

**SUNRAY SHORES WATER DISTRICT
SUNRAY SHORES C#1 PUMP STATION, STORAGE AND TRANSMISSION MAIN
BELMONT, NEW HAMPSHIRE**

ADDENDUM #1

DATE: JULY 18, 2025
TO: PLAN HOLDERS

This ADDENDUM #1 shall become part of the Bidding Documents and Contract Documents for the above referenced project. BIDDERS, please acknowledge receipt of this ADDENDUM #1 on the BID FORM (Page 1). This ADDENDUM #1 consists of 4 pages in total including the attachments.

1. Sunray Shores Water District Contract #1 Electrical Plan Set. Sheet E1.01 has been revised to clarify Rigid Galvanized Steel (RGS) conduit for anything exposed in the building. This is found in Section 11 and noted on the plans with a revision cloud for clarity.
2. Sunray Shores Water District Contract #1 Civil Plan Set. Sheets D1.01 and D1.02 have been revised to clarify "Or Approved Equal" for Item 16. This has been noted on the plans with a revision cloud and a revision 1 triangle for clarity.
3. Clarifications:
 - a. A question was presented regarding specifications on file for the pump controller system or the equipment as a package. Per the Electrical Engineer, the intent is that the bidding contractor would work a panel shop and/or integrator, and a shop drawing submittal of the panel would be provided to be reviewed and approved. The integrator would also be responsible for developing the PLC and HMI files for the panel.
4. Attachments:
 - a. E1.01 ELECTRICAL SPECIFICATIONS ADD 1.pdf
 - b. 220963 C#1_Rev1 Sheets D1.01 and D1.02.pdf

End of Addendum #1

1.1 THE WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THESE GENERAL NOTES. CONSTRUCTION DRAWINGS AND CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, EQUIPMENT, TOOLS, LABOR, SUPERVISION AND ANY OTHER MISCELLANEOUS ITEMS REQUIRED TO INSTALL THE EQUIPMENT AND/OR DEVICES AS SPECIFIED HEREIN AND SHOWN ON THE DRAWINGS, UNLESS SPECIFICALLY EXCLUDED. THE EQUIPMENT OR DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC, THE MFR'S INSTRUCTIONS AND ACCORDING TO PLANS AND DRAWINGS PROVIDED. WRITTEN APPROVAL FROM THE AUTHORIZED COMPANY REPRESENTATIVE SHALL BE OBTAINED PRIOR TO MAKING ANY DEVIATION FROM THE DRAWINGS OR ANY SUBSTITUTION OF MATERIALS. IF SUCH PRIOR APPROVAL HAS NOT BEEN OBTAINED, IT WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO CHANGE, WITHOUT ADDITIONAL COMPENSATION, ANY ITEMS SUBSEQUENTLY DISCOVERED TO BE UNACCEPTABLE.

1.2 THE CONTRACTOR SHALL PROVIDE THE INSTALLATION, INTERCONNECTION AND TESTING OF COMPLETE AND OPERABLE SYSTEMS.

1.3 INCLUDED IN THIS WORK IS THE FURNISHING, BY THE CONTRACTOR, OF OFFICE MATERIAL, EQUIPMENT STORAGE AND SHOP FACILITIES FOR THE CONSTRUCTION WORK DURING THE ENTIRE CONSTRUCTION PERIOD. CAPACITY, ARRANGEMENTS AND LOCATION OF THESE FACILITIES ARE SUBJECT TO APPROVAL BY THE CONSTRUCTION MANAGER AND SHALL COMPLY WITH APPLICABLE CODES AND REGULATIONS.

1.4 TO ENABLE ORDERLY REVIEW DURING PROGRESS OF THE WORK, AND TO PROVIDE FOR SYSTEMATIC DISCUSSION OF PROBLEMS, THE CONSTRUCTION MANAGER WILL CONDUCT PROJECT MEETINGS THROUGHOUT THE CONSTRUCTION PERIOD. THE CONTRACTOR WILL BE EXPECTED TO ATTEND THESE MEETINGS.

1.5 THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ON THE PROJECT REQUIRED TO BE PERFORMED BY ELECTRICIANS, INCLUDING THAT DUE TO JURISDICTION AND/OR LOCAL PRACTICES.

1.6 THE CONTRACTOR SHALL EMPLOY QUALIFIED ELECTRICAL WORKERS, AND LABORERS TO PERFORM THE WORK TO BE DONE.

1.7 THE CONTRACTOR SHALL PROVIDE ALL TOOLS, CONSTRUCTION EQUIPMENT, TEST EQUIPMENT, AND TESTING FACILITIES AND SHALL MAKE TESTS AND KEEP RECORDS AS SPECIFIED HEREIN.

1.8 THE CONTRACTOR SHALL COORDINATE THEIR WORK WITH ALL OTHER TRADES, PERMANENT FACILITY PERSONNEL, AND THE CONSTRUCTION MANAGER. COORDINATION SHALL ALLOW WORK TO BE INSTALLED IN THE MOST DIRECT MANNER AND SO INTERFERENCE BETWEEN CONDUITS, PIPING, DUCTS, EQUIPMENT, AND STRUCTURAL FEATURES WILL BE AVOIDED.

1.9 CABLE TRAY AND RACEWAY ROUTING.

1.9.a EQUIPMENT, INSTRUMENTS, DEVICES, PANELS AND JUNCTION BOXES LOCATIONS ARE SHOWN ON THE ELECTRICAL LAYOUT DRAWINGS.

1.9.b ONLY THE GENERAL CABLE OR RACEWAY TRAY ROUTING PLANS ARE SHOWN ON THE ELECTRICAL LAYOUT DRAWINGS. THE ROUTING FROM INDIVIDUAL ITEMS IS NOT DEPICTED ON THE DRAWINGS.

1.9.c THE DIFFERENT WIRING CLASSES AND WIRE ASSIGNED TO THEM (MEDIUM VOLTAGE POWER, LOW VOLTAGE POWER, CONTROL, INSTRUMENTATION) ARE ALL INDICATED ON THE DRAWING OR IN THE CABLE, CONDUIT AND WIRE SCHEDULE.

1.9.d IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE BEST CABLE TRAY OR RACEWAY ROUTING FOR ALL WIRES NOT SPECIFICALLY ROUTED, WHILE MAINTAINING THE WIRE CLASS SEGREGATION REQUIREMENTS OF THE NEC.

1.9.e THE CONTRACTOR SHALL PRESENT THE ROUTING PLAN TO THE CONSTRUCTION MANAGER FOR APPROVAL BEFORE PROCEEDING.

1.10 RUNS FROM OUTLETS REFERRED TO AS "HOME RUNS" MAY BE USED ON CONTRACTOR'S CONSTRUCTION DRAWINGS. THEY ARE INDICATED BY POINTING IN THE GENERAL DIRECTION OF PANELS. CONTRACTOR SHALL BE RESPONSIBLE TO CONTINUE SUCH CIRCUITS TO THE PANELS AS THOUGH THE ROUTES WERE COMPLETELY INDICATED. HOME RUNS SHALL BE INSTALLED FROM OUTLETS AS SHOWN ON CONTRACTOR'S DRAWINGS.

1.11 THE CONTRACTOR SHALL BECOME FAMILIAR WITH ALL DETAILS OF THE WORK AND VERIFY ALL DIMENSIONS IN THE FIELD SO THAT THE OUTLETS AND EQUIPMENT WILL BE PROPERLY LOCATED AND READILY ACCESSIBLE. LIGHTING FIXTURES, OUTLETS, AND OTHER EQUIPMENT AND MATERIALS SHALL BE LOCATED TO AVOID INTERFERENCE WITH CABINETS, MECHANICAL OR STRUCTURAL FEATURES. DEVIATIONS FROM DRAWINGS REQUIRED TO MAKE WORK OF THIS CONTRACT CONFORM TO BUILDING AS CONSTRUCTED, OR AS TO WORK OF OTHER CONTRACTORS, SHALL BE MADE BY THE CONTRACTOR AT HIS EXPENSE. THE ENGINEER RESERVES THE RIGHT TO MAKE MINOR CHANGES IN THE LOCATION OF EQUIPMENT AND OUTLETS PRIOR TO INSTALLATION WITHOUT ADDITIONAL CHARGES.

