# TO: PLANS AND SPECIFICATIONS FOR STATE OF MISSOURI

Renovate Mechanical / Electrical / Life-Safety / State Office Building Jefferson State Office Building 205 Jefferson Street Jefferson City, MO 65101 PROJECT NO. 01911-01

Bid Opening Date: 1:30 PM, Thursday, February 1, 2024 (Changed per Addendum #2)

Bidders are hereby informed that the construction Plans and/or Specifications are modified as follows:

# **SPECIFICATION CHANGES:**

- 1. <u>Section 004322 Unit Prices Form</u>
  - a. THE UNIT PRICES FORM INCLUDED WITH THIS ADDENDUM SHALL BE INCLUDED WITH THE BID DOCUMENTS ON MOBUYS WHEN SUBMITTING THE BID. Be sure to use the UNIT PRICES FORM labeled Addendum #3 in the header.
- 2. Section 012200- Unit Prices
  - a. ADDED specification section 012200 Unit Prices.
- 3. <u>Section 040110 Masonry Cleaning</u>
  - a. UPDATED Part 1.1 General Section 1.5 A.1
  - b. **UPDATED** Part 3.5 Final Cleaning Section B
- 4. <u>Section 064116 Plastic-Laminate Clad Architectural Cabinets</u>
  - a. **ADDED** Part 1.1 Summary Section A.4
  - **b. ADDED** Part 2.3 Plastic-Laminate-Clad Cabinet Fronts At Fan Coil Units Rinse off roof and flush gutters and downspouts. (Text has been strikethrough.)
- 5. <u>Section 232113 Hydronic Piping</u>
  - a. **REMOVED** Section 232113.3.1.1 Grooved fittings not acceptable for hydronic systems outside of pump vibration isolation controls.

# DRAWING CHANGES:

- 1. <u>Drawing A-100:</u>
  - a. **ADDED** Demolition General Note #24 to address the removal of all existing fan coil unit laminate fronts for Mechanical work.
- 2. Drawing A-116:
  - a. UPDATED Plan #2 Furniture Demolition Plan Eleventh Floor: Changed phasing of plan to also show wall demolition in breakroom, existing data and electrical and office spaces.
- 3. Drawing A-120:
  - a. **ADDED** Architectural General Note #25 to address removal of all existing fan coil unit

laminate fronts.

- b. **ADDED** Architectural General Note #26 to address floor leveling at existing floor outlet box removal.
- 4. Drawings ED1.2 through ED1.13:
  - a. **UPDATED -** Keyed Note regarding disconnecting and removal of existing floor outlet device.
- 5. Drawing E2.13:
  - a. **ADDED** new power and data outlets to Room 1309.
- 6. Drawing S1.2:
  - a. **ADDED** More information on structural detail.
- 7. <u>Drawing S1.4:</u>
  - a. **UPDATED** Section Cut Note to 2/S1.4

# <u>GENERAL:</u>

- 1. Pre-Bid Questions:
  - a. Specifications Section 230548.13-1 states that grooved couplings are only allowed for vibration isolation, whereas Specification Section 232113-10 states that as contractor's option grooved couplings may be used in all exposed locations where welded pipe is permitted. Screenshots of both sections attached. Please clarify.

**<u>Response</u>**: Grooved fittings are only acceptable as a means of vibration control at pumps, not as a means of typical jointing.

- b. Please provide specifications & schedule for signage.
   <u>Response:</u> Signage for all offices and workstations will be provided and installed by the State. See Addendum 1 Drawing Changes Item 3.b. for additional information.
- c. General note #14/A120 indicates to prepare existing slab to be smooth & level within ¼" on 10'! There is no way of knowing how good or bad the existing slab is for floor levelness. What are we to assume as a basis for bidding purposes to correct existing slab conditions. <u>Response:</u> Note applies to the concrete demo work associated with the removal of equipment maintenance pads. Reference Drawing Changes item #3.b. And at areas scheduled for floor electrical box removal. Allot for 520 tombstone fills. Fills will be a simple plug and floor leveling skim coat for potential future use.
  - See Attachment Section 004322 Unit Prices Form
  - See Attachment Section 012200- Unit Prices
- d. Masonry cleaning is in the spec. Where is masonry cleaning being done in this project? <u>Response:</u> Masonry Cleaning scope applies to the existing glazed block walls in the Restrooms scheduled for renovation. And scheduled exterior louver replacement – just need the dust knocked off so it doesn't stain. References to plant material will be removed from Spec Section 040110 – Masonry Cleaning.
- e. Construction Facilities Spec. Sec. 01 50 00 Construction Facilities and Temporary Controls. Contractor and Owner are both stated. Who is the responsible party?

**<u>Response</u>**: This will be owner supplied. See Addendum #1 attached specifications section 01 50 00 - Construction Facilities and Temporary Controls for updates.

- f. Need details on S1.2 for steel plates to be epoxied to the floor. (Specify number and size of expansion anchor bolts to anchor steel plates to slab.)
  <u>Response:</u> Drawing sheet S1.2 has been amended. Please see attachment.
- *g.* Roof Top Equipment S1.4 has wrong section cut note as 3/S1.0. Should be 2/S1.4. <u>**Response:**</u> Drawing sheet S1.4 has been amended. Please see attachment.
- h. Are all the FCU panels being replaced?

**Response:** Updated 064116 – Plastic-Laminate-Clad Architectural Cabinets summary to include Fan Coil Unit laminate panels and added section 2.3 to address Fan Coil Unit laminate panels. Sheet A-100 – added General Note #24 – Floors 2-13: Remove all existing laminate panel fronts at existing fan coil units. Reference Mechanical drawings for more information.

- On the fire alarm may want to put a DAA so we don't have to run floor to floor to floor (need to have a smoke detector by it as well). Do you want an amplifier on each floor?
   <u>Response:</u> An amplifier on each floor is not necessary. The building system is a general alarm system where all the speakers will activate on any alarm initiation.
- *j.* Will the Café receive new flooring? If yes, is that encompassed in the Alternate? <u>**Response:**</u> The Café flooring removal and new flooring is included in Alternate #5 – reference sheet A-019 for more information. No flooring removal or replacement is included in the base bid.
- k. What floors receive the new carpet?

**<u>Response</u>**: Reference Finish Plans A-140 through A-148 for all new flooring layouts. Carpet pattern shown on finish plans. The fifth-floor existing carpet (noted by a grid hatch pattern) will remain. Note the following areas are alternates:

- <u>Alternate #3:</u> Second through Fourteenth Floors Elevator Lobbies and Corridors (200C1, 300C1, & 1300C1), removal of existing and all new flooring are part of this alternate and not part of the base bid. Reference sheet A-020.
- <u>Alternate #5</u>: First Floor Rooms 144 through 149, removal of existing and all new flooring are part of this alternate and not part of the base bid. Reference sheet A-019.
- *I.* The 11th floor demo drawings contradict the 11th floor swing space drawings. Please clarify.

**<u>Response</u>**: Sheet A-014 indicates the work required in Phase 1. The 11th Floor Swing Space will be set up at the beginning of the Project to maximize desk count to hold people displaced during construction. Whereas Sheet A-116 Furniture Demo 10th & 11 Floors indicates the work to be completed in Phase 4 demolishing the swing space and completing the final buildout at the 11th Floor.

*m.* Per spec section 271513-1.3-A1, advise if the TIA-568-C.1 applies to any of the horizontal cabling locations for this project?
 <u>Response:</u> The cabling distances in TIA-568-C.1 should be adhered to. Provide the

quantity of data cables per the plans.

n. I noticed that the Plan Set is MISSING the Reflective Ceiling Plans for Levels 2 through 14. I've looked through Addendum #1, and they don't address these missing sheets, either.

**<u>Response</u>**: Reflected Ceiling Plans were not issued in this set. Reference Addendum 1 drawing changes #4 & 5. And reference Sheet A-700 General Notes #3, 5, & 6. Reference electrical lighting plans E1.0 through E1.14 for new grid and lighting layouts.

o. The demolition drawings EDO 1 – ED1.15 do not show any specific amount of data cabling or devices to be demolished. The power and data drawings E2.0 - E2.15 have a general note, I.E. E2.3 general note 10, that in portions of the building new cabling is required in those areas to match the quantities that were demoed. Please clarify what is required in these areas. We need to know how many new data drops need to be installed at each location.

**<u>Response</u>**: Most private offices will require 2 data cables. Larger offices (618 and 1309) will likely require more. For bidding purposes, include 6 to this space 618. See revised drawings for 1309.

# SUBSTITUTION REQUESTS:

- 1. Substitution Request Nystrom Fire Extinguishers <u>Response:</u> Substitution Approved
- 2. Substitution Request Nystrom Fire Protection Cabinets <u>Response:</u> Substitution Approved
- 3. Substitution Request Nystrom Access Doors and Frames <u>Response:</u> Substitution Approved
- Substitution Request O1911-01\_AAI01
   <u>Response:</u> The proposed substitute request is approved if the proposed product can pass
   room peripherals including cameras and conference audio back to host PC and guest laptop
   connection locations.
- Substitution Request O1911-01\_AAI02
   <u>Response:</u> The proposed substitute request is approved if the proposed product can pass
   room peripherals including cameras and conference audio back to host PC and guest laptop
   connection locations.
- Substitution Request O1911-01\_AAI03
   <u>Response:</u> The proposed substitute request is approved if the proposed product can pass
   room peripherals including cameras and conference audio back to host PC and guest laptop
   connection locations.
- Substitution Request O1911-01\_AAI04
   <u>Response:</u> The proposed substitute request is approved if the proposed product can pass
   room peripherals including cameras and conference audio back to host PC and guest laptop
   connection locations.

8. Substitution Request - O1911-01\_AAI05

**<u>Response</u>**: The proposed substitute request is approved if the proposed product can pass room peripherals including cameras and conference audio back to host PC and guest laptop connection locations.

Substitution Request - O1911-01 - ECC - AT-OME-MS42
 <u>Response:</u> The proposed substitute request is approved if the proposed product can pass
 room peripherals including cameras and conference audio back to host PC and guest laptop
 connection locations.

# ATTACHMENTS:

- 10. Attachment A Specifications
  - a. Section 004322 Unit Price Form (1 Page)
  - b. Section 012200 Unit Prices (2 Pages)
  - c. Section 040110 Masonry Cleaning (7 Pages)
  - d. Section 064116 Plastic-Laminate Clad Architectural Cabinets (4 Pages)
  - e. Section 232113 Hydronic Piping (15 Pages)

# 11. Attachment B – Drawings

- a. Drawing A-100 (1 Page)
- b. Drawing A-116 (1 Page)
- c. Drawing A-120 (1 Page)
- d. Drawing S1.2 MECHANICAL ROOM STRUCTRAL PLAN (1 Page)
- e. Drawing S1.4 ROOFTOP EQUIPMENT STRUCTURAL SUPPORT (1Page)
- f. Drawing ED1.2 SECOND FLOOR PLAN DEMOLITION (1 Page)
- g. Drawing ED1.3 THIRD FLOOR PLAN DEMOLITION (1 Page)
- h. Drawing ED1.4 FOURTH FLOOR PLAN DEMOLITION (1 Page)
- i. Drawing ED1.5 FIFTH FLOOR PLAN DEMOLITION (1 Page)
- j. Drawing ED1.6 SIXTH FLOOR PLAN DEMOLITION (1 Page)
- k. Drawing ED1.7 SEVENTH FLOOR PLAN DEMOLITION (1 Page)
- I. Drawing ED1.8 EIGHTH FLOOR PLAN DEMOLITION (1 Page)
- m. Drawing ED1.9 NINTH FLOOR PLAN DEMOLITION (1 Page)
- n. Drawing ED1.10 TENTH FLOOR PLAN DEMOLITION (1 Page)
- o. Drawing ED1.11 ELEVENTH FLOOR PLAN DEMOLITION (1 Page)
- p. Drawing ED1.12 TWELFTH FLOOR PLAN DEMOLITION (1 Page)
- q. Drawing ED1.13 THIRTEENTH FLOOR PLAN DEMOLITION (1 Page)
- r. Drawing E2.13 THIRTEENTH FLOOR PLAN POWER AND DATA (1 Page)
- 12. Attachment C Substitution Request Documentation
  - a. Substitution Request Nystrom Fire Extinguishers (17 Pages)
  - b. Substitution Request Nystrom Fire Protection Cabinets (17 Pages)
  - c. Substitution Request Nystrom Access Doors and Frames (21 Pages)
  - d. Substitution Request O1911-01\_AAI01 (6 Pages)
  - e. Substitution Request O1911-01\_AAI02 (13 Pages)
  - f. Substitution Request O1911-01\_AAI03 (6 Pages)
  - g. Substitution Request O1911-01\_AAI04 (9 Pages)

- h. Substitution Request O1911-01\_AAI05 (7 Pages)
- i. Substitution Request O1911-01 ECC AT-OME-MS42 (9 Pages)

# By the Order of:

Frank Cunningham Division of Facilities Management, Design and Construction January 18, 2024

# END ADDENDUM NO. 3

# **SECTION 004322 - UNIT PRICES FORM**

# PROJECT NUMBER: 01911-01

#### 1.0 Description

A. For changing specified quantities of work from those indicated by the contract drawings and specifications, upon written instructions of Owner, the following unit prices shall prevail. The unit prices include all labor, overhead and profit, materials, equipment, appliances, bailing, shoring, shoring removal, etc., to cover the finished work of the several kinds of work called for. Only a single unit price shall be given, and it shall apply for either MORE or LESS work than that shown on the drawings and called for in the specifications or included in the Base Bid. In the event of more or less units than so indicated or included during construction the total contract price shall be decreased as appropriate or increased by contract change in accordance with General Conditions Article 4.1.

#### 2.0 Unit Prices

- A. Unit Price No. 1 Tombstone Core Fills:
  - 1. Description: Plug floor conduits and apply floor leveling skim coat to locations of floor electrical and data tombstones that serve cubicles and offices.
  - 2. Unit of Measurement: Two each, floor conduits serving floor tombstone.
  - 3. Base Bid Quantity: 520 two conduit tombstone locations
    - \$\_\_\_\_\_ per Two each, floor conduits serving floor tombstone.

## **SECTION 012200 – UNIT PRICES**

#### PART 1 - GENERAL

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions and other Division 1 Specification Sections apply to this Section.
- B. Quantities of Units to be included in the Base Bid are indicated in Section 004322 Unit Prices.

## 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Unit Prices.
- B. Related Sections include the following:
- 1. Division 1 Section "Allowances" for procedures for using Unit Prices to adjust quantity allowances.
- 2. Division 1 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
- 3. Drawing Sheet, A-120 Architectural General Note #26 for procedures for measurement and payment for tombstone core fills.

#### **1.3 DEFINITIONS**

A. Unit Price is a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

#### **1.4 PROCEDURES**

- A. Unit Prices include all necessary material plus cost for delivery, installation, insurance, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of Unit Prices. Methods of measurement and payment for Unit Prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of Work in-place that involves use of established Unit Prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A list of Unit Prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each Unit Price.

Jefferson State Office Building Renovate Mechanical/Electrical/Life-Safety O1911-01

# PART 2 - PRODUCTS (Not Used)

#### **PART 3 - EXECUTION**

#### 3.1 LIST OF UNIT PRICES

- A. Unit Price No. 1 Tombstone Core Fills:
  - 1. Description: Plug floor conduits and apply floor leveling skim coat to locations of floor electrical and data tombstones that serve cubicles and offices according to Drawing Sheet A-120 Architectural General Note #26.
  - 2. Unit of Measurement: Two each, floor conduits serving floor tombstone.
  - 3. Base Bid Quantity: 520

# END OF SECTION 012200

## SECTION 040110 - MASONRY CLEANING

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. Section includes cleaning the following:
  - 1. Unit masonry surfaces.

### 1.3 DEFINITIONS

- A. Very Low-Pressure Spray: Under 100 psi (690 kPa).
- B. Low-Pressure Spray: 100 to 400 psi (690 to 2750 kPa); 4 to 6 gpm (0.25 to 0.4 L/s).
- C. Medium-Pressure Spray: 400 to 800 psi (2750 to 5510 kPa); 4 to 6 gpm (0.25 to 0.4 L/s).

### 1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
  - 1. Review methods and procedures related to cleaning masonry including, but not limited to, the following:
    - a. Verify masonry-cleaning equipment and facilities needed to make progress and avoid delays.
    - b. Materials, material application, and sequencing.
    - c. Cleaning program.
    - d. Coordination with building occupants.

# 1.5 SEQUENCING AND SCHEDULING

A. Work Sequence: Perform masonry-cleaning work in the following sequence:

1. Remove dust to prevent staining at scheduled exterior louver replacement.

- 2. Inspect for open mortar joints. Where repairs are required, delay further cleaning work until after repairs are completed, cured, and dried to prevent the intrusion of water and other cleaning materials into the wall.
- 3. Clean masonry surfaces.

### 1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include material descriptions and application instructions.
  - 2. Include test data substantiating that products comply with requirements.

#### 1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For paint-remover manufacturer and chemical-cleaner manufacturer.
- B. Cleaning program.

#### 1.8 QUALITY ASSURANCE

- A. Chemical-Cleaner Manufacturer Qualifications: A firm regularly engaged in producing masonry cleaners that have been used for similar applications with successful results, and with factory-authorized service representatives who are available for consultation and Project-site inspection and on-site assistance.
- B. Cleaning Program: Prepare a written cleaning program that describes cleaning process in detail, including materials, methods, and equipment to be used; protection of surrounding materials; and control of runoff during operations. Include provisions for supervising worker performance and preventing damage.
  - 1. If materials and methods other than those indicated are proposed for any phase of cleaning work, add a written description of such materials and methods, including evidence of successful use on comparable projects and demonstrations to show their effectiveness for this Project.
- C. Mockups: Prepare mockups of cleaning on existing surfaces to demonstrate aesthetic effects and to set quality standards for materials and execution.
  - 1. Cleaning: Clean an area approximately 25 sq. ft. (2.3 sq. m) for each type of masonry and surface condition.
    - a. Test cleaners and methods on samples of adjacent materials for possible adverse reactions. Do not test cleaners and methods known to have deleterious effect.
    - b. Allow a waiting period of not less than seven days after completion of sample cleaning to permit a study of sample panels for negative reactions.

2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

## 1.9 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit masonry-cleaning work to be performed according to product manufacturers' written instructions and specified requirements.
- B. Clean masonry surfaces only when air temperature is 40 deg F (4 deg C) and above and is predicted to remain so for at least seven days after completion of cleaning.

# PART 2 - PRODUCTS

# 2.1 CLEANING MATERIALS

- A. Water: Potable.
- B. Hot Water: Water heated to a temperature of 140 to 160 deg F (60 to 71 deg C).
- C. Detergent Solution, Job Mixed: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium pyrophosphate (TSPP), 1/2 cup (125 mL) of laundry detergent, and 20 quarts (20 L) of hot water for every 5 gal. (20 L) of solution required.
- D. Mold, Mildew, and Algae Remover, Job Mixed: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium pyrophosphate (TSPP), 5 quarts (5 L) of 5 percent sodium hypochlorite (bleach), and 15 quarts (15 L) of hot water for every 5 gal. (20 L) of solution required.
- E. Nonacidic Liquid Cleaner: Manufacturer's standard mildly alkaline liquid cleaner formulated for removing mold, mildew, and other organic soiling from ordinary building materials, including polished stone, brick, aluminum, plastics, and wood.
  - 1. Prosoco; Enviro Klean Safety Klean.
  - 2. Diedrich; Echo-Scrub Acid Free Masonry Cleaner
  - 3. Infiniti Paints & Coatings; Masonry Cleaner & Efflorescence Remover

### 2.2 ACCESSORY MATERIALS

- A. Liquid Strippable Masking Agent: Manufacturer's standard liquid, film-forming, strippable masking material for protecting glass, metal, glazed masonry, and polished stone surfaces from damaging effects of acidic and alkaline masonry cleaners.
  - 1. Strippable Masking: Water-based temporary coating.

## 2.3 CHEMICAL CLEANING SOLUTIONS

A. Dilute chemical cleaners with water to produce solutions not exceeding concentration recommended in writing by chemical-cleaner manufacturer.

# PART 3 - EXECUTION

#### 3.1 PROTECTION

- A. Comply with each manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent paint removers and chemical cleaning solutions from coming into contact with people, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.
  - 1. Cover adjacent surfaces with materials that are proven to resist paint removers and chemical cleaners used unless products being used will not damage adjacent surfaces. Use protective materials that are waterproof and UV resistant. Apply masking agents according to manufacturer's written instructions. Do not apply liquid strippable masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.
  - 2. Do not apply chemical solutions during winds of enough force to spread them to unprotected surfaces.
  - 3. Neutralize alkaline and acid wastes before disposal.
  - 4. Dispose of runoff from operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.

### 3.2 CLEANING MASONRY, GENERAL

- A. Cleaning Appearance Standard: Cleaned surfaces are to have a uniform appearance as viewed from 20 feet (6 m) away by Architect.
- B. Proceed with cleaning in an orderly manner; work from top to bottom of each scaffold width and from one end of each elevation to the other. Ensure that dirty residues and rinse water do not wash over dry, cleaned surfaces.
- C. Use only those cleaning methods indicated for each masonry material and location.
  - 1. Brushes: Do not use wire brushes or brushes that are not resistant to the chemical cleaner being used.
  - 2. Spray Equipment: Use spray equipment that provides controlled application at volume and pressure indicated, measured at nozzle. Adjust pressure and volume to ensure that cleaning methods do not damage surfaces, including joints.
    - a. Equip units with pressure gages.
    - b. For chemical-cleaner spray application, use low-pressure tank or chemical pump suitable for chemical cleaner indicated, equipped with nozzle having a cone-shaped spray.

- c. For water-spray application, use fan-shaped spray that disperses water at an angle of 25 to 50 degrees.
- d. For heated water-spray application, use equipment capable of maintaining temperature between 140 and 160 deg F (60 and 71 deg C) at flow rates indicated.
- D. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces. Keep wall wet below area being cleaned to prevent streaking from runoff.
- E. Perform additional general cleaning, paint and stain removal, and spot cleaning of small areas that are noticeably different when viewed according to the "Cleaning Appearance Standard" Paragraph, so that cleaned surfaces blend smoothly into surrounding areas.
- F. Water Application Methods:
  - 1. Water-Soak Application: Soak masonry surfaces by applying water continuously and uniformly to limited area for time indicated. Apply water at low pressures and low volumes in multiple fine sprays using perforated hoses or multiple spray nozzles. Erect a protective enclosure constructed of polyethylene sheeting to cover the area being sprayed.
  - 2. Water-Spray Applications: Unless otherwise indicated, hold spray nozzle at least 6 inches (150 mm) from masonry surface and apply water in horizontal back-and-forth sweeping motion, overlapping previous strokes to produce uniform coverage.
- G. Chemical-Cleaner Application Methods: Apply chemical cleaners to masonry surfaces according to chemical-cleaner manufacturer's written instructions; use brush or spray application. Do not allow chemicals to remain on surface for periods longer than those indicated or recommended in writing by manufacturer.
- H. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting. Periodically during each rinse, test pH of rinse water running from cleaned area to determine that chemical cleaner is completely removed.
  - 1. Apply neutralizing agent and repeat rinse if necessary to produce tested pH of between 6.7 and 7.5.
- I. After cleaning is complete, remove protection no longer required. Remove tape and adhesive marks.

### 3.3 PRELIMINARY CLEANING

A. Removing Plant Growth: Completely remove visible plants, moss, and shrub growth from masonry surfaces. Carefully remove plants, creepers, and vegetation by cutting at roots and allowing remaining growth to dry if possible before removal. Remove loose soil and plant debris from open joints to whatever depth they occur.

- B. Preliminary Cleaning: Before beginning general cleaning, remove extraneous substances that are resistant to planned cleaning methods. Extraneous substances include paint, calking, asphalt, and tar.
  - 1. Carefully remove heavy accumulations of rigid materials from masonry surface with sharp chisel. Do not scratch or chip masonry surface.

## 3.4 CLEANING MASONRY

- A. Cold-Water Soak:
  - 1. Apply cold water by intermittent spraying to keep surface moist.
  - 2. Use perforated hoses or other means that apply a fine water mist to entire surface being cleaned.
  - 3. Apply water in cycles of five minutes on and 20 minutes off.
  - 4. Continue spraying until surface encrustation has softened enough to permit its removal by water wash, as indicated by cleaning tests
  - 5. Remove soil and soften surface encrustation from surface with cold water applied by low-pressure spray.
- B. Cold-Water Wash: Use cold water applied by low or medium-pressure spray as recommended by manufacturer.
- C. Hot-Water Wash: Use hot water applied by low or medium-pressure spray as recommended by manufacturer.
- D. Detergent Cleaning:
  - 1. Wet surface with cold or hot water applied by low-pressure spray.
  - 2. Scrub surface with detergent solution using medium-soft brushes until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from mortar joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is used and that surface remains wet.
  - 3. Rinse with cold or hot water applied by low or medium-pressure spray to remove detergent solution and soil.
  - 4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.
- E. Mold, Mildew, and Algae Removal:
  - 1. Wet surface with cold or hot water applied by low-pressure spray.
  - 2. Apply mold, mildew, and algae remover by brush or low-pressure spray.
  - 3. Scrub surface with medium-soft brushes until mold, mildew, and algae are thoroughly dislodged and can be removed by rinsing. Use small brushes for mortar joints and crevices. Dip brush in mold, mildew, and algae remover often to ensure that adequate fresh cleaner is used, and that surface remains wet.
  - 4. Rinse with cold or hot water applied by low or medium-pressure spray to remove mold, mildew, and algae remover and soil.
  - 5. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.

- F. Nonacidic Liquid Chemical Cleaning:
  - 1. Wet surface with cold or hot water applied by low-pressure spray.
  - 2. Apply cleaner to surface by brush or low-pressure spray.
  - 3. Let cleaner remain on surface for period recommended in writing by chemicalcleaner manufacturer
  - 4. Rinse with cold or hot water applied by low or medium-pressure spray to remove chemicals and soil.
- 3.5 FINAL CLEANING
  - A. Clean adjacent non masonry surfaces of spillage and debris. Use detergent and soft brushes or clothes.
  - B. Remove debris from gutters and downspouts. Rinse off roof and flush gutters and downspouts.
  - C. Remove masking materials, leaving no residues that could trap dirt.

END OF SECTION 040110

# SECTION 064116 - PLASTIC-LAMINATE-CLAD ARCHITECTURAL CABINETS

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Plastic-laminate-clad architectural cabinets.
  - 2. Cabinet hardware and accessories.
  - 3. Wood furring, blocking, shims, and hanging strips for installing plastic-laminateclad architectural cabinets that are not concealed within other construction.
  - 4. Plastic-laminate-clad cabinet fronts at Fan Coil Unit (FCU).

#### 1.2 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to support loads imposed by installed and fully loaded cabinets.
- 1.3 ACTION SUBMITTALS
  - A. Product Data: For each type of product.
    - 1. Include data for fire-retardant treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements.
  - B. Shop Drawings:
    - 1. Include plans, elevations, sections, and attachment details.
    - 2. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
    - 3. Show locations and sizes of cutouts and holes for items installed in plasticlaminate architectural cabinets.
    - 4. Apply AWI Quality Certification Program label to Shop Drawings.
  - C. Samples: For each exposed product and for each color and texture specified, in manufacturer's or manufacturer's standard size.
  - D. Samples for Verification: For the following:
    - 1. Exposed Cabinet Hardware and Accessories: One full-size unit for each type and finish.

#### 1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer and Installer.

- B. Product Certificates: For each type of product.
- 1.5 CLOSEOUT SUBMITTALS
  - A. Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.
- 1.6 QUALITY ASSURANCE
  - A. Manufacturer's Qualifications: Employs skilled workers who custom fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
    - 1. Manufacturer's Certification: Licensed participant in AWI's Quality Certification Program.
  - B. Installer Qualifications: Licensed participant in AWI's Quality Certification Program.
- 1.7 DELIVERY, STORAGE, AND HANDLING
  - A. Do not deliver cabinets until painting and similar finish operations that might damage architectural cabinets have been completed in installation areas. Store cabinets in installation areas or in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.

### 1.8 FIELD CONDITIONS

- A. Environmental Limitations with Humidity Control: Do not deliver or install cabinets until building is enclosed, wet-work is complete, and HVAC system is operating and maintaining temperature between 60 and 90 deg F (16 and 32 deg C) and relative humidity between 25 and 55 percent during the remainder of the construction period.
- B. Field Measurements: Where cabinets are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
  - 1. Locate concealed framing, blocking, and reinforcements that support cabinets by field measurements before being enclosed/concealed by construction, and indicate measurements on Shop Drawings.

### PART 2 - PRODUCTS

 Basis-of-Design Product: Subject to compliance with requirements, provide Formica Corporation products or comparable product by one of the following:
 a. Nevamar Company, LLC. b. Wilsonart LLC

# 2.2 PLASTIC-LAMINATE-CLAD ARCHITECTURAL CABINETS

- A. Quality Standard: Unless otherwise indicated, comply with the Architectural Woodwork Standards for grades of cabinets indicated for construction, finishes, installation, and other requirements.
  - 1. Provide labels and certificates from AWI certification program indicating that woodwork and installation complies with requirements of grades specified.
    - a. This project has been registered with AWI as AWI Quality Certification Program Number.
  - 2. The Contract Documents contain requirements that are more stringent than the referenced quality standard. Comply with requirements of Contract Documents in addition to those of the referenced quality standard.

### 2.3 PLASTIC-LAMINATE-CLAD CABINET FRONTS AT FAN COIL UNITS

- A. Quality Standard: Unless otherwise indicated, comply with the Architectural Woodwork Standards for grades of cabinets indicated for construction, finishes, installation, and other requirements.
  - Provide labels and certificates from AWI certification program indicating that woodwork and installation complies with requirements of grades specified.
    - a. This project has been registered with AWI as AWI Quality Certification Program Number.
  - The Contract Documents contain requirements that are more stringent than the referenced quality standard. Comply with requirements of Contract Documents in addition to those of the referenced quality standard.
  - 3. Substrate: Medium Density Overlay (MDO) plywood

### PART 3 - EXECUTION

#### 3.1 PREPARATION

A. Before installation, condition cabinets to humidity conditions in installation areas for not less than 72 hours.

#### 3.2 INSTALLATION

- A. Architectural Woodwork Standards Grade: Install cabinets to comply with quality standard grade of item to be installed.
- B. Assemble cabinets and complete fabrication at Project site to extent that it was not completed in the shop.
- C. Anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with wafer-head cabinet installation screws.
- D. Install cabinets level, plumb, and true in line to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm) using concealed shims.
  - 1. Scribe and cut cabinets to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
  - 2. Install cabinets without distortion so doors and drawers fit openings and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.

#### 3.3 FIELD QUALITY CONTROL

- A. Inspections: Provide inspection of installed Work through AWI's Quality Certification Program certifying that woodwork, including installation, complies with requirements of the Architectural Woodwork Standards for the specified grade.
  - 1. Inspection entity shall prepare and submit report of inspection.

### 3.4 ADJUSTING AND CLEANING

- A. Repair damaged and defective cabinets, where possible, to eliminate functional and visual defects. Where not possible to repair, replace architectural cabinets. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean cabinets on exposed and semi exposed surfaces.

END OF SECTION 064116

#### SECTION 232113 – HYDRONIC PIPING

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions and Division 01 Specification Sections, apply to this Section.
- B. Section 200800 "Seismic Protection," Section 230100 "Basic Mechanical Requirements," and Section 230500 "Basic Mechanical Materials and Methods" all apply to the work of this Section as if fully repeated herein.

#### 1.2 SUMMARY

- A. This Section includes pipe and fitting materials, joining methods, special-duty valves, and specialties for the following:
  - 1. Hot-water heating piping.
  - 2. Chilled-water piping.
  - 3. Makeup-water piping.
  - 4. Condensate-drain piping.
  - 5. Blowdown-drain piping.
  - 6. Air-vent piping.
  - 7. Safety-valve-inlet and -outlet piping.
- B. Related Sections include the following:
  - 1. Division 07 Section "Penetration Firestopping" for materials and methods for sealing pipe penetrations through fire and smoke barriers.
  - 2. Division 07 Section "Joint Sealants" for materials and methods for sealing pipe penetrations through exterior walls.
  - 3. Division 23 Section "Basic Mechanical Materials and Methods" for general piping materials and installation requirements, and for labeling and identifying hydronic piping.
  - 4. Division 23 Section "Hangers and Supports" for pipe supports, product descriptions, and installation requirements. Hanger and support spacing is specified in this Section.
  - 5. Division 23 Section "Valves" for general-duty gate, globe, ball, butterfly, and check valves.
  - 6. Division 23 Section "Meters and Gages" for thermometers, flow meters, and pressure gages.

- 7. Division 23 Section "Hydronic Pumps" for pumps, motors, and accessories for hydronic piping.
- 8. Division 23 Section "Control Systems" for temperature-control valves and sensors.

#### 1.3 DEFINITIONS

- A. CWP: Cold working pressure (formerly WOG Water, Oil, Gas working pressure).
- B. DZR Brass: Brass alloy containing not more than 15% zinc by weight.
- C. SWP: Steam working pressure.
- D. Pipe sizes used in this Specification are Nominal Pipe Size (NPS).
- E. Class 125: Minimum 125-psig (860-kPa) SWP and minimum 200-psig (1380-kPa) CWP ratings.
- F. Class 150: Minimum 150-psig (1035-kPa) SWP and minimum 300-psig (2070-kPa) CWP ratings.

#### 1.4 PERFORMANCE REQUIREMENTS

- A. Hydronic piping components and installation shall be capable of withstanding the following minimum working pressure and temperature:
  - 1. Hot-Water Heating Piping: 150 psig at 200°F.
  - 2. Chilled-Water Piping: 150 psig at 200°F.
  - 3. Makeup-Water Piping: 80 psig at 150°F.
  - 4. Condensate-Drain Piping: 150°F.
  - 5. Blowdown-Drain Piping: 200°F.
  - 6. Air-Vent Piping: 200°F.
  - 7. Safety-Valve-Inlet and -Outlet Piping: Equal to the pressure of the piping system to which it is attached.

### 1.5 SUBMITTALS

- A. Product Data: For each type of the following:
  - 1. Plastic pipe and fittings with solvent cement.
  - 2. Valves. Include flow and pressure drop curves based on manufacturer's testing for calibratedorifice balancing valves and automatic flow-control valves.
  - 3. Air control devices.
  - 4. Hydronic specialties.

B. Operation and Maintenance Data: For air control devices, hydronic specialties, and special-duty valves to include in emergency, operation, and maintenance manuals.

#### 1.6 QUALITY ASSURANCE

- A. Steel Support Welding: Qualify processes and operators according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- B. Welding: Qualify processes and operators according to ASME Boiler and Pressure Vessel Code: Section IX.
  - 1. Comply with provisions in ASME B31 Series, "Code for Pressure Piping."
  - 2. Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.
- C. ASME Compliance: Comply with ASME B31.9, "Building Services Piping," for materials, products, and installation. Safety valves and pressure vessels shall bear the appropriate ASME label. Fabricate and stamp air/dirt separators and expansion tanks to comply with ASME Boiler and Pressure Vessel Code: Section VIII, Division 1.
- D. Comply with NFPA 70 National Electrical Code. Do not route piping directly above electric panelboards and switchboards, or other prohibited locations.

#### 1.7 COORDINATION

- A. Coordinate layout and installation of hydronic piping and suspension system components with other construction, including light fixtures, HVAC equipment, fire-suppression-system components, and partition assemblies.
- B. Coordinate pipe sleeve installations for foundation wall penetrations.
- C. Coordinate piping installation with roof curbs, equipment supports, and roof penetrations. Roof specialties are specified in Division 07 Sections.
- D. Coordinate pipe fitting pressure classes with products specified in related Sections.
- E. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into base. Concrete, reinforcement, and formwork requirements are specified in Division 03 Sections.
- F. Coordinate installation of pipe sleeves for penetrations through exterior walls and floor assemblies. Coordinate with requirements for firestopping specified in Division 07 Section "Penetration Firestopping" for fire and smoke wall and floor assemblies.

# PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1. Manual Balancing Valves:
  - a. Armstrong Pumps, Inc.
  - b. "Circuit Setter" by Bell & Gossett; a Xylem Brand.
  - c. Nexus Valve.
  - d. Nibco Inc.
  - e. Tour & Andersson.
- 2. Pressure-Reducing Valves and Safety Valves:
  - a. Amtrol, Inc.
  - b. Armstrong Pumps, Inc.
  - c. Bell & Gossett; a Xylem Brand.
  - d. Conbraco Industries, Inc.
  - e. Spence Engineering Company, Inc.
  - f. Watts Regulator Co.; a division of Watts Water Technologies, Inc.
- 3. Manual, Expansion Tanks, Air Purgers:
  - a. Amtrol, Inc.
  - b. Armstrong Pumps, Inc.
  - c. Bell & Gossett; a Xylem Brand.
- 4. Automatic Air Vents and Coalescing-type Air/Dirt Separators:
  - a. Spirotherm, Inc. or approved equal.
- 5. Strainers:
  - a. Armstrong Machine Works.Eaton Filtration.
  - b. Hoffman Specialty ITT; Fluid Handling Div.
  - c. Metraflex Co.
  - d. Nibco Inc.
  - e. Spirax Sarco.
  - f. Watts Regulator Co.

#### 2.2 PIPING MATERIALS

A. General: Refer to Part 3 "Piping Applications" Article for applications of pipe and fitting materials, including a schedule of which types of piping to use in which application.

## 2.3 COPPER TUBE AND FITTINGS

- A. Drawn-Temper Copper Tubing: ASTM B88, Type L (ASTM B88M, Type B).
- B. Annealed-Temper Copper Tubing: ASTM B88, Type K (ASTM B88M, Type A).
- C. DWV Copper Tubing: ASTM B306, Type DWV.
- D. Wrought-Copper Fittings: ASME B16.22.
- E. Wrought-Copper Unions: ASME B16.22.

- F. Solder Filler Metals: ASTM B32, 95-5 tin antimony.
- G. Field or shop fabricated fittings are not allowed. Pulled-tees or pipe fittings using "T-Drill" are not allowed.

#### 2.4 STEEL PIPE AND FITTINGS

- A. Steel Pipe: ASTM A53/A53M, black steel with plain ends; Type E (Electric-resistance welded), Grade B, Schedule 40; unless otherwise indicated in Part 3 "Piping Applications" Article.
- B. Steel Pipe Nipples: ASTM A733, made of ASTM A53/A53M black steel, Grade B, Schedule 40; unless otherwise indicated in Part 3 "Piping Applications" Article.
- C. Malleable-Iron Threaded Fittings: ASME B16.3, Class 150 or 300 as indicated in Part 3 "Piping Applications" Article.
- D. Malleable-Iron Unions: ASME B16.39; Class 150, 250, or 300 as indicated in Part 3 "Piping Applications" Article.
- E. Cast-Iron Pipe Flanges and Flanged Fittings: ASME B16.1, Class 125 or 250 as indicated in Part 3 "Piping Applications" Article; raised ground face, and bolt holes spot faced.
- F. Wrought-Steel Fittings: ASTM A234/A234M, wall thickness to match adjoining pipe. All elbows shall be long-radius type.
- G. Wrought Steel Flanges and Flanged Fittings: ASME B16.5, including bolts, nuts, and gaskets of the following material group, end connections, and facings:
  - 1. Material Group: 1.1.
  - 2. End Connections: Butt welding.
  - 3. Facings: Raised face.

#### 2.5 SPECIALTIES

A. Refer to Division 23 Section "Basic Mechanical Materials and Methods" for joining materials, transition fittings, and dielectric fittings. Those requirements apply to the work of this Section as if fully reproduced herein.

#### 2.6 GENERAL-PURPOSE VALVES

- A. Refer to Division 23 Section "Valves" for Gate, Globe, Check, Ball, and Butterfly Valves, whose requirements apply to the work of this Section as if fully reproduced herein.
- B. Refer to Division 23 Section "Control Systems" for Automatic Temperature-Control Valves, Actuators, and Sensors, whose requirements apply to the work of this Section as if fully reproduced herein.
- C. Refer to Part 3 "Valve Applications" Article elsewhere within this Section for applications of each type of valve and service.

#### 2.7 SPECIALTY VALVES

- A. Calibrated-Orifice Balancing Valves:
  - 1. Body (Size 2-inch NPS and smaller): Bronze or DZR-brass body; ball- or plug-type with calibrated orifice or venturi.
  - 2. Body (Size 2<sup>1</sup>/<sub>2</sub>-inch NPS and larger): Cast-iron or steel body; ball, plug, or globe pattern with calibrated orifice or venturi.
  - 3. Ball: Brass or stainless steel.
  - 4. Plug: Resin.
  - 5. Seat: PTFE.
  - 6. Stem Seals: EPDM O-rings.
  - 7. Disc: Glass and carbon-filled PTFE.
  - 8. End Connections (Size 2-inch NPS and smaller): Threaded or socket.
  - 9. End Connections (Size 21/2-inch NPS and larger): Flanged.
  - 10. Pressure Gage Connections: Integral seals for portable differential pressure meter.
  - 11. Handle Style: Lever, with memory stop to retain set position.
  - 12. Accessories: Integral pointer and calibrated scale to register degree of valve opening.
  - 13. CWP Rating: Minimum 125 psig (860 kPa).
  - 14. Maximum Operating Temperature: 250°F (121 C).
- B. Diaphragm-Operated Pressure-Reducing Valves:
  - 1. Body: Bronze or DZR-brass.
  - 2. Disc: Glass and carbon-filled PTFE.
  - 3. Seat: Brass.
  - 4. Stem Seals: EPDM O-rings.
  - 5. Diaphragm: EPT.
  - 6. Low inlet-pressure check valve.
  - 7. Inlet Strainer: Bronze or stainless steel; removable without system shutdown.
  - 8. Valve Seat and Stem: Noncorrosive.
  - 9. Valve Size, Capacity, and Operating Pressure: Selected to suit system in which installed, with operating pressure and capacity factory set and field adjustable.

- C. Diaphragm-Operated Safety Valves:
  - 1. Body: Bronze or DZR-brass.
  - 2. Disc: Glass and carbon-filled PTFE.
  - 3. Seat: Brass.
  - 4. Stem Seals: EPDM O-rings.
  - 5. Diaphragm: EPT.
  - 6. Wetted, Internal Work Parts: Brass and rubber.
  - 7. Inlet Strainer: Bronze or stainless steel; removable without system shutdown.
  - 8. Valve Seat and Stem: Noncorrosive.
  - 9. Valve Size, Capacity, and Operating Pressure: Comply with ASME Boiler and Pressure Vessel Code: Section IV, and selected to suit system in which installed, with operating pressure and capacity factory set and field adjustable.

