NEW YORK STATE | Office of General Services

DESIGN & CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242

ADDENDUM NO. 1 TO PROJECT NO. 45682

CONSTRUCTION, HVAC WORK, PLUMBING, AND ELECTRICAL WORK
PROVIDE BEDROOM AND BATHROOM UPGRADES, BUILDINGS 72, 73 AND 74
INDUSTRY LIMITED SECURE CENTER
375 RUSH-SCOTTSVILLE ROAD
RUSH, NEW YORK

July 2, 2025

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

BIDDING REQUIREMENTS – COMMON

1. DOCUMENT 001114 ADVERTISEMENT FOR BIDS: The last date for receipt of bids is changed from Wednesday, July 16, 2025, to Wednesday, July 30, 2025.

GENERAL REQUIREMENTS - CONSTRUCTION

2. SECTION 014339 MOCKUP REQUIREMENTS: Add the accompanying Section (pages 014339 – 1 and 014339 – 2) to the Project Manual.

GENERAL REQUIREMENTS - HVAC

3. SECTION 014339 MOCKUP REQUIREMENTS: Add the accompanying Section (pages 014339 – 1 and 014339 – 2) to the Project Manual.

GENERAL REQUIREMENTS - PLUMBING

4. SECTION 014339 MOCKUP REQUIREMENTS: Add the accompanying Section (pages 014339 – 1 and 014339 – 2) to the Project Manual.

GENERAL REQUIREMENTS - ELECTRICAL

5. SECTION 014339 MOCKUP REQUIREMENTS: Add the accompanying Section (pages 014339 – 1 and 014339 – 3) to the Project Manual.

GENERAL REQUIREMENTS - COMMON

6. SECTION 017716 CONTRACT CLOSEOUT: Discard the Section bound in the Project Manuals and substitute the accompanying Section (pages 017716 – 1 thru 017716 – 4) noted "Addendum No. 1".

CONSTRUCTION WORK SPECIFICATIONS

7. SECTION 081119 STAINLESS STEEL DOOR AND FRAMES: Add the accompanying Section (Pages 081119 – 1 through 081119 – 10) to the Project Manual.

8. SECTION 082200 FIBERGLASS DOORS AND FRAMES: Discard the Section in its entirety.

9. SECTION 083113 ACCESS DOORS, Page 083113 – 2, add the following Article to PART 2 PRODUCTS:

"**2.04 NON-FIRE RATED ACCESS DOORS FOR DOOR VISION LITES**

A. Opening Size: Custom size. Refer to drawing details.

B. Frames: Minimum 12 gage type 304 stainless steel.
   1. Mounting style: Surface mounted (no return flange).
   2. Frame: Exposed frame around the perimeter, within the limits of the door window frame.
   3. Finish: Match door panel.
   4. Anchorage, Predrilled holes in frame for anchoring with fasteners.

C. Door Panel: Flush type, 12 gage type 304 stainless steel.
   1. Hinges: Continuous set to open a minimum of 135 degrees.
   2. Finish: #4 Brushed.

D. Cam Locks: Flush key operated to hold door panel in flush, smooth plane when closed.
   1. Key operated lock, mortised prepped for pin tumbler type cylinder.
   2. Key all locks alike."

10. SECTION 323113 CHAIN LINK FENCE AND GATES – SECURITY: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 323113 – 1 thru 323113 – 10) noted "Addendum No. 1".

HVAC WORK SPECIFICATIONS

11. SECTION 237200 AIR-TO-AIR ENERGY RECOVERY UNITS: Add the accompanying Section (Pages 237200 – 1 through 081119 – 7) to the Project Manual.

12. SECTION 238127 AIR COOLED CONDENSING UNITS: Add the accompanying Section (Pages 238127 – 1 through 238127 – 4) to the Project Manual.

PLUMBING WORK SPECIFICATIONS

13. SECTION 211313 SPRINKLER SYSTEMS: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 211313 – 1 thru 211313 – 8) noted "Addendum No. 1".

CONSTRUCTION WORK DRAWINGS

14. Revised Drawings:
    a. Drawing No. C-4603, noted "6/25/2025 ADDENDUM NO. 1" accompanies this Addendum and supersedes the same numbered originally issued drawings.
    b. Drawing No. A-4511, noted "6/25/2025 ADDENDUM #1" accompanies this Addendum and supersedes the same numbered originally issued drawings.

HVAC WORK DRAWINGS

15. Revised Drawings:
    a. Drawing No. M-1201, noted "6/25/2025 ADDENDUM NO. 1" accompanies this Addendum and supersedes the same numbered originally issued drawings.

PLUMBING WORK DRAWINGS

16. Revised Drawings:
    a. Drawing Nos. F-1100, F-2100, and F-3100, noted "6/25/2025 ADDENDUM NO. 1" accompany this Addendum and supersede the same numbered originally issued drawings.

ELECTRICAL WORK DRAWINGS

17. Revised Drawings:
    a. Drawing Nos. E-1502, E-2502, and E-3502, noted "6/25/2025 ADDENDUM NO. 1" accompany this Addendum and supersede the same numbered originally issued drawings.

END OF ADDENDUM

Brady Sherlock, P.E.
Director, Division of Design
Design & Construction

SECTION 014339

MOCKUP REQUIREMENTS

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. 055000 Metal Fabrications Broadscope for shower panels (SSP-1) and trim.

B. 066000 Solid Plastic Fabrications for polycarbonate shower panels.

C. 079200 Joint Sealers for sealants.

D. 092116 Gypsum Board Systems for polycarbonate-backed gypsum board ceilings.

E. 096723 Epoxy Resin Flooring for epoxy resin floors.

F. 099101 Construction Painting for painting.

G. 102813 Toilet and Bath Accessories for shower/bathroom accessories.

1.02 SUBMITTALS

A. Quality Control Submittals
   1. Mockup Plan: Copy of proposed plan.

1.03 DEFINITIONS

A. Mockups (General): Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances.
   1. Mockups are not Samples.
   2. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

B. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes, doors, windows, millwork, casework, specialties, furnishings and equipment, and lighting.

1.04 QUALITY ASSURANCE

A. Mockup Plan: Detailed, dimensioned plans and elevations showing mockup size, and items and materials that will be included in proposed mockup.

B. Pre-Construction Conference: Prior to the construction of the mockup, a conference will be called by the Director's Representative at the Site for the purpose of reviewing the requirements, and intent of mockup. The conference shall be attended by the Director's Representative, Contractor, and person supervising this phase of the Work

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 INSTALLATION

A. Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish as directed.
   1. Build mockups in location and of size and profile indicated or, or as directed by the Director's Representative.
   2. Notify the Director's Representative a minimum of 14 days in advance of dates and times when mockups will be constructed and able to be inspected.
   3. Employ supervisory personnel to oversee mockup construction. Employ same workers that will be employed during the construction of Project.
   4. Demonstrate the proposed range of aesthetic effects and workmanship.
   5. Commence the Work after mockup has been inspected and approved in writing by Director's Representative.
   6. The mockup will establish the standard of quality of workmanship by which the Work will be judged.
   7. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work. Failure to maintain the mockup, until directed, will be cause for rejection of the Work.

B. Mockup Types: Construct mockup in accordance with approved shop drawings, project manual, and Contract Drawings, using exact materials and methods approved for the Project, including required accessories.
   1. Room Mockups: Construct one (1) room mockup incorporating required materials and assemblies, finished according to requirements. Provide required lighting and additional lighting where required to enable the Director's Representative to evaluate quality of the Work. Shower Room Mockup: Shower room mockup includes walls, ceilings, stainless steel shower wall and ceiling panels, epoxy flooring and base, polycarbonate shower screen, stainless steel trim, floor drains, light fixtures, shower control panel, water closet, lav, door frame, one coat of paint, sealants, toilet room and shower room accessories, The following are not required as part of the shower room mockup.
      a. Doors and door hardware.
      b. Electrical power
      c. Functional mechanical systems
      d. Functional sprinkler system

END OF SECTION

SECTION 014339

MOCKUP REQUIREMENTS

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. 055000 Metal Fabrications Broadscope for shower panels (SSP-1) and trim.

B. 066000 Solid Plastic Fabrications for polycarbonate shower panels.

C. 079200 Joint Sealers for sealants.

D. 092116 Gypsum Board Systems for polycarbonate-backed gypsum board ceilings.

E. 096723 Epoxy Resin Flooring for epoxy resin floors.

F. 099101 Construction Painting for painting.

G. 102813 Toilet and Bath Accessories for shower/bathroom accessories.

1.02 SUBMITTALS

A. Quality Control Submittals
   1. Mockup Plan: Copy of proposed plan.

1.03 DEFINITIONS

A. Mockups (General): Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances.
   1. Mockups are not Samples.
   2. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

B. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes, doors, windows, millwork, casework, specialties, furnishings and equipment, and lighting.

1.04 QUALITY ASSURANCE

A. Mockup Plan: Detailed, dimensioned plans and elevations showing mockup size, and items and materials that will be included in proposed mockup.

B. Pre-Construction Conference: Prior to the construction of the mockup, a conference will be called by the Director's Representative at the Site for the purpose of reviewing the requirements, and intent of mockup. The conference shall be attended by the Director's Representative, Contractor, and person supervising this phase of the Work

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 INSTALLATION

A. Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish as directed.
   1. Build mockups in location and of size and profile indicated or, or as directed by the Director's Representative.
   2. Notify the Director's Representative a minimum of 14 days in advance of dates and times when mockups will be constructed and able to be inspected.
   3. Employ supervisory personnel to oversee mockup construction. Employ same workers that will be employed during the construction of Project.
   4. Demonstrate the proposed range of aesthetic effects and workmanship.
   5. Commence the Work after mockup has been inspected and approved in writing by Director's Representative.
   6. The mockup will establish the standard of quality of workmanship by which the Work will be judged.
   7. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work. Failure to maintain the mockup, until directed, will be cause for rejection of the Work.

B. Mockup Types: Construct mockup in accordance with approved shop drawings, project manual, and Contract Drawings, using exact materials and methods approved for the Project, including required accessories.
   1. Room Mockups: Construct one (1) room mockup incorporating required materials and assemblies, finished according to requirements. Provide required lighting and additional lighting where required to enable the Director's Representative to evaluate quality of the Work. Shower Room Mockup: Shower room mockup includes walls, ceilings, stainless steel shower wall and ceiling panels, epoxy flooring and base, polycarbonate shower screen, stainless steel trim, floor drains, light fixtures, shower control panel, water closet, lav, door frame, one coat of paint, sealants, toilet room and shower room accessories, The following are not required as part of the shower room mockup.
      a. Doors and door hardware.
      b. Electrical power
      c. Functional mechanical systems
      d. Functional sprinkler system

END OF SECTION

SECTION 014339

MOCKUP REQUIREMENTS

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. 055000 Metal Fabrications Broadscope for shower panels (SSP-1) and trim.

B. 066000 Solid Plastic Fabrications for polycarbonate shower panels.

C. 079200 Joint Sealers for sealants.

D. 092116 Gypsum Board Systems for polycarbonate-backed gypsum board ceilings.

E. 096723 Epoxy Resin Flooring for epoxy resin floors.

F. 099101 Construction Painting for painting.

G. 102813 Toilet and Bath Accessories for shower/bathroom accessories.

1.02 SUBMITTALS

A. Quality Control Submittals
   1. Mockup Plan: Copy of proposed plan.

1.03 DEFINITIONS

A. Mockups (General): Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances.
   1. Mockups are not Samples.
   2. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

B. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes, doors, windows, millwork, casework, specialties, furnishings and equipment, and lighting.

1.04 QUALITY ASSURANCE

A. Mockup Plan: Detailed, dimensioned plans and elevations showing mockup size, and items and materials that will be included in proposed mockup.

B. Pre-Construction Conference: Prior to the construction of the mockup, a conference will be called by the Director's Representative at the Site for the purpose of reviewing the requirements, and intent of mockup. The conference shall be attended by the Director's Representative, Contractor, and person supervising this phase of the Work

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 INSTALLATION

A. Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish as directed.
   1. Build mockups in location and of size and profile indicated or, or as directed by the Director's Representative.
   2. Notify the Director's Representative a minimum of 14 days in advance of dates and times when mockups will be constructed and able to be inspected.
   3. Employ supervisory personnel to oversee mockup construction. Employ same workers that will be employed during the construction of Project.
   4. Demonstrate the proposed range of aesthetic effects and workmanship.
   5. Commence the Work after mockup has been inspected and approved in writing by Director's Representative.
   6. The mockup will establish the standard of quality of workmanship by which the Work will be judged.
   7. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work. Failure to maintain the mockup, until directed, will be cause for rejection of the Work.

B. Mockup Types: Construct mockup in accordance with approved shop drawings, project manual, and Contract Drawings, using exact materials and methods approved for the Project, including required accessories.
   1. Room Mockups: Construct one (1) room mockup incorporating required materials and assemblies, finished according to requirements. Provide required lighting and additional lighting where required to enable the Director's Representative to evaluate quality of the Work. Shower Room Mockup: Shower room mockup includes walls, ceilings, stainless steel shower wall and ceiling panels, epoxy flooring and base, polycarbonate shower screen, stainless steel trim, floor drains, light fixtures, shower control panel, water closet, lav, door frame, one coat of paint, sealants, toilet room and shower room accessories, The following are not required as part of the shower room mockup.
      a. Doors and door hardware.
      b. Electrical power
      c. Functional mechanical systems
      d. Functional sprinkler system

END OF SECTION

SECTION 014339

MOCKUP REQUIREMENTS

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. 055000 Metal Fabrications Broadscope for shower panels (SSP-1) and trim.

B. 066000 Solid Plastic Fabrications for polycarbonate shower panels.

C. 079200 Joint Sealers for sealants.

D. 092116 Gypsum Board Systems for polycarbonate-backed gypsum board ceilings.

E. 096723 Epoxy Resin Flooring for epoxy resin floors.

F. 099101 Construction Painting for painting.

G. 102813 Toilet and Bath Accessories for shower/bathroom accessories.

1.02 SUBMITTALS

A. Quality Control Submittals
   1. Mockup Plan: Copy of proposed plan.

1.03 DEFINITIONS

A. Mockups (General): Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances.
   1. Mockups are not Samples.
   2. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

B. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes, doors, windows, millwork, casework, specialties, furnishings and equipment, and lighting.

1.04 QUALITY ASSURANCE

A. Mockup Plan: Detailed, dimensioned plans and elevations showing mockup size, and items and materials that will be included in proposed mockup.

B. Pre-Construction Conference: Prior to the construction of the mockup, a conference will be called by the Director's Representative at the Site for the purpose of reviewing the requirements, and intent of mockup. The conference shall be attended by the Director's Representative, Contractor, and person supervising this phase of the Work

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 INSTALLATION

A. Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish as directed.
   1. Build mockups in location and of size and profile indicated or, or as directed by the Director's Representative.
   2. Notify the Director's Representative a minimum of 14 days in advance of dates and times when mockups will be constructed and able to be inspected.
   3. Employ supervisory personnel to oversee mockup construction. Employ same workers that will be employed during the construction of Project.
   4. Demonstrate the proposed range of aesthetic effects and workmanship.
   5. Commence the Work after mockup has been inspected and approved in writing by Director's Representative.
   6. The mockup will establish the standard of quality of workmanship by which the Work will be judged.
   7. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work. Failure to maintain the mockup, until directed, will be cause for rejection of the Work.

B. Mockup Types: Construct mockup in accordance with approved shop drawings, project manual, and Contract Drawings, using exact materials and methods approved for the Project, including required accessories.
   1. Room Mockups: Construct one (1) room mockup incorporating required materials and assemblies, finished according to requirements. Provide required lighting and additional lighting where required to enable the Director's Representative to evaluate quality of the Work.

   2. Shower Room Mockup: Shower room mockup includes walls, ceilings, stainless steel shower wall and ceiling panels, epoxy flooring and base, polycarbonate shower screen, stainless steel trim, floor drains, light fixtures, shower control panel, water closet, lav, door frame, one coat of paint, sealants, toilet room and shower room accessories, The following are not required as part of the shower room mockup.
      a. Doors and door hardware.
      b. Electrical power
      c. Functional mechanical systems
      d. Functional sprinkler system

END OF SECTION

SECTION 017716 – CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

A. Other provisions pertaining to this Section are included in Article 9 of the General Conditions.

1.2 CONTRACT CLOSEOUT INSPECTIONS

A. The following 3 inspections will be made in addition to the normal inspections to ensure that all Contract requirements are met and that the Work is complete and acceptable. The purpose of each of these inspections is to furnish the Contractor a written list of Contract exceptions, omissions, and incompletions so that the Work can be progressed to timely completion in accordance with the Contract Documents.

1. Detailed Inspection: The "Detailed Inspection" will be made when the Work is substantially complete. A copy of the detailed inspection list will be furnished to the Contractor. When this inspection progresses over any length of time, copies of the list will be furnished as the inspection progresses so that the Contractor may proceed with the required Work without delay.
2. Final Inspection: The Contractor will be advised by letter of the date and time of final inspection. A copy of the final inspection list containing all incomplete or unsatisfactory items and the time allowed to complete the Work will be furnished to the Contractor.
3. Joint Inspection for Physical Completion: The joint inspection for physical completion may be made to verify completion of the exception items listed on the final inspection list so that the physical completion date (defined in the General Conditions) may be established.

1.3 FINAL CLEANING

A. Perform final cleaning prior to joint inspection for physical completion. Leave the premises in a neat, unobstructed condition, the work areas broom clean (except where more thorough cleaning is specified), and everything in perfect repair and adjustment.

B. Clean site; sweep paved areas, rake clean landscaped surfaces.

C. Remove tools, equipment, waste and surplus materials, rubbish, and construction facilities from the premises as soon as possible upon completion of the Work.

1.4 PROJECT RECORD DOCUMENTS

A. Maintain on site, 2 sets of the following record documents; record actual revisions to the Work.

1. Contract Drawings.

2. Project Manual.
3. Addenda.
4. Change Orders and other modifications to the Contract.
5. Reviewed shop drawings, product data, and samples.

B. Store record documents separate from documents used for construction.

C. Record information concurrent with construction progress.

D. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including.

1. Measured depths of foundations in relation to finish (first) (main) floor datum.
2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
4. Field changes of dimension and detail.
5. Details not on original Contract Drawings.

E. Construction Work Contract, Protected EPDM Roofing System Work, Section 075553: Maintain, at the site, 2 sets of the membrane manufacturer's sheet layout drawings for recording joint locations. Mark up the drawings in red as follows.

1. Show the actual size of membrane sheets.
2. Dimension the location of end and edge joints, and factory and field fabricated patches in the membrane. Show dimensions taken from fixed locations such as parapet walls, gravel stops, etc. Dimensions shall be accurate to within one foot.
3. Show the type and location of penetrations through the roof.

F. Upon completion of the work, create electronic versions of the project record documents. Black and white documents are to be scanned into TIFF format using CCIT Group 4 compression. Documents with color, which include black line documents with color notations, are to be scanned into TIFF format using a minimum of 8 colors and "packbits" compression test.