2.1 THE CONTRACT DOCUMENTS SHALL CONSIST OF DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS ISSUED BY THE ENGINEER. EACH DOCUMENT IS COMPLEMENTARY, AND THE REQUIREMENTS SHOWN, WRITTEN OR REASONABLY INFERABLE THERE FROM ONE DOCUMENT IS CONSIDERED AS WRITTEN, SHOWN OR IMPLIED IN ALL.

2.2 THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ALL OF THE PLANS INCLUDING ARCHITECTURAL, LAYOUT, PIPING AND MECHANICAL PLANS. HE SHALL PERFORM ALL WORK AND PROVIDE ALL MATERIAL REQUIRED BY THE ELECTRICAL CONTRACTOR SHOWN UNDER THESE AND ALL OTHER SECTIONS OF THE PLANS AND SPECIFICATIONS.

2.3 THE CONTRACTOR SHALL MAINTAIN AN UP TO DATE SET OF AS-BUILT DRAWINGS NEATLY MARKED WITH ALL CHANGES (RED LINED) FROM THE ORIGINAL DESIGN. THESE DRAWINGS SHALL BE DELIVERED TO THE CONSTRUCTION MANAGER AT THE COMPLETION OF THE PROJECT PRIOR TO RECEIVING FINAL PAYMENT.

3.1 THE ELECTRICAL EQUIPMENT, MATERIALS AND INSTALLATION PROVIDED FOR THIS PROJECT SHALL CONFORM IN DESIGN, FABRICATION, TESTING AND PERFORMANCE TO THE LATEST EDITION OF STANDARDS AND GUIDELINES PUBLISHED BY THE FOLLOWING ORGANIZATIONS WHERE APPLICABLE. THE LATEST EDITION OF THE STANDARDS, DOCUMENTS, AND PUBLICATIONS, REFERENCED HEREIN BY BASIC DESIGNATION SHALL BECOME PART OF THESE SPECIFICATIONS TO THE EXTENT REFERENCED.

ANSI AMERICAN NATIONAL STANDARDS INSTITUTE

FM FACTORY MUTUAL FM STANDARDS

IEEE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

NEC

NATIONAL ELECTRICAL CODE

NFPA

NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS

NFPA 70

NATIONAL ELECTRIC CODE

NFPA 70E

STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE

NFPA 72

NATIONAL FIRE ALARM CODE

NEMA

NATIONAL ELECTRICAL MFR'S ASSOCIATION

UL

UNDERWRITERS' LABORATORIES, INC.

ICEA

INSULATED CABLE ENGINEERS ASSOCIATION

IPCEA

INSULATED POWER CABLE ENGINEERS ASSOCIATION STANDARDS

ISA

INSTRUMENT SOCIETY OF AMERICA STANDARDS

3.2 ALL LOCAL, STATE AND FEDERAL CODES, STANDARDS AND REGULATIONS IN EFFECT HAVING JURISDICTION IN THE AREA WHERE THE EQUIPMENT WILL BE INSTALLED. ANY CONFLICT BETWEEN THE ABOVE MENTIONED DOCUMENTS AND THIS SPECIFICATION SHALL BE REFERRED TO THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE FABRICATION OF THE AFFECTED PARTS.

4.1 THE INSTALLATION AND MATERIALS SHALL COMPLY WITH ALL LAWS APPLYING TO ELECTRICAL INSTALLATION IN EFFECT, WITH THE REGULATIONS OF THE NEC WHERE SUCH REGULATIONS DO NOT CONFLICT WITH LAWS IN EFFECT, AND WITH THE REGULATIONS OF THE PUBLIC UTILITY COMPANY FURNISHING THE SERVICE.

4.2 THE CONTRACTOR SHALL MAKE PROVISIONS FOR TIMELY AND SAFE DELIVERY AND SAFE STORAGE OF MATERIALS.

4.3 THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ON THE PROJECT REQUIRED TO BE PERFORMED BY ELECTRICIANS, INCLUDING THAT DUE TO JURISDICTION AND/OR LOCAL PRACTICES.

4.4 THE CONTRACTOR SHALL EMPLOY QUALIFIED ELECTRICAL WORKERS, AND LABORERS TO PERFORM THE WORK TO BE DONE.

4.5 THE CONTRACTOR SHALL PROVIDE ALL TOOLS, CONSTRUCTION EQUIPMENT, TEST EQUIPMENT, AND TESTING FACILITIES AND SHALL MAKE TESTS AND KEEP RECORDS AS SPECIFIED HEREIN.

4.6 THE CONTRACTOR SHALL COORDINATE THEIR WORK WITH ALL OTHER TRADES, PERMANENT FACILITY PERSONNEL, AND THE CONSTRUCTION MANAGER. COORDINATION SHALL ALLOW WORK TO BE INSTALLED IN THE MOST DIRECT MANNER AND SO INTERFERENCE BETWEEN CONDUITS, PIPING, DUCTS, EQUIPMENT, AND STRUCTURAL FEATURES WILL BE AVOIDED.

4.7 THE CONTRACTOR SHALL PRESENT THE ROUTING PLAN TO THE CONSTRUCTION MANAGER FOR APPROVAL BEFORE PROCEEDING.

5.1 THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS, WORKMANSHIP AND THE SUCCESSFUL OPERATION OF ALL EQUIPMENT AND APPARATUS UNDER THIS CONTRACT FOR A PERIOD OF (18) EIGHTEEN MONTHS FROM THE DATE OF FINAL ACCEPTANCE OF THE WHOLE WORK. CONTRACTOR SHALL GUARANTEE TO REPAIR OR REPLACE AT HIS OWN EXPENSE ANY PART OF THE APPARATUS WHICH MAY SHOW DEFECT DURING THAT TIME PROVIDED SUCH DEFECT IS DUE TO IMPROPER MATERIALS OR WORKMANSHIP AND NOT TO CARELESSNESS OR IMPROPER USE BY THE OWNER. BY DEFAULT, OWNER MAY HAVE SUCH WORK DONE AND CHARGED TO THE CONTRACTOR.

6.1 CONTRACTOR SHALL SUBMIT AN ELECTRONIC SET OF SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING ELECTRICAL CONSTRUCTION AND/OR PURCHASE OF EQUIPMENT INCLUDED THEREIN.

6.1.a THE FOLLOWING IS THE MINIMUM EXPECTATION OF SHOP DRAWINGS THAT WILL BE REQUIRED FOR THE PROJECT:

TRANSFORMERS

SWITCHGEAR, SWITCHBOARDS, PANELBOARDS, MOTOR CONTROLLERS

DISCONNECT SWITCHES AND ASSOCIATED FUSES

RACEWAYS: CONDUIT, CABLE TRAY AND WIREWAY

WIRE, CABLE INCLUDING GROUND SYSTEM

LIGHTING FIXTURES

CONTROL PANELS

ALL PREFABRICATED CONCRETE: MANHOLES, VAULTS, POLE BASES

6.2 RECEIPT OR APPROVAL OF SHOP DRAWINGS BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF COMPLYING WITH CONTRACT DOCUMENTS.

6.3 ALL MATERIAL SHALL BE UL LISTED UNLESS OTHERWISE REQUIRED.

6.4 CONTRACTOR SHALL MAKE PROVISIONS FOR TIMELY AND SAFE DELIVERY AND SAFE STORAGE OF MATERIALS.

6.5 MFR'S NAMES ARE LISTED TO ESTABLISH FUNCTION AND QUALITY OF MATERIAL OR EQUIPMENT. MATERIALS SO LISTED SHALL BE BID AS SPECIFIED UNLESS WRITTEN APPROVAL IS OBTAINED TO SUBSTITUTE MATERIALS OF EQUAL QUALITY BY OTHER MFR'S. LETTERS REQUESTING APPROVAL AND INCLUDING COMPLETE ENGINEERING INFORMATION DESCRIBING PERFORMANCE AND SHOWING DIMENSIONS SHALL BE SUBMITTED TO THE ENGINEER AT LEAST 5 WORKING DAYS PRIOR TO BID OPENING.

