

CITY OF VALDEZ Project Title: New Well 5 Pumping Station Project No.: 21-310-2538 Contract No.: 2406

TO: All Recipients Date: November 12, 2025

SUBJECT: Addendum No.5

This eighty (80) page Addendum forms a part of the project scope documents and modifies the project scope for the above-referenced project. <u>Acknowledge receipt of this Addendum in the space provided on the Bid Form</u>. Failure to do so may subject the Bidder to disqualification.

This Addendum makes the following changes and/or clarifications:

- 1. The bid opening date remains unchanged. The bid date is Monday, November 17, 2025 at 3:00 pm.
- 2. Revised set of drawings attached (65 pages). Revisions made to sheets C5, C8 & D1.
- 3. Revised specification section 087100 Door Hardware (10 pages).

VALDEZ WELL HOUSE #5 QUESTIONS AND ANSWERS

1. Question: How long can Well #4 and the supply tank be isolated and kept out of service without affecting the city water supply and demand? If the answer is shorter than the actual time required to install the D-1 assembly, including flushing, chlorination, and Bac T results (24 hours), how much water will need to be supplied to the system from Well #4 and the tank?

Answer: Eight (8) hours. Wells # 1 and # 2 and water storage tank 1 are serviceable and capable of keeping the City in water (depending on City water usage) during time needed if closely coordinated. Figure on special timing and coordination if needed to fit the connections and flushing into the City's water usage. The City has the well and storage capacity to survive with well # 4 and the south tank for a while.

2. Question: Is there an isolation valve on the HDPE from the Well # 4 tank which will be required for the D-1 tie-in?

Answer: The 12" fill and service pipes to and from the tank and the 12" pipe from well # 4 are ductile iron. One 12" pipe coming from Egan (currently dead ended) is HDPE. Well # 4 can be shut off, and the service pipe out of the tank has an isolation valve at the tank. We have operated the tank service valve, it moves freely, so it will cut off most of the water from the tank service pipe. The existing valves are old so they may not be watertight. Figure on some water coming through during the connection as well as draining the pipes when they are cut.

3. Question: Please provide isolation details necessary to properly flush, chlorinate the D-1 installation.

Answer: Well # 4 will be shut off, so the 12" ductile iron pipe to well #4 can be isolated. The 12" ductile iron fill pipe from the tank has no valve but the pipe goes up the tank and fills to an elevated inlet in the tank. The tank can be below the inlet to reduce the water encountered to what is in the pipe. The 12" ductile iron service pipe has a valve at the tank. The 12" HDPE pipe is not currently connected and has a relatively new valve to connect to. The 12" ductile iron service pipe to Egan has valves in Egan to isolate. We will disinfect the connections as best we can.

4. Question: The plans indicate that the existing valves may not shut off properly. If that is the case how will adequate testing be done?

Answer: The existing 12" valve on the south side of Egan is only 4 years old. We do not anticipate trouble with that. We will test to the new valves. In small sections where we connect to existing pipe and do not have isolation valves, we will do a visual before backfilling.

5. Question: Will the City water from Well #4 and tank have enough pressure and volume to bore flush at the D-1 tie-in?

Answer: Yes, depending on what the water usage (i.e. if the canneries are running) in the system is at that time. Figure on special timing and coordination if needed to fit the connections and flushing into the City's water usage.

6. Question: Is it the intent to bore flush, chlorinate and pressure test the existing 12" main from Well #5 tie-in to the new Well #4?

Answer: No. This pipe was installed in the past 4 years and was flushed, disinfected, and tested previously.

7. Question: Will the other existing wells maintain the supply required for the city during the work required?

Answer: Yes. Wells # 1 and # 2 and water storage tank 1 are serviceable and capable of keeping the city in water (depending on City water usage) during time needed if closely coordinated. Figure on special timing and coordination if needed to fit the connections and flushing into the City's water usage. The City has the well and storage capacity to survive with well # 4 and the south tank for a while.

8. Question: Coatings and Wrappings: Is it required that all new DIP pipe and appurtenances will be coated and wrapped per spec 33100-3 2.02 section E?

Answer: Federal safety blue Sherwin-Williams Macropoxy epoxy for potable water or equal, 2 coats and 10 mils minimum on all exposed potable water piping and fittings. It is acceptable for buried factory coated ductile iron fittings to be completely wrapped in plastic like the pipe. The fittings, if wrapped in plastic like the pipe, do not have to be

coated and wrapped in Protecto wrap.

9. Question: Is there a Geotech Report available for this project? If so, can you please provide a copy?

Answer: We do not have a Geotech Report available for this site. We provided the subsurface data available in Addendum #4.

10. Question: The plans are vague regarding I.E., of the new or existing piping. If available, can you please provide the elevations of the existing waterlines or as-builts?

Answer: See attached proposed and existing pipe elevations on the revised plans. The elevations are clouded on sheets C5, C8 and D1.

11. Question: Additional clarification is needed for Amendment 4 question 10. It would appear that currently the system Integrator is direct to the owner and is providing the listed equipment in section 409100 Part 2 – 2.01. Please confirm. Spec 409100-1.02 C. The I&C system provided as part of this Contract is an addition and modification to the Owner's existing SCADA system, which was designed and furnished by S&B, Inc. For compatibility with their comprehensive system, I&C design and system integration will be provided by the Owner's I&C System Integrator, S&B, Inc. D. Installation of equipment supplied in this section shall be performed by the electrical and mechanical contractors as assigned by the General Contractor. Spec 409100-2.01-4 4. The System Integrator shall furnish MCC with VFDs, control panels, field instrumentation, and sensors for installation by the Contractor.

Answer: Spec Section 409100-1.02 C, identifies that S&B is the City's System Integrator that the Contactor must use for this project. The System Integrator is NOT direct to the Owner, rather direct to the Contractor. Typically to the Electrical Contractor.

Spec Section 409100-1.02D, provides direction that the Contractor is responsible for installation of all equipment supplied by the System Integrator as listed in 409100-2.01-4

12. Question: 1. Section 074217 (1.11 C) The specifications refers to a Weather Tightness Warranty (WTW) for the metal roofing system. Our metal supplier noted that WTW coverage cannot typically be provided for projects located within 1,500 feet of salt water. Given the site's proximity to the coast, please confirm whether a WTW is required for this project, or if a Coastal Fluothane paint warranty will be acceptable in lieu of the WTW due to its location.

Answer: Site is located approximately 3200' from salt water. WTW generally exclude corrosion or deterioration caused by exposure to marine atmosphere regardless of finish. The Owner elects to waive the WTW.

13. Question: Section 01505 states that "Mobilization shall include obtaining permits, insurance, taxes, overhead and profit, vehicles, equipment, fuel, moving plant and equipment onto site; furnishing and erecting plants, temporary buildings, and other construction facilities, as required for the proper performance and completion of the

Work." a. Please confirm whether this means that the costs for overhead, profit, vehicles, equipment, and fuel for the entire duration of the project are to be included under the Mobilization/Demobilization line item on the bid schedule, or if these costs should instead be distributed within their respective work items.

Answer: The contractor is responsible for bidding the project in a manner that adequately covers their costs of doing business.

14. Question: Please confirm whether the Owner will be responsible for the costs and coordination of required special inspections and materials testing, or if these are to be included in the contractor's scope of work.

Answer: The Owner will pay for testing and pay for and provide special inspections.

15. Question: The specifications for door hardware appear to be incomplete. Could you please include any applicable ANSI references or callouts?

Answer: Replace specification 087100 with attached specification. Ten (10) pages.

16. Question: The specs reference a 7-pin "Large Format" key system. Can you please confirm if this is the correct system to be used, or provide clarification on the key system requirements if otherwise?

Answer: The city uses a Best 9K 7-pin core system.

17. Question: Section 33100 - 2.02.E - All valves and fittings shall receive 2 coats of Protecto wrap. Question: Can we supply epoxy coated ductile fittings and valves?

Answer: All buried ductile iron pipe, fittings and valves shall be protected as specified in the Technical Specifications, Section 33100.

18. Question: Can the main new well pump be used for the pumping test? And does it need to be removed for disinfection?

Answer: The main or new well pump may be used for test pumping. The pump does not have to be removed for disinfection.

Attached documents:

- Revised set of drawings attached (65 pages).
- Revised specifications section

REVISED NEW WELL 5 PUMPING STATION

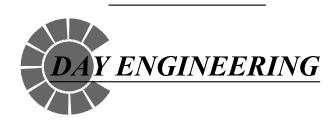
CITY OF VALDEZ, ALASKA PROJECT NO. 21-310-2538 **CONSTRUCTION CONTRACT NO. 2227 NOVEMBER 2025**

OWNER





ENGINEER



PO BOX 651 • EUREKA, NEVADA 89316 • (775) 293-1743 5 EAST PARK STREET • FALLON, NEVADA 89406 • (775) 423-9090

CONSULTANTS

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STRUCTURAL | PND ENGINEERS DAVID BENTTI, P.E., S.E. 625 SOUTH COBB STREET PALMER, AK 99645

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ELECTRICAL & MECHANICAL RSA MECHANICAL & ELECTRICAL CONSULTING ENGINEERS DAVIN BLUBAUGH, P.E. BRIAN PEKAR, P.E. 670 WEST FIREWEED LANE, SUITE 200 ANCHORAGE, ALASKA 99503

CONTROLS/INTEGRATION STEAD AND ASSOCIATES JAMES SWANSON 13200 S.E. 30TH ST. BELLEVUE, WA 98005 (425) 644-1700

(907) 276-0521



SHEET LIST

SHEET NO.	<u>DESCRIPTION</u>
C1 C2 C3 C4 C5 C6 C7 C8 D1-D2 G1.1 G0.02 A1.1 A2.2 A3.1 A5.2 A4.1 A5.3 A6.1 S1.4 S1.5 S2.0 S4.0 M1 M2 M3 E1 E2 E3 E4-E5 I1-I2 I3 I4 I5 I6 I7 I8 I9 I1 I1 I1 I1 I1 I1 I1 I1 I1 I1	TITLE SHEET GENERAL NOTES, ABBREVIATIONS, AND LEGEND SITE PIPING PLAN SITE GRADING PLAN BUILDING PIPING PLAN AND SECTION WELL 5 TRANSMISSION MAIN BUILDING DRAIN PLAN AND PROFILE WELL CROSS SECTION GENERAL DETAILS CODE PLAN DESIGN DEVELOPMENT
17 18 19 110	SUBMERSIBLE PROBE INSTALLATION MAG FLOWMETER (NETWORKED) MAG FLOWMETER (DISCRETE) DETAIL MAG METER INSTALLATION
112 113 114 115 116	FLOOD SWITCH DÉTAIL INTRUSION LIMIT SWITCH DETAIL STATION ANTENNA INSTALLATION DETAIL POWER METER (NETWORKED) GAUGE PRESSURE TRANSMITTER
117 118 119 20 21 22	PRESSURE TRANSMITTER DETAILS BLOCK DIAGRAM AUTOMATION POWER & ANCILLARY SYSTEMS RTU BLOCK DIAGRAM PUMP ROOM WELL OPERATIONS BLOCK DIAGRAM CONTROL SYSTEM NETWORK DIAGRAM WELL 5 BACKUP PANEL PRESENTATION WELL 4/ RESERVOIR 2 BLOCK DIAGRAM RIO PANEL
122 123 124	WELL 4/ RESERVOIR 2 BLOCK DIAGRAM RIO PANEL WELL 4/ RESERVOIR 2 BLOCK DIAGRAM CONTROL SYSTEM NETWORK DIAGRAM WELL 4/ RESERVOIR 2 I/O BACK PANEL PRESENTATION

LOCATION MAP

VALDEZ, ALASKA

BASIS OF BEARINGS:

THE BASIS OF BEARING, COORDINATES, BEARINGS, DISTANCES ARE ALL BASED ON HIGH PRECISION GPS RTK, NAD83 ALASKA STATE PLANE ZONE 3 IN FEET.

THE BASIS OF ELEVATION IS BASED ON HIGH PRECISION GPS RTK, NAVD88 GEOID 12b.

GENERAL NOTES

- 1. ALL CONSTRUCTION AND MATERIALS FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "ORANGE BOOK" - STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION.
- 2. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, INCLUDING A BUILDING PERMIT, A DUST CONTROL PERMIT AND A STORMWATER POLLUTION PREVENTION PLAN, AS WELL AS BONDING FROM THE APPROPRIATE AGENCIES PRIOR
- 3. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT THE WORK PERFORMED UNDER THE CONTRACT SHALL RESULT IN A COMPLETE OPERATING SYSTEM IN SATISFACTORY WORKING CONDITION WITH RESPECT TO THE FUNCTIONAL PURPOSES OF THE INSTALLATION. IF THERE ARE ANY DISCREPANCIES REGARDING THE IMPLIED MEANING OF THESE PLANS, THE CONTRACTOR IS DIRECTED TO CONTACT THE CONSULTING ENGINEER IMMEDIATELY.

DAY ENGINEERING PO BOX 651 EUREKA, NEVADA 89316 (775) 293–1743

OWNER OF WATER UTILITIES CITY OF VALDEZ PO BOX 307 VALDEZ, AK 99686

- 4. THE CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK IN CONNECTION WITH CONSTRUCTION.
- 5. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE PROSECUTED TO COMPLETION WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.
- 6. PRIOR TO FINAL ACCEPTANCE, BOND RELEASES, AND NOTICE OF COMPLETION, CERTIFIED LEGIBLE AS-BUILT DRAWINGS MUST BE SUBMITTED TO CITY OF VALDEZ. AS-BUILT DRAWINGS MUST SHOW ALL CHANGES AND ACTUAL FIELD LOCATIONS. IN THE ABSENCE OF CHANGES, A COPY OF APPROVED DRAWINGS WILL BE REQUIRED STATING "INSTALLED AS PER DRAWINGS" AND CERTIFIED AS SUCH BY THE ENGINEER.
- 7. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITION BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND INGRESS AND EGRESS TO SAID CONSTRUCTION. EXTENT OF TRANSITION TO BE DETERMINED BY THE ENGINEER.
- 8. BEFORE ANY WORK IS STARTED IN THE ADOT RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE AND MEET ALL REQUIREMENTS OF THE ADOT ENCROACHMENT PERMIT. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING PUBLIC STREETS IMMEDIATELY AFTER THE FIRST GRADING WORK IS ACCOMPLISHED AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "ALASKA TRAFFIC MANUAL" - CURRENT EDITION, AND TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" - CURRENT EDITION, AND BE APPROVED BY THE ADOT ENGINEER BEFORE CONSTRUCTION BEGINS. A COPY OF THE ADOT PERMIT SHALL BE ON SITE AT ALL TIMES.
- 9. EXISTING UTILITIES ARE LOCATED ON PLANS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR THE PROTECTION OF UTILITIES AND THE DESIGN ENGINEER BEARS NO RESPONSIBILITY FOR UTILITIES NOT SHOWN ON THE PLANS OR NOT IN THE LOCATION SHOWN ON THE PLANS. THIS INCLUDES ALL SERVICE LATERALS OF ANY KIND. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING OVER OR NEAR EXISTING GAS MAINS AND UNDERGROUND POWER AND TELEPHONE LINES.
- 10. ALL EXCESS OR UNSUITABLE MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH CITY OF VALDEZ CODES.
- 11. PROTECTION AND REPLACEMENT OF SURVEY MONUMENTS OR PROPERTY STAKES NOT DELINEATED ON THE CONTRACT DRAWINGS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. REPLACEMENT OF SURVEY MONUMENTS OR PROPERTY STAKES SHALL BE DONE TO ENGINEER'S SATISFACTION.
- 12. AT LEAST TWO WORKING DAYS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES THAT MAY HAVE FACILITIES IN THE AREA OF CONSTRUCTION.
- 13. MODIFICATIONS TO EXISTING UTILITIES SHALL CONFORM TO CITY OF VALDEZ PUBLIC WORKS DESIGN STANDARDS. CONTRACTOR SHALL NOTIFY AFFECTED UTILITY 48 HOURS IN ADVANCE OF ANY WORK.
- 14. THE CONTRACTOR SHALL TAKE REASONABLE MEASURES TO PROTECT EXISTING IMPROVEMENTS FROM DAMAGE AND ALL SUCH IMPROVEMENTS DAMAGED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED OR RECONSTRUCTED TO CITY OF VALDEZ'S SATISFACTION AT THE EXPENSE OF THE CONTRACTOR.
- 15. CONTRACTOR SHALL POTHOLE EXISTING UTILITIES TO VERIFY DEPTHS, EXISTING MATERIALS AND LOCATION PRIOR TO
- 16. ALL DRAINAGES, ROADWAYS, CULVERTS, SLOPES, DITCHES, CURB & GUTTER & SIDEWALKS, FENCES, UTILITIES, AND STRUCTURES SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION BY THE CONTRACTOR IN ACCORDANCE WITH
- 17. CONTRACTOR SHALL STABILIZE TRENCHING ACTIVITIES INCLUDING EXISTING WATER AND SEWER LINES, OVERHEAD POWER POLES, EXISTING STRUCTURES AND WHEREVER NECESSARY, SUCH AS AT CROSSINGS AND ADJACENT TO STORM DRAIN HEADWALLS TO MAINTAIN TRENCH STRUCTURAL INTEGRITY.

PUBLIC WORKS UTILITY NOTES

- 1. ALL WORK AUTHORIZED BY THIS PLAN SHALL CONFORM TO CITY OF VALDEZ DESIGN STANDARDS, LATEST REVISION AND THE SPECIAL PROVISIONS OF THE PROJECT.
- NO OPEN TRENCH SHALL BE ALLOWED ACROSS ANY STREET OR WITHIN TEN FEET (10') OF ANY TRAVEL-WAY, EXCEPT WHEN WORK IS IN ACTUAL PROGRESS. AREAS COVERED BY ACCEPTABLE STEEL PLATES ARE NOT TO BE CONSTRUCTED AS A TRENCH. NO OPEN TRENCH PERMITTED IN EXCESS OF 500 FEET OR LENGTH NECESSARY TO ACCOMMODATE PIPE INSTALLATION IN A SINGLE DAY, WHICHEVER
- 3. ALL PERMITS AND APPROVED PLANS FOR THIS WORK MUST BE ON THE JOB SITE AT ALL TIMES.
- 4. ALL TRENCH CROSSINGS AND BACKFILL SHALL MEET THE STANDARD SPECIFICATIONS UNLESS OTHERWISE STATED.
- 5. CONTRACTOR SHALL MAINTAIN AN ON-GOING PROCESS FOR REMOVAL OF ALL SPILLAGE OF EXCAVATED MATERIAL ON ALL PAVED STREETS.
- . INSPECTIONS ARE REQUIRED. THE CONTRACTOR SHALL NOTIFY ALL EFFECTED PUBLIC ENTITIES 48 HOURS MINIMUM PRIOR TO COMMENCEMENT OF WORK.
- 7. ANY SPECIAL INSPECTIONS SHALL BE AS REQUIRED PER SPECIFICATIONS.
- 8. COMPACTION TESTS ARE REQUIRED. SOIL TESTING SHALL COMPLY WITH THE STANDARD SPECIFICATIONS.

WATER NOTES

- 1. ALL PIPE FOR THIS PROJECT SHALL BE HDPE WHERE SHOWN.
- 2. ALL PIPE SHALL BE FLUSHED AND PRESSURE TESTED PER AWWA C600 (LATEST REVISION).
- 3. ALL PIPE SHALL BE DISINFECTED PER AWWA C651 (LATEST REVISION).
- 4. THE CONSTRUCTION OPERATION SEQUENCING FOR MAINTAINING WATER SUPPLY SHALL BE DEFINED BY THE CONTRACTOR AND APPROVED BY THE CITY OF VALDEZ PRIOR TO CONSTRUCTION.
- 5. THE CONTRACTOR SHALL NOTIFY THE CITY OF VALDEZ 48 HOURS IN ADVANCE OF ANY WATER MAIN SHUTDOWNS OR TIE-INS. THE TOTAL TIME OF ANY WATER SERVICE INTERRUPTION IS LIMITED TO 4 HOURS MAXIMUM. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING VALVES.
- 6. ALL WATER SERVICES 2 INCHES OR LESS SHALL BE IPS, PE PIPE; SERVICES 3 INCHES OR GREATER SHALL BE PVC C900 DR 18 OR AS SPECIFIED ON THE PLANS.
- MAINTAIN 18 INCHES VERTICAL AND 5 FEET HORIZONTAL SEPARATION BETWEEN ALL UNDERGROUND UTILITY LINES AND WATER LINES. IF WATER LINE IS BELOW POWER LINE OR IS WITHIN 18 INCH VERTICAL SEPARATION OF POWER LINE, POWER/TELEPHONE LINE SHALL BE ENCASED 4 INCHES MINIMUM OF CONCRETE EXTENDING 5 FEET EACH SIDE OF THE CROSSING. CONCRETE ENCASEMENT OF WATER LINES IS NOT ALLOWED.
- 8. WATER VALVE MARKERS SHALL BE BLUE CARSONITE UTILITY MARKER (CUM-375), 5'-2" WITH WATER VALVE DECAL (WV-XXX) OR APPROVED EQUAL. PLACE MARKER NO MORE THAN FIVE (5) FEET FROM
- 9. SATISFACTORY BACTERIOLOGICAL ANALYSIS MUST BE PROVIDED TO ADEC PRIOR TO PLACING A NEW WELL, WATER STORAGE TANK, OR DISTRIBUTION AND TRANSMISSION MAINS INTO SERVICE.
- 10. CONTRACTOR SHALL SEAL ALL OPENINGS OF UNFINISHED PIPE OR APPURTENANCES AT THE END OF EACH CONSTRUCTION DAY TO PREVENT THE INTRODUCTION OF CONTAMINATION.
- 11. CONTACT ADEC FOR COORDINATION PRIOR TO DISPOSAL OF HEAVILY CHLORINATED WATER.
- 12. ALL MATERIALS COMING INTO CONTACT WITH POTABLE WATER SHALL BE NSF 61 LISTED AND CERTIFIED AS LEAD-FREE.
- 13. THE HDPE PIPE MANUFACTURER WILL CERTIFY THAT THE RESIN CAN BE USED IN THE CITY OF VALDEZ CLIMATE.
- 14. THE HDPE PIPE MANUFACTURER'S WELDABILITY TESTING RECOMMENDATIONS WILL BE SUBMITTED FOR APPROVAL BY THE ENGINEER AND FOLLOWED BY THE CONTRACTOR.
- 15. BUTT FUSION OF HDPE JOINTS WILL PER THE MANUFACTURER'S RECOMMENDATIONS, AND A DATA LOGGER WILL RECORD THE FUSION EQUIPMENT TEMPERATURE, TIMES, AND PRESSURES. ALL WELDS SHALL BE ACCOMPLISHED IN THE PRESENCE OF A QUALIFIED INSPECTOR PROVIDED BY THE ENGINEER.
- 16. HDPE PIPE BUTT FUSION WELDERS SHALL BE CERTIFIED TO OPERATE FUSION EQUIPMENT.
- 17. HDPE PIPE FUSION SHALL USE CERTIFIED EQUIPMENT. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL, AND FOLLOW, EQUIPMENT MANUFACTURER'S QA/QC, MAINTENANCE, AND CALIBRATION.
- 18. PARTS AND PIPE FOR THIS PROJECT IN CONTACT WITH POTABLE WATER SHALL NOT HAVE MORE THAN 0.25 PERCENT LEAD.
- 19. CONTRACTOR SHALL PROVIDE CERTIFICATION THAT ALL PARTS AND PIPE IN CONTACT WITH POTABLE WATER ARE NSF-61 CERTIFIED BY AN ANSI ACCREDITED ORGANIZATION.
- 20. FLUSHING AREA IS SHOWN ON THE PLANS (FROM FIRE HYDRANT). FLUSH WATER SHALL BE FLUSHED USING AN AIR GAP. CHLORINATED FLUSH WATER SHALL BE DECHLORINATED USING A DIFFUSER ON THE HYDRANT THAT CONTAINS SODIUM SULFITE TABLETS. THEN THE FLUSH WATER CAN BE PUT ON THE GROUND AND GRADED TO AVOID DAMAGE TO ADJACENT PROPERTY. FLUSHED WATER MUST MEET THE REQUIREMENTS OF 18 AAC 70.
- 21. THE WATER SAMPLE TAP FOR BACTERIOLOGICAL SAMPLES SHALL BE OUT OF THE FIRE HYDRANT. TWO SEPARATE SAMPLES TAKEN 24 HOURS APART MUST PASS AS NEGATIVE FOR COLIFORM BACTERIA BEFORE NEW WATER PIPING CAN BE CONNECTED AND PUT INTO SERVICE IN THE WATER SYSTEM.

ABBREVIATIONS

	ABBREVIAT	IONS	
A AC ACP ADJ AL AD BC	AREA ASPHALTIC CONCRETE ABESTOS CEMENT PIPE ADJUST, ADJUSTABLE ARC LENGTH AREA DRAIN BEGINNING OF CURB / BACK OF CURB	L LS LAT LF LT LP	LENGTH LANDSCAPE LATERAL LINEAL FEET LEFT LOW POINT
BCR BDRY BEG BM BSW BVC CB	BEGINNING OF CURB RETURN BOUNDARY BEGIN BENCHMARK BACK OF SIDEWALK BEGINNING OF VERTICAL CURVE CATCH BASIN / DROP INLET	MAX MB MH MIN N NO	MAXIMUM MAIL BOX MANHOLE MINIMUM NORTH NUMBER
C&G CF CIP CL CMP CONC	CURB AND GUTTER CURB FACE CAST IRON PIPE CENTERLINE CORRUGATED METAL PIPE CONCRETE	OC OD OHE PC PCC PI	ON CENTER OUTSIDE DIAMETER OVERHEAD POWER LINE POINT OF CURVATURE POINT OF COMPOUND CURVE POINT OF INTERSECTION
CONST DC DI DIA DIP DMH	CONSTRUCT, CONSTRUCTION DEPRESSED CURB DROP INLET DIAMETER DUCTILE IRON PIPE DROP MANHOLE	PL PP POC PRC PROP PT PVC	PROPERTY LINE POWER POLE POINT OF CONNECTION POINT OF REVERSE CURVE PROPOSED POINT OF TANGENT POLYVINYL CHLORIDE PIPE
E EC ECR EF EG	EAST END OF CURVE END OF CURB RETURN ELECTROFUSION EXISTING GROUND	PVI Q RAD RED RCP	POINT OF VERTICAL INTERSECTION RATE OF FLOW RADIUS REDUCER REINFORCED CONCRETE PIPE
EL EP, EOP EVC EXIST, EX FF	ELEVATION EDGE OF PAVING EDGE OF VERTICAL CURVE EXISTING FINISHED FLOOR	RT R/W, ROW S SS SSCO	RIGHT RIGHT OF WAY SOUTH SANITARY SEWER SANITARY SEWER CLEANOUT
FG FH FL FM G	FINISHED GRADE FIRE HYDRANT FLOWLINE FORCEMAIN GAS	SSMH SD SDMH SF	SANITARY SEWER MANHOLE STORM DRAIN STORM DRAIN MANHOLE SQUARE FOOT

SHP

SHT

STA

STD

STL

SW

GB

GΥ

HDPE

HGT

HORIZ.

GRADE BREAK

HIGH DENSITY POLYETHYLENE PIPE

GAS VALVE

HORIZONTAL

HIGH POINT

INSIDE DIAMETER

INVERT ELEVATION

HEIGHT

STEEL HIGH PRESSURE

SHEET

STATION

STEEL

STANDARD

SIDEWALK

TANGENT DISTANCE TOP BACK OF CURB TOP OF CURB TEL TELEPHONE TOP FRONT OF CURB TFC TOC TOP OF CONCRETE TMH TOP OF MANHOLE TOW TOP OF WALL TRANS TRANSITION TSC TRAFFIC SIGNAL CONDUIT TSW TOP OF SIDEWALK TYP TYPICAL UNDERGROUND ELECTRIC LINE UGE VC VERTICAL CURVE VCP VITRIFIED CLAY PIPE VERT VERTICAL VALLEY GUTTER

WEST, WATER WATER VALVE WV

LEGEND

	PROPOSED WATER MAIN		SECTION/ PROPERTY LINE/ EASEMENT LINE
	EXISTING WATER MAIN		CENTERLINE
	EXISTING SEWER MAIN	_хх _	FENCE
-ī —ī —	EXISTING TELEPHONE		EDGE OF ROAD
\bowtie	PROPOSED WATER VALVE		
₩V	EXISTING WATER VALVE	_ 00 00	OVERHEAD POWER LINE
(A)	PROPOSED AIR VALVE ASSEMBLY	**	LIGHT POLE
		S	TELEPHONE PEDESTAL
*	PROPOSED FIRE HYDRANT	D	POWER POLE
*	EXIST FIRE HYDRANT		TOWERT GEE
	PROPOSED SINGLE METER		
	PROPOSED DOUBLE METER		
	EXISTING METER		

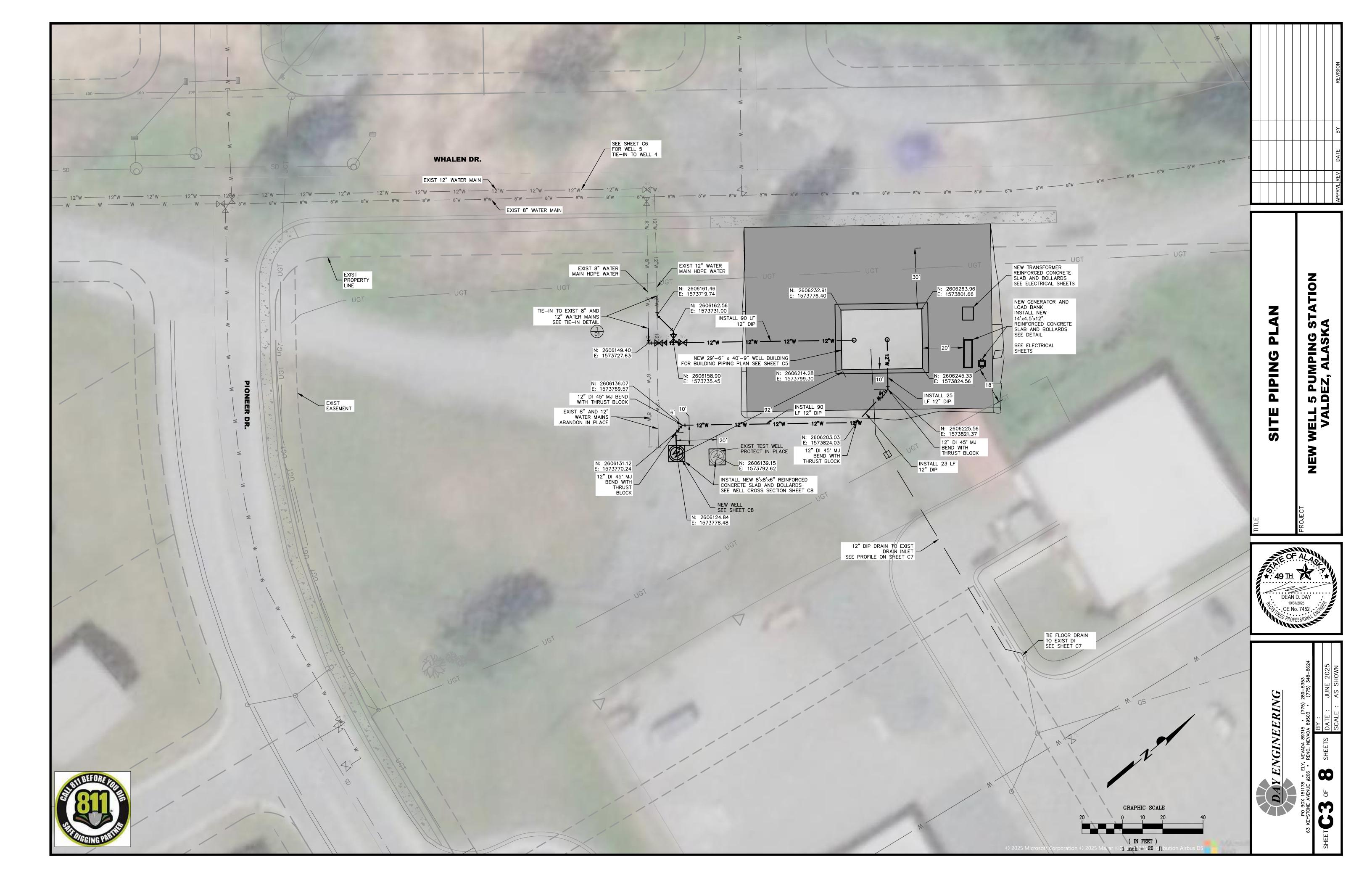
PROPOSED SSMH

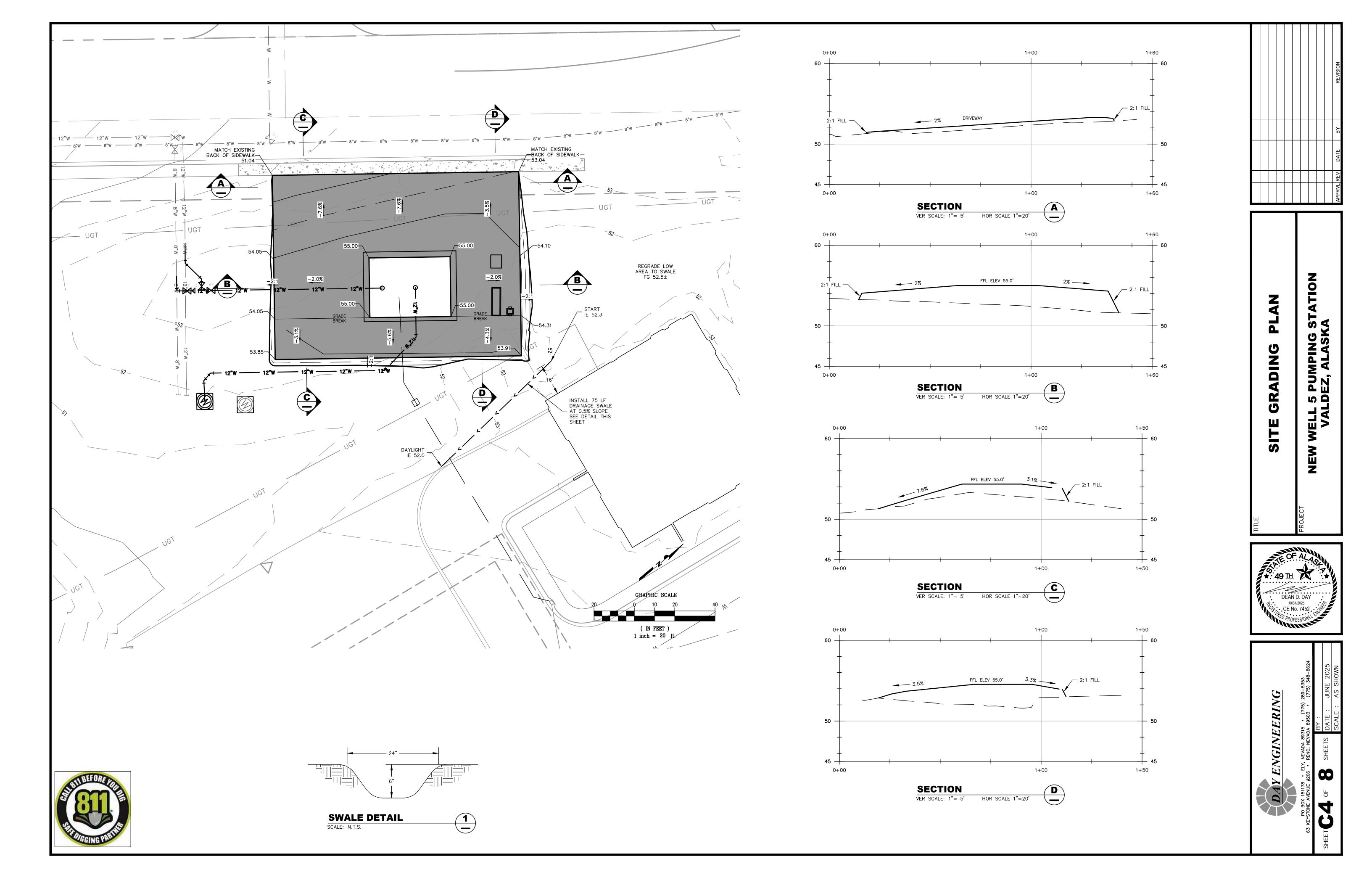
S EXISTING SSMH

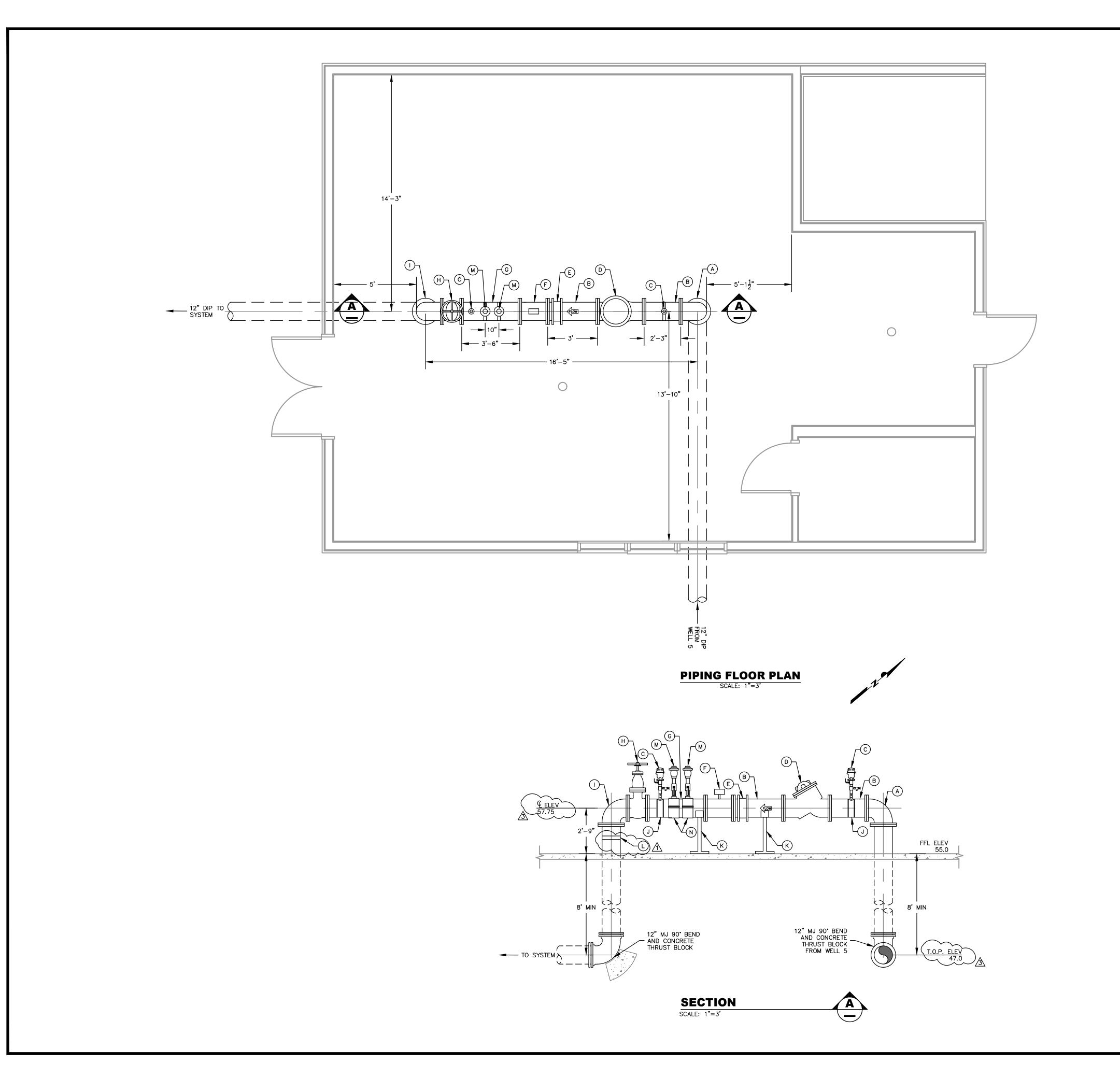
FLOW ARROW

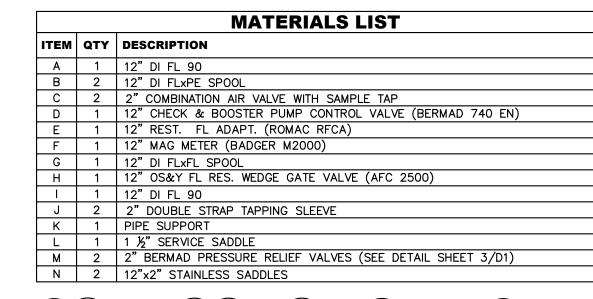












NOTE:

1) SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL SHEETS FOR BUILDING DETAILS.

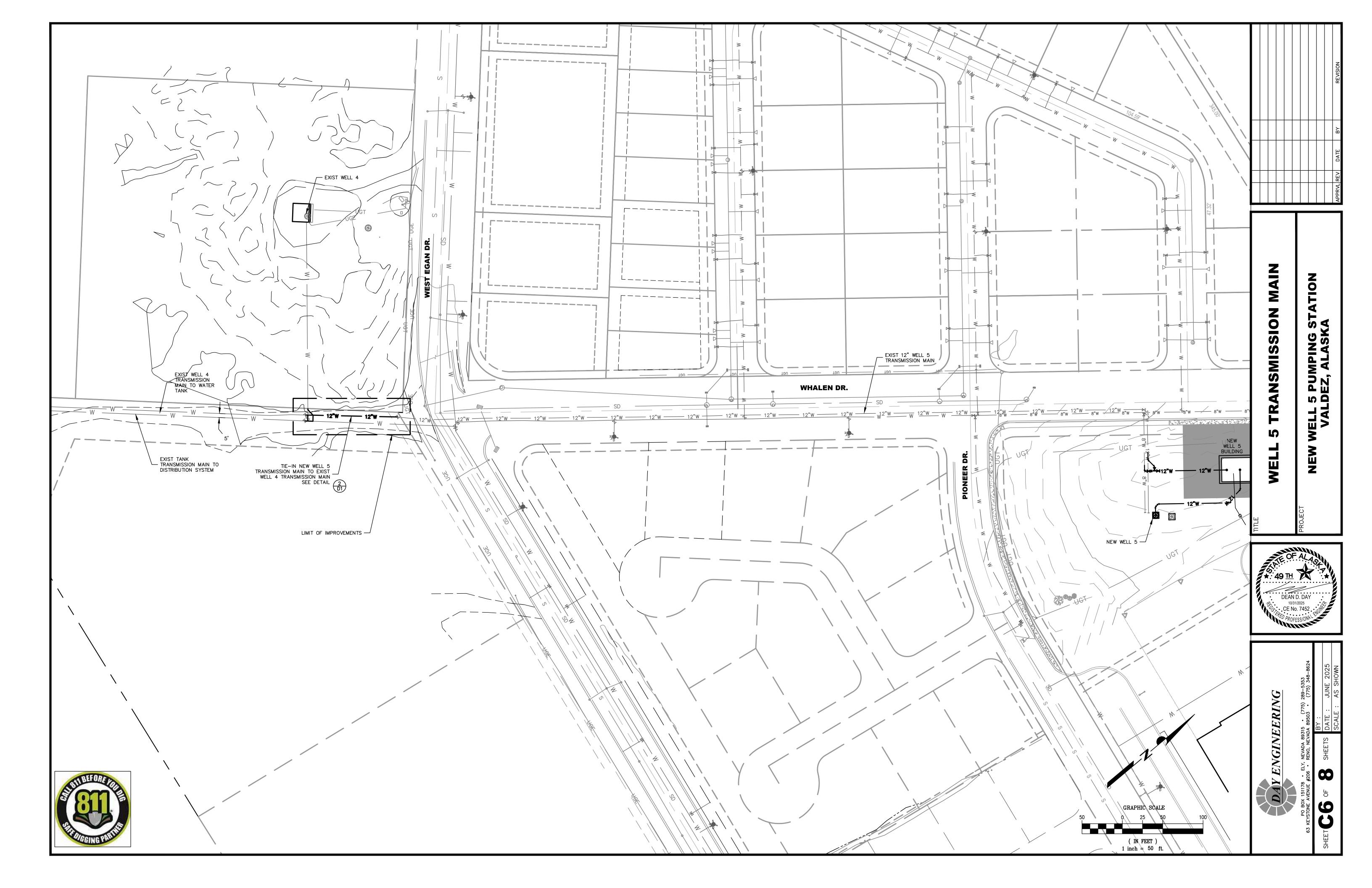
2) FEDERAL SAFETY BLUE SHERWIN-WILLIAMS MACROPOXY EPOXY FOR POTABLE WATER OR EQUAL, 2 COATS AND 10 MILS MINIMUM ON ALL EXPOSED POTABLE WATER PIPING AND FITTINGS.

