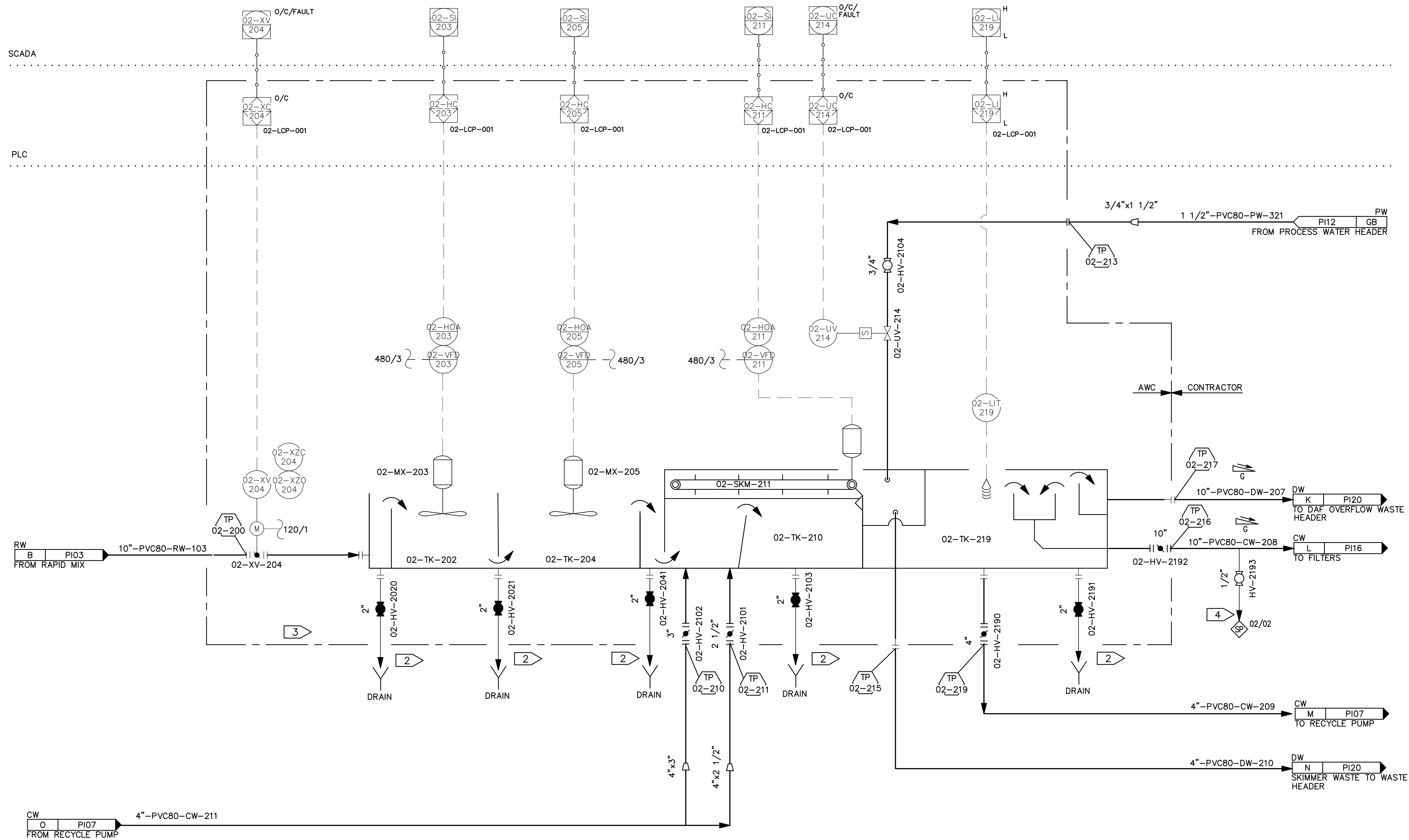
PROJECT 1528.50206.01  
 DATE 06/02/23

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**PI-05**

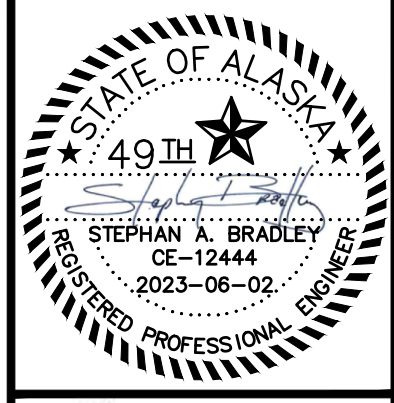
**BID DOCUMENTS**  
**AGENCY SUBMITTAL - NOT FOR CONSTRUCTION**

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- GENERAL NOTES:**
- 1 SEE AWC DRAWINGS FOR FULL SCOPE OF SUPPLY.
  - 2 FOUR 2" AND ONE 2 1/2" DRAINS ROUTED TO WASTE COLLECTION SYSTEM.
  - 3 FOR DETAILS, SEE AWC DRAWING 17805-PR-PID-002, SHEET 1 OF 3.
  - 4 SAMPLE TAPS SHOULD BE LOCATED AT 90° OR 180° ALONG THE PIPELINE BEING SAMPLED. SAMPLE PIPING ROUTED TO ENSURE VALVE OPENS DOWN FOR EASE OF SAMPLE COLLECTION.

REV	DATE	DESCRIPTION	BY



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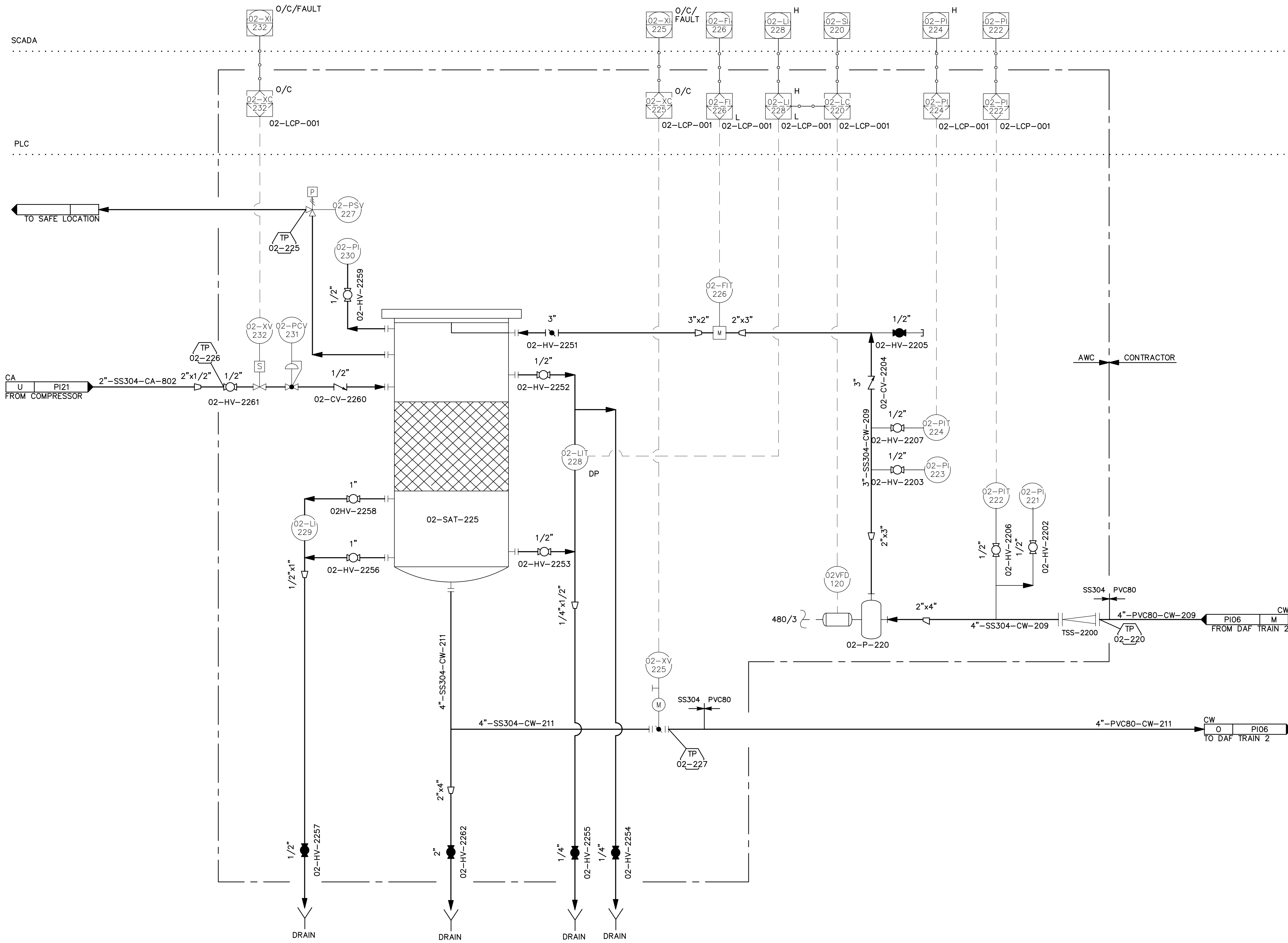
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA

**DAF UNIT #2  
PROCESS AND INSTRUMENT DIAGRAM**

SEC. 31; TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

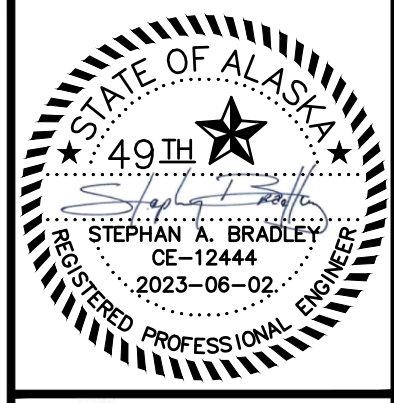
- |  |   |  |  |  |   |   |
|--|---|--|--|--|---|---|
| <p><b>02-MX-203</b><br/>STAGE 1 FLOC MIXER<br/>MODEL: AMX37, G VALUE:100 S-1<br/>RATING: 1/2 HP<br/>POWER: 480V/3Ph/60Hz</p> | <p><b>02-MX-205</b><br/>STAGE 2 FLOC MIXER<br/>MODEL: AMX18, G VALUE:65 S-1<br/>RATING: 1/4 HP<br/>POWER: 480V/3Ph/60Hz</p> | <p><b>02-TK-202</b><br/>STAGE 1 FLOC TANK<br/>MATERIAL: ALUM.<br/>8'L X 10'W X 12'H<br/>VOLUME: 6680 GAL</p> | <p><b>02-TK-204</b><br/>STAGE 2 FLOC TANK<br/>MATERIAL: ALUM.<br/>8'L X 10'W X 12'H<br/>VOLUME: 6680 GAL</p> | <p><b>02-TK-210</b><br/>CLARIFIER TANK<br/>MATERIAL: ALUM.<br/>17'L X 10'W X 12'H<br/>VOLUME: 14,200 GAL</p> | <p><b>02-SKM-211</b><br/>SKIMMER DRIVE<br/>MODEL: KA47/T R37 DR DR2S63MS4/R<br/>RATING: 1/4 HP<br/>POWER: 480V/3Ph/60Hz</p> | <p><b>02-TK-219</b><br/>BREAK TANK<br/>MATERIAL: ALUM.<br/>4'L X 10'W X 12'H<br/>VOLUME: 3340 GAL</p> |
|--|---|--|--|--|---|---|

\\bil-gis\BIL-Projects\28\_50206-01\Plant3D\CW WTP\PID DWG\P22-C-PID-07.dwg PLOT DATE 2023-05-30 17:01 SAVED DATE 2023-05-02 14:36 USER: gplatt



GENERAL NOTES:  
 1 SEE AWC DRAWING 17805-PR-PID-003 SHEET 2 OF 3 FOR ADDITIONAL DETAILS.

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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**RECYCLE AND SATURATION - SYSTEM 2**  
**PROCESS AND INSTRUMENT DIAGRAM**  
 SEC. 31; TOWNSHIP 62S; RANGE 84E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.50206.01  
 DATE 06/02/23

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PI-07

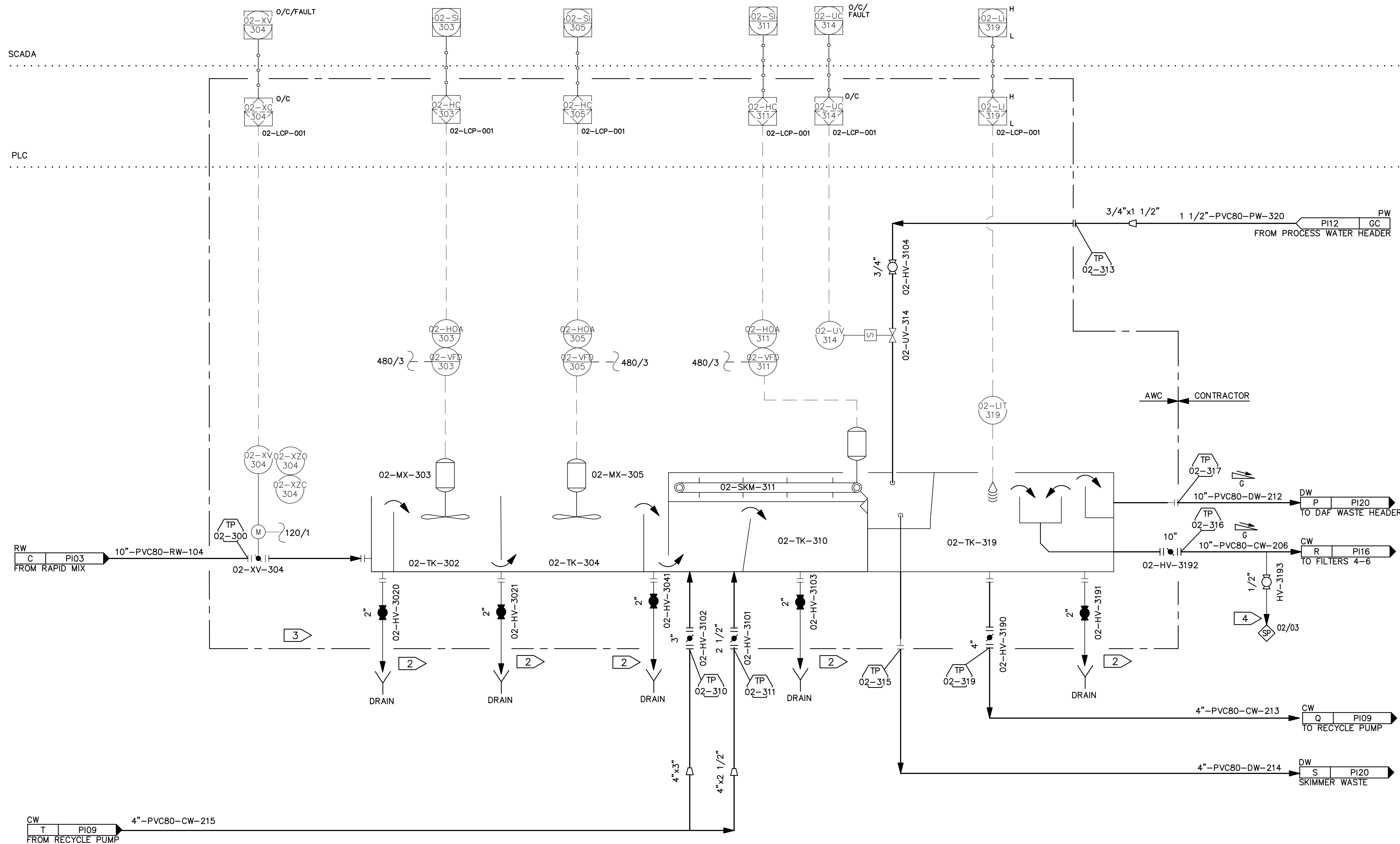
**02-SAT-225**  
 SATURATOR  
 MATERIAL: EPOXY COATED STEEL  
 24" DIA X 78 11/16"  
 MAWP: 150 PSIG @ 250F