1. The scanned images are to be put on a USB flash drive using NTFS/NTFS5 format. Name the electronic files with the same name as the drawing. Create a folder on the USB flash drive for each trade and one for Shop Drawings.
2. Label the USB flash drive with the project number, name, and title as it appears on the project manual cover. If there is more than one USB flash drive include notation to that effect on the label; i.e., 1 of 3, 2 of 3, 3 of 3. The project record documents, and USB flash drive(s) are to be turned over to the Director's Representative.

G. Applications for progress payments will not be approved if the record documents are not kept current. Application for final payment will not be approved until the project record documents are delivered to the Director's Representative.

1.5 OPERATION AND MAINTENANCE DATA

A. Prepare 2 sets comprised of 8-1/2 x 11 inch text pages bound in capacity expansion binders with durable plastic covers identified with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required. Prepare a printed Table of Contents for each volume, with each product or system description identified. Internally subdivide the binder contents with permanent page dividers, logically organized as described below, with tab titles clearly printed under reinforced laminated plastic tabs:

Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, subcontractors, and major equipment suppliers.

Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of subcontractors and suppliers. Identify the following:

1. Significant design criteria.
2. List of equipment.
3. Parts list for each component.
4. Operating instructions.
5. Maintenance instructions for equipment and systems.
6. Maintenance instructions for finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.

Part 3: Project documents and certificates, including the following:

1. Shop drawings and product data.
2. Air and water balance reports.
3. Certificates.
4. Photocopies of warranties.

B. Submit one copy of completed volumes in final form 15 days prior to final inspection. This copy will be returned after final inspection, with the Director's comments. Revise content of documents as required prior to final submittal.

C. Submit 2 volumes prior to final Application for Payment.

1.6 WARRANTIES

A. Furnish warranty certification and copies of warranties that extend beyond the one year period required by the General Conditions. Warranties submitted without warranty certification will not be accepted.

1. Warranty Certification: Written certification from the warrantor that invoices for installation, service, supplies, and warranty fees have been paid in full to persons or firms due payment, and that the warranty is in effect and non-retractable due to any of the specified conditions.

B. Prepare printed Table of Contents and assemble warranty certifications and warranty copies in a binder with a durable plastic cover.

C. Deliver the binder to the Director's Representative prior to final Application for Payment.

D. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within 10 days after acceptance, indicating date of acceptance as start of warranty period.

E. Applications for final payment will not be approved until the warranty certification and warranty documents are delivered to the Director's Representative.

1.7 SPARE PARTS AND MAINTENANCE MATERIALS

A. Label and deliver spare parts, maintenance items, and extra materials to the Site. Place in locations as directed.

1. Include "NOT FOR WARRANTY REPAIRS" on the labels.
2. Obtain receipt prior to final payment.

B. Do not use the spare parts and maintenance materials required by the Contract Documents to remedy defects during the one-year period described in Paragraph 9.8 of the General Conditions except when approved otherwise by authorized Facility Representative. In such cases, replace items used.

C. Furnish the names, business addresses, and telephone numbers of fully equipped authorized service organizations to the Director's Representative.

D. Applications for final payment will not be approved until these items are delivered to the Director's Representative.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 017716

SECTION 081119

STAINLESS STEEL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Stainless Steel doors and frames, including borrowed lites; sidelights; vision lites; glass moldings and stops; louvers; panels; hardware reinforcements; and accessories as shown in the contract documents.

1.02 REFERENCES

A. ANSI- American National Standard Institute
   1. A240: Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels and for General Applications.
   2. A250.4-2001 Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcings.

B. NAAMM National Association of Architectural Metal Manufacturers
   1. HMMA 866-12 (R2018). Guide Specifications for Stainless Steel Doors and Frames
   2. HMMA 831-2011 Recommended Hardware Locations for Hollow Metal Doors and Frames.
   3. HMMA 840-2018 Guide Specification for Installation and Storage of Hollow Metal Doors and Frames.

C. NFPA National Fire Protection Association
   1. NFPA 80- 2019 Standard for Fire Doors and other Opening Protectives.

1.03 DEFINITIONS

A. Stainless Steel Door and Frame Manufacturer: Manufacturer of stainless steel doors and frames regularly engaged in the manufacturing of such products for use in commercial, institutional, educational and other similar applications.

B. Company Field Advisor(s): An employee of the stainless steel door and frame manufacturer who is certified in writing by the manufacturer to be technically qualified in design, installation, and servicing of products.

C. Stainless Steel Door and Frame Distributor: Distribution Company who regularly engages in the distribution of stainless steel doors and frames of the manufacturer whose doors and frames are submitted for this project.

D. Certified Installation Supervisor: Designated supervisor/installer, who has a minimum three years experience in stainless steel frame and door installation, and is certified in writing by the stainless steel door and frame manufacturer as qualified and responsible to ensure approved stainless steel frames and doors are installed, adjusted, and operate properly.

1.04 SUBMITTALS

A. Waiver of Submittals: "Waiver of Certain Submittal Requirements" in Section 01330 does not apply to this Section.

B. Submittals Packages
1. Door and Frame Schedule and Shop Drawings Package: Submit as a complete package. Incomplete packages will be returned unreviewed.
a. Quality Assurance Submittal
1) Certification of Compliance as described in the Quality Assurance Article.
2) Company Field Advisor's Qualification Data
a) Name of Company Field Advisor and Employer's name, business address and telephone number and e-mail address.
b) Names and addresses of 3 similar projects Company Field Advisor has worked on during the past three years.
c) Written certification on Stainless steel door and frame manufacturer's letterhead that Company Field advisor is technically qualified in design, installation, and servicing of the products furnished for this Project.
3) Certified Supervisor's and Installer's Qualification Data
a) Name of Supervisor and each Installer performing Work, and Employer's name, business address and telephone number.
b) Names and addresses of 3 similar projects Supervisor and each Installer has worked on during the past three years.
c) Written certification on stainless steel door and frame manufacturer's letterhead that Supervisor/Installer is technically qualified to ensure approved stainless steel frames and doors are installed, adjusted, and operate properly.
b. Door and Frame Schedule:
1) Include a Cover Sheet that lists:
a) OGS project name, project number, and project address.
b) Manufacturer's name, address, and telephone number.
c) Distributor's name, address, and telephone number.
d) Shop drawing preparer's name, and telephone number and e-mail address.
e) Submission date.
2) List by opening
a) Door and Frame number and location by building and room name. Use same reference numbers for openings and as those shown on Contract Drawings.
b) Door width, height, thickness, type, gage, and options
c) Frame type, width, height, jamb depth, gage, anchor type and options.

d) Door and frame elevations; head and jamb profiles and details; welding requirements; and reinforcements.
e) Fire Rating.
f) Glass type.
g) Undercut.
h) Electric preparations, if any.
i) Hardware Set.
j) Show dimensioned elevations; construction details of each door including vertical and horizontal edge details; and frame details for each type, including dimensions profiles; locations for finish hardware, including cutouts and reinforcements; gage of reinforcements; details of connections; anchors and accessories; and details of conduit and preparations for electrified door hardware and controls.

3) Product Data: Manufacturer's catalog sheets, specifications, and detailed installation instructions. Highlight products and options pertaining to this Project. Cross out information irrelevant to this Project.

4) Manufacturer's Written Certification of Compliance that their products conform to the requirements of the references named in the References Article of this specification section, and as modified by this specification.

5) Samples:
a) Frames: Corner sample of each type, 18 x 18 inches, with mortises and reinforcements, factory primed or factory finished, as required.
b) Doors: Corner sample of each type construction, 18 x 18 inches, with mortises and reinforcements, factory primed or factory finished, as required.

1.05 QUALITY ASSURANCE

A. Uniformity and single source responsibility:
1. Provide stainless steel doors and frames from a single source manufacturer who specializes in this type of work.

B. Certification of Compliance: A statement, written on stainless steel door and frame manufacturer's letterhead, that certifies their products, submitted for this Project, have been tested and comply with references named in the References Article of this specification section, and as modified by other requirements this specification.

C. Construction Verification: In order to determine if the products furnished comply with the specifications, the Director may choose one or more doors and frames for examination. The examination may involve cutting doors to expose the internal construction to inspect reinforcements, cores, welds and other construction details.

D. Field Measurements: Verify existing openings by field measurements before

fabrication and indicate measurements on shop drawings.

E. Pre-Submittal Conference: Pre-Submittal Conference: Before the stainless steel door and frame submittals are written, the contractor, the stainless steel door and frame distributor, the stainless steel door and frame shop drawing preparer, and the stainless steel door and frame designer shall attend a conference to discuss the contract requirements for the stainless steel door and frame submittal package, including but not limited to, quality assurance items to be submitted, the cover sheet, index, page numbering, schedule formatting, product nomenclature, installation notes, preparations for electric hardware and product data sheets.

F. Pre-installation Conference: When stainless steel frames are on site, and before stainless steel frame installation begins, the Director's Representative shall call a conference at the site to review the approved Stainless Steel Door and Frame Submittal, approved Finish Hardware Submittals, and proper installation procedures for the Work as well as:

1. Pre-installation inspection of Doors and Frames
    a. Use and coordination of approved Stainless Steel Door and Frame submittals with approved Finish Hardware Submittals in the pre- installation inspection process
    b. Reading and understanding manufacturer's Door and Frame tags
    c. Inspection and verification of labeling and label placement
        1) Specified fire labels (attached metal labels) on doors and frames,
        2) Label locations
        3) Label legibility
    d. Inspection and verification of proper welding of frames
    e. Inspection and verification of hardware reinforcement and preparations in frame head and jambs.
    f. Inspection and verification of required anchors and fasteners.
    g. Inspection and verification of glass kit preparations in doors
    h. Inspection and verification of Electric hardware preparation in frames and doors
2. Review of maximum allowable clearances between frames and doors; doors and floor; and meeting stiles of doors, and verification methods.
3. Verification of plumb, square and level frame installation with jamb rabbets parallel to one another.
4. Review of proper frame installation tools.

The contractor, frame installers, certified Company Field Advisor, OGS designer; and OGS inspector shall attend the conference. Facility personnel may attend. The OGS designer will present installation information.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver doors and frames in heavy paper cartons or other protective packaging. Remove any plastic protective wrap from the package.

B. Store doors and frames under cover, in a dry area, on raised platforms in vertical position with minimum 4 inch blocking between units to allow air circulation.

C. Clearly label packaging, and doors and frames, for identification and installation location.

PART 2 PRODUCTS

2.01 MATERIALS

A. Type 304 Stainless Steel Sheet

B. Anchors and Supports: Fabricate of not less than 16 gage stainless steel sheet steel unless otherwise indicated.

C. Anchorage Devices, Bolts, and Other Fasteners: Manufacturer's standard units unless otherwise indicated.
   1. All components to be fabricated from Type 304 Stainless Steel

D. Solid Block polyurethane core with minimum .07 U Factor.

E. Polystyrene slab with a minimum .24 U factor.

F. Extruded polystyrene rigid insulation.

2.02 DOORS

A. General:
   1. Design and Thickness: 2 outer stretcher-leveled stainless steel sheets not less than 12 gage, seamless, hollow construction, 1-3/4 inches thick.
   2. Construct doors with smooth flush surfaces without visible joints or seams on exposed faces or stile edges, except around glass and louver panels. Continuously MIG, ARC or laser weld vertical edges full height of door, grind smooth, and dress to achieve seamless edge. Tack welded, putty filled edges are not acceptable.
   3. Reinforce vertical edges by a continuous stainless steel channel not less than 14ga extending the full height of door.
   4. Close top and bottom of horizontal edges with 14 gage stainless steel channel spot welded to the inside of the face sheets a maximum of 4 inches on center.
   5. Continuously weld the closing end channels to the vertical edge reinforcing channel at all four corners producing a fully welded exterior.
   6. Provide minimum 16 gage flush stainless steel top and bottoms caps, notched at both ends to fit hinge and lock channels, installed with a minimum of 6 welds per cap. Grind welds, body fill and finish smooth.
   7. Sound Deadening (ASTM E 90): Minimum Sound Transmission Class of 25.
   8. Door Edges: Bevel lock stile edge of single acting hinged doors 1/8 inch in 2 inches. “V” bevel meeting stiles of pairs of doors, except at double egress locations where meeting stiles are parallel.
   9. Glazing Stops and Beads: Fixed stainless steel stops, formed integral with door on non-threat side of doors. Removable stainless steel beads, of not less than 14 gage formed stainless steel sheet or solid bar stock, on other side of doors secured with torx head machine screws. Form corners with butted hairline joints. Coordinate width of rabbet between fixed stop and removable bead, and depth of rabbet, with type of glass and glazing required.
   10. Louvers: Vandal resistant security louvers. 18-gauge stainless steel frame with mitered and welded corners. 24-gauge inverted “V” stainless steel louver blades. 16-gauge steel security grill attached on exterior face. Prime with powder coat finish. 45 percent minimum free area. Basis of

Design Product: L-VRSG-2 by National Guard Products. Fasten with tamper resistant security screws.

.

B. Fire Rated Assemblies: Wherever a fire resistance classification is shown or scheduled for steel doors and frames; provide fire rated units that have been tested as fire door assemblies, and comply with National Fire Protection Association (NFPA) Standard No. 80 and these specifications.
   1. Identify each door and frame with a factory applied metal UL, FM, or WHI label.
   2. Label shall remain legible, and shall not be obscured by powder coating or finish painting.
   3. Indicate the applicable fire rating on the door label.
   4. Locate labels on the hinge edge of door and jamb rabbet of frame.
   5. Where continuous hinges are specified, apply labels on the header rabbet of frame and on top exposed edge of door. Locate labels as close to hinge edge as possible.
   6. At the manufacturer's and/or contractor's expense, retain a third party inspector to recertify fire rated doors and frames, and to replace primed and finish painted labels.

C. Oversize Assemblies Requiring Fire Rating: Whenever fire rated assemblies are larger than size limitations established by NFPA and testing laboratories, provide the manufacturer's certification, by affixing a metal label construction label, that the assemblies have been constructed with materials and methods equivalent to requirements for fire rated construction.

D. Interior Doors:
   1. Fabricate doors with 2 outer stretcher-leveled, 12 GA Type 304
   2. Reinforce inside of doors with polystyrene slab with a minimum .24 U factor, permanently bonded to inside of each face sheet.

2.03 FRAMES

A. General:
   1. Furnish stainless steel frames for doors, transoms, sidelites, borrowed lites, and other openings, as shown, of size and profile as indicated.
   2. Construction: Full welded unit construction, with corners mitered and continuously welded full depth and width of frame, unless otherwise specified or shown. Knock-down type frames will not be accepted.
      a. Fixed Stops: Integral 5/8 inch stop unless otherwise shown.
      b. Removable Beads: Removable stainless steel beads secured with machine screws. Form corners with butted hairline joints.
   3. Do not drill frames for silencers.
   4. Weld stainless steel shipping spreaders to the underside of the jamb legs, requiring removal of the spreaders prior to frame installation.

B. Interior and Exterior Frames: 12 GA Type 304 Stainless Steel.

C. Mullions and Transom Bars:
   1. Furnish closed or tubular mullions and transom bars where shown. Fasten mullions and transom bars at crossings and to jambs by butt welding. Reinforce joints between frame members with concealed clip

angles or sleeves of same metal and thickness as frame.

2. Where installed in masonry, leave vertical mullions in frames open at the top so they can be filled with grout.

D. Wall Anchors: Unless otherwise specified or shown, formed of not less than 16 gage stainless steel.

1. Masonry Construction: Adjustable, corrugated or perforated T-shaped to suit frame size with leg not less than 2 inches wide by 10 inches long. Furnish at least 3 anchors per jamb up to 7'6" jamb height; 4 anchors per jamb up to 8 foot jamb height; one additional anchor per jamb for each 24 inches or fraction thereof over 8 feet high.
2. Steel Stud Construction: Weld-in type welded to back of frame unless otherwise indicated or approved. Furnish at least 4 anchors per jamb up to 7'-6" jamb height; 5 anchors per jamb to 8 foot jamb height; one additional anchor per jamb for each 24 inches or fraction thereof over 8 feet high.
3. Wood Stud Construction: Weld-in type welded to back of frame unless other wise indicated or approved. Furnish at least 3 anchors per jamb.
4. Anchors for Completed Openings: Anchorage devices designed to secure frame to in-place concrete or in-place masonry construction, as applicable. Furnish at least 5 anchors per jamb up to 7'-6" jamb height; 6 anchors per jamb to 8 foot jamb height; one additional anchor per jamb for each 12 inches or fraction thereof over 8 feet high.

E. Floor Anchors: Furnish floor anchor for each jamb and mullion which extends to floor, formed of not less than 16 gage stainless steel, with 2 holes to receive fasteners,

welded to bottom of jamb or mullion, and galvanized if used with galvanized frames

2.04 ACCESS DOORS FOR DOOR VISION LITES

A. Opening Size: Custom size. Refer to drawing details.

B. Frames: Minimum 12 gage type 304 stainless steel.

1. Mounting style: Surface mounted (no return flange).
2. Frame: Exposed frame around the perimeter, within the limits of the door window frame.
3. Finish: Match door panel.
4. Anchorage, Fully welded.

C. Door Panel: Flush type, 12 gage type 304 stainless steel.

1. Hinges: Continuous set to open a minimum of 135 degrees.
2. Finish: To match door finish.

D. Cam Locks: Flush key operated to hold door panel in flush, smooth plane when closed.

1. Key operated lock, mortised prepped for pin tumbler type cylinder.
2. Key all locks alike.

2.05 FABRICATION

A. Fabricate stainless steel door and frame units to be rigid, neat in appearance, and free from warp, buckle and defects. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. To assure proper assembly at Project site, clearly identify items that cannot be permanently factory-assembled before shipment.

B. Exposed Fasteners: Countersunk flat, or oval head torx center pin screws and bolts. Unless otherwise indicated, locate fasteners 2 inches from ends of members and not more than 12 inches apart.

C. Finish Hardware Reinforcements:
1. Minimum 10 gage continuous reinforcement for continuous hinges.
2. Install 7 gage reinforcement for butt hinges, or hinge reinforcement in door edge may be one piece 12 gage channel full door height with extruded hinge screw holes having an average minimum thread pull-out strength of 1600 pounds per hole.
3. Minimum 12 gage reinforcement for other hardware.
4. Weld 14 gage stainless steel tongues, 1-1/2 inches high, inside lock mortise to keep lock body centered in door.
5. Closer reinforce doors and provide full profile closer reinforcement in frames for full width of opening, whether or not closers are specified.

D. Finish Hardware Preparation:
1. Factory prepare doors and frames to receive mortised and concealed hardware, including cutouts; reinforcing; drilling and tapping, in accordance with approved Finish Hardware Schedule and templates furnished by hardware manufacturers.
2. Factory reinforced doors and frames to receive surface applied hardware. Drill and tap for surface applied hardware at project site.