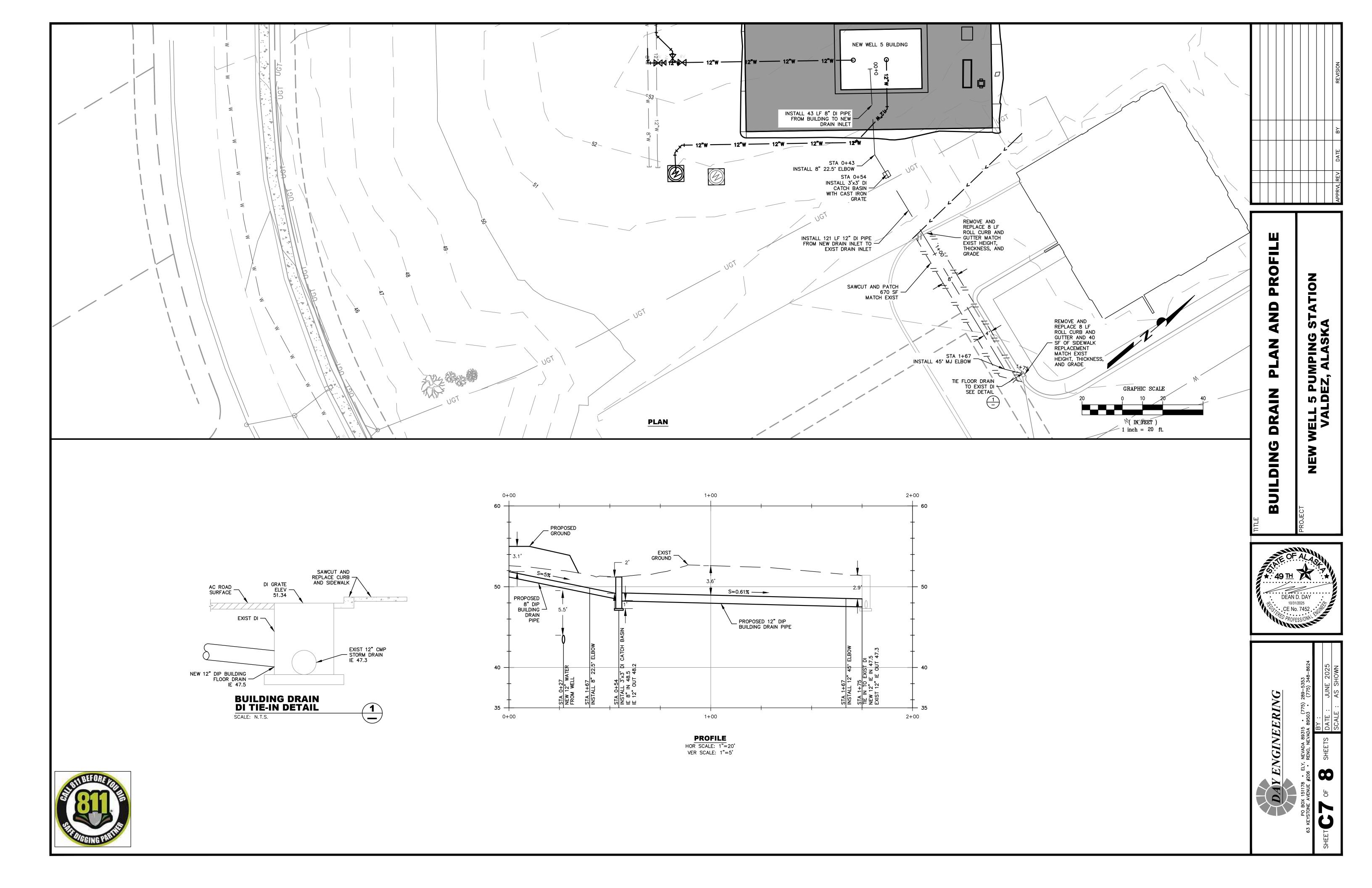
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9/23/5072	$\overline{\mathbb{Q}}$	
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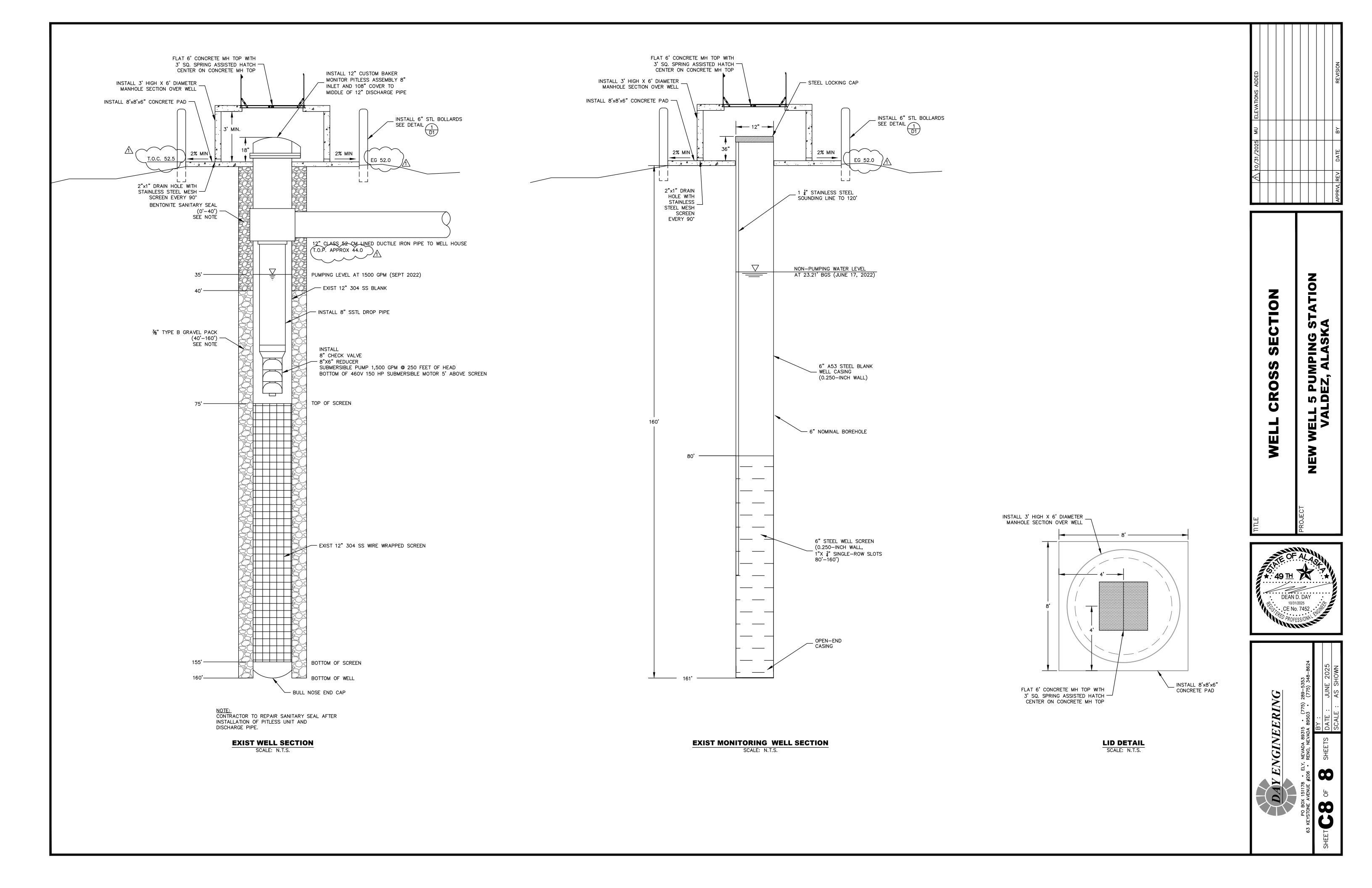
CTIO SE AND **PIPING**

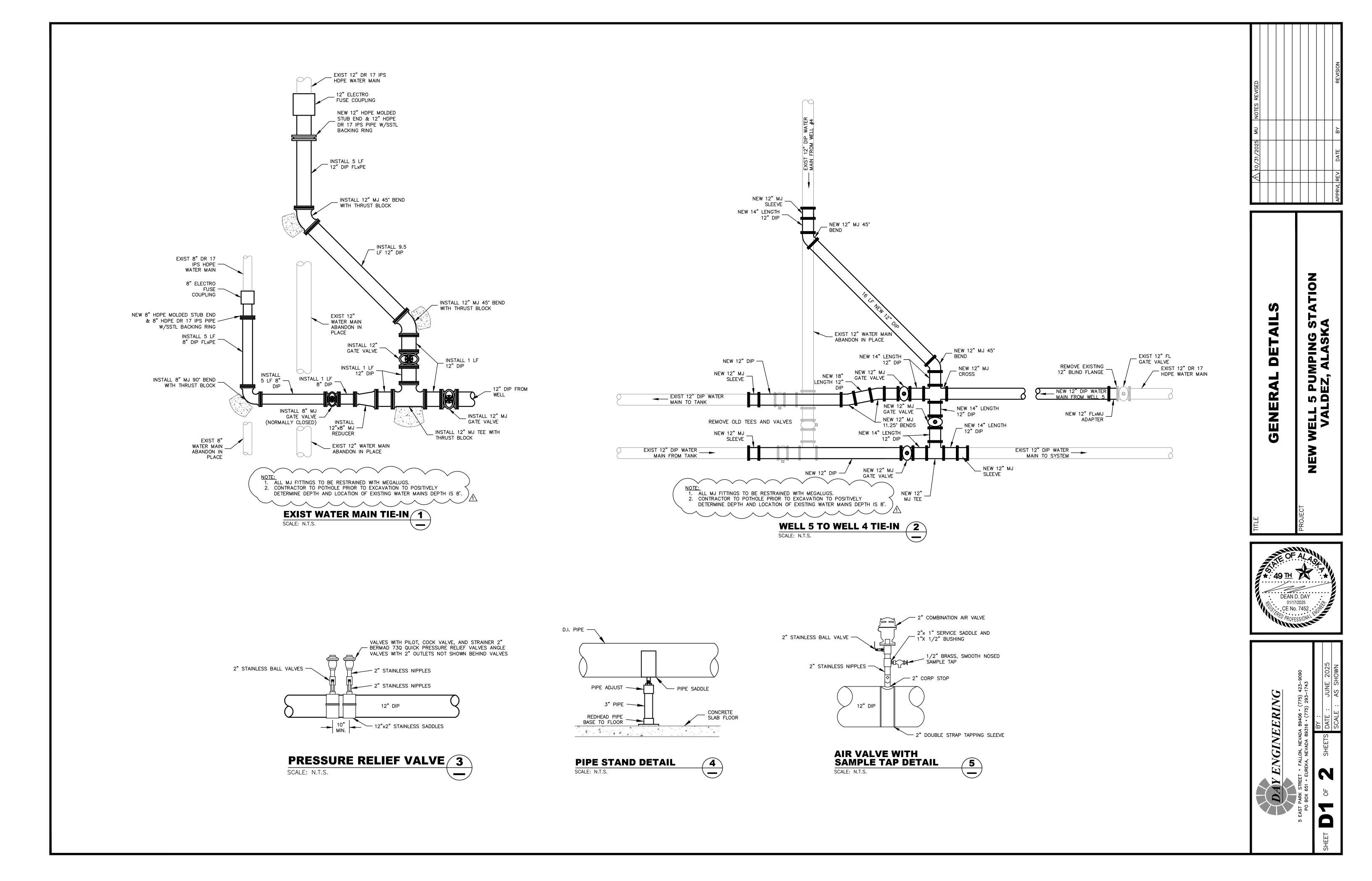
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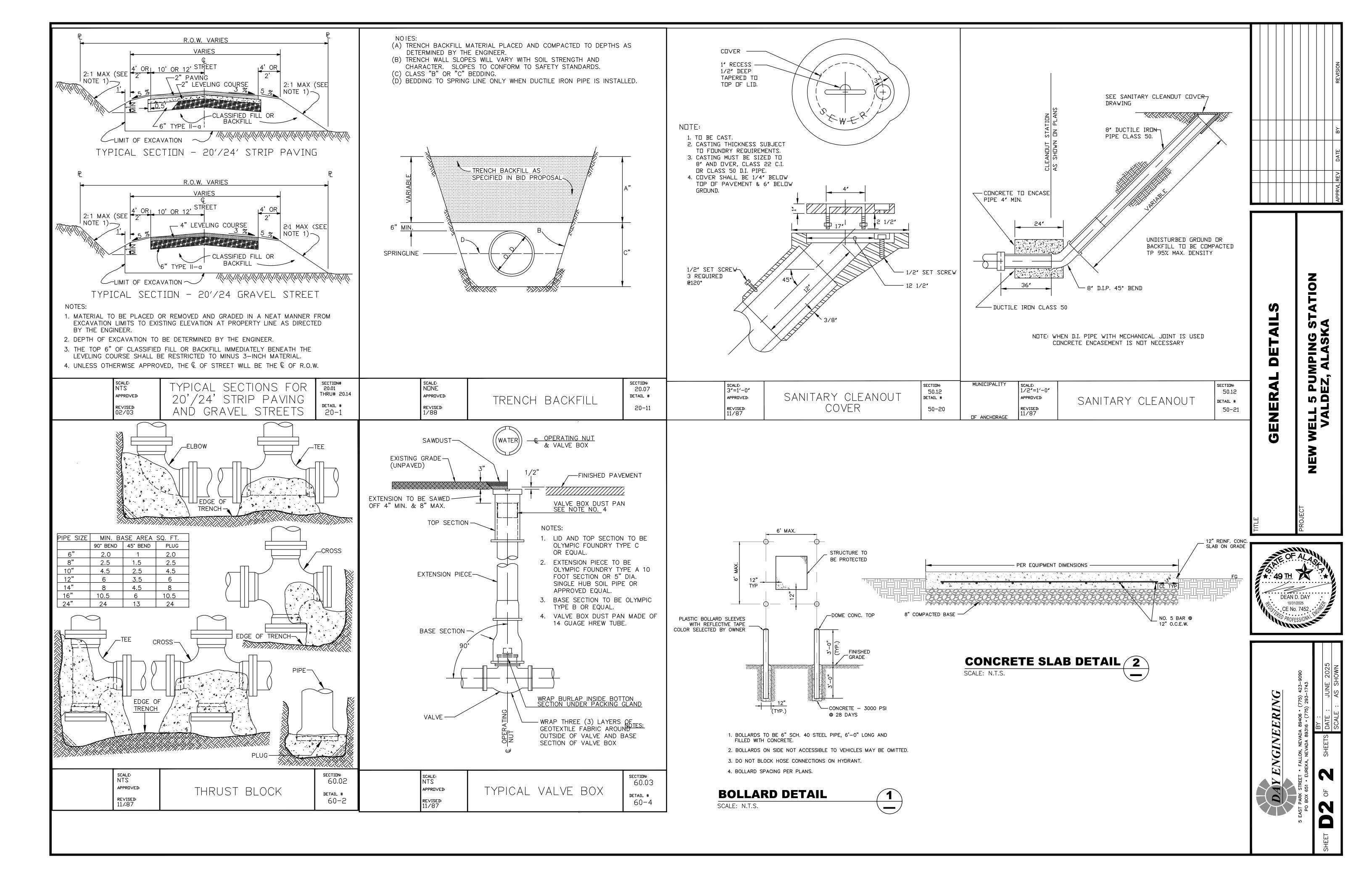
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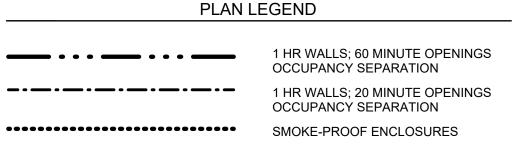


CODE PLAN GENERAL NOTES

- 1. SEE MAIN FLOOR PLAN FOR DIMENSIONS, WALL TYPE REFERENCES.
- 2. SEE DOOR AND RELITE SCHEDULES FOR DOOR HARDWARE AND OTHER FIRE RATING REQUIREMENTS FOR DOORS AND RELITES.
- 3. SEE ELECTRICAL FOR EXIT SIGNS AND EMERGENCY EGRESS LIGHT FIXTURES.
- 4. INTERIOR WALL AND CEILING FINISHES SHALL CONFORM TO IBC SECTION 803.5 AND TABLE 803.5 FOR FLAME SPREAD REQUIREMENTS.
- 5. PORTABLE FIRE EXTINGUISHERS MUST BE PROVIDED WHERE REQUIRED BY NFPA 101.4. WHEN PROVIDED, FIRE EXTINGUISHERS MUST BE LOCATED IN ACCORDANCE WITH NFPA 10. IF PROVIDED IN ELECTRONIC EQUIPMENT AREAS, CLEAN AGENT TYPE PORTABLE FIRE EXTINGUISHERS MUST BE USED. PORTABLE FIRE EXTINGUISHERS UTILIZING CARBON DIOXIDE (CO2) ARE ONLY PERMITTED TO BE USED IN ENCLOSED ROOMS IF THEY EXCEED 1,000SF.

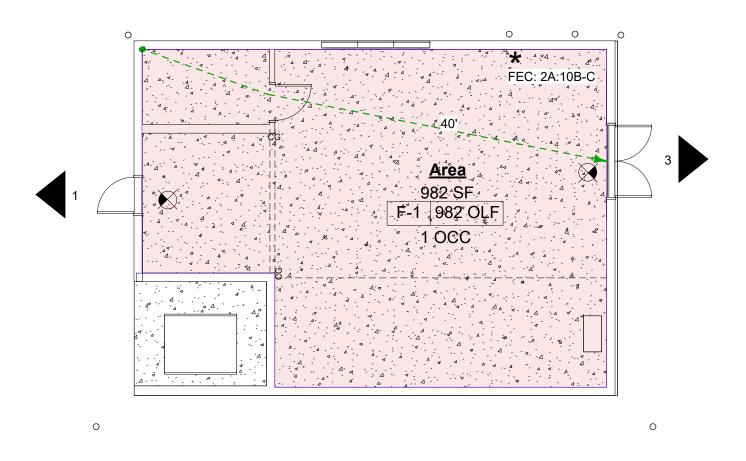
FIRE STOPPING NOTES

ALL PENETRATIONS MADE THROUGH FIRE-RATED WALLS, CEILINGS AND FLOOR ASSEMBLIES, BOTH EMPTY HOLES AND HOLES ACCOMODATING SUCH ITEMS AS DUCTS, PIPES, CONDUIT, AND OTHER PENETRATING ITEMS SHALL BE FIRE- STOPPED. PENETRATIONS SHALL BE FIRE STOPPED TO RETAIN THE INTEGRITY OF THE TIME-RATED CONSTRUCTION BY MAINTAINING AN EFFECTIVE BARRIER AGAINST THE SPREAD OF FLAME, SMOKE, AND GASES, IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 07270 - FIRESTOPPING. MECHANICAL AND ELECTRICAL RELATED PENETRATIONS SHALL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR MAKING THE PENETRATION - SEE MECHANICAL AND ELECTRICAL.



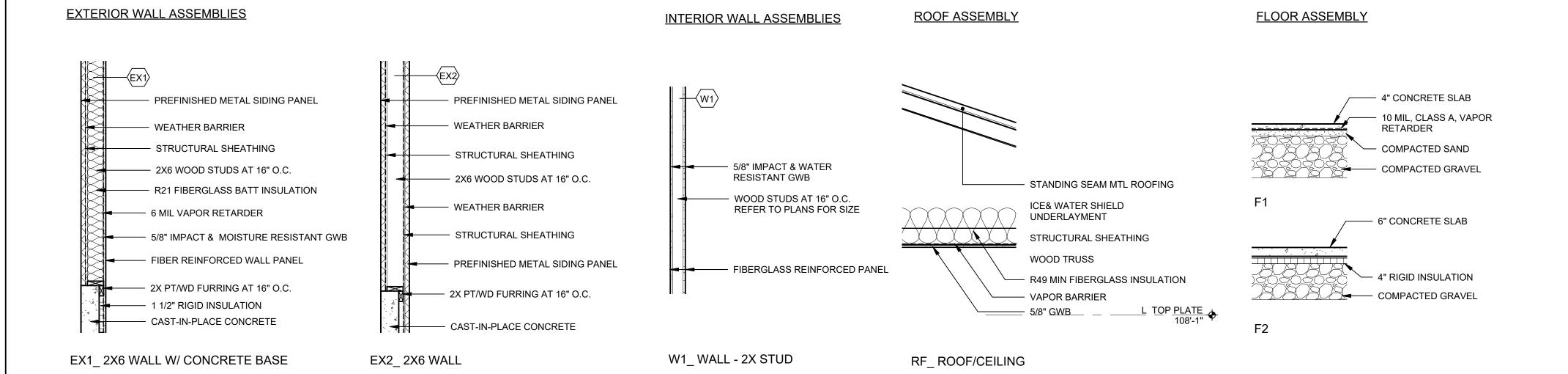
EXIT FROM ROOMS. NUMBER INDICATES THE CALCULATED ACCUMULATED LOAD AT THAT ROOM OR BUILDING EXIT. ARROW INDICATES EXIT DIRECTION.

★ FIRE EXTINGUISHER CABINET, 2A:10B-C





TYPICAL CONSTRUCTION ASSEMBLIES



BUILDING CODE ANALYSIS

GOVERNING CODES: 2021 INTERNATIONAL BUILDING CODE (AK AMMENDMENTS)
2017 ICC/ANSI A117.1 (AK AMMENDMENTS)
2021 INTERNATIONAL MECHANICAL CODE (AK AMMENDMENTS)
2021 INTERNATIONAL FUEL AND GAS CODE (AK AMMENDMENTS)
2021 INTERNATIONAL FIRE CODE (AK AMMENDMENTS)
2021 NFPA STANDARD 13 & 72 FIRE PROTECTION
2018 UNIFORM PLUMBING CODE (AK AMMENDMENTS)
2020 NATIONAL ELECTRICAL CODE

CHAPTER 3 OCCUPANCY CLASSIFICATION AND USE

SECTION 306 F-1 MODERATE -HAZARD FACTORY INDUSTRIAL; WATER TREATMENT FACILITY

CHAPTER 4 SPECIAL REQUIREMENTS BASED ON USE/OCCUPANCY

N/A

CHAPTER 5 GENERAL BUILDING HEIGHTS & AREAS

CONSTRUCTION TYPE V-B, SEPARATED OCCUPANCIES

IBC TABLE 504.3 / 504.4 ALLOWABLE NUMBER OF STORIES/HEIGHT ABOVE GRADE PLANE:
OCC. CONST. TYPE ALLOW. STORY ALLOW. HEIGHT/ACTUAL HEIGHT
F-1/NS V-B 1 40'/20'-8"

IBC TABLE 506.2 ALLOWABLE AREA FACTOR:

 OCC.
 ALLOWABLE AREA
 ACTUAL AREA

 F-1
 8500 SF
 982 SF

508.3 NON-SEPARATED BASED ON PROVISIONS OF 508.3.1 AND 508.3.2 OCCUPANCY SEPARATION NOT REQUIRED

508.4 ACCESSORY OCCUPANCIES--NO ACCESSORY OCCUPANCIES

509 INCIDENTAL OCCUPANCIES--NO INCIDENTAL OCCUPANCIES

CHAPTER 6 TYPES OF CONSTRUCTION

TABLE 601: TYPE VB -- NO FIRE RESISTANT RATING REQUIRED FOR BUILDING ELEMENTS

TABLE 602: FIRE RESISTANCE RATING FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE F-1 X>/= 30' NO RATING REQUIRED

CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES

TABLE 716.5 FIRE-RATED ASSEMBLIES: RATING: ASSEMBLY:

STRUCTURAL FRAME 0-HR **EXTERIOR BEARING WALLS** 0-HR N/A INTERIOR BEARING WALLS 0-HR N/A FLOOR/CEILING 0-HR N/A ROOF/CEILING 0-HR N/A FIRE BARRIERS NONE REQUIRED FIRE PARTITIONS NONE REQUIRED DOORS NONE REQUIRED SMOKE PARTITIONS NONE REQUIRED

CHAPTER 9 FIRE PROTECTION SYSTEMS

903 AUTOMATIC SPRINKLER SYSTEMS

F-1 NOT REQUIRED

PORTABLE FIRE EXTINGUISHERS

IFC TABLE ORDINARY HAZARD TYPE 2-A WITHIN 75' TRAVEL DISTANCE

7 FIRE ALARM AND DETECTION SYSTEMS

907.2 MANUAL FIRE ALARM NOT REQUIRED

907.2.13.2 F-1 NOT REQUIRED

CHAPTER 10 MEANS OF EGRESS

TABLE 1004.5 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

OCCUPANT LOAD 1:300=3 OCCUPANTS

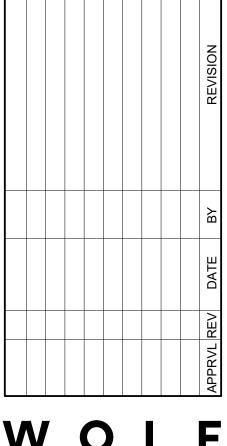
1006.2.1 1 EXIT REQUIRED; 2 PROVIDED OCCUPANT LOAD <30; MAX

MAX TRAVEL DISTANCE 75'; ACTUAL 40'

CHAPTER 12 VENTILATION

TABLE 12.03.02

PROVIDE 28.3 SQUARE INCHES OF VENTILATION PER ROOF TRUSS BAY FOR TOTAL OF 566 SQUARE FEET. 50% AT LOW EAVE - 14SF 50% AT HIGH EAVE - 14SF



V O L F ARCHITECTURE

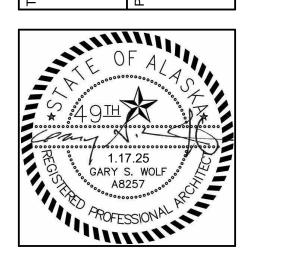
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PROJECT

NEW WELL 5 PUMPING STATION

VALDEZ, ALASKA

A

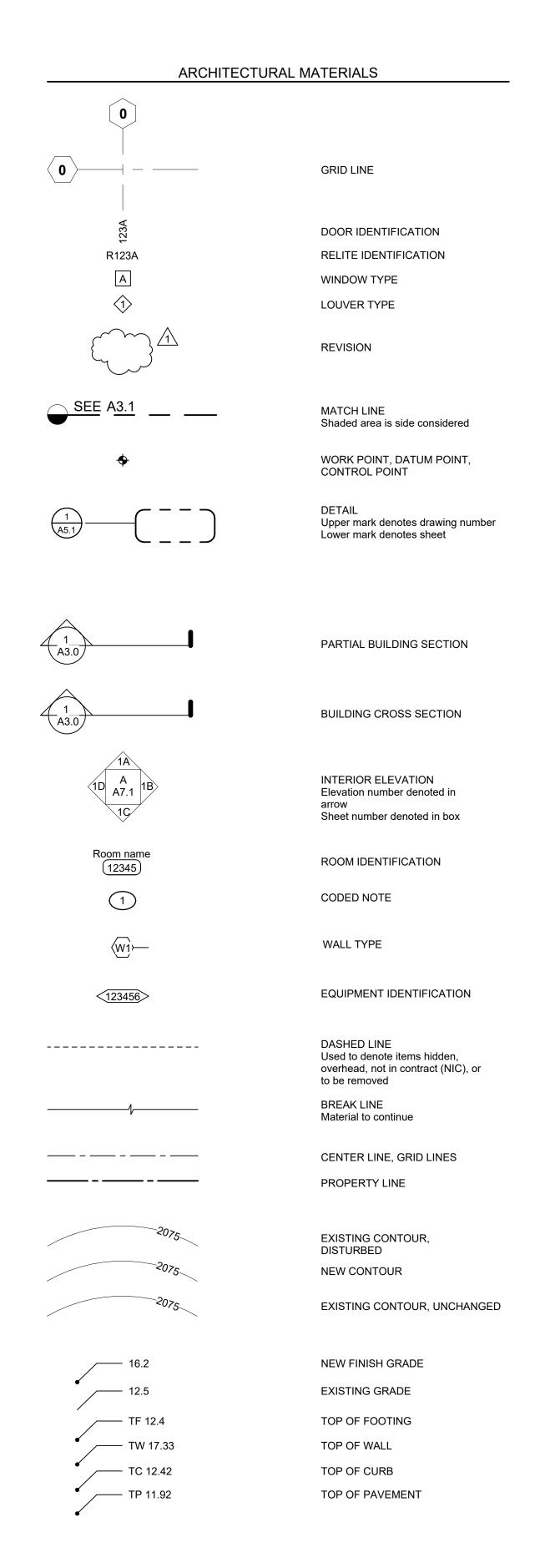


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BY:

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DATE: 6/30/25

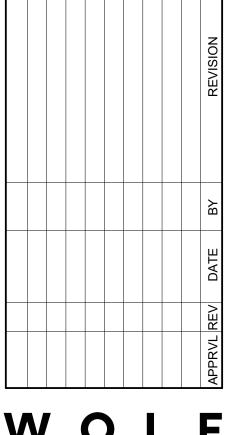


	ATERIALS
TAIL INDICATIONS	ATERIALS
TAIL INDICATIONS	ATERIALS
ACOUS	
ASPHA	STIC TILE OR BOARD
	LT CONCRETE PAVING
ROOFI	NG
BRICK	
CONC	RETE
PRECA	ST CONCRETE
CONCE	RETE MASONRY UNIT
EARTH	/ FINISH GRADE
GLASS	
GRAVE	EL .
GYPSL	JM BOARD
	ATION, BATT
INSULA	ATION, RIGID
MORTA	AR, PLASTER, SAND
MDF	
PLYW0	OOD
WOOD	, FINISH
	FRAMING lous member
	FRAMING oted member
N INDICATIONS	
STUD V	VALL
BRICK CONCE	RETE MASONRY UNIT
4. A. A. A. A. A. A. CONCF	

	ABBREVIATIONS		ABBREVIATIONS		ABBREVIATIONS		ABBREVIATIONS
_	ANGLE	FA	FIRE ALARM				
<u></u>	CENTERLINE POUND, NUMBER	FAB FD	FABRICATE FLOOR DRAIN	O/S OA	OUTSIDE OVERALL	UNFIN UNO	UNFINISHED UNLESS NOTED OTHERWISE
& @	AND AT	FDN FE	FOUNDATION FIRE EXTINGUISHER	OBS OC	OBSCURE ON CENTER	UPT UR	UNGLAZED PORCELAIN TILE URINAL
0	DEGREE PLUS / MINUS	FEC FEC-S	FIRE EXTINGUISHER CABINET (RECESSED) FIRE EXTINGUISHER CABINET	OCC	OCCUPANT, OCCUPANCY	USK	UTILITY SINK
± Ø	DIAMETER		(SEMI-RECESSED)	OD OFCI	OUTSIDE DIAMETER (DIM) OWNER FURNISHED CONTRACTOR	VB	VAPOR BARRIER
A/C	AIR CONDITIONING	FF FFL	FACTORY FINISHED FINISHED FLOOR LINE	OFF	INSTALLED OFFICE	VCT VENT	VINYL COMPOSITION TILE VENTILATE
AB AC	ANCHOR BOLT ASPHALT CONCRETE	FHC FIN	FIRE HOSE CABINET FINISH	OFOI OH	OWNER FURNISHED OWNER INSTALLED OVERHEAD	VER VERT	VERIFY VERTICAL
ACOUS	ACOUSTICAL	FLASH FLR	FLASHING FLOOR, FLOORING	OHD OPNG	OVERHEAD DOOR OPENING	VEST	VESTIBULE
AD ADDL	AREA DRAIN ADDITIONAL	FLUOR	FLUORESCENT	OPP	OPPOSITE	VOL VRB	VOLUME VENTILATING RUBBER BASE
ADJ ADJT	ADJUSTABLE ADJACENT	FOC FOF	FACE OF CONCRETE FACE OF FINISH	ORIG	ORIGINAL	VTR VWC	VENT THROUGH ROOF VINYL WALL COVERING
AFF AGGR	ABOVE FINISHED FLOOR AGGREGATE	FOM FOS	FACE OF MASONRY FACE OF STUDS	PAR PB	PARALLEL PEG BOARD	W	WEST, WIDE, WIDTH
AJ	ACCENT JOINT ALUMINUM	FOSH FP	FACE OF SHEATHING FIREPROOF	PC PCC	PRECAST PORTLAND CEMENT CONCRETE	W/	WITH
AL ALT	ALTERNATE	FR	FIRE RESISTANT	PCD	PAPER CUP DISPENSER	W/D W/O	WASHER/DRYER WITHOUT
ANC APC	ANCHOR(AGE) ACOUSTICAL PANEL CEILING	FRMG FRP	FRAMING FIBER REINFORCED PLASTIC	PERF PERP	PERFORATED PERPENDICULAR	WC WD	WATER CLOSET WOOD
APPD APPROX	APPROVED APPROXIMATE	FRTW FS	FIRE RETARDANT TREATED WOOD FLOOR SINK	PL PLAM	PLATE PLASTIC LAMINATE	WDW WH	WINDOW WALL HUNG
ARCH ASB	ARCHITECTURAL ASBESTOS	FT FTG	FOOT, FEET FOOTING	PLAS PLUMB	PLASTER PLUMBING	WP WPTL	WATERPROOF, WALL PADS WOOD PRESERVATIVE TREATED LUMBER
ASPH	ASPHALT	FURR	FURRING	PLYWD	PLYWOOD	WS	WEATHER STRIPPING
AUTO AWP	AUTOMATIC ACOUSTICAL WALL PANEL	FUT FWC	FUTURE FABRIC WALL COVERING	PNL POS	PANEL POSITIVE	WSCT WT	WAINSCOT WEIGHT
BD	BOARD	GA	GAUGE	PR PREFAB	PAIR PREFABRICATE(D)	WTR WWF	WATER WELDED WIRE FABRIC
BET	BETWEEN	GALV GB	GALVANIZED GRAB BAR	PREFIN PROJ	PREFINISH(ED) PROJECT	****	WEBEB WIKE FABRIG
BITUM BLDG	BITUMINOUS BUILDING	GEN	GENERAL	PS	PROJECTION SCREEN		
BLK BLKG	BLOCK BLOCKING	GI GL	GALVANIZED IRON GLASS	PT PTD	POINT, PAINT PAPER TOWEL DISPENSER		
BM BOF	BEAM BOTTOM OF FRAME	GLB GLZ	GLUE LAMINATED BEAM GLAZING	PTDR	COMBINATION PAPER TOWEL DISPENSER & RECEPTACLE		
BOM	BOTTOM OF MASONRY	GMU GND	GLAZED MASONRY UNIT GROUND	PTN PTR	PARTITION PAPER TOWEL RECEPTACLE		
BOTT BRG	BOTTOM BEARING	GR	GRADE	PVMT	PAVEMENT		
BSMT BUR	BASEMENT BUILT UP ROOF	GYP GYP BD	GYPSUM BOARD (SCHEDULES ONLY) GYPSUM BOARD	PWP	PLASTIC WALL PROTECTION		
С	COURSES	Н	HIGH	QT	QUARRY TILE		
CAB	CABINET	HB	HOSE BIB	R R&S	RISER, RADIUS CLOSET ROD & SHELF		
CB CC	CATCH BASIN, CHALKBOARD CUBICLE CURTAIN & TRACK	HC HD	HOLLOW CORE, HANDICAP (ACCESSIBLE) HEAD	RAF	RESILIENT ATHLETIC FLOORING		
CEM CER	CEMENT CERAMIC	HDW HDWD	HARDWARE HARDWOOD	RB RCP	RUBBER BASE REFLECTED CEILING PLAN		
CG CI	CORNER GUARD CAST IRON	HORIZ HSS	HORIZONTAL HOLLOW STEEL SECTION	RD RDO	ROOF DRAIN ROOF DRAIN, OVERFLOW		
CIP	CAST-IN-PLACE CONCRETE	HT	HEIGHT	REBAR RECD	REINFORCING BAR RECEIVED		
CJ CLG	CONTROL JOINT CEILING	HTG HVAC	HEATING HEATING/ VENTILATING/ AIR	REF	REFERENCE		
CLKG CLO	CAULKING CLOSET	HWH(T)	CONDITIONING HOT WATER HEATER (TANK)	REFL REFR	REFLECTED REFRIGERATOR		
CLR	CLEAR, COLOR	I/S	INSIDE	REINF REQD	REINFORCE(D)(ING) REQUIRED		
CMU CNTR	CONCRETE MASONRY UNIT COUNTER	ID	INSIDE DIAMETER (DIM) INCLUDE	RESIL RF	RESILIENT ROOF		
CO COL	CLEANOUT COLUMN	INCL INFO	INFORMATION	RFT	RESILIENT FLOORING TILE		
COMBO COMP	COMBINATION TPD, SNR, & SCD COMPOSITION, COMPOSITE	INSUL INT	INSULATION INTERIOR	RH RM	ROBE HOOK ROOM		
CONC	CONCRETE	INTERCO	M INTERCOMMUNICATION	RO RSD	ROUGH OPENING RECESSED SOAP DISPENSER		
CONN CONST	CONNECTION CONSTRUCTION	JAN JST	JANITOR JOIST	RST RT	RUBBER STAIR TREAD RIGHT		
CONT CONTR	CONTINUOUS CONTRACTOR	JT	JOINT	RWL	RAIN WATER LEADER		
COORD CORR	COORDINATE CORRIDOR	KIT	KITCHEN	S	SOUTH		
CPT CT	CARPET CERAMIC TILE	L	LENGTH, LONG	SC SCD	SOLID CORE SEAT COVER DISPENSER		
CTR	CENTER	LAB LAM	LABORATORY LAMINATE	SCHED SD	SCHEDULE SOAP DISPENSER		
CW	CURTAIN WALL	LAV	LAVATORY	SDG	SIDING		
D DBL	DEEP, DEPTH DOUBLE	LKR LMS	LOCKER LIQUID MARKING SURFACE	SECT SHR	SECTION SHOWER		
DEMO	DEMOLISH, DEMOLITION	LN LT	LINOLEUM LIGHT, LEFT	SHT SHTG	SHEET SHEETING / SHEATHING		
DET DF	DETAIL DRINKING FOUNTAIN	LV	LOUVER	SIM SLR	SIMILAR SEALER		
DIA DIAG	DIAMETER DIAGONAL	MACH	MACHINE	SND	SANITARY NAPKIN DISPENSER		
DIM DISP	DIMENSION DISPOSAL	MATL MAX	MATERIAL MAXIMUM	SNR SPEC	SANITARY NAPKIN RECEPTACLE SPECIFICATION		
DIV DN	DIVISION DOWN	MB MBR	MARKING BOARD MEMBER	SQ SS	SQUARE SOLID SURFACE		
DP	DAMPPROOF(ING)	MC MCSP	MEDICINE CABINET MINERAL COMPOSITE SCULPTURAL PANEL	SSK SST	SERVICE SINK STAINLESS STEEL		
DR DS	DOOR DOWNSPOUT	MDF	MEDIUM DENSITY FIBERBOARD	STD	STANDARD		
DSP DWG	DRY STANDPIPE DRAWING	MECH MED	MECHANICAL MEDIUM	STL STN	STEEL STAIN		
DWR	DRAWER	MEMB MEZZ	MEMBRANE MEZZANINE	STOR STRFT	STORAGE STOREFRONT		
E	EAST	MFR MH	MANUFACTURER MANHOLE, MOP HOLDER	STRUCT SUB	STRUCTURAL SUBSTITUTE		
EA EHD	EACH ELECTRIC HAND/ HAIR DRYER	MIN	MINIMUM	SUSP	SUSPENDED		
EJ EL	EXPANSION JOINT ELEVATION	MIR MIR-S	MIRROR MIRROR W/ SHELF	SV SWC	SHEET VINYL SANITARY WALL COVERING		
ELEC	ELECTRICAL	MISC MO	MISCELLANEOUS MASONRY OPENING	SYM SYS	SYMMETRICAL SYSTEM		
ELEV EM	ELEVATOR ENTRY MAT	MT(D) MTL	MOUNT(ED) METAL	T	TREAD, TEE		
EMB EMER	ENAMELIZED MARKING BOARD EMERGENCY	MUL	MULLION	TB	TOWEL BAR, TACK BOARD		
ENCL EP	ENCLOSURE ELECTRICAL PANELBOARD, EPOXY PAINT	N	NORTH	TC TEL	TOP OF CURB TELEPHONE		
EPT	EPOXY PAINT	NAT NIC	NATURAL NOT IN CONTRACT	TEMP TERR	TEMPORARY TERRAZZO		
EQ EQUIP	EQUAL EQUIPMENT	NO	NUMBER	TF	TOP OF FOOTING		
EW EWC	EYEWASH ELECTRIC WATER COOLER	NOM NTS	NOMINAL NOT TO SCALE	THK THRU	THICK THROUGH		
EXC EXH	EXCAVATE EXHAUST			TOF TOM	TOP OF FRAME TOP OF MASONRY		
EXIST	EXISTING			TP TPD	TOP OF PAVEMENT TOILET PAPER DISPENSER		
EXP EXPO	EXPANSION EXPOSED			TR TS	TOWEL RACK TUBE STEEL		
EXT	EXTERIOR			TV	TELEVISION		
				TVB	TELEVISION BRACKET		

TOP OF WALL TYPICAL

TW TYP



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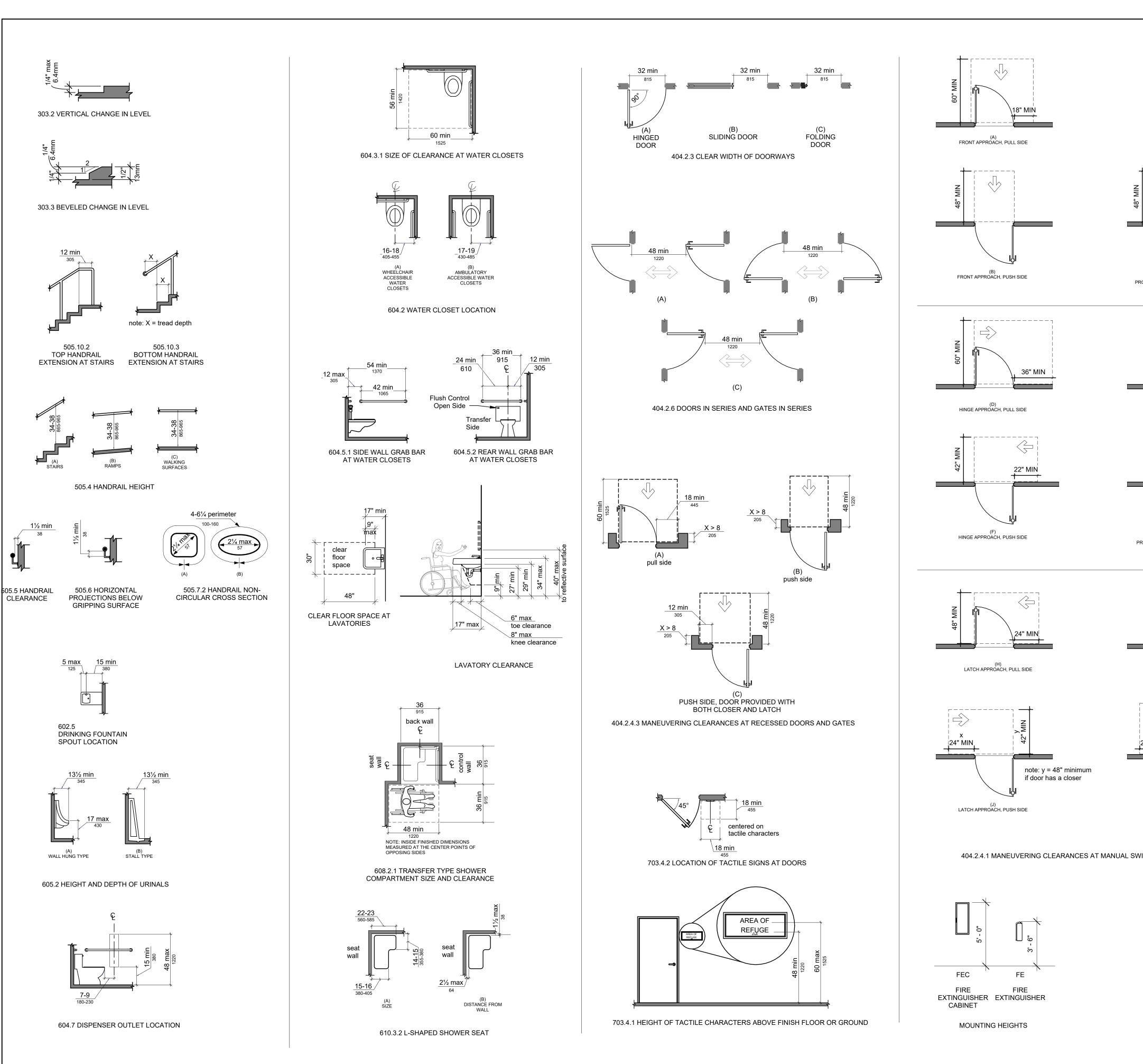
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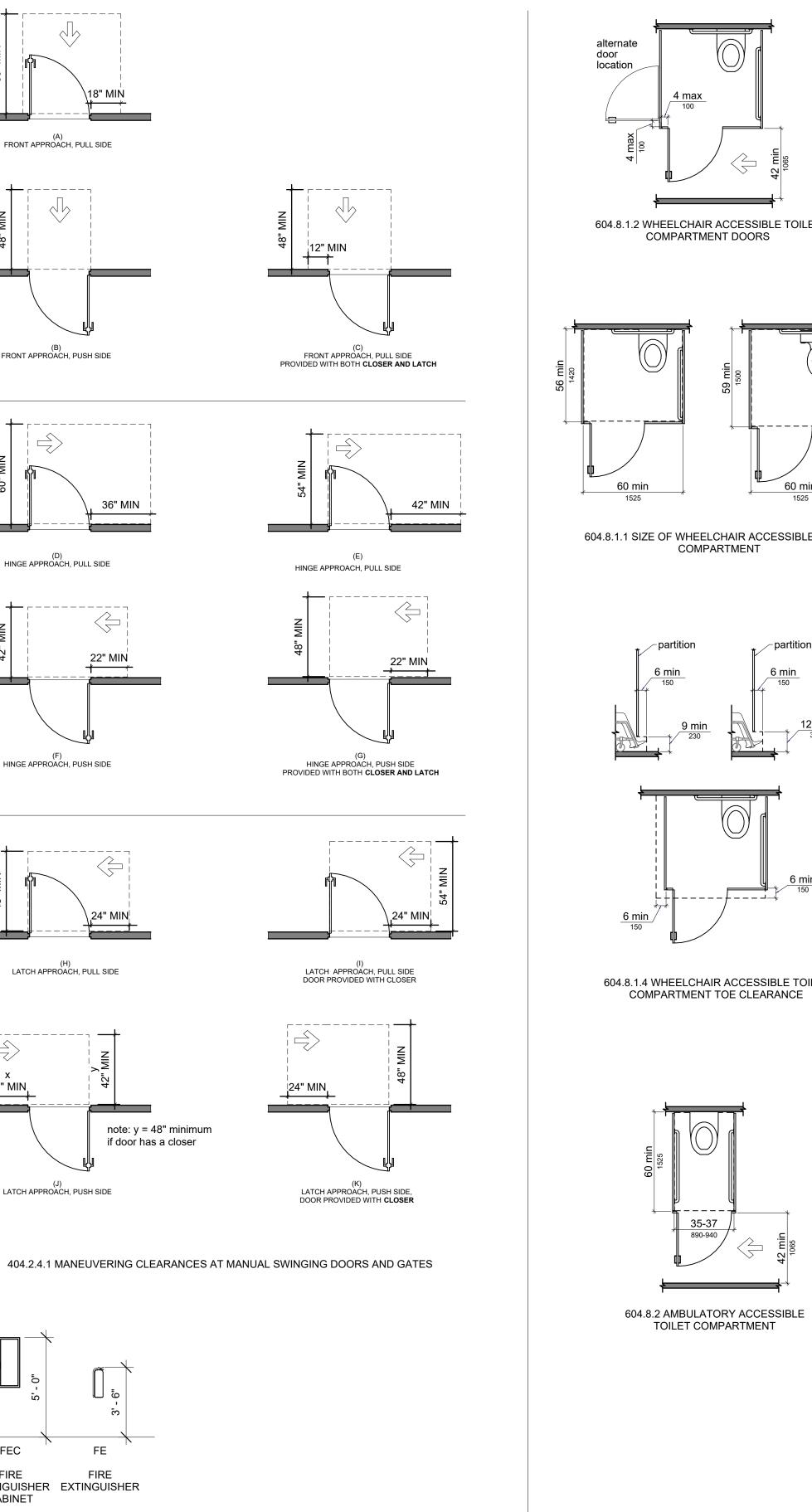
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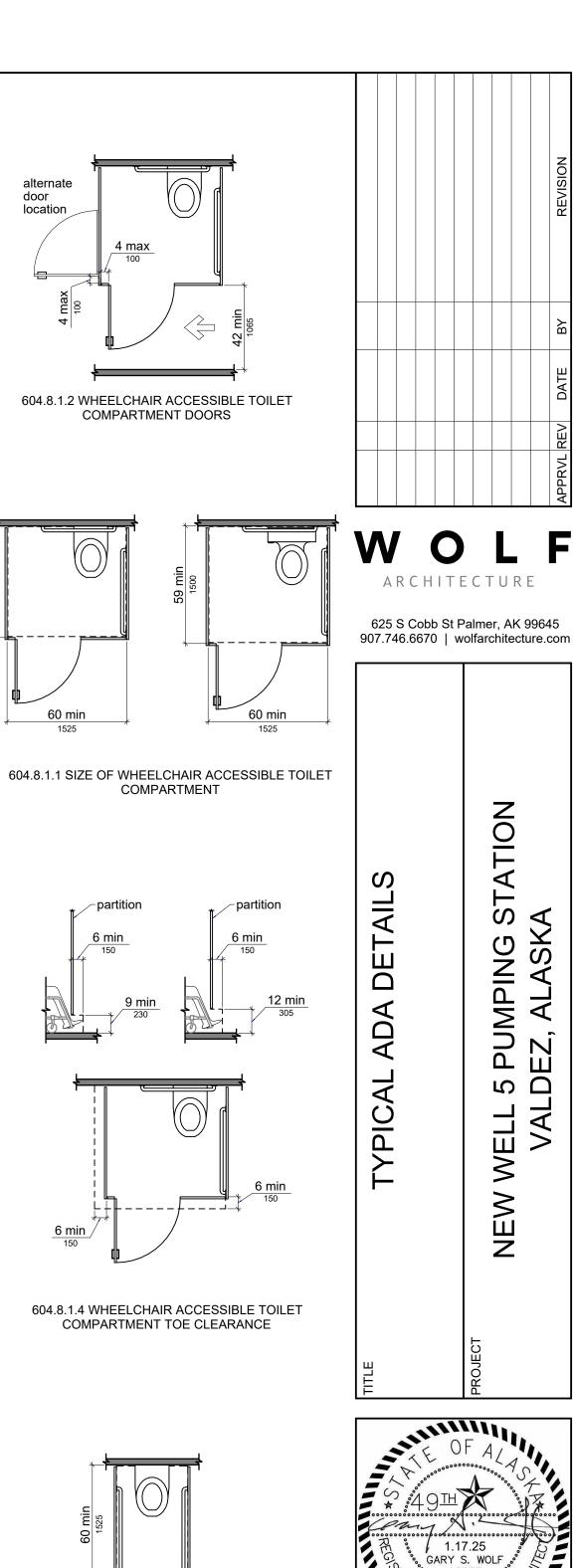
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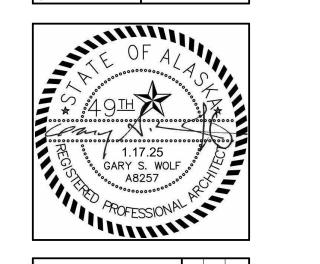
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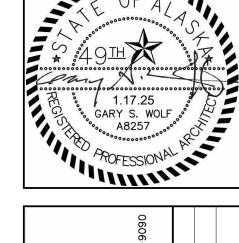




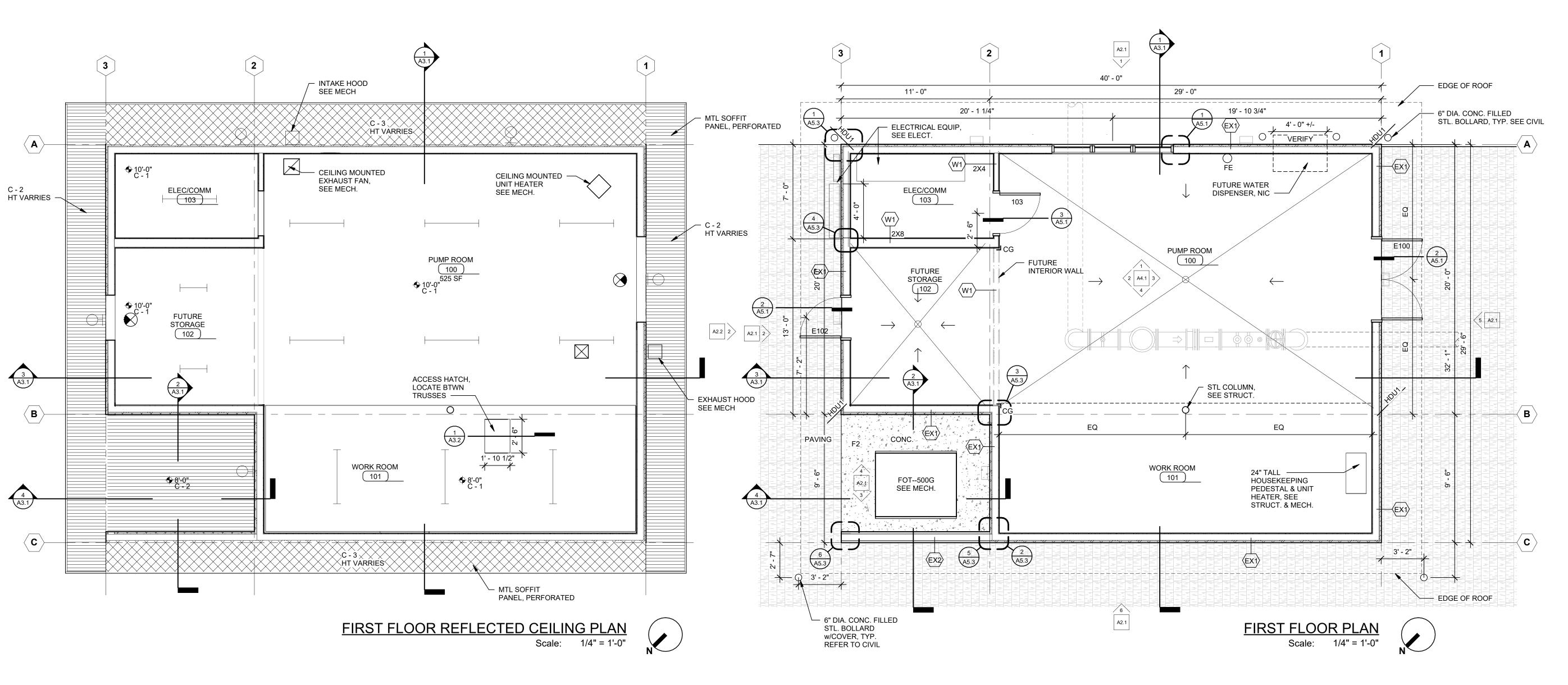
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5 PUMPING ST DEZ, ALASKA



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GENERAL RCP NOTES

- 1. SEE FINISH SCHEDULE FOR COLORS.
- 2. ALL GYP BD CEILINGS AND SOFFITS TO BE PAINTED.
- 3. EXCEPT AT ELECTRICAL UTILITY ROOMS PAINT ALL EXPOSED DUCTWORK, PIPING AND CONDUITS.
- 4. CEILING HEIGHT TO BE MEASURED FROM FINISH FLOOR LEVEL OF THE
- ROOM OR THE AREA WHERE CEILING IS IN.

