

GENERAL PROVISIONS

A. GENERAL

1. REQUIREMENTS SPECIFIED ON COVER SHEET, ALONG WITH ELECTRICAL SPECIFICATIONS AND ALL ITS SECTIONS, COMPRISE THE CONTRACT DOCUMENTS FOR THE ELECTRICAL CONTRACT. DRAWINGS AND ALL THEIR REVISIONS UP TO THE BID SUBMITTAL DATE BECOME A BINDING PART OF THE CONTRACT, ALONG WITH THESE SPECIFICATIONS AS THOUGH THEY WERE ONE, AND ANYTHING IMPLIED BY THE SPECIFICATIONS SHALL BE INTERPRETED AS ALSO IMPLIED BY THE DRAWINGS AND VICE VERSA. PROVIDE NECESSARY ITEMS FOR A COMPLETE INSTALLATION OF ALL ELECTRICALLY OPERATED EQUIPMENT LISTED IN THE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
2. THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND EQUIPMENT DRAWINGS AND SPECIFICATIONS ARE INCORPORATED INTO, AND BECOME A PART OF THIS DIVISION. THIS CONTRACTOR SHALL EXAMINE ALL SUCH DRAWINGS AND SPECIFICATIONS AND BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS CONTAINED THEREIN. THE SUBMISSION OF HIS BID SHALL INDICATE SUCH KNOWLEDGE.
3. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. THEY ARE INTENDED TO SHOW THE APPROXIMATE LOCATIONS OF EQUIPMENT AND CONDUIT. DIMENSIONS GIVEN ON THE PLANS, IN FIGURES, SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED IN THE FIELD. THE ELECTRICAL CONTRACTOR SHALL LAYOUT ALL EQUIPMENT ROOMS TO MAKE SURE THE EQUIPMENT, AS PURCHASED, FITS IN THE ROOM OR SPACE SHOWN. EXACT LOCATION OF ALL EQUIPMENT SHALL BE VERIFIED IN THE FIELD AND ROUTING OF CONDUITS SHALL SUIT FIELD CONDITIONS.
4. UNTIL THE TIME OF INSTALLATION, THE ARCHITECT RESERVES THE RIGHT TO MAKE MINOR CHANGES IN THE LOCATION OF CONDUIT AND EQUIPMENT WITHOUT ADDITIONAL COST TO THE CONTRACT.
5. THE ELECTRICAL DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER. MATERIAL AND LABOR NECESSARY TO THE PROJECT SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. LABOR AND/OR MATERIALS NEITHER SHOWN NOR SPECIFIED, BUT OBVIOUSLY NECESSARY FOR THE COMPLETION AND PROPER FUNCTIONING OF THE SYSTEM, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AT NO ADDITIONAL COST.
6. ARRANGE ALL EQUIPMENT SUBSTANTIALLY AS SHOWN ON THE DRAWINGS. MAKE DEVIATIONS ONLY WHERE NECESSARY TO AVOID INTERFERENCE. CHECK ALL EQUIPMENT SIZES AGAINST AVAILABLE SPACE PRIOR TO SHIPMENT TO AVOID INTERFERENCE.
7. EXAMINE THE WORK OF OTHER TRADES INSOFAR AS THEIR WORK COMES IN CONTACT WITH OR IS COVERED BY THIS WORK. IN NO CASE ATTACH TO, OR FINISH AGAINST ANY DEFECTIVE WORK OR INSTALL WORK IN A MANNER WHICH WILL PREVENT PROPER INSTALLATION OF THE WORK OF OTHER TRADES.
8. ELECTRICAL CONTRACTOR SHALL VERIFY WITH OTHER TRADES ALL ELECTRICAL CHARACTERISTICS OF EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. CONTRACTOR SHALL VERIFY VOLTAGE, PHASE AND HORSEPOWER AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO START OF WORK. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECTING MEANS AND OVERLOAD PROTECTION FOR ALL EQUIPMENT, UNLESS FURNISHED INTEGRAL WITH EQUIPMENT PACKAGE.
9. IT IS THE INTENT OF THESE DRAWINGS THAT THIS BE A COMPLETE ELECTRICAL JOB. ANY ERRORS OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BIDDING THE JOB.

B. VISIT TO THE SITE

1. THE CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING HIS WORK. THE SUBMISSION OF HIS PROPOSAL SHALL INDICATE SUCH KNOWLEDGE. NO ADDITIONAL PAYMENT SHALL BE MADE ON CLAIMS THAT ARISE FROM A LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.

C. CODE AND PERMITS

1. INSTALLATION SHALL BE IN FULL ACCORDANCE WITH ALL CODES, RULES AND REGULATIONS OF MUNICIPAL, CITY, COUNTY, STATE AND PUBLIC UTILITIES AND ALL OTHER AUTHORITIES HAVING JURISDICTION OVER THE PREMISES.
2. COMPLY WITH ANY SPECIFICATION REQUIREMENTS THAT ARE IN EXCESS BUT NOT IN CONFLICT WITH CODE REQUIREMENTS.
3. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, PLAN REVIEWS AND CERTIFICATES OF INSPECTION IN CONNECTION WITH HIS WORK. REQUIRED BY THE FOREGOING AUTHORITIES. BEFORE FINAL PAYMENT OF THE CONTRACT IS ALLOWED, ALL CERTIFICATES SHALL BE DELIVERED TO THE ARCHITECT IN DUPLICATE.
4. ELECTRICAL MATERIAL AND EQUIPMENT SHALL BEAR THE UL LABEL EXCEPT WHERE UL DOES NOT LABEL SUCH TYPES OF MATERIAL AND EQUIPMENT.

D. SHOP DRAWINGS SUBMITTALS

1. THE ELECTRICAL CONTRACTOR SHALL SUBMIT FIVE (5) SETS OF SHOP DRAWINGS. THE SHOP DRAWINGS OF THE FOLLOWING EQUIPMENT USING THE INDICATED NUMBERING SYSTEM AND TITLES. SHALL BE SUBMITTED THROUGH THE ARCHITECT TO THE ENGINEER AND THEN RESUBMITTED FOR FINAL APPROVAL, IF NECESSARY. SHOP DRAWINGS SHALL BE SUBMITTED FOR THE FOLLOWING ITEMS:
 - a. WIRING DEVICES
 - b. PANELBOARDS AND SAFETY SWITCHES INCLUDING FAULT CURRENT STUDY BASED ON EQUIPMENT BEING SUPPLIED.
 - c. CONTACTORS, TIME SWITCHES AND PHOTOCELL
 - d. LIGHTING FIXTURES
 - e. SUPERVISORY ALARM SYSTEM
2. ALL SUBMITTED SHOP DRAWINGS (MANUFACTURERS' EQUIPMENT DESCRIPTIVE SHEETS OR VENDORS' PREPARED DRAWINGS) SHALL HAVE THE GENERAL CONTRACTOR'S OR SUBCONTRACTOR'S "STAMP OF APPROVAL," INDICATING THAT THE ITEM SUBMITTED IS AS CALLED FOR ON THE PLANS AND SPECIFICATIONS, IS APPROVED BY THE GENERAL CONTRACTOR OR SUBCONTRACTOR, THE DATE OF APPROVAL AND INITIALED BY THE PERSON APPROVING THE SUBMITTAL AND THE NAME OF THE COMPANY SUBMITTING SAID EQUIPMENT FOR APPROVAL.
3. SUBMIT BOUND BROCHURES COMPLETE WITH A TABLE OF CONTENTS. LOOSE OR STAPLED TOGETHER SHEETS ARE NOT ACCEPTABLE. ANY SUBMITTALS NOT IN BROCHURE FORM OR NOT AS SPECIFIED SHALL BE RETURNED AT THE CONTRACTOR'S EXPENSE FOR RESUBMITTAL.
4. ALL DESCRIPTIVE LITERATURE SHALL BE SUBMITTED IN A THREE (3) HOLE BROCHURE WITH A COVER IDENTIFYING THE FOLLOWING:
 - a. NAME OF THE JOB.
 - b. LOCATION OF THE JOB, ADDRESS, CITY AND STATE.
 - c. NAME AND ADDRESS OF THE COMPANY SUBMITTING THE BROCHURES.
 - d. DATE OF THE SUBMITTAL.
5. EVERY EFFORT SHALL BE MADE, IN CHECKING THE SHOP DRAWINGS, TO DETECT AND CORRECT ALL ERRORS, OMISSIONS AND INACCURACIES. FAILURE TO DO THIS WILL NOT RELIEVE THE ELECTRICAL CONTRACTOR OF THE RESPONSIBILITY FOR THE PROPER AND COMPLETE INSTALLATION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