**02-P-220**  
 RECYCLE PUMP  
 GRUNDFOS CRI 15-4/ RATING: 7.5 HP  
 80 GPM @ 200 FT TDH  
 460V/3Ph/60Hz

BID DOCUMENTS  
 AGENCY SUBMITTAL - NOT FOR CONSTRUCTION

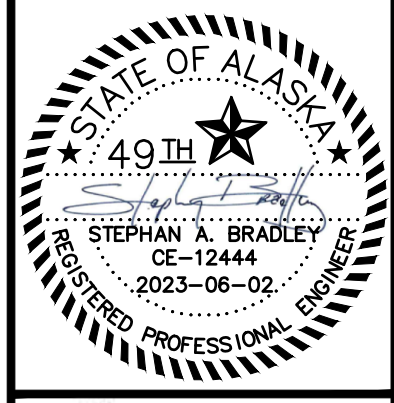


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- GENERAL NOTES:**
- 1 SEE AWC DRAWINGS FOR FULL SCOPE OF SUPPLY.
  - 2 FOUR 2" AND ONE 2 1/2" DRAINS ROUTED TO WASTE COLLECTION SYSTEM.
  - 3 FOR DETAILS, SEE AWC DRAWING 17805-PR-PID-002, SHEET 1 OF 3.
  - 4 SAMPLE TAPS SHOULD BE LOCATED AT 90° OR 180° ALONG THE PIPELINE BEING SAMPLED. SAMPLE PIPING ROUTED TO ENSURE VALVE OPENS DOWN FOR EASE OF SAMPLE COLLECTION.

REV	DATE	DESCRIPTION	BY



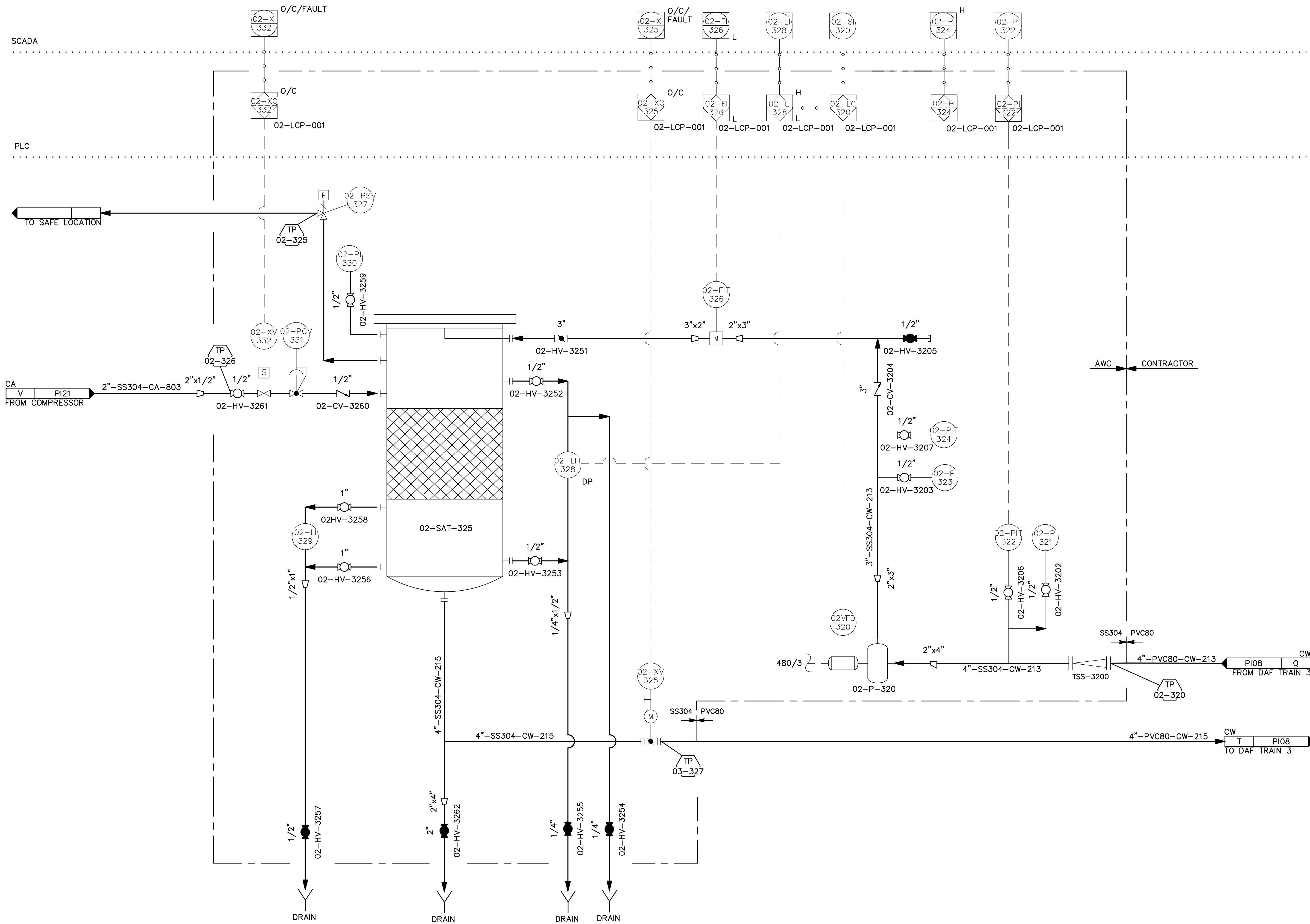
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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**DAF UNIT #3**  
**PROCESS AND INSTRUMENT DIAGRAM**  
SEC. 31; TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

- 02-MX-303**  
STAGE 1 FLOC MIXER  
MODEL: AMX37, G VALUE: 100 S-1  
RATING: 1/2 HP  
POWER: 480V/3Ph/60Hz
- 02-MX-305**  
STAGE 2 FLOC MIXER  
MODEL: AMX18, G VALUE: 65 S-1  
RATING: 1/4 HP  
POWER: 480V/3Ph/60Hz
- 02-TK-302**  
STAGE 1 FLOC TANK  
MATERIAL: ALUM.  
8'L X 10'W X 12'H  
VOLUME: 6680 GAL
- 02-TK-304**  
STAGE 2 FLOC TANK  
MATERIAL: ALUM.  
8'L X 10'W X 12'H  
VOLUME: 6680 GAL
- 02-TK-310**  
CLARIFIER TANK  
MATERIAL: ALUM.  
17'L X 10'W X 12'H  
VOLUME: 14,200 GAL
- 02-SKM-311**  
SKIMMER DRIVE  
MODEL: KA47/T R37 DR DR2S63MS4/R  
RATING: 1/4 HP  
POWER: 480V/3Ph/60Hz
- 02-TK-319**  
BREAK TANK  
MATERIAL: ALUM.  
4'L X 10'W X 12'H  
VOLUME: 3340 GAL

\\bil-gis\Bills\Projects\28\_50206-01\Plant3D\CW WTP\PID DWG\P22-C-PID-09.dwg PLOT DATE 2023-05-30 17:02 SAVED DATE 2023-05-02 14:36 USER: gplatt



GENERAL NOTES:  
 1 SEE AWC DRAWING 17805-PR-PID-003 SHEET 3 OF 3 FOR ADDITIONAL DETAILS.

REV	DATE	DESCRIPTION	BY



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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**RECYCLE AND SATURATION - SYSTEM 3  
 PROCESS AND INSTRUMENT DIAGRAM**

PROJECT 1528.50206.01  
 DATE 06/02/23

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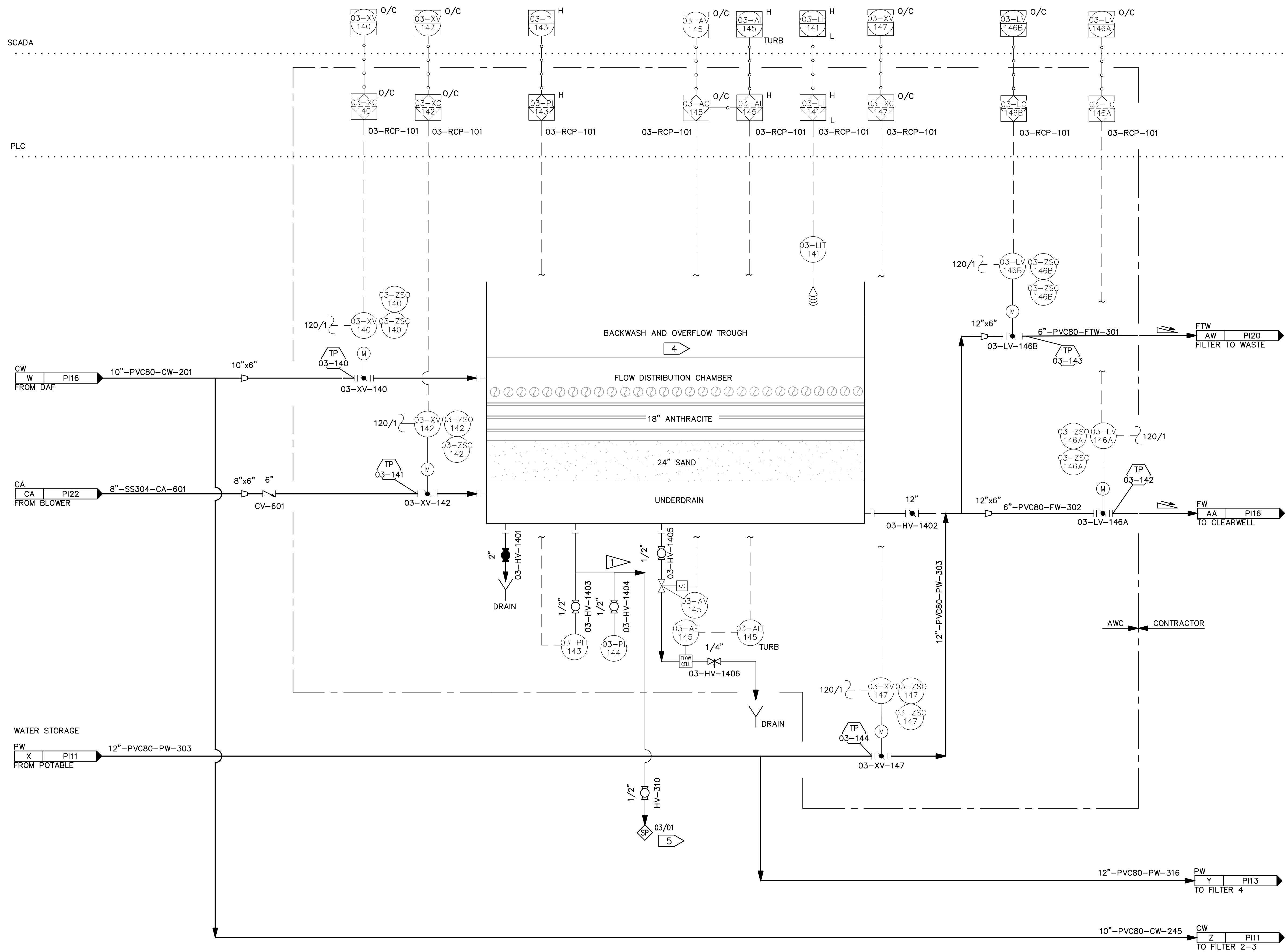
PI-09

**02-SAT-325**  
 SATURATOR  
 MATERIAL: EPOXY COATED STEEL  
 24" DIA X 78 11/16"  
 MAWP: 150 PSIG @ 250°F

**02-P-320**  
 RECYCLE PUMP  
 GRUNDFOS CRI 15-4/ RATING: 7.5 HP  
 80 GPM @ 200 FT TDH  
 460V/3Ph/60Hz

BID DOCUMENTS  
 AGENCY SUBMITTAL - NOT FOR CONSTRUCTION

\\bil-gis\BIL-Projects\28\_50206-01\Plant3D\CBW WTP\PID DWG\P22-C-PID-10.dwg PLOT DATE 2023-05-30 17:02 SAVED DATE 2023-05-02 14:36 USER: gplatt



**GENERAL NOTES:**

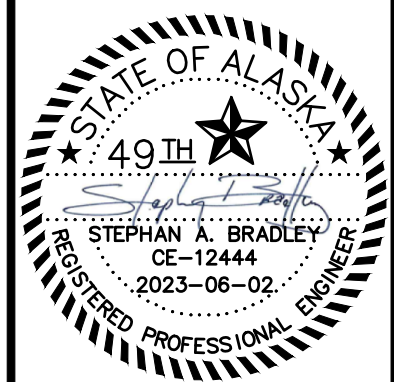
- 1 SEE AWC DRAWINGS FOR FULL SCOPE OF SUPPLY.
- 2 FILTERS 1, 2, & 3 ARE ALL HOUSED IN A COMMON TANK WITH SEPARATION WALLS. SEE AWC DWG. 17805-PR-PID-006.
- 3 TO WASTE HEADER.
- 4 COMMON TO FILTERS 1,2,& 3. ONE 16\"/>

**CONSTRUCTION NOTES:**

- 1 CONNECT AS REQUIRED TO PROVIDE SAMPLE TAP. THIS TIE-POINT NOT SHOWN ON VENDOR DRAWINGS.