E. Finish Hardware Locations: Locate hardware reinforcements and mortises so hardware locations comply with requirements of HMMA 831, “Recommended Hardware Locations for Custom Hollow Metal Doors and Frames”, and as follows:
1. Knobs, Levers, Crescents : Centerline 3’2” from finished floor.
2. Mortise Deadlocks: Centerline not to exceed 48” above finished floor.

F. Clearances: Fabricate doors for their respective frames within the following clearances:
1. Jambs and Head: 3/32 to 1/8 inch.
2. Meeting Edges of Pairs: 1/8 to 3/16 inch.
3. Bottom (no threshold): 3/4 inch, maximum to finished surface.
4. Bottom (at threshold): 3/8 inch, maximum to top of threshold or carpet.
5. Fire Rated Doors: Comply with clearances specified in NFPA Standard No.80.
6. Measure door clearances from stile edge to jamb.

G. Access Doors: Assemble access doors as integral units complete with all parts and ready for installation. Fabricate units of continuous welded stainless steel construction unless otherwise indicated or specified. Grind welds smooth and flush with adjacent surfaces. Anchorage devices shall be of size and type required to secure access doors to types of supports indicated on the Drawings.

H. Factory Prefinish Powder Coating:
1. Chemically wash, rinse, and dry exposed and concealed surfaces of fabricated units.
2. Units shall be capable of passing the following tests:
a. Salt Spray Test complying with ASTM B 117-97 for 120 continuous hours.
b. Water Fog Test complying with ASTM D 1735-97 for 240 continuous hours.
3. Factory pre-finish with powder coating doors and frames..
a. Provide custom color(s) as selected by the Director's Representative.
b. Provide 3 (three) touch-up paint kits for field repair. Turn over remaining paint to the Facility.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine substrates, areas and conditions, with installer present under which frames are to be installed for defects that will adversely affect execution and quality of Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 PREPARATION

A. Prior to installation adjust and securely brace door frames for squareness, alignment, twist, and plumb to the following tolerances:
1. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
2. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
3. Twist: Plus or minus 1/16", measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
4. Plumbness: Plus or minus 1/16 inch, measured at jamb face on a perpendicular line from head to floor.

B. Drill and tap doors and frames to receive non-templated mortised and surface mounted hardware.

3.03 INSTALLATION

A. General: Install stainless steel doors and frames plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
1. Frames: Install frame of size and profile indicated. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set.
a) Remove temporary braces necessary for installation only after frames have been properly set and secured.
b) Check plumb, squareness, and twist of frames as walls are constructed. Adjust as necessary to comply with installation tolerances.
2. Installation Tolerances: Adjust door frames for squareness, alignment, twist, and plumb to the following tolerances:

a) Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
b) Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
c) Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
d) Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

B. Doors: Fit non-fire-rated doors accurately in frames with the following clearances:
1. Jambs and Head: 1/8 inch plus or minus 1/16 inch.
2. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch.
3. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch.

3.04 ADJUSTING AND CLEANING

A. Final Adjustments:
1. Check and readjust operating hardware items immediately before final inspection.
2. Leave work in complete and proper operating condition.
3. Remove and replace defective work including doors or frames that are warped, bowed, or otherwise unacceptable.

B. Clean foreign materials off stainless steel doors and frames immediately after installation.

3.05 FINAL INSPECTION

A. Upon completion of the project, the Director's representative will schedule a final inspection to verify doors and frames are properly installed and adjusted. The contractor, door and frame installer, and design representative will attend.

B. Upon verification, the design representative will certify in writing components are properly installed and adjusted within referenced tolerances in accordance with this specification. Include this certification in the Close-out Submittals.

END OF SECTION

BTH

SECTION 323113

CHAIN LINK FENCE AND GATES

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. Earthwork: Section 310000.

1.02 PREINSTALLATION MEETING

A. Preinstallation Conference: Conduct conference at the project site with all parties involved with erecting the secure perimeter.
   1. Inspect and discuss electrical roughing in, equipment bases and other preparatory work specified elsewhere.
   2. Review coordination of rough and finish grading the site with work specified elsewhere.
   3. Review sequence of installation of fence and gates, including type of gate operator.
   4. Review required testing, inspection and certifying procedures.

1.03 REFERENCES

A. Comply with ASTM A 53 for requirements of Schedule 40 piping.

B. Welding Standards: “Structural Welding Code - Steel, AWS D1.1” or “Structural Welding Code - Sheet Steel, AWS D1.3”, as applicable, by the American Welding Society (AWS Codes).

C. Materials and Finishes Standard: ANSI/BHMA A156.18-2012, “American National Standard for Materials and Finishes”.

D. Electrical Components for Locking Devices and Electric Locks Standard: National Electric Code.

1.04 DEFINITIONS

A. Height of Fence: Distance measured for fences with buried concrete footings measured from finished grade to the top of fabric.

B. Company Field Advisor: An employee of the company which markets the security coils under their name and who is certified in writing by the Company to be technically qualified in design and installation of security coils or an employee of an organization certified by the foregoing company to be technically qualified in design and installation of security coils.

1.05 SUBMITTALS

A. Waiver of Submittals: The "Waiver of Certain Submittal Requirements" in Section 013300 does not apply to this Section.

B. Submit an Environmental Product Declaration (EPD) from the manufacturer for concrete and steel this specification section, if available. A statement of the contractor's good faith effort to obtain the EPD shall be provided if not available.
   1. Manufacturer-provided EPDs must be Product Specific Type III (Third-Party Reviewed), in adherence with ISO 14025 *Environmental labels and declarations*, ISO 14044 *Environmental management – Life cycle assessment*, and ISO 21930 *Core rules for environmental product declarations of construction products and services.*

C. Shop Drawings: Complete detailed drawings, plans, elevations, sections and details for each height and style of fence and gate required. Include separate schedule for each listing all materials required and technical data such as size, weight, and finish, to ensure conformance to specifications.

D. Product Data: Manufacturer's catalog cuts, specifications, and installation instructions for each item specified.

E. Samples:
   1. Fence Fabric: Minimum one square foot.
   2. Fence and Gate Posts: One foot long each.
   3. Miscellaneous Materials and Accessories: One each.
   4. Provide material samples to the Director's Representative.

F. Re-Evaluation Fee: In accordance with Article 4.7 of the General Conditions, a re-evaluation processing fee will be levied against the Contractor for each re-evaluation of any Submittal Package submission that was returned for failure to comply with the submittal requirements relative to completeness, content or format. There will be a fee of $250 levied against the Contractor for each re-evaluation of any Submittal Package submission that was returned for failure to comply with the submittal requirements relative to completeness, content or format.

G. Quality Control Submittals:
   1.
   2. Certificates: Letter required under Quality Assurance Article.

1.06 QUALITY ASSURANCE

A. Comply with standards of the Chain Link Fence Manufacturer's Institute.

B. Provide steel fence and related gates as a complete compatible system including necessary erection accessories, fittings, and fastenings.

C. Posts and rails shall be continuous without splices.

D.

E. Concrete batching plants shall be currently approved as concrete suppliers by the New York State Department of Transportation.

1.07 DELIVERY

A. Coordinate delivery of anchors and other accessories to be built into other Work, to avoid delay. Furnish instructions and templates as required for accurate location.

B. The manufacturer of the prison lock keys shall notify the Director's Representative Daniel Sharlow 585-313-7955 and the Deputy Superintendent for Administration at Industry Residential Center, Robert Tubbs 585-533-2777, a minimum of two days in advance of shipping keys. Ship all prison lock keys direct from manufacturer, through the United States Postal Service, via Registered Mail, Restricted Delivery, Return Receipt Requested, to:

Deputy Superintendent for Administration
Industry Residential Center
375 Rush-Scottsville Road
Rush, NY 14543

1.08 UNIFORMITY OF DETENTION HARDWARE

A. Provide detention hardware specified in this section from the same manufacturer.

B. The existing equipment at Industry Residential Center is Folger Adam. Provide Folger Adam detention hardware specified in this section from Southern Folger Detention Equipment Company.

PART 2 PRODUCTS

2.01 COMPANIES

A. Hearne Steel Company, Inc. P.O. Box 1239 Hearne TX 77859, (979) 279-3464, www.hearnesteel.com.

B. Southern Folger Detention Equipment Company, 4634 South Presa St., San Antonio, TX 78223, (210) 533-1231, www.southernfolger.com.

C. R.R. Brink Locking Systems, Inc. 500 Earl Road, Sherwood, IL. 60431. (815) 744-7000, www.rrbrink.com

D. Tymetal Corporation, Inc., 678 Wilbur Avenue, Greenwich, NY 12834, (518) 692-9930, www.tymetal.com

E. Wheatland Tube Company, 700 South Dock Street, Sharon, PA 16161, (724) 342-6851, www.wheatland.com

2.02 PERFORMANCE REQUIREMENTS

A. Deflection Limits: Fence deflections shall be within the following limits:

1. Fabric Tension: Maximum 2 inches when tested by applying a 30 lbf force at midpoint between rails and horizontally between posts for every eighth lower panel along the fence line. Measure fabric movement from the relaxed position at the point where the force is applied.

2.03 MATERIALS

A. ASTM A1011 high-strength low-alloy steel strip/sheet steel (fy = 50 ksi):
   1. WT-40 Fence Pipe by Wheatland Tube Company.

B. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

2.04 STEEL FRAMEWORK (FOR FENCES 6'-1" - 10'-0" HIGH)

A. End Posts, Corner Posts and Pull Posts:
   1. Pipe: 2.875 inches OD, 5.79 pounds per linear foot (Schedule 40).
   2. Class B Steel Tubing: 2.875 inches OD, 4.64 pounds per linear foot.

B. Line Posts:
   1. Pipe: 2.375 inches OD, 3.65 pounds per linear foot (Schedule 40).
   2. Class B Steel Tubing: 2.375 inches OD, 3.11 pounds per linear foot.

2.05 STEEL FABRIC

A. One-piece widths for fence heights up to 12'-0".

B. Chain link:
   1. 2-inch mesh, No. 9 gauge

C. Selvages:
   1. 2-inch mesh, Top edge and bottom edge twisted and barbed.

2.06 SWING GATE POSTS

A. Single width of gate 6'-0" to 12'-0" wide or over 10'-0" high:
   1. Pipe: 4 inches OD, 9.11 pounds per linear foot (Schedule 40).
   2. Class B Steel Tubing: 4 inches OD, 6.56 pounds per linear foot.

2.07 SWING GATE FRAMES

A. Height: 6'-0" - 12'-0", or leaf width exceeding 8'-0":
   1. Pipe: 1.90 inches OD, 2.72 pounds per linear foot (Schedule 40).
   2. Class B Steel Tubing: 1.90 inches OD, 2.28 pounds per linear foot.

B. Assemble gate frames by welding. Install mid-height horizontal rails on gates over 6 feet high. When width of gate leaf exceeds 10 feet, install mid-distance vertical bracing of the same size and weight as frame members. When either horizontal or vertical bracing is not required, provide truss rods as cross bracing to prevent sag or twist.

2.08 SWING GATE HARDWARE

A. Type "C" Gates:
   1. Hinges: Pressed Steel Offset 180-degree gate hinge item no. 014005 by Hearne Steel Company, Inc. or appropriate for use.
   2. Locks: Drop bar type complete with flush plate set in concrete. For double gates provide full height drop bar and keeper. Padlock eye shall be an integral part of latch construction.
      a. For single leaf gate latch – industrial steel latch Item No. 016424 for 2.875" post or Item No. 016427 for 4" post by Hearne Steel Company, Inc. or appropriate for use.

2.09 FABRICATION AND MANUFACTURE

A. Do not ship the entire assembly from the fabricating shop to the galvanizer prior to QA inspection and approval by the State or designated inspection laboratory that the assembly is in conformance with the Contract Documents
   1. Remove steel mill stamp, loose mill scale, loose rust, weld slag and spatter, and other detrimental material in accordance with SSPC SP-2 "Hand Tool Cleaning", SSPC SP-3 "Power Tool Cleaning"

B. At the galvanizer, thoroughly clean all steel prior to galvanizing the entire assembly. Remove oil, grease, and similar contaminants in accordance with SSPC SP-1 "Solvent Cleaning", SSPC SP-2 "Hand Tool Cleaning", SSPC SP-3 "Power Tool Cleaning", SSPC SP-6 "Commercial Blast Clean" or SSPC SP-7 "Brush-Off Blast Cleaning". A QA observation will be made by the State or designated inspection laboratory that the assembly has been prepared properly.

2.10 KEYING

A. Key locks as specified and incorporate a keying schedule into the hardware schedule for approval.
   1. Key changes shall be different from changes previously used at this Facility, except as noted.
   2. Record key changes, to avoid future unintended duplication.
   3. Furnish seven keys for each change, except as noted.
   4. Furnish extended shank keys when required.
   5. Key locks as specified in Section 323114.

2.11 MISCELLANEOUS MATERIALS AND ACCESSORIES

A. Rails and Post Braces:
   1. Pipe: 1.660 inches OD, 2.27 pounds per linear foot (Schedule 40).
   2. Class B Steel Tubing: 1.660 inches OD, 1.84 pounds per linear foot.

B. Fittings and Post Tops: Pressed Steel.
   1. Fasteners: Tamper-resistant cadmium plated steel screws or #10-8 x ½" round head grade 18-8 stainless steel U-drive screw, Item No. 0172734.

C. Stretcher Bars: One piece equal to full height of fabric up to 12 ft. high, above 12 ft. height, additional bars required, minimum cross-section 3/16 inch by 3/4 inch.

D. Metal Bands (for securing stretcher bars): Pressed Steel, 12-gauge minimum thickness with beveled edges.

E. Wire Ties: Conform to American Steel Wire gauges.
1. For tying fabric to line posts, rails and braces: 9-gauge (.1483 inch) steel wire.
2. For tying tension wire to fabric: 9-gauge (.1483 inch) galvanized steel hog rings.
3. For tying security coils to fence fabric, barbed wire, or adjacent coils: 16 gauge (.0625 inch) 300 Series stainless steel wire.
4. For splicing adjoining sections of security coils: 16 gauge (.0625 inch) 300 Series stainless steel wire, or 11 gauge (.1205 inch) 300 Series stainless steel hog rings.
5. For splicing overlapped fabric at bottom rail: 9-gauge (.1483 inch) galvanized steel hog rings.

F. Truss Rods: 3/8-inch diameter with threaded end to be utilized with a pressed steel industrial truss rod tightener.

G. Concrete: (Class F1 as defined by ACI 318-14 Section 19.3.1) Portland Cement concrete having a minimum compressive strength of 3500 psi at 28 days, maximum water/cement ratio of 0.55, target air content of 5% +/- 1%. The design mix shall be procured from a NYSDOT approved concrete supplier. Retarding Admixture: ASTM C 494, Type D, Water-reducing and retarding, for use in hot weather concreting, and on the New York State Department of Transportation's current "Approved List".

H. Spiral Paper Tubes:
1. Sonotube by Sonoco Products Co., North Second St., Hartsville, SC 29550, (800) 377-2692.
2. Sleek/tubes by Jefferson Smurfit Corp., P.O. Box 66820, St. Louis, MO 63166, (314) 746-1100.

I. Cold Galvanizing Compound: Single component compound giving 93 percent pure zinc in the dried film, and meeting the requirements of DOD-P-21035A (NAVY).

J. Tension Wire: Galvanized 7-gauge coiled spring steel wire: ASTM A 824.

2.12 FINISHES

A. Steel Framework:
1. Pipe: Galvanized in accordance with ASTM A 53, 1.8 ounces zinc per square foot.

2. Square Tubing: Galvanized in accordance with ASTM A 123, 2.0 ounces zinc per square foot.
3. Class B Steel Tubing: Exterior; 1.0 ounces zinc per square foot plus chromate conversion coating and clear polyurethane. Interior; zinc rich organic coating.

B. Fabric; one of the following:
1. Galvanized Finish: ASTM A 392 class II zinc coated after weaving, with 2.0 ounces per square foot.
2. Aluminized Finish: ASTM A 491 aluminum coated with 0.40 ounces per square foot.

C. Fence and Gate Hardware, Miscellaneous Materials, Accessories:
1. Wire Ties and Hog Rings: Galvanized Finish, ASTM A 90 1.6 ounces zinc per square foot, or aluminized finish, ASTM A 809 0.40 ounces per square foot.
2. Hardware and Miscellaneous Items: Galvanized Finish, ASTM A 153 (Table 1).
3. Extension Arms: Hot-dip galvanized after fabrication, ASTM 123, 2.0 ounces zinc per square foot.
4. Angle Beams, I Beams, and Steel Shapes: Galvanized in accordance with ASTM A 123, 2.0 ounces zinc per square foot.

PART 3 EXECUTION

3.01 PREPARATION

A. Begin installation of any fencing and or gates when rough grading has been completed within 4 inches of finish grading.

B. Clear and grub along fence line as required to eliminate growth interfering with alignment. Remove debris from State property.

3.02 INSTALLATION

A. Space posts equidistant in the fence line with a maximum of 10 feet on center. Post spacing can be reduced to avoid underground utilities and returned spacing as soon as practical to standard spacing.

B. Setting Posts in Earth: Drill holes for post footings. Set posts in approximate center of hole and fill hole with concrete utilizing two-foot spiral paper tube within four inches of finished grade. When soil conditions warrant, use spiral paper tubes to maintain holes to set posts. Plumb and align posts. Vibrate or rod tamp concrete for consolidation. Finish concrete in a dome shape to shed water. Do not attach fabric to posts until concrete has cured a minimum of 7 days.

C. For temporary construction security fence, use ballast style post base and minimum two sandbags per post.

D. Brace assembled sections until permanently secured in place to prevent displacement or distortion of the members. Do not utilize welding methods, nails or screws in conjunction with metal bracing to support post when plumbing or securing posts that may damage galvanization.

E. If post tops or extension arms will not be installed prior to impending rain, provide temporary covers over tops of posts to prevent posts from filling with water.

F. Locate corner posts at corners and at changes in direction. Use pull posts at all abrupt changes in grade and at intervals no greater than 500 feet. On runs over 500 feet, space pull posts evenly between corner or end posts. On long curves, space pull posts so that the strain of the fence will not bend the line posts.

G. Install top rail continuously through post tops or extension arms, bending to radius for curved runs. Install expansion couplings as recommended by fencing manufacturers.

H. Install bottom and intermediate rails in one piece between posts and flush with post on fabric side using special offset fittings where necessary.

I. Brace corner posts, pull posts, end posts, and gate posts to adjacent line posts with horizontal rails.

J. Diagonally brace corner posts, pull posts, end posts, and gate posts to adjacent line posts with truss rods and truss rod tighteners were fence lines have two or more-line posts.