7.1 ALL MOTORS AND INSTRUMENTS SHALL BE HAVE AN EQUIPMENT IDENTIFYING TAG AS INDICTED HEREIN, ON PLANS OR IN SPECIFICATIONS SECTION 26

7.2 TERMINAL BLOCKS SHALL BE LABELED AS INDICTED HEREIN, ON PLANS OR IN SPECIFICATIONS SECTION 26.

7.3 POWER CABLES ARE TO BE COLORED CODED BY PHASE AS INDICATED HEREIN.

8.1 THE CONTRACTOR SHALL PERFORM ALL EXCAVATION, TRENCHING AND BACKFILLING WORK, AND REMOVE ALL DEBRIS IN CONNECTION WITH HIS WORK. BACKFILLING SHALL BE DONE WITH MATERIALS ACCEPTABLE TO THE CONSTRUCTION MANAGER AND THOROUGHLY COMPACTED. ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND PROPERLY INSTALLED TO ELIMINATE ANY SETTLEMENT.

8.2 THE CONTRACTOR SHALL SECURE THE APPROVAL OF THE CONSTRUCTION MANAGER.

9.1 THE CONTRACTOR SHALL BE HELD SOLELY RESPONSIBLE FOR THE PROPER INSTALLATION OF HIS WORK. HE SHALL ARRANGE WITH THE PROPER CONTRACTORS FOR THE BUILDING IN OF ANCHORS, ETC., AND FOR THE LEAVING OF REQUIRED CHASES, OPENINGS, ETC., AND SHALL DO ALL CUTTING AND PATCHING MADE NECESSARY BY HIS FAILURE OR NEGLECT TO MAKE SUCH ARRANGEMENTS WITH OTHERS. ANY CUTTING OR PATCHING DONE BY THIS CONTRACTOR SHALL BE SUBJECT TO THE DIRECTIONS OF THE CONSTRUCTION MANAGER AND SHALL NOT BE STARTED UNTIL APPROVAL HAS BEEN OBTAINED.

9.2 ALL CUTTING, WELDING OR DRILLING OF CONCRETE OR STRUCTURAL MEMBERS SHALL BE PROPERLY REINFORCED AND PATCHED TO MATCH AS NEARLY AS POSSIBLE THE SURROUNDING WORK. BEFORE CUTTING, WELDING OR DRILLING ANY CONCRETE OR STRUCTURAL MEMBER, THE CONTRACTOR SHALL SECURE THE APPROVAL OF THE CONSTRUCTION MANAGER.

9.3 THE CONTRACTOR SHALL ASSIGN PERSONS IN DIRECT CHARGE OF WORK WHO ARE THOROUGHLY EXPERIENCED IN THE CLASS OF CONSTRUCTION WORK SPECIFIED HEREIN. ALL LABOR SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED WORKMEN UNDER THE SUPERVISION OF COMPETENT SUPERVISORS.

9.4 THE CONTRACTOR SHALL PERIODICALLY REMOVE ALL DEBRIS AND WASTE IN ORDER TO MAINTAIN SAFE WORKING AND OPERATING CONDITIONS, AND SHALL DISPOSE OF THE SAME IN AN APPROVED MANNER. AT THE COMPLETION OF WORK, HE SHALL REMOVE ALL HIS RUBBISH, TOOLS, SCAFFOLDS AND SURPLUS MATERIALS FROM AND ABOUT THE SITE, LEAVING HIS WORK CLEAN AND THE AREAS READY FOR OCCUPANCY.

10.1 UPON COMPLETION, THE COMPANY SHALL REVIEW AND APPROVE THE INSTALLATION TO ENSURE THAT THE WORK WAS DONE IN ACCORDANCE WITH THE DESIGN DRAWINGS AND CODE REQUIREMENTS, WITH ANY REQUIRED CORRECTIVE ACTIONS AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CERTIFICATES, PERMITS OR INSPECTIONS BY THE AUTHORITIES HAVING JURISDICTION.

10.2 THE INSTALLATION SHALL BE TESTED FREE FROM ALL GROUNDS AND SHORT CIRCUITS. ALL EQUIPMENT FURNISHED SHALL BE DEMONSTRATED TO OPERATE IN ACCORDANCE WITH THE REQUIREMENTS OF THESE SPECIFICATIONS AND PLANS. CONSULT WITH THE OWNER'S REPRESENTATIVE PRIOR TO TESTING AND ADJUSTING TO DETERMINE INTENDED FUNCTION. PERFORM SUCH TESTS AND MAKE NECESSARY ADJUSTMENTS TO ENSURE THAT DESIGN FUNCTION IS OBTAINED. THESE TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE CONSTRUCTION MANAGER OR HIS AUTHORIZED REPRESENTATIVE. THE CONTRACTOR SHALL NOTIFY ALL THOSE WHO ARE REQUIRED TO BE PRESENT DURING THE TESTS (SUCH AS THE FIRE MARSHAL FOR THE TESTING OF THE FIRE ALARM SYSTEM AND EMERGENCY EXIT LIGHTING SYSTEM), NOTIFICATION OF A TEST SHALL BE MADE TO PERSONS THAT ARE TO ATTEND AS REQUIRED BY THEIR DEPARTMENT AT LEAST 7 DAYS IN ADVANCE.

10.3 NORMAL FEEDERS, CIRCUITS, AND SERVICE ENTRANCE CONDUCTORS WITH WIRE SIZE #2 AND LARGER SHALL BE TESTED FOR LEAKAGE PHASE-TO-GROUND AND PHASE-TO-PHASE PRIOR TO ENERGIZATION OF THE ELECTRICAL SYSTEM. THE CONTRACTOR SHALL SUBMIT A WRITTEN REPORT TO THE CONSTRUCTION MANAGER SHOWING METHODS AND READINGS TAKEN.

11.1 CONDUIT

11.1.a MATERIALS: EXTERIOR - ALL CONDUITS SHALL BE PVC (BELOW GRADE) AND RIGID STEEL ABOVE GRADE. TRANSITION FROM PVC TO STEEL CONDUIT BELOW GRADE WITH PVC COATED RIGID SWEEPS. INTERIOR - ALL CONDUITS SHALL BE STEEL PER PLANS. ANY INTERIOR AREAS SUBJECT TO POTENTIAL IMPACT WITH CONDUIT (IE STORAGE AREAS, FORKLIFT PATHWAYS) SHALL BE PROTECTED.

11.1.b CONDUITS MUST USE EXPANSION JOINTS AS PER NEC.

11.1.c BEFORE INSTALLATION, THE INTERIOR AND EXTERIOR OF ALL CONDUIT AND FITTINGS SHALL BE INSPECTED AND CLEANED OF ALL DIRT, CUTTINGS AND OTHER FOREIGN MATERIALS.

11.1.d WHEN CONDUIT IS INSTALLED WHERE NO LOCATION DIMENSIONS ARE GIVEN ON THE DRAWINGS, APPROVAL OF THE LOCATIONS OF THESE CONDUITS SHALL BE OBTAINED FROM THE COMPANY REPRESENTATIVE PRIOR TO INSTALLATION.

11.1.e CONDUITS SHALL NOT BE FASTENED TO REMOVABLE MEMBERS SUCH AS PIPING. CONDUIT HANGERS SHALL BE SUPPORTED FROM BUILDINGS AND STRUCTURES, NOT FROM EQUIPMENT.

11.1.f CONNECTIONS TO INTERIOR BOXES, PANELS, EQUIPMENT AND RELATED ITEMS SHALL BE MADE WITH DOUBLE LOCKNUTS, ONE INSIDE AND ONE OUTSIDE, WITH AN INSULATING BUSHING ON EACH END OF THE CONDUIT IN ADDITION TO LOCKNUTS. OUTDOOR CONNECTIONS SHALL BE MADE WITH "MYERS" HUBS OR APPROVED EQUAL.