RCP - CODED NOTES

- C 1 5/8" GWB
- C 2 METAL SOFFIT PANEL C - 3 PERFORATED METAL SOFFIT PANEL

LEGEND

♦ 1'-0" C-1 CEILING HEIGHT (HEIGHTS INDICATED ARE RELATIVE TO 100'-0" FLOOR LEVEL).

STRIPLIGHT - PENDANT OR SURFACE MTD WALL ____ Θ

SURFACE MOUNTED LIGHT FIXTURES

SUPPLY DIFFUSERS

RETURN AIR REGISTER OR EXHAUST FAN

EXIT LIGHT

GENERAL NOTES

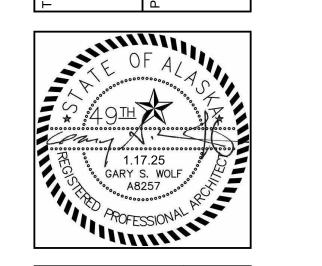
- 1. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DRAWINGS, DIMENSIONS, SPECIFICATIONS, AND SCHEDULES PRIOR TO PROCEEDING WITH ANY WORK OF FABRICATION. NOTIFY ARCHITECT IMMEDIATELY OF ANY UNCERTAINTY OR DISCREPANCY.
- 2. DRAWINGS SHALL NOT BE SCALED.
- 3. WHERE NOTES ON THE DRAWINGS INDICATE A CONDITION AT ONE LOCATION, WHETHER INDICATED AS TYPICAL OR NOT, THE NOTE SHALL APPLY TO ALL SIMILAR LOCATIONS UNLESS NOTED OTHERWISE.
- 4. SEE SHEET G0.01 FOR SYMBOLS, ABBREVIATIONS, ETC.
- 5. SEE SHEET G0.02 FOR TYPICAL ADA DETAILS AND CLEARANCES.
- 6. SEE SHEET G0.02 FOR TYPICAL ACCESSORY MOUNTING HEIGHTS.
- 7. DIMENSIONS ARE TYPICALLY TAKEN TO GRID LINE, FACE OF STUD WALL, UNLESS NOTED OTHERWISE OR INDICATED ON DETAILS. A DIMENSION NOTING "5'-0" CLEAR" WOULD DENOTE FACE OF FINISH.

8. WALL TYPES W1 UNLESS NOTED OTHERWISE.

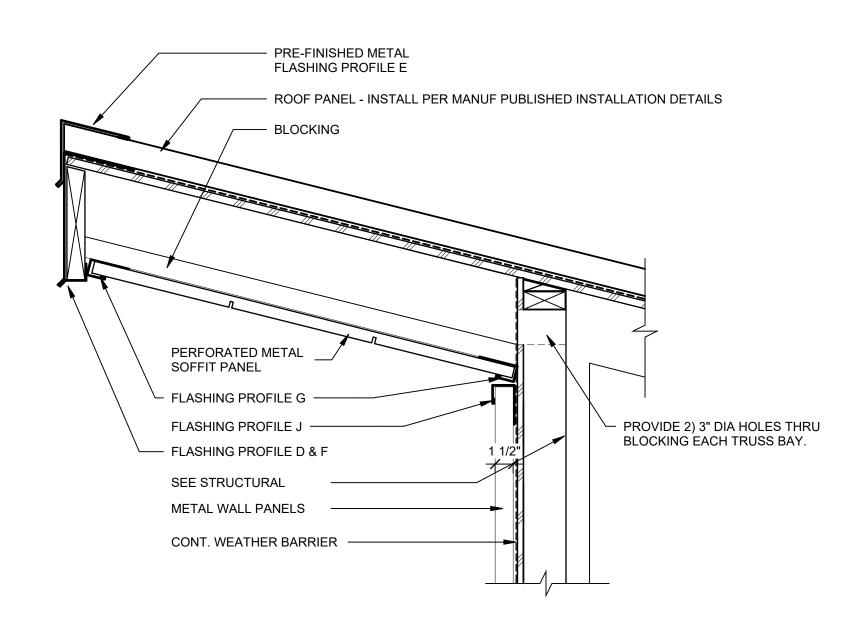
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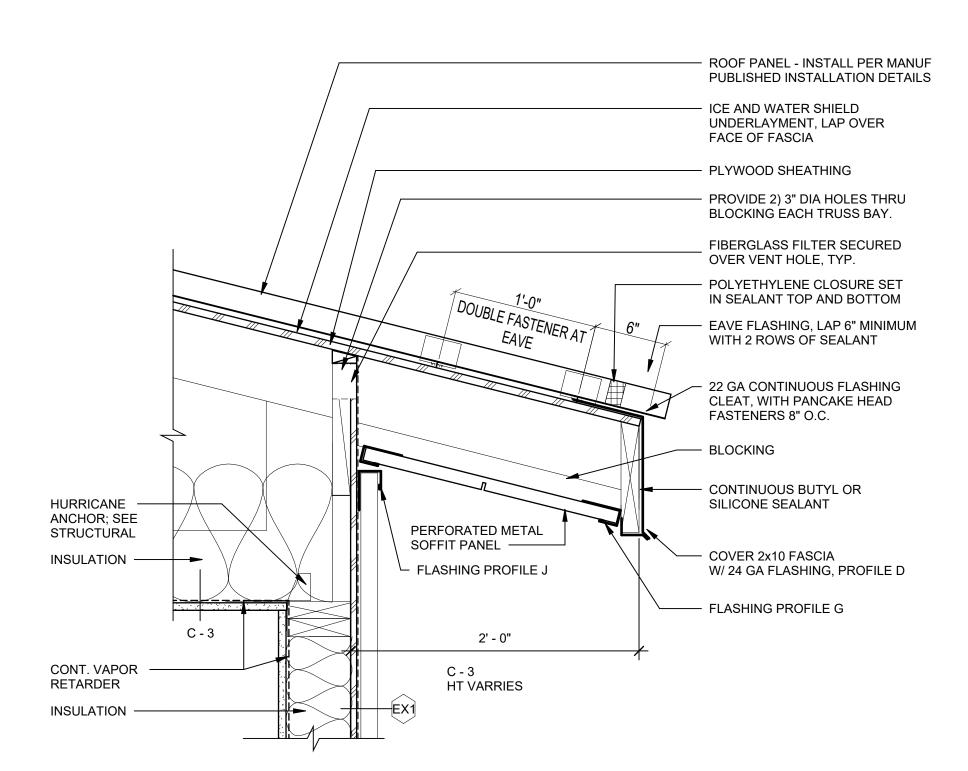
PLANS EILING WELL 5 PUMPING S' VALDEZ, ALASKA $\overline{\mathbf{O}}$ CTED REFLE(∞ OR FIRS

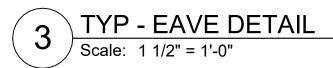


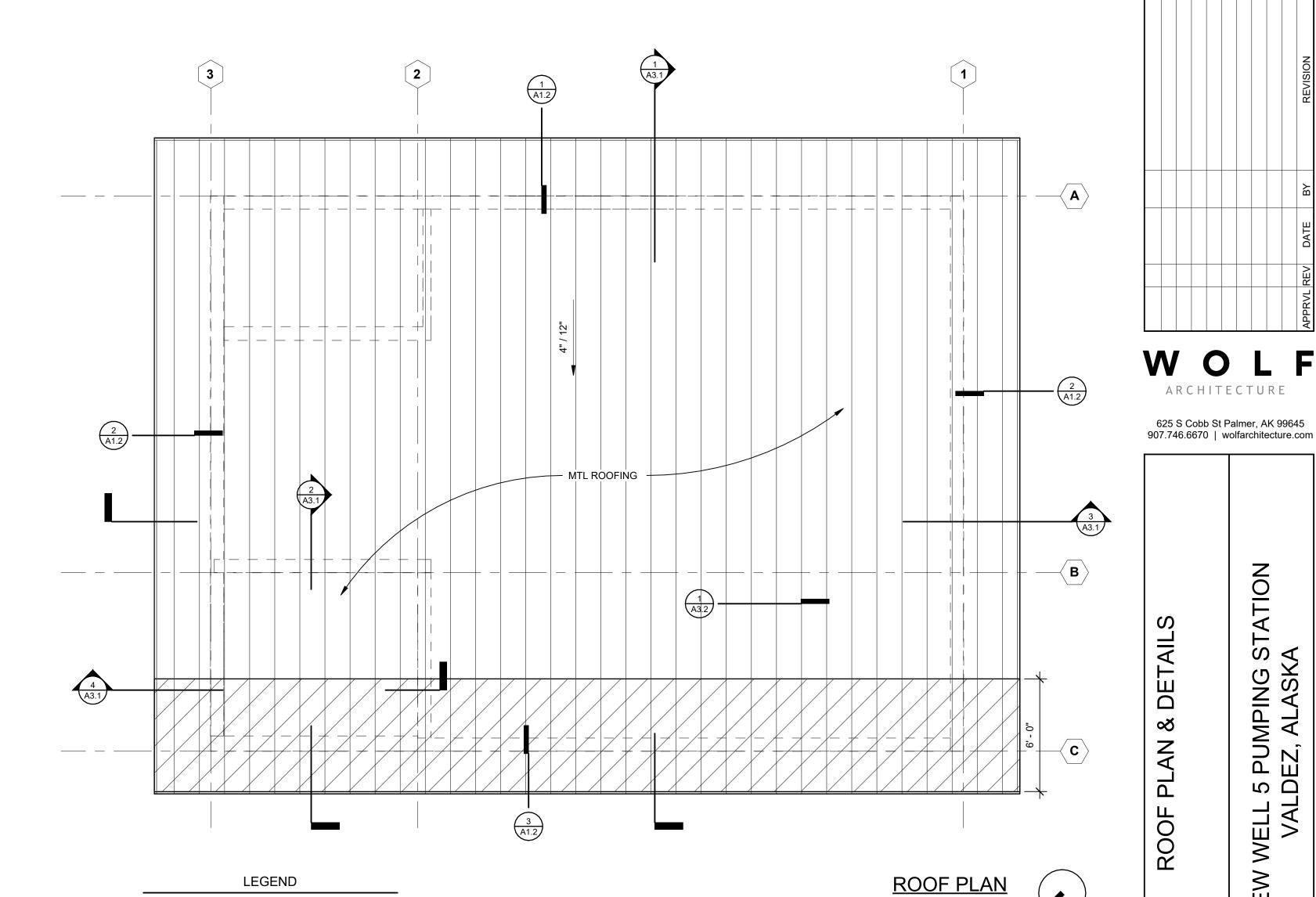
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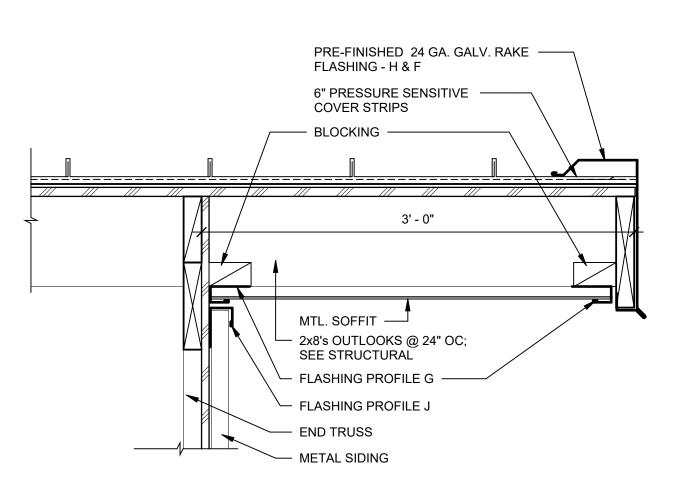
TYP - TOP OF EAVE DETAIL







— DIRECTION OF SLOPE TO DRAIN ICE & WATER SHEILD



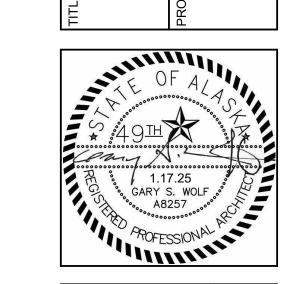
TYP - RAKE DETAIL

GENERAL NOTES

- 1. SEE G SHEETS FOR TYPICAL ROOF CONSTRUCTION
- 2. VENTS, EXHAUST, & COWLS ARE MECHANICAL PENETRATION ITEMS. SEE MECHANICAL FOR LOCATIONS, TYPES, SIZES AND QUANTITY OF ALL PENETRATIONS. PENETRATIONS SHALL BE MIN 18" FROM ANY RIDGE VALLEY HIP, OR EDGE OF ROOF.

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

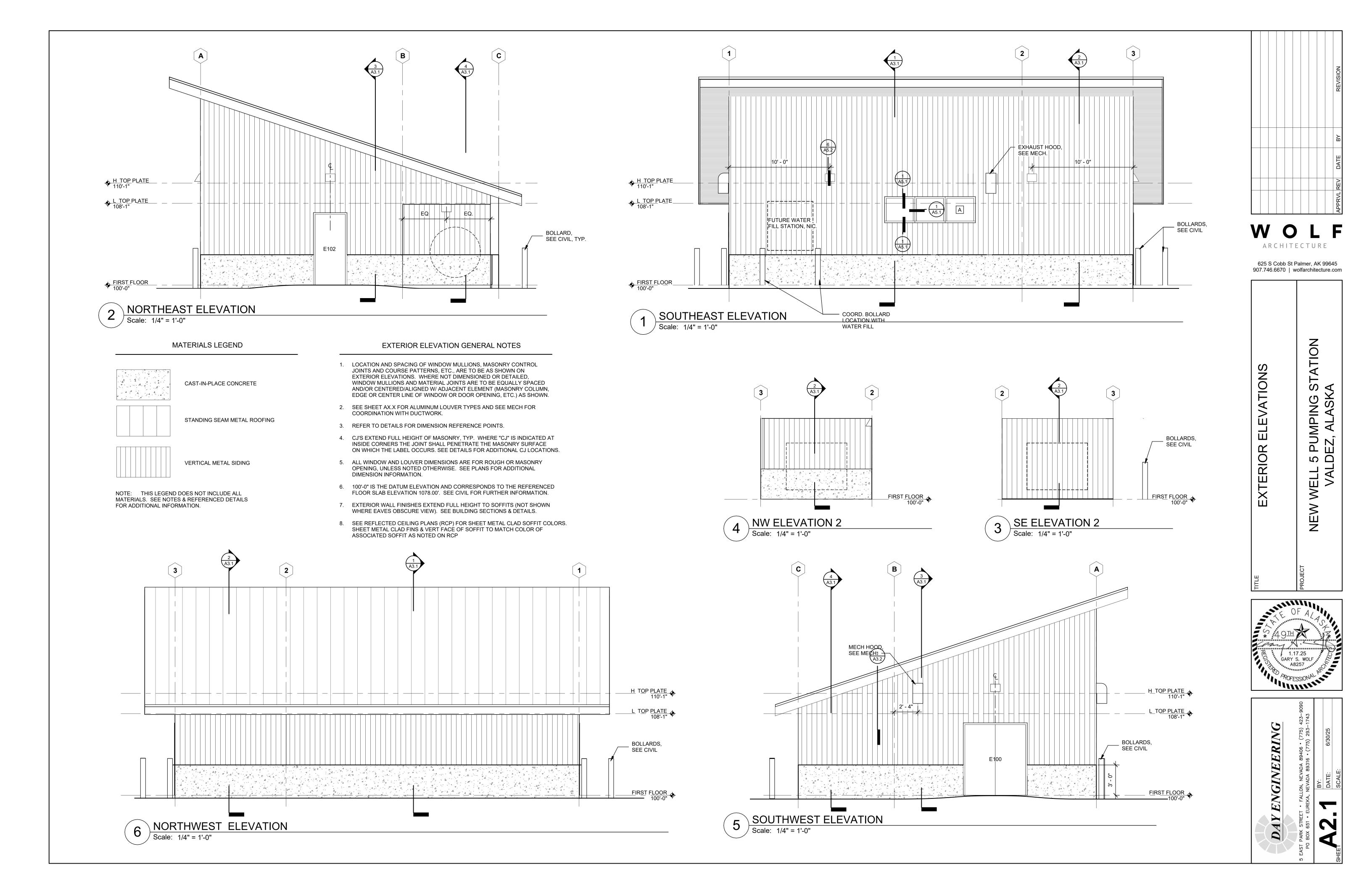
- 3. ALL FLASHING & ROOFING TIE-INS TO PLUMBING & HVAC PENETRATIONS ARE BY ROOFING CONTRACTOR.
- 4. PROVIDE MINIMUM R-38 INSUL AT ALL ROOFS OCCURRING ABOVE INTERIOR BUILDING AREA. SEE DETAILS.
- 5. SEE EXTERIOR ELEVATIONS FOR ADDITIONAL ROOFING DETAIL INDICATIONS.
- 6. SEE A5.3 FOR FLASHING DETAILS

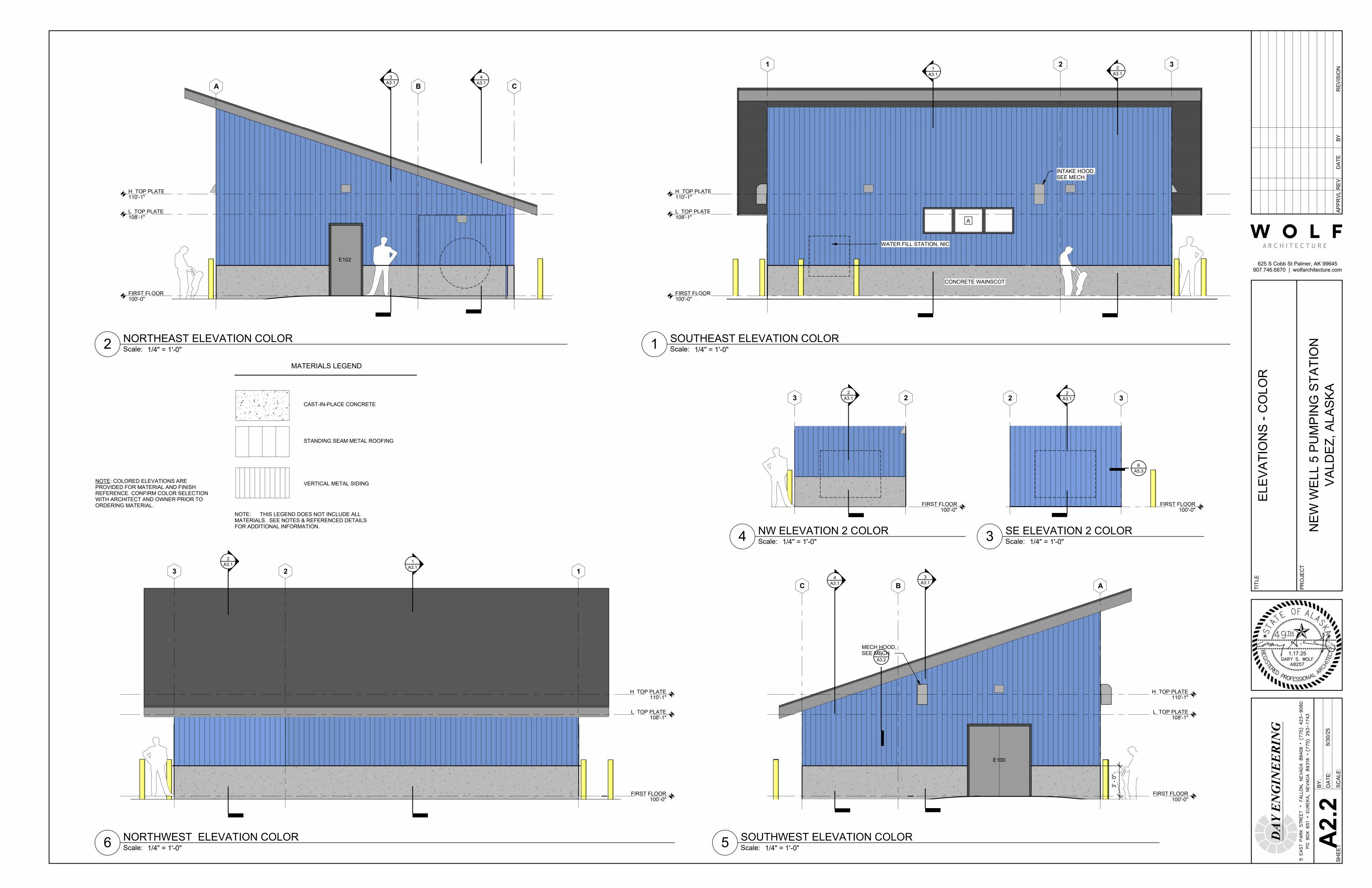


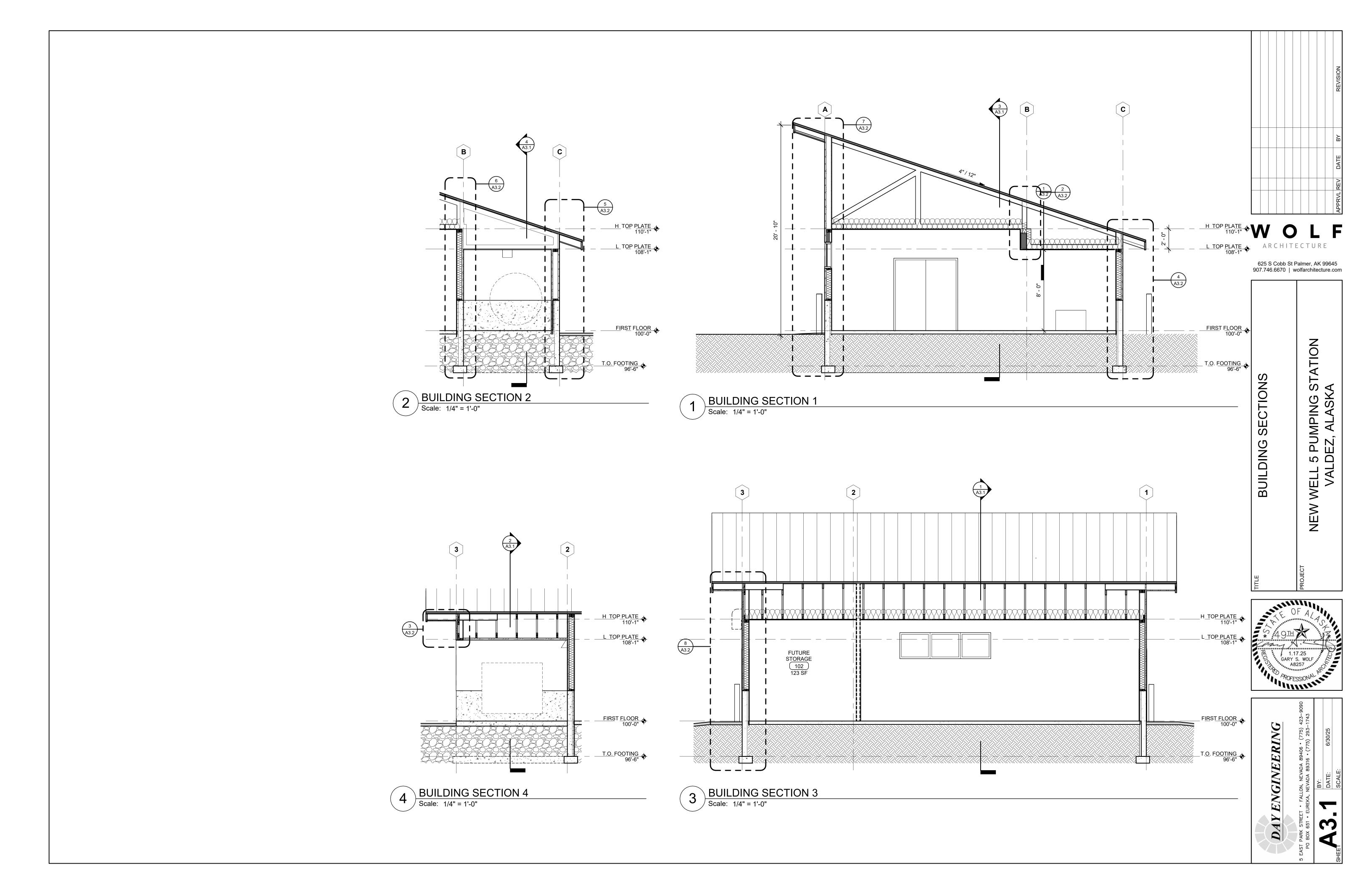
5 PUMPING S DEZ, ALASKA

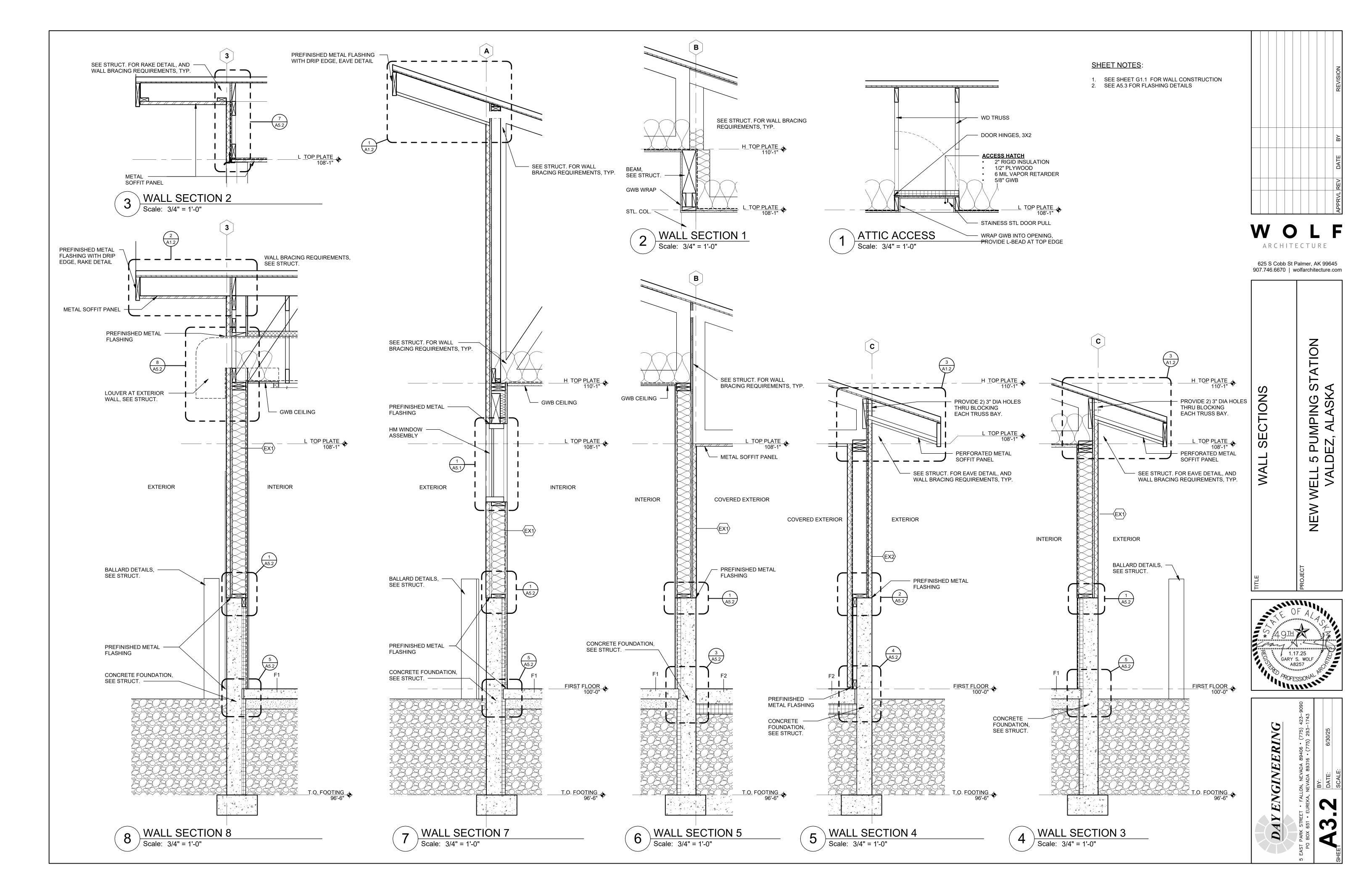
NEW

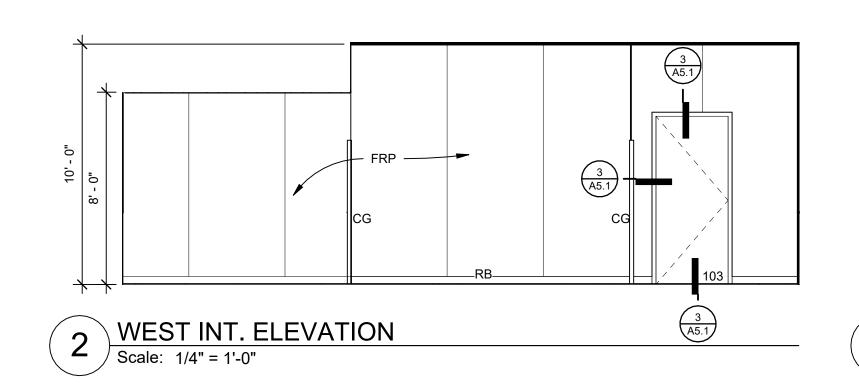
ENGINEERING

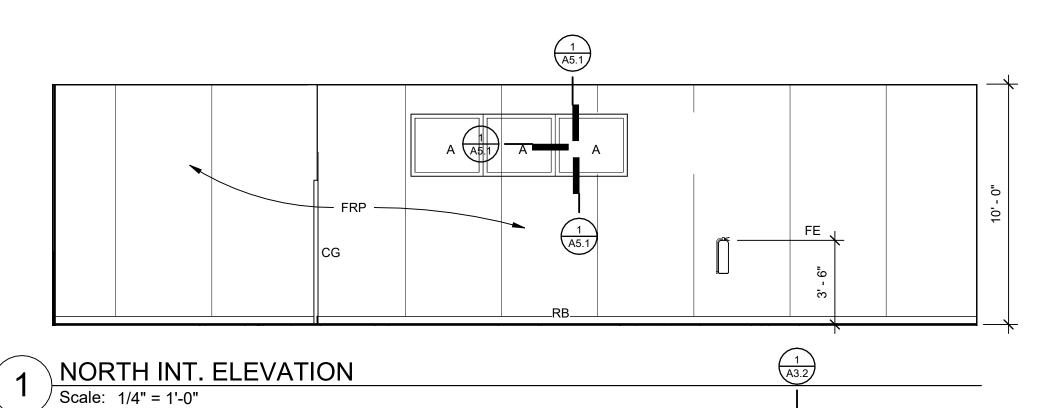








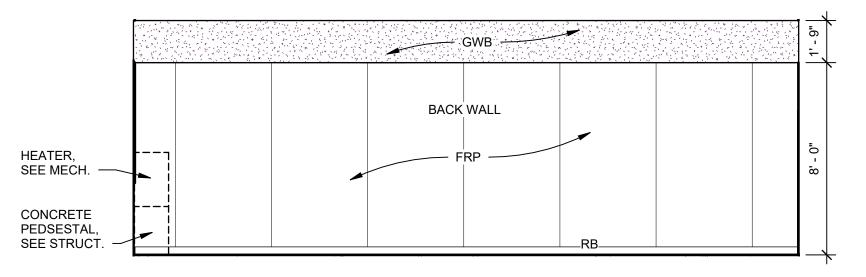




2 A5.1

E100 CONCRETE ——/
PEDSESTAL,
SEE STRUCT. HEATER, SEE MECH.

3 EAST INT. ELEVATION
Scale: 1/4" = 1'-0"

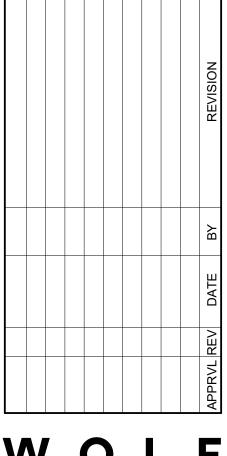


SOUTH INT. ELEVATION

	ROOM FINISH SCHEDULE									
ВООМ			FLOOR	BASE	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL		
ROOM NUMBER	NAME	CEILING	MAT	CLR	FIN	FIN	FIN	FIN	NOTES	
100	PUMP ROOM	GWB	SC	RB	FRP	FRP	FRP	FRP		
101	WORK ROOM	GWB	SC	RB	FRP	FRP	FRP	FRP		
102	FUTURE STORAGE	GWB	SC	RB	FRP	FRP	FRP	FRP		
103	ELEC/COMM	GWB	SC	RB	FRP	FRP	FRP	FRP		

INTERIOR FINISH GENERAL NOTES

- 1. AN ASTERISK (*) IN THE FINISH SCHEDULE REFERENCES CODED NOTES IN THE REMARKS COLUMN.
- 2. PAINT ALL INTERIOR MECHANICAL LOUVERS AND EQUIPMENT TO MATCH ADJACENT SURFACE, UNLESS NOTED OTHERWISE.
- 3. PAINT ALL DOORS PAINT COLOR PT-3
- 4. PAINT ALL DOOR & RELITE FRAMES PAINT COLOR PT-2 UNLESS NOTED OTHERWISE.
- 5. ALL GYP BD CEILINGS TO BE PAINT PT-1, UNO.
- 6. FOR ALL PRODUCTS, FOLLOW MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
- 7. ELEVATED CONCRETE PEDESTAL TO BE SEALED CONCRETE.



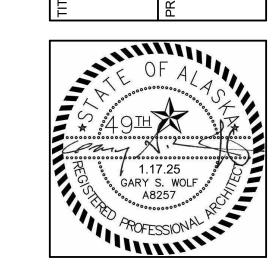
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> WELL 5 PUMPING STATION VALDEZ, ALASKA NEW

ELEVATIONS

NTERIOR



ENGINEERING DAY

FINISH MATERIAL SCHEDULE

PT-1 SHERWIN WILLIAMS **PAINT** PT-2 SHERWIN WILLIAMS PT-3 SHERWIN WILLIAMS

WALL BASE RB-1 6" ROPPE WALL COVERING FRP MARLITE STANDARD

668 NIGHT HAWK LIGHT GREY

SW 7649 SILVERPLATE

SW 7048 URBANO BRONZE

SW 7660 EARL GREY

FINISH ABBREVIATIONS

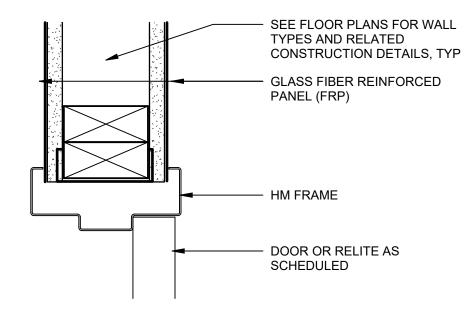
ALUMINUM ACOUSTICAL PANEL CEILING AWP ACOUSTICAL WALL PANEL CLR COLOR CONC CONCRETE CPT CARPET CT CERAMIC TILE ENTRY MAT EP **EPOXY PAINT** EXP EXPOSED FF FACTORY FINISHED FIN GLZ FINISH GLAZING GYP GYPSUM BOARD LN LINOLEUM MATL MATERIAL MINERAL COMPOSITE SCULPTURAL MCSP PANEL MTL PT

METAL PAINT RESILIENT ATHLETIC FLOORING RB RUBBER BASE

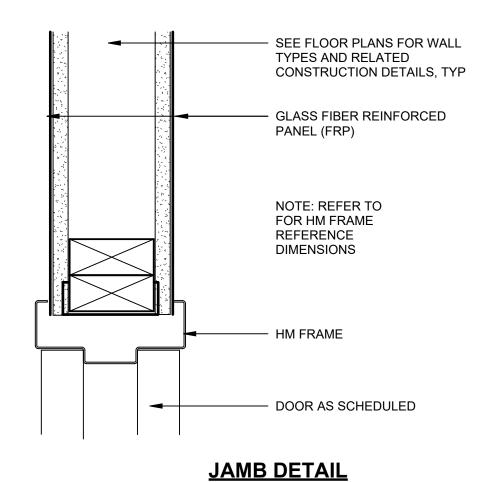
RESILIENT FLOORING TILE RUBBER STAIR STRINGER RFT SC SLR SEALED CONCRETE SEALER

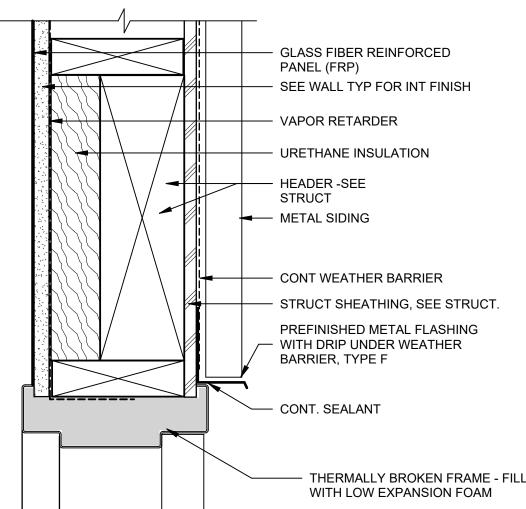
STL STEEL SWC SANITARY WALL COVERING SV SHEET VINYL UNO UNLESS NOTED OTHERWISE VCT VINYL COMPOSITION TILE VRB VENTILATING RUBBER BASE

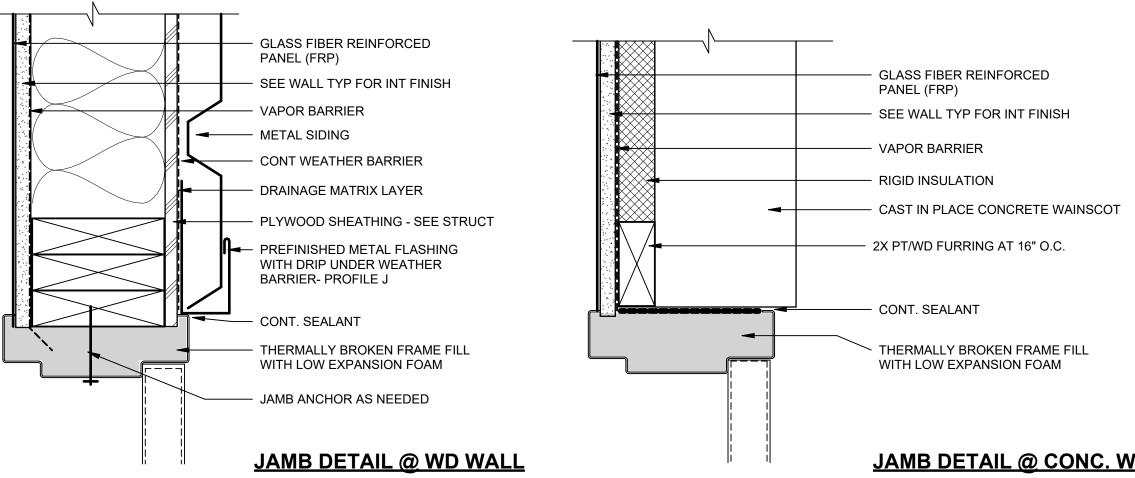
VWC VINYL WALL COVERING WALL PADS

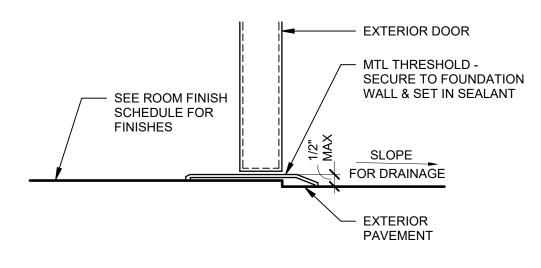


HEAD DETAIL



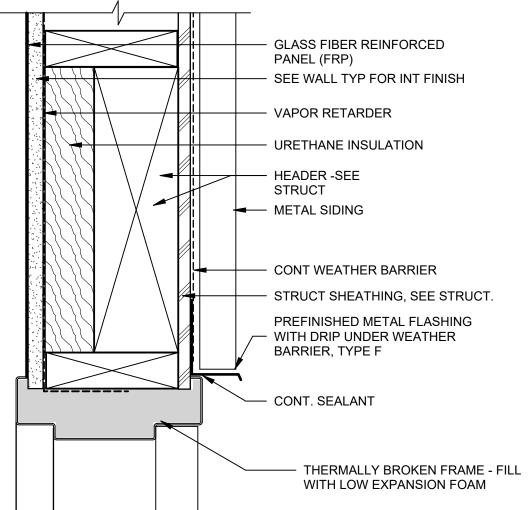




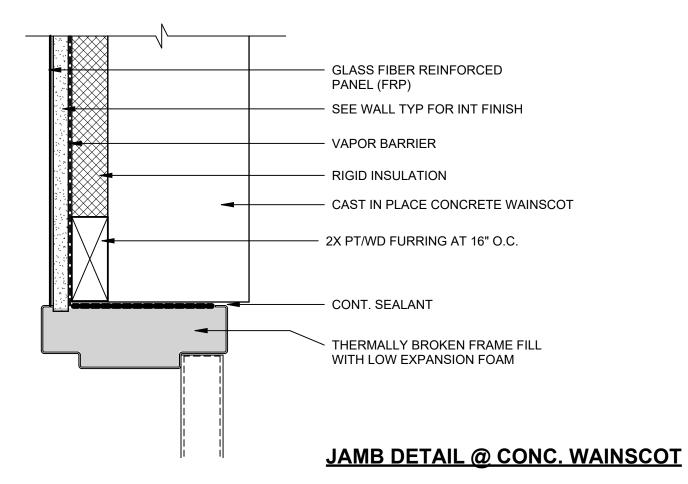


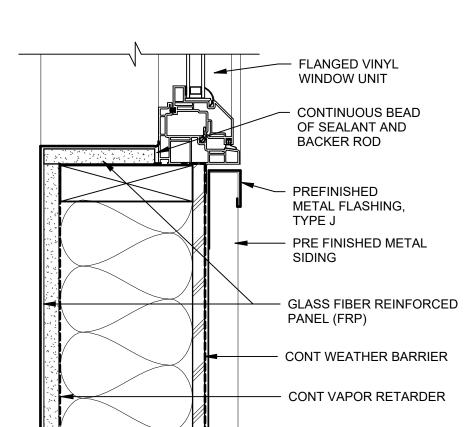
SILL DETAIL

EXTERIOR DOOR - HM HJS TYP Scale: 3" = 1'-0"



HEAD DETAIL



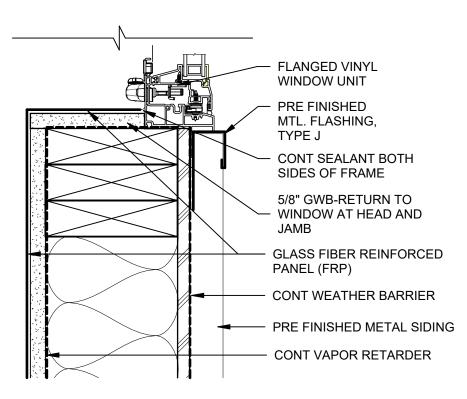


SILL DETAIL

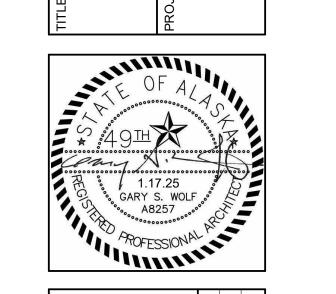
EXTERIOR WINDOW - VINYL MTL Scale: 3" = 1'-0"

1. SEE SHEET G1.1 FOR WALL CONSTRUCTION 2. SEE A5.3 FOR FLASHING DETAILS GLASS FIBER REINFORCED PANEL (FRP) SEE WALL TYP FOR INT FINISH — AIR INFILTRATION BARRIER PLYWOOD SHEATHING PER STRUCT — CONT WEATHER BARRIER PRE FINISHED METAL SIDING CONT VAPOR RETARDER - FRAMING AND HEADER PER STRUCT PREFINISHED WRAP FRP -METAL FLASHING CONT SEALAN VINYL WINDOW ASSY **HEAD DETAIL**

SHEET NOTES:



JAMB DETAIL



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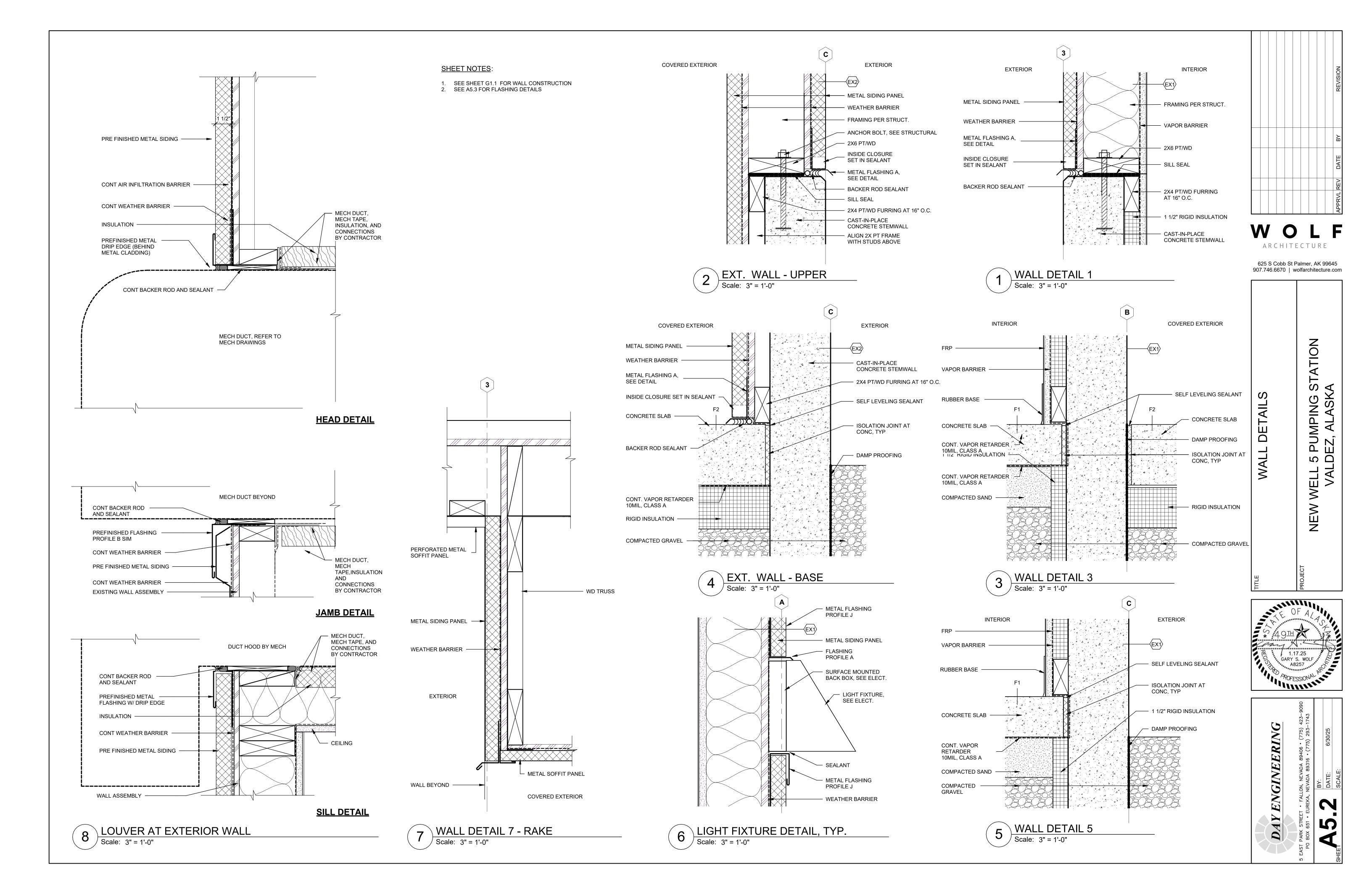
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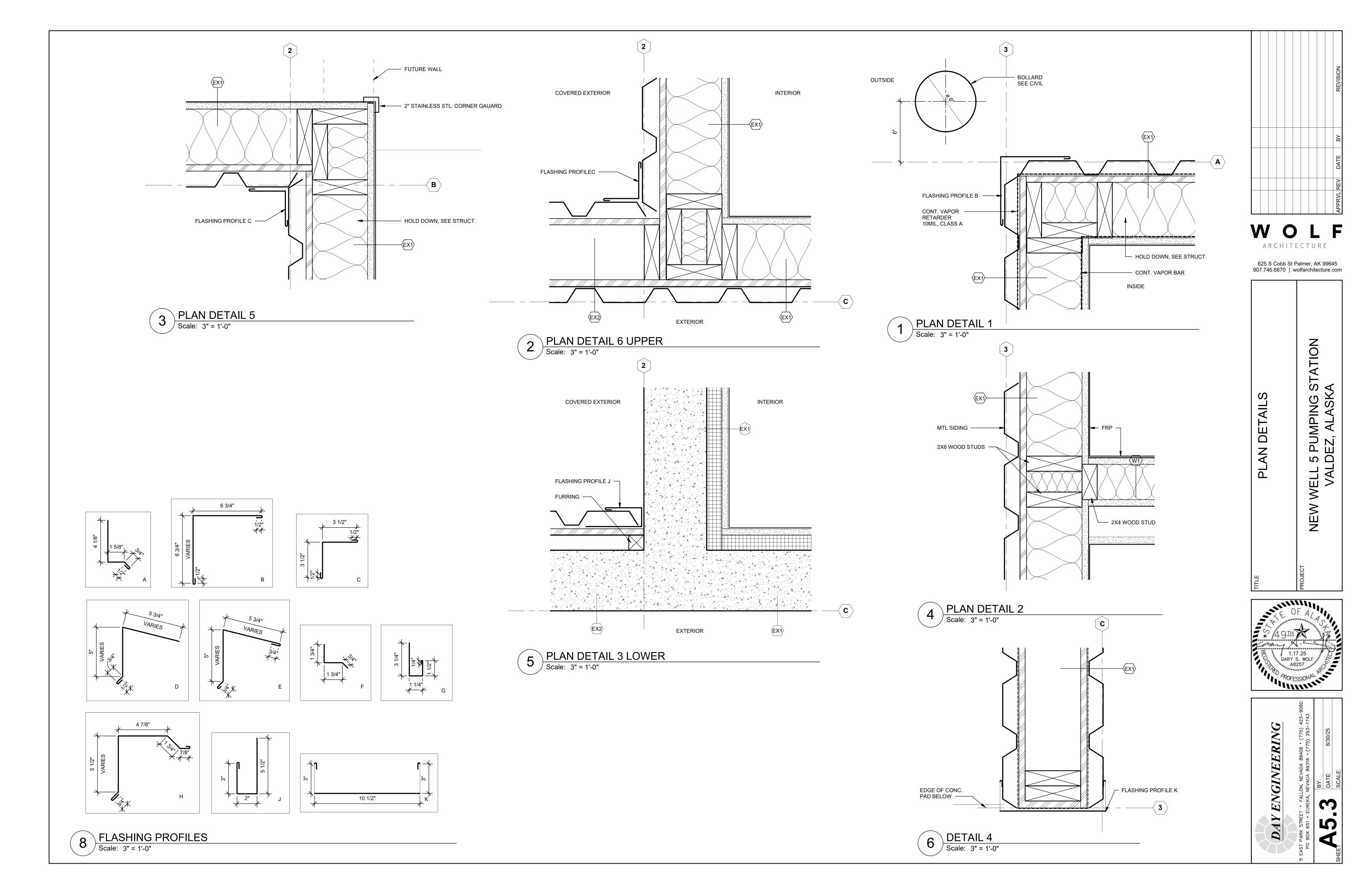
WOLF