E. RECORD DRAWINGS

1. SUBMIT TO THE ARCHITECT ONE SET OF REPRODUCIBLE (MYLARS) ELECTRICAL DRAWINGS SHOWING THE RECORD CONDITIONS.

F. STANDARDS AND SUBSTITUTIONS

1. WHEREVER THE WORDS "APPROVED BY," "APPROVED EQUAL," "AS DIRECTED" OR SIMILAR PHRASES ARE USED IN THE FOLLOWING SPECIFICATIONS, THEY SHALL BE UNDERSTOOD TO REFER TO THE OWNER AS THE APPROVING AGENCY. THE NAME OR MAKE OF ANY EQUIPMENT OR MATERIALS NAMED IN THIS SPECIFICATION (WHETHER OR NOT THE WORDS "OR APPROVED EQUAL" ARE USED) SHALL BE KNOWN AS THE "STANDARD".
2. THESE SPECIFICATIONS ESTABLISH QUALITY STANDARD OF MATERIALS AND EQUIPMENT TO BE PROVIDED. SPECIFIC ITEMS ARE IDENTIFIED BY MANUFACTURER, TRADE NAME OR CATALOG DESIGNATION. THIS CONTRACTOR SHALL SUBMIT HIS BASE BID PRICE BASED UPON STANDARD SPECIFIED EQUIPMENT DESCRIBED HEREIN AND AS DETAILED ON DRAWINGS AND ASSOCIATED CONTRACT DOCUMENTS. THESE SPECIFICATIONS ARE NOT TO BE CONSIDERED PROPRIETARY THE CONTRACTOR MAY SUBMIT INFORMATION ON MATERIALS AND MANUFACTURERS (OTHER THAN THOSE LISTED) FOR REVIEW BY THE ARCHITECT AND ENGINEER NO LATER THAN TEN (10) DAYS BEFORE BIDS ARE SUBMITTED. IN ADDITION, SAMPLES OF PROPOSED EQUIPMENT MAY BE REQUIRED TO BE SUBMITTED TO THE ENGINEER FOR REVIEW NO LATER THAN TEN (10) DAYS BEFORE BIDS ARE SUBMITTED. MANUFACTURERS OF PRODUCTS ACCEPTED BY THE ARCHITECT AND ENGINEER WILL BE LISTED IN AN ADDENDUM TO THE SPECIFICATIONS AS AN ACCEPTABLE SUBSTITUTION EQUIPMENT ACCEPTED AS DETAILED BELOW AND SHALL BE SHOWN AS A SEPARATE ADD OR DEDUCT PRICE TO BE FACTORED INTO THE BASE BID PRICE BY THE ARCHITECT AND OWNER IF ACCEPTED.
3. SHOULD THE CONTRACTOR PROPOSE TO FURNISH MATERIALS AND EQUIPMENT OTHER THAN THOSE SPECIFIED OR APPROVED BY ADDENDUM, SUBMIT A WRITTEN REQUEST FOR SUBSTITUTIONS TO THE ARCHITECT AT THE BID OPENING. THE REQUEST SHALL BE AN ALTERNATE TO THE ORIGINAL BID; BE ACCOMPANIED WITH COMPLETE DESCRIPTIVE (MANUFACTURER, BRAND NAME, CATALOG NUMBER, ETC.) AND TECHNICAL DATA FOR ALL ITEMS. FAILURE BY THIS CONTRACTOR TO SUBMIT THE REQUISITE DOCUMENTATION DETAILED ABOVE SHALL BE UNDERSTOOD BY THE ARCHITECT AND ENGINEER TO INDICATE THAT SUBSTITUTE EQUIPMENT WILL NOT BE PRESENTED BY THE CONTRACTOR FOR CONSIDERATION. SUCH SUBSTITUTIONS WILL NOT BE CONSIDERED AFTER THE BID OPENING DATE AND DELAY OF PROJECT WILL NOT BE PERMITTED FOR FURTHER INSPECTION AND EVALUATION AFTER THIS DATE.
4. WHERE SUCH SUBSTITUTIONS ALTER THE DESIGN OR SPACE REQUIREMENTS INDICATED ON THE DRAWINGS, INCLUDE ALL ITEMS OF COST FOR THE REVISED DESIGN AND CONSTRUCTION INCLUDING COST OF ALL ALLIED TRADES INVOLVED.
5. ACCEPTANCE OR REJECTION OF THE PROPOSED SUBSTITUTIONS SHALL BE SUBJECT TO APPROVAL OF THE ARCHITECT AND ENGINEER. IF REQUESTED, THE CONTRACTOR SHALL SUBMIT (AT HIS COST) INSPECTION SAMPLES OF BOTH THE SPECIFIED AND PROPOSED SUBSTITUTE ITEMS.
6. IN ALL CASES WHERE SUBSTITUTIONS ARE PERMITTED, THE CONTRACTOR SHALL BEAR ANY EXTRA COST OF EVALUATING THE QUALITY OF THE MATERIAL AND EQUIPMENT TO BE PROVIDED, INCLUDING ALL ARCH/ENGINEER FEES ASSOCIATED WITH CHANGE.
7. TESTING AND PLACING IN SERVICE
 1. ANY MATERIAL OR EQUIPMENT FAILING A TEST SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 2. TESTS SHALL INCLUDE THE FOLLOWING:
 - a. MEASURE THE LOAD ON EACH PHASE OF THE MAIN SERVICE AND EACH PHASE OF EVERY FEEDER UNDER FULL LOAD CONDITIONS.
 - b. MEASURE THE NO-LOAD AND FULL-LOAD VOLTAGES (PHASE TO PHASE, PHASE TO NEUTRAL AND PHASE TO GROUND FOR EACH PHASE OF EACH SERVICE, OF EACH SEPARATELY DERIVED SYSTEM, AND AT EACH PANELBOARD OR TRANSFORMER).
 - c. MEASURE THE GROUND RESISTANCE OF THE MAIN SERVICE GROUNDING ELECTRODE AND THE GROUND RESISTANCE OF EACH SEPARATELY DERIVED SYSTEM'S GROUNDING ELECTRODE.
 - d. MAKE INSULATION RESISTANCE TESTS ON ALL DRY TYPE TRANSFORMERS AND MOTORS.

H. INTERFERENCES

1. BEFORE THE INSTALLATION OF ANY ITEM BEGINS, THE ELECTRICAL CONTRACTOR SHALL CAREFULLY ASCERTAIN THAT IT DOES NOT INTERFERE WITH CLEARANCES FOR THE ERECTION OF FINISH BEAMS, COLUMNS, PLASTER, WALLS OR OTHER STRUCTURAL OR ARCHITECTURAL MEMBERS AS SHOWN ON THE ARCHITECTURAL DRAWINGS. IF ANY WORK IS INSTALLED AND THE ARCHITECTURAL DESIGN CANNOT BE FOLLOWED, THIS CONTRACTOR SHALL, AT HIS OWN EXPENSE, MAKE CHANGES IN HIS WORK AS DIRECTED BY THE ARCHITECT TO PERMIT THE COMPLETION OF THE ARCHITECTURAL WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS.
 2. IT SHALL BE THE DUTY OF THIS CONTRACTOR TO REPORT ANY INTERFERENCES BETWEEN HIS WORK AND THAT OF ANY OF THE OTHER CONTRACTORS AS SOON AS THEY ARE DISCOVERED. THE ARCHITECT SHALL DETERMINE WHICH EQUIPMENT WILL BE RELOCATED, REGARDLESS OF WHICH WAS INSTALLED FIRST. HIS DECISION WILL BE FINAL.
- I. QUALITY ASSURANCE
- ALL PRODUCTS SHALL BE NEW AND OF THE TYPE AND QUALITY SPECIFIED. WHERE MATERIALS, EQUIPMENT, APPARATUS OR OTHER PRODUCTS ARE SPECIFIED BY MANUFACTURER, BRAND NAME, TYPE OR CATALOG NUMBER, SUCH DESIGNATION SHALL ESTABLISH THE STANDARDS OF THE DESIRED QUALITY AND STYLE. IT IS THE INTENT OF THESE SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY OF MATERIALS AND EQUIPMENT INSTALLED.

BASIC ELECTRICAL MATERIALS AND METHODS

A. NAMEPLATES

1. GENERAL: FURNISH AND MOUNT ON EACH PANELBOARD, SWITCHBOARD (INCLUDING BRANCH SWITCHES), LARGE JUNCTION BOX, SAFETY SWITCH, STARTER, REMOTE CONTROL, PUSH BUTTON STATION, AND ALL SIMILAR CONTROLS, A NAMEPLATE DESCRIPTIVE OF THE EQUIPMENT OR EQUIPMENT CONTROLLED.
2. PROVIDE BLACK AND WHITE NAMEPLATES CONSTRUCTED FROM LAMINATED PHENOLIC WITH A WHITE CENTER CORE. LETTERS SHALL BE ENGRAVED IN THE PHENOLIC TO FORM WHITE LETTERS 3/8" HIGH. FASTEN THE NAMEPLATES WITH SCREWS AND AN ADHESIVE TYPE FASTENER.
3. MEET THE REQUIREMENTS OF NEC 110.16 AND 110.21(B)

B. MOUNTING ACCESSORIES

1. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL ANGLE IRON, CHANNEL IRON, RODS, SUPPORTS, HANGERS, CONCRETE OR PLYWOOD REQUIRED TO INSTALL, MOUNT AND SUPPORT ANY ELECTRICAL EQUIPMENT OR DEVICE CALLED FOR ON THE PLANS.
2. SUPPORTING MATERIAL SHALL BE COMPLETE WITH HANGERS, CONNECTORS, BOLTS, CLAMPS AND NECESSARY ACCESSORIES TO MAKE A COMPLETE INSTALLATION. SUPPORTING MATERIAL SHALL BE GALVANIZED, PAINTED OR OTHERWISE SUITABLY FINISHED. PRODUCTS BY BRINKLEY, STEEL CITY OR RACO WILL BE ACCEPTABLE.
3. ALL SURFACE-MOUNTED EQUIPMENT ON BLOCK WALLS SHALL BE MOUNTED ON 3/4" PLYWOOD BACKBOARD. ALL FLOOR-MOUNTED EQUIPMENT SHALL BE INSTALLED ON A 4" HIGH CONCRETE HOUSEKEEPING PAD.

C. EXECUTION

1. THE ELECTRICAL WORK FOR CONSTRUCTION PROPOSED SHALL CONFORM TO ALL FEDERAL (OSHA), STATE, ALL SPECIFIC SAFETY REQUIREMENTS AND THE REQUIREMENTS OF THE CURRENT EDITION OF THE NEC.
2. CHECK THE HVAC AND PLUMBING SPECIFICATIONS FOR ELECTRICAL REQUIREMENTS AND INCLUDE THE SAME IN THE CONTRACT COST.
3. EQUIPMENT CONNECTIONS, STARTERS, DISCONNECT SWITCHES, CONTROL TRANSFORMERS AND PUSH-BUTTON STATIONS FOR THE EQUIPMENT FURNISHED BY THE OWNER OR UNDER A SEPARATE CONTRACT SHALL BE INSTALLED AND CONNECTED UNDER THIS DIVISION, AS INDICATED ON THE CONTRACT DRAWINGS.
4. ALL CUTTING, PATCHING, EXCAVATING, BACKFILLING AND CONCRETE WORK RELATED TO THIS CONTRACT WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. THIS CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF PROVIDING THE SLEEVES, CHASES AND OPENINGS NECESSARY FOR THE ELECTRICAL INSTALLATION AND FOR THEIR REPAIR IN AN ACCEPTABLE MANNER, AS DETERMINED BY THE ARCHITECT. ALL HOLES SHALL BE CORE-DRILLED. PROVIDE FIRE STOP IN ALL OPENINGS CREATED THROUGH FIRE-RATED WALLS, FLOORS OR CEILINGS.
5. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED ACCESS PANELS NECESSARY FOR HIS WORK, COORDINATE WITH ARCHITECT PRIOR TO INSTALLATION.

D. MATERIALS AND WORKMANSHIP

1. ALL WORK SHALL BE INSTALLED IN A PRACTICAL AND WORKMANLIKE MANNER, BY MECHANICS SKILLED IN THE SEVERAL TRADES NECESSARY.
2. ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS AND SHALL BE THE BEST OF THEIR SEVERAL KINDS UNLESS SPECIFIED OR INDICATED ON THE DRAWINGS TO THE CONTRARY.
3. DURING EACH PHASE AND AT THE COMPLETION OF THE CONSTRUCTION, THIS CONTRACTOR SHALL REMOVE ALL DEBRIS AND EXCESS MATERIALS CAUSED BY HIS WORK. HE SHALL LEAVE THE AREA OF OPERATION ROOM CLEAN.
4. ALL ELECTRICAL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OR ETL LABEL.
5. THIS CONTRACTOR SHALL GUARANTEE HIS WORKMANSHIP AND MATERIAL (LAMPS EXCEPTED) FOR A PERIOD OF ONE YEAR FROM THE DATE OF BUILDING OPENING AND LEAVE HIS WORK IN PERFECT ORDER AT THE COMPLETION. SHOULD DEFECTS DEVELOP WITHIN THE GUARANTEE PERIOD, THE CONTRACTOR SHALL, UPON NOTICE OF THE SAME, REMEDY THE DEFECTS AND HAVE ALL DAMAGES TO OTHER WORK OR FURNISHINGS CAUSED BY THE REPAIRS CORRECTED AT HIS EXPENSE TO THE CONDITION BEFORE SUCH DAMAGE.

E. SCOPE OF WORK

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, STORAGE, UNPACKING AND PLACEMENT; TO INCLUDE BUT NOT BE LIMITED TO, THE FOLLOWING ITEMS:
 - a. COMPLETE BRANCH CIRCUIT WIRING SYSTEM.
 - b. COMPLETE POWER WIRING FOR ALL AIR CONDITIONING EQUIPMENT, PLUMBING SYSTEM, HEATING EQUIPMENT, VENTILATING AND EXHAUST EQUIPMENT.
 - c. LIGHTING FIXTURE INSTALLATION.
 - d. TEMPORARY ELECTRICAL POWER AND LIGHTING AS REQUIRED FOR CONSTRUCTION.
2. TESTING OF ALL CABLES AND CIRCUIT WIRING AFTER INSTALLATION.
 - a. WIRING DEVICES.
 - b. LIGHTING CONTROLS.
 - c. GROUNDING OF THE ELECTRICAL SYSTEM.
 - d. IDENTIFY RACEWAYS AND CABLES WITH COLOR BANDING AS FOLLOWS:
2. COLORS:
 - a. FIRE ALARM SYSTEM: RED
 - b. SECURITY SYSTEM: BLUE AND YELLOW.
 - c. TELECOMMUNICATION SYSTEM: GREEN AND YELLOW.

