ADDENDUM NO. 2

Maine Department of Agriculture, Conservation & Forestry
Cony Road Building Renovation
333 Cony Road
Augusta, ME

February 6, 2025

From: WSP USA
2 Monument Square, Suite 200
Portland, Maine 04101

To: Prospective Bidders

This Addendum forms a part of the Contract Documents and modifies the original bidding documents dated January 10, 2025 as noted below. Bidder shall acknowledge receipt of this Addendum in the space provided on the Contractor Bid Form, failure to do so may subject the bidder to disqualification.

PERTAINING TO SPECIFICATIONS:

1. Section 123553.16 Plastic-Laminate-Clad Laboratory Casework
    a) DELETE section in its entirety, ADD Section 123553.16 attached to this addendum.
2. Section 230500 Basic Mechanical Requirements:
    a) DELETE paragraph 1.8 COORDINATION DRAWINGS

PERTAINING TO DRAWINGS:

1. DELETE the following Drawings, ADD the following Drawings attached to this addendum.
    a) P-501 – Plumbing Details
    b) P-601 – Plumbing Schedules
    c) MD101 – Mechanical Demolition Plan
    d) E-001 – Electrical Legend and Abbreviations
    e) E-002 – Electrical Notes
    f) E-101 – Electrical Power Plan
    g) E-402 – Electrical Diagrams and Details
    h) ED-101 – Electrical Demolition Plan

PERTAINING TO REQUESTS FOR INFORMATION:

1. Responses to RFIs is attached to this addendum.

END OF ADDENDUM NO. 2

SECTION 123553.16 - PLASTIC-LAMINATE-CLAD LABORATORY CASEWORK

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Plastic-laminate-clad laboratory casework.
2. Auxiliary cabinets.
3. Countertops.
4. Tables.
5. Laboratory accessories.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for wood blocking for anchoring laboratory casework.
2. Section 092216 "Non-Structural Metal Framing" for reinforcements in metal-framed partitions for anchoring laboratory casework.

1.2 DEFINITIONS

A. Concealed Surfaces of Casework: Include sleepers, web frames, dust panels, and other surfaces not usually visible after installation.

B. Exposed Surfaces of Casework: Surfaces visible when doors and drawers are closed, including bottoms of cabinets more than 48 inches above floor, and visible surfaces in open cabinets or behind glass doors.

1. Ends of cabinets are defined as "exposed" except ends are defined as "concealed" where installed directly against and completely concealed by walls or other cabinets.

C. Plastic Laminate: High-Pressure Decorative Laminate (HPDL).

D. Semiexposed Surfaces of Casework: Surfaces behind opaque doors, such as cabinet interiors, shelves, and dividers; interiors and sides of drawers; and interior faces of doors. Tops of cases 78 inches or more above floor and bottoms of cabinets more than 24 inches, but less than 48 inches above floor, are defined as "semiexposed."

1.3 COORDINATION

A. Coordinate layout and installation of framing and reinforcements for support of laboratory casework.

B. Coordinate installation of laboratory casework with installation of laboratory equipment.

1.4 ACTION SUBMITTALS

A. Product Data:

1. Plastic-laminate-clad laboratory casework.
2. Auxiliary cabinets.
3. Countertops.
4. Tables.
5. Laboratory accessories.

B. Shop Drawings: For laboratory casework.

1. Include plans, elevations, sections, and attachments to other work including blocking and reinforcements required for installation.
2. Indicate types and sizes of casework.
3. Indicate manufacturer's catalog numbers for casework.
4. Show fabrication details, including types and locations of hardware.
5. Include details of utility spaces showing supports for conduits and piping.
6. Include details of exposed conduits, if required, for service fittings.
7. Indicate locations of and clearances from adjacent walls, doors, windows, other building components, and laboratory equipment.
8. Include coordinated dimensions for laboratory equipment specified in other Sections.

C. Keying Schedule: Include schematic keying diagram, and index each key set to unique designations that are coordinated with the Contract Documents.

D. Samples for Initial Selection: For plastic laminate and other materials requiring color selection.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect finished surfaces during handling and installation with protective covering of polyethylene film or other suitable material.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install laboratory casework until building is enclosed, utility roughing-in and wet-work are complete, and HVAC system is operating and maintaining temperature and relative humidity at levels planned for building occupants during the remainder of the construction period.

B. Established Dimensions: Where laboratory casework is indicated to fit to other construction, establish dimensions for areas where casework is to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

C. Field Measurements: Where laboratory casework is indicated to fit to existing construction, verify dimensions of existing construction by field measurements before fabrication and indicate measurements on Shop Drawings. Provide fillers and scribes to allow for trimming and fitting.

D. Locate concealed framing, blocking, and reinforcements that support casework by field measurements before enclosing them, and indicate measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain laboratory casework from single source from single manufacturer unless otherwise indicated.

2.2 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Laboratory casework installation to withstand the effects of earthquake motions determined in accordance with ASCE/SEI 7.

1. Design earthquake spectral response acceleration, short period (Sds) for Project is indicated on Drawings.
2. Component Importance Factor: 1.0.
3. Base Cabinet Load (Including Countertop and Load on Countertop): 200 lb/ft..
4. Wall Cabinet (Upper Cabinet) Load: 100 lb/ft..

2.3 CASEWORK, GENERAL

A. Casework Product Standard: Comply with SEFA 8-PL, "Laboratory Grade Plastic Laminate Casework."

2.4 PLASTIC-LAMINATE-CLAD LABORATORY CASEWORK

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. CIF Lab Solutions LP.
2. Case Systems Inc.
3. Stevens Industries, Inc.
4. TMI Systems Corporation.

B. Design:

1. Flush overlay.

C. Grain Direction for Wood Grain Plastic Laminate:

1. Doors: Vertical with continuous vertical matching.
2. Drawer Fronts: Vertical with continuous vertical matching.
3. Face Frame Members: Lengthwise.
4. End Panels: Vertical.
5. Bottoms and Tops of Units: Side to side.

6. Knee Space Panels: Vertical.
7. Aprons: Horizontal.

D. Exposed Materials:

1. Plastic-Laminate Grade: VGS.

a. Colors and Patterns: As selected by Architect from manufacturer's full range.

2. Edgebanding: Plastic laminate matching adjacent surfaces.

E. Semiexposed Materials:

1. Plastic Laminate: Grade VGS unless otherwise indicated. Provide plastic laminate for semiexposed surfaces, other than drawer bodies, unless otherwise indicated.

a. Colors and Patterns: As selected by Architect from manufacturer's full range.
b. Provide plastic laminate of same grade as exposed surfaces for interior faces of doors and drawer fronts and other locations where opposite side of component is exposed.

2. Thermally Fused Laminate (TFL) Panels: Provide thermally fused laminate (TFL) panels for drawer sides, backs, and bottoms.

a. Colors and Patterns: As selected by Architect from manufacturer's full range.
b. Provide plastic laminate of same grade as exposed surfaces for interior faces of doors and drawer fronts and other locations where opposite side of component is exposed.

3. Plywood: Hardwood plywood. Grade B faces and Grade J crossbands. Provide backs of same species as faces.
4. Metal for Steel Drawer Pans: Cold-rolled, carbon-steel sheet complying with ASTM A1008/A1008M; matte finish; suitable for exposed applications.

F. Concealed Materials:

1. Plywood: Hardwood plywood.
2. Plastic Laminate: Grade VGS concealed backs of panels with exposed plastic-laminate surfaces.
3. Hardboard for dust panels.

2.5 PLASTIC-LAMINATE CABINET MATERIALS

A. Hardwood Plywood: HPVA HP-1, particleboard core except where veneer core is indicated.

B. Plastic Laminate: HDPL complying with ISO 4586-3.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. ABET Inc.
b. Arborite, Division of Wilsonart Canada ULC.
c. Formica Corporation.
d. Laminart LLC.
e. Nevamar Company, LLC.
f. Wilsonart LLC.

C. Thermally Fused Laminate (TFL) Panels: Particleboard or MDF finished with thermally fused, melamine-impregnated decorative paper.

1. Edgebanding for Thermally Fused Laminate (TFL) Panels: PVC or polyester edgebanding matching thermally fused laminate panels.

2.6 AUXILIARY CABINETS

A. Tempered Glass for Glazed Doors: Clear tempered glass complying with ASTM C1048, Kind FT, Condition A, Type I, Class 1, Quality-Q3; not less than 5.0 mm thick.

2.7 CABINET HARDWARE

A. General: Provide laboratory casework manufacturer's standard, commercial-quality, heavy-duty hardware complying with requirements indicated for each type.

B. Frameless Concealed Hinges (European Type): ANSI/BHMA A156.9, Type B01602, self-closing. Provide two for doors 48 inches high or less and three for doors more than 48 inches high.

1. Degrees of Opening: 170.

C. Hinged-Door and Drawer Pulls: Stainless steel, back-mounted pulls. Provide two pulls for drawers more than 24 inches wide.

1. Design: As selected from manufacturer's full range.
2. Overall Size: 1-3/8 by 5-1/2 inches.

D. Door Catches: Dual, self-aligning, permanent magnet catches. Provide two catches on doors more than 48 inches high.

E. Drawer Slides: ANSI/BHMA A156.9.

1. Manufacturer's standard.
2. Heavy Duty (Grade 1HD-100): Side mount.

a. Type: Full extension.
b. Material: Zinc-plated ball bearing slides.
c. Motion Feature: Self-closing mechanism.

3. General-purpose drawers; provide 100 lb load capacity.

F. Label Holders: Stainless steel, aluminum, or chrome plated; sized to receive standard label cards approximately 1 by 2 inches, attached with screws or rivets. Provide where indicated.

G. Locks: Cam type, brass with chrome-plated finish; complying with ANSI/BHMA A156.11, Type E07281 or Type E07261.

1. Tumbler: Disc.
2. Lock Locations: Provide where indicated.
3. Keying: Key locks alike within each room; key each room separately.

a. Master key for up to 225 key changes.

4. Key Quantity: Minimum of two keys per lock.
5. Master Key System: Key locks to be operable by master key.

a. Master Keys: Provide two.

H. Adjustable Shelf Supports: ANSI/BHMA A156.9, powder-coated steel shelf rests, Type B04013.

2.8 COUNTERTOPS

A. General: Provide laboratory countertops as indicated on Drawings.

B. Stainless Steel Sheet: ASTM A240/A240M, Type 304.

2.9 TABLES

A. Tabletops and Shelf: Fabricate similar to countertops. Fold edge down a minimum of ¾-inch.

1. At fixed table provide shelf 12 inches fill width and length of table at a height of 12 inches above floor.

B. Welded tubing legs, not less than 2 inches square with channel stretchers as needed to comply with product standard. Weld or bolt stretchers to legs and cross-stretchers, and bold legs to table aprons. Provide leveling device welded to bottom of each let.

1. Leg Shoes: Black vinyl or rubber, open-bottom, slip-on type.

C. Height Adjustable Table Base: Provide pneumatic height adjustable table base with paddle-style adjustment control. Provide dual synchronized pneumatic piston mechanism.

2.10 CABINET FABRICATION

A. Construction: Provide plastic-laminate laboratory casework of the following minimum construction:

1. Bottoms and Ends of Cabinets, and Tops of Wall Cabinets and Tall Cabinets: 3/4-inch-thick particleboard.

2. Shelves: 3/4-inch-thick plywood.
3. Exposed Backs of Cabinets: 1/2-inch-thick particleboard or MDF.
4. Backs of Cabinets: 1/4-inch-thick, veneer-core hardwood plywood dadoed into sides, bottoms, and tops where not exposed unless otherwise indicated.
5. Drawer Fronts: 3/4-inch-thick particleboard.
6. Drawer Sides and Backs: 1/2-inch-thick solid-wood or veneer-core hardwood plywood, with glued dovetail or multiple-dowel joints.
7. Drawer Bottoms: 1/4-inch-thick hardwood plywood glued and dadoed into front, back, and sides of drawers.

    a. Use 1/2-inch-thick material for drawers more than 24 inches wide.

8. Doors: 3/4 inch thick, with particleboard or MDF cores.
9. Stiles and Rails of Glazed Doors Less Than 48 Inches (1200 mm) High: 3/4 inch thick, with particleboard cores.

B. Utility-Space Framing: Steel framing units consisting of two steel slotted channels complying with MFMA-4, not less than 1-5/8 inches square by 0.105-inch nominal thickness, that are connected at top and bottom by U-shaped brackets made from 1-1/4-by-1/4-inch steel flat bars. Framing units may be made by welding channel material into rectangular frames instead of using U-shaped brackets.

C. Removable Backs: Provide backs that can be removed from within cabinets at utility spaces.

D. Filler and Closure Panels: Provide where indicated and as needed to close spaces between casework and walls, ceilings, and equipment. Fabricate from same material and with same finish as adjacent exposed casework surfaces unless otherwise indicated.

1. Provide knee-space panels (modesty panels) at spaces between base cabinets, where indicated.
2. Provide utility-space closure panels at spaces between base cabinets where utility space would otherwise be exposed, including spaces below countertops.
3. Provide closure panels at ends of utility spaces where utility space would otherwise be exposed.

2.11 COUNTERTOP FABRICATION

A. Countertops, General: Provide units with smooth surfaces in uniform plane, free of defects. Make exposed edges and corners straight and uniformly beveled. Provide front and end overhang of 1 inch.

B. Sinks, General: Provide integral stainless-steel basins, sized 42 inches x 16 inches x 10 inches and 36 inches x 16 inches x 10 inches, or a size of equal or greater volume, as approved by Architect.

1. Outlets: Provide with strainers and tailpieces, NPS 1-1/2, unless otherwise indicated.
~~A.~~2. Overflows: For each sink except cup sinks, provide overflow of standard beehive or open-top design with separate strainer. Height 2 inches less than sink depth. Provide in same material as strainer.

~~B.~~C. Stainless Steel:

1. Countertops: Made from stainless steel sheet, not less than 0.062-inch nominal thickness, with ASTM A480/A480M No. 4 satin finish.

   a. Extend top down 1 inch at edges with a 1/2-inch return flange under frame. Apply heavy coating of heat-resistant, sound-deadening mastic to undersurface.
   b. Form backsplash coved to and integral with top surface.
   c. Factory punch holes for service fittings.
   d. Reinforce underside of countertop with channels, or use thicker metal sheet where necessary to ensure rigidity without deflection.
   e. Weld shop-made joints.
   f. Where field-made joints are required, provide hairline butt joints mechanically bolted through continuous channels welded to underside at edges of joined ends. Keep field jointing to a minimum.
   g. After fabricating and welding, grind surfaces smooth and polish to produce uniform, directionally textured finish with no cross scratches or evidence of welds. Passivate and rinse surfaces; remove embedded foreign matter and leave surfaces clean.

2. Shelves: Made from stainless steel sheet, not less than 0.050-inch nominal thickness, with ASTM A480/A480M No. 4 satin finish. Weld shop-made joints. Fold down front edge 3/4 inch; fold up back edge 3 inches.

   a. Provide integral stiffening brackets, formed by folding up ends 3/4 inch and welding to upturned front and back edges.
   b. After fabricating, grind welds smooth and polish to produce uniform, directionally textured finish with no cross scratches or evidence of welds. Passivate and rinse surfaces; remove embedded foreign matter and leave surfaces clean.

3. Sinks: Made from stainless steel sheet not less than 0.050-inch nominal thickness. Fabricate with corners rounded and coved to at least 5/8-inch radius. Slope sink bottoms to outlet. Provide continuous butt-welded joints.

   a. After fabricating and welding, grind surfaces smooth and polish to produce uniform finish with no cross scratches or evidence of welds. Passivate and rinse surfaces, remove embedded foreign matter and leave surfaces clean.
   b. Factory punch holes for fittings.
   c. Provide with stainless steel strainers and tailpieces.
   d. Provide with integral rims except where located in stainless steel countertops.
   ~~b.~~c. Apply 1/8-inch-thick coating of heat-resistant, sound-deadening mastic to undersink surfaces.

2.12 LABORATORY ACCESSORIES

A. Stainless Steel Pegboards: Stainless steel pegboards with removable polypropylene pegs and stainless steel drip troughs with drain outlet.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances, location of reinforcements, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF CASEWORK

A. Comply with installation requirements in SEFA 2. Install level, plumb, and true in line; shim as required using concealed shims. Where laboratory casework abuts other finished work, apply filler strips and scribe for accurate fit, with fasteners concealed where practical. Do not exceed the following tolerances:

1. Variation of Tops of Base Cabinets from Level: 1/16 inch in 10 feet.
2. Variation of Bottoms of Upper Cabinets from Level: 1/8 inch in 10 feet.
3. Variation of Faces of Casework from a True Plane: 1/8 inch in 10 feet.
4. Variation of Adjacent Surfaces from a True Plane (Lippage): 1/32 inch.
5. Variation in Alignment of Adjacent Door and Drawer Edges: 1/16 inch.

B. Utility-Space Framing: Secure to floor with two fasteners at each frame. Fasten to partition framing, wood blocking, or metal reinforcements in partitions and to base cabinets.

C. Base Cabinets: Fasten cabinets to utility-space framing, partition framing, wood blocking, or reinforcements in partitions, with fasteners spaced not more than 16 inches o.c. Bolt adjacent cabinets together with joints flush, tight, and uniform.

1. Where base cabinets are installed away from walls, fasten to floor at toe space at not more than 24 inches o.c. and at sides of cabinets with not less than two fasteners per side.

D. Wall Cabinets: Fasten to hanging strips, masonry, partition framing, blocking, or reinforcements in partitions. Fasten each cabinet through back, near top, at not less than 16 inches o.c.

E. Install hardware uniformly and precisely.

F. Adjust operating hardware so doors and drawers align and operate smoothly without warp or bind and contact points meet accurately. Lubricate operating hardware as recommended by manufacturer.

3.3 INSTALLATION OF COUNTERTOPS

A. Comply with installation requirements in SEFA 2. Abut top and edge surfaces true in plane with flush hairline joints and with internal supports placed to prevent deflection. Locate joints where indicated on Shop Drawings.

B. Field Jointing: Where possible, make in same manner as shop-made joints, using dowels, splines, fasteners, adhesives, and sealants recommended by manufacturer. Shop prepare edges for field-made joints.

C. Fastening:

1. Secure countertops, except for epoxy countertops, to cabinets with Z-type fasteners or equivalent, using two or more fasteners at each cabinet front, end, and back.

D. Provide holes and cutouts required for service fittings.

E. Seal unfinished edges and cutouts in plastic-laminate countertops with heavy coat of polyurethane varnish.

F. Provide scribe moldings for closures at junctures of countertop, curb, and splash with walls as recommended by manufacturer for materials involved. Match materials and finish to adjacent laboratory casework. Use chemical-resistant, permanently elastic sealing compound where recommended by manufacturer.

G. Dress joints smooth, remove surface scratches, and clean entire surface.

3.4 INSTALLATION OF SINKS

A. Comply with installation requirements in SEFA 2.

3.5 INSTALLATION OF LABORATORY ACCESSORIES

A. Install accessories in accordance with Shop Drawings, installation requirements in SEFA 2, and manufacturer's written instructions.

B. Securely fasten adjustable shelving supports, stainless steel shelves, and pegboards to partition framing, wood blocking, or reinforcements in partitions.

C. Install shelf standards plumb and at heights to align shelf brackets for level shelves. Install shelving level and straight, closely fitted to other work where indicated.

D. Securely fasten pegboards to partition framing, wood blocking, or reinforcements in partitions.

3.6 CLEANING AND PROTECTING

A. Clean finished surfaces, touch up as required, and remove or refinish damaged or soiled areas to match original factory finish, as approved by Architect.

B. Protect countertop surfaces during construction with 6-mil plastic or other suitable water-resistant covering. Tape to underside of countertop at a minimum of 48 inches o.c.

END OF SECTION 123553.16

SECTION 230500 - BASIC MECHANICAL REQUIREMENTS

TABLE OF CONTENTS

SECTION 23 05 00 - BASIC MECHANICAL REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. The work of Division 23 is governed by the General and Supplementary Conditions of the Contract, and Sections of Division 1 of the Project Manual.

B. Perform work and provide materials and equipment as shown on Drawings and as specified or referenced in this Section of the Specifications. Completely coordinate work of this Section with work of other trades and provide complete and fully functional systems installation.

C. Give notices, file plans, obtain permits and licenses, pay fees and backcharges, and obtain necessary approvals from authorities that have jurisdiction as required to perform work in accordance with all legal requirements and with the Contract Documents.

D. Section Includes: The work of this Section includes the basic requirements common to the Sections of Division 23, including:

1. Demolition of existing HVAC equipment, ductwork, piping, automatic temperature controls and appurtenances.
2. Definitions,
3. Organization of submittals,
4. Proposed substitutions,
5. Core drilling,
6. Cutting and Patching,
7. Sleeves and penetrations,
8. Coordination drawings,
9. Valve tags,
10. Equipment and piping identification,
11. Record documents,
12. Systems start-ups,
13. Access Panels,
14. Fire Watch,
15. Scaffolding, hoisting, rigging and staging,
16. Commissioning.

E. Related Sections: Related work specified in other Sections includes, but is not necessarily limited to:

1. Cutting and Patching: Openings in masonry, concrete, tile, and other parts of structure, except drilling for hangers, providing holes and openings in metal decks, and core drilling.

2. Temporary Facilities and Controls: Temporary heat, light, power, fire protection, and sanitary facilities for use during construction.

3. Selective Demolition: Removal and disposal of demolished mechanical and electrical piping and conduit systems and equipment.

4. Excavation and Backfilling: Trench excavation, pipe bedding, and backfilling.

5. Concrete: Housekeeping pads and inertia pads.

6. Metal Fabrications: Structural supports necessary to distribute loading from equipment to roof, floor, walls or other building structural components.

7. Firestops and Smokeseals: Caulking of pipe and duct penetrations through floor slabs and fire-rated or smoke partitions.

8. Membrane Roofing System: Flashing of roof penetrations and roof drains.

9. Flashing and Sheet Metal.

10. Sealants and Caulking: Sealing joints between plumbing fixtures and abutting surfaces.

11. Access Panels: Access to concealed mechanical, electrical, and telecommunications devices.

12. Existing Ceilings: Removal of existing ceilings for new work under Divisions 20 through 26.

13. Painting: Painting of exposed piping and equipment except as specified in this Section.

14. Electrical Power: Power for mechanical equipment as specified in Division 26.

1.2 REFERENCES

A. American National Standards Institute (ANSI)

1. ANSI A13.1 - Scheme for the Identification of piping systems.

B. American Society for Testing and Materials (ASTM)

1. ASTM E119 - Test Methods for Fire Tests of Building Construction and Materials.

2. ASTM E814 - Test Method for Fire Tests of Through-Penetration Fire Stops.

C. Compressed Gas Association (CGA)

1. C-9 - Standard Color Marking of Compressed Gas Cylinders Intended for Medical Use.

D. Construction Specifications Institute. (CSI)

1. Manual of Practice

E. Underwriters Laboratories (UL)

1. Fire Resistance Directory, Vol. I - Beams, Columns, Floors, Roofs, Walls, and Partitions.

2. Fire Resistance Directory, Vol. II, Through Penetration Firestop Systems.

3. ANSI/UL1479 - Fire Tests of Through Penetration Firestops.

F. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA).

1. Fire, Smoke, and Radiation Damper Installation Guide for HVAC Systems.

G. National Fire Protection Association

1. No. 70 – National Electrical Code.
2. No. 70E – Standard for Electrical Safety Requirements for Employee Workplaces.
3. No. 72 – National Fire Alarm Code.
4. No. 241 - Safeguarding Construction, Alteration, and Demolition Operations.

