

# NAVAJO TRIBAL UTILITY AUTHORITY

# BOOSTER PUMP STATION

# NAZLINI



## FINAL SUBMITTAL

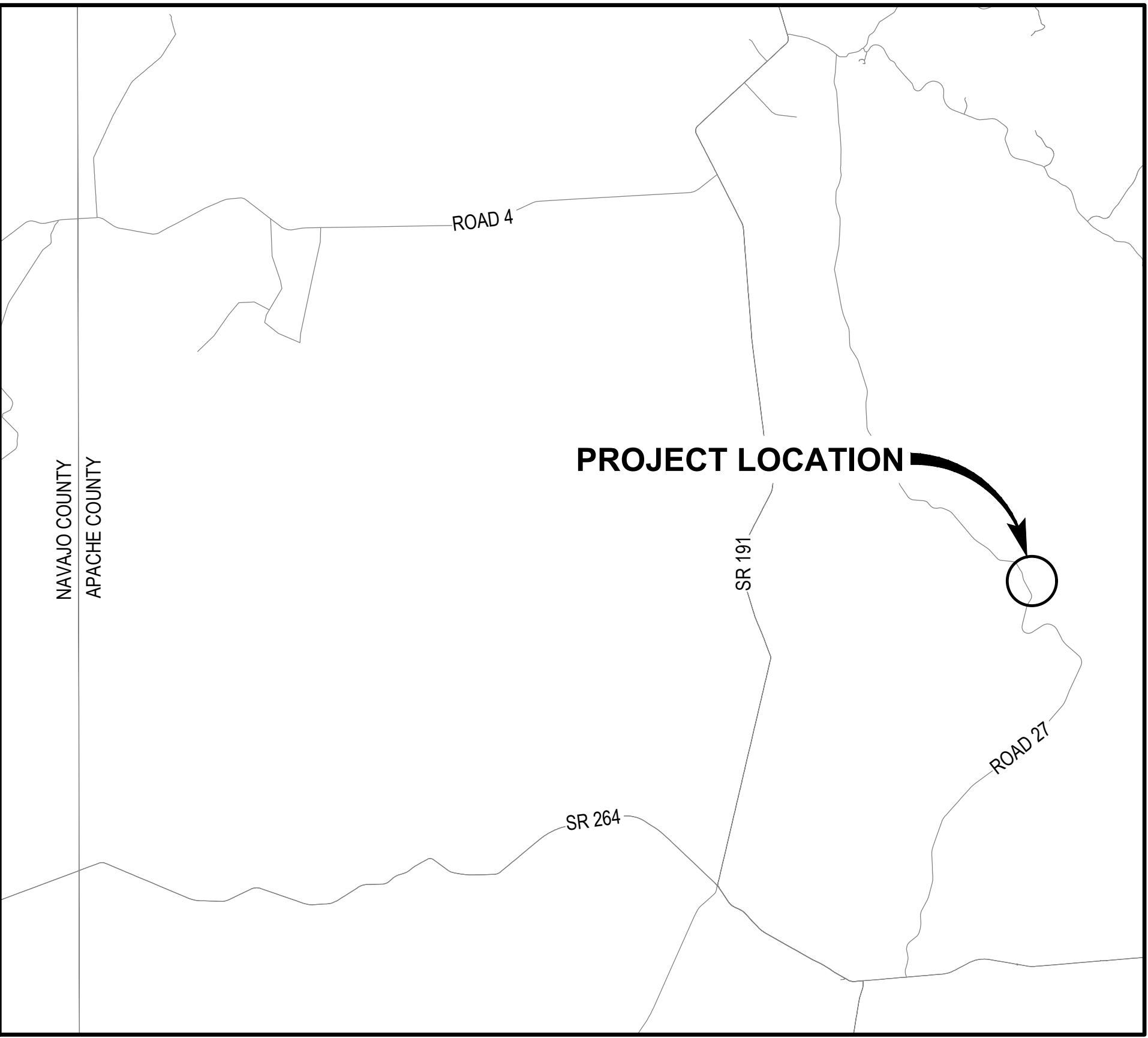
PROJECT NO: W232520UT  
JULY 2024



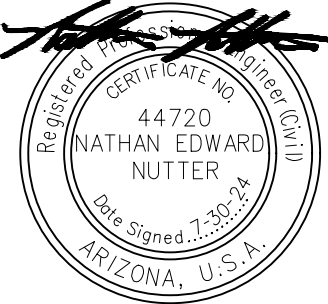
986 WEST 9000 SOUTH  
WEST JORDAN, UTAH 84008




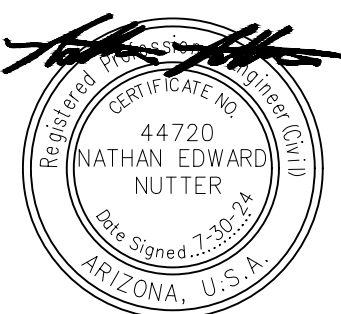

VICINITY MAP  
NOT TO SCALE



LOCATION MAP  
SCALE: 1" = 20000'





| 1   |           | 2  |          | 3   |       | 4  |           | 5  |          | 6  |        | 7  |  |  |  |
|---|-----------|--|----------|---|-------|--|-----------|--|----------|--|--------|--|--|--|--|
| A   | @         | AT   | CMP      | CORRUGATED METAL PIPE   | FLR   | FLOOR  | KPL       | KICK PLATE   | PRESS    | PRESSURE   | TCE    | TEMPORARY CONSTRUCTION EASEMENT            |  |  |  |
|   | AASHTO    | AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS | CMU      | CONCRETE MASONRY UNIT   | FM    | FORCE MAIN   | KVA       | KILOVOLT AMPERE  | PRKG     | PARKING  | TDH    | TOTAL DYNAMIC HEAD                         |  |  |  |
|   | AB        | ANCHOR BOLT  | CND      | CONDUIT   | FO    | FIBER OPTIC  | KW        | KILOWATT   | PROP     | PROPERTY   | TEMP   | TEMPERATURE / TEMPORARY                    |  |  |  |
|   | ABAN(D)   | ABANDON(ED)  | CO       | CLEANOUT  | FOC   | FACE OF CONCRETE   | KWY       | KEYWAY   | PRV      | PRESSURE REDUCING VALVE  | T&G    | TONGUE & GROOVE                            |  |  |  |
|   | ABS       | ACRYLONITRILE BUTADIENE STYRENE                                  | COL      | COLUMN  | FOF   | FACE OF FINISH   | L         | LENGTH   | PS       | PUMP STATION   | THK    | THICK / THICKNESS                          |  |  |  |
|   | ABV       | ABOVE / ALCOHOL BY VOLUME  | COMB     | COMBINATION   | FOM   | FACE OF MASONRY  | LAB       | LABORATORY   | PSIG     | POUNDS PER SQUARE INCH GAUGE   | THRD   | THREAD (ED)                                |  |  |  |
|   | AC        | ASPHALTIC CONCRETE   | CONC     | CONCRETE  | FOS   | FACE OF STUDS  | LAV       | LAVATORY   | PSL      | PIPE SLEEVE  | THRU   | THROUGH                                    |  |  |  |
|   | ACP       | ASPHALTIC CONCRETE PAVING  | CONN     | CONNECTION  | FPM   | FEET PER MINUTE  | LB        | POUND  | PSPT     | PIPE SUPPORT   | TP     | TEST PIT / TOP OF PAVEMENT / TURNING POINT |  |  |  |
|   | ADJ       | ADJUSTABLE   | CONST    | CONSTRUCTION  | FPS   | FEET PER SECOND  | LF        | LINEAR FOOT  | PT       | POINT OF TANGENCY  |        | TRANSITION                                 |  |  |  |
|   | ADJC      | ADJACENT   | CONT     | CONTINUOUS / CONTINUATION   | FRP   | FIBERGLASS REINFORCED PLASTIC  | LIN       | LINEAL   | PTVC     | POINT OF TANGENCY ON VERTICAL CURVE                                  | TSP    | TRI-SODIUM PHOSPHATE                       |  |  |  |
| B   | AFF       | ABOVE FINISHED FLOOR   | COORD    | COORDINATE  | FT    | FEET / FOOT  | LN        | LANE   | PTW      | PUMP TO WASTE  | TST    | TOP OF STEEL                               |  |  |  |
|   | AFG       | ABOVE FINISHED GRADE   | COP      | COPPER  | FTG   | FOOTING  | LOC       | LOCATION   | PV       | PLUG VALVE   | TW     | TOP OF WALL                                |  |  |  |
|   | AHR       | ANCHOR   | CORP     | CORPORATION   | FUT   | FUTURE   | LONG      | LONGITUDINAL   | PVC      | POLYVINYL CHLORIDE   | TYP    | TYPICAL                                    |  |  |  |
|   | AL        | ALUMINUM   | CORR     | CORRUGATED  | FXTR  | FIXTURE  | LP        | LOW PRESSURE   | PVMT     | PAVEMENT   | UG     | UNDERGROUND                                |  |  |  |
|   | ALT       | ALTERNATE  | CP       | CONTROL POINT   | G     | GAS  | LPT       | LOW POINT  | PW       | POTABLE WATER  | UH     | UNIT HEATER                                |  |  |  |
|   | AMP       | AMPERE   | CPLG     | COUPLING  | GA    | GAUGE  | LRG       | LARGE  | PWR      | POWER  | UN     | UNION                                      |  |  |  |
|   | ANSI      | AMERICAN NATIONAL STANDARDS INSTITUTE                            | CPVC     | CHLORINATED POLYVINYL CHLORIDE  | GAL   | GALLON   | LS        | LONG SLEEVE / LUMP SUM   |          |  | UON    | UNLESS OTHERWISE NOTED                     |  |  |  |
|   |           |  | CR       | CRUSHED ROCK  | GALV  | GALVANIZED   | LT        | LEFT   | QTY      | QUANTITY   | USGS   | UNITED STATES GEOLOGIC SURVEY              |  |  |  |
|   | APPROX    | APPROXIMATE  | CS       | COMBINED SEWER  | GC    | GROOVED COUPLING   | LVL       | LEVEL  |          |  |        |  |  |  |  |
|   | APPVD     | APPROVED   | CSP      | CONCRETE SEWER PIPE   | GFA   | GROOVED FLANGE ADAPTER   | LWL       | LOW WATER LINE   |          |  |        |  |  |  |  |
| C   | APWA      | AMERICAN PUBLIC WORKS ASSOCIATION                                | CT       | COURT   | GI    | GALVANIZED IRON  | MAN       | MANUAL   | RAD      | RADIUS   | V      | VENT / VOLT                                |  |  |  |
|   | ARCH      | ARCHITECTURAL  | CTR      | CENTER  | GIP   | GALVANIZED IRON PIPE   | MAT       | MATERIAL   | RCP      | REINFORCED CONCRETE PIPE   | VAC    | VACUUM                                     |  |  |  |
|   | ARV       | AIR RELEASE VALVE  | CU       | CUBIC   | GJ    | GRIP JOINT   | MAX       | MAXIMUM  | RD       | ROAD / ROOF DRAIN  | VB     | VACUUM BREAKER                             |  |  |  |
|   | ASCE      | AMERICAN SOCIETY OF CIVIL ENGINEERS                              | CULV     | CULVERT   | GL    | GLASS  | MCC       | MOTOR CONTROL CENTER   | RDCR     | REDUCER  | VBOX   | VALVE BOX                                  |  |  |  |
|   | ASR       | AQUIFER STORAGE & RECOVERY                                       | CV       | CONTROL VALVE   | GLV   | GLOBE VALVE  | MCP       | MASTER CONTROL PANEL   | REF      | REFERENCE  | VC     | VERTICAL CURVE                             |  |  |  |
|   | ASSN      | ASSOCIATION  | CW       | CLOCKWISE / COLD WATER  | GND   | GROUND   | MECH      | MECHANICAL   | REINF    | REINFORCE(D)(ING)(MENT)  | VERT   | VERTICAL                                   |  |  |  |
|   | ASSY      | ASSEMBLY   | CY       | CUBIC YARDS   | GPD   | GALLONS PER DAY  | MET       | METAL  | REQ'D    | REQUIRED   | VFD    | VARIABLE FREQUENCY DRIVE                   |  |  |  |
|   | ASTM      | AMERICAN SOCIETY FOR TESTING & MATERIALS                         | CYL      | CYLINDER LOCK   | GPH   | GALLONS PER HOUR   | MFR       | MANUFACTURER   | RESTR    | RESTRAINED   | VOL    | VOLUME                                     |  |  |  |
|   |           |  | D        | DRAIN   | GPM   | GALLONS PER MINUTE   | MGD       | MILLION GALLONS PER DAY  | RFCA     | RESTRAINED FLANGE COUPLING ADAPTER                                   | VCP    | VITRIFIED CLAY PIPE                        |  |  |  |
|   | ATM       | ATMOSPHERE   | DC       | DIRECT CURRENT  | GPS   | GALLONS PER SECOND   | MH        | MANHOLE  | RM       | ROOM   | VTR    | VENT THROUGH ROOF                          |  |  |  |
| D   | AUTO      | AUTOMATIC  | DEFL     | DEFLECTION  | GR    | GRADE  | MIN       | MINIMUM  | RND      | ROUND  | W      | WATER                                      |  |  |  |
|   | AUX       | AUXILIARY  | DEQ      | DEPARTMENT OF ENVIRONMENTAL QUALITY   | GR LN | GRADE LINE   | MIPT      | MALE IRON PIPE THREAD  | RO       | ROUGH OPENING  | W/     | WITH                                       |  |  |  |
|   | AVE       | AVENUE   | DET      | DETAIL  | GRTG  | GRATING  | MISC      | MISCELLANEOUS  | R/W      | RIGHT-OF-WAY   | W/IN   | WITHIN                                     |  |  |  |
|   | AVG       | AVERAGE  | DI       | DUCTILE IRON  | GV    | GATE VALVE   | MJ        | MECHANICAL JOINT   | RPBPD    | REDUCED PRESSURE BACKFLOW PREVENTION DEVICE                          | W/O    | WITHOUT                                    |  |  |  |
|   | AWWA      | AMERICAN WATER WORKS ASSOCIATION                                 | DIA      | DIAMETER  | GRVL  | GRAVEL   | MON       | MONUMENT / MONOLITHIC  | RPM      | REVOLUTIONS PER MINUTE   | WW     | WALL TO WALL                               |  |  |  |
|   |           |  | DIM      | DIMENSION   | GYP   | GYPSUM   | MOT       | MOTOR  | RR       | RAILROAD   | WD     | WOOD                                       |  |  |  |
|   | B&S       | BELL & SPIGOT  | DIR      | DIRECTION   | HB    | HOSE BIBB  | MP        | MILEPOST   | RST      | REINFORCED STEEL   | WF     | WIDE FLANGE                                |  |  |  |
|   | BC        | BOLT CIRCLE  | DIST     | DISTANCE  | HC    | HOLLOW CORE  | MSL       | MEAN SEAL LEVEL  | RT       | RIGHT  | WH     | WATER HEATER                               |  |  |  |
|   | BD        | BOARD  | DN       | DOWN  | HDPE  | HIGH DENSITY POLYETHYLENE  | MTD       | MOUNTED  |          |  | WI     | WROUGHT IRON                               |  |  |  |
|   | BETW      | BETWEEN  | DR       | DRIVE   | HDR   | HEADER   |           |  |          |  | WM     | WATER METER                                |  |  |  |
| E   | BF        | BOTH FACE  | DS       | DOWNSPOUT   | HDWE  | HARDWARE   | NA        | NOT APPLICABLE   | SALV     | SALVAGE  | WP     | WORKING POINT / WATERPROOFING              |  |  |  |
|   | BFD       | BACKFLOW PREVENTION DEVICE                                       | DWG      | DRAWING   | HGR   | HANGER   | NAVD      | NORTH AMERICAN VERTICAL DATUM  | SAN      | SANITARY   | WS     | WATER SERVICE                              |  |  |  |
|   | BFILL     | BACKFILL   | DWL      | DOWEL   | HGT   | HEIGHT   | NC        | NORMALLY CLOSED  | SC       | SOLID CORE   | WT     | WEIGHT                                     |  |  |  |
|   | BFV       | BUTTERFLY VALVE  | DWV      | DRAIN WASTE AND VENT  | HH    | HANDHOLD   | NF        | NEAR FACE  | SCHED    | SCHEDULE   | WTP    | WATER TREATMENT PLANT                      |  |  |  |
|   | BHP       | BRAKE HORSEPOWER   | DWY      | DRIVEWAY  | HM    | HOLLOW METAL   | NIC       | NOT IN CONTRACT  | SD       | STORM DRAIN  | WTRT   | WATERTIGHT                                 |  |  |  |
|   | BKGD      | BACKGROUND   |          |   | HMAC  | HOT MIX ASPHALT CONCRETE   | NO / NO.  | NORMALLY OPEN / NUMBER   | SDR      | STANDARD DIMENSION RATIO   | WWF    | WELDED WIRE FABRIC                         |  |  |  |
|   | BLDG      | BUILDING   | E / ELEC | ELECTRICAL  | HNDRL | HANDRAIL   | NOM       | NOMINAL  | SECT     | SECTION  | WWTF   | WASTEWATER TREATMENT FACILITY              |  |  |  |
|   | BLK       | BLOCK  | EA       | EACH  | HOA   | HAND-OFF-AUTO  | NORM      | NORMAL   | SHLDR    | SHOULDER   | WWTP   | WASTEWATER TREATMENT PLANT                 |  |  |  |
|   | BLVD      | BOULEVARD  | ECC      | ECCENTRIC   | HOR   | HAND-OFF-REMOTE  | NRS       | NON-RISING STEM  | SHT      | SHEET  |        |  |  |  |  |
|   | BM        | BENCHMARK / BEAM   | EF       | EACH FACE   | HORIZ | HORIZONTAL   | NTS       | NOT TO SCALE   | SIM      | SIMILAR  | X SECT | CROSS SECTION                              |  |  |  |
| F   | BMP       | BEST MANAGEMENT PRACTICES  | EL       | ELEVATION   | HP    | HIGH PRESSURE / HORSEPOWER   |           |  | SLP      | SLOPE  | XFMR   | TRANSFORMER                                |  |  |  |
|   | BO        | BLOW-OFF   | ELB      | ELBOW   | HPG   | HIGH PRESSURE GAS  | O TO O    | OUT TO OUT   | SLV      | SLEEVE   |        |  |  |  |  |
|   | BOC       | BACK OF CURB   | ENCL     | ENCLOSURE   | HPT   | HIGH POINT   | OC        | ON CENTER  | SOLN     | SOLUTION   | YD     | YARD DRAIN / YARD                          |  |  |  |
|   | BS        | BOTH SIDES   | EOP      | EDGE OF PAVEMENT  | HR    | HOOR   | OD        | OUTSIDE DIAMETER   | SP       | SOIL PIPE / SEWER PIPE   | YH     | YARD HYDRANT                               |  |  |  |
|   | BSMT      | BASEMENT   | EQ       | EQUAL   | HSB   | HIGH STRENGTH BOLT   | OF        | OVERFLOW / OUTSIDE FACE  | SPCL     | SPECIAL  | YR     | YEAR                                       |  |  |  |
|   | BTF       | BOTTOM FACE  | EQL SP   | EQUALLY SPACED  | HV    | HOSE VALVE   | OPNG      | OPENING  | SPEC(S)  | SPECIFICATION(S)   |        |  |  |  |  |
|   | BTU       | BRITISH THERMAL UNIT   | EQUIP    | EQUIPMENT   | HVAC  | HEATING, VENTILATION, AIR CONDITIONING   | OPP       | OPPOSITE   | SPG      | SPACING  |        |  |  |  |  |
|   | BV        | BALL VALVE   | ESMT     | EASEMENT  | HWL   | HIGH WATER LINE  | ORIG      | ORIGINAL   | SPL      | SPOOL  |        |  |  |  |  |
|   | BW        | BOTH WAYS  | EW       | EACH WAY  | HWY   | HIGHWAY  | OSHA      | OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION  | SPRT     | SUPPORT  |        |  |  |  |  |
|   |           |  | EXC      | EXCAVATE  | HYD   | HYDRANT  | OVHD      | OVERHEAD   | SQ       | SQUARE   |        |  |  |  |  |
| G   | C         | CELSIUS  | EXIST    | EXISTING  | HYDR  | HYDRAULIC  |           |  | SQ FT    | SQUARE FOOT  |        |  |  |  |  |
|   | C TO C    | CENTER TO CENTER   | EXP      | EXPANSION   |       |  | P&ID      | PROCESS & INSTRUMENTATION DIAGRAM  | SQ IN    | SQUARE INCH  |        |  |  |  |  |
|   | CARV      | COMBINATION AIR RELEASE VALVE                                    | EXP BT   | EXPANSION BOLT  | I&C   | INSTRUMENTATION & CONTROL  | PC        | POINT OF CURVE   | SQ YD    | SQUARE YARD  |        |  |  |  |  |
|   | CATV      | CABLE TELEVISION   | EXP JT   | EXPANSION JOINT   | IAW   | IN ACCORDANCE WITH   | PCC       | POINT OF COMPOUND CURVE  | SS       | SANITARY SEWER   |        |  |  |  |  |
|   | CB        | CATCH BASIN  | EXT      | EXTERIOR  | ID    | INSIDE DIAMETER  | PCVC      | POINT OF CURVATURE ON VERTICAL CURVE   | SST      | STAINLESS STEEL  |        |  |  |  |  |
|   | CCP       | CONCRETE CYLINDER PIPE   |          |   | IE    | INVERT ELEVATION   |           |  | ST       | STREET   |        |  |  |  |  |
|   | CCW       | COUNTER CLOCKWISE  | F        | FAHRENHEIT  | IF    | INSIDE FACE  | PE        | PLAIN END  | STA      | STATION  |        |  |  |  |  |
|   | CDOT      | COLORADO DEPARTMENT OF TRANSPORTATION                            | F TO F   | FACE TO FACE  | IMPVT | IMPROVEMENT  | PERF      | PERFORATED   | STD      | STANDARD   |        |  |  |  |  |
|   | CFM       | CUBIC FEET PER MINUTE  | FAB      | FABRICATE   | IN    | INCH   | PERM      | PERMANENT  | STL      | STEEL  |        |  |  |  |  |
|   | CFS       | CUBIC FEET PER SECOND  | FB       | FLAT BAR  | INCC  | INCLUDE(D)(ING)  | PERP      | PERPENDICULAR  | STOR     | STORAGE  |        |  |  |  |  |
| H   | CHAN      | CHANNEL  | FCA      | FLANGED COUPLING ADAPTER  | INFL  | INFLEUNT   | PG        | PRESSURE GAUGE   | STR      | STRAIGHT   |        |  |  |  |  |
|   | CHEM      | CHEMICAL   | FCO      | FLOOR CLEANOUT  | INJ   | INJECTION  | PH        | PIPE HANGER  | STRUCT   | STRUCTURE / STRUCTURAL   |        |  |  |  |  |
|   | CHFR      | CHAMFER  |          |   | INSTL | INSTALLATION   | PI        | POINT OF INTERSECTION  | SUBMG    | SUBMERGED  |        |  |  |  |  |
|   | CHKV      | CHECK VALVE  | FD       | FLOOR DRAIN   | INSUL | INSULATION   | PIVC      | POINT OF INTERSECTION ON VERTICAL CURVE  | SUCT     | SUCTION  |        |  |  |  |  |
|   | CI        | CAST IRON  | FDN      | FOUNDATION  | INTER | INTERCEPTOR  |           |  | SV       | SOLENOID VALVE   |        |  |  |  |  |
|   | CIP       | CAST IRON PIPE   | FEXT     | FIRE EXTINGUISHER   | INTR  | INTERIOR   | PL OR P/L | PROPERTY LINE / PLATE / PLASTIC  | S/W      | SIDEWALK   |        |  |  |  |  |
|   | CIPC      | CAST IN PLACE CONCRETE   | FF       | FINISHED FLOOR / FAR FACE   | INV   | INVERT   | PLBG      | PLUMBING   | SWD      | SIDEWATER DEPTH  |        |  |  |  |  |
|   | CISP      | CAST IRON SOIL PIPE  | FGL      | FIBERGLASS  | IP    | IRON PIPE  | PNL       | PANEL  | SWGR     | SWITCH GEAR  |        |  |  |  |  |
|   | CJ        | CONSTRUCTION JOINT   | FH       | FIRE HYDRANT  | IPT   | IRON PIPE THREAD   | POC       | POINT OF CURVATURE   | SYMM     | SYMMETRICAL  |        |  |  |  |  |
|   | CL OR C/L | CENTER LINE  | FIN      | FINISH(ED)  | IR    | IRON ROD   | POLY      | POLYETHYLENE   | SYS      | SYSTEM   |        |  |  |  |  |
| I   | CL2       | CHLORINE   | FIPT     | FEMALE IRON PIPE THREAD   | IRRIG | IRRIGATION   |           |  | T OR TEL | TELEPHONE  |        |  |  |  |  |
|   | CLG       | CEILING  | FITG     | FITTING   |       |  | PP        | POWER POLE / PURPLE PIPE   | T&B      | TOP & BOTTOM   |        |  |  |  |  |
|   | CLJ       | CONTROL JOINT  | FL       | FLOOR LINE  |       |  | PRC       | POINT OF REVERSE CURVATURE   | TAN      | TANGENCY   |        |  |  |  |  |
|   | CLR       | CLEAR  | FLEX     | FLEXIBLE  | JT    | JOINT  | PRCST     | PRECAST  | TB       | THRUST BLOCK   |        |  |  |  |  |
|   | CLSM      | CONTROLLED LOW STRENGTH MATERIAL                                 | FLG      | FLANGE  | JUNC  | JUNCTION   | PREP      | PREPARATION  | TBM      | TEMPORARY BENCHMARK  |        |  |  |  |  |
|   |           |  | FLL      | FLOW LINE   |       |  |           |  | TC       | TOP OF CONCRETE / TOP OF CURB  |        |  |  |  |  |
|   |           |  |          |   |       |  |           |  |          |  |        |  |  |  |  |
|   |           |  |          |   |       |  |           |  |          |  |        |  |  |  |  |
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|   |           |  |          |   |       |  |           |  |          |  |        |  |  |  |  |
| <div></div> <div>This document, ideas, and designs incorporated herein, are an instrument of professional service, and is not to be used, in whole or in part, for any other project without the written authorization of CONSOR.</div> |           | Consultant:  |          | Engineer's Seal: <div></div> |       | Client / Owner: <div></div> |           | Project Title: <div>NAVAJO TRIBAL UTILITY<br/>AUTHORITY<br/>BOOSTER PUMP STATION</div> |          | Drawing Title: <div>GENERAL<br/>NAZLINI<br/><br/>ABBREVIATIONS</div> |        | Designed By: <div>AMB</div>                |  | CONSOR Project No.: W232520UT                              |  |
|   |           |  |          |   |       |  |           |  |          |  |        | Drawn By: <div>RB</div>                    |  | Issued On: JULY 2024                                       |  |
|   |           |  |          |   |       |  |           |  |          |  |        | Checked By: <div>JY</div>                  |  | Drawing No.: G-002   |  |
|   |           |  |          |   |       |  |           |  |          |  |        | Approved By: <div>NN</div>                 |  | 0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE |  |