GROUNDING AND BONDING

- A. GROUND ALL EQUIPMENT PER N.E.C.
- B. ALL CONDUITS SHALL CONTAIN A CODE-SIZED GROUND WIRE SIZED PER N.E.C. IN ADDITION TO THE CONDUCTORS SHOWN ON THE PLANS. WHERE CIRCUIT CONDUCTORS ARE INCREASED IN SIZE FOR VOLTAGE DROP, THE GROUND WIRE SIZE SHALL BE INCREASED PROPORTIONATELY.
- C. AFTER INSTALLING GROUNDING SYSTEM BUT BEFORE PERMANENT ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, TEST FOR COMPLIANCE WITH REQUIREMENTS.

WIRE AND CABLE

- A. COLOR CODE CONDUCTORS (EXCEPT CONTROL AND INSTRUMENTATION CONDUCTORS) AS FOLLOWS:
208/120V SYSTEM-PHASE A BLACK; PHASE B RED; PHASE C BLUE; NEUTRAL WHITE; GROUND GREEN.
480/277V SYSTEM-PHASE A BROWN; PHASE B ORANGE; PHASE C YELLOW; NEUTRAL GREY; GROUND GREEN.
#12 AND #10 CONDUCTORS SHALL HAVE CONTINUOUS INSULATION COLOR, AS LISTED ABOVE.
2. COLOR CODE CONDUCTORS LARGER THAN ABOVE, WHICH DO NOT HAVE CONTINUOUS INSULATION COLOR BY APPLICATION OF AT LEAST TWO LAPS OF COLORED TAPE ON EACH CONDUCTOR AT ALL POINTS OF ACCESS INCLUDING JUNCTION BOXES. COLOR TAPE SHALL BE THE EQUAL OF 3M PRODUCTS SCOTCH 363.
3. CONDUCTORS SHALL BE SOFT ANNEALED COPPER INSULATED FOR 600 VOLTS UNLESS SPECIFICALLY INDICATED OTHERWISE. ALUMINUM CONDUCTORS ARE NOT ALLOWED ON THIS PROJECT.
- B. INSULATION TYPE SHALL BE TYPE THWN FOR WIRE SIZES #8 AWG AND LARGER AND THHN OR THWN FOR #10AWG AND SMALLER. THHN SHALL NOT BE USED IN WET OR DAMP LOCATIONS.
- C. FLEXIBLE CORD SHALL BE HEAVY DUTY TYPE SO WITH AN EQUIPMENT GROUND CONDUCTOR IN ADDITION TO THE CURRENT CARRYING CONDUCTORS.
- D. PROVIDE #12 CONDUCTORS, UNLESS OTHERWISE INDICATED.
 1. CONTROL CONDUCTORS SHALL BE #14 MINIMUM FOR NEC CLASS I AND #16 FOR NEC CLASS II.
- E. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED.
- F. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID.
- G. INSTALL WIRING IN CONDUIT. CONCEALED WIRING IN WALLS OR ABOVE CEILINGS, OR EXPOSED IN UNFINISHED AREAS (WHERE NOT SUBJECT TO PHYSICAL DAMAGE) MAY BE RUN IN MC OR AC CABLE.
- H. CONNECT #10 AND SMALLER WIRES WITH CONSTANT PRESSURE EXPANDABLE SPRING TYPE CONNECTORS, "SCOTCHLOCK" BY 3M OR B-CAP BY BUCHANAN.
- I. CONNECT #8 AND LARGER WIRES WITH COMPRESSION CONNECTORS OR SPICES AS MANUFACTURED BY BURNDY OR T&B. INSULATE SPLICING CONNECTORS TO AT LEAST 200% OF THE WIRE INSULATION. USE PRE-STRETCHED TUBING CONNECTOR INSULATORS, 3M PST FOR #2 AND LARGER CONDUCTORS.
- K. PULL CONDUCTORS USING RECOGNIZED METHODS AND EQUIPMENT LEAVING AT LEAST 6" WIRE AT ALL JUNCTION BOXES FOR CONNECTIONS.
 1. CLEANOUT EACH CONDUIT SYSTEM BEFORE PULLING WIRE.
- L. FORM AND TIE ALL WIRING IN PANELBOARDS.
- N. BRANCH CIRCUIT WIRE SIZES (AND CONDUITS) SHALL BE INCREASED FROM THOSE INDICATED ON THE PLANS TO PREVENT EXCESSIVE VOLTAGE DROP. BRANCH CIRCUITS SHALL BE INSTALLED WITH WIRES OF SUFFICIENT SIZE SO THAT VOLTAGE DROP BETWEEN THE PANEL AND THE LOADS DOES NOT EXCEED LIMIT OF 3%.
- O. WIRE SIZES SHALL BE BASED ON THE 60 DEGREES C. AMPACITIES FOR WIRE SIZES NO. 14-1 A.W.G., AND 75 DEGREES C. AMPACITIES FOR WIRE SIZES #10 A.W.G. AND LARGER.
- P. CIRCUITS MAY BE MULTI-PLEXED IN CONDUIT PROVIDED WIRE IS PROPERLY DERATED AND CONDUIT SIZED PER CODE. UNDER NO CIRCUMSTANCE SHALL MORE THAN (8) CURRENT CARRYING CONDUCTORS BE RUN IN A SINGLE CONDUIT.

RACEWAYS AND BOXES

A. RACEWAYS

1. ALL WIRE SHALL BE RUN IN ACCORDANCE WITH CODE IN CORROSION RESISTANT, RIGID, THREADED, METAL CONDUIT OR ELECTRICAL METALLIC TUBING (E.M.T.) UNLESS OTHERWISE SPECIFICALLY STATED HEREIN.
 - a. CONDUIT IN EXTERIOR WALLS, BELOW FLOOR SLAB, OR UNDERGROUND SHALL BE RIGID, THREADED, GALVANIZED, HEAVY WALL TYPE.
 - b. CARLON PVC TYPE 40 HEAVY WALL CONDUIT WITH GROUND WIRE MAY BE USED BELOW FLOOR SLAB OR UNDERGROUND IN LIEU OF RIGID, THREADED, GALVANIZED CONDUIT. PVC 40 CONDUIT SHALL NOT BE RUN IN OR ABOVE FLOOR SLAB. PVC CONDUIT SHALL TERMINATE BELOW FLOOR SLAB WITH RIGID, THREADED METAL CONDUIT ADAPTER. CONDUIT ABOVE SLAB SHALL BE METAL.
 - c. CONDUIT RUN EXPOSED TO THE WEATHER SHALL BE HEAVY WALL, METAL THREADED TYPE.
 - d. PROVIDE BRANCH CIRCUIT CONDUCTORS THAT ARE TYPE THHN OR THWN AS REQUIRED. MC CABLE CAN BE USED FOR LIGHT FIXTURE TO LIGHT FIXTURE.
2. CONDUIT SIZE SHALL BE 3/4" MINIMUM.
3. CONDUIT SHALL BE SECURELY FASTENED IN PLACE.
4. ALL CONDUIT SHALL BE CONCEALED IN WALLS, FLOOR AND CEILINGS WHEREVER POSSIBLE. EXPOSED CONDUIT IN FINISHED AREAS WILL NOT BE PERMITTED. EXPOSED CONDUIT WILL BE PERMITTED IN UNFINISHED AREAS WITH THE SPECIFIC APPROVAL OF THE ARCHITECT.
5. USE FLEXIBLE CONDUIT FOR THE CONNECTION TO RECESSED OR SEMI-RECESSED LIGHTING FIXTURES (6' LENGTH MAXIMUM). USE LIQUID TIGHT METAL CONDUIT FOR ALL CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SUBJECT TO VIBRATION AND IN AREAS SUBJECT TO MOISTURE.
6. USE WATER-TIGHT JOINTS WITH BURIED AND CONCRETE ENCASED CONDUIT. ALL BURIED CONDUITS OUTSIDE OF BUILDINGS SHALL HAVE A MINIMUM OF 24" OF COVER. METAL CONDUITS BURIED IN EARTH SHALL BE PAINTED (TWO COATS) WITH HEAVY ASPHALTUM PAINT.
7. SUPPORT RUNS OF CONDUIT AS DETAILED IN THE APPROPRIATE TABLE OF THE NATIONAL ELECTRICAL CODE (NEC).
8. INSTALL EXPOSED RUNS OF CONDUIT AND CONDUIT ABOVE LAY-IN CEILINGS PARALLEL OR PERPENDICULAR TO THE WALLS, STRUCTURAL MEMBERS OF INTERSECTIONS OF VERTICAL PLANES AND CEILINGS. PROVIDE RIGHT ANGLE TURNS USING FITTINGS OR SYMMETRICAL BENDS. SUPPORT CONDUITS WITHIN 1' OF ALL CHANGES IN DIRECTION.
9. IF A CONDUIT IS SUSPENDED, IT SHALL BE SUPPORTED ON TRAPEZE HANGERS WHICH USE "ALL-THREAD" RODS FROM THE STRUCTURAL STEEL. THE USE OF CEILING SUPPORT WIRE OR SIMILAR MATERIAL WILL NOT BE ACCEPTED.
10. INSTALL EMPTY CONDUIT FOR FUTURE USE AS INDICATED ON THE DRAWINGS. CONDUIT SHALL BE COMPLETE WITH JETLINE OR PULL-ROPE, JUNCTION/OUTLET BOXES, TILE RINGS AND APPROPRIATE COVER PLATES.
11. PROVIDE FITCHPOCKETS WHERE CONDUITS PENETRATE THE ROOF.
12. THREAD LUBRICATION/SEALANT IS REQUIRED ON OUTDOOR AND UNDERGROUND THREADED METAL JOINTS.
13. INSTALL FIRE SEAL FITTINGS WHERE CONDUITS PENETRATE CONCRETE FLOOR SLABS OR MASONRY WALLS REQUIRED TO BE FIRE RATED.
14. HORIZONTAL PORTION OF CONDUIT EXPOSED ON THE ROOF AND FEEDING EQUIPMENT SHALL NOT BE MORE THAN 5'-0" UNLESS THE WRITTEN APPROVAL FROM ARCHITECT OR ENGINEER IS OBTAINED.

B. PULL AND JUNCTION BOXES

1. INSTALL PULL AND JUNCTION BOXES WHERE SHOWN ON THE DRAWINGS, AND WHERE REQUIRED FOR CHANGES IN DIRECTION, AT JUNCTION POINTS, AND TO FACILITATE WIRE PULLING. FURNISH BOX SIZES IN ACCORDANCE WITH NEC UNLESS LARGER BOXES ARE INDICATED.
2. PROVIDE STEEL BOXES AND REMOVABLE COVERS OF CODE GAGE, HOT ROLLED SHEET STEEL, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE, FOR ABOVE GROUND WORK. FURNISH WEATHERPROOF BOXES WHEN INSTALLED ABOVE GROUND OUTSIDE.
3. PROVIDE CAST IRON BOXES, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE WHERE SHOWN ON THE DRAWINGS. FURNISH REMOVABLE COVERS WITH GASKETS AND STAINLESS STEEL, BRASS OR BRONZE SCREWS.
4. PROVIDE CONCRETE BOXES FOR UNDERGROUND WORK UNLESS OTHERWISE INDICATED ON THE DRAWINGS. FURNISH STEEL FRAMES AND COVERS WITH THE COVER ATTACHED TO THE FRAME WITH HEXAGON HEAD, BRASS OR BRONZE CAP SCREWS, 3/8" DIAMETER. PROVIDE A RUBBER GASKET FOR SEALING BETWEEN THE COVER AND THE FRAME. PAINT THE COVER WITH TWO COATS OF HEAVY ASPHALTUM.