H. International Code Council (ICC):

1. International Building Code – IBC.
2. International Plumbing Code – IPC.
3. International Mechanical Code – IMC.
4. International Fire Prevention Code – IFPC.

I. South Coast Air Quality Management District

1. Rule #1168 VOC Limits.

1.3 DEFINITIONS

A. General: Words and terminology used throughout the of Sections of Division 23 shall be understood in their common usage as defined in a common dictionary, and as further defined in the CSI Manual of Practice, the General and Supplementary Conditions of the Contract, Division 1 of the Project Manual, and the Sections of Division 23.

B. Specification Content: Sections of Division 23 may use certain conventions regarding the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:

1. Abbreviated Language: Language used in Specifications and other Contract Documents maybe of the abbreviated style. Words and meanings shall be interpreted as appropriate. Words implied, but not stated shall be interpolated as

the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.

2. Streamlined Language: The Specifications generally use the imperative mood and streamlined language. Requirements expressed in the imperative mood shall be performed by the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.

   a. The words "shall be" are implied where a colon (:) is used within a sentence or phrase.

C. Indicated: The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, or other paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the reader locate the reference. Location is not limited.

D. Directed: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the Architect, requested by the Architect, and similar phrases.

E. Approved: When used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, The term "approved," is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.

F. Furnish: Furnish means purchase, delivery and storage at the Project Site for installation under other Sections or by the Owner.

G. Install: Includes operations at the Project Site including the actual unpacking, preparation, assembly, erecting, placing, anchoring, supporting, connecting, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations required for a complete installation ready for the intended use.

H. Provide: Provide means to furnish and install.

I. Limit of Work: Limit of Work lines shown on Sections of Division 23 show the primary architectural area of work. Related work for the Facilities Services Subgroup may extend to new points of connection to existing systems beyond the indicated architectural limit of work area. Approximate locations of new connections are indicated in the contract documents.

J. The words “demolish” and “remove” are used interchangeably in the Sections of Division 23, and shall mean: shut down, disconnect, disassembly and leave debris on floor for disposal under other sections.

K. By Others: Provided under other sections of the specifications.

L. Project Site: Project Site is the space available to the Contractor for performing construction activities, either exclusively or in conjunction, with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.

M. Testing Agencies: A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

N. Product Data: Product data sheets include the manufacturers standard catalog information with illustrations, standard schedules, diagrams, performance charts, instructions, and brochures that illustrate physical appearance, size, weight, and other general characteristics of materials and equipment for some portion of the work.

O. Shop Drawings: Shop drawings are detailed drawings, diagrams, illustrations, and schedules specifically prepared by the installing contractor or supplier to illustrate some portion of the work.

P. Fabrication Drawings: The installation shop drawings required by the work of the various Sections of the Project Manual, such as sheet metal and sprinkler shop drawings, and normally prepared by the installing sub-contractor.

Q. Coordination Drawings: The coordinated installation shop drawings normally prepared by the installing sub-contractors indicating multiple building systems and interdisciplinary work on a single set of coordinated documents.

R. Piping: Includes all necessary piping system components, including pipe, fittings, couplings, gaskets, flanges, unions, valves, strainers, hangers, supports, attachments, insulation, and identification.

S. Substitutions: Substitutions include manufacturers not listed as acceptable within the specifications, or materials, products, systems, or equipment, which differ from the requirements of the Contract Documents.

T. Regulations: Regulations includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

U. NEC: National Electrical Code - NFPA 70.

V. NRTL: OSHA recognized Nationally Recognized Testing Laboratory such as Underwriters Laboratory, Inc., Warnock Hersey, or Factory Mutual Research Corporation.

W. Exterior or Exposed: Includes work exposed to the weather including work inside open parking structures and enclosures that are not heated and weather tight.

X. Mechanical Systems: Includes all of the plumbing, fire protection, HVAC and related systems specified in Divisions 21 through 23.

Y. Electrical Systems: Includes all of the systems specified in Division 26 through 28.

Z. Life Safety Systems: Life Safety Systems include all fire protection systems, devices, and equipment used to detect fire, activate alarms, suppress or control fire and smoke, or any combination thereof.

1.4 SUBMITTALS

A. General Requirements: Comply with Division 1 Sections regarding Submittals, the Sections of Division 23 and the additional requirements of this Section.

B. Materials List: Within 30 calendar days after the Contractor has received the Owner's Notice to proceed, submit a list of the proposed materials to be provided under the work of Sections of Division 23.

C. Organization of Submittals: Bind submittals into comprehensible packages with related product data sheets and shop drawings organized and identified by Specification Section and Article numbers and titles. Bind submittals into packages in order as specified in the Sections of Division 23. Identify submittal pages to indicate the specific equipment or fixture type the data sheet applies to by Article number and title. Submittals, which are not properly bound and identified, may be returned without review.

1. Indicate appropriate model numbers in manufacturers' brochures and cross out non-applicable information.

2. Copies of faxed pages are unacceptable.

3. Submit shop drawings for particular systems complete, simultaneously, and organized by system.

D. Submittal Cover Sheet: Provide a completed cover sheet with each submittal package indicating the information on the following sample page:

SUBMITTAL COVER SHEET			
PROJECT:		CONTRACTOR:	
SECTION NO.:		ARTICLE NO.:	
DESCRIPTION:			
CONTRACT DRAWING REFERENCE NO.:			
EQUIPMENT IDENTIFICATION TAG NUMBER:			
SUBMISSION (CIRCLE ONE): FIRST, SECOND, THIRD, FOURTH			
DATE:			
INFORMATION AND CHECKLIST		**REPLY**	**COMMENTS**
1.	Contractor's Log #ID		
2.	Name, address, and phone number of supplier.		
3.	Are all specified or scheduled items included and exactly match scheduled/specified items?	Yes No	
4.	Is this item a substitution?	Yes No	
5.	Are deviations clearly identified?	Yes No	
6.	Does equipment fit space shown on construction documents, coordination drawings, and actual field conditions?	Yes No	
7.	Has support, erection, weights, and installation been coordinated with all trades?	Yes No	
8.	Does the proposed installation void warranties or violate UL or code requirements?	Yes No	
9.	Does this material/equipment add expense to any other trade or project costs?	Yes No	
10.	Does equipment require interface with other trades? List sections and specifics requiring coordination?	Yes No	
11	Is control interface coordinated?	Yes No	
12	List electrical characteristics (V/Ph/A)		

E. After approval of the proposed materials list, provide complete submittals as soon as possible and with adequate time for processing in order to not delay the project.

F. Submit for review of all project specific reproducible drawings, one reproducible and one print of each drawing. Submit for review eight sets of detailed Shop Drawings and Product Data. Submittals for review shall include complete Specifications, including type of materials, electrical characteristics, capacities, performance and power requirements to determine compliance with Contract Documents. All data submitted including wiring diagrams shall be complete for all equipment and shall apply only to this specific project. All extraneous material shall be deleted or marked out. Items to be supplied shall be specifically indicated using a method that will be visible after photocopying.

G. Contractor's Review: Review, stamp and certify each submittal prior to submission to the Architect. The certification shall state that the data and details contained on each Shop Drawing, Product Data, layout drawing, catalog data and brochure has been reviewed and that it complies with the Contract Documents in all respects. Shop Drawings, layout drawings, catalog data and brochures will not be reviewed and will be returned unchecked unless they are certified and all items specifically identified.

H. Multiple submissions: It is intended that Submittal data be complete and accurate at the first submission. If the Submittal is returned marked "Resubmit" only one additional submission will be permitted.

1. If the second submission is not acceptable, or if the submittal is not made within the specified time frame, the right of substitution and selection will be lost. At that time the specified item shall be provided at no additional cost.

I. Required Review Time: A minimum period of ten working days, exclusive of transmittal time, will be required in the Engineer's office each time Shop Drawings, Product Data, layout drawings, catalog data and brochures are submitted or resubmitted for review. A minimum period of fifteen working days exclusive of transmittal time will be required for reviewing substitute materials or manufacturer. The required review time, including multiple submission, shall be considered when scheduling the work.

J. Submit Shop Drawings and Product Data sheets in a timely manner sufficiently in advance to give ample time for reviewing, correcting, resubmitting and re-reviewing if necessary. No claim for delay will be granted for failure to comply with this requirement.

K. Equipment shall be of proper size for its allotted space. Equipment may be disassembled as required, where it does not invalidate the manufacturer's warranty, so that it can be installed through available window door, or louver openings.

L. Schedule of Shutdowns: After the project construction schedule is developed, submit the following information to the Owner for all required shutdowns of existing systems.

1. Date of proposed shutdown.

2. List of systems to be affected.

3. List of areas affected by the shutdown.

4. Description of work to be performed.

5. Estimated length of the shutdown.

M. Piping Systems Schedule: Prepare and submit a schedule of mechanical piping systems to indicate the piping material, joints, and fittings to be used with each system.

N. Insulation Schedule: Prepare and submit a schedule to indicate insulation types and thicknesses to be used on each mechanical piping system.

O. UL Through-Penetration Firestop System Schedule: Prepare and submit a schedule to indicate the UL-System number for through-penetration assemblies to be used with all mechanical and electrical systems. Coordinate with the work of the Firestops and Smokeseals Section in Division 7.

P. Shop Drawings: Submit product data sheets and shop drawings as specified within Division 23.

Q. Record Drawings: Prepare record drawings in accordance with the provisions of Division 1 governing - Project Record Documents and the additional requirements of this Section.

R. Valve Tag Charts: Prepare and submit valve tag charts as specified in this Section.

S. Operation and Maintenance Manuals: Prepare and submit copies of the Operation and Maintenance Manuals as specified in the appropriate Section of Division 1 governing - Contract Close-out the additional requirements of this Section.

T. Training Seminar Confirmation: Prior to the final completion of the project, submit copies of the training seminar sign in sheets and a letter to the Owner containing the names of training seminar participants, including instructor's names, the name of the firms represented and the dates of the instruction seminars.

U. Engineer's Action: Except for items submitted solely for record purposes or information, the Engineer will review each submittal for general compliance with the Contract Documents, as defined in the General Conditions, and return the submittal with comments.

V. Action Stamp: The Engineer will attach a Submittal Review sheet to each submittal package to indicate the status of the submission and the action taken, as follows:

1. Approved: Submission is generally in compliance with the intent of the contract documents and fabrication may be undertaken.

2. Approved as Noted: Submission is generally in compliance with the contract documents and fabrication may be undertaken with the corrections noted.

3. Revise and Resubmit: Submission is not in compliance with the contract documents and requires substantial corrections. Fabrication work may not be undertaken.

4. Rejected: Submission is not in compliance with the contract documents. Resubmit as specified.

5. Submit Specified Item: Second submission is not in compliance with the contract documents. Submit specified item without deviation.

6. Reviewed For Comment Only: Engineer is not responsible for the approval of the submittal.

1.5 QUALITY ASSURANCE

A. Qualifications: Use adequate numbers of skilled, licensed workers who are thoroughly trained and experienced and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Standard of Quality: The manufacturers names specified first or scheduled on the drawings are used for the design and to establish the standards of function, dimension, space requirements, appearance, and quality upon which the Contract is based. Acceptable manufacturers' names are listed to provide competitive bids with the specified or scheduled manufacturer.

1. Whenever a product is specified by using a proprietary name or the name of a particular manufacturer or vendor, the specific item mentioned shall be understood as establishing type, function, dimension, appearance, and quality desired unless specifically identified "no substitutions allowed". Other manufacturers' products might be accepted, provided sufficient information is submitted to allow the A/E to determine that products proposed are equivalent to those named.

2. Acceptable Manufacturers: The inclusion of a manufacturer's name within the list of acceptable manufacturers does not necessarily mean that the manufacturer's standard product is equal to the specified or scheduled product without some required modification. The submitted product shall be equal in terms of quality, durability, appearance, space requirements, weight, strength, sound performance and design to the product required by the Contract Documents.

3. All electrical equipment and components shall be listed in compliance with NFPA 70 – National Electrical Code.

C. Contractor's Review: It is solely the Contractor's responsibility to verify that the products of acceptable manufacturers and proposed substitutes meet or exceed the performance of the specified or scheduled product. To be considered acceptable, products must comply with the following for the full possible performance range:

1. Horsepower: Equal or less.
2. Efficiency: Equal or greater.
3. Capacities: Equal or greater.
4. Space/Clearances: Equal or greater.
5. Storage and Recovery: Equal or greater.
6. Warranty: Equal or better.
7. Weight: Equal or less.
8. Noise: Equal or quieter.
9. Short Circuit Rating: Equal or greater.

D. Substitutions: Substitutions include manufacturers not listed as acceptable within the specifications, or products, systems and methods, which differ from the specified systems.

1. Comply with the provisions of the Instructions to Bidders and pertinent sections in Division 1. Submit list of proposed substitutes for review and approval in compliance with the Instructions to Bidders, AIA Document A701.

2. By the submission of a proposed substitution, the Contractor represents that he has reviewed the proposed substitution and certifies that:

a. The proposed substitution does not affect dimensions shown on drawings.

b. Changes to the building design, including A/E design and review time at a rate of 2.6 x DPE, detailing and construction costs caused by the requested substitution will be included in the bid price with no additional cost to the Owner.

c. The proposed substitution will have no adverse effect on other trades, the construction schedule, or specified warranty requirements.

d. Maintenance and service parts are available locally.

e. All costs associated with or caused by the use of the proposed substitute will be covered by the Contractor.

E. Codes and Regulations:

1. In addition to complying with the specified requirements, comply with pertinent regulations of governmental agencies and authorities that have jurisdiction.

2. In case of conflict between or among specified requirements and pertinent regulations, the more stringent requirement will govern.

F. Qualifications for Welding and Brazing Work:

1. Qualify welding processes and welding operators in accordance with AWS Standard Qualification Procedure."

2. Provide certification that welders to be employed in work have satisfactorily passed AWS qualification tests.

a. If recertification of welders is required, retesting will be Contractor's responsibility.

G. Standards: Maintain copies of the most recent editions of the following standards at the job site for reference during construction:

1. UL Through Penetration Fire Stop Systems.

2. SMACNA Fire Damper Installation Guide.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protection (general): Use all means necessary to protect materials of the Sections of Division 23 before, during and after installation and to protect installed work and materials of all trades and Sections.

B. Protection: Ductwork, VAV terminal units, fans, sound attenuators, etc. shall come from the factory/shop with protected with 2.5 mil Dual Film Polyethylene on every opening. If film becomes damaged or removed, replace.

C. Replacements: In the event of damage, immediately make all repairs and replacement necessary to the approval of the Architect at no change in Contract Sum.

1.7 PROJECT CONDITIONS

A. Comply with Article 2 of the Instructions to Bidders, AIA Document A701, including the Appendix. Visit the site prior to submission of bids and examine existing conditions to be familiar with the related implications to the Work of the Facility Services Subgroup Divisions.

1. Questions regarding the Bidding Documents: Submit questions and requests for clarifications in compliance with the Instructions to Bidders.

B. Contract Documents: The Contract Drawings are diagrammatic and do not show every fitting and component and shall be used in conjunction with the specified requirements to provide complete and fully functional systems for the intended use. The drawings and specifications are complimentary, and the requirements indicated on both establish the requirements of the Contract.

1. The Contract Drawings indicate the general locations of equipment and distribution systems throughout the project. The actual installation locations shall be coordinated by the contractor on site based on actual field measurements performed by the contractor.

C. Document Review: Review the complete set of Contract Documents and be familiar with the space requirements and work of other Sections. Thoroughly review building sections, architectural details, space availability phasing requirements and Facility Services Subgroup Divisions drawings for a complete understanding of the scope and coordination requirements of the Facility Services Subgroup Divisions.

D. Scheduled Equipment: Standard manufacturers model numbers scheduled on the drawings shall be modified as specified in the descriptive specification for the scheduled equipment. The drawings generally define quantities, and the specifications further define equipment quality and system components, which may not be included in the standard model number.

E. Pipe sizing notations: Pipe sizing notations run along the pipe from the larger sizes to the smaller size. Sections of pipe, which are not specifically identified with a pipe size, are the continuation of the previous larger pipe size indication. Pipe sizes change only where indicated by a notation change.

F. Existing Conditions: The existing conditions indicated on the contract drawings are taken primarily from existing record drawings provided by the Owner and do not necessarily indicate actual as-built conditions. Preparation work of the Facility Services Subgroup Divisions includes the verification of existing conditions before the start of related installation work.

~~1.8 COORDINATION DRAWINGS~~

~~A. Prepare coordination drawings for the Sections of Division 23 in compliance with the requirements of Division 1 and the additional requirements of this Section.~~

~~B. Coordination drawings shall indicate how work provided under different sections will be coordinated and installed in the available spaces. Coordination drawings shall also indicate the sequence of installation work of the various sections. Coordination Drawings shall include work by sub-contractors and fabricators when off-site fabrication of work and production materials will interface with other trades.~~

~~C. Each of the following sub-contractors shall indicate their work on architectural backgrounds available on AutoCAD electronic files. Coordination drawings shall show the work of all major trades without excluding the work of any particular trade. Coordination drawings shall include, but not be limited to, the work of the following trades:~~

~~1. Sheetmetal~~

~~2. Plumbing~~

~~3. Sprinkler/Fire Protection~~

~~4. Electrical~~

~~5. Telecommunications~~

~~6. Security~~

~~D. Contractor shall produce 3/8 inch scale or larger, reproducible mylar transparencies produced on AutoCAD 2008 that shall include the following general information:~~

~~1. Outline of all structural grid reference lines.~~

~~2. Elevation reference lines.~~

~~3. Structural steel beam sizes and column layout.~~

~~4. Partition and door layout.~~

~~5. Room or space number.~~

~~6. Fire rating of partition penetrations.~~

~~7. Acoustical ceiling layout.~~

~~8. Firewalls and smoke partitions.~~

~~E. Copies of the coordination drawings shall be distributed to each subcontractor and subsequently each trade shall indicate its work and show elevations, sizes, pipe and duct insulation, junction boxes, and fixture sizes.~~

~~F. Conflicts shall be identified for immediate attention and resolution. Upon resolution of all conflicts, the coordinated drawings shall be signed by all trades and submitted to the Architect in accordance with Section 01300, for review and confirmation of compliance with the Contract Documents.~~

~~G. Additional work required to accommodate a trade that failed to coordinate his work in a timely manner will be paid for by the subcontractor who failed to coordinate his work.~~

~~H. Where conflicts occur regarding the location of materials of various trades, the Contractor will be responsible to coordinate the available space to accommodate all trades. Any resulting adjustments shall be initiated and dated by the specialty trade. The Contractor shall then final date and sign each drawing.~~

~~I. A sub-contractor who fails to promptly review and incorporate his work on the drawings shall assume full responsibility of any installation conflicts affecting his work and of any schedule ramifications.~~

~~J. Fabrication shall not start until such transparencies of completed coordination drawings are received by the Architect and have been reviewed.~~

~~K. Review of coordination drawings shall not diminish responsibility under this Contract for final coordination of installation and maintenance clearances of all systems and equipment with Architectural, Structural, Mechanical, Electrical and other work.~~

~~L. Coordination Drawings shall include the following work:~~

~~1. Structural elements.~~

~~2. Partition/room layout.~~

~~3. Ceiling grid.~~

~~4. Lighting fixtures.~~

~~5. Smoke and heat detectors.~~

~~6. Access panels.~~

~~7. Sheetmetal, heating coils, boxes, grilles, diffusers, air flow stations, etc.~~

~~8. All HVAC piping and valves.~~

~~9. Fire and smoke dampers.~~

~~10. Fire rated sleeves.~~

~~11. Soil, waste and vent piping.~~

~~12. Water mains and branches.~~

~~13. Medical and specialty gas systems.~~

~~14. Fuel gas piping systems.~~

~~15. Roof drain piping.~~

~~16. Major electrical conduit runs, panelboards, feeder conduit and racks of branch conduit.~~

~~17. Miscellaneous metal support.~~

~~18. Fire standpipes and distribution piping.~~

~~19. Sprinkler piping and heads.~~

~~20. Heat tracing of piping.~~

~~21. Telecommunication and Building Control Conduits.~~

~~22. Seismic restraints.~~

~~23. Code required clearances around electrical equipment.~~

~~1.9~~1.8 WARRANTY

A. Upon completion of the Work and as a condition of its acceptance and final payment, deliver to the Architect two copies of a written Warranty agreeing to replace the work of Sections of Division 23, which fails due to defective materials or workmanship within one year after Date of Substantial Completion as that date is determined in accordance with the General Conditions. All refrigeration compressors shall have the manufacturer's extended warranty for a total of five years.

B. Failure due to defective materials or workmanship is deemed to include, but is not to be limited to:

1. Failures in operating component or components.

2. Leakage from piping system.

3. Code violations.

C. Obtain written equipment and material warranties offered in manufacturer's published data without exclusion or limitation, in Owner's name.

D. Replace material and equipment that require excessive service during warranty period as defined and as directed by Architect.

E. Warranty shall include 24-hour service of complete system during warranty period at no cost to Owner. Choice of service organization shall be subject to Owner's approval.

F. Include copy of warranty in the Operation and Maintenance Manuals.

G. At end of warranty period, transfer manufacturer's equipment and material warranties still in force to Owner.

H. This Article shall not be interpreted to limit Owner's rights under applicable codes and laws and under this Contract.

~~1.10~~1.9 MANUALS AND INSTRUCTIONS

A. Comply with pertinent provisions of the appropriate Section in Division 1 regarding - Contract Closeout.

B. Operation and Maintenance Manuals: Bind Manuals in hardcover, three-ring binders, and provide identified dividers with tabs. Also, provide a PDF copy of the entire manual. Indicate appropriate model numbers in manufacturers' brochures and cross out non-applicable information. Review the Manuals with the Owner's maintenance personnel and add additional maintenance data sheets and information as directed by the Owner's Representatives. Copies of faxed pages are unacceptable.

1. Obtain at time of purchase of equipment, three copies of operation, lubrication and maintenance manuals for all items. Assemble literature in coordinated manuals with additional information describing combined operation of field-assembled units, including as-built wiring diagrams. Manual shall contain names and addresses of manufacturers and local representatives who stock or furnish repair parts for items or equipment.

2. Provide directions for and sequences of operation for the Sections of Division 23. Sequence shall list valves, switches, and other devices used to start, stop and control systems.

3. Lubrication instructions detailing type of lubricant, amount, and intervals recommended by manufacturer for each item of equipment. Include additional instructions necessary for implementation of first-class lubrication program. Include approved summary of lubrication instructions in chart form, where appropriate.

C. Furnish three copies of manuals to Architect for approval and distribution to Owner. Deliver manuals no less than 30 days prior to acceptance of equipment to permit Owner's personnel to become familiar with equipment and operation prior to acceptance.

D. Organization of Manuals: Divide manuals with identified tabs to match the Facility Services Subgroup specification sections numbers and titles. Separate product information within each section by the Article numbers and titles as listed in Part 2 of each specification section. Provide a clear see-through plastic holder on the edge of the binder with a typed card indicating the Project name, the Engineer’s name, the Installer’s name and the Volume number (e.g., Vol. No. 1 of 2).