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|---|---|----------------------------|--|-----------------------------|--|--|---|---|---------------------|----------------------------|-------------------------------|-----------------------------|--|--|---|---------------------|--|-----------------|----------------------|-------------------|--------------------|--------------------|--|
|   | 1   | 2                          | 3  | 4                           | 5  | 6  | 7   |   |                     |                            |                               |                             |  |  |   |                     |  |                 |                      |                   |                    |                    |  |
| A   | <div>GENERAL NOTES</div> <div>1. ALL CONSTRUCTION OPERATIONS ARE TO BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE STATE STATUES AND OSHA REGULATIONS.</div> <div>2. ALL WORK SHALL COMPLY WITH THE CURRENT LOCAL AGENCY STANDARDS AND REQUIREMENTS.</div> <div>3. THE CONTRACTOR SHALL SCHEDULE WORK IN SUCH A MANNER AS TO AVOID UNNECESSARY INCONVENIENCE TO THE OWNER OR THE PUBLIC.</div> <div>4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL SURVEY MONUMENTS AND CORNER MARKERS. SURVEY MONUMENTS AND PROPERTY CORNER MARKERS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REESTABLISHED BY A REGISTERED PROFESSIONAL SURVEYOR LICENSED IN THE STATE IN WHICH THE WORK IS BEING PERFORMED.</div> <div>5. CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A SAFE, NEAT, AND WORKMANLIKE MANNER AT ALL TIMES. JOB SITE SAFETY SHALL NOT BE COMPROMISED.</div> <div>6. DIMENSIONS TO STRUCTURES, REFERENCED PIPING, PAVING, AND OTHER IMPROVEMENTS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS 14 DAYS IN ADVANCE OF THE CONSTRUCTION PROGRESS.</div> <div>7. STRUCTURES SUCH AS CURBS AND GUTTERS, CONCRETE AND ASPHALT DRIVES AND WALKWAYS, PAVING BRICKS, FENCING, RETAINING WALLS, SIGNS, POSTS, MARKERS, ETC., CROSSED BY A UTILITY THAT ARE NOT INDICATED IN THE PLANS SHALL BE RESTORED BY THE CONTRACTOR TO PRECONSTRUCTION CONDITIONS.</div> <div>8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS, BUILDINGS, OR OTHER STRUCTURES RESULTING FROM THE CONTRACTOR'S CONSTRUCTION ACTIVITIES. REPAIRS SHALL BE MADE TO PRECONSTRUCTION CONDITIONS.</div> <div>9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS REQUIRED TO PERFORM THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.</div> <div>10.THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING STAGING AREAS REQUIRED TO PERFORM THE WORK.</div> <div>11.THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS TO ALL ADJOINING PROPERTIES ACCESSIBLE TO THE PUBLIC AND EMERGENCY VEHICLES. DESIGNS FOR MAINTAINING ACCESS WILL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE CONTROLLING AGENCY FOR THE REVIEW AND APPROVAL.</div> <div>12.CONTRACTOR SHALL COMPLY WITH THE TRENCH PLATE REQUIREMENTS OF THE GOVERNING JURISDICTION. IF TRENCH PLATE REQUIREMENTS ARE NOT SPECIFIED, THE CONTRACTOR SHALL APPLY SKID RESISTANT COATING ON THE TRENCH PLATES AND COLD MIX ASPHALT CONCRETE TO THE EDGES. THE TRENCH PLATES SHALL BE NOTCHED INTO THE ASPHALT CONCRETE OR TRAVELED SURFACE TO PREVENT SLIPPAGE AND ROCKING UNDER TRAFFIC.</div> <div>13.THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, COUNTY, AND LOCAL LAWS AND ORDINANCES RELATING TO THE SAFETY AND CHARACTER OF WORK, EQUIPMENT, AND PERSONNEL. THIS INCLUDES, BUT IS NOT LIMITED TO SHEETING, SHORING, BRACING, VENTILATION, CONFORMANCE WITH TRAFFIC CONTROL AND MAINTENANCE OF BARRICADES AND WARNING DEVICES.</div> <div>14.CONTRACTOR SHALL KEEP COMPLETE AND ACCURATE RECORD DRAWINGS OF THE WORK, UTILITY POTHOLE DATA, AND EXISTING CONDITIONS THAT HAVE CHANGED OR ARE DIFFERENT THAN SHOWN ON THE PLANS. UPON COMPLETION OF THE WORK, THE CONTRACTORS RECORD DRAWINGS SHALL BE SUBMITTED TO THE OWNER.</div> <div>15.CONTRACTOR IS RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL STORM DRAIN PIPES, STORM WATER FEATURES, OR DRAINAGE FACILITIES FROM DAMAGE DURING ALL STAGES OF CONSTRUCTION.</div> <div>16.ALL EXISTING PAVEMENT MARKINGS AND SIGNAGE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY CONTRACTOR AT NO EXPENSE TO OWNER.</div> <div>17.CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING THE WATER FOR ALL PROJECT-RELATED ACTIVITIES INCLUDING BUT NOT LIMITED TO CONSTRUCTION, DUST CONTROL, TESTING, AND DISINFECTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING WITH OWNER TO TAP EXISTING MAINS AND BRINGING WATER TO THE SITE.</div> <div>18.CONTRACTOR WILL BE RESPONSIBLE FOR DEVELOPMENT OF A CONSTRUCTION STORMWATER POLLUTION PREVENTION PROGRAM. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE CONSTRUCTION PERMIT AND COMPLYING WITH ALL ASPECTS OF THE PERMIT.</div> <div>19.LIMITED POWER IS CURRENTLY AVAILABLE AT THE SITE. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER AND PROVIDING ALL ADDITIONAL POWER NEEDED FOR CONSTRUCTION.</div> <div>20. THE CONTRACTOR SHALL RESTORE THE SITE GRADING AND DRAINAGE TO PRECONSTRUCTION CONDITIONS.</div> |                            |  |                             |  |  |   |   |                     |                            |                               |                             |  |  |   |                     |  |                 |                      |                   |                    |                    |  |
| B   |   |                            |  |                             |  |  |   |   |                     |                            |                               |                             |  |  |   |                     |  |                 |                      |                   |                    |                    |  |
| C   | <div>EXISTING UTILITY NOTES:</div> <div>1. UTILITY LOCATIONS SHOWN ON PLANS ARE CONSIDERED APPROXIMATE ONLY. NO ELEVATIONS ARE SHOWN, AND NO INFORMATION WAS AVAILABLE DURING THE DESIGN PERIOD.</div> <div>2. THE CONTRACTOR SHALL VERIFY LOCATION AND DEPTHS OF EXISTING UTILITIES BY CONTACTING ALL UTILITIES, AGENCIES, AND SUBSURFACE UTILITY LOCATING SERVICES (811). IN ADVANCE OF EXCAVATION, CONTRACTOR SHALL USE ALL EXISTING UTILITIES AND STRUCTURES ADJACENT TO THE WORK AREA, WHETHER INDICATED ON THE DRAWINGS OR NOT. SURVEY AND ACCURATELY RECORD THE LOCATIONS AND ELEVATIONS OF THE UTILITY CROSSINGS ON THE RECORD DRAWINGS. PREPARE AND SUBMIT THE UTILITY FIELD SURVEY INFORMATION TO THE OWNER FOR REVIEW ON A MONTHLY BASIS DURING THE COURSE OF CONSTRUCTION. SUBMITTAL SHALL INCLUDE UTILITIES SURVEYED THAT MONTH AND ASSOCIATED VERTICAL ELEVATIONS AND HORIZONTAL LOCATIONS (NORTHING AND EASTING COORDINATES) AND A LIST OF UTILITIES SURVEYED TO DATE. ALL COMPILED IN MICROSOFT EXCEL SPREADSHEET FORMAT. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE UTILITY AGENCY THE PROTECTION, REMOVAL, RECONSTRUCTION, AND/OR RECONNECTION OF EXISTING FACILITIES AS REQUIRED TO COMPLETE THE WORK. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IMMEDIATELY OF ANY POTENTIAL UTILITY CONFLICTS.</div> <div>3. SUPPORT ALL EXISTING UTILITIES AT CROSSING LOCATIONS. PROTECT EXISTING UTILITIES RUNNING PARALLEL TO CONSTRUCTED TRENCHES FROM DAMAGE CAUSED BY THE REMOVAL OF ADJACENT MATERIALS.</div> <div>4. SOME UTILITY SERVICES MAY NOT BE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO LOCATE AND PROTECT SERVICE DURING CONSTRUCTION.</div> <div>5. PRIOR TO CONSTRUCTION OF ANY NEW PIPELINE THAT TIES INTO AN EXISTING UTILITY, EXPOSE AND VERIFY LOCATION AND ELEVATION OF THE TIE-IN POINT. CONFIRM THE EXISTING PIPE MATERIAL AND ANY OTHER INFORMATION REQUIRED BY THE DRAWINGS. SURVEY AND ACCURATELY RECORD THE LOCATION AND ELEVATION OF THE TIE-IN POINT ON THE RECORD DRAWINGS.</div> <div>6. BEFORE CONSTRUCTION IS STARTED, CONTRACTOR SHALL COORDINATE WITH THE OWNER OF EACH UTILITY AND DEFINE THE REQUIREMENTS AND METHODS TO ACCOMMODATE THE PROTECTION, TEMPORARY SUPPORT, ADJUSTMENT, OR RELOCATION OF ANY UTILITIES AFFECTED BY THE PROPOSED WORK.</div> <div>7. CONTRACTOR IS RESPONSIBLE FOR COSTS INCURRED AS A RESULT OF UTILITY RELOCATIONS PERFORMED FOR THE CONTRACTOR'S CONVENIENCE.</div>  |                            |  |                             |  |  |   |   |                     |                            |                               |                             |  |  |   |                     |  |                 |                      |                   |                    |                    |  |
| D   | <div>GENERAL PIPELINE NOTES:</div> <div>1. ALL OPEN TRENCHES, WORK AREA, AND SHAFTS SHALL BE SLOPED OR HAVE A SHORING SYSTEM IN ACCORDANCE WITH OSHA, STATE, AND LOCAL REQUIREMENTS.</div> <div>2. SCHEDULE TIE-INS IN ACCORDANCE WITH THE SEQUENCING REQUIREMENTS OF THE CONTRACT. SCHEDULE AND COORDINATE TIE-INS AROUND THE OWNER'S OPERATIONAL REQUIREMENT AND LIMITATION.</div> <div>3. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING FOR REQUIRED INSPECTION. THE PRESENCE OR ABSENCE OF THE INSPECTOR WILL NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR THE PROPER PERFORMANCE OF THE WORK.</div>   |                            |  |                             |  |  |   |   |                     |                            |                               |                             |  |  |   |                     |  |                 |                      |                   |                    |                    |  |
|   | <div>OPERATION OF SYSTEM:</div> <div>1. OPERATION OF VALVES AND ANY OTHER COMPONENTS OF THE PUBLIC WATER SYSTEM SHALL ONLY BE PERFORMED BY THE WATER SYSTEM OWNER.</div>  |                            |  |                             |  |  |   |   |                     |                            |                               |                             |  |  |   |                     |  |                 |                      |                   |                    |                    |  |
| <table><tr><td rowspan="5"><div></div><div>This document, ideas, and designs incorporated herein, are an instrument of professional service, and is not to be used, in whole or in part, for any other project without the written authorization of CONSOR.</div></td><td>Consultant:</td><td rowspan="5"><div>FINAL SUBMITTAL</div></td><td>Engineer's Seal:<div></div></td><td>Client / Owner:<div></div></td><td>Project Title:<div>NAVAJO TRIBAL UTILITY<br/>AUTHORITY<br/>BOOSTER PUMP STATION</div></td><td>Drawing Title:<div>GENERAL NAZLINI<br/><br/>GENERAL NOTES</div></td><td><table><tr><td>Designed By:<br/>AMB</td><td>CONSOR Project No.: W232520UT</td></tr><tr><td>Drawn By:<br/>RB</td><td>Issued On: JULY 2024</td></tr><tr><td>Checked By:<br/>JY</td><td>Drawing No.: G-003</td></tr><tr><td>Approved By:<br/>NN</td><td><div><div><div>0</div><div>1/2</div><div>1</div></div>IF BAR DOES NOT MEASURE 1"<br/>DRAWING IS NOT TO SCALE</div></td></tr></table></td></tr></table> |   |                            |  |                             |  |  |   | <div></div> <div>This document, ideas, and designs incorporated herein, are an instrument of professional service, and is not to be used, in whole or in part, for any other project without the written authorization of CONSOR.</div> | Consultant:         | <div>FINAL SUBMITTAL</div> | Engineer's Seal: <div></div>  | Client / Owner: <div></div> | Project Title: <div>NAVAJO TRIBAL UTILITY<br/>AUTHORITY<br/>BOOSTER PUMP STATION</div> | Drawing Title: <div>GENERAL NAZLINI<br/><br/>GENERAL NOTES</div> | <table><tr><td>Designed By:<br/>AMB</td><td>CONSOR Project No.: W232520UT</td></tr><tr><td>Drawn By:<br/>RB</td><td>Issued On: JULY 2024</td></tr><tr><td>Checked By:<br/>JY</td><td>Drawing No.: G-003</td></tr><tr><td>Approved By:<br/>NN</td><td><div><div><div>0</div><div>1/2</div><div>1</div></div>IF BAR DOES NOT MEASURE 1"<br/>DRAWING IS NOT TO SCALE</div></td></tr></table> | Designed By:<br>AMB | CONSOR Project No.: W232520UT  | Drawn By:<br>RB | Issued On: JULY 2024 | Checked By:<br>JY | Drawing No.: G-003 | Approved By:<br>NN | <div><div><div>0</div><div>1/2</div><div>1</div></div>IF BAR DOES NOT MEASURE 1"<br/>DRAWING IS NOT TO SCALE</div> |
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|   | Designed By:<br>AMB   |                            | CONSOR Project No.: W232520UT  |                             |  |  |   |   |                     |                            |                               |                             |  |  |   |                     |  |                 |                      |                   |                    |                    |  |
|   | Drawn By:<br>RB   |                            | Issued On: JULY 2024   |                             |  |  |   |   |                     |                            |                               |                             |  |  |   |                     |  |                 |                      |                   |                    |                    |  |
|   | Checked By:<br>JY   |                            | Drawing No.: G-003   |                             |  |  |   |   |                     |                            |                               |                             |  |  |   |                     |  |                 |                      |                   |                    |                    |  |
|   | Approved By:<br>NN  |                            | <div><div><div>0</div><div>1/2</div><div>1</div></div>IF BAR DOES NOT MEASURE 1"<br/>DRAWING IS NOT TO SCALE</div> |                             |  |  |   |   |                     |                            |                               |                             |  |  |   |                     |  |                 |                      |                   |                    |                    |  |

|  | 1                                       | 2 | 3  | 4 | 5           | 6 | 7        |
|--|---|---|--|---|-------------|---|----------|
|  | TOPOGRAPHIC LEGEND                      |   |  |   |             |   |          |
|  | EXISTING                                |   | PROPOSED   |   | EXISTING    |   | PROPOSED |
|  | WATERLINE                               |   | 12"DI W  |   | SS SD W C T |   |          |
|  | ELECTRICITY (UNDERGROUND)               |   | E  |   |             |   |          |
|  | OVERHEAD UTILITY                        |   | OVHD   |   |             |   |          |
|  | GAS                                     |   | 4"G  |   |             |   |          |
|  | TELEPHONE/TELEMETRY                     |   | T  |   |             |   |          |
|  | CABLE TELEVISION                        |   | COM  |   |             |   |          |
|  | COMMUNICATION                           |   | CATV   |   |             |   |          |
|  | FIBER OPTIC                             |   | FO   |   |             |   |          |
|  | SANITARY SEWER LINE                     |   | 8"SS   |   |             |   |          |
|  | SANITARY SEWER FORCE MAIN               |   | 6"FM   |   |             |   |          |
|  | STORM DRAIN                             |   | 8"SD   |   |             |   |          |
|  | DRAIN                                   |   | D  |   |             |   |          |
|  | CULVERT                                 |   | 18"SD  |   |             |   |          |
|  | ABANDONED PIPE                          |   | 10"W (ABAND)                                       |   |             |   |          |
|  | DRAINAGE DITCH                          |   |  |   |             |   |          |
|  | BARBWIRE FENCE                          |   |  |   |             |   |          |
|  | CHAIN LINK FENCE                        |   |  |   |             |   |          |
|  | TEMPORARY SILT FENCE                    |   |  |   |             |   |          |
|  | GUARDRAIL                               |   |  |   |             |   |          |
|  | ROCK WALL                               |   |  |   |             |   |          |
|  | TREE/BUSH LINE                          |   |  |   |             |   |          |
|  | CENTERLINE                              |   |  |   |             |   |          |
|  | RIGHT-OF-WAY                            |   | R/W  |   |             |   |          |
|  | PROPERTY LINE                           |   |  |   |             |   |          |
|  | EASEMENT                                |   |  |   |             |   |          |
|  | EDGE OF PAVEMENT/AC                     |   |  |   |             |   |          |
|  | EDGE OF GRAVEL                          |   |  |   |             |   |          |
|  | CURB                                    |   |  |   |             |   |          |
|  | SIDEWALK                                |   | S/W  |   |             |   |          |
|  | STRUCTURE OR FACILITY                   |   |  |   |             |   |          |
|  | CONTOUR MINOR                           |   |  |   |             |   |          |
|  | CONTOUR MAJOR                           |   | 200  |   |             |   |          |
|  | MANHOLE                                 |   |  |   |             |   |          |
|  | CLEAN-OUT                               |   |  |   |             |   |          |
|  | CATCH BASIN/FIELD INLET                 |   |  |   |             |   |          |
|  | THRUST BLOCK                            |   |  |   |             |   |          |
|  | VALVE                                   |   |  |   |             |   |          |
|  | AIR INJECTION ASSEMBLY                  |   |  |   |             |   |          |
|  | BLOW-OFF ASSEMBLY (PERMANENT)           |   |  |   |             |   |          |
|  | BLOW-OFF ASSEMBLY (TEMPORARY)           |   |  |   |             |   |          |
|  | AIR RELEASE ASSEMBLY                    |   |  |   |             |   |          |
|  | FIRE HYDRANT ASSEMBLY                   |   |  |   |             |   |          |
|  | WATER METER                             |   |  |   |             |   |          |
|  | PULL BOX/JUNCTION BOX                   |   |  |   |             |   |          |
|  | UTILITY POLE                            |   |  |   |             |   |          |
|  | GUY WIRE                                |   |  |   |             |   |          |
|  | LIGHT POST                              |   |  |   |             |   |          |
|  | STREET LIGHT                            |   |  |   |             |   |          |
|  | MAILBOX                                 |   |  |   |             |   |          |
|  | SIGN                                    |   |  |   |             |   |          |
|  | TREE DECIDUOUS                          |   |  |   |             |   |          |
|  | TREE CONIFEROUS                         |   |  |   |             |   |          |
|  | TREE TO BE REMOVED                      |   |  |   |             |   |          |
|  | SURFACE ELEVATION                       |   | + 176.63   |   |             |   |          |
|  | WETLAND                                 |   |  |   |             |   |          |
|  | BENCHMARK                               |   |  |   |             |   |          |
|  | IRON ROD                                |   |  |   |             |   |          |
|  | MONUMENT                                |   |  |   |             |   |          |
|  | BORE                                    |   |  |   |             |   |          |
|  | TEST PIT                                |   |  |   |             |   |          |
|  | BOLLARD                                 |   |  |   |             |   |          |
|  | SCHEMATIC                               |   | SCHEMATIC  |   | SCHEMATIC   |   |          |
|  | WELDED JOINT                            |   | BUTTERFLY VALVE                                    |   |             |   |          |
|  | FLANGED JOINT                           |   | GATE VALVE   |   |             |   |          |
|  | GROOVED END JOINT                       |   | GLOBE VALVE  |   |             |   |          |
|  | MECHANICAL JOINT                        |   | BALL VALVE   |   |             |   |          |
|  | PUSH-ON JOINT (RUBBER GASKET)           |   | BALANCING VALVE                                    |   |             |   |          |
|  | FLANGED COUPLING ADAPTER                |   | PLUG VALVE (TOP)                                   |   |             |   |          |
|  | DOUBLE BALL FLEXIBLE EXTENSION COUPLING |   | PLUG VALVE (SIDE)                                  |   |             |   |          |
|  | FLEXIBLE COUPLING W/ THRUST RING        |   | 3-WAY PLUG VALVE                                   |   |             |   |          |
|  | 90° BEND UP                             |   | CHECK VALVE  |   |             |   |          |
|  | 90° BEND DOWN                           |   | SWING CHECK VALVE                                  |   |             |   |          |
|  | TEE UP                                  |   | DOUBLE CHECK ASSEMBLY                              |   |             |   |          |
|  | TEE DOWN                                |   | BALL SWING CHECK                                   |   |             |   |          |
|  | LATERAL UP                              |   | SILENT CHECK VALVE                                 |   |             |   |          |
|  | LATERAL DOWN                            |   | PRESSURE REDUCING VALVE                            |   |             |   |          |
|  | CONCENTRIC REDUCER                      |   | ALTITUDE CONTROL VALVE                             |   |             |   |          |
|  | ECCENTRIC REDUCER                       |   | SOLENOID VALVE                                     |   |             |   |          |
|  | UNION                                   |   | RELIEF VALVE                                       |   |             |   |          |
|  | BLIND FLANGE                            |   | NEEDLE VALVE                                       |   |             |   |          |
|  | CAP                                     |   | HOSE VALVE   |   |             |   |          |
|  | LONG SLEEVE                             |   | REDUCED PRESSURE BACKFLOW PREVENTER W/ GATE VALVES |   |             |   |          |
|  | FLEXIBLE COUPLING                       |   | HOSE BIBB  |   |             |   |          |
|  | FITTING (45°)                           |   |  |   |             |   |          |

MISCELLANEOUS PIPING SYMBOLS

|  |                         |
|--|-------------------------|
|  | STRAINER                |
|  | SIGHT GLASS             |
|  | PRESSURE GAUGE W/ COCK  |
|  | PRESSURE SWITCH W/ COCK |
|  | METER                   |
|  | SLIP-ON JOINT PIPE      |
|  | RESTRAINED JOINT PIPE   |



GENERAL NOTES

1. CONTRACTOR TO LOCATE AND VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION
2. CONTRACTOR SHALL USE CAUTION AROUND OVERHEAD UTILITIES AND POLES
3. CONTRACTOR TO PROTECT IN PLACE EXISTING SITE FEATURES TO REMAIN.
4. SEE SHEET S-101 FOR NEW BUILDING STRUCTURAL, AND D-101 FOR PROCESS PIPING IN THE BUILDING.
5. INSTALL NEW DRIVEWAY IN ACCORDANCE WITH BIA DOT REQUIREMENTS.

KEY NOTES

1. PROPOSED BOOSTER STATION BUILDING, SEE STRUCTURAL PLANS
2. INSTALL 6 FT CHAIN LINK FENCE WITH 2 FT OF BARBED WIRE ON TOP
3. INSTALL CANTILEVER GATE PER DETAIL ON SHEET C502
4. INSTALL 8' SWING GATE PER DETAIL ON SHEET C501
5. REMOVE EXISTING FENCE
11. INSTALL NEW OVERHEAD ELECTRIC LINE.

| SURVEY CONTROL POINTS |                |             |            |
|-----------------------|----------------|-------------|------------|
| PT NO.                | DESCRIPTION    | NORTHING    | EASTING    |
| 1                     | NW CORNER BLDG | N1781782.68 | E914306.00 |
| 2                     | NE CORNER BLDG | N1781791.36 | E914321.20 |
| 3                     | BLDG CORNER    | N1781778.62 | E914328.47 |
| 4                     | BLDG CORNER    | N1781777.26 | E914326.09 |
| 5                     | SE CORNER BLDG | N1781769.66 | E914330.42 |
| 6                     | SW CORNER BLDG | N1781762.35 | E914317.61 |
| 7                     | FENCE          | N1781783.17 | E914300.47 |
| 8                     | FENCE          | N1781744.10 | E914323.24 |
| 9                     | FENCE          | N1781758.93 | E914349.05 |
| 10                    | FENCE          | N1781797.95 | E914326.63 |
| 11                    | PROP EP        | N1781752.98 | E914317.85 |
| 12                    | PROP EP        | N1781726.55 | E914271.85 |
| 13                    | PROP EP        | N1781686.03 | E914260.48 |
| 14                    | PROP EP        | N1781758.42 | E914218.92 |
| 15                    | PROP EP        | N1781747.35 | E914259.88 |
| 16                    | PROP EP        | N1781773.76 | E914305.83 |



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Consultant:

FINAL SUBMITTAL

Engineer's Seal:  


Client / Owner:  


Project Title:  
NAVAJO TRIBAL UTILITY  
AUTHORITY  
BOOSTER PUMP STATION

Drawing Title:  
CIVIL  
NAZLINI  
OVERALL SITE PLAN AND  
SURVEY CONTROL

Designed By:  
AMB

Drawn By:  
RB

Checked By:  
JY

Approved By:  
NN

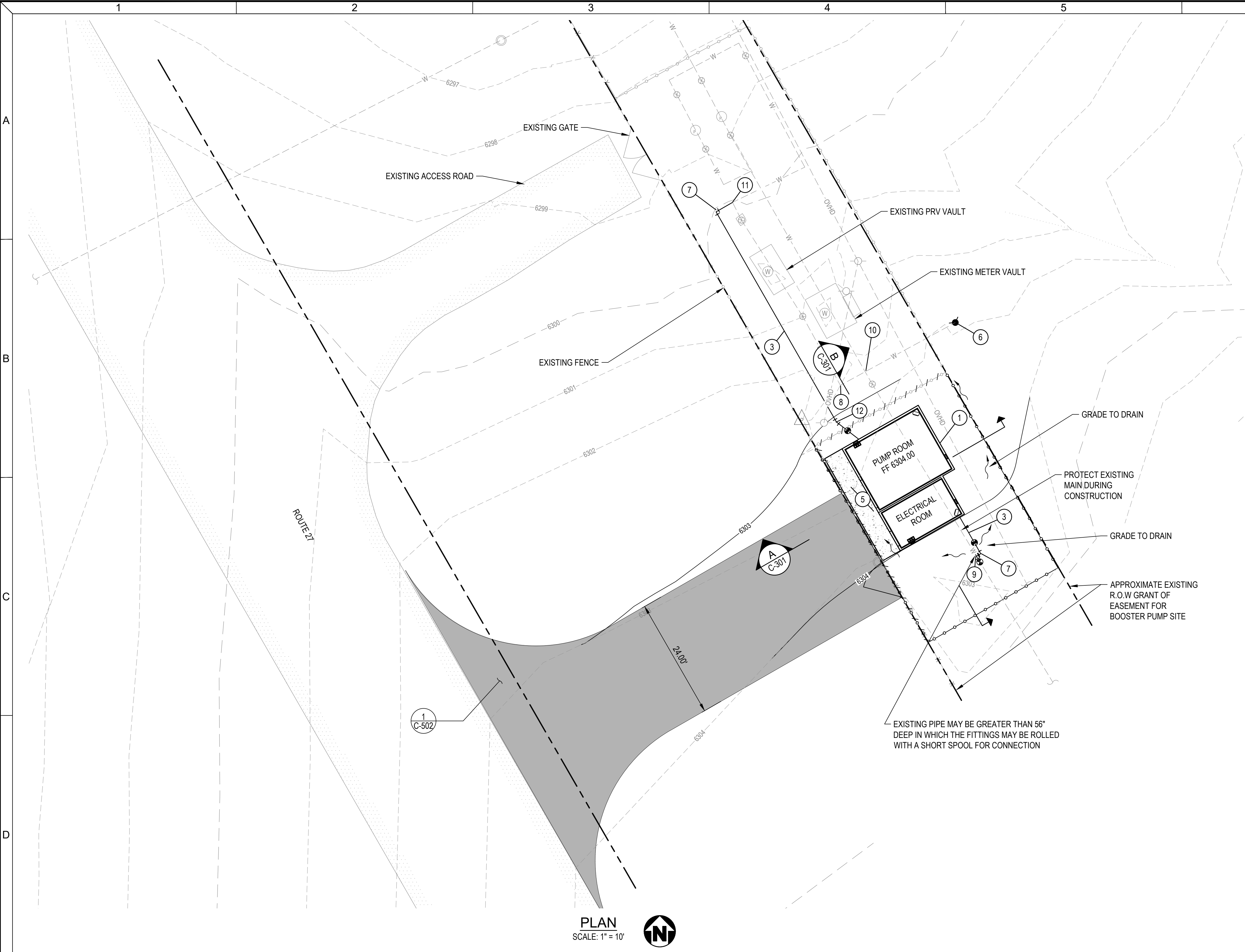
CONSOR Project No.: W232520UT

Issued On: JULY 2024

Drawing No.: C-100

0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

Drawing Path and Name: A:\VWP\Projects\UT\NTUA\2023\W232520\0012 CAD\012-S sheets\6-3 nazlini\W232520UT\_B-3\_C-100.dwg, Plotted Date: July 30, 2024 11:29 AM By: Jeff Bennett



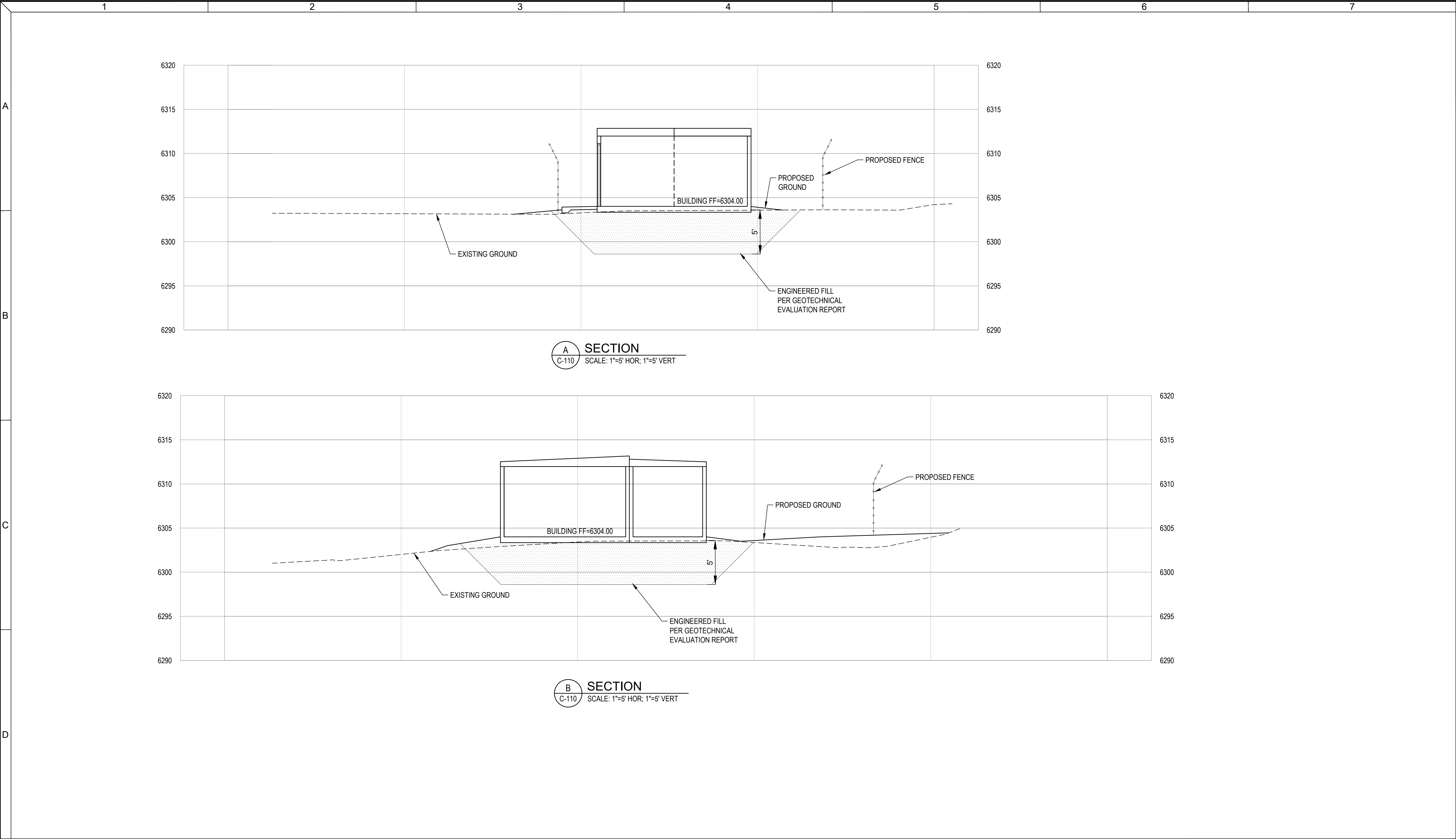
GENERAL NOTES

- 1. CONTRACTOR TO LOCATE AND VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION
- 2. CONTRACTOR SHALL USE CAUTION AROUND OVERHEAD UTILITIES AND POLES
- 3. CONTRACTOR TO PROTECT IN PLACE EXISTING SITE FEATURES TO REMAIN.
- 4. SEE SHEET S-101 FOR NEW BUILDING STRUCTURAL, AND D-101 FOR PROCESS PIPING IN THE BUILDING.
- 5. ALL SITE WATER PIPING SHALL BE DUCTILE IRON CLASS 52. ALL JOINTS, FITTINGS AND VALVES SHALL BE RESTRAINED JOINT, UNLESS OTHERWISE NOTED. ACTUAL PIPE ALIGNMENT AND DEPTH SHALL BE ADJUSTED IN THE FIELD TO AVOID CONFLICT WITH OTHER UTILITIES, ALL LOCATING ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER.
- 6. ALL BURIED PIPELINES SHALL MAINTAIN 36 INCHES COVER UNLESS OTHERWISE NOTED. AT UTILITY CROSSINGS, NEW PIPE SHALL BE ROUTED UNDER EXISTING, AND ADDITIONAL FITTINGS AS REQUIRED, COORDINATE WITH ENGINEER PRIOR TO PLACEMENT.
- 7. CONTRACTOR SHALL PROVIDE AND INSTALL SLEEVES AND SPOOLS AS NEEDED TO FACILITATE CONNECTIONS TO EXISTING AND NEW YARD PIPING. LONG SLEEVES SHALL BE INSTALLED WITHIN 5-FEET OF NEW STRUCTURE.