11.1.g ALL CONDUITS SHALL HAVE THEIR ENDS PLUGGED BY CAPS. COUPLINGS W/ PLUGS OR OTHER APPROVED MEANS DURING CONSTRUCTION WORK.

11.1.h ALL CONDUIT SUPPORTS SHALL BE ALUMINUM. THE USE OF PERFORATED STRAP OR PLUMBERS STRAP IS NOT PERMITTED.

11.1.i IN CROSSING OF PIPING, THE CONDUIT SHOULD CLEAR THE PIPE BY A MINIMUM OF 6 INCHES.

11.2 CONDUIT BENDS

11.2.a ALL BENDS SHALL HAVE RADIUS NOT LESS THAN SHOWN IN THE NEC OR SHALL BE MADE UP OF SCREW-JOINTED CONDUIT FITTINGS. NOT MORE THAN THE EQUIVALENT OF FOUR (4) 90° BENDS SHALL BE USED IN ANY RUN BETWEEN TERMINALS AND CABINETS, OR BETWEEN OUTLETS AND JUNCTION OR PULL BOXES.

11.2.b A GROUP OF EXPOSED CONDUITS THAT CHANGE DIRECTION UTILIZING BENDS SHALL HAVE THE MINIMUM BENDING RADIUS OF THE LARGEST CONDUIT IN THE GROUP FOR VERTICAL CHANGES AND SHALL HAVE THE SAME BEND RADIUS POINT FOR A HORIZONTAL CHANGE.

11.2.c BENDS SHALL BE FREE FROM CRACKS, CRIMPS OR OTHER DAMAGE TO THE CONDUIT OR ITS COATING. THE CONDUIT AFTER BENDING SHALL BE TRUE AND ROUND WITH FULL INSIDE AREAS FOR THE LENGTH OF THE BEND. CONDUIT BENDS SHALL COMPLY WITH NEC.

11.3 CONDUIT JOINTS

11.3.a ALL JOINTS IN ALUMINUM SHALL BE THREADED OR ALUMINUM PUSH FITTINGS. ALL CUT THREADS AND ANY WRENCH MARKS SHALL BE COATED WITH COLD SEALING COMPOUND. ALL THREADED JOINTS SHALL BE MADE UP TIGHT WITH A MINIMUM OF FIVE (5) FULL THREADS.

11.4 CABLE TRAY

11.4.a MATERIALS: TRAYS SHALL BE THE BRAND/MODEL INDICATED ON PLANS OR AS DESCRIBED IF NO SPECIFIC BRAND/MODEL IS GIVEN. SUBSTITUTIONS MUST BE APPROVED BY ENGINEER.

11.4.b CABLE TRAY AND TRAY SUPPORT MATERIALS, WHEN ASSEMBLED AND MOUNTED SHALL SUPPORT THE FULL CABLE LOAD WITH A MAXIMUM OF 2" DEFLECTION WITHOUT PERMANENT DEFORMATION.

11.4.c TRAY FITTINGS, SUCH AS BRANCHES, REDUCERS, FLAT ELBOWS, TEES AND CROSSES, SHALL BE USED FOR CHANGES IN DIRECTION. THE DIMENSIONS OF TRAY FITTINGS SHALL PROVIDE AMPLE BENDING RADIUS FOR THE CABLES CONTAINED IN THE TRAY. THE TERMINATION SHALL BE PROVIDED WITH A PROTECTOR GUARD TO PREVENT DAMAGE TO THE CABLES. AS REQUIRED, PROVIDE ADDITIONAL SUPPORTS FOR INDIVIDUAL CABLES WHERE THE CABLE LEAVES THE CABLE TRAY FOR FINAL TERMINATION.

11.4.d TRAYS SHALL BE CAREFULLY ALIGNED, LEVELED AND PLUMBED. TRAY SECTIONS AND FITTINGS SHALL BE ASSEMBLED ON THEIR SUPPORTS AND JOINTED TOGETHER, USING MFR'S STANDARD CONNECTOR UNITS.

11.4.e POWDER COATED STEEL ANGLES, TRAPEZE HANGERS, CHANNELS, BOLTING, AND MISCELLANEOUS MATERIALS REQUIRED FOR THE SUPPORT OF TRAYS FROM THE BUILDING STRUCTURE, SHALL BE ALUMINUM AND SUPPLIED AND INSTALLED BY THE CONTRACTOR.

11.4.f ALL EXTERIOR CABLE TRAYS TO BE SUPPLIED WITH COVERS. INSTALLED BY THE CONTRACTOR AFTER ALL CABLES ARE INSTALLED.

11.5 JUNCTION AND PULL BOXES

11.5.a MATERIALS: BOXES SHALL BE THE BRAND/MODEL INDICATED ON PLANS OR AS DESCRIBED IF NO SPECIFIC BRAND/MODEL IS GIVEN. ALL BOXES SHALL BE UL/FM RATED FOR LOCATION. SUBSTITUTIONS MUST BE APPROVED BY ENGINEER.

11.5.b BOXES FOR INDOOR INSTALLATION SHALL CONFORM TO THE FOLLOWING:

BE HEAVY DUTY POWDER COATED METAL OR ALUMINUM, WITH ALUMINUM COVERS AND BRONZE OR CADMIUM PLATED SCREWS OR BOLTS UNLESS OTHERWISE PERMITTED OR SPECIFIED.

BE NEMA 12 IN NON-HAZARDOUS AREAS OR AS SHOWN ON DRAWINGS AND HAVE GASKETED COVERS ON BOXES CONTAINING TERMINAL BLOCKS.

HAVE PIANO HINGED COVER AND INTERIOR MOUNTING PANEL WHERE USED FOR ENCLOSING TERMINAL BLOCKS AND CONTROL RELAYS.

11.5.c BOXES FOR OUTDOOR INSTALLATION SHALL CONFORM TO THE FOLLOWING:

BE HEAVY DUTY STAINLESS STEEL WITH STAINLESS STEEL COVERS. SCREWS OR BOLTS UNLESS OTHERWISE NOTED.

HAVE THREADED CONDUIT ENTRANCES SUCH AS "MYERS" HUBS, OR APPROVED EQUAL AND HAVE RUBBER OR NEOPRENE COVER GASKETS.

BE NEMA 4 WATERTIGHT IN OUTDOOR NON-HAZARDOUS AREAS AND HAVE A DRIP LIP AND OTHER FEATURES REQUIRED FOR RAIN TIGHT CONSTRUCTION. UNLESS OTHERWISE NOTED.

HAVE PIANO HINGED COVER AND INTERIOR MOUNTING PANELS WHEN USED FOR ENCLOSING TERMINAL BLOCKS, CONTROL RELAYS, ETC AND HAVE A DRAIN FITTING INSTALLED IN THE BOTTOM OF THE BOX.

11.5.d IDENTIFICATION: NAMEPLATES, WITH TITLE AND TAG NO., FABRICATED FROM PLASTIC WITH BLACK LETTERS ON WHITE BACKGROUND SHALL BE PERMANENTLY AFFIXED TO ALL JUNCTION BOXES.

11.1 EXPOSED CONDUITS IN BUILDINGS, UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS, SHALL BE SUBJECT TO THE FOLLOWING REQUIREMENTS:

ALL CONDUITS SHOULD RUN PARALLEL OR PERPENDICULAR TO WALLS, CEILINGS, BEAMS AND COLUMNS.

ALL CONDUIT RUNS SHALL CLEAR ALL CRANE SYSTEMS, DOORS, WINDOWS, ACCESS WALLS AND OPENINGS.

PARALLEL RUNS SHOULD BE GROUPED IN NEATLY ALIGNED BANKS WHERE POSSIBLE WITH MINIMUM 1" CLEARANCE BETWEEN CONDUITS.

CONDUITS TERMINATING AT CABLE TRAYS SHALL ATTACH TO TRAY AND SHALL BE ELECTRICALLY BONDED TO EDGE OF TRAY OR TO THE GND WIRE IN CABLE TRAY.