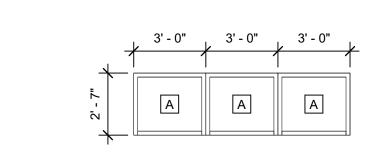
. 5 PUMPING ST _DEZ, ALASKA ∞ WELL

DAY ENGINEERING 5

INTERIOR DOOR - HM HJS TYP. Scale: 3" = 1'-0"







WINDOW TYPE

VINYL WINDOW NOTES:

FINISH

1. BASIS OF DESIGN - JELDWEN, PREMIUM, LOW-E 366, ARGON U-VALUE - 0.27 OR LOWER

REMARKS / CODED NOTES

- SHGC 0.24 OR LOWER VT 0.55 OR HIGHER
- FINISH DK BRONZE 2. GLASS TYPE - CARDINAL 366 OR EQUAL

					REVISION
					ВУ
					APPRVL REV DATE
					REV
					APPRVL

WOLF

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FRAME TYPES - DOOR

WIDTH WIDTH LEAF A F-1 F-2

LEAF B LEAF A

DOOR - TYPES

MAN DOOR SCHEDULE

TYPE | MATERIAL

DOOR DOOR

PR A B R HT TYPE MATERIAL FINISH

DOOR NO

DOOR

ABBREVIATIONS

AL ALUMINUM
BOF BOTTOM OF FRAME
FF FACTORY FINISH
GL GLASS

H HINGE (JAMB) HR HOUR

MFR MANUFACTURER PL PLASTIC LAMINATE PR PAIR OF DOORS

PT PAINT
S STRIKE (JAMB)
SST STAINLESS STEEL

STN STAIN & VARNISH TOF TOP OF FRAME

STL STEEL

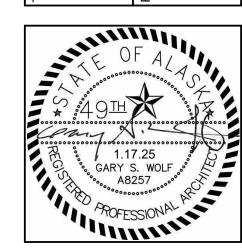
WD WOOD

To Room: Name

ELEC/COMM PUMP ROOM FUTURE STORAGE

- 1. ALL DOORS TO BE 1 3/4" THICK, UNLESS NOTED OTHERWISE
- 2. SEE SHEET A5.1 FOR INTERIOR STEEL FRAME DOOR AND RELITE DETAILS
- 4. GLAZING DIMENSIONS FOR DOOR TYPES ARE TO INSIDE OF FRAME (CLEAR GLAZING AREA). ACTUAL CUTOUT AND TOTAL FRAME WILL BE SLIGHTLY LARGER
- 5. RELITE GLAZING AND STOP TO OCCUR ON CORRIDOR SIDE OF FRAME, UNLESS NOTED OTHERWISE
- 6. ALL DOOR HANDLES TO BE LEVER TYPE COMPLYING WITH ADA

SCHEDULES	NEW WELL 5 PUMPING STATION VALDEZ, ALASKA
TITLE	PROJECT
33111111111111111111111111111111111111	FALAC
49IH 2 49IH 2 3 1.11	20000000000000000000000000000000000000



DAY ENGINEERING

GENERAL DOOR & RELITE NOTES

3. LABEL COLUMN NUMBERS INDICATES THE RATING IN MINUTES, UNLESS NOTED OTHERWISE

7. DOORS AND FRAMES ARE TO BE PAINTED

ABBREVIATIONS

AB ANCHOR BOLT

ACI AMERICAN CONCRETE INSTITUTE

AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION

ALT ALTERNATE

APA AMERICAN PLYWOOD ASSOCIATION ARCH ARCHITECTURAL

ASTM AMERICAN SOCIETY FOR TESTING & MATERIALS

AWS AMERICAN WELDING SOCIETY

BLKG BLOCKING BM BEAM

BNDRY BOUNDARY BOC BOTTOM OF CONCRETE

BOD BOTTOM OF DECK

BOS BOTTOM OF STEEL BOT BOTTOM

BTWN BETWEEN CIP CAST IN PLACE (CONCRETE)

CJP COMPLETE JOINT PENETRATION

CLR CLEAR

COL COLUMN CONN CONNECTION

CONT CONTINUOUS

CVN CHARPY V NOTCH

DIAM DIAMETER DWGS DRAWINGS

(E) EXISTING EA EACH

EL ELEVATION

ELEC ELECTRICAL ELEV ELEVATION

EOR ENGINEER OF RECORD EW EACH WAY

EQ EQUAL

CONCRETE COMPRESSIVE STRENGTH F'M MASONRY COMPRESSIVE STRENGTH

FDN FOUNDATION

FOC FACE OF CONCRETE FT FEET

FTG FOOTING

GA GAGE OR GAUGE GALV GALVANIZED

GLB GLUE-LAMINATED BEAM HORIZ HORIZONTAL

HS HEADED STUD HSH HORIZONTAL SLOTTED HOLE

HSS HOLLOW STRUCTURAL SECTION LVL LAMINATED VENEER LUMBER

MAX MAXIMUM MECH MECHANICAL

MF MOMENT FRAME

MIN MINIMUM MT MAGNETIC PARTICLE STRIP

NOT APPLICABLE NFS NON FROST SUSCEPTIBLE

NIC NOT IN CONTRACT

NTS NOT TO SCALE OC ON CENTER

OWSJ OPEN WEB STEEL JOIST PDF POWER DRIVEN FASTENER

PLF POUNDS PER LINEAR FOOT PSF POUNDS PER SQUARE FOOT

PSI POUNDS PER SQUARE INCH

REQ'D REQUIRED REINF REINFORCING

RT RADIOGRAPHIC TEST STEEL DECK INSTITUTE

SJI STEEL JOIST INSTITUTE

SQ SQUARE STD STANDARD

TBD TO BE DETERMINED

TEMP TEMPERATURE

TOC TOP OF CONCRETE TOS TOP OF STEEL

TS TUBE STEEL TYP TYPICAL

UNO UNLESS NOTED OTHERWISE

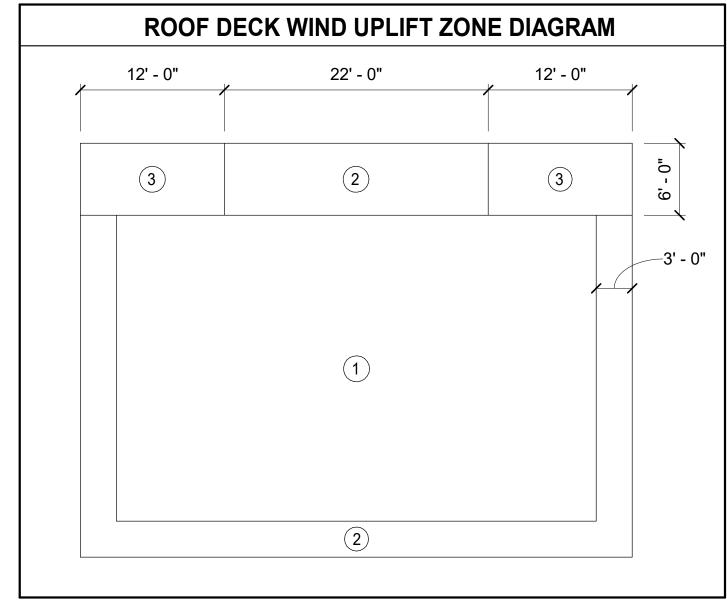
UT ULTRASONIC VERT VERTICAL

WIDE FLANGE DESIGNATION WF WIDE FLANGE

WP WORK POINT WWF WELDED WIRE FABRIC

W/ WITH

	SC	CHEDULE OF CO	DNST	RUCTIO	N MA	TERIA	ALS		
CONCRETE		LOCATION		28-DAY STRE	ENGTH	MAX. V	V/C RATIO	AIR ENTRAINMENT	Γ
	EXTERIOR C	ONCRETE (EXPOSED TO FREE	ZING)	4,500 P.S.I.		0.45		6% +/- 1%	
	INTERIOR SL	ABS (NOT EXPOSED TO FREE:	ZING)	4,000 P.S.I.		0.45		3%	
	FOOTINGS, F	OUNDATION WALLS		3,000 P.S.I.		0.50		5% +/- 1%	
	NOTE: CONC	RETE DESIGN PERFORMED U	SING 3000	0 P.S.I.					
REINFORCING		APPLICATION		TYPE			COM	MENTS	
	FABRICATED	AND STRAIGHT BARS		ASTM A615, GRAI	DE 60	SEE LAP	SPLICE SCHE	EDULE FOR LAP	
	FIELD BENT		,	ASTM A615, GRAI	DE 40	LENGTH	S		
STRUCTURAL		APPLICATION		TYPE		G	RADE	Fy	
STEEL	ANCHOR RO	DS	,	ASTM F1554		GRADE 3	36		
	HSS COLUMN	IS		ASTM A500		GRADE (46 KSI ROUND	
	PLATES		1	ASTM A572	STM A572		50	50 KSI	
WOOD		APPLICATION		SPECIES		G	RADE	COMMENTS	
	DIMENSION	STRUCTURAL WALL STUDS		HEM-FIR	HEM-FIR		NO. 2		
	LUMBER	PLATES AND LEDGERS		HEM-FIR		NO. 2			
		SAWN BEAMS		DOUG. FIR-LARCH		NO. 1			
		POSTS		DOUG. FIR-LARCH		NO. 1			
		BLOCKING, MISC FRAMING		HEM-FIR		STD & BETTER			
	WOOD PANEL	APPLICATION		GRADE		ЛIN. HICK.	SPAN RATING	EXPOSUR	₹E
	SHEATHING	ROOF		APA RATED	3/4"		48/24	EXPOSURE	1
		SHEAR WALLS		APA RATED	15/32"		32/16	EXPOSURE	1



	STRUCTURAL DESIGN C	RITERIA SC	HEDULE	$\neg I \mid \mid \mid \mid \mid \mid$	
CRITERIA	DESCRIPTION	VALUE	COMMENTS	$\exists \mathbf{I} \mid \cdot \cdot $	
CODE	IBC 2021				
SEISMIC	ANALYSIS PROCEDURE SEISMIC DESIGN CATEGORY RISK CATEGORY SEISMIC IMPORTANCE FACTOR, IE SITE CLASS 0.2S SPECTRAL RESPONSE ACCELERATION, SS 1.0S SPECTRAL RESPONSE ACCELERATION, S1 0.2S SPECTRAL RESPONSE COEFFICIENT, Sds 1.0S SPECTRAL RESPONSE COEFFICIENT, Sd1 STRUCTURAL SYSTEM RELIABILITY/REDUNDANCY RESPONSE MODIFICATION FACTOR, R OMEGA Cs (STRENGTH DESIGN) V (STRENGTH DESIGN)	ELF E II 1.0 D- 1.50 0.77 1.20 0.87 1 6.5 3 0.185 11.7 KIPS	PER ASCE 7-16 LIGHT FRAME WOOD WALLS SHEATHED WITH WOOD STRUCTURAL PANELS	P	N D
WIND	BASIC WIND SPEED (3 SECOND GUST) RISK CATEGORY EXPOSURE FACTOR INTERNAL PRESSURE COEFFICIENT, GCpi	133 MPH II C ±0.18	PER ASCE 7-16 BASIC WIND SPEED MAP ENCLOSED BUILDING	625 South Col Palmei PH 90 WWW.PNDE	EERS, INC. ob Street, Suite 202 r, AK 99645 7.707.1081 ENGINEERS.COM # AECC250
COMP. & CLADDING PRESSURES	ROOF INTERIOR - ZONE ① PERIMETER - ZONE ② CORNER - ZONE ③ WALL INTERIOR - ZONE ④ CORNER - ZONE ⑤	10 Ft ² 100 Ft ² 48.4 PSF 41.9 PSF 51.2 PSF 45.1 PSF 100.7 PSF 71.3 PSF 41.8 PSF 36.1 PSF 51.6 PSF 40.1 PSF	WIND VALUES SHOWN ARE ULTIMATE LOADS MULTIPLY BY 0.6 FOR ALLOWABLE LOADS VALUES MAY BE NEGATIVE OR POSITIVE VALUES MAY BE INTERPOLATED BETWEEN 10 SQFT AND 100 SQFT ZONE 5 EXISTS FOR WALLS WITHIN 3 FT OF WALL CORNERS		STATION
ROOF LIVE LOADS	GROUND SNOW LOAD SNOW LOAD EXPOSURE FACTOR THERMAL FACTOR Ct SNOW IMPORTANCE FACTOR FLAT ROOF SNOW LOAD SNOW DRIFT LOADS	160 PSF 1.0 1.0 1.0 135 PSF PER ASCE 7-16		CRITERIA	JMPING , ALASK
FLOOR LIVE LOADS	1ST LEVEL SLAB ON GRADE	100 PSF			P. E
FOUNDATIONS	ALLOWABLE SOIL BEARING PRESSURE	3000 PSF	PRESUMPTIVE BEARING PRESSURE PER IBC TABLE 1806.2	DESIGN	LL 5 ALD
	DEEEDDED CLIDMI	TTALC			

DEFERRED SUBMITTALS

DEFERRED SUBMITTAL ITEMS SHALL BE REVIEWED BY THE EOR AND THEN SUBMITTED TO THE BUILDING OFFICIAL.

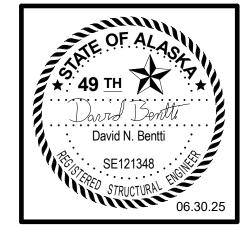
THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING CALCULATION AND DRAWINGS STAMPED BY AN ALASKA REGISTERED PROFESSIONAL ENGINEER FOR THE FOLLOWING CONTRACTOR DESIGNED ITEMS:

- PREMANUFACTURED WOOD TRUSSES
- SEISMIC RESTRAINT OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL COMPONENTS

AS-BUILT DRAWINGS

CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS ON SITE, MODIFIED TO REFLECT ALL DESIGN CHANGES TO THE ORIGINAL DRAWING SET.

PND ENGINEERS INC IS NOT RESPONSIBLE FOR SAFETY PROGRAMS, METHODS, OR PROCEDURES OF OPERATION, OR THE CONSTRUCTION OF THE DESIGN SHOWN ON THESE DRAWINGS. DRAWINGS ARE FOR USE ON THIS PROJECT ONLY AND ARE NOT INTENDED FOR REUSE WITHOUT WRITTEN APPROVAL FROM PND. DRAWINGS ARE ALSO NOT TO BE USED IN ANY MANNER THAT WOULD CONSTITUTE A DETRIMENT DIRECTLY OR INDIRECTLY TO PND.



WELL

DAY

ENGINEERING

STATEMENT OF SPECIAL INSPECTIONS

THE FOLLOWING SPECIAL INSPECTIONS SHALL BE PERFORMED BY QUALIFIED PERSONNEL EMPLOYED BY THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT.

SPECIAL INSPECTOR QUALIFICATIONS:

THE SPECIAL INSPECTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING THEIR COMPETENCE AND RELEVANT EXPERIENCE OR TRAINING.

INSPECTION TASKS:

INSPECTION TASKS ARE LISTED IN THE ATTACHED TABLES AND IN THE 2021 EDITION OF THE IBC CHAPTER 17.

REPORT REQUIREMENTS:

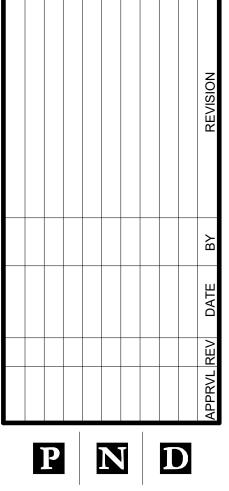
REPORTS SHALL BE COMPLETED ON A DAILY BASIS AND DISTRIBUTED ON A WEEKLY BASIS. COPIES OF REPORTS SHALL BE DISTRIBUTED TO THE GENERAL CONTRACTOR, THE ENGINEER OF RECORD AND THE ARCHITECT OF RECORD. REPORTS SHALL INDICATE WHETHER THE WORK WAS OR WAS NOT COMPLETED IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR. IF THEY ARE NOT CORRECTED, DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING THE SPECIAL INSPECTIONS PERFORMED AND THE CORRECTION OF ANY DISCREPANCIES SHALL BE DISTRIBUTED AS NOTED ABOVE.

	REQUIRED INSPECTION	ON OF SOILS	
	VERIFICATION AND INSPECTION TASK	FREQUENCY OF INSPECTION	REMARKS
1	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	PERIODIC	
2	VERIFY EXCAVATIONS EXTEND TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	PERIODIC	
3	PERFORM CLASSIFICATION AND TESTING OF FILL MATERIALS.	PERIODIC	
4	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	CONTINUOUS	
5	PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PREPARED PROPERLY.	PERIODIC	

	SPECIAL INSPECTION FOR WIND RESISTANCE									
	VERIFICATION AND INSPECTION TASK	FREQUENCY OF INSPECTION	REMARKS							
1	STRUCTURAL WOOD: FIELD GLUING OF ELEMENTS PART OF THE MAIN WINDFORCE-RESISTING SYSTEM	CONTINUOUS								
	NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF ELEMENTS OF THE MAIN WIND FORCE RESISTING SYSTEM INCLUDING: WOOD SHEAR WALLS, DRAG STRUTS, HOLDOWNS AND DIAPHRAGMS.	PERIODIC								
2	ARCHITECTURAL COMPONENTS: ROOF AND WALL CLADDING.	PERIODIC								

	VERIFICATION AND INSPECTION TASK	FREQUENCY OF	REFERENCE FOR CRITERIA			
		INSPECTION	REF. STANDARD	IBC REFERENCE		
1	INSPECTION OF REINFORCING STEEL AND PLACEMENT	PERIODIC	ACI 318: CH 20, 25.2, 25.3 26.6.1-26.6.3			
2	REINFORCING BAR WELDING:		AWS D1.4 ACI 318: 26.6.4			
	a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	PERIODIC				
	b. INSPECT SINGLE-PASS FILLET WELDS MAXIMUM 5/16"	PERIODIC				
	b. INSPECT ALL OTHER WELDS	CONTINUOUS				
3	INSPECTION OF ANCHORS CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASE OR WHERE STRENGTH DESIGN IS USED	PERIODIC	ACI 318: 17.8.2			
4	INSPECTION OF ANCHORS POST INSTALLED IN HARDENED CONCRETE MEMBERS					
	a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	CONTINUOUS	ACI 318: 17.8.2.4			
	b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4. a.	PERIODIC	ACI 318: 17.8.2			
5	VERIFY USE OF REQUIRED MIX DESIGN	PERIODIC	ACI 318: CH 19, 26.4.3, 26.4.4	1904.1, 1904.2		
6	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRET	CONTINUOUS	ASTM C172 ASTM C31 ACI 318: 26.5, 26.15			
7	INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	CONTINUOUS	ACI 318: 26.5			
8	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TECHNIQUES	PERIODIC	ACI 318: 26.5.3-26.5.5			
9	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	PERIODIC	ACI 318: 26.11.1.2(b)			

	SPECIAL INSPECTION FOR SEISMIC RESISTANCE											
	VERIFICATION AND INSPECTION TASK	FREQUENCY OF INSPECTION	REMARKS									
1	STRUCTURAL WOOD: FIELD GLUING OF ELEMENTS PART OF THE MAIN WINDFORCE-RESISTING SYSTEM	CONTINUOUS										
	NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF ELEMENTS OF THE MAIN WIND FORCE RESISTING SYSTEM INCLUDING: WOOD SHEAR WALLS, DRAG STRUTS, HOLDOWNS AND DIAPHRAGMS.	PERIODIC										
2	ARCHITECTURAL COMPONENTS: ROOF AND WALL CLADDING. INTERIOR AND EXTERIOR NON-BEARING WALLS. INTERIOR AND EXTERIOR VENEER SYSTEMS.	PERIODIC										

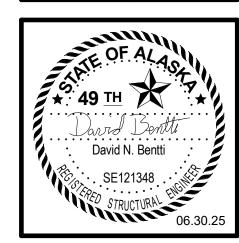


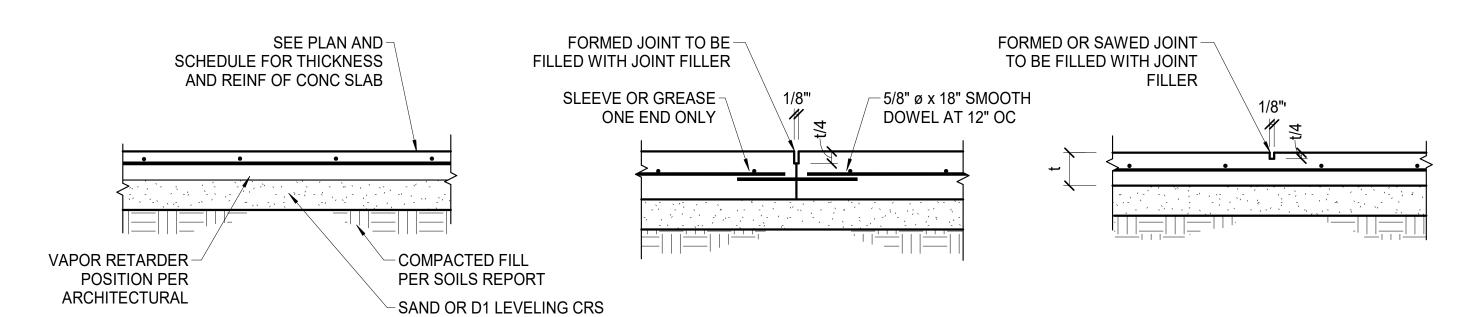


PROJECT

NEW WELL 5 PUMPING STATION

VALDEZ, ALASKA





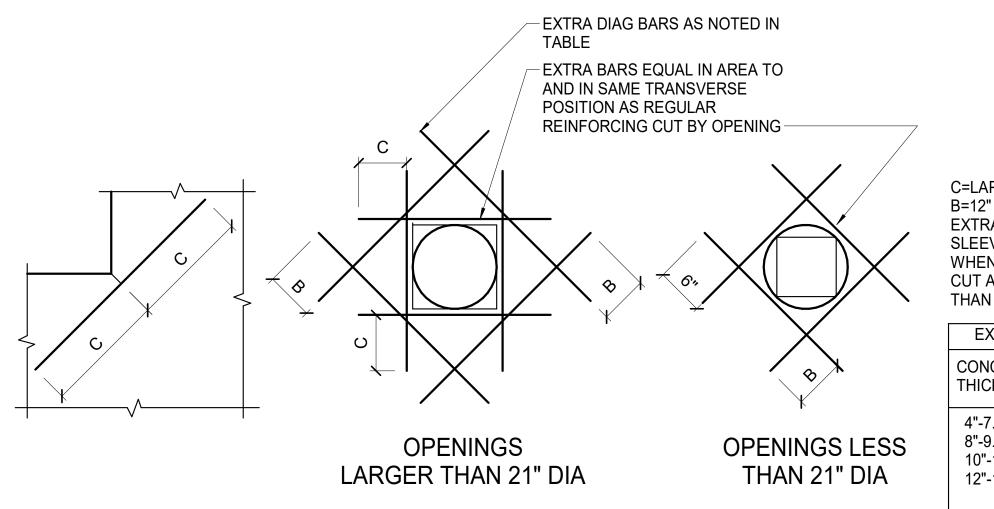
TYPICAL INTERIOR SLAB ON GRADE

TYPICAL SLAB CONSTRUCTION JOINTS

TYPICAL SLAB CONTROL JOINT

1 TYPICAL SLAB JOINTS 3/4" = 1'-0"

RE-ENTRANT CORNERS



OPENING REINFORCING

C=LAP SPLICE MIN
B=12" MIN
EXTRA BARS NOT REQUIRED AT
SLEEVES OR WALL PIPES
WHEN REINFORCING IS NOT
CUT AND OPENING IS LESS
THAN 10 INCH

EXTRA DIAG E	BARS	
CONCRETE THICKNESS	BAR SIZE	
4"-7.99" 8"-9.99" 10"-11.99" 12"-18"	4 5 5 T&B 6 T&B	

SLAB REINFORCING SCHEDULE THICKNESS TYPE REINFORCING CONCRETE COVER 4" ON GRADE #3 @ 16" OC EACH WAY 2" FROM TOP

#3 @ 16" OC EACH WAY

NOTES:

ON GRADE

CONCRETE WALL REINFORCING SCHEDULE									
MARK	THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING	POSITION	REMARKS				
6C	6"	#5 @ 16" OC	#5 @ 12" OC	CENTERED	TYPICAL CONCRETE STEM WALL				
	NOTES: ALL HORIZONTAL REINFORCING SHALL TERMINATE AT WALL ENDS, INTERSECTIONS AND JAMBS WITH A STANDARD HOOK.								

2" FROM TOP

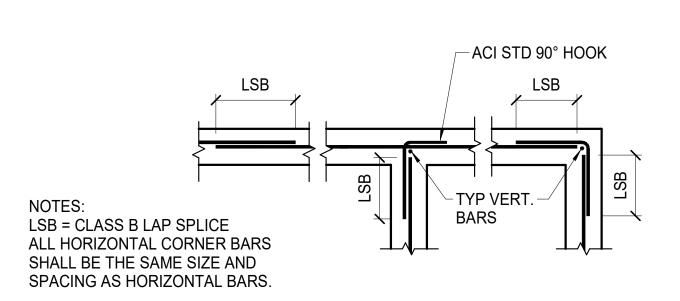
STRIP FOOTING REINFORCING SCHEDULE										
MARK	FTG WIDTH	FTG DEPTH	T.O.F. ELEV.	LONGITUDINAL REINFORCING	TRANSVERSE REINFORCING					
SF3	3'-0"	12"	SEE PLAN	(4) #5 TOP & BOTTOM	#5 AT 12" OC					
NOTES:										

			AC	IST	AND	ARD	90° HOOK DIMENSIONS	
BAR SIZE	#3	#4	#5	#6	#7	#8		
MIN. BEND DIAM. (d)	2 1/4"	3"	3 3/4"	4 1/2"	5 1/4"	6"		NOTE: REFERENCE ACI 318-14
EXTENSION LENGTH (L)	6"	6"	8"	9"	11"	12"		SEC. 25.3

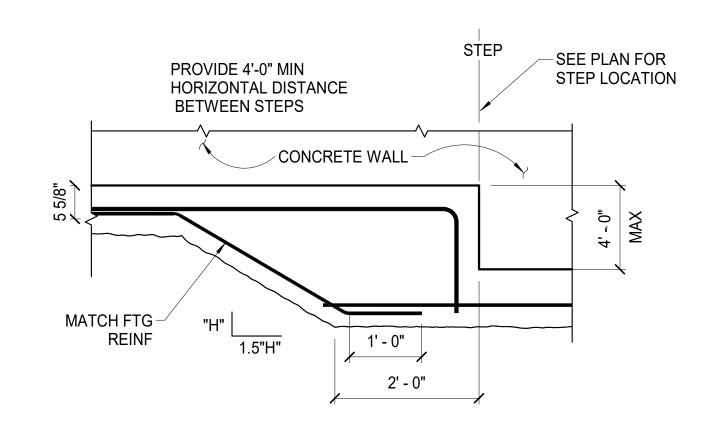
LAP S	PLIC	CES	IN W	/ALL	S, F	TOOT	INGS AND SLABS-ON-GRADE (3000 PSI)
BAR SIZE	#3	#4	#5	#6	#7	#8	NOTE: INCREASE TABULATED LAP LENGTH BY 20% FOR BUNDLES OF 3 BARS.
CLASS B SPLICE	22"	29"	36"	43"	63"	72"	

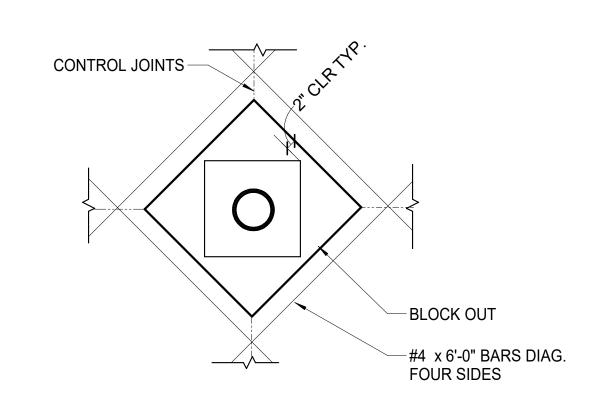
EXPOSURE CO	NDITION	MIN. COVER	TOLERANCE*
CAST AGAINST AND PERMANENTLY EX	(POSED TO EARTH	3"	-3/8", +1"
EXPOSED TO EARTH OR WEATHER	#5 AND SMALLER BARS:	1 1/2"	-1/4", +1/2"
	#6 AND LARGER BARS:	2"	-1/4", +1/2"
NOT EXPOSED TO EARTH, WEATHER (OR IN CONTACT WITH GROUND:	3/4"	-1/4", +3/8"
TIES AND STIRRUPS		1 1/2"	-1/4", +1/2"

2 TYPICAL WALL OPENING REINFORCING



SINGLE CURTAIN PLAN - 8" WALLS











David N. Bentti

David N. Bentti

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> . 5 PUMPING ST .DEZ, ALASKA

WELL !

NEW

REINFORCING SCHEDUL TYPICAL DETAILS

CONCRETE

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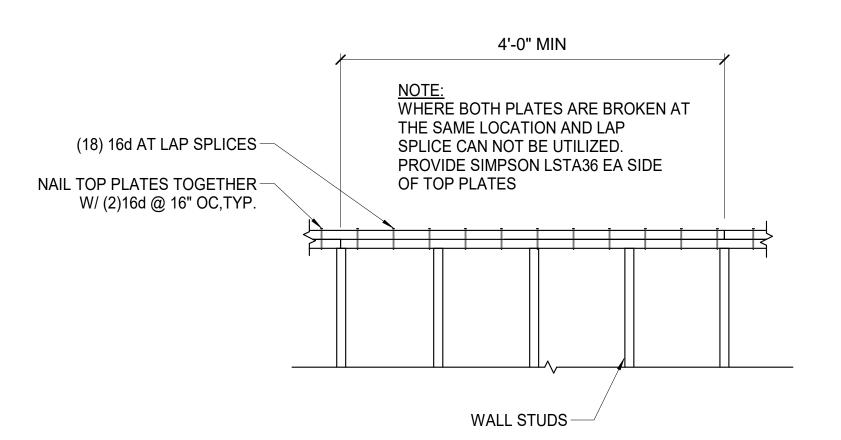
 BOX 651 • EUREKA, NEVADA 89316 • (775) 203-1743

 BOTE:
 DONB

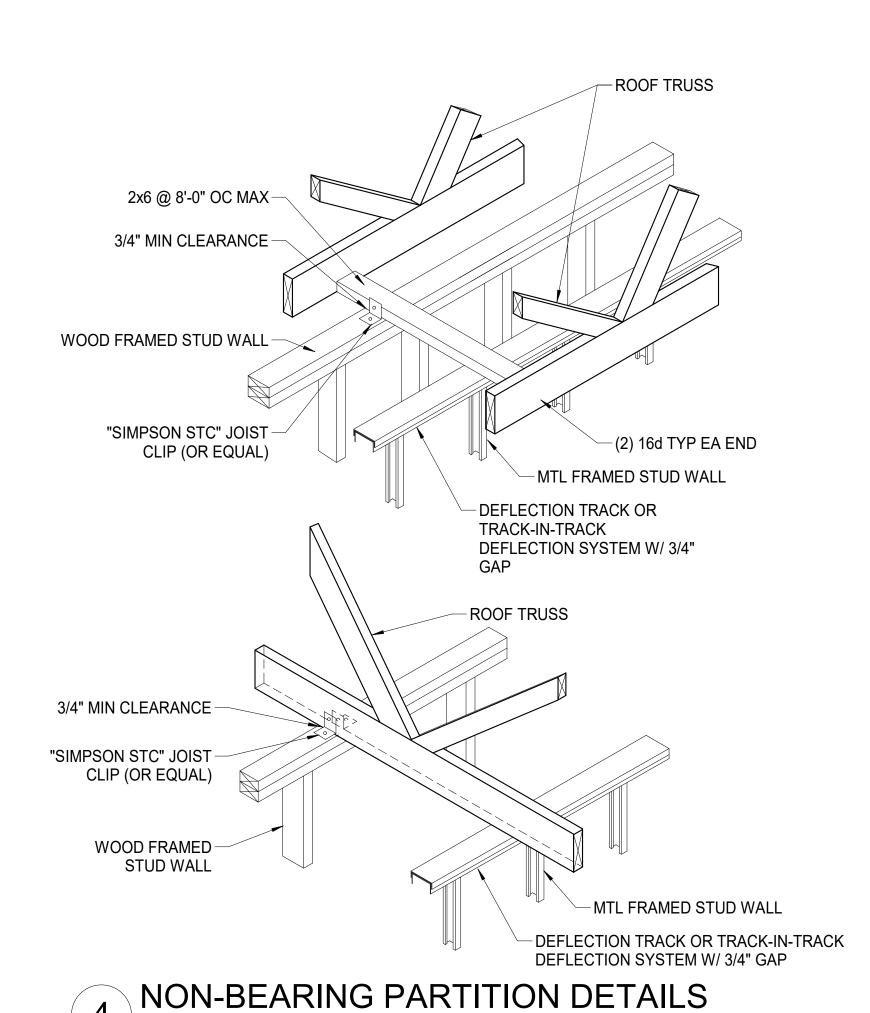
 BOTE:
 06/30/2025

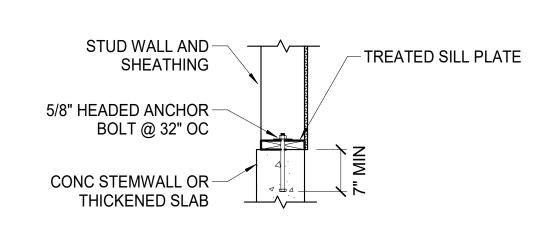
HEADER SCHEDULE									
MARK	SIZE	TRIMMER STUDS	KING STUDS	NOTES					
H1	4x12	(1) 2x6	(2) 2x6						
H2	5.5x12 GLB	(2) 2x6	(4) 2x6						

NOTE: ALL HEADERS ARE LOCATED AT THE TOP OF OPENING.



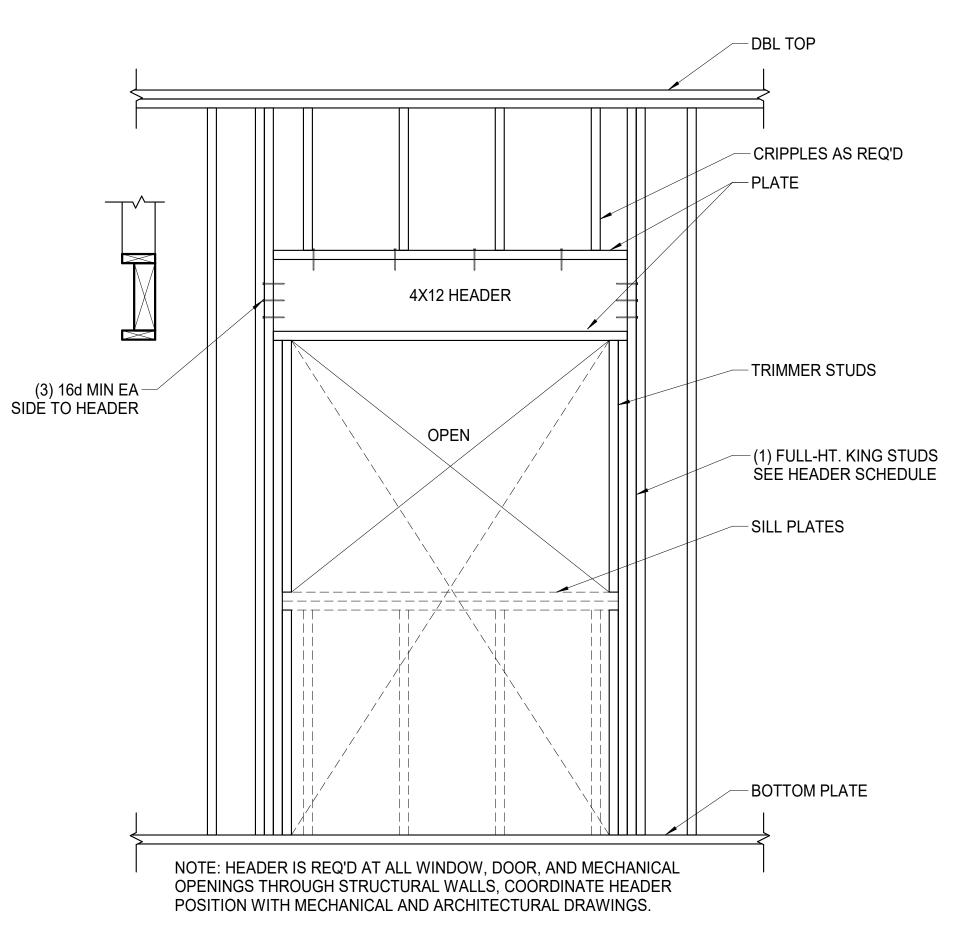
TYPICAL TOP PLATE SPLICE



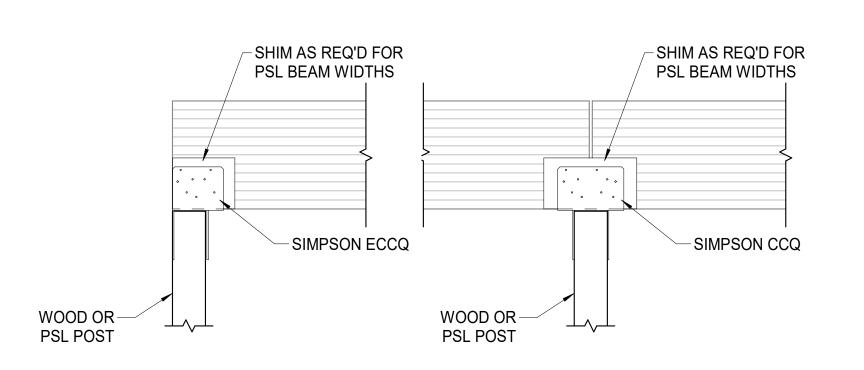


- 1. ANCHOR SIZE AND SPACING AND SILL PLATE SIZE SPECIFIED THIS DETAIL FOR ALL NON-SHEAR STRUCTURAL BEARING WALLS. SIZE AND SPACING FOR SHEAR WALLS CAN BE FOUND IN THE SHEAR WALL SCHEDULE.
- ALL ANCHORS SHALL BE HOT-DIPPED GALVANIZED ASTM A307 BOLTS OR THREADED RODS.
- ALL ANCHORS SHALL HAVE A GALV STD WASHER BETWEEN SILL PLATE AND NUT. ALL ANCHORS SHALL BE PLACED A MINIMUM OF 3" AWAY FROM EDGE OF CONC AND
- LOCATED NO CLOSER THAN 6" FROM END OF WALL

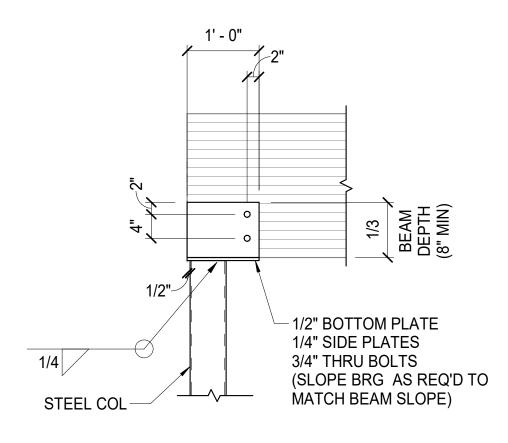
TYP SILL PL ANCHOR - NON SHEAR WALL

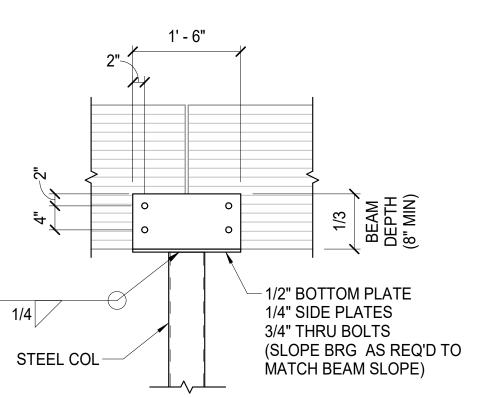






TYPICAL TIMBER POST CAP DETAIL 3/4" = 1'-0"





TYPICAL GLB COLUMN CAPS 3/4" = 1'-0"

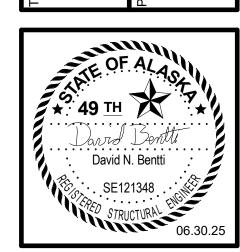


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5 PUMPING S-DEZ, ALASKA . () SCHEDULES A WELL (

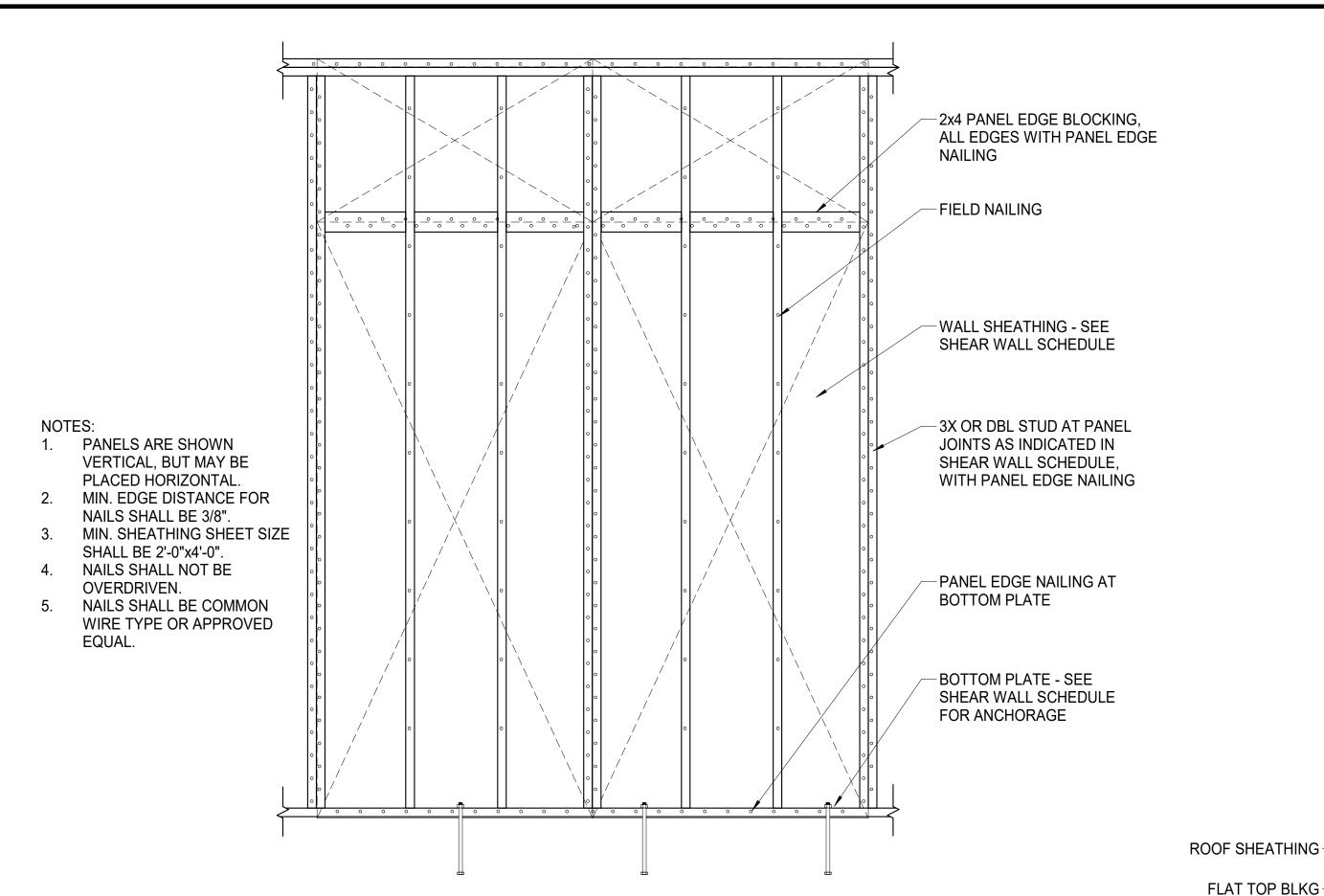
AMING

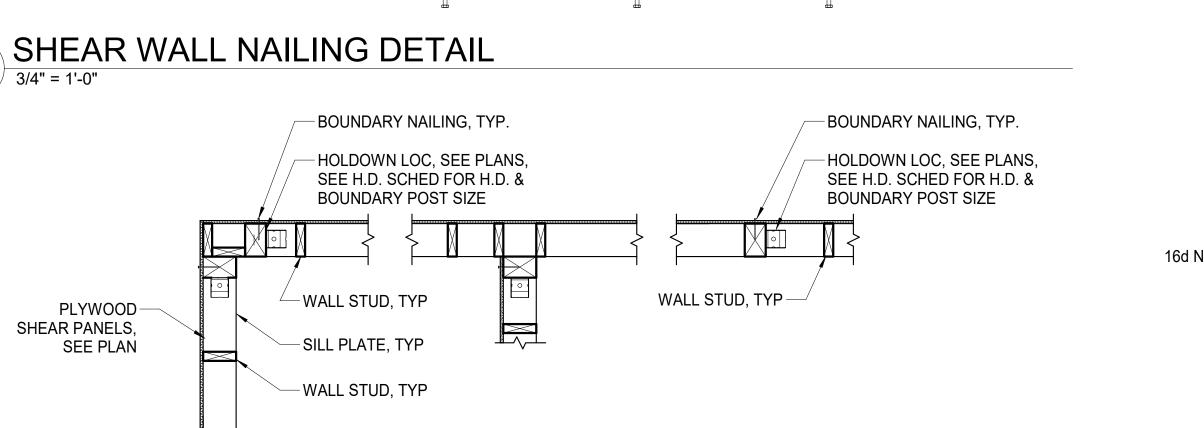
WOOD

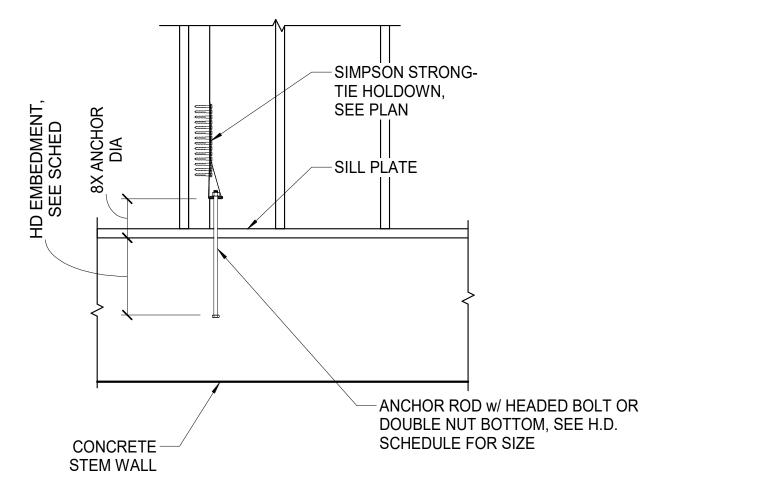


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WOOD SHEAR WALL SCHEDULE **WOOD PANELS** NAIL NAIL SPACING PANEL JOINT SILL OR BOTTOM PLATE ATTACHMENT APA Grade | Thick. | Span rating | SIZE STUDS Edges Field Fastener Detail Dia. Spacing Embed. Washer Anchor Rod 4 / S1.5 6 | Sheathing | 15/32" | 32/16 8d 12" 2x 5/8" 4 / S1.5 4 Sheathing 15/32" 32/16 8d 4" 12" Anchor Rod 5/8" 2x

WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS FOR ITS TYPE IN DOC PS1 OR PS2.