03-TK-140  
 FILTER 1  
 MATERIAL: ALUMINUM  
 10' L X 12' W X 10.5' H  
 VOLUME: 8500 GAL

REV	DATE	DESCRIPTION	BY



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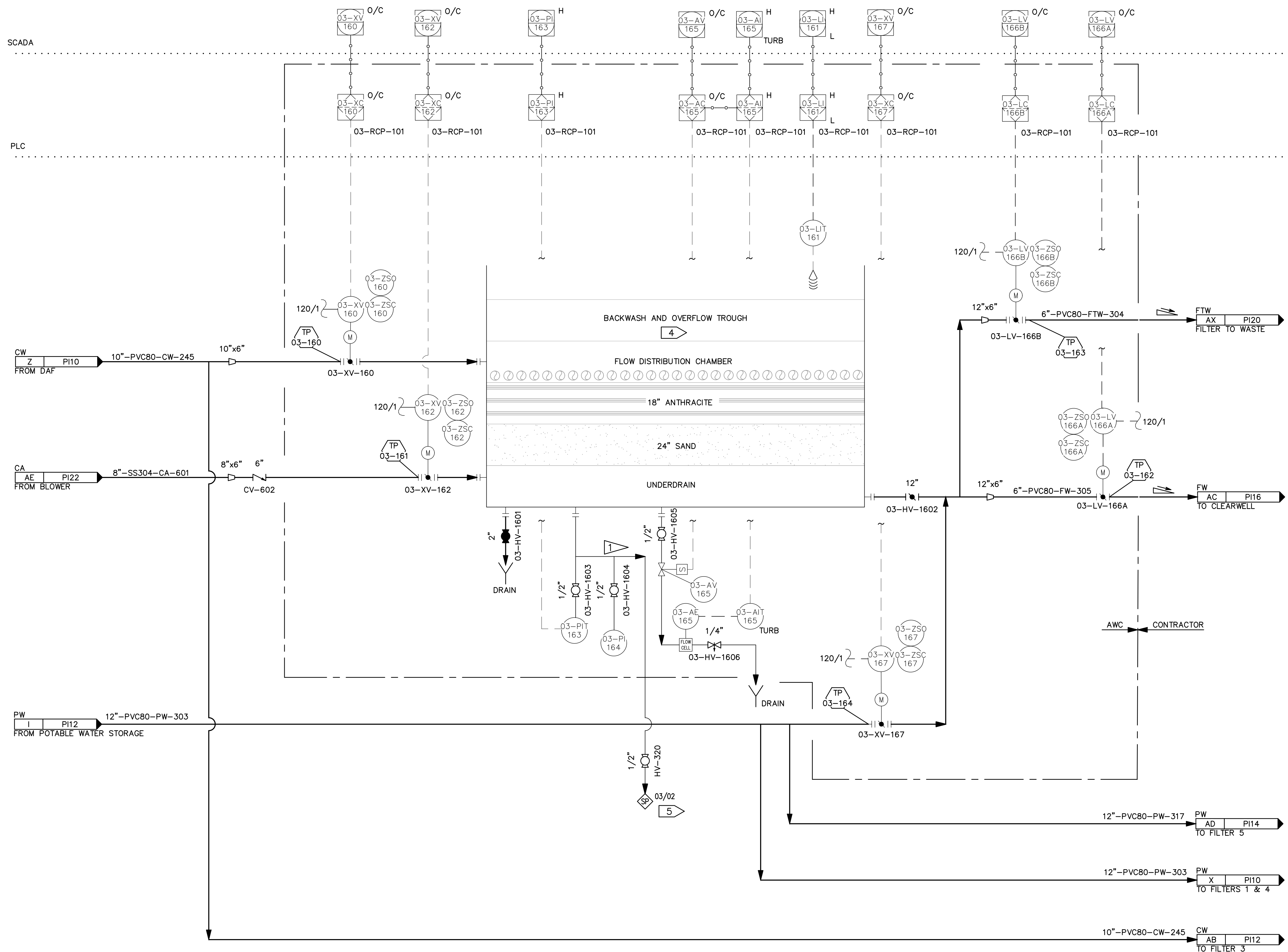
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**WTP FILTER #1  
 PROCESS AND INSTRUMENT DIAGRAM**  
 SEC. 31; TOWNSHIP 62S; RANGE 84E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

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 DATE 06/02/23

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PI-10

\\bil-gis\BIL-Projects\28\_50206-01\Plant3D\CBW WTP\PID DWG\P22-C-PID-11.dwg PLOT DATE 2023-05-30 17:02 SAVED DATE 2023-04-28 13:54 USER: gplatt

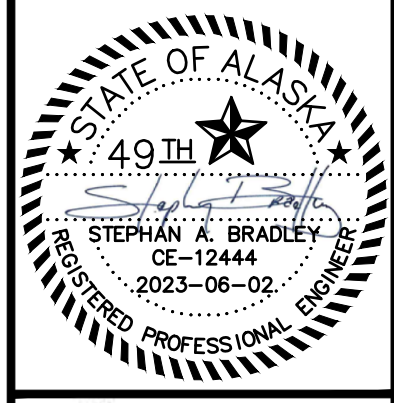


- GENERAL NOTES:**
- 1 SEE AWC DRAWINGS FOR FULL SCOPE OF SUPPLY.
  - 2 FILTERS 1, 2, & 3 ARE ALL HOUSED IN A COMMON TANK WITH SEPARATION WALLS. SEE AWC DWG. 17805-PR-PID-006.
  - 3 TO WASTE HEADER.
  - 4 COMMON TO FILTERS 1,2,& 3. ONE 16\"/>

- CONSTRUCTION NOTES:**
- 1 CONNECT AS REQUIRED TO PROVIDE SAMPLE TAP. THIS TIE-POINT NOT SHOWN ON VENDOR DRAWINGS.

03-TK-160  
 FILTER 2  
 MATERIAL: ALUMINUM  
 10' L X 12' W X 10.5' H  
 VOLUME: 8500 GAL

REV	DATE	DESCRIPTION	BY



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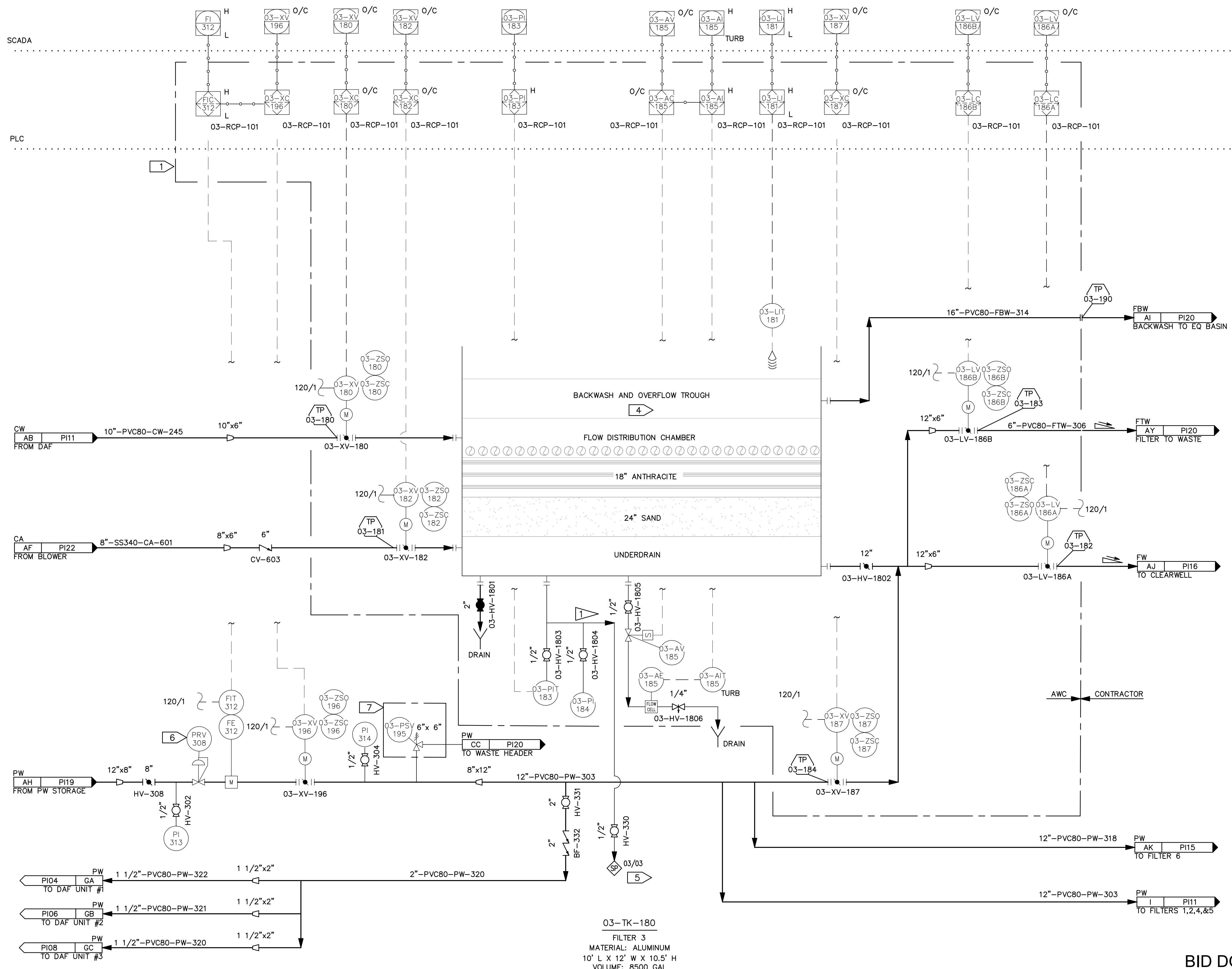
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**WTP FILTER #2  
 PROCESS AND INSTRUMENT DIAGRAM**  
 SEC. 31; TOWNSHIP 62S; RANGE 84E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.50206.01  
 DATE 06/02/23

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PI-11

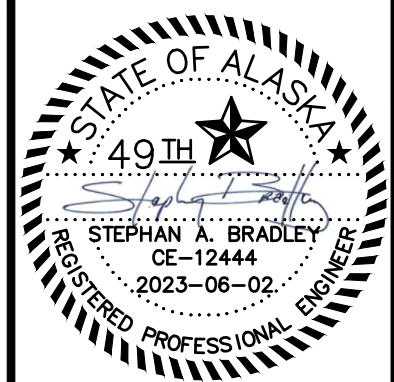
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GENERAL NOTES:

- 1 SEE AWC DRAWINGS FOR FULL SCOPE OF SUPPLY.
  - 2 FILTERS 1, 2, & 3 ARE ALL HOUSED IN A COMMON TANK WITH SEPARATION WALLS. SEE AWC DWG. 17805-PR-PID-006.
  - 3 TO WASTE HEADER.
  - 4 COMMON TO FILTERS 1,2,& 3. ONE 16" OUTLET PIPE TO WASTE HEADER SERVES ALL THREE FILTERS.
  - 5 SAMPLE TAPS SHOULD BE LOCATED AT 90° OR 180° ALONG THE PIPELINE BEING SAMPLED. SAMPLE PIPING ROUTED TO ENSURE VALVE OPENS DOWN FOR EASE OF SAMPLE COLLECTION.
  - 6 SET PRV-308 TO MAINTAIN 10 PSIG AT INLET OF FLOW METER FE-312.
  - 7 03-PSV-195 IS SUPPLIED AND SHIPPED LOOSE BY AWC AND INSTALLED BY THE CONTRACTOR. SET POINT SHALL BE 7.5 PSIG. SIZING CASE IS CONTROL VALVE FAILURE.
- CONSTRUCTION NOTES:
- 1 CONNECT AS REQUIRED TO PROVIDE SAMPLE TAP. THIS TIE-POINT NOT SHOWN ON VENDOR DRAWINGS.

REV	DATE	DESCRIPTION	BY



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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**WTP FILTER #3  
PROCESS AND INSTRUMENT DIAGRAM**  
SEC. 31; TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.50206.01  
DATE 06/02/23

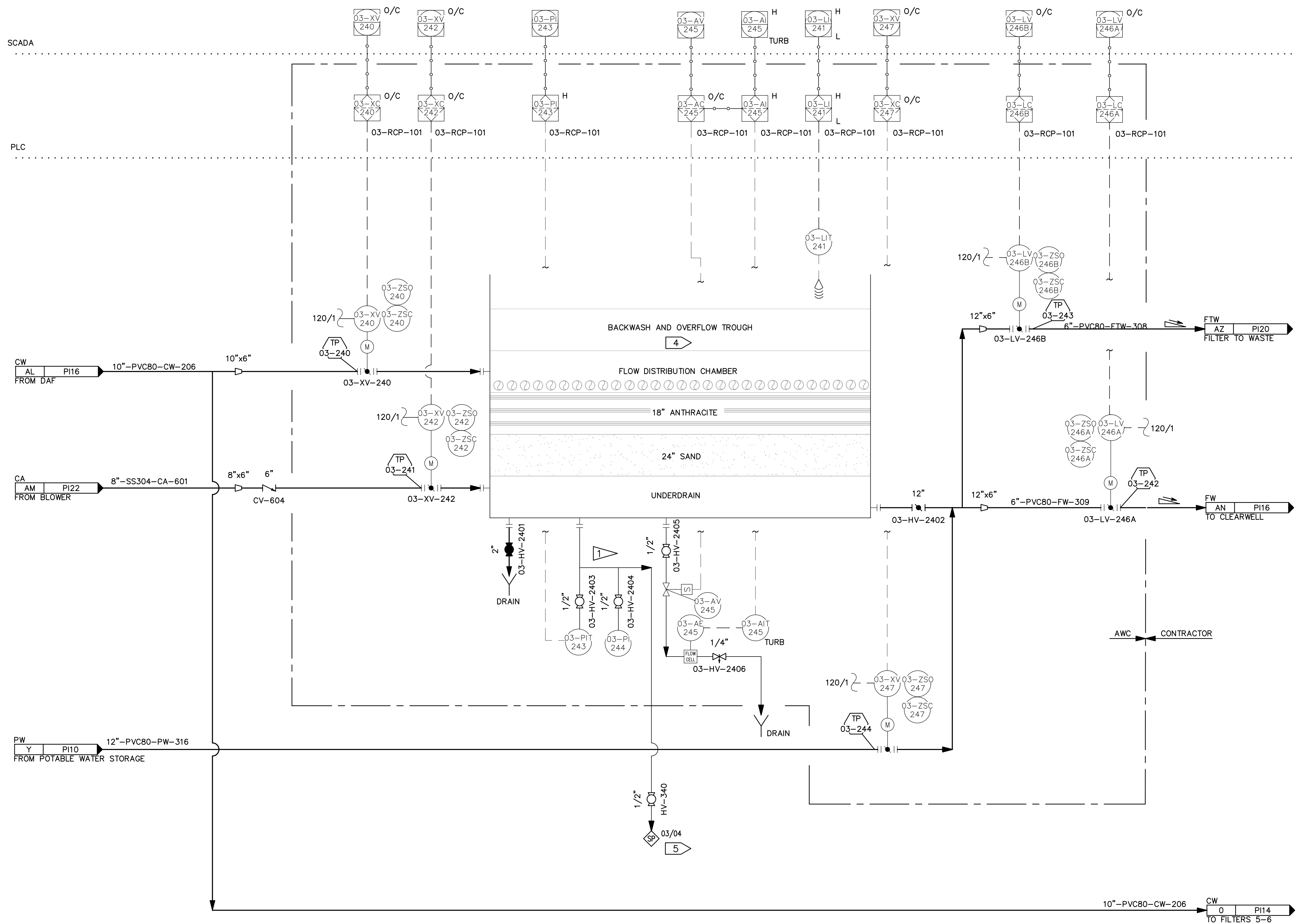
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PI-12

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AGENCY SUBMITTAL - NOT FOR CONSTRUCTION

03-TK-180  
FILTER 3  
MATERIAL: ALUMINUM  
10' L X 12' W X 10.5' H  
VOLUME: 8500 GAL

\\bil-gis\BIL-Projects\28\_50206-01\Plant3D\CBW WTP\PID DWG\P22-C-PID-13.dwg PLOT DATE 2023-04-28 13:54 USER: gplatt



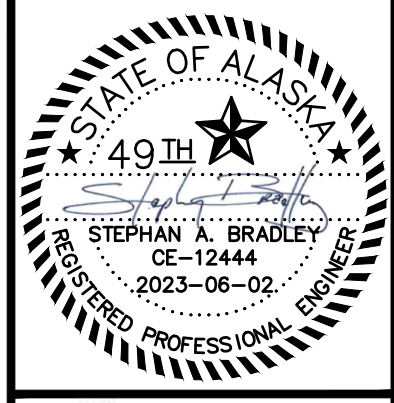
**GENERAL NOTES:**

- 1 SEE AWC DRAWINGS FOR FULL SCOPE OF SUPPLY.
- 2 FILTERS 4, 5, & 6 ARE ALL HOUSED IN A COMMON TANK WITH SEPARATION WALLS. SEE AWC DWG. 17805-PR-PID-006.
- 3 TO WASTE HEADER.
- 4 COMMON TO FILTERS 4,5,& 6. ONE 16" OUTLET PIPE TO WASTE HEADER SERVES ALL THREE FILTERS.
- 5 SAMPLE TAPS SHOULD BE LOCATED AT 90° OR 180° ALONG THE PIPELINE BEING SAMPLED. SAMPLE PIPING ROUTED TO ENSURE VALVE OPENS DOWN FOR EASE OF SAMPLE COLLECTION.