11.1.x CONDUITS SHALL BE INSTALLED, WHEREVER POSSIBLE, IN SUCH MANNER AS TO AVOID THE COLLECTION OF CONDENSED MOISTURE IN THE CONDUIT. DRAINS SHALL BE INSTALLED AT LOW POINTS IN EXPOSED CONDUIT RUNS.

11.1.y PULL POINTS SHALL BE PROVIDED IN EACH CONDUIT RUN TO CONFORM WITH THE REQUIREMENTS OF THE NEC OR CABLE MFR'S RECOMMENDATION.

11.1.z CONDUIT RUNS SHALL BE IDENTIFIED AT TERMINATIONS AND PULL POINTS WITH STAMPED ALUMINUM BANDS.

11.1.aa EACH CONDUIT SHALL BE CLEANED OF ALL OBSTRUCTION BY PULLING A MANDEREL THROUGH THE ENTIRE LENGTH OF RUN PRIOR TO PULLING WIRE OR CABLE IN CONDUIT.

11.1.ab CONDUIT SEALING AND DRAINING SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC. SEALING METHODS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SEAL MFR.

11.1.ac CONDUIT UNIONS SHALL BE INSTALLED IN ALL CONDUITS CONNECTED TO TAPPED EQUIPMENT SO THAT THE EQUIPMENT CAN BE REMOVED WITHOUT DISTURBING THE CONDUIT (OR SEAL).

11.1.ad ALL BOLTS, NUTS & WASHERS SHALL BE CADMIUM PLATED.

11.1.ae ALL CONDUITS ROUTED TO EXTERIOR CABLE TRAYS SHALL ENTER THROUGH THE BOTTOM OF THE CABLE TRAY UON.

11.2 CONDUIT BENDS

11.2.a ALL BENDS SHALL HAVE RADIUS NOT LESS THAN SHOWN IN THE NEC OR SHALL BE MADE UP OF SCREW-JOINTED CONDUIT FITTINGS. NOT MORE THAN THE EQUIVALENT OF FOUR (4) 90° BENDS SHALL BE USED IN ANY RUN BETWEEN TERMINALS AND CABINETS, OR BETWEEN OUTLETS AND JUNCTION OR PULL BOXES.

11.2.b A GROUP OF EXPOSED CONDUITS THAT CHANGE DIRECTION UTILIZING BENDS SHALL HAVE THE MINIMUM BENDING RADIUS OF THE LARGEST CONDUIT IN THE GROUP FOR VERTICAL CHANGES AND SHALL HAVE THE SAME BEND RADIUS POINT FOR A HORIZONTAL CHANGE.

11.2.c BENDS SHALL BE FREE FROM CRACKS, CRIMPS OR OTHER DAMAGE TO THE CONDUIT OR ITS COATING. THE CONDUIT AFTER BENDING SHALL BE TRUE AND ROUND WITH FULL INSIDE AREAS FOR THE LENGTH OF THE BEND. CONDUIT BENDS SHALL COMPLY WITH NEC.

11.3 CONDUIT JOINTS

11.3.a ALL JOINTS IN ALUMINUM SHALL BE THREADED OR ALUMINUM PUSH FITTINGS. ALL CUT THREADS AND ANY WRENCH MARKS SHALL BE COATED WITH COLD SEALING COMPOUND. ALL THREADED JOINTS SHALL BE MADE UP TIGHT WITH A MINIMUM OF FIVE (5) FULL THREADS.

11.4 CABLE TRAY

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11.4.b CABLE TRAY AND TRAY SUPPORT MATERIALS, WHEN ASSEMBLED AND MOUNTED SHALL SUPPORT THE FULL CABLE LOAD WITH A MAXIMUM OF 2" DEFLECTION WITHOUT PERMANENT DEFORMATION.

11.4.c TRAY FITTINGS, SUCH AS BRANCHES, REDUCERS, FLAT ELBOWS, TEES AND CROSSES, SHALL BE USED FOR CHANGES IN DIRECTION. THE DIMENSIONS OF TRAY FITTINGS SHALL PROVIDE AMPLE BENDING RADIUS FOR THE CABLES CONTAINED IN THE TRAY. THE TERMINATION SHALL BE PROVIDED WITH A PROTECTOR GUARD TO PREVENT DAMAGE TO THE CABLES. AS REQUIRED, PROVIDE ADDITIONAL SUPPORTS FOR INDIVIDUAL CABLES WHERE THE CABLE LEAVES THE CABLE TRAY FOR FINAL TERMINATION.

11.4.d TRAYS SHALL BE CAREFULLY ALIGNED, LEVELED AND PLUMBED. TRAY SECTIONS AND FITTINGS SHALL BE ASSEMBLED ON THEIR SUPPORTS AND JOINTED TOGETHER, USING MFR'S STANDARD CONNECTOR UNITS.

11.4.e POWDER COATED STEEL ANGLES, TRAPEZE HANGERS, CHANNELS, BOLTING, AND MISCELLANEOUS MATERIALS REQUIRED FOR THE SUPPORT OF TRAYS FROM THE BUILDING STRUCTURE, SHALL BE ALUMINUM AND SUPPLIED AND INSTALLED BY THE CONTRACTOR.

11.4.f ALL EXTERIOR CABLE TRAYS TO BE SUPPLIED WITH COVERS. INSTALLED BY THE CONTRACTOR AFTER ALL CABLES ARE INSTALLED.

11.5 JUNCTION AND PULL BOXES

11.5.a MATERIALS: BOXES SHALL BE THE BRAND/MODEL INDICATED ON PLANS OR AS DESCRIBED IF NO SPECIFIC BRAND/MODEL IS GIVEN. ALL BOXES SHALL BE UL/FM RATED FOR LOCATION. SUBSTITUTIONS MUST BE APPROVED BY ENGINEER.

11.5.b BOXES FOR INDOOR INSTALLATION SHALL CONFORM TO THE FOLLOWING:

BE HEAVY DUTY POWDER COATED METAL OR ALUMINUM, WITH ALUMINUM COVERS AND BRONZE OR CADMIUM PLATED SCREWS OR BOLTS UNLESS OTHERWISE PERMITTED OR SPECIFIED.

BE NEMA 12 IN NON-HAZARDOUS AREAS OR AS SHOWN ON DRAWINGS AND HAVE GASKETED COVERS ON BOXES CONTAINING TERMINAL BLOCKS.

HAVE PIANO HINGED COVER AND INTERIOR MOUNTING PANEL WHERE USED FOR ENCLOSING TERMINAL BLOCKS AND CONTROL RELAYS.

11.5.c BOXES FOR OUTDOOR INSTALLATION SHALL CONFORM TO THE FOLLOWING:

BE HEAVY DUTY STAINLESS STEEL WITH STAINLESS STEEL COVERS. SCREWS OR BOLTS UNLESS OTHERWISE NOTED.

HAVE THREADED CONDUIT ENTRANCES SUCH AS "MYERS" HUBS, OR APPROVED EQUAL AND HAVE RUBBER OR NEOPRENE COVER GASKETS.

BE NEMA 4 WATERTIGHT IN OUTDOOR NON-HAZARDOUS AREAS AND HAVE A DRIP LIP AND OTHER FEATURES REQUIRED FOR RAIN TIGHT CONSTRUCTION. UNLESS OTHERWISE NOTED.

HAVE PIANO HINGED COVER AND INTERIOR MOUNTING PANELS WHEN USED FOR ENCLOSING TERMINAL BLOCKS, CONTROL RELAYS, ETC AND HAVE A DRAIN FITTING INSTALLED IN THE BOTTOM OF THE BOX.

11.5.d IDENTIFICATION: NAMEPLATES, WITH TITLE AND TAG NO., FABRICATED FROM PLASTIC WITH BLACK LETTERS ON WHITE BACKGROUND SHALL BE PERMANENTLY AFFIXED TO ALL JUNCTION BOXES.