KEY NOTES

- 1 PROPOSED BOOSTER STATION BUILDING, SEE STRUCTURAL PLANS
- 3 CONSTRUCT NEW WATERLINE
- 5 CLEAR AND GRUB SITE, INSTALL 3/4" GRAVEL WITH GEOTEXTILE FABRIC WITHIN FENCED AREA.
- 6 REPLACE EXISTING BLOW-OFF WITH 2-1/8" POST TYPE SINGLE PORT FIRE HYDRANT ASSEMBLY
- 7 (1) 4" MJ 90° BEND
- 8 (1) EXIST 4" MJ 90° BEND INSTALL WITH CAP
- 9 (1) 4" MJ TEE, (2) 4" MJ GATE VALVE
- 10 (1) EXIST 4" MJ CROSS, (1) INSTALL MJ GATE VALVE, (1) INSTALL MJ CAP
- 11 CONNECT TO EXISTING WITH 4" MJ LS
- 12 (1) 4" MJ 22.5° BEND

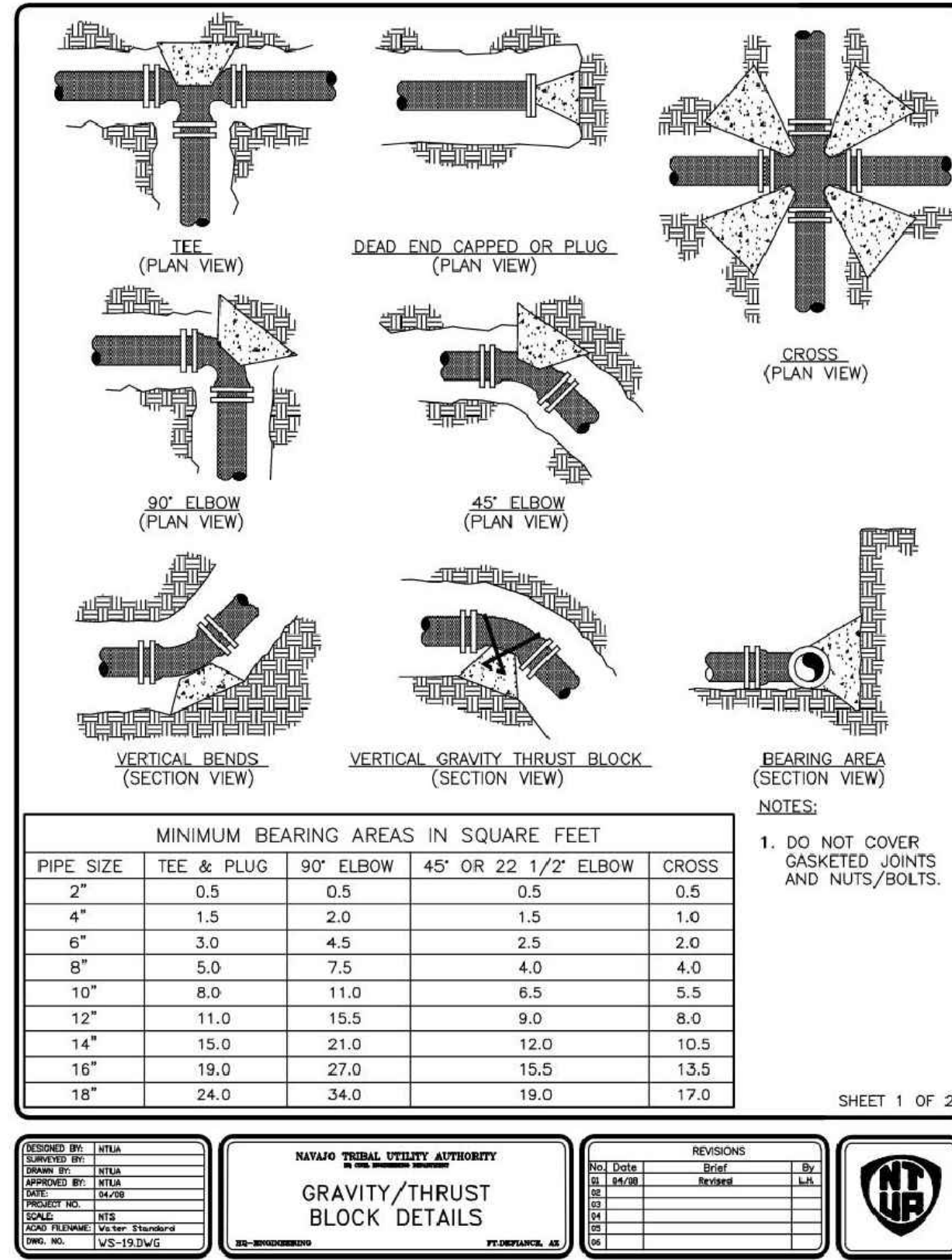
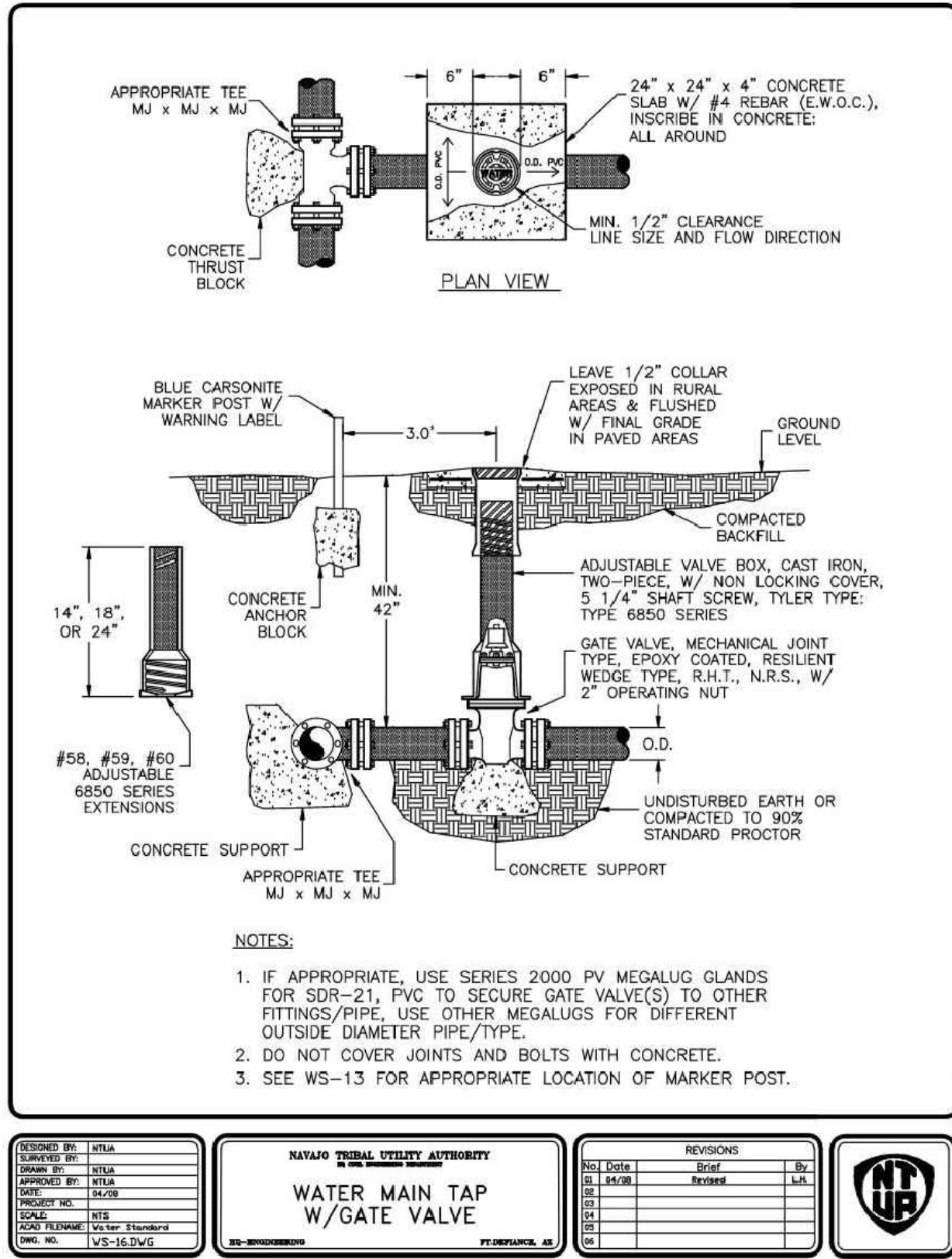
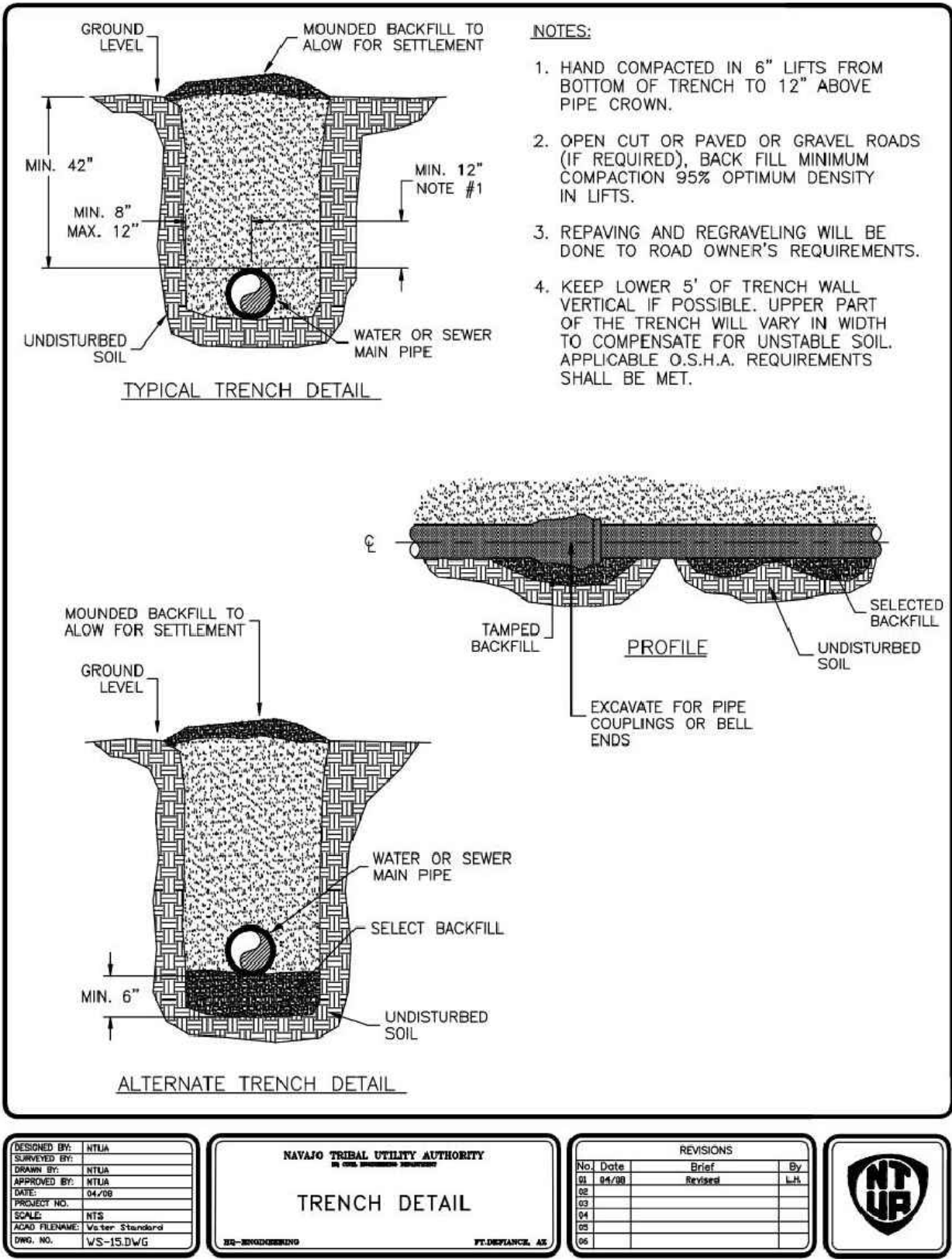
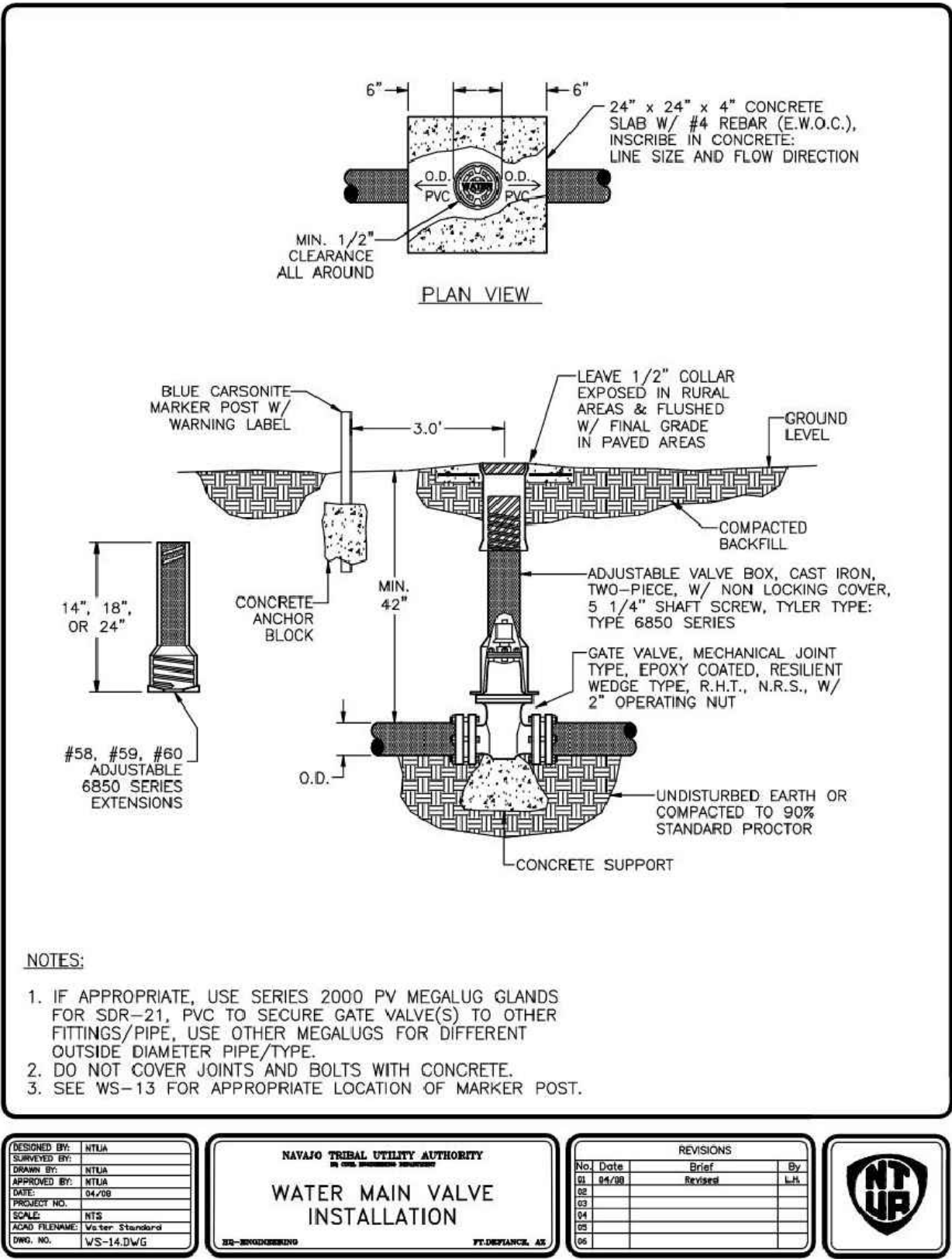
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|---|-------------|------------------------|----------------------|---------------------|---|---|----------------------|--------------------------------------|--|
| <br><small>This document, ideas, and designs incorporated herein, are an instrument of professional service, and is not to be used, in whole or in part, for any other project without the written authorization of CONSOR.</small> | Consultant: | <b>FINAL SUBMITTAL</b> | Engineer's Seal:<br> | Client / Owner:<br> | Project Title:<br><b>NAVAJO TRIBAL UTILITY AUTHORITY<br/>BOOSTER PUMP STATION</b> | Drawing Title:<br><b>CIVIL<br/>NAZLINI<br/>PAVING, GRADING AND<br/>YARD PIPING PLAN</b> | Designed By:<br>---- | CONSOR Project No.: <b>W232520UT</b> |  |
|   |             |                        |                      |                     |   |   | Drawn By:<br>----    | Issued On: <b>JULY 2024</b>          |  |
|   |             |                        |                      |                     |   |   |                      | Checked By:<br>----                  | Drawing No.: <b>C-110</b>                                  |
|   |             |                        |                      |                     |   |   |                      | Approved By:<br>----                 | 0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE |

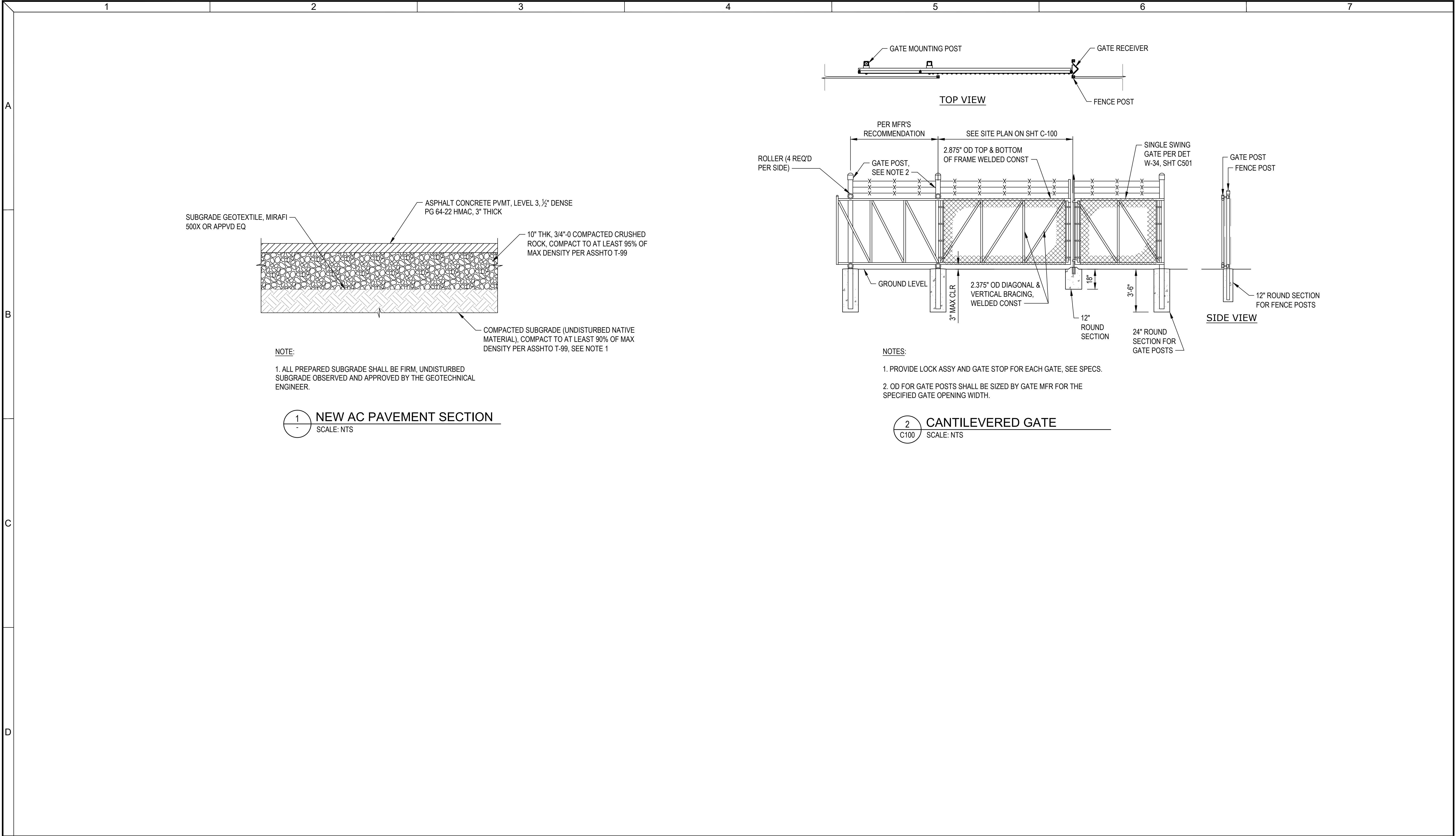


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| <br><small>This document, ideas, and designs incorporated herein, are an instrument of professional service, and is not to be used, in whole or in part, for any other project without the written authorization of CONSOR.</small> | Consultant:               | <b>FINAL SUBMITTAL</b> |  | Client / Owner:<br> | Project Title:<br><b>NAVAJO TRIBAL UTILITY<br/>AUTHORITY<br/>BOOSTER PUMP STATION</b> | Drawing Title:<br><b>CIVIL<br/>NAZLINI<br/><br/>SECTIONS</b> | Designed By:<br><b>AMB</b>  | CONSOR Project No.: <b>W232520UT</b> |
|   | Drawn By:<br><b>RB</b>    |                        |  |                     |   |  | Issued On: <b>JULY 2024</b> |                                      |
|   | Checked By:<br><b>JY</b>  |                        |  |                     |   |  | Drawing No.: <b>C-301</b>   |                                      |
|   | Approved By:<br><b>NN</b> |                        |  |                     |   |  |                             |                                      |

A

B





|   |             |                 |   |   |   |   |                     |  |
|---|-------------|-----------------|---|---|---|---|---------------------|--|
| <br><small>This document, ideas, and designs incorporated herein, are an instrument of professional service, and is not to be used, in whole or in part, for any other project without the written authorization of CONSOR.</small> | Consultant: | FINAL SUBMITTAL |  |  | Project Title:<br><br>NAVAJO TRIBAL UTILITY<br>BOOSTER PUMP STATION | Drawing Title:<br><br>CIVIL<br>NAZLINI<br><br>DETAILS | Designed By:<br>AMB | CONSOR Project No.: W232520UT                              |
|   |             |                 |   |   |   |   | Drawn By:<br>RB     | Issued On: JULY 2024                                       |
|   |             |                 |   |   |   |   | Checked By:<br>JY   | Drawing No.: C-502   |
|   |             |                 |   |   |   |   | Approved By:<br>NN  | 0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE |

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## A

|        |                   |  |
|--------|-------------------|--|
| CODES: | LOADS:            | IBC 2021; ASCE 7-16  |
|        | CONCRETE:         | ACI 318-19   |
|        | STRUCTURAL STEEL: | AISC Steel Construction Manual,<br>15th Ed                 |
|        | CONSTRUCTION:     | APWA Manual of Standard<br>Specifications (Latest Edition) |

BORROW MATERIAL  
UNIT WEIGHT: 135 PCF (SANDY GRAVEL)

ACTIVE LATERAL  
PRESSURE (E.F.P. METHOD): 33 PSF WITH 0.31q SURCHARGE

AT-REST LATERAL  
PRESSURE (E.F.P. METHOD): 51 PSF WITH 0.47q SURCHARGE

COEFF OF SLIDING FRICTION: 0.25

**B**

C

## D

- |  |  |
|--|--|
|  |  |
|--|--|

1. SHOP DRAWINGS:  
CONCRETE REINFORCING STEEL  
CONCRETE MIX DESIGN  
CONCRETE REINFORCING STEEL  
PAINT AND SEALANT  
PRECAST CONCRETE PUMP STATION BUILDING INCLUDING ALL  
APPURTENANT ITEMS INDICATED ON G.S.N. SHEET S-002

- SHOP DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW PRIOR TO COMPONENT FABRICATION. ALL SHOP DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION TO THE ENGINEER.

MIX DESIGNS AND/OR SPECIFICATIONS:  
CONCRETE MIX DESIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW A  
MINIMUM OF ONE WEEK PRIOR TO THE FIRST FIELD DELIVERY.

CAST-IN-PLACE PORTIONS OF THE WORK SHALL COMPLY WITH ALL APPLICABLE PORTION OF APWA  
DIVISION 03, AND AS NOTED BELOW:

WELDING: PER AWS D1.4. NO WELDING OR GAS CUTTING OF GRADE 60 BARS IS PERMITTED, EXCEPT WITH PRIOR APPROVAL FROM ENGINEER.

BAR LAP: 48 BAR DIAMETERS, U.O.N.

BAR FABRICATION AND PLACING: PER CONCRETE REINFORCING STEEL INSTITUTE (CRSI) MANUAL OF STANDARD PRACTICE (LATEST EDITION)

REINFORCING IN CONCRETE PLACED AGAINST EARTH WITHOUT FORMS IS TO BE SUPPORTED BY CONCRETE BLOCKS, APPROVED NON-METALLIC CHAIRS, OR ANOTHER METHOD APPROVED BY THE ENGINEER.

CHAMFER ALL EXPOSED CORNERS 3/4" EXCEPT WHERE NOTED OTHERWISE.

CONCRETE PROTECTION COVER OF REINFORCING STEEL SHALL BE 2" EXCEPT WHERE NOTED OTHERWISE.

|        |   |
|--------|---|
| WALLS: | UNFINISHED PLYWOOD FORM FACED (NOT EXPOSED)   |
|        | B-GRADE FINISHED PLYWOOD FORM FACED (EXPOSED) |
| SLABS: | MEDIUM BROOM                                  |

GROUT SHALL BE HIGH STRENGTH, NON-SHRINK, NON-METALLIC EQUIVALENT TO 'MASTER BUILDERS' MASTERFLOW 713, INSTALLED PER THE MFRG'S RECOMMENDATIONS.

CONCRETE JOINT SEALANT: SILICONE SEALANT AS MANUFACTURED BY DOW CORNING FOR VERTICAL CONTROL JOINTS IN CONCRETE WALLS OR APPROVED EQUAL. PROVIDE BOND BREAKER OR BACK-UP ROD AS RECOMMENDED BY MANUFACTURER. INSTALL SEALANT AS RECOMMENDED BY MANUFACTURER.

'REFLECTIX' WITH TEAR OFF STRIP (OR APPROVED EQUAL), INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

SHALL BE 'HILTI' HIT-HY 200 V3 + REBAR, INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.



Consultant:

Engineer's Seal:



Client / Owner:



Project Title

# NAVAJO TRIBAL UTILITY AUTHORITY BOOSTER PUMP STATION

Drawing Title:

Working Title:

# STRUCTURAL NAZLINI

## PUMP STATION BUILDING

### GENERAL STRUCTURAL NOTES

Designed By:

JVB  
Drouin, B.

Drawn By:  
JVB

Checked By:  
RB

CONSOR Project No.: W2325201IT




Issued On: JULY 2024

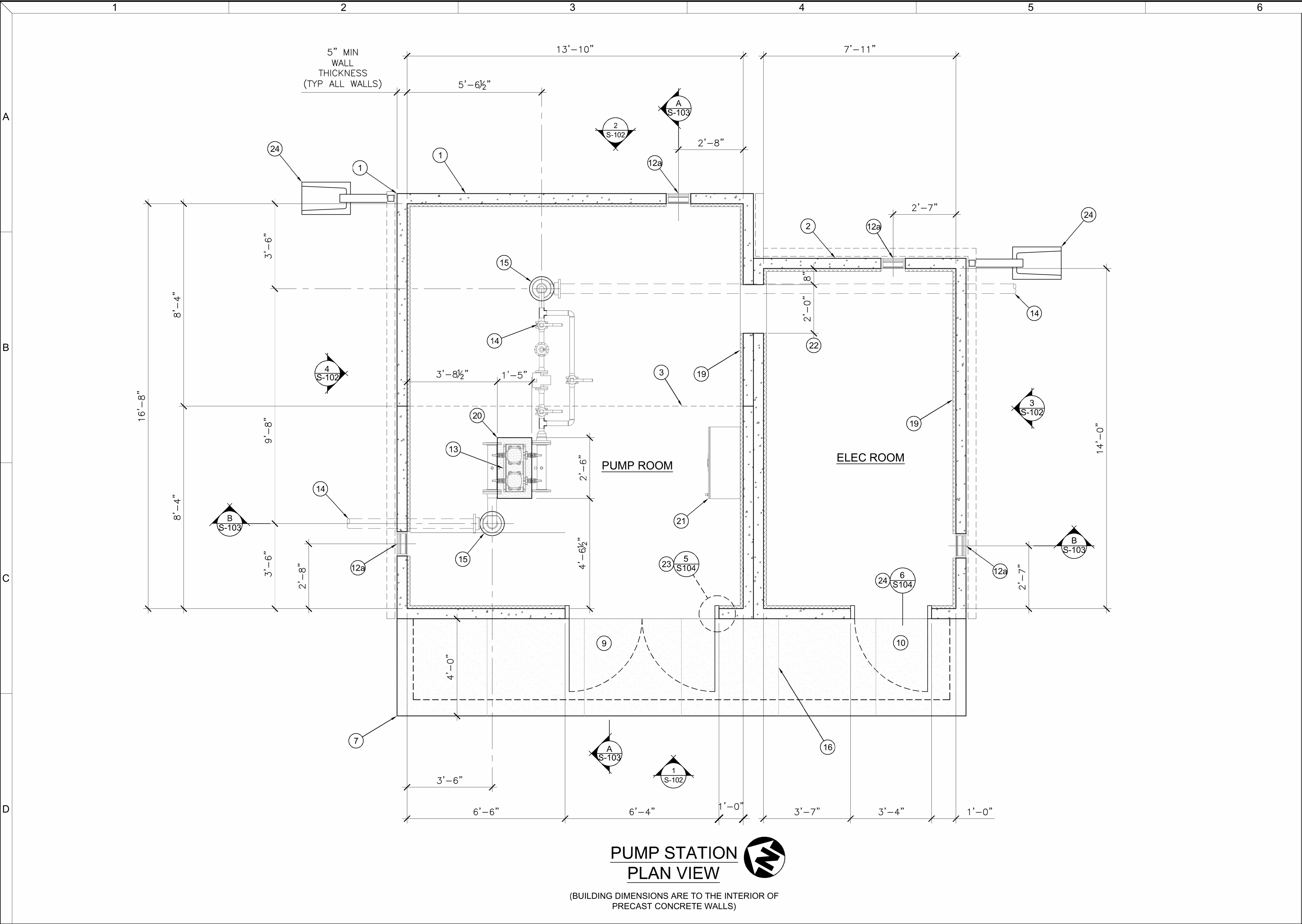
Drawing No.