C. OUTLET BOXES

1. USE SHEET STEEL BOXES, ZINC COATED OR CADMIUM PLATED, FOR CONCEALED INTERIOR WORK.
2. USE CAST BOXES, ZINC-CADMIUM FINISH MALLEABLE IRON, FOR EXPOSED INTERIOR WORK, AND FOR EXPOSED OR CONCEALED WORK IN WET, DAMP OR EXTERIOR LOCATIONS.
3. WALL BOX SIZES (MINIMUM) SHALL BE 4" SQUARE X 2-1/2" DEEP WHERE WALL CONSTRUCTION PERMITS. WHERE WALL CONSTRUCTION DICTATES, THE WIDTH MAY BE REDUCED TO 2-1/8" OR 1-1/2" UNDER SPECIAL CONDITIONS.
4. FIXTURE OUTLETS IN CEILINGS (MINIMUM) SHALL BE 4" OCTAGONAL X 1-1/2" DEEP (4-11/16" OCTAGONAL X 2-1/2" DEEP WHERE REQUIRED TO ACCOMMODATE LARGER CONDUIT OR LARGER NUMBER OF WIRES).
5. GANG BOXES SHALL BE ONE PIECE (MINIMUM) 2-1/8" DEEP.
6. PROVIDE CONCRETE-TIGHT FLOOR BOXES WITH ADJUSTABLE COVERS SET FLUSH AND LEVEL WITH THE FINISHED FLOOR, WITH OUTLETS AS INDICATED ON THE DRAWINGS. PROVIDE WIREMOLD #EFB68 SERIES BOXES WITH LEVELING SCREWS FOR ABOVE GRADE APPLICATIONS, AND WIREMOLD #EFB68-OG FOR ON-GRADE APPLICATIONS. FLUSH TYPE COVERS AND OPENINGS TO SERVE OUTLETS USED. FURNISH FLUSH CAPS FOR CLOSING OFF BOX WHEN NOT IN USE.
7. PROVIDE WIREMOLD EVOLUTION SERIES WALL BOX BEHIND ALL WALL MOUNTED FLAT SCREEN MONITORS. COORDINATE HEIGHT WITH ARCHITECT.
8. FLUSH MOUNT BOXES IN ALL FINISHED WALLS. INSTALL THE PLASTER RINGS IN DRYWALL PLASTERED WALLS AND RAISED COVERS AS REQUIRED IN WALLS WITH OTHER FINISHES SO THAT THE COVER PLATES FIT TIGHTLY AGAINST BOXES OR RINGS. 3/16" MAXIMUM GAPS ARE ALLOWED FOR NONCOMBUSTIBLE WALLS.
9. ADJUST LOCATION OF OUTLETS IN MASONRY OR TILE CONSTRUCTION TO OCCUR IN THE NEAREST JOINT TO THE HEIGHT SPECIFIED. HEIGHTS SHALL MEET A.D.A. REQUIREMENTS.
10. SUPPORT ALL BOXES TO MAINTAIN PROPER ALIGNMENT AND RIGIDITY.
10. CLEAN BOXES OF ALL DEBRIS PRIOR TO THE INSTALLATION OR WIRING OF DEVICES.
11. MOUNTING HEIGHTS ON THE DRAWINGS ARE TO THE CENTERLINE OF THE BOX UNLESS OTHERWISE NOTED.

WIRING DEVICES

- A. WIRING DEVICE COLOR SHALL BE WHITE, UNLESS OTHERWISE INDICATED.
- B. CEILING MOUNTED OCCUPANCY SENSORS SHALL BE LINE VOLTAGE DUAL TECHNOLOGY (US/PIR)
- C. PROVIDE NEMA CONFIGURATION 5-15R DUPLEX 125 VOLT GROUNDING TYPE RECEPTACLES RATED FOR 15 AMPERES UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- D. RECEPTACLES SHALL BE SPECIFICATION GRADE AS MANUFACTURED BY PASS & SEYMOUR.
- E. RECEPTACLES REQUIRING AMPERAGES, VOLTAGES OR CONFIGURATIONS DIFFERENT FROM THE DUPLEX CONVENIENCE RECEPTACLES ABOVE SHALL BE AS INDICATED ON THE DRAWINGS.
- F. PROVIDE OTHER RECEPTACLES OF A QUALITY, MATERIAL AND WORKMANSHIP EQUAL TO THAT SPECIFIED FOR DUPLEX CONVENIENCE RECEPTACLES.
- G. PROVIDE COVER OR DEVICE PLATES FOR OUTLET BOXES AS FOLLOWS UNLESS OTHERWISE NOTED:
 1. FINISHED AREAS: STAINLESS STEEL.
 2. UNFINISHED AREAS: ZINC COATED SHEET METAL, ALUMINUM, OR CAST METAL, AS APPROPRIATE FOR THE TYPE OF BOX.
 3. EXTERIOR AREAS: COPPER FREE ALUMINUM WITH GRAY, POWDER EPOXY FINISH, GASKET, WEATHERPROOF.
4. TELEPHONE, COMMUNICATION, AND SIGNAL OUTLET PLATES SHALL MATCH THOSE USED FOR RECEPTACLES AND SWITCHES. ALL OUTLET AND/OR JUNCTION BOXES SHALL BE COMPLETE WITH A COVER PLATE BY THIS CONTRACTOR.
5. WHERE DEVICES ARE GANGED, THEY SHALL BE INSTALLED UNDER A COMMON COVERPLATE.
- H. LOCATE THE SWITCHES APPROXIMATELY 4'-0" ABOVE THE FINISHED FLOOR ELEVATION OR NEAREST BLOCK COURSE (WITHIN A.D.A. REQUIREMENTS), UNLESS OTHERWISE INDICATED. THE LONG DIMENSION OF THE SWITCHES SHALL BE VERTICAL.
- J. LOCATE RECEPTACLES APPROXIMATELY 2'-6" ABOVE GRADE. THE LONG DIMENSION OF RECEPTACLES SHALL BE VERTICAL.

SAFETY SWITCHES

- A. SAFETY SWITCHES SHALL BE THE ENCLOSED HEAVY-DUTY TYPE (TYPE HD) WITH QUICK-MAKE, QUICK-BREAK MECHANISM AND EXTERNAL PAD LOCKABLE OPERATING HANDLE.
- B. SAFETY SWITCHES SHALL BE RATED FOR 240 OR 600 VOLTS AS APPLICABLE. THEY SHALL BE HORSEPOWER RATED WHEN USED IN MOTOR CIRCUITS.
- C. SAFETY SWITCHES SHALL BE FUSIBLE OR NON-FUSIBLE, 2, 3, OR 4-POLE AS INDICATED ON THE DRAWINGS.
- D. SAFETY SWITCHES SHALL BE SINGLE THROW UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- E. ENCLOSURES SHALL BE NEMA 1 INDOORS AND NEMA 3R OUTDOORS UNLESS OTHERWISE INDICATED ON DRAWINGS.
- F. MANUFACTURER SHALL BE SQUARE D, SIEMENS, OR CUTLER-HAMMER. ALL SAFETY SWITCHES SHALL BE BY ONE MANUFACTURER.
- G. MOUNT THE SAFETY SWITCHES SECURELY BETWEEN 3' & 6' LEVELS ABOVE THE FLOOR UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- H. SWITCHES ON BLOCK WALLS SHALL BE MOUNTED ON A 3/4" PLYWOOD BACKBOARD, WHERE LOCATED INDOORS.



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Revisions:	
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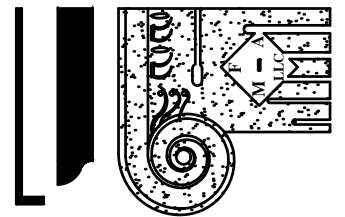
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Boy's & Girls Restroom Modifications
Fair Oaks School
Community Center
836 Old Colchester Road Oakdale, CT.

Plans
PLUMBING
GENERAL NOTES
AND LEGEND

PROJECT NO: 2022-10-22

SCALE: AS NOTED
DRAWN BY: FSM
CHECKED BY: BJZ
DATE: 08/28/2025

P-0

ABBREVIATIONS	
AAV	AIR ADMITTANCE VALVE
ABV.	ABOVE
AFF	ABOVE FINISHED FLOOR
BEL	BELOW
BFP	BACKFLOW PREVENTER DEVICE
BV	BALANCE VALVE
CW	COLD WATER
HW	HOT WATER
CO	CLEANOUT
ECO	CLEANOUT, EXISTING
CLG	CEILING
CP	CIRCULATOR PUMP
CFH	CUBIC FEET PER HOUR
CND	CONDENSATE DRAIN PIPING
DF	DRINKING FOUNTAIN
EWC	ELECTRIC WATER COOLER
EWB	ELECTRIC WATER HEATER
EX., EXIST.	EXISTING
FL	FLOOR
FS	FLOOR SINK
G	GAS
GPM	GALLONS PER MINUTE
HW	HOT WATER
HC	HANDICAPPED ACCESSIBLE
INV. ELEV.	INVERT ELEVATION
LAV	LAVATORY
PSI	POUNDS PER SQUARE INCH
RD	ROOF DRAIN
SAN	SANITARY
TMV	THERMOSTATIC MIXING VALVE
UR	URINAL
V	VENT
VIF	VERIFY IN FIELD
VTR	VENT THRU ROOF
W	WASTE
WC	WATER CLOSET
WHA	WATER HAMMER ARRESTOR
WCO	WALL CLEANOUT

PLUMBING SYMBOL LEGEND	
	BALL VALVE
	BUTTERFLY VALVE
	GATE VALVE
	CHECK VALVE
	BACKFLOW PREVENTER ASSEMBLY (RPZ)
	BALANCING VALVE (CALIBRATED)
	GAS VALVE, (BALL OR PLUG)
	PRESSURE REDUCING VALVE
	SOLENOID VALVE
	THERMOSTATIC MIXING VALVE
	HOT WATER RETURN PUMP
	HOSE BIBB (HB) OR DRAIN VALVE
	WALL HYDRANT (WH) (EXTERIOR)
	GLOBE VALVE
	MOTORIZED VALVE
	UNION
	STRAINER
	PIPE DROP WITH VALVE
	PIPE ELBOW DOWN OR DROP
	PIPE ELBOW UP
	WALL CLEANOUT
	PIPE CAP
	P-TRAP
	OVERFLOW DOWNSPOUT NOZZLE (ODN)
	T&P RELIEF VALVE
	WATER METER ASSEMBLY
	GAS METER ASSEMBLY
	GAS PRESSURE REGULATOR
	PRESSURE GAUGE
	THERMOMETER
	TRAP PRIMER
	ELECTRONIC TRAP PRIMER
	FLOOR CLEANOUT
	FLOOR DRAIN (FD)
	FLOOR SINK (FS)