**CONSTRUCTION NOTES:**

- 1 CONNECT AS REQUIRED TO PROVIDE SAMPLE TAP. THIS TIE-POINT NOT SHOWN ON VENDOR DRAWINGS.

REV	DATE	DESCRIPTION	BY



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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**WTP FILTER #4  
PROCESS AND INSTRUMENT DIAGRAM**  
SEC. 31; TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

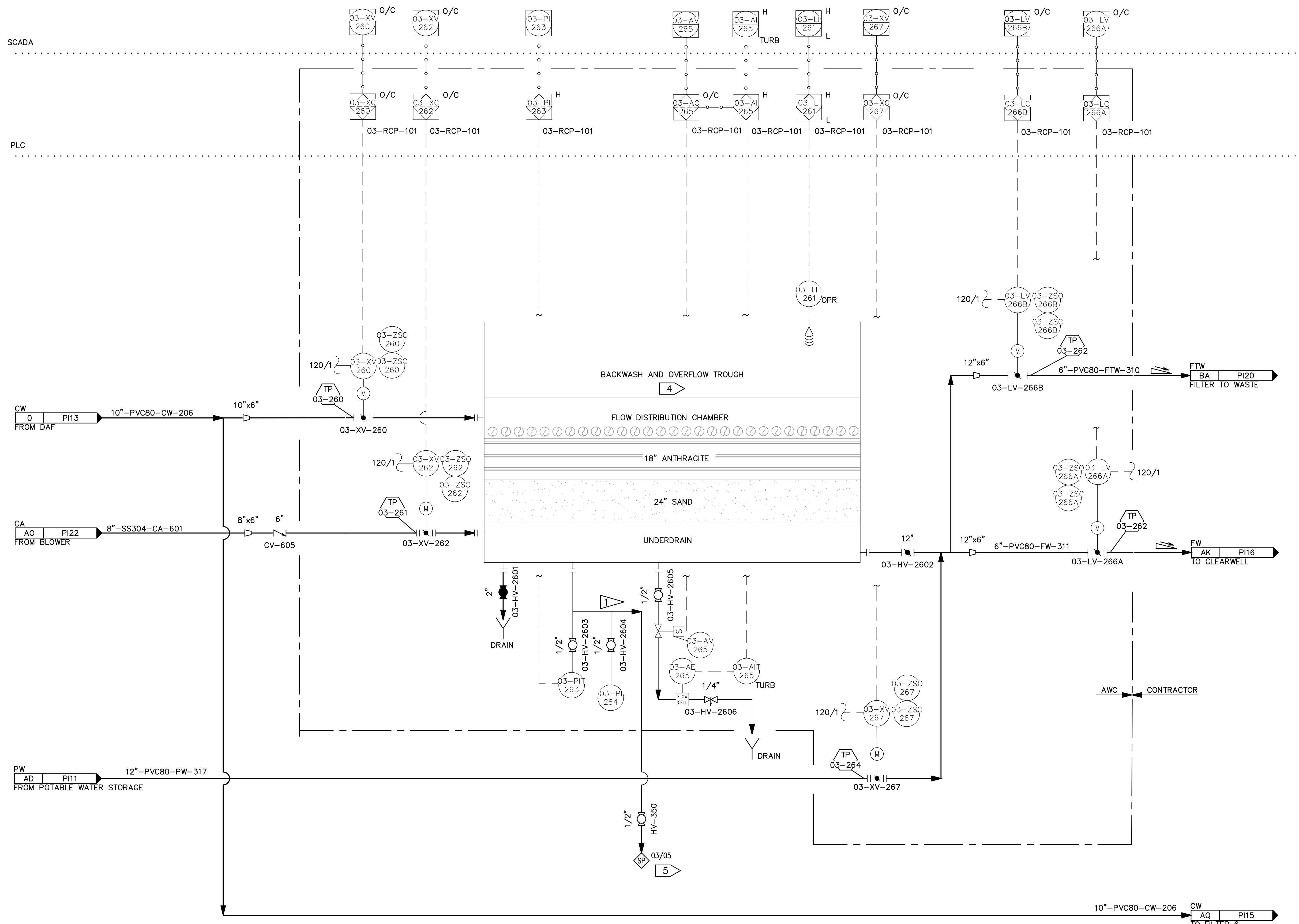
PROJECT 1528.50206.01  
DATE 06/02/23

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PI-13

03-TK-240  
FILTER 4  
MATERIAL: ALUMINUM  
10' L X 12' W X 10.5' H  
VOLUME: 8500 GAL

\\bil-gis\BIL-Projects\28\_50206-01\Plant3D\CW WTP\PID DWG\P22-C-PID-14.dwg PLOT DATE 2023-05-30 17:04 SAVED DATE 2023-04-28 13:54 USER: gplatt



- GENERAL NOTES:**
- 1 SEE AWC DRAWINGS FOR FULL SCOPE OF SUPPLY.
  - 2 FILTERS 4, 5, & 6 ARE ALL HOUSED IN A COMMON TANK WITH SEPARATION WALLS. SEE AWC DWG. 17805-PR-PID-006.
  - 3 TO WASTE HEADER.
  - 4 COMMON TO FILTERS 4,5,& 6. ONE 16" OUTLET PIPE TO WASTE HEADER SERVES ALL THREE FILTERS.
  - 5 SAMPLE TAPS SHOULD BE LOCATED AT 90° OR 180° ALONG THE PIPELINE BEING SAMPLED. SAMPLE PIPING ROUTED TO ENSURE VALVE OPENS DOWN FOR EASE OF SAMPLE COLLECTION.
- CONSTRUCTION NOTES:**
- 1 CONNECT AS REQUIRED TO PROVIDE SAMPLE TAP. THIS TIE-POINT NOT SHOWN ON VENDOR DRAWINGS.

03-TK-260  
 FILTER 5  
 MATERIAL: ALUMINUM  
 10' L X 12' W X 10.5' H  
 VOLUME: 8500 GAL

REV	DATE	DESCRIPTION	BY



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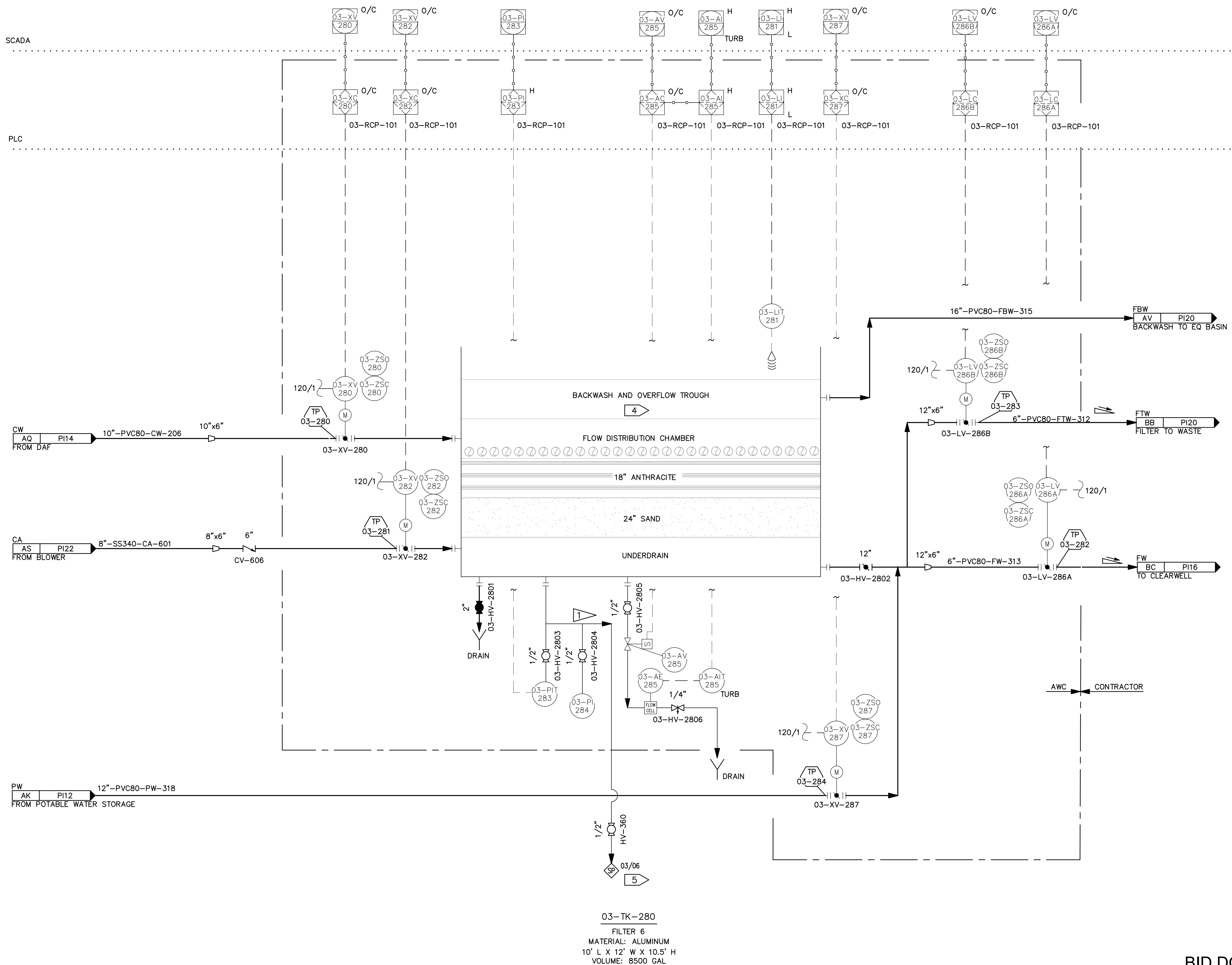
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**WTP FILTER #5  
 PROCESS AND INSTRUMENT DIAGRAM**  
 SEC. 31; TOWNSHIP 62S; RANGE 84E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.50206.01  
 DATE 06/02/23

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PI-14

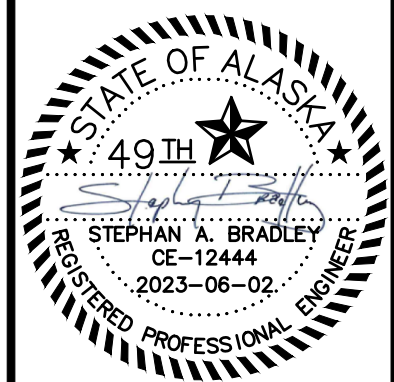
\\bil-gis\BIL-Projects\28\_50206-01\Plant3D\CW WTP\PID DWG\P22-C-PID-15.dwg PLOT DATE 2023-05-30 17:04 SAVED DATE 2023-04-28 13:54 USER: gplatt



- GENERAL NOTES:**
- SEE AWC DRAWINGS FOR FULL SCOPE OF SUPPLY.
  - FILTERS 4, 5, & 6 ARE ALL HOUSED IN A COMMON TANK WITH SEPARATION WALLS. SEE AWC DWG. 17805-PR-PID-006.
  - TO WASTE HEADER.
  - COMMON TO FILTERS 4,5,& 6. ONE 16" OUTLET PIPE TO WASTE HEADER SERVES ALL THREE FILTERS.
  - SAMPLE TAPS SHOULD BE LOCATED AT 90° OR 180° ALONG THE PIPELINE BEING SAMPLED. SAMPLE PIPING ROUTED TO ENSURE VALVE OPENS DOWN FOR EASE OF SAMPLE COLLECTION.
- CONSTRUCTION NOTES:**
- CONNECT AS REQUIRED TO PROVIDE SAMPLE TAP. THIS TIE-POINT NOT SHOWN ON VENDOR DRAWINGS.