K. Attach fabric to security side of fence. Maintain a 2-inch clearance above finished grade except when indicated otherwise. Thread stretcher bars through fabric using one bar for each gate and end post and 2 for each corner and pull post. Pull fabric tight so that the maximum deflection of fabric is 2 inches when a 30-pound pull is exerted perpendicular to the center of a panel. Maintain tension by securing stretcher bars to posts with metal bands spaced 15 inches oc. Fasten fabric to steel framework with wire ties spaced 12 inches oc for line posts and 24 inches oc for rails and braces. Bend back wire ends to prevent injury. Tighten stretcher bar bands, wire ties, and other fasteners securely.
   1. Pre-formed ties to secure the fence fabric, the “pigtail” for all ties at the 8-foot-high level and below shall be bent down parallel with the fence posts and/or rails.

L. Position bolts for securing metal bands and hardware so nuts are located opposite the fabric side of fence. Tighten nuts and bend bolts downwards with a minimum angle of 30 degrees. Bend bolt ends of all bolts below a height of 8 feet to prevent loosening or removal of nuts.

M. Secure post tops and extension arms with tamper-resistant cadmium plated steel screws or #10-8 x ½” round head grade 18-8 stainless steel U-drive screws.

N. Install gates plumb and level and adjust for full opening without interference. Install ground-set items in concrete for anchorage, as recommended by fence manufacturer. Adjust hardware for smooth operation and lubricate where necessary.

O. Tension Wire: Where tension wire is indicated or required, weave tension wire through fabric or fasten with hog rings spaced 24 inches oc. Tie tension wire to posts with 9-gauge wire ties.

P. Grounding Method along secure perimeter: At each grounding location (every 300 feet of fencing), drive a grounding rod vertically until the top is 12 inches below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence post at grounding location 6 inches below grade. Ground fence on each side of gates and other fence openings.

Q. Grounding Connections: Make connections with clean, bare metal at points of contact.
1. Make below-grade ground connections with exothermic welds.
2. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

R. Wire brush and repair welded and abraded areas of galvanized surfaces with one coat of cold galvanizing compound.

S. Restore disturbed ground areas to original condition. Topsoil and seed to match adjacent areas.

3.03 FIELD QUALITY CONTROL

A. Perform the following tests:
1. Chain Link Fabric Testing: Test fabric tension according to Article 2.02. Prepare test report and submit to Director's Representative.

B. Inspections of the following items to be performed by the Director's Representative, but not limited to:
1. Verify approved shop drawings, product data, samples match materials on site.
   a. Verify selvages- top and bottom edge of chain link fabric is twisted and barbed.
   b. Posts and rails shall be continuous without splices.
2. Verify the grades have been set before installing posts.
3. Verify post alignment, center of footing and spacing (vibrate concrete).
   a. Tickets for concrete batch plants meets specified concrete mix.
   b. Finish grade of concrete should shed water.
   c. Verify depth of fence and gate footings.
   d. Brace posts until permanently set, no welding methods allowed to brace posts.
   e. Install post tops prior to impending rain.

4. Schedule inspections at gate manufacturer, pre and post galvanization inspections to happen at the galvanizer.
5. Coordinate locks and shipment of keys to the Facility Director.
   a. Verify keying schedule.
6. Swing Gates: Verify three hinges are installed with one flipped upside down per security standard.
7. Vehicle, Pedestrian Slide Gates installation to be overseen by qualified installer.
8. Install rails using offset fitting to keep chain link fabric flush on fabric side.
9. Chain Link Fabric installed on secure side.
10. 2-inch clearance above finished grade for bottom rail.
11. Max. deflection when a 30 lbs. pull is put on fabric.
12 Verify steel ties are used to secure fabric rails and post, and proper number of twists and spacing have been performed.
13. Nuts are located opposite the fabric (secure) side.
14. Bend bolts min. 30 degrees towards ground below the 8 ft. height.
15. Install gates plumb.

3.04 ADJUSTING

A. Gates: Adjust operative units and equipment to work freely and easily, free of binding, warp, excessive deflection, distortion, nonalignment, disruption, or malefaction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

B. Gate Operator: Energize circuits to electrical equipment and devices, start units, and verify proper motor rotation and unit operations per manufacturer's specification.

C. Field lubricate operating and locking systems and related components in accordance with the manufacturer's maintenance instructions. Test and adjust equipment. Replace damaged and malfunctioning controls and equipment.

3.05 DEMONSTRATION

A. Fence contractor to train Facility's maintenance personnel to adjust, operate and maintain chain-link fences and gates.

END OF SECTION

SECTION 237200

AIR-TO-AIR ENERGY RECOVERY UNITS

PART 1 – GENERAL

1.01 SUMMARY

A. This Section includes the following:
   1. Packaged energy recovery units.

1.02 SUBMITTALS

A. Product Data for each energy recovery unit specified, including the following:
   1. Certified supply and exhaust fans performance curves with system operating conditions indicated.
   2. Certified fans sound power ratings.
   3. Certified heat recovery component (i.e., heat wheels, heat-pipe heat exchangers, etc.) rated capacities for inlet and outlet operating conditions, and operating efficiencies indicated.
   4. Motor ratings and electrical characteristics plus motor and fan accessories.
   5. Material gages and finishes.
   6. Filters with performance characteristics.
   7. Dampers, including housings, linkages, and operators.
   8. Weights (shipping, installed, and operating).
   9. Furnished specialties.
   10. All required accessories.
   11. Installation and startup instructions.

B. Shop Drawings from manufacturer detailing equipment assemblies and indicating dimensions, weights, loadings, required clearances, method of field assembly, components, and location and size of each field connection.
   1. Wiring diagrams detailing wiring for power and control systems and differentiating between manufacturer-installed and field-installed wiring.

C. Field test reports indicating and interpreting test results relative to compliance with specified requirements.

D. Maintenance data for each energy recovery unit, control, and accessory to include in the operation and maintenance manual specified in Division 1. Include instruction for lubrication, filter replacement, motor and drive replacement, spare parts lists, and wiring diagrams.

E. Manufacturer’s Warranty to include manufacturer's standard form with agreement to repair or replace components of water source heat pump units that fail in materials or workmanship within specified warranty period. Warranty period shall be a minimum of 5 years from date of Substantial Completion.

1.03 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with provisions of the following codes:
   1. ASHRAE Compliance: Provide capacity ratings for energy recovery devices according to ASHRAE 84, "Method of Testing Air-to-Air Heat Exchangers."
   2. NRCA Compliance: Provide roof curbs for roof-mounted equipment constructed according to recommendations of NRCA.

B. Testing Requirements: The following factory tests are required:
   1. Sound Power Level Ratings: Comply with AMCA 301, "Methods for Calculating Fan Sound Ratings from Laboratory Test Data." Test fans according to AMCA 300, "Reverberant Room Method for Sound Testing of Fans." Fans shall bear AMCA-certified sound ratings seal.
   2. Fan Performance Ratings: For fans product data submitted, establish flow rate, pressure, power, air density, speed of rotation, and efficiency by factory tests and ratings in accordance with AMCA Standard 210/ASHRAE Standard 51 - Laboratory Methods of Testing Fans for Rating.

C. NFPA Compliance: Central-station air-handling units and components shall be designed, fabricated, and installed in compliance with NFPA 90A, "Installation of Air Conditioning and Ventilating Systems."

D. UL Standard: Provide units complying with UL 1812, "Ducted Heat Recovery Ventilators"; or UL 1815, "Nonducted Heat Recovery Ventilators."

E. UL and NEMA Compliance: Provide ancillary electrical components, such as motors, required as part of energy recovery units that are listed and labeled by UL and that comply with applicable NEMA standards.

F. Comply with NFPA 70 for components and installation.

G. AHRI Compliance: Air to air energy recovery components shall comply with AHRI 1060.

H. ARI Compliance: Coils shall be rated in accordance with ARI standard 410 and bear the ARI seal.

I. Listing and Labeling: Provide electrically operated components specified in this Section that are listed and labeled.
   1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.

J. Coordination: Coordinate layout and installation of energy recovery units with ductwork and with other installations.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver energy recovery unit as a factory-assembled module with protective crating and covering.

B. Lift and support units with manufacturer's designated lifting or supporting points.

1.05 SEQUENCING AND SCHEDULING

A. Coordinate size and location of concrete housekeeping bases. Cast anchor-bolt inserts into base. Concrete reinforcement and formwork requirements are specified in Division 3 sections.

B. Coordinate installation of roof curbs, equipment supports, and roof penetrations.

1.06 ENVIRONMENTAL REQUIREMENTS

A. Do not operate units for any purpose, temporary or permanent, until ductwork is clean, filters are in place, bearings lubricated, and fan has been test run under observation.

1.07 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with labels describing contents.

B. Filters: Furnish one set of each type of filter specified.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   1. Packaged Energy Recovery Units:
      a. Carnes Co., Inc.
      b. Conservation Energy Systems.
      c. Des Champs Laboratories Inc.
      d. Gaylord Industries, Inc.
      e. Munters Cargocaire.
      f. QDT Ltd.
      g. SEMCO Inc.
      h. Venmar Ventilation Inc.
      i. Innovent Air Handling Equipment

2.02 PACKAGED ENERGY RECOVERY UNITS

A. Housing: Galvanized steel panels fastened to structural-steel or formed galvanized steel internal frame, gasketed and calked weather tight; with waterproof floor, manufacturer's standard paint finish, and lifting lugs. Panels shall be fabricated to allow removal for access to internal parts and components, with joints between sections sealed Thermal break construction: The entire casing, excluding doors, must be built such that no member on the exterior of the unit, excluding fasteners, has through metal contact with any member on the interior of the unit, excluding fasteners.
   1. Outside Casing: Galvanized steel, 0.0516 inch (1.3 mm).

B. Insulation: Glass-fiber insulation, coated on airstream side complying with NFPA 90A, "Installation of Air Conditioning and Ventilating Systems," for insulation. Unit insulation required in all sections.
   1. Thickness: 1 inch (25 mm).

C. Insulate casing sections with 1-inch - 1.5-pound insulation, applied to internal surfaces with adhesive. Insulation and adhesive shall conform to NFPA 90A. Unit insulation required in all sections.

D. Access Doors: Same materials and finishes as cabinet and complete with hinges, latches, handles, and gaskets. At a minimum, provide double-wall insulated, one side hinged with minimum of 2-cam latches operated from either side.

E. Drain Pans: Formed sections of galvanized steel sheet with connection for factory supplied insulated "P" trap. Fabricate pans in sizes and shapes to collect condensate from coils and energy recovery sections when units are operating at maximum catalogued face velocity across heat recovery component. Provide drain pans under fan/coil section, energy recovery section and any additional coil sections.
   1. Double-Wall Construction: Fill space between walls with foam insulation and seal moisture tight.

F. Fixed-Plate Heat Exchangers: Construct with plates evenly spaced and sealed, arranged for counterflow airflow.
   1. Plate Material: Polypropylene copolymer (high-density plastic).

G. Supply and Exhaust Fans: Provided by manufacturer integral to packaged energy recovery unit as scheduled, with spring isolation base and flexible duct connections, and motors on adjustable motor bases. Fan assemblies shall be statically and dynamically balanced and designed for continuous operation at maximum rated fan speed and motor power. Fan section assemblies include fan wheels, shafts, bearings, drives, belts, isolation bases, and isolators.

H. Motors:
   1. Torque Characteristics: Sufficient to accelerate driven loads satisfactorily.
   2. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range.
   3. Temperature Rating: 50 DegC maximum temperature rise at 40 DegC ambient for continuous duty at full load (Class A Insulation).
   4. Service Factor: 1.15 for polyphase motors and 1.35 for single-phase motors.
   5. Motor Construction: NEMA MG-1, general purpose, continuous duty, Design B. Provide adjustable base.
   6. Overload Protection: Built-in, automatic reset, thermal overload protection.
   7. Noise Rating: Quiet.
   8. Efficiency: Energy-efficient motors shall have a minimum efficiency as scheduled according to IEEE 112, Test Method B. If efficiency is not specified, motors shall have a higher efficiency than "average standard industry motors" according to IEEE 112, Test Method B.
   9. Nameplate: Indicate full identification of manufacturer, ratings, characteristics, construction, and special features.

I. Dampers: Provide low leakage dampers. Leakage rate, according to AMCA 500, "Test Methods for Louvers, Dampers and Shutters," shall not exceed 2 percent of air quantity at 2000-fpm (10-m/s) face velocity through damper and 4-inch w.g. (1000-Pa) pressure differential.

1. Damper operators are specified in Division 23 Section "Control Systems Equipment."

J. Disposable Filters: 2 inches (50 mm) thick, viscous-coated fibers encased in fiberboard cell with perforated-metal media support, clean airflow resistance of 0.28 inch wg at face velocity of 500 fpm and rating of MERV 8 when tested in accordance with ASHRAE 52.2. Provide in galvanized steel frame, upstream of unit in both supply and exhaust airstreams, with maximum 500 FPM face velocity.

1. Filters comply with NFPA 90A.
2. Filter Section: Provide filter media holding frames arranged for flat or angular orientation; provide access doors on both sides of unit.

K. Wiring: Fabricate units with space within housing for electrical conduits. Wire motors and controls so only external connections are required during installation.

L. Power: Provide packaged unit with single power point connection and thru the door factory mounted disconnect switch.

M. Unit Mounted Display and Keypad: Provide from the factory a controller with an LCD screen and keypad for user interface mounted on the unit it is controlling. System passwords are required to prevent unauthorized use. A portable service tool is acceptable, but one must be permanently mounted at each packaged energy recovery unit. Local access to packaged energy recovery unit status, setpoints, and alarms is critical. No exceptions will be permitted. Controller shall be factory programmed with standard sequences of operation, and the controller shall communicate with the BAS through a Bacnet IP / Bacnet MSTP interface card provided by the equipment manufacturer.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Examine areas to receive energy recovery units for compliance with requirements for installation tolerances and other conditions affecting performance of energy recovery units. Examine roughing-in of condensate drainage piping and electrical to verify actual locations of connections before installation. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Install indoor energy recovery units as indicated, plumb and level and according to manufacturer's written instructions.

1. Suspended Units: Suspend units from structural-steel support frame using threaded steel rods and vibration isolation.

B. Arrange installation of units to provide access space around equipment for service and maintenance.

C. Install new filters at completion of equipment installation and before testing, adjusting, and balancing.

3.03 CONNECTIONS

A. Drawings indicate the general arrangement of ducts and duct accessories. Make final duct connections with flexible connections.

3.04 CLEANING

A. After completing system installation, including outlet fittings and devices, inspect and clean exposed finishes. Remove burrs, dirt and construction debris, and repair damaged finishes including chips, scratches and abrasions

B. Clean fan interiors to remove foreign material and construction dirt and dust. Vacuum clean fan wheels, cabinets, and heat recovery equipment air face areas.

3.05 COMMISSIONING

A. Manufacturer's Field Inspection: Engage a factory-authorized service representative to perform the following:
   1. Inspect field assembly of components and installation of equipment including piping, ductwork, and electrical connections.
   2. Prepare a written report on findings and recommended corrective actions.

B. Final Checks before Startup: Perform the following before startup:
   1. Verify that shipping, blocking, and bracing are removed.
   2. Verify that unit is secure on mountings and supporting devices and that connections for ductwork and electrical are complete. Verify that proper thermal overload protection is installed in motors, starters and disconnects.
   3. Perform cleaning and adjusting specified in this Section.
   4. Disconnect fan drive from motor, verify proper motor rotation direction, and verify free fan wheel rotation and smooth bearings operations. Reconnect fan drive system, align belts, and install belt guards.
   5. Lubricate bearings, pulleys, belts, and other moving parts with factory-recommended lubricants.
   6. Inspect energy recovery component and confirm there is no damage or operational issues.
   7. Install clean filters.
   8. Verify that manual and automatic volume control, and any fire and smoke dampers in connected ductwork systems are in fully open position.

C. Startup Services: Engage a factory-authorized service representative to commission units as specified below.
   1. Energize and verify correct rotation of heat wheels and fans.
   2. Adjust seals and purge.
   3. Test and adjust controls and safeties. Replace damaged or malfunctioning controls and equipment.
   4. Prepare a written report on commissioning checklists and startup procedures.

3.06 DEMONSTRATION

A. Train Owner's maintenance personnel on procedures and schedules related to startup and shutdown, troubleshooting, servicing, and preventive maintenance.

B. Review data in the operation and maintenance manuals.

C. Schedule training with Owner with at least 7 days' advance notice.

END OF SECTION

SECTION 238127

AIR COOLED CONDENSING UNITS

PART 1 GENERAL

1.01 SUBMITTALS

A. Product Data: Manufacturer's catalog sheets, brochures, performance charts, test data, standard schematic drawings, specifications and installation instructions for each type unit.

B. Contract Closeout Submittals:
   1. Operation and Maintenance Data: Deliver 2 copies, covering the installed products, to the Director's Representative.

1.02 QUALITY ASSURANCE

A. Regulatory Requirements:
   1. Unit shall be rated in accordance with AHRI Standard 360.
   2. Unit construction shall comply with ANSI/ASHRAE 15 safety code latest revision and comply with NEC.
   3. Unit shall be constructed in accordance with UL 1995 standard and shall carry the UL label.
   4. Air-cooled condenser coils shall be leak tested at 150 psig, and pressure tested at 650 psig.

1.03 MAINTENANCE

A. Maintenance Service: A full equipped authorized service organization capable of guaranteeing response within 8 hours to service calls shall be available 24 hours a day, 7 days a week to service the completed Work.

PART 2 PRODUCTS

2.01 EQUIPMENT

A. General: Outdoor-mounted, air-cooled condensing unit. Unit shall consist of a hermetic scroll air-conditioning compressor(s) assembly, an air-cooled coil, propeller-type condenser fans, and a control box. Unit shall discharge supply air upward as shown on contract drawings. Unit shall be used in a refrigeration circuit matched with a packaged air-handling unit.

B. Unit Cabinet:
   1. Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a prepainted baked enamel finish.
   2. A heavy-gauge roll-formed perimeter base rail with forklift slots and lifting holes shall be provided to facilitate rigging.

C. Condenser Fans:

1. Condenser fans shall be direct driven, propeller type, discharging air vertically upward.
2. Fan blades shall be balanced.
3. Condenser fan discharge openings shall be equipped with PVC-coated steel wire safety guards.
4. Condenser fan and motor shaft shall be corrosion resistant.

D. Compressor: Compressor shall be of the variable, hermetic scroll type mounted on rubber grommets, with overload protection, crankcase heater and internal high pressure and high temperature protection.
1. CU-#-A and CU-#-B shall use two compressors, circuited independently with lead circuit piped for hot-gas reheat.
2. CU-#-C shall use two compressors, circuited independently to the pair of indoor air handling sections.

E. Condenser Coils:
1. Standard Aluminum fin - Copper Tube Coils:
   a. Standard condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
   b. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.

F. Refrigeration Components
1. Refrigeration circuit components shall include liquid line service valve, suction line service valve, a full charge of compressor oil, and a partial holding charge of refrigerant.