S-001



|  | 1  | 2 | 3 | 4 | 5 | 6 | 7 |
|--|--|---|---|---|---|---|---|
|  | GENERAL STRUCTURAL NOTES (GSN)   |   |   |   |   |   |   |
|  | <div><div><div>DIVISION 03 40: PRECAST CONCRETE<br/>BOOSTER PUMP STATION (BPS) BUILDING</div></div><div><div>A</div><div><div>PRECAST MANUFACTURER REQUIREMENTS FOR PUMP STATION BUILDING:</div><div><div>1. CONTRACTOR TO LOCATE AND VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION AND PLACEMENT OF PRECAST STRUCTURES.</div><div>2. CONTRACTOR TO PROTECT IN PLACE EXISTING SITE FEATURES TO REMAIN.</div><div>3. CONTRACTOR TO VERIFY ALL PROPOSED UTILITIES PRIOR TO PLACEMENT OF PRECAST STRUCTURES TO ALIGN ALL OPENINGS IN THE STRUCTURES WITH THE PROPOSED UTILITY STUB OUTS.</div><div>4. CONTRACTOR SHALL USE CAUTION AROUND OVERHEAD UTILITIES,POLES AND EXISTING SITE FEATURES AND VERIFY CLEARANCES WITH THE CRANE OUTRIGGERS</div><div>5. SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR PRECAST CONCRETE STRUCTURES.</div><div>6. COMPLETE REQUIREMENTS SHALL BE AS OUTLINED IN THE SPECIFICATION SECTION 03 41 10 WHICH ARE INCLUDED AND HEREBY MADE A PART OF THESE CONTRACT DOCUMENTS.</div><div>7. PROVIDE COMPLETE SHOP DRAWINGS CONFORMING TO THE INSIDE CLEAR DIMENSIONS OF THE CAST-IN-PLACE STRUCTURES. THIS SHALL INCLUDE REINFORCING, EMBEDS, AND LIFTING REQUIREMENTS.</div><div>8. PROVIDE THE SUBGRADE PREPARATION PER DIVISION 31 - EARTHWORK THAT WILL BE REQUIRED FOR THE PROPER INSTALLATION OF THE PRECAST STRUCTURE.</div><div>9. PROVIDE SEALED STRUCTURAL CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ARIZONA. STRUCTURAL CALCULATIONS SHALL INCLUDE BOTH LIFTING AND IN-PLACE LOADS ON THE STRUCTURE.</div><div>10. DESIGN SHALL BE IN ACCORDANCE WITH THE LATEST:<div>PRECAST CONCRETE INSTITUTE (PCI) MANUAL OF STANDARD PRACTICE.<br/>CONCRETE REINFORCING INSTITUTE, MANUAL OF STANDARD PRACTICE.</div></div><div>11. ADDITIONAL DESIGN REQUIREMENTS (INCLUDING BUT NOT LIMITED TO SEISMIC AND WIND LOADS).</div><div>12. CASTING KEYED JOINTS SHOWN ON THE DRAWINGS ARE TO BE WATERTIGHT AND SHALL BE SEALED ON THE EXTERIOR AND INTERIOR SURFACE. THE PRECAST SUPPLIER SHALL PROVIDE EMBEDS AND FIELD INSTALLATION COMPONENTS AS REQUIRED TO PREVENT THE JOINTS FROM SEPARATING. THE PRECAST SUPPLIER SHALL SUBMIT THE PROPOSED JOINT DETAIL INCLUDING JOINT SEALANT TO THE ENGINEEER FOR REVIEW AND APPROVAL PRIOR TO CASTING.</div></div><div><div>B</div><div>13. SUBBASE PREPARATION, BEDDING, AND LEVELING COURSE SHALL BE IN ACCORDANCE WITH ASTM C1675-11.</div><div>14. DESIGN SHALL CONFORM TO GOVERNING AGENCY STANDARDS AND REQUIREMENTS.</div><div>15. CONCRETE: 28-DAY COMPRESSIVE STRENGTH 4,000 PSI (MIN).</div><div>16. STEEL REINFORCING: ASTM A-615, GRADE 60.</div><div>17. WWF: ASTM A1064, Fy = 70 KSI.</div><div>18. CEMENT: ASTM C858.</div><div>19. JOINT SEALANT: DOW CORNING 790 SILICONE SEALANT OR APPROVED EQUAL.</div></div><div><div>C</div><div>20. CONTROLLED LOW STRENGTH MATERIAL (CLSM) SHALL BE A SELF-COMPACTING, FLOWABLE, CEMENTITIOUS MATERIAL CONSISTING OF 1/2 SACK OF PORTLAND CEMENT PER CU YARD OF ½" MEDIUM AGGREGATE AND SAND.</div><div>21. EXTERIOR WALLS SHALL BE PAINTED WITH (2) FINISH COATS FLAT EXTERIOR GRADE ACRYLIC WALL PAINT. PREPARE AND SEAL THE CONCRETE SUBSTRATE AS RECOMMENDED BY THE PAINT MANUFACTURER.</div><div>22. INTERIOR CONCRETE FLOORS SHALL BE TREATED WITH LOW-LUSTER CONCRETE SEALER. PREPARE AND SEAL THE CONCRETE SUBSTRATE AS RECOMMENDED BY THE PAINT MANUFACTURER.</div><div>23. HOLLOW METAL DOORS, JAMBS, ACCESSORIES, AND HARDWARE SHALL BE PER THE PROJECT SPECIFICATIONS.</div><div>24. FRP CEILING PANELS SHALL BE 0.90" THICK, CLASS A, WHITE PEBBLED TEXTURED WITH MATCHING PVC MOLDINGS. INSTALL PANELS WITH ADHESIVE PER THE MANUFACTURER'S RECOMMENDATIONS OVER ½" GYPSUM BOARD OVER 2x4 FURRING STRIPS (FLAT) INSTALLED AT 24" O.C.</div><div>25. 5⁄8" PLYWOOD WALL PANELS SHALL BE GRADE B-C WITH A CLEAR WATER PROOFING SEALANT INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. INSTALL PANELS OVER 2x4 FURRING STRIPS (FLAT) USING #8 STAR DRIVE ZINC PLATED CONSTRUCTION SCREWS (DRYWALL SCREWS NOT PERMITTED) AT 6" O.C. (EDGES) AND 12" O.C. INTERMEDIATE.</div><div>26. FURRING STRIPS SHALL BE INSTALLED FLAT AND ATTACHED TO THE CONCRETE USING ¼" DIA x 2 ¾" TAPCON ANCHORS AT 16" O.C. INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.</div><div>27. WALL AND CEILING INSULATION SHALL 1½" R-7.5 RIGID POLYSTYRENE PANELS, OWENS CORNING FOARMULAR NGX OR APPROVED EQUAL INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.</div><div>28. COMPOSITE CURBING SHALL BE SHIELD-IT CURB 4912C WITH END AND CORNER PIECES INSTALLER PER THE MANUFACTURER'S RECOMMENDATIONS.</div></div><div><div>D</div></div></div></div></div> |   |   |   |   |   |   |

|  |             |                 |   |  |  |  |                             |  |
|--|-------------|-----------------|---|--|--|--|-----------------------------|--|
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|  |             |                 |   |  |  |  | Drawn By: <div>JVB</div>    | Issued On: JULY 2024   |
|  |             |                 |   |  |  |  | Checked By: <div>RB</div>   | Drawing No.: S-002   |
|  |             |                 |   |  |  |  | Approved By: <div>NN</div>  | <div><div>0121</div>IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE</div> |

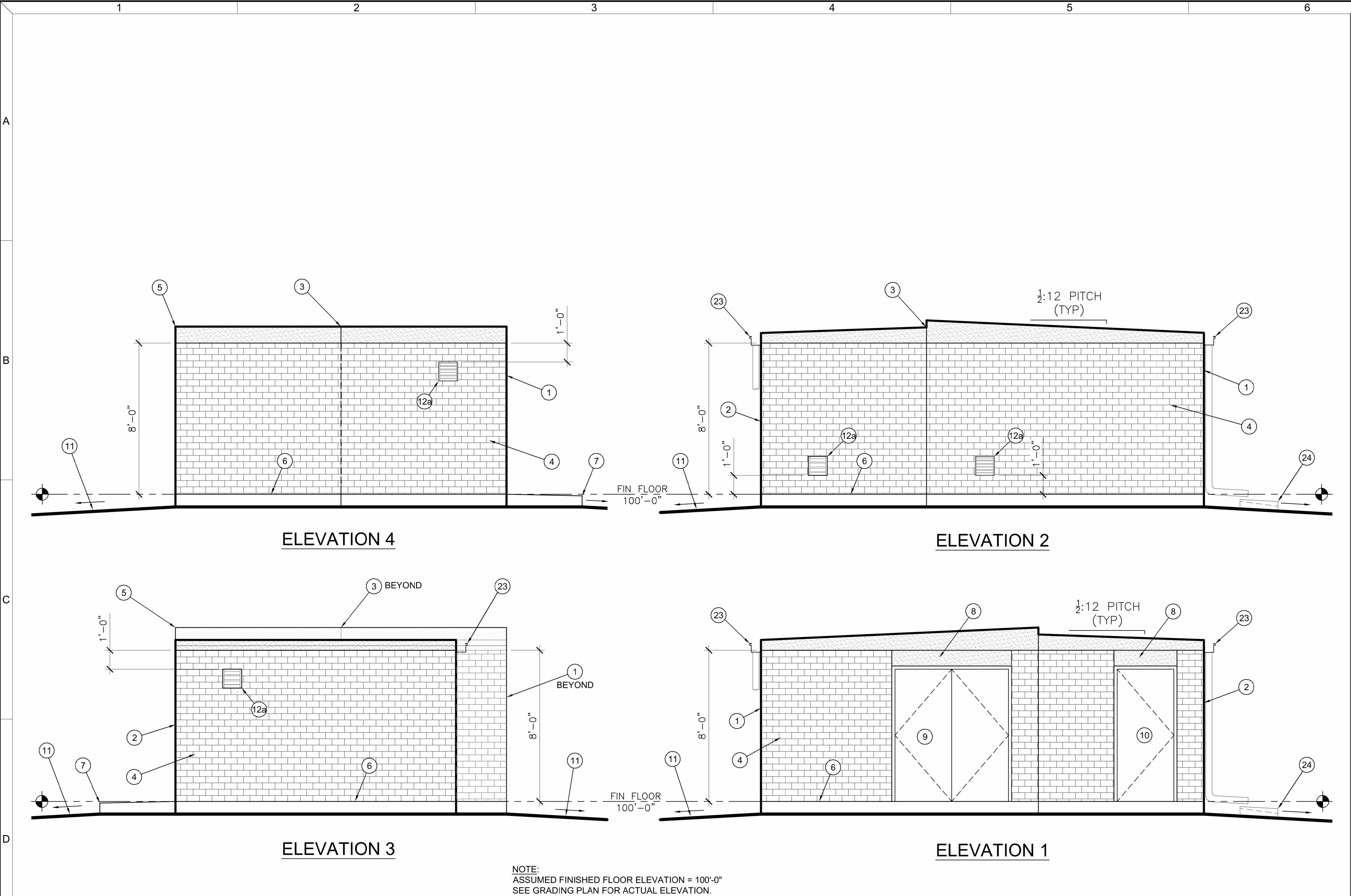


### GENERAL NOTES

- SEE SHEETS S-001 AND S-002 (GSN) FOR GENERAL STRUCTURAL NOTES.
- SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR PRECAST CONCRETE STRUCTURES.

### KEY NOTES

- PRECAST REINFORCED CONCRETE MODULAR PUMP STATION BUILDING - PAINT PER G.S.N.
- PRECAST REINFORCED CONCRETE ELECTRICAL ROOM BUILDING - PAINT PER G.S.N.
- MODULE CASTING JOINT LINE
- CONCRETE SIDEWALK WITH PERIMETER TURNDOWN
- DOUBLE 3' x 7' HOLLOW METAL DOOR AND FRAME
- SINGLE 3' x 7' HOLLOW METAL DOOR AND FRAME
- WALL LOUVER PER MECHANICAL
  - 12 1/2" x 12 1/2"
  - 18 1/2" x 18 1/2"
  - 30 1/2" x 30 1/2"
- BOOSTER PUMP SKID - SEE PROCESS PLANS
- PIPING - SEE PROCESS PLANS
- 12" DIA OPENING IN FLOOR SLAB FOR PIPING
- TOOLED CONTROL JOINT - LOCATIONS AS SHOWN
- 3/4" PLYWOOD WALL PANEL OVER 1 1/2" RIGID INSULATION
- REINFORCED CONCRETE PUMP HOUSEKEEPING PAD
- PUMP CONTROL PANEL
- 20" HIGH x 24" WIDE OPENING FOR ELECTRICAL CONDUITS
- DOOR JAMB
- DOOR THRESHOLD

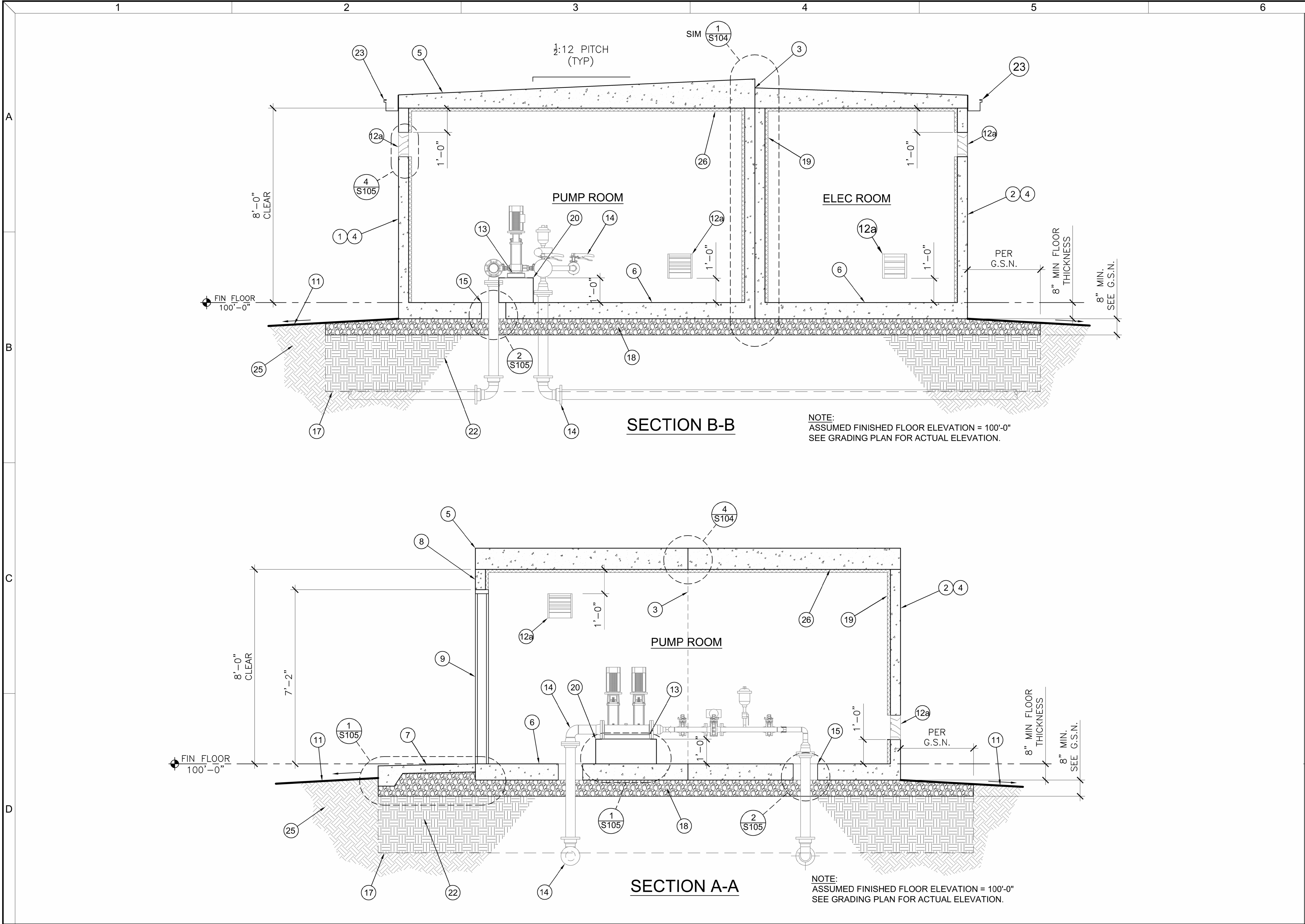


GENERAL NOTES

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- SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR PRECAST CONCRETE STRUCTURES.

KEY NOTES

- PRECAST REINFORCED CONCRETE MODULAR PUMP STATION BUILDING - PAINT PER G.S.N.
- PRECAST REINFORCED CONCRETE ELECTRICAL ROOM BUILDING - PAINT PER G.S.N.
- MODULE CASTING JOINT LINE
- PRECAST REINFORCED CONCRETE WALLS WITH EXTERIOR WITH SLUMP BLOCK OR BRICK TYPE FINISH
- PRECAST REINFORCED CONCRETE ROOF STRUCTURE
- PRECAST REINFORCED CONCRETE FLOOR SLAB INTEGRALLY CAST WITH WALLS
- CONCRETE SIDEWALK WITH PERIMETER TURNDOWN
- PRECAST REINFORCED CONCRETE DOOR TRANSOM INTEGRALLY CAST WITH WALLS
- DOUBLE 3' x 7' HOLLOW METAL DOOR AND FRAME
- SINGLE 3' x 7' HOLLOW METAL DOOR AND FRAME
- FINISHED GRADE - SLOPE AWAY FROM BUILDING
- WALL LOUVER PER MECHANICAL
  - 12 1/2" x 12 1/2"
  - 18 1/2" x 18 1/2"
  - 30 1/2" x 30 1/2"
- GUTTER AND DOWNSPOUT - EXACT LOCATION TO BE TO BE DETERMINED IN THE FIELD
- PRECAST SPLASH BLOCK - EXACT LOCATION TO BE DETERMINED IN THE FIELD



GENERAL NOTES

- SEE SHEETS S-001 AND S-002 (GSN) FOR GENERAL STRUCTURAL NOTES.
- SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR PRECAST CONCRETE STRUCTURES.

KEY NOTES

- PRECAST REINFORCED CONCRETE MODULAR PUMP STATION BUILDING - PAINT PER G.S.N.
- PRECAST REINFORCED CONCRETE ELECTRICAL ROOM BUILDING - PAINT PER G.S.N.
- MODULE CASTING JOINT LINE
- PRECAST REINFORCED CONCRETE WALLS WITH EXTERIOR WITH SLUMP BLOCK EXTERIOR TYPE FINISH
- PRECAST REINFORCED CONCRETE ROOF STRUCTURE
- PRECAST CONCRETE FLOOR SLAB INTEGRALLY CAST WITH WALLS
- CONCRETE SIDEWALK WITH PERIMETER TURNDOWN
- PRECAST REINFORCED CONCRETE DOOR TRANSOM INTEGRALLY CAST WITH WALLS
- DOUBLE 3' x 7' HOLLOW METAL DOOR AND FRAME
- FINISHED GRADE - SLOPE AWAY FROM BUILDING
- WALL LOUVER PER MECHANICAL
  - 12 1/2" x 12 1/2"
  - 18 1/2" x 18 1/2"
  - 30 1/2" x 30 1/2"
- BOOSTER PUMP SKID - SEE PROCESS PLANS
- PIPING - SEE PROCESS PLANS
- 12" DIA OPENING IN FLOOR SLAB FOR PIPING
- SUBGRADE PREPARATION PER G.S.N.
- COMPACTED AB PAD PER G.S.N.
- 3/4" PLYWOOD WALL PANEL OVER 1 1/2" RIGID INSULATION
- REINFORCED CONCRETE PUMP HOUSEKEEPING PAD
- PUMP CONTROL PANEL
- OVER EXCAVATION PER G.S.N.
- GUTTER AND DOWNSPOUT - EXACT LOCATION TO BE TO BE DETERMINED IN THE FIELD
- PRECAST SPLASH BLOCK - EXACT LOCATION TO BE DETERMINED IN THE FIELD
- UNDISTURBED NATIVE MATERIAL
- FRP CEILING PANEL OVER 1/2" GYP BOARD OVER 1 1/2" RIGID INSULATION



KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE ROOF STRUCTURE  
2 MODULE CASTING JOINT LINE  
3 2x4 FURRING STRIPS (CONT) AT 24" O.C. (FLAT) - SECURE TO  
4 CONCRETE WALL/ROOF PER G.S.N.  
5 1-1/2" RIGID INSULATION PER G.S.N.  
6 FRP CEILING PANEL OVER 1/2" GYP BOARD PER G.S.N.  
7 BUILDING HALVES TO ABUT AS SHOWN  
8 FRP MOLDINGS PER G.S.N.  
9 SEAL WATERTIGHT PER PRECAST MANUFACTURER  
10 WELD PLATES PER PRECAST MANUFACTURER



KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE ROOF STRUCTURE
- 2 PRECAST REINFORCED CONCRETE BUILDING WALL
- 3 2x4 FURRING STRIPS (CONT) AT 24" O.C. (FLAT) - SECURE TO
- 4 CONCRETE WALL/ROOF PER G.S.N.
- 5 1-1/2" RIGID INSULATION PER G.S.N.
- 6 FRP CEILING PANEL OVER 1/2" GYP BOARD PER G.S.N.
- 7 5/8" PLYWOOD WALL PANELS PER G.S.N.
- 8 FRP MOLDDINGS PER G.S.N.



## KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE ROOF STRUCTURE  
2 PRECAST REINFORCED CONCRETE BUILDING WALL -  
3 INTEGRAL WITH FLOOR  
4 PRECAST REINFORCED CONCRETE BUILDING FLOOR STRUCTURE  
5 WELD PLATES PER PRECAST MANUFACTURER  
6 STEEL REINFORCING PER PRECAST MANUFACTURER  
7 2x4 FURRING STRIPS AT 24" O.C. (FLAT)  
8 FRP CEILING PANEL OVER 1/2" GYP BOARD PER G.S.N.  
9 5/8" PLYWOOD WALL PANELS PER G.S.N.  
10 BUILDINGS TO ABUT AS SHOWN  
11 COMPACTED AB PAD PER G.S.N.  
12 OVER EXCAVATION PER G.S.N.  
13 SEALANT PER G.S.N. AROUND ENTIRE BUILDING PERIMETER  
14 3/4" CHAMFER AND SEALANT ALL AROUND OPENING  
15 1-1/2" RIGID INSULATION PER G.S.N.  
16 20" HIGH x 24" WIDE OPENING FOR ELECTRICAL CONDUIT  
17 16 GA GALV TRIM ALL AROUND OPENING  
18 COMPOSITE CURBING PER G.S.N.  
19 2x4 FURRING STRIP (FLAT) FROM WALL CORNER (BEYOND)  
20 2x4 FURRING STRIP (FLAT) CONTINUOUS  
21 VINYL BASE BOARD



(DOOR THRESHOLD)

KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE BUILDING FLOOR  
2 CAST-IN-PLACE SIDEWALK  
3 DOOR THRESHOLD (3 PIECE) PER G.S.N.  
4 SECURE TO FLOOR PER G.S.N.  
5 1/2" COMPRESSIBLE JOINT MATERIAL AND  
6 JOINT SEALANT PER G.S.N.  
7 DOOR SWEEP PER G.S.N.  
8 SOLID GROUT  
9 WEATHER STRIP PLATE PER G.S.N.  
10 HOLLOW METAL DOOR PER G.S.N.



(DOOR JAMB)  
(HEAD SIMILAR)

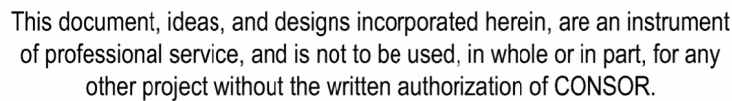
### KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE BUILDING WALL  
2 2x4 HORIZ FURRING STRIP (CONT) - SECURE TO  
3 CONCRETE WALL PER G.S.N.  
4 1-1/2" RIGID INSULATION PER G.S.N.  
5 5/8" PLYWOOD WALL PANELS PER G.S.N.  
6 SEALANT PER G.S.N.  
7 3/4 x 3-1/2 WOOD TRIM  
8 HOLLOW METAL DOOR FRAME PER G.S.N.  
9 METAL CLIPS AND ANCHORAGE PER G.S.N.  
10 HOLLOW METAL DOOR PER G.S.N.  
COMPOSITE CURBING END PIECE (BELOW)



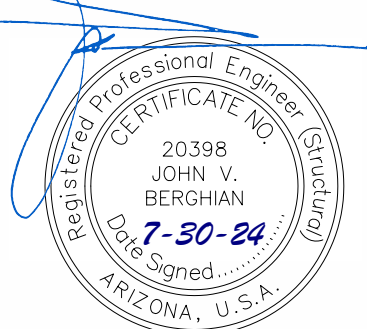
KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE FLOOR STRUCTURE
- 2 PRECAST REINFORCED CONCRETE BUILDING WALL
- 3 2x4 HORIZ FURRING STRIP (CONT) - SECURE TO  
CONCRETE WALL PER G.S.N.
- 4 1-1/2" RIGID INSULATION PER G.S.N.
- 5 5/8" PLYWOOD WALL PANELS PER G.S.N.
- 6 SEALANT PER G.S.N.
- 7 COMPOSITE CURBING PER G.S.N.
- 8 U-SHAPED EDGE BINDING PER G.S.N.



Consultant:

Engineer's Seal:



Client / Owner:



Project Title:

# NAVAJO TRIBAL UTILITY AUTHORITY BOOSTER PUMP STATION

Drawing Title:

le: STRUCTURAL  
NAZLINI

BOOSTER PUMP STATION  
DETAILS

Designed By:

JVB

Drouin, B. et al.

IVR

JVD

Checked By: BB

RB

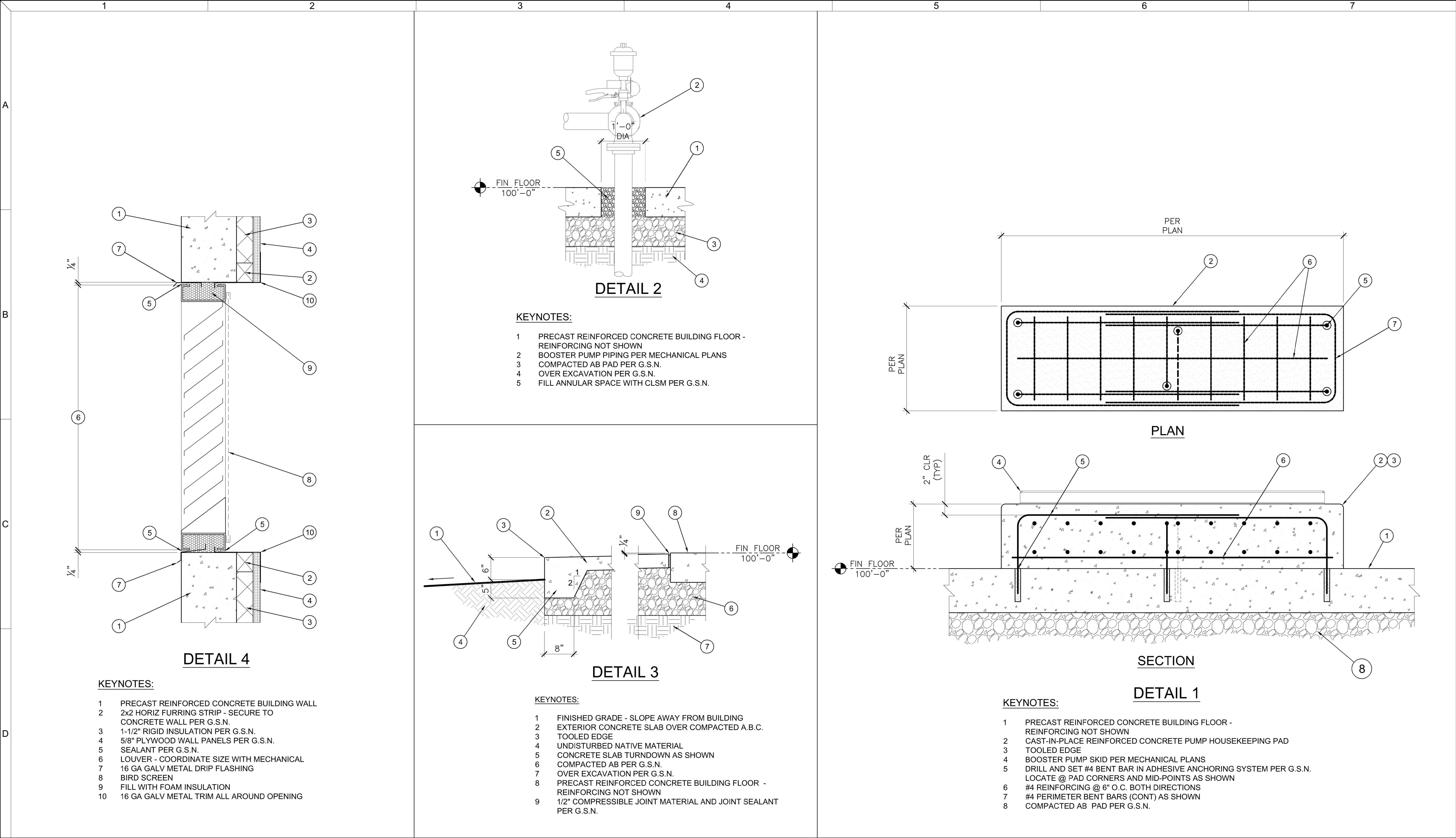
CONSOR Project No.: W232520UIT

Issued On: 11/11/2004

Issued On:

S-104

0 1/2 1 IF BAR DOES NOT MEASURE 1  
DRAWING IS NOT TO SCALE



|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|---|--|--------|--------------------|--------|----------------------------------|------|---------|-------------|--|------|---------|-------------|--|
| A | PIPE SYMBOLS   |        | PIPE FITTINGS      |        | VALVE SYMBOLS                    |      |         |             | VALVE SYMBOLS                            |      |         |             | GENERIC PIPING NOTES:<br><br>1. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.<br><br>2. SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.<br><br>3. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. CONTRACTOR SHALL DESIGN SUPPORTS AS SPECIFIED.<br><br>4. ALL JOINTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO A BACKFILL.<br><br>5. ALL FLEXIBLE CONNECTORS AND COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.<br><br>6. SYMBOLS, LEGENDS AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS COMPONENTS ARE NECESSARILY USED IN THE PROJECT.<br><br>7. ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED OR SCREWED PIPING, SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED.<br><br>8. NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.<br><br>9. WHERE A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE, UNLESS OTHERWISE SPECIFIED. WHERE A FLANGED COUPLING ADAPTER IS SHOWN, A STANDARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER. |
|   | DESCRIPTION  | SYMBOL | DESCRIPTION        | SYMBOL | DESCRIPTION                      | PLAN | SECTION | SINGLE LINE | DESCRIPTION                              | PLAN | SECTION | SINGLE LINE |  |
|   | PROPOSED   |        | 90° ELBOW          |        | BALL VALVE                       |      |         |             | PRESSURE REDUCING VALVE (STRAIGHT)       |      |         |             |  |
|   | HIDDEN   |        | 45° ELBOW          |        | BUTTERFLY VALVE                  |      |         |             | PRESSURE REDUCING VALVE (ANGLED)         |      |         |             |  |
|   | BELOW GRADE  |        | 22.5° ELBOW        |        | BUTTERFLY VALVE (WAFER / LUGGED) |      |         |             | BACK PRESSURE REGULATOR VALVE (STRAIGHT) |      |         |             |  |
|   | EXISTING   |        | 11.25° ELBOW       |        | CHECK VALVE (SWING)              |      |         |             | PRESSURE GAUGE                           |      |         |             |  |
|   | EXISTING HIDDEN  |        | BASE ELBOW         |        | CHECK VALVE (BALL)               |      |         |             | AIR VALVE (COMBINATION)                  |      |         |             |  |
|   | DEMOLISH   |        | TEE                |        | DIAPHRAGM VALVE                  |      |         |             | AIR VALVE (AIR RELEASE)                  |      |         |             |  |
|   | FUTURE   |        | CROSS              |        | GATE VALVE                       |      |         |             | AIR VALVE (AIR/VACUUM)                   |      |         |             |  |
|   | CENTERLINE   |        | REDUCING 90° ELBOW |        | KNIFE GATE VALVE                 |      |         |             | FLOW METER                               |      |         |             |  |
| B | PIPE JOINTS  |        |                    |        |                                  |      |         |             |  |      |         |             | PIPE PENETRATIONS<br><br><br><br><br><br>  |
|   | DESCRIPTION  | SYMBOL |                    |        |                                  |      |         |             |  |      |         |             |  |
|   | FLANGED  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   | MECHANICAL JOINT   |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   | GROOVED  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   | PVC  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   | STEEL  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   | PUSH-ON  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   | TAP  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   | SERVICE SADDLE   |        |                    |        |                                  |      |         |             |  |      |         |             |  |
| C | GENERAL NOTES:   |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   | 1. THIS IS A STANDARD LEGEND, NOT ALL OF THE INFORMATION MAY BE USED ON THIS PROJECT.  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   | 2. ONLY FLANGED END CONNECTIONS ARE SHOWN HERE. OTHER FITTING PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS. |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
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|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
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|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
| D |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
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|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |
|   |  |        |                    |        |                                  |      |         |             |  |      |         |             |  |

100-8"-DI1-PI-1001

— FLOW STREAM IDENTIFICATION NUMBER (IF APPLICABLE)

— PIPE SERVICE, SEE PIPE SERVICE IDENTIFIERS ON SHEETS I001 P&ID LEGENDS

— PIPE MATERIAL, SEE PIPE SPECIFICATION IDENTIFIERS ON SHEETS I001 P&ID LEGENDS

— PIPE DIAMETER, INCHES

— AREA, SEE AREA IDENTIFIERS ON SHEET G002 SHEET INDEX (IF APPLICABLE)