03-TK-280  
 FILTER 6  
 MATERIAL: ALUMINUM  
 10' L X 12' W X 10.5' H  
 VOLUME: 8500 GAL

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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**WTP FILTER #6**  
**PROCESS AND INSTRUMENT DIAGRAM**  
 SEC. 31; TOWNSHIP 62S; RANGE 84E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.50206.01  
 DATE 06/02/23

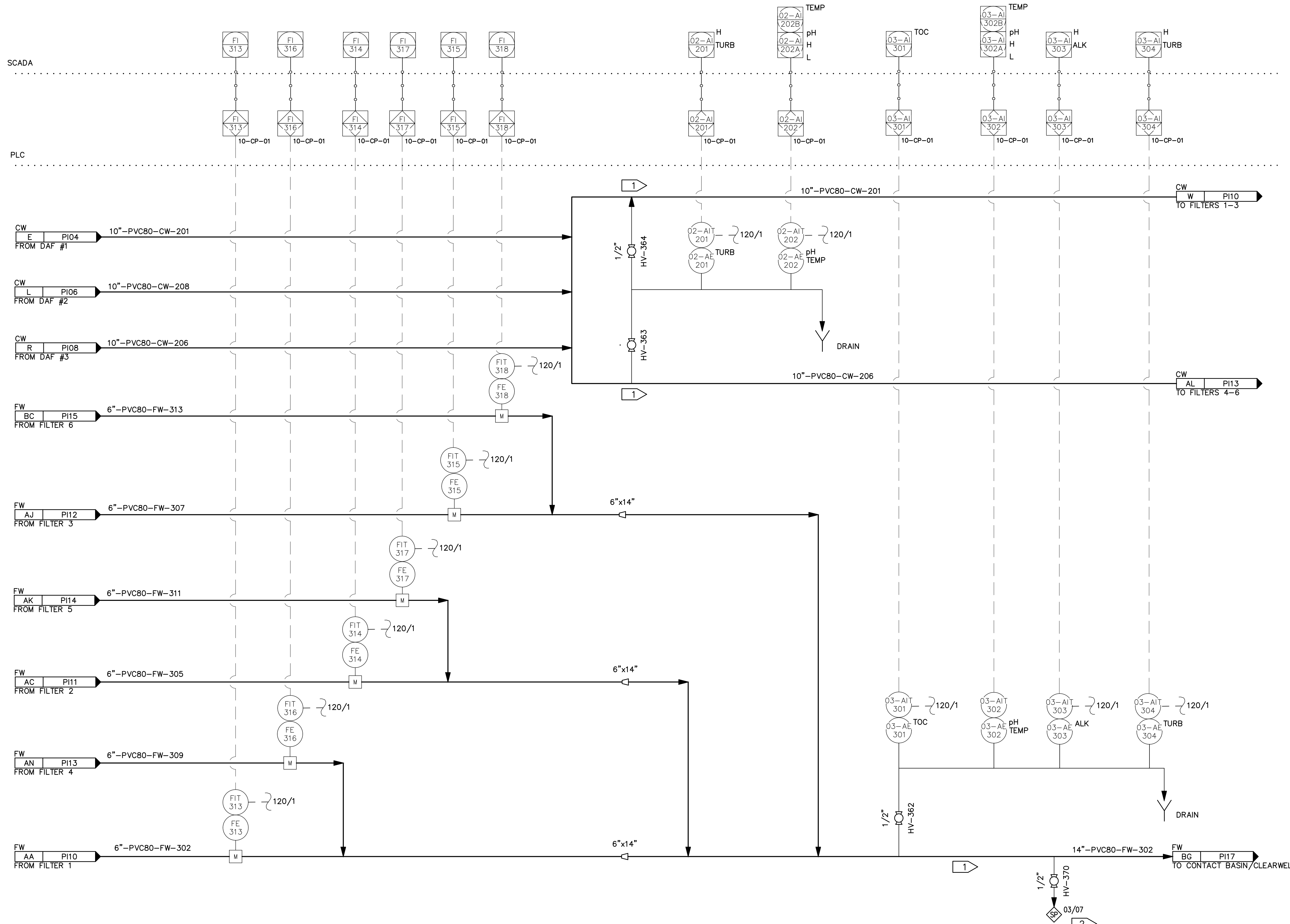
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PI-15

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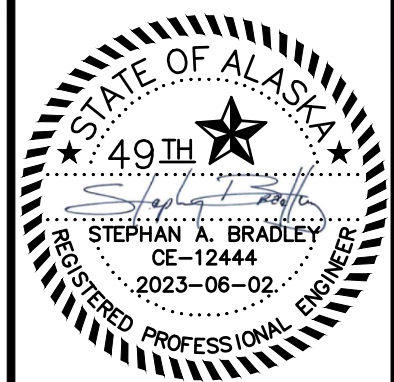


\\bil-gis\BIL-Projects\28\_50206-01\Plant3D\CWB WTP\PID DWG\P22-C-PID-16.dwg PLOT DATE 2023-05-30 17:04 SAVED DATE 2023-05-30 11:33 USER: gplatt



- GENERAL NOTES:**
- 1 LOCATE TAP BETWEEN 45' AND 135' FROM TOP OF PIPE. DO NOT LOCATE TAP ON TOP OR BOTTOM OF PIPE.
  - 2 SAMPLE TAPS SHOULD BE LOCATED AT 90° OR 180° ALONG THE PIPELINE BEING SAMPLED. SAMPLE PIPING ROUTED TO ENSURE VALVE OPENS DOWN FOR EASE OF SAMPLE COLLECTION.
  - 3 LOCATE SAMPLE TAP 45' - 90' FROM TOP OF PIPE.

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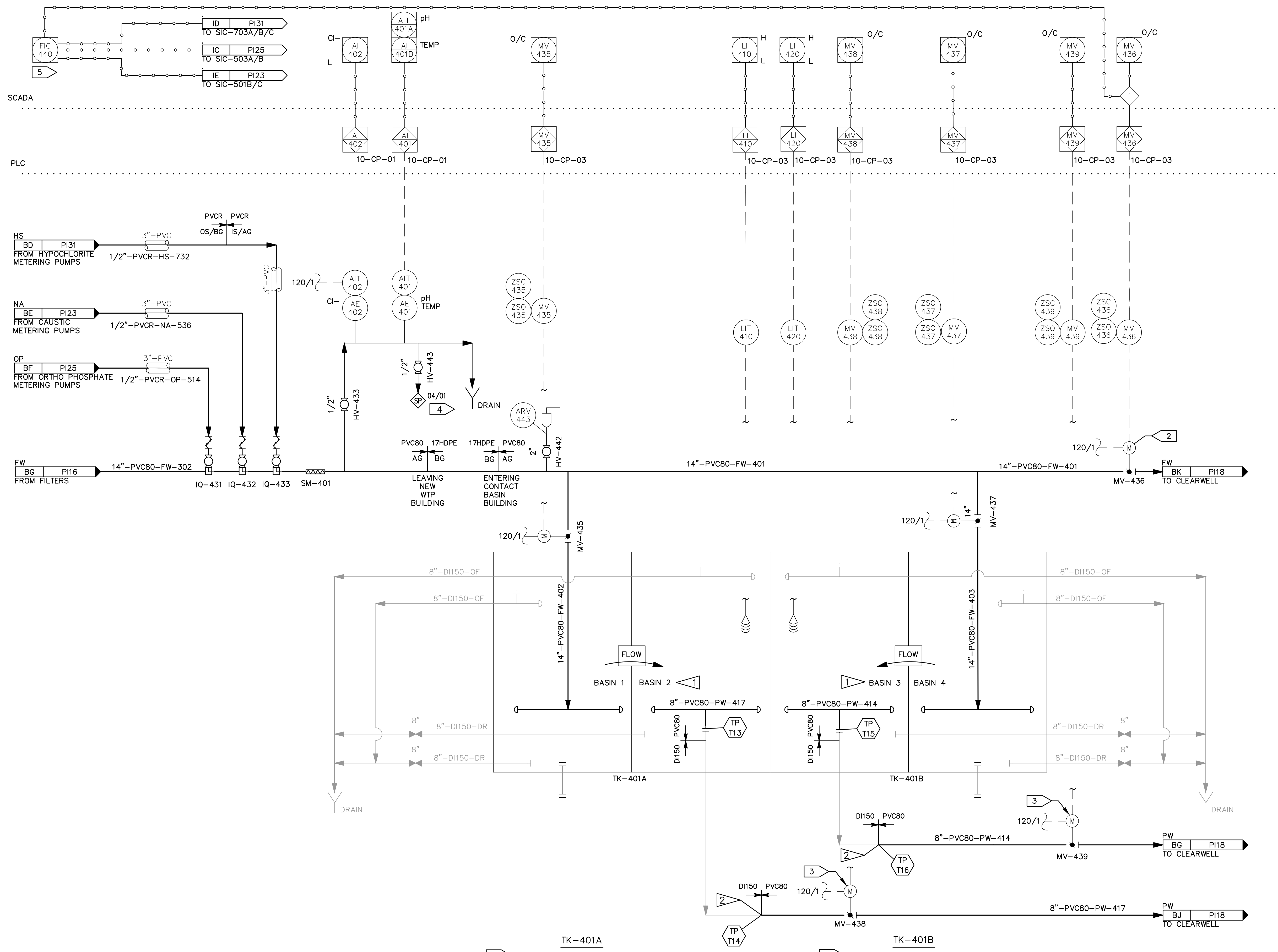
**WRANGELL WATER TREATMENT PLANT IMPROVEMENTS**  
WRANGELL, ALASKA  
**PIPING HEADERS AND MANIFOLDS**  
**PROCESS AND INSTRUMENT DIAGRAM**

PROJECT 1528.50206.01  
DATE 06/02/23

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**PI-16**

\\bil-gis\BIL-Projects\28\_50206-01\Plant3D\CWB WTP\PID DWG\P22-C-PID-17.dwg PLOT DATE 2023-05-30 17:05 SAVED DATE 2023-05-02 14:36 USER: gplatt



- GENERAL NOTES:**
- EXISTING SAND FILTERS CONVERTED TO CHLORINE CONTACT BASINS
  - BYPASS OF CONTACT BASIN IS ONLY ALLOWED AT FLOWS LESS THAN 975 GPM TO MAINTAIN CHLORINE CONTACT TIME.
  - INSTALL NEW MOTOR OPERATED BUTTERFLY VALVE.
  - SAMPLE TAPS SHOULD BE LOCATED AT 90° OR 180° ALONG PIPELINE BEING SAMPLED. SAMPLE PIPING SHALL BE ROUTED TO ENSURE VALVE OPENS DOWN FOR EASE OF SAMPLE COLLECTION.
  - FLOW RATE FOR FI-440 IS THE SUM OF FI-313/14/15/16/17/18.

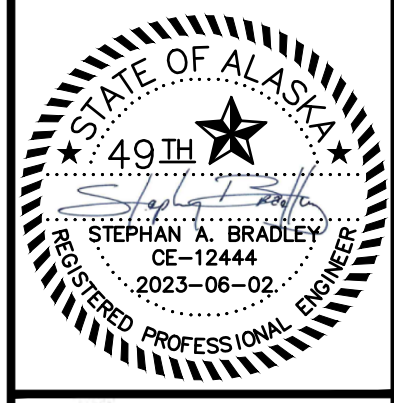
- INTERLOCK NOTES:**
- FLOW AT FI-440 MUST BE LESS THAN 975 GPM TO ENTER "DIRECT TO CLEARWELL" MODE, MV-436 OPEN, MV-435 & MV-437 CLOSED.

- CONSTRUCTION NOTES:**
- EXISTING SAND FILTERS CELLS CONVERTED TO CONTACT BASINS. OLD CELL NUMBERS MATCH NEW BASIN NUMBERS. TK-401A CONSISTS OF BASIN 1 AND BASIN 2. TK-401B CONSISTS OF BASIN 3 AND BASIN 4.
  - SEE SPECIFICATION SECTION 01 10 01 FOR CONSTRUCTION SEQUENCING.

TK-401A  
 1 SOUTH CHLORINE CONTACT TANK  
 MATERIAL: CONCRETE  
 CAPACITY: 249,000 GAL.

TK-401B  
 1 NORTH CHLORINE CONTACT TANK  
 MATERIAL: CONCRETE  
 CAPACITY: 249,000 GAL.

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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**CHLORINE CONTACT BASINS  
 PROCESS AND INSTRUMENT DIAGRAM**  
 SEC. 31; TOWNSHIP 62S; RANGE 84E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

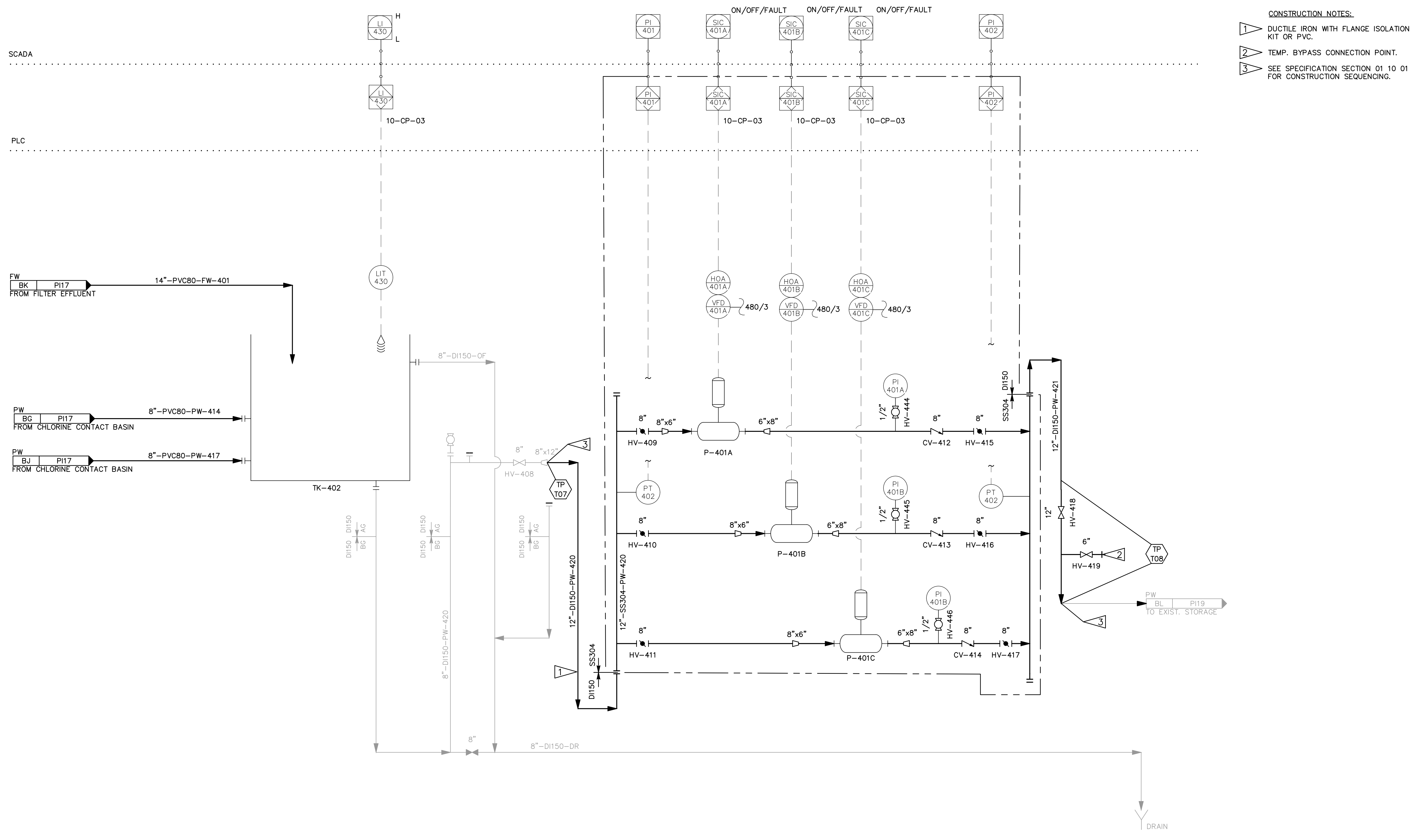
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- CONSTRUCTION NOTES:**
- 1 DUCTILE IRON WITH FLANGE ISOLATION KIT OR PVC.
  - 2 TEMP. BYPASS CONNECTION POINT.
  - 3 SEE SPECIFICATION SECTION 01 10 01 FOR CONSTRUCTION SEQUENCING.