G. Controls and Safeties:
1. Minimum control functions shall include:
   a. Control wire terminal blocks.
   b. Compressor lockout on auto-reset safety until reset from thermostat.
   c. Each unit shall utilize a diagnostic board that provides:
      (1.) System Pressure Trip fault code indication
      (2.) Short Cycling fault code indication
      (3.) Locked Rotor fault code indication
      (4.) Open Circuit fault code indication
      (5.) Reverse Phase 3 fault code indication
      (6.) Welded Contactor fault code indication
      (7.) Low Voltage fault code indication
      (8.) Anti-short cycle protection
      (9.) Phase reversal protection
2. Minimum safety devices which are equipped with automatic reset (after resetting first at thermostat), shall include:
   a. High discharge pressure cutout.
   b. Low pressure cutout.

H. Electrical:
   1. Single point power connection.
   2. 24V control transformer.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install air cooled condensing units in accordance with the manufacturer's printed installation instructions. Provide concrete pad to contain each building's air cooled condensing units.

B. Route refrigerant piping maintaining required unit access.

C. Charge systems with refrigerant and oil, and test for leaks. Repair leaks and replace lost refrigerant and oil.

3.02 FIELD QUALITY CONTROL

A. Preliminary Requirements: Provide the services of a Company Field Advisor for the following:
   1. Inspect air conditioning system installations prior to start-up.
   2. Supervise initial start-up of equipment.
   3. Instruction of State Personnel.
   4. Service.

B. Air Cooled Condensing Unit System Pre-Start-Up and Start-Up:
   1. Upon completion of the air cooled condensing unit system installations, the Company Field Advisor shall visit the site, inspect the installations and notify the Director's Representative of any Work which must be done or modified prior to start-up.
   2. Upon completion of required Work, or modifications to installed Work and miscellaneous testing, all as required by the particular air conditioning system or apparatus, the Company Field Advisor shall supervise the air cooled condensing unit system start-up.
   3. Start-up the system and conduct a preliminary test, for the purpose of checking the general operation of the air cooled condensing unit system, proving mechanical and electrical controls and making necessary adjustments.
   4. Provide pre-start-up check list, start-up list and operating instructions for the air cooled condensing unit system, and deliver to the Director's Representative.

C. Instruction of State Personnel: The manufacturer's representative shall instruct authorized State Personnel in the operation and maintenance of the air cooled condensing unit system equipment and all accessories. Provide a minimum of 8 hours for instruction purposes, exclusive of all pre-start-up, start-up and service call time.

END OF SECTION

SECTION 211313

SPRINKLER SYSTEMS

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. Backflow Preventers: Section 210524.

B Hangers and Supports: Section 210529.

C. Sprinkler Piping: Section 211300.

1.02 REFERENCES

A. NFPA 13 2016 - National Fire Protection Association Standard for the Installation of Sprinkler Systems.

1.03 SYSTEM DESCRIPTION

A. Type of System:
   1. Wet System – Hydraulically Designed System

B. Occupancy Classification:
   1. Light Hazard Occupancy.
   2. Ordinary Hazard Occupancy.

1.04 SUBMITTALS

A. Shop Drawings:
   1. The Shop Drawings shall be developed by and the hydraulic calculations shall be performed by a person meeting the following minimum qualification level(without substitution) National Institute for Certification in Engineering Technologies, NICET Level III for Water Based Fire Protection Systems Certified Technician.
   2. The drawings and hydraulic calculations shall bear the seal and signature of the NICET Level III technician
   3. Complete sprinkler system layout indicating the locations of sprinkler heads, devices, and accessories. Include separate details of special or not easily visualized piping arrangements and inspector's test valves and connections.
   4. Hydraulic calculations shall be complete and cross referenced to the appropriate drawing sheets.

B. Product Data: Catalog sheets, specifications, and installation instructions. Indicate UL or FM approval for each product. Include the following additional information:

1. Hose Threads: Verify that hose threads on fire department connections match threads on equipment used by the local or servicing fire department.

C. Quality Control Submittals:
1. Design Data: The portions of the sprinkler system not sized on the Contract Drawings shall be sized in accordance with NFPA requirements for Hydraulically Designed Systems. Submit drawings and hydraulic calculations for approval.
2. Certificates: As required under Quality Assurance Article.
3. Installers Qualification Data:
   a. Name of each person who will be performing the Work.
   b. Upon request, furnish names and addresses of the required number of similar projects that each person has worked on which meet the experience criteria.

D. Contract Closeout Submittals:
1. Operation and Maintenance Data: For wet-pipe sprinkler systems and specialties to include in emergency, operation, maintenance manuals, parts list for mechanical and electrical devices, and Publication NFPA 25 Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems. Submit one (1) set of copies to the Director's Representative and a second set of copies to be inserted into the AS Built Drawing Cabinet located in the Fire Sprinkler Riser Room.
2. Warranty Information: Providing one-year parts and labor warranty certificate. Submit one copy to the Director's Representative and provide a second copy to be inserted into the AS Built Drawing Cabinet located in the Fire Sprinkler Riser Room.
3. As-Built Drawings and Hydraulic Calculations: After final acceptance of the system all drawings and calculations shall have the NICET level III and a seal and signature. Submit one (1) set of copies to the Director's Representative as a hard copy electronically and as a .pdf and .dwg. files. Then provide a second set of hard copies to be inserted into the AS Built Drawing Cabinet located in the Fire Sprinkler Riser Room.
4. As per IFC follow requirements in 901.2.1 Statement of compliance. Before requesting final approval of the installation, the installing contractor shall furnish a written statement to the fire code official that the subject fire protection system has been installed in accordance with approved plans and has been tested in accordance with the manufacture's specifications and the appropriate installation standard. Any deviation from the design standards shall be noted and copies of the approvals for such deviations shall be attached to the written statement. Submit pdf copy to the Director's Representative and provide a second hard copy and pdf to be inserted into the AS Built Drawing Cabinet located in the Fire Sprinkler Riser Room.
5. Field Test Reports: Completed NFPA Test Certificates and Test Forms signed by Installing Contractor and witnessed by Director's Representative including their signature. Submit all related test reports in pdf to the Director's Representative and provide the same related test reports in hard copy and pdf to be inserted into the AS Built Drawing Cabinet located in the Fire Sprinkler Riser Room.

a. Indicate and interpret test results for compliance with performance requirements and as described in NFPA 13. Include "Contractor's Material and Test Certificate for Aboveground Piping", NFPA 24 "Contractor's Material and Test Certificate for Underground Piping", and NYSDOH Form 1013-Report on Test and Maintenance of Backflow Prevention Device.

1.05 QUALITY ASSURANCE

A. Contractor Qualifications: The Contractor performing the Work of this Section shall be experienced in sprinkler work and shall have been regularly engaged in the installation of sprinkler systems for a minimum of 10 years and shall, upon request, furnish to the Director's Representative the names and addresses of 5 similar projects which the Contractor worked on during the last 5 years.

1. The Project Manager employed to supervise the Work shall be National Institute for Certification in Engineering Technologies (NICET) certified as Level III for Water-Based Fire Protection Systems. The services of a Project Manager shall include, but are not limited to, the following:
   a. Attendance at meetings during construction.
   b. Render advice regarding installation and final adjustment of the system.
   c. Witness final system test and then certify with an affidavit that the system is installed in accordance with the Contract Documents and is operating properly.
   d. Performance of hydraulic calculations and development of Working Drawings.

B. Installer Qualifications: The workers and supervisors performing the Work of this Section shall be personally experienced in sprinkler systems Work and shall have been regularly employed by a company engaging in the installation of sprinkler systems for a minimum of 5 years and shall, upon request, furnish to the Director's Representative the names and addresses of 5 similar projects which they have worked on during the last 5 years.

C. Working Drawing/Hydraulic Calculation Preparer Qualifications:

1. The persons employed to prepare these documents for the Work shall be personally experienced in sprinkler work and shall have been regularly performing such work for a minimum of 5 years while in the employ of a company or companies engaged in the installation of fire protection systems.
   a. Upon request, furnish to the Director's Representative the names and addresses of five similar projects which the foregoing people have prepared working drawings/hydraulic calculations on during the past 3 years.
   b. The persons employed to prepare these documents for the Work shall be performed by person(s) meeting one of the following minimum qualification levels (without substitution):
      1) National Institute for Certification in Engineering Technologies (NICET) Level III for Water-Based Fire Protection Systems certified technician.

D. Regulatory Requirements:
1. Materials for the Work of this Section shall be Underwriter's Laboratories listed, and/or Factory Mutual approved.

E. Certification: NFPA Contractor's Material and Test Certificate.

1.06 MAINTENANCE

A. Spare Parts: Furnish the following items and deliver to the Director's Representative for storage in spare sprinkler head cabinets:
1. Spare sprinkler heads of required temperature range as follows:

QUANTITY	TYPE
3	standard upright
6	institutional pendent
1	Dry pendant

2. One sprinkler head wrench to fit each type sprinkler head listed above.

B. An AS Built Drawing Cabinet shall be installed at each project that has a new Fire Sprinkler System, alteration and fit-up which shall be located in the Fire Sprinkler Riser Room. All close out submittals for the project record documents shall be stored in the AS Built Drawing Cabinet.
1. AS Built Drawing Cabinet:
   a. Rigid 16 gage steel construction/ Red powder coat finish.
   b. Dimensions: 26.35"H x 14.25" W x 4" H.
   c. Full-length, stainless steel piano hinge w/Boston lock
   d. Surface mount w/ wall mount holes.

C. Laminated 11x17 paper: Emergency and Working Procedures and System Riser Diagram: Fasten to wall located in the Fire Sprinkler Riser Room.
1. Start-up procedures.
2. Shut-down procedures.
3. Riser diagram showing valve locations and equipment with brass identification tags.
4. Alarm Co. & Monitoring Co. contact information.
5. Installing Contractors information.

D. Laminated 11x17 Building Map: Fasten to wall located in Fire Sprinkler Room.
1. Showing Riser Detail Location: Include Main Control Valves, Main Drains, Low Point Drains, Inspectors Test Stations, Fire Alarm Control Panel, and Annunciator Panel.
2. Each System numbered and color coded in what areas they cover of the building.

PART 2 PRODUCTS

2.01 VALVES AND ACCESSORIES

A. Gate Valves (175 psig non-shock working pressure):
   1. 3/4 inch to 2 inch: Bronze body, OS & Y indicating type; double or wedge disc with threaded ends.
   2. 2-1/2 inch and larger: IBBM, OS & Y indicating type; double or wedge disc with end connections as required to suit the piping system.

B. Test and Drain Valve
   1. Standard: UL “Fire Protection Equipment Directory” or FM Global “Approval Guide.”
   2. Pressure Rating: 175-psig minimum.
   3. Body Material: Bronze housing with orifice, sight glassand integral test valve.
   4 Include: Pressure relief
   5. Size: Same as connecting piping.
   6. Inlet and Outlet: Threaded.
   7. Locking plate kit to prevent unintentional alarms.

C. Valve Locking Devices:
   1. Chain: 3/16 inch galvanized steel, welded link.
   2. Padlock: Series 800 by Yale, Eaton Corp., Charlotte, NC: Key all locks alike. Furnish 2 keys for each lock.
   3. Key Tags: 1-1/2 inch dia., brass, stamped with valve number and service.
   4. “S” Hooks: Brass, for securing keys to key tags.

D. Check Valves: IBBM, single clapper swing check with metal to metal or rubber faced checks, suitable for horizontal and vertical installation; end connections as required to suit the piping system; 175 psig non-shock working pressure.
   1. Ball Drip (where shown on Drawings): Brass, automatic; threaded on both ends.

E. Pressure Gages: Range of 2 times system working pressure at point where installed. Equip with gage cock and provisions for draining.

F Automatic Air Vent Assembly:
   1. Automatic air vent assembly that automatically vents trapped air without human intervention, including Y strainerand ball valve in pre piped assembly.
   2. UL listed or FM Global approved for usein wet-pipe fire sprinkler system
   3. Vents oxygen continuously from system.
   4. Float valve to prevent water discharge.

2.02 SPRINKLER HEADS AND APPURTENANCES

A. Sprinkler Heads: Brass or bronze, with standard 1/2 inch orifice, and deflector:
   1. Upright or Pendent Type: Deflector designed to distribute water downward in a uniform hemispherical spray pattern.
   2. Dry Pendent Type: Designed to prevent water and condensation from being trapped below the drainable system piping.
   2. Institutional Pendent Type: TYCO Raven
   3. Markings: Stamp sprinkler type on deflector in addition to NFPA's color code requirements covering temperature classification.

B. Flexible Sprinkler Hose Assemblies:
   1. Standard: UL 1474.
   2. Type: Flexible hose for connection to sprinkler, and with bracket for connection to ceiling grid.
   3. Pressure Rating: 200-psig minimum.
   4. Size: Same as connected piping, for sprinkler.
   5. Required identification label to be installed on all flexibly sprinkler hose assemblies [CAUTION: Relocation of this device should only be performed by qualified and /or certified individuals that are aware of the original system design criteria, hydraulic criteria, sprinkler head listings parameters, and knowledge of the fire code and NFPA 13 installation standards. Relocation of device without this knowledge could adversely affect the performance of this fire protection and life safety system].

C. Spare Sprinkler Head Cabinet: Steel, with hinged cover, constructed of minimum 20 gage material and fitted with 16 gage steel racks designed to hold quantities and types of spare sprinkler heads and sprinkler head wrenches.
   1. Finish: Bright red, baked on enamel.

2.03 FIRE DEPARTMENT CONNECTION

A. Siamese Connection: Two way wall type, brass with polished finish; size 2-1/2 x 2-1/2 x 4 inch , with two 2-1/2 inch female connections, 2 individual drop clapper valves, plugs and chains, and escutcheon.
   1. Equip above with integral sillcock having hose bibb end, cap, chain and removable tee handle key. Furnish 2 keys. Deliver to the Director's Representative.

B. Identification: Cast the word FIRE DEPT CONNECTION on escutcheon.

2.04 WATER FLOW ALARM DEVICE

A. Vane Type Waterflow Switch: Autocall Div., Federal Signal Corp.'s 4160, Potter Electric Signal Co.'s VSR-F, or Reliable's Model A., having:
   1. Corrosion-resistant vane.
   2. Splash/dust resistant enclosure with anti-tamper switch.
   3. Adjustable pneumatic retard.
   4. Screw type wiring terminals.
   5. Switch rated minimum 7.0 amps at 125 V ac and 0.25 amps at 125 V dc.

2.05 ELECTRIC ALARM GONG

A. 6 inch diameter vibrating bell; 120 V ac. Sound rating 92 db at 10 feet minimum; Viking's 03115BA or Edward's 438-6N5.
   1. Markings: The words FIRE ALARM in block lettering on a contrasting background.
   2. Mounting: Suitable for both wall and ceiling mounting.

2.06 VALVE SUPERVISORY SWITCHES

A. Mechanically actuated, designed to close contacts and sound an alarm when supervised valve is closed and when switch cover removed.
   1. For Gate Valves: Potter Electric Signal Co.'s OSYSU-A, or Grinnell's F640.

2.07 SIGNS

A. Steel with vitreous enamel finish, lettering on contrasting background to identify and indicate the function of:
   1. Control valves.
   2. Drain, test, valves.
   3. Hydraulic Design Nameplate Data: Size approx. 9 x 12 inches, inscribed with the following::
      a. SPRINKLER SYSTEM HYDRAULICALLY DESIGNED (in block letters).
      b. Location and area of hydraulically designed section.
      c. Discharge density over designed area in gallons per minute.
      d. Residual pressure at base of riser supplying water to designed section.

PART 3 EXECUTION

3.01 INSTALLATION

A. Unless otherwise shown or specified, install the Work of this section in accordance with NFPA 13, and the item manufacturer's installation instructions.

B. Locking Valves:
   1. Lock gate valves in open position with chain looped through handwheel and around adjacent sprinkler pipe. Secure with padlock.
   2. Lock test outlet valve in closed position with padlock.

C. Spare Sprinkler Head Cabinet: Secure to building wall or other permanent structure in vicinity of main valve controlling sprinkler system, unless otherwise directed.

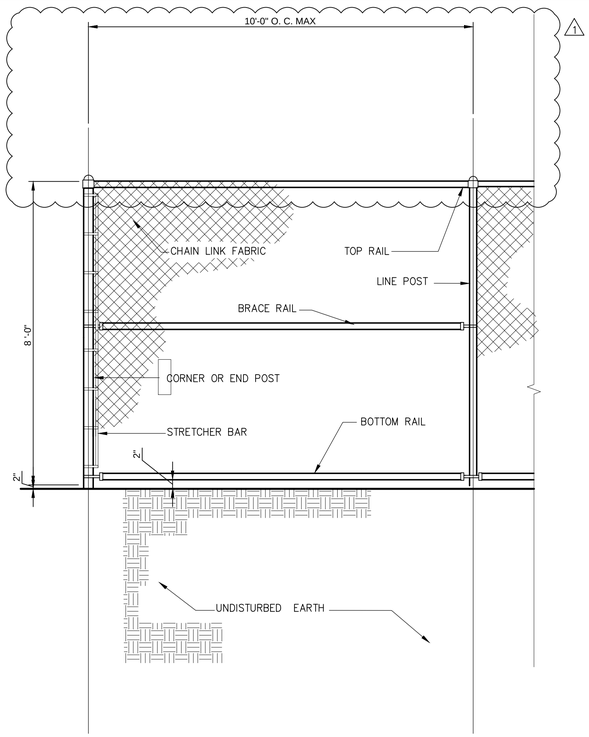
D. Connection to Existing Main: A bolted mechanical branch connection may be used. Refer to Section 211300.

E. Signs: Install signs identifying the following:
   1. Valves: One for each size, type and function.
   2. Hydraulically Designed System.

3.02 FIELD QUALITY CONTROL

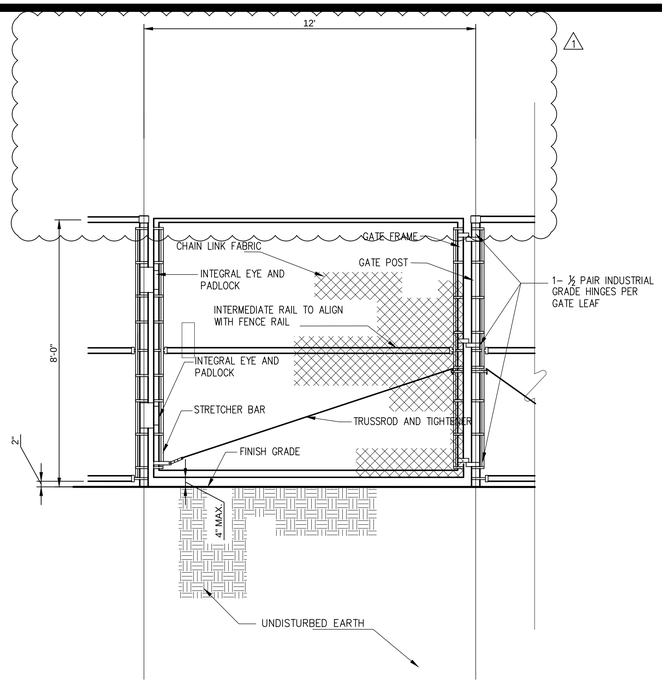
A. Tests: Unless otherwise shown or specified, perform tests in accordance with NFPA 13.
   1. Flushing: In addition to the requirements of the Standard, flush new piping before making final connection to existing systems and before performing hydrostatic test. Flush at rates of flow prescribed in the Contractor's Material and Test Certificate. After making final connections, flush entire system and assure that debris is removed from piping and there are no stoppages or obstructions in the system.
   2. System Tests:
      a. Test all new Work.
      b. Notify the Director's Representative when the Work of this Section is ready for testing.
      c. Perform the tests when directed, and in the Director's Representatives presence.