- APPLY SHEATHING TO THE SIDE OF WALL INDICATED BY THE SYMBOL. PANELS MAY BE INSTALLED HORIZONTALLY OR VERTICALLY.
- DOUBLE SHEATHED WALLS SHALL HAVE PANELS APPLIED TO BOTH FACES
- ALL PANEL EDGES SHALL BE LOCATED ON STUDS, BLOCKING LAID FLAT, PLATES OR RIM JOISTS. WHERE SHEATHING IS APPLIED TO BOTH FACES OF WALL, OFFSET PANEL EDGES TO FALL ON DIFFERENT STUDS.
- STAGGER PANEL EDGE NAILING AT PANEL JOINTS.
- ANCHOR RODS SHALL BE HOT-DIPPED GALVANIZED ASTM A307 HEADED BOLTS. FIRST AND LAST ANCHORS SHALL BE LOCATED 6" FROM
- END OF EACH WALL SEGMENT OR END WALL HOLDOWN.
- SEE TYPICAL PLATE WASHER DETAIL FOR SILL PLATE ANCHOR INSTALL AND LOCATION REQUIREMENTS.
- SEE HOLDOWN SCHEDULE FOR HOLDOWNS AND BOUNDARY POST SIZES.
- ANCHOR ROD EMBEDMENT IS THE DISTANCE FROM TOP OF CONCRETE TO TOP OF NUT OR BOLT HEAD.

WOOD DIAPHRAGM SCHEDULE									
AREA DESCRIPTION	SHEATHING		NAIL	NAIL SPACING		3	NOMINAL THICKNESS	PANEL EDGE	
	APA Grade	Thick.	Span Rating	SIZE	Edges (2,3)	Boundary	Field	OF FRAMING MEMBERS	BLOCKING
ROOF	Sheathing	3/4"	48/24	8d	6"	6"	12"	2x	NONE

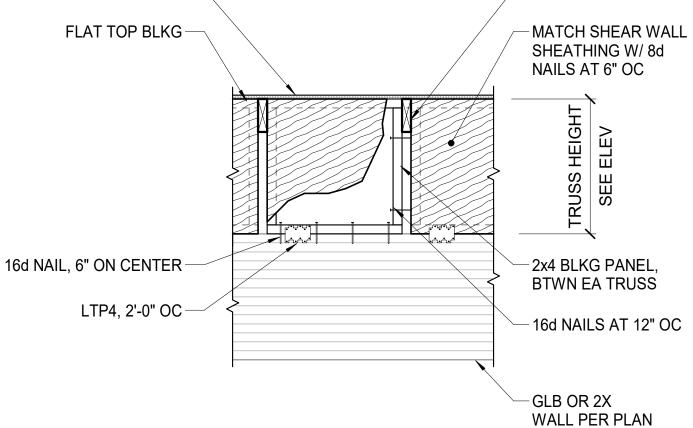
- APPLY SHEATHING PERPENDICULAR TO FRAMING MEMBERS UNLESS NOTED OTHERWISE.
- LOCATE PANEL ENDS OVER FRAMING MEMBERS AND STAGGER LOCATION OF ENDS JOINTS BY A MINIMUM OF 2'-0" UNLESS SHOWN OTHERWISE.
- SEE SCHEDULE FOR PANEL EDGE BLOCKING REQUIREMENTS.
- STAGGER PANEL EDGE NAILING AT BLOCKED JOINTS.
- NAILS SHALL BE LOCATED AT LEAST 3/8" FROM THE EDGES OF PANELS. HEADS OF NAILS SHALL BE DRIVEN FLUSH WITH THE SURFACE.
- PANELS SHALL NOT BE LESS THAN 4' x 8' EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING WHERE ALL EDGES ARE SUPPORTED BY AND

FASTENED T	O FRAMING	MEMBERS	OR BLOCKING
	•		0

TRUSS PER PLAN

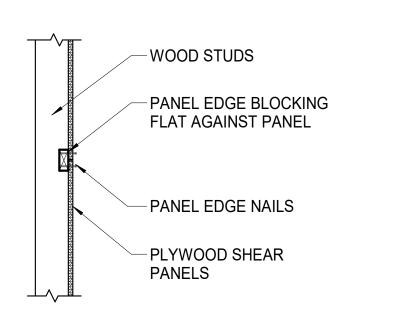
MARK	HOLDOWN	ANCHOR ROD		BOUNDARY	COMMENTS
		Diam.	Embed.	POST SIZE	
HD1	SIMPSON DTT2Z	1/2"	20"	4x6 OR (2) 2x6	

- 2. ANCHOR RODS SHALL BE GALVANIZED ASTM F1554 GRADE 36 HEADED BOLTS OR ASTM A36 THREADED ROD WITH DBL NUT AT BOTTOM.
- ROD COUPLERS WITH 125% STRENGTH OF THE ROD MAY BE USED TO EXTEND RODS.
- BOUNDARY POSTS ARE DF No. 1

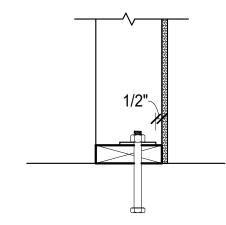


CONTRACTOR OPTION: BLKG PANEL MAY BE SPECIFIED BY TRUSS MFR.





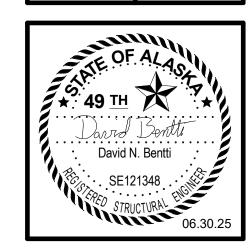
PANEL EDGE BLOCKING



SINGLE-SIDED SHEAR WALL

NOTE: 0.229"x3"x3" MIN SIZE PLATE WASHER TO BE USED FOR EACH SILL PLATE ATTACHMENT BOLT. PLATE WASHER MUST BE WITHIN 1/2" OF SHEATHING FACE. SLOTTED HOLE IN PLATE WASHER PER AWC MAY BE USED PROVIDED A STD CUT WASHER BE PLACED BETWEEN PLATE WASHER AND NUT

TYP SILL PLATE ANCHOR - SHEAR WALLS



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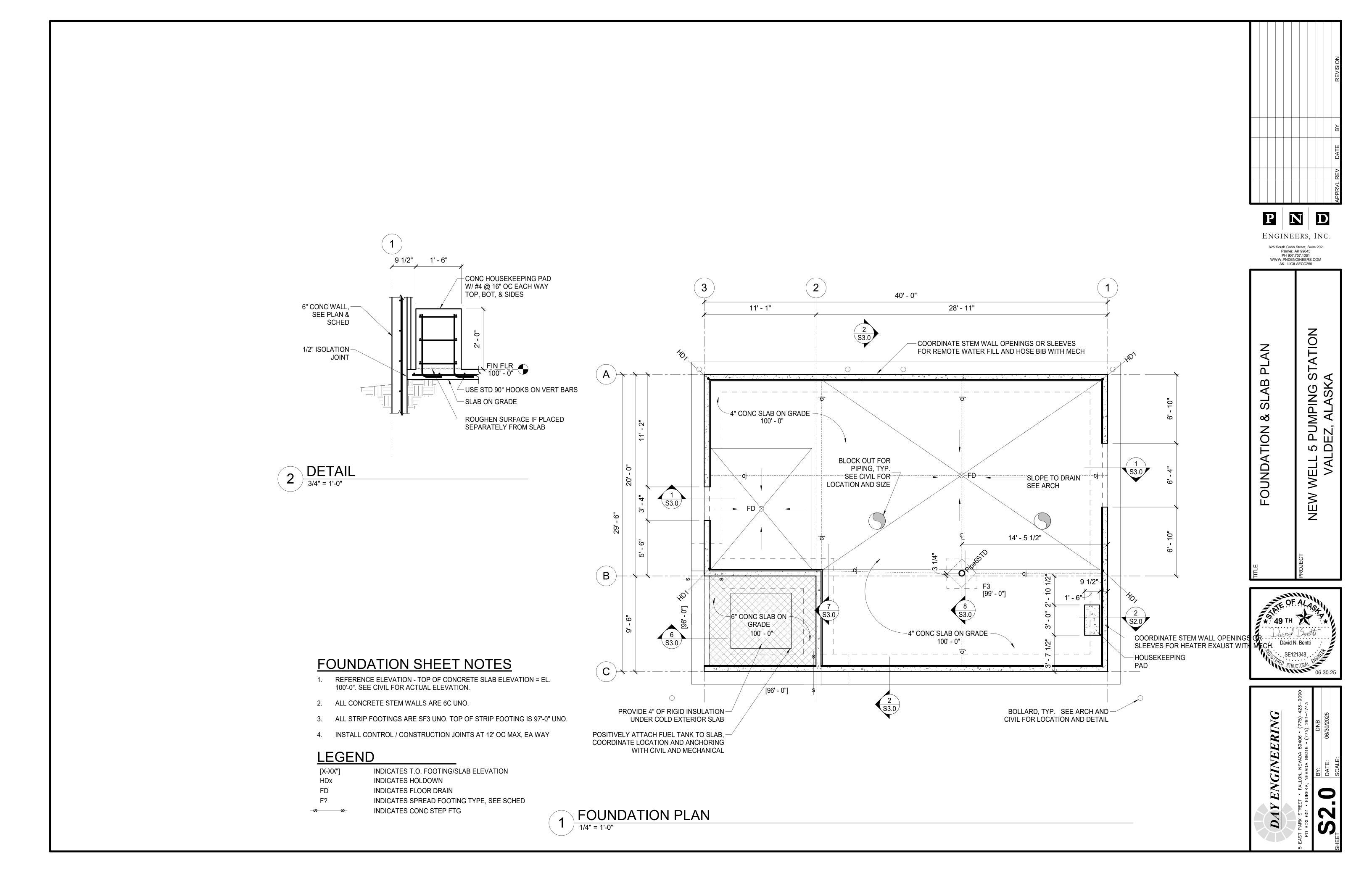
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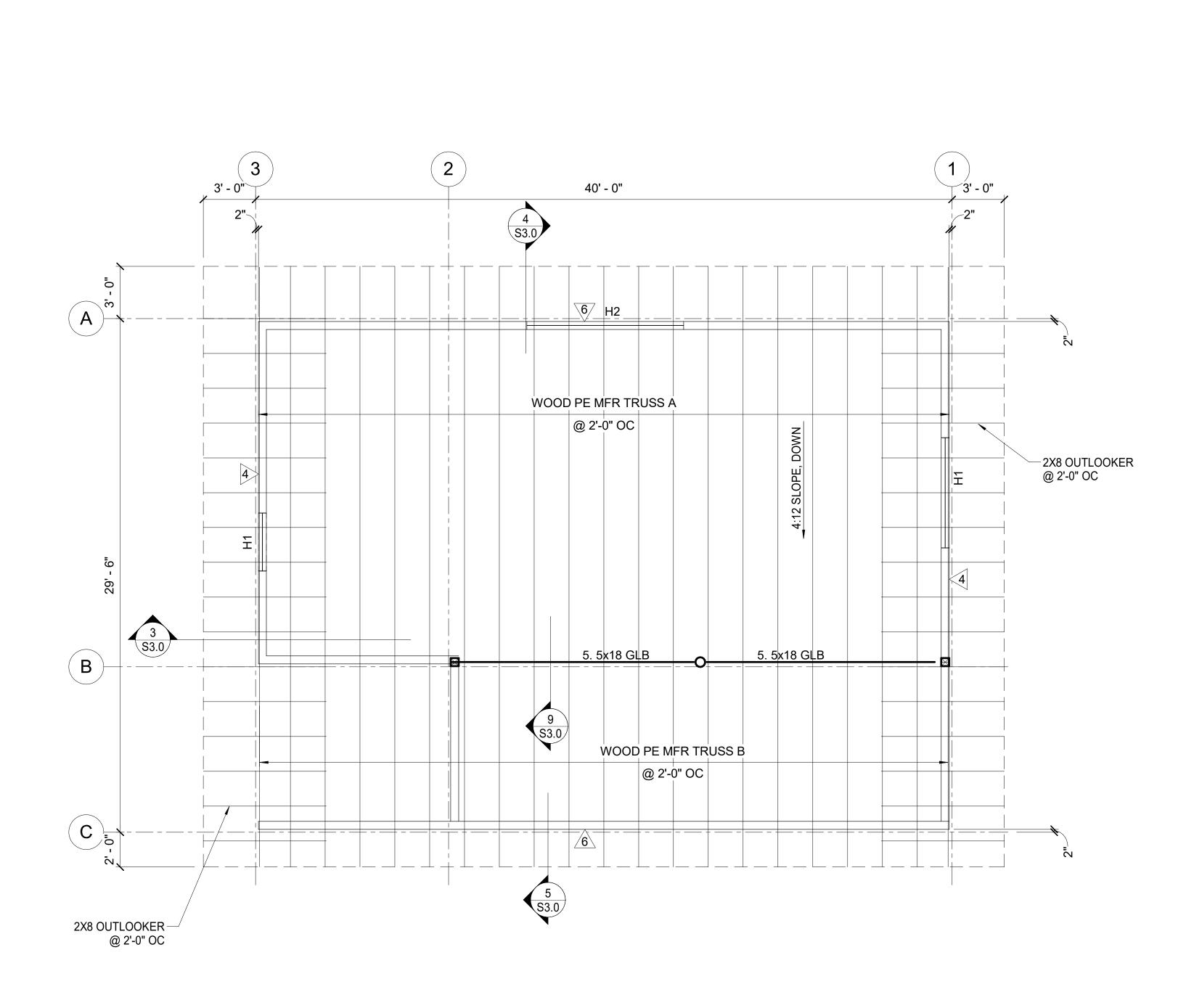
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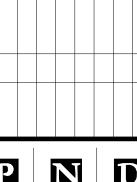
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TYPICAL HOLDOWN DETAIL AT FOUNDATION





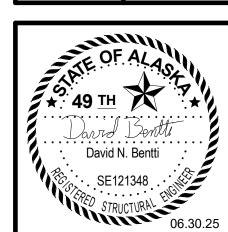




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. 5 PUMPING ST LDEZ, ALASKA FRAMING ROOF



DAY ENGINEERING

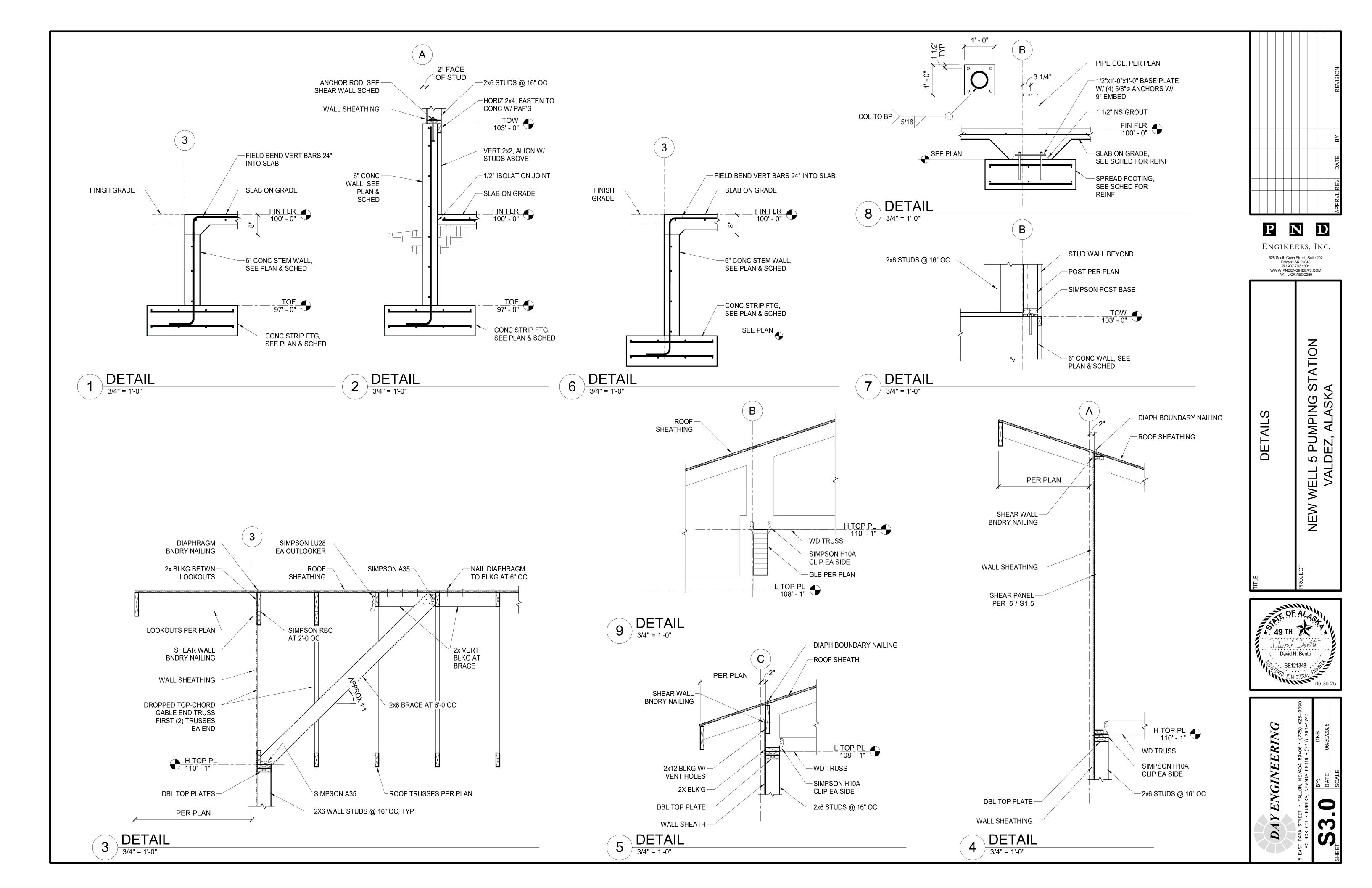
ROOF SHEET NOTES

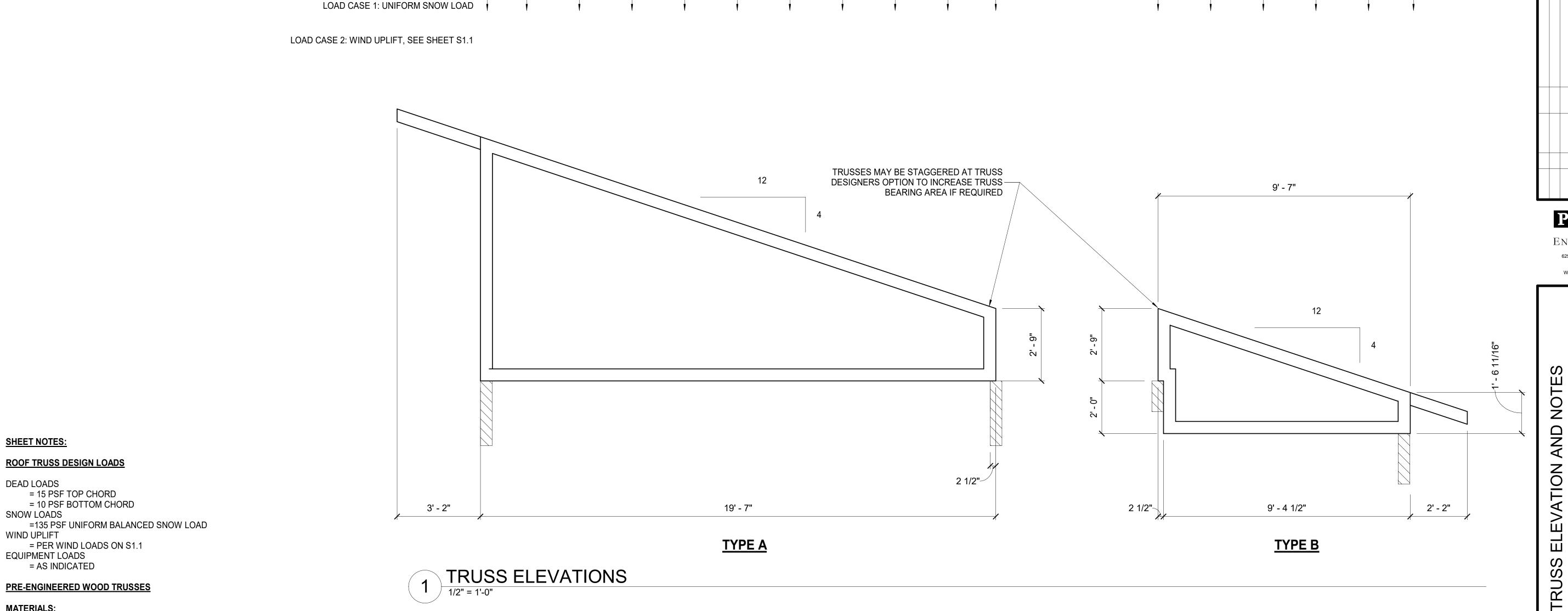
- ROOF SHEATHING IS 3/4" PLYWOOD. ORIENT PANELS PERPENDICULAR TO FRAMING MEMBERS. SEE DIAPHRAGM SCHEDULE FOR BLOCKING AND NAILING REQUIREMENTS AT PANEL JOINTS.
- 2. SEE SECTIONS FOR ROOF ELEVATIONS.

LEGEND

- INDICATES HEADER TYPE, SEE SCHED
- INDICATES SHEAR WALL BELOW, SEE SHEAR WALL SCHED







Ps=135 PSF

MATERIALS:

SHEET NOTES:

DEAD LOADS

SNOW LOADS

WIND UPLIFT

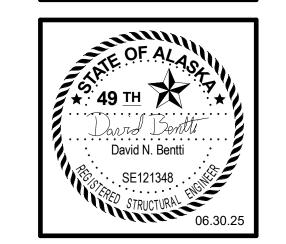
- 1. LUMBER: AS REQUIRED BY THE TRUSS MANUFACTURER. MINIMUM GRADE TO BE HEM-FIR OR DOUGLAS FIR-LARCH NO. 2 KD 15 PERCENT MC, EXCEPT FOR WEBS, WHICH MAY BE MINIMUM GRADE OF HEM-FIR OR DOUGLAS FIR-LARCH NO. 3, KD 15 PERCENT
- 2. CONNECTIONS: ALL INTERNAL TRUSS CONNECTIONS ARE TO BE DESIGNED BY THE TRUSS MANUFACTURER. CONNECTORS SHALL BE DEFORMED PLATE TYPE, OF MINIMUM 20 GAUGE GALVANIZED STEEL SHEET. ALL JOINTS ARE TO BE DESIGNED USING METHODS AS SET FORTH IN ANSI/TPI STANDARDS 2014.
- HANGERS: ALL TRUSS TO TRUSS HANGERS SHALL BE MINIMUM 16 GA., AND SHALL BE PROVIDED BY THE TRUSS SUPPLIER. SPECIFICATIONS AND REFERENCE STANDARDS: UNLESS SPECIFICALLY SHOWN OTHERWISE, DESIGN, FABRICATION, ERECTION, HANDLING AND BRACING REQUIREMENTS ARE TO BE GOVERNED BY THE LATEST REVISIONS OF:
 - A. NATIONAL DESIGN SPECIFICATIONS FOR STRESS-GRADE LUMBER AND ITS FASTENINGS.
 - B. TIMBER CONSTRUCTION STANDARDS.
 - C. TPI 1, NATIONAL DESIGN STANDARDS FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION
 - D. TP1 DSB, RECOMMENDED DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD TRUSSES
 - E. TPI HIB, COMMENTARY AND RECOMMENDATIONS FOR HANDLING, INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES.

DESIGN:

- 1. ALL TRUSSES ARE TO BE DESIGNED BY THE TRUSS MANUFACTURER FOR THE LOADS INDICATED ON THE DRAWINGS.
- 2. WHERE TRUSSES ARE REQUIRED TO FRAME INTO OTHER TRUSSES, DESIGN OF THE HANGERS SHALL BE THE RESPONSIBILITY OF THE TRUSS SUPPLIER. THE TRUSS SUPPLIER SHALL MAKE NECESSARY PROVISIONS IN THE SUPPORTING TRUSS TO ACCEPT THE TYPE OF HANGER REQUIRED.

SUBMITTALS:

- 1. TRUSS DESIGNS ARE TO BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION. TRUSS SUBMITTAL SHALL INCLUDE THE FOLLOWING INFORMATION:
 - A. DESIGN INFORMATION FOR EACH TYPE OF TRUSS SUPPLIED.
 - B. LAYOUT DRAWING INDICATING LOCATION OF EACH SPECIFIC TRUSS TYPE.
 - C. TRUSS HANGER TYPE AND LOCATION, FOR ALL TRUSSES FRAMING INTO TRUSSES. D. TRUSS DESIGNS AND LAYOUT DRAWING STAMPED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF ALASKA.
- 2. SUBMITTALS WHICH DO NOT INCLUDE THE ABOVE LISTED INFORMATION WILL BE RETURNED TO THE CONTRACTOR PRIOR TO REVIEW.



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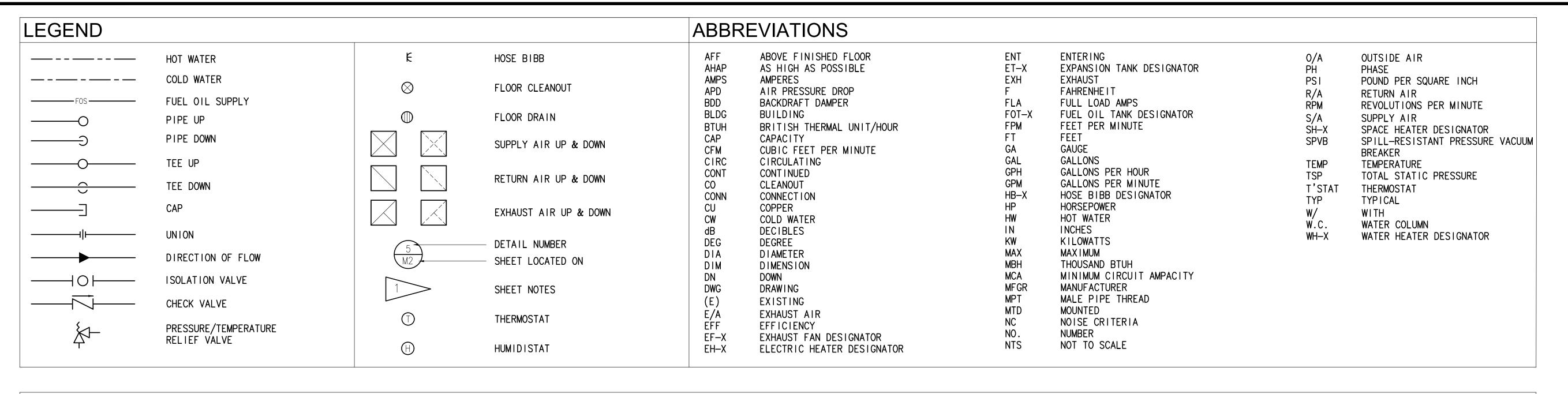
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Ps=135 PSF

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ELECTRIC HEATER SCHEDULE

			CAPACITY		ELECTRICAL	DATA		
SYMBOL	MANUFACTURER	MODEL	MBH	CFM	AMPS	KW	VOLTS/PHASE	REMARKS
EH-1	QMARK	MWUH7504	19.2	270	27.1	5.6	208/1	HORIZONTAL ELECTRIC UNIT HEATER W/ INTEGRAL THERMOSTAT AND THERMAL OVERHEAT PROTECTION. PROVIDE W/ WALL MOUNTING BRACKET.
EH-2	QMARK	CWH1202DSF	5.1	65	7.3	1.5	208/1	RECESSED WALL ELECTRIC HEATER W/ INTEGRAL THERMOSTAT AND THERMAL OVERHEAT PROTECTION. PROVIDE W/ RECESS MOUNTING FRAME.

FAN SCHEDULE

1 / (1 4 🔾												
						TSP		MOTOR DATA				
SYMBOL	MANUFACTURER	MODEL	TYPE	SERVICE	CFM	IN W.C.	RPM	HP	VOLTAGE/PHASE	DRIVE	SONES	REMARKS
EF-1	GREENHECK	SQ-90-VG	EXHAUST	PUMP HOUSE	500	0.29	1,505	1/6	120/1	DIRECT	7.0	INLINE DIRECT DRIVE FAN, VARIGREEN MOTOR, PROVIDE WITH INTEGRAL BACKDRAFT DAMPER.

HOSE BIBB SCHEDULE

1100				/ L L		
SYMBOL	MANUFACTURER	MODEL	CW	SERVICE	FINISH	REMARKS
HB-1	WOODFORD	B65	3/4"	PUMP HOUSE	CHROME	ANTI-SIPHON AND FROST-PROOF, CHROME PLATED LOCKABLE RECESSED BOX, REMOVABLE KEY, MPT OUTLET CONNECTION.

SPACE HEATER SCHEDULE

								ELECTRICAL		
SYMBOL	MANUFACTURER	MODEL	LOCATION	HEATING CAPACITY	FUEL TYPE	FUEL GPH	EXHAUST	WATTS	VOLTS/PHASE	REMARKS
SH-1	TOYOSTOVE	L-731	PUMP HOUSE	40 MBH (HIGH)	FUEL OIL #1	0.30 (HIGH)	DIRECT VENT	260	120/1	DIRECT VENT THROUGH WALL HEATER W/ DIRECT VENT KIT, CORD AND PLUG CONNECTION, PROVIDE WITH TOYOTOMI OIL LIFTEX PUMP MODEL OPT-91UL.

TANK SCHEDULE

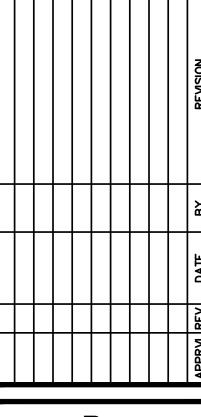
							TANK CAPACITY				
SYMBOL	MANUFACTURER	MODEL	LOCATION	FUNCTION	MEDIUM	MATERIAL	(GAL)	DIAMETER	LENGTH	LABEL	REMARKS
FOT-1	GREER TANK	500 GAL	PUMP HOUSE	FUEL STORAGE	FUEL OIL #1	STEEL	500	4'-2"	6'-0"	UL-142	DOUBLE WALL, SADDLE MOUNTED, TRIM PER PLANS.

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	MANUFACTURER	MODEL	WASTE	VENT	TRAP	ELECTRICAL	TRIM/REMARKS
FD-1	FLOOR DRAIN	J.R. SMITH	2005	4"	4"	4"	N/A	SQUARE TOP.
FS-1	FLOOR SINK	J.R. SMITH	9812-880-CB24	8"	6"	8"	N/A	FIBERGLASS CATCH BASIN, PROVIDE W/ GALVANIZED STEEL GRATE, 8" PIPE ADAPTOR.
TP-1	TRAP PRIMER	PPP INC.	MPB-500-115V				120V/6.3W	SURFACE MOUNT ELECTRIC TRAP PRIMER W/ BOX, PROVIDE W/ DISTRIBUTION UNIT.

AIR INLET/OUTLET SCHEDULE

All	IINLL I/O	OILLI							
SYMBOL	MANUFACTURER	MODEL	TYPE	USE	MATERIAL	FINISH	CFM	FACE SIZE (IN.) NC	REMARKS
A	TITUS	50F	EGGCRATE	O/A	ALUMINUM	WHITE	PER PLANS	PER PLANS <25	1/2" X 1/2" X 1/2" GRID CORE, SURFACE MOUNTED FRAME, BORDER TYPE I.



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Electrical Consulting
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Corporate No.: AECC542

MECHAN ABBREVIATIO



3 SHEETS $\frac{1}{2}$ SMC $\frac{1}{2}$ SMC $\frac{1}{2}$ SMEETS $\frac{1}{2}$ SCALE: AS NOTED

GENERAL NOTES

A. ALL INTERIOR AND EXTERIOR HOODS, DUCTWORK, GRILLES, AND PIPING SHALL BE SHOP PRIMED AND PAINTED TO MATCH ADJOINING FINISHES.

12/12 E/A HOOD, 3

SHEET NOTES

<u>SH−1</u>, INSTALL PER MANUFACTURER INSTRUCTIONS WITH OIL LIFTEX PUMP. MAINTAIN CLEARANCES TO COMBUSTIBLES. MOUNT $\underline{SH-1}$ A MINIMUM OF 24" AFF.

<u>EH-1,2</u>, INSTALL PER MANUFACTURER INSTRUCTIONS. MAINTAIN CLEARANCES TO COMBUSTIBLES. MOUNT $\underline{\mathsf{EH}}-1$ A MINIMUM OF 6" FROM CEILING.

 \rightarrow EXTEND <u>FOT-</u>1 VENT BEYOND EAVE AND MINIMUM 12' AFG AND 3' ABOVE ROOF.

EXTEND SIDE WALL VENT 6" FROM EDGE OF SIDING, AHAP. TRIM AND PAINT TO MATCH

TRANSITION FROM 6" V TO 8" V BEFORE VENT TEE.

PLUMBING VENT IN ATTIC SPACE, ROUTE AROUND ELEC/COMM ROOM.

ELECTRIC TRAP PRIMER

SLEEVE CONCRETE FOR EXHAUST TO ENSURE PROPER ANGLE/DRAINAGE FOR INSTALL.

PROVIDE WATTS LF008PCQT SPILL-RESISTANT PRESSURE VACUUM BREAKER TO HOSE BIBB $\underline{\mathsf{HB}}$ -1, AND INTERIOR HOSE CONNECTION.

SECTION 23 09 93 - SEQUENCE OF OPERATION

ELECTRIC HEATERS — EH-1, EH-2:

A. UNIT SHALL OPERATE TO MAINTAIN ROOM TEMPERATURE SETPOINT OF 55 DEG F. FAN AND HEATER SHALL CYCLE ON/OFF TO MAINTAIN SETPOINT.

<u>SPACE HEATER - SH-1</u>:

A. UNIT SHALL OPERATE TO MAINTAIN ROOM TEMPERATURE SETPOINT OF 65 DEG F. FAN AND HEATER SHALL CYCLE ON/OFF TO MAINTAIN SETPOINT.

EXHAUST FANS— EF—1:

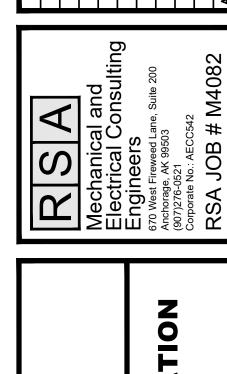
8" W, SEE CIVIL

FOR CONTINUATION

- WHEN HUMIDITY IS GREATER THAN 60% RH, FAN SHALL BE IN OPERATION.
- THE EXHAUST FAN MAY BE PLACED INTO MANUAL OVERRIDE USING A SPRING-WOUND TIMER LOCATED IN THE PUMP ROOM.

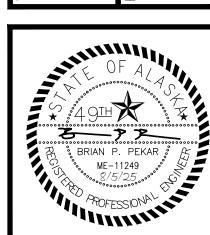
REMOTE FILL STATION

BY OTHERS -



MECHANIC

5 WELL ! N



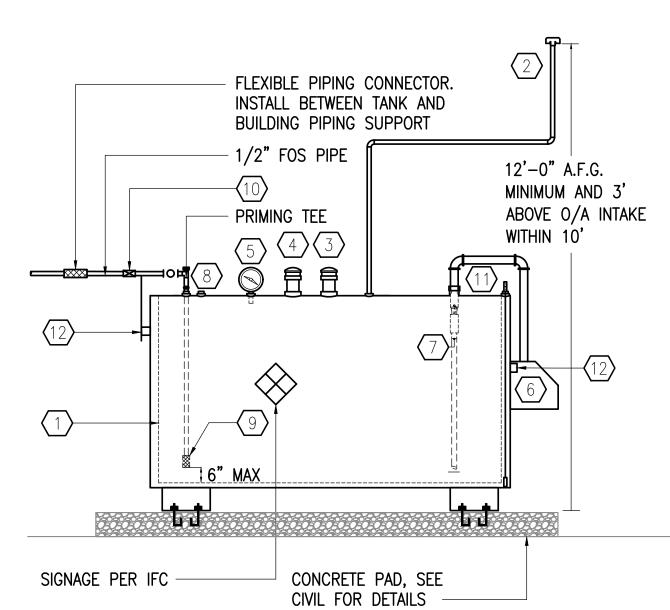
FOR DETAIL SEE - M3 UP TO YCO, SEE CIVIL — 1-1/2" CW → 8" SIDE WALL VENT MCC, SEE ELECTRICAL <u>EF-1</u> ELEC/COMM PUMP ROOM 1-1/2" CW DN TO (103) ELEC/COMM WATER SERVICE, FOR (103) PUMP ROOM ELECTRICAL PANEL DETAIL SEE - 4 - 1/2" CW ROUTED IN (100) SLAB (TYP OF 3) 8" W— M3 1-1/2" CW ROUTED
ALONG CEILING, SHOWN
OFFSET FOR CLARITY ---4" W 1-1/2" CW DN TO SERVICE SADDLE FUTURE STORAGE 102 FUTURE STORAGE 102 - 12/12 O/A HOOD, FOR DETAIL SEE - M3 - <u>FS-1</u> RECESSED IN FLOOR BELOW SURGE RELIEF VALVE - FLEX CONNECTION WORK ROOM WORK ROOM SLEEVE AND SEAL WALL PENETRATION ს <u>FOT−1</u> 1/2" FOS ROUTED ALONG WALL 6'-6" AFF - FOR FUEL OIL TANK DETAIL, SEE - 2 M3

MECHANICAL PLAN



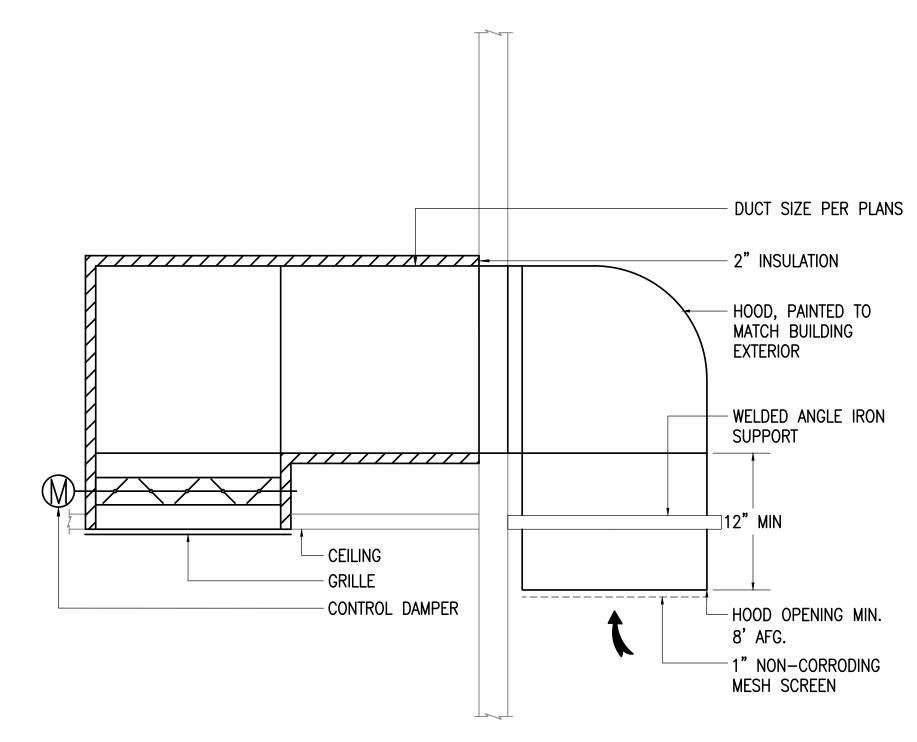
PLUMBING PLAN

1/4" = 1'-0"



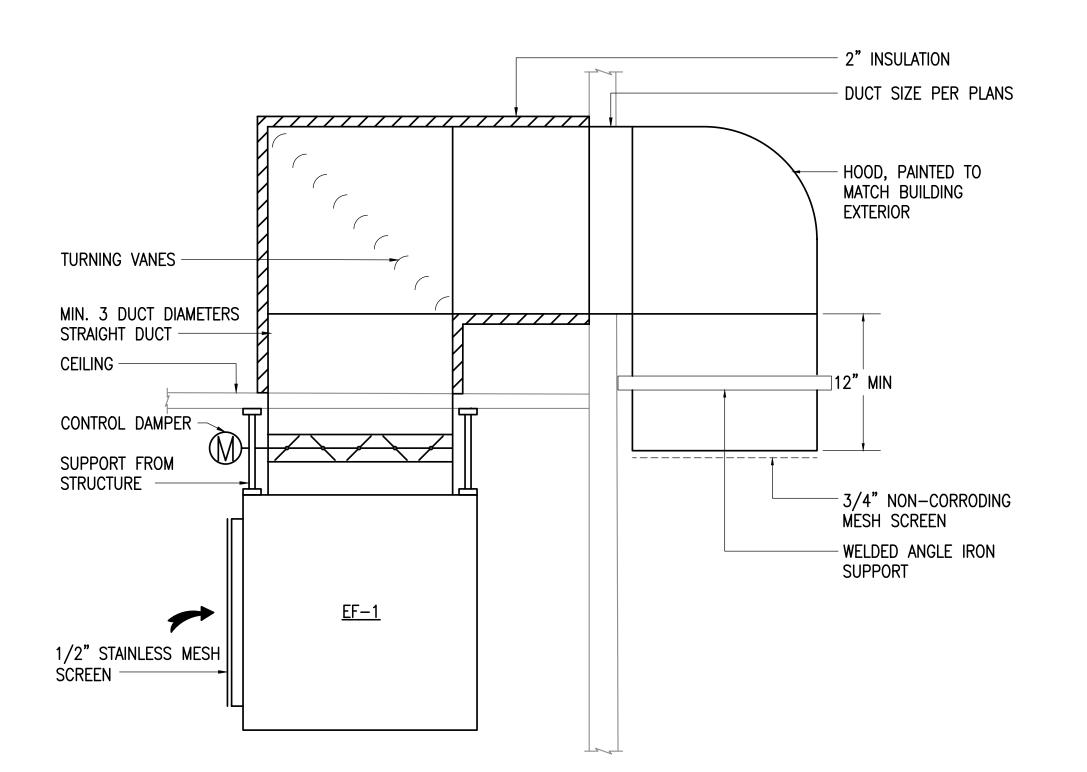
- 1500 GALLON DOUBLE WALL FUEL OIL STORAGE TANK.
- $\langle 2 \rangle$ 2" PRIMARY TANK VENT, MORRISON BROTHERS FIG. 922.
- (3)4" PRIMARY TANK EMERGENCY VENT, MORRISON BROTHERS FIG. 244
- $\langle 4 \rangle$ 4" SECONDARY TANK EMERGENCY VENT, MORRISON BROTHERS FIG. 244.
- $\langle 5 \rangle$ MECHANICAL CLOCK TYPE TANK GAUGE, MORRISON BROTHERS FIG. 818.
- 6 REMOTE SPILL CONTAINER, MORRISON BROTHERS FIG. 515. PROVIDE W/ FIG. 246, 800A, 800DC, AND 691B.
- (7)OVERFILL PREVENTION VALVE, MORRISON BROTHERS FIG. 9095. COORDINATE APPROPRIATE FLOW RATE WITH LOCAL PURVEYOR OF FUEL.