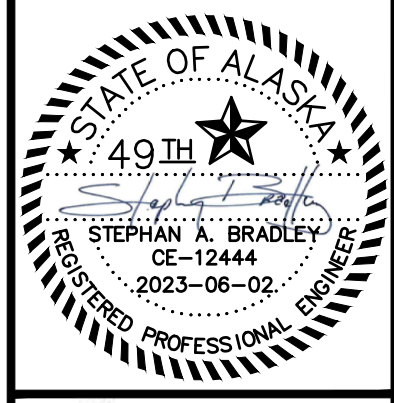
**TK-402**  
 EXIST. CLEARWELL  
 MATERIAL: CONCRETE  
 10' X 14'  
 CAPACITY: 10,200 GAL

**P-401A**  
 HIGH SERVICE PUMP  
 TYPE: VERTICAL INLINE  
 790 GPM @ 111 FT TDH  
 40 HP

**P-401B**  
 HIGH SERVICE PUMP  
 TYPE: VERTICAL INLINE  
 790 GPM @ 111 FT TDH  
 40 HP

**P-401C**  
 VERTICAL INLINE PUMP  
 TYPE: VERTICAL INLINE  
 790 GPM @ 111 FT TDH  
 40 HP

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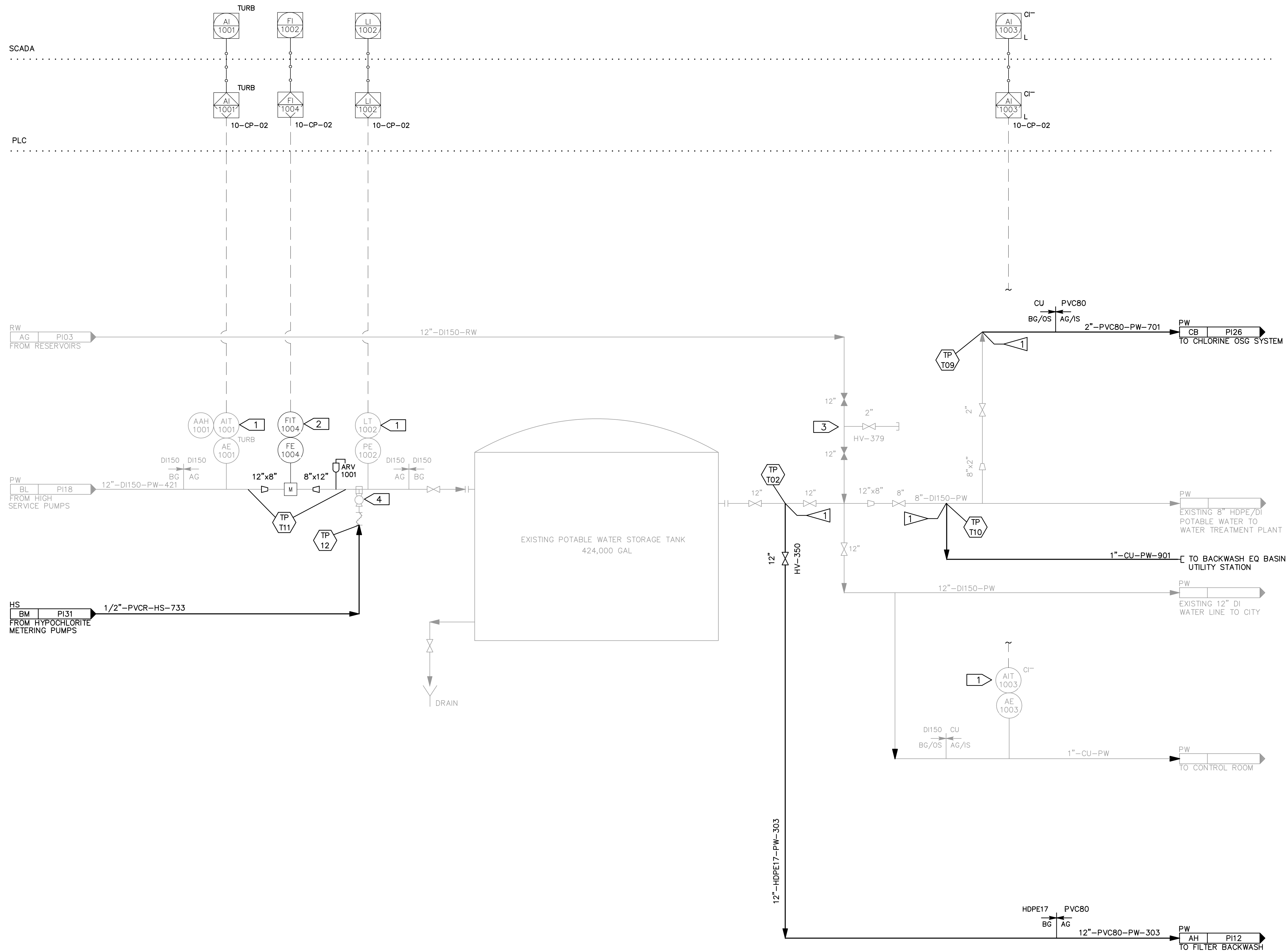
**WRANGELL WATER TREATMENT PLANT IMPROVEMENTS**  
 WRANGELL, ALASKA  
**CLEARWELL AND HIGH SERVICE PUMPS**  
**PROCESS AND INSTRUMENT DIAGRAM**  
 SEC. 31; TOWNSHIP 62S; RANGE 84E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.50206.01  
 DATE 06/02/23

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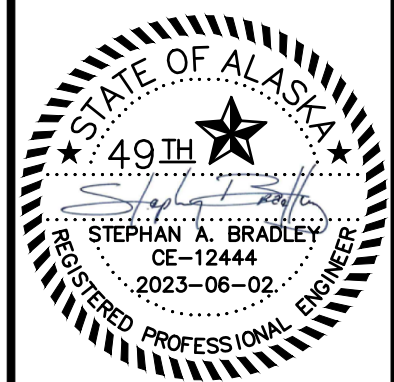
**PI-18**

\\bil-gis\BIL-Projects\28\_50206-01\Plant3D\CBW WTP\PID DWG\P22-C-PID-19.dwg PLOT DATE 2023-05-30 17:05 SAVED DATE 2023-05-30 11:33 USER: gplatt



- GENERAL NOTES:**
- 1 VERIFY EXISTING TRANSMITTERS CAN BE REUSED.
  - 2 LOCATED INSIDE EXISTING CONTROL ROOM BUILDING IN SHOP/STORAGE AREA.
  - 3 DOUBLE BLOCK AND BLEED VALVE ARRANGEMENT TO ISOLATE RAW WATER FROM POTABLE WATER.
  - 4 INJECTION QUILL IS EXISTING.
- CONSTRUCTION NOTES:**
- 1 SEE SPECIFICATION SECTION 01 10 01 FOR CONSTRUCTION SEQUENCING.

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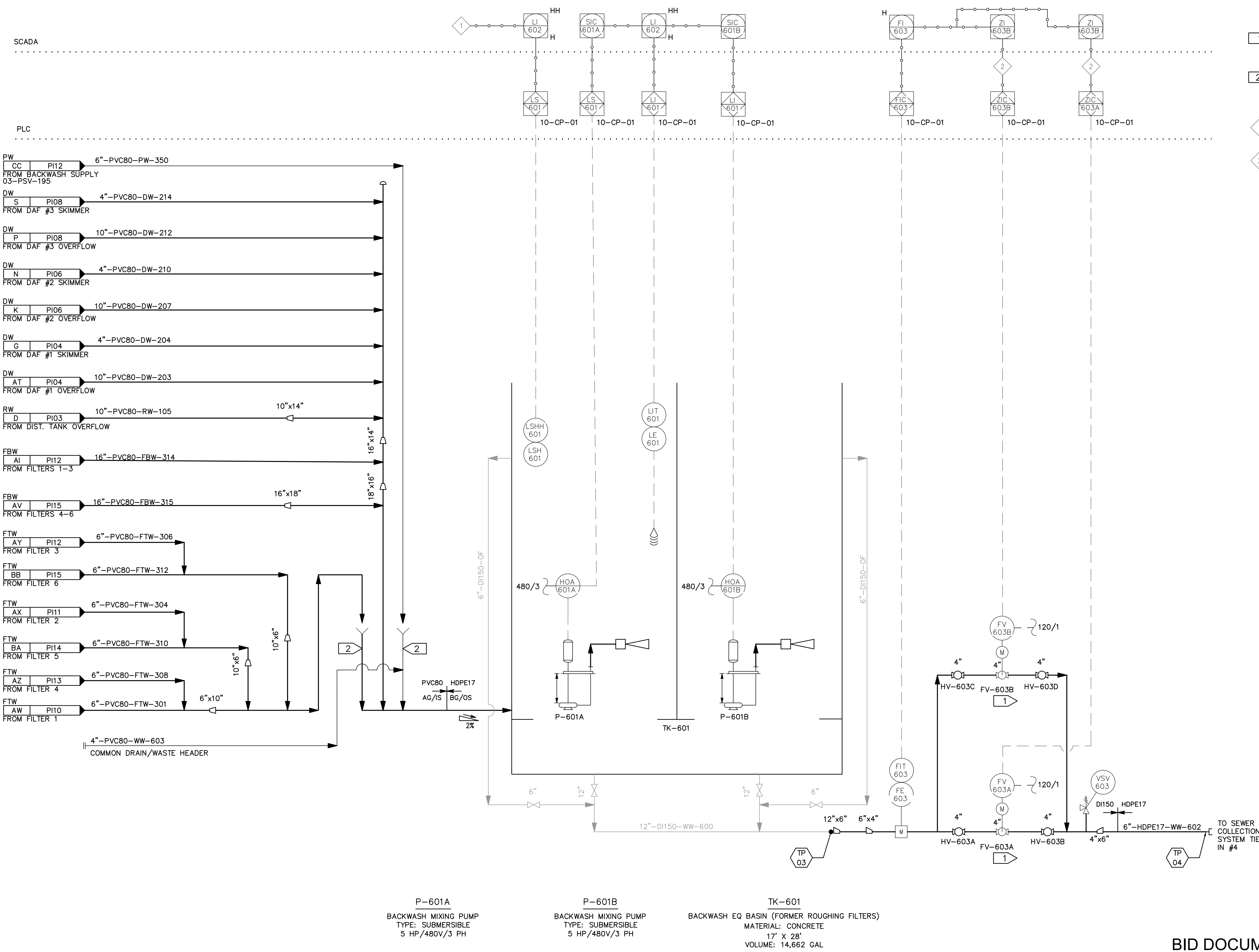
**WRANGELL WATER TREATMENT PLANT IMPROVEMENTS**  
WRANGELL, ALASKA  
**STORAGE AND DISTRIBUTION**  
**PROCESS AND INSTRUMENT DIAGRAM**  
SEC. 31; TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

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**PI-19**

\\bil-gis\BIL-Projects\28\_50206-01\Plant3D\CBW WTP\PID DWG\P22-C-PID-20.dwg PLOT DATE 2023-05-30 17:06 SAVED DATE 2023-05-30 11:20 USER: gplatt



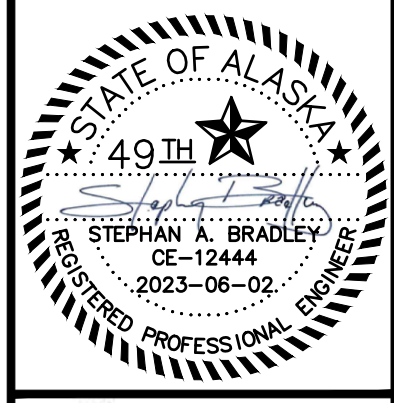
- GENERAL NOTES:**
- 1 SEGMENTED FLOW CONTROL BALL VALVE AND FLOW METER LOCATED IN A VAULT TO THE NORTHEAST OF BACKWASH EQ BASIN.
  - 2 AIR GAP
- INTERLOCK NOTES:**
- 1 BACKWASH EQ BASIN HIGH LEVEL LOCKS OUT FILTER BACKWASH.
  - 2 HIGH LEVEL IN SEWER COLLECTION SYSTEM LIFT STATIONS NODE 4 AND/OR NODE 6 CLOSES BACKWASH EQ BASIN OUTLET FLOW CONTROL VALVES. SIGNAL FROM NODE 4 AND NODE 6 SHALL BE TRANSMITTED VIA SCADA SYSTEM.

**P-601A**  
 BACKWASH MIXING PUMP  
 TYPE: SUBMERSIBLE  
 5 HP/480V/3 PH

**P-601B**  
 BACKWASH MIXING PUMP  
 TYPE: SUBMERSIBLE  
 5 HP/480V/3 PH

**TK-601**  
 BACKWASH EQ BASIN (FORMER ROUGHING FILTERS)  
 MATERIAL: CONCRETE  
 17' X 28'  
 VOLUME: 14,662 GAL

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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**FILTER BACKWASH HANDLING  
 PROCESS AND INSTRUMENT DIAGRAM**  
 SEC. 31; TOWNSHIP 62S; RANGE 84E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