100-TNK-101

— EQUIPMENT & VALVE IDENTIFICATION NUMBER

— EQUIPMENT & VALVE TYPE, SEE EQUIPMENT & VALVE TAG IDENTIFIERS ON SHEETS I001 & I002 P&ID LEGENDS

— AREA, SEE AREA IDENTIFIERS ON SHEET G002 SHEET INDEX (IF APPLICABLE)

WALL SPOOL (FLANGED)

WALL SPOOL (FLANGED x MJ)

LINK SEAL

DESIGNED BY: AMB

DRAWN BY: JLC

CHECKED BY: AMB

APPROVED BY: -----

CONSOL PROJECT NO.: W232520UT

ISSUED ON: JULY 2024

DRAWING NO.: D-001

0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE



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Consultant:

Engineer's Seal:



Client / Owner:



Project Title:

NAVAJO TRIBAL UTILITY  
AUTHORITY  
BOOSTER PUMP STATION

Drawing Title:

PROCESS  
NAZLINI  
  
LEGEND AND NOTES

Designed By:  
AMB

Drawn By:  
JLC

Checked By:  
AMB

Approved By:  
----

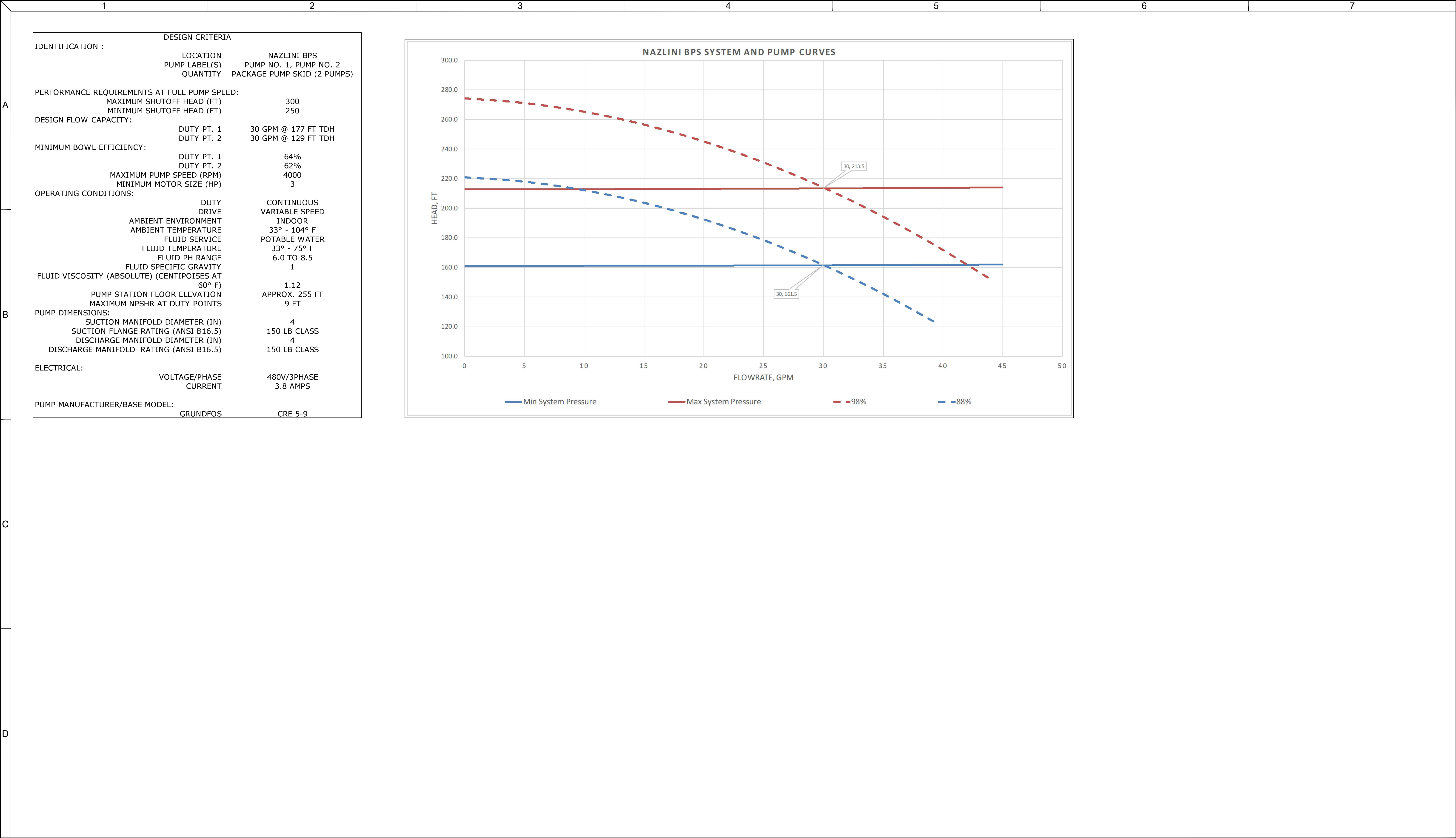
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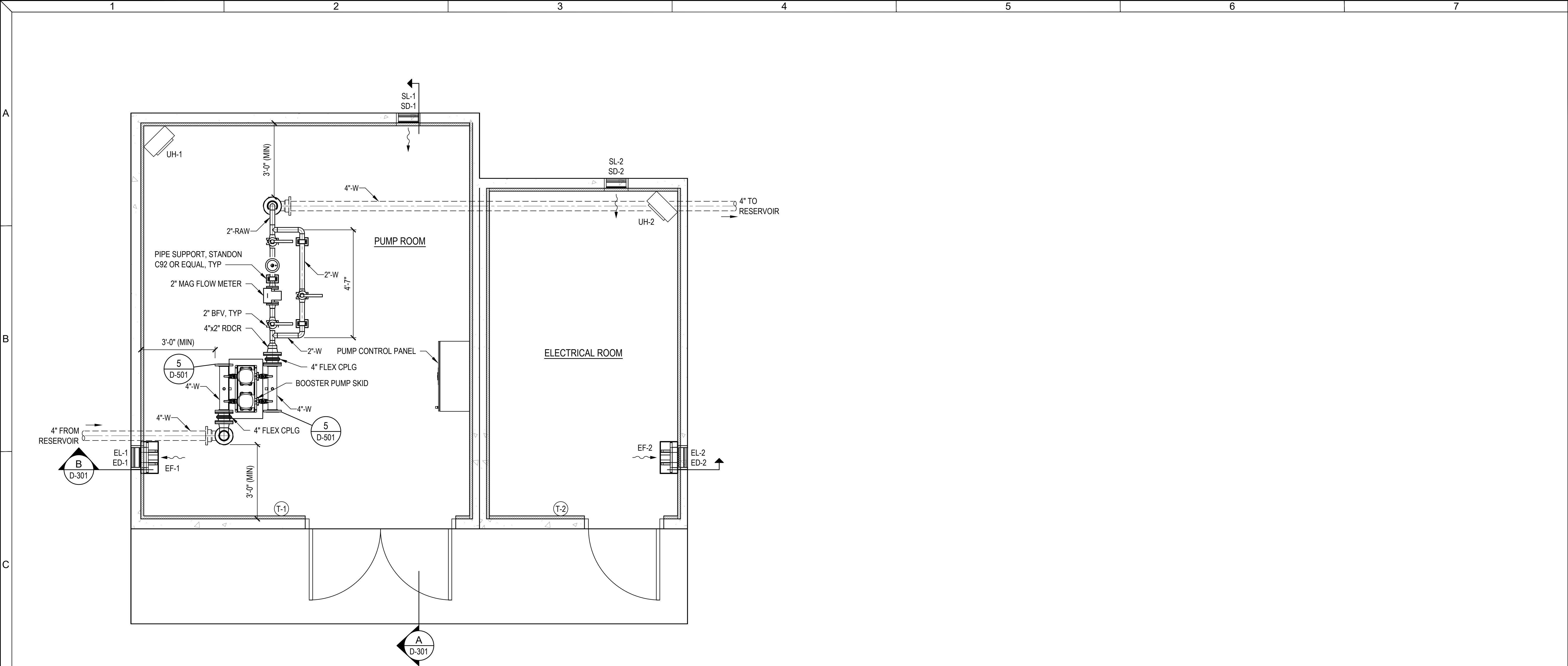
Issued On: JULY 2024

Drawing No.: D-001

01/2

1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

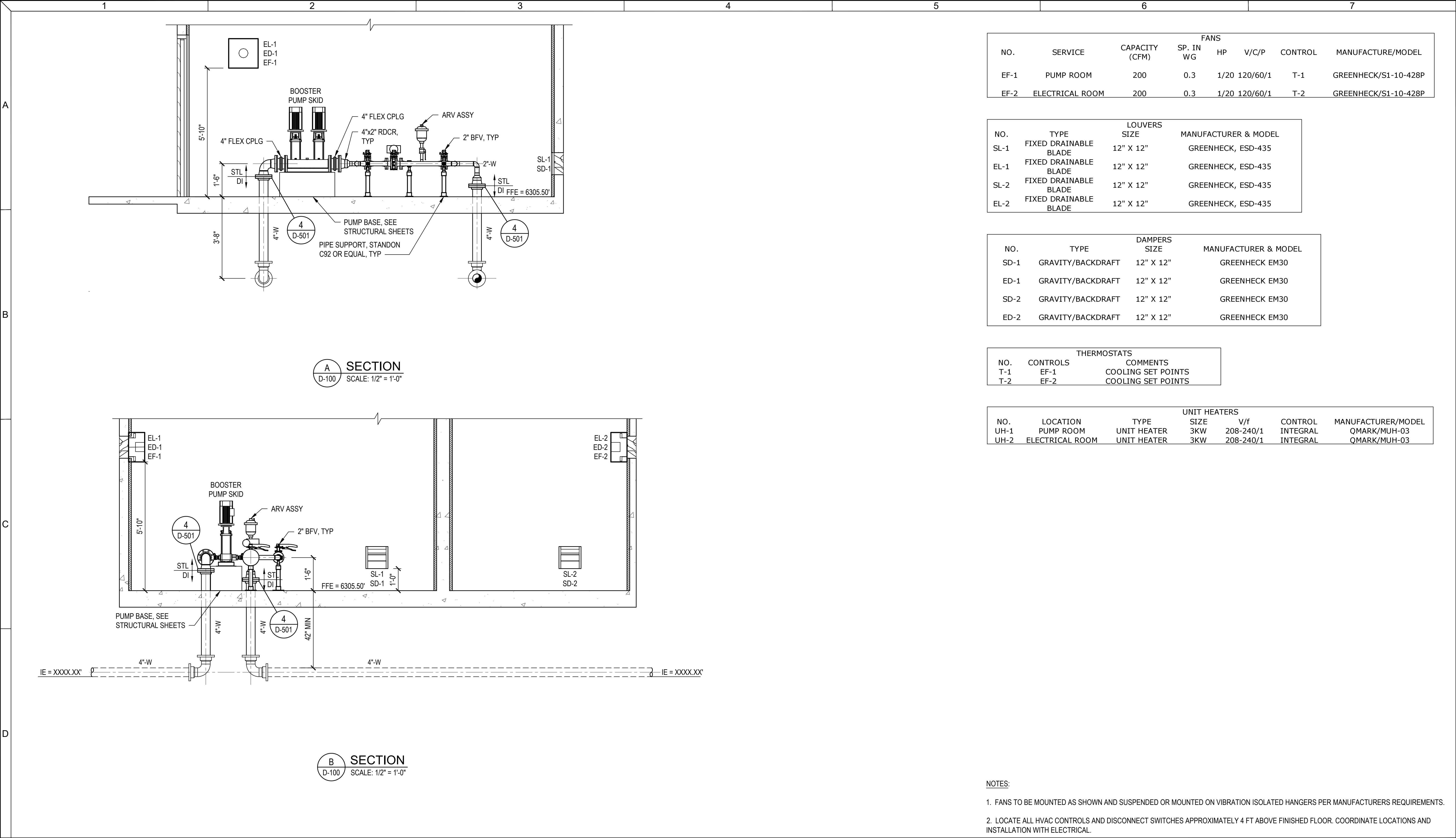




PLAN  
SCALE: 1/2" = 1'-0"

- NOTES:
1. ALL PIPING SHALL BE RESTRAINED, MATERIAL, DIAMETER AND PIPE ENDS AS SHOWN TO CONNECT WITH RESPECTIVE FITTINGS AND VALVES, SPOOL LENGTHS AS REQUIRED.
  2. SPECIAL HANGERS AND SUPPORTS ARE SHOWN IN SOME LOCATIONS. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION AND NUMBER OF ALL ADDITIONAL SUPPORTS TO PROPERLY SUPPORT PIPING, VALVES AND EQUIPMENT CONNECTIONS PREVENTING DEFLECTION AND STRESSES.
  3. INSTALL FLANGE INSULATING KITS (ISOLATION JOINT) ON ALL MAG METER FLANGES. SEE DETAIL WS-19 AND WS 19A, SHEET C-501.
  4. THRUST BLOCKS NOT SHOWN FOR CLARITY. INSTALL THRUST BLOCKS ON ALL BENDS UNDER BUILDING PER NTUA STANDARD DETAIL, SHT C-501.
  5. SEE SHEET D-110 FOR HVAC SCHEDULES.
  7. CONTRACTOR SHALL COORDINATE PRECAST FLOOR PENETRATIONS AND WALL KNOCKOUTS PRIOR TO INSTALLATION TO AVOID CONFLICTS WITH EQUIPMENT.

|   |             |                        |   |   |  |   |                      |   |
|---|-------------|------------------------|---|---|--|---|----------------------|---|
| <br><small>This document, ideas, and designs incorporated herein, are an instrument of professional service, and is not to be used, in whole or in part, for any other project without the written authorization of CONSOR.</small> | Consultant: | <b>FINAL SUBMITTAL</b> |  |  | Project Title:<br><br>NAVAJO TRIBAL UTILITY<br>AUTHORITY<br>BOOSTER PUMP STATION | Drawing Title:<br><br>PROCESS<br>NAZLINI<br><br>PUMP STATION PLAN<br>AND HVAC | Designed By:<br>AMB  | CONSOR Project No.: W232520UT                                 |
|   |             |                        |   |   |  |   | Drawn By:<br>JLC     | Issued On: JULY 2024  |
|   |             |                        |   |   |  |   | Checked By:<br>AMB   | Drawing No.: D-100  |
|   |             |                        |   |   |  |   | Approved By:<br>---- | 0 1/2 1 IF BAR DOES NOT MEASURE 1"<br>DRAWING IS NOT TO SCALE |



| FANS                 |                 |                |           |      |          |         |
|----------------------|-----------------|----------------|-----------|------|----------|---------|
| NO.                  | SERVICE         | CAPACITY (CFM) | SP. IN WG | HP   | V/C/P    | CONTROL |
| EF-1                 | PUMP ROOM       | 200            | 0.3       | 1/20 | 120/60/1 | T-1     |
| EF-2                 | ELECTRICAL ROOM | 200            | 0.3       | 1/20 | 120/60/1 | T-2     |
| MANUFACTURE/MODEL    |                 |                |           |      |          |         |
| GREENHECK/S1-10-428P |                 |                |           |      |          |         |

| LOUVERS |                       |           |                      |
|---------|-----------------------|-----------|----------------------|
| NO.     | TYPE                  | SIZE      | MANUFACTURER & MODEL |
| SL-1    | FIXED DRAINABLE BLADE | 12" X 12" | GREENHECK, ESD-435   |
| EL-1    | FIXED DRAINABLE BLADE | 12" X 12" | GREENHECK, ESD-435   |
| SL-2    | FIXED DRAINABLE BLADE | 12" X 12" | GREENHECK, ESD-435   |
| EL-2    | FIXED DRAINABLE BLADE | 12" X 12" | GREENHECK, ESD-435   |

| DAMPERS |                   |           |                      |
|---------|-------------------|-----------|----------------------|
| NO.     | TYPE              | SIZE      | MANUFACTURER & MODEL |
| SD-1    | GRAVITY/BACKDRAFT | 12" X 12" | GREENHECK EM30       |
| ED-1    | GRAVITY/BACKDRAFT | 12" X 12" | GREENHECK EM30       |
| SD-2    | GRAVITY/BACKDRAFT | 12" X 12" | GREENHECK EM30       |
| ED-2    | GRAVITY/BACKDRAFT | 12" X 12" | GREENHECK EM30       |

| THERMOSTATS |          |                    |
|-------------|----------|--------------------|
| NO.         | CONTROLS | COMMENTS           |
| T-1         | EF-1     | COOLING SET POINTS |
| T-2         | EF-2     | COOLING SET POINTS |

| UNIT HEATERS |                 |             |      |           |          |                    |
|--------------|-----------------|-------------|------|-----------|----------|--------------------|
| NO.          | LOCATION        | TYPE        | SIZE | V/f       | CONTROL  | MANUFACTURER/MODEL |
| UH-1         | PUMP ROOM       | UNIT HEATER | 3KW  | 208-240/1 | INTEGRAL | QMARK/MUH-03       |
| UH-2         | ELECTRICAL ROOM | UNIT HEATER | 3KW  | 208-240/1 | INTEGRAL | QMARK/MUH-03       |

- NOTES:
- FANS TO BE MOUNTED AS SHOWN AND SUSPENDED OR MOUNTED ON VIBRATION ISOLATED HANGERS PER MANUFACTURERS REQUIREMENTS.
  - LOCATE ALL HVAC CONTROLS AND DISCONNECT SWITCHES APPROXIMATELY 4 FT ABOVE FINISHED FLOOR. COORDINATE LOCATIONS AND INSTALLATION WITH ELECTRICAL.



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Consultant:

**FINAL SUBMITTAL**



Engineer's Seal: 44720 NATHAN EDWARD NUTTER One Signed, 7-30-24 ARIZONA, U.S.A.

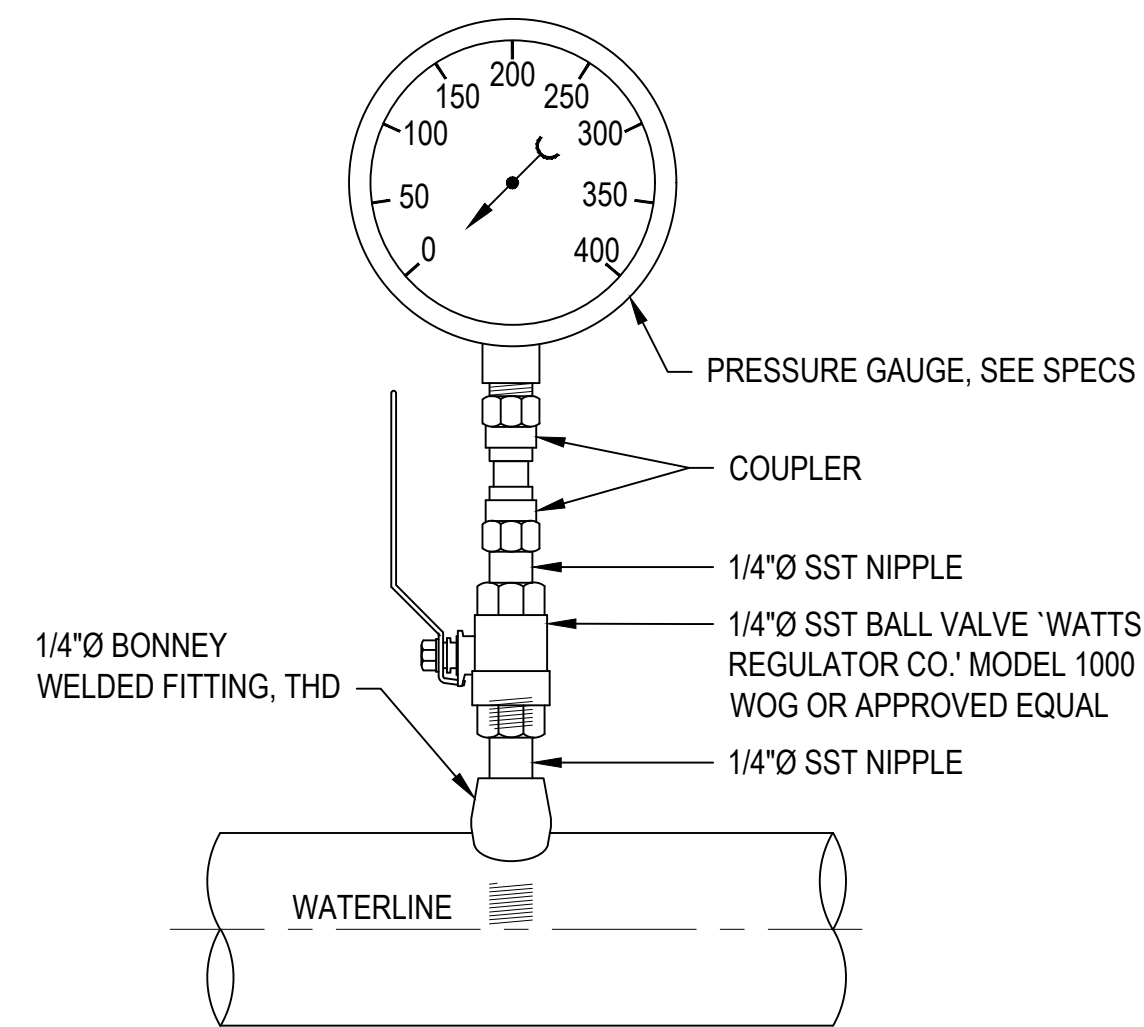


Client / Owner: NAVAJO TRIBAL UTILITY AUTHORITY UTILITIES FOR THE NAVAJO NATION

Project Title:  
**NAVAJO TRIBAL UTILITY AUTHORITY  
BOOSTER PUMP STATION**

Drawing Title:  
**PROCESS  
NAZLINI  
SECTIONS AND HVAC  
SCHEDULES**

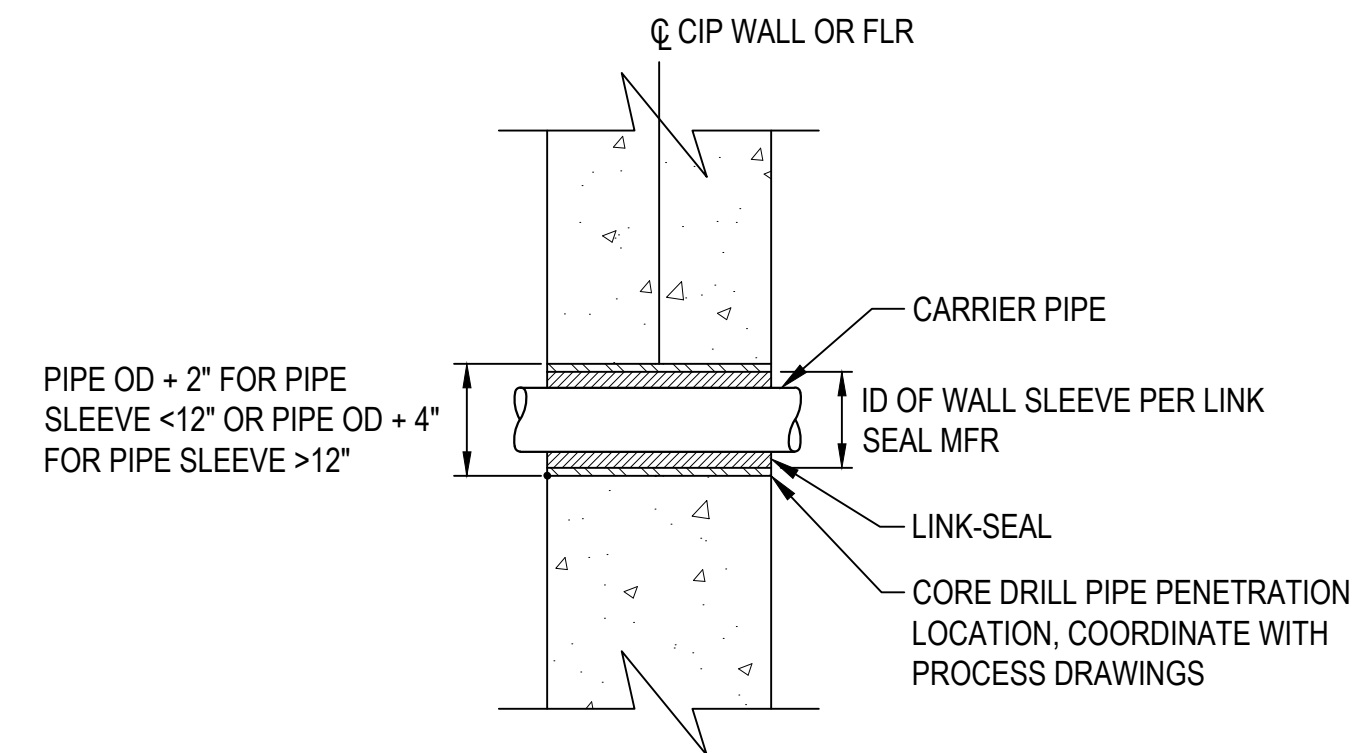
|                            |  |
|----------------------------|--|
| Designed By:<br><b>AMB</b> | CONSOR Project No.: <b>W232520UT</b>                       |
| Drawn By:<br><b>JLC</b>    | Issued On: <b>JULY 2024</b>                                |
| Checked By:<br><b>AMB</b>  | Drawing No.: <b>D-301</b>                                  |
| Approved By:<br>----       | 0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE |



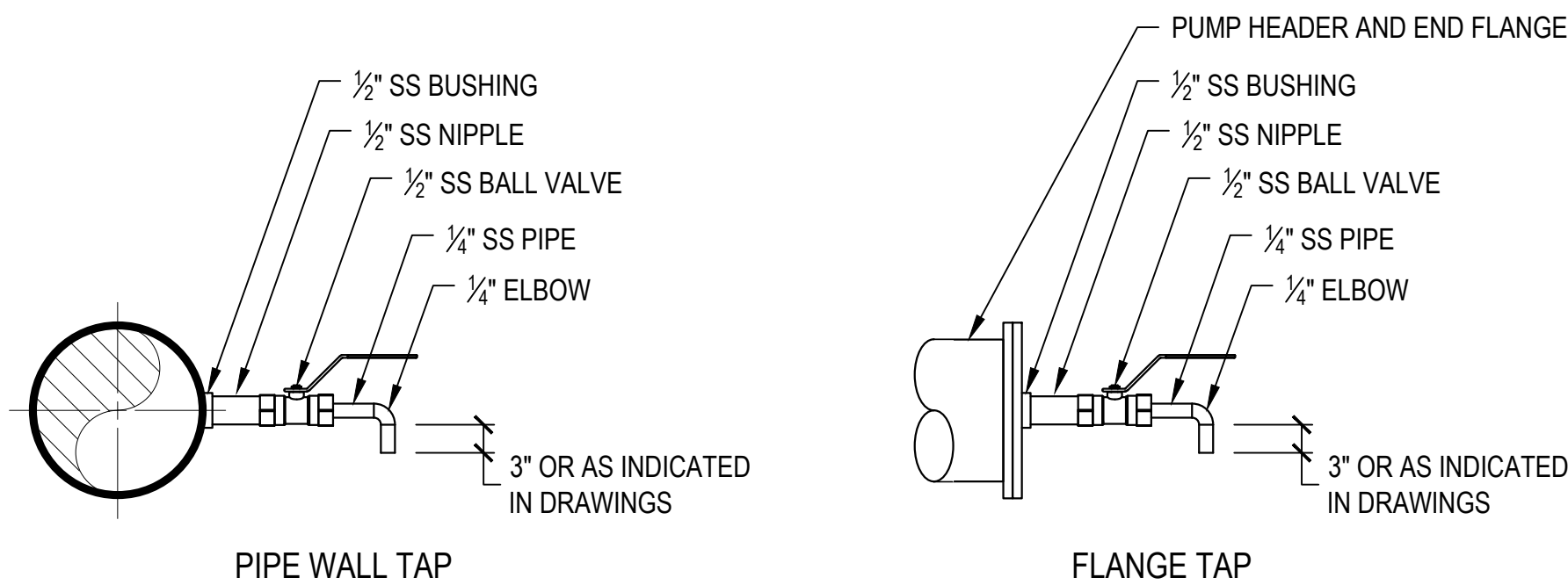
1. ORIENT UNISTRUT CHANNEL VERTICALLY OR HORIZONTALLY DEPENDING ON APPLICATION.
2. AT A MINIMUM, SUPPORT PIPE HORIZONTALLY EVERY 6 FEET AND VERTICALLY AT EVERY 10 FEET, UNLESS SHOWN OTHERWISE.
3. COORDINATE SUPPORTS WITH ELECTRICAL CONDUIT AND EQUIPMENT. SEE ELECTRICAL SHEETS.

1 PIPE EQUIPMENT SUPPORT  
SCALE: NTS

2 PRESSURE GAUGE ASSEMBLY  
- SCALE: NTS

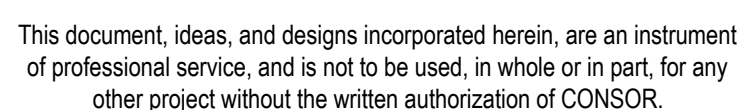


3 PIPE PENETRATION  
- SCALE: NTS

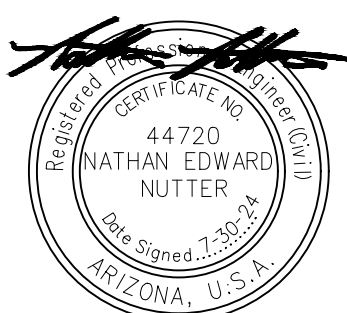


5 SAMPLE TAP  
- SCALE: NTS

1. SEE ELECTRICAL AND INSTRUMENTATION FOR PRESSURE TRANSMITTER CONNECTION DETAIL.
2. SEE ELECTRICAL AND INSTRUMENTATION FOR ADDITIONAL FLANGE GROUNDING DETAILS REQUIRED BY MAGNETIC FLOWMETER.