PLUMBING PIPING SYMBOL LEGEND	
	FIRE SERVICE
	WATER SERVICE
	COLD WATER
	HOT WATER
	HOT WATER RECIRCULATION
	VENT PIPING
	SANITARY OR WASTE ABOVE GRADE
	SANITARY OR WASTE BURIED
	COMBINATION WASTE & VENT ABOVE GRADE
	COMBINATION WASTE & VENT BURIED
	INDIRECT WASTE
	STORM DRAIN BURIED
	PIPING WITH HEAT TRACE or HEAT CABLE
	PIPING - DEMOLITION (TO BE REMOVED)

PLUMBING RENOVATION/ DEMOLITION GENERAL NOTES

- BEFORE SUBMITTING BID, THE CONTRACTORS SHALL VISIT THE JOB SITE AND BECOME FULLY FAMILIAR WITH THE EXISTING CONDITIONS AND THE DOCUMENTS OF OTHER TRADES UNDER WHICH THEIR WORK WILL BE ACCOMPLISHED. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS MADE AS A RESULT OF FAILURE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS.
- THE CONTRACTOR SHALL COORDINATE AND SCHEDULE ANY DAILY INTERRUPTIONS OR SHUTDOWNS OF THE EXISTING SYSTEMS IN ADVANCE WITH OWNER'S DESIGNATED REPRESENTATIVE. THIS SHALL INCLUDE SERVICES INTERRUPTIONS, CONNECTIONS AND DISRUPTIONS EFFECTING OTHER TRADES (MECHANICAL AND ELECTRICAL). INCLUDE ALL WORK REQUIRED TO ALLOW PHASED CONSTRUCTION WHERE NECESSARY.
- DEMOLITION DRAWINGS ARE STRICTLY DIAGRAMMATIC AND SHOW GENERAL ARRANGEMENT AND APPROXIMATE LOCATION OF EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT. IT IS NOT THE INTENT OF THESE DRAWINGS TO SHOW ALL EQUIPMENT, PIPING OR CONDUIT TO BE REMOVED. EQUIPMENT NOT BEING REUSED SHALL BE REMOVED, INCLUDING ALL ASSOCIATED HANGERS, SUPPORTS, PIPES, CONDUITS, WIRES, AND CONTROLS BACK TO THE POINT OF ORIGIN.
- REFER TO THE ARCHITECTURAL DEMOLITION DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. THE FULL EXTENT OF THE DEMOLITION AND RECONSTRUCTION SCOPE OF WORK SHALL BE DETERMINED BY THE ENTIRE SET OF BID DOCUMENTS.
- THE CONTRACTORS SHALL COORDINATE THE DEMOLITION SCOPE OF WORK WITH THE GENERAL CONTRACTOR'S OR CONSTRUCTION MANAGER'S PHASING SCHEDULE PRIOR TO COMMENCEMENT OF WORK. CARE MUST BE TAKEN SO AS NOT TO DESTROY, REMOVE OR DEMOLISH ANY EQUIPMENT, APPURTENANCES OR DEVICES INTENDED TO REMAIN. PROVIDE TEMPORARY SERVICES AND SYSTEM MODIFICATIONS TO ACCOMMODATE CONTINUOUS OPERATION OF ACTIVE SYSTEM.
- THE LOCATION OF EXISTING PLUMBING SYSTEM SHOWN ON FLOOR PLANS, IS BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY PRIOR TO COMMENCEMENT OF CONSTRUCTION, EXACT QUANTITY AND LOCATION(S) OF EXISTING EQUIPMENT, PIPING, PLUMBING FIXTURES TO BE REMOVED AND ADJUST AS NECESSARY.
- ALL EQUIPMENT, PLUMBING FIXTURES AND ASSOCIATED PIPING INDICATED TO BE REMOVED OR RELOCATED, SHALL BE DISCONNECTED AND REMOVED, INCLUDING HANGERS AND OTHER COMPONENTS, UP TO NEAREST EXISTING ACTIVE MAIN OR BRANCH LINE AND CAPPED AS CLOSE TO THE ACTIVE LINE AS POSSIBLE. NO EQUIPMENT, PIPING, OR CONDUIT SHALL BE ABANDONED IN PLACE, UNLESS SPECIFICALLY NOTED.
- ALL SYSTEMS TO BE REMOVED SHALL BE REMOVED BACK TO THE POINT OF SOURCE. THE CONTRACTOR SHALL VERIFY WHICH SYSTEMS MUST REMAIN ACTIVE TO SERVE ADJACENT SPACES DURING CONSTRUCTION. SHOULD THE CONTRACTOR ENCOUNTER, DURING DEMOLITION OF EXISTING WALLS OR CHASES, ANY PIPING OR CONDUIT WHICH MUST REMAIN ACTIVE, HE SHALL IMMEDIATELY GIVE NOTICE TO THE ENGINEER, GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.
- ALL SALVAGEABLE MATERIALS OR EQUIPMENT TO BE REMOVED SHALL BE TURNED OVER TO THE OWNER AT THE END OF EACH DAY. ITEMS REMOVED AND NOT REUSED OR DISCLAIMED BY THE OWNER SHALL BECOME PROPERTY OF THE TRADE CONTRACTOR AND SHALL BE TRANSPORTED FROM THE SITE. SITE STORAGE OF REMOVED ITEMS WILL NOT BE PERMITTED.
- PROPERLY DISPOSE OF ALL DEMOLISHED EQUIPMENT IN COMPLIANCE WITH CODES AND REGULATIONS; THIS APPLIES TO HAZARDOUS MATERIALS AND CONTAMINATED ITEMS TO BE DEMOLISHED.
- THE PLUMBING CONTRACTOR SHALL VERIFY EXACT LOCATION AND INVERT ELEVATION OF EXISTING BURIED SANITARY, WASTE OR STORM PIPING PRIOR TO ANY EXCAVATION FOR NEW PIPING CONNECTION AND SHALL NOTIFY ENGINEER OF ANY PROBLEMS.

PLUMBING GENERAL NOTES

- THE PROJECT DRAWINGS AND SPECIFICATIONS ARE BASED ON THE CONSTRUCTION SPECIFICATIONS INSTITUTE (CSI) DOCUMENTATION FORMAT. SPECIFICATION AND DRAWING CONTENTS ARE ARRANGED BY TOPIC AND CATEGORY AND ARE NOT INTENDED TO AWARD DIVISION OF WORK.
- ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH CURRENT APPLICABLE CODES, ORDINANCES, THE REGULATORY AGENCIES HAVING JURISDICTION AND THE SPECIFICATIONS. THE SPECIFICATIONS MAY EXCEED THE REQUIREMENTS OF THE CODE, IN WHICH CASE, THE SPECIFICATION MUST BE FOLLOWED.
- THE INTENT OF THESE DOCUMENTS IS FOR THE MEP TRADES TO FURNISH AND INSTALL COMPLETE MECHANICAL AND ELECTRICAL SYSTEMS. THE SPECIFIED PLUMBING SYSTEM SHALL BE COMPLETE IN ALL RESPECTS; OPERATIONAL, TESTED, ADJUSTED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
- THE TRADES SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS BEFORE SUBMITTING A BID. INFORMATION IS PROVIDED ON THE VARIOUS DRAWINGS, SCHEDULES, SPECIFICATIONS AND ALL OF THE VARIOUS DOCUMENTS IN THE BIDDING PACKAGE. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND FORM A TOTAL PROJECT DESIGN AND INFORMATION SOURCE FOR CONSTRUCTION PURPOSES.
- THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. COORDINATE LOCATIONS OF EQUIPMENT WITH OTHER TRADES BEFORE AND DURING CONSTRUCTION. ANY MODIFICATION TO THE EQUIPMENT LAYOUT, REQUIRED FOR INSTALLATION, IS TO BE PERFORMED UNDER THE CONTRACT AGREEMENT, AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH THE PROJECT DOCUMENTS OF ALL TRADES. THE DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT AND PIPING. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EQUIPMENT AND PIPING INSTALLATION WITH ALL THE TRADES BEFORE COMMENCING WORK.
- EQUIPMENT SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS, WHEN EQUIPMENT MUST BE LOCATED ABOVE AN INACCESSIBLE CEILING (GYP BOARD OR EQUIVALENT), OR BEHIND A WALL, AN APPROPRIATE ACCESS DOOR SHALL BE PROVIDED. IF AN ACCESS DOOR IS REQUIRED, IT SHALL BE OF A RATING APPROPRIATE FOR THE WALL/CEILING IN WHICH IT IS TO BE INSTALLED. THE CONTRACTOR SHALL COORDINATE LOCATIONS OF ACCESS PANELS FOR ALL VALVES AND DEVICES, REQUIRING ACCESS, WITH THE ARCHITECT, PRIOR TO INSTALLATION OF SUCH DEVICES OR OTHER APPURTENANCES.
- COORDINATE EXACT LOCATION OF PLUMBING SERVICES ENTERING THE BUILDING WITH THE SITE CONTRACTOR AND UTILITY DRAWINGS PRIOR TO INSTALLATION. COORDINATE ALL FOUNDATION WALL PENETRATIONS AND INVERT ELEVATIONS WITH THE GENERAL CONTRACTOR AND/OR CONSTRUCTION MANAGER BEFORE COMMENCING WORK.
- WHERE A CONFLICT OCCURS BETWEEN THE DOCUMENTS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
- THIS CONTRACT SHALL INCLUDE ALL THE NECESSARY PIPING, FITTINGS, TRANSITIONS ETC. AS REQUIRED TO INSTALL PIPING AND EQUIPMENT, AND TO AVOID ANY CONFLICTS WITH OTHER TRADES AND THE BUILDING STRUCTURE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS HE MAKES AS A RESULT OF HIS FAILURE TO COORDINATE WITH OTHER TRADES OR BECOME FULLY FAMILIAR WITH THE PROJECT DOCUMENTS OF ALL TRADES.
- DO NOT INSTALL ANY PIPING OVER ELECTRICAL PANELS, TRANSFORMERS, SPECIAL EQUIPMENT, OR THROUGH ROOMS THAT ARE NOT ASSOCIATED WITH OR SERVING THE RESPECTIVE ROOMS. COORDINATE THE LOCATION OF ELECTRICAL EQUIPMENT IN THE FIELD AND ADJUST AS NECESSARY.
- IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW INDIVIDUAL BRANCH PIPING TO EACH PLUMBING FIXTURE. ONLY THE BRANCH PIPING TO GROUPS OF FIXTURES IS INDICATED. EACH AND EVERY FIXTURE SHALL BE PROPERLY PIPED TO WATER, WASTE, AND VENT PIPING SYSTEMS. REFER TO THE PLUMBING SCHEDULES FOR INDIVIDUAL PIPE SIZES TO EACH FIXTURE.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES OR EQUIPMENT. ALL SUCH EQUIPMENT AND EQUIPMENT COLORS AND FINISHES SHALL BE COORDINATED WITH THE ARCHITECT. MOUNTING HEIGHTS SHALL BE APPROVED BY THE ARCHITECT.
- FLOOR MOUNTED PLUMBING EQUIPMENT SHALL BE INSTALLED ON A 6" CONCRETE HOUSE-KEEPING PAD. COORDINATE SIZE AND FINAL LOCATION OF ALL CONCRETE PADS WITH THE STRUCTURAL ENGINEER. PADS SHALL BE MINIMUM 6" LARGER THAN THE EQUIPMENT IN BOTH HORIZONTAL DIRECTIONS.
- INSTALL WATER HAMMER ARRESTORS (WHA) AT ALL QUICK CLOSING VALVES (FLUSH VALVES, SOLENOID VALVES, ETC.); SIZE SHALL BE BASED ON FIXTURE UNITS PER PDI STANDARDS AND INSTALLED PER MANUFACTURER'S RECOMMENDATION.
- ALL PIPING, DRAINS, STRAINERS, FAUCETS, FAUCET AERATORS, FILTERS, ETC. SHALL BE THOROUGHLY CLEANED AND FLUSHED IMMEDIATELY BEFORE PROJECT COMPLETION. PROVIDE CERTIFICATION ON CONTRACTOR'S LETTER HEAD THAT THIS WORK HAS BEEN COMPLETED.
- DOMESTIC WATER DROPS AND RISERS INSTALLED IN EXTERIOR WALLS SHALL BE INSTALLED ON THE WARM SIDE OF INSULATION AND THE LOCATION SHALL BE MADE INFILTRATION FREE.
- BEFORE INSTALLATION, COORDINATE THE WORK WITH OWNER-FURNISHED EQUIPMENT, INCLUDING REQUIRED SERVICE CONNECTIONS, FACTORY START UPS AND INSTALLATION OF FIELD DEVICES.
- PIPE ALL CONDENSATE DRAINS FROM MECHANICAL EQUIPMENT COOLING COILS, BY GRAVITY (INTERIOR AIR HANDLING UNITS, FAN COIL UNITS, AC UNITS, ETC.) TO FLOOR DRAINS OR JANITOR'S SINKS OR OTHER APPROVED LOCATION THROUGH AN AIR GAP. EACH CONDENSATE DRAIN SHALL BE TRAPPED AT THE EQUIPMENT DRAIN OUTLET. REFER TO TRAP DETAILS ON DRAWINGS. COORDINATE EXACT LOCATION OF EQUIPMENT WITH THE HVAC CONTRACTOR AND ADJUST AS NECESSARY.
- INSULATE ALL WASTE ABOVE SLAB "P" TRAPS AND BRANCH WASTE PIPING RECEIVING CONDENSATE FROM EQUIPMENT.
- ALL INDIRECT WASTE DRAINS SHALL BE PIPED TO FLOOR DRAINS, FUNNELS OR FIXED AIR GAP FITTINGS, THROUGH AIR GAP OR TO A SINK DRAIN TAILPIECE.
- INSTALL TRAP PRIMERS FOR EACH INDIVIDUAL FLOOR DRAIN OR, AS A OPTION, CONTRACTOR MAY UTILIZED UTILITY DISTRIBUTION UNIT FOR MULTIPLE DRAIN. CONNECT TRAP PRIMER TO NEAREST ACTIVE COLD WATER MAIN; PROVIDE ISOLATION VALVES AND EXTEND TO FLOOR DRAIN.
- COORDINATE ALL PLUMBING EQUIPMENT REQUIRING POWER, FOR EXACT LOCATION AND POWER REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.
- SEISMICALLY SUPPORT THE EQUIPMENT AS REQUIRED BY CODE, THE AUTHORITY HAVING JURISDICTION, AND/OR AS SPECIFIED. SUBMIT ENGINEERED INSTALLATION DETAILS PER THE SPECIFICATIONS. THE CONTRACTOR'S SEISMIC ENGINEER SHALL REVIEW THE INSTALLATION AND PROVIDE A REPORT OF THE FINDINGS.
- PROVIDE PIPE EXPANSION COMPENSATION FOR THE VARIOUS PIPING SYSTEMS. SUBMIT ENGINEERED DETAILS FOR APPROVAL AND VERIFY INSTALLATION IS IN ACCORDANCE WITH THE CODE. THE CONTRACTOR'S CONSULTING ENGINEER SHALL REVIEW THE INSTALLATION AND PROVIDE A REPORT OF THE FINDINGS.