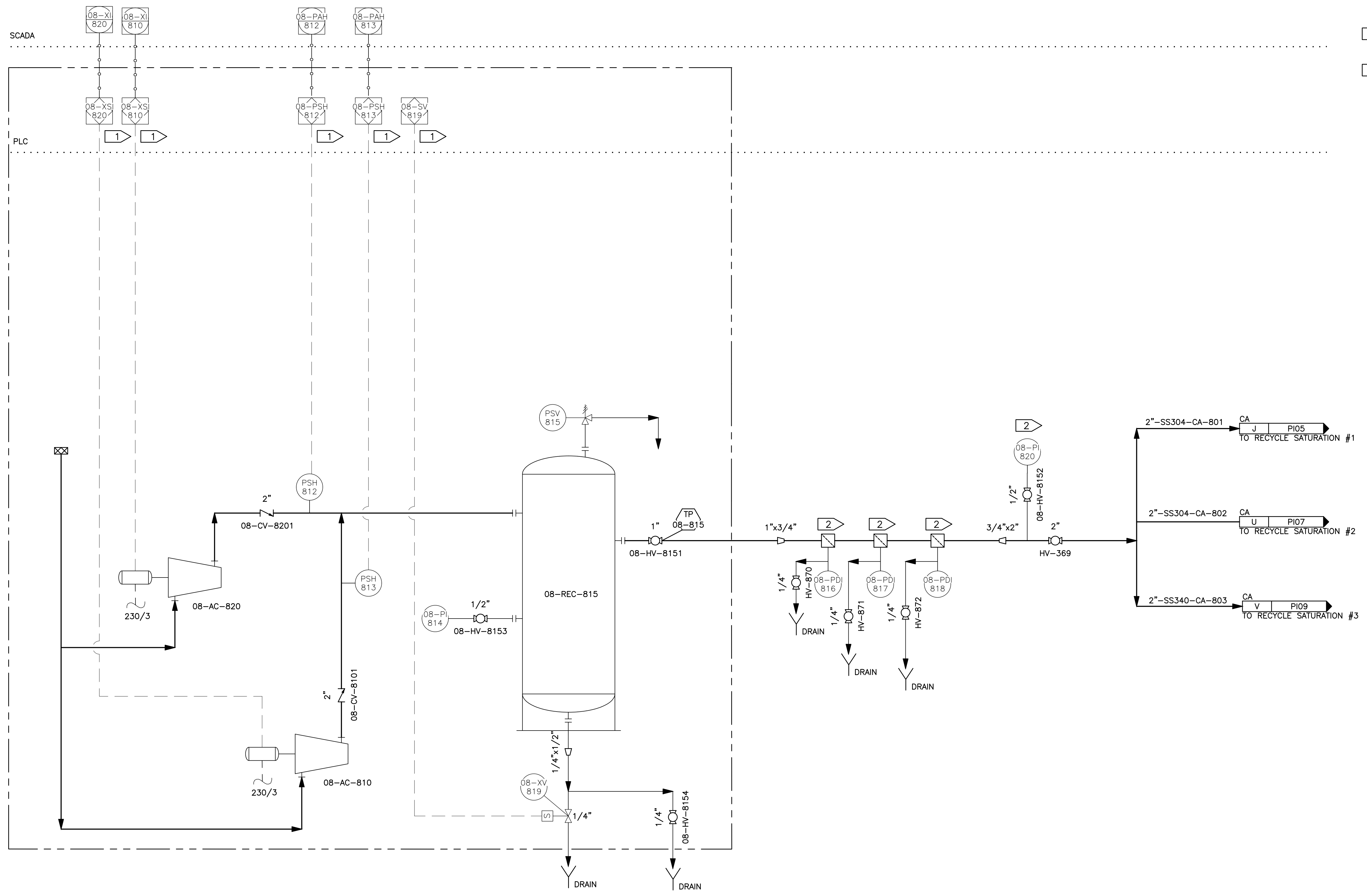
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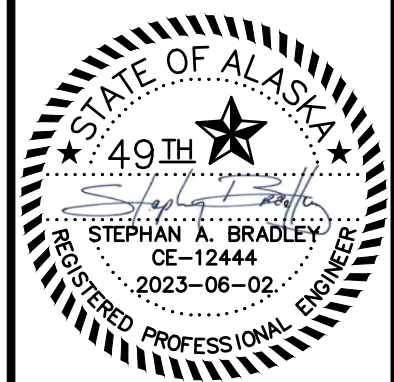
- GENERAL NOTES:**
- 1 INCLUDED IN COMPRESSOR VENDOR PACKAGE. CONFIRM REQUIRED COMMUNICATION TO SCADA..
  - 2 SEE AWC DRAWING 17805-PR-PID-004, FOR SCOPE OF SUPPLY.

**08-AC-820**  
CENTRIFUGAL COMPRESSOR  
16.8 SCFM @ 175 PSI  
5 HP  
230 V/3 PH

**08-AC-810**  
CENTRIFUGAL COMPRESSOR  
16.8 SCFM @ 175 PSI  
5 HP  
230 V/3 PH

**08-REC-815**  
RECEIVER VESSEL  
CARBON STEEL  
TBD X TBD  
120 GAL

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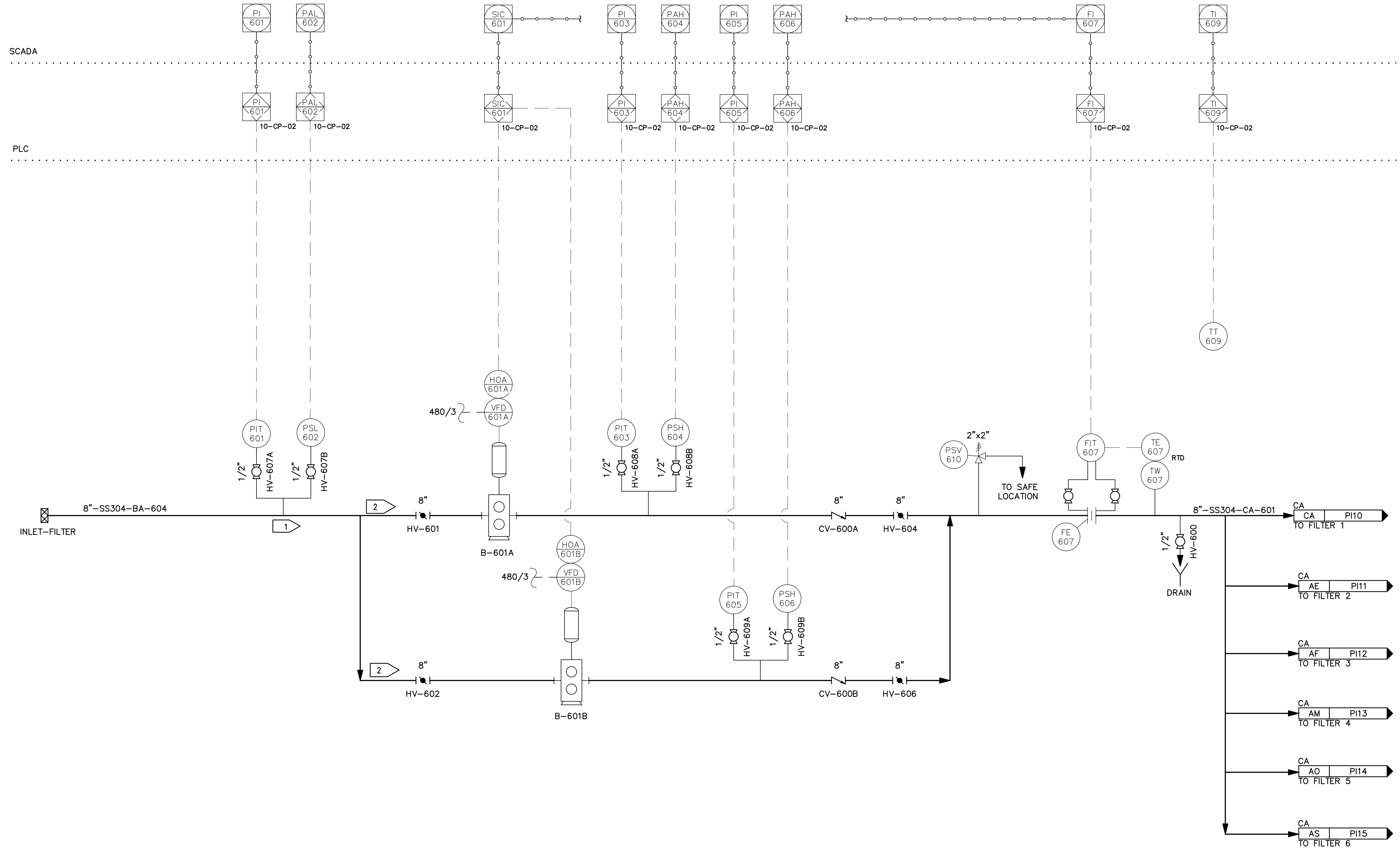
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
WRANGELL, ALASKA  
**DAF COMPRESSOR SYSTEM  
PROCESS AND INSTRUMENT DIAGRAM**  
SEC. 31; TOWNSHIP 62S; RANGE 84E  
CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.50206.01  
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**PI-21**

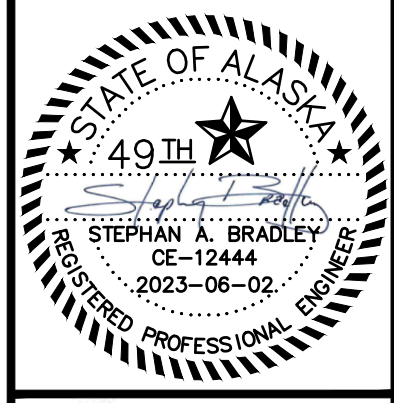
\\bil-gis\Projects\28\_50206-01\Plant3D\CBW WTP\PID DWG\P22-C-PID-22.dwg PLOT DATE 2023-04-28 13:52 USER: gplatt



- GENERAL NOTES:**
- SEE SPECIFICATION SECTION 43 11 33 FOR AIR SCOUR BLOWER DESIGN CRITERIA, SITE CONDITIONS, AND PERFORMANCE DATA.
  - SEE SPECIFICATION SECTION 43 11 33 FOR BLOWER SUCTION AND DISCHARGE SPECIALTY PIPING (SILENCERS, ETC) REQUIRED.

- B-601A**  
 1 FILTER AIR SCOUR BLOWER A  
 POSITIVE DISPLACEMENT BLOWER  
 KAESER MODEL CBS121  
 480 SCFM @ 5.0 PSIG (DISCHARGE)  
 25 HP/480V/3 PH
- B-601B**  
 1 FILTER AIR SCOUR BLOWER B  
 POSITIVE DISPLACEMENT BLOWER  
 KAESER MODEL CBS121  
 480 SCFM @ 5.0 PSIG (DISCHARGE)  
 25 HP/480V/3 PH

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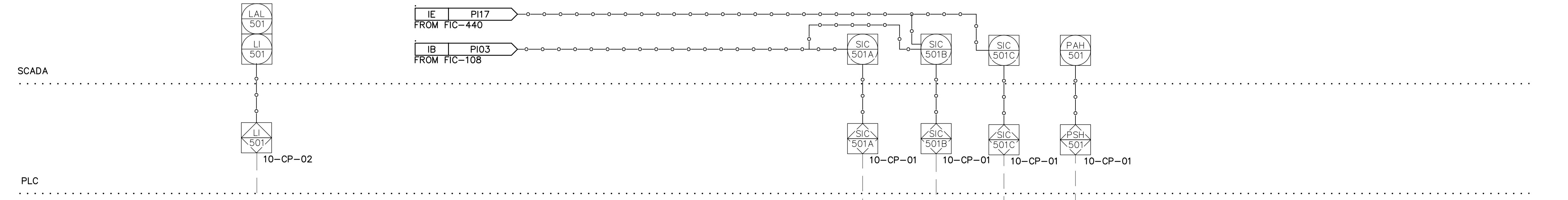
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**FILTER AIR SCOUR BLOWERS  
 PROCESS AND INSTRUMENT DIAGRAM**  
 SEC. 31; TOWNSHIP 62S; RANGE 84E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.50206.01  
 DATE 06/02/23

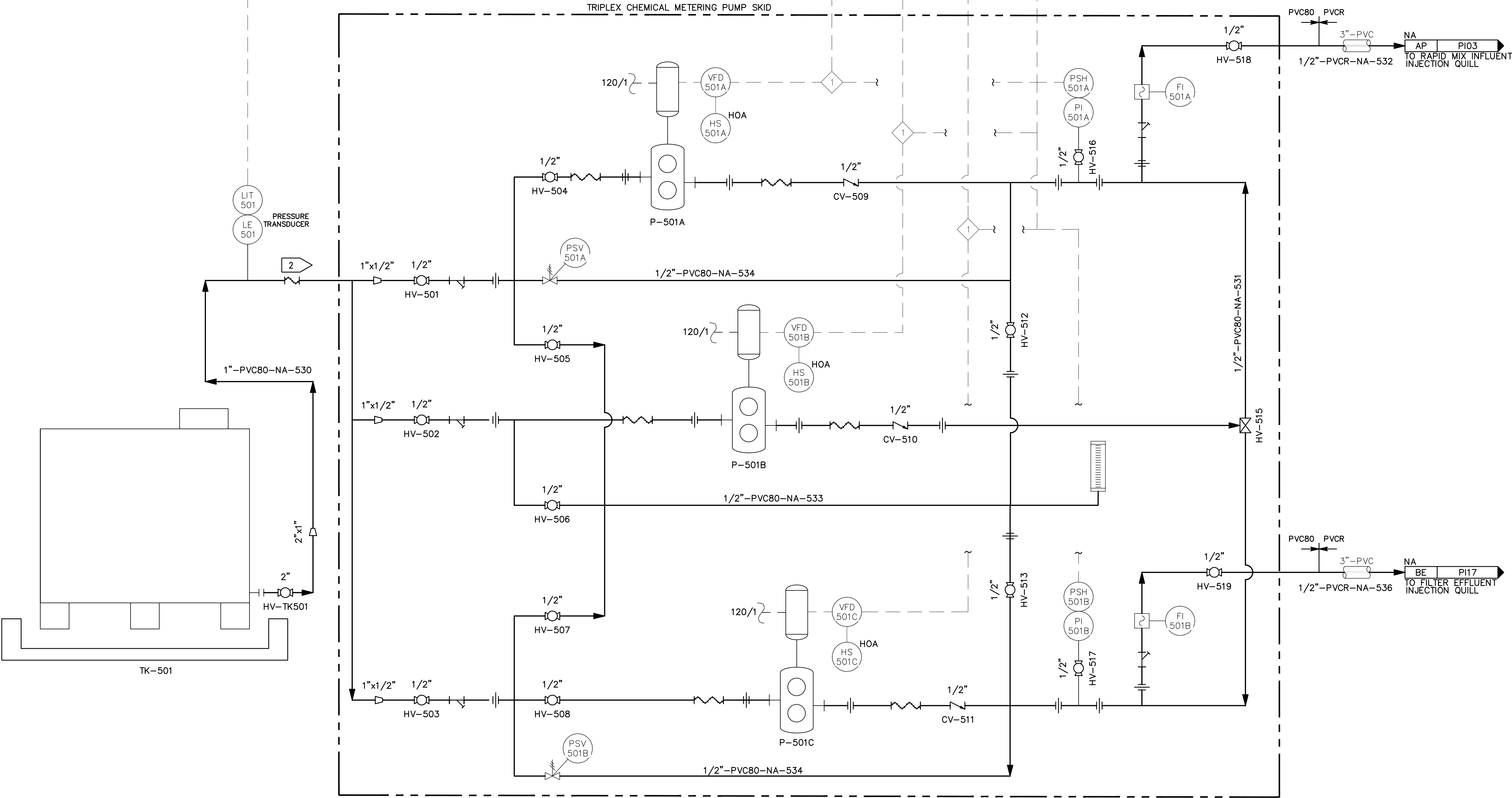
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**PI-22**

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- GENERAL NOTES:**
- ALL PUMPS SHALL BE CONFIGURED TO PUMP TO BOTH RAW WATER AND FINISHED WATER INJECTION POINTS. PUMP DESIGN POINT SHOWN IS BASED ON HIGHER PRESSURE INJECTION POINT (RAW WATER)
  - SEE MECHANICAL DETAIL 3/M-906 FOR TOTE SUCTION LINE CONNECTION DETAILS.
- INTERLOCK NOTES:**
- HIGH PRESSURE TRIPS PUMPS.