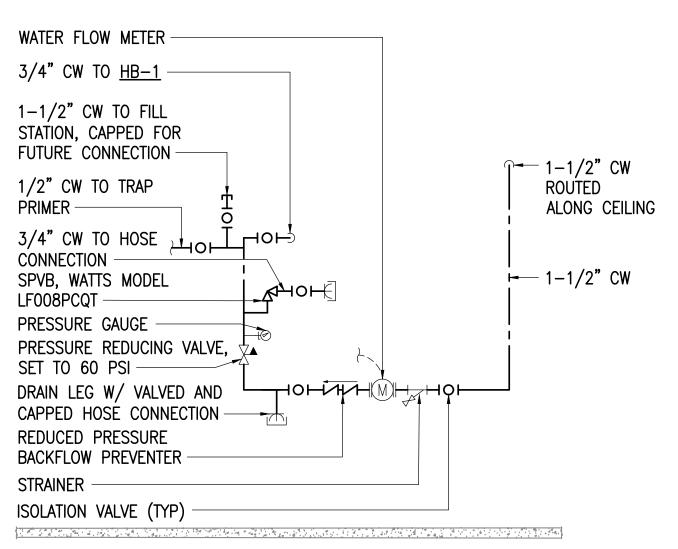
- 8 4" FPT TAPPING, W/PLUG.
- $\langle 9 \rangle$ PROVIDE 3/4" SINGLE POPPET FOOT VALVE ´OPW MODÉL 99-0033 OR APPROVED EQUAL, PROVIDE TANK BUSHING AS REQUIRED FOR CONNECTION TO 3/4" FOS DROP TUBE.
- 10 ANTI SIPHON VALVE, MORRISON BROTHERS FIG. 912. PROVIDE (1) PER FOS LINE. COORDINATE REQUIRED RELIEF PRESSURE WITH SITE ELEVATION.
- (11) KRUEGER SENTRY LEAK GAUGE
- (12) MOUNTING CLIPS



2 EXTERIOR WALL HOOD DETAIL
NO SCALE

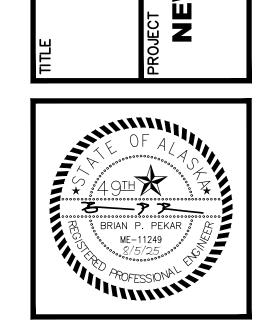
FUEL TANK DETAIL NOT TO SCALE





EXHAUST FAN HOOD DETAIL





PUMPING STA

5

DET,

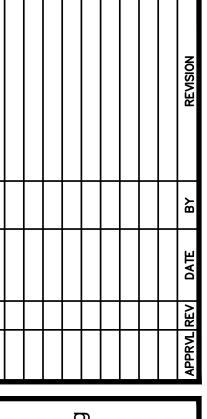
ECHANIC

	LE	GEND	
Ю	PHOTOCELL	\$ T	FRACTIONAL HORSEPOWER MOTOR STARTER
Ю	LIGHT FIXTURE - SURFACE MTD ON WALL	3	DISCONNECT SWITCH
—	STRIPLIGHT - PENDANT OR SURFACE MTD CLG	VFD	VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECT
A	FIXTURE TAG (LETTER INDICATES TYPE)		NOTE TAG (No. INDICATES NOTE)
\$	SINGLE POLE SWITCH	AFF	ABOVE FINISHED FLOOR
\$ a	SINGLE POLE SWITCH (LOWERCASE LETTER INDICATES SWITCHING)	AFG	ABOVE FINISHED GRADE
\$ 3	THREE WAY SWITCH	С	CONDUIT
	CONDUIT, CONCEALED	EM	DENOTES EMERGENCY POWER
#10	NUMBER AND SIZE OF WIRES (NO MARKS = 3 #12)	GFCI	GROUND FAULT CIRCUIT INTERRUPTER
A-2	HOMERUN TO PANEL (PANEL AND CIRCUIT No.)	К	KELVIN
— UG/E—	UNDERGROUND ELECTRICAL LINE	LED	LIGHT EMITTING DIODE
-UG/COM-	UNDERGROUND COMMUNICATION LINE	LM	LUMENS
_	PANEL	NEC	NATIONAL ELECTRICAL CODE
Ф	DUPLEX RECEPTACLE	TYP	TYPICAL
47	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER	UON	UNLESS OTHERWISE NOTED
0	JUNCTION BOX	WP	WEATHERPROOF
0	MOTOR (SIZED AS NOTED)	XFMR	TRANSFORMER

MF	R/MO	DEL:	SIEMENS MCC		VOLTS:	277/480	V,3PH,4	W		ENCLO	SURE:	NEMA 1			400	Α
MT	G SP	ACE:	AS REQUIRED				VOLT-/	AMPS			MTG:	PAD MOUNTED				
NOIE	POLE	AMPS	SERVICE	TYPE	,	4	E	3	(С	TYPE	SERVICE		AMPS	POLE	NOTE
а	3	*	PANEL 'LS' VIA 30KVA XFMR	FEDR	5442	49883					MOTR	WELL PUMP		*	3	a
1	3	*	۸۸۸	FEDR			5402	49883			MOTR	۸۸۸		*	3	í
ı	3	*	۸۸۸	FEDR					3885	49883	MOTR	۸۸۸		*	3	1
	3	-	SPACE									SPACE		-	3	Ι
	3	-	^^^									۸۸۸		-	3	
	3	-	۸۸۸									۸۸۸		-	3	
	3	-	SPACE									SPACE		-	3	
	3	_	۸۸۸									۸۸۸		-	3	
	3	_	^^^									۸۸۸		-	3	
			TOTAL V-A			55325		55285		53768			164,379	VA		
			TOTAL AMPS			200		200		194			198	Α		
		M	INIMUM RECOMMENDED AIC F	ATING:	18,000	A.I.C.										
			TOTRE	LTG	REC	MOTR	LG MTR	MISC	ΚIT	HEAT	SPEC	TOTAL		Α	MP	S
			NECTED LOAD IN KVA (THIS PANEL)		0.00	149.65	37.41	0.00	0.00	0.00	0.00	149.6 KVA			180	- /
(ED LOAD IN KVA (BRANCH PANELS) $ $	0.59	2.35	0.86	0.22	1.77	0.00	9.16	0.00	14.7 KVA			18	
	T	OTA	L CONNECTED LOAD IN KVA:	0.59	2.35	150.51	37.41	1.77	0.00	9.16	0.00	164.4 KVA			198	
			DEMAND LOAD IN KVA:	0.74	2.35	150.51	37.41	1.77	0.00	11.44	0.00	204.2 KVA			246	- /
		NOT	_									<u>OPTIONS:</u>				
	SEE	E ON	E-LINE DIAGRAM FOR BREAKE	ER SIZE								LUGS ONLY				
												RAL SPD				
											POWE	R MONITORING				

			LIGHT FIXTURE SCHEDULE					
TYPE	LOCATION	MANUFACTURER AND CATALOG	LUMINAIRE DESCRIPTION	MOUI	NTING			TOTAL
111 6	LOCATION	NUMBER (OR APPROVED EQUAL)	LUMINAINE DESCRIPTION	TYPE	HEIGHT	LAMPS	BALLAST/DRIVER	WATTS
A1	BUILDING INTERIORS NON-HAZARD	LITHONIA #ZL1D L48 5000LM FST MVOLT 40K 80CRI WH	48" LED STRIP LIGHT, LENSED, WHITE HOUSING. PROVIDE WITH OPTION #E7W WHERE SPECIFIED AS EMERGENCY ON PLANS.	SURFACE	CEILING	5,541LM 4000K	120/277V LED	41
A2	ELECTRICAL ROOM	LITHONIA #ZL1D L48 7000LM FST MVOLT 40K 80CRI WH	SAME AS TYPE A1 EXCEPT HIGHER LUMEN OUTPUT. PROVIDE WITH OPTION #E7W WHERE SPECIFIED AS EMERGENCY ON PLANS.	SURFACE	CEILING	7,596LM 4000K	120/277V LED	59
B1	BUILDING EXTERIOR	LITHONIA #WDGE2 LED P2 40K 80CRI VW MVOLT SRM PBBW DDBXD	LED WALLPACK WITH -40°C RATING, WIDE DISTRIBUTION, SURFACE-MOUNTED BACK BOX, AND DARK BRONZE HOUSING.	WALL	10'-0" AFG	2,076LM 4000K	120/277V LED	15
B2	BUILDING EXTERIOR	LITHONIA #WDGE2 LED P1 40K 80CRI VW MVOLT SRM PBBW DDBXD	SAME AS TYPE B1 EXCEPT LOWER LUMEN OUTPUT.	WALL	8'-0" AFG	1,289LM 4000K	120/277V LED	10
С	BUILDING INTERIORS	HOLOPHANE #EMXH L24 7000LM FPFL MD MVOLT GZ10 40K 80CRI DWHXD CR	24" LINEAR LED FIXTURE FOR CORROSIVE AREAS, CAST AND EXTRUDED ALUMINUM HOUSING WITH FROSTED POLYCARBONATE LENS AND WHITE FINISH.	SURFACE	CEILING	5,442LM 4000K	120/277V LED	46.3

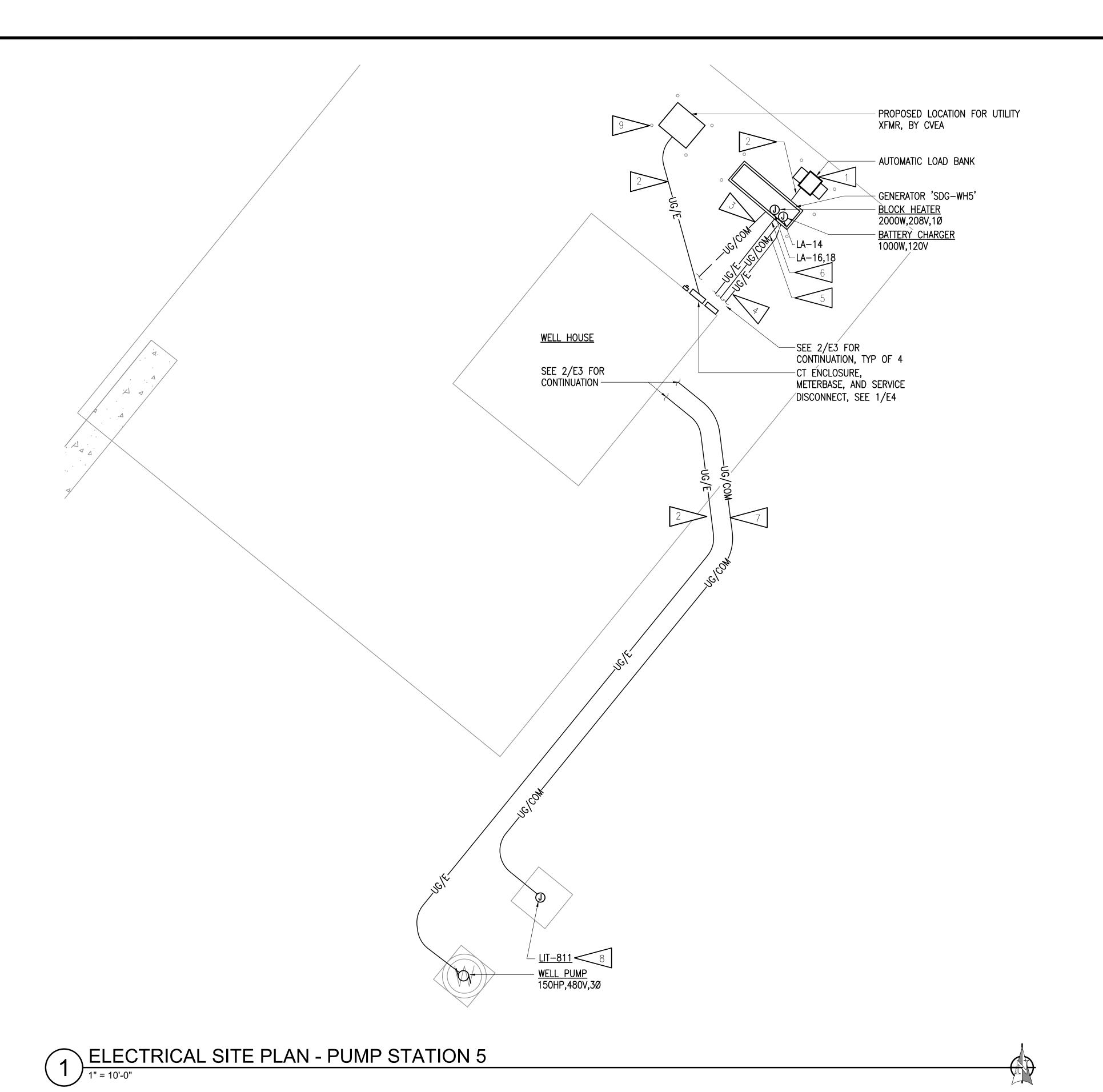
MF	R/MC	DEL:	INTEGRAL TO MCC		VOLTS:	120/208	V,3PH,4	W		ENCLO	SURE:	NEMA 1		100	Α
							VOLT-/	AMPS			MTG: MCC				
CIRC	POLE	AMPS	SERVICE	TYPE	,	4	E	3	(С	TYPE	SERVICE	AMPS	POLE	CIRC
1	1	20	LTG - INTERIOR & EXTERIOR	LTG	591	2818					HEAT	EH-1	35	2	2
3	1	20	RECP - S. EXT, ELEC/COM, STOR.	RECP			720	2818			HEAT	۸۸	35	2	4
5	1	20	RECP - WORK RM 101	RECP					900	759	HEAT	EH-2	15	2	6
7	1	20	RECP - SH-1 & WELL PUMP	MISC	274	759					HEAT	۸۸	15	2	8
9	1	15	EF-1	MOTR			864				MISC	ELECTRIC TRAP PRIMER	20	1	10
11	1	20	RECP - N. EXT, PUMP RM, TRA P PRIMER	RECP					726	500	MISC	RTU	20	1	12
13	1	20	SPARE			1000					MISC	GENERATOR BATTERY CHARGER	20	1	14
15	1	20	SPARE					1000			HEAT	GENERATOR BLOCK HEATER	20	2	16
17	1	_	SPACE							1000	HEAT	۸۸	20	2	18
19	1	_	SPACE									SPACE	-	1	20
21	1	-	SPACE									SPACE	-	1	22
23	1	_	SPACE									SPACE	-	1	24
25	1	-	SPACE									SPACE	-	1	26
27	1	-	SPACE									SPACE	-	1	28
29	1	-	SPACE									SPACE	-	1	30
			TOTAL V-A			5442		5402		3885		14,730	VA		
			TOTAL AMPS			45		45		32		41	Α		
	MIN	MUM	RECOMMENDED AIC RATING:	10,000	A.I.C.										
				LTG	RECP	MOTR	LG.MT	MISC	KIT	HEAT	SPEC	TOTAL	F	AMP:	S
		TOTA	L CONNECTED LOAD IN KVA:	0.59	2.35	0.86	0.22	1.77	0.00	9.16	0.00	14.7 KVA		41	
			DEMAND LOAD IN KVA:	0.74	2.35	1.08	0.22	1.77	0.00	11.44	0.00	17.6 KVA		49	Α



NEW WELL 5 PUMPING STATION VALDEZ, ALASKA ELECTRICAL LEGEND AND SCHEDULE



DAY ENGINEERING

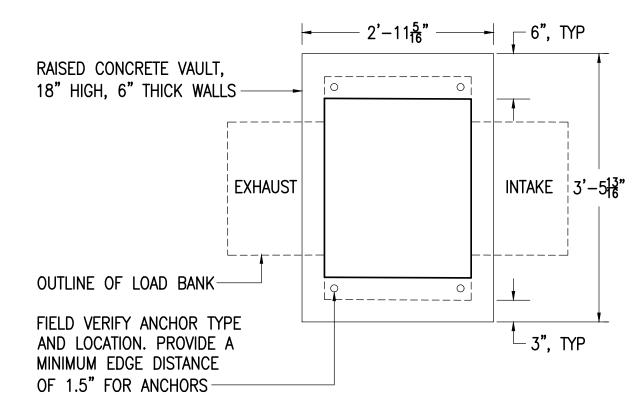


GENERAL NOTES:

- A. REFERENCE AND COORDINATE WITH THE CITY OF VALDEZ STANDARD SPECIFICATIONS FOR APPLICABLE REQUIREMENTS PRIOR TO BEGINNING
- B. REFERENCE 3/E4 FOR TRENCHING REQUIREMENTS.
- C. CONDUIT AND CONDUCTORS BETWEEN THE BUILDING, GENERATOR, AND LIFT PUMP SHALL BE ROUTED UNDERGROUND AND STUB UP BELOW THE EQUIPMENT.
- D. CONDUIT AND WIRING ASSOCIATED WITH ALL INSTRUMENTATION, CONTROL, AND SIGNALING ARE NOT SHOWN ON THESE SHEETS. REFERENCE THE INSTRUMENTATION DRAWINGS FOR REQUIREMENTS. PROVIDE CONDUIT AND WIRING AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
- E. FIELD COORDINATE WITH COPPER VALLEY ELECTRIC ASSOCIATION (CVEA) FOR NEW ELECTRICAL SERVICE TO BUILDING. EXACT LOCATION AND ROUTING TO BE DETERMINED BY UTILITY.

SHEET NOTES:

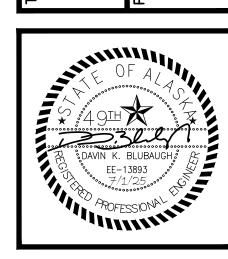
- PROVIDE NEW RAISED CONCRETE PEDESTAL BELOW LOAD BANK AS SHOWN WITHIN DETAIL 2. ORIENT LOAD BANK TO PEDESTAL SUCH THAT THE EXHAUST END IS FACING AWAY FROM THE SIDEWALK.
- 2. UNDERGROUND ELECTRICAL LINE. SEE 1/E4 FOR CONDUIT AND WIRE
- 3. PROVIDE (2)1" UNDERGROUND CONDUIT WITH PULL STRING FROM GENERATOR CONTROL PANEL TO RTU IN BUILDING. SEE 2/E3 FOR CONTINUATION. COORDINATE WITH INSTRUMENTATION DRAWINGS FOR CABLING REQUIRED.
- 4. PROVIDE (2) 1" UNDERGROUND CONDUIT WITH 3#10 AWG, CU, XHHW EACH FROM PANEL 'LA' TO GENSET FOR CONNECTION TO GENERATOR BATTERY CHARGER AND ENGINE BLOCK HEATER.
- 5. UNDERGROUND CONDUIT FROM ATS TO GENSET FOR START/STOP WIRING. SEE 1/E4 FOR DETAILS.
- 6. UNDERGROUND CONDUIT FROM ATS TO GENERATOR FOR STANDBY POWER CONNECTION. SEE 1/E4 FOR CONDUIT AND WIRE SIZE.
- 7. PROVIDE 1" UNDERGROUND CONDUIT WITH PULL STRING FROM JUNCTION BOX INSIDE TO JUNCTION BOX FOR LIT-811 CABLING. COORDINATE WITH INSTRUMENTATION DRAWINGS FOR CABLING REQUIRED.
- 8. COORDINATE LOCATION AND CONNECTION REQUIREMENTS WITH INSTRUMENTATION DRAWINGS PRIOR TO ROUGH-IN.
- 9. BOLLARDS, TYP. SEE CIVIL PLANS FOR DETAILS.





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GENERAL NOTES:

PANEL 'LA'

(INTEGRAL TO MCC)

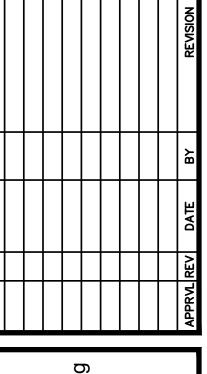
- A. SEE SHEET E2 FOR ADDITIONAL GENERAL NOTES.
- B. ALL INTERIOR AND EXTERIOR LIGHTING SHALL BE CONNECTED TO PANEL 'LA' CIRCUIT 1.
- C. ROUTE EXTERIOR LIGHTING CIRCUIT THROUGH PHOTOCELL LOCATED ON EXTERIOR OF THE BUILDING.
- D. MOUNT ALL RECEPTACLES ON THE INTERIOR OR EXTERIOR OF THE EXTERIOR WALLS OF THE BUILDING AT +48" AFF, TO AVOID CONFLICTS WITH CONCRETE WALL.
- E. CONDUIT AND WIRING ASSOCIATED WITH ALL INSTRUMENTATION, CONTROL, AND SIGNALING ARE NOT SHOWN ON THESE SHEETS. REFERENCE THE INSTRUMENTATION DRAWINGS FOR REQUIREMENTS. PROVIDE CONDUIT AND WIRING AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
- F. LIGHTING CONTROL WIRING NOT SHOW BUT SHALL BE PROVIDED BY THE CONTRACTOR TO COMPLY WITH SPECIFICATIONS. CIRCUIT NUMBERS, AND LIGHTING CONTROLS SHOWN IN EACH ROOM.
- G. CONNECT ALL EMERGENCY LIGHTING TO UNSWITCHED LEG OF LOCAL LIGHTING CIRCUIT.
- H. OCCUPANCY AND EXIT REQUIREMENTS PER IBC DO NOT REQUIRE EMERGENCY LIGHTING FOR THIS BUILDING. EMERGENCY LIGHTS ARE FOR CONVENIENCE OF OCCUPANTS IN CASE OF POWER LOSS.
- COORDINATE LOCATION AND CONNECTION REQUIREMENTS OF ALL DEVICES ENDING IN "-811" AND "-801" WITH INSTRUMENTATION DRAWINGS PRIOR TO ROUGH-IN.

WORK ROOM

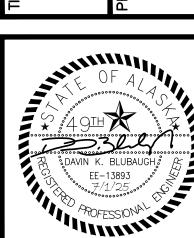
SHEET NOTES:

- 1. ROUTE 1.5" CONDUIT WITH PULL STRING FROM CONTROL PANEL TO ROOF FOR CONNECTION TO NEW CELLULAR/WIRELESS ANTENNA. COORDINATE WITH INSTRUMENTATION DRAWINGS FOR ANTENNA CONNECTION PRIOR TO ROUGH-IN.
- 2. UNDERGROUND ELECTRICAL LINE. SEE 1/E4 FOR CONDUIT AND WIRE
- 3. SH-1 LIFT PUMP SHALL UTILIZE RECEPTACLE FOR POWER REQUIREMENTS.
- 4. JUNCTION BOX FOR CONNECTION TO ELECTRIC TRAP PRIMER. COORDINATE WITH MECHANICAL FOR EXACT LOCATION PRIOR TO ROUGH-IN.
- 5. UNDERGROUND CONDUIT FOR CONNECTION TO GENERATOR CONTROL PANEL, SEE 1/E2 FOR CONTINUATION.
- 6. UNDERGROUND CONDUIT FOR CONNECTION TO GENERATOR BATTERY CHARGER AND ENGINE BLOCK HEATER, SEE 1/E2 FOR CONTINUATION.
- 7. UNDERGROUND CONDUIT FROM ATS TO GENSET FOR ATS/GENERATOR CONTROL WIRING. SEE 1/E4 FOR DETAILS. SEE 1/E2 FOR CONTINUATION.
- 8. UNDERGROUND CONDUIT FOR CONNECTION TO GENERATOR SEE 1/E2 FOR CONTINUATION.

- 9. FIELD COORDINATE JUNCTION BOX MOUNTING LOCATION TO BE 1" AFF.
- 10. MOUNT ON DISCHARGE SIDE OF PCV.
- 11. PROVIDE 6"X6"X6" JUNCTION BOX FOR INSTRUMENTATION EQUIPMENT <u>LIT-811</u> CABLING.



TRICAL ELL 5 VALDI



SEE 1/E2 FOR CONTINUATION -<u>LSH-811</u> 'MCC-WH5' \circ LA−2,4 ○ 00 LA-11 \$ LA-11 LA−11 🏗 – <u>EF–1</u> 1"C, 2#8, 1#10 GND— SERVICE 1/6HP,120V SERVICE DISCONNECT PANEL 'LA' EQUIPMENT, <u> USH−801</u> (INTEGRAL TO MCC) CT ENCLOSURE SEE 1/E4— 27.1A,208V,1Ø [—] <u>USH-811</u> METERBASE -– <u>ZS–810</u> <u>EH-2</u> 7.3A,208V,1Ø RTU 500VA,120V <u>ZS-812</u> -<u>FE/FIT-811</u> <u>ZS-811</u> <u>USH-811</u> <u>TIT-811</u> <u>SH-1</u> 260W,120V -FUEL TANK **₩**LA-5 **₩** LA-5

ELECTRICAL LIGHTING PLAN

FUEL TANK

'MCC-WH5'-

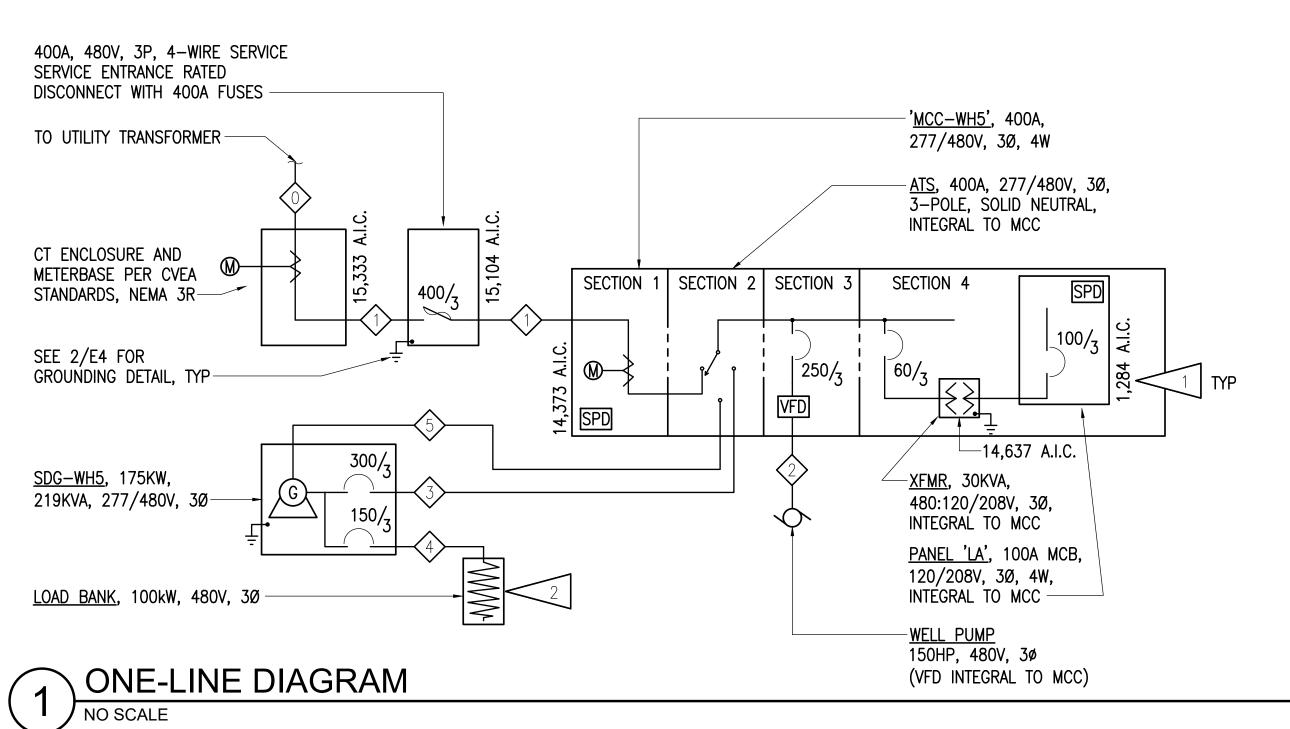
SERVICE

EQUIPMENT,

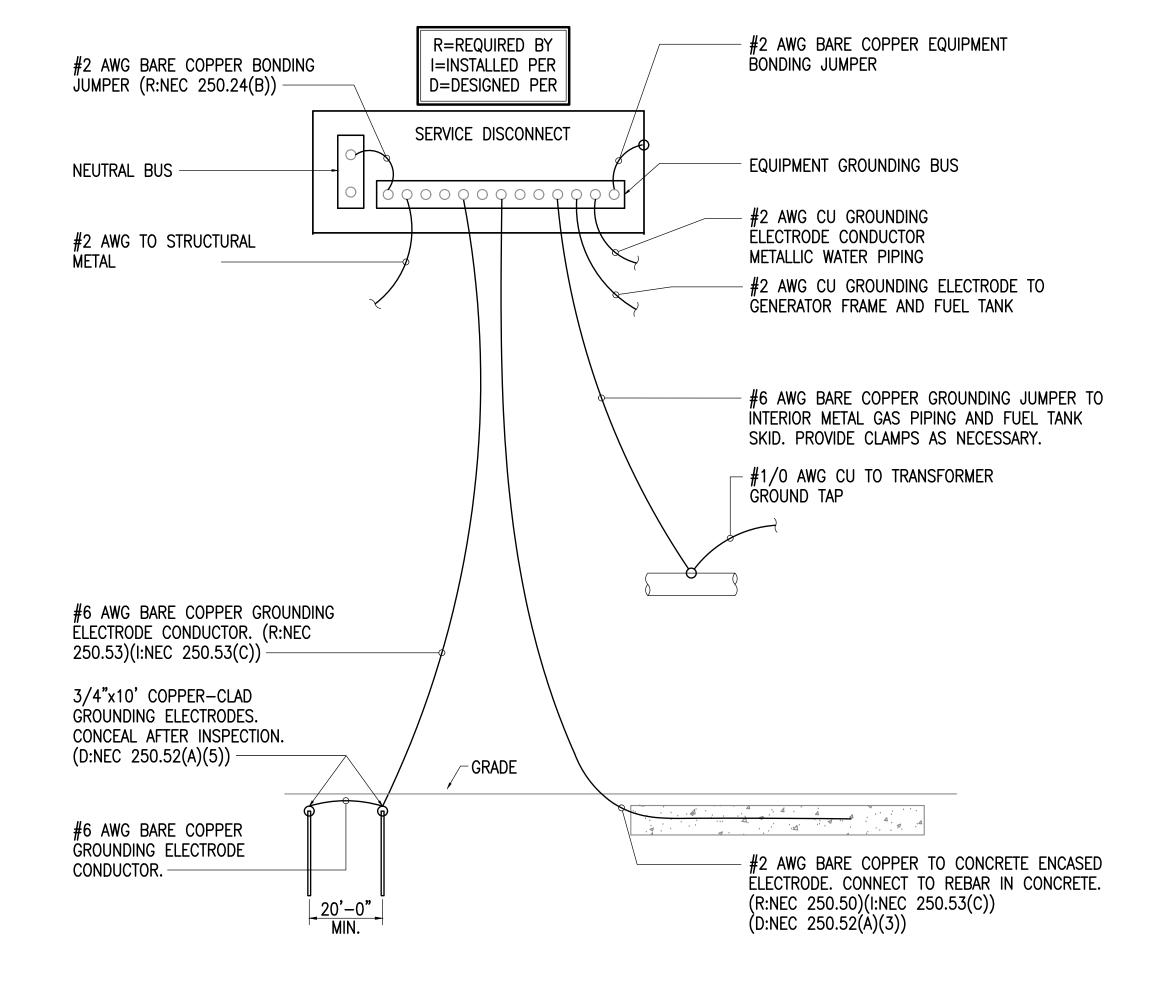
SEE 1/E4—

TYP OF 4

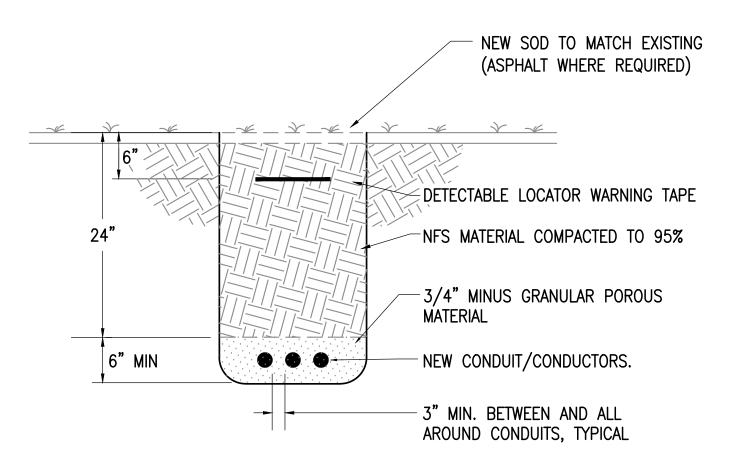
ELECTRICAL POWER AND SIGNAL PLAN



FEEDER SCHEDULE FEEDER TAG CONDUIT AND CONDUCTOR SIZE AND QUANTITY CONDUIT ONLY, SIZED AS REQUIRED BY CVEA, CONDUCTORS BY CVEA (2) 2"C, 4#3/0 AWG, 1#2 AWG GND CU, XHHW 2"C, 3#4/0 AWG, 1#4 AWG GND CU, XHHW 3"C, 4#350 KCMIL, 1#4 AWG GND CU, XHHW 1.5"C, 3#1/0 AWG, 1#6 AWG GND CU, XHHW 1"C AND GENERATOR START/STOP WIRING PER MANUFACTURER







TRENCHING DETAIL (3)NO SCALE

GENERAL NOTES:

- A. SEE SHEET E2 FOR GENERAL NOTES.
- B. SERVICE ENTRANCE EQUIPMENT SHALL BE ASSEMBLED IN CONFORMANCE WITH THE LOCAL SERVING UTILITY'S STANDARDS. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF WITH CVEA.

SHEET NOTES:

- 1. EQUIPMENT CALCULATED AIC. PANELBOARDS SHALL HAVE CALCULATED AIC INSTALLED ON NAMEPLATES.
- 2. PROVIDE ADDITIONAL CONTROL AND SIGNAL WIRING BETWEEN LOAD BANK AND GENERATOR IN ACCORDANCE WITH LOAD BANK MANUFACTURER'S INSTRUCTIONS.

CALL BEFORE YOU DIG

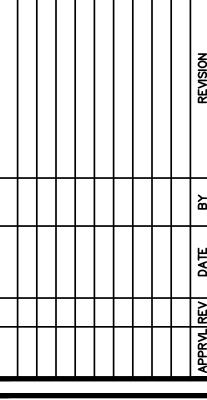
THE CONTRACTOR SHALL NOTIFY ALL AREA UTILITY COMPANIES PRIOR TO COMMENCEMENT OF EXCAVATION. THE FOLLOWING

COPPER VALLEY ELECTRIC ASSOCIATION 811

278-3121

IS A PARTIAL LIST:

LOCATE CALL CENTER OF ALASKA



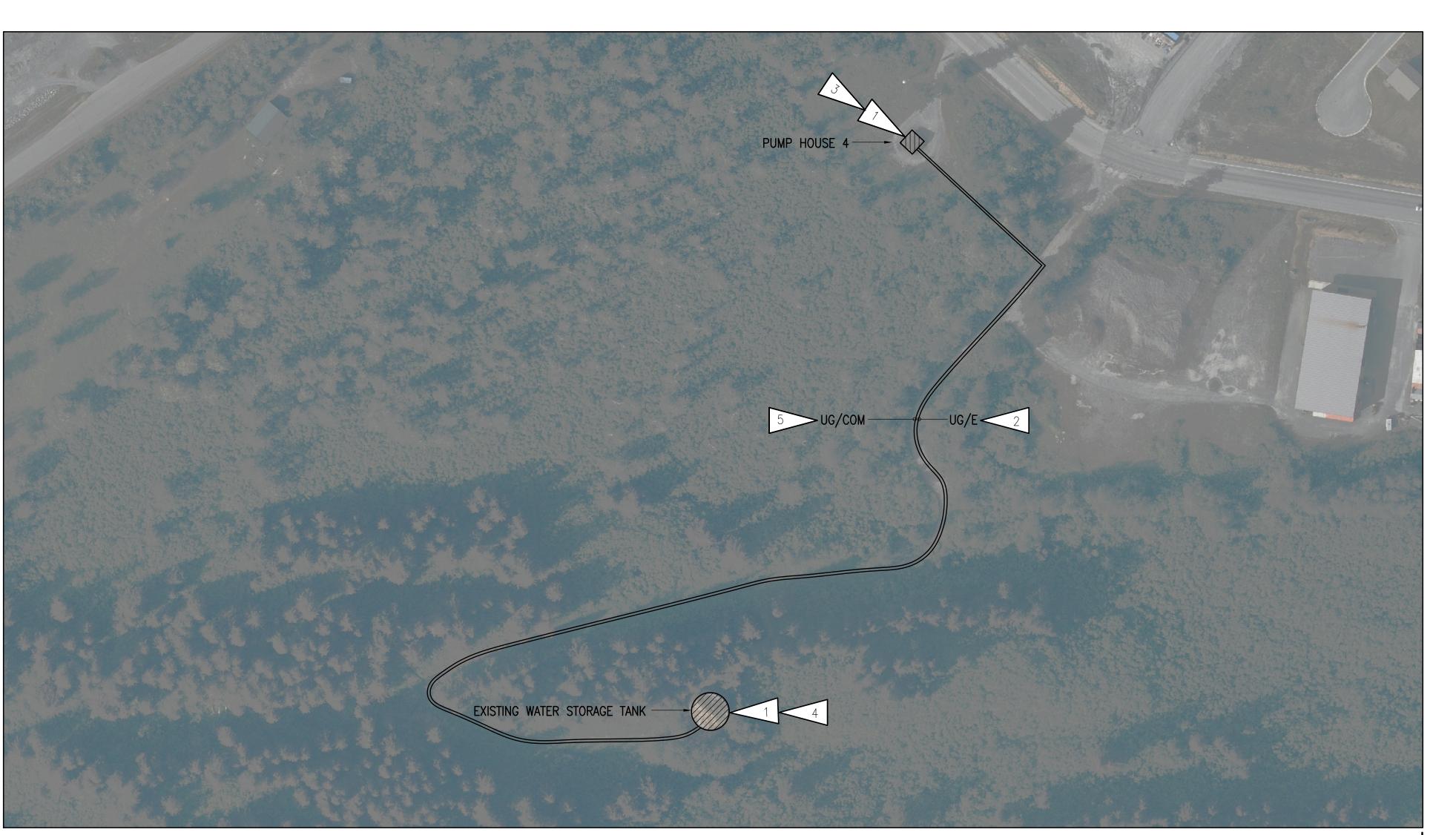
0 PUMPING ST/

DETAILS

CTRICAL

S WELL !

DAY ENGINEERING



1 ELECTRICAL SITE PLAN - PUMP STATION 4

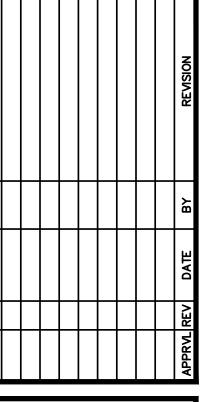
GENERAL NOTES:

A. SEE SHEET E2 FOR GENERAL NOTES.

B. IN-GRADE PULL BOXES ARE NOT SHOWN BUT SHALL BE PROVIDED AT A MAXIMUM OF 200FT INTERVALS. PROVIDE ADDITIONAL PULL BOXES AS REQUIRED.

SHEET NOTES:

- 1. PROVIDE 0.5"C, 3#12 AWG CU XHHW FROM SPLICE BOX TO SPARE 20A, 1—POLE BREAKER IN EXISTING PANELBOARD IN THE BUILDING.
- 2. PROVIDE 2"C, 3#4 AWG CU XHHW FROM SPLICE BOX IN PUMP HOUSE 4 TO THE EXISTING WATER TOWER.
- 3. PROVIDE JUNCTION BOX FOR SPLICING #3 AWG CONDUCTORS TO #12 AWG.
- 4. PROVIDE 0.5"C, 3#12 AWG CU XHHW FROM SPLICE BOX TO EQUIPMENT IN WATER STORAGE TANK. COORDINATE WITH OWNER FOR EXACT EQUIPMENT REQUIRING CONNECTION.
- 5. PROVIDE 2"C WITH PULL STRINGS FROM THE EXISTING PUMP HOUSE 4 TO THE EXISTING WATER STORAGE TANK.



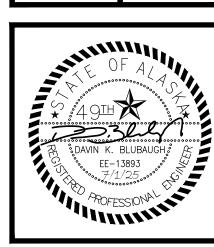
Mechanical and Electrical Consulting Engineers
670 West Fireweed Lane, Suite 200
Anchorage, AK 99503
(907)276-0521
Corporate No.: AECC542
RSA JOB # M4082

TATION

- 5 PUMPING STAT LDEZ, ALASKA

OJECT

PROJECT



7, NEVADA 89315 • (775) 289-5353 • RENO, NEVADA 89503 • (775) 348-8624 BY: CSZ,DB SHEETS DATE: 06/30/2025 SCALE • AS NOTED

PO BOX 151178 • ELY, NEVADA

63 KEYSTONE AVENUE #206 • HEET FS OF S

*.#	#.#		ANSI / ISA DESIGNATION		GENERAL SHEET NOTES
DELIMITER	FIRST LE	TTER		SECOND OR SUCCEEDING LETTERS	
•	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION MODIFIER FUNCTION	
XXXXXX - XXX - XXX . XXXXX SCADA EXTENSION	A ANALYSIS	D DIFFERENTIAL	A ALARM	B USER'S CHOICE B USER'S CHOICE	
EQUIPMENT ID NUMBER	B BURNER, COMBUSTION	F RATIO (FRACTION)	B USER'S CHOICE	C CONTROL H HIGH	
EQUIPMENT CODE OR ISA TAG	C USER'S CHOICE	J SCAN	E SENSOR (PRIMARY ELEMENT)	K CONTROL STATION L LOW	
PROCESS DESIGNATION	D USER'S CHOICE	K TIME RATE OF CHANGE	G GLASS, VIEWING DEVICE	N USER'S CHOICE M MIDDLE, INTERMEDIATE	
FACILITY/AREA CODE	E VOLTAGE	M MOMENTARY	I INDICATION	S SWITCH N USER'S CHOICE	
NSS FACILITY / AREA CODE DESIGNATION EXAMPLE	F FLOW RATE	Q INTEGRATE, TOTALIZER	L LIGHT	T TRANSMIT U MULTIFUNCTION	
MED FACILITYCODEAREACODELL 5W5CHEMICALCHM	G USER'S CHOICE	S SAFETY	N USER'S CHOICE	U MULTIFUNCTION X UNCLASSIFIED	
	H HAND	X X- AXIS	O ORIFICE, RESTRICTION	V VALVE, DAMPER, LOUVER	
SULTING CODE: LL 5 CHEMICAL W5CHM	I CURRENT (ELECTRICAL)	Y Y-AXIS	P POINT (TEST CONNECTION)	X UNCLASSIFIED	
V5 WELL 5 GENERAL	J POWER	Z Z-AXIS	R RECORD	Y RELAY, COMPUTE, CONVERT	
	K TIME, TIME SCHEDULE		U MULTIFUNCTION	Z DRIVER, ACTUATOR	
	L LEVEL		W WELL		
	M USER'S CHOICE		X UNCLASSIFIED		
	N USER'S CHOICE				
	O USER'S CHOICE				
	P PRESSURE, VACUUM				
	Q QUANTITY				
	R RADIATION				
	S SPEED, FREQUENCY				
	T TEMPERATURE				
	U MULTIVARIABLE				
	V VIBRATION, MECHANICAL ANALYSES				
	W WEIGHT, FORCE				
	X UNCLASSIFIED				
	Y EVENT, STATE OR PRESENCE				
	Z POSITION, DIMENSION				



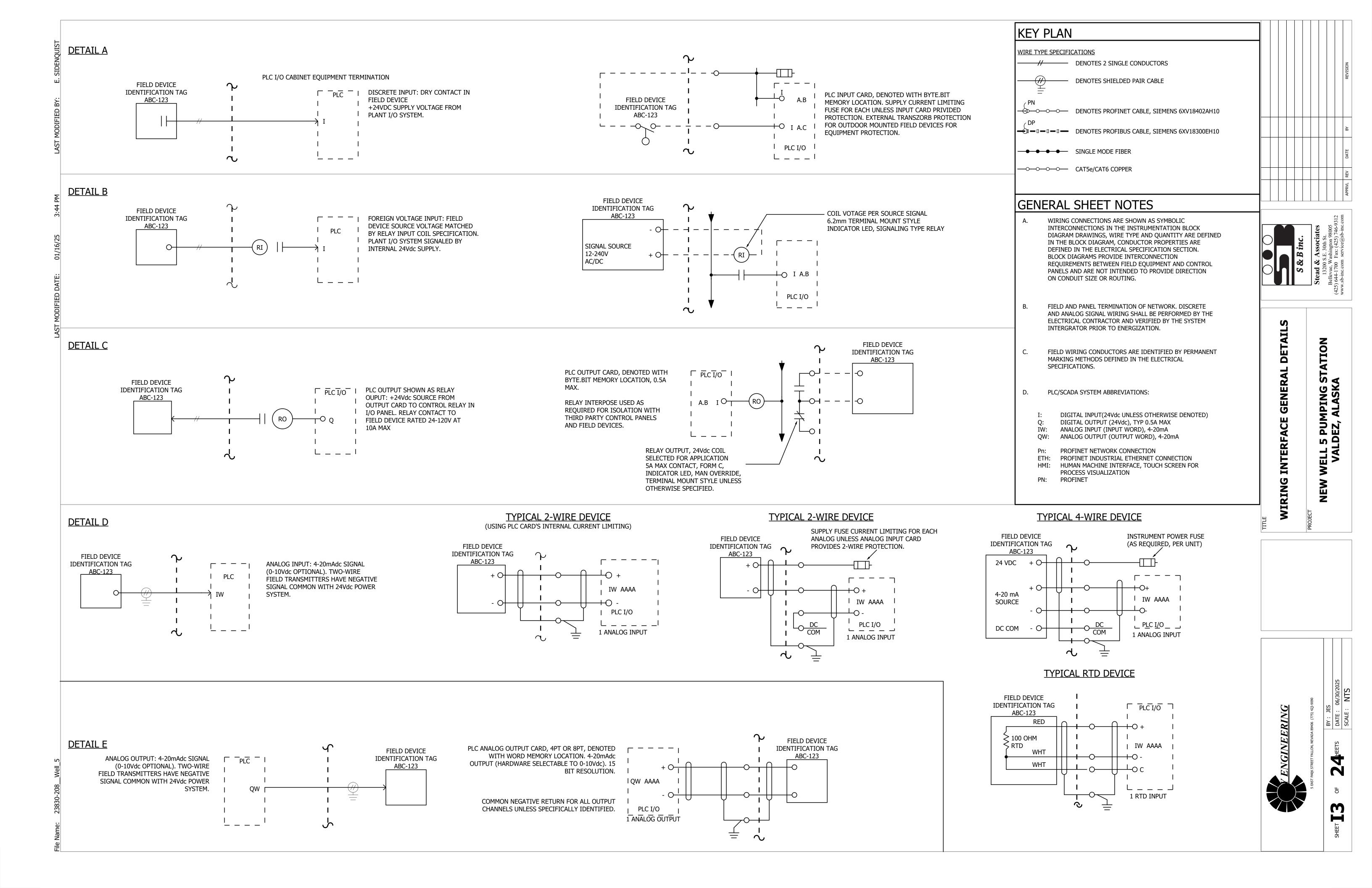
NEW WELL 5 PUMPING STATION VALDEZ, ALASKA

YENGINEERING SHEET **T**

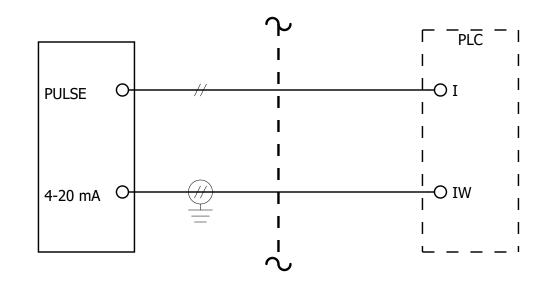
#.# INSTRUMENTATION CALL-OUT		TION CALL-OUT		#.#	CO	LOR PLAN
				COLOR	GENERIC MEANING	ELEMENT ASSOCIATION
INS	STRUMENT ID ———	,		BLACK	BACKGROUND	
	/	XXX		RED	EMERGENCY	A) STOP
	(_	Ā				B) HIGHEST PRIORITY ALARM
NUMERIC LOOP NUMBER INSTRUMENT SYMBOL (MAY INCLUDE ALPHA SUFFIX)			YELLOW	CAUTION	A) ABNORMAL CONDITION B) SECOND PRIORITY ALARM C) CLOSED	
				GREEN	SAFE	A) NORMAL OPERATION B) START C) OPEN
5.3	SYM	BOLS				C) ON
	PRIMARY LOCATION NORMALLY ACCESSIBLE TO	FIELD MOUNTED	AUXILIARY LOCATION NORMALLY ACCESSIBLE TO	CYAN (LIGHT BLUE)	STATIC & SIGNIFICANT	A) PROCESS EQUIPMENT IN SERVICE B) MAJOR LABELS
	OPERATOR	FIELD MOONTED	OPERATOR	BLUE	NONESSENTIAL	A) STANDBY PROCESS EQUIPMENT B) LABELS, TAGS, ETC.
	XXX	XXX	XXX	MAGENTA (PURPLE)	ANALYTICAL	A) RADIATION ALARMS B) QUESTIONABLE VALUES
DISCRETE INSTRUMENTS	B B	A B	A B	WHITE	DYNAMIC DATA	A) MEASUREMENTS & STATE INFORMATION B) SYSTEM MESSAGES C) TREND D) ACTIVE SEQUENTIAL STEP
PROGRAMMABLE LOGIC	XXX	AXXX	XXX	GRAY	INACTIVE	A) OFF B) NOT MONITORED
CONTROL	В	В	В	#.#	WIRE	NUMBERING
ANAL	OG INPUT	DISCRETE INPUT				
ANAI	OG OUTPUT	DISCRETE OUTPUT				
V	•					
	— — ELECTRIC S	IGNAL				
		YSTEM LINK OR DATA LINK)				
	(

GENERAL SHEET NOTES WELL 5 PUMPING STATION VALDEZ, ALASKA NEW

YENGINEERING



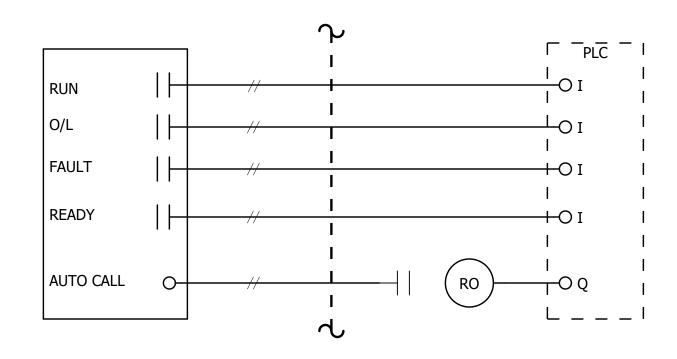
DETAIL G DISCRETE FLOW METER



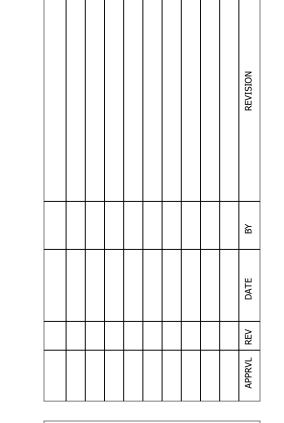
APPLICATION: SPECIAL PURPOSE FLOWS, PLC SYSTEM MONITORS FLOW RATE AND ACCUMULATES FLOW TOTAL. RATE IS CONTINUOUSLY ANALYZED FOR CONSISTENCY. ALARMS CALCULATED FOR INVALID MA SIGNAL AND RAPID CHANGE IN FLOW. PLC STORES DAILY FLOW TOTAL, LIFETIME ACCUMULATED TOTAL, AND INSTANTANEOUS FLOW RATE. SCADA PROVIDES INDICATION OF VALUES, HISTORICAL TREND AND DAILY TOTAL FLOW ARCHIVE.

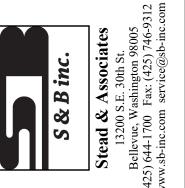
DETAIL H

DISCRETE STARTER



APPLICATION: SPECIAL PURPOSE MOTOR STARTERS FOR FRACTIONAL HORSEPOWER INSTALLATIONS. PLC SYSTEM MONITORS AUTOMATIC MODE, PROVIDES CONTROL (WHERE DEFINED BY P&ID). PROVIDES ALARM NOTIFICATION ON FAILURE TO COMMAND WITHIN ALLOTTED TIME, AND FOR A PROCESS LOGIC VIOLATION. SCADA PROVIDES VISUALIZATION OF MOTOR STATUS AND ALARM CONDITIONS, AUTO OPERATION SETTINGS, AND SUPERVISORY CONTROL OVERRIDE.





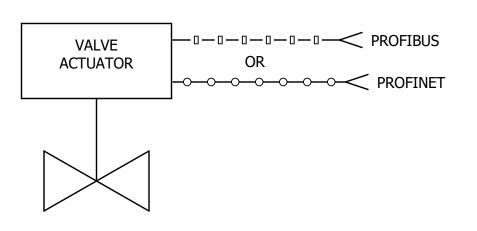
ENT WIRING FOR DISCRETE AND VIRTUAL DATA STATIOI A

5

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ENGINEERING

<u>DETAIL I</u> **NETWORKED VALVE ACTUATOR**



VIRTUAL I/O

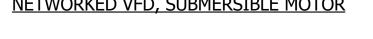
SUPERVISORY CONTROL OVERRIDE OF VALVE

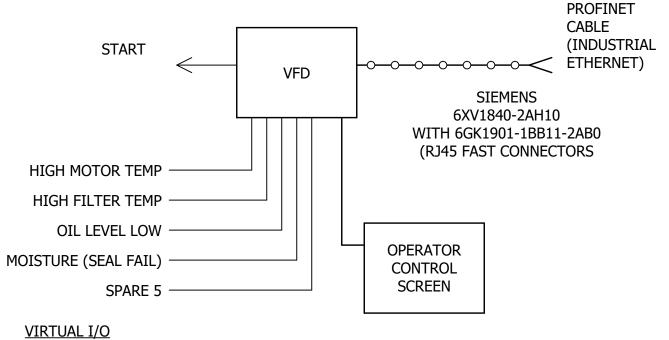
VALVE POSITION XXX.X % TORQUE APPLIED XXX FT-LBS ACTUATOR TEM XXX DegF **FULLY CLOSED FULLY OPEN** VALVE SELECTOR IN STOP VALVE SELECTOR IN REMOTE VALVE SELECTOR IN LOCAL VALVE IN PLC CONTROL VALVE MOTOR RUNNING VALVE TORQUE STOPPED VALVE OVERLOAD CMD ERROR

APPLICATION: ALL VALVES UNLESS SPECIFICALLY IDENTIFIED. PLC SYSTEM POSITIONS VALVE IN AUTOMATIC MODE, PROVIDES ALARM NOTIFICATION ON FAILURE TO MEET SETPOINT, PROCESS FLOW VIOLATION, AND ALL VALVE INITIATED ALARM STATES. SCADA PROVIDES VISUALIZATION OF VALVE STATUS AND ALARM CONDITIONS, AUTO OPERATION SETTINGS, AND SUPERVISORY CONTROL OVERRIDE OF VALVE. PROCESS FIELDBUS MAY BE PROFINET (PREFERRED) OR PROFIBUS. SEE NETWORK DIAGRAM FOR DETAILS THAT PRESCRIBE ROUTING TO DEVICE.

NETWORKED VFD, SUBMERSIBLE MOTOR

DETAIL J





IN AUTO / IN HAND CALL RUNNING READY AT SPEED FAULT-VFD FAULT ALARM ALARM-VFD WARNING OVERLOAD-MOTOR OVERLOAD

TEMPERATURE-VFD/MOTOR OVERTEMP

SPEED FEEDBACK SPEED COMMAND DC LINK VOLTAGE MOTOR HP MOTOR VOLTS MOTOR AMPS MOTOR TORQUE LAST FAULT CODE LAST ALARM CODE

APPLICATION: VARIABLE FREQUENCY DRIVE MOTOR STARTERS PLC SYSTEM MONITORS MOTOR CONTROLLER VIA PROFIBUS NETWORK. VFD CONTOLLER PROVIDES ON BOARD LOGIC FOR LOCAL (HAND) AND REMOTE AUTO CONTROL, PROVIDES CONTROL (AS DEFINED BY P&ID), PROVIDES ALARM NOTIFICATION ON FAILURE TO COMMAND WITHIN ALLOTTED TIME, FOR A PROCESS LOGIC VIOLATION AND ALL ALARM CONDITIONS GENERATED BY THE VFD CONTROL UNIT. POWER INFORMATION IS MONITORED FOR OVER AND UNDER LOAD CONDITIONS AS EARLY WARNING INDICATION OF PROCESS ABNORMALITIES. SCADA PROVIDES VISUALIZATION OF MOTOR STATUS AND ALARM CONDITIONS, AUTO OPERATION SETTING, AND SUPERVISORY CONTROL OVERRIDES (HAND/OFF/AUTO). SCADA PROVIDES INDICATION OF ALL NETWORK DERIVED INFORMATION, ARCHIVES RUNTIME, SPEED, kW LOAD AND ALARM CONDITION.