# FINAL SUBMITTAL



NAVAJO TRIBAL UTILITY  
AUTHORITY  
BOOSTER PUMP STATION

## DETAILS

Approved By:

0 1/2 1 IF BAR DOES NOT MEASURE 1  
DRAWING IS NOT TO SCALE

|   |               |                                   |        |  |       |                                    |  |  |  |  |  |                                  |   |  |  |  |  |  |
|---|---------------|-----------------------------------|--------|--|-------|------------------------------------|--|--|--|--|--|----------------------------------|---|--|--|--|--|--|
| A   | ABBREVIATIONS |                                   |        |  |       |                                    |  |  |  |  |  |                                  | GENERAL NOTES:<br><br>1. THE GENERAL ABBREVIATIONS ARE NOT TO BE CONFUSED WITH EQUIPMENT NUMBERING PREFIXES LISTED ON GENERAL DRAWINGS OR OTHER CONTRACT DOCUMENTS. |  |  |  |  |  |
|   | A             | AMP(S), AMPERE(S)                 | HP     | HORSEPOWER                                 | PVC   | POLYVINYL CHLORIDE                 |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | AC            | ALTERNATING CURRENT               | HTR    | HEATER                                     | PWR   | POWER                              |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | AFF           | ABOVE FINISHED FLOOR              | HV     | HIGH VOLTAGE                               | I/O   | INPUT/OUTPUT                       |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | AIC           | AMPS INTERRUPTING CAPACITY, SYMM. | HVAC   | HEATING, VENTILATION, AND AIR CONDITIONING | IPB   | INSTRUMENT PULLBOX                 |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | AL            | ALUMINUM                          | HZ     | HERTZ (CYCLES PER SECOND)                  | J, JB | JUNCTION BOX                       |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | ARCH          | ARCHITECT(URAL)                   | ICOM   | INTERCOM                                   | KCMIL | 1000 CIRCULAR MIL                  |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | ASYM          | ASYMMETRICAL                      | IMC    | INTERMEDIATE METAL CONDUIT                 | KV    | KILOVOLT                           |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | AUTO          | AUTOMATIC                         | INTLK  | INTERLOCK                                  | KVA   | KILOVOLT-AMPERE                    |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | AUX           | AUXILIARY                         | KW     | KILOWATT                                   | KVAR  | KILOVOLT-AMPERE REACTIVE           |  |  |  |  |  |                                  |   |  |  |  |  |  |
| B   | AWG           | AMERICAN WIRE GAUGE               | KWH    | KILOWATT-HOUR                              | RCPT  | RECEPTACLE                         |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | BLDG          | BUILDING                          | LCP    | LOCAL CONTROL PANEL                        | REF   | REFERENCE                          |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | C             | CONDUCTOR, CONDUIT                | LHH    | LOW VOLTAGE HANDHOLE                       | REQD  | REQUIRED                           |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | CB            | CIRCUIT BREAKER                   | LMH    | LOW VOLTAGE MANHOLE                        | RMS   | ROOT MEAN SQUARE                   |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | CKT           | CIRCUIT                           | LP     | LEGEND PLATE                               | RNG   | RUNNING                            |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | CND           | CONDUIT                           | LTG    | LIGHTING                                   | RTD   | RESISTANCE TEMPERATURE DETECTOR    |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | CNTL          | CONTROL                           | LV     | LOW VOLTAGE                                | RTU   | REMOTE TERMINAL UNIT               |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | CONC          | CONCRETE                          | M      | METER                                      | SA    | SURGE ARRESTOR                     |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | CPT           | CONTROL POWER TRANSFORMER         | MBS    | MANUAL BYPASS SWITCH                       | SCR   | SILICON CONTROLLED RECTIFIER       |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | CT            | CURRENT TRANSFORMER               | MCC    | MOTOR CONTROL CENTER                       | SD    | SMOKE DETECTOR                     |  |  |  |  |  |                                  |   |  |  |  |  |  |
| C   | CU            | COPPER                            | MCP    | MOTOR CIRCUIT PROTECTOR                    | SEC   | SECONDARY                          |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | DB            | DUCT BANK, DIRECT BURIAL          | MECH   | MECHANICAL                                 | SEL   | SELECTOR                           |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | DC            | DIRECT CURRENT                    | MFR    | MANUFACTURE(R)                             | SES   | SERVICE ENTRANCE SECTION           |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | DCU           | DISTRIBUTED CONTROL UNIT          | MH     | MANHOLE                                    | SHH   | SIGNAL HANDHOLE                    |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | DET           | DETAIL                            | MISC   | MISCELLANEOUS                              | SPEC  | SPECIFICATION                      |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | DISC          | DISCONNECT                        | MMH    | MEDIUM VOLTAGE MANHOLE                     | SR    | SINGLE RATIO                       |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | DP            | DISTRIBUTION PANEL                | MOV    | MOTOR OPERATED VALVES                      | ST    | SHORT TIME                         |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | DWG           | DRAWING                           | MPC    | MINI POWER CENTER                          | SSS   | SOLID STATE STARTER                |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | EL            | ELEVATION                         | MR     | MULTI RATIO                                | SUB   | SUBSTATION                         |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | ELEC          | ELECTRIC(AL)                      | MTS    | MANUAL TRANSFER SWITCH                     | SW    | SWITCH                             |  |  |  |  |  |                                  |   |  |  |  |  |  |
| D   | EMER          | EMERGENCY                         | MV     | MEDIUM VOLTAGE                             | SWBD  | SWITCHBOARD                        |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | EMH           | ELECTRICAL MANHOLE                | MVMC   | MEDIUM VOLTAGE MOTOR CONTROL               | SWGR  | SWITCHGEAR                         |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | EMT           | ELETRICAL METALLIC TUBING         | N/A    | NOT APPLICABLE                             | SYS   | SYSTEM                             |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | ENCL          | ENCLOSURE/ENCLOSED                | N.C.   | NORMALLY CLOSED                            | TB    | TERMINAL BOX, TERMINAL BLOCK       |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | EPB           | ELECTRICAL PULLBOX                | NEUT,N | NEUTRAL                                    | TEL   | TELEPHONE                          |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | EQUIP         | EQUIPMENT                         | NF     | NON-FUSED                                  | TEMP  | TEMPERATURE                        |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | (E)           | EXISTING                          | N.O.   | NORMALLY OPEN                              | TVSS  | TRANSIENT VOLTAGE SURGE SUPPRESSOR |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | FDR           | FEEDER                            | NO.    | NUMBER                                     | TYP   | TYPICAL                            |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | FLA           | FULL LOAD AMPS                    | NP     | NAMEPLATE                                  | U/G   | UNDERGROUND                        |  |  |  |  |  |                                  |   |  |  |  |  |  |
|   | FLEX          | FLEXIBLE CONDUIT                  | NTS    | NOT TO SCALE                               | UON   | UNLESS OTHERWISE NOTED             |  |  |  |  |  |                                  |   |  |  |  |  |  |
| SYMBOLS:  |               |                                   |        |  |       |                                    |  |  |  |  |  |                                  |   |  |  |  |  |  |
| CIRCUIT AND RACEWAYS:   |               |                                   |        |  |       | GROUNDING:                         |  |  |  |  |  | LIGHTING CONTROL AND CIRCUITING: |   |  |  |  |  |  |
| 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# CONSTRUCTION SET

Engineer's Seal:



Client / Owner:



Project Title:

## NAVAJO TRIBAL UTILITY AUTHORITY B-1 BOOSTER BUMP STATION

Drawing Title:

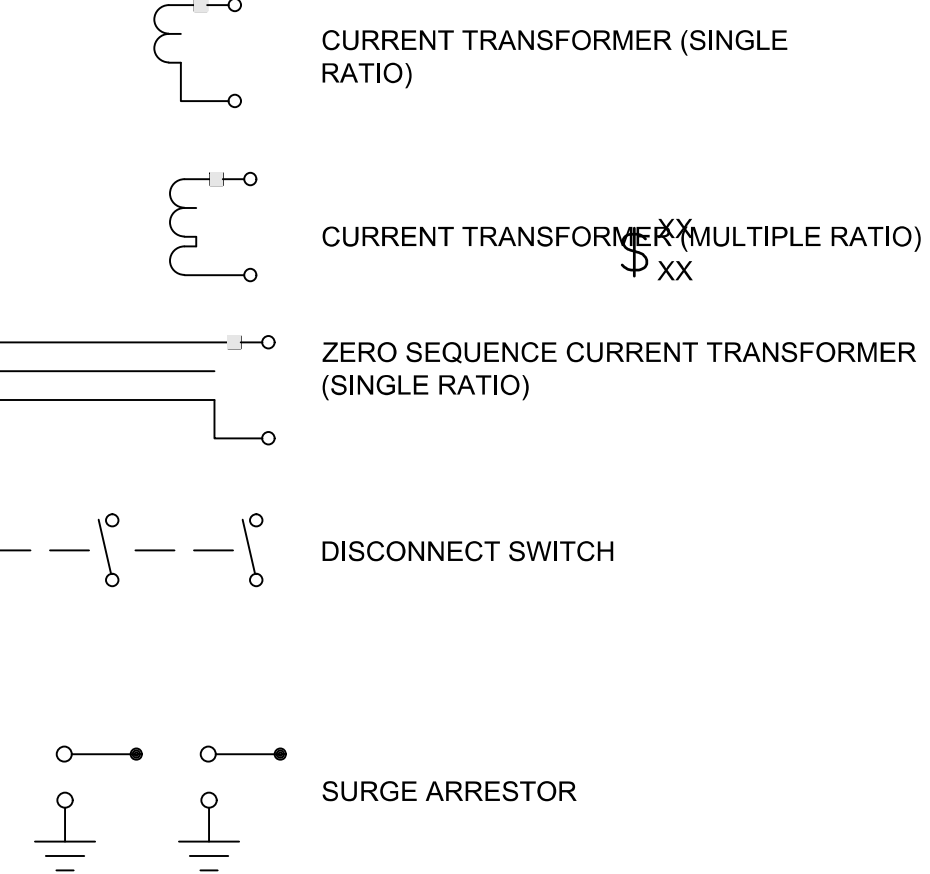
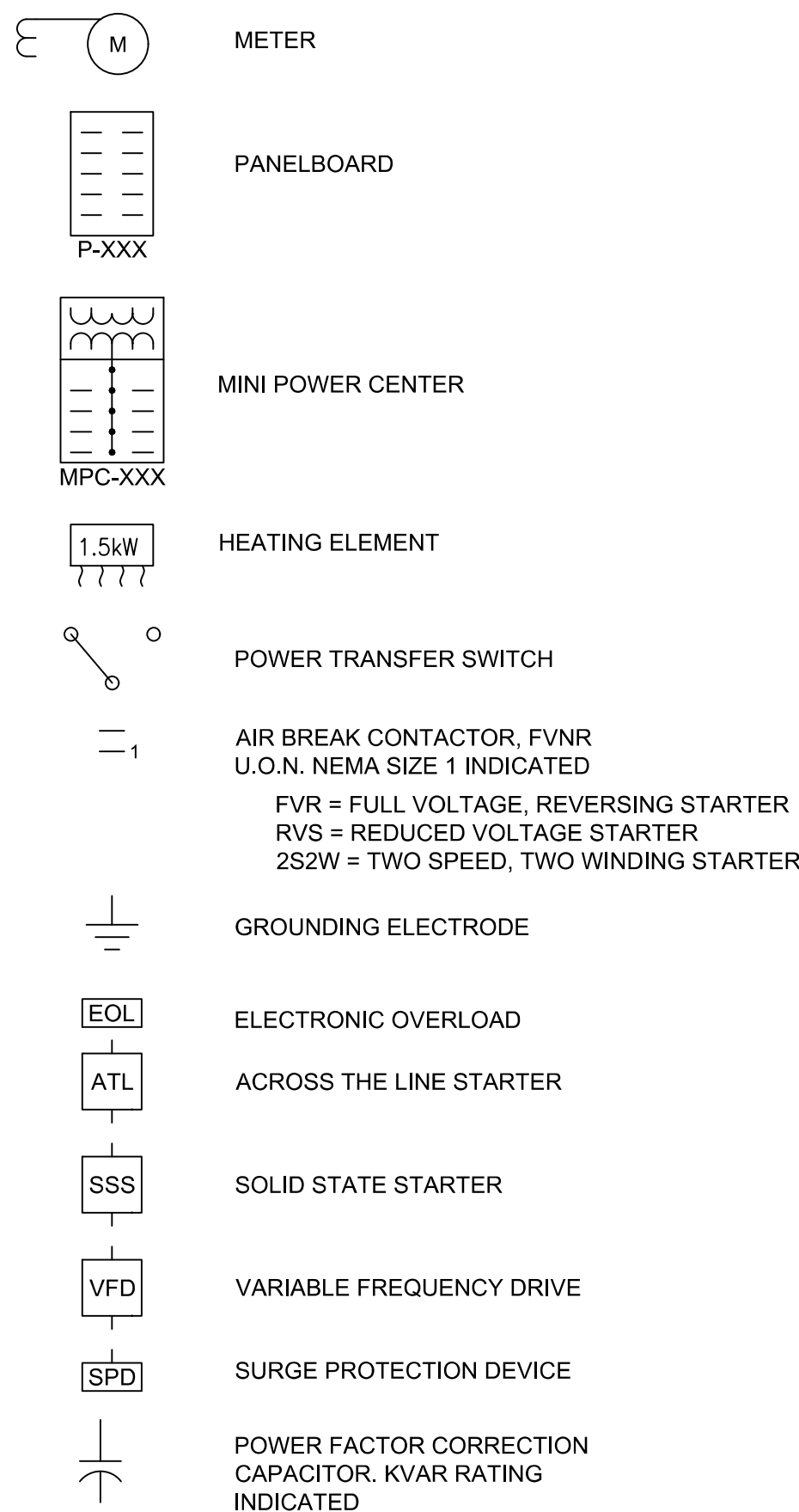
## ELECTRICAL NAZLINI LEGEND & SYMBOLS SHEET - I

|              |     |                                    |                         |
|--------------|-----|------------------------------------|-------------------------|
| Designed By: | RPO | CONSOR Project No.:                | W23250UT                |
| Drawn By:    | RPO | Issued On:                         | JULY 2024               |
| Checked By:  | MAB | Drawing No.:                       | E001                    |
| Approved By: | MAB | 0 1/2 1 IF BAR DOES NOT MEASURE 1" | DRAWING IS NOT TO SCALE |

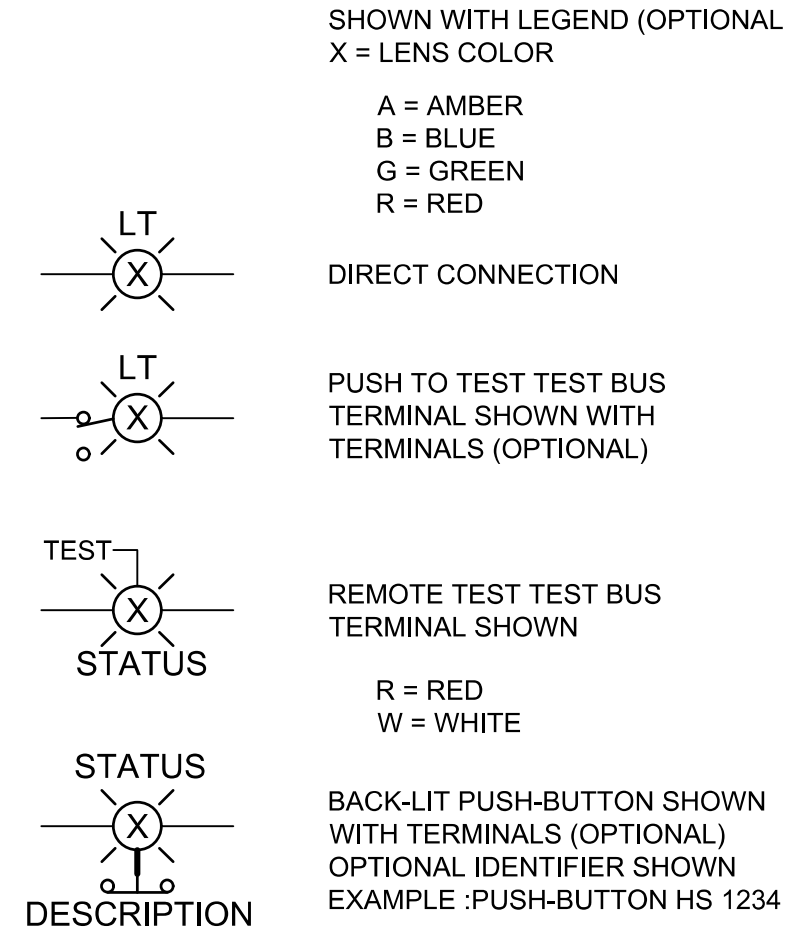
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## CONTROL DIAGRAMS

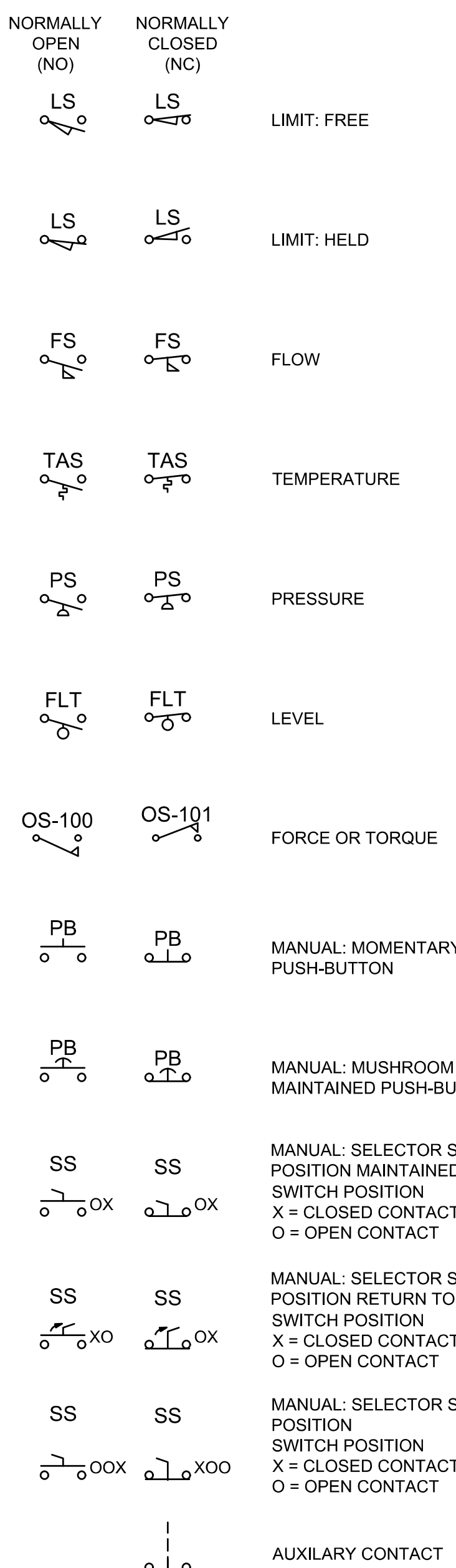
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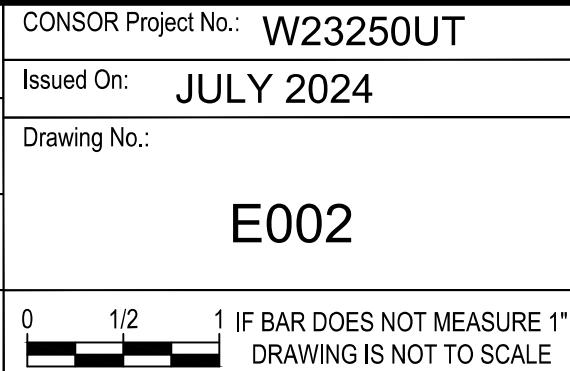
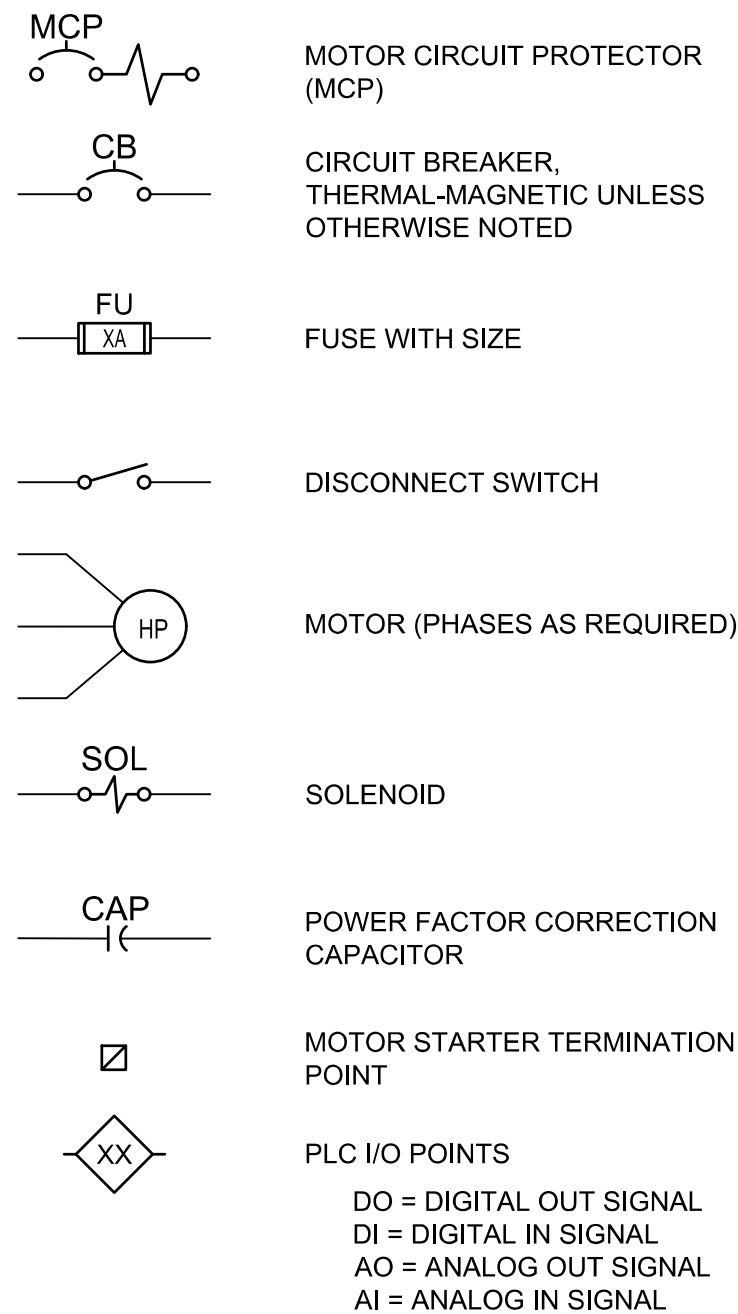
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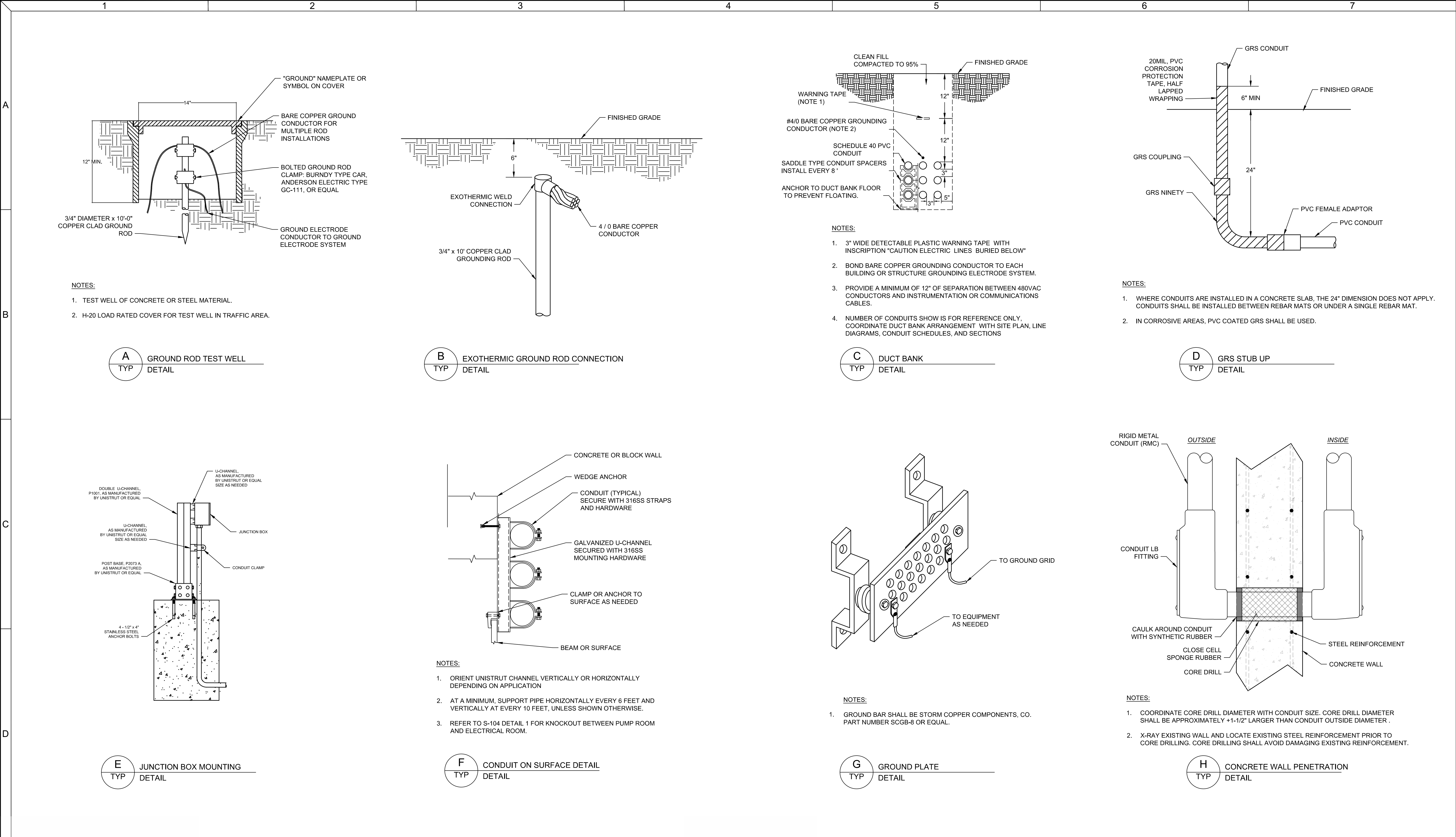


SWITCHES:  
SHOWN WITH LOCATION REFERENCE (OPTIONAL)



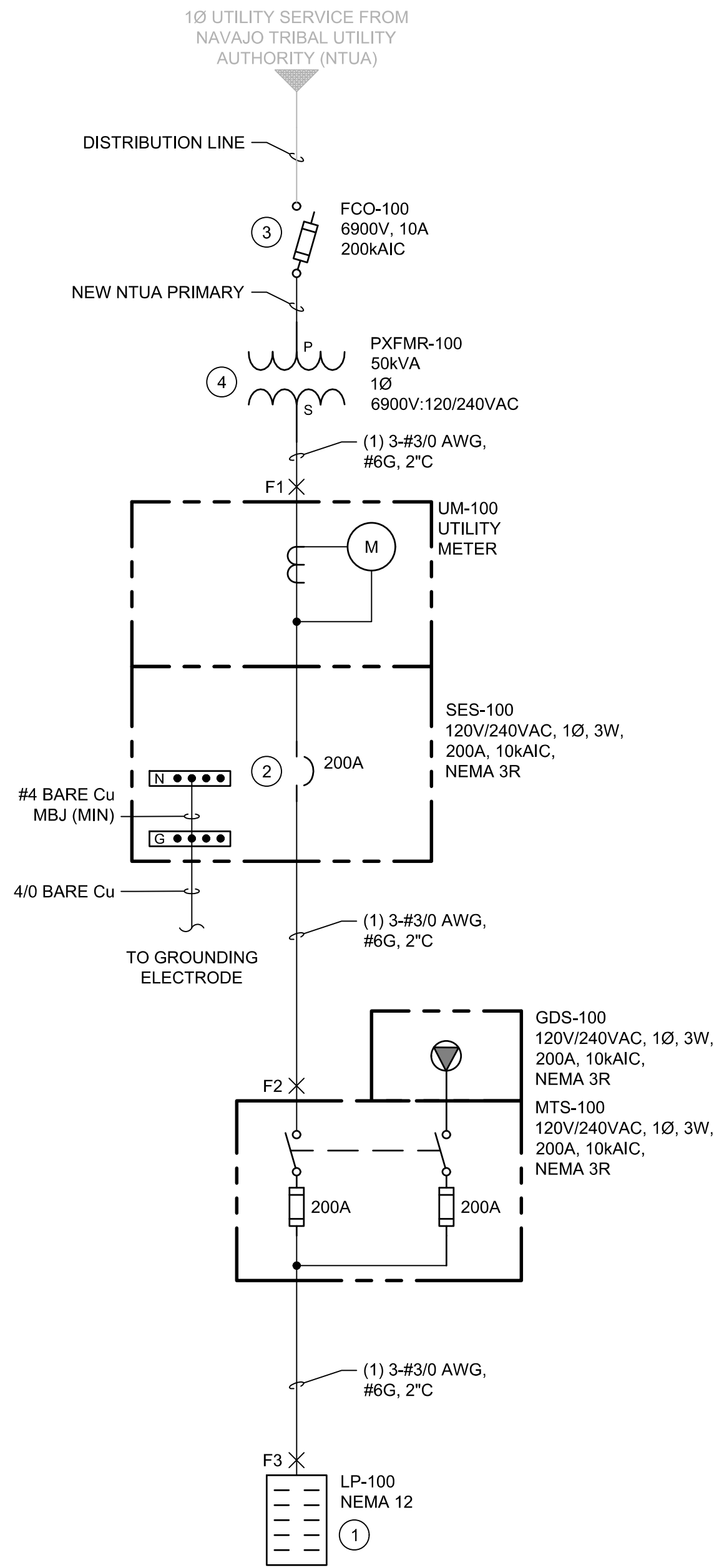
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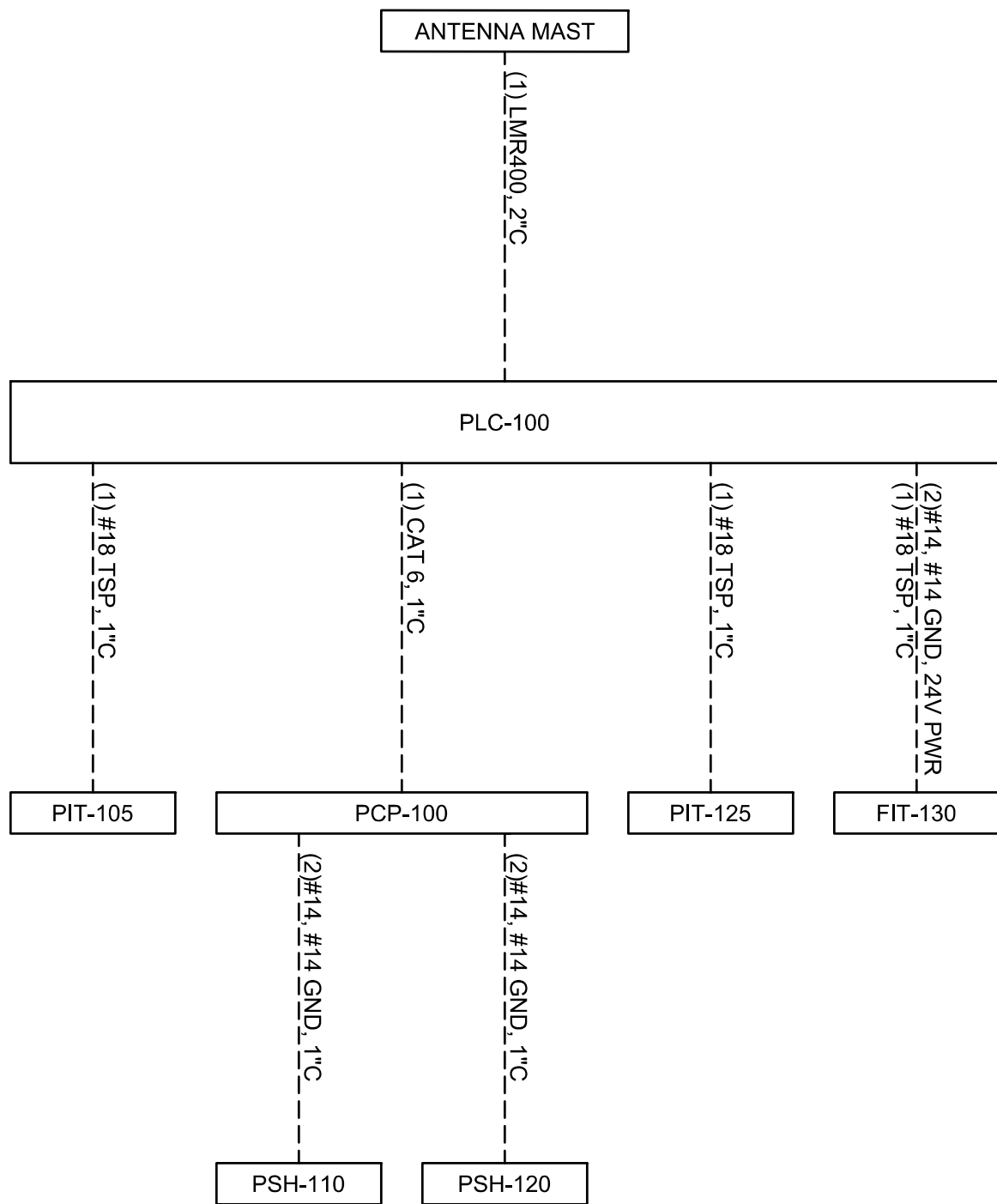




A  
B  
C  
D



SINGLE LINE DIAGRAM



CONDUIT BLOCK DIAGRAM

GENERAL NOTES:

- A. SHORT CIRCUIT INTERRUPTING AND PROTECTING DEVICES SHALL HAVE A SHORT CIRCUIT INTERRUPTING RATING EQUAL TO OR GREATER THAN THE AVAILABLE SHORT CIRCUIT ON THE BUS.