11.1 EXPOSED CONDUITS IN BUILDINGS, UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS, SHALL BE SUBJECT TO THE FOLLOWING REQUIREMENTS:

ALL CONDUITS SHOULD RUN PARALLEL OR PERPENDICULAR TO WALLS, CEILINGS, BEAMS AND COLUMNS.

ALL CONDUIT RUNS SHALL CLEAR ALL CRANE SYSTEMS, DOORS, WINDOWS, ACCESS WALLS AND OPENINGS.

PARALLEL RUNS SHOULD BE GROUPED IN NEATLY ALIGNED BANKS WHERE POSSIBLE WITH MINIMUM 1" CLEARANCE BETWEEN CONDUITS.

CONDUITS TERMINATING AT CABLE TRAYS SHALL ATTACH TO TRAY AND SHALL BE ELECTRICALLY BONDED TO EDGE OF TRAY OR TO THE GND WIRE IN CABLE TRAY.

11.1.x CONDUITS SHALL BE INSTALLED, WHEREVER POSSIBLE, IN SUCH MANNER AS TO AVOID THE COLLECTION OF CONDENSED MOISTURE IN THE CONDUIT. DRAINS SHALL BE INSTALLED AT LOW POINTS IN EXPOSED CONDUIT RUNS.

11.1.y PULL POINTS SHALL BE PROVIDED IN EACH CONDUIT RUN TO CONFORM WITH THE REQUIREMENTS OF THE NEC OR CABLE MFR'S RECOMMENDATION.

11.1.z CONDUIT RUNS SHALL BE IDENTIFIED AT TERMINATIONS AND PULL POINTS WITH STAMPED ALUMINUM BANDS.

11.1.aa EACH CONDUIT SHALL BE CLEANED OF ALL OBSTRUCTION BY PULLING A MANDEREL THROUGH THE ENTIRE LENGTH OF RUN PRIOR TO PULLING WIRE OR CABLE IN CONDUIT.

11.1.ab CONDUIT SEALING AND DRAINING SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC. SEALING METHODS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SEAL MFR.

11.1.ac CONDUIT UNIONS SHALL BE INSTALLED IN ALL CONDUITS CONNECTED TO TAPPED EQUIPMENT SO THAT THE EQUIPMENT CAN BE REMOVED WITHOUT DISTURBING THE CONDUIT (OR SEAL).

11.1.ad ALL BOLTS, NUTS & WASHERS SHALL BE CADMIUM PLATED.

11.1.ae ALL CONDUITS ROUTED TO EXTERIOR CABLE TRAYS SHALL ENTER THROUGH THE BOTTOM OF THE CABLE TRAY UON.

11.2 CONDUIT BENDS

11.2.a ALL BENDS SHALL HAVE RADIUS NOT LESS THAN SHOWN IN THE NEC OR SHALL BE MADE UP OF SCREW-JOINTED CONDUIT FITTINGS. NOT MORE THAN THE EQUIVALENT OF FOUR (4) 90° BENDS SHALL BE USED IN ANY RUN BETWEEN TERMINALS AND CABINETS, OR BETWEEN OUTLETS AND JUNCTION OR PULL BOXES.

11.2.b A GROUP OF EXPOSED CONDUITS THAT CHANGE DIRECTION UTILIZING BENDS SHALL HAVE THE MINIMUM BENDING RADIUS OF THE LARGEST CONDUIT IN THE GROUP FOR VERTICAL CHANGES AND SHALL HAVE THE SAME BEND RADIUS POINT FOR A HORIZONTAL CHANGE.

11.2.c BENDS SHALL BE FREE FROM CRACKS, CRIMPS OR OTHER DAMAGE TO THE CONDUIT OR ITS COATING. THE CONDUIT AFTER BENDING SHALL BE TRUE AND ROUND WITH FULL INSIDE AREAS FOR THE LENGTH OF THE BEND. CONDUIT BENDS SHALL COMPLY WITH NEC.

11.3 CONDUIT JOINTS

11.3.a ALL JOINTS IN ALUMINUM SHALL BE THREADED OR ALUMINUM PUSH FITTINGS. ALL CUT THREADS AND ANY WRENCH MARKS SHALL BE COATED WITH COLD SEALING COMPOUND. ALL THREADED JOINTS SHALL BE MADE UP TIGHT WITH A MINIMUM OF FIVE (5) FULL THREADS.

11.4 CABLE TRAY

11.4.a MATERIALS: TRAYS SHALL BE THE BRAND/MODEL INDICATED ON PLANS OR AS DESCRIBED IF NO SPECIFIC BRAND/MODEL IS GIVEN. SUBSTITUTIONS MUST BE APPROVED BY ENGINEER.

11.4.b CABLE TRAY AND TRAY SUPPORT MATERIALS, WHEN ASSEMBLED AND MOUNTED SHALL SUPPORT THE FULL CABLE LOAD WITH A MAXIMUM OF 2" DEFLECTION WITHOUT PERMANENT DEFORMATION.

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HAVE PIANO HINGED COVER AND INTERIOR MOUNTING PANEL WHERE USED FOR ENCLOSING TERMINAL BLOCKS AND CONTROL RELAYS.

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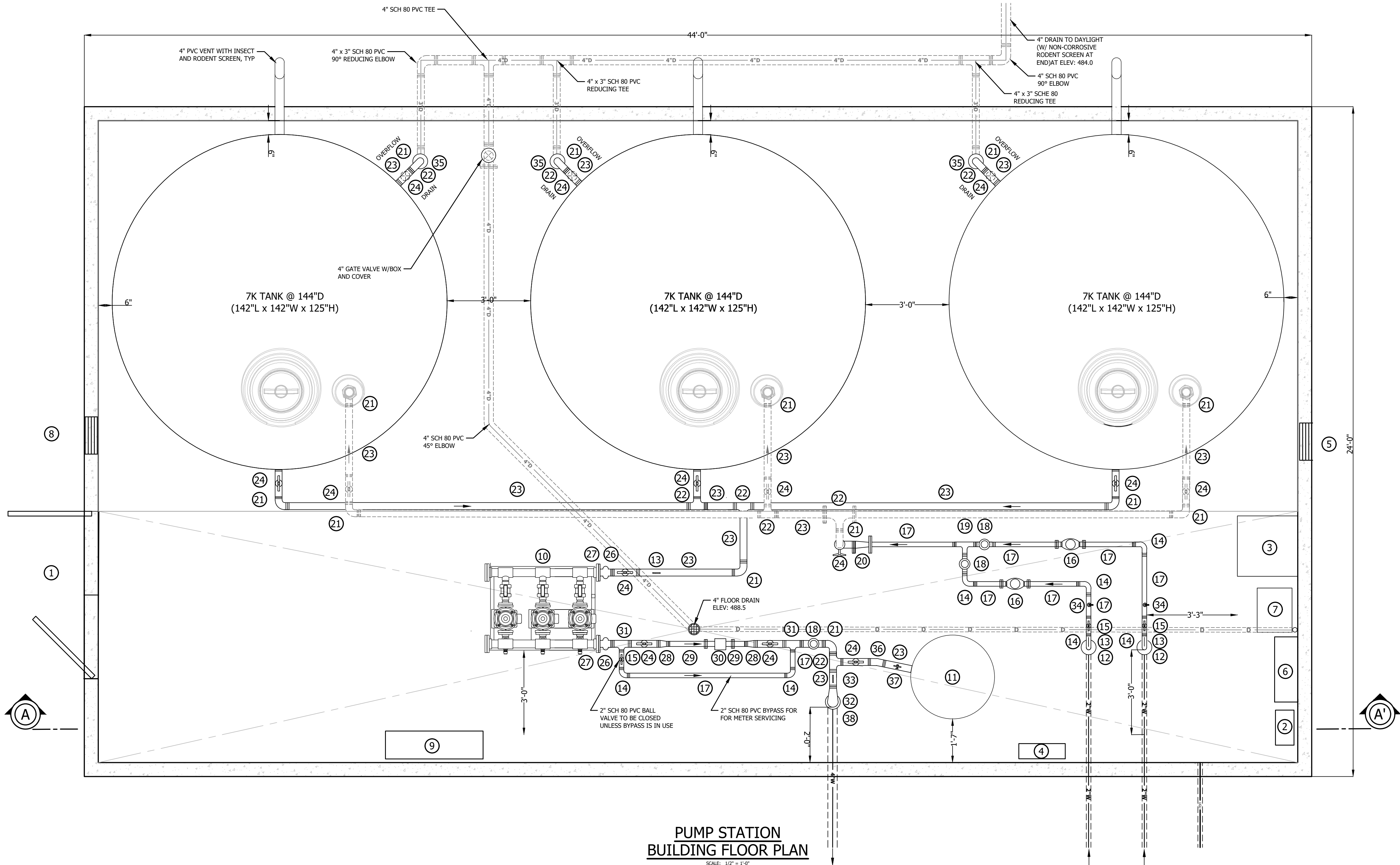
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MECHANICAL EQUIPMENT SCHEDULE	
ITEM	DESCRIPTION
①	6'-0" x 6'-8" EXTERIOR, DOUBLE, HOLLOW METAL DOORS, WITH 10" x 10" LITES
②	AUTOMATIC TRANSFER SWITCH
③	PROPANE GAS HEATER, REZNOR V3, 30,000 BTU, MODEL UDAS, 26" x 26" x 12" H, CEILING MOUNT, WITH WALL MOUNT THERMOSTAT, OR EQUAL.
④	MAIN BREAKER PANEL
⑤	18" x 18" AIR INLET LOUVER AND GRAVITY RELIEF DAMPER, GREENHECK, OR EQUAL.
⑥	CONTROL PANEL
⑦	DEHUMIDIFIER, DAYTON MODEL 39K869, OR EQUAL.
⑧	18" x 18" AIR OUTLET LOUVER AND GRAVITY RELIEF DAMPER AND SIDEWALL DIRECT DRIVE 3/4 HP EXHAUST FAN, GREENHECK, OR EQUAL.
⑨	PUMP CONTROLS BY MANUFACTURER OF BOOSTER PUMP PACKAGE
⑩	GOULD 15SV3GG4F60 3 PHASE 460V 60HZ OR EQUAL
⑪	264 GAL HYDRO-PNEUMATIC TANK, WESSELS FXA 1000, OR EQUAL