NETWORK CABLING NOTES

WWW.PROFIBUS.ORG.

GROUNDING SPECIFICATIONS.

AND CONNECTOR ASSEMBLIES.

GENERAL PLANT CABLING CAN CARRY HIGH VOLTAGES AND CURRENTS.

RUNNING PROFIBUS CABLES PARALLEL TO SUCH CABLES CAN LEAD

MINIMIZE RISK OF INTERFERENCE BY FOLLOWING "INSTALLATION

USE CARE TO AVOID COMMON PROFINET INSTALLATION PROBLEMS

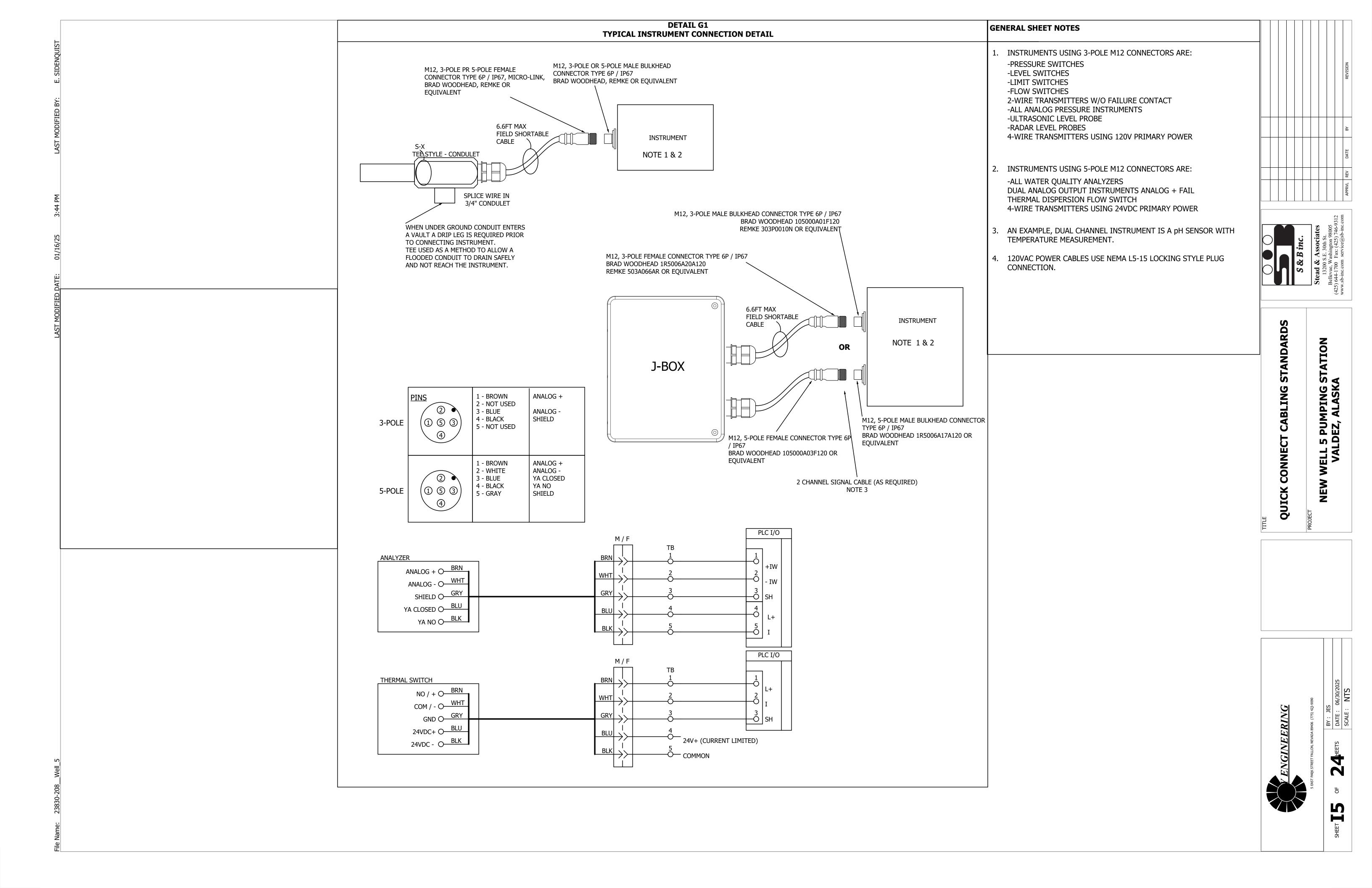
INCLUDING: OVERSTRESSED PULL TENSION, FAILURE TO FOLLOW END TAP LENGTHS IN EXCESS OF 1 METER AND FAILURE TO FOLLOW POLARITY,

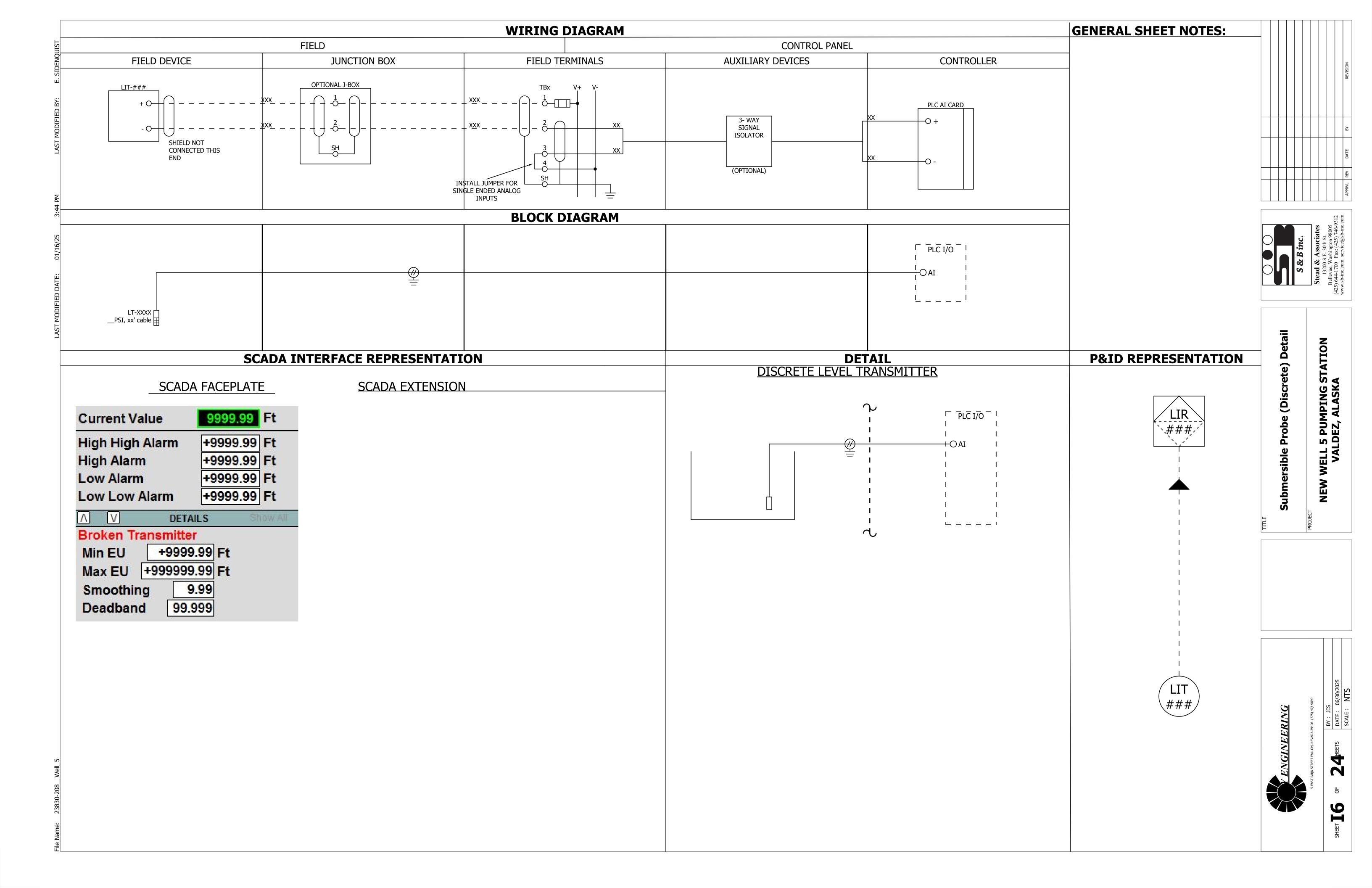
PROFINET / INDUSTRIAL ETHERNET CABLING REQUIRES HOME RUN TO

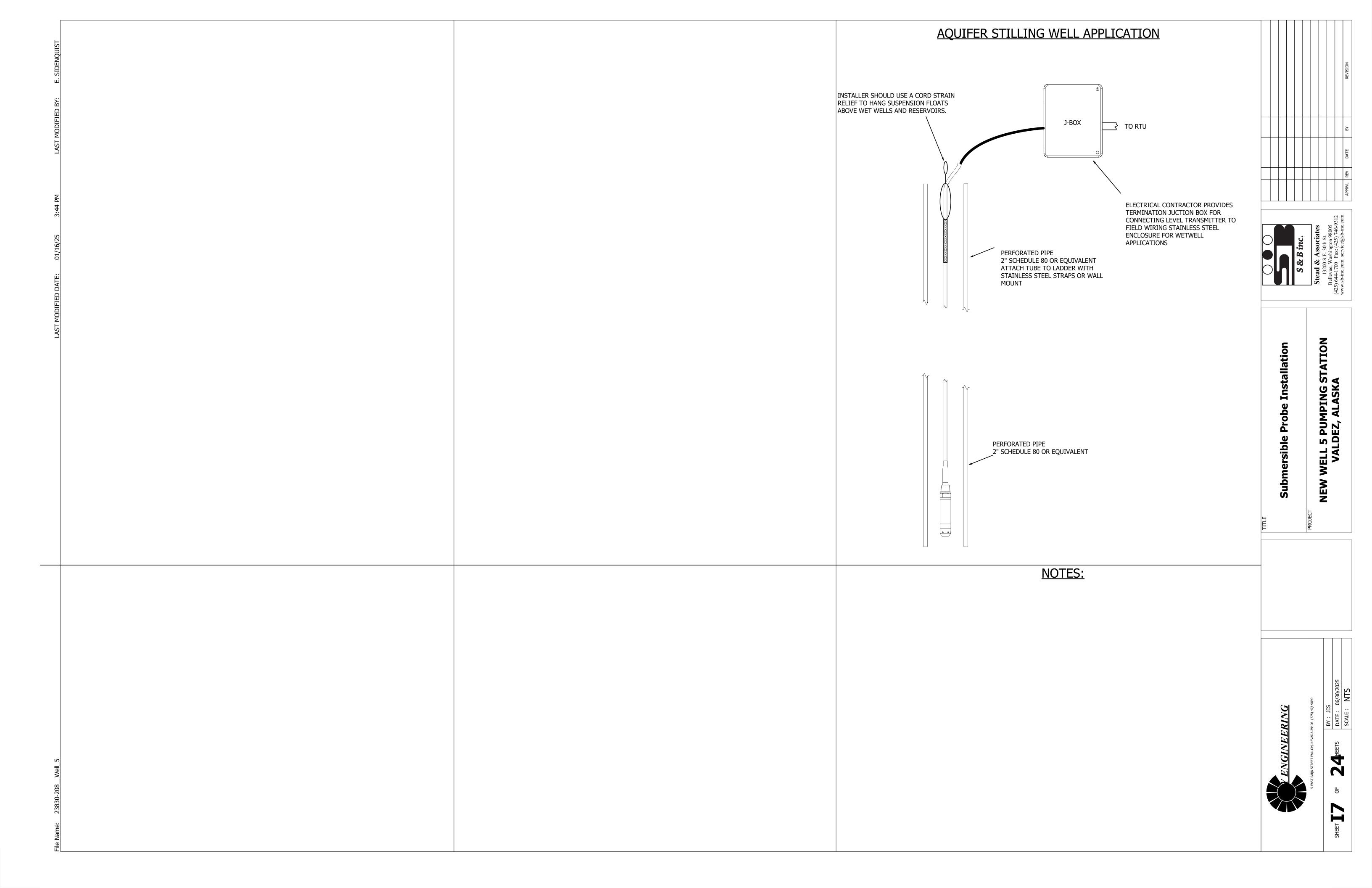
NETWORK SWITCH FOR EACH DEVICE AND USE OF INDUSTRIAL CABLING

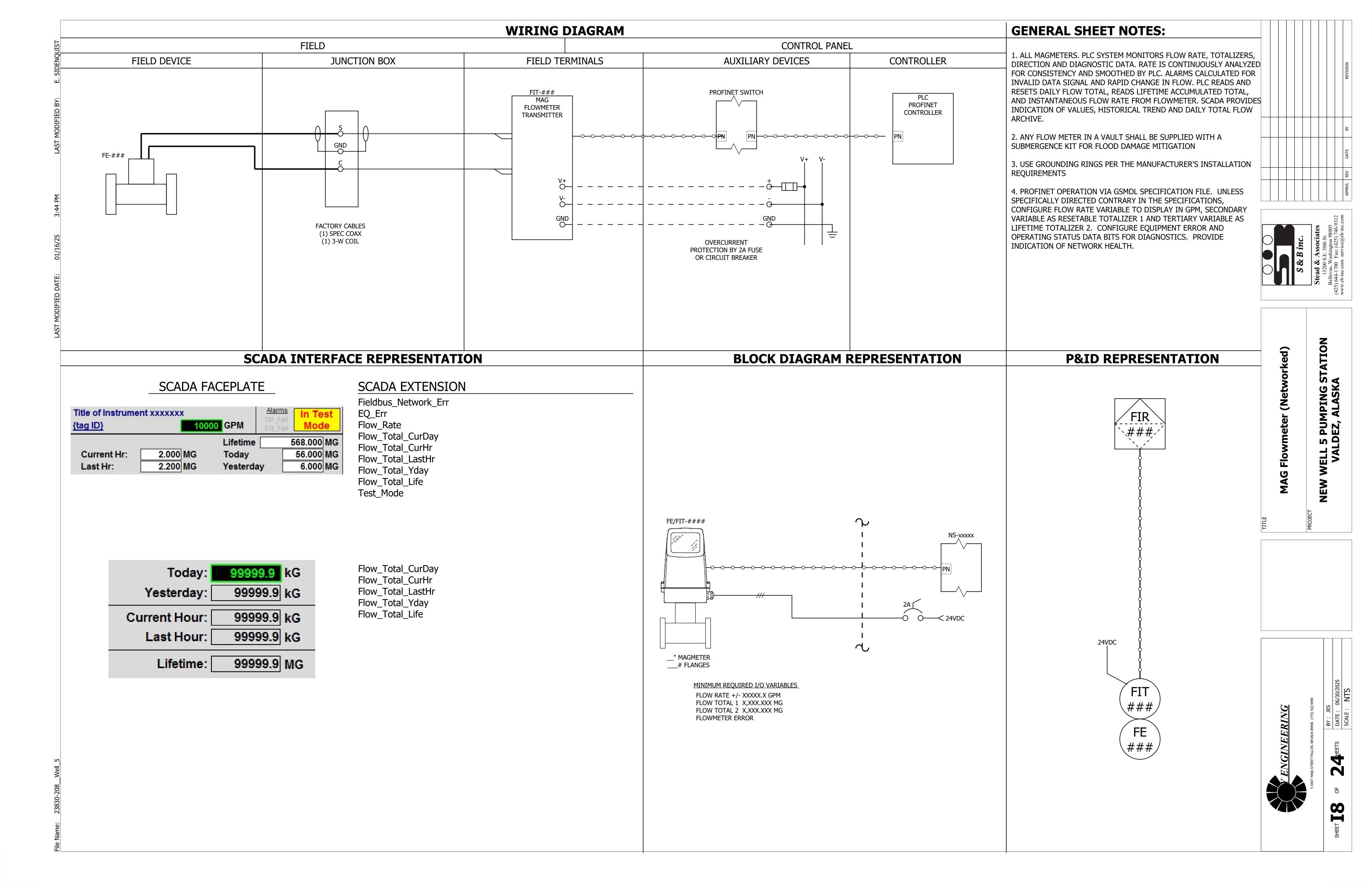
GUIDELINE FOR CABLING AND ASSEMBLY" AVAILABLE ONLINE AT

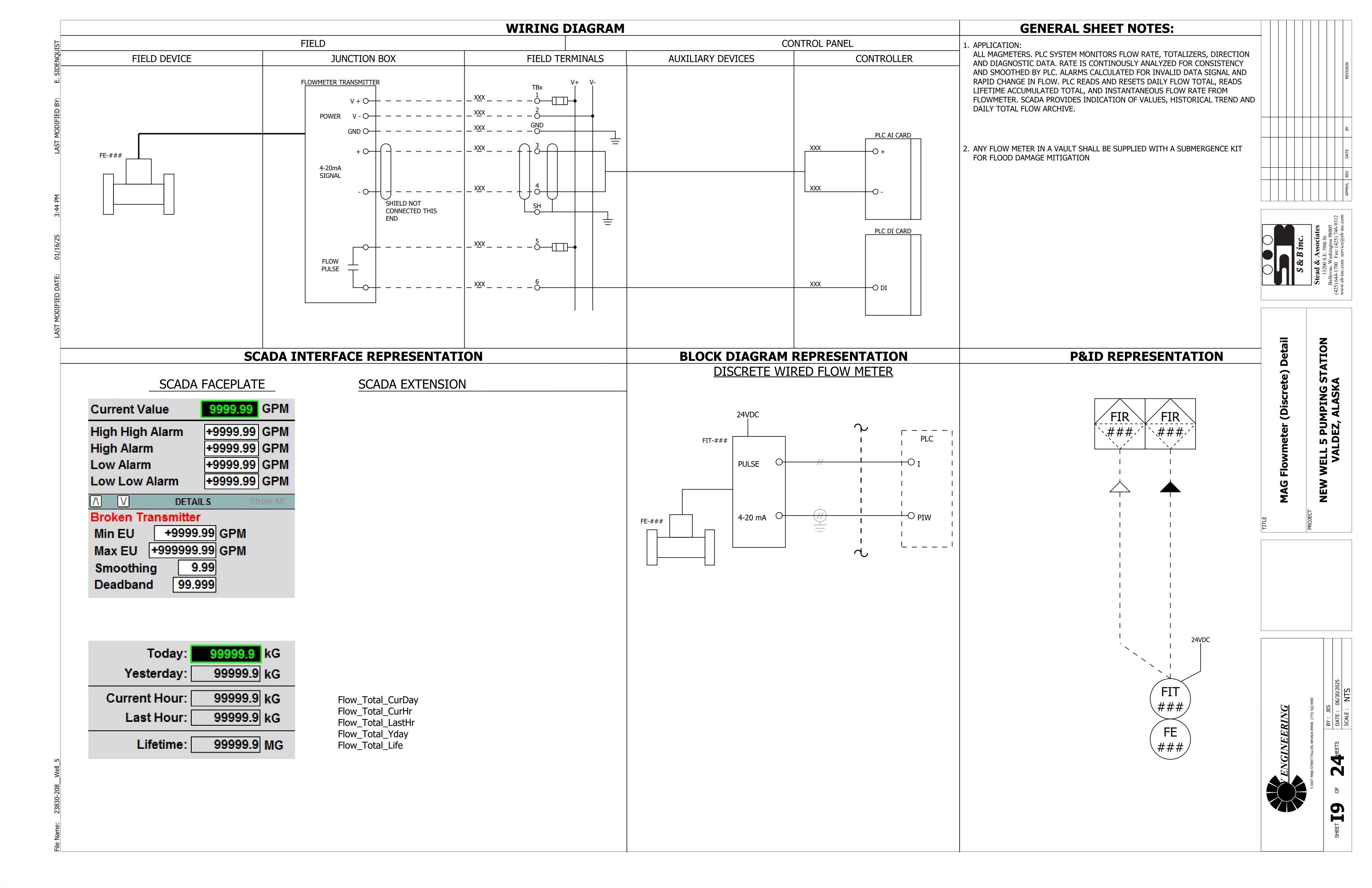
TO INTERFERENCE PICKUP AND DATA TRANSMISSION ERRORS.

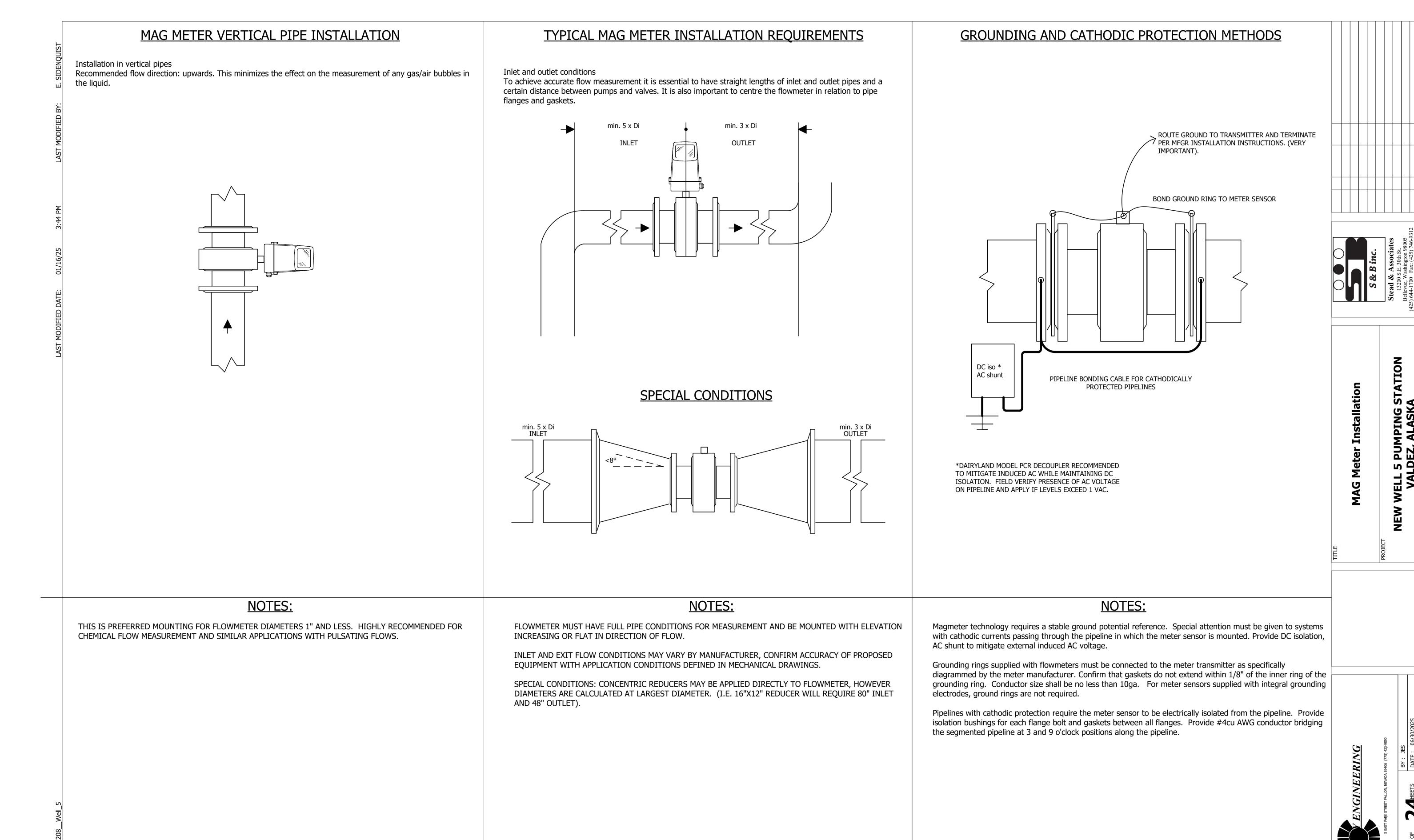


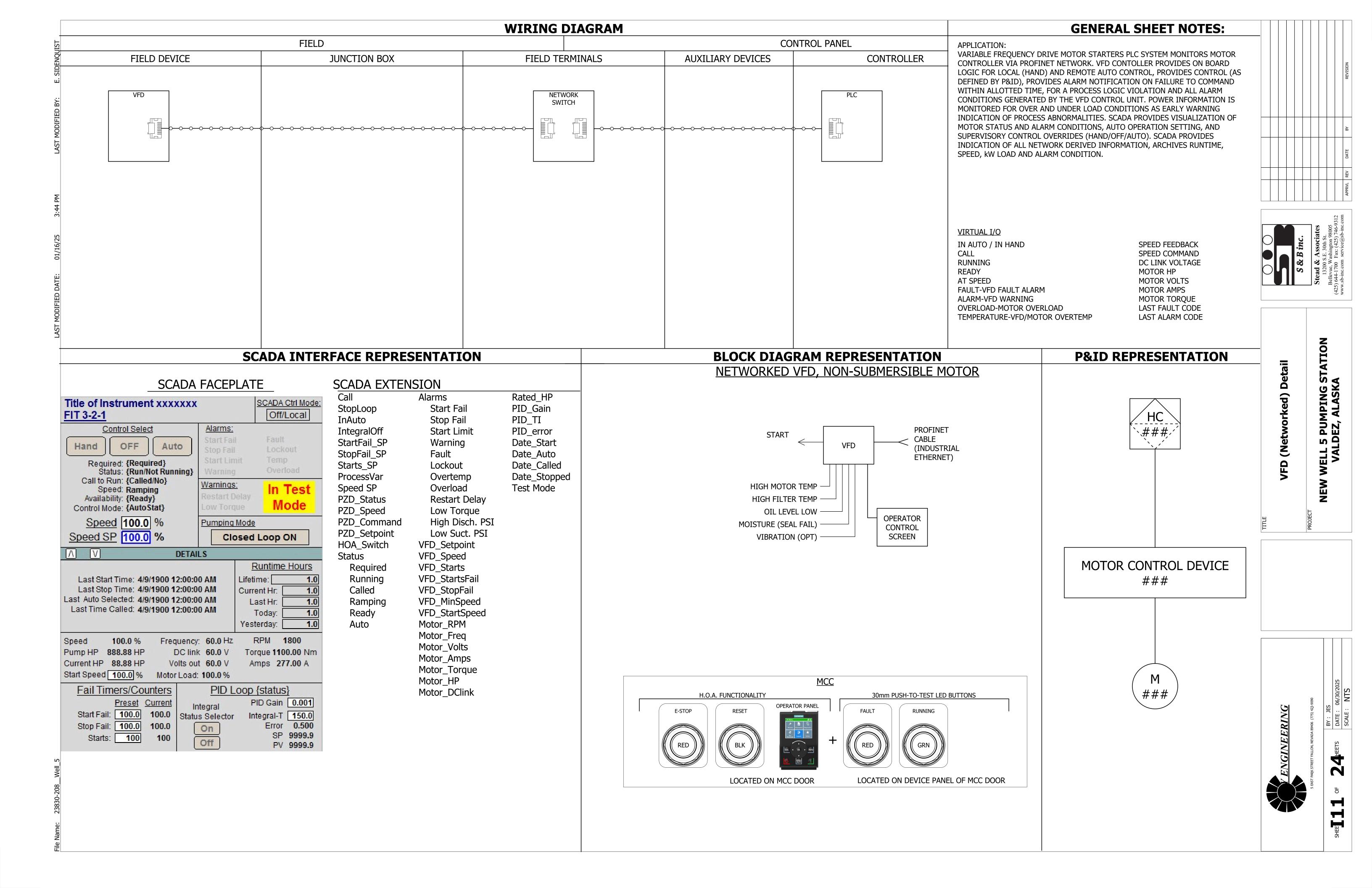


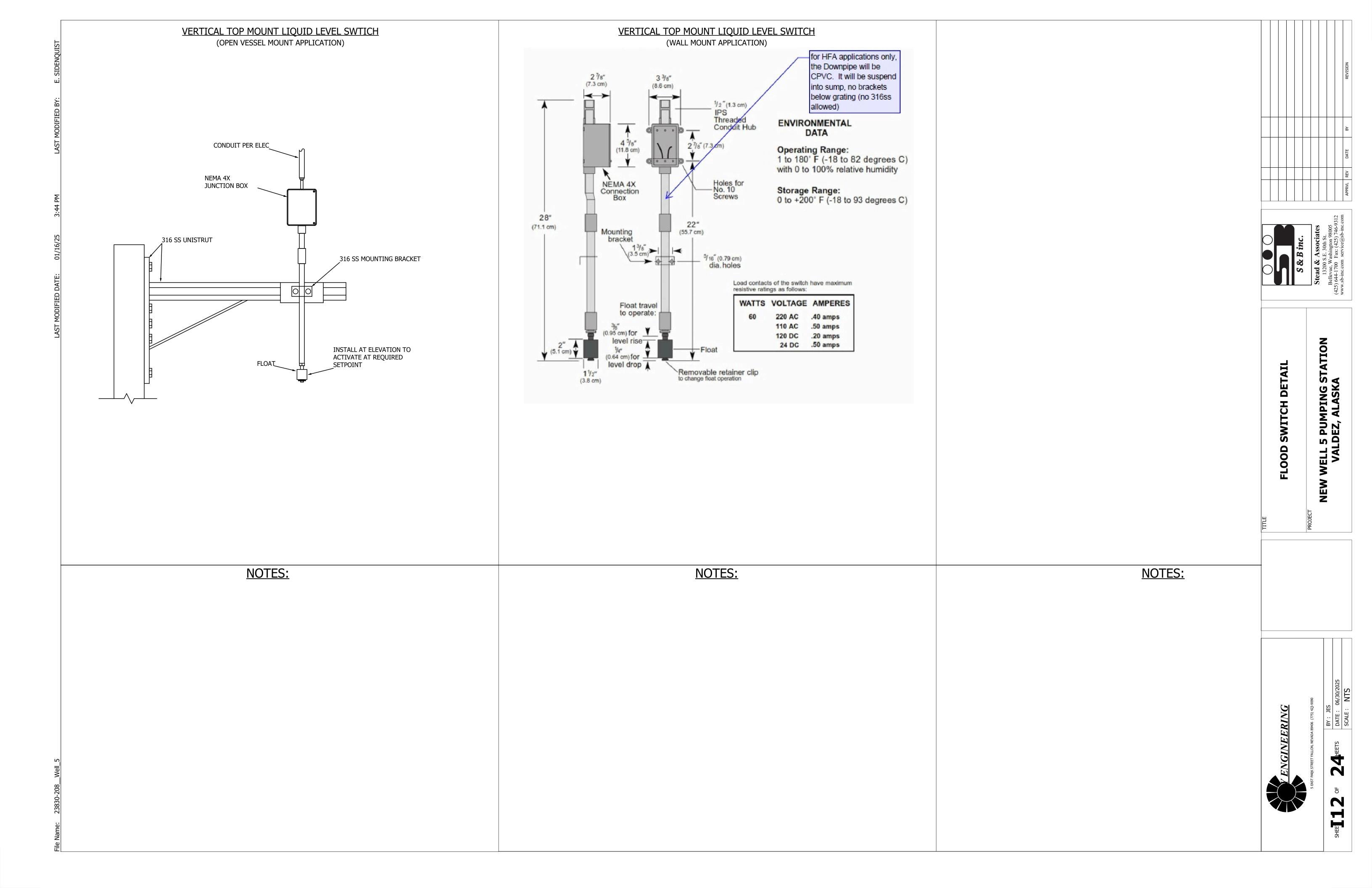


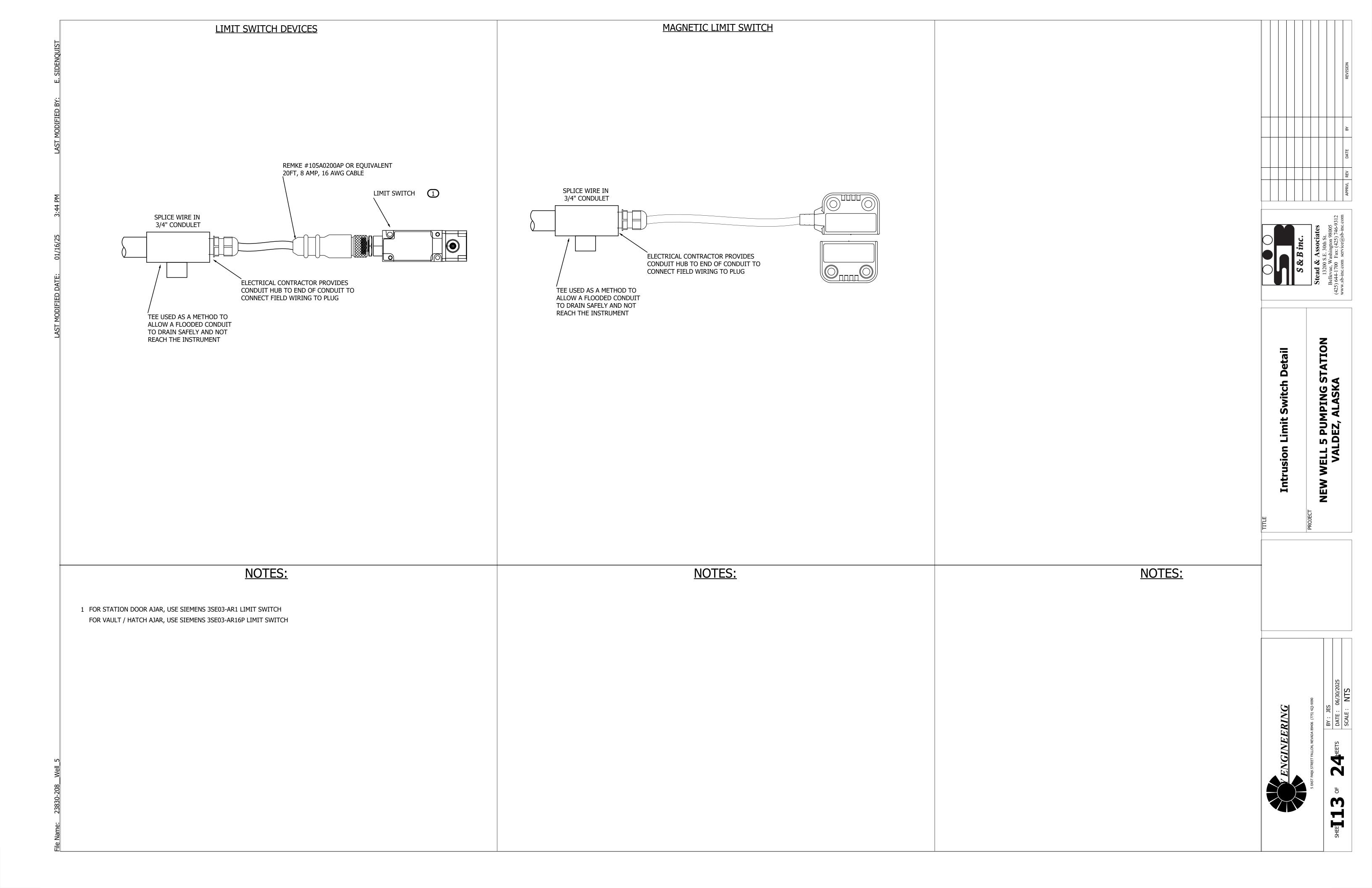




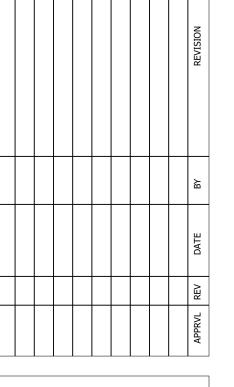


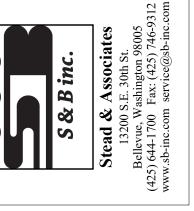






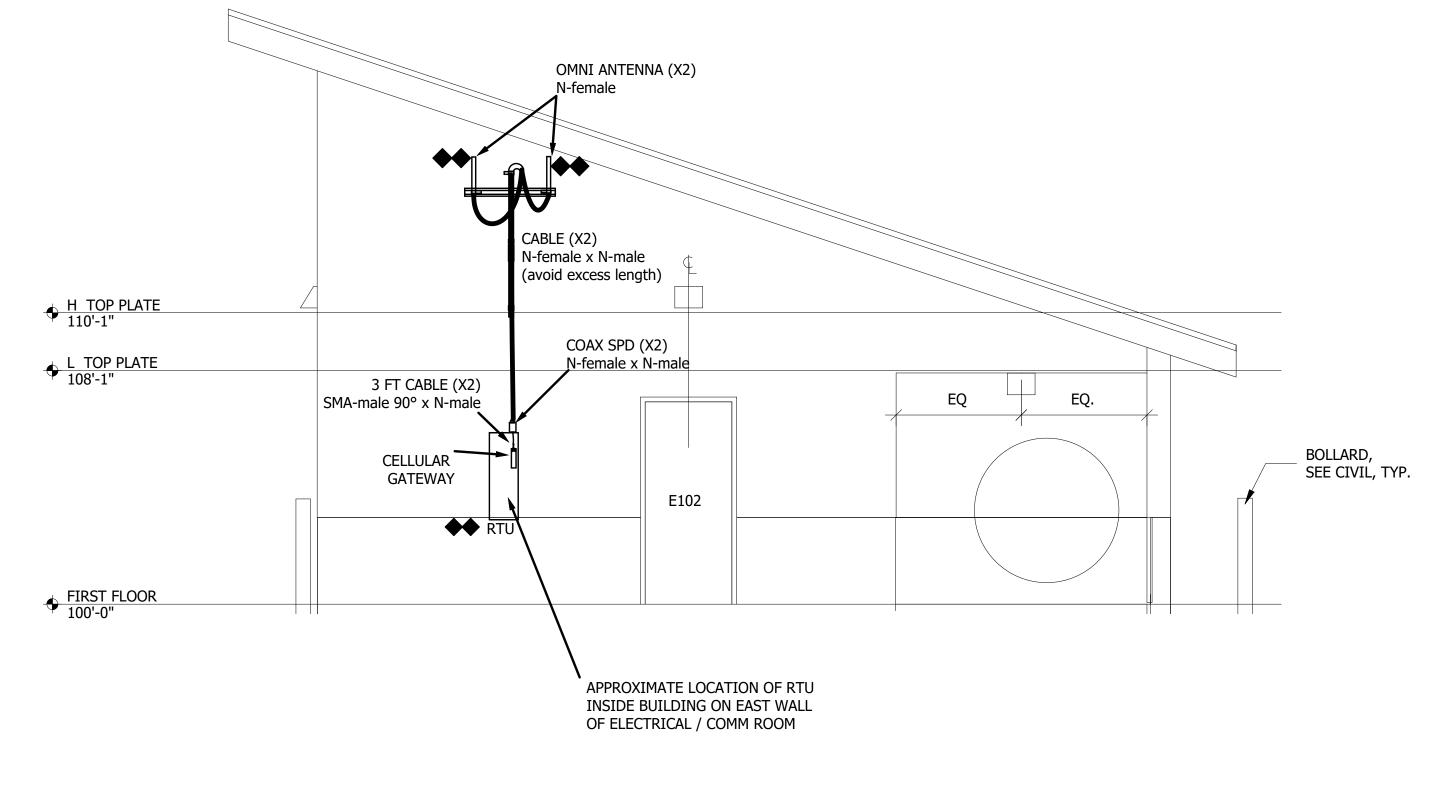
- 1. EXAMPLE OF BUILDING WITH EXTERIOR MAST FOR CELLULAR ANTENNA. BUILDING IS GENERIC IN NATURE AND INTENDED ONLY TO REPRESENT RECOMMENDED CLEARANCE AND SPACING FOR ANTENNA SYSTEM, AND NOT TO REPRESENT ACTUAL BUILDING DESIGN.
- 2. MAST AND ANTENNA LOCATION DETERMINED BY CELLULAR NETWORK SIGNAL ANALYSIS
- 3. MAST IS RECOMMENDED TO AVOID ROOF PENETRATIONS ON RETROFIT APPLICATIONS, ANY ROOF PENETRATION REQUIRES WEATHERTIGHT PROTECTION FOR THE STRUCTURE. RECOMMEND SIDE WALL MOUNTED MAST AND EXTENDING MAST VERTICAL TO CLEARANCES SHOWN ABOVE ROOFLINE.
- 4. SURGE PROTECTION FOR THE ANTENNA SYSTEM SHALL BE SUPPLIED FOR ALL SYSTEMS WITH OUTDOOR MOUNTED ANTENNA. SURGE UNIT IS LOCATED ON OR ADJACENT TO THE RTU, IN CLOSE PROXIMITY TO THE CELLULAR MODEM.

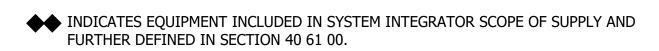




ELL 5 PUMPING STATION VALDEZ, ALASKA

ENGINEERING





"U" CLAMP

"U" CLAMP 🥆

2" GRS CABLE —

CONDUIT "T" FITTING

ROUTED TO "RTU"

◆◆ OMNI ANTENNA ~

WEATHER HEAD

GALVANIZED

STEEL

BLOCKING

OMNI ANTENNA

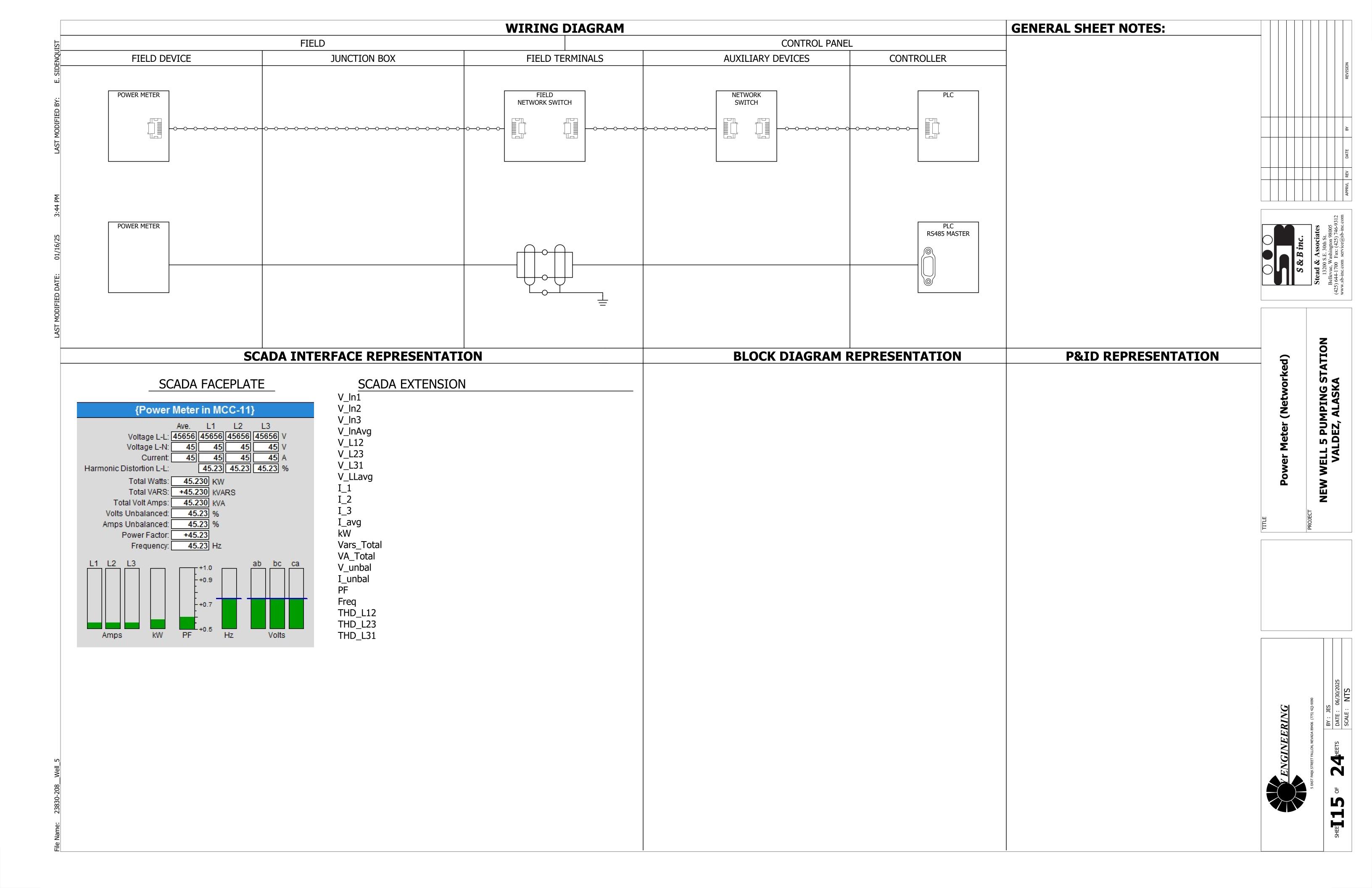
#6 BARE COPPER **GROUND TO**

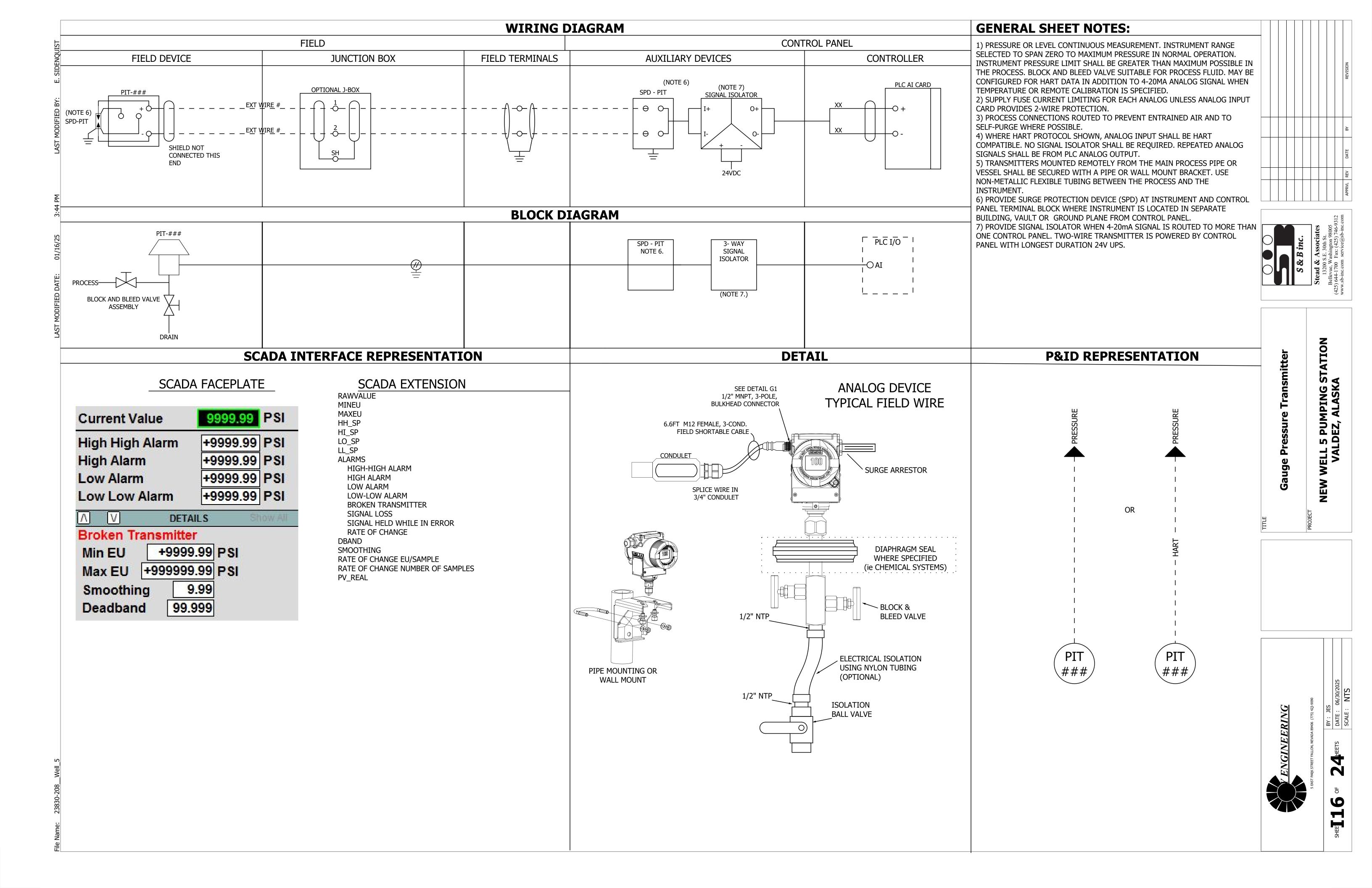
GROUNDING SYSTEM.