### 2.8 AIR CONTROL DEVICES

- A. Manual Air Vents:
  - 1. Body: Bronze.
  - 2. Internal Parts: Nonferrous.
  - 3. Operator: Manual via screwdriver or thumbscrew.
  - 4. Inlet Connection: NPS <sup>1</sup>/<sub>2</sub> (DN 15).
  - 5. Discharge Connection: NPS 1/8 (DN 6).
  - 6. CWP Rating: 150 psig (1035 kPa).
  - 7. Maximum Operating Temperature: 225°F (107 C).
- B. Automatic Air Vents shall be Spirotherm Spirotop Air Release Valve.
- C. Diaphragm or Bladder-Type Expansion Tanks:
  - 1. Tank: Welded steel, rated for 125-psig (860-kPa) working pressure and 240°F (115 C) maximum operating temperature. Factory test with taps fabricated and supports installed and labeled according to ASME Boiler and Pressure Vessel Code: Section VIII, Division 1.
  - 2. Diaphragm or Bladder (as indicated on Drawings; Diaphragm if not indicated): Securely sealed into tank to separate air charge from system water to maintain required expansion capacity.
  - 3. Air-Charge Fittings: Schrader valve, stainless steel with EPDM seats.

#### 2.9 COALESCING-TYPE AIR/DIRT SEPARATORS

- A. Tank: Welded steel; ASME constructed and labeled for 125-psig (860-kPa) working pressure and 240°F (115 C) operating temperature.
- B. Inlet and Outlet Connections: Threaded for NPS 2 (DN 50) and smaller; flanged connections for NPS 2<sup>1</sup>/<sub>2</sub> (DN 65) and larger. Designed for inline connection, with inlet and outlet connections aligned on a common horizontal axis.
- C. Blowdown Connection: Threaded, valved side tap to flush floating dirt or liquids and for quick bleeding of large amounts of air during system fill or refill.
- D. Size: Match system flow capacity. Include appropriate reducers to connect to piping as shown on the drawing.
- E. Medium: Integral copper tube-and-mesh assembly to act as the turbulence suppressive coalescing and barrier medium, which must completely fill the separators internal area. Separators shall remove free and entrained air during system operation and continue to eliminate dissolved air and dirt through constant circulation and the coalescing / barrier action of the tubes.
  - 1. Internal coalescing elements consisting of plastic, perforated steel plate or tubes, or randomly-filled loose steel rings will not be accepted.
- F. Venting Chamber: Prevent system contaminants from harming the float and venting valve operation. At the top of the venting chamber shall be an integral float actuated brass air vent. There shall be no restriction in the connection from the venting chamber to the vent.
- G. Lower Chamber: Vessel shall extend below the pipe connections for dirt separation. The internal medium shall act as a barrier to force dirt and sediment to fall from the flow path to a collection chamber for blowdown through standard connection and valve.
- H. Performance: Coalescing air-and-dirt separator shall remove 100% of the entrained air, 100% of the free air, and 99% of the dissolved air from the system fluid; and shall remove at least 80% of all particles 30 micron and larger within 100 passes. Separator must be capable of removing particles down to 5 microns. This performance shall be certified by a reputable, independent, third-party testing laboratory, proof of which shall be submitted in writing as part of the submittal process, including name of laboratory, location, date of test, and test results.
- I. Removable head, to facilitate removal of tube assembly for inspection or cleaning.

#### 2.10 CHEMICAL TREATMENT

- A. Bypass Chemical Feeder: Welded steel construction; 125-psig (860-kPa) working pressure; 5-gal. (19-L) capacity; with fill funnel and inlet, outlet, and drain valves.
- B. Chemicals: Specially formulated, based on analysis of makeup water, to prevent accumulation of scale and corrosion in piping and connected equipment.

#### 2.11 HYDRONIC PIPING SPECIALTIES

A. Y-Pattern Strainers, 2-inch and Smaller:

- 1. Body (for use in Copper piping): ASTM B584 C84400 or ASTM B-62 C83600 bronze body, with threaded bronze cover and brass drain plug.
- 2. Body (for use in Steel piping): ASTM A126, Class B, cast iron with threaded cap and bottom drain connection.
- 3. End Connections: Threaded ends.
- 4. Strainer Screen: 20-mesh, Type 304 stainless steel.
- 5. CWP Rating: 200 psig (1380 kPa) at 150°F (65 C).
- 6. SWP Rating: 150 psig (1030 kPa) at 350°F (176 C).
- B. Y-Pattern Strainers, 2<sup>1</sup>/<sub>2</sub>-inch and Larger:
  - 1. Body: ASTM A126, Class B, cast iron with bolted cover and bottom drain connection.
  - 2. End Connections: Flanged ends.
  - 3. Strainer Screen: 40-mesh startup strainer, and perforated stainless-steel basket with 50 percent free area.
  - 4. CWP Rating: 175 psig (1200 kPa) at 150°F (65 C).
  - 5. SWP Rating: 125 psig (860 kPa) at 350°F (176 C).
- C. Refer to Division 23 Section "Pipe Expansion Fittings" for expansion fittings and loops, whose requirements apply to the work of this Section as if fully reproduced herein.
- D. Refer to Division 23 Section "Basic Mechanical Materials and Methods" for flexible pipe connectors, whose requirements apply to the work of this Section as if fully reproduced herein.

### PART 3 - EXECUTION

# 3.1 PIPING SCHEDULE OF APPLICATIONS

- A. Hot-water heating piping, Chilled-water piping, aboveground, NPS 2 (DN 50) and smaller, shall be Type L (C), drawn-temper copper tubing, wrought-copper fittings, and soldered joints.
  - 1. Contractor's Option: Schedule 40 steel pipe; Class 150, malleable-iron fittings; cast-iron flanges and flange fittings; and threaded joints will be acceptable.
- B. Hot-water heating piping, Chilled-water piping, aboveground, NPS 2½ (DN 65) and larger, shall be Standard Weight schedule 40 steel pipe; wrought-steel fittings and wrought-cast or forgedsteel flanges and flange fittings, and welded and flanged joints. All elbows shall be long-radius type.
- C. Makeup-water piping installed aboveground shall be Type L (B), drawn-temper copper tubing, wrought-copper fittings, and soldered joints.
- D. Cooling Coil Condensate-Drain Piping: Type DWV, drawn-temper copper tubing, wrought-copper fittings, and soldered joints;

- E. Heat exchanger or other hydronic heating system drains (blowdown, overflow, etc.): Use same materials and joining methods as for hot-water heating piping described above.
- F. Air-Vent Piping: Same materials and joining methods as for piping specified for the service in which air vent is installed.
- G. Safety-Valve-Inlet and -Outlet Piping for HVAC Piping: Same materials and joining methods as for piping specified for the service in which safety valve is installed.
- H. Other HVAC-Related Piping Applications:
  - 1. Chemical Treatment Piping: Type L (C), drawn-temper copper tubing, wrought-copper fittings, and soldered joints, or Schedule 40 PVC plastic pipe and fittings and solvent-cemented joints, as recommended by chemical treatment provider.
- I. Contractor's Option: Standard Weight steel pipe; mechanical joints will be acceptable where welded-steel piping is specified above, but only where piping is exposed to view or located above a fully-accessible lay-in ceiling.

#### 3.2 VALVE APPLICATIONS

- A. Install valves where indicated on Drawings and where indicated in Division 23 Section "Valves."
- B. Install safety valves at heat exchangers and elsewhere as required by ASME Boiler and Pressure Vessel Code. Install drip-pan elbow on safety-valve outlet and pipe without valves to the outdoors; and pipe drain to nearest floor drain or as indicated on Drawings. Comply with ASME Boiler and Pressure Vessel Code: Section VIII, Division 1, for installation requirements.
- C. Install specialty valves where indicated on Drawings.
- D. Install drain valves at all low points, and manual air vents at all high points, in mains, risers, branch lines and elsewhere as required for system drainage.
- E. Any valve that represents a termination or the end of a run (e.g., blowdown or drain valve, hoseend valve, etc.) shall be fitted with a permanent but removable cap, plug, or blind flange matching the valve construction, to minimize risk in the event the valve is accidentally opened under pressure.
- F. Route automatic air vent discharge in <sup>1</sup>/<sub>4</sub> inch (6.4 mm) poly tubing to floor drain.

#### 3.3 PIPING INSTALLATIONS

- A. General: General piping installation is specified in Division 23 Section "Basic Mechanical Materials and Methods," whose requirements apply to the work of this Section as if fully repeated herein.
- B. Install drains, consisting of a tee fitting, NPS <sup>3</sup>/<sub>4</sub> (DN 20) ball valve, and short NPS <sup>3</sup>/<sub>4</sub> (DN 20) threaded nipple with cap, at low points in piping system mains and elsewhere as required for system drainage.
- C. In closed systems, install horizontal piping at a uniform grade of 0.2 percent upward in direction of flow.

- D. For cooling coil condensate-drain piping, install horizontal piping at a uniform grade of 1.0 percent downward in the direction of flow.
- E. Bull-head tees prohibited: Do not use tee fittings in such a way that the flow through the branch leg equals the sum of the flows through two main legs.
- F. Reduce pipe sizes using eccentric reducer fitting installed with level side up.
- G. Install branch connections to mains using tee fittings in main pipe, with the branch connected to the top of the main pipe. For up-feed risers, connect the branch to the top of the main pipe.
- H. Changes of direction, branches, tees, etc. shall be accomplished with the appropriate factory or foundry fitting meeting the requirements of these specifications. Mechanically-formed extruded tee outlets or field-fabricated tee branches and/or elbows are not acceptable.
- I. All elbows shall be long-radius type.
- J. Install valves according to Division 23 Section "Valves."
- K. Install unions in piping NPS 2 (DN 50) and smaller, at final connections of equipment and elsewhere as indicated.
- L. Install flanges in piping NPS 2<sup>1</sup>/<sub>2</sub> (DN 65) and larger, at final connections of equipment and elsewhere as indicated.
- M. Install strainers on inlet side of each control valve, pressure-reducing valve, solenoid valve, in-line pump, and elsewhere as indicated. Install NPS <sup>3</sup>/<sub>4</sub> (DN 20) nipple and ball valve in blowdown connection of strainers NPS 2 (DN 50) and larger. Match size of strainer blowoff connection for strainers smaller than NPS 2 (DN 50).
- N. Install and anchor piping to allow for proper length and direction of expansion and contraction.
- O. Connect risers and branch connections to mains with at least five pipe fittings, including tee in main.
- P. Connect risers and branch connections to terminal units with at least four pipe fittings, including tee in riser.
- Q. Connect mains and branch connections to terminal units with at least four pipe fittings, including tee in main.
- R. Install expansion joints, anchors, and pipe alignment guides as specified in Division 23 Section "Pipe Expansion Fittings."
- S. Identify piping as specified in Division 23 Section "Basic Mechanical Materials and Methods."
- T. Hang, support, and anchor all piping as specified in Division 23 Section "Hangers and Supports."
- U. Restrain all piping against seismic forces as specified in Division 20 Section "Seismic Protection."
- V. Connect copper branch lines to steel or iron mains as follows: Install steel branch pipe off main with black iron nipple connected to bronze ball valve. Connect bronze ball valve to copper piping with threaded copper male adaptor, which is then soldered to the copper branch line.
- W. Provide shutoff valves at each floor and/or branch on hot water reheat systems.

#### 3.4 PIPE JOINT CONSTRUCTION

- A. Refer to Division 23 Section "Basic Mechanical Materials and Methods" for joint construction requirements for soldered joints in copper tubing; threaded, welded, and flanged joints in steel piping; and solvent-welded joints for PVC piping.
- B. Welded Joints: Construct joints according to AWS D10.12, "Recommended Practices and Procedures for Welding Low Carbon Steel Pipe," using qualified processes and welding operators according to "Quality Assurance" Article.
  - 1. Apply one coat of self-priming, rust-inhibitor paint around the entire circumference of each welded pipe joint; regardless of whether or not the piping is specified to be painted. Paint may be brush-applied, roller-applied, or spray-applied at contractor's option.

#### 3.5 HYDRONIC SPECIALTIES INSTALLATION

- A. Install manual air vents at high points in piping, at heat-transfer coils, and elsewhere as required for system air venting.
- B. Install ball valve at all locations were a manual air vent is installed as indicated on Drawings.
- C. Install automatic air vents where indicated on Drawings.
- D. Install air/dirt separator in pump suction, unless another location is indicated on Drawings. Install blowdown piping with full-port ball valve; extend full size to nearest floor drain.
- E. Install expansion tanks at location indicated on Drawings. Install tank fitting in tank bottom and charge tank. Use manual vent for initial fill to establish proper water level in tank.
  - 1. Install tank fittings that are shipped loose.
  - 2. Support tank from floor or structure above with sufficient strength to carry weight of tank, piping connections, fittings, plus tank full of water. Do not overload building components and structural members.
  - 3. Vent and purge air from hydronic system, and ensure tank is properly charged with air to suit system Project requirements.
- F. Install bypass chemical feeders in each hydronic system where indicated, in upright position with top of funnel not more than 48 inches (1200 mm) above the floor. Install feeder in minimum NPS <sup>3</sup>/<sub>4</sub> (DN 20) bypass line, from main with full-size, full-port, ball valve in the main between bypass connections. Install NPS <sup>3</sup>/<sub>4</sub> (DN 20) pipe from chemical feeder drain, to nearest equipment drain and include a full-size, full-port, ball valve.
- G. Install simplex basket strainers at location indicated on Drawings. Install line size shutoff valves on inlet, outlet and bypass around strainer.
  - 1. Install strainer fittings that are shipped loose.
  - 2. Support strainer from floor on concrete housekeeping pad.
  - 3. Coordinate installation of strainer to allow removal of strainer out the top of unit.

4. Strainer shall be located on the chilled water supply between the building entrance and building pump.

#### 3.6 TERMINAL EQUIPMENT CONNECTIONS

- A. Sizes for supply and return piping connections shall be the same as or larger than equipment connections.
- B. Install control valves in accessible locations close to connected equipment, but outside the service area. For example, control valve shall be as close to hydronic coil as practical, but not within the coil pull space and/or access door swing space.
- C. Install ports for pressure gages and thermometers at coil inlet and outlet connections according to Division 23 Section "Meters and Gages."

#### 3.7 CHEMICAL TREATMENT

- A. Water treatment scope to be provided by Walter Louis Fluid Technologies. Water treatment scope to be carried in the contractors bid.
- B. Perform an analysis of makeup water to determine type and quantities of chemical treatment needed to keep system free of scale, corrosion, and fouling, and to sustain the following water characteristics:
  - 1. pH: 9.0 to 10.5.
  - 2. "P" Alkalinity: 100 to 500 ppm.
  - 3. Boron: 100 to 200 ppm.
  - 4. Chemical Oxygen Demand: Maximum 100 ppm. Modify this value if closed system contains glycol.
  - 5. Corrosion Inhibitor: Sodium Nitrate Plus Molybdate, 100 to 200 ppm each.
  - 6. Soluble Copper: Maximum 0.20 ppm.
  - 7. Tolyiriazole Copper and Yellow Metal Corrosion Inhibitor: Minimum 10 ppm.
  - 8. Total Suspended Solids: Maximum 10 ppm.
  - 9. Ammonia: Maximum 20 ppm.
  - 10. Free Caustic Alkalinity: Maximum 20 ppm.
  - 11. Microbiological Limits:
    - a. Total Aerobic Plate Count: Maximum 1000 organisms/ml.
    - b. Total Anaerobic Plate Count: Maximum 100 organisms/ml.
    - c. Nitrate Reducers: 100 organisms/ml.
    - d. Sulfate Reducers: 0 organisms/ml.
    - e. Iron Bacteria: 0 organisms/ml.

- C. Fill system with fresh water and add liquid alkaline compound with emulsifying agents and detergents to remove grease and petroleum products from piping. Circulate solution for a minimum of 24 hours, drain, clean strainer screens, and refill with fresh water.
- D. Add initial chemical treatment and maintain water quality in ranges noted above for the first year of operation.

#### 3.8 FIELD QUALITY CONTROL

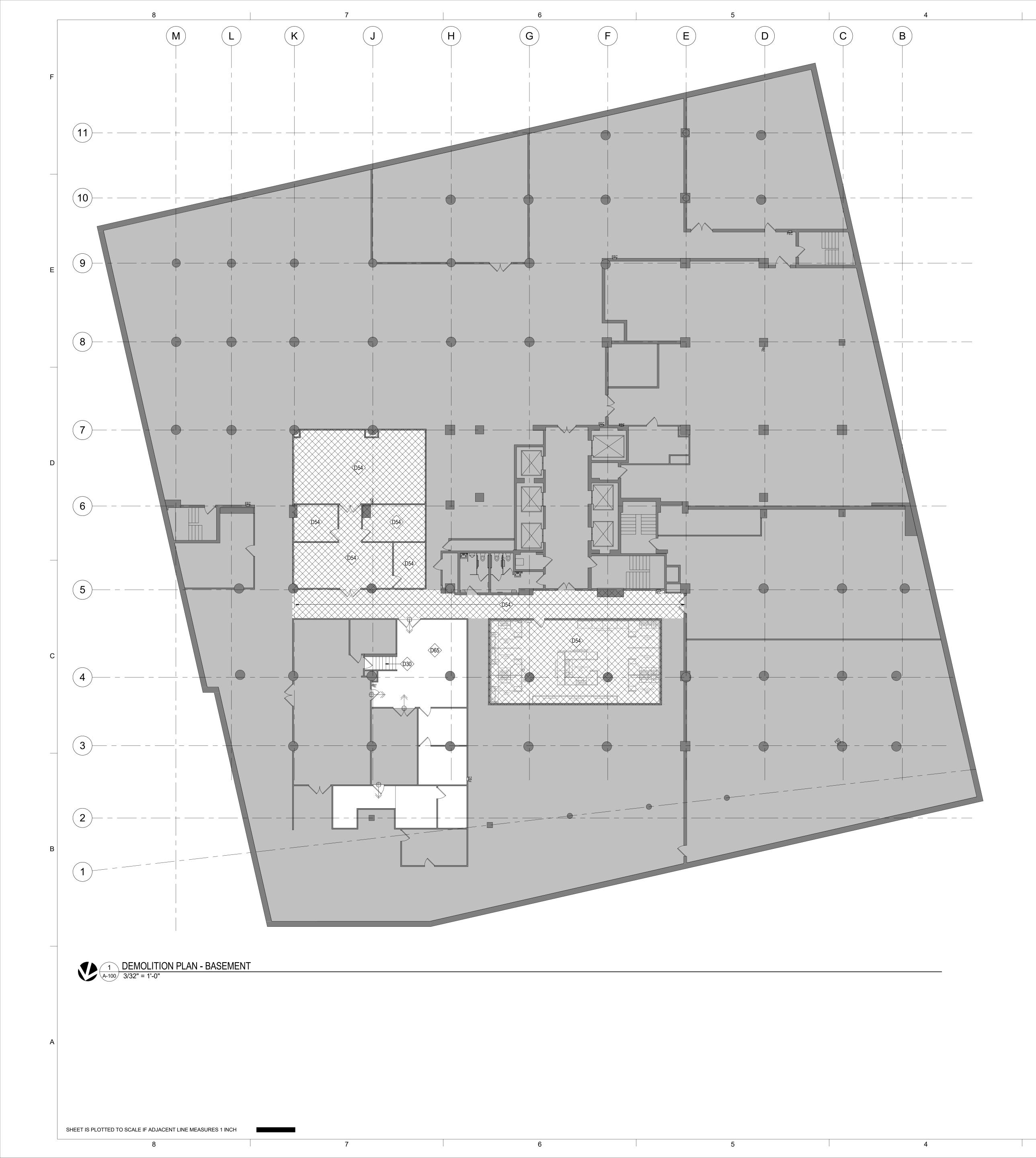
- A. Prepare hydronic piping according to ASME B31.9 and as follows:
  - 1. Notify Owners Representative 72 hours before required testing. All tests shall be conducted in the presence of the Owner Representative.
  - 2. Leave joints, including welds, uninsulated and exposed for examination during test.
  - 3. Provide temporary restraints for expansion joints that cannot sustain reactions due to test pressure. If temporary restraints are impractical, isolate expansion joints from testing.
  - 4. Flush hydronic piping systems with clean water; then remove and clean or replace strainer screens.
  - 5. Isolate equipment from piping. If a valve is used to isolate equipment, its closure shall be capable of sealing against test pressure without damage to valve. Install blinds in flanged joints to isolate equipment.
  - 6. Install safety valve, set at a pressure no more than one-third higher than test pressure, to protect against damage by expanding liquid or other source of overpressure during test.
- B. Perform the following tests on hydronic piping:
  - 1. Use ambient temperature water as a testing medium unless there is risk of damage due to freezing. Another liquid that is safe for workers and compatible with piping may be used. Do not pressure test with air.
  - 2. While filling system, use vents installed at high points of system to release air. Use drains installed at low points for complete draining of test liquid.
  - 3. Isolate expansion tanks and determine that hydronic system is full of water.
  - 4. Subject piping system to hydrostatic test pressure that is not less than 1.5 times the system's working pressure. Test pressure shall not exceed maximum pressure for any vessel, pump, valve, or other component in system under test. Verify that stress due to pressure at bottom of vertical runs does not exceed 90 percent of specified minimum yield strength or 1.7 times "SE" value in Appendix A in ASME B31.9, "Building Services Piping."
  - 5. Minimum duration of test shall be four (4) hours. During the final hour of the hydrostatic test, examine piping, joints, and connections for leakage. Eliminate leaks by tightening, repairing, or replacing components, and repeat hydrostatic test until there are no leaks.
  - 6. Prepare written report of testing.
  - 7. Minimum test pressure shall be 100 PSIG.

- 8. Calibrate all pressure gauges within one year of test date.
- C. Perform the following before operating the system:
  - 1. Open manual valves fully.
  - 2. Inspect pumps for proper rotation.
  - 3. Set makeup pressure-reducing valves for required system pressure.
  - 4. Inspect air vents at high points of system and determine if all are installed and operating freely (automatic type), or bleed air completely (manual type).
  - 5. Set temperature controls so all coils are calling for full flow.
  - 6. Inspect and set operating temperatures of hydronic equipment, such as boilers, chillers, cooling towers, to specified values.
  - 7. Verify lubrication of motors and bearings.
- D. System shall be operational for a minimum of 24 hours to demonstrate to the Owner's Representative that system is complete and operational.

#### 3.9 CLEANING AND ADJUSTING

A. Flush hydronic piping systems with clean water. Remove and clean or replace strainer screens. After cleaning and flushing hydronic piping systems, but before balancing, remove disposable fine-mesh strainers in pump suction diffusers.

END OF SECTION 232113



# **GENERAL NOTES: DEMOLITION**

- 1. PROVIDE TEMPORARY BARRICADES AND OTHER FORMS OF PROTECTION AS REQUIRED TO PROTECT OWNER'S AND CLIENT'S PERSONNEL AND GENERAL PUBLIC FROM INJURY DUE TO
- SELECTIVE DEMOLITION WORK. . ERECT AND MAINTAIN DUST-PROOF PARTITIONS AND CLOSURES AS REQUIRED TO PREVENT
- SPREAD OF DUST OR FUMES TO OCCUPIED PORTIONS OF THE BUILDING. PROTECT MECHANICAL SYSTEM AS REQUIRED.
- 3. CONDUCT SELECTIVE DEMOLITION OPERATIONS AND DEBRIS REMOVAL IN A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR
- USED FACILITIES.PROVIDE BYPASS CONNECTIONS AS NECESSARY TO MAINTAIN CONTINUITY OF SERVICE TO
- OCCUPIED AREAS OF THE BUILDING. REVIEW/COORDINATE SCHEDULE OF WORK TO BE DEMOLISHED WITH OWNER TO LIMIT
- INTERRUPTIONS OF OCCUPIED SPACES.6. MAINTAIN FIRE PROTECTION SERVICES DURING SELECTIVE DEMOLITION.
- 7. COVER AND PROTECT EQUIPMENT AND FIXTURES INDICATED "TO REMAIN" FROM SOILAGE OR
- DAMAGE. 8. LOCATE, IDENTIFY, STUB OFF, AND DISCONNECT UTILITY SERVICES THAT ARE NOT INDICATED TO REMAIN.
- 9. PERFORM SELECTIVE DEMOLITION WORK IN A SYSTEMATIC MANNER.
   10. WHERE INDICATED ON DRAWINGS AS "SALVAGE AND STORE," CAREFULLY REMOVE INDICATED ITEMS. CLEAN, STORE, AND DELIGE AS DECLIDED, DELINGED ITEMS AT COMPLEX TO A CLEAN STORE.
- ITEMS, CLEAN, STORE, AND REUSE AS REQUIRED. DELIVER UNUSED ITEMS AT COMPLETION OF PROJECT TO CLIENT.
  WHERE INDICATED ON DRAWINGS AS "SALVAGE AND DELIVER TO OWNER," CAREFULLY REMOVE INDICATED ITEMS. CLEAN STORE, AND RETURN TO OWNER.
- INDICATED ITEMS, CLEAN, STORE, AND RETURN TO OWNER.
  12. UNO REMOVE ALL EXISTING FLOORING (CARPET TILE, BROADLOOM CARPET, RESILIENT FLOORING, VINYL COMPOSITION TILE, ALL BASE, ETC.) WITHIN SCOPE OF WORK AREA. CLEAN AND PREPARE CONCRETE SLAB FLOOR AREA TO RECEIVE NEW FLOORING MATERIALS, INCLUDING REMOVAL OR SEALING OF ANY REMAINING EXISTING ADHESIVE AS REQUIRED, PATCHING CRACKS, AND LEVELING OF FLOOR TO MEET REQUIRED TOLERANCES FOR SCHEDULED FINISHES. PERFORM MOISTURE TESTING ON FLOOR TO DETERMINE IF EXTENSIVE FLOOR PREP IS

REQUIRED.
13. UNO ALL EXISTING PARTITIONS, FIRE EXTINGUISHERS (INCLUDING FIRE EXTINGUISHER SIGNAGE) AND CABINETS, MILLWORK, DOORS, HARDWARE, SIDELITES, CLERESTORIES, ETC. TO REMAIN.
14. REMOVE ALL HEADERS AT DOOR LOCATIONS WHERE DOORS ARE INDICATED TO BE REMOVED.
15. UNO REMOVE ALL EXISTING ACOUSTICAL CEILING TILE AND GRID, ALL CEILING SUSPENSION SYSTEMS, AND ALL CEILING ELEMENTS INSTALLED INCEILINGS.
16. UNO REMOVE ALL EXISTING LIGHT FIXTURES.

- 10. UNO REIMOVE ALTEXISTING LIGHT FIX TORES.
- WHERE WALLS OR PARTITIONS ARE TO BE REMOVED, REMOVE OR RELOCATE ALL EXISTING ELECTRICAL WIRING, DATA CABLING, TELEPHONE LINES, CABLE LINES, SATELLITE LINES, CONDUIT WIRE MOLD, RECEPTACLES AND SWITCH BOXES, ETC. LOCATED WITHIN DEMOLISHED PORTIONS.
   REMOVE ELECTRICAL TERMINATIONS, BOXES, CONDUIT, AND WIRING BACK TO SOURCE PANEL.
   UNO ALL EXISTING WINDOW TREATMENTS IN SCOPE OF WORK AREA TO REMAIN. REPAIR OR REPLACE ANY DAMAGED BLINDS WITH BUILDING STANDARD MANUFACTURER, STYLE, FUNCTION,
- MOUNTING METHOD, AND COLOR. COORDINATE WITH OWNER.
  21. PREPARE EXISTING SLAB TO RECEIVE NEW FLOORING, INCLUDING REMOVAL OR SEALING OF ANY REMAINING EXISTING ADHESIVE AS REQUIRED.
  22. SALVAGE AND STORE ALL DOORS, FRAMES, AND HARDWARE SCHEDULED FOR REMOVAL FOR
- 22. C. LEVINGE 7, REPERTOR ALL DOORS, FRAMES, AND HARDWARE SOMEDULED FOR REMOVAL FOR POSSIBLE REUSE. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION. ALL UNUSED DOORS, FRAMES, AND HARDWARE TO BE TURNED OVER TO THE OWNER.
   23. GC TO REMOVE, SALVAGE, AND STORE ALL EXISTING WALL MOUNTED TELEVISION MONITORS,

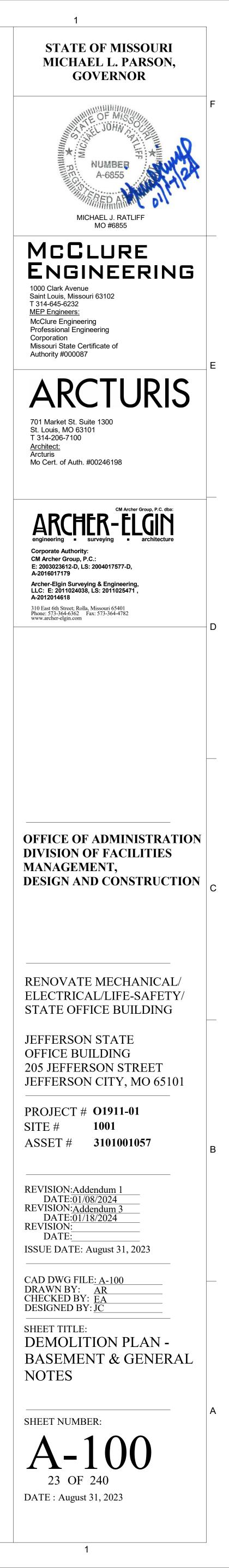
24. FLOORS 2 -13: REMOVE ALL EXISTING LAMINATE PANEL FRONTS AT EXISTING FAN COIL UNITS. REFERENCE MECHANICAL DRAWINGS FOR MORE INFORMATION.

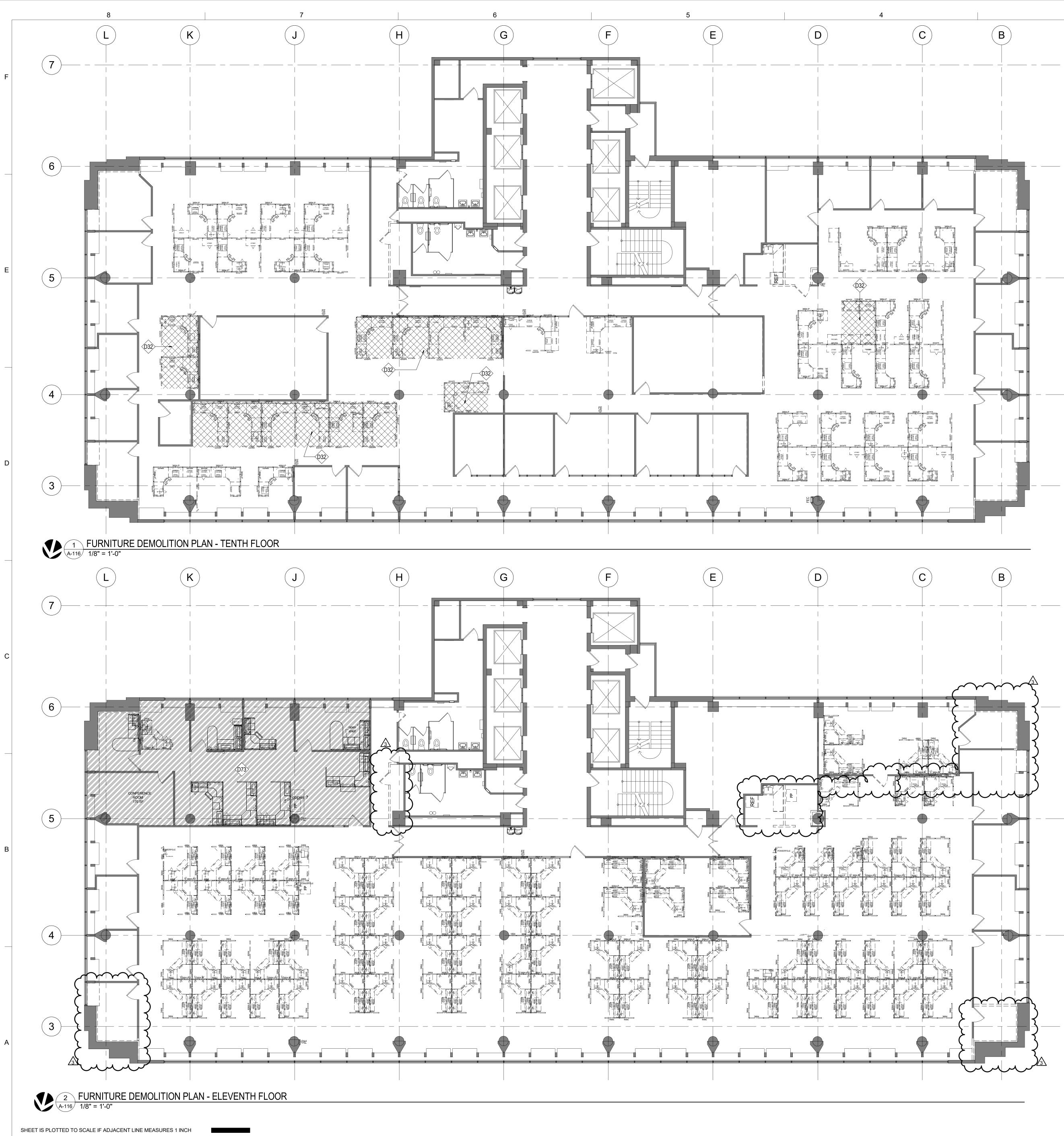
# **KEYED NOTES - DEMOLITION**

- D30 REMOVE CARPET FROM STEPS AND LANDING ABOVE
- D54 THIS ROOM TO ONLY RECEIVE SELECTIVE REMOVAL OF EXISTING CEILING GRID AND ACOUSTICAL TILES DUE TO SCHEDULED MECHANICAL WORK; REMOVE AND REINSTALL GRID AND TILES, AS REQUIRED; REFERENCE MECHANICAL SHEET MD3.0 FOR ADDITIONAL INFORMATION
- D65 GC TO REMOVE EXISTING CARPET AND WALL BASE PRIOR TO INSTALLING SWING SPACE FURNITURE

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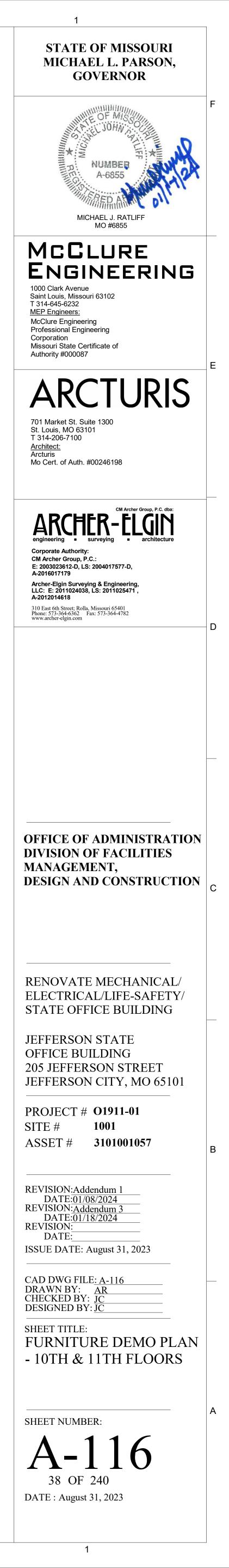
GENERAL NOTES: TENTH & ELEVENTH FLOOR FURNITURE DEMOLITION

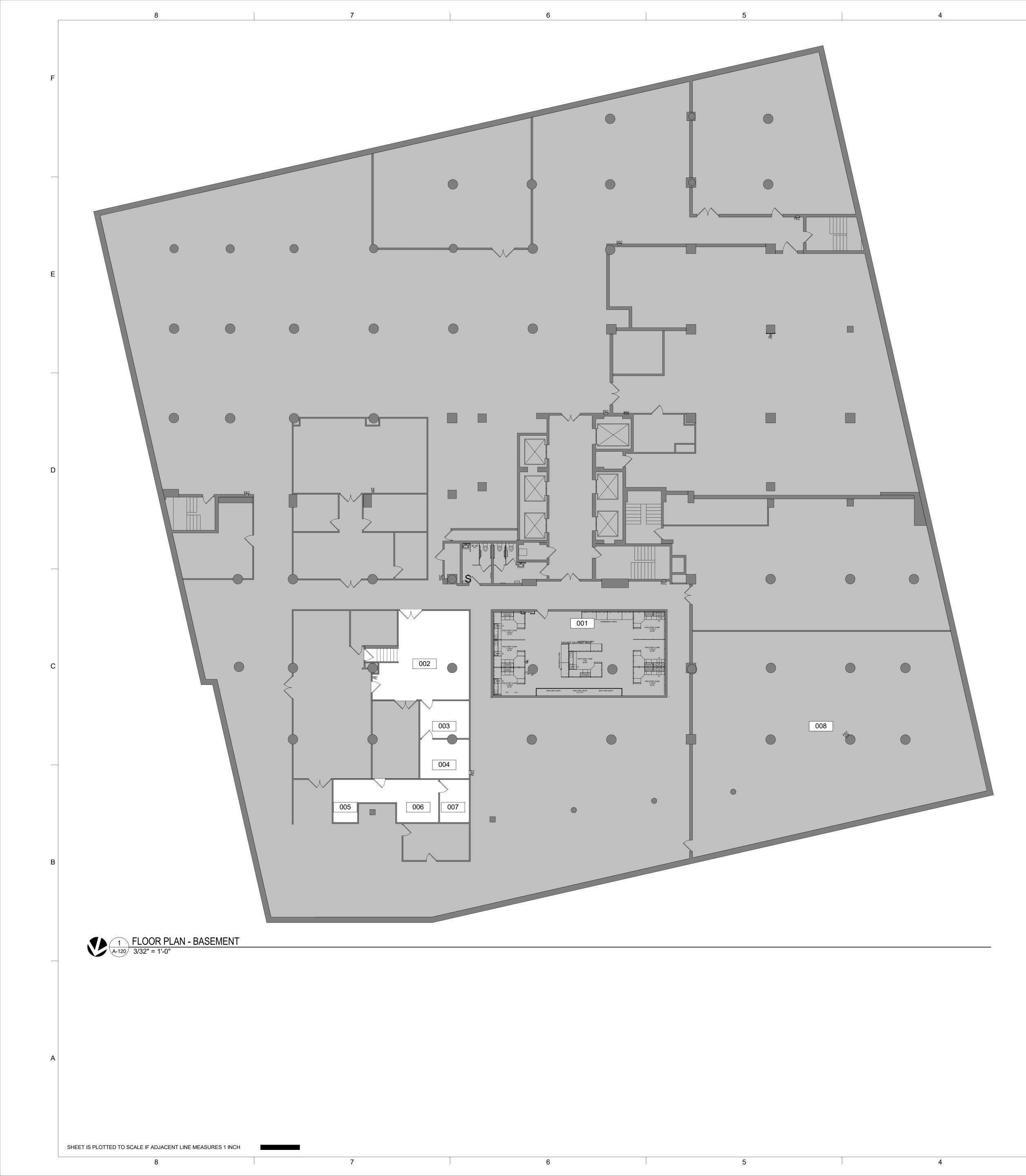
- REFER TO SHEET A-110 FOR OVERALL FURNITURE DEMO GENERAL NOTES.
   UNO ALL SYSTEMS FURNITURE ON TENTH FLOOR TEAL WITH GRAY TRIM: GC TO DISMANTLE, SORT, AND INVENTORY. COORDINATE WITH THE OWNER TO SHIP THE TEAL WALL PANELS TO MVE FOR REUPHOLSTERY. THE OWNER WILL ASSESS THE CONDITION OF OTHER COMPONENTS AND RECOMMEND ACTION TO BE TAKEN ON EACH, THE REMAINDER SHALL BE ADDED TO EXISTING PARTS INVENTROY. THE OWNER WILL USE THE INVENTORY TO DETERMINE THE ADDITIONAL COMPONENTS REQUIRED FOR THE REBUILD OF THE SYSTEM FURNITURE BY THE GC.
- UNO ALL SYSTEMS FURNITURE ON ELEVENTH FLOOR SWING SPACE GRAY WITH GRAY TRIM: GC TO DISMANTLE, SORT, INVENTORY AND SEPARATE ANY DAMAGED OR STAINED COMPONENTS. OWNER WILL ASSESS THE CONDITION OF IDENTIFIED COMPONENTS AND RECOMMEND ACTION TO BE TAKEN ON EACH, THE REMAINDER SHALL BE ADDED TO EXISTING PARTS INVENTROY. THE OWNER WILL USE THE INVENTORY TO DETERMINE THE ADDITIONAL COMPONENTS REQUIRED FOR THE REBUILD OF THE SYSTEM FURNITURE BY THE GC.
- 4. ALL ADDITIONAL SYSTEMS FURNITURE NOT USED IN NEW LAYOUT TO BE RETURNED TO OWNER/STATE.