E. Manuals shall include the following materials and information for all specified materials and equipment:

1. Table of contents.

2. Emergency instructions with 24-hour phone number to contact a responsible individual for each Section of Work.

3. Subcontractor's warranties and certificates of completion.

4. Name and telephone number of local representative and supplier.

5. Manufacturers' maintenance procedures.

6. Exploded drawings and parts lists.

7. Troubleshooting checklists with potential problems and possible causes.

8. Schematic wiring diagrams.

9. Record drawings.

10. Valve tag charts.

11. Equipment warranties and guaranties.

12. Sequence of Operations and Systems Descriptions.

13. Additional requirements specified in other sections.

F. Maintenance Information: Systems which require preventive maintenance to maintain efficient operation shall be furnished with complete necessary maintenance information. Required routine maintenance actions, as specified by the manufacturer, shall be stated clearly and incorporated on a readily accessible label on the equipment. Such label may be limited to identifying, by title or publication number, the operation and maintenance manual for that particular model and type of product.

G. Instruction Seminars: Perform systems instruction seminars and walk-through with the Owner's designated representatives after preparation, review and approval of the Operation and Maintenance manuals by the Architect and Owner.

1. Perform detailed instruction seminars, prior to the completion of the Work, presented to the responsible personnel designated by the Architect. The seminars shall cover the operation and maintenance of all Work installed under Sections of Division 23. All instruction seminars shall be recorded and turned over to the owner on DVD or USB format using a recording software approved by the owner. Recording training sessions shall be of professional quality and performed by a firm regularly engaged in that business. A letter with two (2) copies containing the name of the person or persons to whom the instructions were given and the dates of the instruction period shall be submitted to the Architect at the completion of the project.

2. Record the names of personnel and firms (subcontractors) represented and all training seminar participants, including all instructors and manufacturers' representatives on a seminar sign in sheet.

3. During the instruction period the Operation and Maintenance Manual shall be used and explained.

H. As a minimum training sessions shall consist of the following:

1. General project information and review shall be by the General Foreman or Superintendent of the Trade.

2. Specific system and equipment training shall be by a Factory Trained Representative.

3. Provide a complete review of the project and systems including, but not limited to, the following:

a. In a classroom environment mount the drawings on an easel or equivalent and review each Record Drawing (can use typicals).

b. Note equipment layouts, locations and control points.

c. Review each system.

d. Review system design operation and philosophy.

e. Review alarms and necessary responses.

f. Review areas served by various equipment and systems.

g. Identify color codes used.

h. Review features and special functions.

i. Review maintenance requirements.

j. Review operation and maintenance manuals.

k. Respond to questions (for videotaping, record questions and answers).

4. After classroom training, walk the entire project, review each equipment room and typical locations. Explain equipment and proper operation.

~~1.11~~1.10 RECORD DOCUMENTS

A. Prepare record documents for the work of the Sections of Division 23 as specified in Division 1 for Project Record Documents. The record drawings shall accurately indicate all valve locations and shall clearly show the assigned valve tag number. Record drawings shall include:

1. Piping and equipment location changes from the Contract Documents.

2. Updated schedules to indicate the scheduled characteristics of the actual installed equipment.

3. Valve locations and valve tag numbers.

4. Equipment identification numbers coordinated with the Owner's Facility Management Program.

5. Locations of seismic restraints.

B. Record drawings include ductwork, sprinkler and fabrication drawings required for all other systems and coordination drawings prepared under the work of this contract. Provide polyester mylar reproducible drawings and electronic AutoCAD 2010 drawing files of both the contract drawings and additional fabrication/coordination drawings that indicate Facility Services Subgroup systems. All AutoCAD files shall be fully bound and submitted on CD format along with PDFs of each drawing. If the architect is using Revit, .RVT files are acceptable. These files should be in the same version used in the project.

C. Submission of the specified polyester mylars of the full Facility Services Subgroup coordination drawings eliminates the requirement to modify the contract drawings to incorporate the changes to piping and equipment locations made during construction.

~~1.12~~1.11 ELECTRONIC DRAWING FILES

A. Electronic drawing files of floor plans and schedules on AutoCAD 2010, DXF format or Revit will be made available by the engineer for the contractor's use to prepare fabrication, coordination or record drawings. After the contractor requests the electronic files, a waiver will be provided for the contractor to sign and return to WSP. A service

charge of one hundred dollars ($100.00) per drawing will be charged to cover the cost of the engineer's time and materials. After WSP receives the signed waiver the electronic drawing files will be forwarded to the contractor.

PART 2 - PRODUCTS

2.1 ELECTRICAL EQUIPMENT LISTINGS AND APPROVALS

A. Reference Standards: All electrical equipment and systems shall comply with the following standards:

1. NFPA 70 – NEC (2017 Edition)
2. NFPA 79 – Industrial Machinery Code (2007 Edition)
3. OSHA part 1910

B. All Electrical equipment, devices, materials and systems provided under the work of Sections of Division 23 shall be UL listed and labeled. Where a UL listing is not available, submit the test reports of a NRTL testing engineer hired under the work of the Sections specifying the equipment. The NRTL testing engineer shall perform field testing to confirm that all electrical equipment, devices, materials and systems are in conformance with all applicable standards as well as State and local codes as enforced by the local inspector. All NRTL tests and inspections required for approval shall be performed under the work of the related Section at no additional cost to the Owner.

C. All electrical equipment including starters, variable frequency drives, control panels, etc. shall be rated 65,000 symmetrical amperes at 480 volt and 42,000 symmetrical amperes at 208 volt.

2.2 SLEEVES AND PENETRATIONS

A. Piping penetrations through fire rated construction shall comply with a listed fire rated assembly as detailed in the UL Fire Resistance Directory. Pipe sleeves through floors, exterior walls and fire-rated construction shall be galvanized Schedule 40 steel pipe. Pipe sleeves through non-fire-rated partitions shall be 26-gauge galvanized steel.

1. Sleeves Through Foundation Walls: Provide galvanized schedule 40 steel with continuous weld slip on welding flange water stop. Provide waterproof resilient link caulking assembly by Link-Seal or Sure-Seal for plumbing, electrical and mechanical systems.

a. Fire Service Entrances: Provide waterproof mastic or silicone sealant equal to GE Silicone II XST at sprinkler and fire service entrances in conformance with NFPA 13.

2. In areas where pipe or duct is exposed, install sleeves flush with the finish floor, except in mechanical rooms, janitor's closets and other potentially wet areas, extend sleeves at least 4 inches above finish floor.

3. Annular Space Requirements: Sleeves shall be sized to provide a total clearance of 1/2 inch around pipe or duct including insulation cover. Annular space around fire rated through penetrations assemblies shall be in compliance with the Listed Assembly.

4. Packing between the pipe and sleeve in fire rated construction shall be a combination of listed insulation and fire-proof caulk. Coordinate with the work of the Division 7 Section for Firestops Smokeseals.

5. Installation of recessed boxes, panels and cabinets installed in fire-rated walls shall be fire rated or installed with a listed fire rating assembly equal to the rating of the wall.

6. Core drilled holes in lieu of sleeves are acceptable except in mechanical rooms, janitor's closets and other areas with plumbing fixtures or equipment with water connections, which require sleeves installed above floors.

7. Non-Fire Rated Penetrations: Provide 26 gauge galvanized sheet metal sleeves at all plumbing and mechanical piping sleeves through non-rated partitions. Sleeves are not required on electrical conduit or fire protection piping.

B. Duct sleeves through fire-rated construction shall be of the same gauge as the related fire damper sleeve. See SMACNA Fire, Smoke and Radiation Installation Guide for HVAC Systems. The sleeve shall be sized to provide the necessary clearance required for expansion of the fire damper sleeve in conformance with UL approval. Duct sleeves through non-fire-rated partitions shall be 26-gauge galvanized steel. Duct sleeves through non-fire-rated floors and exterior walls shall be 16-gauge galvanized steel.

1. Packing for sleeves that do not require maintenance of fire rating shall be silicate foam, ceramic fiber, or mineral fiber with approved sealant. Pack or foam to within 1 inch of both wall surfaces. Seal penetration packing with approved caulking and paintable waterproof mastic surface finish or silicone caulking.

2. Openings in walls, partitions and other fire rated construction that do not require smoke dampers shall meet NFPA 90A, Section 3-3.8.

C. Through Penetration Assemblies: The combination of materials shall have the same fire rating, in hours, as the wall or floor, as tested in accordance with the code referenced editions of ANSI/UL 1479 (ASTM E-814). The combination of materials shall be classified by UL for the fire rating required and shall be listed as a numbered system in the UL Fire Resistance Directory.

1. Caulking of pipe and duct penetrations through floor slabs, smoke barriers and fire rated partitions shall be performed under the Division 7 Section for Firestopping.

D. Waterproof Pipe Penetrations:

1. Modular mechanical penetrations seals shall be interlocking synthetic rubber links shaped to fill annular space continuously, with galvanized carbon steel bolts, nuts and pressure plates to expand rubber seal between pipe and sleeve. Sleeve seal shall be water-tight.

2. Prefabricated modular sleeves shall be Mason Industries (SWS) or approved equal stiffened galvanized steel sleeves with preformed closed-cell elastomeric seal (non-fire-rated) or preformed mineral fiber or silicone foam seal (fire-rated).

3. Provide waterproof 1" single ring set in silicone and bolted to floor or wall at chipped and drilled penetrations of existing slabs on grade and existing walls below grade.

E. Provide adjustable escutcheons on exposed piping that passes through finished floors, walls, and ceilings. Escutcheons shall be chromium-plated cast brass, sized to cover sleeve opening and to accommodate pipe and insulation.

F. Exposed Duct Through Finished Floors, Walls or Ceilings: Provide 4" wide 20 gauge galvanized sheet metal collars at sleeves and prepared openings, sized to cover entire duct penetration including sleeve and seal, and to accommodate duct and insulation as necessary. Edges shall have milled lips ground smooth. Paint to match finish of duct or as directed by Architect.

2.3 VALVE TAGS & VALVE TAG CHARTS

A. Identify all valves on this project as described. Attached tags using solid brass chain and "S" hooks so they are easily visible but do not obstruct the operation of the valve.

B. Provide valve tags on all controlling valves installed and related to this project, except obvious drain and vent piping. Match service abbreviations with drawings.

C. Valve Tags shall be approximately 19 gauge brass and no less than 1 ½" in diameter. Tag shall be stamped and black filled with a service abbreviation and a sequential number. The service abbreviation shall be on the top line and be no less than ¼" in height. The sequential number shall be on the bottom line and shall not be less than ½" in height. If necessary, to accommodate longer abbreviations or number sequences increase tag size to 2" in diameter.

D. Attach valve tag to the stem or body of the valve so that the tag is visible but doesn't interfere with the valve operation.

E. Attach each valve tag using the following products. #16 Solid Brass Jack Chain, 1-½" Solid Brass "S" Hooks, # 6 Solid Brass Beaded Chain.

F. Valve Tag Charts

1. Prepare valve tag charts to indicate the location of all valves by room name and number as identified on the architectural floor plans. Indicate areas, floors, or specific rooms controlled by each valve. Provide valve tag charts for each system as specified in Part 2 of this Section.

2. Valve Schedule Frame: Install an 8 ½" x 11" aluminum valve chart frame in a conspicuous location inside the mechanical room or as directed by the owner or engineer. The chart should contain the following information about each tag: Service Abbreviation, Valve Number, Valve Location and Valve Function. To protect the chart, the frame should be supplied with a 10 mil clear plastic cover.

3. Provide a valve schedule to the engineer for approval.

4. Coordinate valve tag numbers with the Owner's facility management programs.

G. Designations

1. HVAC Systems:

a.	Condenser Water Supply	CWS
b.	Condenser Water Return	CWR
c.	Boiler Feedwater	BF
d.	Heating Hot Water Supply	HWS
e.	Heating Hot Water Return	HWR
f.	Pumped Condensate	PD
g.	Cold Water	CWS

H. Valve tags on plumbing systems may be engraved laminated plastic tags color-coded to match the pipe identification marks.

I. Identify non-potable water outlets with permanently attached yellow color-coded marker or 4-inch high triangle tag reading: Water Unsafe.

2.4 IDENTIFICATION OF PIPING, DUCTWORK AND EQUIPMENT

A. Description of Work

1. Work in this section includes: Identification materials, including necessary accessories indicated on Contract Documents and specified in this section or as required for proper identification of equipment and piping.

a. Pipe Markers
b. Equipment Nameplates
c. Duct Markers

B. Quality Assurance and Reference Standards

1. The latest published edition of a reference shall be applicable, unless identified by a specific edition date.

2. All materials, installation and workmanship shall comply with the applicable requirements and standards addressed within the following references:

a. ANSI / ASME A13.1 2007: “Scheme for the Identification of Piping Systems”
b. ANSI Z535.1 2007: “Safety Color Code”
c. NFPA 99C: “Standard on Gas and Vacuum Systems”

C. Submittals

1. Submit product data sheets on all products contained in this section for approval. Data sheets must substantiate conformance with applicable standards.

D. Coordination

1. Coordinate installation of identifying devices with the completion of covering and painting of surfaces where devices are to be applied.

2. Coordinate installation of identifying devices with the location of access panels and doors.

3. Install identifying devices before installing acoustical ceiling tiles or similar concealment.

E. Manufacturers

1. Provide manufacturers standard products that conform to ANSI / ASME A13.1 2007 requirements for lettering size, background size, background color, and angle of installation.

2. Acceptable manufactures are Seton, Brimar Industries, Emedco or approved equal.

F. Pipe Markers

1. General: Pipe Markers shall comply with ANSI / ASME A13.1 2007 “Scheme for the Identification of Piping Systems” and be installed as required and indicated below using legends spelled out fully with few abbreviations and directional arrows to indicate flow. Arrows must have the same background color as the pipe marker legend, or be incorporated into the pipe marker.

2. Color: Pipe markers shall conform to ANSI Z535.1 “Safety Color Code”

3. For pipes with an overall diameter of 6” or less (including insulation), provide semi rigid plastic wrap around pipe marker that extends 360° around the pipe at each marker location. The semi rigid marker should include the legend (pipe content) and a directional flow arrow. The marker shall be supplied as a pre-tensioned device and be equipped with a ½” strip of adhesive on the inside to further secure the marker in a permanent position on vertical locations.

4. For pipes with an overall diameter greater than 6” (including insulation) provide a semi rigid plastic strap-on pipe marker with a height no less than 3 times the letter height. The marker shall include a legend (pipe content) and a directional flow arrow. The maker shall be supplied with no less than two nylon straps to secure the marker in place.

G. Equipment Nameplates

1. Provided an engraved multi-layered plastic laminated nameplate for all equipment. Provide an engraved nameplate for each disconnect, VFD, starter, controller, etc. connected to equipment.

2. Provide a 1/8” thick black Phenolic material engraved nameplate with white letters for all equipment. The nameplate shall be a minimum of 3” high x 6” wide.

3. The minimum letter height shall be 3/4”. If necessary enlarge the size of the plate to accommodate the ¾” characters. Do not reduce the letter height.

4. The nameplate shall be installed with stainless steel screws.

5. The nameplate shall be engraved with the Equipment Tag as shown on the mechanical drawings and schedules.

   a. Name and number of the equipment (Example – AHU-1)
   b. Make, model and serial number
   c. Coordinate with the owner to follow any building/owner standard

6. Equipment markings shall be prominently displayed on each normally visible side of equipment.

7. Equipment intended for installation in finished area shall have markings located behind normally used access panels mounted so as to be readily found.

H. Equipment Nameplates – Fire Damper, Smoke Damper and Fire/Smoke Damper Markers

1. Provided an engraved nameplate for each fire, smoke and fire/smoke damper.

I. Access Panels

1. Provide a 1/16” thick white nameplate with black letters to identify access to concealed valves or equipment such as those found above acoustical ceilings tiles. The nameplate shall be ¾” high x 2 ½” wide. The minimum letter height shall be ¼”.
2. Coordinate the information to be engraved on each plate so that it exactly matches the valve tag or equipment nameplate. Install these nameplates on the ceiling support to the right of the tile that would provide access.
3. Nameplates should be installed using with stainless steel screws.

J. Duct Markers

1. Provide pressure sensitive vinyl labels on all ductwork installed on this project to identify the basic content and directional flow of the duct.

2. Utilize manufacturer’s standard legends such as: Exhaust, Exhaust Air, Intake, Intake Air, Outside Air, Relief, Relief Air, Return Air or Supply Air.

3. Smaller Ducts: On ducts up to 24” in size provide a duct marker that is a minimum of 2 ¼” x 16” and has a letter size of 1 ½”. Each marker must be supplied with a directional flow arrow.

4. Larger Ducts: On ducts larger than 24” in size provide a duct marker that is a minimum of 4” x 24” and has a letter height of 2 ½”. Each marker must be supplied with a directional flow arrow.

K. Preparation

1. All surfaces that are to receive adhesive applied mechanical identification such as Pipe, Duct, and Equipment nameplates should be clean and dry prior to application.

2.5 PRESSURE VESSELS

A. Pressure vessels including, but not limited to; domestic water heaters, boilers, compressed air and vacuum receiver tanks provided under Division 23 shall be ASME rated construction.

2.6 MASTICS, ADHESIVES, SEALANTS AND TAPES

A. Provide low VOC mastics, adhesives, sealants and tapes in compliance with South Coast Air Quality Management District Rule #1168 VOC Limits.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Inspect site conditions before starting preparatory work and verify that actual conditions are known and acceptable before starting work. Be familiar with the work of other sections, separate contractors, and the Owner.

B. Inspect areas where piping, conduit, ductwork, fixtures and equipment will be installed and verify adequate space is available for access, service and removal of equipment. Coordinate with the Work of other Sections.

C. Notify the Architect immediately when the removal of existing ceilings, walls, or obstructions reveal conditions substantially different from the Contract Documents.

3.2 PREPARATION

A. Perform coordination with the work of other Sections and prepare composite coordination drawings as specified in this Section before starting installation work of Divisions 20 through 26.

B. Verify points of connection to existing systems and confirm that required system shutdowns are acceptable with the Owner before proceeding with any related installation work.

3.3 SYSTEM SHUTDOWNS

A. Coordinate shutdowns of existing systems with the Owner and submit a written request at least ten working days in advance. Minimize system shut downs as much as possible. Submit a list of all affected areas, the proposed work to be performed, and the expected length of the shutdown including time for retesting.

B. Perform phasing and provide temporary services to maintain existing active services serving areas outside the limit of work area. Provide new services in place or temporary systems to re-feed existing systems affected by demolition work before starting shutdown and demolition work. Mechanical and electrical systems of Divisions 20 through 28 pass through the area to be demolished and shall be maintained active for areas outside the work area except for shutdown time for new service connections.

3.4 LIFE SAFETY SYSTEMS SHUTDOWNS

A. Impairment Permits: Coordinate the preparation of Impairment Plans for existing Life Safety systems with the work of Division 1 Sections on Permits and Temporary Facilities. Obtain impairment permits from the local Authorities Having Jurisdiction for all Life Safety Systems affected by the work of Sections of Division 23.

1. Submit the proposed Impairment Plan to the local Authorities Having Jurisdiction for review and approval. Maintain the existing Life Safety Systems in operation during construction in conformance with the impairment permits obtained from the local Authorities Having Jurisdiction. Perform work and provide temporary services to maintain active systems and perform phasing of new work in compliance with the approved impairment plan.

B. Safeguarding Construction: Provide fire watch, portable extinguishers, and safety procedures in compliance with NFPA 241.

3.5 DEMOLITION WORK

A. Take care to avoid creating hazards on the site or causing disruption of service in the adjoining areas to remain active.

B. Remove all abandoned piping, ductwork and equipment not built into building construction. Where ceilings or walls are removed all abandoned duct, conduit and piping shall be removed. Abandoned elements built into walls or located above existing ceilings that are not being removed shall remain. All duct and pipe ends shall be capped and be marked abandoned.

C. Shut off, disconnect, make inactive and dismantle existing mechanical and electrical systems to be demolished and leave debris on floor for removal under Division 2. Disconnect and make safe existing equipment to be demolished and identify items to be removed with orange spray paint for removal and disposal under Divisions 1 and 2.

D. Remove existing systems serving areas to be demolished. Remove systems back to active main and make safe and provide cap or plug to suit system. Obtain existing record drawings from Owner. Maintain existing systems serving areas to remain.

E. After walls and ceilings are removed and piping is exposed, verify exposed mechanical and electrical systems serve only areas indicated for demolition before shutdown for disconnection. Identify existing systems which serve areas to remain. Promptly notify Architect of active systems to be maintained when located in partitions to be demolished.

F. Remove existing active systems located in existing partitions to be demolished and provide new off-set at ceiling and drop through floor and reconnect to existing services at the floor below.

3.6 CORE DRILLING

A. Do not core new concrete structure without written approval from the Structural Engineer.

B. Perform all core drilling required for the proper installation of the work of Divisions 20 through 26. Locate all required openings and prior to coring coordinate the opening with the other Trades and obtain approval from the Structural Engineer.

C. Thoroughly investigate the existing conditions in the vicinity of the required opening prior to cutting. Take care so as not to disturb the existing building systems. Damage to existing conditions incurred during core drilling shall be corrected to the Owners satisfaction with no additional expense to the Owner.

3.7 CUTTING AND PATCHING

A. Cutting and patching shall be performed under other Sections. Locate all other than cored openings required for the installation of the mechanical piping systems. Coordinate the opening with the work of the other trades so as not to interfere with the work of other Sections. Thoroughly investigate the existing conditions in the vicinity of the required openings as much as possible.

B. Patching of the existing walls around openings shall be performed by the respective trade responsible for the finish material in which the opening is made.

3.8 SLEEVES AND PENETRATIONS

A. Coordination: Closely Coordinate electrical conduit, mechanical piping and ductwork penetrations through floor slabs and fire rated walls with the other Sections of Divisions 20 through 26 and the requirements of Division 7 - Fire Stops and Smoke Seals. Penetrations through fire rated construction shall consist of a complete rated assembly.

1. UL -Listed through Penetration Components: In addition to the fire stop caulking provided under Division 7, the components of a fire rated through penetration assembly include the piping size and material, annular space, and insulation type, density and thickness.

2. Prepare a schedule of UL Through Penetration System numbers for submission and approval.

B. Set sleeves in position in advance of concrete work. Provide suitable reinforcing around sleeves.

C. Extend sleeves through Mechanical Room and other potentially wet floors a maximum of 2 inches above finished floor level and provide pipe support sleeve.

D. Install cast brass chrome plated escutcheons where piping passes through finished surfaces.

E. Provide vertical flush wall cleanouts on the base of stacks just above the wainscot.

F. Provide sheetmetal sleeves on piping through non-rated partitions.

3.9 GENERAL INSTALLATION REQUIREMENTS

A. General: Coordinate with the work of other trades before starting installation. Install materials, equipment, including fixture and trim in accordance with the approved manufacturers latest printed installation instructions and the product NRTL listing requirements.

1. Store materials on site in clean and dry conditions on racks off the floor or ground.

2. Install piping straight, plumb and form right angles on parallel lines with building walls. Locate groups of pipes parallel to each other. Provide sufficient spacing for insulation and valve access.

3. Install mechanical and electrical systems as high as possible to maximize ceiling heights.

4. Piping components shall be of rust, from scale and dirt. Protect open ended pipe ends to prevent debris from entering. All piping shall be reamed free of burrs.

5. Locate valves for easy access and operation. Install valve stems above the horizontal. Provide chain operators on all valves 4 inches and larger located 7 feet or higher above the finish floor.

6. Piping connections to coils and equipment shall be made with off-sets provided with isolation valves, unions of flanges arranged so that equipment can be serviced or removed without dismantling.

7. Provide for expansion and contraction in all piping systems to prevent undue strains on piping or equipment. Provide double off-sets at risers to take up expansion.

8. Install equipment with care to minimize damage to shop applied finishes. Replace or repair damaged components or finishes incurred during shipping and installation to the Owners satisfaction.