END OF SECTION



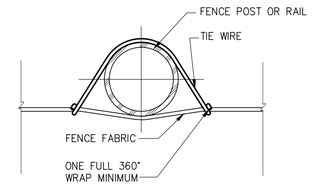
NOTE:
1. TEMPORARY CORNER POSTS AND GATE POSTS TO HAVE CONCRETE FOOTING, AS SHOWN.
2. ALL LINE POSTS TO BE SET IN EXISTING GROUND WITHOUT CONCRETE FOOTING.

1 8' TALL TEMPORARY SECURITY FENCE
SCALE: N.T.S.

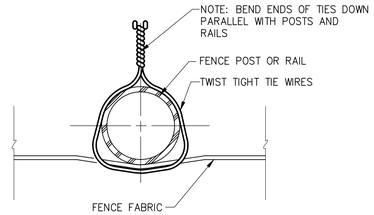


NOTE:
1. TEMPORARY CORNER POSTS AND GATE POSTS TO HAVE CONCRETE FOOTING, AS SHOWN.
2. ALL LINE POSTS TO BE SET IN EXISTING GROUND WITHOUT CONCRETE FOOTING.

2 8' TALL TEMPORARY GATE TYPE "C"
SCALE: N.T.S.

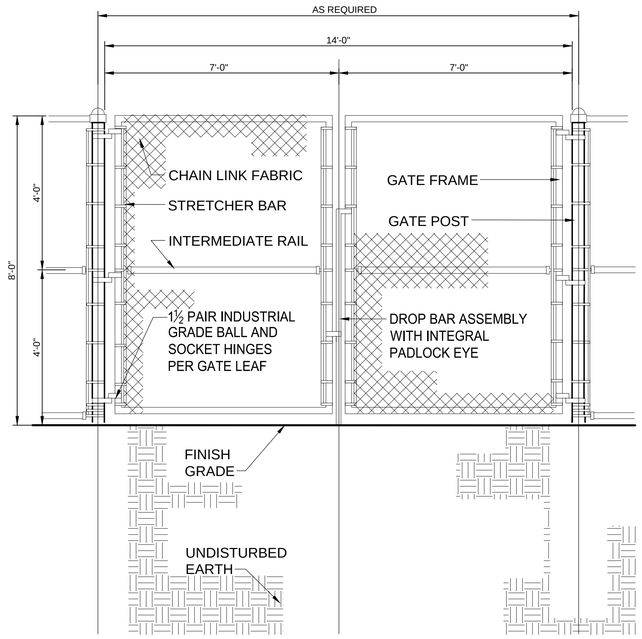


MANUAL ATTACHMENT



MACHINE ATTACHMENT

3 FENCE FABRIC POST ATTACHMENT
SCALE: N.T.S.



4 14' WIDE TEMPORARY SWING GATE
SCALE: N.T.S.

36x24 PLOT SHEET

NEW YORK STATE OF OPPORTUNITY. Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

CERTIFICATE OF AUTHORIZATION #: 0021745

CHA

UNIFORM CODE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.

ENERGY CODE COMPLIANCE STATEMENT:
TO THE BEST OF THE REGISTERD DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLAN AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

STATE OF NEW YORK · SAMUEL K BENNETT · 084465 · LICENSED PROFESSIONAL ENGINEER

REGISTRATION EXPIRES: 04/30/2027

CONTRACT:
CONSTRUCTION

TITLE:
PROVIDE BEDROOM AND BATHROOM UPGRADES, BUILDINGS 72, 73 AND 74

LOCATION:
INDUSTRY LIMITED SECURE CENTER
375 RUSH-SCOTTSVILLE ROAD
RUSH, NY 14543

CLIENT:
NEW YORK STATE OFFICE OF CHILDREN AND FAMILY SERVICES

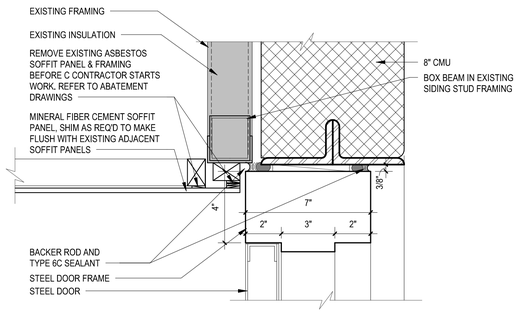
MARK	DATE	DESCRIPTION
1	06/25/2025	ADDENDUM NO 1
0	11/20/2024	BID SUBMISSION

PROJECT NUMBER:	45682-C
DESIGNED BY:	DD
DRAWN BY:	TK
FIELD CHECK:	
APPROVED:	SB

SHEET TITLE:
SITE DETAILS

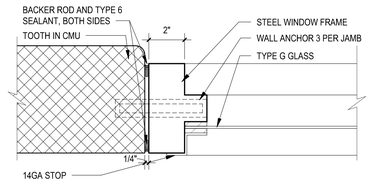
DRAWING NUMBER:
C-4603

SHEET: 26 OF 206



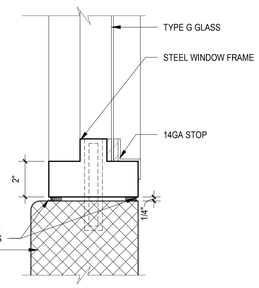
1 A-4511 DOOR HEAD DETAIL AT EXISTING EXTERIOR SOFFIT

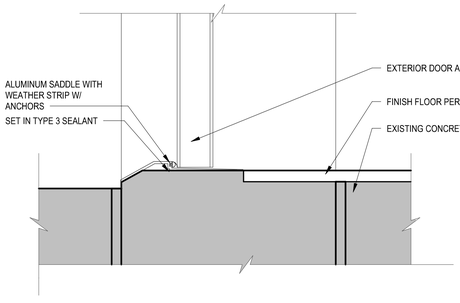
3" = 1'-0"



5 A-4511 FRAME JAMB DETAIL

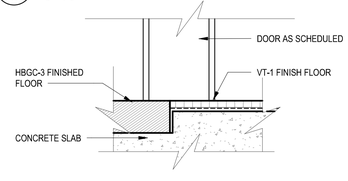
3" = 1'-0"





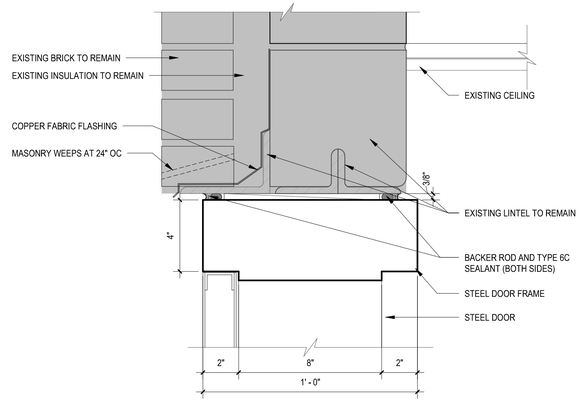
13 A-4511 TYPICAL EXTERIOR SILL

3" = 1'-0"



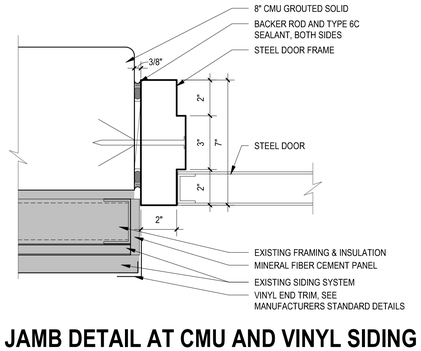
15 A-4511 TRANSITION DETAIL

6" = 1'-0"



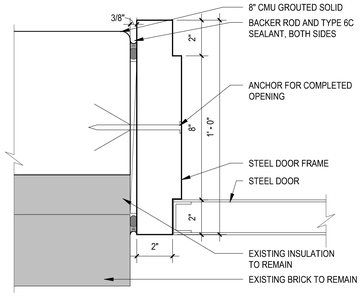
2 A-4511 EXTERIOR FRAME DETAIL

3" = 1'-0"



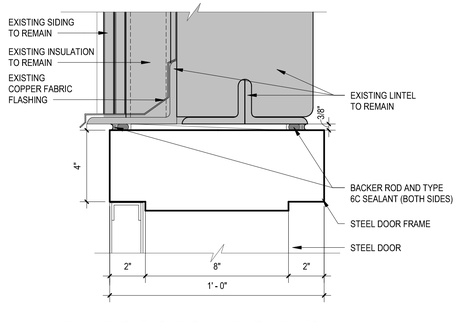
6 A-4511 DOOR JAMB DETAIL AT CMU AND VINYL SIDING

3" = 1'-0"



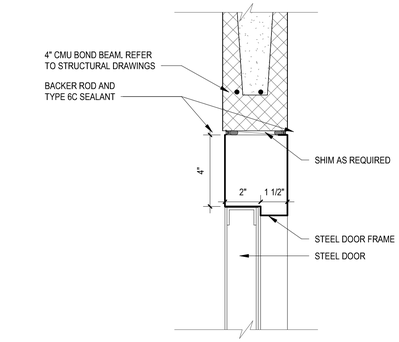
10 A-4511 DOOR JAMB AT CMU AND BRICK WALL

3" = 1'-0"



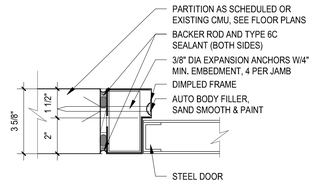
17 A-4511 EXTERIOR FRAME DETAIL

3" = 1'-0"



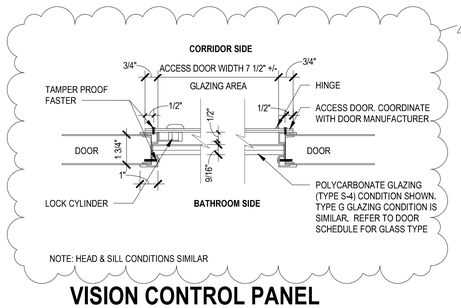
3 A-4511 DOOR HEAD DETAIL AT 4" CMU

3" = 1'-0"



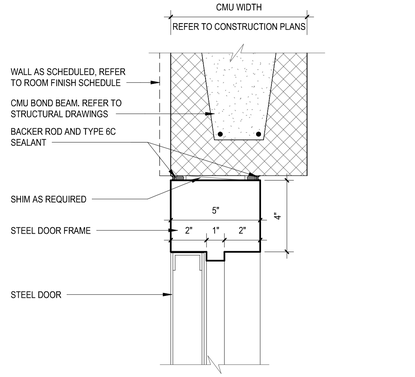
7 A-4511 JAMB DETAIL AT 4" CMU

3" = 1'-0"



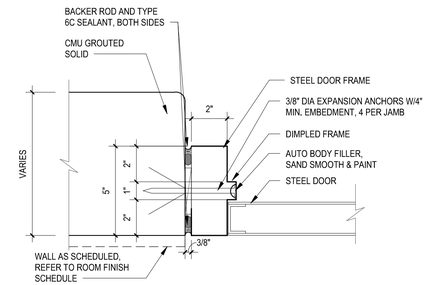
12 A-4511 VISION CONTROL PANEL BATHROOM DOOR

3" = 1'-0"



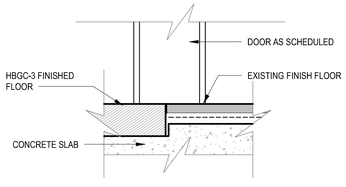
4 A-4511 DOOR HEAD DETAIL AT 6" & 8" CMU

3" = 1'-0"



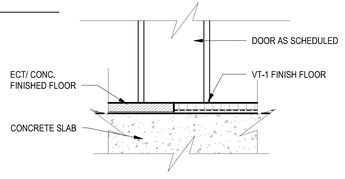
8 A-4511 FRAME JAMB DETAIL AT EXISTING CMU

3" = 1'-0"



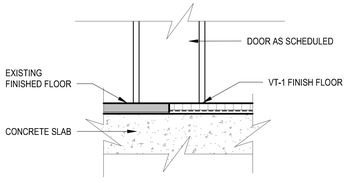
14 A-4511 TRANSITION DETAIL

6" = 1'-0"



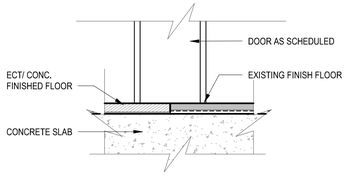
16 A-4511 TRANSITION DETAIL

6" = 1'-0"



18 A-4511 TRANSITION DETAIL

6" = 1'-0"



19 A-4511 TRANSITION DETAIL

6" = 1'-0"

NEW YORK STATE OF OPPORTUNITY. Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

CERTIFICATE OF AUTHORIZATION #: 018342

CHA

FoitAlbert ASSOCIATES

Architecture. Engineering. Surveying. Environmental

CERTIFICATE OF AUTHORIZATION #: 0018046

UNIFORM CODE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.

ENERGY CODE COMPLIANCE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLAN AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

REGISTERED ARCHITECT BRUCE T. BIXBY NO. 26382 STATE OF NEW YORK

REGISTRATION EXPIRES: 04/30/2028

CONTRACT:
CONSTRUCTION

TITLE:
PROVIDE BEDROOM AND BATHROOM UPGRADES, BUILDING 72, 73 AND 74

LOCATION:
INDUSTRY LIMITED SECURE CENTER
375 RUSH-SCOTTSVILLE ROAD
RUSH, NY 14543

CLIENT:
NEW YORK STATE OFFICE OF CHILDREN AND FAMILY SERVICES

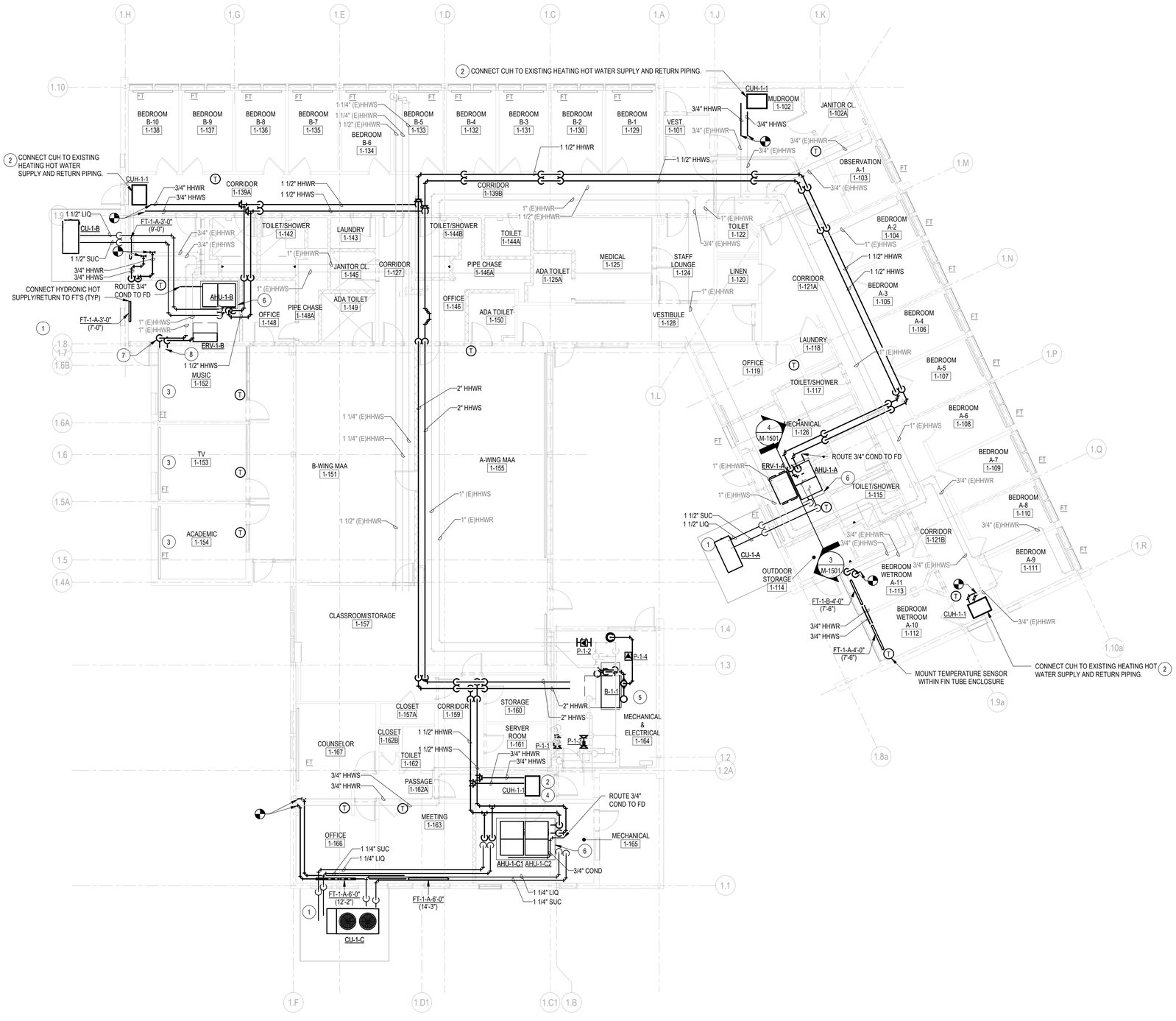
MARK	DATE	DESCRIPTION
2	06/25/2025	ADDENDUM #1
1	11/20/2024	BID SUBMISSION

PROJECT NUMBER:	45682-C
DESIGNED BY:	BB
DRAWN BY:	MC, APO, JB
FIELD CHECK:	
APPROVED:	

SHEET TITLE:
STANDARD DOOR FRAME DETAILS

DRAWING NUMBER:
A-4511

SHEET: 124 OF 206



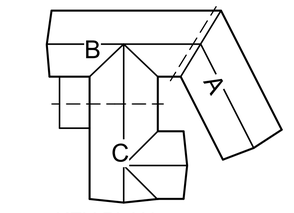
GENERAL NOTES

1. PROVIDE TEMPERATURE SENSOR ON WALL. IN SECURE WALLS, SAW CUT WALL TO RUN CONTROL WIRING FROM SENSOR TO ABOVE CEILING. IN FILL CUT CHANNEL PRIOR TO WALL FINISH APPLICATION, COORDINATE WITH DIRECTOR'S REPRESENTATIVE.
2. ALL PIPING PENETRATIONS SHALL BE PER SPECIFICATION 232000 SECTION 3.04, COORDINATE WALL TYPE WITH DIRECTOR'S REPRESENTATIVE.