## **KEYED NOTES - DEMOLITION**

**D#** 

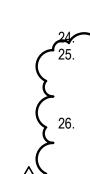
- D32 GC TO DISMANTLE, SORT, INVENTORY AND SEPARATE ANY DAMAGED OR STAINED COMPONENTS. OWNER WILL ASSESS THE CONDITION OF IDENTIFIED COMPONENTS AND RECOMMEND ACTION TO BE TAKEN ON EACH. THE REMAINDER SHALL BE ADDED TO EXISTING PARTS INVENTROY. THE OWNER WILL USE THE INVENTORY TO DETERMINE THE ADDITIONAL COMPONENTS REQUIRED FOR THE REBUILD OF THE SYSTEM FURNITURE BY THE GC
- D73 GC TO PROTECT SYSTEMS FURNITURE IN THIS AREA IF LEFT IN PLACE. NO ASBESTOS WORK - REPLACE CARPET AND HVAC





## **GENERAL NOTES: ARCHITECTURAL**

- 1. WHERE WORK OR EQUIPMENT IS INDICATED AS 'NOT IN CONTRACT (NIC)' IN THE DOCUMENTS, SUCH WORK OR EQUIPMENT SHALL BE PROVIDED OUTSIDE THE CONTRACT SCOPE REPRESENTED IN THESE DOCUMENT. THE CONTRACTOR SHALL COORDINATE THEIR WORK WITH NIC ITEMS AND COOPERATE TO AFFECT THE IMPLEMENTATION OF SUCH WORK OR INSTALLATION.
- DETAILS NOT SHOWN ARE TO BE SIMILAR IN CHARACTER TO THOSE DRAWN. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED THE CONTRACTOR IS TO OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
   DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN. LARGE SCALE DETAILS GOVERN OVER
- SMALL SCALE.
  WHERE EXISTING WALLS, PARTITIONS, COLUMNS, FLOORS, BULKHEADS, SURFACES, OR FINISHES ARE REMOVED OR PARTIALLY DEMOLISHED, EACH TRADE IS RESPONSIBLE FOR PATCHING OR REFINISHING OF EXISTING CONSTRUCTION REQUIRED BY THAT TRADE'S WORK ON THE PROJECT. THIS WORK MUST BE DONE IN A MANNER WHICH WILL ACCEPT NEW
- FINISHES. 5. ALL NEW, EXISTING, AND MODIFIED PARTITIONS TO RECEIVE A LEVEL FOUR (4) DRYWALL FINISH PRIOR TO APPLICATION OF PAINT TO SURFACE TO AVOID PAINT FLASHING. WALL FINISH LEVEL BASED ON GA-214-17 "RECOMMENDED LEVELS OF GYPSUM BOARD FINISH." REFER TO PARTITION TYPES FOR ADDITIONAL INFORMATION.
- PARTITIONS ARE DIMENSIONED TO FACE OF PARTITION UNLESS NOTED OTHERWISE.
   INSTALL MOISTURE RESISTANT GYP BOARD AT ALL WET WALLS, INCLUDING BUT NOT LIMITED TO RESTROOM AND SINK LOCATIONS. PROVIDE GYP TILE BACKER BOARD AT ALL WALLS TO
- RECEIVE CERAMIC TILE.
  8. UNO EDGE OF DOOR TO BE LOCATED 5" OFF PERPENDICULAR WALL. PROVIDE BACK-TO-BACK
  OR NESTED STUDE AT BOTH CIDES OF ALL NEW JAMPL CONTIONS NESTED STUDE CALCE TO
- OR NESTED STUDS AT BOTH SIDES OF ALL NEW JAMB LOCATIONS. NESTED STUD GAUGE TO MATCH PARTITION TYPE IN WHICH IT OCCURS OR 20 GA, WHICHEVER GAUGE IS HEAVIER.
  9. PROVIDE BLOCKING IN STUD WALLS BEHIND ITEMS (CABINETS, MILLWORK, MARKER BOARDS, ETC.) SUPPORTED BY WALLS, OF SIZES, LENGTHS AND HEIGHTS AS REQUIRED. ATTACH BLOCKING TO STUDS WITH TYPE, SIZE, NUMBER AND SPACING OF ANCHORS AS REQUIRED TO PROPERLY SUPPORT LOADS OF ITEMS SUPPORTED. WHERE WOOD BLOCKING IS USED IT IS TO BE FIRE RETARDANT TREATED. WHERE METAL IS USED PROVIDE MIN 1/8 INCH THICK PLATE, WELDED, SCREWED OR BOLTED TO METAL STUD FRAMING. IF PLATES ARE NOT LOCATED
- COMPLETELY BEHIND ITEMS SUPPORTED, LET PLATES INTO STUDS OR OTHERWISE CONFIGURE SO THAT THERE ARE NO VISIBLE BULGES IN SURFACE OF FINISHED GYPSUM BOARD DUE TO THICKNESS OF PLATES BETWEEN STUDS AND GYPSUM BOARD.
   10. ALL MATERIALS USED IN FIRE-RATED ASSEMBLIES SHALL BE APPROVED BY UL OTHER
- RECOGNIZED STANDARD FOR USE IN SUCH ASSEMBLIES.
  ALL FIRESTOP SYSTEMS TO MEET UL TESTED SYSTEMS. SYSTEMS MUST BE SUBMITTED TO AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION. GC IS TO KEEP A COPY OF ALL APPROVED SYSTEMS ON SITE FOR DURATION OF PROJECT. ALL INSTALLED SYSTEMS MUST BE LABELED AND DOCUMENTED. DOCUMENTATION IS TO BE SUBMITTED TO OWNER AND
- ARCHITECT UPON COMPLETION OF THE PROJECT. 12. PROVIDE THROUGH PENETRATION FIRESTOP SYSTEMS FOR ALL ITEMS PENETRATING FIRE-RATED ASSEMBLIES. PENETRATIONS TO BE DESIGNED, TESTED, AND FIRE-RESISTANCE RATED TO RESIST FOR A PRESCRIBED PERIOD OF TIME THE SPREAD OF FIRE THROUGH
- PENETRATIONS. PROVIDE UL-LISTED ASSEMBLIES AS REQUIRED.
  13. PROVIDE AND INSTALL ADA COMPLIANT BUILDING STANDARD FIRE EXTINGUISHERS AS REQUIRED BY AND IN ACCORDANCE WITH NFPA LIFE SAFETY CODE AND LOCAL BUILDING FIRE SAFETY CODE AND REGULATIONS.
- 14. PREPARE EXISTING FLOOR SLABS FOR INSTALLATION OF SPECIFIED FLOOR FINISHES. PREPARE EXISTING FLOOR SLABS TO BE SMOOTH AND LEVEL BEFORE INSTALLATION OF FINISH FLOOR MATERIALS, WITH MAXIMUM DEVIATION OF 1/4" IN 10'-0". NO FLOOR PREPARATION ALLOWANCES WILL BE ACCEPTED.
- ALL BUILDING ACCESSIBILITY IS DESIGNED AND SHALL BE IN ACCORDANCE WITH IBC, ANSI 117.1 AND ADAAG, WHICHEVER STANDARD PROVIDES THE GREATEST DEGREE OF ACCESSIBILITY FOR ANY GIVEN BUILDING ELEMENT.
- FOR ALL DOORS HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE. LEVER- OPERATED MECHANISMS, PUSH-TYPE MECHANISMS, AND U-SHAPED HANDLES ARE ACCEPTABLE DESIGNS. WHEN SLIDING DOORS ARE FULLY OPEN, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES. HARDWARE REQUIRED FOR ACCESSIBLE DOOR PASSAGE SHALL BE MOUNTED NO HIGHER THAN 48" AFF.
   ALL BUILDING ENTRANCES / EXITS ARE ACCESSIBLE.
- ALL BUILDING ENTRANCES / EXITS ARE ACCESSIBLE.
   ACCESSIBLE DOORS SHALL HAVE A LANDING ON BOTH SIDES. LANDINGS SHALL BE NO MORE THAN 1/2 INCH BELOW THE TOP OF THE DOOR THRESHOLD.
   EACH GLAZING LINIT SHALL BEAR THE MANUEACTURER'S LABEL DESIGNATING THE TYPE AND.
- EACH GLAZING UNIT SHALL BEAR THE MANUFACTURER'S LABEL DESIGNATING THE TYPE AND THICKNESS OF GLASS. GLAZING LOCATED WITHIN 24" OF A DOOR AND LESS THAN 60" AFF SHALL BE SAFETY GLAZED.
   INSTALL ALL APPLIANCES SHOWN IN DOCUMENTS. COORDINATE LOCATION AND SIZE OF ALL
- APPLIANCES AND ALL PLUMBING AND ELECTRICAL CONNECTIONS REQUIRED.
   TO PREVENT GALVANIC ACTION BETWEEN DISSIMILAR METALS, WHERE DISSIMILAR METALS COME INTO CONTACT WITH EACH OTHER, WHERE METALS COME INTO CONTACT WITH WOOD, CONCRETE OR MASONRY, WHERE RUNOFF FROM A METAL SURFACE FLOWS OVER A DISSIMILAR METAL, OR WHERE NON-PASSIVE METAL FASTENERS PENETRATE DISSIMILAR METALS, BREAK THE CONTACT BETWEEN MATERIALS WITH A HEAVY WATERPROOF PAPER OR FELT. A HEAVY COAT OF BITUMINOUS COATING OR AN ELASTOMERIC FILM UNLESS OTHER
- SEPARATOR IS INDICATED IN THE CONTRACT DOCUMENTS.
   STEEL EXPOSED TO WATER AND/OR EXTERIOR WEATHER CONDITIONS IS TO BE GALVANIZED UNLESS INDICATED OTHERWISE. WHERE CUTTING, FASTENING, ANCHORAGE OR CONNECTION CONDITIONS RESULT IN BREAKS IN THE GALVANIZING COATING, RESTORE COATING OR APPLY ADDITIONAL COMPATIBLE PROTECTIVE COATING TO MAINTAIN INTEGRITY OF PROTECTION.
   SHEET METAL FLASHING SHALL BE OF APPROPRIATE THICKNESS AND SIZES, AND DETAILED, CONFIGURED AND INSTALLED SO AS TO ALLOW FOR ACCEPTABLE THERMAL MOVEMENTS WITHOUT VISIBLE DISTORTIONS, LEAKS OR FAILURES OF THE FLASHING SYSTEM'S ABILITY TO



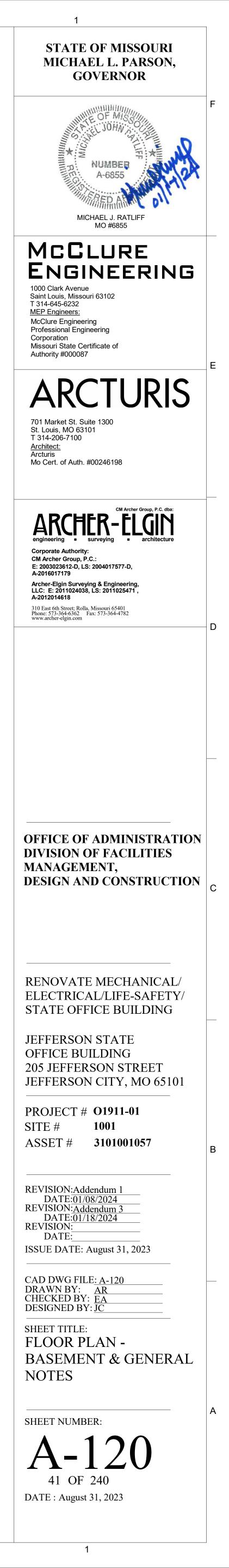
PROVIDE AND INSTALL NEW LAMINATE FRONTS AT ALL EXISTING FAN COIL UNITS ON FLOORS 2-13. COORDINATE ALL WORK WITH MECHANICAL SCOPE AND REFERENCE DETAIL 8/A-502 FOR MORE INFORMATION. LAMINATE TO MATCH EXISTING, PROVIDE LAMINATE OPTIONS FOR FMDC TO SELECT CLOSEST MATCH TO EXISTING. AREAS SCHEDULED FOR REMOVAL OF EXISTING FLOOR OUTLET DEVICES: CONTRACTOR TO INFILL WITH CONCRETE AND PATCH SLAB AT NEW RECESSED THREADED CONDUIT PLUG AND PROVIDE FLOOR LEVELING. PROVIDE AN ALLOWANCE FOR 520 TOTAL FLOOR OUTLET

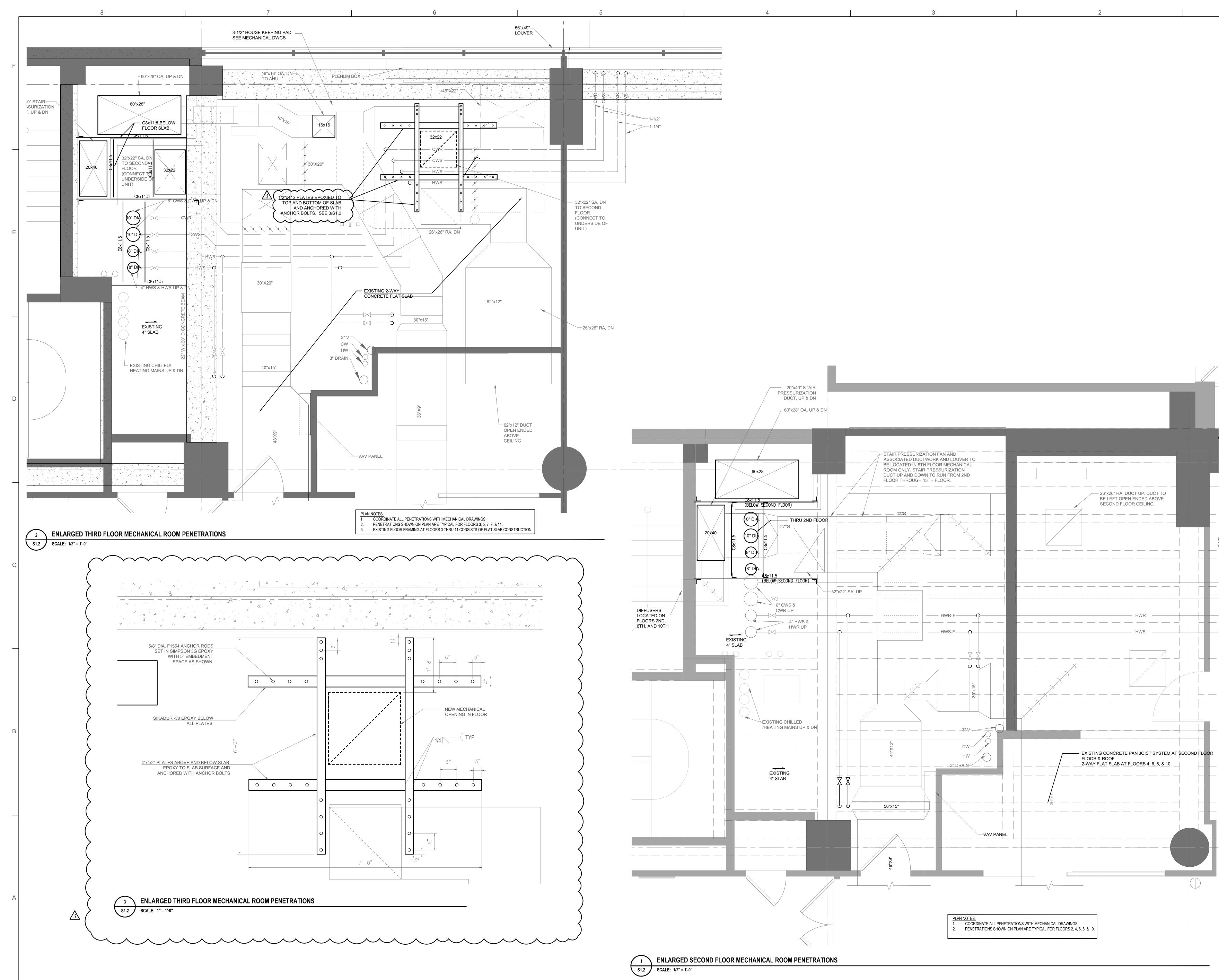
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DEVICES. REFERENCE ELECTRICAL SCOPE FOR MORE INFORMATION.

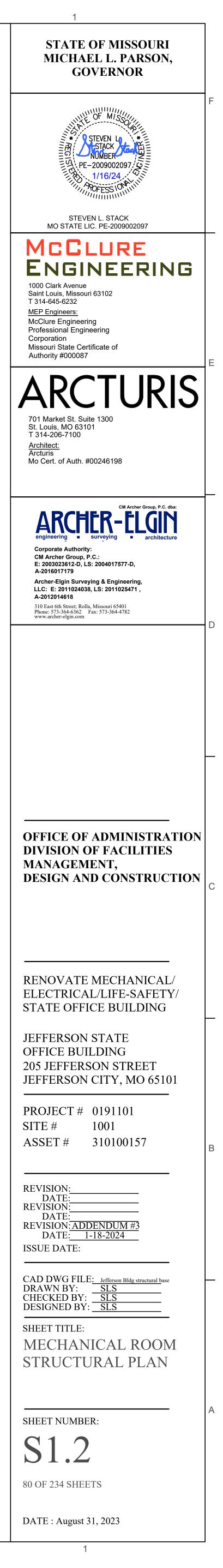
PERFORM AS REQUIRED BY THE CONTRACT DOCUMENTS.

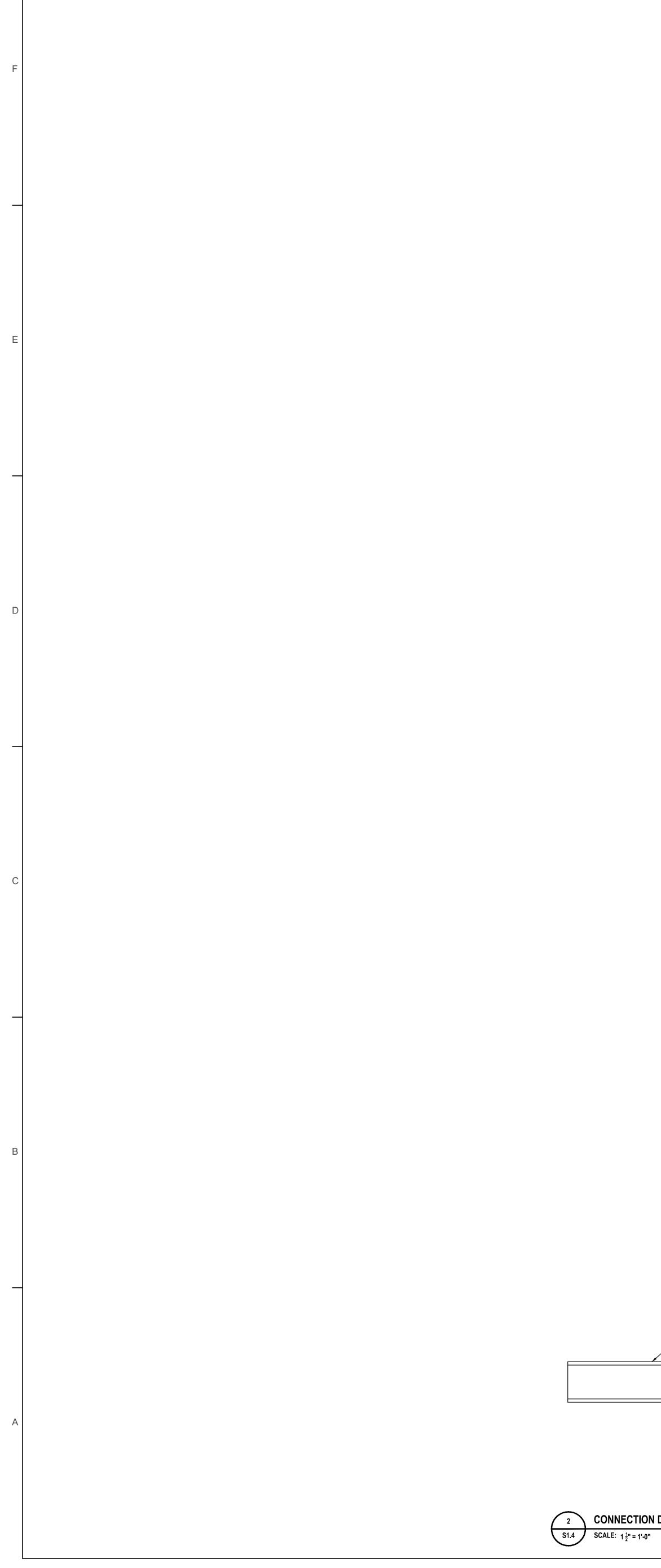
RO	OM SCHEDULE - BASEMENT
Number	Name
001	PRINT SHOP
002	OPEN OFFICE
003	OFFICE
004	OFFICE
005	OFFICE
006	OFFICE
007	OFFICE
008	STORAGE AREA





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## CONNECTION DETAIL

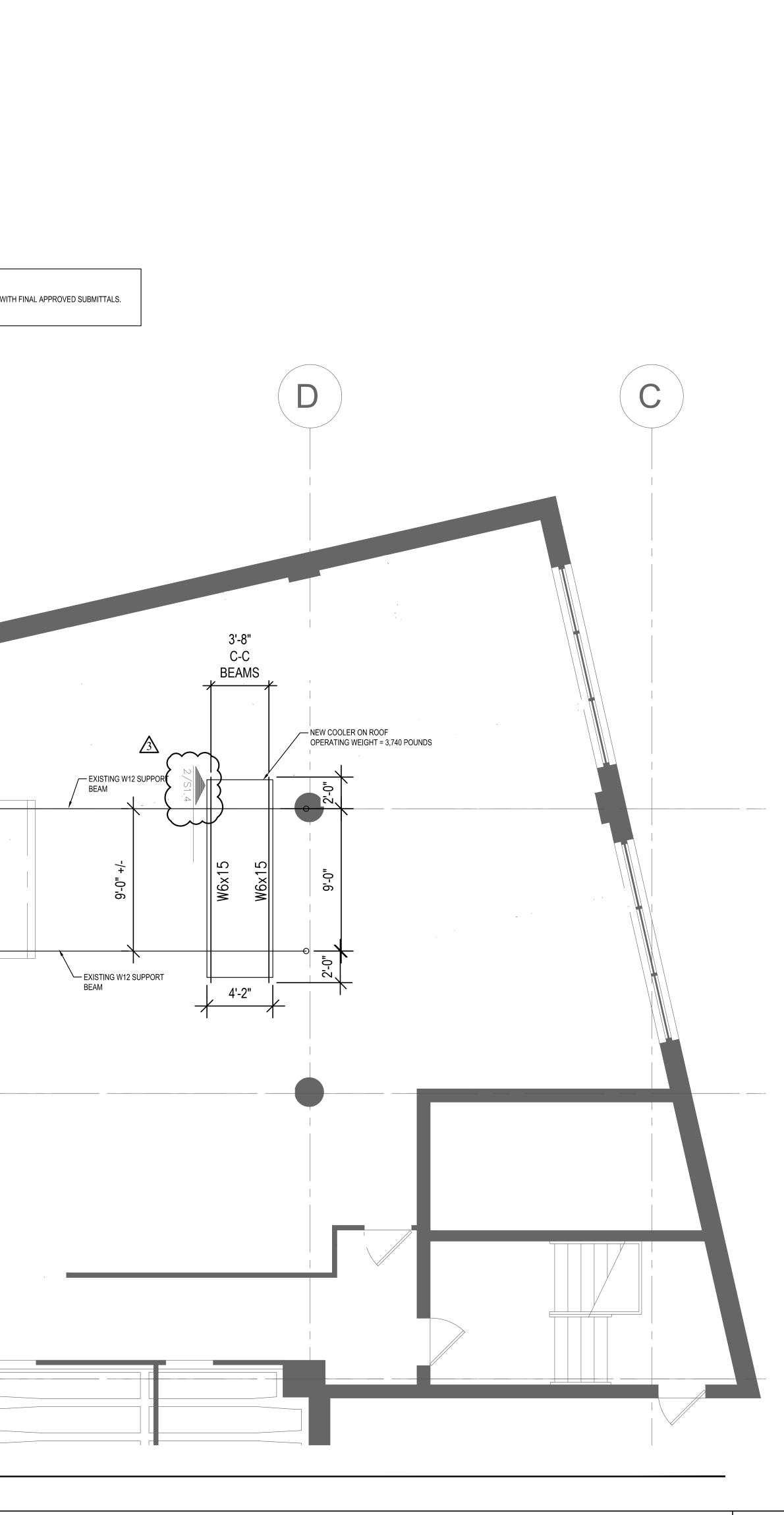
 $\int \frac{1/4}{1/4} \rightarrow \checkmark$ NEW W 6x15 BEAM 

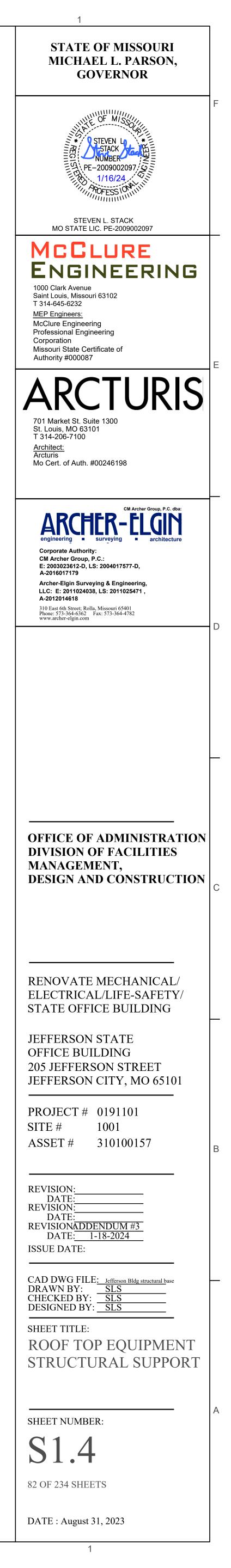
EXISTING W12 BEAM

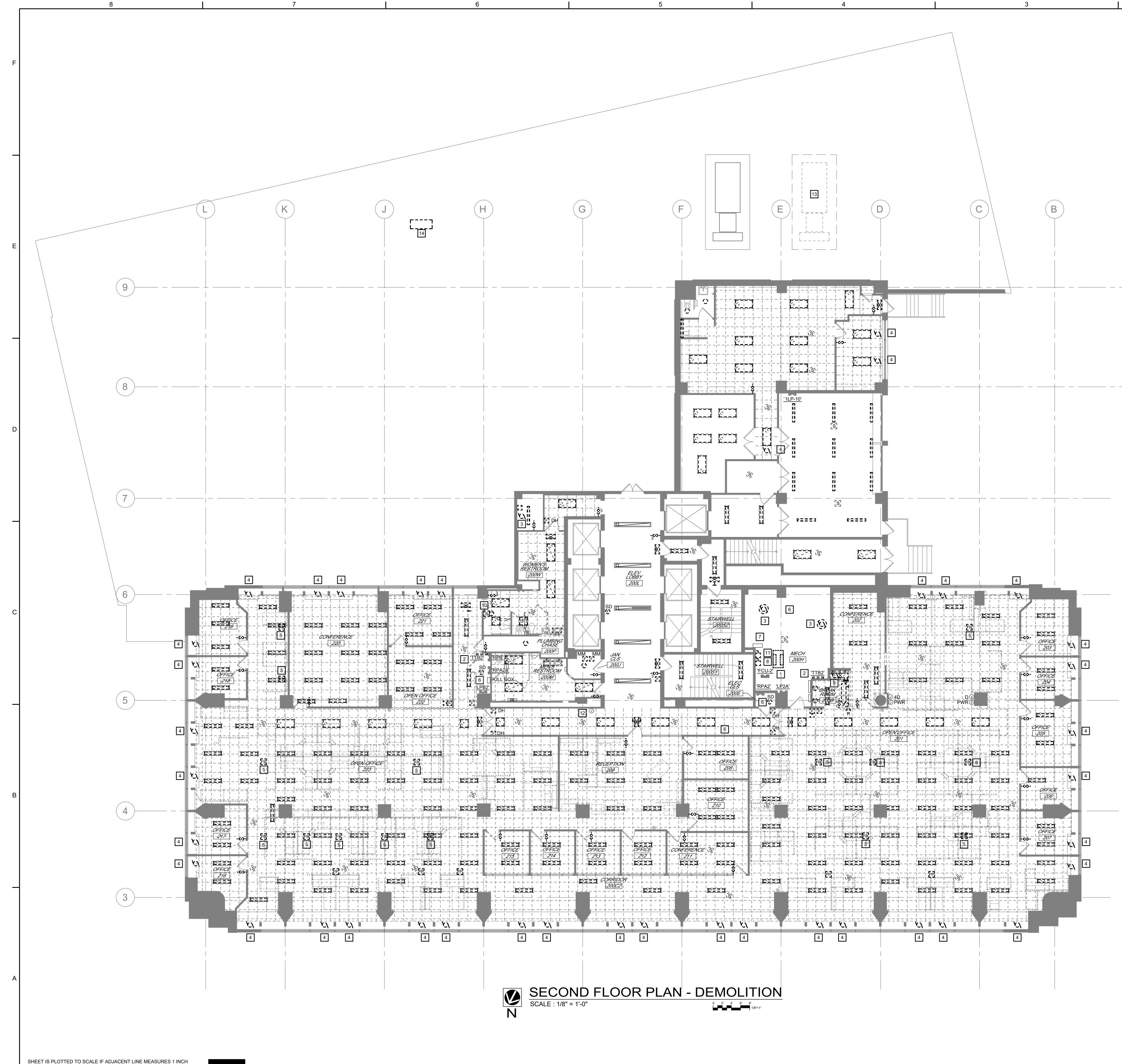
1 Е EXISTING GENERATOR —\_\_\_\_ TO REMAIN EXISTING STEEL POST -----EA. CORNER \_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ 1 PARTIAL ROOF PLAN S1.4 SCALE: 1/4" = 1'-0"

CONTRACTOR SHALL COORDINATE DIMENSIONS OF NEW EQUIPMENT WITH FINAL APPROVED SUBMITTALS. FIELD MEASURE EXISTING STEEL FRAMING

NOTES:







4

3

GENERAL DEMOLITION NOTES

- 1. ALL SYMBOLS SHOWN DASHED ARE EXISTING ELECTRICAL DEVICES TO BE REMOVED OR AS NOTED. ALL SYMBOLS SHOWN SOLID LIGHT LINE ARE EXISTING ELECTRICAL DEVICES TO REMAIN. EXISTING ELECTRICAL DEVICES WHICH ARE TO REMAIN SHALL BE EXTENDED TO BE FLUSH WITH NEW FINISH ON EXISTING WALLS WHERE REQUIRED.
- 2. ALL EXISTING ELECTRICAL DEVICES IN A WALL THAT IS TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, CUT OFF CONDUCTORS AND CAP CONDUIT IN FLOOR OR CEILING AS REQUIRED. DEVICES ARE TO BE REMOVED ALONG WITH WALL BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.
- ALL EXISTING ELECTRICAL DEVICES TO BE REMOVED FROM WALLS WHICH ARE TO REMAIN. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, REMOVE CONDUCTORS, REMOVE DEVICE AND PROVIDE BLANK COVERPLATES AS REQUIRED. UNLESS OTHERWISE NOTED.
- 4. FOR A PORTION OF A CIRCUIT WHICH IS REMOVED OR ABANDONED, RE-ESTABLISH CIRCUIT CONTINUITY FOR THE PORTION OF THE CIRCUIT WHICH IS TO REMAIN.
- ALL EXISTING CONDUITS, RACEWAYS AND WIRING ROUTED IN EXISTING WALLS AND CEILING SPACES (WHICH ARE TO BE DEMOLISHED) WHICH SERVE OTHER AREAS SHALL BE REROUTED AS REQUIRED.
- 6. PROVIDE AND INSTALL SUPPORTS FOR EXISTING CABLES AND CONDUITS ABOVE CEILING THAT ARE CURRENTLY UNSUPPORTED IN ALL AREAS WHERE CEILING WORK IS BEING PERFORMED.
- 7. INACTIVE TWISTED PAIR PUNCHDOWN BLOCKS, CABLING, OR IT EQUIPMENT TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 8. INTERCEPT EACH AND EVERY UN-SWITCHED LIGHTING BRANCH CIRCUIT (IN THE AREA THAT IT SERVES) AND TERMINATE EXISTING CONDUCTORS IN NEW JUNCTION BOX IN ACCESSIBLE CEILING SPACE, EXISTING BRANCH CIRCUIT IS TO BE EXTENDED TO NEW LIGHTING FIXTURES AND SWITCHING AS INDICATED ON LIGHTING PLANS, MATCH EXISTING CONDUCTORS AND CONDUIT, E.C. SHALL MAINTAIN EXISTING CIRCUIT CONTINUITY BACK TO SOURCE.
- ALL EXISTING DATA CABLES SHALL BE DISCONNECTED AND REMOVED, EXISTING DATA CABLE RACEWAYS TO REMAIN AND BE RE-USED.
- 10. EXISTING FIRE ALARM SYSTEM AND DEVICES TO REMAIN IN OPERATION UNTIL NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE DEMOLITION OF EXISTING FIRE ALARM SYSTEM AND DEVICES.
- 11. EXISTING PUBLIC ADDRESS SYSTEM AND SPEAKERS TO REMAIN IN OPERATION UNTIL THE NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE DEMOLITION OF THE PUBLIC ADDRESS SYSTEM AND SPEAKERS.
- 12. DEMOLISH ALL LIGHTING FIXTURES UNLESS NOTED OTHERWISE. SALVAGE ALL LED LAMPS AND RETURN TO OWNER FOR REUSE.
- 13. DEMOLISH ALL EXISTING POWER POLES. REROUTE CONDUCTORS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY.
- 14. REMOVE ALL WAPS ON EACH FLOOR AND STORE FOR REINSTALLATION.

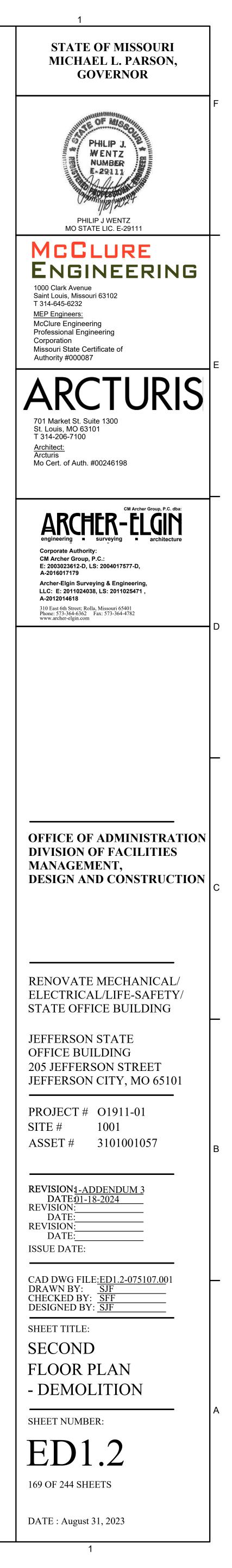
KEYED NOTES:

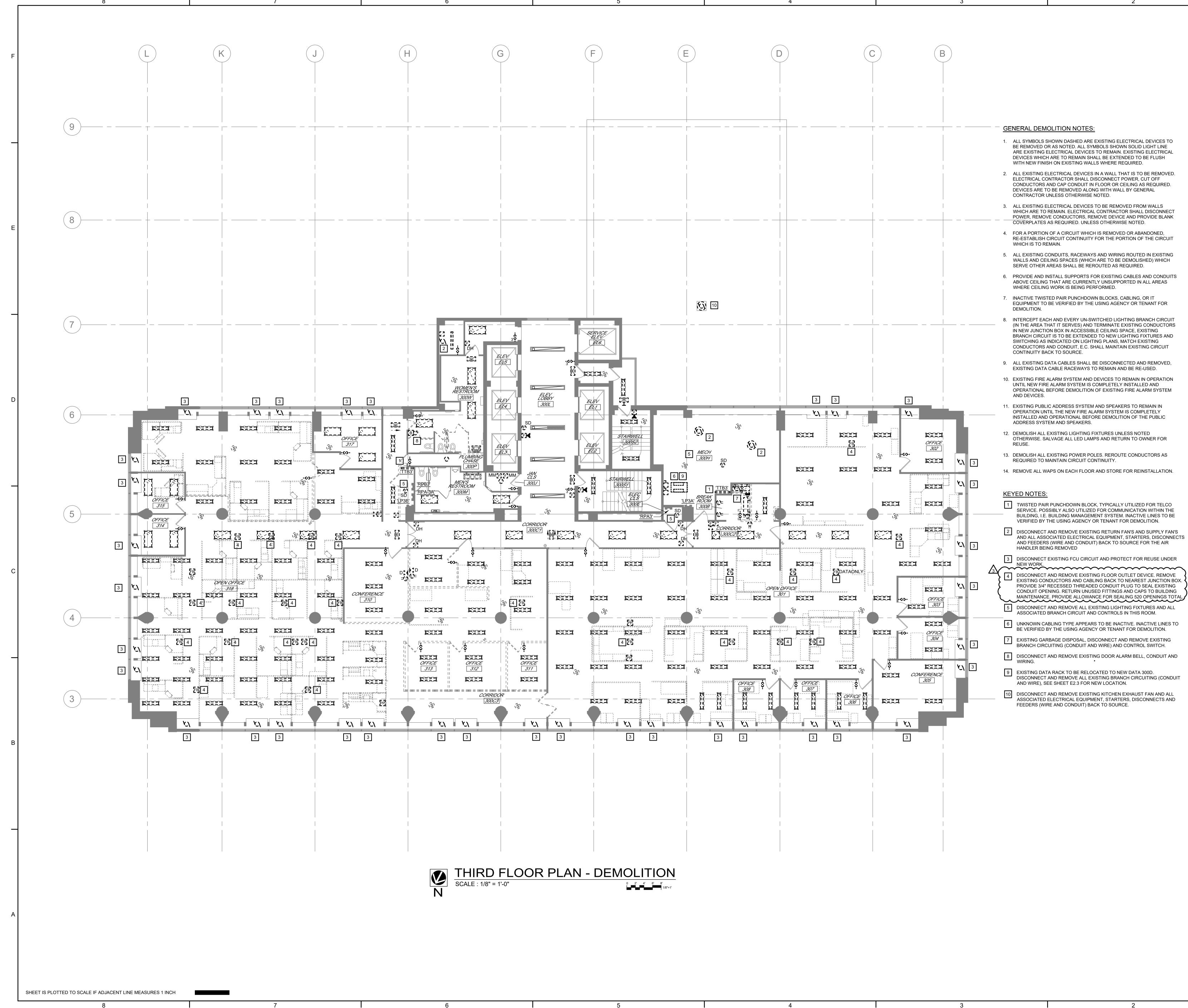
- 1 DISCONNECT AND REMOVE EXISTING PANEL `FCU-2'. REMOVE EXISTING FEEDER CONDUCTORS. EXISTING CONDUIT TO REMAIN AND BE RE-USED.
- 2 TWISTED PAIR PUNCHDOWN BLOCK, TYPICALLY UTILIZED FOR TELCO SERVICE. POSSIBLY ALSO UTILIZED FOR COMMUNICATION WITHIN THE BUILDING, I.E. BUILDING MANAGEMENT SYSTEM. INACTIVE LINES TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 3 DISCONNECT AND REMOVE EXISTING RETURN FAN'S AND SUPPLY FAN'S AND ALL ASSOCIATED ELECTRICAL EQUIPMENT, STARTERS, DISCONNECTS AND FEEDERS (WIRE AND CONDUIT) BACK TO SOURCE FOR THE AIR HANDLER BEING REMOVED

4 DISCONNECT EXISTING FCU CIRCUIT AND PROTECT FOR REUSE UNDER NEW WORK.

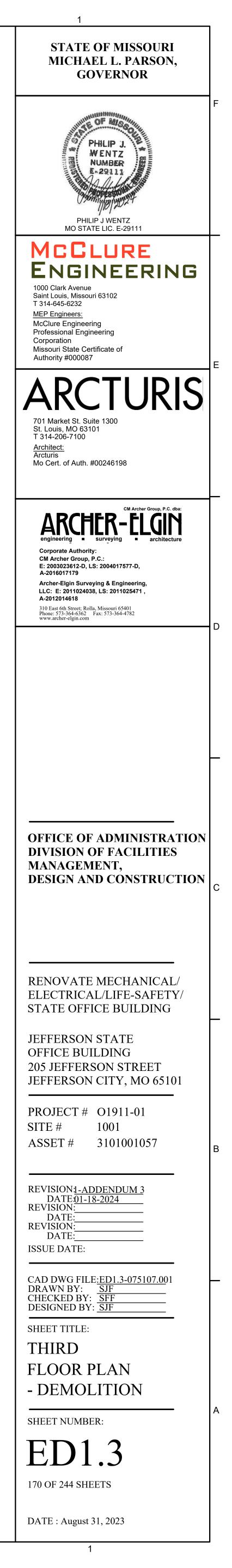
- DISCONNECT AND REMOVE EXISTING FLOOR OUTLET DEVICE. REMOVE EXISTING CONDUCTORS AND CABLING BACK TO NEAREST JUNCTION BOX. PROVIDE 3/4" RECESSED THREADED CONDUIT PLUG TO SEAL EXISTING CONDUIT OPENING. RETURN UNUSED FITTINGS AND CAPS TO BUILDING MAINTENANCE. PROVIDE ALLOWANCE FOR SEALING 520 OPENINGS TOTAL.
- 6 DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES AND ALL ASSOCIATED BRANCH CIRCUIT AND CONTROLS IN THIS ROOM.
- 7 EXISTING FAN COIL UNIT CONTACTOR PANEL. DEMO ALL EXISTING CONTACTORS AND PROTECT EXISTING FAN COIL UNIT CIRCUITS FOR RE-CONNECTION UNDER NEW WORK.
- 8 UNKNOWN CABLING TYPE APPEARS TO BE INACTIVE. INACTIVE LINES TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 9 EXISTING GARBAGE DISPOSAL. DISCONNECT AND REMOVE EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE) AND CONTROL SWITCH.
- 10 DISCONNECT AND REMOVE EXISTING DOOR ALARM BELL, CONDUIT AND WIRING.
- 11 EXISTING DATA RACK TO BE RELOCATED TO NEW DATA 200D. DISCONNECT AND REMOVE ALL EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE), SEE SHEET E2.2 FOR NEW LOCATION.
- 12 DISCONNECT EXISTING EWC, EXISTING BRANCH CIRCUITING TO REMAIN.

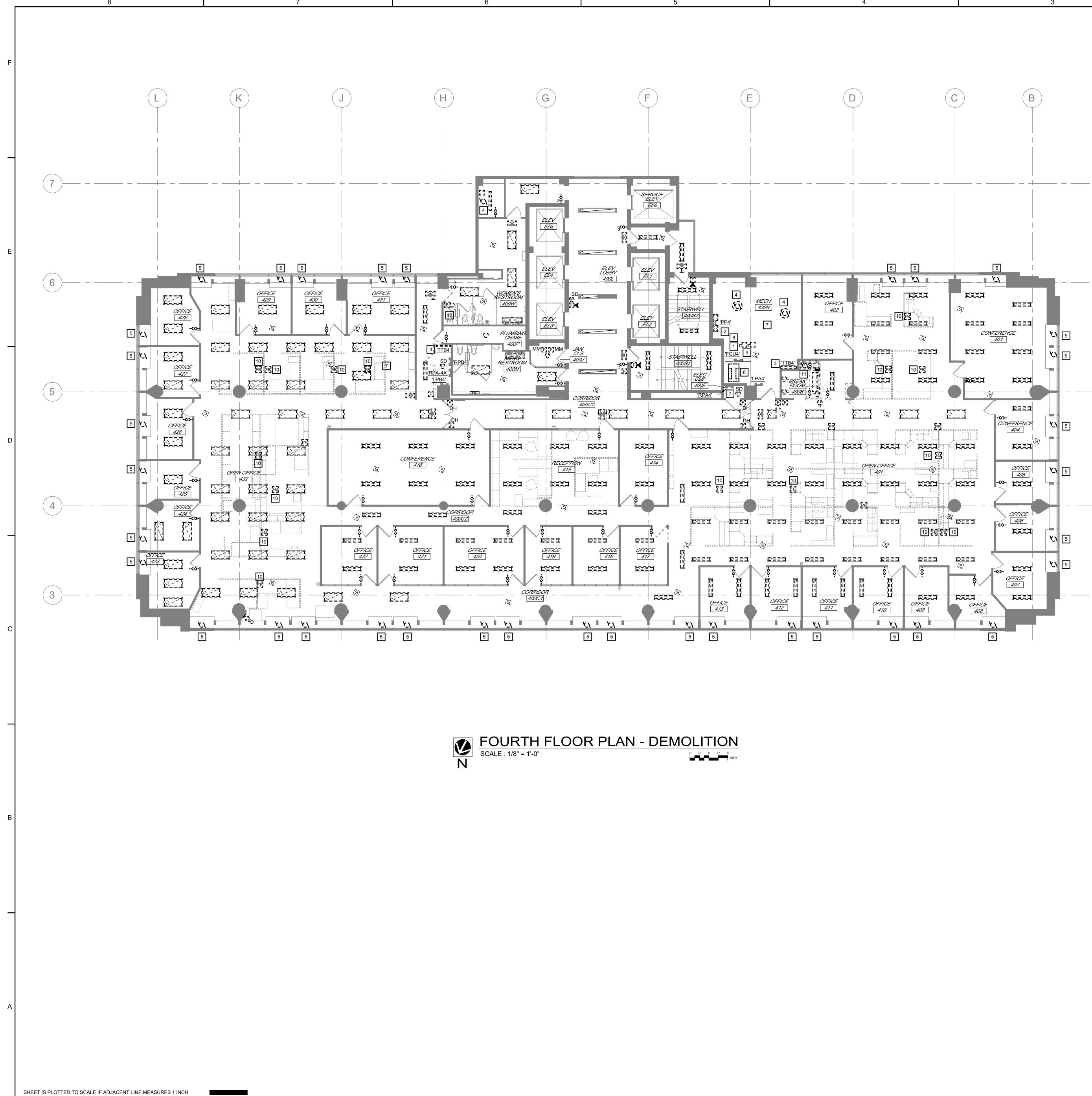
- 13 DISCONNECT AND REMOVE EXISTING CUMMINS 125 KW EMERGENCY GENERATOR AND ALL ASSOCIATED ELECTRICAL DEVICES AND EQUIPMENT.
- 14 APPROXIMATE LOCATION OF CONDENSING UNIT ON ROOF SERVING BASEMENT COMPUTER ROOM. MAINTAIN EXISTING CIRCUITING.