9. Thoroughly clean items before installation. Cap pipe openings to exclude dirt until fixtures are installed and final connections have been made.

10. Cut pipe accurately and work into place without springing or forcing, and properly clearing windows, doors, and other openings.

11. Show no tool marks or threads on exposed plated, polished, or enameled connections from fixtures. Tape all finished surfaces to prevent damage during construction.

12. Make changes in directions with fittings, make changes in main sizes with eccentric reducing fittings. Install water supply and return piping with straight side of eccentric fittings at top of the pipe.

13. Run piping concealed above ceilings and within furred spaces. Take special care to locate stacks and risers within pipe chases as indicated on the Architectural Drawings. Obtain approval from the Architect for piping locations which require furrings not indicated on the Contract Drawings.

14. Install equipment and components to minimize noise and vibration transmission to the structure. Provide vibration isolators and flexible connectors for all vibrating equipment.

15. Locate piping and equipment to maintain at least 18 inches clear in front of access panels and doors.

16. Provide sufficient swing joints, ball joints, expansion loops, and devices necessary for a flexible piping system.

17. Support piping independently at pumps, coils, tanks and similar locations, so that weight of piping will not be supported by the equipment.

18. Pipe the drains from pump glands, drip pans, relief valves, air vents and similar locations, to spill through an air gap into a floor drain.

19. Securely bolt all equipment, isolators, hangers, and similar items in place.

20. Provide complete dielectric isolation between ferrous and non-ferrous metals.

21. Do not install plastic piping systems when the ambient temperature is below 60 degrees F.

22. Install non-electrical systems at least 6 feet above electrical panels and equipment and provide drip pan with pipe to spill on the floor.

23. Provide Armstrong Armaflex 2000 white insulation on pipe hangers, duct hangers, duct flanges, the edge of ductwork, and to the sharp edges of mechanical systems when located below 6'-8" above the floor.

24. Insulating Clamps: Provide IPS Corp. Strap-Tite insulating clamps on uninsulated copper piping installed through metal stud perforations.

25. Provide temporary caps or test plugs on open piping during installation to prevent construction debris or trash from entering the system.

B. Installation of Grooved Piping Systems:

1. Grooved piping systems shall be installed in accordance with the manufacturer's latest published installation instructions. Grooved ends shall be clean and free from indentations, projections, and roll marks. Gaskets shall be molded and produced by the coupling manufacturer, and shall be verified by the manufacturer as suitable for the intended service.

2. Training: A factory-trained technical employee of the mechanical joint manufacturer shall provide on-site training of the installing contractor's field personnel in the proper use of grooving tools and installation of grooved piping products and provide certification of training. The factory-trained representative shall periodically review the product installation on-site and ensure best practices are being followed. A distributor's representative is not considered qualified to conduct the training.

   a. Submit training certifications of for all installing personnel.

3. Measure all piping grooves prior to joint assembly with the appropriate tools to confirm that grooves conform to the manufacturer's specified requirements and tolerances.

   a. Piping, grooves and installations found to be non-compliant with the specified requirements shall be removed and replaced.

C. Equipment Access for Maintenance and Removal:

1. Install piping, equipment and accessories to permit access for maintenance as specified by the equipment manufacturer. Provide adequate clearance to disconnect equipment for removal. Locate valves and unions so additional piping removal is not necessary to remove equipment. Coordinate piping and equipment locations with all trades to ensure adequate clearance is maintained for equipment maintenance and removal.

2. Relocate items as necessary to provide access for maintenance and removal without additional cost to the Owner.

D. System Flushing:

1. Perform system flushing of rough piping installation before final equipment and fixtures are installed.

2. Perform final flushing of piping systems through strainers, hose bibs and drain valves to remove debris from piping. Perform necessary cleaning of outlets at equipment and fixtures such as faucet aerators, flush valves, flow controls and shower heads to ensure proper function.

E. Protection of Mechanical and Electrical Systems:

1. Coordinate the requirements for physical protection of all mechanical and electrical systems with the work of other sections. Bollards, guardrails, bumper guards and barriers shall be provided under other sections.

3.10 ACCESS PANELS

A. Access Panels: Comply with the appropriate Section of Division 8 specifying Access Panels.

B. Furnish access panels for installation under other sections to allow access to mechanical equipment and devices installed under Divisions 20 through 26. Furnish access panels for mechanical and electrical devices installed behind permanent construction such as gypsum wallboard partitions and ceilings or concrete masonry walls and partitions.

C. Devices provided under the work of Divisions 15 and 16 that require access include, but are not necessarily limited to; valves, cleanouts, air release valves; water hammer arrestors, trap primer devices, terminal boxes; fire and smoke dampers, smoke detectors, steam traps, slip joints, expansion joints, filters, coils, junction and pull boxes and volume and control dampers.

D. Coordinate with the Architectural reflected ceiling plans, room elevations and finish schedules for locations where the above panels are applicable. Coordinate all work with the General Contractor/Installer. Locations of all access panels shall be coordinated with the Architect prior to locating items that require an access panel. Access panels will not be allowed in any wall finished with brick, structural glazed facing tile, or wood.

E. Access panels shall be large enough to provide access for maintenance and removal of mechanical and electrical equipment and devices.

F. Access panels shall have same fire rating classification as the construction penetrated.

G. Panels shall be at least 12" x 12"; access panels at equipment shall be 18" x 18".

3.11 VALVE TAG CHARTS

A. Prepare valve tag charts to indicate the location of all valves by room name and number as identified on the architectural floor plans. Indicate areas, floors or specific rooms controlled by each valve. Provide valve tag charts for each system as specified in Part 2 of this Section.

B. Coordinate valve tag numbers with the Owner's facility management programs.

3.12 IDENTIFICATION OF PIPING, DUCTWORK AND EQUIPMENT

A. Install all identification in accordance with the latest version of with ANSI A13.1.

B. Pipe Markers

1. Identify all piping on this project.

2. Install pipe markers on long straight runs every 20 feet.

3. Install pipe markers above and below every floor penetration and on either side of every wall penetration and insure there is at least one marker per pipe in every room.

4. Install pipe markers at every valve, branch and any change in piping direction on all directions, sides, etc.

5. Install pipe markers so they are visible for a normal standing position.

C. Duct Markers

1. Identify all ductwork on this project.

2. Install duct markers every 20 feet on long straight runs.

3. Install duct markers at all floor and wall penetrations and near all connected equipment and insure there is at least one marker per duct in every room.

4. Install duct markers at all branches and changes in direction of the duct so it is easily traced.

5. Install duct markers so they are visible for a normal standing position.

D. Equipment Nameplates

1. Identify all equipment, the location of concealed equipment, associated components and controls of all equipment.

E. Equipment Nameplates – Fire Damper, Smoke Damper and Fire/Smoke Damper Markers

1. Identify all fire dampers, smoke dampers and fire/smoke dampers

2. Install labels on the exterior of the dampers and/or ductwork if exposed or concealed.

3. Install labels on the access panel or ceiling grid if concealed above ceiling.

3.13 FIRE WATCH

A. Provide a fire watch as required by Division 1 when performing work, which may cause a fire, such as welding or torch cutting work.

3.14 SCAFFOLDING, HOISTING, RIGGING AND STAGING

A. Provide scaffolding, hoisting, rigging, conveyance apparatus and staging in conformance with Division 1 as required to perform the work specified in the other mechanical and electrical sections of Divisions 20 through 26.

3.15 RECORD DOCUMENTS

A. Project Progress and Record Drawings: Comply with the appropriate Section of Division 1 governing Project Record Documents and the additional requirements of this Section.

1. Maintain a daily record of the project construction progress by coloring the work completed on the white prints furnished by the Owner at the commencement of the work.

2. Modify the equipment schedules to reflect data consistent with that of the installed equipment. Clearly show all changes to the work as a result of addenda, change orders, clarifications, instructions issued by the Architect or conditions encountered in the field. Accurately indicate the location, size, type and elevation of new work and their relationship to existing work. Provide dimensions from permanent site improvements or column centerlines.

3. The marked up and colored in prints will be used as a guide for determining the progress of the work installed. They shall be inspected weekly and shall be corrected immediately if found inaccurate or incomplete. Requisitions for Payment will not be approved until the Drawings are accurate and up-to-date.

B. At the completion of the work submit one set of the marked up prints for review and acceptance. After acceptance, these marked up record prints shall be used to prepare the Owner's final Record Drawings.

C. Maintain the established layering, color and pen thickness scheme on modified electronic drawing files.

D. Make all modifications on the AutoCAD Drawing files indicated on the approved marked up set of Record Drawings. Remove all superseded data to show the completed installation.

E. The final approved AutoCAD Record Drawing files shall become the property of the Owner.

F. Deliver the completed Record Documents both in AutoCAD and PDF properly titled and dated to the Architect. These Record Documents shall become the property of the Owner.

3.16 SYSTEM START-UPS AND INSTRUCTIONS

A. Start-Ups: Perform system and equipment start-ups in accordance with the manufacturers' printed start-up instructions in the presence of the manufacturers' representatives.

1. Perform initial systems start up for all Life Safety Systems with the manufacturers' representatives and provide complete integrated systems testing and verification as detailed in the Fire Protection Narrative before notifying the approving Authorities having Jurisdiction. Make all necessary adjustments, corrections and changes and retest the systems with the manufacturers' representatives present during the final testing and preliminary acceptance tests.

2. After the successful completion of all preliminary Life Safety Systems acceptance tests notify the approving Authorities having Jurisdiction.

3. Perform the final Life Safety Systems acceptance tests as detailed in the Fire Protection Narrative with the Manufacturers' Representatives, Authorities having Jurisdiction and Owner's Maintenance and Facility staff in attendance.

3.17 CONSTRUCTION CERTIFICATIONS AND AFFIDAVITS

A. Engineer's Responsibility: During construction the Engineer is responsible for the following services:

1. Review, for conformance to the design concept, shop drawings, samples and other submittals, which are submitted by the contractor in accordance with the requirements of the construction documents.

2. Review and approval of the quality control procedures for all code-required controlled materials.

3. Be present at intervals appropriate to the stage of construction to become, generally familiar with the progress and quality of the work and to determine, in general, if the work is being performed in a manner consistent with the construction documents.

B. Contractor's Responsibility: The Contractor is solely responsible for the completion of the work on schedule and in compliance with the Contract Documents and the applicable codes; and for scheduling sufficient time for all required testing and submissions and approvals.

1. Construction Affidavits: If the Building Official requires on-site representation from a Professional Engineer stating that the Contractor's work is in accordance with the approved construction documents and with applicable local, state and federal statutes and regulations as required by, the Contractor shall retain the services of a qualified Registered Professional Engineer to be on site during construction.

2. Submission Schedule: Allow sufficient time for the initial submission; Architect/Engineer review; resubmission; and final review and approval of all documents required for acceptance of the request for a Certificate of Occupancy.

3. Submit copies of the approved fire protection shop drawings, "As-Built" record drawings and completed contractor's test and material certificates to the building official and head of the fire department before scheduling the final fire protection/life safety systems operational acceptance tests.

4. Testing Schedule: Allow sufficient time for the initial testing, adjustments, and final functional operational testing of all fire protection systems as outlined in the Fire Protection Narrative.

C. Construction Certifications: After the General Contractor and the Facility Services Group Subcontractors submit signed Certifications of Compliance as required, the responsible engineers will provide written certifications to confirm that to the best of the engineer's knowledge, information, and belief, the finished work is in compliance with the approved drawings issued for permit as defined below:

1. Final Affidavits/Certifications will be signed by the Engineers of Record only after all specified systems are complete, tested and accepted as defined in: the Building Code and the applicable Referenced Standards; Divisions 21, 22, 23 and 26; and the Project Fire Protection Narrative filed with the permit documents.

2. Prior to submission of the final signed Certifications of Compliance, the Contractor shall submit written responses to all punch list items submitted by the design team.

3. It is the Contractor's sole responsibility to schedule all installation work, preliminary and final acceptance testing to allow at least 5 days for the engineer to review all documents, and final acceptance testing documentation before affidavits will be issued.

4. The engineer will not submit certifications or affidavits until all required certifications of testing, compliance, acceptance and completion of punch list items have been submitted to the engineer and approved.

3.18 OEM CONTROLS INTEGRATION

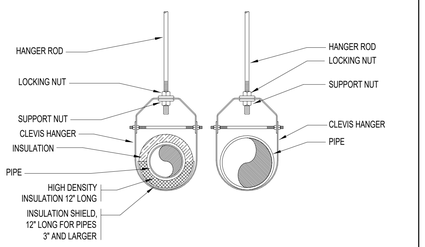
A. The contractor shall ensure that original equipment manufacturers (OEM), providing equipment with integral controllers (DDC, electronic), shall coordinate with the Building Controls System (BCS) contractor to ensure complete integration of the OEM controls with the BCS. Provision of any gateways, wiring, etc., shall be by the BCS contractor.

B. The contractor shall refer to the Building Controls Systems drawings to ensure the sequences required by OEM equipment are followed.

C. The OEM controllers shall coordinate with the BCS contractor to provide for the following, as applicable to the device, for connection by the BCS contractor.

1. Remote start/stop.
2. Remote set-point adjust.
3. Remote alarming.
4. Remote status.
5. Remote monitoring of all process variables measured by the OEM controller. In short, all information that is available on the local OEM control panel shall be communicated to the BCS.

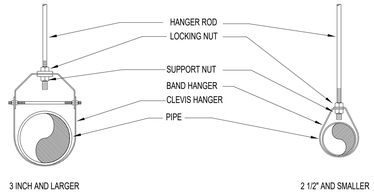
END OF SECTION



HANGER ROD SCHEDULE	
PIPE SIZE	ROD SIZE
UP TO 2"	3/8" DIA.
2 1/2" THRU 3"	1/2" DIA.
4" AND 5"	5/8"
6" THRU 8"	3/4"
12"	7/8"

HANGER ROD SPACING	
PIPE SIZE	MAX. ALLOWABLE SPACING
1"	7'
1 1/4"	8'
1 1/2"	9'
2"	10'
2 1/2"	11'
3" THRU 8"	12'
10" & 12"	15"

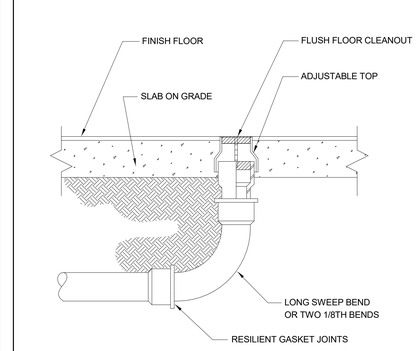
1 TYPICAL CLEVIS HANGER & ROD INSTALLATION
DETAIL FOR INSULATED PIPING SYSTEMS — NO SCALE



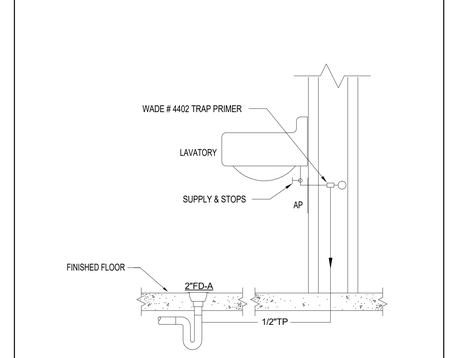
HANGER ROD SCHEDULE	
PIPE SIZE	ROD SIZE
UP TO 2"	3/8" DIA.
2 1/2" & 3"	1/2" DIA.
4" AND 5"	5/8"
6" - 8"	3/4"
10 & 12"	7/8"

HANGER ROD SPACING	
PIPE SIZE	MAX. ALLOWABLE SPACING
1"	7'
1 1/4"	8'
1 1/2"	9'
2"	10'
2 1/2"	11'
3" - 12"	12'

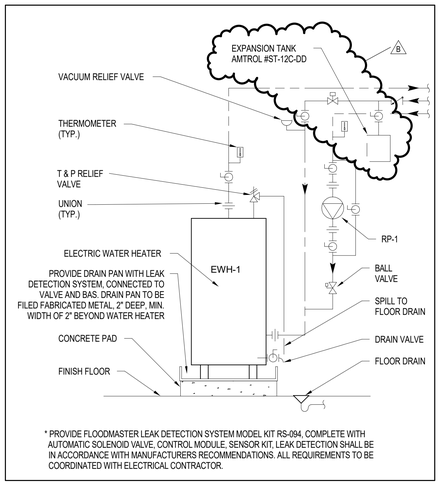
2 TYPICAL CLEVIS / BAND HANGER & ROD INSTALLATION
DETAIL FOR NON-INSULATED PIPING SYSTEMS — NO SCALE



3 END OF RUN FLOOR CLEANOUT
INSTALLATION DETAIL — NO SCALE



4 LAVATORY SUPPLY - TRAP PRIMER DETAIL
(WHERE APPLICABLE) — NO SCALE

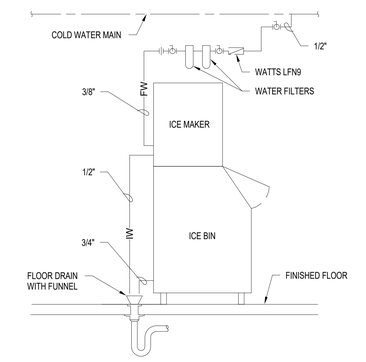


* PROVIDE FLOODMASTER LEAK DETECTION SYSTEM MODEL KIT RS-094, COMPLETE WITH AUTOMATIC SOLENOID VALVE, CONTROL MODULE, SENSOR KIT, LEAK DETECTION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. ALL REQUIREMENTS TO BE COORDINATED WITH ELECTRICAL CONTRACTOR.

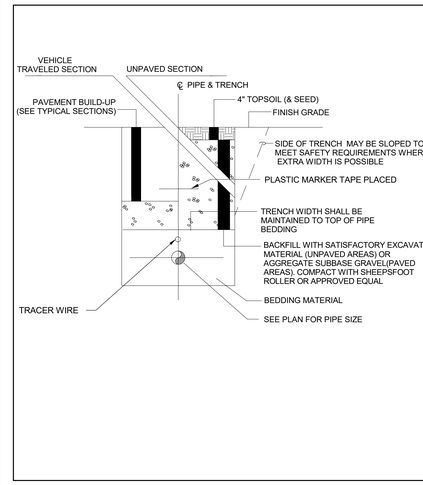
5 ELECTRIC WATER HEATER
PIPING DIAGRAM — NO SCALE

NOTE:

REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS FOR CONNECTION LOCATIONS.



6 ICE MACHINE PIPING DIAGRAM
- — NO SCALE



7 GAS TRENCH
- — NO SCALE

Architects/Engineers:

WSP USA Buildings Inc
2 MONUMENT SQUARE, SUITE 200
PORTLAND, ME 04101
(207) 775-5401

wsp.com

STATE OF MAINE
DEPT OF AGRICULTURE, CONSERVATION AND FORESTRY
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0022
(207) 287-3200

WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. THESE DRAWING SHALL BE COPIED FROM THE ORIGINAL BLUEPRINTS AND ARE APPROXIMATELY TO SCALE. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE PROJECT AND SHALL NOTIFY THE ENGINEER OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.

NO.	REVISION	DATE
A	ISSUED FOR BID	01-10-2025
B	ADDENDUM NO 2	02-06-2025

STATE OF MAINE — Blair B. Chamberlain No. 9293 — REGISTERED PROFESSIONAL ENGINEER
3529230024
Feb. 6, 2025

PROJECT
CONY ROAD BUILDING RENOVATION

OWNER
MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

TITLE
PLUMBING DETAILS

PROJECT NO.: 3529230024
DATE: 01-10-2025
DWN. BY: CJ | CKD. BY: JO/BC
SCALE: NTS

P-501

ISSUED FOR BID

2/6/2025 11:59:01 AM Autodesk Docs://PWM100-Maine DACF Cony Road Reno - R24 - C24/3529230024_Cony Rd-P24.rvt

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE TYPE	DESCRIPTION	ACCESSORY 1	ACCESSORY 2 & 3	WASTE PIPE	VENT PIPE	COLD WATER	HOT WATER	BASIS OF DESIGN		NOTES
					IN	IN	IN	IN	MANUFACTURER	MODEL	
WC-A	WATER CLOSET (ADA)	1.28 GPF, VITREOUS CHINA, ELONGATED BOWL, WALL MOUNTED BACK OUTLET, ADA/ABA COMPLIANT COLOR: WHITE	AMERICAN STANDARD SEAT HEAVY DUTY OPEN FRONT LESS COVER #5901.100	AMERICAN STANDARD SENSOR FLUSH VALVE 6066121.002 BATTERY OPERATED JAY R SMITH CARRIER #0211Y	4"	2"	1-1/4"	-	AMERICAN STANDARD	2257.101	
LAV-A	LAVATORY	WALL-HUNG, VITREOUS CHINA, SQUARE SHAPED BOWL WITH BACK OVERFLOW, CENTER HOLE	AMERICAN STANDARD 702P.400 POLISHED CHROME TOUCHLESS LAVATORY FAUCET WITH 0.35 GPM. BATTER POWERED	McGUIRE 155AECO TAILPIECE AND MCGUIRE 8090CBOS4 P-TRAP W ADA GUARD MCGUIRE SUPPLIES	2"	1-1/2"	1/2"	1/2"	KOHLER	KINGSTON ULTRA K-84325	
SH-A	SHOWER	ADA PERSONAL SHOWER SYSTEM, PRESSURE BALANCED WITH SLIDE BAR, 1.5 GPM	ENCLOSURE - EVERFAB #S3839A SINGLE PIECE TRANSFER SHOWER	N/A	-	-	1/2"	1/2"	AMERICAN STANDARD	1662.211	1
SK-A	KITCHEN SINK	SINGLE BOWL UNDERMOUNT SINK, 18 GAUGE 304 STAINLESS STEEL, CENTER DRAIN, SINGLE HOLE	ELKAY LKHA1041 SINGLE HOLE FAUCET WITH PULL DOWN SPRAY AND FORWARD ONLY LEVER HANDLE.	ELKAY LKAD35 DRAIN W/ ADA GUARD	2"	1-1/2"	1/2"	1/2"	ELKAY	ECTSRAD25226TBG SINGLE HOLE	2
SK-B	LAB SINK	LAB SINK , DECK MOUNTED FAUCET	INSINKERATOR GARBAGE DISPOSAL BADGER 1 (1/3 HP)	INTEGRAL, REFER TO DIV. 12	2"	2"	1/2"	1/2"	ELKAY	SS 26" X 22" X 8"	
SK-C	LAB SINK	LAB SINK , DECK MOUNTED FAUCET	INSINKERATOR GARBAGE DISPOSAL BADGER 1 (1/3 HP)	INTEGRAL, REFER TO DIV. 12	2"	2"	1/2"	1/2"	ELKAY	SS 42" X 22" X 8"	
PW-1	PURE WATER FAUCET	DECK MOUNTED PURE WATER FAUCET ADJACENT TO LAB SINK	N/A	N/A			1/2"(PW)		WATER SAVER	L7833	
EW-1	EYEWASH	DECK MOUNTED EYEWASH/DRENCH HOSE UNIT	N/A	N/A			1/2"	1/2"	WATER SAVER	EW-1022-HG W/TM60 20 MIXING VALVE	
MSB-A	SERVICE SINK	ONE PIECE TERRAZZO MOP BASIN WITH 6" DROP FRONT WITH STAINLESS STEEL CAPS AND THRESHOLD	AMERICAN STANDARD 8344.012 EXPOSED WALL YOKE WALL-MOUNT UTILITY FAUCET WITH TOP BRACE	N/A	3"	1-1/2"	1/2"	1/2"	FIAT		
EWC-A	WATER COOLER	BOTTLE FILLING STATION AND VERSATILE BI-LEVEL ADA COOLER REFRIGERATED STAINLESS HIGH CAPACITY WATER COOLER	ELKAY MLP200 WALL CARRIER	N/A	2"	1-1/2"	1/2"	-	ELKAY	LZSTL8WSSP	
WH-A	WALL HYDRANT	WALL HYDRANT							WATTS	HY-420	
WB-A	WALL BOX	REFRIGERATOR ICE MAKER BOX	N/A	N/A	-	-	1/2"	-	SIOUX CHIEF	696-G1000WF	

NOTES:
1. SEE DRAWINGS FOR SHOWER SIZE
2. INCLUDES LK173 P-TRAP. PROVIDE WITH 1.0 GPM AERATOR.
3. MOUNT REMOTE CHILLER IN CEILING ABOVE UNIT.