(#) CODED NOTES

1. SIZE REFRIGERANT PIPING PER MANUFACTURER.
2. LOCATE CONTROL VALVES AND PIPING ACCESSORIES ABOVE ACCESSIBLE CEILING.
3. PROVIDE 2-WAY CONTROL VALVE ON EXISTING FIN TUBE PIPING AND CONNECT TO ROOM THERMOSTAT.
4. PROVIDE CABINET UNIT HEATER MOUNTED IN SLOPED HARD CEILING. COORDINATE FRAMED OPENING DIMENSIONS WITH C-CONTRACT.
5. COORDINATE BOILER NATURAL GAS PIPING CONNECTION WITH DIRECTOR'S REPRESENTATIVE. NATURAL GAS PIPING BY P-CONTRACT.
6. INTERIOR EQUIPMENT PADS BY H-CONTRACT. DIMENSIONS PER DETAIL 3/M-4500.
7. PROVIDE 1" HHWS AND 1" HHWR DROP INSIDE MECH ROOM TO MATCH (E)FT PIPING ELEVATION IN MUSIC 1-152.
8. CONNECT 1" HHWS AND 1" HHWR TO (E)FT.

1 BUILDING 72 1ST FLOOR PIPING PLAN
1/8" = 1'-0"



KEY PLAN
NOT TO SCALE

NEW YORK STATE | Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

CERTIFICATE OF AUTHORIZATION #: 0021745

CHA

UNIFORM CODE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.

ENERGY CODE COMPLIANCE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLAN AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

TRUE NORTH
PROJECT NORTH

REGISTRATION EXPIRES: 07/31/2025

CONTRACT:
HVAC

TITLE:
PROVIDE BEDROOM AND BATHROOM UPGRADES, BUILDINGS 72, 73 AND 74

LOCATION:
INDUSTRY LIMITED SECURE CENTER
375 RUSH-SCOTTSVILLE ROAD
RUSH, NY

CLIENT:
NEW YORK STATE OFFICE OF CHILDREN AND FAMILY SERVICES

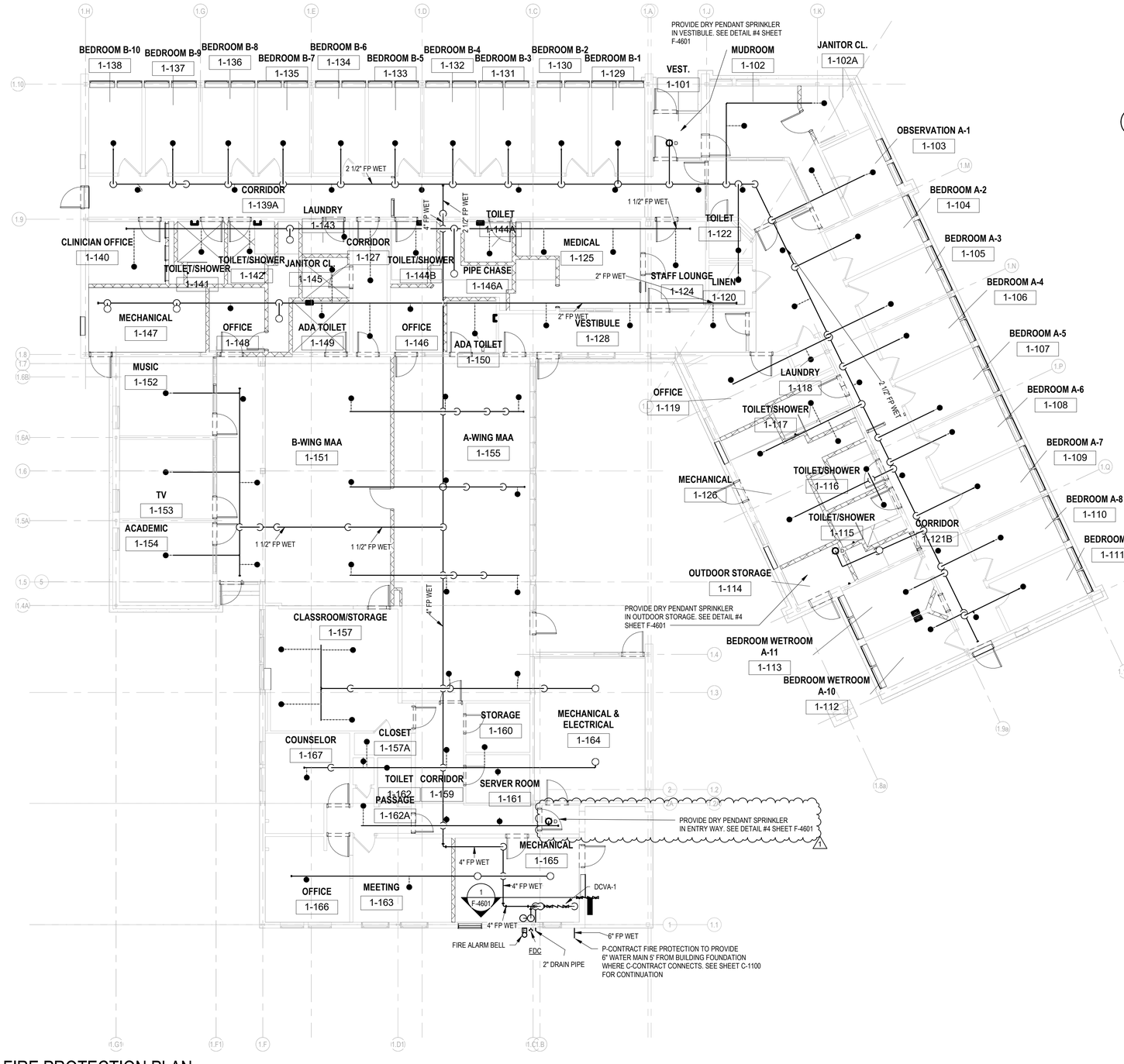
MARK	DATE	DESCRIPTION
1	06/25/2025	ADDENDUM NO 1
0	11/20/2024	BID SUBMISSION

PROJECT NUMBER:	45682-H
DESIGNED BY:	JH
DRAWN BY:	KH
FIELD CHECK:	
APPROVED:	

SHEET TITLE:
BUILDING 72 MECHANICAL PIPING PLAN

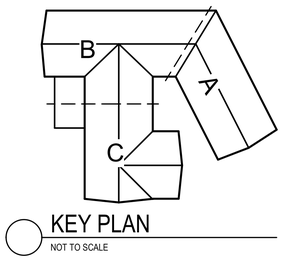
DRAWING NUMBER:
M-1201

SHEET: 155 OF 206



1 BUILDING 72 FIRE PROTECTION PLAN

1/8" = 1'-0"



KEY PLAN

NOT TO SCALE

NEW YORK STATE | Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

CERTIFICATE OF AUTHORIZATION #: 0021745

CHA

UNIFORM CODE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.

ENERGY CODE COMPLIANCE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLAN AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

TRUE NORTH
PROJECT NORTH

REGISTRATION EXPIRES:

CONTRACT:

PLUMBING

TITLE:

PROVIDE BEDROOM AND BATHROOM UPGRADES, BUILDINGS 72, 73 AND 74

LOCATION:
INDUSTRY LIMITED SECURE CENTER
375 RUSH SCOTTSVILLE ROAD
RUSH, NY 14543

CLIENT:
NEW YORK STATE OFFICE OF CHILDREN AND FAMILY SERVICES

MARK	DATE	DESCRIPTION
1	06/25/2025	ADDENDUM NO 1
0	11/20/2024	BID SUBMISSION

PROJECT NUMBER:	45682-P
DESIGNED BY:	RA
DRAWN BY:	RA
FIELD CHECK:	
APPROVED:	

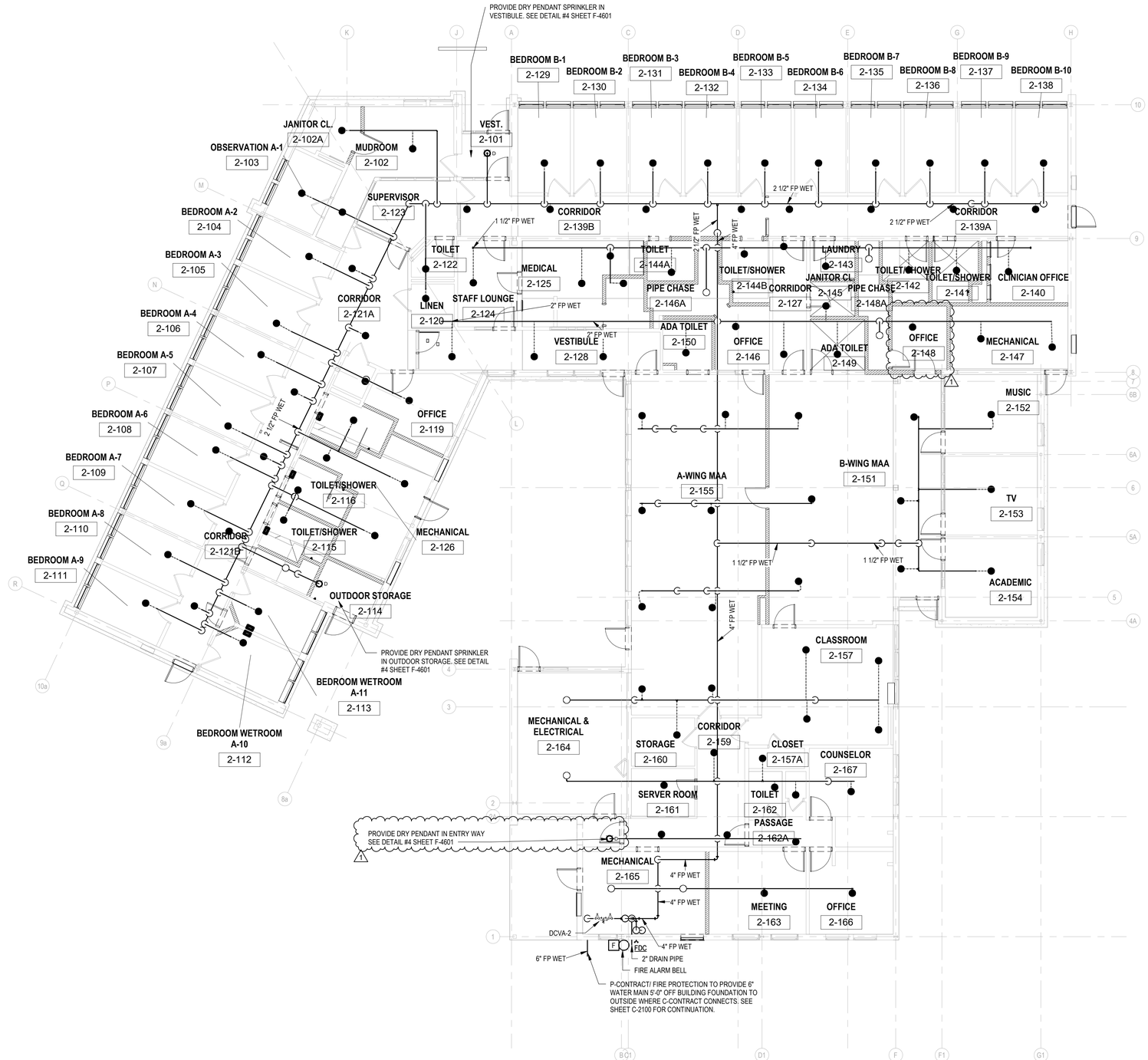
SHEET TITLE:

BUILDING 72 FIRE PROTECTION PLAN

DRAWING NUMBER:

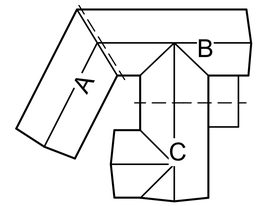
F-1100

SHEET: 127 OF 206



1 BUILDING 73 FIRE PROTECTION PLAN

1/8" = 1'-0"



KEY PLAN

NOT TO SCALE

NEW YORK STATE | Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

CERTIFICATE OF AUTHORIZATION #: 0021745

CHA

UNIFORM CODE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.

ENERGY CODE COMPLIANCE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLAN AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

PROJECT NORTH

TRUE NORTH

REGISTRATION EXPIRES:

CONTRACT:

PLUMBING

TITLE:

PROVIDE BEDROOM AND BATHROOM UPGRADES, BUILDINGS 72, 73 AND 74

LOCATION:
INDUSTRY LIMITED SECURE CENTER
375 RUSH SCOTTSVILLE ROAD
RUSH, NY 14543

CLIENT:
NEW YORK STATE OFFICE OF CHILDREN AND FAMILY SERVICES

MARK	DATE	DESCRIPTION
1	06/25/2025	ADDENDUM NO 1
0	11/20/2024	BID SUBMISSION

PROJECT NUMBER:	45682-P
DESIGNED BY:	RA
DRAWN BY:	RA
FIELD CHECK:	
APPROVED:	

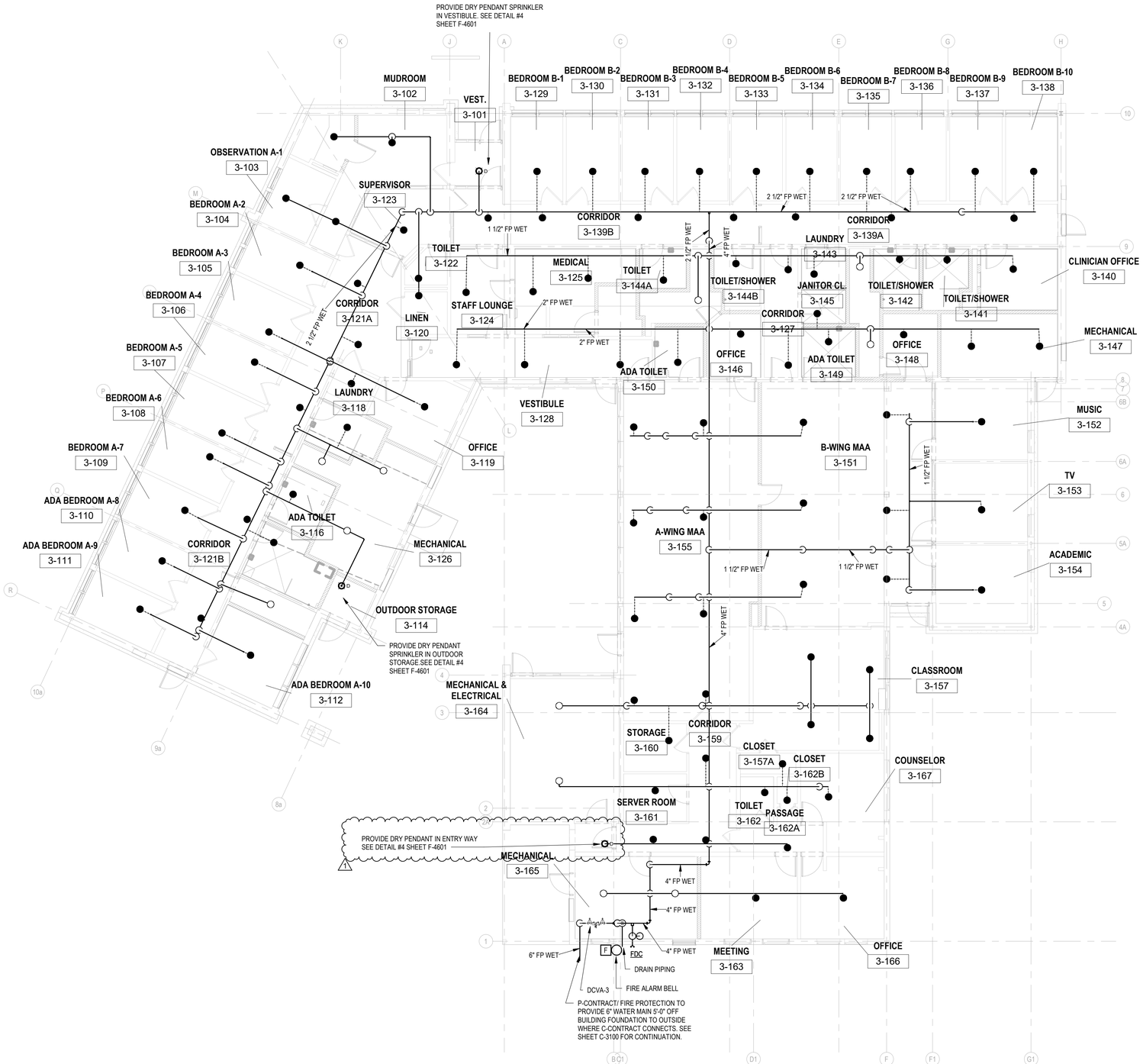
SHEET TITLE:

BUILDING 73 FIRE PROTECTION PLAN

DRAWING NUMBER:

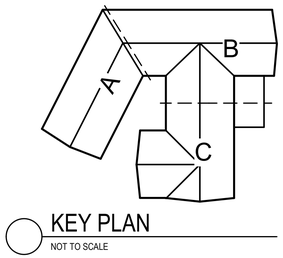
F-2100

SHEET: 128 OF 206



1 BUILDING 74 FIRE PROTECTION PLAN

1/8" = 1'-0" 0' 4' 8' 16'



KEY PLAN

NOT TO SCALE

NEW YORK STATE | Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

CERTIFICATE OF AUTHORIZATION #: 0021745

CHA

UNIFORM CODE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.