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836 Old Colchester Road Oakdale, CT.

Plans PLUMBING FLOOR PLANS	
PROJECT NO:	2022-10-22
SCALE:	AS NOTED
DRAWN BY:	FSM
CHECKED BY:	BJZ
DATE:	08/28/2025
P-1	

1 BASEMENT DEMOLITION PART PLAN
SCALE: 1/8" = 1'-0"

2 FIRST FLOOR DEMOLITION PART PLAN
SCALE: 1/4" = 1'-0"

PLUMBING DEMOLITION NOTES:

- 1 REMOVE ALL PLUMBING FIXTURES, DOMESTIC WATER, SANITARY, WASTE AND VENT FAR ENOUGH AWAY TO RE-PIPE FOR THE NEW FIXTURES LOCATIONS.
- 2 REMOVE ALL HANGERS AND CARRIERS. PREPARE FOR NEW WORK.
- 3 REMOVE EXISTING FLOOR DRAIN AND PREPARE FOR NEW WORK.
- 4 REMOVE EXISTING FLOOR DRAIN AND CAP WASTE BELOW THE SLAB. VERIFY EXACT LOCATIONS IN THE FIELD AND PREPARE FOR NEW WORK.

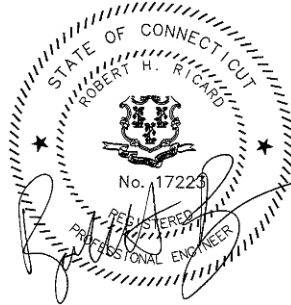
3 FIRST FLOOR NEW WORK PART PLAN
SCALE: 1/4" = 1'-0"

PLUMBING KEY NOTES:

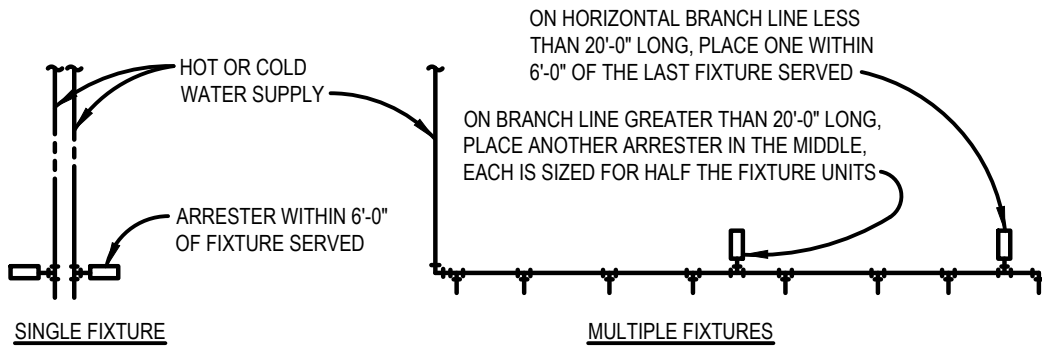
- 1 CONNECT NEW 2" VENT TO EXISTING. VERIFY EXACT LOCATION IN THE FIELD.
- 2 INSTALL ALL NEW CARRIERS FOR WATER CLOSETS AND RE-PIPE THE DOMESTIC COLD WATER. INSTALL WATER HAMMER ARRESTERS PER DETAIL #1 ON DRAWING P-2.
- 3 INSTALL ALL NEW CARRIERS FOR URNLS AND RE-PIPE THE DOMESTIC COLD WATER, WASTE AND VENT. INSTALL WATER HAMMER ARRESTERS PER DETAIL #1 ON DRAWING P-2.
- 4 RE-PIPE THE DOMESTIC HOT & COLD WATER, WASTE AND VENT FOR NEW LAVATORY SINK LOCATIONS.
- 5 4" SANITARY DOWN TO BASEMENT. CONNECT TO EXISTING SANITARY IN BASEMENT. VERIFY THE EXACT LOCATION IN THE FIELD.
- 6 CONNECT NEW 3/4" DCW TO EXISTING IN WET WALL.
- 7 CONNECT NEW 2" WASTE TO EXISTING. FIELD VERIFY THE EXISTING LOCATION.
- 8 INSTALL NEW FLOOR DRAIN. ADJUST PIPING AS REQUIRED FOR NEW FLOOR VERIFY EXACT SIZE IN THE FIELD.
- 9 CONNECT NEW 3" WASTE TO EXISTING. FIELD VERIFY THE EXISTING LOCATION.

Key Plan Main Level Floor

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PDI SIZE	FIXTURE UNIT LOAD
AA	1-3
A	4-11
B	12-32
C	33-60
D	61-113
E	114-154
F	155-330

FIXTURE UNIT TABULATION		
FIXTURE	COLD	HOT
VALVE WATER CLOSET	10	-
TANK WATER CLOSET	5	-
URINAL	5	-
LAVATORY	1.5	1.5
SINK	2	2
MOP BASIN	3	3
SHOWER/BATH/TUB	2	3
DRINKING FOUNTAIN	0.5	-

PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE #1010 OR ANSI #A12.26.1M CERTIFICATION. SIZE AND INSTALL PER PDI #WH-201 STANDARD OR MANUFACTURER'S INSTRUCTION. TABLES ABOVE ARE BASED ON SIOUX CHIEF PRODUCT LINE. IF PRESSURE IS IN EXCESS OF 65 PSIG THEN UPSIZE ARRESTER BY ONE (EXAMPLE: AN 'A' ARRESTER WOULD BECOME A 'B' ARRESTER.)

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WATER HAMMER ARRESTERS
SCALE: N.T.S