- 10 DISCONNECT AND REMOVE EXISTING KITCHEN EXHAUST FAN AND ALL ASSOCIATED ELECTRICAL EQUIPMENT, STARTERS, DISCONNECTS AND





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### **GENERAL DEMOLITION NOTES:**

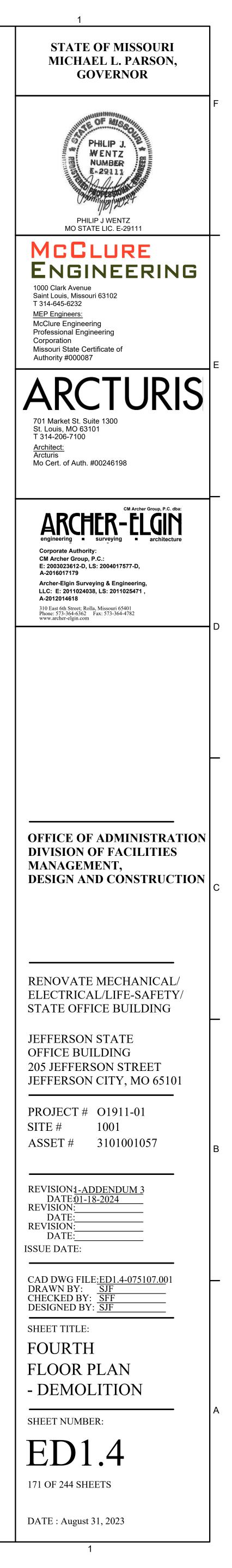
- 1. ALL SYMBOLS SHOWN DASHED ARE EXISTING ELECTRICAL DEVICES TO BE REMOVED OR AS NOTED. ALL SYMBOLS SHOWN SOLID LIGHT LINE ARE EXISTING ELECTRICAL DEVICES TO REMAIN. EXISTING ELECTRICAL DEVICES WHICH ARE TO REMAIN SHALL BE EXTENDED TO BE FLUSH WITH NEW FINISH ON EXISTING WALLS WHERE REQUIRED.
- 2. ALL EXISTING ELECTRICAL DEVICES IN A WALL THAT IS TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, CUT OFF CONDUCTORS AND CAP CONDUIT IN FLOOR OR CEILING AS REQUIRED. DEVICES ARE TO BE REMOVED ALONG WITH WALL BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.
- 3. ALL EXISTING ELECTRICAL DEVICES TO BE REMOVED FROM WALLS WHICH ARE TO REMAIN. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, REMOVE CONDUCTORS, REMOVE DEVICE AND PROVIDE BLANK COVERPLATES AS REQUIRED. UNLESS OTHERWISE NOTED.
- 4. FOR A PORTION OF A CIRCUIT WHICH IS REMOVED OR ABANDONED, RE-ESTABLISH CIRCUIT CONTINUITY FOR THE PORTION OF THE CIRCUIT WHICH IS TO REMAIN.
- 5. ALL EXISTING CONDUITS, RACEWAYS AND WIRING ROUTED IN EXISTING WALLS AND CEILING SPACES (WHICH ARE TO BE DEMOLISHED) WHICH SERVE OTHER AREAS SHALL BE REROUTED AS REQUIRED.
- 6. PROVIDE AND INSTALL SUPPORTS FOR EXISTING CABLES AND CONDUITS ABOVE CEILING THAT ARE CURRENTLY UNSUPPORTED IN ALL AREAS WHERE CEILING WORK IS BEING PERFORMED.
- INACTIVE TWISTED PAIR PUNCHDOWN BLOCKS, CABLING, OR IT EQUIPMENT TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 8. INTERCEPT EACH AND EVERY UN-SWITCHED LIGHTING BRANCH CIRCUIT (IN THE AREA THAT IT SERVES) AND TERMINATE EXISTING CONDUCTORS IN NEW JUNCTION BOX IN ACCESSIBLE CEILING SPACE, EXISTING BRANCH CIRCUIT IS TO BE EXTENDED TO NEW LIGHTING FIXTURES AND SWITCHING AS INDICATED ON LIGHTING PLANS, MATCH EXISTING CONDUCTORS AND CONDUIT, E.C. SHALL MAINTAIN EXISTING CIRCUIT CONTINUITY BACK TO SOURCE.
- 9. ALL EXISTING DATA CABLES SHALL BE DISCONNECTED AND REMOVED, EXISTING DATA CABLE RACEWAYS TO REMAIN AND BE RE-USED.
- 10. EXISTING FIRE ALARM SYSTEM AND DEVICES TO REMAIN IN OPERATION UNTIL NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE DEMOLITION OF EXISTING FIRE ALARM SYSTEM AND DEVICES.
- 11. EXISTING PUBLIC ADDRESS SYSTEM AND SPEAKERS TO REMAIN IN OPERATION UNTIL THE NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE DEMOLITION OF THE PUBLIC ADDRESS SYSTEM AND SPEAKERS.
- 12. DEMOLISH ALL EXISTING LIGHTING FIXTURES UNLESS NOTED OTHERWISE. SALVAGE ALL LED LAMPS AND RETURN TO OWNER FOR REUSE.
- 13. DEMOLISH ALL EXISTING POWER POLES, REROUTE CONDUCTORS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY.
- 14. REMOVE ALL WAPS ON EACH FLOOR AND STORE FOR REINSTALLATION.

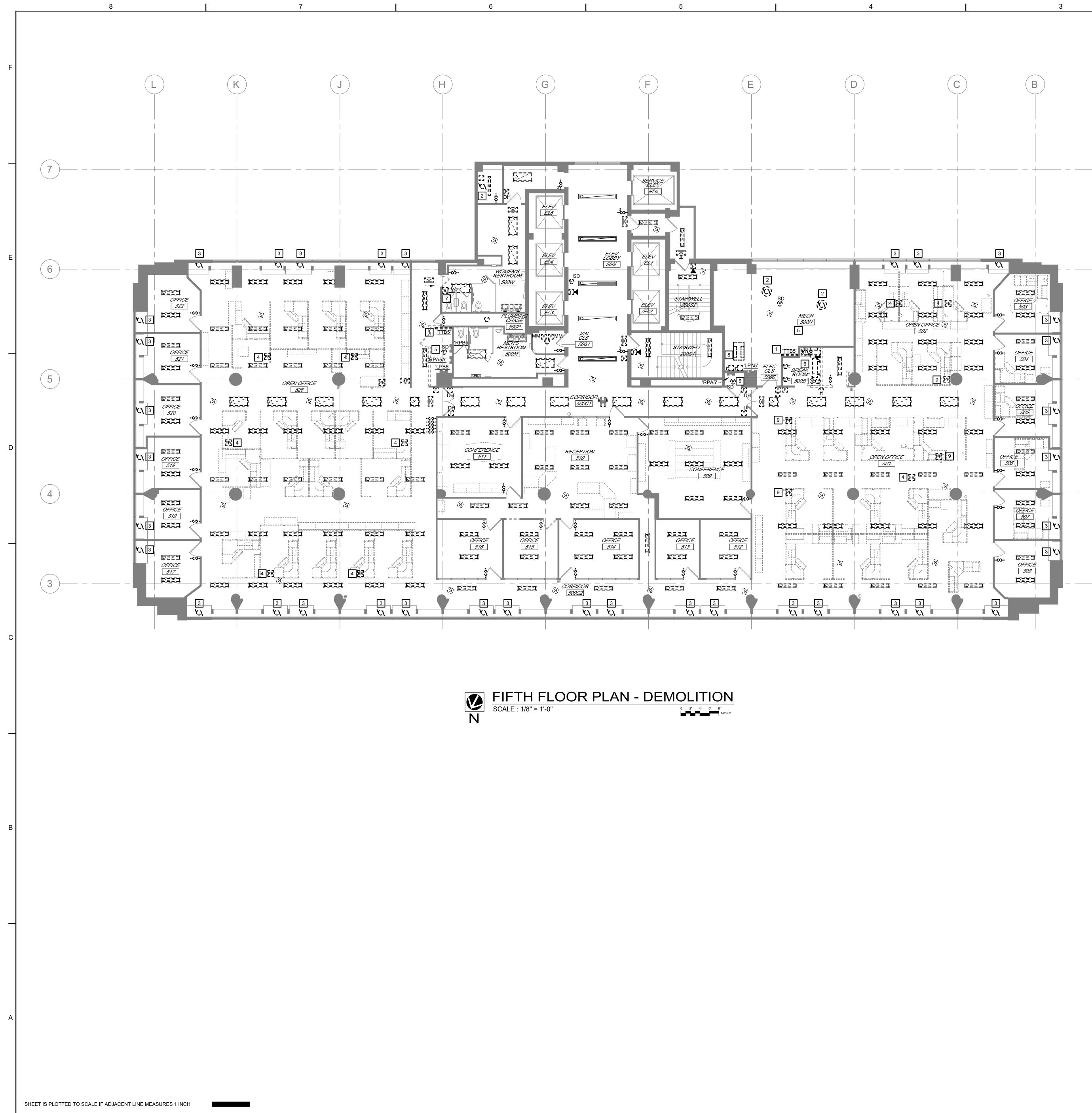
### KEYED NOTES:

- 1 DISCONNECT AND REMOVE EXISTING PANEL `FCU-4'. REMOVE EXISTING FEEDER CONDUCTORS. EXISTING CONDUIT TO REMAIN AND BE RE-USED.
- 2 DISCONNECT AND REMOVE EXISTING PANEL 'PP4', REMOVE EXISTING FEEDER CONDUCTORS TO AHU/RUA ON LEVELS 2, 4 AND 6, EXISTING CONDUIT TO REMAIN
- 3 TWISTED PAIR PUNCHDOWN BLOCK, TYPICALLY UTILIZED FOR TELCO SERVICE. POSSIBLY ALSO UTILIZED FOR COMMUNICATION WITHIN THE BUILDING, I.E. BUILDING MANAGEMENT SYSTEM. INACTIVE LINES TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 4 DISCONNECT AND REMOVE EXISTING RETURN FAN'S AND SUPPLY FAN'S AND ALL ASSOCIATED ELECTRICAL EQUIPMENT, STARTERS, DISCONNECTS AND FEEDERS (WIRE AND CONDUIT) BACK TO SOURCE FOR THE AIR HANDLER BEING REMOVED
- 5 DISCONNECT EXISTING FAN COIL UNIT CIRCUIT AND PROTECT FOR RE-USE UNDER NEW WORK.
- 6 EXISTING DATA RACK TO BE RELOCATED TO NEW DATA 400D. DISCONNECT AND REMOVE ALL EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE), SEE SHEET E2.4 FOR NEW LOCATION.
- 7 DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES AND ALL ASSOCIATED BRANCH CIRCUIT AND CONTROLS IN THIS ROOM.
- 8 UNKNOWN CABLING TYPE APPEARS TO BE INACTIVE. INACTIVE LINES TO
- BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION. 9 EXISTING FAN COIL UNIT CONTACTOR PANEL, DISCONNECT AND REMOVE ALL EXISTING CONTACTORS AND PROTECT EXISTING FAN COIL UNIT CIRCUITS FOR RE-CONNECTION UNDER NEW WORK.

#### DISCONNECT AND REMOVE EXISTING FLOOR OUTLET DEVICE. REMOVE EXISTING CONDUCTORS AND CABLING BACK TO NEAREST JUNCTION BOX. PROVIDE 3/4" RECESSED THREADED CONDUIT PLUG TO SEAL EXISTING CONDUIT OPENING. RETURN UNUSED FITTINGS AND CAPS TO BUILDING MAINTENANCE. PROVIDE ALLOWANCE FOR SEALING 520 OPENINGS TOTAL. <u>\_</u>......

- 11 EXISTING GARBAGE DISPOSAL. DISCONNECT AND REMOVE EXISTING BRANCH CIRCUITING (CONDUIT AND WIRING) AND CONTROL SWITCH
- 12 DISCONNECT AND REMOVE EXISTING DOOR ALARM BELL, CONDUIT AND WIRING.





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GENERAL DEMOLITION NOTES:

CONTRACTOR UNLESS OTHERWISE NOTED.

- 1. ALL SYMBOLS SHOWN DASHED ARE EXISTING ELECTRICAL DEVICES TO BE REMOVED OR AS NOTED. ALL SYMBOLS SHOWN SOLID LIGHT LINE ARE
- ON EXISTING WALLS WHERE REQUIRED.
- EXISTING ELECTRICAL DEVICES TO REMAIN. EXISTING ELECTRICAL DEVICES WHICH ARE TO REMAIN SHALL BE EXTENDED TO BE FLUSH WITH NEW FINISH

- 2. ALL EXISTING ELECTRICAL DEVICES IN A WALL THAT IS TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, CUT OFF

CONDUCTORS AND CAP CONDUIT IN FLOOR OR CEILING AS REQUIRED.

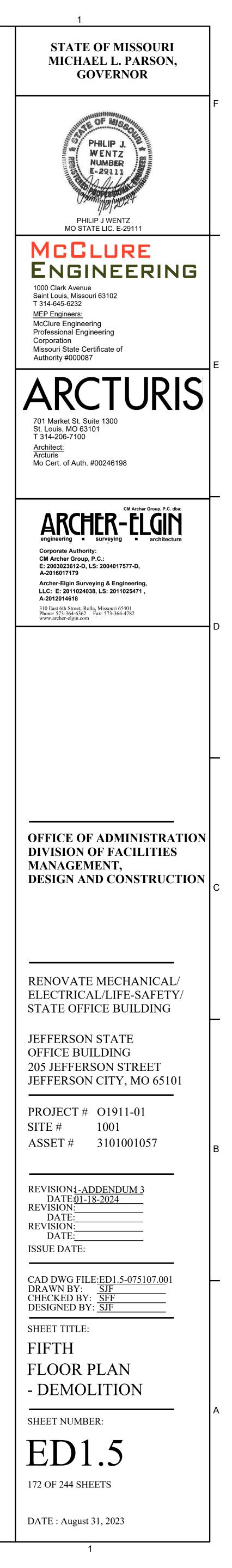
3. ALL EXISTING ELECTRICAL DEVICES TO BE REMOVED FROM WALLS WHICH ARE TO REMAIN. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, REMOVE CONDUCTORS, REMOVE DEVICE AND PROVIDE BLANK COVERPLATES AS REQUIRED. UNLESS OTHERWISE NOTED.

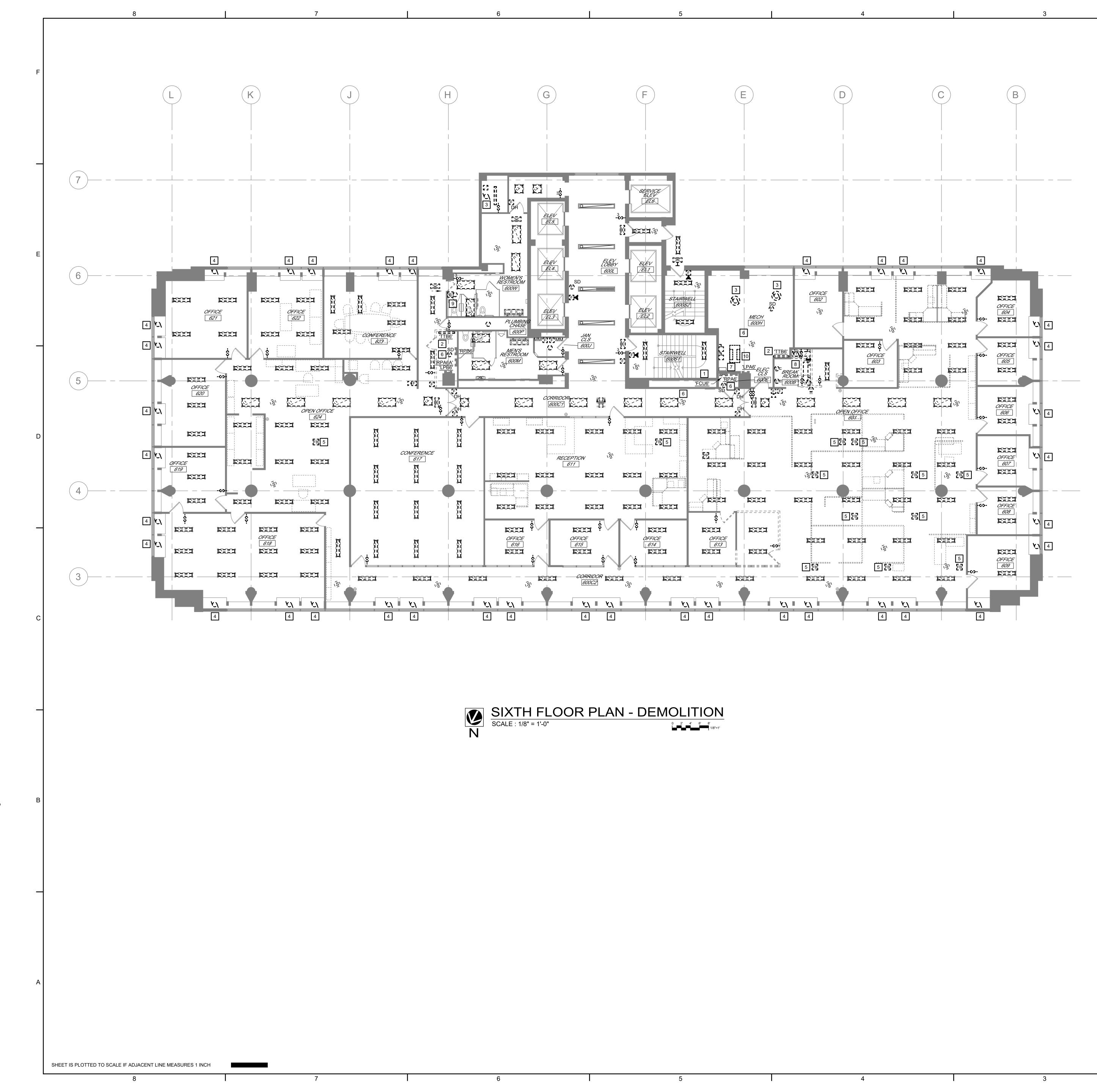
DEVICES ARE TO BE REMOVED ALONG WITH WALL BY GENERAL

- 4. FOR A PORTION OF A CIRCUIT WHICH IS REMOVED OR ABANDONED, RE-ESTABLISH CIRCUIT CONTINUITY FOR THE PORTION OF THE CIRCUIT WHICH IS TO REMAIN.
- 5. ALL EXISTING CONDUITS, RACEWAYS AND WIRING ROUTED IN EXISTING WALLS AND CEILING SPACES (WHICH ARE TO BE DEMOLISHED) WHICH SERVE OTHER AREAS SHALL BE REROUTED AS REQUIRED.
- 6. PROVIDE AND INSTALL SUPPORTS FOR EXISTING CABLES AND CONDUITS ABOVE CEILING THAT ARE CURRENTLY UNSUPPORTED IN ALL AREAS WHERE CEILING WORK IS BEING PERFORMED.
- 7. INACTIVE TWISTED PAIR PUNCHDOWN BLOCKS, CABLING, OR IT EQUIPMENT TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- INTERCEPT EACH AND EVERY UN-SWITCHED LIGHTING BRANCH CIRCUIT (IN THE AREA THAT IT SERVES) AND TERMINATE EXISTING CONDUCTORS IN NEW JUNCTION BOX IN ACCESSIBLE CEILING SPACE, EXISTING BRANCH CIRCUIT IS TO BE EXTENDED TO NEW LIGHTING FIXTURES AND SWITCHING AS INDICATED ON LIGHTING PLANS, MATCH EXISTING CONDUCTORS AND CONDUIT, E.C. SHALL MAINTAIN EXISTING CIRCUIT CONTINUITY BACK TO SOURCE.
- 9. ALL EXISTING DATA CABLES SHALL BE DISCONNECTED AND REMOVED, EXISTING DATA CABLE RACEWAYS TO REMAIN AND BE RE-USED.
- 10. EXISTING FIRE ALARM SYSTEM AND DEVICES TO REMAIN IN OPERATION UNTIL NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE DEMOLITION OF EXISTING FIRE ALARM SYSTEM AND DEVICES.
- 11. EXISTING PUBLIC ADDRESS SYSTEM AND SPEAKERS TO REMAIN IN OPERATION UNTIL THE NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE DEMOLITION OF THE PUBLIC ADDRESS SYSTEM AND SPEAKERS.
- 12. DEMOLISH ALL EXISTING LIGHTING FIXTURES UNLESS NOTED OTHERWISE. SALVAGE ALL LED LAMPS AND RETURN TO OWNER FOR REUSE.
- 13. DEMOLISH ALL EXISTING POWER POLES. REROUTE CONDUCTORS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY.
- 14. REMOVE ALL WAPS ON EACH FLOOR AND STORE FOR REINSTALLATION.

## **KEYED NOTES:**

- 1 TWISTED PAIR PUNCHDOWN BLOCK, TYPICALLY UTILIZED FOR TELCO SERVICE. POSSIBLY ALSO UTILIZED FOR COMMUNICATION WITHIN THE BUILDING, I.E. BUILDING MANAGEMENT SYSTEM. INACTIVE LINES TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 2 DISCONNECT AND REMOVE EXISTING RETURN FAN'S AND SUPPLY FAN'S AND ALL ASSOCIATED ELECTRICAL EQUIPMENT, STARTERS, DISCONNECTS AND FEEDERS (WIRE AND CONDUIT) BACK TO SOURCE FOR THE AIR HANDLER BEING REMOVED
- 3 DISCONNECT EXISTING FAN COIL UNIT CIRCUIT AND PROTECT FOR RE-USE DISCONNECT AND REMOVE EXISTING FLOOR OUTLET DEVICE. REMOVE
  - EXISTING CONDUCTORS AND CABLING BACK TO NEAREST JUNCTION BOX PROVIDE 3/4" RECESSED THREADED CONDUIT PLUG TO SEAL EXISTING CONDUIT OPENING. RETURN UNUSED FITTINGS AND CAPS TO BUILDING MAINTENANCE. PROVIDE ALLOWANCE FOR SEALING 520 OPENINGS TOTAL
  - 5 DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES AND ALL ASSOCIATED BRANCH CIRCUIT AND CONTROLS IN THIS ROOM.
  - 6 EXISTING GARBAGE DISPOSAL, DISCONNECT AND REMOVE EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE) AND CONTROL SWITCH.
- 7 DISCONNECT AND REMOVE EXISTING DOOR ALARM BELL, CONDUIT AND WIRF
- 8 EXISTING DATA RACK TO BE RELOCATED TO NEW DATA 500D. DISCONNECT AND REMOVE ALL EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE). SEE SHEET E2.5 FOR NEW LOCATION.
- 9 DISCONNECT AND REMOVE EXISTING POWER POLE, BRANCH CIRCUITING (CONDUIT AND WIRE)AND DATA CABLING.





GENERAL DEMOLITION NOTES

WHERE REQUIRED.

NOTED.

1. ALL SYMBOLS SHOWN DASHED ARE EXISTING ELECTRICAL DEVICES TO BE REMOVED OR AS NOTED. ALL SYMBOLS SHOWN SOLID LIGHT LINE ARE EXISTING ELECTRICAL DEVICES TO REMAIN. EXISTING ELECTRICAL DEVICES WHICH ARE TO REMAIN SHALL BE EXTENDED TO BE FLUSH WITH NEW FINISH ON EXISTING WALLS

2. ALL EXISTING ELECTRICAL DEVICES IN A WALL THAT IS TO BE REMOVED.

ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, CUT OFF CONDUCTORS

AND CAP CONDUIT IN FLOOR OR CEILING AS REQUIRED. DEVICES ARE TO BE

REMOVED ALONG WITH WALL BY GENERAL CONTRACTOR UNLESS OTHERWISE

3. ALL EXISTING ELECTRICAL DEVICES TO BE REMOVED FROM WALLS WHICH ARE TO

4. FOR A PORTION OF A CIRCUIT WHICH IS REMOVED OR ABANDONED, RE-ESTABLISH

CIRCUIT CONTINUITY FOR THE PORTION OF THE CIRCUIT WHICH IS TO REMAIN.

5. ALL EXISTING CONDUITS, RACEWAYS AND WIRING ROUTED IN EXISTING WALLS

6. PROVIDE AND INSTALL SUPPORTS FOR EXISTING CABLES AND CONDUITS ABOVE

CEILING THAT ARE CURRENTLY UNSUPPORTED IN ALL AREAS WHERE CEILING

7. INACTIVE TWISTED PAIR PUNCHDOWN BLOCKS, CABLING, OR IT EQUIPMENT TO BE

8. INTERCEPT EACH AND EVERY UN-SWITCHED LIGHTING BRANCH CIRCUIT (IN THE

JUNCTION BOX IN ACCESSIBLE CEILING SPACE, EXISTING BRANCH CIRCUIT IS TO

NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE

BE EXTENDED TO NEW LIGHTING FIXTURES AND SWITCHING AS INDICATED ON

LIGHTING PLANS, MATCH EXISTING CONDUCTORS AND CONDUIT, E.C. SHALL

9. ALL EXISTING DATA CABLES SHALL BE DISCONNECTED AND REMOVED, EXISTING

10. EXISTING FIRE ALARM SYSTEM AND DEVICES TO REMAIN IN OPERATION UNTIL

11. EXISTING PUBLIC ADDRESS SYSTEM AND SPEAKERS TO REMAIN IN OPERATION

OPERATIONAL BEFORE DEMOLITION OF THE PUBLIC ADDRESS SYSTEM AND

12. DEMOLISH ALL EXISTING LIGHTING FIXTURES. SALVAGE ALL LED LAMPS AND

13. DEMOLISH ALL EXISTING POWER POLES. REROUTE CONDUCTORS AS REQUIRED

1 DISCONNECT AND REMOVE EXISTING PANEL `FCU-6'. REMOVE EXISTING

2 TWISTED PAIR PUNCHDOWN BLOCK, TYPICALLY UTILIZED FOR TELCO

VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.

3 DISCONNECT AND REMOVE EXISTING RETURN FAN'S AND SUPPLY FAN'S

AND FEEDERS (WIRE AND CONDUIT) BACK TO SOURCE FOR THE AIR

4 DISCONNECT EXISTING FAN COIL UNIT CIRCUIT AND PROTECT FOR RE-USE

DISCONNECT AND REMOVE EXISTING FLOOR OUTLET DEVICE. REMOVE EXISTING CONDUCTORS AND CABLING BACK TO NEAREST JUNCTION BOX. PROVIDE 3/4" RECESSED THREADED CONDUIT PLUG TO SEAL EXISTING CONDUIT OPENING. RETURN UNUSED FITTINGS AND CAPS TO BUILDING MAINTENANCE. PROVIDE ALLOWANCE FOR SEALING 520 OPENINGS TOTAL <u>\_</u>...... 6 DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES AND ALL

ASSOCIATED BRANCH CIRCUIT AND CONTROLS IN THIS ROOM.

8 EXISTING GARBAGE DISPOSAL. DISCONNECT AND REMOVE EXISTING

7 EXISTING FAN COIL UNIT CONTACTOR PANEL. DISCONNECT AND REMOVE

BRANCH CIRCUITING (CONDUIT AND WIRE) AND CONTROL SWITCH.

9 DISCONNECT AND REMOVE EXISTING DOOR ALARM BELL, CONDUIT AND

DISCONNECT AND REMOVE ALL BRANCH CIRCUITING (CONDUIT AND

2

10 EXISTING DATA RACK TO BE RELOCATED TO NEW DATA 600D.

WIRING) SEE SHEET E2.6 FOR NEW LOCATION.

ALL EXISTING CONTACTORS AND PROTECT EXISTING FCU CIRCUITS FOR

FEEDER CONDUCTORS. EXISTING CONDUIT TO REMAIN AND BE RE-USED.

SERVICE. POSSIBLY ALSO UTILIZED FOR COMMUNICATION WITHIN THE

BUILDING, I.E. BUILDING MANAGEMENT SYSTEM. INACTIVE LINES TO BE

AND ALL ASSOCIATED ELECTRICAL EQUIPMENT, STARTERS, DISCONNECTS

UNTIL THE NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND

14. REMOVE ALL WAPS ON EACH FLOOR AND STORE FOR REINSTALLATION.

AREA THAT IT SERVES) AND TERMINATE EXISTING CONDUCTORS IN NEW

VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.

MAINTAIN EXISTING CIRCUIT CONTINUITY BACK TO SOURCE.

DEMOLITION OF EXISTING FIRE ALARM SYSTEM AND DEVICES.

DATA CABLE RACEWAYS TO REMAIN AND BE RE-USED.

AND CEILING SPACES (WHICH ARE TO BE DEMOLISHED) WHICH SERVE OTHER

REMAIN. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, REMOVE

CONDUCTORS, REMOVE DEVICE AND PROVIDE BLANK COVERPLATES AS

REQUIRED. UNLESS OTHERWISE NOTED.

AREAS SHALL BE REROUTED AS REQUIRED.

WORK IS BEING PERFORMED.

SPEAKERS.

**KEYED NOTES:** 

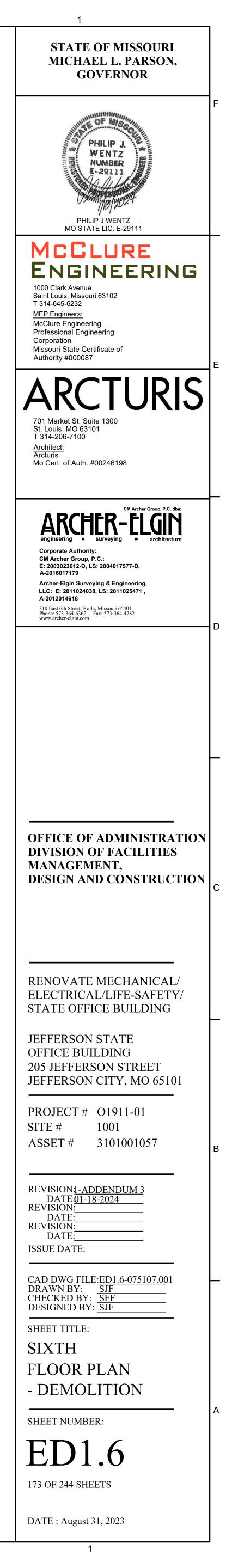
RETURN TO OWNER FOR REUSE.

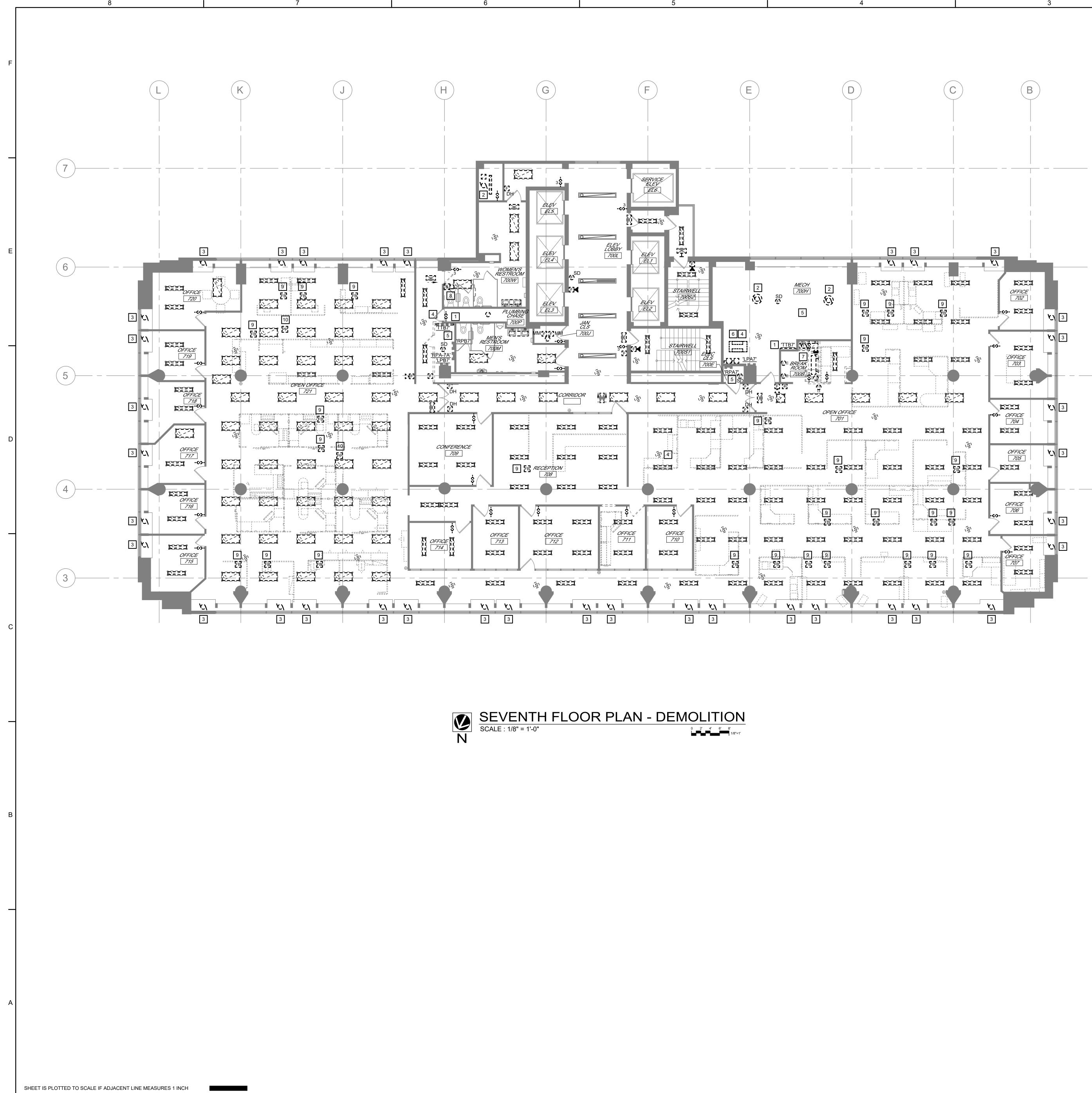
TO MAINTAIN CIRCUIT CONTINUITY.

HANDLER BEING REMOVED

**RE-CONNECTION UNDER NEW WORK.** 

UNDER NEW WORK.





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GENERAL DEMOLITION NOTES:

- 1. ALL SYMBOLS SHOWN DASHED ARE EXISTING ELECTRICAL DEVICES TO BE REMOVED OR AS NOTED. ALL SYMBOLS SHOWN SOLID LIGHT LINE ARE EXISTING ELECTRICAL DEVICES TO REMAIN. EXISTING ELECTRICAL DEVICES WHICH ARE TO REMAIN SHALL BE EXTENDED TO BE FLUSH WITH NEW FINISH ON EXISTING WALLS WHERE REQUIRED.
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- 6. PROVIDE AND INSTALL SUPPORTS FOR EXISTING CABLES AND CONDUITS ABOVE CEILING THAT ARE CURRENTLY UNSUPPORTED IN ALL AREAS WHERE CEILING WORK IS BEING PERFORMED.
- 7. INACTIVE TWISTED PAIR PUNCHDOWN BLOCKS, CABLING, OR IT EQUIPMENT TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 8. INTERCEPT EACH AND EVERY UN-SWITCHED LIGHTING BRANCH CIRCUIT (IN THE AREA THAT IT SERVES) AND TERMINATE EXISTING CONDUCTORS IN NEW JUNCTION BOX IN ACCESSIBLE CEILING SPACE, EXISTING BRANCH CIRCUIT IS TO BE EXTENDED TO NEW LIGHTING FIXTURES AND SWITCHING AS INDICATED ON LIGHTING PLANS, MATCH EXISTING CONDUCTORS AND CONDUIT, E.C. SHALL MAINTAIN EXISTING CIRCUIT CONTINUITY BACK TO SOURCE.
- 9. ALL EXISTING DATA CABLES SHALL BE DISCONNECTED AND REMOVED, EXISTING DATA CABLE RACEWAYS TO REMAIN AND BE RE-USED.
- 10. EXISTING FIRE ALARM SYSTEM AND DEVICES TO REMAIN IN OPERATION UNTIL NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE DEMOLITION OF EXISTING FIRE ALARM SYSTEM AND DEVICES.
- 11. EXISTING PUBLIC ADDRESS SYSTEM AND SPEAKERS TO REMAIN IN OPERATION UNTIL THE NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE DEMOLITION OF THE PUBLIC ADDRESS SYSTEM AND SPEAKERS.
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- 13. DEMOLISH ALL EXISTING POWER POLES. REROUTE CONDUCTORS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY.

14. REMOVE ALL WAPS ON EACH FLOOR AND STORE FOR REINSTALLATION.

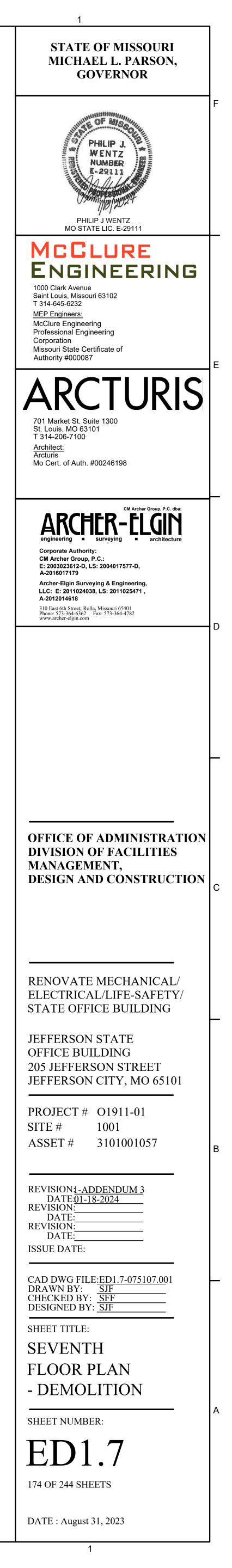
**KEYED NOTES:** 

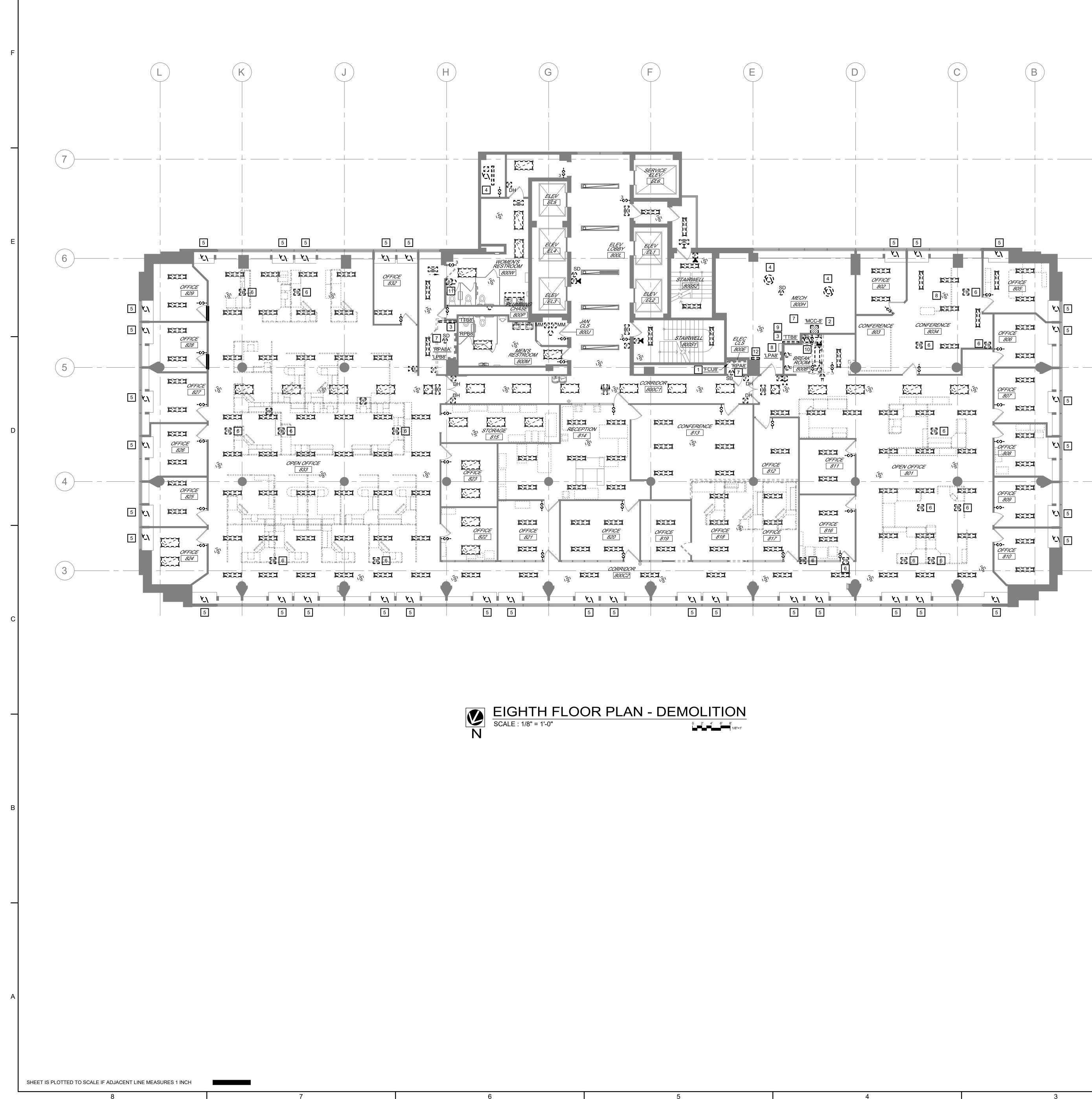
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- 2 DISCONNECT AND REMOVE EXISTING RETURN FAN'S AND SUPPLY FAN'S AND ALL ASSOCIATED ELECTRICAL EQUIPMENT, STARTERS, DISCONNECTS AND FEEDERS (WIRE AND CONDUIT) BACK TO SOURCE FOR THE AIR HANDLER BEING REMOVED
- 3 DISCONNECT EXISTING FAN COIL UNIT CIRCUIT AND PROTECT FOR RE-USE UNDER NEW WORK.
- 4 EXISTING DATA RACK TO BE RELOCATED TO NEW DATA 700D. DISCONNECT AND REMOVE ALL EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE). SEE SHEET E2.7 FOR NEW LOCATION.
- 5 DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES AND ALL ASSOCIATED BRANCH CIRCUIT AND CONTROLS IN THIS ROOM.
- 6 UNKNOWN CABLING TYPE APPEARS TO BE INACTIVE. INACTIVE LINES TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 7 EXISTING GARBAGE DISPOSAL. DISCONNECT AND REMOVE EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE) AND CONTROL SWITCH.
- 8 DISCONNECT AND REMOVE EXISTING DOOR ALARM BELL, CONDUIT AND

3

WIRING

- 9 DISCONNECT AND REMOVE EXISTING FLOOR OUTLET DEVICE. REMOVE EXISTING CONDUCTORS AND CABLING BACK TO NEAREST JUNCTION BOX. PROVIDE 3/4" RECESSED THREADED CONDUIT PLUG TO SEAL EXISTING CONDUIT OPENING. RETURN UNUSED FITTINGS AND CAPS TO BUILDING MAINTENANCE. PROVIDE ALLOWANCE FOR SEALING 520 OPENINGS TOTAL.
- 10 DISCONNECT AND REMOVE EXISTING POWER POLE, BRANCH CIRCUITING (CONDUIT AND WIRE) AND DATA CABLING.