DOMESTIC HOT WATER HEATER SCHEDULE

TAG	SERVES	TYPE	DHW PERFORMANCE						CONNECTIONS (IN)			ELECTRICAL					BASIS OF DESIGN			NOTES
			CAPACITY	UEF	FIRST HOUR RATING (GAL)	STORAGE (GAL)	EWT (°F)	STORAGE (°F)	CW INLET	DHW OUTLET	RELIEF	MOP	KW	VOLT	PHASE	HZ	MFG	MODEL	WEIGHT (LBS)	
EWH-01	FIRST FLOOR	ELECTRIC	50 GAL	0.9	62	50	40	140	3/4	3/4	3/4	-	4.5	208	3	60	AO SMITH	ENT-50	125	2

NOTES:
1. COORDINATE CIRCUIT WITH ELECTRICAL.

EQUIPMENT ROUGHING SCHEDULE

PLUMBING ID	FIXTURE TYPE	USE	CW	HW	IW	CONNECTION REMARKS
IM	ICE MAKER	FURNISHED UNDER OTHER SECTIONS, INSTALLED UNDER DIVISION 22	1/2"	-	-	PROVIDE PRV INLINE FILTER, PROVIDE WATTS LF7 BFP AND SHUT OFF VALVE. 1/2" CW FROM WB-A

NOTES:
1. PROVIDE ISOLATION VALVES AT ALL CONNECTIONS TO EQUIPMENT
2. PROVIDE ACCESS PANELS AT ALL RISER VALVES IN CONCEALED AREAS
3. APPLIANCE AND PLUMBING FIXTURE DESIGNATIONS ON THE PLANS ARE ONLY FOR ROUGH PIPING SIZES.

WATER FILTRATION SCHEDULE

I.D.	DESCRIPTION	CW CONN.	MODEL	REMARKS
WF-1	WATER FILTRATION SYSTEM	1/2"	THERMO BARNSTEAD B-PURE #D4521	WALL MOUNTED FILTRATION SYSTEM ABOVE CASEWORK. 1/2"CW CONN. W/ SHUT OFF VALVE TO FILTRATION SYSTEM. 1/2" FILTERED WATER FROM SYSTEM TO (2) DECK MOUNTED FAUCETS. PIPING FROM SYSTEM TO FAUCETS IN WALL AND CASEWORK

NOTES:

WATER HAMMER ARRESTOR SCHEDULE

TAG	SIZE	FIXTURE UNITS	BASIS OF DESIGN		NOTES
			MFG	MODEL	
WHA-1	100	1 - 11	ZURN	Z1700	1, 2, 3
WHA-2	200	12 - 32			
WHA-3	300	33 - 60			
WHA-4	400	61 - 113			
WHA-5	500	114 - 154			
WHA-6	600	155 - 330			

NOTES:
1. LOCATE WATER HAMMER ARRESTOR IN ACCESSIBLE LOCATION.
2. WATER HAMMER ARRESTOR SHALL BE MINIMUM OF THE SAME SIZE AS PIPE INSTALLED ON.
3. MANUFACTURER SHALL BE AS LISTED ON SCHEDULE OR APPROVED EQUAL.

DRAIN SCHEDULE

TAG	SERVICE	PIPE SIZE	MANUFACTURER	MODEL	STYLE	NOTES
FD-A	FLOOR DRAIN	NOTE 1	ZURN	Z507	MEDIUM DUTY	
FCO-A	FLOOR CLEANOUT	NOTE 1	ZURN	Z1400-B	LIGHT DUTY	

NOTES:
1. PIPE SIZE TO MATCH DRAWINGS.

PUMP SCHEDULE

ITEM	DESCRIPTION	SYSTEM	LOCATION	GPM	TDH	PSI	MOTOR				MANUFACTURER & MODEL #	REMARKS
							HP	RPM	V	PH		
RP-1	RECIRC. PUMP	HOT WATER LEVEL 1	WATER HEATER CLOSET	5	15	-	1/25	-	115	1	GRUNDFOS MAGNA1	COORDINATE WITH DIV. 26

GENERAL NOTES: -
1. COORDINATE ELECTRICAL REQUIREMENT WITH DIVISION 26.

Architects/Engineers:

WSP USA Buildings Inc
2 MONUMENT SQUARE, SUITE 200
PORTLAND, ME 04101
(207) 775-5401

wsp.com

STATE OF MAINE
DEPT OF AGRICULTURE, CONSERVATION AND FORESTRY
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0022
(207) 287-3200

WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. THESE DRAWING SHALL BE COPIED FROM THE ORIGINAL BLUEPRINTS AND ARE APPROXIMATELY TO SCALE. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE PROJECT AND SHALL NOTIFY THE ENGINEER OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.

NO.	REVISION	DATE
A	ISSUED FOR BID	01-10-2025
B	ADDENDUM NO 2	02-06-2025

STATE OF MAINE
Blair B. Chamberlain
No. 9258
REGISTERED PROFESSIONAL ENGINEER
3529230024
Feb 6, 2025

PROJECT

CONY ROAD BUILDING RENOVATION

OWNER

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

TITLE

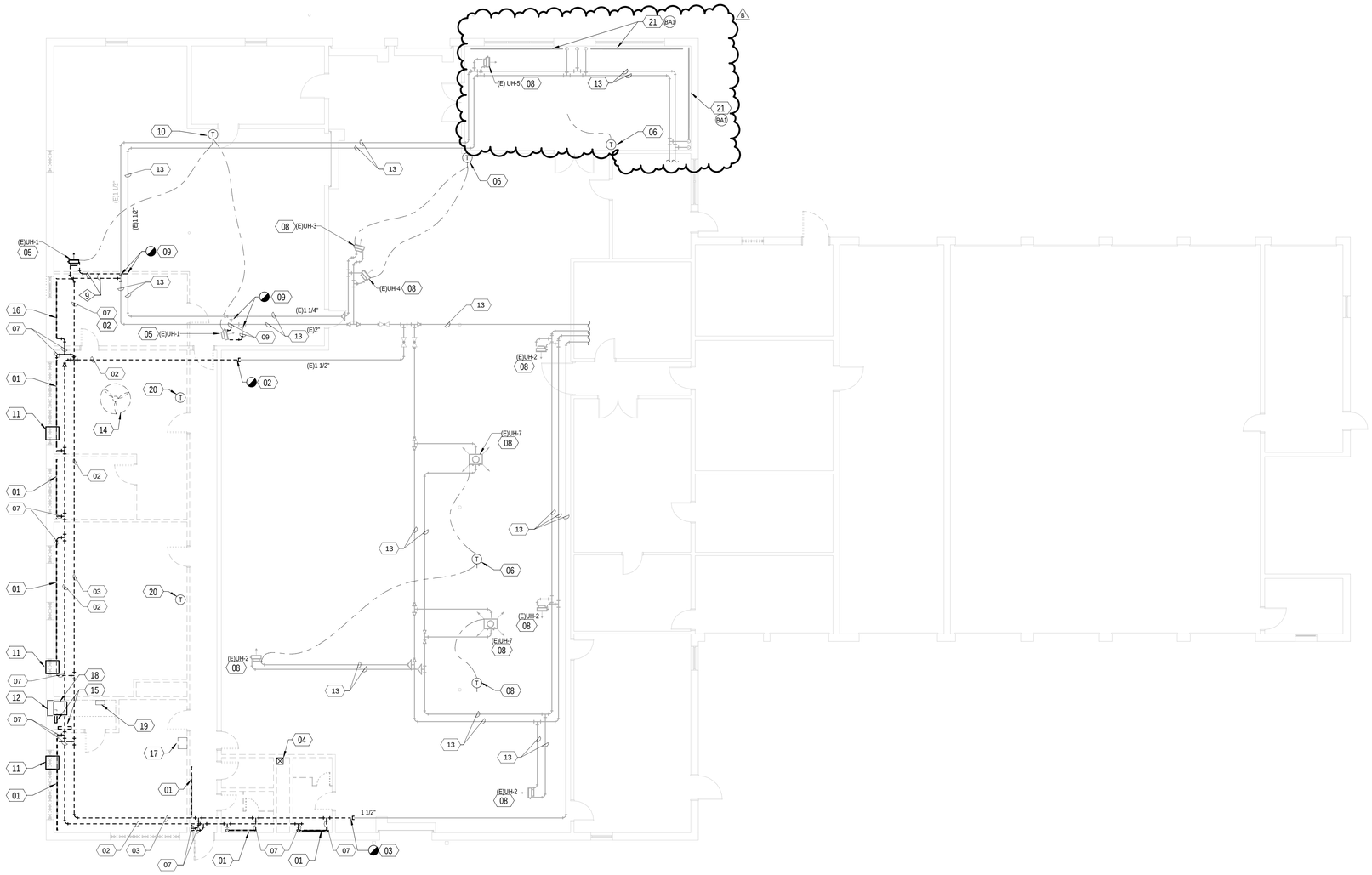
PLUMBING SCHEDULES

PROJECT NO.: 3529230024
DATE: 01-10-2025
DWN. BY: CJ | CKD. BY: JO/BC
SCALE: As indicated

P-601

ISSUED FOR BID

2/6/2025 11:59:01 AM Autodesk Docs://PWM100-Maine DACF Cony Road Reno - R24 - C24/3529230024_Cony Rd-P24.rvt



1 MECHANICAL DEMOLITION PLAN

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

GENERAL NOTES

1. SEE G-001 AND M-001 FOR PROJECT GENERAL NOTES, SYMBOLS, ABBREVIATIONS AND LEGENDS.

KEYNOTES

01 EXISTING FTR AND ASSOCIATED CONTROLS SHALL BE REMOVED.

02 EXISTING HWS MAIN PIPE SHALL BE REMOVED UP TO POINT OF REMOVAL.

03 EXISTING HWR MAIN PIPE SHALL BE REMOVED UP TO POINT OF REMOVAL.

04 EXISTING EXHAUST DUCTWORK UP TO ROOF AND EXISTING EXHAUST FAN RF-2 ON THE ROOF & ASSOCIATED CONTROLS SHALL BE REMOVED.

05 EXISTING UNIT HEATER SHALL BE RELOCATED AT NEW WORK.

06 EXISTING THERMOSTAT SHALL REMAIN.

07 EXISTING HWS/R DROPS TO EXISTING FTR SHALL BE REMOVED.

08 EXISTING UNIT HEATER AND ASSOCIATED HWS/R PIPES AND CONTROLS SHALL REMAIN.

09 EXISTING HWS/R PIPES SHALL BE REMOVED UP TO POINT OF REMOVAL.

10 EXISTING THERMOSTAT SHALL REMAIN. CUT WIRING AND EXTEND TO NEW RELOCATED EXISTING UNIT HEATER.

11 WINDOW AC UNIT SHALL BE DISCONNECTED AND RETURNED TO THE OWNER.

12 EXISTING LOUVER SHALL BE REMOVED - NEW EXHAUST LOUVER WILL BE INSTALLED AT THE WALL OPENING.

13 EXISTING HWS/R MAIN PIPES SHALL REMAIN.

14 EXISTING CEILING FAN AND ALL ASSOCIATED HANGERS AND CONTROLS SHALL BE REMOVED.

15 EXISTING ELECTRIC BASEBOARD AND ASSOCIATED CONTROLS SHALL BE REMOVED.

16 EXISTING FIN TUBE RADIATION AND ASSOCIATED CONTROLS SHALL REMAIN.

17 EXISTING FREEZER ALARM SHALL BE REMOVED.

18 EXISTING WALL HEATER AND ASSOCIATED CONTROLS SHALL BE REMOVED.

19 EXISTING HVAC CONTROLS SHALL BE REMOVED.

20 EXISTING THERMOSTAT SHALL BE REMOVED.

21 EXISTING 2-TIER FTR, ENCLOSURE, CONTROLS, AND ASSOCIATED PIPING SHALL REMAIN.

ALTERNATE BID ITEMS

BA1 THE 2-TIER FTR AND ENCLOSURE SHALL BE REMOVED AND REINSTALLED ON THE NEW WALL. PIPING AND CONTROLS SHALL BE MODIFIED AS REQUIRED TO ACCOMMODATE THE RELOCATION.

NORTH & GRAPHIC SCALE

PLAN NORTH

0 2 4 6 11 16

1/8"=1'-0"

Architects/Engineers:

WSP USA Buildings Inc
2 MONUMENT SQUARE, SUITE 200
Portland, ME 04101
(207) 775-5401

wsp.com

STATE OF MAINE
DEPT OF AGRICULTURE, CONSERVATION AND FORESTRY
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0022
(207) 287-3200

WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. THESE DRAWING SHALL BE COPIED FROM THE ORIGINAL BLUEPRINTS AND ARE APPROXIMATELY TO SCALE. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE PROJECT AND SHALL NOTIFY THE ENGINEER OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.

NO.	REVISION	DATE
A	ISSUED FOR BID	01-10-2025
B	ADDENDUM NO. 2	02-06-2025

STATE OF MAINE
ANDRE M. HEBERT
14347
02-06-2025
LICENSED PROFESSIONAL ENGINEER

PROJECT
CONY ROAD BUILDING RENOVATION

OWNER
MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

TITLE
MECHANICAL DEMOLITION PLAN

PROJECT NO.: 3529230024	
DATE: 01-10-2025	
DWN. BY: UD	CKD. BY: AH
SCALE: 1/8" = 1'-0"	

MD101

ISSUED FOR BID

2/6/2025 2:09:01 PM Autodesk Docs://PWM100-Maine DACF Cony Road Reno - R24 - C24/3529230024_Cony Rd-M24.rvt

ELECTRICAL LEGEND AND ABBREVIATIONS

ABBREVIATIONS

℄	CENTER LINE
AFF	ABOVE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY
AS/AF	AMPERE RATING OF SWITCH/FUSE
AF/AT	AMPERE RATING OF CIRCUIT, BREAKER FRAME/TRIP
A/V	AUDIO/VISUAL
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT, GENERIC TERM FOR RACEWAY
CB	CIRCUIT BREAKER
CKT	CIRCUIT
DE	DUAL ELEMENT, TIME DELAY FUSES
EC	ELECTRICAL CONTRACTOR
EMT	ELECTRICAL METALLIC TUBING
FA	FIRE ALARM
FDR	FEEDER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GFPE	GROUND FAULT PROTECTION EQUIPMENT
GND	GROUND
LSGI	LONG TIME SHORT TIME GROUND INSTANT.
MCA	MINIMUM CIRCUIT AMPACITY
MCP	MOTOR CIRCUIT PROTECTOR
MOCP	MAXIMUM OVERCURRENT PROTECTIVE DEVICE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OCPD	OVERCURRENT PROTECTIVE DEVICE
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PVC	POLYVINYL CHLORIDE CONDUIT
RSC	RIGID STEEL CONDUIT
SE	SERVICE ENTRANCE
SP	STANDBY POWER SYSTEM
SPD	SURGE PROTECTION DEVICE
TEL	TELECOM
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
WT	WATERTIGHT

POWER LEGEND

	SURFACE MOUNTED PANELBOARD
	RECESSED PANELBOARD
G	GENERATOR
ATS	AUTOMATIC TRANSFER SWITCH
	HEAVY DUTY DISCONNECT SWITCH
	HEAVY DUTY DISCONNECT SWITCH WITH FUSE
	MOTOR STARTER
VFD	VARIABLE FREQUENCY DRIVE
CB	ENCLOSED CIRCUIT BREAKER
J	JUNCTION BOX
	FLEXIBLE CONNECTION
CM	CUSTOMER ENERGY METER
M	UTILITY USAGE METER

ONE LINE DIAGRAM SYMBOLS

	CIRCUIT BREAKER
	SWITCH AND FUSE
60	FEEDER TAG, REFER TO CIRCUIT SCHEDULE FOR FEEDER SIZE
	CIRCUIT BREAKER IN ENCLOSURE
CM M	CURRENT TRANSFORMER COMPARTMENT WITH CUSTOMER OR UTILITY METER
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	TRANSFORMER

FIRE ALARM LEGEND

F	MANUAL PULL STATION
②XX	AREA SMOKE DETECTOR: CEILING MOUNTED; CO = COMBINATION SMOKE/CO DETECTOR E = ELEVATOR RECALL SP = STAIR PRESSURIZATION ACTIVATION I = INTERLOCKED TO TRASH CHUTE
	HEAT DETECTOR, CEILING MOUNTED
WF	SPRINKLER WATER FLOW SWITCH
TS	SPRINKLER TAMPER SWITCH
LP	SPRINKLER SYSTEM LOW PRESSURE SWITCH
CM	CONTROL MODULE
MM	MONITOR MODULE
H	FIRE ALARM HORN: CEILING MOUNTED
H	FIRE ALARM HORN: WALL MOUNTED
H	COMBINATION FIRE ALARM HORN/VISUAL ALARM: CEILING MOUNTED
H	COMBINATION FIRE ALARM HORN/VISUAL ALARM: WALL MOUNTED
RAI	FIRE ALARM REMOTE ALARM INDICATOR, CEILING MOUNTED
RAI	FIRE ALARM REMOTE ALARM INDICATOR, WALL MOUNTED
	VISUAL ALARM; CEILING MOUNTED
	VISUAL ALARM; WALL MOUNTED
RS	REMOTE TEST STATION WITH INDICATING LIGHT
FACP	FIRE ALARM CONTROL PANEL
FARA	FIRE ALARM REMOTE ANNUNCIATOR
FARP	FIRE ALARM REMOTE PANEL
FATC	FIRE ALARM TERMINAL CABINET
FABP	FIRE ALARM BOOSTER PANEL

MISCELLANEOUS LEGEND

	GROUND BAR - 2"W x 1/4" THICK COPPER BUS, UNLESS OTHERWISE INDICATED.
AC 2	MECHANICAL EQUIPMENT TAG NUMBER REFER TO MECHANICAL EQUIPMENT SCHEDULE.
100MI	FEEDER TAG, REFER TO CIRCUIT SCHEDULE FOR FEEDER SIZE
①	DRAWING KEY NOTE
DPS	DOOR POWER SUPPLY
DA	POWER DOOR ACTIVATOR
B E-2	SECTION IDENTIFIER, INDICATING SECTION "B" ON DRAWING E-2.
2 E-4	DETAIL IDENTIFIER, INDICATING DETAIL NO. 2 ON DRAWING E-4.

WIRING DEVICE LEGEND

	SINGLE RECEPTACLE OUTLET: 125V; WALL MOUNTED
	DUPLEX RECEPTACLE OUTLET: 125V; WALL MOUNTED
	DOUBLE DUPLEX RECEPTACLE OUTLET: 125V; WALL MOUNTED
	DUPLEX RECEPTACLE OUTLET: 125V; GROUND FAULT INTERRUPTER; WALL MOUNTED
	DOUBLE DUPLEX RECEPTACLE OUTLET: 125V; GROUND FAULT INTERRUPTER; WALL MOUNTED
	HALF SWITCHED DUPLEX RECEPTACLE OUTLET: 125V; WALL MOUNTED. TOP OUTLET CONTROLLED BY OCCUPANCY SESOR
	FULLY SWITCHED RECEPTACLE OUTLET: 125V; WALL MOUNTED
	HALF SWITCHED DOUBLE DUPLEX RECEPTACLE OUTLET: 125V; WALL MOUNTED. (1) DUPLEX RECEPTACLE CONTROLED BY OCCUPANCY SENSOR
	FULLY SWITCHED DOUBLE DUPLEX RECEPTACLE OUTLET: 125V; WALL MOUNTED
	DUPLEX RECEPTACLE OUTLET: 125V; WALL MOUNTED; CONNECTED TO GENERATOR CIRCUIT
	DOUBLE DUPLEX RECEPTACLE OUTLET: 125V; WALL MOUNTED; CONNECTED TO GENERATOR CIRCUIT
	DUPLEX RECEPTACLE OUTLET: 125V; GROUND FAULT INTERRUPTER; WALL MOUNTED; CONNECTED TO GENERATOR CIRCUIT
① ②	SPECIAL PURPOSE RECEPTACLE OUTLET: REFER TO SCHEDULE FOR RATING OR RATING AS INDICATED OR MATCH CIRCUIT BREAKER; WALL MOUNTED.
TV	DUPLEX RECEPTACLE MOUNTED IN RECESSED TV BACKBOX; MOUNTED 60"AFF UNLESS OTHERWISE NOTED
	SINGLE RECEPTACLE OUTLET: 125V; CEILING MOUNTED
	DUPLEX RECEPTACLE OUTLET: 125V; CEILING MOUNTED
	DOUBLE DUPLEX RECEPTACLE OUTLET: 125V; CEILING MOUNTED
① ②	SPECIAL PURPOSE RECEPTACLE OUTLET: REFER TO SCHEDULE FOR RATING OR RATING AS INDICATED OR MATCH CIRCUIT BREAKER; CEILING MOUNTED.
	POWER TYPE MULTI-OUTLET ASSEMBLY: LENGTH APPROXIMATELY AS SHOWN. ONE OUTLET PER FT. UNLESS NOTED OTHERWISE.
	PLUGMOLD, DUAL CIRCUIT WITH OUTLETS 1FT OC
$	SINGLE POLE SWITCH
TM	ASTRONOMICAL TIMECLOCK
D	WALL DIMMER
LV	LOW VOLTAGE SWITCH
SC	SCENE CONTROLLER
OS	OCCUPANCY SENSOR: WALL MOUNTED; DUAL TECHNOLOGY WITH OVERRIDE SWITCH.
VS	VACANCY SENSOR: WALL MOUNTED; DUAL TECHNOLOGY WITH OVERRIDE SWITCH
OS XX	OCCUPANCY SENSOR: CEILING MOUNTED; DUAL TECHNOLOGY; HB = HIGH BAY OCCUPANCY SENSOR; PL = PLUG LOAD CONTROL
VS XX	VACANCY SENSOR: CEILING MOUNTED; DUAL TECHNOLOGY; PL = PLUG LOAD CONTROL
PC	PHOTOCELL: CEILING MOUNTED
LD	LOW VOLTAGE LIGHTING CONTROL SWITCH: ON/OFF AND DIMMING
CD	CORD DROP WITH DOUBLE DUPLEX RECEPTACLE. SEE THE "CORD DROP DETAIL" ON DRAWING E-402
FP	POWER FURNITURE FEED: WALL MOUNTED. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH FURNITURE MANUFACTURER
FT	DATA FURNITURE FEED: WALL MOUNTED. COORDINATE EXACT DATA REQUIREMENTS WITH FURNITURE MANUFACTURER
▽	TELECOMMUNICATION OUTLET. 4" SQUARE BY 2' 1/8" DEEP BOX WITH SINGLE GANG PLASTIC RING. 1" 1/4" C. FROM BOX TO ABOVE ACCESSIBLE SUSPENDED CEILING SPACE. ALL CONDUITS FOR TELECOMMUNICATIONS SHALL INCLUDE INSULATED BUSHINGS AND A SECURED PULL STRING.