PLUMBING FIXTURE SCHEDULE							
SYMBOL	FIXTURE TYPE	MANUFACTURER MODEL NUMBER	PIPE SIZES				DESCRIPTION
			HOT (IN)	COLD (IN)	SOIL OR WASTE (IN)	VENT (IN)	
	WATER CLOSET WALL MOUNTED FLUSH VALVE TYPE ACCESSIBLE	AMERICAN STANDARD "AFWALL" MODEL #3351.128	---	1	4	2	WALL MOUNTED, SIPHON JET FLUSH ACTION TYPE, WATER CLOSET. VITREOUS CHINA. ELONGATED BOWL, 1.28 GALLON FLUSH CYCLE, 1-1/2" TOP SPUD, FURNISH COMPLETE WITH GASKET, BOLTS AND CAPS, COLOR: WHITE SEAT: CHURCH, MODEL 3155C: ELONGATED OPEN FRONT SEAT, WITHOUT COVER, ANTI-BACTERIAL. COLOR: WHITE CARRIER: SMITH OR EQUAL FLUSH VALVE: SLOAN ROYAL, MODEL 111-1.28, BATTERY OPERATED INFRARED SENSOR WATER CLOSET FLUSH VALVE, DIAPHRAGM TYPE, 1.28 GPF, VACUUM BREAKER, 1-1/2" TOP SPUD, ANGLE VALVE SCREWDRIVER STOP, VANDAL RESISTANT STOP CAP, BUMPER.
	WATER CLOSET WALL MOUNTED FLUSH VALVE TYPE STANDARD	AMERICAN STANDARD "AFWALL" MODEL #3351.128	---	1	4	2	WALL MOUNTED, SIPHON JET FLUSH ACTION TYPE, WATER CLOSET. VITREOUS CHINA. ELONGATED BOWL, 1.28 GALLON FLUSH CYCLE, 1-1/2" TOP SPUD, FURNISH COMPLETE WITH WAX GASKET, BOLTS AND CAPS, COLOR: WHITE SEAT: CHURCH, MODEL 3155C: ELONGATED OPEN FRONT SEAT, WITHOUT COVER, ANTI-BACTERIAL. COLOR: WHITE CARRIER: SMITH OR EQUAL FLUSH VALVE: SLOAN ROYAL, MODEL 111-1.28, BATTERY OPERATED INFRARED SENSOR WATER CLOSET FLUSH VALVE, DIAPHRAGM TYPE, 1.28 GPF, VACUUM BREAKER, 1-1/2" TOP SPUD, ANGLE VALVE SCREWDRIVER STOP, VANDAL RESISTANT STOP CAP, BUMPER.
	URINAL WALL MOUNTED FLUSH VALVE TYPE MOUNTED AT 24" TO RIM A.F.F.	AMERICAN STANDARD "WASHBROOK" MODEL #6590.125	---	3/4	2	2	WALL HUNG, FLUSHING RIM, WASHOUT FLUSH ACTION, VITREOUS CHINA, EXTENDED SIDES, 0.125 GALLON FLUSH, 3/4" TOP INLET, 2" OUTLET. FURNISH COMPLETE WITH GASKET, AND MOUNTING HARDWARE. COLOR: WHITE MEETS ANSI A117.1 AND A.D.A. REQUIREMENTS. CARRIER: SMITH OR EQUAL FLUSH VALVE: SLOAN ROYAL, MODEL 186-0.13, BATTERY OPERATED INFRARED SENSOR URINAL FLUSH VALVE, DIAPHRAGM TYPE, 0.13 GPF, VACUUM BREAKER, 3/4" TOP SPUD, ANGLE VALVE SCREWDRIVER STOP, VANDAL RESISTANT STOP CAP, BUMPER.
	LAVATORY COUNTERTOP DROP IN ACCESSIBLE	AMERICAN STD. "RONDALYN" #0491019.020	1/2	1/2	1-1/2	1-1/2	DROP-IN COUNTERTOP SINK, VITREOUS CHINA, UNGLAZED RIM, REAR OVERFLOW, OVERALL DIMENSIONS 19-1/8", MOUNTING KIT AND TEMPLATE. 3-HOLE DRILLING, 4" CENTERS, COORDINATE WITH ARCHITECT. COLOR: WHITE MEETS ANSI A117.1 AND A.D.A. REQUIREMENTS FAUCET TO BE SLOAN OPTIMA, MODEL ETF-600, 24 VAC SENSOR FAUCET, 4" CENTERS WITH DECK PLATE, 1/2" I.P. ADAPTERS, BRUSHED NICKEL FINISH, 0.5 GPM AERATOR, BELOW DECK THERMOSTATIC MIXING VALVE. TRIM : CHROME PLATED CAST BRASS OFFSET TAILPIECE AND 1-1/2" CHROME PLATED P-TRAP, MINIMUM 17ga CONSTRUCTION. 3/8" N.P.T. ANGLE SUPPLY CONNECTION AND FOUR ARM HANDLE STOP TRUEBRO INSULATION KIT FOR DRAIN AND WATER PIPING.
WCO	CLEANOUT WALL TYPE	SMITH MODEL #4450, WITH COVER SCREW LENGTH VERIFIED IN THE FIELD	---	---	4	---	CAST IRON CLEANOUT TEE AND COUNTERSUNK PLUG WITH CHROME PLATED, BRONZE ROUND FRAME AND SECURED COVER. PROVIDE WITH VANDAL PROOF SCREWS AND POLISHED BRONZE FRAME AND COVER. SIZE AS INDICATED ON FLOOR PLANS. MODEL 4550S: FACE OF WALL - TILE, MASONRY, DRY WALL MODEL 4555S: FLUSH WITH WALL - PLASTER, WET WALL
FD	FLOOR DRAIN	SMITH MODEL #2005Y-P050-U	---	---	3	2	CAST IRON FLOOR DRAIN WITH FLANGE, INTEGRAL REVERSIBLE CLAMPING COLLAR, SEEPAGE OPENINGS, AND 5" DIA. NICKEL BRONZE STRAINER WITH VANDAL PROOF SCREWS, TRAP PRIMER CONNECTION. SUPPLY WITH DEEP SEAL TRAP. PROVIDE PROSET "TRAP GUARD" OR TRAP PRIMER AS INDICATED

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Boy's & Girls Restroom Modifications

Fair Oaks School
Community Center

836 Old Colchester Road Oakdale, CT.

Plans

PLUMBING
SCHEDULE AND
DETAILS

PROJECT NO: 2022-10.22

SCALE:
AS NOTED
DRAWN BY:
FSM
CHECKED BY:
BJZ
DATE:
08/28/2025

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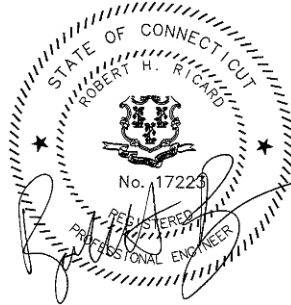
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Revisions:	

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Boy's & Girls Restroom Modifications

**Fair Oaks School
Community Center**

836 Old Colchester Road Oakdale, CT.

Plans
PLUMBING
SPECIFICATIONS

PROJECT NO.:
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PLUMBING SPECIFICATIONS

GENERAL CONDITIONS OF THE CONTRACT

IT IS THE INTENT OF THE SPECIFICATIONS AND DRAWINGS TO PROVIDE FOR FINISHED WORK, TESTED AND READY FOR OPERATION.

WORK OF THIS SECTION SHALL BE GOVERNED BY THE CONTRACT DOCUMENTS. PROVIDE MATERIALS, LABOR, EQUIPMENT AND SERVICES NECESSARY TO FURNISH, DELIVER AND INSTALL ALL WORK AS SPECIFIED AND AS REQUIRED BY JOB CONDITIONS. WHERE A CONFLICT EXISTS BETWEEN THESE NOTES, THE DRAWINGS AND THE FOLLOWING SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

ITEMS AND SERVICES NOT SHOWN ON THE DRAWINGS OR STATED IN THE SPECIFICATIONS, BUT REQUIRED TO RENDER THE WORK COMPLETE AND READY FOR OPERATION, SHALL BE PROVIDED WITHOUT ADDITIONAL COST.

DRAWINGS ARE DIAGRAMMATIC AND ARE NOT TO BE SCALED. DRAWINGS INDICATE A GENERAL ARRANGEMENT OF WORK AND ARE NOT TO BE CONSIDERED SUB-CONTRACTOR DOCUMENTS. IT IS THE INTENT OF THESE DOCUMENTS TO INCLUDE THE PROVISION AND INSTALLATION OF ALL NECESSARY WORK AND MATERIALS FOR COMPLETE, OPERATIONAL AND CODE COMPLIANT SYSTEMS BY THE CONTRACTOR.

GENERAL DESIGN CONCEPTS INDICATED MUST BE FOLLOWED OR BETTERED.

THE BID SHALL INCLUDE OFFSETS, ADDITIONAL PIPING, VALVES, EQUIPMENT AND COMPONENTS AS REQUIRED TO MEET CONSTRUCTION CONDITIONS FOR PROPER OPERATION.

THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED AND PAY ALL APPLICABLE FEES. INCLUDED SHALL BE ANY UTILITY COST ASSOCIATED WITH ANY NEW OR MODIFIED SERVICES.

CONSULT ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SPACE CONDITIONS AND ADDITIONAL REQUIREMENTS.

PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT'S GENERAL CONDITIONS AND IN COORDINATION WITH ALL OTHER TRADES. ALL WORK SHALL BE DONE IN CONFORMANCE AND PROVISIONS OF ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES AND LAWS AS REFERENCED OR STATED.

CONNECTICUT CODES AND STANDARDS:
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL ENERGY CONSERVATION CODE WITH AMENDMENTS
2021 INTERNATIONAL EXISTING BUILDING CODE
2021 INTERNATIONAL MECHANICAL CODE
2021 INTERNATIONAL PLUMBING CODE
2020 NATIONAL ELECTRICAL CODE (NFPA 70)
ICC/ANSI A117.1-2009 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

WORK SHALL INCLUDE ALL INCIDENTALS, LABOR, MATERIAL, EQUIPMENT, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORTS, TOOLS, CONSUMABLE ITEMS, AND ADMINISTRATIVE TASKS/DUTIES REQUIRED TO COMPLETE AND MAKE OPERABLE WORK SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN.

STORE MATERIALS INSIDE AND PROTECTED FROM DEBRIS, WEATHER AND MOISTURE.

COORDINATION
CONTRACTOR IS REQUIRED TO OBTAIN COMPLETE SETS OF THE CONTRACT DOCUMENTS FOR COORDINATION WITH ALL OTHER TRADES.

SHOP DRAWINGS

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER INITIAL REVIEW AND APPROVAL, REVISED IF REQUIRED AND RESUBMITTED AS PER ENGINEER'S COMMENTS PRIOR TO CONSTRUCTION.

ACCEPTANCE OF DEVIATIONS OR SUBSTITUTIONS FROM BASE SPECIFIED ITEMS OR EQUIPMENT SHALL BE AT THE ENGINEERS DISCRETION. ANY CHANGES REQUIRED FOR ACCOMMODATION SHALL BE AT NO ADDITIONAL COST.

OWNER'S MANUAL AND AS BUILT DRAWINGS

UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL PROVIDE AN OWNER'S MANUAL WITH AS-BUILT DRAWINGS REFLECTING INSTALLED CONDITIONS.

THE OWNER'S MANUAL SHALL CONSIST OF ALL DOCUMENTATION PROVIDED AS SHOP DRAWINGS, MANUALS PACKED WITH EQUIPMENT AND COMPLETE PARTS BREAKDOWN WITH PART NUMBERS AND DIAGRAMS. THE OWNER'S MANUALS SHALL BE IN A THREE RING BINDER. PROVIDE NAMES AND PHONE NUMBERS OF SUPPLY HOUSES WHERE PARTS MAY BE PURCHASED.

AS-BUILT DRAWINGS SHALL CONSIST OF FIELD MARK-UPS TO THE CONSTRUCTION DRAWINGS AND INCLUDE ANY ADDITIONAL DETAILS TO CLEARLY REFLECT INSTALLED CONDITIONS. ANY ISSUED OR SUPPLEMENTAL SKETCHES OR DIRECTIVES SHALL BE INCORPORATED INTO THE FINAL CONSTRUCTION MARK-UPS.

CONTRACTOR SHALL MAINTAIN, ON-SITE, A FIELD MARK-UP SET OF DOCUMENTS WHICH SHALL BE KEPT CURRENT WITH ANY CHANGES FROM THE ORIGINAL CONTRACT DOCUMENTS. THESE MARK-UPS ARE TO BE PROVIDED AS AS-BUILT DRAWINGS FOR COMPARISONS.

BASES, HANGERS AND SUPPORTS

THE CONTRACTOR SHALL PROVIDE, OR CAUSE TO BE PROVIDED BY ANOTHER CONTRACTOR, ALL REQUIRED BASES AND SUPPORTS FOR PIPING AND EQUIPMENT PROVIDED UNDER THESE SPECIFICATIONS.

PROVIDE ADJUSTABLE CLEVIS HANGERS FOR ALL SINGLE RUN PIPING, WHERE REQUIRED, OVERSIZE TO ACCOMMODATE INSULATION TO PASS THROUGH, PROVIDE INSULATION SHIELDS, WHERE POSSIBLE, GROUP PIPING TO ALLOW TRAPEZE HANGERS TO BE USED.