**GENERAL DEMOLITION NOTES:** 

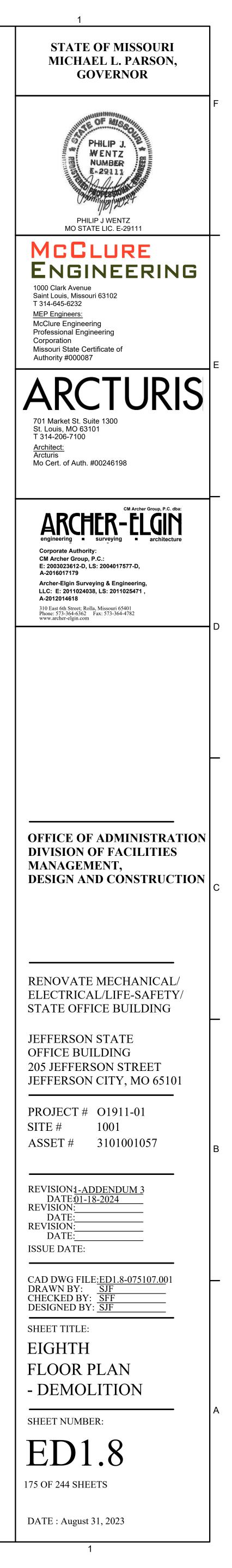
CONTRACTOR UNLESS OTHERWISE NOTED.

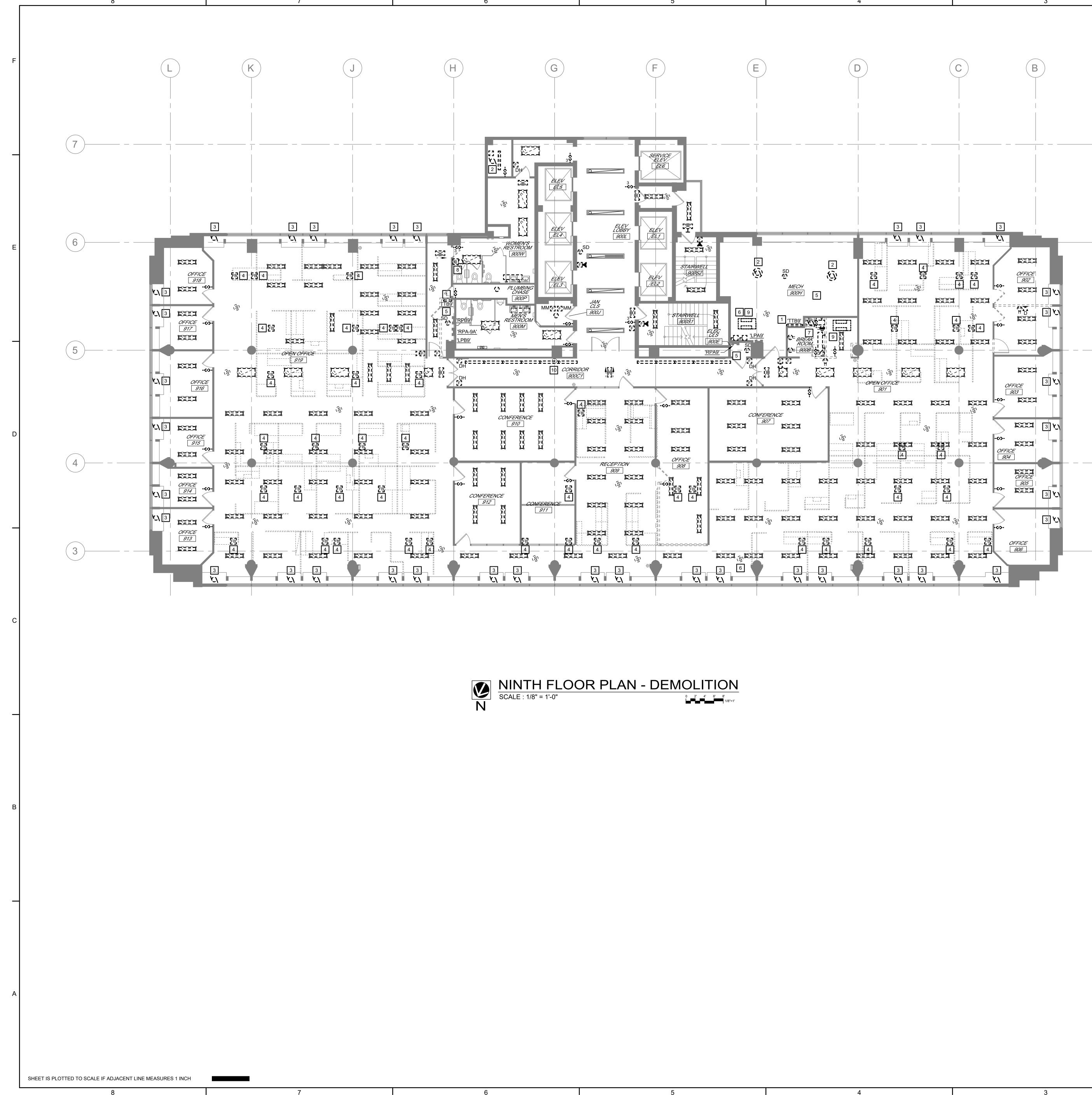
- 1. ALL SYMBOLS SHOWN DASHED ARE EXISTING ELECTRICAL DEVICES TO BE REMOVED OR AS NOTED. ALL SYMBOLS SHOWN SOLID LIGHT LINE ARE EXISTING ELECTRICAL DEVICES TO REMAIN. EXISTING ELECTRICAL DEVICES WHICH ARE TO REMAIN SHALL BE EXTENDED TO BE FLUSH WITH NEW FINISH ON EXISTING WALLS WHERE REQUIRED.
- 2. ALL EXISTING ELECTRICAL DEVICES IN A WALL THAT IS TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, CUT OFF CONDUCTORS AND CAP CONDUIT IN FLOOR OR CEILING AS REQUIRED. DEVICES ARE TO BE REMOVED ALONG WITH WALL BY GENERAL
- 3. ALL EXISTING ELECTRICAL DEVICES TO BE REMOVED FROM WALLS WHICH ARE TO REMAIN. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, REMOVE CONDUCTORS, REMOVE DEVICE AND PROVIDE BLANK COVERPLATES AS REQUIRED. UNLESS OTHERWISE NOTED.
- 4. FOR A PORTION OF A CIRCUIT WHICH IS REMOVED OR ABANDONED, RE-ESTABLISH CIRCUIT CONTINUITY FOR THE PORTION OF THE CIRCUIT WHICH IS TO REMAIN.
- 5. ALL EXISTING CONDUITS, RACEWAYS AND WIRING ROUTED IN EXISTING WALLS AND CEILING SPACES (WHICH ARE TO BE DEMOLISHED) WHICH SERVE OTHER AREAS SHALL BE REROUTED AS REQUIRED.
- 6. PROVIDE AND INSTALL SUPPORTS FOR EXISTING CABLES AND CONDUITS ABOVE CEILING THAT ARE CURRENTLY UNSUPPORTED IN ALL AREAS WHERE CEILING WORK IS BEING PERFORMED.
- 7. INACTIVE TWISTED PAIR PUNCHDOWN BLOCKS, CABLING, OR IT EQUIPMENT TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 8. INTERCEPT EACH AND EVERY UN-SWITCHED LIGHTING BRANCH CIRCUIT (IN THE AREA THAT IT SERVES) AND TERMINATE EXISTING CONDUCTORS IN NEW JUNCTION BOX IN ACCESSIBLE CEILING SPACE, EXISTING BRANCH CIRCUIT IS TO BE EXTENDED TO NEW LIGHTING FIXTURES AND SWITCHING AS INDICATED ON LIGHTING PLANS, MATCH EXISTING CONDUCTORS AND CONDUIT, E.C. SHALL MAINTAIN EXISTING CIRCUIT CONTINUITY BACK TO SOURCE.
- 9. ALL EXISTING DATA CABLES SHALL BE DISCONNECTED AND REMOVED, EXISTING DATA CABLE RACEWAYS TO REMAIN AND BE RE-USED.
- 10. EXISTING FIRE ALARM SYSTEM AND DEVICES TO REMAIN IN OPERATION UNTIL NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE DEMOLITION OF EXISTING FIRE ALARM SYSTEM AND DEVICES.
- 11. EXISTING PUBLIC ADDRESS SYSTEM AND SPEAKERS TO REMAIN IN OPERATION UNTIL THE NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE DEMOLITION OF THE PUBLIC ADDRESS SYSTEM AND SPEAKERS.
- 12. DEMOLISH ALL EXISTING LIGHTING FIXTURES UNLESS NOTED OTHERWISE. SALVAGE ALL LED LAMPS AND RETURN TO OWNER FOR REUSE.
- 13. DEMOLISH ALL EXISTING POWER POLES.REROUTE CONDUCTORS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY.
- 14. REMOVE ALL WAPS ON EACH FLOOR AND STORE FOR REINSTALLATION.

KEYED NOTES:

WIRING.

- 1 DISCONNECT AND REMOVE EXISTING PANEL 'FCU-8'. REMOVE EXISTING FEEDER CONDUCTORS EXISTING CONDUIT TO REMAIN.
- 2 DISCONNECT AND REMOVE EXSITING PANEL 'MCC-8'. REMOVE EXISTING FEEDER CONDUCTOR EXISTING CONDUIT TO REMAIN.
- 3 TWISTED PAIR PUNCHDOWN BLOCK, TYPICALLY UTILIZED FOR TELCO SERVICE. POSSIBLY ALSO UTILIZED FOR COMMUNICATION WITHIN THE BUILDING, I.E. BUILDING MANAGEMENT SYSTEM. INACTIVE LINES TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 4 DISCONNECT AND REMOVE EXISTING RETURN FAN'S AND SUPPLY FAN'S AND ALL ASSOCIATED ELECTRICAL EQUIPMENT, STARTERS, DISCONNECTS AND FEEDERS (WIRE AND CONDUIT) BACK TO SOURCE FOR THE AIR HANDLER BEING REMOVED
- 5 DISCONNECT EXISTING FAN COIL UNIT CIRCUIT AND PROTECT FOR RE-USE UNDER NEW WORK.
- 6 DISCONNECT AND REMOVE EXISTING FLOOR OUTLET DEVICE. REMOVE EXISTING CONDUCTORS AND CABLING BACK TO NEAREST JUNCTION BOX. PROVIDE 3/4" RECESSED THREADED CONDUIT PLUG TO SEAL EXISTING
- CONDUIT OPENING. RETURN UNUSED FITTINGS AND CAPS TO BUILDING MAINTENANCE. PROVIDE ALLOWANCE FOR SEALING 520 OPENINGS TOTAL
- <u>\_\_\_\_\_\_</u> 7 DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES AND ALL ASSOCIATED BRANCH CIRCUIT AND CONTROLS IN THIS ROOM.
- 8 EXISTING FAN COIL UNIT CONTACTOR PANEL. DEMO ALL EXISTING CONTACTORS AND PROTECT EXISTING FAN COIL UNIT CIRCUITS FOR RE-CONNECTION UNDER NEW WORK.
- 9 UNKNOWN CABLING TYPE APPEARS TO BE INACTIVE. INACTIVE LINES TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 10 EXISTING GARBAGE DISPOSAL, DISCONNECT AND REMOVE EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE) AND CONTROL SWITCH.
- 11 DISCONNECT AND REMOVE EXISTING DOOR ALARM BELL, CONDUIT AND
- 12 EXISTING DATA CABLING ON LEVEL 8 ROUTES TO RACK ON LEVEL 7. REMOVE EXISTING CABLING BACK TO SOURCE.





GENERAL DEMOLITION NOTES

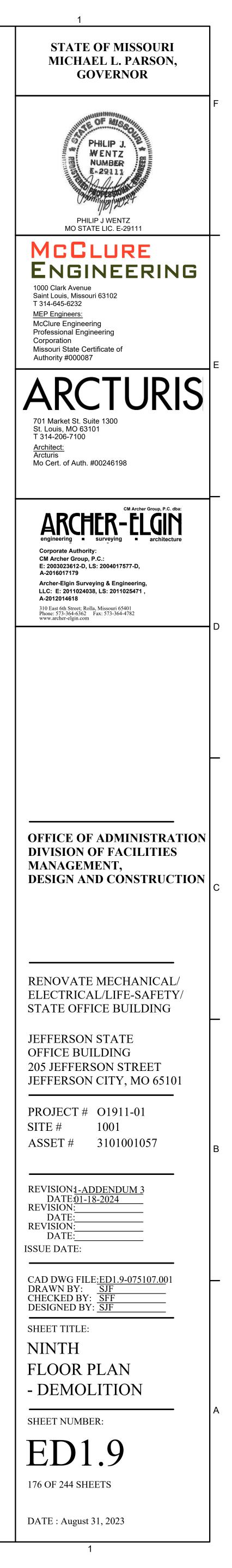
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- 2. ALL EXISTING ELECTRICAL DEVICES IN A WALL THAT IS TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, CUT OFF CONDUCTORS AND CAP CONDUIT IN FLOOR OR CEILING AS REQUIRED. DEVICES ARE TO BE REMOVED ALONG WITH WALL BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.
- 3. ALL EXISTING ELECTRICAL DEVICES TO BE REMOVED FROM WALLS WHICH ARE TO REMAIN. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, REMOVE CONDUCTORS, REMOVE DEVICE AND PROVIDE BLANK COVERPLATES AS REQUIRED. UNLESS OTHERWISE NOTED.
- 4. FOR A PORTION OF A CIRCUIT WHICH IS REMOVED OR ABANDONED, RE-ESTABLISH CIRCUIT CONTINUITY FOR THE PORTION OF THE CIRCUIT WHICH IS TO REMAIN.
- 5. ALL EXISTING CONDUITS, RACEWAYS AND WIRING ROUTED IN EXISTING WALLS AND CEILING SPACES (WHICH ARE TO BE DEMOLISHED) WHICH SERVE OTHER AREAS SHALL BE REROUTED AS REQUIRED.
- PROVIDE AND INSTALL SUPPORTS FOR EXISTING CABLES AND CONDUITS ABOVE CEILING THAT ARE CURRENTLY UNSUPPORTED IN ALL AREAS WHERE CEILING WORK IS BEING PERFORMED.
- 7. INACTIVE TWISTED PAIR PUNCHDOWN BLOCKS, CABLING, OR IT EQUIPMENT TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 8. INTERCEPT EACH AND EVERY UN-SWITCHED LIGHTING BRANCH CIRCUIT (IN THE AREA THAT IT SERVES) AND TERMINATE EXISTING CONDUCTORS IN NEW JUNCTION BOX IN ACCESSIBLE CEILING SPACE, EXISTING BRANCH CIRCUIT IS TO BE EXTENDED TO NEW LIGHTING FIXTURES AND SWITCHING AS INDICATED ON LIGHTING PLANS, MATCH EXISTING CONDUCTORS AND CONDUIT, E.C. SHALL MAINTAIN EXISTING CIRCUIT CONTINUITY BACK TO SOURCE.
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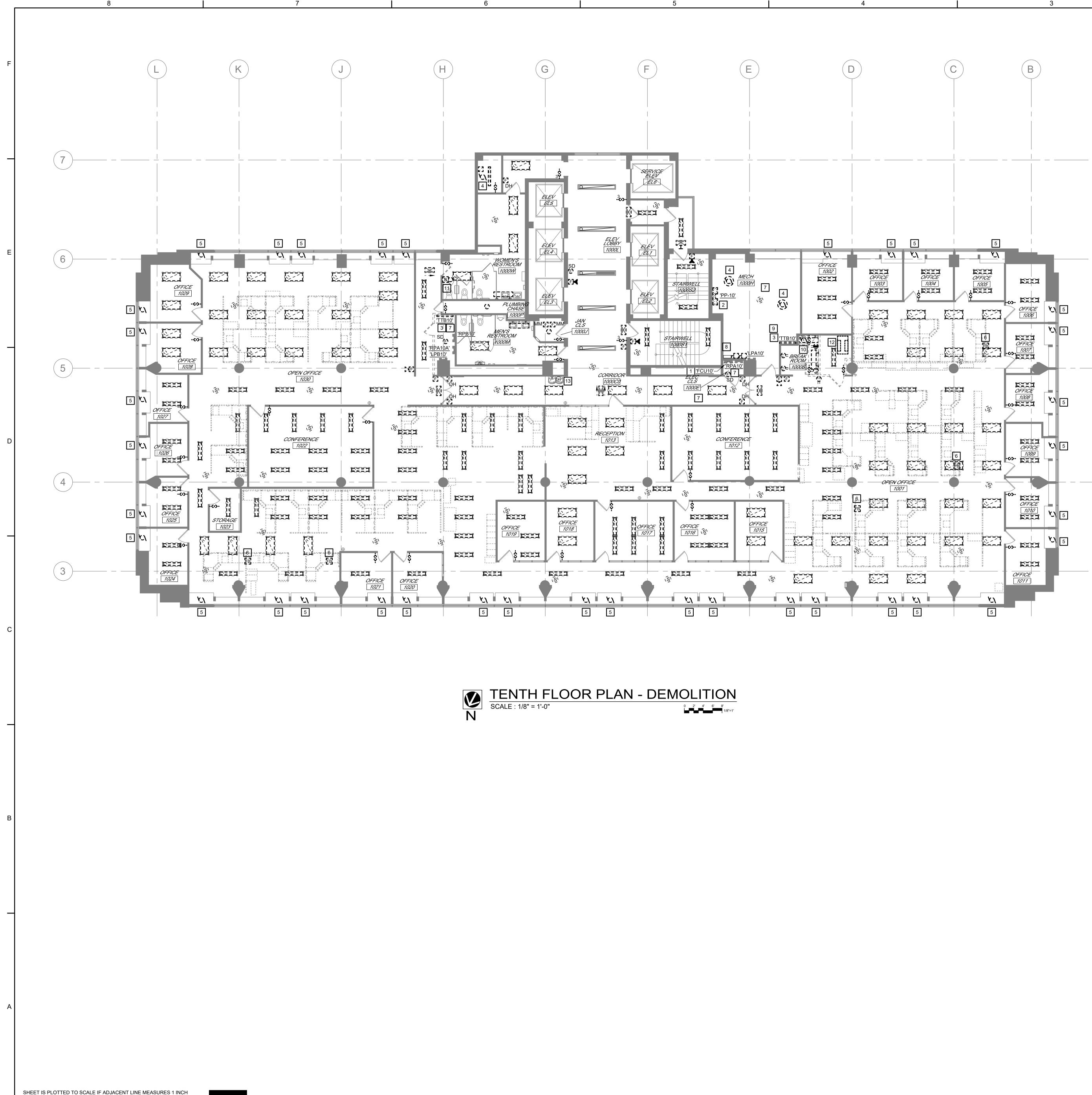
### **KEYED NOTES:**

- 1 TWISTED PAIR PUNCHDOWN BLOCK, TYPICALLY UTILIZED FOR TELCO SERVICE. POSSIBLY ALSO UTILIZED FOR COMMUNICATION WITHIN THE BUILDING, I.E. BUILDING MANAGEMENT SYSTEM. INACTIVE LINES TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 2 DISCONNECT AND REMOVE EXISTING RETURN FAN'S AND SUPPLY FAN'S AND ALL ASSOCIATED ELECTRICAL EQUIPMENT, STARTERS, DISCONNECTS AND FEEDERS (WIRE AND CONDUIT) BACK TO SOURCE FOR THE AIR HANDLER BEING REMOVED
- 3 DISCONNECT EXISTING FAN COIL UNIT CIRCUIT AND PROTECT FOR **RE-WORK UNDER NEW WORK.**

4 DISCONNECT AND REMOVE EXISTING FLOOR OUTLET DEVICE. REMOVE EXISTING CONDUCTORS AND CABLING BACK TO NEAREST JUNCTION BOX. PROVIDE 3/4" RECESSED THREADED CONDUIT PLUG TO SEAL EXISTING CONDUIT OPENING. RETURN UNUSED FITTINGS AND CAPS TO BUILDING MAINTENANCE. PROVIDE ALLOWANCE FOR SEALING 520 OPENINGS TOTAL. 5 DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES AND ALL

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- 9 EXISTING DATA RACK TO BE RELOCATED TO NEW ELECTRICAL CLOSET. DISCONNECT AND REMOVE ALL EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE). SEE SHEET E2.9 FOR NEW LOCATION.
- 10 DISCONNECT EXISTING EWC, EXISTING BRANCH CIRCUITING TO REMAIN.



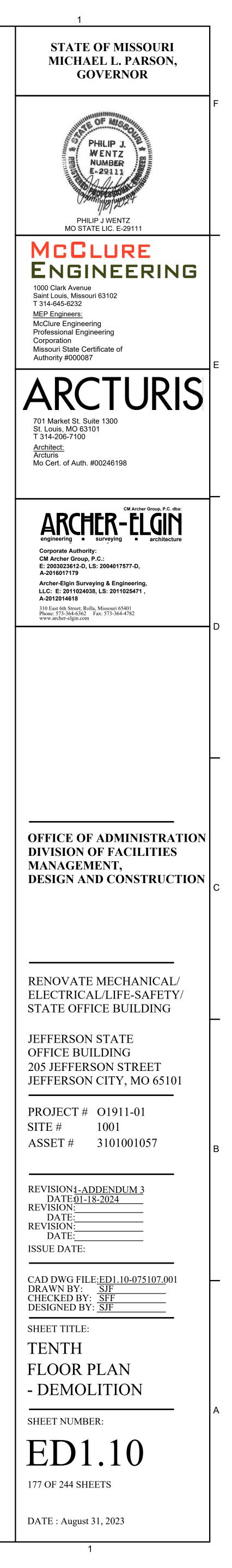


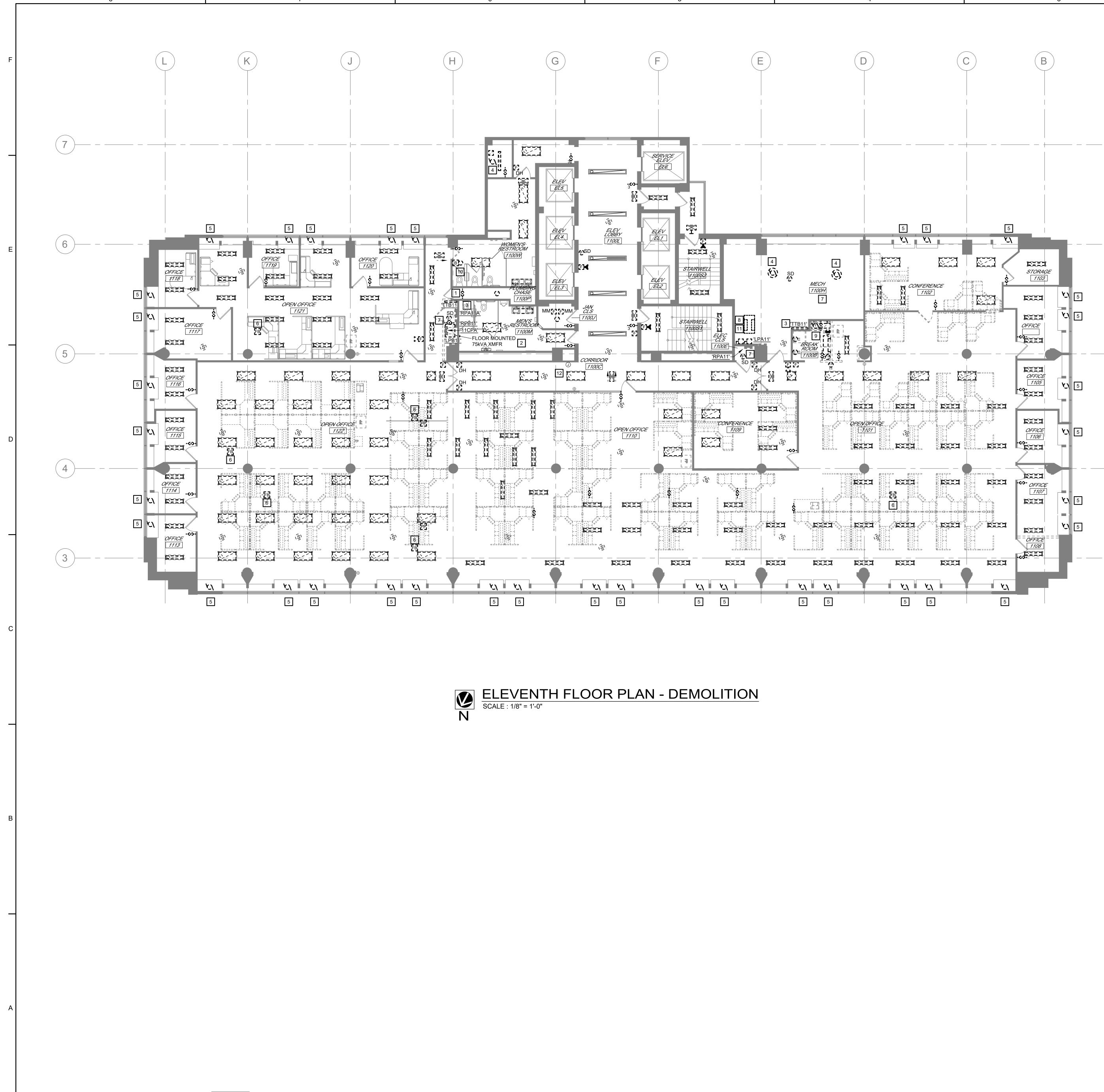
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**GENERAL DEMOLITION NOTES:** 

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- 2. ALL EXISTING ELECTRICAL DEVICES IN A WALL THAT IS TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, CUT OFF CONDUCTORS AND CAP CONDUIT IN FLOOR OR CEILING AS REQUIRED. DEVICES ARE TO BE REMOVED ALONG WITH WALL BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.
- 3. ALL EXISTING ELECTRICAL DEVICES TO BE REMOVED FROM WALLS WHICH ARE TO REMAIN. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, REMOVE CONDUCTORS, REMOVE DEVICE AND PROVIDE BLANK COVERPLATES AS REQUIRED. UNLESS OTHERWISE NOTED.
- 4. FOR A PORTION OF A CIRCUIT WHICH IS REMOVED OR ABANDONED, RE-ESTABLISH CIRCUIT CONTINUITY FOR THE PORTION OF THE CIRCUIT WHICH IS TO REMAIN.
- 5. ALL EXISTING CONDUITS, RACEWAYS AND WIRING ROUTED IN EXISTING WALLS AND CEILING SPACES (WHICH ARE TO BE DEMOLISHED) WHICH SERVE OTHER AREAS SHALL BE REROUTED AS REQUIRED.
- 6. PROVIDE AND INSTALL SUPPORTS FOR EXISTING CABLES AND CONDUITS ABOVE CEILING THAT ARE CURRENTLY UNSUPPORTED IN ALL AREAS WHERE CEILING WORK IS BEING PERFORMED.
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- 13. DEMOLISH ALL EXISTING POWER POLES. REROUTE CONDUCTORS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY.
- 14. REMOVE ALL WAPS ON EACH FLOOR AND STORE FOR REINSTALLATION. **KEYED NOTES:**
- 1 DISCONNECT AND REMOVE EXISTING PANEL 'FCU-10', REMOVE EXISTING FEEDER CONDUCTORS, EXISTING CONDUIT TO REMAIN. 2 DISCONNECT AND REMOVE EXISTING PANEL 'PP-10', REMOVE EXISTING
- FEEDER CONDUCTOR EXISTING CONDUIT TO REMAIN. PANEL TO REMAIN IN SERVICE UNTIL ALL ASSOCIATED 'AHU'S ARE DISCONNECTED. 3 TWISTED PAIR PUNCHDOWN BLOCK, TYPICALLY UTILIZED FOR TELCO
- SERVICE. POSSIBLY ALSO UTILIZED FOR COMMUNICATION WITHIN THE BUILDING, I.E. BUILDING MANAGEMENT SYSTEM. INACTIVE LINES TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
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- 12 EXISTING DATA RACK TO BE RELOCATED TO NEW ELECTRICAL CLOSET, DISCONNECT AND REMOVE EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE) SEE SHEET E2.10 FOR NEW LOCATION.
- 13 DISCONNECT EXISTING EWC, EXISTING BRANCH CIRCUITING TO REMAIN.



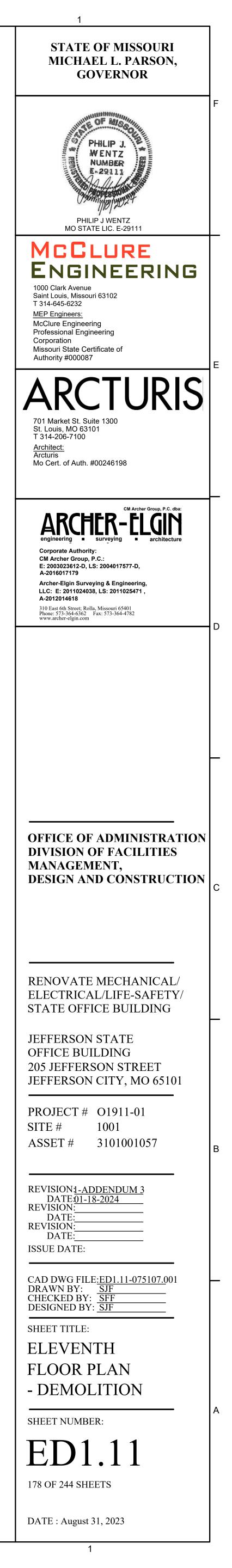


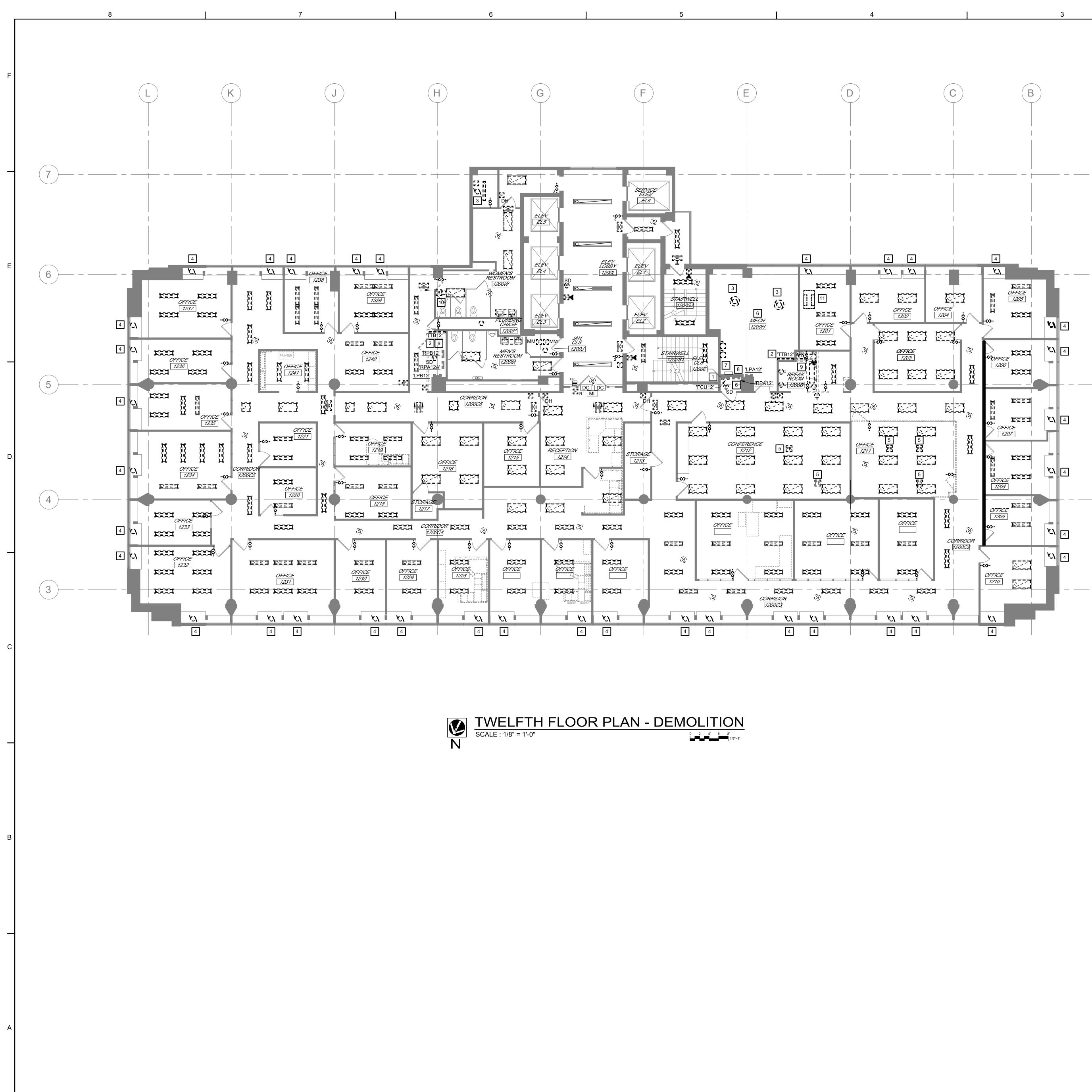
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- 12. DEMOLISH ALL EXISTING LIGHTING FIXTURES UNLESS NOTED OTHERWISE. SALVAGE ALL LED LAMPS AND RETURN TO OWNER FOR REUSE.
- 13. DEMOLISH ALL POWER POLES. REROUTE CONDUCTORS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY.
- 14. REMOVE ALL WAPS ON EACH FLOOR AND STORE FOR REINSTALLATION. KEYED NOTES:
- 1 DISCONNECT AND REMOVE EXISTING PANEL `RPA11A' REPLACE WITH NEW 42 CIRCUIT BREAKER PANEL.
- 2 DISCONNECT AND REMOVE EXISTING 75kVA TRANSFORMER BEING FED FROM PANEL 'PP14'. DISCONNECT AND REMOVE EXISTING PANEL '11CPA' AND RECONNECT THE TWELVE (12) EXISTING BRANCH CIRCUITS TO THE NEW 42 CIRCUIT PANEL 'RPA11A'.
- 3 TWISTED PAIR PUNCHDOWN BLOCK, TYPICALLY UTILIZED FOR TELCO SERVICE. POSSIBLY ALSO UTILIZED FOR COMMUNICATION WITHIN THE BUILDING, I.E. BUILDING MANAGEMENT SYSTEM. INACTIVE LINES TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
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- 5 DISCONNECT FAN COIL UNIT CIRCUIT AND PROTECT FOR RE-USE UNDER NEW WORK.  $\label{eq:labeleq:labeled}$ DISCONNECT AND REMOVE EXISTING FLOOR OUTLET DEVICE. REMOVE EXISTING CONDUCTORS AND CABLING BACK TO NEAREST JUNCTION BOX.
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- 10 DISCONNECT AND REMOVE EXISTING DOOR ALARM BELL, CONDUIT AND **WIRING**
- 11 EXISTING DATA RACK TO BE RELOCATED, DISCONNECT AND REMOVE EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE). SEE SHEET E2.11 FOR NEW LOCATION.
- 12 DISCONNECT EXISTING EWC, EXISTING BRANCH CIRCUITING TO REMAIN.





SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

5

4

**GENERAL DEMOLITION NOTES:** 

UNLESS OTHERWISE NOTED.

IS BEING PERFORMED.

CONTINUITY BACK TO SOURCE.

MAINTAIN CIRCUIT CONTINUITY.

**KEYED NOTES:** 

NEW WORK.

NEW WORK.

3

SHALL BE REROUTED AS REQUIRED.

1. ALL SYMBOLS SHOWN DASHED ARE EXISTING ELECTRICAL DEVICES TO BE REMOVED

2. ALL EXISTING ELECTRICAL DEVICES IN A WALL THAT IS TO BE REMOVED. ELECTRICAL

CONDUIT IN FLOOR OR CEILING AS REQUIRED. DEVICES ARE TO BE REMOVED ALONG

CONDUCTORS, REMOVE DEVICE AND PROVIDE BLANK COVERPLATES AS REQUIRED.

CONTRACTOR SHALL DISCONNECT POWER, CUT OFF CONDUCTORS AND CAP

3. ALL EXISTING ELECTRICAL DEVICES TO BE REMOVED FROM WALLS WHICH ARE TO

4. FOR A PORTION OF A CIRCUIT WHICH IS REMOVED OR ABANDONED, RE-ESTABLISH

CIRCUIT CONTINUITY FOR THE PORTION OF THE CIRCUIT WHICH IS TO REMAIN.

5. ALL EXISTING CONDUITS, RACEWAYS AND WIRING ROUTED IN EXISTING WALLS AND

6. PROVIDE AND INSTALL SUPPORTS FOR EXISTING CABLES AND CONDUITS ABOVE

7. INACTIVE TWISTED PAIR PUNCHDOWN BLOCKS, CABLING, OR IT EQUIPMENT TO BE

8. INTERCEPT EACH AND EVERY UN-SWITCHED LIGHTING BRANCH CIRCUIT (IN THE AREA

LIGHTING FIXTURES AND SWITCHING AS INDICATED ON LIGHTING PLANS, MATCH

EXISTING CONDUCTORS AND CONDUIT, E.C. SHALL MAINTAIN EXISTING CIRCUIT

10. EXISTING FIRE ALARM SYSTEM AND DEVICES TO REMAIN IN OPERATION UNTIL NEW

11. EXISTING PUBLIC ADDRESS SYSTEM AND SPEAKERS TO REMAIN IN OPERATION UNTIL

THE NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL

12. DEMOLISH ALL EXISTING LIGHTING FIXTURES UNLESS NOTED OTHERWISE. SALVAGE

13. DEMOLISH ALL EXISTING POWER POLES. REROUTE CONDUCTORS AS REQUIRED TO

BEFORE DEMOLITION OF THE PUBLIC ADDRESS SYSTEM AND SPEAKERS.

14. REMOVE ALL WAPS ON EACH FOR AND STORE FLOOR REINSTALLATION.

FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE

9. ALL EXISTING DATA CABLES SHALL BE DISCONNECTED AND REMOVED, EXISTING

THAT IT SERVES) AND TERMINATE EXISTING CONDUCTORS IN NEW JUNCTION BOX IN

ACCESSIBLE CEILING SPACE, EXISTING BRANCH CIRCUIT IS TO BE EXTENDED TO NEW

VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.

DATA CABLE RACEWAYS TO REMAIN AND BE RE-USED.

ALL LED LAMPS AND RETURN TO OWNER FOR REUSE.

DEMOLITION OF EXISTING FIRE ALARM SYSTEM AND DEVICES.

CEILING SPACES (WHICH ARE TO BE DEMOLISHED) WHICH SERVE OTHER AREAS

CEILING THAT ARE CURRENTLY UNSUPPORTED IN ALL AREAS WHERE CEILING WORK

REMAIN. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, REMOVE

WITH WALL BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.

OR AS NOTED. ALL SYMBOLS SHOWN SOLID LIGHT LINE ARE EXISTING ELECTRICAL

DEVICES TO REMAIN. EXISTING ELECTRICAL DEVICES WHICH ARE TO REMAIN SHALL BE EXTENDED TO BE FLUSH WITH NEW FINISH ON EXISTING WALLS WHERE REQUIRED.

- 1 DISCONNECT AND REMOVE EXISTING PANEL 'FCU-12'. REMOVE EXISTING FEEDER CONDUCTORS EXISTING CONDUIT TO REMAIN. 2 TWISTED PAIR PUNCHDOWN BLOCK, TYPICALLY UTILIZED FOR TELCO SERVICE. POSSIBLY ALSO UTILIZED FOR COMMUNICATION WITHIN THE BUILDING, I.E. AGENCY OR TENANT FOR DEMOLITION. 3 DISCONNECT AND REMOVE EXISTING RETURN FAN'S AND SUPPLY FAN'S AND ALL ASSOCIATED ELECTRICAL EQUIPMENT, STARTERS, DISCONNECTS AND FEEDERS
- (WIRE AND CONDUIT) BACK TO SOURCE FOR THE AIR HANDLER BEING REMOVED

4 DISCONNECT FAN COIL UNIT BRANCH CIRCUIT AND PROTECT FOR RE-USE UNDER

DISCONNECT AND REMOVE EXISTING FLOOR OUTLET DEVICE. REMOVE EXISTING

CONDUCTORS AND CABLING BACK TO NEAREST JUNCTION BOX. PROVIDE 3/4" RECESSED THREADED CONDUIT PLUG TO SEAL EXISTING CONDUIT OPENING.

RETURN UNUSED FITTINGS AND CAPS TO BUILDING MAINTENANCE. PROVIDE

 $\underline{}$ 

7 EXISTING FAN COIL UNIT CONTACTOR PANEL. DEMO ALL EXISTING CONTACTORS AND PROTECT EXISTING FAN COIL UNIT CIRCUITS FOR RE-CONNECTION UNDER

8 UNKNOWN CABLING TYPE APPEARS TO BE INACTIVE. INACTIVE LINES TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.

9 EXISTING GARBAGE DISPOSAL. DISCONNECT AND REMOVE EXISTING BRANCH

10 DISCONNECT AND REMOVE EXISTING DOOR ALARM BELL, CONDUIT AND WIRING.

11 EXISTING DATA RACK TO BE RELOCATED. DISCONNECT AND REMOVE EXISTING

BRANCH CIRCUITING (CONDUIT AND WIRE). SEE SHEET E2.12 FOR NEW LOCATION.