VALVE & PIPING SCHEDULE					
ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION
⑫	2" DUCTILE IRON THROUGH FLOOR	⑳	3" x 2" SCH 80 PVC REDUCER	⑩	2 1/2" BADGER MODMAG M2000 FLOW METER, OR EQUAL W/ PVC FLANGE ADAPTERS
⑬	SUCTION PRESSURE GAUGE LIQUID FILLED 0-200 PSI	㉑	3" SCH 80 PVC 90°D ELBOW	㉑	3" x 2" SCH 80 PVC REDUCING TEE
⑭	2" SCH 80 PVC 90° ELBOW	㉒	3" SCH 80 PVC TEE	㉒	4" x 3" REDUCING ELBOW
⑮	2" SCH 80 PVC BALL VALVE - TRUE UNION	㉓	3" SCH80 SPOOL PIECE WITH MAINTENANCE COUPLING	㉓	DISCHARGE PRESSURE GAUGE LIQUID FILLED 0-200 PSI
⑯	2" NEPTUNE MACH 10 ULTRASONIC FLOW METER W/PVC FLANGE ADAPTERS OR APPROVED EQUAL	㉔	3" SCH 80 PVC BALL VALVE - TRUE UNION	㉔	SAMPLE TAP
⑰	2" SCH80 SPOOL PIECE WITH MAINTENANCE COUPLING	㉕	3" SCH 80 PVC CHECK VALVE	㉕	3" DUCTILE IRON THROUGH FLOOR
⑱	2" SCH 80 PVC CHECK VALVE	㉖	3" FLEXICRAFT ULTRASPOOL FLEXIBLE EXPANSION JOINT	㉖	3" SCH 80 PVC 11 1/4" ELBOW
㉑	2" SCH 80 PVC TEE	㉗	3" COMPANION COUPLING	㉗	PRESSURE GAUGE AND DRAIN VALVE
㉒	3" x 2" SCH 80 PVC REDUCER	㉘	3" x 2 1/2" SCH 80 PVC REDUCER	㉘	4" DUCTILE IRON THROUGH FLOOR
		㉙	2 1/2" SCH80 SPOOL PIECE WITH MAINTENANCE COUPLING		

NOTES:

- ALL SCH 80 PVC CONNECTIONS SHALL BE GLUED OR THREADED AS NEEDED.
- LADDER TO BE STORED IN PUMP HOUSE FOR ACCESS TO TANK VALVES.



FOR BIDDING
PWS# 0202020

DATE OF PRINT
JULY 18 2025
HORIZONS ENGINEERING

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PROJECT #:	220963	DATE:	JUNE 2025	NO.	DATE	REVISION DESCRIPTION	ENG	DWG
MAP LOT (OR ARCHIVE)		-		1	07/2025	REVISIONS PER ADDENDUM 1	MSG	MSG
SURVEYED BY:	HEI							
ENGINEERED BY:	MSG							
DRAWN BY:	LJM							
CHECKED BY:	CFC							



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SUNRAY SHORES WATER DISTRICT
BELMONT, NEW HAMPSHIRE
CONTRACT # 1
WATER BOOSTER PUMP STATION PROJECT
BOOSTER PUMP STATION FLOOR PLAN