PROVIDE ALL ANCHORS, INSERTS AND BEAM CLAMPS REQUIRED FOR HANGERS AND SUPPORTS. IF ADDITIONAL STRUCTURAL MEMBERS OR SUPPORTS ARE REQUIRED, THE CONTRACTOR IS TO COORDINATE WITH THE STRUCTURAL CONTRACTOR FOR PROVISION OF THESE MEMBERS. ALL PIPING AND EQUIPMENT IS TO BE SECURELY FASTENED TO THE BUILDING STRUCTURE IN AN ACCEPTABLE MANNER.

ALL PIPING PASSING THROUGH WALLS AND FLOORS SHALL BE SLEEVED. THE SLEEVES SHALL HAVE AN INSIDE DIAMETER 1" LARGER THAN THE PIPE AND INSULATION, IF INSULATED. INSULATION SHALL PASS CONTINUOUS THROUGH THE SLEEVE.

PIPE SEALS AND FIRE-STOPS

SEAL ALL PIPING PASSING THROUGH FIRE AND/OR SMOKE RATED PARTITIONS, WALLS AND FLOORS WITH A UL LISTED, APPROVED AND TESTED FIRE AND/OR SMOKE SEALING MATERIAL EQUIVALENT TO THE RATING OF THE WALL, PARTITION OR FLOOR. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR COMPATIBILITY WITH WALL AND FLOOR CONSTRUCTION.

FOR INTERIOR PARTITIONS, WALLS AND FLOORS, SLEEVES SIZED TO ALLOW INSULATION TO PASS THROUGH CONTINUOUS WITH A MAXIMUM 1" ANNULAR SPACE BETWEEN THE INSULATION AND SLEEVE. SLEEVES TO BE CUT SMOOTH AND INSTALLED FLUSH WITH FINISHED WALLS AND 2" ABOVE FINISHED FLOORS. FILL THE ANNULAR SPACE WITH UL SEALING MATERIAL.

CLEANING AND PROTECTION AGAINST FOREIGN MATTER

THE JOBSITE SHALL BE KEPT CLEAN AT ALL TIMES. CAP EXPOSED PIPING AND COVER FLOOR DRAINS TO INSURE ADEQUATE PROTECTION AGAINST THE ENTRANCE OF FOREIGN MATTER.

AT COMPLETION OF THE PROJECT, ALL EQUIPMENT, FIXTURES, ETC. SHALL BE CLEANED.

OPERATING INSTRUCTIONS

UPON THE COMPLETION OF ALL WORK, TESTING AND ADJUSTING THE CONTRACTOR SHALL FURNISH PERSONNEL TO INSTRUCT THE OWNER'S REPRESENTATIVES IN THE OPERATION, ADJUSTMENT AND MAINTENANCE OF THE EQUIPMENT AND SYSTEMS FURNISHED.

GUARANTEES

IN ADDITION TO THE CONTRACTOR'S GUARANTEE, PROVIDE ALL APPLICABLE EXTENDED GUARANTEES FOR EQUIPMENT.

PLUMBING PIPING INSULATION

PROVIDE 1" GLASS FIBER INSULATION FOR ALL NEW COPPER PIPING (HOT AND COLD WATER), INCLUDES INSULATION FOR FITTINGS AND VALVES. INSULATION TO BE AS MANUFACTURED BY KNAUF, MANVILLE, OWENS-CORNING OR CERTAIN-TEED.

INSULATION TO HAVE A "K" VALUE OF 0.24 AT 75°F. FLAME SPREAD/SMOKE OF 5/50, MAX. 850°F RATING. VAPOR BARRIER WHITE KRAFT PAPER WITH GLASS FIBER YARN BONDED TO ALUMINIZED FILM.

AT ALL FITTINGS AND VALVES PROVIDE PRE-MOLDED PVC JACKET BY ZESTON.

BEFORE INSTALLING INSULATION, ALL REQUIRED PIPING IS TO BE TESTED AND APPROVED.

INSULATION IS TO PASS CONTINUOUSLY THROUGH HANGERS, WALLS, SLEEVES AND OTHER PIPE PENETRATIONS.

PLUMBING PIPING

PIPING MATERIAL SHALL BE AS FOLLOWS:

SANITARY/STORM/WASTE PIPING ABOVE AND BELOW FLOOR SLAB - ASTM D2665 OR ASTM D3034 PVC, SOLVENT WELDED WITH ASTM D2564 CEMENT.

VENT PIPING ABOVE AND BELOW FLOOR SLAB - ASTM D2665 OR ASTM D3034 PVC, SOLVENT WELDED WITH ASTM D2564 CEMENT.

WATER PIPING - COPPER, TYPE L, ASTM B88, SOLDER OR PRESS CONNECTIONS.

BALL VALVES SHALL BE BRONZE, TWO PIECE, FULL PORT, EXTENDED LEVER HANDLE FOR INSULATION, CLASS 150-400 PSI WOG, AS MANUFACTURED BY MILWAUKEE, NIBCO OR APOLLO.

NO PIPING SHALL BE COVERED UNTIL TESTED AND APPROVED BY THE AUTHORITIES HAVING JURISDICTION.

INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS OR CONNECTED EQUIPMENT.

CONCEALED PIPING AND ACCESSORIES SHALL BE ARRANGED TO USE THE MINIMUM AMOUNT OF ACCESS DOORS AND PANELS.

PIPING SHALL BE RUN CONCEALED IN FURRED SPACES, CHASES, WALLS, ETC. CONTRACTOR SHALL OBTAIN PERMISSION TO RUN EXPOSED PIPING.

PROVIDE ISOLATION AND SHUT-OFF VALVES AT ALL BRANCH LINES AND EQUIPMENT.

PROVIDE LISTED AND APPROVED DIELECTRIC FITTINGS WHEN JOINING DISSIMILAR METALS.

RUN ALL SANITARY AND WASTE PIPING AT A MINIMUM OF 1/8" PER FOOT FOR PIPING. SLOPE VENT PIPING TO DRAIN.

PIPE HANGERS SHALL BE PLACED ADJACENT TO MOTOR DRIVEN EQUIPMENT. HANGERS AND SUPPORTS SHALL BE AS FOLLOWS:

COPPER PIPING

1/2" TO 1-1/4" AT MAXIMUM 6'-0" SPACING
1-1/2" TO 3" AT MAXIMUM 10'-0" SPACING

CAST IRON PIPING

1-1/2" TO 2" AT MAXIMUM 10'-0" SPACING
2-1/2" AND ABOVE AT MAXIMUM 5'-0" SPACING

WATER PIPING IS TO BE FLUSHED AND DISINFECTED IN ACCORDANCE WITH LOCAL AND STATE HEALTH REGULATIONS. AFTER FLUSHING AND DISINFECTING, THE WATER IS TO BE TESTED BY THE CONTRACTOR THROUGH AN INDEPENDENT LAB WITH A WRITTEN REPORT.

ALL NEW WATER, SANITARY, WASTE, AND VENT PIPING SHALL BE PRESSURE TESTED AS FOLLOWS:

SANITARY, WASTE, AND VENT PIPING - HYDROSTATIC TEST AT 10 FT HEAD FOR A MINIMUM 4 HOURS. SUBMIT WRITTEN/SIGNED TEST RESULTS.

WATER PIPING - HYDROSTATIC TEST AT 125 PSI OR 1-1/2 TIMES OPERATING PRESSURE (WHICHEVER IS GREATER) FOR A MINIMUM 4 HOURS WITH MAXIMUM LOSS OF 2 PSI. SUBMIT WRITTEN/SIGNED TEST RESULTS. AIR TESTING WILL NOT BE ACCEPTABLE.

PLUMBING PIPING SPECIALTIES

CLEANOUTS IN INTERIOR FINISHED FLOORS SHALL HAVE A CAST IRON BODY WITH ANCHOR FLANGE, THREADED TOP ASSEMBLY AND ROUND GASKETED SCORED COVER. FOR FINISHED FLOORS PROVIDE DEPRESSED COVER TO ACCEPT FLOOR FINISH.

WATER HAMMER ARRESTORS SHALL BE STAINLESS STEEL CONSTRUCTION, BELLOWS TYPE, PRECHARGED, AIR CHAMBERS ARE NOT ACCEPTABLE. INSTALL WATER HAMMER ARRESTORS AT ALL QUICK CLOSING VALVES, ON HOT AND/OR COLD WATER SUPPLIES TO NEW INDIVIDUAL FIXTURES OR IN BANKS OF FIXTURES.

PLUMBING EQUIPMENT AND FIXTURES

ALL PLUMBING EQUIPMENT AND FIXTURES SHALL BE NEW, COMPLETE WITH ALL TRIM AS SPECIFIED.

FOR ALL EQUIPMENT AND FIXTURES, INSTALL AS PER MANUFACTURER'S INSTRUCTIONS, AS REQUIRED BY CODE, AND IN COMPLIANCE WITH CONDITIONS FOR CERTIFICATION (IF ANY). RETAIN ALL INFORMATION, MANUALS AND PARTS DIAGRAMS PACKAGED WITH THE UNITS.

COORDINATE ALL RELATED ELECTRICAL WORK AND REQUIRED CONNECTIONS TO ACHIEVE AN OPERATIONAL SYSTEM. VERIFY THAT ELECTRICAL POWER HAS PROPER CHARACTERISTICS.

ALL EQUIPMENT SHALL BE UL TESTED AND APPROVED AND IF APPLICABLE SHALL HAVE NSF CERTIFICATION.

PLUMBING FIXTURES SHALL BE INSTALLED WITH TRIM, INCLUDING BUT NOT LIMITED TO, FAUCETS, CARRIERS, WATER SUPPLIES, SUPPLY STOPS, TRAPS, TAILPIECES, HARDWARE, HANGERS/SUPPORTS, AND FASTENING DEVICES.

PLUMBING FIXTURES AND TRIM SHALL BE OF THE MANUFACTURER LISTED ON THE DRAWINGS OR AN APPROVED EQUAL MEETING THE OPERATIONAL CHARACTERISTICS, FUNCTION, SIMILAR APPEARANCE AND QUALITY OF THE SPECIFIED ITEMS.

FOR ALL EXPOSED PIPING TO FIXTURES, PROVIDE CHROME PLATED PIPES, ESCUTCHEONS AT WALLS, SUPPLY TUBES AND SUPPLY STOPS. DRAIN PIPING SHALL BE MINIMUM 17 GA, CHROME PLATED CAST BRASS, P-TRAPS SHALL HAVE CLEANOUT PLUGS.

SEAL FIXTURES TO WALLS AND FLOOR WITH APPROVED SILICONE SEALANT, COLOR TO MATCH FIXTURE COLOR OR CLEAR.

UPON COMPLETION OF INSTALLATION OF PLUMBING EQUIPMENT AND FIXTURES, TEST TO DEMONSTRATE CAPABILITY AND COMPLIANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND CODES. FOR ALL EQUIPMENT, REPAIR OR REPLACE ANY MALFUNCTIONING EQUIPMENT OR FIXTURES AND RETEST.

ADJUST WATER PRESSURES THROUGH VALVES OR STOPS TO OBTAIN PROPER FLOW RATES AND PRESSURES REQUIRED.

UPON COMPLETION OF INSTALLATION OF EQUIPMENT OR FIXTURES, THOROUGHLY CLEAN ALL EXPOSED SURFACES, TRIM AND PIPING, FLUSH STRAINERS AND VERIFY FINAL OPERATION.

PROVIDE ALL WARRANTIES AND GUARANTEES TO THE OWNER WITH ALL NAMES, ESTABLISHED DATES, AND ANY ADDITIONAL INFORMATION REQUIRED FOR ENFORCEMENT.

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