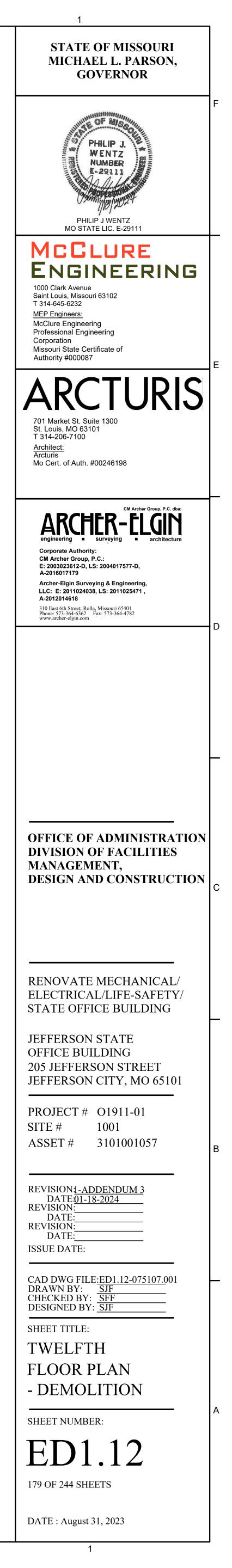
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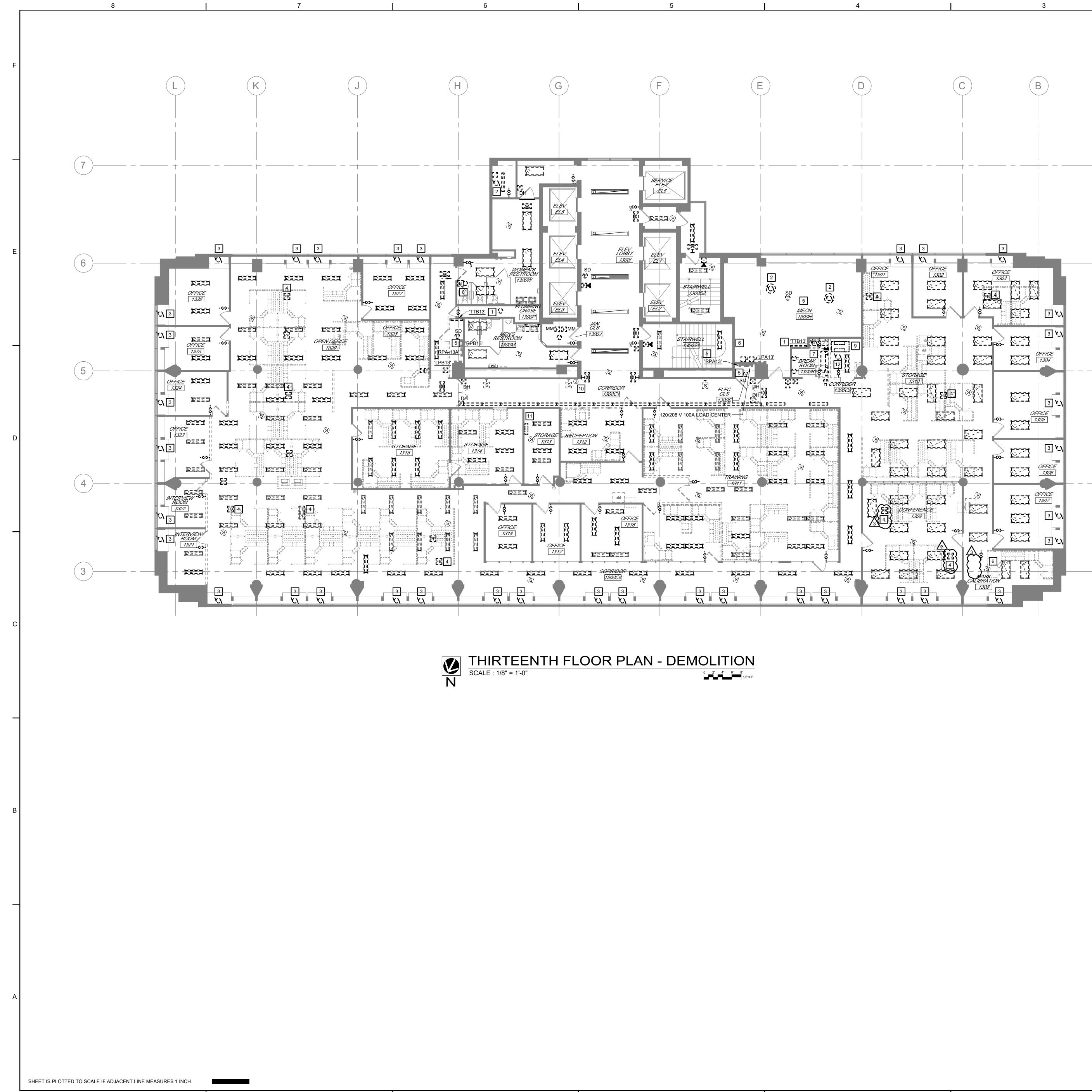
CIRCUITING (CONDUIT AND WIRE) AND CONTROL SWITCH.

6 DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES AND ALL ASSOCIATED BRANCH CIRCUIT AND CONTROLS IN THIS ROOM.

ALLOWANCE FOR SEALING 520 OPENINGS TOTAL.

- BUILDING MANAGEMENT SYSTEM. INACTIVE LINES TO BE VERIFIED BY THE USING





4

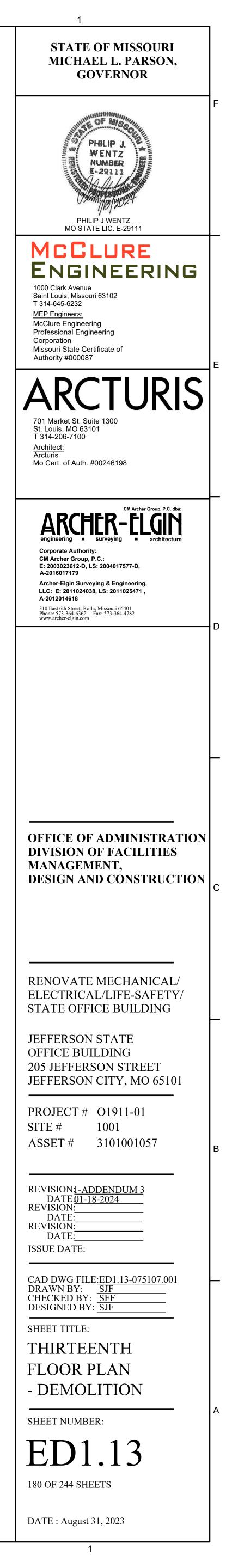
3

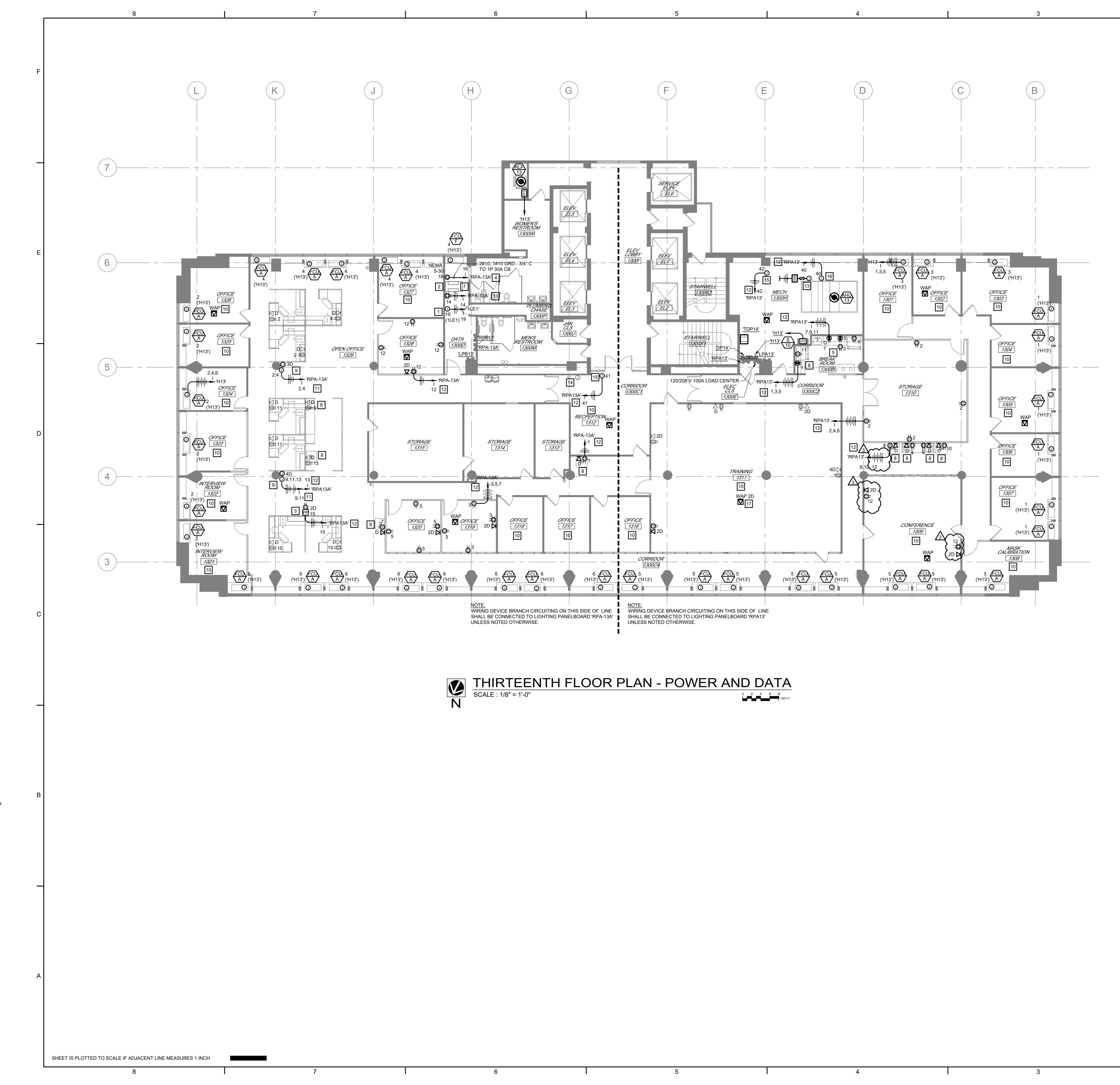
**GENERAL DEMOLITION NOTES:** 

- 1. ALL SYMBOLS SHOWN DASHED ARE EXISTING ELECTRICAL DEVICES TO BE REMOVED OR AS NOTED. ALL SYMBOLS SHOWN SOLID LIGHT LINE ARE EXISTING ELECTRICAL DEVICES TO REMAIN. EXISTING ELECTRICAL DEVICES WHICH ARE TO REMAIN SHALL BE EXTENDED TO BE FLUSH WITH NEW FINISH ON EXISTING WALLS WHERE REQUIRED.
- 2. ALL EXISTING ELECTRICAL DEVICES IN A WALL THAT IS TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, CUT OFF CONDUCTORS AND CAP CONDUIT IN FLOOR OR CEILING AS REQUIRED. DEVICES ARE TO BE REMOVED ALONG WITH WALL BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.
- 3. ALL EXISTING ELECTRICAL DEVICES TO BE REMOVED FROM WALLS WHICH ARE TO REMAIN. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER. REMOVE CONDUCTORS, REMOVE DEVICE AND PROVIDE BLANK COVERPLATES AS REQUIRED. UNLESS OTHERWISE NOTED.
- 4. FOR A PORTION OF A CIRCUIT WHICH IS REMOVED OR ABANDONED, RE-ESTABLISH CIRCUIT CONTINUITY FOR THE PORTION OF THE CIRCUIT WHICH IS TO REMAIN.
- 5. ALL EXISTING CONDUITS, RACEWAYS AND WIRING ROUTED IN EXISTING WALLS AND CEILING SPACES (WHICH ARE TO BE DEMOLISHED) WHICH SERVE OTHER AREAS SHALL BE REROUTED AS REQUIRED.
- 6. PROVIDE AND INSTALL SUPPORTS FOR EXISTING CABLES AND CONDUITS ABOVE CEILING THAT ARE CURRENTLY UNSUPPORTED IN ALL AREAS WHERE CEILING WORK IS BEING PERFORMED.
- 7. INACTIVE TWISTED PAIR PUNCHDOWN BLOCKS, CABLING, OR IT EQUIPMENT TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 8. INTERCEPT EACH AND EVERY UN-SWITCHED LIGHTING BRANCH CIRCUIT (IN THE AREA THAT IT SERVES) AND TERMINATE EXISTING CONDUCTORS IN NEW JUNCTION BOX IN ACCESSIBLE CEILING SPACE, EXISTING BRANCH CIRCUIT IS TO BE EXTENDED TO NEW LIGHTING FIXTURES AND SWITCHING AS INDICATED ON LIGHTING PLANS, MATCH EXISTING CONDUCTORS AND CONDUIT, E.C. SHALL MAINTAIN EXISTING CIRCUIT CONTINUITY BACK TO SOURCE.
- 9. ALL EXISTING DATA CABLES SHALL BE DISCONNECTED AND REMOVED, EXISTING DATA CABLE RACEWAYS TO REMAIN AND BE RE-USED.
- 10. EXISTING FIRE ALARM SYSTEM AND DEVICES TO REMAIN IN OPERATION UNTIL NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE DEMOLITION OF EXISTING FIRE ALARM SYSTEM AND DEVICES.
- 11. EXISTING PUBLIC ADDRESS SYSTEM AND SPEAKERS TO REMAIN IN OPERATION UNTIL THE NEW FIRE ALARM SYSTEM IS COMPLETELY INSTALLED AND OPERATIONAL BEFORE DEMOLITION OF THE PUBLIC ADDRESS SYSTEM AND SPEAKERS.
- 12. DEMOLISH ALL EXISTING LIGHTING FIXTURES UNLESS NOTED OTHERWISE. SALVAGE ALL LED LAMPS AND RETURN TO OWNER FOR REUSE.
- 13. DEMOLISH ALL EXISTING POWER POLES. REROUTE CONDUCTORS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY.
- 14. REMOVE ALL WAPS ON EACH FLOOR AND STORE FOR REINSTALLATION. KEYED NOTES:
- 1 TWISTED PAIR PUNCHDOWN BLOCK, TYPICALLY UTILIZED FOR TELCO SERVICE. POSSIBLY ALSO UTILIZED FOR COMMUNICATION WITHIN THE BUILDING, I.E. BUILDING MANAGEMENT SYSTEM. INACTIVE LINES TO BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 2 DISCONNECT AND REMOVE EXISTING RETURN FAN'S AND SUPPLY FAN'S AND ALL ASSOCIATED ELECTRICAL EQUIPMENT, STARTERS, DISCONNECTS AND FEEDERS (WIRE AND CONDUIT) BACK TO SOURCE FOR THE AIR HANDLER BEING REMOVED
- 3 DISCONNECT FAN COIL UNIT CIRCUIT AND PROTECT FOR RE-USE UNDER NEW WORK.
- 4 DISCONNECT AND REMOVE EXISTING FLOOR OUTLET DEVICE. REMOVE EXISTING CONDUCTORS AND CABLING BACK TO NEAREST JUNCTION BOX. PROVIDE 3/4" RECESSED THREADED CONDUIT PLUG TO SEAL EXISTING CONDUIT OPENING. RETURN UNUSED FITTINGS AND CAPS TO BUILDING
- MAINTENANCE. PROVIDE ALLOWANCE FOR SEALING 520 OPENINGS TOTAL <u>\_</u>...... 5 DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES AND ALL
- ASSOCIATED BRANCH CIRCUIT AND CONTROLS IN THIS ROOM. 6 UNKNOWN CABLING TYPE APPEARS TO BE INACTIVE. INACTIVE LINES TO
- BE VERIFIED BY THE USING AGENCY OR TENANT FOR DEMOLITION.
- 7 EXISTING GARBAGE DISPOSAL. DISCONNECT AND REMOVE EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE) AND CONTROL SWITCH.
- 8 DISCONNECT AND REMOVE EXISTING DOOR ALARM BELL, CONDUIT AND WIRE.
- 9 EXISTING DATA RACK TO BE RELOCATED, DISCONNECT AND REMOVE EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE). RELOCATE TO NEW ELECTRICAL CLOSET. SEE SHEET E2.13 FOR NEW LOCATION.
- 10 DISCONNECT EXISTING EWC, EXISTING BRANCH CIRCUITING TO REMAIN.
- 11 DISCONNECT AND REMOVE EXISTING DATA SWITCH.

2

12 DISCONNECT EXISTING WALL FAN AND REMOVE EXISTING BRANCH CIRCUITING (CONDUIT AND WIRE) AND CONTROLS BACK TO SOURCE.





ONLY. ACTUAL CIRCUIT NUMBERS WILL VARY BASED UPON SPARE BREAKERS AVAILABLE IN EXISTING PANELS. 4. EXISTING POWER IS DISTRIBUTED VIA RELOC WIRING SYSTEM, WHERE EXISTING

CONTINUITY, PROVIDE NEW CONDUCTORS AND CONDUIT (MATCH EXISTING) AS

ARCHITECT THE EXACT POWER AND DATA CONNECTION TYPES AND LOCATIONS

BEFORE POWER AND DATA ROUGH-IN ARE INSTALLED, E.C. SHALL MAKE FINAL

CONNECTIONS. COORDINATE EXACT MOUNTING LOCATIONS AT JOB SITE. 3. NEW BRANCH CIRCUITING INDICATED ON PLAN IS FOR GROUPING PURPOSES

DEVICES ARE REMOVED AND RELOC WILL NO LONGER PROVIDE CIRCUIT

5. E.C. SHALL COORDINATE WITH THE OFFICE FURNITURE SHOP DRAWINGS AND

7. E.C. SHALL PROVIDE AND INSTALL HORIZONTAL CABLING TO WAP LOCATIONS. PROVIDE 6'-0" OF CABLE AT EACH. WAPS TO BE INSTALLED BY OWNER.

8. FIRE SEAL ALL EXISTING AND NEW PENETRATIONS OF FIRE RATED ASSEMBLIES.

SEAL ALL ROOF AND EXTERIOR WALL PENETRATIONS WEATHER TIGHT.

1 POWER CONNECTION TO NEW `FASE' PANEL, VERIFY MOUNTING HEIGHT, LOCATION AND BRANCH CIRCUIT ROUTING AT JOB SITE.

2 POWER CONNECTION TO DATA RACK, PROVIDE NEW GROUND BAR VERIFY

4 CONNECT NEW HOMERUN TO EXISTING PANEL INDICATED, FURNISH AND

5 DUPLEX RECEPTACLES FOR MICROWAVES, VERIFY EXACT MOUNTING

6 DUPLEX RECEPTACLE FOR COFFEE MAKER, VERIFY EXACT MOUNTING LOCATION AT JOB SITE, SEE SHEET A-200.

7 NEW LOCATION OF RELOCATED EXISTING DATA RACK. RACK TO BE BOLTED

8 DEDICATED 120 VOLT BRANCH CIRCUIT FOR POWER AND DATA CONNECTION

9 EXISTING JUNCTION BOXES INSTALLED PER SWING SPACE PHASE IS TO

10 IN THIS AREA FURNISH AND INSTALL NEW DATA CABLE TO REPLACE THE

TO THE FLOOR. CONTRACTOR TO PROVIDE, INSTALL AND LABEL CABLING TO

THE PATCH PANEL. OWNER WILL PROVIDE AND INSTALL THE PATCH CABLES

REMAIN AN BE RE-USED, PROVIDE NUMBER OF DATA CABLES AS INDICATED

EXISTING DATA CABLE (THAT WERE REMOVED PER THE DEMOLITION PLANS

EXISTING RACEWAYS. PROVIDE NEW DATA COVERPLATE ON EXISTING DATA

BACKBOX. VERIFY EXACT LOCATION AND REQUIREMENTS AT JOB SITE FOR

AMP CIRCUIT BREAKER INSTALLED PER SWING SPACE PHASE IS TO REMAIN

MATCH NUMBER OF DEMOLISHED CABLES SERVING THIS AREA) RE-USE

11 EXISTING HOMERUN TO EXISTING PANEL INDICATED AND TO THREE POLE 20

AND BE RECONNECTED TO NEW OFFICE FURNITURE. CIRCUIT NUMBERS

12 CONNECT NEW HOMERUN TO SPARE SINGLE POLE 20 AMP CIRCUIT BREAKER IN EXISTING PANEL INDICATED. IF NO SPARE THEN FURNISH AND INSTALL NEW SINGLE POLE 20 AMP CIRCUIT BREAKER IN EXISTING SPACE, MATCH EXISTING. CIRCUIT NUMBERS SHOWN ARE ARBITRARY AND ARE FOR

 13
 RIB, TOGGLE AND JUNCTION BOX FOR POWER CONNECTION TO FACTORY

 INSTALLED AIR HANDLING UNIT COIL'S UV-C LIGHTS, CONNECT INTO

UN-SWITCHED LIGHTING 277 VOLT BRANCH CIRCUIT IN THIS AREA.

14 NEW BI-LEVEL EWC SHALL BE CONNECTED TO EXISTING EWC BRANCH

17 ADD 15 FT OF ADDITIONAL CABLING AT THIS LOCATION AND LEAVE ABOVE

2

SHOWN ARE ARBITRARY AND ARE FOR BALANCING AND REFERENCE ONLY.

AMP GFCI CIRCUIT BREAKERS IN PANEL INDICATED.

INSTALL NEW SINGLE POLE 30 AMP CIRCUIT BREAKER IN EXISTING SPACE, MATCH EXISTING. CIRCUIT NUMBERS ARE ARBITRARY AND ARE FOR

LOCATIONS AT JOB SITE, SEE SHEET A-200. PROVIDE NEW SINGLE POLE 20

3 FURNISH AND INSTALL NEW POWER POLE FOR POWER AND DATA CONNECTION TO NEW OFFICE FURNITURE.

REQUIRED TO RE-ESTABLISH CIRCUIT CONTINUITY.

EXACT MOUNTING LOCATION AT JOB SITE.

BALANCING AND REFERENCE ONLY.

TO PRINTER, PLOTTER OR COPIER.

CONNECT TO NEW OFFICE FURNITURE.

NEW WALL MOUNTED DATA OUTLET.

BALANCING AND REFERENCE ONLY.

15 120V POWER TO FIRE / SMOKE DAMPER.

16 120V POWER FOR AHU LIGHTING.

CIRCUITING.

CEILING.

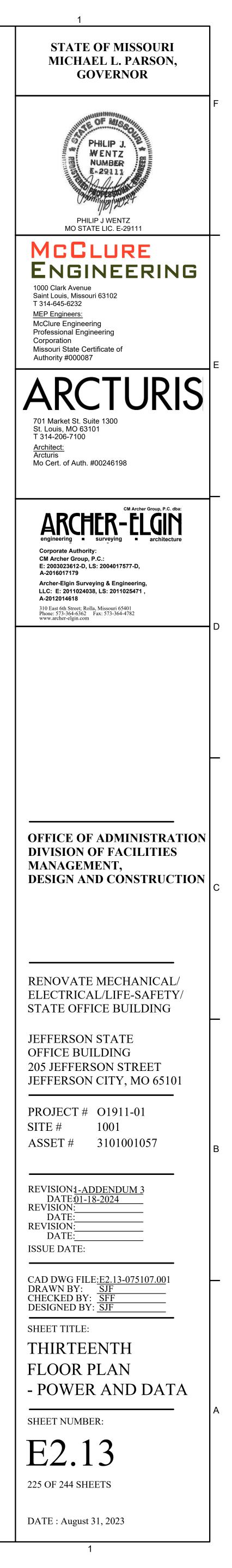
TO THE SWITCH.

6. FOR ADDITIONAL DATA SYSTEM INFORMATION SEE SHEET E0.7.

CONNECTIONS AS REQUIRED.

KEYED NOTES

- 2. SEE MECHANICAL / ELECTRICAL INTERFACE SCHEDULE ON SHEET E0.5 FOR ADDITIONAL INFORMATION FOR MECHANICAL EQUIPMENT ELECTRICAL
- GENERAL NOTES 1. TERMINATE EXISTING FAN COIL UNIT CONDUCTORS AT NEW FAN COIL UNIT INTEGRAL DISCONNECT, INTERCEPT OPPOSITE END OF EXISTING HOMERUN AT EXISTING FAN COIL UNIT PULL-BOX (SEE KEYED NOTE #2 SHEET E2.2) AND EXTEND TO NEW PANEL 'H3'.





#### SUBSTITUTION REQUEST (During the Bidding Phase)

Project:	Jefferson State Office Building	Substitution Request Number:
	Jefferson City MO	From: D.L. Neuner Company, Inc.
To:	Arcturis	Date: <u>1/3/24</u>
		A/E Project Number:
Re:	Substitution Request	Contract For:
Specifica	ation Title: Fire Extinguishers	Description: Fire extinguisher
	Section: <u>10 4416</u> Page:2	Article/Paragraph 2 <u>.2/A</u>
Proposed	l Substitution: Nystrom	
Manufac	turer: <u>Nystrom</u> Address: Brooklyn Park MN	Phone: <u>888-412-3726</u>
Trade Na	ame:	Model No.:
Attached	data includes product description, specifications, drawings, p	notographs, and performance and test data adequate for evaluation of

the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by:	David Koob
Signed by:	
Firm:	D.L. Neuner Company, Inc.
Address:	3015 S. Brentwood Blvd.
	St. Louis, MO 63144
Telephone:	(800) 775-9455

#### A/E's REVIEW AND ACTION

Substitution approved - Make submittals in accordance with Specification Section 01330.

Substitution approved as noted - Make submittals in accordance with Specification Section 01330.

Substitution rejected - Use specified materials.

Substitution Request received too late - Use specified materials.

Signed by: Erica Alley					Date: 01/09/2024
Supporting Data Attached:	Drawings	Product Data	Samples	Tests	Reports

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# **Direct** Service Done Right





<sup>10 4413 + 10 4416</sup> Fire Cabinets + Extinguishers Catalog

## **nystrom**

Direct Service Done Right





### DIVISION 10 4413 + 10 4416 Fire Cabinets + Extinguishers

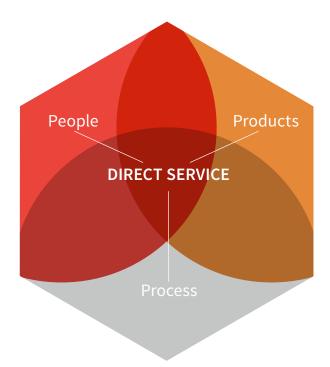
EXTINGUISHER CABINETS	6-9
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## Direct Service Done Right

Nystrom offers a broad line of specialty building products to better serve construction professionals and architects.

We have customer focused professionals and hassle-free processes that directly serve and simplify the building process.



#### PEOPLE

architects, engineers, designers, estimators, construction professionals, and service specialists

#### PROCESS

estimating & bid design support, tech support, logistics support, installation support, cad, revit/ bim

EFFICIENCY

TIME

#### PRODUCTS

standard & custom designs, warehousing, quality assurance, exceptional warranties, leed certification, labeling & tagging



#### SPECIFICATION SUPPORT

By giving architects, designers and contractors open access to our expert team, we simplify the process of specifying and procuring access products from design through delivery and installation.

## ADA + NFPA REGULATIONS

#### CONSENSUS STANDARDS, REQUIREMENTS, CODES AND LAWS

The placement of fire extinguishers and fire extinguisher cabinets is driven by a group of consensus standards, requirements, codes and laws. Ultimately, where, how many, and what type, will be determined by the authority having jurisdiction for that location. The authority could be as diverse as the City Building Inspector or the Deputy Chief of Staff for Installations and Logistics.

The requirements that establish placement practice are ultimately found in local fire prevention codes at one end of the spectrum or Federal Law at the other end.

For the proper location, type and number of fire extinguishers, consult with the local authority having jurisdiction. As a general guideline, we offer the following excerpt from <u>Occupational Safety and Health Administration - Sub</u><u>Part L</u> and from <u>National Consensus</u> documents:

## AMERICANS WITH DISABILITIES ACT - PROTRUDING OBJECTS

The majority of fire extinguishers, when hung on a wall, protrude more than 4 inches into walks, halls, corridors, passageways or aisles. To comply with the Americans with Disabilities Act of 1990 (ADA), objects protruding from walls (fire extinguishers) with their leading edges between 27 inches and 80 inches (685 mm and 2030 mm) above the finished floor, shall protrude no more than 4 inches (100 mm) into walks, halls, corridors, passageways or aisles. Therefore, fire extinguishers that protrude more than 4 inches must be recessed into the wall.

Nystrom's fire extinguisher cabinets allow the specifier to comply with the ADA protrusion requirements, which are identified in each dimensional table found in this catalog.

\*Please note the column headed ADA Compliance to specify the appropriate fire extinguisher cabinet.

#### FIRE EXTINGUISHER SIZE AND PLACEMENT CRITERIA (PER NFPA 10)

#### FOR CLASS A HAZARDS

CRITERIA	LIGHT	ORDINARY	EXTRA
	OCCUPANCY	OCCUPANCY	OCCUPANCY
Minimum Rated Single Extinguisher	2-A	2-A	4-A
Maximum Floor Area per	3,000	1,500	1,000
Unit of A	sq. ft.	sq. ft.	sq. ft.
Maximum Floor Area for	11,250	11.250	11,350
Extinguisher	sq. ft.	sq. ft.	sq. ft.
Maximum Travel Distance to Extinguisher	75 ft.	75 ft.	75 ft.

#### FOR CLASS B HAZARDS

TYPE OF HAZARD	MAXIMUM EXT'G RATING	MAXIMUM TRAVEL DISTANCE TO EXT'G
Light (Low)	5-B 10-B	30 ft. 50 t.
Ordinary (Moderate)	10-В 20-В	30 ft. 50 ft.
Extra (High)	40-B 80-B	30 ft. 50 ft.

#### FOR CLASS C HAZARDS

Class C ratings are required where energized electrical equipment is encountered. Since fire itself is a Class A or B hazard, the extinguishers are sized and located on the basis of the Class A or B hazard.

#### **INSTALLATION OF FIRE EXTINGUISHERS**

Portable fire extinguishers shall be securely installed on the hangers or in the bracket supplied or placed in cabinets or wall recesses. Wheeled-type extinguishers shall be in a designated location.

Extinguishers having a gross weight not exceeding 40 Lbs. shall be installed so that the top of the extinguisher is not more than 5' above the floor.

Extinguishers having a gross weight greater than 40 Lbs. shall be installed so that the top of the extinguisher is not more than 3'-6" above the floor.



## Alpine FIRE EXTINGUISHER CABINET

This Alpine Fire Extinguisher Cabinet is the industry's most popular design. Available in various door styles and mounting options to complement virtually any type of construction.

#### **FEATURES**

**CONTINUOUS PIANO HINGE** Built with a continuous hinge to combine aesthetics and provide sufficient support for the cabinet door operation.

**SAFETY GLASS** Constructed with tempered safety break glass, this cabinet will keep you safe from risk of injury in the event of an emergency.





#### DETAILS

#### MATERIAL

- Cold Rolled Steel, White Polyester Finish
- Aluminum
- Stainless Steel

**DOOR** Full Glass, Duo-Vertical Panel, Duo-Vertical Panel with Lock, Solid Flush Panel or Solid Flush Panel with Lock

**GLAZING** None, Tempered Safety Glass, 1/4 inch Wire Inserted Glass, 1/8 inch Acrylic

MOUNTING Recessed, Semi-Recessed, Surface or Trimless

**SIZE** Determined by the fire extinguisher size and available wall depth (see table below)

**OPTIONS** Lettering, Fire-Rating, Rolled Radius

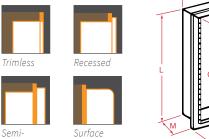
### Fire Extinguisher Sold Separately

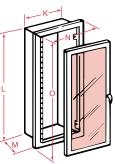
#### MODELS

STEEL	ALUMINUM	STAINLESS	WALL	TRIM		BOX I.D.		FRAME	O.D.	WAI	L OPEN	IING	FR	Ο ΟΡΤΙ	ON	Ġ.	FOR USE
		STEEL	MOUNTING				М	Ν	0	W			W			ADA	WITH EXT'G
FC-7007	FC-7037	FC-7057	Recessed	1/2	9	18	5	11-3/4	20-3/4	10	19	4-3/4	11-1/4	20	5-5/8	Yes	EX-3002
FC-7008	FC-7038	FC-7058	Semi-Recessed	2	9	18	5	11-3/4	20-3/4	10	19	3-1/4	11-1/4	20	4-1/8	Yes	EX-3002
FC-7009	FC-7039	FC-7059	Surface	-	11-1/2	2 20-1/2	5-3/4	-	-	-	-	-	-	-	-	No	EX-3005-3
FC-7010	FC-7030	FC-7050	Recessed	1/2	9	24	5	11-3/4	26-3/4	10	25	4-3/4	11-1/4	26	5-5/8	Yes	EX-3302
FC-7012	FC-7032	FC-7052	Semi-Recessed	2	9	24	5	11-3/4	26-3/4	10	25	3-1/4	11-1/4	26	4-1/8	Yes	EX-3305
FC-7013	FC-7033	FC-7053	Semi-Recessed	3	9	24	5	11-3/4	26-3/4	10	25	2-1/4	11-1/4	26	3-1/8	Yes	EX-3305-3
FC-7020	FC-7040	FC-7060	Recessed	1/2	9	24	5-3/4	11-3/4	26-3/4	10	25	5-1/2	11-1/4	26	6-3/8	Yes	EX-3006
FC-7021	FC-7041	FC-7061	Trimless	-	9	24	5-3/4	12-3/4	27-3/4	10	25	6	11-1/4	26	7-3/8	Yes	EX-3010
FC-7022	FC-7042	FC-7062	Semi-Recessed	2	9	24	5-3/4	11-3/4	26-3/4	10	25	4	11-1/4	26	4-7/8	Yes	EX-3306
FC-7023	FC-7043	FC-7063	Semi-Recessed	3	9	24	5-3/4	11-3/4	26-3/4	10	25	3	11-1/4	26	3-7/8	Yes	EX-3310
FC-7024	FC-7044	FC-7064	Surface	-	11-1/2	2 26-1/2	5-3/4	-	-	-	-	-	-	-	-	No	EX-3405
FC-7025	FC-7045	FC-7065	Recessed	1/2	12	27	8	14-3/4	29-3/4	13	28	7-3/4	14-1/4	29	8-5/8	Yes	
FC-7026	FC-7046	FC-7066	Trimless	-	12	27	8	15-3/4	30-3/4	13	28	8-1/4	14-1/4	29	9-5/8	Yes	EX-3020
FC-7027	FC-7047	FC-7067	Semi-Recessed	3	12	27	8	14-3/4	29-3/4	13	28	5-1/4	14-1/4	29	6-1/8	Yes	EX-3202 EX-3320
FC-7028	FC-7048	FC-7068	Semi-Recessed	5	12	27	8	14-3/4	29-3/4	13	28	3-1/4	14-1/4	29	4-1/8	No	EX-3410
FC-7029	FC-7049	FC-7069	Surface	-	14-5/8	3 29-3/8	8	-	-	-	-	-	-	-	-	No	

#### MOUNTING

Recessed







## Palisade FIRE EXTINGUISHER CABINET

Palisade Fire Extinguisher Cabinets feature the ultra-clean, contemporary look of a full acrylic door, available in five eye-pleasing panel colors. In addition, a host of letter colors and placement options make it easier than ever to specify a truly modern, durable and functional fire extinguisher cabinet.

#### **FEATURES**

MOUNTING

Trimless

Semi-

Recessed

**PUSH LATCH HANDLE** Designed for the door to safely open and close with the use of a magnet. No need to turn a handle... simply push and latch.

**GRAVITY PIVOT HINGE** The door is constructed with the hinges at the top and bottom of the door so that it will swing freely.

Recessed

Surface

#### DETAILS

#### MATERIAL

- Cold Rolled Steel, White Polyester Finish
- Aluminum
- Stainless Steel

**DOOR** Full Acrylic or Full Acrylic with Scored Insert

GLAZING Clear, White, Smoke or Red

MOUNTING Recessed, Semi-Recessed, Surface or Trimless

**SIZE** Determined by the fire extinguisher size and available wall depth (see table below)

**OPTIONS** Lettering, Fire-Rating, Rolled Radius

### Fire Extinguisher Sold Separately

#### MODELS

STEEL	ALUMINUM	STAINLESS	WALL	TRIM		BOX I.D.		FRAM	E O.D.	WAI	L OPEN	IING	FR	ΟΡΤΙ	ON	Ŀ.	FOR USE
		STEEL	MOUNTING	Т	K	L	М	Ν	0	W	н	D	W	Н	D	ADA	WITH EXT'G
FC-7107	FC-7137	FC-7157	Recessed	1/2	9	18	5	11-3/4	20-3/4	10	19	4-3/4	11-1/4	20	5-5/8	Yes	EX-3002
FC-7108	FC-7138	FC-7158	Semi-Recessed	2	9	18	5	11-3/4	20-3/4	10	19	3-1/4	11-1/4	20	4-1/8	Yes	EX-3002
FC-7109	FC-7139	FC-7159	Surface	-	11-1/2	2 20-1/2	5-3/4	-	-	-	-	-	-	-	-	No	EX-3005-3
FC-7110	FC-7130	FC-7150	Recessed	1/2	9	24	5	11-3/4	26-3/4	10	25	4-3/4	11-1/4	26	5-5/8	Yes	EX-3302
FC-7112	FC-7132	FC-7152	Semi-Recessed	2	9	24	5	11-3/4	26-3/4	10	25	3-1/4	11-1/4	26	4-1/8	Yes	EX-3305 EX-3305-3
FC-7113	FC-7133	FC-7153	Semi-Recessed	3	9	24	5	11-3/4	26-3/4	10	25	2-1/4	11-1/4	26	3-1/8	Yes	EX-3303-3
FC-7120	FC-7140	FC-7160	Recessed	1/2	9	24	5-3/4	11-3/4	26-3/4	10	25	5-1/2	11-1/4	26	6-3/8	Yes	EX-3006
FC-7121	FC-7141	FC-7161	Trimless	-	9	24	5-3/4	12-3/4	27-3/4	10	25	6-1/2	11-1/4	26	7-3/8	Yes	EX-3010
FC-7122	FC-7142	FC-7162	Semi-Recessed	2	9	24	5-3/4	11-3/4	26-3/4	10	25	4	11-1/4	26	4-7/8	Yes	EX-3306
FC-7123	FC-7143	FC-7163	Semi-Recessed	3	9	24	5-3/4	11-3/4	26-3/4	10	25	3	11-1/4	26	3-7/8	Yes	EX-3310
FC-7124	FC-7144	FC-7164	Surface	-	11-1/2	2 26-1/2	5-3/4	-	-	-	-	-	-	-	-	No	EX-3405
FC-7125	FC-7145	FC-7165	Recessed	1/2	12	27	8	14-3/4	29-3/4	13	28	7-3/4	14-1/4	29	8-5/8	Yes	
FC-7126	FC-7146	FC-7166	Trimless	-	12	27	8	15-3/4	30-3/4	13	28	8-3/4	14-1/4	29	9-5/8	Yes	EX-3020
FC-7127	FC-7147	FC-7167	Semi-Recessed	3	12	27	8	14-3/4	29-3/4	13	28	5-1/4	14-1/4	29	6-1/8	Yes	EX-3202 EX-3320
FC-7128	FC-7148	FC-7168	Semi-Recessed	5	12	27	8	14-3/4	29-3/4	13	28	3-1/4	14-1/4	29	4-1/8	No	EX-3410
FC-7129	FC-7149	FC-7169	Surface	-	14-5/	8 29-3/8	8	-	-	-	-	-	-	-	-	No	

## Summit FIRE EXTINGUISHER CABINETS

The Summit Fire Extinguisher Cabinet distinguishes itself with an exceptionally refined look that's realized by concealing all handles and hinges. Depending upon door style, glazing and other options chosen, a Summit Series cabinet can be designed to effortlessly blend into its surrounding environment or be unmistakably conspicuous.

#### **FEATURES**

**CONCEALED DESIGN** The frameless design of the Summit series allows the cabinet to be camouflaged into the wall.

**SAFETY BREAK GLASS** Constructed with tempered safety break glass to protect against cuts in the event of an emergency.

#### DETAILS

#### MATERIAL

- Cold Rolled Steel, White Polyester Finish
- Aluminum
- Stainless Steel

**DOOR** Duo-Vertical Panel, Duo-Vertical Panel with Lock, Solid Flush Panel or Solid Flush Panel with Lock

**GLAZING** None, Tempered Safety Glass, 1/4 inch Wire Inserted Glass, 1/8 inch Acrylic

#### MOUNTING Recessed

**SIZE** Determined by the fire extinguisher size and available wall depth (see table below)

**OPTIONS** Lettering, Fire-Rating

### Fire Extinguisher Sold Separately

#### MODELS

STEEL	ALUMINUM	STAINLESS STEEL	WALL MOUNTING	TRIM T	ĸ	BOX I.D.	м	FRAME	0.D.	WAL	L OPEN ப	NING	FRC W	COPTI	ON	ري ADA	FOR USE WITH EXT'G
FC-7210	FC-7230	FC-7250	Recessed	5/8	9	18	,	11-3/4	,	10	19	6	11-1/4	20	6-7/8	Yes	EX-3002 EX-3005-3
FC-7220	FC-7240	FC-7260	Recessed	5/8	9	24	5-3/4	11-3/4	26-3/4	10	25	6	11-1/4	26	6-7/8	Yes	EX-3002 EX-3310
FC-7225	FC-7245	FC-7265	Recessed	5/8	12	27	8	14-3/4	,	13	28	8-1/4	13	28	8-1/4	Yes	EX-3202 EX-3020 EX-3410





#### MOUNTING







## Ridge FIRE EXTINGUISHER CABINETS

A convex, clear plastic "bubble" window is the earmark of the Ridge Fire Extinguisher Cabinet. This ultra-practical design delivers 180° of visibility for quick identification of the extinguisher. The Ridge's shallow design is also ideal for contemporary structures with limited wall depth.