LIGHTING LEGEND

	LIGHTING FIXTURE; CEILING MOUNTED
	LIGHTING FIXTURE; WALL MOUNTED
	LIGHTING FIXTURE, SIZE APPROXIMATELY AS SHOWN; CEILING MOUNTED
	LIGHTING FIXTURE, SIZE APPROXIMATELY AS SHOWN; WALL MOUNTED
	LIGHTING FIXTURE, CONTINUOUS ROW; CEILING MOUNTED
A NL/EM a 2	LIGHTING FIXTURE SUBSCRIPTIONS: NUMBER INDICATES CIRCUIT, LOWERCASE LETTER INDICATES SWITCH CONTROL UPPERCASE LETTER INDICATES FIXTURE TYPE NL INDICATES NIGHT LIGHT EM INDICATES EMERGENCY FIXTURE
	EXIT SIGN; ARROWS AS SHOWN, ILLUMINATED FACE AS INDICATED BY SHADING; WALL MOUNTED
	EXIT SIGN; ARROWS AS SHOWN, ILLUMINATED FACE AS INDICATED BY SHADING; CEILING MOUNTED
EB	EMERGENCY BATTERY UNIT (EBU) QUANTITY OF HEADS AS INDICATED

EXISTING EQUIPMENT

	DASHED DENOTES EXISTING EQUIPMENT UNLESS OTHERWISE INDICATED.
(X)	EXISTING ITEM TO BE REMOVED AND CIRCUIT PULLED BACK TO NEXT ACTIVE OUTLET OR BACK TO PANEL.
(E)	EXISTING ITEM TO REMAIN.
(XN)	EXISTING ITEM TO BE REMOVED AND NEW ITEM AS SPECIFIED INSTALLED ON EXISTING OUTLET, RECONNECT TO EXISTING CIRCUIT
(XE)	EXISTING ITEM TO BE REMOVED, OUTLET BLANKED AND CIRCUIT EXTENDED TO NEW ITEM AS SHOWN.
(XR)	EXISTING ITEM TO BE REMOVED AND RELOCATED.
(XL)	NEW LOCATION OF EXISTING RELOCATED ITEM.
(W)	EXISTING ITEM TO BE REWIRED.

HOMERUN LEGEND

R21A-1,3,5	ARROW SIGNIFIES HOMERUNS TO PANEL CIRCUIT NOTED: PROVIDE 2#12 FOR EACH CIRCUIT PLUS A #12 GROUND WIRE. (IE: 3/4"C, 6#12 & 1#12 GND.)
R21A-1,3,5 (30A-3P-NG)	ARROW SIGNIFIES BREAKER SIZE AND HOMERUN TO PANEL NOTED. REFER TO WIRING SCHEDULE. (IE: 3/4" 4#10 & 1#10 GND)

SECURITY SYSTEM LEGEND

CR	CARD READER.
MD	MOTION DETECTOR.
DC	DOOR CONTACTS.
REX	REQUEST TO EXIT DEVICE.
ASR	ACCESS CONTROL UNIT.
	INTERIOR CAMERA.

LEGEND NOTES

A	THIS SHEET IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS AND SHALL BE USED AS A DICTIONARY TO DEFINE ITEMS INDICATED ON DRAWINGS. NOT ALL SYMBOLS OR ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT.

WIRING DEVICE SUBSCRIPT LEGEND

ALL RECEPTACLE AND SWITCHES ARE MINIMUM 20A UNLESS NOTED OTHERWISE RELAY CONTROL LIGHTING SYSTEM SWITCHES SHALL BE LOW VOLTAGE

C	C	=	COUNTER HEIGHT
6	6	=	NUMBER INDICATES CIRCUIT NUMBER
$2	2	=	DOUBLE POLE SWITCH
$3	3	=	THREE WAY SWITCH
$4	4	=	FOUR WAY SWITCH
$F	F	=	FAN SWITCH
$K	K	=	KEY SWITCH
$P	P	=	PILOT LIGHT SWITCH
$T	T	=	THERMAL OVERLOAD/DISCONNECT SWITCH

ELECTRICAL DRAWING LIST

Architects/Engineers:

WSP USA Buildings Inc
2 MONUMENT SQUARE, SUITE 200
PORTLAND, ME 04101
(207) 775-5401

wsp.com

STATE OF MAINE
DEPT OF AGRICULTURE, CONSERVATION AND FORESTRY
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0022
(207) 287-3200

STATE OF MAINE
MELISSA A. SIERRA
18357
LICENSED PROFESSIONAL ENGINEER
02/07/2025

WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. THESE DRAWING SHALL BE COPIED FROM THE ORIGINAL BLUEPRINTS AND ARE APPROXIMATELY TO SCALE. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE PROJUECT AND SHALL NOTIFY THE ENGINEER OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.

NO.	REVISION	DATE
A	ISSUED FOR BID	01-10-2025
B	ADDENDUM 2	02-06-2025

PROJECT

CONY ROAD BUILDING RENOVATION

OWNER

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

TITLE

ELECTRICAL LEGEND AND ABBREVIATIONS

PROJECT NO.: 3529230024	E-001
DATE: 01-10-2025	
DWN. BY: S.O. CKD. BY: A.P.	
SCALE: N.T.S.	

ISSUED FOR BID

2/6/2025 10:11:01 PM Autodesk Docs://PWM100-Maine DACF Cony Road Reno - R24 - C24/3529230024_Cony Rd-E24.rvt

GENERAL NOTES:

1. THE ELECTRIC CODE REFERRED TO SHALL BE THE MAINE ELECTRIC CODE LATEST EDITION AS WELL AS ALL LOCAL CODE REQUIREMENTS.
2. VISIT THE SITE TO DETERMINE ALL PRE-EXISTING CONDITIONS AND WORK NECESSARY PRIOR TO SUBMISSION OF BID PRICE.
3. COORDINATE WITH THE GENERAL CONTRACTOR, OTHER TRADES AND MANUFACTURER'S SHOP DRAWINGS. COORDINATE EXACT LOCATIONS AND ROUGHING IN DIMENSIONS OF ALL EQUIPMENT AND MAKE ALL FINAL CONNECTIONS AS REQUIRED, I.E., POWER, CONTROL, INTERLOCK, ETC.
4. ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH OSHA, NFPA STANDARDS, THE ELECTRIC CODE AND THE LOCAL GOVERNING AUTHORITIES. THE DRAWINGS AND SPECIFICATIONS DO NOT ATTEMPT TO INDICATE ALL WORK REQUIRED BY CODES AND AUTHORITIES.
5. TEST ALL EQUIPMENT AND SYSTEMS INSTALLED TO CERTIFY COMPLIANCE WITH DRAWINGS, SPECIFICATIONS, CODES, LOCAL AUTHORITIES AND REGULATIONS. INCLUDE LABOR AND COSTS FOR TESTING, REVIEWS, APPROVALS AND CERTIFICATIONS.
6. PROVIDE TRAINING TO OWNER ON ALL EQUIPMENT AND SYSTEMS INSTALLED.
7. IN GENERAL, DRAWINGS ARE DIAGRAMMATIC ONLY. EXACT LOCATION, MOUNTING HEIGHTS OF EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED WITH THE EQUIPMENT REQUIREMENTS AND FIELD CONDITIONS.
8. PROVIDE ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE ELECTRICAL WORK COMPLETE AND READY FOR OPERATION.
9. ELECTRIC METALLIC TUBING SHALL BE USED FOR BRANCH CIRCUIT HOMERUNS IN EXPOSED, UNFINISHED AREAS. MINIMUM SIZE SHALL BE 3/4 INCH. PROVIDE RIGID STEEL CONDUIT BELOW 8 FEET AND IN AREAS SUBJECT TO ABUSE. FLEXIBLE METALCONDUIT WITH PVC COATING SHALL BE USED FOR CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT.
10. STEEL SET SCREW TYPE FITTINGS MAY BE USED ON EMT OR FLEXIBLE METAL CONDUITS, UNLESS OTHERWISE INDICATED.
11. TYPE MC OR AC CABLE WITH A FULL SIZE, INSULATED, SEPARATE GREEN GROUND WIRE MAY BE USED AS PERMITTED BY STATE AND LOCAL CODES FOR BRANCH CIRCUIT WIRING IN CONCEALED AREAS.
12. SUPPORT ALL WORK FROM THE BUILDING STRUCTURE.
13. ELECTRICAL WORK SHALL BE RECESSED INTO WALLS OR INSTALLED ABOVE HUNG CEILINGS UNLESS OTHERWISE INDICATED.
14. DO NOT INSTALL OUTLETS BACK TO BACK. PROVIDE 24 INCH SPACING IN FIRE RATED WALLS.
15. PROVIDE ELECTRICAL OUTLET PLATE GASKETS SEALS AT RECEPTACLES, SWITCHES AND OTHER ELECTRICAL BOXES ON EXTERIOR WALLS AND INTERIOR WALLS BETWEEN CONDITIONED AND NON-CONDITIONED SPACES.
16. WIRE AND CONDUIT SIZES INDICATED ON HOMERUNS SHALL BE CONTINUOUS THROUGHOUT CIRCUIT.
17. FURNISH AND INSTALL CODE REQUIRED STARTERS AND DISCONNECTS WHICH ARE NOT FURNISHED WITH THE EQUIPMENT.
18. INSTALL A GREEN GROUNDING CONDUCTOR WITHIN EACH RACEWAY SIZED IN ACCORDANCE WITH THE ELECTRIC CODE.
19. INSTALLATION OF RACEWAYS UNDER THE BUILDING OR IN THE FLOOR SLAB WILL NOT BE ACCEPTABLE UNLESS SPECIFICALLY INDICATED OTHERWISE.
20. PROVIDE WATERTIGHT AND GAS-TIGHT SEALS INSIDE AND OUTSIDE OF CONDUITS THAT PENETRATE THE BUILDING BELOW GRADE, O.Z. GEDNEY OR APPROVED EQUAL. PROVIDE WEATHER-TIGHT SEAL AT PENETRATIONS ABOVE GRADE.
21. PROVIDE NRTL LISTED SMOKE AND FIRE SEALS AT ALL PENETRATIONS THROUGH FLOORS OR FULL HEIGHT (SLAB TO SLAB) WALLS.
22. USE CAUTION TO AVOID DAMAGE TO EXISTING UTILITY LINES AND/OR HARM TO PERSONNEL WORKING IN THESE AREAS.
23. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER MINIMUM #12 AWG. SIZE UNLESS OTHERWISE INDICATED.
24. ALL CONDUCTORS INSTALLED UNDERGROUND SHALL BE COPPER, SIZE AS INDICATED, USE-2/RHW-2 INSULATION, 600 VOLTS RATED UNLESS OTHERWISE INDICATED.
25. TEMPORARY LIGHTING AND POWER SHALL BE PROVIDED AS REQUIRED BY OSHA, CODES AND LOCAL AUTHORITIES. REMOVE ALL TEMPORARY FACILITIES AT PROJECT COMPLETION.

LIGHTING FIXTURE NOTES:

1. FURNISH ALL LIGHTING FIXTURES COMPLETE WITH MOUNTING ACCESSORIES TO MEET THE JOB REQUIREMENTS. VERIFY CEILING AND GRID TYPE PRIOR TO ORDERING FIXTURES. USE THE LATEST ARCHITECTURAL DRAWINGS.
2. VERIFY FIXTURE MOUNTING, HEIGHTS AND LOCATION AGAINST PLANS, ELEVATIONS AND DETAIL DRAWINGS. EXACT LOCATION OF FIXTURES SHALL BE CONFIRMED WITH THE ARCHITECT PRIOR TO ROUGHING IN.
3. FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE, INDEPENDENT OF HUNG CEILING, REFER TO SPECIFICATIONS.
4. FINISH COLOR AS SELECTED BY THE ARCHITECT.
5. ALL LIGHTING FIXTURES IN EACH ROOM/AREA SHALL BE INSTALLED SO THAT THE ORIENTATION OF LAMPS, BASKETS, DIFFUSERS, ETC. ARE IN A CONSISTENT MANNER THROUGHOUT THAT ROOM/AREA. PRIOR TO INSTALLATION COORDINATE WITH THE ARCHITECT.
6. ALL EXIT SIGNS AND EMERGENCY BATTERY UNIT SHALL BE WIRED AHEAD OF ALL CONTROLS FOR CONSTANT AC INPUT.
7. WHERE PHOTOSENSORS ARE INDICATED IN A ROOM/AREA THEY SHALL PROVIDE ADDITIONAL CONTROL FOR EACH LIGHTING FIXTURE IN THAT ROOM/AREA, EXCEPT AS FOLLOWS:
   A. DESIGNATED 24/7 NIGHTLIGHTS;
   B. EXIT SIGNS, EMERGENCY BATTERY UNITS AND EMERGENCY BATTERY BACKUP DRIVERS
   C. CORD AND PLUG UNDER COUNTER/CABINET LIGHTING FIXTURES
   D. PHOTOSENSORS DESIGNATED WITH A LOWER CASE LETTER(S) (a,b,c,etc.) SHALL ONLY CONTROL LIGHTING FIXTURES THAT INCLUDE ONE OR MORE OF THOSE LETTERS.
8. WHERE A LIGHTING FIXTURE IS SCHEDULED WITH A REMOTE LED DRIVER, THE DRIVER LOCATION REQUIREMENTS SHALL BE AS FOLLOWS:
   A. REMOTE LED DRIVERS FOR LIGHTING FIXTURES SERVING THE BEDROOMS SHALL BE LOCATED ON THE WALL ABOVE THE ACCESSIBLE SUSPENDED CEILING OUTSIDE THE SPECIFIC BEDROOM.
   B. REMOTE LED DRIVERS FOR ALL OTHER INDOOR LIGHTING FIXTURES SHALL BE LOCATED WALL MOUNTED ABOVE THE NEAREST ACCESSIBLE SUSPENDED CEILING SPACE TO THE SPECIFIC LIGHTING FIXTURE FOR THAT DRIVER.
   C. REMOTE LED DRIVERS FOR EXTERIOR BUILDING MOUNTED LIGHTING FIXTURES SHALL BE LOCATED WALL MOUNTED ABOVE THE NEAREST INTERIOR ACCESSIBLE SUSPENDED CEILING SPACE TO THE SPECIFIC LIGHTING FIXTURE FOR THAT DRIVER.
9. PRIOR TO INSTALLATION OF REMOTE LED DRIVERS COORDINATE EXACT LOCATIONS WITH THE ARCHITECT, AND CONFIRM ALL DRIVER AND LIGHTING FIXTURE MANUFACTURERS REQUIREMENTS FOR INSTALLATION.
10. REMOTE LED DRIVERS INSTALLED INDOORS SHALL BE INSTALLED IN STEEL BOXES WITH LOUVERED SCREW FASTENED STEEL COVERS. BOXES SHALL BE CUSTOM SIZED FOR AIR CIRCULATION FOR THE DRIVERS.
11. ALL LOW VOLTAGE WIRING SHALL BE INSTALLED IN CONDUITS MEETING ALL REQUIREMENTS OF THE SPECIFICATIONS AND THE DRAWINGS FOR THE SPECIFIC APPLICATIONS.
12. INCLUDE ALL REMOTE LED DRIVER LOCATIONS AND HANDHOLE LOCATIONS ON THE AS-BUILT DRAWINGS. IDENTIFY THE LIGHTING FIXTURE CONTROLLED BY EACH DRIVER.

CONTROLLED RECEPTACLE NOTES:

1. PROVIDE COMPLETE WIRING SYSTEMS FOR CIRCUITING AND CONTROL AS INDICATED.
2. UTILIZE THE DEDICATED OCCUPANCY SENSORS FOR THE SAME ROOM. PROVIDE AND WIRE SEPARATE DEDICATED POWER PACKS FOR RECEPTACLE CONTROL.
3. OCCUPANCY/VACANCY SENSORS FOR LIGHTING CONTROL ARE INDEPENDENT OF THE SENSORS FOR RECEPTACLE CONTROL AND SHALL NOT AFFECT RECEPTACLES.

SECURITY SYSTEM EQUIPMENT NOTES:

1. CARD READER: HID SIGNO PRIORITY MODEL 20, 20K, 40, 40K.
2. INTERIOR CAMERA: AXIS MODEL P3265-V OR BETTER.
3. REQUEST TO EXIT DEVICE: SECURITRON MODEL EEB2 OR ALARM CONTROLS TS-2T.
4. MOTION DETECTOR: MATCH EXISTING.
5. DOOR CONTACTS: MATCH EXISTING.
6. POWER DOOR OPERATOR RELAY: VOLTAGE TO MATCH THAT OF THE LOCK.
   - DELAY TIMER: BEA MC-25 OR BEA BR-3

B

WIRING NOTES:

1. RACEWAYS ARE INDICATED ON DRAWINGS ONLY FOR SPECIFIC ROUTES OR SPECIAL CONDITIONS.
2. WIRING AND CONDUIT SHALL BE REQUIRED BETWEEN ALL OUTLETS INDICATED WITH CIRCUIT NUMBERS AND PANEL DESIGNATIONS.
3. ALL SWITCH CONTROLS SHALL BE PROVIDED WITH WIRING AND CONDUIT AS REQUIRED.
4. ALTHOUGH NOT ALL BRANCH CIRCUIT WIRE AND CONDUIT IS SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE BRANCH CIRCUIT WIRING SYSTEM BE INSTALLED.
5. RACEWAYS SHALL BE LIMITED TO SIX CURRENT CARRYING CONDUCTORS (THREE PHASE AND THREE NEUTRALS) AND GROUNDING CONDUCTOR, UNLESS OTHERWISE INDICATED. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH SINGLE PHASE CIRCUIT, EXCEPT FOR LIGHTING CIRCUITS, UNLESS AN OVERSIZED NEUTRAL IS SPECIFICALLY INDICATED.
6. WIRING INDICATED BY CIRCUIT NUMBER SYMBOL SHALL INCLUDE A NEUTRAL WHEN THE LOAD SERVED HAS PROVISIONS FOR, OR REQUIRES A NEUTRAL.
7. PRIOR TO INSTALLATION OF ANY OUTLETS, COORDINATE WITH ARCHITECT OR EXACT LOCATIONS. LOCATIONS OF OUTLETS ON ARCHITECTURAL DRAWINGS AND/OR DIRECTION BY ARCHITECT FOR OUTLET LOCATIONS SHALL SUPERSEDE THE OUTLET LOCATIONS ON THE ELECTRICAL PLANS. QUANTITIES SHALL NOT BE LESS THAN THOSE INDICATED ON THE ELECTRICAL PLANS. OUTLETS INDICATED ON ONE SET OF DRAWINGS (ARCHITECTURAL OR ELECTRICAL) AND NOT INDICATED ON THE OTHER SET SHALL BE PROVIDED AND WIRED.
8. SPECIAL CONFIGURATION RECEPTACLES SHALL MATCH NEMA CONFIGURATION OF CORD & PLUG FOR EQUIPMENT TO BE PLUGGED IN TO THAT RECEPTACLE. CIRCUIT BREAKER TRIP AMPERE RATING SHALL MATCH THAT OF CORD AND PLUG FOR EQUIPMENT. CIRCUIT CONDUCTORS AMPERE RATING AT 60°C COLUMN OF 310-15(B)(16) OF THE NEC SHALL MATCH OR EXCEED TRIP AMPERE RATING OF THE CIRCUIT BREAKER

LIGHTING CONTROL GENERAL NOTES:

1. ALL LIGHTING CONTROL OCCUPANCY SENSORS, VACANCY SENSORS, PHOTOSENSORS AND LOW VOLTAGE SWITCHES SHALL BE OF THE SAME MANUFACTURER.
2. IN ADDITION TO ALL POWER CIRCUIT WIRING SYSTEMS FOR LIGHTING, PROVIDE ALL WIRING SYSTEMS FOR LIGHTING CONTROL WHICH SHALL INCLUDE BUT NOT BE LIMITED TO:
   a. SWITCHED HOT CONDUCTOR FOR 3 WIRE DIMMING.
   b. LOW VOLTAGE VIOLET & PINK CONDUCTORS FOR 0-10V CONTROL AND DIMMING.
   c. SYSTEM CONTROL CABLES (LUTRON ECO, ETHERNET, CRESTNET, MSTP, ETC.)
3. LINE VOLTAGE CONDUCTORS AND LOW VOLTAGE CONDUCTORS SHALL NOT SHARE THE SAME RACEWAYS, ENCLOSURES OR CABLE ASSEMBLIES. UL LISTED STEEL JACKETED LUMINARY MC CABLES MAY ONLY BE UTILIZED FOR APPLICATIONS WHERE THE SPECIFICATIONS ALLOW MC CABLES INSTALLATION.
4. UNLESS SPECIFIED OTHERWISE, ALL LIGHTING ZONES SHALL BE FULLY DIMMABLE.
5. WHERE A ROOM INCLUDES MULTIPLE OCCUPANCY/VACANCY LIGHTING CONTROL SENSORS, ACTIVATION OF ANY OCCUPANCY/VACANCY LIGHTING CONTROL SENSOR SHALL CONTROL ALL LIGHTING IN THE ROOM UNLESS OTHERWISE NOTED. OCCUPANCY SENSORS FOR RECEPTACLE CONTROL ARE INDEPENDENT OF THE SENSORS FOR LIGHTING CONTROL AND SHALL NOT AFFECT LIGHTING.

B

EXTERIOR LIGHTING WIRING NOTES:

1. PROVIDE COMPLETE WIRING SYSTEMS FOR CIRCUITING AND CONTROL AS INDICATED.
2. ALL CONDUCTORS SHALL BE RATED FOR WET LOCATIONS.
3. PROVIDE ALL SETTINGS OF TIME SWITCHES IN PRESENCE OF OWNER, AND CARRY IN BID ALL COSTS FOR ADDITIONAL SETTING FOR EACH TIME SWITCH.
4. PROVIDE PHENOLIC LABELING AT EACH TIME SWITCH TO DESIGNATE THE CIRCUIT CONTROLLED, AND THE ROOM NAME AND NUMBER OF THEPANELBOARD SERVING THE CIRCUIT. FOR EMERGENCY CIRCUITS LIST IN ADDITION TO THE CIRCUIT DESIGNATION AND PANELBOARD LOCATION "VIA EMERGENCY OVERRIDE RELAY" AND LIST THE LOCATION OF THE RELAY. COLOR CODE OF THE PHENOLIC LABELS SHALL BE AS PER THE SPECIFICATIONS FOR THE RESPECTIVE NORMAL POWER AND EMERGENCY POWER SYSTEMS.