SHEET D1.01

MECHANICAL EQUIPMENT SCHEDULE

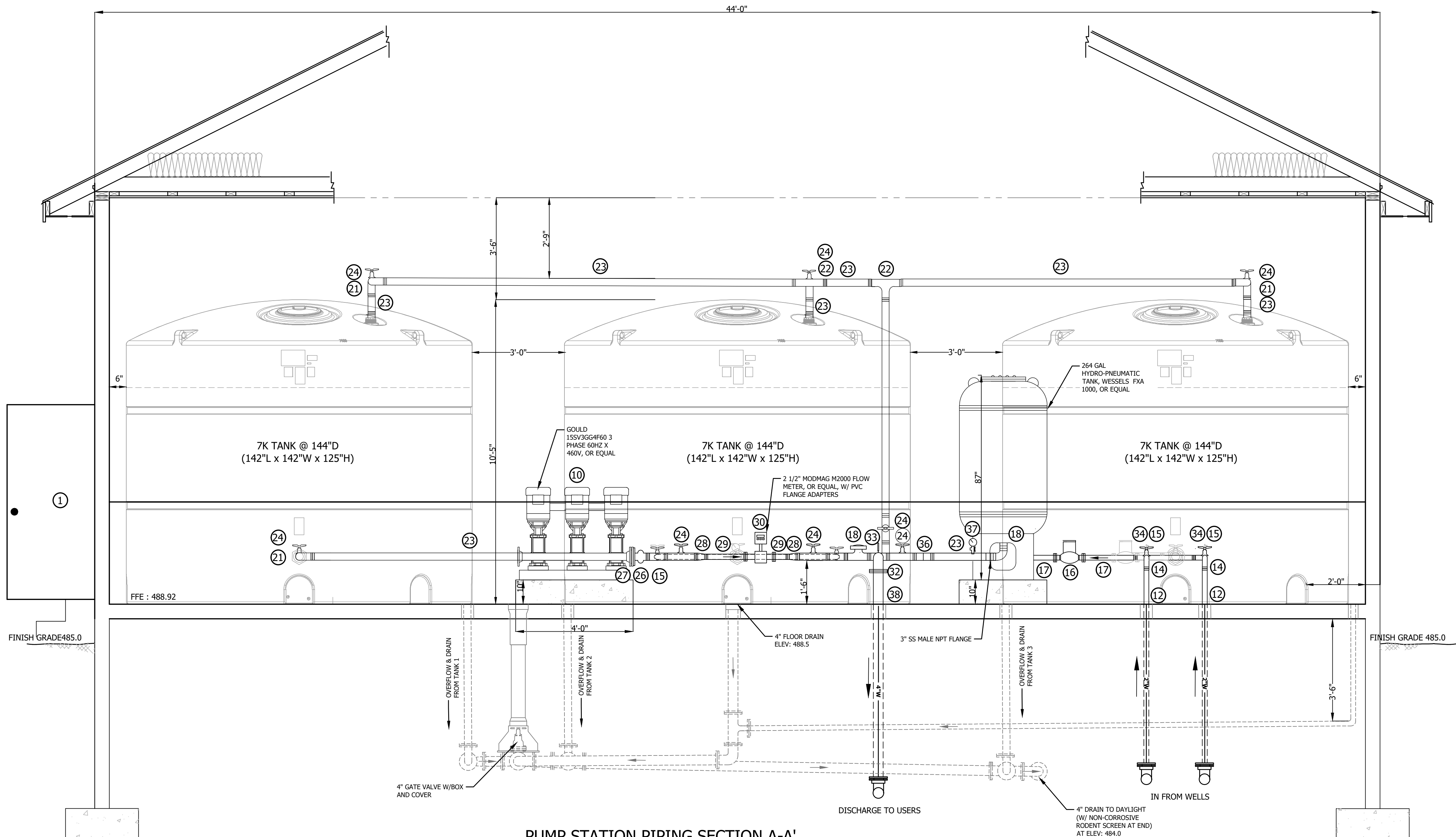
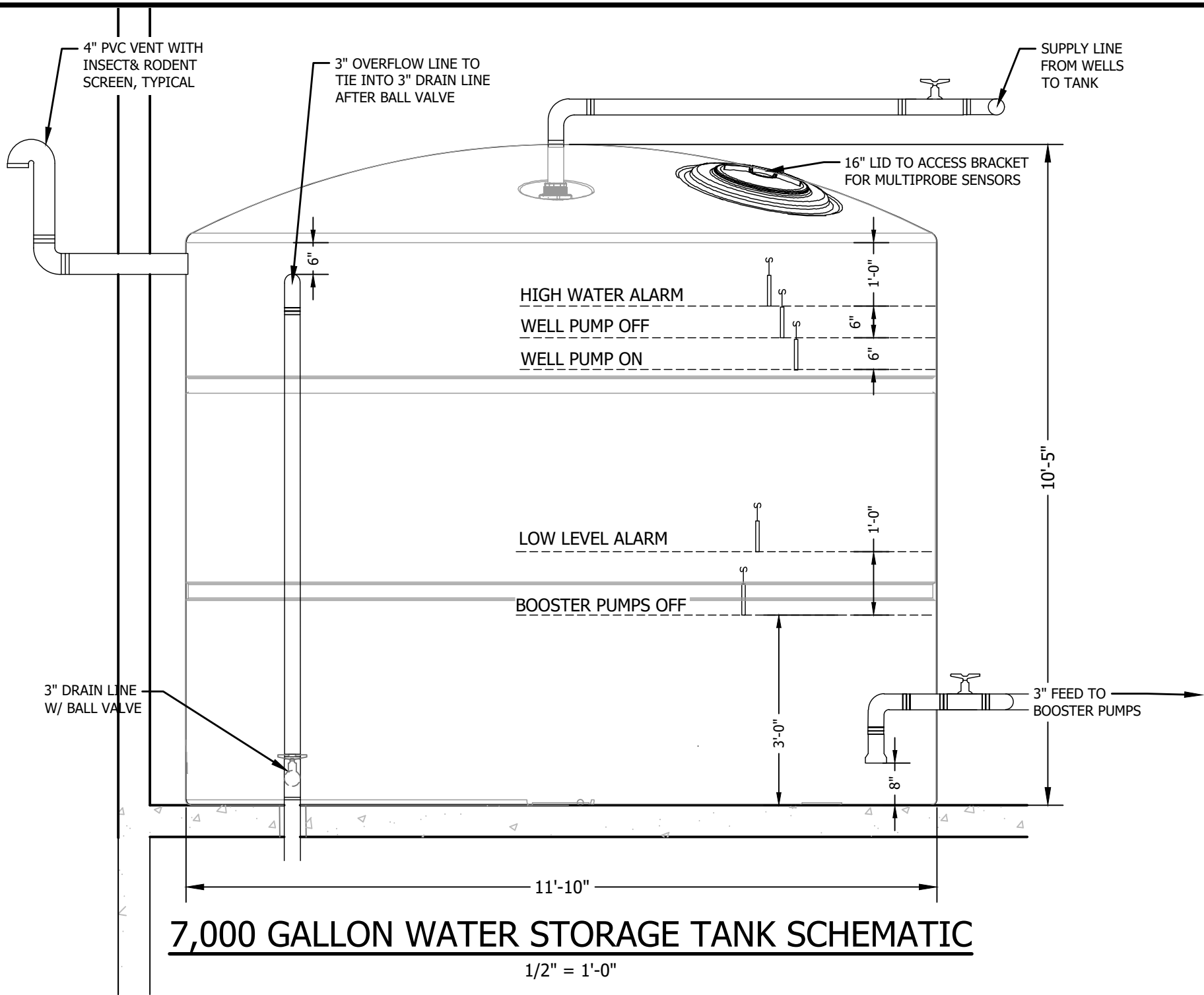
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VALVE & PIPING SCHEDULE

ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION
⑫	2" DUCTILE IRON THROUGH FLOOR	⑳	3" SCH 80 PVC 90°D ELBOW	⑩	2 1/2" BADGER MODMAG M2000 FLOW METER, OR EQUAL W/ PVC FLANGE ADAPTERS
⑬	SUCTION PRESSURE GAUGE LIQUID FILLED 0-200 PSI	㉑	3" SCH 80 PVC TEE	⑪	3" x 2" SCH 80 PVC REDUCING TEE
⑭	2" SCH 80 PVC 90° ELBOW	㉒	3" SCH80 SPOOL PIECE WITH MAINTENANCE COUPLING	⑫	4" x 3" REDUCING ELBOW
⑮	2" SCH 80 PVC BALL VALVE - TRUE UNION	㉓	3" SCH 80 PVC BALL VALVE - TRUE UNION	⑬	DISCHARGE PRESSURE GAUGE LIQUID FILLED 0-200 PSI
⑯	2" NEPTUNE MACH 10 ULTRASONIC FLOW METER W/PVC FLANGE ADAPTERS OR APPROVED EQUAL	㉔	3" SCH 80 PVC CHECK VALVE	⑭	SAMPLE TAP
⑰	2" SCH80 SPOOL PIECE WITH MAINTENANCE COUPLING	㉕	3" FLEXICRAFT ULTRASPOOL FLEXIBLE EXPANSION JOINT	⑮	3" DUCTILE IRON THROUGH FLOOR
⑱	2" SCH 80 PVC CHECK VALVE	㉖	3" COMPANION COUPLING	⑯	3" SCH 80 PVC 11 ¼" ELBOW
⑲	2" SCH 80 PVC TEE	㉗	3" x 2 1/2" SCH 80 PVC REDUCER	⑰	PRESSURE GAUGE AND DRAIN VALVE
㉔	3" x 2" SCH 80 PVC REDUCER	㉘	2 1/2" SCH80 SPOOL PIECE WITH MAINTENANCE COUPLING	⑱	4" DUCTILE IRON THROUGH FLOOR

NOTES:

1. ALL SCH 80 PVC CONNECTIONS SHALL BE GLUED OR THREADED AS NEEDED.
2. LADDER TO BE STORED IN PUMP HOUSE FOR ACCESS TO TANK VALVES.



PUMP STATION PIPING SECTION A-A'

1/2" = 1'-0"

FOR BIDDING
PWS# 0202020

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PROJECT #:	220963	DATE:	JUNE 2025	MAP LOT (OR ARCHIVE)	-	NO.	1	DATE	07/2025	REVISION DESCRIPTION	REVISIONS PER ADDENDUM 1	MSG	MSG	DWG
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BELMONT, NEW HAMPSHIRE
CONTRACT #1
WATER BOOSTER PUMP STATION PROJECT
BOOSTER PUMP STATION SECTION A-A'

SHEET D1.02