KEY NOTES:

- 1 SEE PANEL SCHEDULE FOR MORE INFORMATION.
- 2 SES BREAKER SHALL BE 100% RATED.
- 3 COORDINATE PRIMARY TRANSFORMER FUSE SIZE WITH NTUA.
- 4 TRANSFORMER CONFIGURATION BY UTILITY.

|   |  |  |  |  |   |   |                            |                                     |
|---|--|--|--|--|---|---|----------------------------|-------------------------------------|
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|   | Drawn By:<br><b>RPO</b>  |  | Issued On: <b>JULY 2024</b>  |  |   |   |                            |                                     |
|   | Checked By:<br><b>MAB</b>  |  | Drawing No.: <b>E010</b>   |  |   |   |                            |                                     |
|   | Approved By:<br><b>MAB</b>   |  | <small>0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE</small><br> |  |   |   |                            |                                     |

1

2

3

4

5

6

7

GENERAL NOTES:

A. SHORT CIRCUIT INTERRUPTING AND PROTECTING DEVICES SHALL HAVE A SHORT CIRCUIT INTERRUPTING RATING EQUAL TO OR GREATER THAN THE AVAILABLE SHORT CIRCUIT ON THE BUS.

KEY NOTES:

① WIRE AND CONDUIT SIZE INDICATED ON SITE PLAN.

LP-100


| VOLTS                    | 120/240 | VAC       |    | PH         | 1      | FED FROM | SES-100 |
|--------------------------|---------|-----------|----|------------|--------|----------|---------|
| MAIN BREAKER             | 200     | A         |    | W          | 3      | LOCATION | E-ROOM  |
| BUS RATING               | 200     | A         |    | AIC RATING | 22     | KA       | SURFACE |
| LOAD DESCRIPTION         | BRK     | LOAD TYPE | No | VA         |        |          |         |
|                          |         |           |    | A          | B      |          |         |
| ELEC ROOM - LIGHTS       | 20      | CONT      | 1  | 80         |        | 75       | EF-100  |
| ELEC ROOM - RECEPTACLES  | 20      | NC        | 3  |            | 360    |          | EF-200  |
| PUMP ROOM - LIGHTS       | 20      | CONT      | 5  | 80         |        | 3000     | UH-100  |
| PUMP ROOM - RECEPTACLES  | 20      | NC        | 7  |            | 360    | 3000     | UH-200  |
| OUTSIDE - LIGHTS         | 20      | CONT      | 9  | 71         |        | 1200     | RTU-100 |
| OUTSIDE - RECEPTACLES    | 20      | NC        | 11 |            | 360    | 0        | SPARE   |
| PCP-100                  | 70      | CONT      | 13 | 8400       |        | 0        | SPARE   |
|                          | 70      | CONT      | 15 |            | 8400   |          |         |
| SPACE                    |         |           | 17 | 0          |        | 0        | SPACE   |
| SPACE                    |         |           | 19 |            | 0      | 0        | SPACE   |
| SPACE                    |         |           | 21 | 0          |        | 0        | SPACE   |
| SPACE                    |         |           | 23 |            | 0      | 0        | SPACE   |
| SPACE                    |         |           | 25 | 0          |        | 0        | SPACE   |
| SPACE                    |         |           | 27 |            | 0      | 0        | SPACE   |
| SPACE                    |         |           | 29 | 0          |        | 0        | SPACE   |
| SPACE                    |         |           | 31 |            | 0      | 0        | SPACE   |
| SPACE                    |         |           | 33 | 0          |        | 0        | SPACE   |
| SPACE                    |         |           | 35 |            | 0      | 0        | SPACE   |
| SPACE                    |         |           | 37 | 0          |        | 0        | SPACE   |
| SPACE                    |         |           | 39 |            | 0      | 0        | SPACE   |
| SPACE                    |         |           | 41 | 0          |        | 0        | SPACE   |
| NON-CONTINUOUS LOADS KVA |         |           |    | 0.00       | 1.08   | NOTES:   |         |
| CONTINUOUS LOADS KVA     |         |           |    | 16.13      | 14.34  |          |         |
| PHASE TOTAL KVA          |         |           |    | 16.13      | 15.42  |          |         |
| TOTAL KVA                |         |           |    |            | 31.56  |          |         |
| TOTAL AMPS               |         |           |    |            | 131.48 |          |         |

SHORT CIRCUIT CALCULATIONS

| SOURCE    | TO EQUIPMENT | FAULT POINT | AVAILABLE SCA | V (P-P) | COND. SIZE | TYPE | NO. OF RUNS | RUN LENGTH | CONDUIT TYPE | NO. OF COND. | CONSTANT |      |      |        |
|-----------|--------------|-------------|---------------|---------|------------|------|-------------|------------|--------------|--------------|----------|------|------|--------|
|           |              |             |               |         |            |      |             |            |              |              | C        | f    | m    | l(sca) |
| PXFMR-100 | SES-100      | F1          | -             | 240     | 3/0        | Cu   | 1           | 50         | PVC          | 1/C          | 13,923   | -    | -    | 4,167  |
| SES-100   | MTS-100      | F2          | 4,167         | 240     | 3/0        | Cu   | 1           | 10         | PVC          | 1/C          | 13,923   | 0.02 | 0.98 | 4,079  |
| MTS-100   | LP-100       | F3          | 4,079         | 240     | 3/0        | Cu   | 1           | 10         | PVC          | 1/C          | 13,923   | 0.02 | 0.98 | 3,994  |


LUMINAIRE SCHEDULE

| TYPE OR MARK  | DESCRIPTION                             | MFR                 | CATALOG NUMBER                          | MOUNT     | LAMP DATA            |    |      |        | VAC | NOTES |
|---|---|---------------------|---|-----------|----------------------|----|------|--------|-----|-------|
|   |   |                     |   |           | QUAN.                | VA | TYPE | LUMENS |     |       |
| A   | 4' LED STRIP FOR WET LOCATIONS          | LITHONIA            | FEM L48 3000LM LPAFL MD MVOLT 30K 80CRI | S         | 4                    | 29 | LED  | 3,032  | 120 | 1     |
| B   | WALL PACK IP66 WET LOCATIONS            | LITHONIA            | WPX0 LED ALO SWW2 MVOLT PE DDBXD M2     | E (10')   | 5                    | 13 | LED  | 1,650  | 120 | 2     |
| EX  | SINGLE FACE CEILING MOUNT LED EXIT SIGN | LITHONIA            | WLTE W 1 R EL                           | W (10')   | 1                    | 3  | LED  |        | 120 |       |
| MOUNTING  |   |                     |   | LAMP TYPE |                      |    |      |        |     |       |
| R - RECESSED  |   | D - DRYWALL         |   | F         | FLUORESCENT          |    |      |        |     |       |
| S - SURFACE   |   | G - GRID            |   | CF        | COMPACT FLUORESCENT  |    |      |        |     |       |
| W - WALL  |   | C - CONDUIT         |   | LED       | LIGHT EMITTING DIODE |    |      |        |     |       |
| P - PENDANT   |   | PL(x) - POLE        |   | MH        | METAL HALIDE         |    |      |        |     |       |
| E - EXTERIOR  |   | (x') - MOUNT HEIGHT |   | HPS       | HIGH PRESSURE SODIUM |    |      |        |     |       |
|   |   |                     |   | LPS       | LOW PRESSURE SODIUM  |    |      |        |     |       |
| GENERAL NOTES:  |   |                     |   |           |                      |    |      |        |     |       |
| A) REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.   |   |                     |   |           |                      |    |      |        |     |       |
| B) SUBMIT EQUALS FOR APPROVAL.  |   |                     |   |           |                      |    |      |        |     |       |
| NOTES:  |   |                     |   |           |                      |    |      |        |     |       |
| 1) FIXTURES WITH EMERGENCY BATTERY PACKS TO BE FULLY SWITCHABLE UNLESS NOTED AS NIGHT LIGHT (NL). PROVIDE UNSWITCHED HOT FOR CHARGER. |   |                     |   |           |                      |    |      |        |     |       |
| 2) FURNISH FIXTURE WITH BUTTON TYPE PHOTOCELL FOR ON/OFF CONTROL.   |   |                     |   |           |                      |    |      |        |     |       |



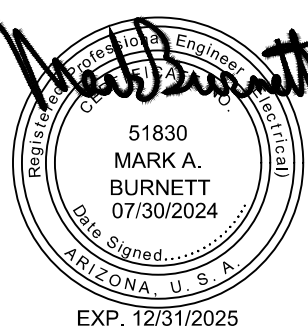
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CONSTRUCTION SET



Engineer's Seal:  
51830  
MARK A. BURNETT  
07/30/2024  
ALABAMA, U.S.A.  
EXP. 12/31/2025



Client / Owner:

Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY  
B-1 BOOSTER BUMP STATION

Drawing Title:

ELECTRICAL  
NAZLINI  
SCHEDULES & CALCULATIONS

Designed By:  
RPO

Drawn By:  
RPO

Checked By:  
MAB

Approved By:  
MAB

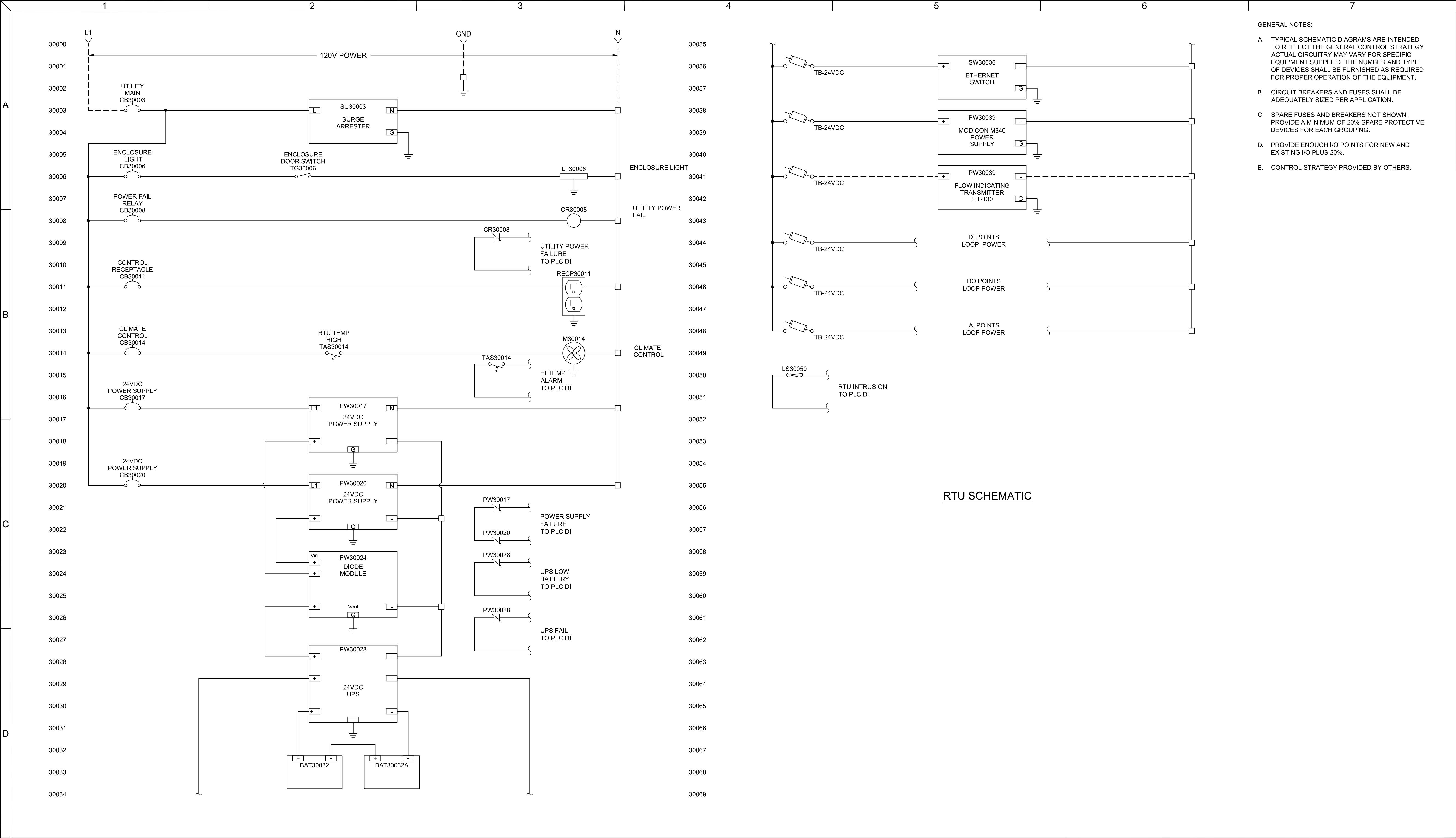
CONSOR Project No.: W23250UT

Issued On: JULY 2024

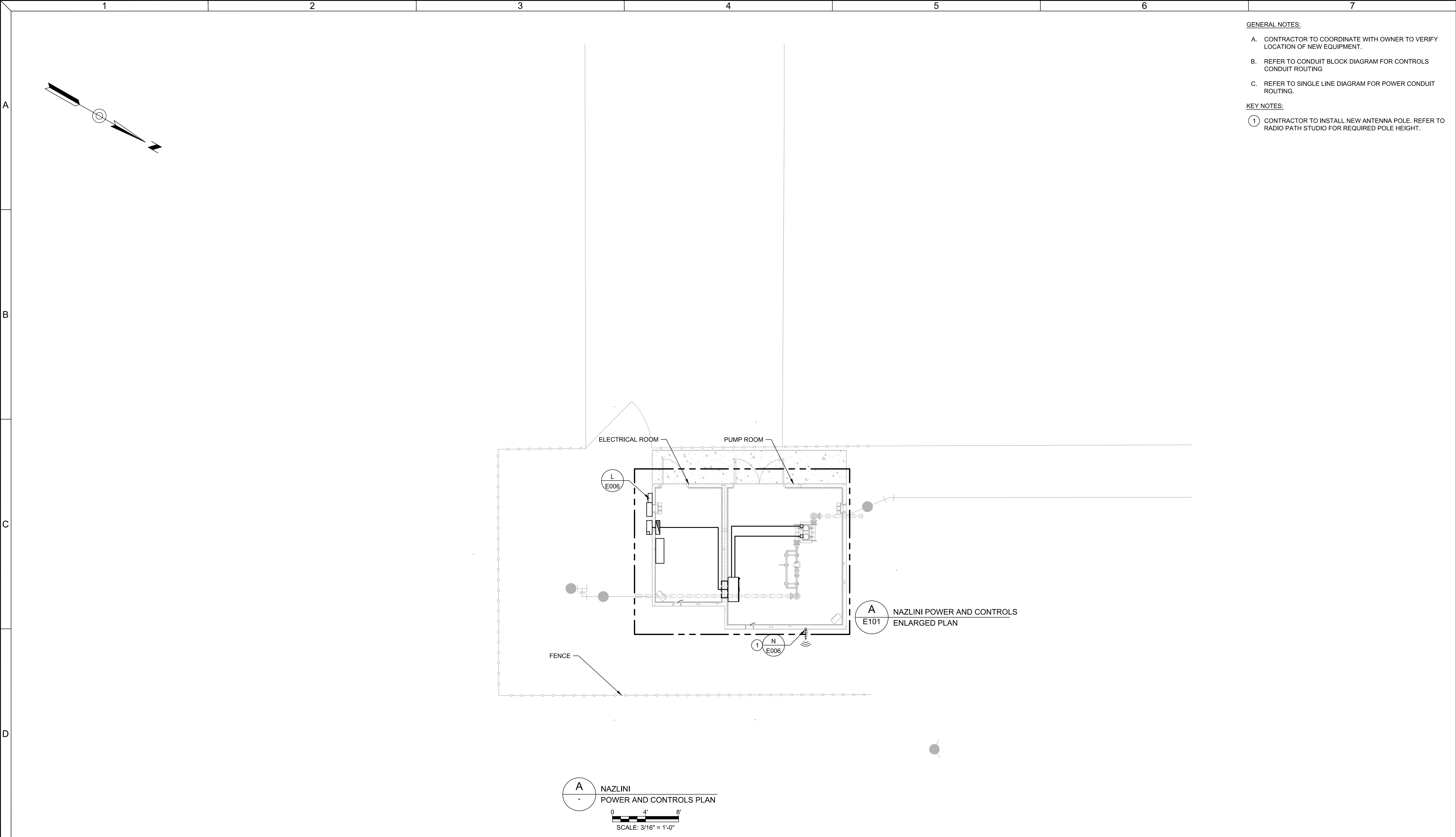
Drawing No.: E011

0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

Drawing Path and Name: C:\Users\Public\CEI Dropbox\Projects\2023\230073 CON - NTUA Four BFS Elec. Eng\8.0 Design\230073 CON - NTUA NAZLINI\E011.dwg, Plotted Date: July 30, 2024 9:51 PM By: Ryan Oliver







- GENERAL NOTES:
- A. CONTRACTOR TO COORDINATE WITH OWNER TO VERIFY LOCATION OF NEW EQUIPMENT.
  - B. REFER TO CONDUIT BLOCK DIAGRAM FOR CONTROLS CONDUIT ROUTING
  - C. REFER TO SINGLE LINE DIAGRAM FOR POWER CONDUIT ROUTING.
- KEY NOTES:
- 1 CONTRACTOR TO INSTALL NEW ANTENNA POLE. REFER TO RADIO PATH STUDIO FOR REQUIRED POLE HEIGHT.



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Consultant:



(480) 588-8021 | WWW.CANFIELDENGIN.COM

CONSTRUCTION SET



Client / Owner:



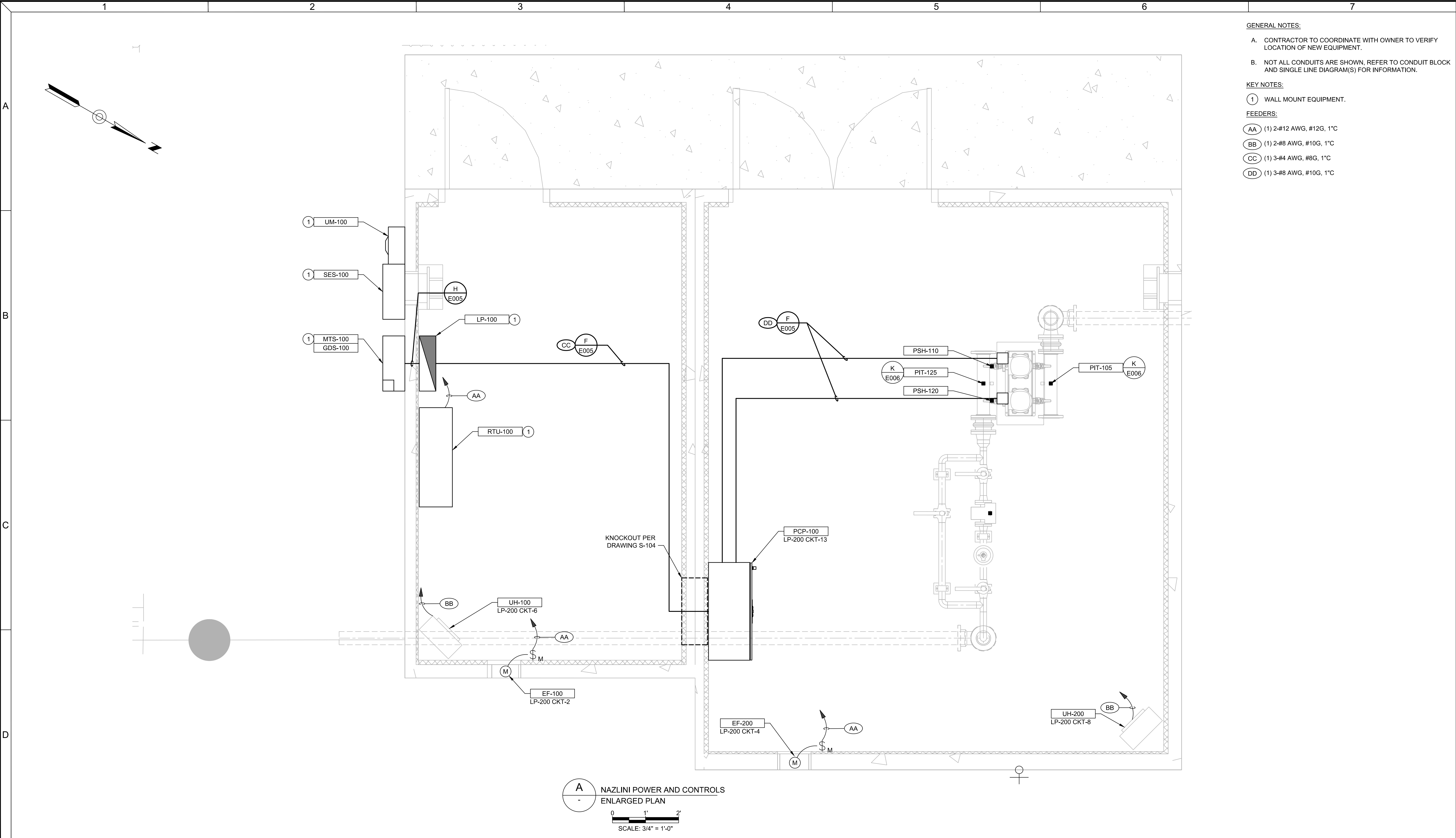
Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY  
B-1 BOOSTER BUMP STATION

Drawing Title:

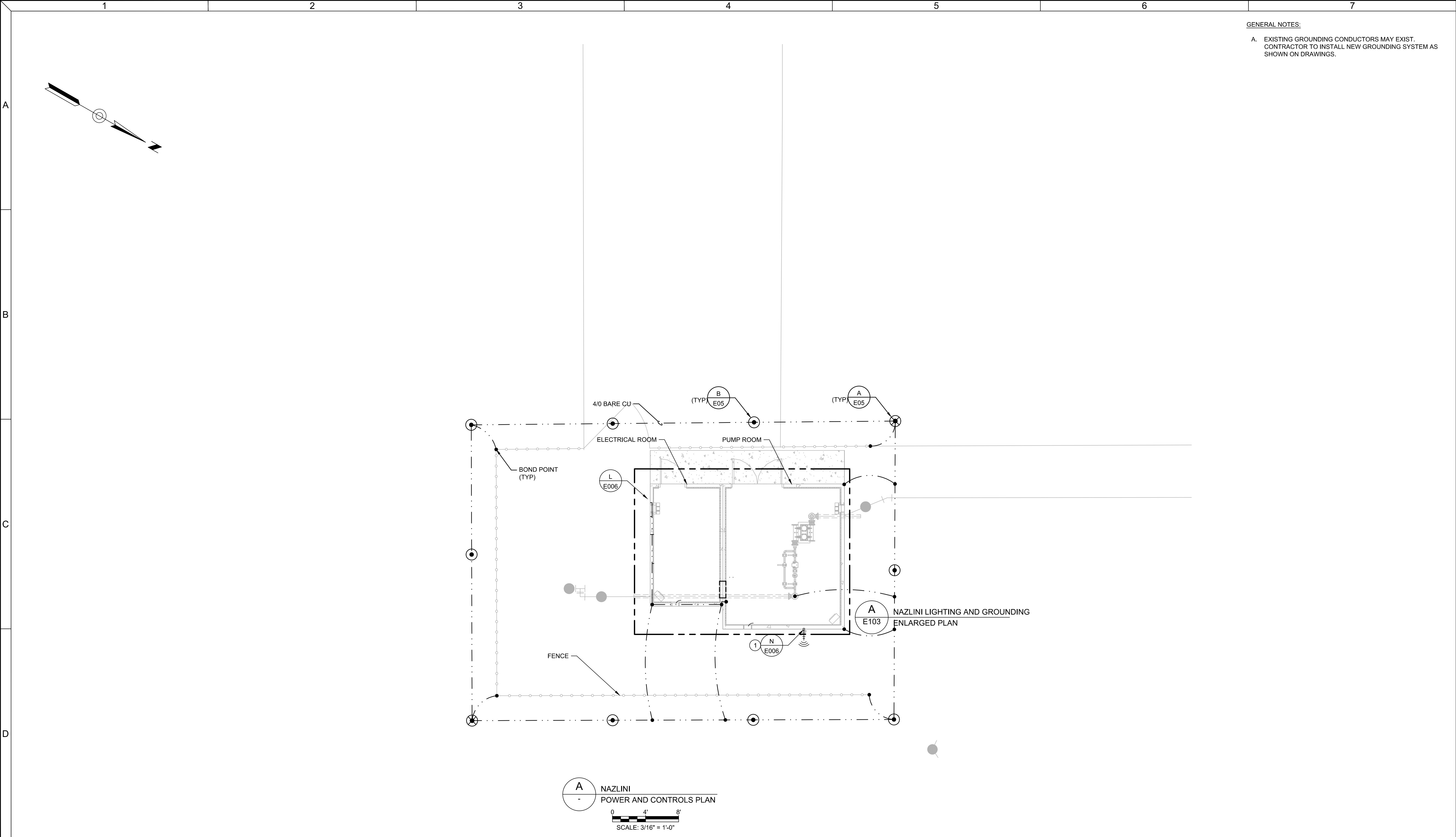
ELECTRICAL  
NAZLINI  
  
SITE PLAN  
POWER & CONTROLS

|                     |  |
|---------------------|--|
| Designed By:<br>RPO | CONSOR Project No.: W23250UT                               |
| Drawn By:<br>RPO    | Issued On: JULY 2024                                       |
| Checked By:<br>MAB  | Drawing No.: E100  |
| Approved By:<br>MAB | 0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE |



- GENERAL NOTES:
- A. CONTRACTOR TO COORDINATE WITH OWNER TO VERIFY LOCATION OF NEW EQUIPMENT.
- B. NOT ALL CONDUITS ARE SHOWN, REFER TO CONDUIT BLOCK AND SINGLE LINE DIAGRAM(S) FOR INFORMATION.
- KEY NOTES:
- ① WALL MOUNT EQUIPMENT.
- FEEDERS:
- AA (1) 2-#12 AWG, #12G, 1" C
- BB (1) 2-#8 AWG, #10G, 1" C
- CC (1) 3-#4 AWG, #8G, 1" C
- DD (1) 3-#8 AWG, #10G, 1" C

|  |             |  |                         |                  |                 |                |                |              |  |
|--|-------------|--|-------------------------|------------------|-----------------|----------------|----------------|--------------|--|
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|  |             |  |                         |                  |                 |                | RPO            | W23250UT     |  |
|  |             |  |                         |                  |                 |                | Drawn By:      | Issued On:   |  |
|  |             |  |                         |                  |                 |                | RPO            | JULY 2024    |  |
|  |             |  |                         | Checked By:      |                 |                |                | MAB          | Drawing No.:   |
|  |             |  |                         |                  |                 |                |                |              | E101   |
|  |             |  |                         | Approved By:     |                 |                |                | MAB          | 0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE |



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**CONSTRUCTION SET**

Engineer's Seal:

Client / Owner:

Project Title:

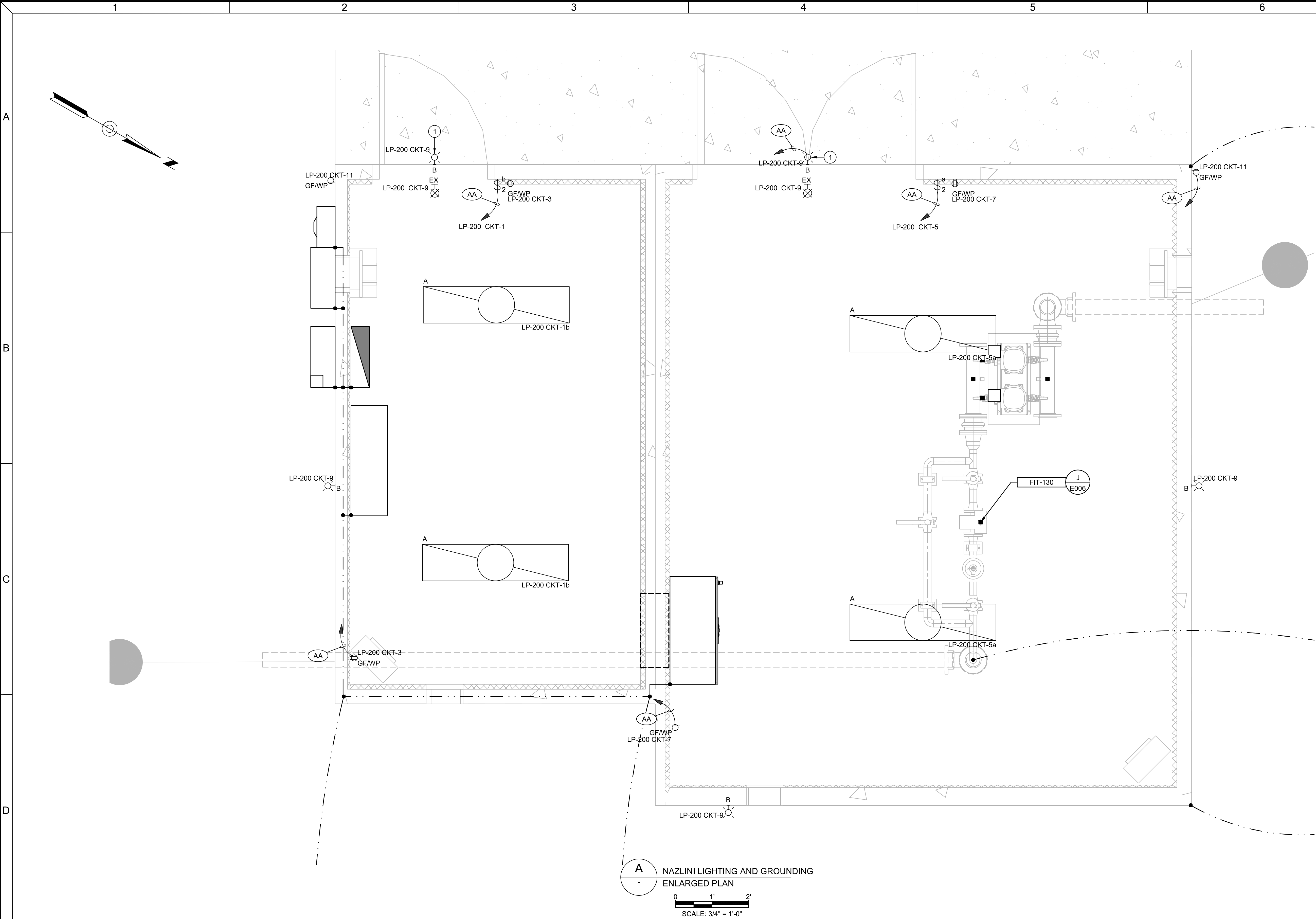
NAVAJO TRIBAL UTILITY AUTHORITY  
B-1 BOOSTER BUMP STATION

Drawing Title:

ELECTRICAL  
NAZLINI

SITE PLAN  
LIGHTING & GROUNDING

|                            |  |
|----------------------------|--|
| Designed By:<br><b>RPO</b> | CONSOR Project No.: <b>W23250UT</b>                        |
| Drawn By:<br><b>RPO</b>    | Issued On: <b>JULY 2024</b>                                |
| Checked By:<br><b>MAB</b>  | Drawing No.: <b>E102</b>                                   |
| Approved By:<br><b>MAB</b> | 0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE |



- GENERAL NOTES:**
- A. EXISTING GROUNDING CONDUCTORS MAY EXIST. CONTRACTOR TO INSTALL NEW GROUNDING SYSTEM AS SHOWN ON DRAWINGS.
  - B. ALL NEW EQUIPMENT SHALL BE A PART OF A CONTIGUOUS GROUND SYSTEM.
- KEY NOTES:**
- ① WALL MOUNT LIGHT FIXTURE ABOVE DOOR.