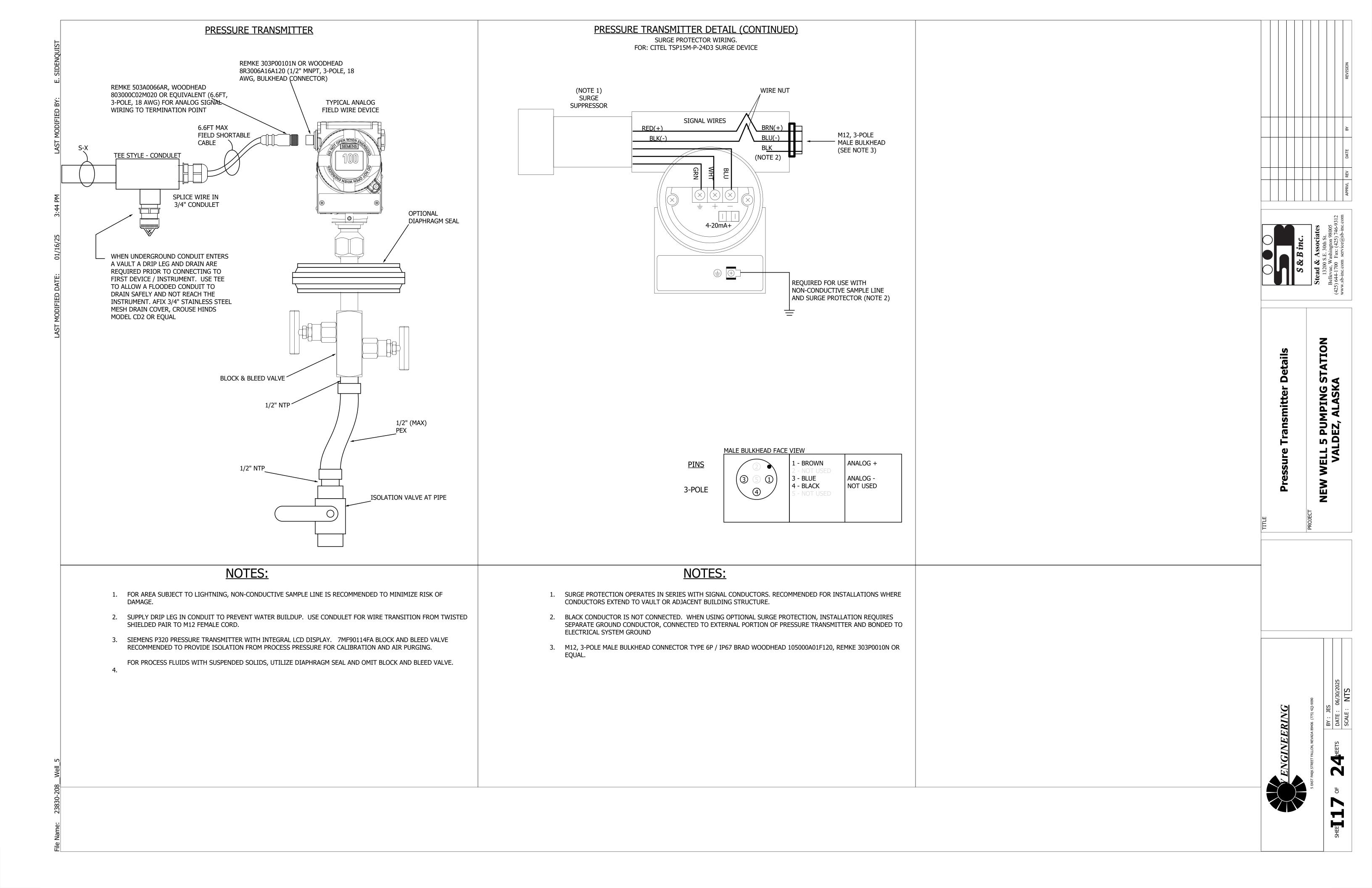
"U" CLAMP; FASTEN / SECURE TO

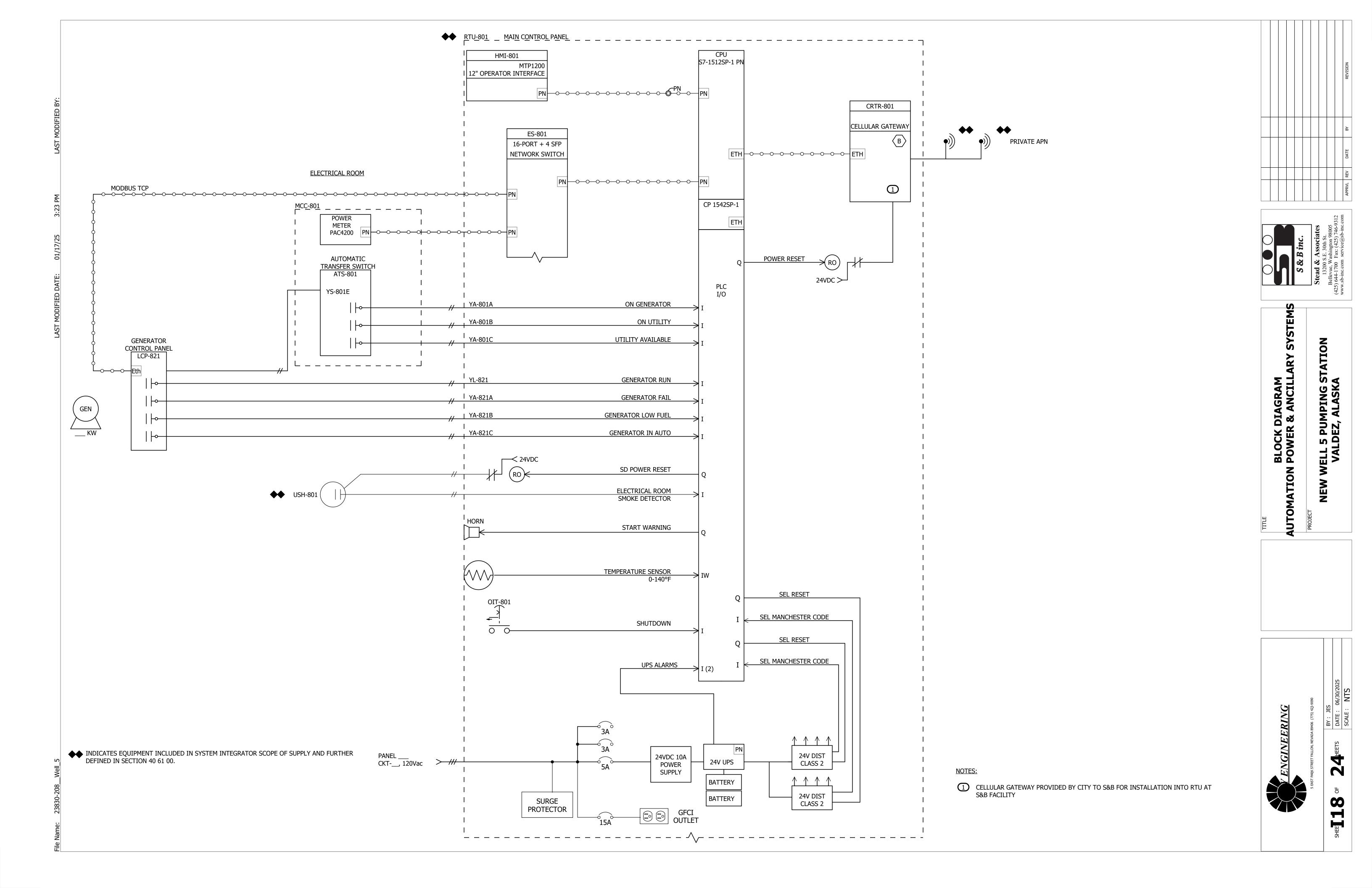
REQUIRED

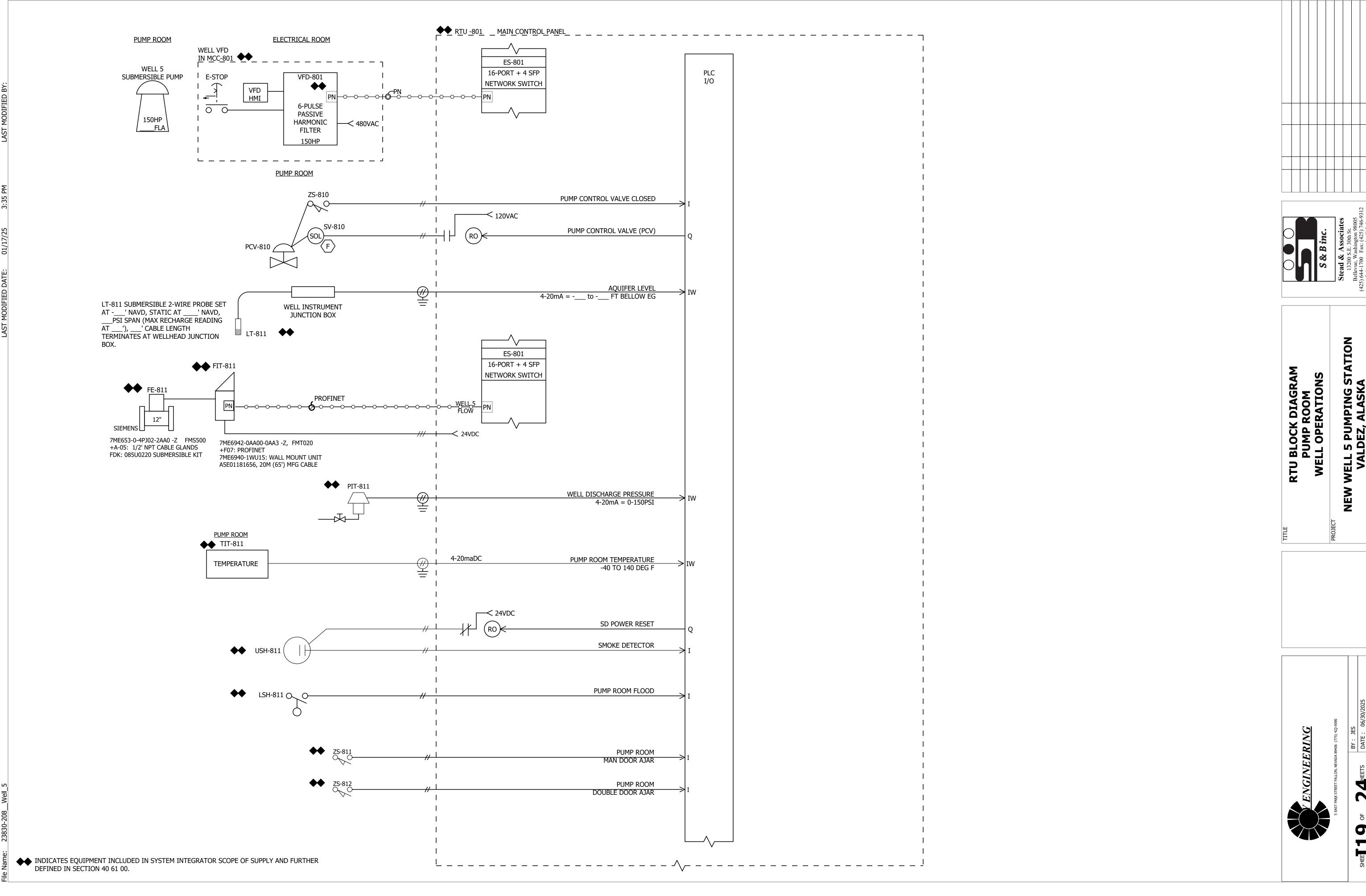
WALL AND PROVIDE BLOCKING AS











Stead & Associates
13200 S.E. 30th St.
Bellevue, Washington 98005
(425) 644-1700 Fax: (425) 746-9312
www.sb-inc.com service@sb-inc.com

BLOCK DIAGRAM
CONTROL SYSTEM NETWORK DIAGRAM

PROJECT

NEW WELL 5 PUMPING STATION

VALDEZ, ALASKA

PROJECT

(775) 423-9090 : JES ATE: 06/30/2025

Y ENGINEERING

AST PARK STREET FALLON, NEVADA 89406 (775) 423-9090

BY: JES

V ENG

FUTURE FIBER IS INSTALLED, DISCONNECT CELLULAR FROM PLC AND CONNECT CELLULAR TO CP1542SP-1 CARD

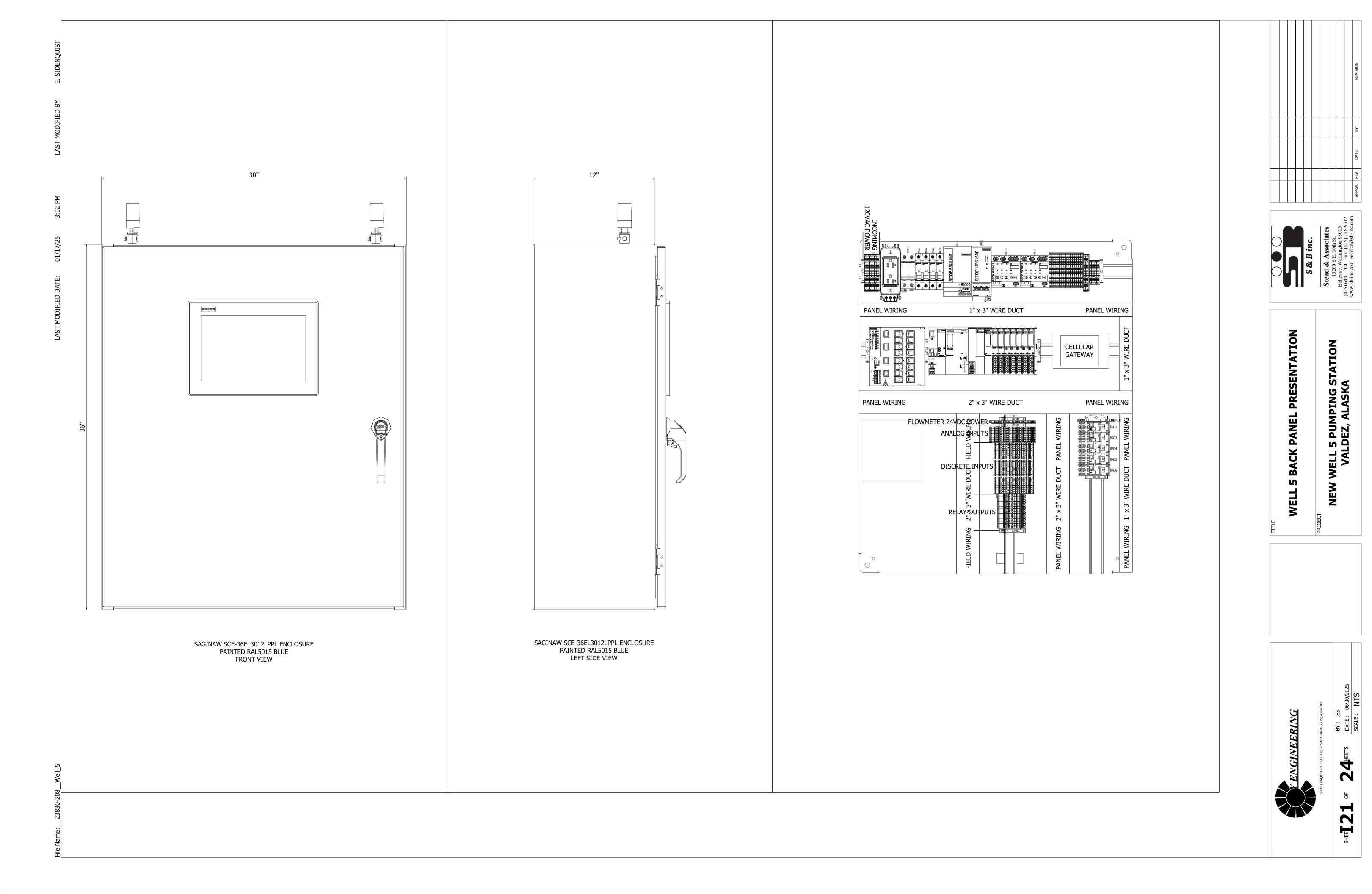
CITY PROVIDES S&B CRADLEPOINT CELLULAR GATEWAY FOR INSTALLATION INTO THE RTU AT S&B'S FACILITY IN BELLEVUE WA.

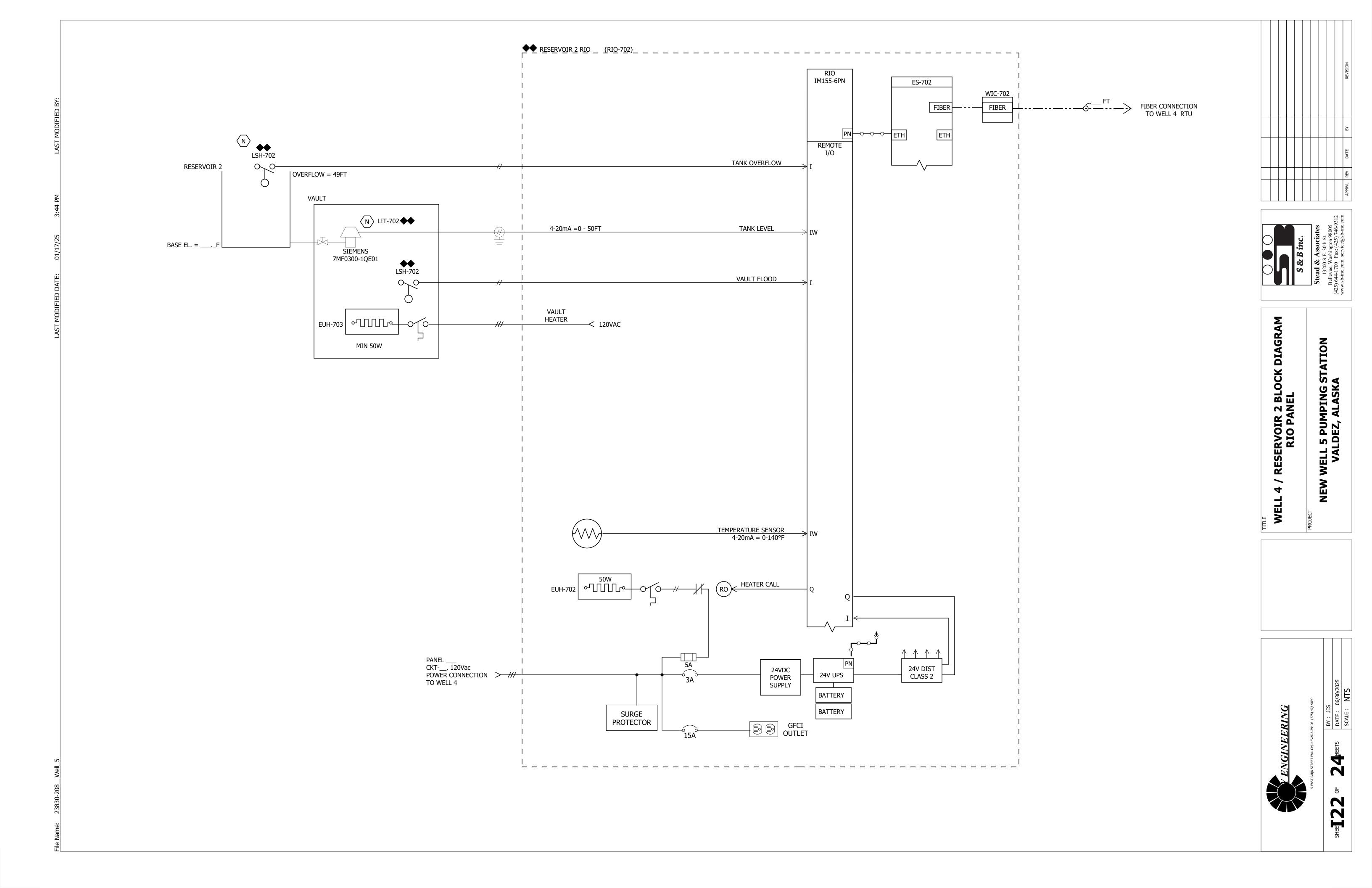
FUTURE PROVISION FOR CITY TO PROVIDE SINGLE MODE FIBER TO NEW WELL 5 BUILDING. FIBER CABLE SHALL BE SUPPLIED BY CITY WITH LC ENDS ON AT LEAST ONE END, USED FOR THE CONNECTION AT THE WELL 5 STATION RTU.

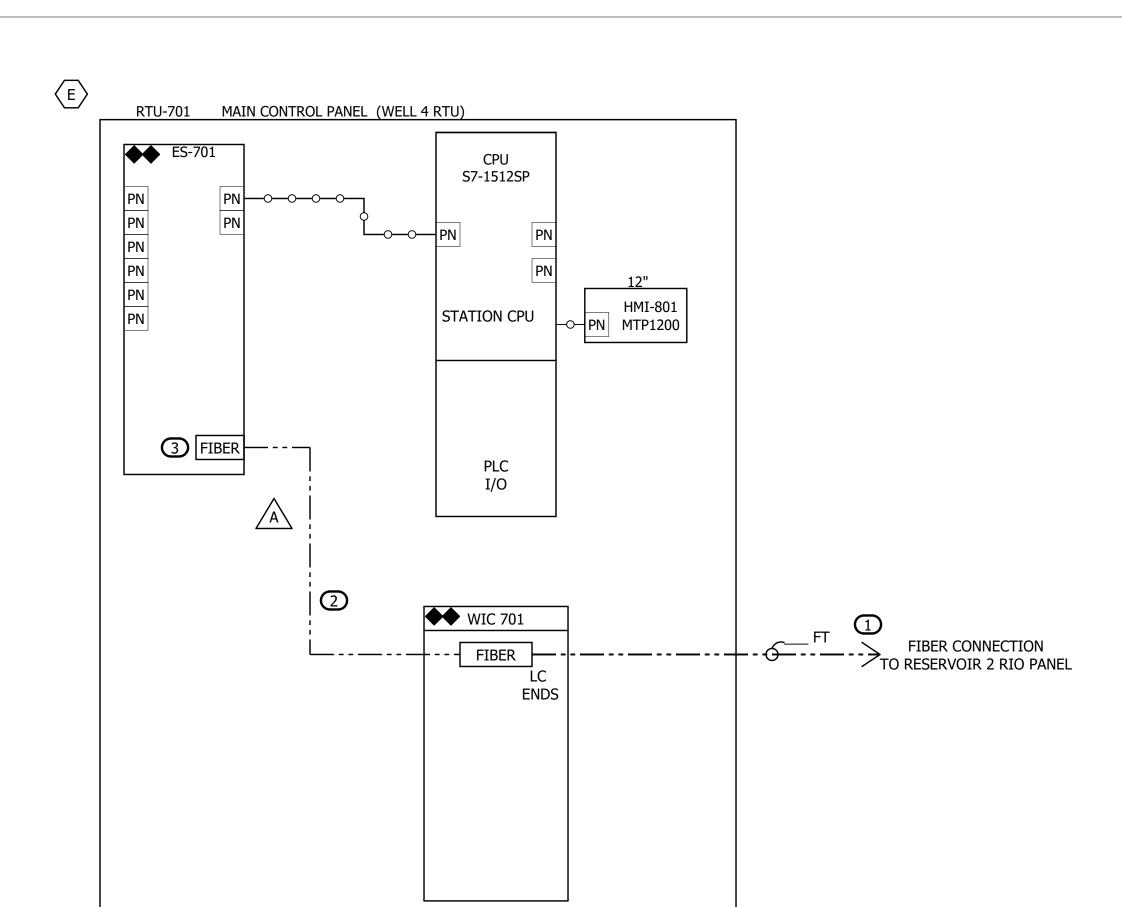
2 FUTURE PROVISION FOR FIBER WIC WITH LC CONNECTIONS AND FIBER PATCH CABLE, 2M, SM, LC TO LC.

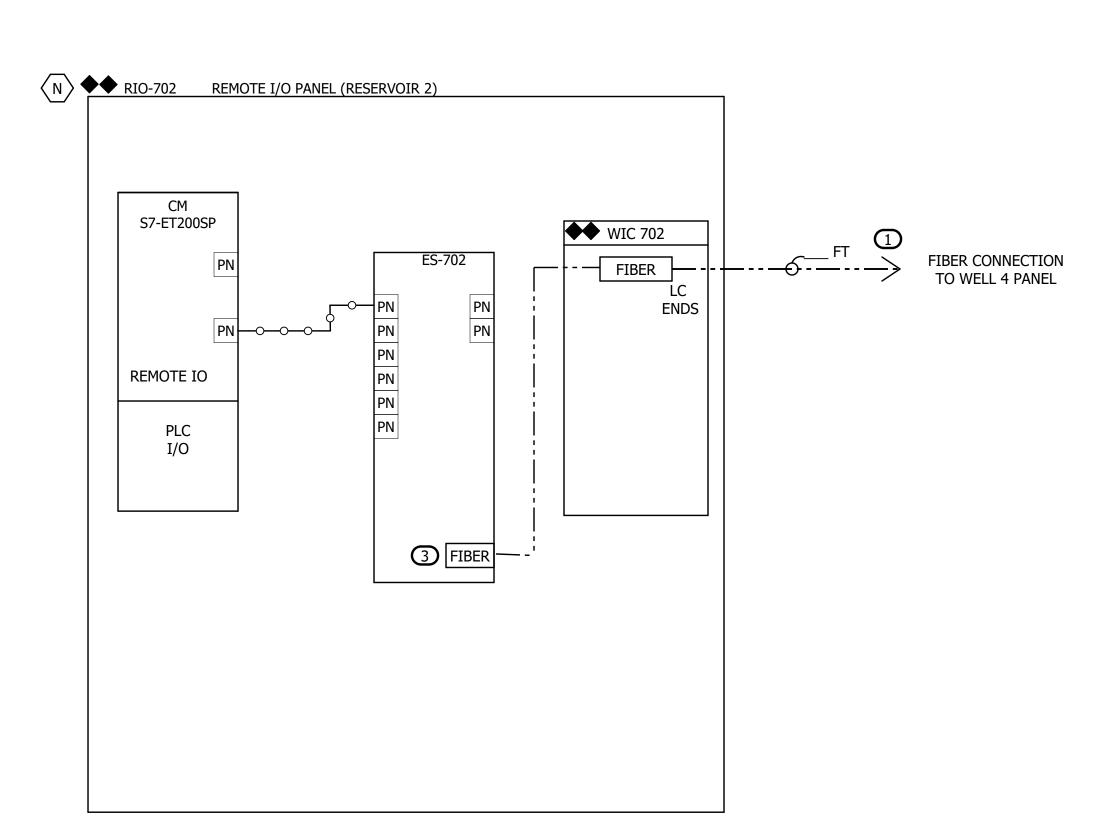
3 FUTURE PROVISION LC SFP MODULE SUPPLIED WITH SWITCH IN RTU

INDICATES EQUIPMENT INCLUDED IN SYSTEM INTEGRATOR SCOPE OF SUPPLY AND FURTHER DEFINED IN SECTION 409100.





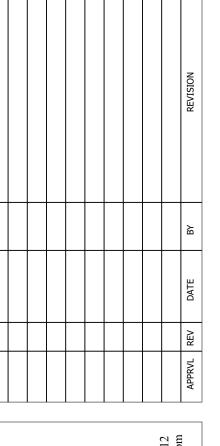


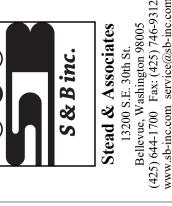


NEW FIBER INSTALLED AS PART OF THIS CONTRACT BETWEEN WELL 4 RTU AND RESERVOIR 2 RIO. FIBER CABLE SHALL BE SUPPLIED WITH LC ENDS

2 FIBER WIC WITH LC CONNECTIONS AND FIBER PATCH CABLE, 2M, SM, LC TO LC.

3 LC SFP MODULE SUPPLIED WITH SWITCH IN RTU





WELL 4 / RESERVOIR 2 BLOCK DIAGRAM CONTROL SYSTEM NETWORK DIAGRAM

PROJECT

NEW WELL 5 PUMPING STATION

VALDEZ, ALASKA

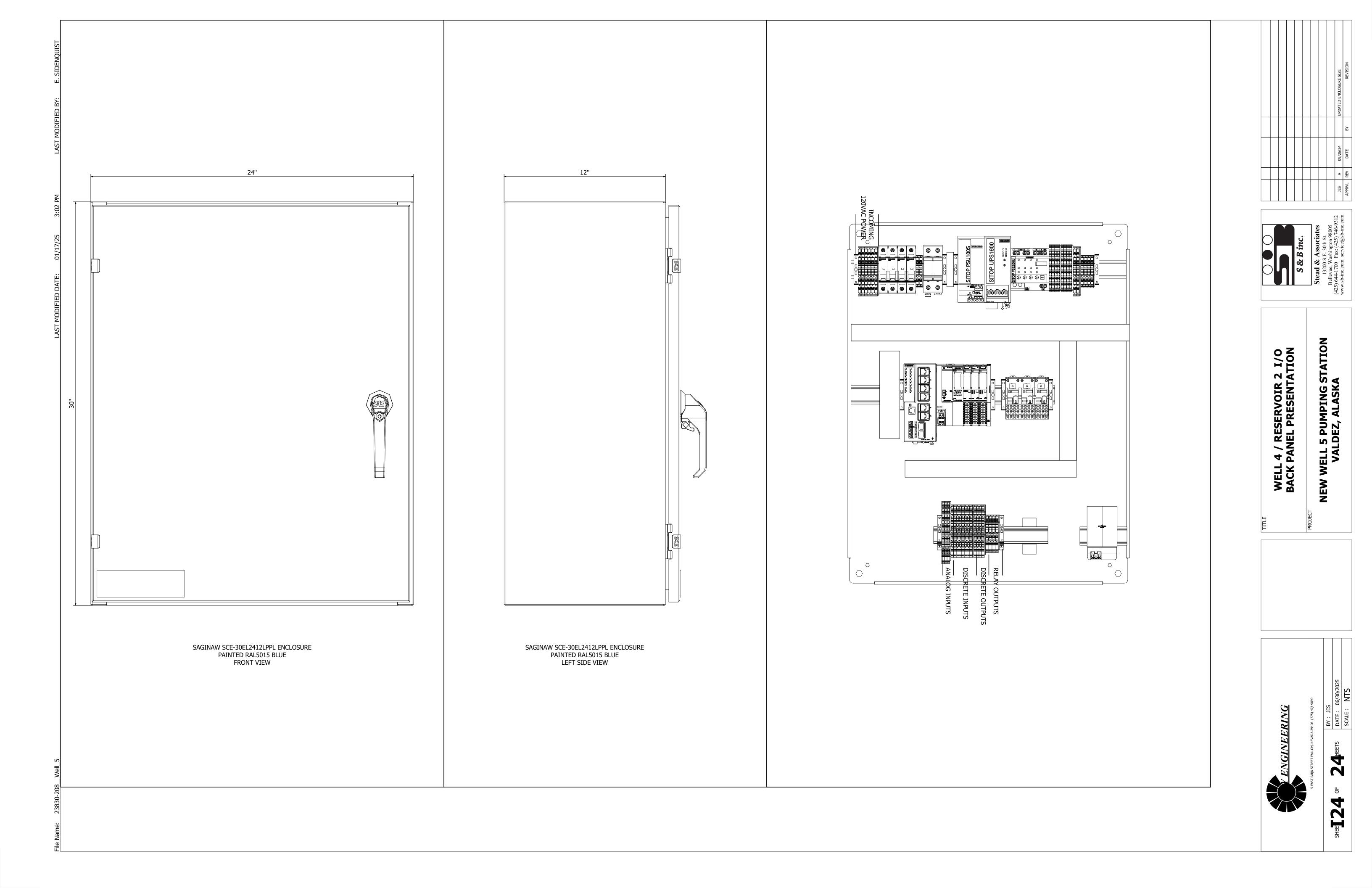
PROJECT

MUB (775) 423-3090 BY: JES DATE: 06/30/2025 SCALE: NITC

5 EAST PARK STREET FAL. 23 OF 24HE

YENGINEERING

INDICATES EQUIPMENT INCLUDED IN SYSTEM INTEGRATOR SCOPE OF SUPPLY AND FURTHER DEFINED IN SECTION 409100.



SECTION 08 71 00

DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. Work under this section includes the complete door hardware requirements for the project. Quantities listed are for the Contractor's convenience only and are not guaranteed. Items not specifically mentioned, but necessary to complete the work shall be furnished, matching the items specified in quality and finish.

B. Related Sections:

1. Division 8 Section "Standard Steel Doors and Frames"

1.2 REFERENCES

- **A.** Standards: Current edition at date of bid.
 - ADAAG Americans with Disabilities Act, "Accessibility Guidelines for Buildings and Facilities"
 - 2. ANSI/BHMA A156.18 Materials and Finishes
 - 3. Underwriters Laboratories Building Materials Directory
 - 4. UL 10C Underwriters Laboratories, "Positive Pressure Fire Tests of Door Assemblies".
 - 5. ICC/ANSI A117.1 "Accessible and Usable Building and Facilities"

B. Codes:

1. International Building Code

1.3 SUBMITTALS

- A. General Requirements: Submittals shall be in accordance with Division 1 "Submittal Procedures".
- **B.** Product Data: Submit manufacturer's data for each item of finish hardware.
- **C.** Hardware Schedule: Submit a detailed Door Hardware Schedule.
 - 1. The submitted Door Hardware Schedule shall indicate the complete designation of every item required for each door or opening.
 - **2.** Furnish cover sheet listing title of project as shown on the Contract Documents, name, address, phone and fax numbers of Owner, Architect, Contractor, and Supplier, name of Certified Hardware Consultant, and date of submittal.
 - 3. List each opening individually under separate headings in the same order as the door schedule. Do not group like or similar doors under a single heading. Do not continue headings on separate pages.
 - **4.** Each heading shall indicate opening location, handing, degree of opening, door size, type, fire rating, and Door and Frame material.
 - **5.** Indicate product Manufacturer and incorporate cross-reference to symbols used in Article 2.11 Hardware Groups.

- **6.** Include an index indicating door, heading, and page numbers and locking function for each opening.
- 7. Locations shall be included and miscellaneous hardware items.
- **8.** A cross reference for abbreviations or symbols used shall be included.
- **9.** Schedules in coded or horizontal format are unacceptable.
- **10.** Submittals not conforming to these requirements will be returned without review, for resubmittal. Following is an example of the required format:
 - 1 Sgl. Door #104 Reception 100 to Office 104 $\,$ LH 90° $\,$ HW-2 $\,$ 3-0 x 7-0 x 1-3/4" x 20 Minute x Type C $\,$ SC WD x HMF
 - 3 Each Butts MC TA2714 US26D (652) 4.5 x 4.5 x 1/2MS
 - 1 Lockset SC L9070R 06L 630 LH
 - 1 Door CloserLCN 4041 Alum./689 x Hinge Face Mtg. x STB
 - 1 Kick Plate TI B4EKP 10 x 34.5 US32D x B4E x CTSK
 - 1 Wall Stop TR 1270CX-SV US26D (626)
 - 1 Set Gasket PE S88D 17' per Set

11.

- **12.** Processing: Hardware schedules will not be reviewed by the Architect until they have been reviewed and approved by Contractor.
- 13. Revisions: The Door Hardware Submittal shall be kept current throughout the project duration. Revisions incorporated shall be submitted in accordance with the above requirements. Submit only cover sheet and revised pages. Clearly identify changes from previous submittal content.
- D. Samples: If requested by the Architect, submit one (1) sample of each exposed hardware category, finished as required, and tagged with full description for coordination with the hardware schedule. Samples will be reviewed, by the Architect, for design and finish only, compliance with other requirements is the responsibility of the Contractor. Units which are acceptable and remain undamaged through submittal procedures may be used on the project.
- **E.** Color Samples: Submit set of color charts and physical samples of each product requiring color selection.
- **F.** Key Schedule: Upon completion of the Key meeting specified under Paragraph 2.13 C., submit Two (2) copies of a key schedule indicating the complete project key system for approval. Obtain approval prior to proceeding with lock portion of the project.
- **G.** Operations and Maintenance Data.
 - 1. Submit Maintenance and Operations Manuals under the provisions of Division 1 "Submittal Procedures".
 - 2. Manuals shall contain final copy of the Finish Hardware Submittal, Product Data, Parts Lists and Diagrams, Key Schedule, Installation Instructions, and Warrantees.

1.4 QUALITY ASSURANCE

- A. Supplier
 - 1. Finish hardware shall be supplied by a recognized Door Hardware supplier who has been furnishing hardware in the same area as the project for a period of not less than five (5) years.
 - **2.** Factory direct, authorized, and stocking distributor of the Exit Devices, Locksets and Door Closers.
 - 3. Employ an Architectural Hardware Consultant, certified by the Door and Hardware Institute.

- **B.** Source: Obtain each kind of Hardware (Butts, Locksets, Exit Devices, Door Closers, etc.) from only one manufacturer.
- **C.** Installer: Finish hardware shall be installed only by experienced tradesmen in compliance with trade union jurisdictions, either at the door and frame fabrication plant or at the project site.
- **D.** Templates: Furnish hardware templates for each fabricator of doors, frames and other work to be factory prepared for the installation of hardware. Upon request, check the shop drawings of such other work to confirm that provisions will be made for the proper installation of hardware.

E. Regulatory Requirements:

- 1. Comply with applicable local and state current building codes.
- 2. Hardware for fire-rated openings shall also be in compliance with fire building codes applicable to the district in which the building is located. Provide only hardware which has been tested and listed by "UL" for the types and sizes of doors required, and which complies with the requirements of the door and door frame labels. Provide Door Closers, Automatic self latching bolts, coordinators, gasketing, and astragals if required to conform to label requirements.
- **3.** Comply with the requirements of ICC/ANSI A117.1, Accessible and Usable Building and Facilities.

1.5 PRODUCT HANDLING AND STORAGE

- **A.** Packaging: Each item or package is to be separately tagged with identification related to the final hardware schedule. Complete installation instructions shall be included in the packages.
- **B.** Storage: Provide a dry locked room at the jobsite for the storage of the hardware.

1.6 WARRANTY

- **A.** Finish hardware shall be guaranteed against defects in workmanship and operation for a period of one year, backed by a factory guarantee of the hardware manufacturer. The following products shall be guaranteed for periods beyond one year:
 - 1. Locks Two Years
 - 2. Door Closers Ten Years
 - 3. Panic Devices Three Years

1.7 MAINTENANCE

- **A.** Furnish the following extra materials, which shall be delivered directly to the Owner prior to substantial completion.
 - 1. One set of Special Tools required for installation and adjustment.
 - **2.** Extra Hardware:
 - **3.** Quantity Description Factory Number
 - 4. Six (6) Interchangeable Core Padlocks _____
 - **5.** Two (2) Locksets _____

PART 2 - PRODUCTS

2.1 MATERIALS

A. Manufacturers: Products may be furnished by the manufacturers listed under "As Specified" below, or equivalent products of type, grade, design, and function from manufacturers listed under "Acceptable Substitutions".

Product	As Specified	Acceptable Substitutions
Butt Hinges	McKinney (MC)	Bommer, Hager
Stainless Steel Continuous Hinges	Stanley (ST)	Stanley
Locksets and Latchsets	Best (BE)	None
Cylinders and Keying	Best (BE)	None
Exit Devices	Precision (PR0	None
Door Closers	Stanley (STH)	None
Kick & Mop Plates	Trimco (TR)	Tice, Rockwood
Wall and Floor Stops	Trimco (TR)	Rockwood
Overhead Stop and Holders	ABH Manf. (ABH)	GJ, Rixson
Weatherstrip & Thresholds	Pemko (PE)	National Guard, Reese
Silencers	Trimco (TR)	Rockwood

2.2 FINISH

- **A.** General: Unless specifically indicated otherwise, provide architectural hardware in the following finishes.
 - **1.** Finish in general shall be: US15D, Satin Nickel Plated (BHMA 619), unless otherwise approved.

2.3 BUTT AND CONTINUOUS HINGES

- **A.** Requirements:
 - 1. Provide hinges conforming to ANSI/BHMA A156.1
 - 2. Provide five knuckle, ball bearing hinges
- B. Quantity (per Leaf):
 - **1.** Door openings up to 60": 2 each.
 - 2. Door openings 60 to 90": 3 each.
 - 3. Doors over 90": Furnish one additional for each 30" increment or fraction thereof.
- C. Sizes:
 - **1.** 1-3/4" Exterior & Vestibule Doors: 5 x 4-1/2"
 - 2. 1-3/4" Interior Doors up to and including 36": 4-1/2 x 4-1/2"
 - 3. 1-3/4" Interior Doors over 36": 5 x 4-1/2"
- **D.** Width of Hinges shall be as required to clear projecting trim or other conditions to allow maximum degree of opening.
- **E.** Butt Hinges shall have non-removable pins (NRP Set Screw in Barrel).
- **F.** Hinges shall have Flat Button Tips.
- **G.** For unusual size or weight doors, furnish type, size and quantity recommended by the hinge manufacturer.

2.4 LOCKSETS AND CYLINDERS

- **A.** Lever Design: Furnish all Lever Handle Locksets and Latches in 06L Design. Provide solid cast levers without plastic inserts.
- **B.** Backset: 2-3/4"
- **C.** The Locksets and Latchsets shall be listed with Underwriters Laboratories for A label and lesser class doors.

D. Cylinders:

- 1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1.
- 2. Provide 7 Pin "Full Sized" Key Removable Interchangeable Cores: COV utilizes the Best 9K 7-pin core system.
- **3.** Provide appropriate cylinder type, length, collars, and cam type to operate specified Locksets and Exit Devices.
- **4.** Provide Curved Lip Strikes with adequate projection to protect door trim. Provide flat, flush lip strikes for pairs of doors with overlapping Astragals.
- **5.** Provide manufacturers standard wrought or plastic strike boxes.

2.5 DOOR CLOSERS

- **A.** Drop Plates: Furnish drop plates where doors have insufficient height top rails, or where Regular Arm Door Closers are used in conjunction with Concealed Overhead Stops.
- **B.** Provide special closer mounting as required where interference with weatherstrip or sound seals occurs.
- **C.** Furnish cold weather fluid, at exterior & vestibule doors. Furnish non-flammable fluid at fire rated openings in conformance with UL Test Standard 10C.
- **D.** Furnish Spacer Blocks and/or shoe supports where frame stop does not provide for adequate support for the parallel arm soffit shoe.
- **E.** Furnish Fifth Hole Spacers or Shoe Supports where required by Frame configuration.
- **F.** Furnish Door Closers with Metal Covers.MC Option).

2.6 KICK AND MOP PLATES

- **A.** Kick and Armor Plates shall be applied to the Push Side of the Door, Mop Plate applied to the Pull Side.
- **B.** Plates shall be beveled four edges (B4E) and countersunk for screws.
- C. Height: Kick Plates: 10", Mop Plates: 6", Armor Plates: 34"
- **D.** Plates shall be furnished with width as required to provide 1/4" clearance at sides of doors, stops, sound seal, or weatherstrip.

2.7 STOPS AND HOLDERS

- **A.** Furnish Overhead Stop and Holders sized as recommended by the manufacturer.
- **B.** Furnish Overhead Stop and Holders with special shims, brackets, or special template mounting where required.

2.8 THRESHOLDS

- **A.** Requirements:
 - 1. Provide thresholds, weather-stripping, and gasketing systems as specified and per architectural details. Match finish of other items.
- 1. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.
- 2. Size thresholds 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width unless otherwise specified in the hardware sets or detailed in the drawings.

2.9 WEATHERSTRIP AND GASKETING

A. Furnish weatherstrip and gaskets for complete perimeter of opening, including mullions, and astragals.

2.10 KEYING

- **A.** All Keyed products (Locksets, Cylinders, Deadlocks, etc.) specified in this Section shall be keyed to per City of Valdez standards.
- **B.** Provide temporary brass Construction Cores and Keys during the construction period. Plastic Construction Cores are unacceptable.
- **C.** The Finish Hardware Supplier shall meet with the Owner to prepare the permanent keying schedule. Submit Key Schedule for approval in accordance with paragraph 1.3 F.
- **D.** The Permanent Cylinders, Change Keys, and Control Keys, prepared according to the approved keying schedule, shall be transmitted directly from the manufacturer to the Owner, prior to substantial completion. The General Contractor shall remove the construction cylinders and install the permanent cylinders. All Construction Cylinders shall be returned to the Finish Hardware Supplier.
- **E.** All Permanent Cores and Keys shall be sent directly to the Owner via Registered Mail, Return Receipt Requested.
- F. Stamp all Keys "Do not Duplicate" and with change designation as directed.
- **G.** Furnish—subject to review and approval by City of Valdez:
 - 1. Six (6) Building Grand Master Keys
 - 2. Six (6) Master Keys per Set
 - 3. Four change keys per Lockset or Cylinder.
 - 4. Six Construction Keys

- 5. Two Construction Control Keys
- 6. Two Permanent Control Keys

2.11 HARDWARE GROUPS -

PART 3 - Hardware Group No. 01

PART 4 - For use on Door #(s):

103 ELECT/COMM

PART 5 - Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	CB179 4.5 X 4.5 NRP	626	ST
1	EΑ	PASSAGE SET	9K3-0N14D S3	619	BE
1	EΑ	KICK PLATE	8400 10" X 2" LDW B-CS	626	TR
1	EA	OH STOP	4423	626	ABH
1	EA	GASKETING	1229A	GREY	TRI

PART 6 - Hardware Group No. 02

PART 7 - For use on Door #(s):

E102 FUTURE STORAGE

PART 8 - Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	CB199 4.5 X 4.5 NRP	626	ST
1	EA	LOCKSET	9K3-7AB14D S3 PATD	619	BE
1	EA	SURFACE CLOSER	QDC115	689	STH
1	EA	OH STOP	1023	626	ABH
1	EA	DOOR SWEEP	200NA		PE
1	EA	SADDLE THRESHOLD	425		PE
1	EA	GASKETING	127N	GREY	PE

PART 9 - Hardware Group No. 03

PART 10 - For use on Door #(s):

E100 PUMP ROOM

PART 11 - Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	CB199 4.5 X 4.5 NRP	626	ST
2	EA	MANUAL FLUSH BOLT	FB458	626	IVE
1	EA	EU MORTISE LOCK	9K3-XXX	619	BE
1	EA	OH STOP	1023	626	ABH
1	EA	RAIN DRIP	142AA	AA	ZER
2	EA	SURFACE CLOSER	QDC115	689	STH
1	EA	ASTRAGAL	383AA	AA	ZER
1	EA	COORDINATOR	COR X FL	628	IVE
2	EA	DOOR SWEEP	200NA		PE
1	EA	SADDLE THRESHOLD	425		PE
1	EA	GASKETING	127N	GREY	PE

PART 12 - EXECUTION

12.1 PREPARATION

- **A.** Examination: Examine Doors, Frames, and related items for conditions that would prevent the proper application and operation of the Doors and Finish Hardware. Do not proceed until defects are corrected.
- **B.** Provide solid blocking for wall mounted components.
- **C.** Fasteners: Check conditions and use fastening devices as needed to securely anchor the hardware as per manufacturer's published templates. Self-tapping sheet metal screws are not acceptable.

12.2 INSTALLATION

A. Mounting Heights: Mount units at heights as recommended in "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames (2001)" by Doors and Hardware Institute, except as indicated below. Products not specifically covered shall be installed in accordance with the manufacturer templates and instructions.

Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.

- 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
- Custom Steel Doors and Frames: HMMA 831.
- 3. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
- 4. Installation Guide for Doors and Hardware: DHI TDH-007-20

В.

- 1. Hinges:
 - a. Top Hinge: 7-1/4", Top of frame rabbet to centerline of hinge.
 - b. Bottom Hinge: 12-1/4", Bottom of Frame to centerline of hinge
 - c. Intermediate Hinges: Centered, equal spacing between top and bottom hinges.
- 2. Mortise Lock Strikes: 40", bottom of frame to centerline of Strike.
- **3.** Push and Pull Plates: 42", bottom of frame to centerline of plate.

- **C.** Install each hardware item in compliance with manufacturer's instructions.
 - 1. Cutting and Fitting: Wherever cutting and fitting are required to install hardware surfaces which will be painted or finished at a later time, install each item completely and then remove and store in a secure place. After completion of the finishes, re-install each item.
 - **2.** Finishes: Do not install surface-mounted items until finishes have been completed on the substrate.
 - **3.** Install Fire Rated Openings to comply with NFPA 80.
 - **4.** Door shall swing to the maximum degree that project conditions will allow. The swings indicated on the floor plan are intended to depict direction and do not indicate full degree of opening.
 - **5.** Trim Exit Devices to provide 1-1/2" clearance between End Cap and hinge jamb stop face and/or stop applied weatherstrip.
 - **6.** Door Closers shall be located to allow maximum degree of opening that project conditions will allow. Door Closers shall not be used to stop the door, except for models equipped with an integral stop-on-the-arm feature.
 - 7. Overhead Stops: Furnish Overhead Stop and Holders with maximum degree of opening that project conditions will allow.
 - **8.** Wall Stops: Locate Wall Stops intended for use with Lever Handle Locksets and Exit Devices at the Centerline of the Spindle or Pull.
 - **9.** Floor Stops: Locate Floors Stops at maximum degree of opening that project conditions will allow. Do not locate Floor Stops where they create a hazardous condition. Stops should be located no more than 1/3 Door width from the latch edge of the Door.
 - **10.** Thresholds: Set Thresholds in a bed of butyl rubber sealant in conformance with Division 7 requirements. Remove excess sealant. Caulk exterior threshold edges and joints to exclude moisture. Do not attach Thresholds that provide transition from concrete to wood floors on wood floor side of opening.
 - **11.** Weatherstrip: Mount and adjust Rigid Jamb Weatherstrip prior to mounting Parallel Arm Door Closers. Weatherstrip shall be installed to provide a continuous seal at head and jambs. Do not notch Weatherstrip for Door Closer shoe. Provide Parallel Arm 5th hole spacer of increased thickness to allow for revised location.
 - **12.** Mount Astragals on the pull side of active leaf our out-swinging applications, inactive leaf for in-swinging.
 - 13. Smoke Gasket
 - a. Completely clean frame and apply gasket in accordance with manufacturer's instructions.
 - b. Apply Gasket to Door rabbet of hinge jamb and to stop face of Strike Jamb and Headers, as described in Pemko's installation instructions for alternative positioning.
- **D.** Adjust and check each operating item of hardware and each door to insure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly.

12.3 ADJUSTMENT

- A. Wherever hardware installation is made more than one (1) month prior to acceptance or occupancy, make a final check and adjustment of hardware during the week prior to acceptance or occupancy. Clean and lubricate operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.
- **B.** Door Closer Adjustment: After mechanical systems have been balanced, adjust Door Closers to comply with following ICC/ANSI A117.1 requirements, as modified by International Building Code:

- 1. Closing Speed: Door Closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to an open position of 12 degrees shall be 5 seconds minimum.
- 2. Opening Force: The maximum force for pushing or pulling a door open shall be as follows: (these forces do not apply to the force required to retract latch bolts or disengage other devices securing the door.
 - a. Fire Doors: The minimum opening force allowable by the appropriate administrative authority.
 - b. Exterior Doors: 10 lbf (44.4 N).
 - c. Interior Doors: 5.0 lbf (22.2 N).
 - d. Automatic Doors: Comply with ICC/ANSI A117.1, 404.3.
- 3. Adjust backcheck to prevent damage to the closer, hardware, door and frame, and wall.
- **C.** Instruct Owner's Personnel in proper adjustment and maintenance of hardware and hardware finishes

END OF SECTION 08 71 00