#### **FEATURES**

MOUNTING

Trimless

Semi-

Recessed

Recessed

Surface

**STYLISH BUBBLE DOOR** Add 180 degrees of visability to your fire extinguisher with the bubble window.

**ACRYLIC PLEXIGLASS** Constructed with durable clear, bronze or smoke colored acrylic plexiglass.

#### DETAILS

#### MATERIAL

- Cold Rolled Steel, White Polyester Finish
- Aluminum
- Stainless Steel

**DOOR** Full Bubble or Full Bubble with Acrylic Insert

#### **GLAZING** Clear or Smoke

**MOUNTING** Recessed, Semi-Recessed, Surface or Trimless

**SIZE** Determined by the fire extinguisher size and available wall depth (see table below)

**OPTIONS** Locks, glazing, lettering, Fire-Rating, Rolled Radius, Polyester finish

### Fire Extinguisher Sold Separately

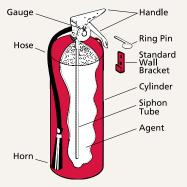
#### MODELS

STEEL	ALUMINUM	STAINLESS	WALL	TRIM		BOX I.D.		FRAM	E O.D.	WA	LL OPEN	NING	FR	C OPTI	ION	Ġ.	FOR USE
		STEEL	MOUNTING	T	K	L	М	N	0	W	н	D	W	Н	D	ADA	WITH EXT'G
FC-7307	FC-7337	FC-7357	Recessed	1/2	9	18	4	11-3/4	20-3/4	10	19	3-3/4	11-1/4	20	4-5/8	Yes	EX-3002 EX-3005
FC-7308	FC-7338	FC-7358	Semi-Recessed	2	9	18	4	11-3/4	20-3/4	10	19	2-1/4	11-1/4	20	3-1/8	No	EX-3005-3 EX-3302
FC-7309	FC-7339	FC-7359	Surface		11-1/2	20-1/2	4	-	-	-	-	-	-	-	-	No	EX-3305 EX-3305-3
FC-7320	FC-7340	FC-7360	Recessed	1/2	9	24	4	11-3/4	26-3/4	10	25	3-3/4	11-1/4	25	4-5/8	Yes	EX-3002, EX-3005 . EX-3005-3
FC-7321	FC-7341	FC-7361	Trimless	-	9	24	4-1/2	11-3/4	27-3/4	10	25	4-1/4	11-1/4	26	5-5/8	Yes	EX-3006, EX-3010 EX-3302, EX-3305
FC-7322	FC-7342	FC-7362	Semi-Recessed	2	9	24	4	11-3/4	26-3/4	10	25	2-1/4	11-1/4	26	3-1/8	No	EX-3305-3
FC-7324	FC-7344	FC-7364	Surface	-	11-1/2	26-1/2	4	-	-	-	-	-	-	-	-	No	EX-3306, EX-3310
FC-7325	FC-7345	FC-7365	Recessed	1/2	12	27	4-3/4	14-1/2	29-1/2	13	28	4-1/2	14-1/4	29	5-3/8	Yes	EX-3020*
FC-7326	FC-7346	FC-7366	Trimless	-	12	27	5-1/4	15-1/2	30-1/2	13	28	5-1/2	14-1/4	29	6-3/8	Yes	EX-3202*
FC-7327	FC-7347	FC-7367	Semi-Recessed	3	12	27	4-3/4	14-1/2	29-1/2	13	28	3	14-1/4	29	2-7/8	No	EX-3320*
FC-7329	FC-7349	FC-7369	Surface	-	14-1/2	29-1/2	4-3/4	-	-	-	-	-	-	-	-	No	EX-3405

\*Add 1 inch to M & D dimensions

## **Fire Extinguishers**

## PRINCIPLES OF SELECTING EXTINGUISHERS:



TYPICAL STORED-PRESSURE FIRE EXTINGUISHER

(DR

- Type of potential fire hazard.
- Severity of potential fire hazard.
- Environmental conditions of potential fire hazard.
- Effectiveness of extinguisher on potential fire hazard.
- Training and physical capabilities of available personnel to operate extinguisher.
- Upkeep and maintenance requirements of extinguisher.

For further information, refer to NFPA 10.

	FIRE CLA	SSIFICATION	٩S	
TYPE OF FIRE	Wood, paper, cloth, trash & other ordinary combustibles	liauids	Energized electric equipment	Cooking appliances w/ combustible cooking media
CLASS AND LETTER SYMBOL	A	В	C	K
PICTURE SYMBOL				*** **
AGENTS				
MULTI-PURPOSE DRY CHEMICAL	Yes	Yes	Yes	No
KITCHEN	Yes	No	No	Yes
WATER	Yes	No	No	No
FFFP	Yes	Yes	No	No
BC DRY CHEMICAL	No	Yes	Yes	No
CARBON DIOXIDE	No	Yes	Yes	No
HALOTRON 1	Yes	Yes	Yes	No

## ABC Dry Chemical

The ABC Multi-Purpose Dry Chemical fire extinguisher is used to provide protection against Class A, B and C fires.

FINISH Glossy red polyester coated MOUNTING Wall bracket DISCHARGE Nozzle or hose AGENT BASE Ammonium Phosphate PRESSURE 195 P.S.I.

#### **MOUNTING BRACKET**

5 Lbs.

6 Lbs.

10 Lbs.

20 Lbs. 5, 6, 10 Lbs.

20 Lbs.

EX-3901

EX-3902

EX-3903

EX-3904

EX-3909 EX-3910

MODEL	NOMINAL CAPACITY	侧 RATING	HEIGHT	CYLINDER DIAMETER	RANGE OF STREAM	TYPE DISCHARGE
EX-3002	2-1/2 Lbs.	1A:10B:C	14-3/4"	3"	9' - 15'	Nozzle
EX-3005	5 Lbs.	2A:10B:C	15-1/4"	4-1/4"	12' - 18'	Hose
EX-3005-3	5 Lbs.	3A:40B:C	15-1/4"	4-1/4"	12' - 18'	Hose
EX-3006	6 Lbs.	3A:40B:C	16"	5"	15' - 21'	Hose
EX-3010	10 Lbs.	4A:80B:C	20"	5"	15' - 21'	Hose
EX-3020		20A:120B:C		7"	15' - 21'	Hose

Kitchen Class K

The Kitchen Class K portable fire extinguishers discharge a fine mist and help prevent grease splash and re-flash while cooling appliances. These wet chemical extinguishers are the best restaurant kitchen appliance portable fire extinguishers available and provide protection against Class K fires.

FINISH Stainless Steel MOUNTING Wall bracket DISCHARGE Hose AGENT Potassium Acetate Solution

MODEL	NOMINAL CAPACITY	侧 RATING	HEIGHT	CYLINDER DIAMETER	RANGE OF STREAM	TYPE DISCHARGE
EX-3260	6 ltr.	2A:K	19"	7"	10' - 12'	Hose
EX-3262	2-1/2 gal.	2A:K	24-1/2"	7"	10' - 12'	Hose

MOUNTING BRACKET

MODEL	FITS SIZE
EX-3904	2-1/2 gal.
*OPTION:	
-AF Anti-free	ze charge

Call for information on water mist "Clean Agent" and pressurized water/foam extinguishers.





## Halotron I

The Halotron 1 fire extinguisher uses an EPA approved "Clean Agent" discharged as a rapidly evaporating liquid which leaves no residue. It effectively extinguishes Class A, B and C fires by cooling and smothering and it will not conduct electricity back to the user.

FINISH Glossy red polyester coated MOUNTING Wall bracket DISCHARGE Nozzle or hose & nozzle BASE AGENT HydroChloroFluoro-Carbon PRESSURE 125 P.S.I.

MODEL	NOMINAL CAPACITY	(h) RATING	HEIGHT	CYLINDER DIAMETER	RANGE OF STREAM	TYPE DISCHARGE
EX-3101	1.4 Lbs.	1B:C	10"	2-7/8"	6' - 8'	Nozzle
EX-3102	2.5 Lbs.	2B:C	15-1/2"	3"	6'-10'	Nozzle
EX-3105	5 Lbs.	5B:C	15-1/4"	4-1/4"	9' - 15'	Nozzle



## BC Dry Chemical FIRE EXTINGUISHERS

The BC Multi-Purpose Dry Chemical fire extinguisher is used to provide protection against Class B and C fires.

FINISH Glossy red polyester coated MOUNTING Wall bracket DISCHARGE Nozzle or hose AGENT BASE Sodium Bicarbonate PRESSURE 195 P.S.I. MOUNTING BRACKET

MODEL	NOMINAL 🕕 CAPACITY RATING		HEIGHT		RANGE OF STREAM	TYPE DISCHARGE
EX-3302	2-1/2 Lbs.	10B:C	15-1/2"	3"	9'-15'	Nozzle
EX-3305	5 Lbs.	10B:C	15-1/4"	4-1/4"	12' - 18'	Hose
EX-3305-3	5-1/2 Lbs.	40B:C	15-1/4"	4-1/4"	12' - 18'	Hose
EX-3310	10 Lbs.	60B:C	20"	5"	15' - 21'	Hose
EX-3320	20 Lbs.	120B:C	23-1/4"	7"	15' - 21'	Hose

MODEL	FITS SIZE
EX-3901	5 Lbs.
EX-3902	6 Lbs.
EV 2002	1011.

EX-3902	6 Lbs.
EX-3903	10 Lbs.
EX-3909	5, 6, 10 Lbs.
EX-3910	20 Lbs.



## Carbon Dioxide

#### FIRE EXTINGUISHERS

The Carbon Dioxide fire extinguisher is used to provide protection against Class B and C fires. Will not contaminate or leave residue on materials which it extinguishes.

MODEL	NOMINAL CAPACITY	س RATING	HEIGHT	CYLINDER DIAMETER		RANGE OF STREAM	TYPE DISCHARGE
EX-3405	5 Lbs.	5B:C	17-3/4"	5-1/4"	8-1/4"	3' - 8'	Horn
EX-3410	10 Lbs.	10B:C	24"	7"	12"	3' - 8'	Hose & Horn
EX-3415	15 Lbs.	10B:C	30"	7"	12"	3' - 8'	Hose & Horn
EX-3420	20 Lbs.	10B:C	30"	8"	13"	3' - 8'	Hose & Horn

FINISH Glossy red polyester coated MOUNTING Wall bracket DISCHARGE Horn or hose & horn PRESSURE 735 P.S.I.

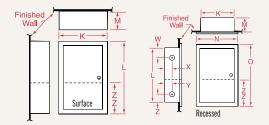
#### **MOUNTING BRACKET**

MODEL	FITS SIZE
EX-3903	5 Lbs.
EX-3904	10, 15 Lbs.
EX-3905	20 Lbs.
EX-3909	5 Lbs.

## **Detention + Institution Cabinets**



Nystrom's Detention Series Cabinets provide the specifier with a substantial unitized design in 12 gauge cold rolled steel construction for maximum security facilities. All corners are mitered and ground smooth to eliminate any dangerous projections. The heavy-duty continuous hinge adds to the secure features of these cabinets.



## Hose Detention cabinets

DOOR 12 gauge Cold Rolled SteelMOUNTING Recessed or SurfaceOPTIONS Lock Prep, Lettering, Fire-Rated (2-hour), Polyester Finish

#### **HOSE CABINET**

MODEL	WALL	CAPACITY		BOX I.	D.	FRAM	E O.D.	WAL	L OPE			٨
MODEL	MOUNTING						0				ADA	FRC
DC-1002	Recessed	100' Hose	24	30	5-1/2		33-3/4			6	Yes	Yes
DC-1052	Surface	Unit	24	30	5-1/2	-	-	-	-	-	No	No

#### HOSE AND EXTINGUISHER CABINET

MODEL		WALL	CAPACITY		BOX I.D.		FRAME	0.D.	WAL	L OPE	NING		٨
	MODEL	MOUNTING						0				ADA	FRC
	DC-1302	Recessed	100' Hose Unit	30	30	8	33-3/4 3						Yes
	DC-1352	Surface	/	30		8	-	-	-	-	-	No	No

## Extinguisher DETENTION CABINETS

DOOR 12 gauge Cold Rolled Steel

**MOUNTING** Recessed or Surface

**OPTIONS** Lock Prep, Lettering, Fire-Rated (2-hour), Polyester Finish



MODEL	WALL	(	CAPACITY			BOX I.D.		FRAM	E O.D.	WAL	L OPE	NING	Ŀ.	٨
MODEL	MOUNTING												ADA	FRC
DC-1704	Recessed	10 Lb.	Dry Chem. E	xt.	9	24	8	12-3/4	27-3/4	10	25	8-1/2	Yes	Yes
DC-1706	Recessed	2-1/2 §	gal. Water E	xt.	12	27	8	15-3/4	30-3/4	13	28	8-1/2	Yes	Yes
 DC-1754	Surface	10 Lb.	Dry Chem. E	xt.	9	24	8	-	-	-	-	-	No	No
 DC-1756	Surface	2-1/2 §	gal. Water E	xt.	12	27	8	-	-	-	-	-	No	No

## Valve DETENTION CABINETS



FIRE BLANKET

BC-6601

FIRE

FIRE

BC-6605

DOOR 12 gauge Cold Rolled Steel

**MOUNTING** Recessed or Surface

OPTIONS Lock Prep, Lettering, Fire-Rated (2-hour), Polyester Finish

#### **VALVE CABINET**

MODEL	WALL	CAPACITY	i	BOX I.D		FRAM	E O.D.	WAL	L OPE	NING	Ŀ.	٨
	MOUNTING				Μ		0				ADA	FRC
DC-1810	Recessed	2-1/2" Angle	18	18	8	21-3/4			19	8-1/2	Yes	Yes
DC-1815	Surface	Valve	18	18	8	-	-	-	-	-	No	No

#### **VALVE AND EXTINGUISHER CABINET**

	MODEL	WALL	CAPACITY	ł	BOX I.D		FRAME	EO.D.	WAL	LOPE	NING	SHELF	Ŀ.	٨
	MODEL	MOUNTING						0					ADA	FRC
	DC-1870	Recessed	2-1/2" Angle Valve	14	40	8	17-3/4	43-3/4			8-1/2		Yes	Yes
-	DC-1875	Surface	2-1/2 gal. Water Ext.		40	0		-	-	-	-	12	No	No

## Fire Blanket

Nystrom offers fire blanket cabinets in different styles to meet varying installation requirements. All styles of cabinets are equipped with a chemically treated fire blanket treated with fire resistant chemicals.

DOOR/BOX 20 gauge Cold Rolled Steel

FRAME 18 gauge Cold Rolled Steel

MOUNTING Recessed, Surface, Semi-recessed or trimless

**OPTIONS** Locks, Lettering, Fire-Rated (2-hour), Polyester Finish

#### FIRE BLANKET CABINET (INCLUDES BLANKET) REPLACEMENT BLANKET

			N				1		
MODEL	WALL MOUNTING		BOX I.D.		لغ ADA	ا FRC		MODEL	SIZE
BC-6601	Surface	15	10	5	No	No		BC-6602	62 x 80



MODEL	WALL MOUNTING	BOX I.D		لغ ADA	الله FRC
BC-6603	Surface	70-1/2 5-3/4	4-1/2	No	No

#### FIRE BLANKET AND EXTINGUISHER CABINET (INCLUDES BLANKET)

MODEL	WALL MOUNTING	E	BOX I.I	D.	COM	IPART SIZE	MENT	WALL OPENING		NING	FOR USE WITH FIRE EXT'G	ي. ADA	الله FRC
BC-6605	Recessed - 5/8	14	40	8	14	28	8	15	41	8	EX-3002, EX-3020	Yes	Yes
BC-6606	Trimless	14	40	8	14	28	8	15	41	9	EX-3002, EX-3252	Yes	Yes
BC-6607	Semi-Recessed	14	40	8	14	28	8	15	41	6	EX-3202, EX-3320	Yes	Yes
BC-6609	Surface	16	42	9-1/2	16	30	9-1/2		-		EX-3002, EX-3410	No	No

## Rain Hoods

BC-6603



Rain hoods help shield surface mounted cabinets from weather.

MATERIAL Cold Rolled Steel FINISH Polyester Coated

MODEL	CABINET WIDTH
OP-1927-04	11-1/4"
OP-1928-06	14-1/2"
OP-1927-70	16"
OP-1928-18	20"

## **Door Style OPTIONS**



-A Full Glass



-B Full Break Glass



-D Duo Panel Glass



-DV Duo Vertical Panel



-DVL Duo Vertical Panel w/Lock



-E Center Break Glass



Panel

-FS Solid Flush Panel w/lock



-FP Full Glass with Flush Pull Handle



-BA Full Bubble with Catch



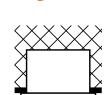
-BB Full Bubble with Cylinder Lock



-A Full Acrylic Panel



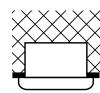
Trimless



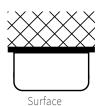
Recessed



Semi-Recessed



Semi-Recessed with rolled radius\*



\*Standard on all 3" - 9" x 24" semi-recessed cabinets.

## **Mounting Brackets**

For use with portable fire extinguishers when additional security is required due to vibration. Furnished with 16 gauge glossy polyester coated steel bracket with spring-type band and/or rubber strap.





EX-3902



EX-3908

EX-3910

Download Drawings, CAD, Spec, and LEED documents at www.Nystrom.com

## Handle + Lock **OPTIONS**



Cam Latch\*

BOP-7911













Break Rite<sup>®</sup> Handle BOP-BR04

\*Standard option

Pull Handle BOP-1905

Fire Pull Handle BOP-1907

Flush Pull Handle BOP-1909

Lock BOP-7912

### Metal Door + Frame Finish **OPTIONS OPTIONS**





Aluminum



Steel White Polyester Finish

Stainless Steel





Coated Steel

Mirror Stainless Steel





F-RE EXT-NGU-SHER

Vertical



Dark Duranodic Aluminum



FIRE

**EXTINGUISHER** 

Horizontal

IN CASE OF

Medium Duranodic Aluminum





FIRE EXTINGUISHER Vertical Ascending

**Die Cut Lettering** + Labels FIRE FIRF FIRF FIRE

EXTINGUISHER AND	DEPARTMENT	EXTINGUISHER	DEPT.	VALVE	BREAK		
FIRE DEPARTMENT VALVE	VALVE	AND OPEN BOOR FROM INSIDE	FIRE Blan	KET	OPEN DOOR PROM INSIDE		
DESCRIPTION			TYPE	WHITE	BLACK	RED	
Fire Extinguisher			Label	-	-	OP-1960	
Fire Extinguisher (V			Label	OP-1963	OP-1962	OP-1961	
Fire Extinguisher Ar	rrow		Label	-	-	OP-1964	
Fire Extinguisher In			Label	-	-	OP-1970	
In case of Fire brea	k glass and open (	door from inside	Label	-	-	OP-1972	
In case of Fire brea	k glass		Label	-	-	OP-1973	
Fire Department Va	lve		Label	-	-	OP-1980	
Fire Extinguisher/Fi	ire Dept Valve		Label	-	-	OP-1982	
Fire Extinguisher (H	lorizontal)		Die Cut	OP-7901	OP-7902	OP-7903	
Fire Extinguisher (V	ertical Ascending	)	Die Cut	OP-7904	OP-7905	OP-7906	
Fire Extinguisher (V	'ertical)		Die Cut	OP-7907	OP-7908	OP-7909	
Fire Department Va				OP-7914	OP-7915	OP-7916	
Reverse die cut lett	ering available by	vadding suffix -R					

Visit www.nystrom.com for the latest version of this document and more information.



9300 73rd Avenue North Minneapolis, MN 55428

Phone (800) 547-2635 Fax (800) 317-8770



www.nystrom.com

FIRE CABINETS + EXTINGUISHERS CATALOG 03/19



#### SUBSTITUTION REQUEST (During the Bidding Phase)

Project:	Jefferson State Office Build	ing		Substitution Request Number:						
	Jefferson City MO			From:	D.L. Neuner Company, Inc.					
To:	Arcturis			Date:	1/3/24					
				A/E Project Number:						
Re:	Substitution Request									
Specifica	ntion Title: <u>Fire Protection Ca</u> Section: <u>10 4413</u>		e:2							
Proposed	l Substitution: Nystrom									
	turer: Nystrom									
Trade Na	ame:				Model No.:					
Attached the reque	data includes product descriptest; applicable portions of the	otion, specif data are cle	ications, drawings, pl arly identified.	notograph	s, and performance and test data adequate for evaluation of					

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by:	David Koob
Signed by:	
Firm:	D.L. Neuner Company, Inc.
Address:	3015 S. Brentwood Blvd.
	St. Louis, MO 63144
Telephone:	(800) 775-9455
Telephone:	

#### A/E's REVIEW AND ACTION

Substitution approved - Make submittals in accordance with Specification Section 01330.

Substitution approved as noted - Make submittals in accordance with Specification Section 01330.

Substitution rejected - Use specified materials.

Substitution Request received too late - Use specified materials.

Signed by: Erica Alley					Date: 01/09/2024
Supporting Data Attached:	Drawings	Product Data	Samples	Tests	Reports

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# **Direct** Service Done Right





<sup>10 4413 + 10 4416</sup> Fire Cabinets + Extinguishers Catalog

# **nystrom**

Direct Service Done Right





#### DIVISION 10 4413 + 10 4416 Fire Cabinets + Extinguishers

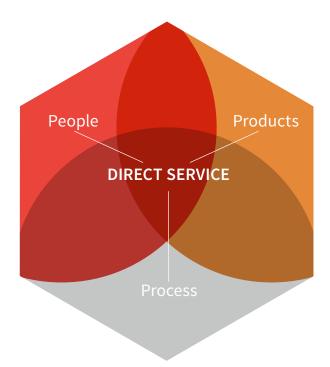
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# Direct Service Done Right

Nystrom offers a broad line of specialty building products to better serve construction professionals and architects.

We have customer focused professionals and hassle-free processes that directly serve and simplify the building process.



#### PEOPLE

architects, engineers, designers, estimators, construction professionals, and service specialists

#### PROCESS

estimating & bid design support, tech support, logistics support, installation support, cad, revit/ bim

EFFICIENCY

TIME

#### PRODUCTS

standard & custom designs, warehousing, quality assurance, exceptional warranties, leed certification, labeling & tagging



#### SPECIFICATION SUPPORT

By giving architects, designers and contractors open access to our expert team, we simplify the process of specifying and procuring access products from design through delivery and installation.

## ADA + NFPA REGULATIONS

#### CONSENSUS STANDARDS, REQUIREMENTS, CODES AND LAWS

The placement of fire extinguishers and fire extinguisher cabinets is driven by a group of consensus standards, requirements, codes and laws. Ultimately, where, how many, and what type, will be determined by the authority having jurisdiction for that location. The authority could be as diverse as the City Building Inspector or the Deputy Chief of Staff for Installations and Logistics.

The requirements that establish placement practice are ultimately found in local fire prevention codes at one end of the spectrum or Federal Law at the other end.

For the proper location, type and number of fire extinguishers, consult with the local authority having jurisdiction. As a general guideline, we offer the following excerpt from <u>Occupational Safety and Health Administration - Sub</u><u>Part L</u> and from <u>National Consensus</u> documents:

### AMERICANS WITH DISABILITIES ACT - PROTRUDING OBJECTS

The majority of fire extinguishers, when hung on a wall, protrude more than 4 inches into walks, halls, corridors, passageways or aisles. To comply with the Americans with Disabilities Act of 1990 (ADA), objects protruding from walls (fire extinguishers) with their leading edges between 27 inches and 80 inches (685 mm and 2030 mm) above the finished floor, shall protrude no more than 4 inches (100 mm) into walks, halls, corridors, passageways or aisles. Therefore, fire extinguishers that protrude more than 4 inches must be recessed into the wall.

Nystrom's fire extinguisher cabinets allow the specifier to comply with the ADA protrusion requirements, which are identified in each dimensional table found in this catalog.

\*Please note the column headed ADA Compliance to specify the appropriate fire extinguisher cabinet.

#### FIRE EXTINGUISHER SIZE AND PLACEMENT CRITERIA (PER NFPA 10)

#### FOR CLASS A HAZARDS

CRITERIA	LIGHT	ORDINARY	EXTRA
	OCCUPANCY	OCCUPANCY	OCCUPANCY
Minimum Rated Single Extinguisher	2-A	2-A	4-A
Maximum Floor Area per	3,000	1,500	1,000
Unit of A	sq. ft.	sq. ft.	sq. ft.
Maximum Floor Area for	11,250	11.250	11,350
Extinguisher	sq. ft.	sq. ft.	sq. ft.
Maximum Travel Distance to Extinguisher	75 ft.	75 ft.	75 ft.

#### FOR CLASS B HAZARDS

TYPE OF HAZARD	MAXIMUM EXT'G RATING	MAXIMUM TRAVEL DISTANCE TO EXT'G
Light (Low)	5-B 10-B	30 ft. 50 t.
Ordinary (Moderate)	10-В 20-В	30 ft. 50 ft.
Extra (High)	40-B 80-B	30 ft. 50 ft.

#### FOR CLASS C HAZARDS

Class C ratings are required where energized electrical equipment is encountered. Since fire itself is a Class A or B hazard, the extinguishers are sized and located on the basis of the Class A or B hazard.

#### **INSTALLATION OF FIRE EXTINGUISHERS**

Portable fire extinguishers shall be securely installed on the hangers or in the bracket supplied or placed in cabinets or wall recesses. Wheeled-type extinguishers shall be in a designated location.

Extinguishers having a gross weight not exceeding 40 Lbs. shall be installed so that the top of the extinguisher is not more than 5' above the floor.

Extinguishers having a gross weight greater than 40 Lbs. shall be installed so that the top of the extinguisher is not more than 3'-6" above the floor.



## Alpine FIRE EXTINGUISHER CABINET

This Alpine Fire Extinguisher Cabinet is the industry's most popular design. Available in various door styles and mounting options to complement virtually any type of construction.

#### **FEATURES**

**CONTINUOUS PIANO HINGE** Built with a continuous hinge to combine aesthetics and provide sufficient support for the cabinet door operation.

**SAFETY GLASS** Constructed with tempered safety break glass, this cabinet will keep you safe from risk of injury in the event of an emergency.





#### DETAILS

#### MATERIAL

- Cold Rolled Steel, White Polyester Finish
- Aluminum
- Stainless Steel

**DOOR** Full Glass, Duo-Vertical Panel, Duo-Vertical Panel with Lock, Solid Flush Panel or Solid Flush Panel with Lock

**GLAZING** None, Tempered Safety Glass, 1/4 inch Wire Inserted Glass, 1/8 inch Acrylic

MOUNTING Recessed, Semi-Recessed, Surface or Trimless

**SIZE** Determined by the fire extinguisher size and available wall depth (see table below)

**OPTIONS** Lettering, Fire-Rating, Rolled Radius

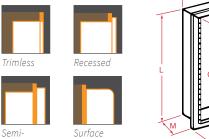
#### Fire Extinguisher Sold Separately

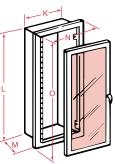
#### MODELS

STEEL	ALUMINUM	STAINLESS	WALL	TRIM		BOX I.D.		FRAME	O.D.	WAI	L OPEN	IING	FR	Ο ΟΡΤΙ	ON	Ġ.	FOR USE
		STEEL	MOUNTING				М	Ν	0	W			W			ADA	WITH EXT'G
FC-7007	FC-7037	FC-7057	Recessed	1/2	9	18	5	11-3/4	20-3/4	10	19	4-3/4	11-1/4	20	5-5/8	Yes	EX-3002
FC-7008	FC-7038	FC-7058	Semi-Recessed	2	9	18	5	11-3/4	20-3/4	10	19	3-1/4	11-1/4	20	4-1/8	Yes	EX-3002
FC-7009	FC-7039	FC-7059	Surface	-	11-1/2	2 20-1/2	5-3/4	-	-	-	-	-	-	-	-	No	EX-3005-3
FC-7010	FC-7030	FC-7050	Recessed	1/2	9	24	5	11-3/4	26-3/4	10	25	4-3/4	11-1/4	26	5-5/8	Yes	EX-3302
FC-7012	FC-7032	FC-7052	Semi-Recessed	2	9	24	5	11-3/4	26-3/4	10	25	3-1/4	11-1/4	26	4-1/8	Yes	EX-3305
FC-7013	FC-7033	FC-7053	Semi-Recessed	3	9	24	5	11-3/4	26-3/4	10	25	2-1/4	11-1/4	26	3-1/8	Yes	EX-3305-3
FC-7020	FC-7040	FC-7060	Recessed	1/2	9	24	5-3/4	11-3/4	26-3/4	10	25	5-1/2	11-1/4	26	6-3/8	Yes	EX-3006
FC-7021	FC-7041	FC-7061	Trimless	-	9	24	5-3/4	12-3/4	27-3/4	10	25	6	11-1/4	26	7-3/8	Yes	EX-3010
FC-7022	FC-7042	FC-7062	Semi-Recessed	2	9	24	5-3/4	11-3/4	26-3/4	10	25	4	11-1/4	26	4-7/8	Yes	EX-3306
FC-7023	FC-7043	FC-7063	Semi-Recessed	3	9	24	5-3/4	11-3/4	26-3/4	10	25	3	11-1/4	26	3-7/8	Yes	EX-3310
FC-7024	FC-7044	FC-7064	Surface	-	11-1/2	2 26-1/2	5-3/4	-	-	-	-	-	-	-	-	No	EX-3405
FC-7025	FC-7045	FC-7065	Recessed	1/2	12	27	8	14-3/4	29-3/4	13	28	7-3/4	14-1/4	29	8-5/8	Yes	
FC-7026	FC-7046	FC-7066	Trimless	-	12	27	8	15-3/4	30-3/4	13	28	8-1/4	14-1/4	29	9-5/8	Yes	EX-3020
FC-7027	FC-7047	FC-7067	Semi-Recessed	3	12	27	8	14-3/4	29-3/4	13	28	5-1/4	14-1/4	29	6-1/8	Yes	EX-3202 EX-3320
FC-7028	FC-7048	FC-7068	Semi-Recessed	5	12	27	8	14-3/4	29-3/4	13	28	3-1/4	14-1/4	29	4-1/8	No	EX-3410
FC-7029	FC-7049	FC-7069	Surface	-	14-5/8	3 29-3/8	8	-	-	-	-	-	-	-	-	No	

#### MOUNTING

Recessed







## Palisade FIRE EXTINGUISHER CABINET

Palisade Fire Extinguisher Cabinets feature the ultra-clean, contemporary look of a full acrylic door, available in five eye-pleasing panel colors. In addition, a host of letter colors and placement options make it easier than ever to specify a truly modern, durable and functional fire extinguisher cabinet.

#### **FEATURES**

MOUNTING

Trimless

Semi-

Recessed

**PUSH LATCH HANDLE** Designed for the door to safely open and close with the use of a magnet. No need to turn a handle... simply push and latch.

**GRAVITY PIVOT HINGE** The door is constructed with the hinges at the top and bottom of the door so that it will swing freely.

Recessed

Surface

#### DETAILS

#### MATERIAL

- Cold Rolled Steel, White Polyester Finish
- Aluminum
- Stainless Steel

**DOOR** Full Acrylic or Full Acrylic with Scored Insert

GLAZING Clear, White, Smoke or Red

MOUNTING Recessed, Semi-Recessed, Surface or Trimless

**SIZE** Determined by the fire extinguisher size and available wall depth (see table below)

**OPTIONS** Lettering, Fire-Rating, Rolled Radius

#### Fire Extinguisher Sold Separately

#### MODELS

STEEL	ALUMINUM	STAINLESS	WALL	TRIM		BOX I.D.		FRAM	E O.D.	WAI	L OPEN	IING	FR	ΟΡΤΙ	ON	Ŀ.	FOR USE
		STEEL	MOUNTING	Т	K	L	М	Ν	0	W	н	D	W	Н	D	ADA	WITH EXT'G
FC-7107	FC-7137	FC-7157	Recessed	1/2	9	18	5	11-3/4	20-3/4	10	19	4-3/4	11-1/4	20	5-5/8	Yes	EX-3002
FC-7108	FC-7138	FC-7158	Semi-Recessed	2	9	18	5	11-3/4	20-3/4	10	19	3-1/4	11-1/4	20	4-1/8	Yes	EX-3002
FC-7109	FC-7139	FC-7159	Surface	-	11-1/2	2 20-1/2	5-3/4	-	-	-	-	-	-	-	-	No	EX-3005-3
FC-7110	FC-7130	FC-7150	Recessed	1/2	9	24	5	11-3/4	26-3/4	10	25	4-3/4	11-1/4	26	5-5/8	Yes	EX-3302
FC-7112	FC-7132	FC-7152	Semi-Recessed	2	9	24	5	11-3/4	26-3/4	10	25	3-1/4	11-1/4	26	4-1/8	Yes	EX-3305 EX-3305-3
FC-7113	FC-7133	FC-7153	Semi-Recessed	3	9	24	5	11-3/4	26-3/4	10	25	2-1/4	11-1/4	26	3-1/8	Yes	EX-3303-3
FC-7120	FC-7140	FC-7160	Recessed	1/2	9	24	5-3/4	11-3/4	26-3/4	10	25	5-1/2	11-1/4	26	6-3/8	Yes	EX-3006
FC-7121	FC-7141	FC-7161	Trimless	-	9	24	5-3/4	12-3/4	27-3/4	10	25	6-1/2	11-1/4	26	7-3/8	Yes	EX-3010
FC-7122	FC-7142	FC-7162	Semi-Recessed	2	9	24	5-3/4	11-3/4	26-3/4	10	25	4	11-1/4	26	4-7/8	Yes	EX-3306
FC-7123	FC-7143	FC-7163	Semi-Recessed	3	9	24	5-3/4	11-3/4	26-3/4	10	25	3	11-1/4	26	3-7/8	Yes	EX-3310
FC-7124	FC-7144	FC-7164	Surface	-	11-1/2	2 26-1/2	5-3/4	-	-	-	-	-	-	-	-	No	EX-3405
FC-7125	FC-7145	FC-7165	Recessed	1/2	12	27	8	14-3/4	29-3/4	13	28	7-3/4	14-1/4	29	8-5/8	Yes	
FC-7126	FC-7146	FC-7166	Trimless	-	12	27	8	15-3/4	30-3/4	13	28	8-3/4	14-1/4	29	9-5/8	Yes	EX-3020
FC-7127	FC-7147	FC-7167	Semi-Recessed	3	12	27	8	14-3/4	29-3/4	13	28	5-1/4	14-1/4	29	6-1/8	Yes	EX-3202 EX-3320
FC-7128	FC-7148	FC-7168	Semi-Recessed	5	12	27	8	14-3/4	29-3/4	13	28	3-1/4	14-1/4	29	4-1/8	No	EX-3410
FC-7129	FC-7149	FC-7169	Surface	-	14-5/	8 29-3/8	8	-	-	-	-	-	-	-	-	No	

## Summit FIRE EXTINGUISHER CABINETS

The Summit Fire Extinguisher Cabinet distinguishes itself with an exceptionally refined look that's realized by concealing all handles and hinges. Depending upon door style, glazing and other options chosen, a Summit Series cabinet can be designed to effortlessly blend into its surrounding environment or be unmistakably conspicuous.

#### **FEATURES**

**CONCEALED DESIGN** The frameless design of the Summit series allows the cabinet to be camouflaged into the wall.

**SAFETY BREAK GLASS** Constructed with tempered safety break glass to protect against cuts in the event of an emergency.

#### DETAILS

#### MATERIAL

- Cold Rolled Steel, White Polyester Finish
- Aluminum
- Stainless Steel

**DOOR** Duo-Vertical Panel, Duo-Vertical Panel with Lock, Solid Flush Panel or Solid Flush Panel with Lock

**GLAZING** None, Tempered Safety Glass, 1/4 inch Wire Inserted Glass, 1/8 inch Acrylic

#### MOUNTING Recessed

**SIZE** Determined by the fire extinguisher size and available wall depth (see table below)

**OPTIONS** Lettering, Fire-Rating

#### Fire Extinguisher Sold Separately

#### MODELS

STEEL	ALUMINUM	STAINLESS STEEL	WALL MOUNTING	TRIM T	ĸ	BOX I.D.	м	FRAME	0.D.	WAL	L OPEN ப	NING	FRC W	COPTI	ON	ري ADA	FOR USE WITH EXT'G
FC-7210	FC-7230	FC-7250	Recessed	5/8	9	18	,	11-3/4	,	10	19	6	11-1/4	20	6-7/8	Yes	EX-3002 EX-3005-3
FC-7220	FC-7240	FC-7260	Recessed	5/8	9	24	5-3/4	11-3/4	26-3/4	10	25	6	11-1/4	26	6-7/8	Yes	EX-3002 EX-3310
FC-7225	FC-7245	FC-7265	Recessed	5/8	12	27	8	14-3/4	,	13	28	8-1/4	13	28	8-1/4	Yes	EX-3202 EX-3020 EX-3410





#### MOUNTING







## Ridge FIRE EXTINGUISHER CABINETS

A convex, clear plastic "bubble" window is the earmark of the Ridge Fire Extinguisher Cabinet. This ultra-practical design delivers 180° of visibility for quick identification of the extinguisher. The Ridge's shallow design is also ideal for contemporary structures with limited wall depth.

#### **FEATURES**

MOUNTING

Trimless

Semi-

Recessed

Recessed

Surface

**STYLISH BUBBLE DOOR** Add 180 degrees of visability to your fire extinguisher with the bubble window.

**ACRYLIC PLEXIGLASS** Constructed with durable clear, bronze or smoke colored acrylic plexiglass.

#### DETAILS

#### MATERIAL

- Cold Rolled Steel, White Polyester Finish
- Aluminum
- Stainless Steel

**DOOR** Full Bubble or Full Bubble with Acrylic Insert

#### **GLAZING** Clear or Smoke

**MOUNTING** Recessed, Semi-Recessed, Surface or Trimless

**SIZE** Determined by the fire extinguisher size and available wall depth (see table below)

**OPTIONS** Locks, glazing, lettering, Fire-Rating, Rolled Radius, Polyester finish

#### Fire Extinguisher Sold Separately

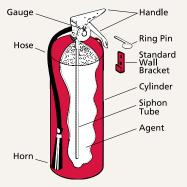
#### MODELS

STEEL	ALUMINUM	STAINLESS	WALL	TRIM		BOX I.D.		FRAM	E O.D.	WA	LL OPEN	NING	FR	C OPTI	ION	Ġ.	FOR USE
		STEEL	MOUNTING	T	K	L	М	N	0	W	н	D	W	Н	D	ADA	WITH EXT'G
FC-7307	FC-7337	FC-7357	Recessed	1/2	9	18	4	11-3/4	20-3/4	10	19	3-3/4	11-1/4	20	4-5/8	Yes	EX-3002 EX-3005
FC-7308	FC-7338	FC-7358	Semi-Recessed	2	9	18	4	11-3/4	20-3/4	10	19	2-1/4	11-1/4	20	3-1/8	No	EX-3005-3 EX-3302
FC-7309	FC-7339	FC-7359	Surface		11-1/2	20-1/2	4	-	-	-	-	-	-	-	-	No	EX-3305 EX-3305-3
FC-7320	FC-7340	FC-7360	Recessed	1/2	9	24	4	11-3/4	26-3/4	10	25	3-3/4	11-1/4	25	4-5/8	Yes	EX-3002, EX-3005 . EX-3005-3
FC-7321	FC-7341	FC-7361	Trimless	-	9	24	4-1/2	11-3/4	27-3/4	10	25	4-1/4	11-1/4	26	5-5/8	Yes	EX-3006, EX-3010 EX-3302, EX-3305
FC-7322	FC-7342	FC-7362	Semi-Recessed	2	9	24	4	11-3/4	26-3/4	10	25	2-1/4	11-1/4	26	3-1/8	No	EX-3305-3
FC-7324	FC-7344	FC-7364	Surface	-	11-1/2	26-1/2	4	-	-	-	-	-	-	-	-	No	EX-3306, EX-3310
FC-7325	FC-7345	FC-7365	Recessed	1/2	12	27	4-3/4	14-1/2	29-1/2	13	28	4-1/2	14-1/4	29	5-3/8	Yes	EX-3020*
FC-7326	FC-7346	FC-7366	Trimless	-	12	27	5-1/4	15-1/2	30-1/2	13	28	5-1/2	14-1/4	29	6-3/8	Yes	EX-3202*
FC-7327	FC-7347	FC-7367	Semi-Recessed	3	12	27	4-3/4	14-1/2	29-1/2	13	28	3	14-1/4	29	2-7/8	No	EX-3320*
FC-7329	FC-7349	FC-7369	Surface	-	14-1/2	29-1/2	4-3/4	-	-	-	-	-	-	-	-	No	EX-3405

\*Add 1 inch to M & D dimensions

# **Fire Extinguishers**

# PRINCIPLES OF SELECTING EXTINGUISHERS:



TYPICAL STORED-PRESSURE FIRE EXTINGUISHER

(DR

- Type of potential fire hazard.
- Severity of potential fire hazard.
- Environmental conditions of potential fire hazard.
- Effectiveness of extinguisher on potential fire hazard.
- Training and physical capabilities of available personnel to operate extinguisher.
- Upkeep and maintenance requirements of extinguisher.

For further information, refer to NFPA 10.

	FIRE CLA	SSIFICATION	٩S	
TYPE OF FIRE	Wood, paper, cloth, trash & other ordinary combustibles	liauids	Energized electric equipment	Cooking appliances w/ combustible cooking media
CLASS AND LETTER SYMBOL	A	В	C	K
PICTURE SYMBOL				*** **
AGENTS				
MULTI-PURPOSE DRY CHEMICAL	Yes	Yes	Yes	No
KITCHEN	Yes	No	No	Yes
WATER	Yes	No	No	No
FFFP	Yes	Yes	No	No
BC DRY CHEMICAL	No	Yes	Yes	No
CARBON DIOXIDE	No	Yes	Yes	No
HALOTRON 1	Yes	Yes	Yes	No

# ABC Dry Chemical

The ABC Multi-Purpose Dry Chemical fire extinguisher is used to provide protection against Class A, B and C fires.

FINISH Glossy red polyester coated MOUNTING Wall bracket DISCHARGE Nozzle or hose AGENT BASE Ammonium Phosphate PRESSURE 195 P.S.I.

#### **MOUNTING BRACKET**

5 Lbs.

6 Lbs.

10 Lbs.

20 Lbs. 5, 6, 10 Lbs.

20 Lbs.

EX-3901

EX-3902

EX-3903

EX-3904

EX-3909 EX-3910

MODEL	NOMINAL CAPACITY	侧 RATING	HEIGHT	CYLINDER DIAMETER	RANGE OF STREAM	TYPE DISCHARGE
EX-3002	2-1/2 Lbs.	1A:10B:C	14-3/4"	3"	9' - 15'	Nozzle
EX-3005	5 Lbs.	2A:10B:C	15-1/4"	4-1/4"	12' - 18'	Hose
EX-3005-3	5 Lbs.	3A:40B:C	15-1/4"	4-1/4"	12' - 18'	Hose
EX-3006	6 Lbs.	3A:40B:C	16"	5"	15' - 21'	Hose
EX-3010	10 Lbs.	4A:80B:C	20"	5"	15' - 21'	Hose
EX-3020		20A:120B:C		7"	15' - 21'	Hose

Kitchen Class K

The Kitchen Class K portable fire extinguishers discharge a fine mist and help prevent grease splash and re-flash while cooling appliances. These wet chemical extinguishers are the best restaurant kitchen appliance portable fire extinguishers available and provide protection against Class K fires.

FINISH Stainless Steel MOUNTING Wall bracket DISCHARGE Hose AGENT Potassium Acetate Solution

MODEL	NOMINAL CAPACITY	侧 RATING	HEIGHT	CYLINDER DIAMETER	RANGE OF STREAM	TYPE DISCHARGE
EX-3260	6 ltr.	2A:K	19"	7"	10' - 12'	Hose
EX-3262	2-1/2 gal.	2A:K	24-1/2"	7"	10' - 12'	Hose

MOUNTING BRACKET

MODEL	FITS SIZE
EX-3904	2-1/2 gal.
*OPTION:	
-AF Anti-free	ze charge

Call for information on water mist "Clean Agent" and pressurized water/foam extinguishers.