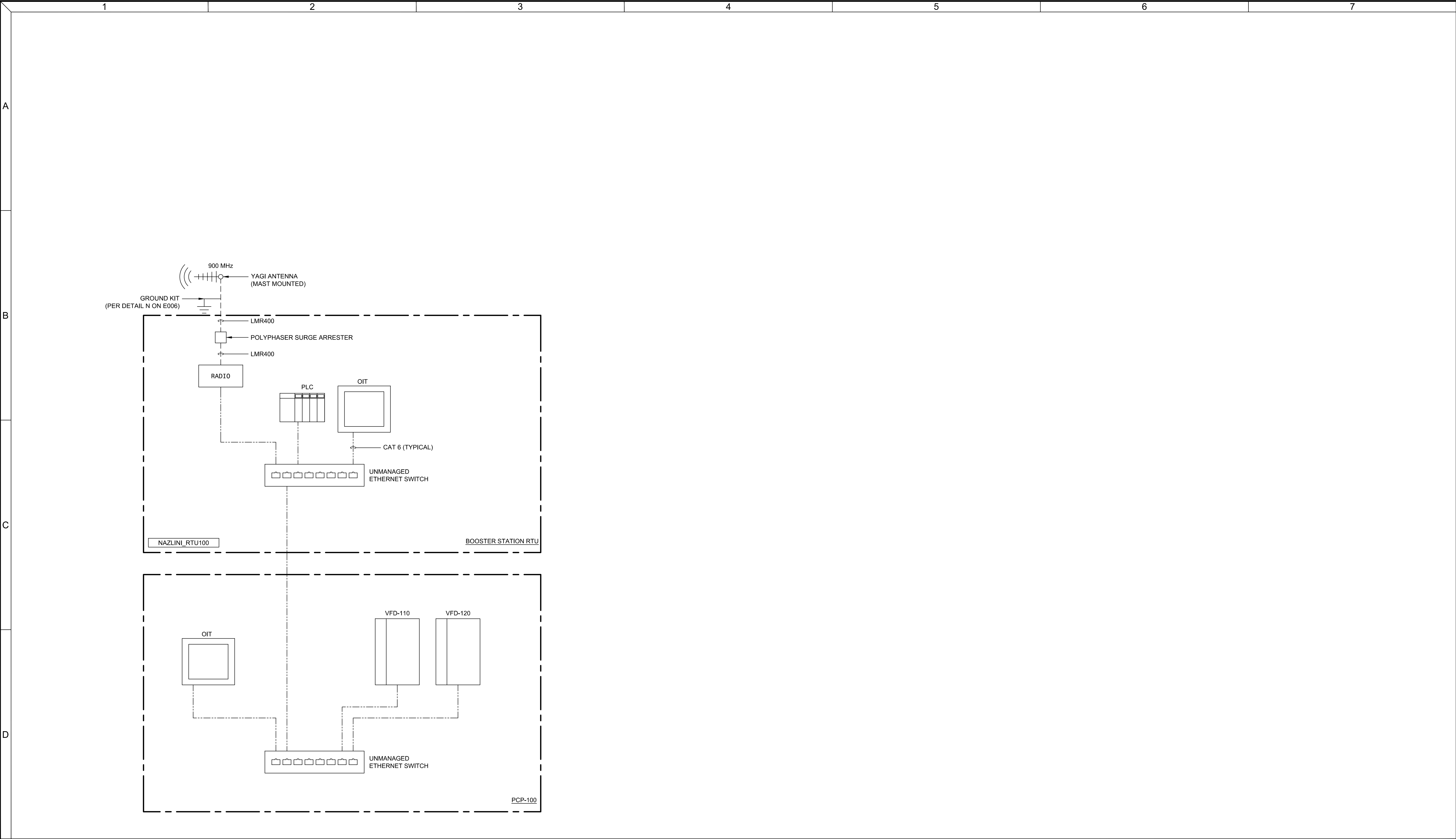
**FEEDERS:**

AA (1) 2-#12 AWG, #12G, 1°C

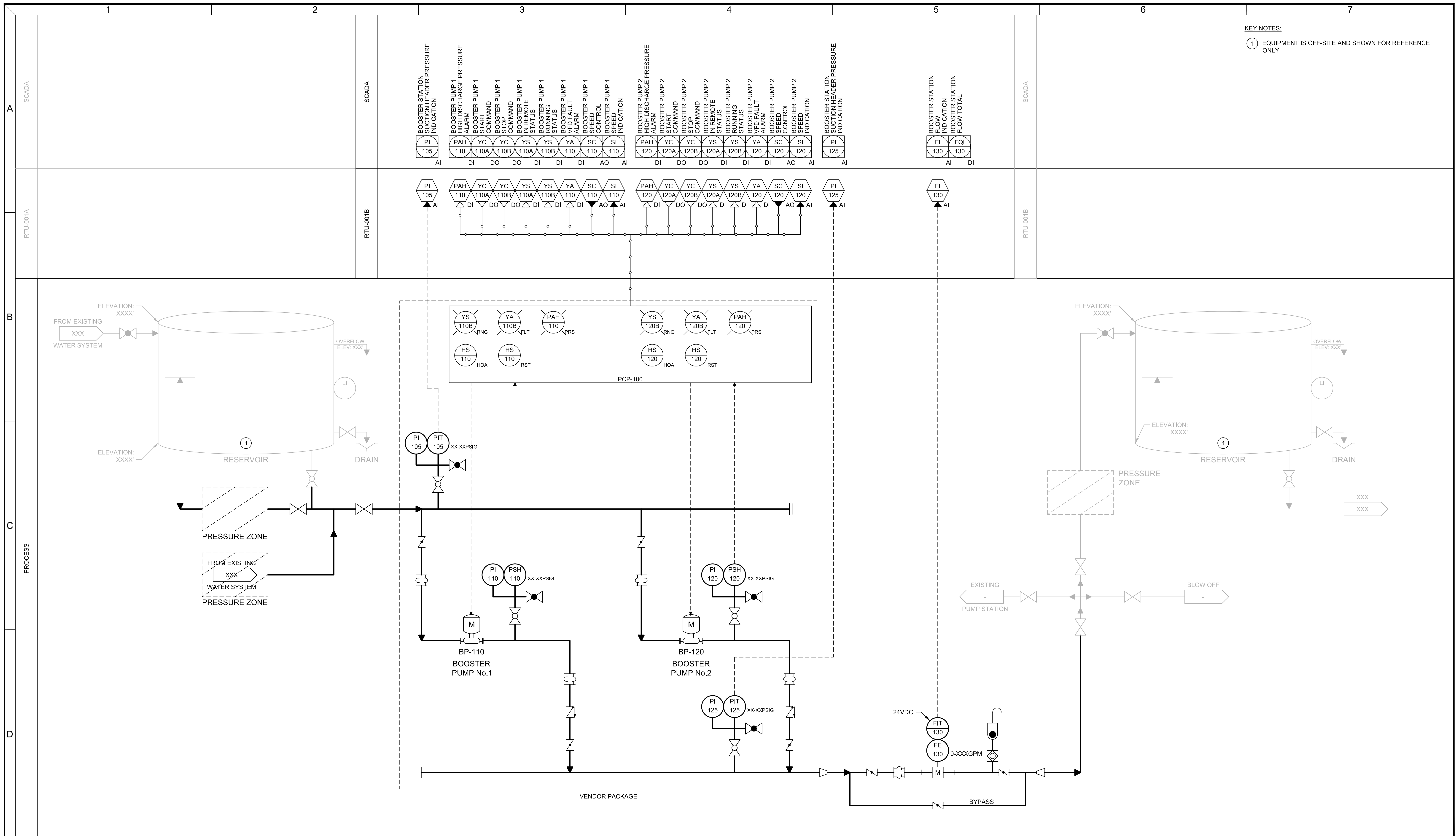
|   |  |                                    |                  |                 |   |  |              |                     |          |
|---|--|------------------------------------|------------------|-----------------|---|--|--------------|---------------------|----------|
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|   | <br><small>(480) 588-8021, WWW.CANFIELDENG.COM</small> |                                    |                  |                 |   |  |              | RPO                 | W23250UT |
|   |  |                                    | Drawn By:        |                 |   |  |              | Issued On:          |          |
|   |  |                                    | RPO              |                 |   |  |              | JULY 2024           |          |
|   | Checked By:  | Drawing No.:                       |                  |                 |   |  |              |                     |          |
| MAB   | E103   |                                    |                  |                 |   |  |              |                     |          |
| Approved By:  |  | 0 1/2 1 IF BAR DOES NOT MEASURE 1" |                  |                 |   |  |              |                     |          |
| MAB   |  | DRAWING IS NOT TO SCALE            |                  |                 |   |  |              |                     |          |

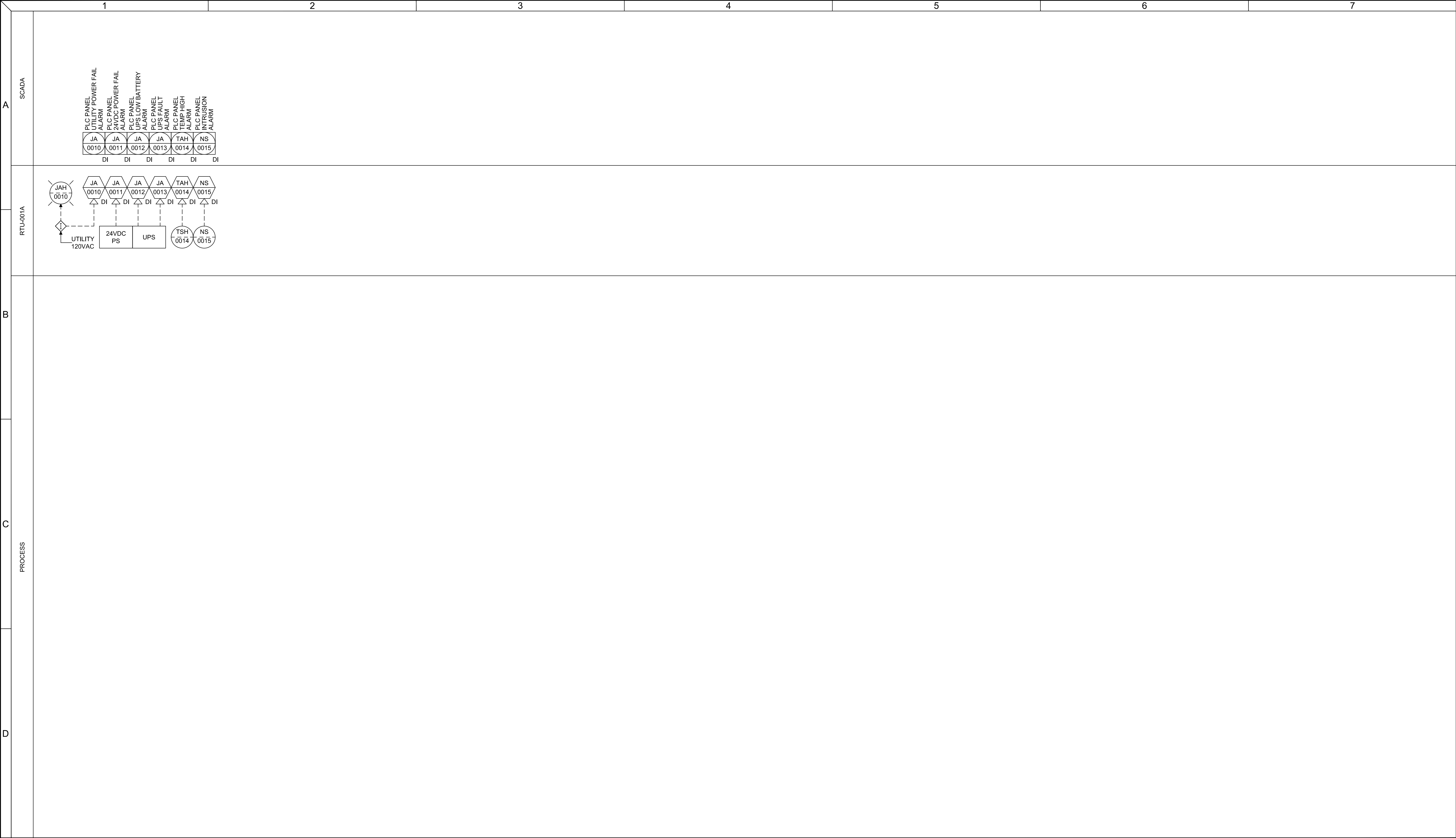


| INSTRUMNETATION SYMBOLS:   |                  |                             |                              |  |  |  |  |   |  |  |  | GENERAL NOTES:<br><br>1. PROCESS AND INSTRUMENTATION DIAGRAMS (P&IDs) ARE PROCESS FLOW AND CONTROL GUIDES. THEY DO NOT NECESSARILY REFLECT THE ACTUAL SPACE RELATIONSHIP OR ORIENTATION OF SOME ITEMS. P&IDs ARE NOT TO BE INTERPRETED AS PLUMBING SCHEMATICS.<br><br>2. PLANT AREA OR PROCESS UNIT PREFIX MAY BE OMITTED FROM DRAWINGS AND COVERED BY NOTE WHEN ALL INSTRUMENTS ON DRAWINGS HAVE SAME PREFIX.<br><br>3. REFERENCE CIVIL/MECHANICAL DRAWINGS/SPECS FOR PIPING, EQUIPMENT DESIGNATIONS AND ABBREVIATIONS.<br><br>4. DRAWINGS I001 AND I002 ARE GENERAL IN NATURE. SOME SYMBOLS AND IDENTIFICATIONS SHOWN HEREON MAY NOT BE USED ON THE CONTRACT DRAWINGS.<br><br>5. EXISTING EQUIPMENT SHALL BE SCREENED BACK GREY. |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
|--|------------------|-----------------------------|------------------------------|--|--|--|--|---|--|--|--|--|--|--|--|--------------------|--|--|--|-----------------|--|--------------------|--|--|---------------------------------|----------|-----------------------------|-----------------|----------|------------|--------------|-------|---------|--|------------------|----------------|-----------|--------------------|-------|---------|--|------|-------------|---------------|------|-------|----------|--|--------|-----------------|---------|--------|------------------|--|-----------------|--|---------|------------|-----------|-------------|--|-----|----------------|--------------------|--------|-------------------------|--|--------|------------|------------|-------------|--------------------|--|--------|--------|--|---------------|------------------|-------------|-----------------|--|------|------------------------------|----------------|----------------|-----------------|------------|--|--|--------------|-----------------------------|--|--|--|--|----------------|--|
| SPECIAL OR INSTRUMENT FUNCTION DESIGNATIONS:   |                  |                             |                              | PRIMARY ELEMENT SYMBOLS:   |  |  |  | INSTRUMENT AND FUNCTION SYMBOLS:  |  |  |  |  |  | FUNCTION IDENTIFICATION  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| <div><div><div><math>\Sigma</math></div><div><math>\pm, +, -</math></div><div>AVG</div><div>X</div><div><math>\div</math></div><div><math>\sqrt{\phantom{x}}</math></div><div><math>x^n</math> OR <math>\sqrt[n]{\phantom{x}}</math></div><div>(K)</div><div>1:1</div><div><input checked="" type="checkbox"/></div><div><input checked="" type="checkbox"/></div><div>REV</div><div>GAF</div><div>S &amp; H</div><div>SRG</div><div>E/P, I/P (TYPICAL)</div><div>%</div><div><math>\int</math></div><div>d/dt</div><div>1 - 0</div><div><math>\Delta</math></div><div>1:3, 2:1 (TYPICAL)</div><div>ES</div><div>FR</div><div>HA</div><div>HOA</div><div>HOR</div><div>JOA</div><div>LF</div><div>LOR</div><div>LR</div><div>OAC</div><div>OC</div><div>OL</div><div>OO</div><div>SIK</div><div>SS</div><div>R</div><div>*V</div><div>RCS</div><div>RDY</div><div>RNG</div><div>O</div><div>C</div></div><div><div>ALGEBRAIC ADDITION</div><div>BIAS</div><div>AVERAGE</div><div>MULTIPLY</div><div>DIVIDE</div><div>EXTRACT SQUARE ROOT</div><div>RAISE TO POWER</div><div>CHARACTERIZE</div><div>BOOST AND ISOLATE</div><div>HIGHEST VALUE SELECTION</div><div>LOWEST VALUE SELECTION</div><div>REVERSE</div><div>GAP ACTION FLOATING</div><div>SAMPLE AND HOLD</div><div>SPLIT-RANGING</div><div>FOR INPUT/OUTPUT CONVERTERS USING FOLLOWING SIGNALS:</div><div>E - VOLTS</div><div>H - HYDRAULIC</div><div>I - CURRENT</div><div>O - ELECTROMAGNETIC OR SONIC</div><div>P - PNEUMATIC</div><div>R - RESISTANCE</div><div>A - ANALOG</div><div>D - DIGITAL</div><div>PROPORTIONAL CONTROL ACTION</div><div>INTEGRAL CONTROL ACTION</div><div>DERIVATIVE CONTROL ACTION</div><div>ON - OFF CONTROL ACTION</div><div>DIFFERENTIAL GAP CONTROL ACTION</div><div>GAIN OR ATTENUATE</div><div>EMERGENCY STOP</div><div>FORWARD - REVERSE</div><div>HAND-AUTO SELECTION</div><div>HAND-OFF-AUTO SELECTION</div><div>HAND-OFF-REMOTE SELECTION</div><div>JOG-OFF-AUTO SELECTION</div><div>LEAD-FOLLOW SELECTION</div><div>LOCAL-OFF-REMOTE SELECTION</div><div>LOCAL-REMOTE SELECTION</div><div>OPEN-AUTO-CLOSE</div><div>OPEN-CLOSE</div><div>OVERLOAD</div><div>ON-OFF SELECTION</div><div>SPEED INDICATION AND COMP. CNTRL.</div><div>START-STOP</div><div>RESET</div><div>VENDOR PACKAGE</div><div>REMOTE CONTROL STATION</div><div>READY</div><div>RUNNING</div><div>OPEN</div><div>CLOSE</div></div></div> |                  |                             |                              | <div><div><div><div><div><div></div></div><div>ORIFICE PLATE</div></div><div><div><div></div></div><div>VENTURI OR FLOW TUBE</div></div><div><div><div></div></div><div>FLUME</div></div><div><div><div></div></div><div>RUPTURE DISC</div></div><div><div><div></div></div><div>CHEMICAL SEAL WITH ISOLATION VALVE PER SPEC SECTION 15050</div></div><div><div><div></div></div><div>CONCENTRIC CHEMICAL SEAL PER SPECIFICATION SECTION 15050</div></div><div><div><div></div></div><div>PROPELLER FLOW METER</div></div><div><div><div></div></div><div>FLOW ELEMENT</div></div><div><div><div></div></div><div>METER</div></div><div><div><div></div></div><div>PRESSURE INDICATOR</div></div><div><div><div></div></div><div>PILOT TUBE</div></div><div><div><div></div></div><div>VARIABLE AREA FLOW INDICATOR (ROTAMETER)</div></div><div><div><div></div></div><div>CONVEYOR</div></div><div><div><div></div></div><div>ROTAMETER</div></div></div></div></div> |  |  |  | <div><div><div><div></div><div>INSTRUMENT</div></div><div><div><div></div></div><div>SHARED DISPLAY (GRAPHICAL OPERATOR INTERFACE)</div></div><div><div><div></div></div><div>COMPUTER FUNCTION</div></div><div><div><div></div></div><div>ANALOG INPUT</div></div><div><div><div></div></div><div>ANALOG OUTPUT</div></div><div><div><div></div></div><div>DISCRETE INPUT</div></div><div><div><div></div></div><div>DISCRETE OUTPUT</div></div><div><div><div></div></div><div>INTERLOCKING OR SEQUENTIAL CONTROL FUNCTION, SEE INTERLOCK NOTES.</div></div><div><div><div></div></div><div>PROGRAMMABLE CONTROLLER</div></div><div><div><div></div></div><div>NOTE:<br/>ANY OF THE ABOVE SYMBOLS MAY BE SHOWN WITH HORIZONTAL BAR(S) TO INDICATE PANEL MOUNTING AND/OR OPERATOR ACCESSIBLE</div></div><div><div><div></div></div><div>FACE MOUNTED ON MAIN PANEL OPERATOR ACCESSIBLE</div></div><div><div><div></div></div><div>MOUNTED ON/IN PANEL OPERATOR INACCESSIBLE</div></div><div><div><div></div></div><div>FACE MOUNTED ON FIELD PANEL OPERATOR ACCESSIBLE WITH TYPICAL PANEL NUMBER</div></div><div><div><div></div></div><div>MOUNTED ON/IN FIELD PANEL OPERATOR INACCESSIBLE</div></div><div><div><div></div></div><div>LACK OF HORIZONTAL BARS INDICATES DEVICE LOCATED IN FIELD</div></div></div></div> |  |  |  |  |  | <table><tr><th colspan="2">FIRST LETTER(S)</th><th colspan="3">SUCCEEDING LETTERS</th></tr><tr><th>MEASURED OR INITIATING VARIABLE</th><th>MODIFIER</th><th>READOUT OR PASSIVE FUNCTION</th><th>OUTPUT FUNCTION</th><th>MODIFIER</th></tr><tr><td>A ANALYSIS</td><td rowspan="4">DIFFERENTIAL</td><td rowspan="4">ALARM</td><td rowspan="4">CONTROL</td><td rowspan="4"></td></tr><tr><td>B BURNER (FLAME)</td></tr><tr><td>C CONDUCTIVITY</td></tr><tr><td>D DENSITY</td></tr><tr><td>E POTENTIAL (ELEC)</td><td rowspan="2">RATIO</td><td rowspan="2">PRIMARY</td><td rowspan="2"></td><td rowspan="2">HIGH</td></tr><tr><td>F FLOW RATE</td></tr><tr><td>G FIRE, SMOKE</td><td rowspan="4">SCAN</td><td rowspan="4">GLASS</td><td rowspan="4">INDICATE</td><td rowspan="4"></td></tr><tr><td>H HAND</td></tr><tr><td>I CURRENT (ELC)</td></tr><tr><td>J POWER</td></tr><tr><td>K TIME</td><td rowspan="2">TIME RATE CHANGE</td><td rowspan="2"></td><td rowspan="2">CONTROL STATION</td><td rowspan="2"></td></tr><tr><td>L LEVEL</td></tr><tr><td>M MOISTURE</td><td rowspan="2">MOMENTARY</td><td rowspan="2">PILOT LIGHT</td><td rowspan="2"></td><td rowspan="2">LOW</td></tr><tr><td>N USERS CHOICE</td></tr><tr><td>O DISSOLVED OXYGEN</td><td rowspan="4">SAFETY</td><td rowspan="4">ORIFICE TEST CONNECTION</td><td rowspan="4"></td><td rowspan="4">MIDDLE</td></tr><tr><td>P PRESSURE</td></tr><tr><td>Q QUANTITY</td></tr><tr><td>R RADIATION</td></tr><tr><td>S SPEED, FREQUENCY</td><td rowspan="4"></td><td rowspan="4">RECORD</td><td rowspan="4">SWITCH</td><td rowspan="4"></td></tr><tr><td>T TEMPERATURE</td></tr><tr><td>U MULTI VARIABLE</td></tr><tr><td>V VIBRATION</td></tr><tr><td>W WEIGHT, FORCE</td><td rowspan="4"></td><td rowspan="4">WELL</td><td rowspan="4">MULTI FUNCTION VALVE, DAMPER</td><td rowspan="4">MULTI FUNCTION</td></tr><tr><td>X UNCLASSIFIED</td></tr><tr><td>Y EVENT, STATUS</td></tr><tr><td>Z POSITION</td></tr><tr><td></td><td></td><td>UNCLASSIFIED</td><td>UNCLASSIFIED RELAY, COMPUTE</td><td></td></tr><tr><td></td><td></td><td></td><td>MISC. ACTUATOR</td><td></td></tr></table> |  |                    |  |  |  | FIRST LETTER(S) |  | SUCCEEDING LETTERS |  |  | MEASURED OR INITIATING VARIABLE | MODIFIER | READOUT OR PASSIVE FUNCTION | OUTPUT FUNCTION | MODIFIER | A ANALYSIS | DIFFERENTIAL | ALARM | CONTROL |  | B BURNER (FLAME) | C CONDUCTIVITY | D DENSITY | E POTENTIAL (ELEC) | RATIO | PRIMARY |  | HIGH | F FLOW RATE | G FIRE, SMOKE | SCAN | GLASS | INDICATE |  | H HAND | I CURRENT (ELC) | J POWER | K TIME | TIME RATE CHANGE |  | CONTROL STATION |  | L LEVEL | M MOISTURE | MOMENTARY | PILOT LIGHT |  | LOW | N USERS CHOICE | O DISSOLVED OXYGEN | SAFETY | ORIFICE TEST CONNECTION |  | MIDDLE | P PRESSURE | Q QUANTITY | R RADIATION | S SPEED, FREQUENCY |  | RECORD | SWITCH |  | T TEMPERATURE | U MULTI VARIABLE | V VIBRATION | W WEIGHT, FORCE |  | WELL | MULTI FUNCTION VALVE, DAMPER | MULTI FUNCTION | X UNCLASSIFIED | Y EVENT, STATUS | Z POSITION |  |  | UNCLASSIFIED | UNCLASSIFIED RELAY, COMPUTE |  |  |  |  | MISC. ACTUATOR |  |
|  |                  |                             |                              |  |  |  |  |   |  |  |  |  |  | FIRST LETTER(S)  |  | SUCCEEDING LETTERS |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| MEASURED OR INITIATING VARIABLE  | MODIFIER         | READOUT OR PASSIVE FUNCTION | OUTPUT FUNCTION              | MODIFIER   |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| A ANALYSIS   | DIFFERENTIAL     | ALARM                       | CONTROL                      |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| B BURNER (FLAME)   |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| C CONDUCTIVITY   |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| D DENSITY  |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| E POTENTIAL (ELEC)   | RATIO            | PRIMARY                     |                              | HIGH   |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| F FLOW RATE  |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| G FIRE, SMOKE  | SCAN             | GLASS                       | INDICATE                     |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| H HAND   |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| I CURRENT (ELC)  |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| J POWER  |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| K TIME   | TIME RATE CHANGE |                             | CONTROL STATION              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| L LEVEL  |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| M MOISTURE   | MOMENTARY        | PILOT LIGHT                 |                              | LOW  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| N USERS CHOICE   |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| O DISSOLVED OXYGEN   | SAFETY           | ORIFICE TEST CONNECTION     |                              | MIDDLE   |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| P PRESSURE   |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| Q QUANTITY   |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| R RADIATION  |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| S SPEED, FREQUENCY   |                  | RECORD                      | SWITCH                       |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| T TEMPERATURE  |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| U MULTI VARIABLE   |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| V VIBRATION  |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| W WEIGHT, FORCE  |                  | WELL                        | MULTI FUNCTION VALVE, DAMPER | MULTI FUNCTION   |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| X UNCLASSIFIED   |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| Y EVENT, STATUS  |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| Z POSITION   |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
|  |                  | UNCLASSIFIED                | UNCLASSIFIED RELAY, COMPUTE  |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
|  |                  |                             | MISC. ACTUATOR               |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| MISCELLANEOUS:   |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |
| <div><div><div><div><div></div><div>P</div></div><div>PURGE OR FLUSHING DEVICE</div></div><div><div><div></div><div>R</div></div><div>RESET FOR LATCH-TYPE OPERATOR</div></div><div><div><div></div><div>B</div></div><div>BUBBLER PANEL</div></div><div><div><div></div><div>C</div></div><div>CONTROL UNIT</div></div><div><div><div></div><div>I</div></div><div>INTERLOCK</div></div><div><div><div></div></div><div>QUICK-CONNECT FITTING</div></div><div><div><div></div></div><div>3-WAY PNEUMATIC PILOT VALVE</div></div><div><div><div></div></div><div>PISTON OPERATOR W/SOLENOID PILOT</div></div><div><div><div></div></div><div>PISTON OPERATOR W/POSITIONER</div></div><div><div><div></div></div><div>SONIC LEVEL PROBE</div></div></div><div><div><div><div></div><div>MAGNETIC FLOW PROBE</div></div><div><div><div></div><div>SONIC FLOW METER (DOPPLER OR TRANSIT TIME)</div></div><div><div><div></div><div>MAGNETIC FLOW METER</div></div><div>0-XXX GPM</div></div><div><div><div></div><div>8</div></div><div>TURBINE FLOW METER</div></div><div><div><div></div></div><div>DENSITY FLOW METER</div></div><div><div><div></div></div><div>BUBBLE LEVEL TUBE</div></div><div><div><div></div></div><div>PILOT TUBE TAP</div></div><div><div><div></div></div><div>AIR SUPPLY</div></div><div><div><div></div></div><div>CAPACITANCE LEVEL PROBE</div></div></div></div></div></div>  |                  |                             |                              |  |  |  |  |   |  |  |  |  |  |  |  |                    |  |  |  |                 |  |                    |  |  |                                 |          |                             |                 |          |            |              |       |         |  |                  |                |           |                    |       |         |  |      |             |               |      |       |          |  |        |                 |         |        |                  |  |                 |  |         |            |           |             |  |     |                |                    |        |                         |  |        |            |            |             |                    |  |        |        |  |               |                  |             |                 |  |      |                              |                |                |                 |            |  |  |              |                             |  |  |  |  |                |  |



|   |   |  |   |  |  |  |                     |                              |
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|   |   |  | Drawn By:<br>RPO  | Issued On: JULY 2024   |  |  |                     |                              |
|   |   |  | Checked By:<br>MAB  | Drawing No.: I003  |  |  |                     |                              |
|   |   |  | Approved By:<br>MAB   | 0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE   |  |  |                     |                              |







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Client / Owner:



Project Title:

NAVAJO TRIBAL UTILITY  
AUTHORITY  
B-1 BOOSTER BUMP STATION

Drawing Title:

P&ID  
NAZLINI  
  
SUPPORT EQUIPMENT

Designed By:  
RPO

Drawn By:  
RPO

Checked By:  
MAB

Approved By:  
MAB

CONSOR Project No.: W23250UT

Issued On: JULY 2024

Drawing No.: I011

0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

Drawing Path and Name: C:\Users\Public\CEI Dropbox\Projects\2023\230073 CON - NTUA Four BFS Elec. Eng\8.0 Design\230073 CON - NTUA NAZLINI\011.dwg, Plotted Date: July 30, 2024 9:51 PM By: Ryan Oliver