DEMOLITION NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
2. DEMOLITION DRAWINGS ARE BASED ON EXISTING PLANS AND FIELD INVESTIGATION. PRIOR TO BID, ELECTRICAL CONTRACTOR SHALL VISIT THE SITE IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND AVOID CONFLICTS. GENERAL DEMOLITION WORK SHALL BE DONE BY THE GENERAL CONTRACTOR UNLESS OTHERWISE INDICATED. COORDINATE ALL WORK CONCERNING EXISTING EQUIPMENT AND SERVICES REMAINING IN THE BUILDING. DE-ENERGIZE CIRCUITS AND RECONNECT CIRCUITS TO REMAIN THAT ARE DISRUPTED DURING DEMOLITION.
3. IN AREAS WHERE NEW LIGHTING IS INDICATED, REMOVE EXISTING FIXTURES AND REMOVE OR DEAD END AND ABANDON EXISTING WIRING AS REQUIRED BY JOB CONDITIONS.
4. WHERE EXISTING OUTLETS ARE NOT TO BE REUSED, THEY SHALL BE REMOVED AND THE WIRING REMOVED OR DEAD ENDED AS REQUIRED BY JOB CONDITIONS.
5. WHERE EXISTING EQUIPMENT IS TO BE RELOCATED, THE EXISTING WIRING SHALL BE EXTENDED TO THE NEW LOCATION OR REMOVED OR ABANDONED AND NEW WIRING INSTALLED AS INDICATED.
6. REMOVE EXPOSED OR ACCESSIBLE WIRING, TO EQUIPMENT OR OUTLETS TO BE REMOVED OR RELOCATED, UNLESS OTHERWISE INDICATED.
7. WHERE EXISTING OUTLETS ARE TO REMAIN AND ARE CUT OFF BY THE REMODELING THEY SHALL HAVE THEIR WIRING EXTENDED AND CONNECTED TO CIRCUITS AS REQUIRED BY JOB CONDITIONS.
8. WHERE EXISTING EQUIPMENT IS INDICATED TO BE REMOVED DISCONNECT EQUIPMENT AND LOWER TO FLOOR FOR REMOVAL FROM AREA BY THE GENERAL CONTRACTOR. OFFER EQUIPMENT TO OWNER. DISPOSE OF EQUIPMENT THE OWNER DOES NOT WISH TO RETAIN.
9. WIRING INDICATED TO BE REMOVED OR SERVING EQUIPMENT TO BE REMOVED SHALL BE REMOVED BACK TO THE SOURCE OR TO THE NEXT JUNCTION POINT IF THE WIRING SERVES OTHER OUTLETS TO REMAIN. CONDUIT OVER UNDISTURBED CEILINGS SHALL REMAIN AND BE LABELED ABANDONED ON EACH END. CONDUIT UNDERGROUND OR IN CONCRETE SLABS SHALL BE MADE FLUSH AND SEALED WATERTIGHT AND GAS-TIGHT USING O.Z. GEDNEY OR EQUAL FITTINGS.
10. RECONNECT EXISTING CIRCUITRY WHICH ORIGINATES OR PASSES THROUGH THE RENOVATED AREAS BUT SERVES OTHER AREAS NOT BEING RENOVATED. EXTEND THESE CIRCUITS AS MAY BE NECESSARY TO THE EXISTING PANELBOARDS.
11. COORDINATE WORK CONCERNING EXISTING EQUIPMENT AND SERVICES IN THE BUILDING. COORDINATE REQUIRED POWER INTERRUPTIONS AND PERFORM AT TIME CONVENIENT TO OWNER. INCLUDE COSTS FOR REQUIRED PREMIUM TIME.
12. BE RESPONSIBLE FOR VERIFYING THE INTEGRITY AND CONDITION OF THE EXISTING BRANCH CIRCUIT WIRING WHICH IS TO BE REUSED FOR NEW EQUIPMENT. WIRING FOUND TO BE NON-FUNCTIONAL SHALL BE REPLACED.
13. IF DURING THE COURSE OF CONSTRUCTION, IT IS DETERMINED BY THE CONTRACTOR THAT AN EXISTING CIRCUIT BECOMES SPARE, THE CONTRACTOR SHALL UPDATE THE PANELBOARD DIRECTORY TO INDICATE SUCH, EVEN IF IT IS NOT EXPLICITLY MARKED ON THE ELECTRICAL PLANS.
14. ALL CONDUIT REMOVED SHALL BE REMOVED IN ITS ENTIRETY, INCLUDING FITTINGS, MOUNTING DEVICES, MOUNTING HARDWARE ETC. PROVIDE CONDUIT PLUGS AND BLANKS FOR ALL OPENINGS CREATED BY THE REMOVAL OF CONDUIT.
15. INCLUDE IN BID ALL INVESTIGATION OF AND TRACING OF EXISTING CIRCUITS AS REQUIRED FOR ALL WORK OF THIS PROJECT. THIS SHALL BE USED FOR ITEMS INCLUDING, BUT NOT LIMITED TO, AS FOLLOWS.
   A. DETERMINATION OF UPSTREAM AND DOWNSTREAM EQUIPMENT AFFECTING/AFFECTED BY THE WORK OF THIS PROJECT.
   B. INTERCEPTION OF EXISTING CIRCUITS.
   C. REQUIREMENTS TO MAINTAIN EXISTING EQUIPMENT THAT WOULD BE AFFECTED BY DEMOLITION AND OTHER WORK OF THIS PROJECT.
   D. DETERMINE EXISTING CIRCUITS SERVING EQUIPMENT FOR DEMOLITION, RE-WIRING, UPDATED LABELING, AND UPDATED TYPEWRITTEN PANELBOARD DIRECTORIES.
16. COORDINATE WITH OWNER AND GENERAL CONTRACTOR PRIOR TO ANY SHUTDOWNS AND PRIOR TO INVESTIGATIONS OUTSIDE THE RENOVATED AREA.

Architects/Engineers:

WSP USA Buildings Inc
2 MONUMENT SQUARE, SUITE 200
PORTLAND, ME 04101
(207) 775-5401

wsp.com

STATE OF MAINE
DEPT OF AGRICULTURE, CONSERVATION AND FORESTRY
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0022
(207) 287-3200

STATE OF MAINE
MELISSA A. SIERRA
18357
LICENSED
PROFESSIONAL ENGINEER
02/07/2025

WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. THESE DRAWING SHALL BE COPIED FROM THE ORIGINAL BLUEPRINTS AND ARE APPROXIMATELY TO SCALE. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE PROJECT AND SHALL NOTIFY THE ENGINEER OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.

NO.	REVISION	DATE
A	ISSUED FOR BID	01-10-2025
B	ADDENDUM 2	02-06-2025

PROJECT
CONY ROAD BUILDING RENOVATION

OWNER
MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

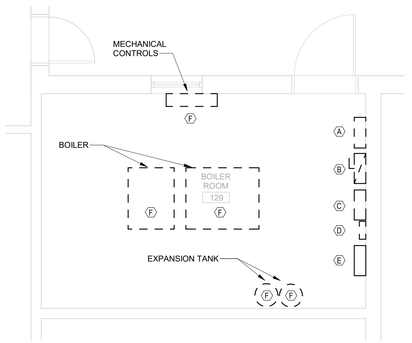
TITLE
ELECTRICAL NOTES

PROJECT NO.: 3529230024
DATE: 01-10-2025
DWN. BY: S.O. CKD. BY: A.P.
SCALE: N.T.S.

E-002

ISSUED FOR BID

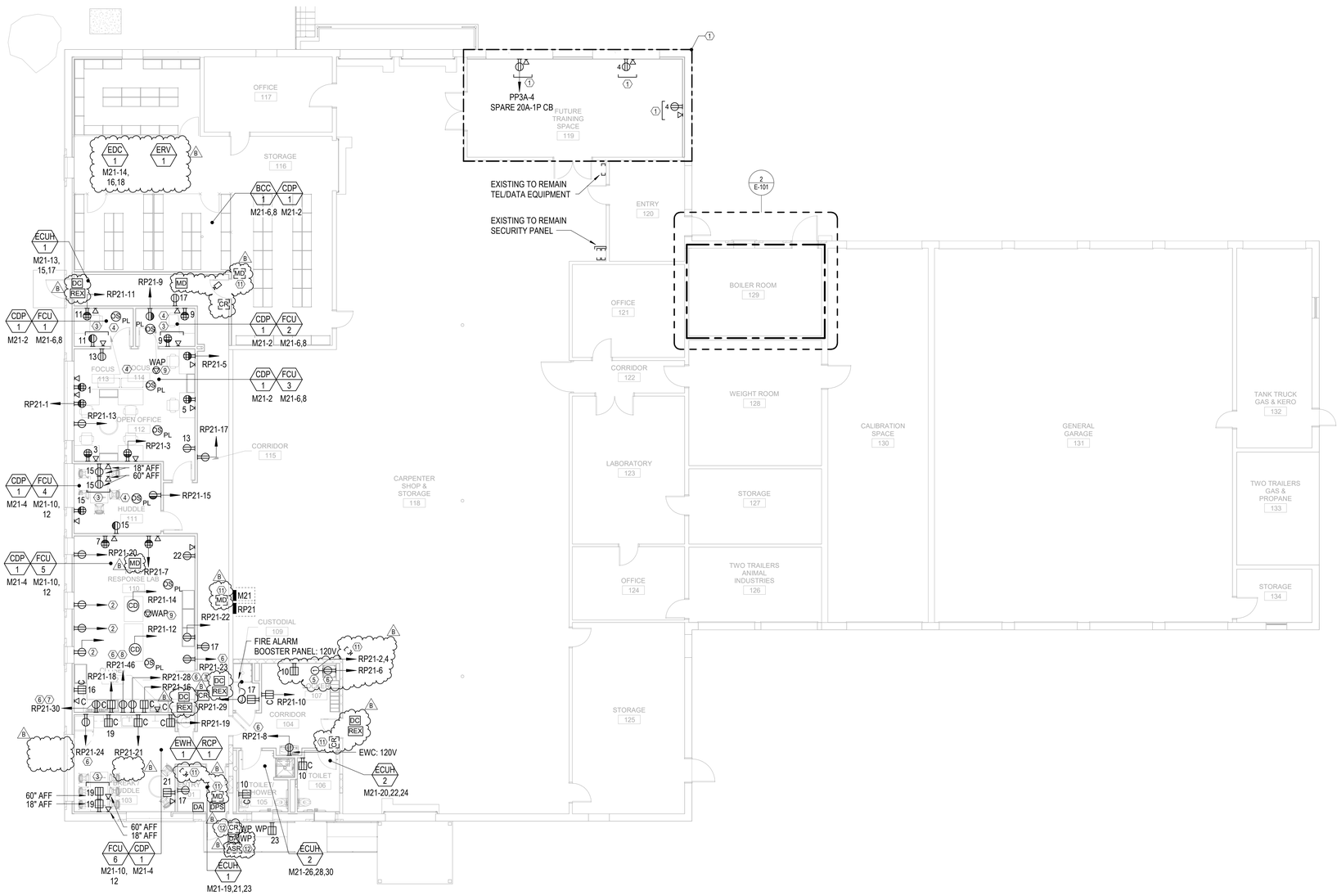
2/6/2025 10:11:01 PM Autodesk Docs://PWM100-Maine DACF Cony Road Reno - R24 - C24/352930024_Cony Rd-E24.rvt



2 E-101 BOILER ROOM PART PLAN
1/4" = 1'-0"

BOILER ROOM EQUIPMENT KEY NOTES.

- (A) EXISTING TO REMAIN AUTOMATIC TRANSFER SWITCH. SEE THE POWER DISTRIBUTION DIAGRAM FOR ADDITIONAL INFORMATION.
- (B) EXISTING TO REMAIN MAIN SERVICE ENTRANCE EQUIPMENT DISCONNECT SWITCH.
- (C) EXISTING TO REMAIN CURRENT TRANSFORMER (CT) CABINET. EXISTING WIRING SYSTEMS TO BE RE-WORKED ARE INSTALLED THROUGH THE EQUIPMENT. COORDINATE WITH THE UTILITY COMPANY BEFORE THE START OF WORK. SEE THE POWER DISTRIBUTION DIAGRAM FOR ADDITIONAL INFORMATION.
- (D) EXISTING MAIN PANELBOARD TO REMAIN AND BE REFED. SEE THE POWER DISTRIBUTION DIAGRAM FOR ADDITIONAL INFORMATION.
- (E) NEW MAIN DISTRIBUTION PANELBOARD. EQUIPMENT BASED ON EATON PRL4B SERIES, MAXIMUM WIDTH 24"
- (F) MECHANICAL EQUIPMENT SHOWN FOR REFERENCE LOCATIONS (TYPICAL)



1 Power Floor Plan
SCALE: 1/8" = 1'-0"

KEY NOTES:

1. ALL WORK IN FUTURE TRAINING SPACE 119 IS BID ALTERNATE BA1.
2. REFRIGERATION EQUIPMENT. FURNISH, INSTALL AND WIRE TO 20A-1P CIRCUIT BREAKER IN EXISTING PANELBOARD PP3A.
3. POWER AND TELECOMMUNICATION OUTLETS FOR TV. COORDINATE WITH THE ARCHITECT AND THE OWNER FOR THE EXACT LOCATIONS AND MOUNTING HEIGHTS.
4. THE CONTROLLED RECEPTACLES IN THIS ROOM SHALL UTILIZE THE OCCUPANCY SENSOR(S) WITHIN THE ROOM FOR ON/OFF CONTROL. PROVIDE AND WIRE A DEDICATED POWER PACK FOR THE CONTROLLED RECEPTACLES IN EACH ROOM IN ADDITION TO THE POWER PACK(S) FOR LIGHTING CONTROL FROM THE OCCUPANCY SENSORS.
5. POWER OUTLET FOR DRYER. NEMA 14-30R RECEPTACLE. 30A-2P GFCI CIRCUIT BREAKER. CIRCUIT WIRING SHALL BE 3/4"C. 3#10 & 1#10G. COORDINATE EXACT LOCATIONS WITH ARCHITECT.
6. 20A-1P GFCI CIRCUIT BREAKER.
7. DISPOSAL: 120V. WIRE TO OUTLET VIA SWITCH ABOVE COUNTER. LABEL SWITCH TO READ "DISPOSAL" AND LIST THE CIRCUIT DESIGNATION. IN ADDITION, PROVIDE MOTOR RATED TOGGLE DISCONNECT SWITCH BELOW COUNTER AT EQUIPMENT.
8. WATER PURIFICATION SYSTEM: 120V.
9. CEILING MOUNTED TELECOMMUNICATIONS WIRELESS ACCESS POINT OUTLET. SHOWN FOR LOCATION REFERENCE.
10. POWER OUTLET FOR WASHER. 20A-1P GFCI CIRCUIT BREAKER.COORDINATE EXACT LOCATIONS WITH ARCHITECT.
11. EXISTING SECURITY DEVICE TO BE RE-INSTALLED WITH NEW WIRING.
12. PROVIDE WEATHER PROOF BACKBOX AND INSTALL EQUIPMENT AT BACKBOX. PROVIDE RIGID STEEL CONDUIT BETWEEN THE BOXES. PROVIDE CONDUITS BACK TO THE SECURITY HEAD END PANEL FOR THE WIRING. EXTERIOR CONDUITS SHALL BE RIGID STEEL.

Architects/Engineers:

WSP USA Buildings Inc
2 MONUMENT SQUARE, SUITE 200
PORTLAND, ME 04101
(207) 775-5401
wsp.com

STATE OF MAINE
DEPT OF AGRICULTURE, CONSERVATION AND FORESTRY
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0022
(207) 287-3200

STATE OF MAINE
MELISSA A SIERRA
18357
LICENSED PROFESSIONAL ENGINEER
02/07/2025

WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. THESE DRAWING SHALL BE COPIED FROM THE ORIGINAL BLUEPRINTS AND ARE APPROXIMATELY TO SCALE. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE PROJECT AND SHALL NOTIFY THE ENGINEER OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.

NO.	REVISION	DATE
A	ISSUED FOR BID	01-10-2025
B	ADDENDUM 2	02-06-2025

PROJECT
CONY ROAD BUILDING RENOVATION

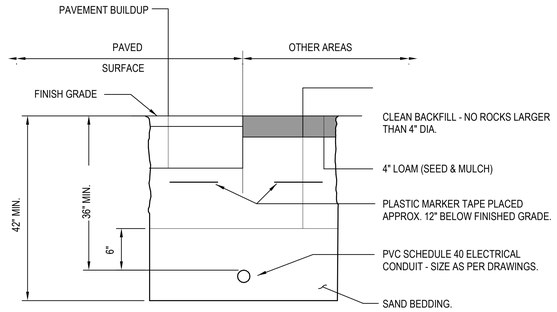
OWNER
MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

TITLE
ELECTRICAL POWER PLAN

PROJECT NO.: 3529230024	E-101
DATE: 01-10-2025	
DWN. BY: S.O. CKD. BY: A.P.	
SCALE: As indicated	

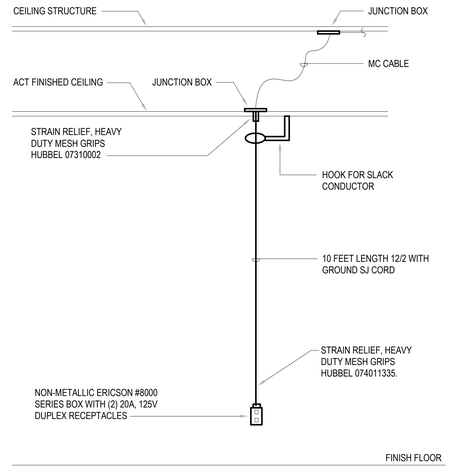
ISSUED FOR BID

2/7/2025 8:34:01 AM Autodesk Docs://PWM100-Maine DACF Cony Road Reno - R24 - C24/3529230024_Cony Rd-E24.rvt



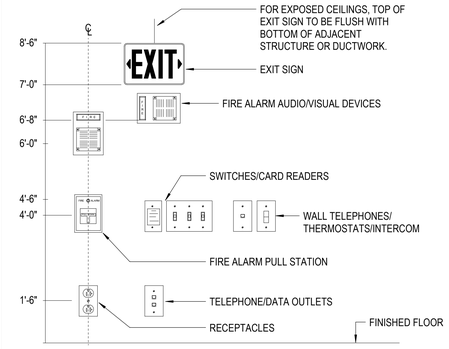
7 DIRECT BURIED ELECTRICAL CONDUIT TRENCH DIAGRAM

EDS-LABEL-03 | NO SCALE



1 TYPICAL CORD DROP DETAIL

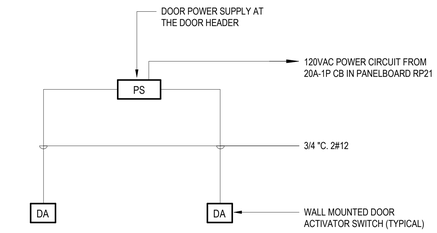
EDS-LABEL-03 | NO SCALE



FOR INFORMATION ONLY
SEE ARCHITECTURAL DRAWINGS FOR EXACT REQUIREMENTS

2 TYPICAL ELECTRICAL MOUNTING HEIGHTS DETAIL

EDS-MOUNT-01 | NO SCALE

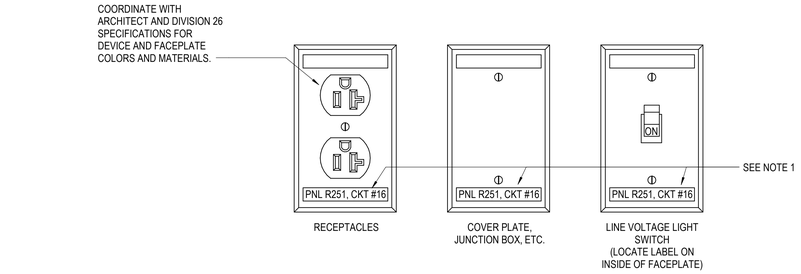


MOTORIZED DOOR POWER NOTES:

1. REFER TO THE ARCHITECTURAL DOCUMENTS FOR THE EXACT LOCATIONS.
2. THE EC SHALL PROVIDE ALL CONDUIT, WIRE AND BACK BOXES. THE BACKBOX FOR THE WALL MOUNTED DOOR ACTUATORS SHALL BE 4" SQUARE BY 2-1/8" DEEP.
3. COORDINATE ALL WORK WITH THE DOOR HARDWARE INSTALLER, THE GC AND THE ARCHITECT.
4. THE DOOR POWER SUPPLIES AND THE WALL MOUNTED DOOR ACTUATORS SHALL BE FURNISHED AND INSTALLED BY THE DOOR HARDWARE INSTALLER.

6 TYPICAL POWERED DOOR WIRING DIAGRAM

EDS-LABEL-03 | NO SCALE

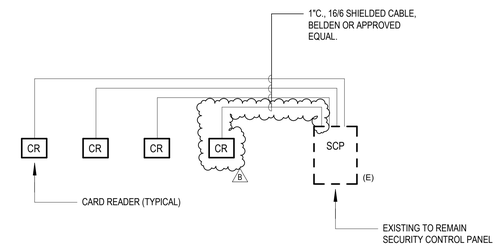


NOTES:

1. AT A MINIMUM, ELECTRICAL CONTRACTOR SHALL PROVIDE TYPED LABELS WITH PTOUCH MACHINE TO INDICATE PANEL NAME AND CIRCUIT NUMBER. PROVIDE 'EMERGENCY' TYPED LABEL FOR CIRCUITS CONNECTED TO EMERGENCY PANELS. COORDINATE EXACT NAMING WITH FACILITY PERSONNEL. IF FACILITY STANDARD IS ENGRAVED COVERPLATES, THE ELECTRICAL CONTRACTOR SHALL PROVIDE ENGRAVED COVERPLATES TO MATCH FACILITY REQUIREMENTS.

3 TYPICAL RECEPTACLE, COVERPLATE, AND SWITCH LABEL DETAIL

EDS-LABEL-03 | NO SCALE

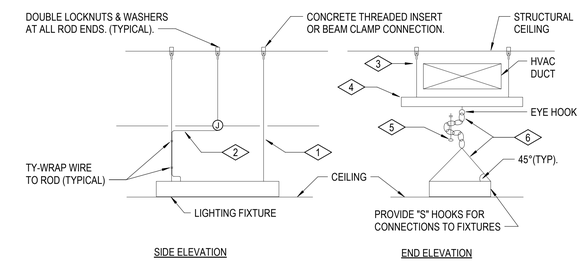


CARD READER NOTES:

1. THE ELECTRICAL INSTALLER SHALL FURNISH, INSTALL AND WIRE EACH OF THE CARD READERS SHOWN ON THE DRAWINGS.
2. PRIOR TO BID CONFIRM WITH THE OWNER' TECHNICAL PERSONNEL THE EXACT REQUIREMENTS FOR EXTENSION TO THEIR EXISTING SECURITY SYSTEM.
3. FURNISH AND INSTALL ALL SYSTEM COMPONENTS FOR COMPLETE INTEGRATION OF THE NEW CARD READERS INTO THE EXISTING SECURITY SYSTEM. THIS INCLUDES BUT IS NOT LIMITED TO PANELS, POWER SUPPLIES, RELAY CARDS, ETC., IN ADDITION TO THE BOXES DEVICES AND WIRING SYSTEMS INDICATED.
4. THE NEW CARD READER DEVICES SHALL MATCH THOSE OF THE EXISTING SYSTEM FOR THE APPLICATION (INDOOR AND OUTDOOR).
5. BOXES SHALL BE A MINIMUM OF 4" SQUARE BY 2-1/8" DEEP WITH A SINGLE GANG PLASTER RING.
6. FURNISH AND INSTALL ALL WIRING TO LOCAL DOOR POWER SUPPLIES AND OTHER DOOR CONTROL COMPONENTS IN ADDITION TO THE WIRING SYSTEMS TO THE EXISTING SECURITY SYSTEM PANEL.
7. FURNISH AND INSTALL ALL LABELS FOR EQUIPMENT AND WIRING SYSTEMS CONSISTENT WITH THE EXISTING SYSTEM. PROVIDE ALL PROGRAMMING AND TESTING.
8. ALL CONDUITS FOR THE CARD READERS SHALL INCLUDE INSULATED BUSHINGS.