**TK-501**  
 30% NaOH TOTE  
 HDPE WITH GALVANIZED STEEL CAGE  
 40"W X 48"L X 53"H  
 330 GAL

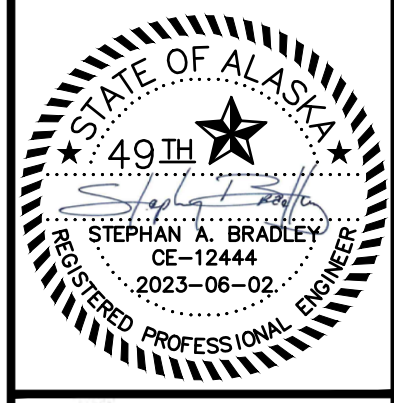
**P-501A**  
 CAUSTIC PERISTALTIC PUMP A (RW pH ADJUSTMENT)  
 BLUE WHITE M3  
 1.26 GPH @ 89 FT TDH  
 0.25 HP

**P-501B**  
 CAUSTIC PERISTALTIC PUMP B (COMMON STANDBY)  
 BLUE WHITE M3  
 1.26 GPH @ 89 FT TDH  
 0.25 HP

**P-501C**  
 CAUSTIC PERISTALTIC PUMP C (FW pH ADJUSTMENT)  
 BLUE WHITE M3  
 1.26 GPH @ 89 FT TDH  
 0.25 HP

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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**CAUSTIC FEED SYSTEM  
 PROCESS AND INSTRUMENT DIAGRAM**  
 SEC. 31; TOWNSHIP 62S; RANGE 84E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

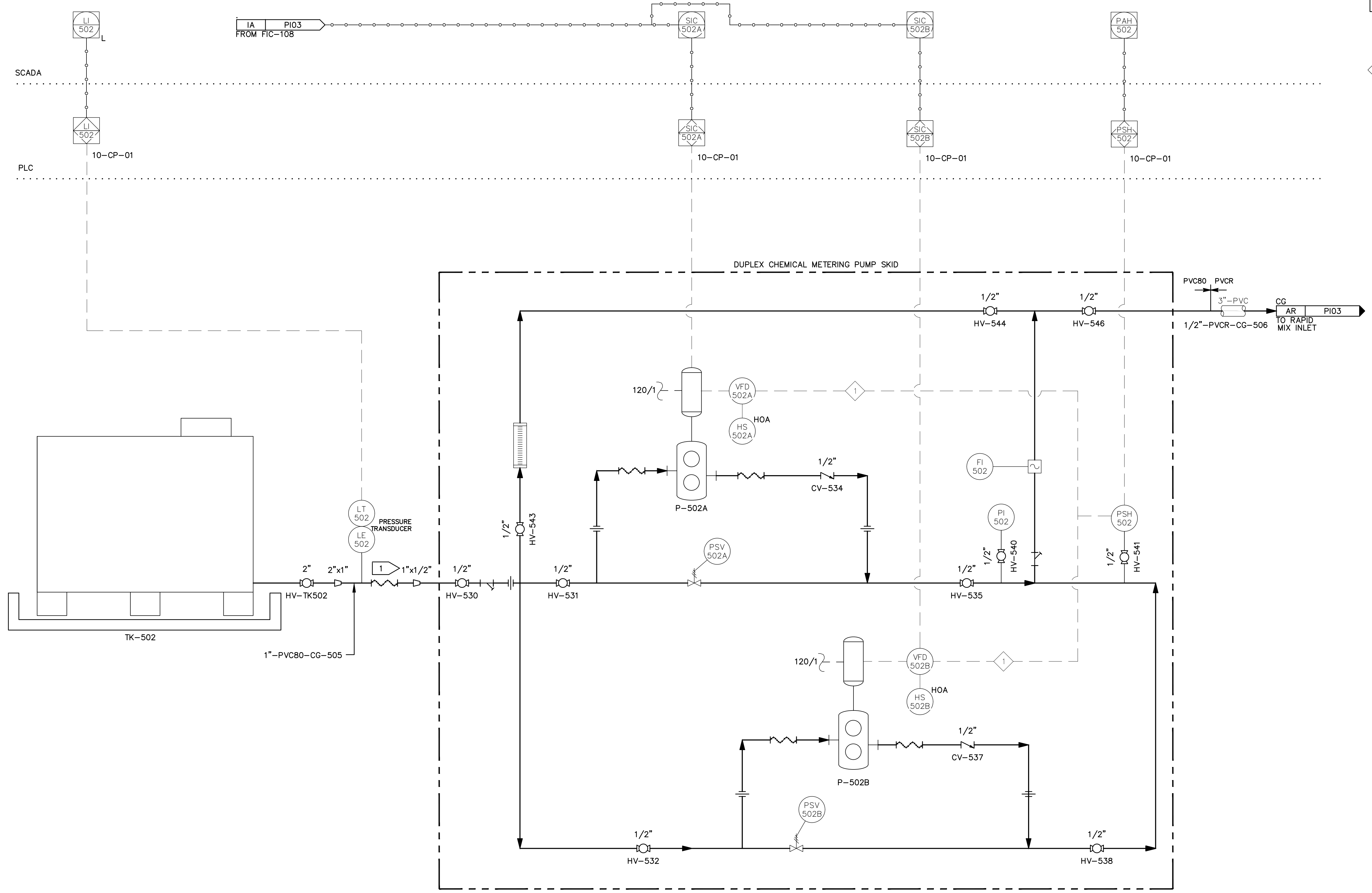
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**PI-23**



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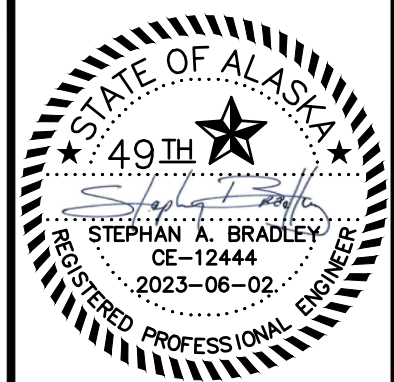
- GENERAL NOTES:**
- 1 SEE MECHANICAL DETAIL 3/M-906 FOR TOTE SUCTION LINE CONNECTION DETAILS.
- INTERLOCK NOTES:**
- 1 HIGH PRESSURE TRIPS PUMPS.

**TK-502**  
 COAGULANT TOTE  
 HDPE WITH GALVANIZED STEEL CAGE  
 40"W X 48"L X 53"H  
 330 GAL

**P-502A**  
 COAGULANT PERISTALTIC PUMP A  
 BLUE WHITE M3  
 2.87 GPH @ 89 FT TDH  
 0.25 HP

**P-502B**  
 COAGULANT PERISTALTIC PUMP B  
 BLUE WHITE M3  
 2.87 GPH @ 89 FT TDH  
 0.25 HP

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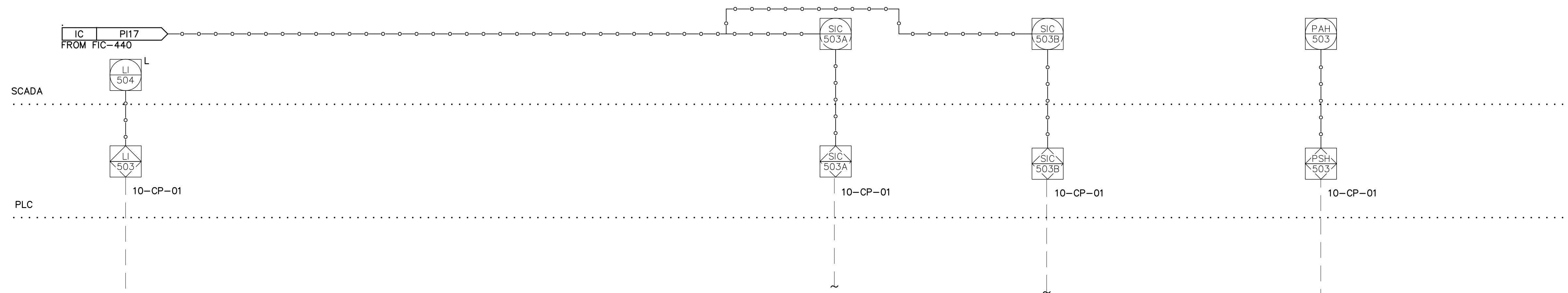
WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**COAGULANT FEED SYSTEM  
 PROCESS AND INSTRUMENT DIAGRAM**  
 SEC. 31; TOWNSHIP 62S; RANGE 84E  
 CITY AND BOROUGH OF WRANGELL, ALASKA

PROJECT 1528.50206.01  
 DATE 06/02/23

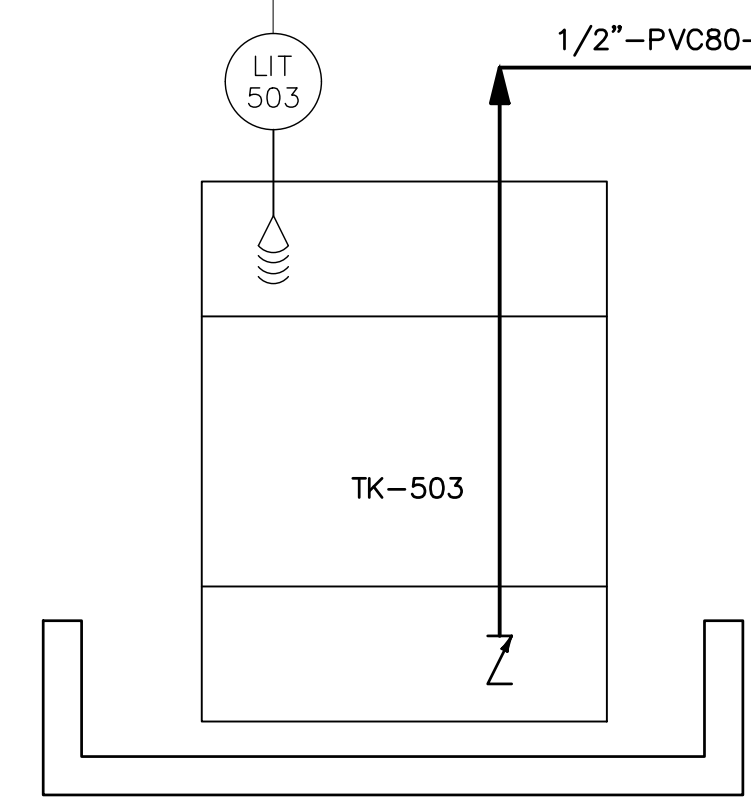
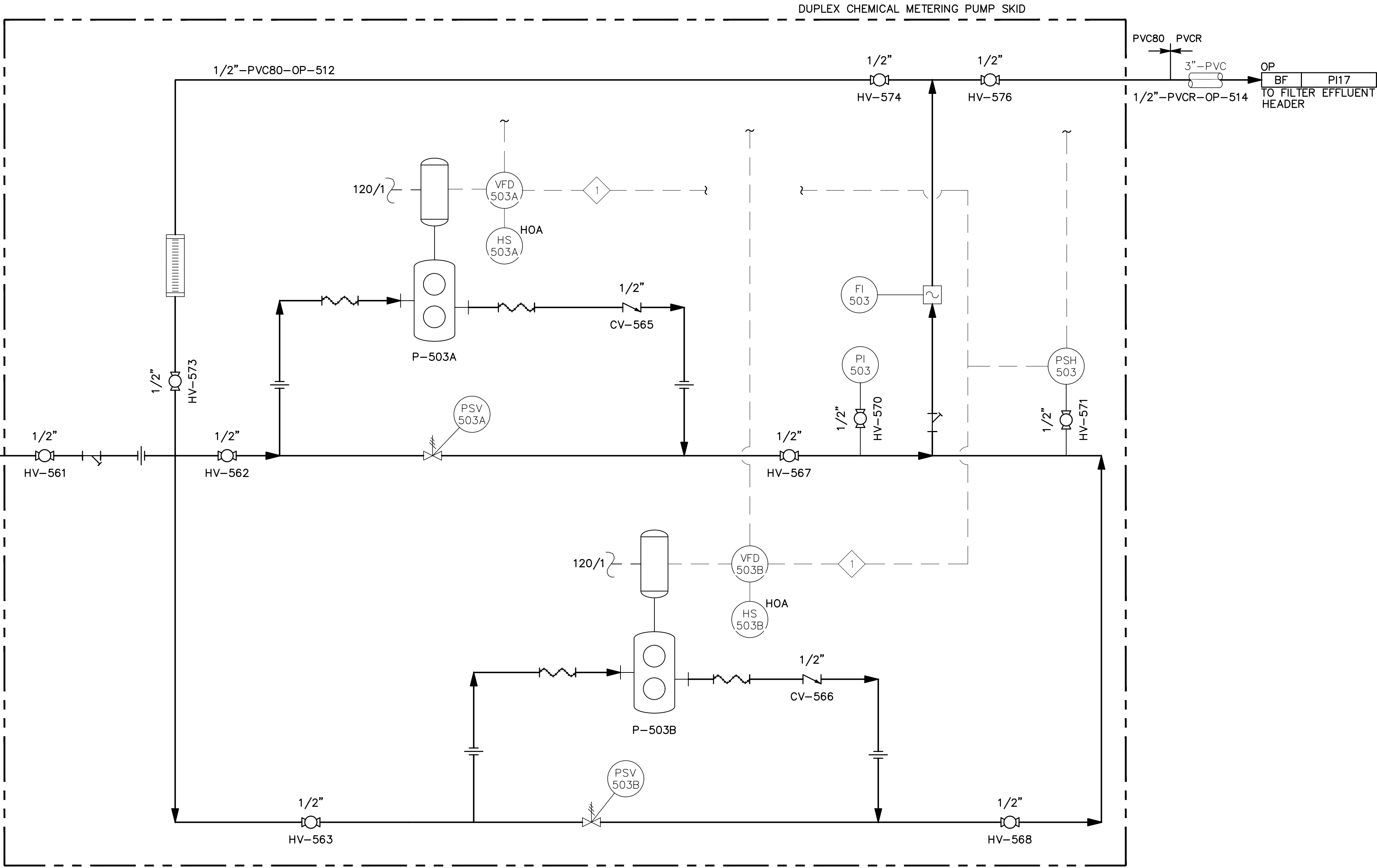
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- GENERAL NOTES:**
- 1 SEE MECHANICAL DETAIL 3/M-906 FOR TOTE SUCTION LINE CONNECTION DETAILS.
- INTERLOCK NOTES:**
- 1 HIGH PRESSURE TRIPS PUMPS.

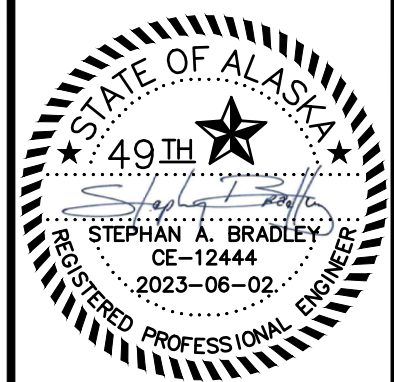


**TK-503**  
 ORTHOPHOSPHATE CONCENTRATE DRUM  
 MATERIAL: HDPE  
 20.5 IN DIA X 34.7 IN H  
 55 GAL

**P-503A**  
 ORTHOPHOSPHATE PERISTALTIC PUMP A  
 BLUE WHITE M3  
 0.21 GPH @ 22 FT TDH  
 0.25 HP

**P-503B**  
 ORTHOPHOSPHATE PERISTALTIC PUMP B  
 BLUE WHITE M3  
 0.21 GPH @ 22 FT TDH  
 0.25 HP

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WRANGELL WATER TREATMENT PLANT IMPROVEMENTS  
 WRANGELL, ALASKA  
**ORTHOPHOSPHATE FEED SYSTEM  
 PROCESS AND INSTRUMENT DIAGRAM**  
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