ENERGY CODE COMPLIANCE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLAN AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

PROJECT NORTH

TRUE NORTH

REGISTRATION EXPIRES:

CONTRACT:

PLUMBING

TITLE:

PROVIDE BEDROOM AND BATHROOM UPGRADES, BUILDINGS 72, 73 AND 74

LOCATION:

INDUSTRY LIMITED SECURE CENTER
375 RUSH SCOTTSVILLE ROAD
RUSH, NY 14543

CLIENT:

NEW YORK STATE OFFICE OF CHILDREN AND FAMILY SERVICES

MARK	DATE	DESCRIPTION
1	06/25/2025	ADDENDUM NO 1
0	11/20/2024	BID SUBMISSION

PROJECT NUMBER: 45682-P

DESIGNED BY: RA

DRAWN BY: RA

FIELD CHECK:

APPROVED:

SHEET TITLE:

BUILDING 74 FIRE PROTECTION PLAN

DRAWING NUMBER:

F-3100

SHEET: 129 OF 206

Autodesk Docs://45682 Industry 72_ 73_74/080679-FIRE22-BLDG 74-CENTRAL.rvt
6/23/2025 8:12:50 AM
36x24 PLOT SHEET

Location: MECHANICAL & ELECTRICAL 1-164
Mounting: SURFACE
Source: MDP

PANEL ID
LP-3

Volts, Phase, Wire: 120/240V, 1Ø, 3W
Mains: 100A MLO
Short Circuit Rating: 42KAIC

CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1	P-1 (NOTE 1)	20 A	1	0 VA	0 VA			1	20 A	WH-1 (NOTE 1)	2
3	B-1-1 (NOTE 1)	20 A	1			100 VA	0 VA	1	20 A	EXISTING LOAD	4
5	EXISTING LOAD	20 A	1	0 VA	0 VA			1	20 A	EXISTING LOAD	6
7	P-1 (NOTE 1)	20 A	2			50 VA	0 VA	1	20 A	EXISTING LOAD	8
9	--	--	--	50 VA	50 VA			2	20 A	P-3 (NOTE 1)	10
11	P-2 (NOTE 1)	25 A	2			50 VA	50 VA	--	--	--	12
13	--	--	--	50 VA	0 VA			1	20 A	EXISTING LOAD	14
15	P-4	15 A	2			50 VA	0 VA	1	20 A	EXISTING LOAD	16
17	--	--	--	50 VA	0 VA			2	20 A	EXISTING LOAD	18
19							0 VA	--	--	--	20
21					0 VA			2	20 A	EXISTING LOAD	22
23							0 VA	--	--	--	24
			Total Load:	200 VA		300 VA					
			Total Amps:	2 A							

NOTES:

1. UTILIZE EXISTING CIRCUIT BREAKER SAVED DURING REMOVALS.

LIGHTING FIXTURE SCHEDULE

FIXTURE DESIG.	TYPE	DESCRIPTION	MOUNTING	VOLTAGE	WATTS	MANUFACTURER	MODEL	NOTES
L1	LED	2'x4' RECSSED LED LIGHT FIXTURE, 4210 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI, VANDAL RESISTANT, 14 GAUGE COLD ROLLED STEEL (PAINTED WHITE) DOOR/HOUSING MATERIAL, 0.50" POLYCARBONATE LENS	RECESSED	120	50	GORDON INC	CLCR-D-MP-0/0-45L40K-DCC-DV-SYM/J	PROVIDE LEL OPTION FOR EM LIGHT FIXTURES.
L2	LED	2'x2' RECSSED LED LIGHT FIXTURE, 3705 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI, VANDAL RESISTANT, 14 GAUGE COLD ROLLED STEEL (PAINTED WHITE) DOOR/HOUSING MATERIAL, 0.50" POLYCARBONATE LENS	RECESSED	120	51	GORDON INC	CLCR-C-MP-0/0-45L40K-DCC-DV-SYM/J	PROVIDE LEL OPTION FOR EM LIGHT FIXTURES.
L3	LED	1'x4' RECSSED LED LIGHT FIXTURE, 3655 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI, VANDAL RESISTANT, 14 GAUGE COLD ROLLED STEEL (PAINTED WHITE) DOOR/HOUSING MATERIAL, 0.50" POLYCARBONATE LENS	RECESSED	120	46	GORDON INC	CLCR-B-MP-0/0-45L40K-DCC-DV-SYM/J	PROVIDE LEL OPTION FOR EM LIGHT FIXTURES.
L4	LED	1'X2' RECSSED LED LIGHT FIXTURE, 1931 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI, VANDAL RESISTANT, 14 GAUGE COLD ROLLED STEEL (PAINTED WHITE) DOOR/HOUSING MATERIAL, 0.50" POLYCARBONATE LENS	RECESSED	120	28	GORDON INC	CLCR-A-MP-0/0-25L40K-DCC-DV-SYM/J	PROVIDE LEL OPTION FOR EM LIGHT FIXTURES. PROVIDE DLN OPTION FOR BEDROOM LIGHT FIXTURES.
L5	LED	4' LED STRIP LIGHT FIXTURE, 3565 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI	SURFACE	120	25	LITHONIA	ZL1N-L48-3000LM-L/LENS-120-40K-80CRI	
L6	LED	SQUARE LED CANOPY LIGHT FIXTURE, 1307 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI	SURFACE	120	13	KENALL	MS11FL-PP-DB-10L40K-120	
L7	LED	6 INCH CIRCULAR LED DOWNLIGHT, 1087 LUMEN, 4000K COLOR TEMPERATURE, 80 CRI, 1/8" CLEAR POLYCARBONATE LENS	RECESSED	120	12	KENALL	DFDL6-FF-XBR-9L-40K8-M-FW-G-RID6-120-DIM1	
L8	LED	CIRCULAR LED WALLPACK, 871 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI	SURFACE	120	13	KENALL	MR13EL-PP-DB-10L40K-120	
X1	LED	CEILING MOUNTED LED EXIT SIGN, SINGLE FACE, RED LETTERING, WITH EM BATTERY, 14 GAUGE COLD ROLLED STEEL (PAINTED) DOOR/HOUSING MATERIAL	CEILING	120	10	KENALL	MMEX-1-0-R-DT-1-EL	
X2	X1	WALL MOUNTED LED EXIT SIGN, SINGLE FACE, RED LETTERING, WITH EM BATTERY, 14 GAUGE COLD ROLLED STEEL (PAINTED) DOOR/HOUSING MATERIAL	WALL	120	10	KENALL	MMEX-1-0-R-DT-1-EL	

1

1

NEW YORK STATE | Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

CERTIFICATE OF AUTHORIZATION #: 0021745

CHA

UNIFORM CODE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.

ENERGY CODE COMPLIANCE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLAN AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

STATE OF NEW YORK · JOSEPH J. DELABRUERE · LICENSED PROFESSIONAL ENGINEER · 089569

REGISTRATION EXPIRES: 10/31/2025

CONTRACT:

ELECTRICAL

TITLE:

PROVIDE BEDROOM AND BATHROOM UPGRADES, BUILDINGS 72, 73, AND 74

LOCATION:

INDUSTRY LIMITED SECURE CENTER
375 RUSH-SCOTTSVILLE ROAD
RUSH, NY 14543

CLIENT:

NEW YORK STATE OFFICE OF CHILDREN AND FAMILY SERVICES

MARK	DATE	DESCRIPTION
1	06/25/2025	ADDENDUM 1
	11/20/2024	BID SUBMISSION

PROJECT NUMBER: 45682-E

DESIGNED BY: KML
DRAWN BY: KML
FIELD CHECK:
APPROVED: JJD

SHEET TITLE:

BUILDING 72 - ELECTRICAL SCHEDULES (CONT.)

DRAWING NUMBER:

E-1502

SHEET: 183 OF 206

Location: MECHANICAL & ELECTRICAL 2-164
Mounting: SURFACE
Source: MDP

PANEL ID
LV-3

Volts, Phase, Wire: 120/240V, 1Ø, 3W
Mains: 100A MLO
Short Circuit Rating: 42KAIC

CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1	P-1 (NOTE 1)	20 A	1	0 VA	0 VA			1	20 A	WH-1 (NOTE 1)	2
3	B-2-1 (NOTE 1)	20 A	1			100 VA	0 VA	1	20 A	EXISTING LOAD	4
5	EXISTING LOAD	20 A	1	0 VA	0 VA			1	20 A	EXISTING LOAD	6
7	P-1 (NOTE 1)	20 A	2			0 VA	0 VA	1	20 A	EXISTING LOAD	8
9	--	--	--	0 VA	0 VA			2	20 A	P-3 (NOTE 1)	10
11	P-2 (NOTE 1)	25 A	2			0 VA	0 VA	--	--	--	12
13	--	--	--	0 VA	0 VA			1	20 A	EXISTING LOAD	14
15	P-4	15 A	2			0 VA	0 VA	1	20 A	EXISTING LOAD	16
17	--	--	--	0 VA	0 VA			2	20 A	EXISTING LOAD	18
19							0 VA	--	--	--	20
21					0 VA			2	20 A	EXISTING LOAD	22
23							0 VA	--	--	--	24
			Total Load:	0 VA		100 VA					
			Total Amps:	0 A							

NOTES:

1. UTILIZE EXISTING CIRCUIT BREAKER SAVED DURING REMOVALS.

LIGHTING FIXTURE SCHEDULE

FIXTURE DESIG.	TYPE	DESCRIPTION	MOUNTING	VOLTAGE	WATTS	MANUFACTURER	MODEL	NOTES
L1	LED	2'x4' RECSSED LED LIGHT FIXTURE, 4210 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI, VANDAL RESISTANT, 14 GAUGE COLD ROLLED STEEL (PAINTED WHITE) DOOR/HOUSING MATERIAL, 0.50" POLYCARBONATE LENS	RECESSED	120	50	GORDON INC	CLCR-D-MP-0/0-45L40K-DCC-DV-SYM/J	PROVIDE LEL OPTION FOR EM LIGHT FIXTURES.
L2	LED	2'x2' RECSSED LED LIGHT FIXTURE, 3705 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI, VANDAL RESISTANT, 14 GAUGE COLD ROLLED STEEL (PAINTED WHITE) DOOR/HOUSING MATERIAL, 0.50" POLYCARBONATE LENS	RECESSED	120	51	GORDON INC	CLCR-C-MP-0/0-45L40K-DCC-DV-SYM/J	PROVIDE LEL OPTION FOR EM LIGHT FIXTURES.
L3	LED	1'x4' RECSSED LED LIGHT FIXTURE, 3655 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI, VANDAL RESISTANT, 14 GAUGE COLD ROLLED STEEL (PAINTED WHITE) DOOR/HOUSING MATERIAL, 0.50" POLYCARBONATE LENS	RECESSED	120	46	GORDON INC	CLCR-B-MP-0/0-45L40K-DCC-DV-SYM/J	PROVIDE LEL OPTION FOR EM LIGHT FIXTURES.
L4	LED	1'X2' RECSSED LED LIGHT FIXTURE, 1931 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI, VANDAL RESISTANT, 14 GAUGE COLD ROLLED STEEL (PAINTED WHITE) DOOR/HOUSING MATERIAL, 0.50" POLYCARBONATE LENS	RECESSED	120	28	GORDON INC	CLCR-A-MP-0/0-25L40K-DCC-DV-SYM/J	PROVIDE LEL OPTION FOR EM LIGHT FIXTURES. PROVIDE DLN OPTION FOR BEDROOM LIGHT FIXTURES.
L5	LED	4' LED STRIP LIGHT FIXTURE, 3565 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI	SURFACE	120	25	LITHONIA	ZL1N-L48-3000LM-L/LENS-120-40K-80CRI	
L6	LED	SQUARE LED CANOPY LIGHT FIXTURE, 1307 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI	SURFACE	120	13	KENALL	MS11FL-PP-DB-10L40K-120	
L7	LED	6 INCH CIRCULAR LED DOWNLIGHT, 1087 LUMEN, 4000K COLOR TEMPERATURE, 80 CRI, 1/8" CLEAR POLYCARBONATE LENS	RECESSED	120	12	KENALL	DFDL6-FF-XBR-9L-40K8-M-FW-G-RID6-120-DIM1	
L8	LED	CIRCULAR LED WALLPACK, 871 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI	SURFACE	120	13	KENALL	MR13EL-PP-DB-10L40K-120	
X1	LED	CEILING MOUNTED LED EXIT SIGN, SINGLE FACE, RED LETTERING, WITH EM BATTERY, 14 GAUGE COLD ROLLED STEEL (PAINTED) DOOR/HOUSING MATERIAL	CEILING	120	10	KENALL	MMEX-1-0-R-DT-1-EL	
X2	X1	WALL MOUNTED LED EXIT SIGN, SINGLE FACE, RED LETTERING, WITH EM BATTERY, 14 GAUGE COLD ROLLED STEEL (PAINTED) DOOR/HOUSING MATERIAL	WALL	120	10	KENALL	MMEX-1-0-R-DT-1-EL	

1 1

NEW YORK STATE | Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

CERTIFICATE OF AUTHORIZATION #: 0021745

CHA

UNIFORM CODE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.

ENERGY CODE COMPLIANCE STATEMENT:
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLAN AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

STATE OF NEW YORK · JOEY J. DELABRUERE · 089569 · LICENSED PROFESSIONAL ENGINEER

REGISTRATION EXPIRES: 10/31/2025

CONTRACT:
ELECTRICAL

TITLE:
PROVIDE BEDROOM AND BATHROOM UPGRADES, BUILDINGS 72, 73 AND 74

LOCATION:
INDUSTRY LIMITED SECURE CENTER
375 RUSH-SCOTTSVILLE ROAD
RUSH, NY 14543

CLIENT:
NEW YORK STATES OFFICE OF CHILDREN AND FAMILY SERVICES

MARK	DATE	DESCRIPTION
1	06/25/2025	ADDENDUM 1
	11/20/2024	BID SUBMISSION

PROJECT NUMBER: 45682-E
DESIGNED BY: KML
DRAWN BY: KML
FIELD CHECK:
APPROVED: JJD

SHEET TITLE:
BUILDING 73 - ELECTRICAL SCHEDULES (CONT.)

DRAWING NUMBER:
E-2502

SHEET: 193 OF 206

Location: MECHANICAL & ELECTRICAL 3-164
Mounting: Surface
Source: MDP

PANEL ID
LV-3

Volts, Phase, Wire: 120/240V, 1Ø, 3W
Mains: 100A MLO
Short Circuit Rating: 42KAIC

CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1	P-1 (NOTE 1)	15 A	1	0 VA	0 VA			1	15 A	WH-1 (NOTE 1)	2
3	B-3-1 (NOTE 1)	20 A	1			100 VA	0 VA	1	20 A	EXISTING LOAD	4
5	EXISTING LOAD	20 A	1	0 VA	0 VA			1	20 A	EXISTING LOAD	6
7	P-1 (NOTE 1)	20 A	2			50 VA	0 VA	1	20 A	EXISTING LOAD	8
9	--	--	--	50 VA	50 VA			2	20 A	P-3 (NOTE 1)	10
11	P-2 (NOTE 1)	25 A	2			50 VA	50 VA	--	--	--	12
13	--	--	--	50 VA	0 VA			1	20 A	EXISTING LOAD	14
15	P-4	15 A	2			50 VA	0 VA	1	20 A	EXISTING LOAD	16
17	--	--	--	50 VA	0 VA			2	20 A	EXISTING LOAD	18
19							0 VA	--	--	--	20
21					0 VA			2	20 A	EXISTING LOAD	22
23							0 VA	--	--	--	24
			Total Load:	200 VA		300 VA					
			Total Amps:	2 A							

NOTES:

1. UTILIZE EXISTING CIRCUIT BREAKER SAVED DURING REMOVALS.

LIGHTING FIXTURE SCHEDULE

FIXTURE DESIG.	TYPE	DESCRIPTION	MOUNTING	VOLTAGE	WATTS	MANUFACTURER	MODEL	NOTES
L1	LED	2'x4' RECSSED LED LIGHT FIXTURE, 4210 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI, VANDAL RESISTANT, 14 GAUGE COLD ROLLED STEEL (PAINTED WHITE) DOOR/HOUSING MATERIAL, 0.50" POLYCARBONATE LENS	RECESSED	120	50	GORDON INC	CLCR-D-MP-0/0-45L40K-DCC-DV-SYM/J	PROVIDE LEL OPTION FOR EM LIGHT FIXTURES.
L2	LED	2'x2' RECSSED LED LIGHT FIXTURE, 3705 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI, VANDAL RESISTANT, 14 GAUGE COLD ROLLED STEEL (PAINTED WHITE) DOOR/HOUSING MATERIAL, 0.50" POLYCARBONATE LENS	RECESSED	120	51	GORDON INC	CLCR-C-MP-0/0-45L40K-DCC-DV-SYM/J	PROVIDE LEL OPTION FOR EM LIGHT FIXTURES.
L3	LED	1'x4' RECSSED LED LIGHT FIXTURE, 3655 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI, VANDAL RESISTANT, 14 GAUGE COLD ROLLED STEEL (PAINTED WHITE) DOOR/HOUSING MATERIAL, 0.50" POLYCARBONATE LENS	RECESSED	120	46	GORDON INC	CLCR-B-MP-0/0-45L40K-DCC-DV-SYM/J	PROVIDE LEL OPTION FOR EM LIGHT FIXTURES.
L4	LED	1'X2' RECSSED LED LIGHT FIXTURE, 1931 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI, VANDAL RESISTANT, 14 GAUGE COLD ROLLED STEEL (PAINTED WHITE) DOOR/HOUSING MATERIAL, 0.50" POLYCARBONATE LENS	RECESSED	120	28	GORDON INC	CLCR-A-MP-0/0-25L40K-DCC-DV-SYM/J	PROVIDE LEL OPTION FOR EM LIGHT FIXTURES. PROVIDE DLN OPTION FOR BEDROOM LIGHT FIXTURES.
L5	LED	4' LED STRIP LIGHT FIXTURE, 3565 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI	SURFACE	120	25	LITHONIA	ZL1N-L48-3000LM-L/LENS-120-40K-80CRI	
L6	LED	SQUARE LED CANOPY LIGHT FIXTURE, 1307 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI	SURFACE	120	13	KENALL	MS11FL-PP-DB-10L40K-120	
L7	LED	6 INCH CIRCULAR LED DOWNLIGHT, 1087 LUMEN, 4000K COLOR TEMPERATURE, 80 CRI, 1/8" CLEAR POLYCARBONATE LENS	RECESSED	120	12	KENALL	DFDL6-FF-XBR-9L-40K8-M-FW-G-RID6-120-DIM1	
L8	LED	CIRCULAR LED WALLPACK, 871 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 CRI	SURFACE	120	13	KENALL	MR13EL-PP-DB-10L40K-120	
X1	LED	CEILING MOUNTED LED EXIT SIGN, SINGLE FACE, RED LETTERING, WITH EM BATTERY, 14 GAUGE COLD ROLLED STEEL (PAINTED) DOOR/HOUSING MATERIAL	CEILING	120	10	KENALL	MMEX-1-0-R-DT-1-EL	
X2	LED	WALL MOUNTED LED EXIT SIGN, SINGLE FACE, RED LETTERING, WITH EM BATTERY, 14 GAUGE COLD ROLLED STEEL (PAINTED) DOOR/HOUSING MATERIAL	WALL	120	10	KENALL	MMEX-1-0-R-DT-1-EL	

CONTRACT:
ELECTRICAL

TITLE:
PROVIDE BEDROOM AND BATHROOM UPGRADES, BUILDINGS 72, 73 AND 74

LOCATION:
INDUSTRY LIMITED SECURE CENTER
375 RUSH-SCOTTSVILLE ROAD
RUSH, NY 14543

CLIENT:
NEW YORK STATE OFFICE OF CHILDREN AND FAMILY SERVICES

MARK	DATE	DESCRIPTION
1	06/25/2025	ADDENDUM 1
	11/20/2024	BID SUBMISSION

PROJECT NUMBER: 45682-E
DESIGNED BY: KML
DRAWN BY: KML
FIELD CHECK:
APPROVED: JJD

SHEET TITLE:
BUILDING 74 - ELECTRICAL SCHEDULES (CONT.)

DRAWING NUMBER:
E-3502

SHEET: 203 OF 206