4 CARD READER WIRING DIAGRAM

EDS-LABEL-03 | NO SCALE



NOTES:

1. TWO (2) ATTACHMENTS PER FIXTURE, 1/2" THREADED ROD WHERE EXPOSED. JACK CHAIN RATED AT 3 TIMES FIXTURE WEIGHT MAY BE USED ABOVE HUNG CEILINGS, PERPENDICULAR TO FIXTURE FOR SUPPORT.
3. FLEXIBLE CONDUIT - NOT TO EXCEED 6'-0". CONDUIT AND FITTINGS TO BE NRTL LISTED FOR EQUIPMENT GROUNDING.
4. 1/4" THREADED ROD UP TO BUILDING STRUCTURE.
5. DO NOT SUPPORT FIXTURE FROM OTHER TRADES WORK. PROVIDE CHANNEL SUPPORT UNDER OBSTRUCTIONS SUPPORTED DIRECTLY FROM BUILDING STRUCTURE SO THAT SUPPORT FROM FIXTURE IS INSTALLED PERPENDICULAR FROM FIXTURE TO SUPPORT.
6. PROVIDE 1/4" X 2" BOLT WITH 3/4" WASHERS AND NUT. PASS THROUGH LOOP IN CHAIN AND TIGHTEN TO TAKE WEIGHT OFF SUSPENDED OR NON-STRUCTURAL CEILING. DO NOT LEAVE GAPS BETWEEN FIXTURE AND CEILING.
7. JACK CHAIN PERPENDICULAR UP TO SUPPORT.
8. SUPPORT FIXTURE WEIGHT DIRECTLY FROM BUILDING STRUCTURE.
9. ALL JUNCTION BOXES ABOVE CEILING USED FOR PENDENT MOUNTED FIXTURES TO BE SUPPORTED WITH THREADED ROD.

5 LIGHTING FIXTURE SUPPORT TYPICAL

EDS-SUPPORT-07 | NO SCALE

Architects/Engineers:

WSP USA Buildings Inc
2 MONUMENT SQUARE, SUITE 200
PORTLAND, ME 04101
(207) 775-5401
wsp.com

STATE OF MAINE
DEPT OF AGRICULTURE, CONSERVATION AND FORESTRY
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0022
(207) 287-3200

STATE OF MAINE
MELISSA A SIERRA
18357
LICENSED PROFESSIONAL ENGINEER
02/07/2025

WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. THESE DRAWING SHALL BE COPIED FROM THE ORIGINAL BLUEPRINTS AND ARE APPROXIMATELY TO SCALE. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE PROJECT AND SHALL NOTIFY THE ENGINEER OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.

NO.	REVISION	DATE
A	ISSUED FOR BID	01-10-2025
B	ADDENDUM 2	02-06-2025

PROJECT
CONY ROAD BUILDING RENOVATION

OWNER
MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

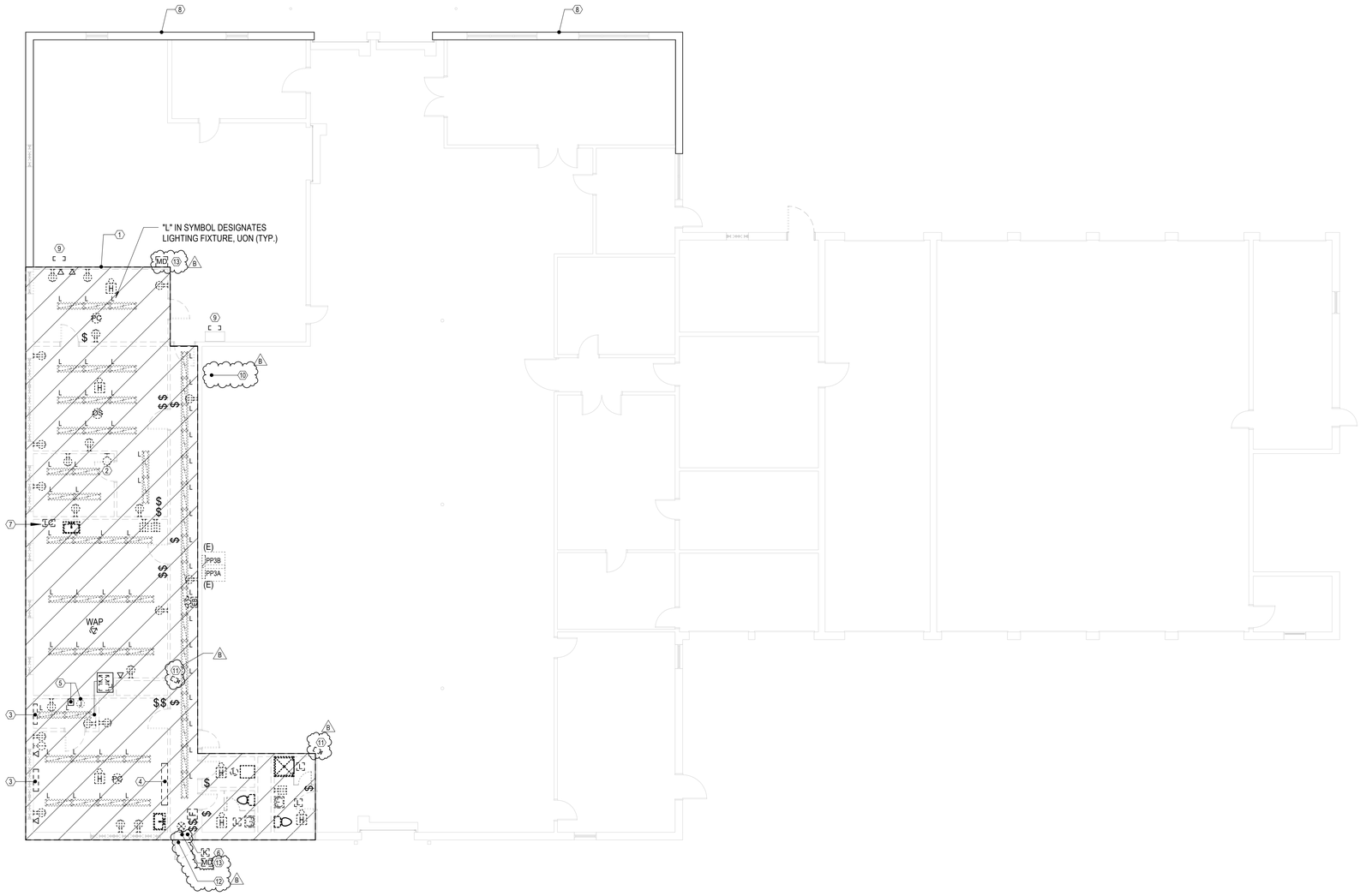
TITLE
ELECTRICAL DIAGRAMS AND DETAILS

PROJECT NO.: 3529230024
DATE: 01-10-2025
DWN. BY: S.O. | CKD. BY: A.P.
SCALE: As indicated

E-402

ISSUED FOR BID

2/6/2025 10:11:06 PM Autodesk Docs://PWM100-Maine DACF Cony Road Reno - R24 - C24/3529230024_Cony Rd-E24.rvt



1 LEVEL 1 ELECTRICAL DEMOLITION PLAN

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

KEY NOTES:

1. ALL ELECTRICAL EQUIPMENT AND FIRE ALARM EQUIPMENT (LIGHTING, CONTROLS, DEVICES, BOXES, MULTI-OUTLET ASSEMBLIES, CONDUITS, CABLES, CONDUCTORS, SUPPORTS, ETC.) IN ROOMS/ AREAS INDICATED BY DIAGONAL HATCHING SHALL BE DEMOLISHED WHETHER OR NOT INDICATED ON THE PLANS, UNLESS OTHERWISE INDICATED AND/OR REQUIRED TO MAINTAIN OPERATION OF EXISTING TO REMAIN EQUIPMENT WITHIN THIS AREA OR AREAS OUTSIDE OF THESE ROOMS/AREAS. THIS INCLUDES ALL ELECTRICAL AND FIRE ALARM ON/IN WALLS AND FLOORS, ON/IN AND ABOVE CEILINGS, AND MOUNTED TO FURNISHED, MILLWORK, BENCHES, ETC.
2. SPECIAL CONFIGURATION RECEPTACLE TO BE DEMOLISHED.
3. MECHANICAL EQUIPMENT TO BE DEMOLISHED BY HVAC INSTALLER. DEMOLISH ALL LINE VOLTAGE CIRCUIT WIRING SYSTEMS, DISCONNECTS CONTROLS. COORDINATE WITH HVAC INSTALLER.
4. MULTI-OUTLET ASSEMBLY TO BE DEMOLISHED.
5. HEATING AND AC RELAY TO BE DEMOLISHED. COORDINATE WITH THE HVAC INSTALLER.
6. SECURITY KEYPAD TO BE DEMOLISHED. WIRING SHALL BE REMOVED BACK TO THE SECURITY HEAD END EQUIPMENT. COORDINATE WITH THE OWNER'S SECURITY PERSONNEL.
7. LOAD CENTER TO BE DEMOLISHED.
8. UNDER BID ALTERNATE BA1 THE EXISTING WALL WILL BE FURRED OUT WITH A NEW STUD AND DRYWALL WALL. SCOPE OF WORK SHALL BE AS FOLLOWS:
   a. ELECTRICAL DEVICE: REMOVE THE COVER PLATE. DISCONNECT AND REMOVE THE DEVICE. INSTALL WIRE NUTS FOR THE CONDUCTORS. PROVIDE STEEL BOX EXTENDERS SO THAT DEVICE WILL BE FLUSH TO THE NEW WALL SURFACE. RE-INSTALL AND RECONNECT THE DEVICE. RE-INSTALL THE COVER PLATE.
   b. FIRE ALARM DEVICE: REMOVE AND STORE THE DEVICE. PULL BACK THE CONDUCTORS TO THE NEXT ACTIVE DEVICES ON THE CIRCUITS. PROVIDE STEEL BOX EXTENDERS SO THAT THE DEVICE WILL BE FLUSH TO THE NEW WALL SURFACE. PROVIDE WIRING SYSTEMS FROM THE EXISTING DEVICES TO THIS LOCATION.
   c. RECESSED MOUNTED TEL/DATA DEVICE: PRIOR TO START OF WORK COORDINATE WITH THE OWNER'S TEL/DATA PERSONNEL. AFTER THE DEVICE AND WIRING HAVE BEEN REMOVED BY TEL/DATA, PROVIDE BOX EXTENDERS SO THAT THE DEVICE WILL BE FLUSH TO THE NEW WALL SURFACE.
   d. SURFACE MOUNTED TEL/DATA DEVICE: PRIOR TO START OF WORK COORDINATE WITH THE OWNER'S TEL/DATA PERSONNEL. AFTER THE DEVICE AND WIRING HAVE BEEN REMOVED BY TEL/DATA, DEMOLISH THE BOX AND CONDUIT.
9. ELECTRIC UNIT HEATER TO BE REMOVED AND RE-INSTALLED BY HVAC FOR THE DEMOLITION WORK. EC SHALL DE-ENERGIZE THE UNIT, DISCONNECT THE WIRING AND REMOVE AND STORE THE DISCONNECT SWITCH. MAKE SAFE THE WIRING. WHEN RE-INSTALLED BY HVAC, EC SHALL RE-INSTALL THE DISCONNECT AND EXTEND THE WIRING TO THE UNIT VIA THE DISCONNECT.
10. SECURITY CARD READER TO BE DISCONNECTED, AND SECURELY STORED FOR RE-USE. DOOR CONTACTS AND REQUEST TO EXIT DEVICE TO BE DEMOLISHED. REMOVE WIRING BACK TO SECURITY HEAD END. REMOVE ALL BOXES.
11. SECURITY CAMERA TO BE DISCONNECTED, REMOVED AND SECURELY STORED FOR RE-USE. REMOVE ALL WIRING BACK TO SECURITY HEAD END EQUIPMENT.
12. SECURITY DOOR CONTACTS AND REQUEST TO EXIT DEVICE AT THIS LOCATION SHALL BE DEMOLISHED. REMOVE WIRING BACK TO SECURITY HEAD END EQUIPMENT. THE CARD READER AND ASR SHALL BE DISCONNECTED, REMOVED AND SECURELY STORED FOR RE-USE. REMOVE THE EXTERIOR BOXES AND RACEWAY. PULL BACK THE CABLES INTO THE BUILDING AND COIL ABOVE THE CEILING LEVEL FOR RE-INSTALLATION.
13. SECURITY MOTION DETECTOR TO BE DISCONNECTED, REMOVED AND SECURELY STORED FOR RE-USE. REMOVE THE WIRING BACK TO THE SECURITY HEAD END EQUIPMENT.

Architects/Engineers:

WSP USA Buildings Inc
2 MONUMENT SQUARE, SUITE 200
PORTLAND, ME 04101
(207) 775-5401
wsp.com

STATE OF MAINE
DEPT OF AGRICULTURE, CONSERVATION AND FORESTRY
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0022
(207) 287-3200

STATE OF MAINE · MELISSA A SIERRA · 18357 · LICENSED PROFESSIONAL ENGINEER
02/07/2025

WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. THESE DRAWING SHALL BE COPIED FROM THE ORIGINAL BLUEPRINTS AND ARE APPROXIMATELY TO SCALE. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE PROJECT AND SHALL NOTIFY THE ENGINEER OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.

NO.	REVISION	DATE
A	ISSUED FOR BID	01-10-2025
B	ADDENDUM 2	02-06-2025

PROJECT
CONY ROAD BUILDING RENOVATION

OWNER
MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

TITLE
ELECTRICAL DEMOLITION PLAN

PROJECT NO.: 3529230024	
DATE: 01-10-2025	
DWN. BY: S.O.	CKD. BY: A.P.
SCALE: 1/8" = 1'-0"	

ED-101

ISSUED FOR BID

2/6/2025 10:11:07 PM Autodesk Docs://PWM100-Maine DACF Cony Road Reno - R24 - C24/3529230024_Cony Rd-E24.rvt

Cony Road Renovation- Prebid Questions

Last Updated: 2/5/2025

No.	Date	Discipline	Question	Responder	Response	Date
1	1/28/25	Plumbing	Is an expansion tank for the water heater required? If so, please specify.	J O'neill	Provide Expansion tank similar to Amtrol #ST-12C-DD, will be included in Addendum 02.	2/5/25
2	1/28/25	Electrical	The existing generator is being converted from LP to Natural Gas, but there is no information regarding the existing generator. Is it a simple adjustment or is a conversion kit going to be required? If a conversion kit, did one come with the generator and can still be used?	T Petrozzelli	The existing LP generator is a Detroit Diesel model number 45G8G. It is rated 45KW; 56KVA. The retrofit specialist will provide all of the equipment, and all of their labor and materials should be included with this electrical bid. The retrofit specialist that we reviewed this work with is Steve Jackson of Stewart and Stevenson. His email is sjackson@kirbycorp.com.	2/5/25
3	1/28/25	Mechanical	Page 700 is calling for coordination drawings. Considering the size of the project, this may be more costly than it is worth. Please confirm that coordination drawings will be required.	A Camire	Concur, not needed. Coordination drawings can be excluded from the bid and will be removed in Addendum 02.	2/5/25
4	1/30/25	Mechanical	How should the contractor deal with the existing heating on the walls where new walls are to be built as part of Alternate 1?	A Camire	Modify piping to remount wall heaters. Will be included with Alternate 1 in Addendum 02.	2/5/25
5	1/30/25	Architectural	Does Bid Alternate 2 apply only to the insulation that is part of the base scope, or does it include the Alternate 1 insulation? If you are looking for options for both, we will need a revised Bid Form with more lines.	A Camire	Options for both - A revised bid form was provided with Addendum 01.	2/5/25
6	1/30/25	Architectural	Do you have a specific product in mind for the stainless-steel tables in Room 110, or will these be custom fabricated?	A Camire	Refer to spec section 123553.16 for requirements, no specific product has been determined. If a pre-manufactured lab/ food service product meets the requirements it can be purchased, if not custom is acceptable. Height adjustable base is intended to be purchased from a funiture vendor with a fabricated stainless tabletop added.	2/5/25
7	1/30/25	General	Will the customer accept an extension to the bid date to Feb 14th?	A Camire	Bid has been extended to 2pm Friday February 14th.	2/5/25
8	1/30/25	General	What is the anticipated start date for this project?	A Camire	Was originally April 1, 2025, will push to April 9, 2025 due to bid extension.	2/5/25
9	1/30/25	General	When is the anticipated award date for this project?	A Camire	Anticipated March 7, 2025.	2/5/25

Cony Road Renovation- Prebid Questions

Last Updated: 2/5/2025

No.	Date	Discipline	Question	Responder	Response	Date
10	1/30/25	General	Are we able to get a 2-week bid extension to properly solicit subcontractors and formulate questions that could affect the overall pricing of the project.	A Camire	Bid has been extended to 2pm Friday February 14th.	2/5/25
11	1/30/25	General	What testing does the contractor own?	A Camire	The owner will does not own any additional testing. If testing is required by the specifications, it is the responsibility of the contractor.	2/5/25
12	1/30/25	General	Is builders risk required?	A Camire	Please refer to 00 72 13 General Conditions for requirements.	2/5/25
13	1/30/25	General	Will a perimeter fence be required?	A Camire	All local and State laws and regulations for fencing shall be followed. Your abatement sub should provide the requirements surrounding exterior fencing when abatement is involved. The Building must be secure at all times. OHSA requires that the public must be kept safe from dangerous equipment and the site is under the Contractor's control. 00 72 13.26 covers Safety and Secuirty of the Premises.	2/5/25
14	1/30/25	General	Can you please share the sign in sheet from the walkthrough?	A Camire	Sign in sheet was uploaded to the Bid Opportunity on the BGS website.	2/5/25
15	1/31/25	Architectural	Please explain how you want the masonry left around the windows. The specifications call for 12” perimeter around the windows to be disposed of as hazardous waste bulk product waste with the PCB caulking. Is a straight cut required or will this area be “toothed in” by a masonry contractor anyway?	A Camire	12" is the minimum. This answer to this question can be found on A-201.	2/5/25
16	1/31/25	Civil	Please confirm no soil to be removed as hazardous waste below the windows at any capacity.	A Camire	Confirmed. The Haley Ward Supplemental HAZMAT Report states that PCBs were not found in the soil and that the soil should be protected from contamination during demolition.	2/5/25
17	1/31/25	Archictural/ Structural	Please confirm none of the removals are structural or require shoring.	J Schott	Masonry required to be shored for new headers per details E and F on drawings S-502. Interior masonry walls at bathroom not load bearing, all other shoring at contractors descretion.	2/5/25

Cony Road Renovation- Prebid Questions

Last Updated: 2/5/2025

No.	Date	Discipline	Question	Responder	Response	Date
18	1/31/25	Architectural	Please confirm there is nothing to salvage beyond the shelving notated on AD101 by note D16. Please confirm this shelving can be placed in a different location on site for storage by the owner.	A Camire	Addendum 2 will note a few electronic security components and their infrastructure to be salvaged as well. Contractor will move shelving to a different location. We are unsure about moving the shelving back into the space, Owner will contact surplus to have them pick up the shelving.	2/5/25
19	1/31/25	General	Please confirm if there will be badging requirements and background checks needed for all parties, or just the general contractor to provide access to the site.	BGS/DCAF	Yes, you will need badge access to get into the building, however not every person will need one. It is possible to get guest badges.	2/5/25
20	1/29/25	Q&A during Pre-Bid	Will the solar panel installation be a part of this job?	T McDonald	No, but there may be overlap in the schedules	1/29/2025
21	1/29/25	Q&A during Pre-Bid	How does that work with insurance (regarding the solar panel overlap)?	T McDonald	Please discuss with your insurace company.	1/29/2025
22	1/29/25	Q&A during Pre-Bid	What will the building occupancy be during this project?	T McDonald	Staff will be in the other half of the building, but no one will be occupying the renovation area.	1/29/2025
23	1/29/25	Q&A during Pre-Bid	Can we extend the due date for RFI submittal?	T McDonald	We will connect with Alissa Camire to push back a week and will respond with confirmation by COB Friday	1/29/2025
24	1/29/25	Q&A during Pre-Bid	Will that also mean room for another site visit if necessary? (WSP asking Celeste)	T McDonald	Yes, please sent request through Alissa Camire with 24 hours notice.	1/29/2025
25	1/29/25	Q&A during Pre-Bid	Will WSP follow up with addendum?	T McDonald	You will have to follow up with RFIs.	1/29/2025
26	1/29/25	Q&A during Pre-Bid	Haley Ward report doesn't say anything about soils/ "no soils removal"/ PCBs	T McDonald	Documents speak to removing 1ft beyond affected areas See revised response above.	1/29/2025
27	1/29/25	Q&A during Pre-Bid	What's the real estate outside for equipment (job trailer layout area)?	T McDonald	Funneling through the main entry driveway and using available lot, while leaving room for the staff that will be occupying the other spaces.	1/29/2025
28	1/29/25	Q&A during Pre-Bid	Is this a one phase project?	T McDonald	Yes	1/29/2025

Cony Road Renovation- Prebid Questions

Last Updated: 2/5/2025

No.	Date	Discipline	Question	Responder	Response	Date
29	1/29/25	Q&A during Pre-Bid	What level of salvage is expected?	T McDonald	Each program will be responsible for moving their shelving/ supplies. Programs will coordinate with contractor and will decide what/ how/ when to dispose. Anything left will be considered disposable.	1/29/2025
30	1/29/25	Q&A during Pre-Bid	Is the whole building sprinklered and will that system need to remain active during renovation?	T McDonald	Yes, the whole system will have to stay active while keeping in mind there is sprinkler scope as well.	1/29/2025
31	1/29/25	Q&A during Pre-Bid	Can this CMU wall (between Office (North) and Reception (South)) be removed or is it structural?	T McDonald	Please follow up with an RFI to ask the question.	1/29/2025
32	1/29/25	Q&A during Pre-Bid	What's happening with the shelving in Storage?	T McDonald	Contractor will move to a different location. We are unsure about moving the shelving back into the space. Owner will contact surplus to have them pick up the shelving.	1/29/2025
33	1/29/25	Q&A during Pre-Bid	Are contractors responsible for moving items being stored on the shelving?	T McDonald	No, that will be the responsibility of the programs, however they would like help moving the shelving itself.	1/29/2025
34	1/29/25	Q&A during Pre-Bid	What is the removal treatment for the concrete sills? Are they not being salvaged?	T McDonald	Dispose of the sills and 1ft of brick underneath. Reference the drawings for more specifics.	1/29/2025
35	1/29/25	Q&A during Pre-Bid	What work is there in the Carpenter Shop & Storage?	T McDonald	There is electrical work as well as the bathroom work in this area.	1/29/2025
36	1/29/25	Q&A during Pre-Bid	What will access to the space look like? Will we need badges?	BGS/DACF	Yes, you will need badge access to get into the building, however not every person will need one. It is possible to get guest badges.	1/29/2025
37	1/29/25	Q&A during Pre-Bid	Is this the fire alarm panel for the whole building (location: on west side of wall between Entry and Carpenter Shop & Storage)?	T McDonald	Yes	1/29/2025
38	1/29/25	Q&A during Pre-Bid	Bid Alternate wall insulation – What happens with plumbing and heaters attached to the walls in this area (Training Room)?	T McDonald	Good question. Submit an RFI.	1/29/2025
39	1/29/25	Q&A during Pre-Bid	What is the budget for this job?	BGS/DACF Revised - A Camire	Roughly 1.3 million with design fees taken out. There is also potential to get grant money for energy upgrades. The construction budget is roughly $1.1M.	1/29/2025