# Halotron I

The Halotron 1 fire extinguisher uses an EPA approved "Clean Agent" discharged as a rapidly evaporating liquid which leaves no residue. It effectively extinguishes Class A, B and C fires by cooling and smothering and it will not conduct electricity back to the user.

FINISH Glossy red polyester coated MOUNTING Wall bracket DISCHARGE Nozzle or hose & nozzle BASE AGENT HydroChloroFluoro-Carbon PRESSURE 125 P.S.I.

MODEL	NOMINAL CAPACITY	(h) RATING	HEIGHT	CYLINDER DIAMETER	RANGE OF STREAM	TYPE DISCHARGE
EX-3101	1.4 Lbs.	1B:C	10"	2-7/8"	6' - 8'	Nozzle
EX-3102	2.5 Lbs.	2B:C	15-1/2"	3"	6'-10'	Nozzle
EX-3105	5 Lbs.	5B:C	15-1/4"	4-1/4"	9' - 15'	Nozzle



## BC Dry Chemical FIRE EXTINGUISHERS

The BC Multi-Purpose Dry Chemical fire extinguisher is used to provide protection against Class B and C fires.

FINISH Glossy red polyester coated MOUNTING Wall bracket DISCHARGE Nozzle or hose AGENT BASE Sodium Bicarbonate PRESSURE 195 P.S.I. MOUNTING BRACKET

MODEL	NOMINAL CAPACITY	(III) RATING	HEIGHT		RANGE OF STREAM	TYPE DISCHARGE
EX-3302	2-1/2 Lbs.	10B:C	15-1/2"	3"	9'-15'	Nozzle
EX-3305	5 Lbs.	10B:C	15-1/4"	4-1/4"	12' - 18'	Hose
EX-3305-3	5-1/2 Lbs.	40B:C	15-1/4"	4-1/4"	12' - 18'	Hose
EX-3310	10 Lbs.	60B:C	20"	5"	15' - 21'	Hose
EX-3320	20 Lbs.	120B:C	23-1/4"	7"	15' - 21'	Hose

MODEL	FITS SIZE
EX-3901	5 Lbs.
EX-3902	6 Lbs.
EV 2002	1011.

EX-3902	6 Lbs.
EX-3903	10 Lbs.
EX-3909	5, 6, 10 Lbs.
EX-3910	20 Lbs.



# Carbon Dioxide

#### FIRE EXTINGUISHERS

The Carbon Dioxide fire extinguisher is used to provide protection against Class B and C fires. Will not contaminate or leave residue on materials which it extinguishes.

MODEL	NOMINAL CAPACITY	س RATING	HEIGHT	CYLINDER DIAMETER		RANGE OF STREAM	TYPE DISCHARGE
EX-3405	5 Lbs.	5B:C	17-3/4"	5-1/4"	8-1/4"	3' - 8'	Horn
EX-3410	10 Lbs.	10B:C	24"	7"	12"	3' - 8'	Hose & Horn
EX-3415	15 Lbs.	10B:C	30"	7"	12"	3' - 8'	Hose & Horn
EX-3420	20 Lbs.	10B:C	30"	8"	13"	3' - 8'	Hose & Horn

FINISH Glossy red polyester coated MOUNTING Wall bracket DISCHARGE Horn or hose & horn PRESSURE 735 P.S.I.

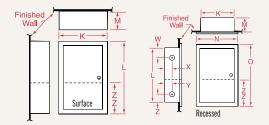
#### **MOUNTING BRACKET**

MODEL	FITS SIZE
EX-3903	5 Lbs.
EX-3904	10, 15 Lbs.
EX-3905	20 Lbs.
EX-3909	5 Lbs.

# **Detention + Institution Cabinets**



Nystrom's Detention Series Cabinets provide the specifier with a substantial unitized design in 12 gauge cold rolled steel construction for maximum security facilities. All corners are mitered and ground smooth to eliminate any dangerous projections. The heavy-duty continuous hinge adds to the secure features of these cabinets.



## Hose Detention cabinets

DOOR 12 gauge Cold Rolled SteelMOUNTING Recessed or SurfaceOPTIONS Lock Prep, Lettering, Fire-Rated (2-hour), Polyester Finish

#### **HOSE CABINET**

MODEL	WALL	WALL CAPACITY		BOX I.D.			E O.D.	WALL OPENING				٨
MODEL	MOUNTING						0				ADA	FRC
DC-1002	Recessed	100' Hose	24	30	5-1/2		33-3/4			6	Yes	Yes
DC-1052	Surface	Unit	24	30	5-1/2	-	-	-	-	-	No	No

#### HOSE AND EXTINGUISHER CABINET

MODEL		WALL	CAPACITY		BOX I.D.		FRAME	0.D.	WAL	L OPE	NING		٨
	MODEL	MOUNTING						0				ADA	FRC
	DC-1302	Recessed	100' Hose Unit	30	30	8	33-3/4 3						Yes
	DC-1352	Surface	/	30		8	-	-	-	-	-	No	No

### Extinguisher DETENTION CABINETS

DOOR 12 gauge Cold Rolled Steel

**MOUNTING** Recessed or Surface

**OPTIONS** Lock Prep, Lettering, Fire-Rated (2-hour), Polyester Finish



MODEL	WALL	(	CAPACITY			BOX I.D.		FRAM	E O.D.	WAL	L OPE	NING	Ŀ.	٨
MODEL	MOUNTING												ADA	FRC
 DC-1704	Recessed	10 Lb.	Dry Chem. E	Ext.	9	24	8	12-3/4	27-3/4	10	25	8-1/2	Yes	Yes
DC-1706	Recessed	2-1/2	gal. Water E	xt.	12	27	8	15-3/4	30-3/4	13	28	8-1/2	Yes	Yes
 DC-1754	Surface	10 Lb.	Dry Chem. E	Ext.	9	24	8	-	-	-	-	-	No	No
 DC-1756	Surface	2-1/2	gal. Water E	xt.	12	27	8	-	-	-	-	-	No	No

## Valve DETENTION CABINETS



FIRE BLANKET

BC-6601

FIRE

FIRE

BC-6605

DOOR 12 gauge Cold Rolled Steel

**MOUNTING** Recessed or Surface

OPTIONS Lock Prep, Lettering, Fire-Rated (2-hour), Polyester Finish

#### **VALVE CABINET**

MODEL	MODEL WALL CAPACITY		i	BOX I.D		FRAM	WALL OPENING			Ŀ.	٨	
MODEL	MOUNTING				Μ		0				ADA	FRC
DC-1810	Recessed	2-1/2" Angle	18	18	8	21-3/4			19	8-1/2	Yes	Yes
DC-1815	Surface	Valve	18	18	8	-	-	-	-	-	No	No

#### **VALVE AND EXTINGUISHER CABINET**

	MODEL	WALL	CAPACITY	ł	BOX I.D		FRAME	EO.D.	WAL	L OPE	NING	SHELF	Ŀ.	٨
	MODEL	MOUNTING						0					ADA	FRC
	DC-1870	Recessed	2-1/2" Angle Valve	14	40	8	17-3/4	43-3/4			8-1/2		Yes	Yes
-	DC-1875	Surface	2-1/2 gal. Water Ext.		40	0		-	-	-	-	12	No	No

# Fire Blanket

Nystrom offers fire blanket cabinets in different styles to meet varying installation requirements. All styles of cabinets are equipped with a chemically treated fire blanket treated with fire resistant chemicals.

DOOR/BOX 20 gauge Cold Rolled Steel

FRAME 18 gauge Cold Rolled Steel

MOUNTING Recessed, Surface, Semi-recessed or trimless

**OPTIONS** Locks, Lettering, Fire-Rated (2-hour), Polyester Finish

#### FIRE BLANKET CABINET (INCLUDES BLANKET) REPLACEMENT BLANKET

			· ·				·		
MODEL	WALL MOUNTING		BOX I.D.		لغ. ADA	ا FRC		MODEL	SIZE
BC-6601	Surface	15	10	5	No	No		BC-6602	62 x 80



MODEL	WALL MOUNTING	BOX I.D		لغ ADA	اللہ FRC
BC-6603	Surface	70-1/2 5-3/4	4-1/2	No	No

#### FIRE BLANKET AND EXTINGUISHER CABINET (INCLUDES BLANKET)

MODEL	WALL MOUNTING	E	SOX I.I	D.	COM	IPART SIZE	MENT	WAL	L OPE	NING	FOR USE WITH FIRE EXT'G	ي. ADA	الله FRC
BC-6605	Recessed - 5/8	14	40	8	14	28	8	15	41	8	EX-3002, EX-3020	Yes	Yes
BC-6606	Trimless	14	40	8	14	28	8	15	41	9	EX-3002, EX-3252	Yes	Yes
BC-6607	Semi-Recessed	14	40	8	14	28	8	15	41	6	EX-3202, EX-3320	Yes	Yes
BC-6609	Surface	16	42	9-1/2	16	30	9-1/2		-		EX-3002, EX-3410	No	No

# Rain Hoods

BC-6603



Rain hoods help shield surface mounted cabinets from weather.

MATERIAL Cold Rolled Steel FINISH Polyester Coated

MODEL	CABINET WIDTH
OP-1927-04	11-1/4"
OP-1928-06	14-1/2"
OP-1927-70	16"
OP-1928-18	20"

## **Door Style OPTIONS**



-A Full Glass



-B Full Break Glass



-D Duo Panel Glass



-DV Duo Vertical Panel



-DVL Duo Vertical Panel w/Lock



-E Center Break Glass



Panel

-FS Solid Flush Panel w/lock



-FP Full Glass with Flush Pull Handle



-BA Full Bubble with Catch



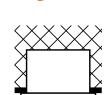
-BB Full Bubble with Cylinder Lock



-A Full Acrylic Panel



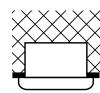
Trimless



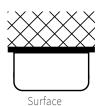
Recessed



Semi-Recessed



Semi-Recessed with rolled radius\*



\*Standard on all 3" - 9" x 24" semi-recessed cabinets.

# **Mounting Brackets**

For use with portable fire extinguishers when additional security is required due to vibration. Furnished with 16 gauge glossy polyester coated steel bracket with spring-type band and/or rubber strap.





EX-3902



EX-3908

EX-3910

Download Drawings, CAD, Spec, and LEED documents at www.Nystrom.com

## Handle + Lock **OPTIONS**



Cam Latch\*

BOP-7911













Break Rite<sup>®</sup> Handle BOP-BR04

\*Standard option

Pull Handle BOP-1905

Fire Pull Handle BOP-1907

Flush Pull Handle BOP-1909

Lock BOP-7912

#### Metal Door + Frame Finish **OPTIONS OPTIONS**





Aluminum



Steel White Polyester Finish

Stainless Steel





Coated Steel

Mirror Stainless Steel





F-RE EXT-NGU-SHER

Vertical



Dark Duranodic Aluminum



FIRE

**EXTINGUISHER** 

Horizontal

IN CASE OF

Medium Duranodic Aluminum





FIRE EXTINGUISHER Vertical Ascending

**Die Cut Lettering** + Labels FIRE FIRF FIRF FIRE

EXTINGUISHER AND	DEPARTMENT	EXTINGUISHER	DEPT.	VALVE	BREAK		
FIRE DEPARTMENT VALVE	VALVE	AND OPEN BOOR FROM INSIDE	FIRE Blan	KET	MC OPS DOOR FROM INSDE		
DESCRIPTION			TYPE	WHITE	BLACK	RED	
Fire Extinguisher			Label	-	-	OP-1960	
Fire Extinguisher (V			Label	OP-1963	OP-1962	OP-1961	
Fire Extinguisher A	rrow		Label	-	-	OP-1964	
Fire Extinguisher In			Label	-	-	OP-1970	
In case of Fire brea	k glass and open (	door from inside	Label	-	-	OP-1972	
In case of Fire brea	k glass		Label	-	-	OP-1973	
Fire Department Va	lve		Label	-	-	OP-1980	
Fire Extinguisher/F	ire Dept Valve		Label	-	-	OP-1982	
Fire Extinguisher (H	lorizontal)		Die Cut	OP-7901	OP-7902	OP-7903	
Fire Extinguisher (V	/ertical Ascending	)	Die Cut	OP-7904	OP-7905	OP-7906	
Fire Extinguisher (V	/ertical)		Die Cut	OP-7907	OP-7908	OP-7909	
Fire Department Va				OP-7914	OP-7915	OP-7916	
Reverse die cut lett	ering available by	vadding suffix -R					

Visit www.nystrom.com for the latest version of this document and more information.



9300 73rd Avenue North Minneapolis, MN 55428

Phone (800) 547-2635 Fax (800) 317-8770



www.nystrom.com

FIRE CABINETS + EXTINGUISHERS CATALOG 03/19



#### SUBSTITUTION REQUEST (During the Bidding Phase)

Project: Jefferson State Office Building				Substitution Request Number:			
5	Jefferson City MO			From:	D.L. Neuner Company, Inc.		
To:	Arcturis			Date:	1/3/24		
				A/E Pro	ject Number:		
Re:	Substitution Request				t For:		
Specifica	ation Title: Access Doors and			Descript	tion: Fire rated and non-rated access doors		
	Section: <u>08 3113</u>	Pag	e:2/3	Article/I	Paragraph 2 <u>.2/A/1 2.3/A/1</u>		
Proposed	l Substitution: <u>Nystrom</u>						
Manufac	turer: Nystrom	Address:	Brooklyn Park MN		Phone: <u>888-412-3726</u>		
Trade Na	ame:				Model No.:		
Attached the reque	data includes product descripest; applicable portions of the	tion, specif data are cle	ications, drawings, ph arly identified.	otograph	s, and performance and test data adequate for evaluation of		

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by:	ed by: David Koob						
Signed by:							
Firm:	D.L. Neuner Company, Inc.						
Address:	3015 S. Brentwood Blvd.						
	St. Louis, MO 63144						
Telephone:	(800) 775-9455						

#### A/E's REVIEW AND ACTION

Substitution approved - Make submittals in accordance with Specification Section 01330.

Substitution approved as noted - Make submittals in accordance with Specification Section 01330.

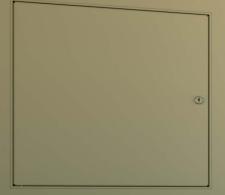
Substitution rejected - Use specified materials.

Substitution Request received too late - Use specified materials.

Signed by: Erica Alley					Date: 01/09/2024
Supporting Data Attached:	Drawings	Product Data	Samples	Tests	Reports

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# **Direct Service Done Right**





08 3100 Access Doors + Panels Catalog

# **nystrom**

Direct Service Done Right



# DIVISION 08 3100 Access Doors

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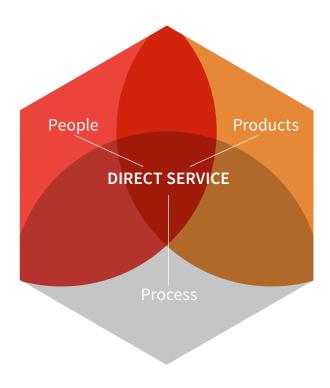
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# Direct Service Done Right

Nystrom offers a broad line of specialty building products to better serve construction professionals and architects.

We have customer focused professionals and hassle-free processes that directly serve and simplify the building process.



#### PEOPLE

architects, engineers, designers, estimators, construction professionals, and service specialists

#### PROCESS

estimating & bid design support, tech support, logistics support, installation support, cad, revit/ bim

EFFICIENCY

TIME

#### PRODUCTS

standard & custom designs, warehousing, quality assurance, exceptional warranties, leed certification, labeling & tagging

#### SERVICE



#### **SPECIFICATION SUPPORT**

By giving architects, designers and contractors open access to our expert team, we simplify the process of specifying and procuring access products from design through delivery and installation.



#### **DETAILS**

#### DOOR

- NT/NW: 16 gauge Steel
- NP: 14 gauge Steel
- 16 gauge Stainless Steel, Type 304

#### FRAME

- 16 gauge Steel
- 16 gauge Stainless Steel, Type 304

#### SI7F

- Min: 6 inches by 6 inches
- Max: 24 inches by 72 inches or 48 inches by 48 inches

#### **INSTALLATION** Ceiling or Wall

FLANGE 1 inch Exposed, Drywall Bead or Plaster Bead

HINGE Concealed Spring Button

#### **PAN DEPTH** 1/2 inch

**FINISH** White Powder Coat (Steel) or #4 Satin (Stainless Steel)

#### **ORDER GUIDE**

BASE	FLANGE	LATCH	WIDTH	Х	LENGTH	OPT	IONS
Ν				х			
	T 1 inch Flange	C Screwdriver Cam	Standard	Sizes (W	x L)	в	Galvannealed
	W Drywall Bead	Latch	6" x 6" 8" x 8"	16" x 20 18" x 18		D14	14 gauge Steel Door
	P Plaster Bead	L Key operated Cam Lock	10" x 10" 12" x 12"	18" x 24 20" x 30		G	Gasketing
		M Mortise Lock	12" x 12"	20" x 30 22" x 22		м	Masonry Anchors
		(1-1/8") Prep	12" x 24" 14" x 14"	22" x 30 24" x 24		L	Louvered Door
		N Knurled Knob	16" x 16"	24" x 30		s	Stainless Steel, Type 304

Rough opening is door size + 1/4 inch minimum. Additional sizes available, call for more information.

## Architectural ACCESS DOOR

The Nystrom Architectural Access Door is built with the architect in mind. Constructed with an industry-standard steel door, the updated design further improves on strength and aesthetics.

#### **FEATURES**

**ANTI-FLEX FRAME** Fasteners are inserted through our patent-pending Easy Install Tabs, firmly fitting the door to the wall without flexing the frame.

**PAINLESS INSTALLATION** When fasteners are not required, quickly and easily install your new panel by bending our patent-pending Easy Install Tabs over the drywall.

**OPTIONAL STAINLESS STEEL** The spot free design on the face of the door gives an aesthetically pleasing appearance.

#### MATERIALS



Powder Coat





**FLANGES** 







#### LATCHES





Key Operated Cam Lock

3

Mortise Lock Prep



Knurled Knob



# Renovation

#### ACCESS DOOR

The Nystrom Renovation Access Door is a lighter gauge alternative to the Architectural Door (page 5). The panel features an industry-leading design to provide superior durability and functionality.

#### DETAILS

DOOR 20 gauge Steel

FRAME 20 gauge Steel

#### SIZE

• Min: 6 inches by 6 inches • Max: 24 inches by 72 inches or 48 inches by 48 inches

**INSTALLATION** Ceiling or Wall

**FLANGE** 1 inch Exposed

HINGE Concealed Spring Button

**PAN DEPTH** 1/2 inch

FINISH White Powder Coat

#### **ORDER GUIDE**

BASE	FLANGE	LATCH	WIDTH	Х	LENGTH	OPTIONS
Е				х		
	T 1 inch Flange	C Screwdriver Cam Latch L Key Operated Cam Lock	8" x 8" 10" x 10" 12" x 12" 12" x 18" 12" x 24" 14" x 14"	16" x 20' 18" x 18' 18" x 24' 20" x 30'	" 24" × 36" 24" × 48" 30" × 30" 30" × 30" 30" × 36" 32" × 32" 36" × 36"	<ul><li>B Galvannealed</li><li>G Gasketing</li></ul>

Rough opening is door size + 1/4 inch minimum. Additional sizes available, call for more information.

# Recessed

ACCESS DOOR

The non-rated Recessed Access Door provides access through openings in wall or ceiling surfaces. This door is designed to receive 5/8 inch drywall to match the surrounding surfaces.



#### **DETAILS**

DOOR 16 gauge Steel

FRAME 16 gauge Steel

#### SIZE

- Min: 6 inches by 6 inches
- Max: 24 inches by 36 inches

**INSTALLATION** Ceiling

FLANGE None, Drywall Bead or Plaster Bead

HINGE Concealed Pivoting Rod

PAN DEPTH 5/8 inch

FINISH White Powder Coat or None

#### **ORDER GUIDE**

BASE	FLANGE	LATCH	WIDTH	Х	LENGTH	OPTIONS
R				х		
	<ul><li>A No Flange</li><li>P Plaster Bead</li><li>W Drywall Bead</li></ul>	C Screwdriver Cam Latch L Key Operated Cam Lock M Mortise Lock (1-1/8") Prep	12" × 12" 16" × 16"	5izes (W 20" x 30 24" x 24 24" x 30 24" x 30	)"* 4"* )"*	<ul><li>B Galvannealed</li><li>G Gasketing</li><li>S Stainless Steel, Type 304</li></ul>

Rough opening is door size + 1/4 inch minimum. Additional sizes available, call for more information. \*Ceiling application only.





## Drywall ACCESS DOOR

The Drywall Access Door comes with standard 1/2 inch or 5/8 inch drywall installed in the door pan. Available in five standard sizes and three door styles for various application requirements.

#### **FEATURES**

**PUSH LATCHING DOOR** Once installed, this door gives the desired appearance architects look for. The door quickly and easily opens and closes with the magnetic push-catch latch.

**SAFETY CORD** For overhead applications, this safety cord supports the door while opening the unit.



**APPLICATION** 





#### **OPTIONS**

STB Pin Hinge

Door

Key Operated

Cam Lock



Screwdriver

Cam Latch



Double Door

#### **DETAILS**

DOOR Welded Aluminum, Drywall Infill

FRAME Welded Aluminum

#### SIZE

- Min: 8 inches by 8 inches
- Max: 24 inches by 24 inches

**INSTALLATION** Ceiling or Wall

**LATCH** Push Latch

HINGE Welded Pin

FINISH Mill

#### **ORDER GUIDE**

BASE	AP	PLICATION	WIDTH	Х	LENGTH	OPTIONS		INFILL
RG				х			-	
	B BR T	STB Pin Hinged Removable Door Tile	Standard Siz 8" x 8" 1 12" x 12" 2	6" x 16	5" 24" x 24"	<ul> <li>C Screwdriver Cam Latch</li> <li>D Double Door</li> <li>L Key Operated Cam Lock</li> </ul>		<ul><li>500 1/2" drywall</li><li>625 5/8" drywall</li></ul>

# Insulated Fire-Rated

Designed for wall and ceiling applications, this firerated Insulated Access Door is UL and Warnock-Hersey listed. Engineered with mineral fiber to assist in reducing heat transfer in the event of a fire.

#### **FEATURES**

**FIRE-RATED** Independently tested and labeled for 1-1/2 hours for wall applications and 3 hours for ceiling applications.

**EASY OPERATION** This self-closing door features an inside knurled knob latch release is easy to operate.

**CUSTOM SIZING** Custom sizes available from 6 inches by 6 inches to 48 inches by 48 inches.





MATERIALS

White

Powder Coat

**FLANGES** 

#### DETAILS

DOOR 20 gauge Steel, Self-Closing

#### FRAME 16 gauge Steel

#### SIZE

- Min: 6 inches by 6 inches
- IT Max: 24 inches by 72 inches or 48 inches by 48 inches
- IW/IP Max: 36 inches by 48 inches

#### **INSTALLATION** Ceiling or Wall

#### HINGE

- IT: Flush Continuous Piano
- IW/IP: Concealed Pin

#### FINISH White Powder Coat

**INSULATION** 2 inch Thick, Fire-Rated Mineral Fiber, R-8

#### CERTIFICATION

- UL listed "B" label for 1-1/2 hours (Wall)
- Warnock-Hersey listed for 3 hours (Ceiling)

#### **ORDER GUIDE**

B	ASE	FLANGE	LATCH	WIDTH	Х	LENGTH	OPTIONS
I					х		
		<ul><li>T 1 inch Flange</li><li>W Drywall Bead</li></ul>	K Knurled Knob / Key Operated Latch Bolt		Sizes (W 18" x 24 20" x 30	" 24" x 48"*	<ul><li>B Galvannealed</li><li>G Gasketing</li></ul>
		P Plaster Bead	M Mortise Lock (1-1/8") Prep	12" x 12" 12" x 18" 12" x 24" 14" x 14" 16" x 16"	22" x 22 22" x 30 22" x 36 24" x 24 24" x 30 24" x 36	" 32" x 32"* " 36" x 36"* " 36" x 48"* " 48" x 48"*	<ul><li>M Masonry Anchors</li><li>S Stainless Steel, Type 304</li></ul>

Rough opening is door size + 1/2 inch minimum. Additional sizes available, call for more information. \*Wall application only.



#### LATCHES

1 inch Flange

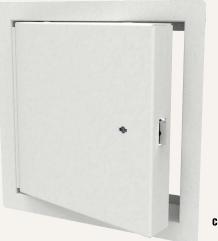


Knob



Lock Prep





#### **ORDER GUIDE**

BASE	FLANGE	LATCH	WIDTH	ХІ	LENGTH	OPTIONS
U				х		
	T 1 inch flange	K Knurled latch/	Standard	Sizes (W ×	L)	B Galvannealed
	W Drywall bead	key operated latch bolt	8" x 8" 10" x 10"	18" x 18" 18" x 24"		<b>G</b> Gasketing
	P Plaster Bead	M Mortise lock	12" x 12"	20" x 30"	24" x 48"	M Masonry Anchors
		(1-1/8") prep	12" x 18" 12" x 24" 14" x 14" 16" x 16"	22" x 22" 22" x 30" 22" x 36" 24" x 24"	32" x 32"	<b>S</b> Stainless Steel, Type 304

Rough opening is door size + 1/4 inch minimum. Additional sizes available, call for more information.

## **Uninsulated** FIRE-RATED ACCESS DOOR

Nystrom's UL Listed Uninsulated Access Door is designed for use in fire-rated walls while providing access to critical building components.

#### DETAILS

**DOOR** 14 gauge Steel, Self-Closing

FRAME 16 gauge Steel

#### SIZE

- Min: 6 inches by 6 inches
- UT Max: 24 inches by 72 inches or 48 inches by 48 inches
- UW/UP Max: 36 inches by 48 inches

#### **INSTALLATION** Wall

FLANGE Exposed, Drywall Bead or Plaster Bead

#### HINGE

- UT: Flush Continuous Piano
- UW/UP: Concealed Pin

FINISH White Powder Coat

**CERTIFICATION** UL listed "B" label for 1-1/2 hours





#### **ORDER GUIDE**

BASE	WIDTH	Х	LENGTH	0	PTIONS
FRD		х			
	Standard Siz	zes (V	/ × L)	с	Ceiling Application
	36" x 60" 40	)" x 60	)" 48" x 60"	D	Double Door
				м	Mortise Lock (1-1/8") prep
				s	Stainless Steel, Type 304
				т	3-Hour Rated
				w	Wall Application

Rough opening is door size. Additional sizes available, call for more information.

# **Oversized Attic**

The Oversized Attic Access Door allows access into ceilings when over-sized or double door applications are required. The double leaf design, with a removable center mullion, allows objects to clear which may interfere with door openings.

#### DETAILS

DOOR 14 gauge Steel

FRAME 16 gauge Steel

#### SIZE

- Min: 36 inches by 60 inches
- Max: 48 inches by 60 inches

**INSTALLATION** Ceiling or Wall

#### FLANGE Exposed

HINGE Continuous Rod or Piano

FINISH Off White Prime Coat

**CERTIFICATION** Warnock-Hersey listed for 2 hours

## Tile Ready FIRE-RATED ACCESS DOOR

The Tile Ready Access Door is UL Listed for openings that may require tile applications. When installed, the door and frame are concealed providing an aesthetically pleasing appearance.

# 

#### DETAILS

DOOR 14 gauge Steel, Self-Closing

**FRAME** 16 gauge Steel

#### SIZE

- Min: 10 inches by 10 inches
- Max: 24 inches by 24 inches

INSTALLATION Wall

**FLANGE** Exposed or Drywall Bead

**HINGE** Cabinet Type

**CERTIFICATION** UL listed "B" label for 1-1/2 hours

#### **ORDER GUIDE**

BASE	FLANGE	LATCH	WIDTH	X	LENGTH	OPTIONS
RU				х		
	<ul><li>T 1 inch Flange</li><li>W Drywall Bead</li></ul>	<ul> <li>K Knurled knowb/ key operated latch bolt</li> <li>M Mortise lock (1-1/8") prep</li> </ul>	Standard Siz 10" × 10" 16 12" × 12" 18	"×16	24" x 24"	S Stainless Steel, Type 304

Rough opening is door size + 1/4 inch minimum. Additional sizes available, call for more information.

## Upward Opening FIRE-RATED ACCESS DOOR

Nystrom's fire-rated Upward Opening Access Door is designed for ceiling applications when the door must swing upward into a ceiling cavity.

• FRU: 18 gauge Steel

• FRU: 16 gauge Steel

#### DETAILS

#### DOOR

• IU: 20 gauge Steel

#### FRAME

• IU: 16 gauge Steel

#### SIZE

- IU Min: 12 inches by 12 inches FRU Min: 24 inches by 36 inches
- IU Max: 24 inches by 36 inches FRU Max: 40 inches by 70 inches

#### **INSTALLATION** Ceiling

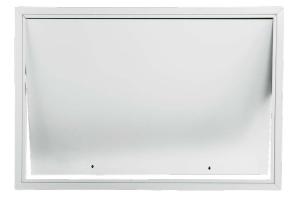
#### **FLANGE** Exposed

HINGE Concealed Continuous Piano

FINISH Off White Prime Coat

**INSULATION** 2 inch Thick, Fire-Rated Mineral Fiber, R-8

**CERTIFICATION** Warnock-Hersey listed for 1 hour



#### ORDER GUIDE

BASE	LATCH	WIDTH	Х	LENGTH	OPTIONS
			х		
IU Sizes <24" x 36" FRU Sizes >24" x 48"	A Allen Head Key M Mortise Lock (1-1/8") Prep	Standard IU 12" x 12" 14" x 14" 18" x 18" FRU 24" x 48" 30" x 30" 30" x 36"	22 22 24 30 32	" x 22" " x 36" " x 36" " x 48"	<ul> <li>B Galvannealed</li> <li>G Gasketing</li> <li>S Stainless Steel</li> <li>Type 304</li> </ul>

Rough opening is door size + 1/4 inch minimum. Additional sizes available, call for more information. Use IUA for access doors 24" x 36" or smaller; FRU for larger doors.

Download Drawings, CAD, Spec, and LEED documents at www.Nystrom.com





# **Fire-Rated** Security ACCESS DOOR

The insulated Fire-Rated Security Access Door is constructed of heavy-duty materials to prevent unwanted access through openings in fire-rated walls.

#### **FEATURES**

FIRE-RATED Independent third-party tested and UL listed and labeled for 1-1/2 hour fire rating.

**SELF-CLOSING** This door is designed with a spring for secure self-closing wall applications.

**CUSTOM SIZES** Custom sizes are available, from 12 inches by 12 inches to 48 inches by 48 inches.

#### DETAILS

#### DOOR

- Outer Door: 14 gauge Steel
- Inner Door: 20 gauge Steel

#### FRAME 16 gauge Steel

#### SIZE

- Min: 8 inches by 12 inches
- ST Max: 24 inches by 72 inches or 48 inches by 48 inches
- SW/SP Max: 36 inches by 48 inches

#### **INSTALLATION** Wall

FLANGE Exposed, Drywall Bead or Plaster Bead

#### HINGE

- ST: Flush Continuous Piano
- SW/SP: Concealed Pin

FINISH White Powder Coat

**INSULATION** 2 inch thick Fire-Rated Mineral Wool

**CERTIFICATION** UL listed "B" label for 1-1/2 hours

#### **ORDER GUIDE**

BASE	FLANGE	LATCH	WIDTH	Х	LENGTH	OPTIONS
s				х		
	<ul><li>T 1 inch Flange</li><li>W Drywall Bead</li><li>P Plaster Bead</li></ul>	<ul> <li>D Detention Lock Prep</li> <li>K Knurled Latch/ Key Operated Latch Bolt</li> <li>M Mortise Lock (1-1/8") Prep</li> </ul>	Standard Siz 12" x 12" 22 16" x 16" 24 18" x 18" 24	2" x 30 4" x 24	24" x 40" 24" x 48"	<ul> <li>B Galvannealed</li> <li>G Gasketing</li> <li>M Masonry Anchors</li> <li>S Stainless Steel, Type 304</li> </ul>

Rough opening is door size + 1/4 inch minimum. Additional sizes available, call for more information.

#### MATERIALS





#### **FLANGES**





Plaster Bead

#### LATCHES



Knob



Mortise Lock Prep

## Medium Security ACCESS DOOR

The Medium Security Access Door is manufactured with heavy-duty materials to prevent unwanted access to critical building components. The optional masonry anchors can be specified allowing this panel to be installed in any wall condition.

#### DETAILS

DOOR 12 gauge Steel

FRAME 12 gauge Steel

SIZE

- Min: 8 inches by 8 inches
- Max: 36 inches by 48 inches

**INSTALLATION** Wall or Ceiling

FLANGE Exposed, Drywall Bead or Plaster Bead

HINGE Concealed Continuous Piano

FINISH White Powder Coat

#### ORDER GUIDE

BASE	FLANGE	LATCH	WIDTH	Х	LENGTH	OPTIONS
м				х		
	T 1 inch Flange	D Detention Lock	Standard	Sizes (W	x L)	B Galvannealed
	W Drywall Bead	Prep		18" x 18 18" x 24		<b>G</b> Gasketing
	P Plaster Bead	K Knurled latch/ key operated latch	12" x 12"	20" x 30	" 24" x 48"	M Masonry Anchors
		bolt	12" x 18" 12" x 24"	22" x 22 22" x 30		N No Hinge
		M Mortise lock (1-1/8") prep	14" x 14" 16" x 16"	22" x 36 24" x 24		S Stainless Steel, Type 304

Rough opening is door size + 3/8 inch minimum. Additional sizes available, call for more information.

# High Security

The High Security Access Door provides secure access through walls and is manufactured with detention-grade materials. This panel is engineered with heavy-duty butt joint hinges on the face of the door to prevent unwanted access.



#### DETAILS

DOOR 10 gauge Steel

**FRAME** 3/16 inch Steel Angle - 2 inches by 2 inches **SIZE** 

- Min: 8 inches by 8 inches
- Max: 48 inches by 54 inches

**INSTALLATION** Wall or Ceiling

FLANGE Exposed

**HINGE** Surface Mounted Heavy-Duty Butt **FINISH** White Powder Coat

#### **ORDER GUIDE**

BASE	LATCH	WIDTH	Х	LENGTH	OPTIONS
HS			х		
	D Detention Lock Prep M Mortise Lock (1-1/8") Prep S Security Screws	<b>Standard Siz</b> 12" × 12" 22 16" × 16" 24 18" × 18" 24	2" x 30 4" x 24	24" x 40"* 24" x 48"*	<ul> <li>S Stainless Steel, Type 304</li> <li>Z Continuous Concealed Hinge</li> </ul>

Rough opening is door size +3/4". Additional sizes available, call for more information. \*Recommended for Wall surfaces only.





#### **ORDER GUIDE**

BASE	LATCH	WIDTH	Х	LENGTH	OPTIONS
тs			х		
	D Detention Lock Prep M Mortise Lock (1-1/8") Prep S Security Screws	Standard Si. 12" x 12" 22 16" x 16" 24 18" x 18" 24	2" x 30 1" x 24	" 24" x 40"* " 24" x 48"*	<ul> <li>Gasketing</li> <li>Masonry Anchors</li> <li>Stainless Steel, Type 304</li> </ul>

Rough opening is door size + 3/4 inch minimum. Additional sizes available, call for more information. \*Recommended for Wall surfaces only.



#### **ORDER GUIDE**

BASE	FLANGE	LATCH	WIDTH	Х	LENGTH	OPTIONS
D				х		
	T 1 inch Flange	D Detention Prep	Standard Sizes (W x L)		( x L)	<b>B</b> Galvannealed
	W Drywall	K Knurled Knob/		22" x 30" 24" x 40"* 24" x 24" 24" x 48"*		<b>G</b> Gasketing
	Bead P Plaster Bead	Key Operated Latch Bolt M Mortise Lock (1-1/8") Prep	18" x 18" 2			S Stainless Steel, Type 304

Rough opening is door size +1/4". Additional sizes available, call for more information. \*Recommended for Wall surfaces only.

## Top Security ACCESS DOOR

Nystrom's Top Security Access Door is manufactured with detention-grade materials and provides access through openings in walls. The pan style access door includes a heavy-duty butt hinge welded on the surface of the door to prevent unwanted access.

#### DETAILS

**DOOR** 7 gauge Steel

**FRAME** 3/16 inch steel angle - 2 inches by 3 inches

#### SIZE

- Min: 8 inches by 8 inches
- Max: 48 inches by 54 inches

**INSTALLATION** Wall

FLANGE Exposed

HINGE Surface Mounted Heavy-Duty Butt

PAN DEPTH 1-1/4 inch

FINISH White Powder Coat

# Draft Stop

Nystrom's Draft Stop Door is a non-rated access door designed to provide access through wall openings of draft stop spaces in the attic while preventing a back draft from one section of the attic to another. This self-closing and self-latching access door allows for access from both sides of the door.

#### DETAILS

DOOR 14 gauge Steel (self-closing)

FRAME 16 gauge Steel

#### SIZE

- Min: 6 inches by 6 inches
- DT Max: 24 inches by 72 inches, 36 inches by 60 inches or 48 inches by 48 inches
- DW Max: 36 inches by 48 inches

#### INSTALLATION Wall

FLANGE Exposed or Drywall Bead

#### HINGE

- DT: Flush Continuous Piano
- DW/DP: Concealed Pin

FINISH White Powder Coat

# Concealed

#### DROP IN ACCESS DOOR

Designed for ceiling applications, the Concealed Drop-In panel provides a seamless, aesthetically pleasing alternative to a traditional steel access door. Finish ready for paint or texture, this access door helps keep the attention where it belongs...on your space.

#### **FEATURES**

**REDUCED LABOR COSTS** Lightweight reinforced gypsum panel allows for single trade installation.

**CORNER OPTIONS** Standard and custom sizes available in circular, radius and square profiles.

**ECO FRIENDLY** These panels contain a 70% postconsumer recycled glass content for a truely GREEN product.



#### DETAILS

**DOOR** Gypsum Fiber Reinforced

FRAME Gypsum Fiber Reinforced

DOOR SHAPE Radius Corner, Circular or Square Corner

#### SIZE

- Min: 6 inches by 6 inches
- Max: 48 inches by 48 inches

**INSTALLATION** Ceiling

FLANGE Drywall

#### FINISH



White

#### **DOOR SHAPE**





Radius Corner Square Corner

#### **ORDER GUIDE**

BASE	DOOR SHAPE		WIDTH		Х	LENGTH		
GFR		-			x			
	<b>C</b> Circular		Standard Sizes (W x L)					
	R Radius Corner		8" × 8" 10" × 10"	16" x 18" x				
	S Square Corner		12" x 12"	22" x	30"			

Rough opening is door size + 6 inches. Additional sizes available, call for more information.



# **Concealed** HINGED ACCESS DOOR

Designed for both ceiling and wall applications, the GFR panel can be used anywhere a locked door is required but style is still of utmost importance. The seamless design of these access doors blend into the surrounding drywall for a clean, upscale appearance.

#### **FEATURES**

**ECO FRIENDLY** These panels contain a 70% postconsumer recycled glass content for a truely GREEN product.

**OPTIONAL LOCKS** Constructed with european style hinges and choice of screwdriver cam latch or keyed cam lock.

**CORNER OPTIONS** Standard and custom sizes available in radius or square corners.

#### DETAILS

**DOOR** Gypsum Fiber Reinforced

FRAME Gypsum Fiber Reinforced

DOOR SHAPE Radius Corner or Square Corner

#### SIZE

- Min: 6 inches by 6 inches
- Max: 30 inches by 30 inches

**INSTALLATION** Wall or Ceiling

FLANGE Drywall

HINGE European

FINISH Unfinished Gypsum, Natural Gypsum White

#### **ORDER GUIDE**

BASE	DOOR SHAPE	LATCH	I	WIDTH	Х	LENGTH
GFR			_		х	
	R Radius Corner S Square Corner	C Screwdriver Cam Latch L Keyed Cam Lock		Standard Si 8" x 8" 1 10" x 10" 1 12" x 12" 2	6" x 16	" 24" x 24" " 30" x 30"

Rough opening is door size + 6 inches.

Additional sizes available, call for more information.

#### FINISH





#### **DOOR SHAPE**



Radius Corner



Corner

#### LATCHES





## **Exterior** ACCESS DOOR

The Nystrom Exterior Access Door provides efficient access from the exterior of your building without compromising security or weather resistance.

#### **FEATURES**

COMPATIBLE WITH BUILDING KEY With the mortise lock prep option, you can match the mortise cylinder to that of your building's other access points.

TEMPERATURE CONTROL With 1.6 inch polyurethane insulation, the Nystrom Exterior Door is constructed to protect your building from the harshest climates.

**AIR + WATER PENETRATION TEST** Independent lab testing for air leakage per ASTM E 283 and water leakage per ASTM E 331-00 assures the best protection against the elements.



#### **DETAILS**

DOOR 24 gauge Steel

FRAME 0.080 inch 6063-T5 Extruded Aluminum

SIZE

- Min: 12 inches by 12 inches
- Max: 48 inches by 60 inches

**INSTALLATION** Ceiling or Wall

FLANGE Exposed or Plaster/Stucco Bead

HINGE Stainless Steel Continuous Piano

FINISH

- Door: Paint Grip Finish
- Frame: Mill

**INSULATION** 1.6 inch Polyurethane; R-11

**GASKETING** EPDM Self-Adhesive, Continuous

# **FLANGES**

1 inch

Flange





D

#### LATCHES



Non-Locking Screwdriver Handle Cam Latch



Handle

Mortise Lock Prep

**ORDER GUIDE** 

BASE	FLANGE	LATCH	WIDTH	Х	LENGTH	OPTIONS
х				х		
	<ul><li>T 1 inch Flange</li><li>P Plaster/Stucco bead</li></ul>	<ul> <li>A Non-Locking Handle</li> <li>C Screwdriver Cam Latch</li> <li>L Locking Handle</li> <li>M Mortise Lock (1-1/8") Prep</li> </ul>	16" × 16"	20" x 30	" 24" x 36" " 36" x 36"	<ul> <li>A Aluminum Door</li> <li>C Drip Cap</li> <li>P Padlock Hasp</li> <li>S Stainless Steel, Type 304</li> </ul>

Rough opening is door size. Additional sizes available, call for more information.

## **Coastal Zone EXTERIOR ACCESS DOOR**

Nystrom's Coastal Zone Exterior Access Door is the industry's only high velocity and impact tested door. With a design pressure of +/- 80psf, this door is sure to withstand mother nature's toughest storms.

#### **FEATURES**

**IMPACT, AIR + WIND PRESSURE TESTED** Independent lab tested to TAS 201, 202 and 203 assures the best protection against the harshest elements.

TEMPERATURE CONTROL With 1.6 inches of closed cell polyurethane insulation, the Coastal Zone Exterior Door delivers a R-11 thermal value.

**CUSTOM SIZES** Available in 1/4 inch increments from 18 inches by 18 inches to 36 inches by 48 inches maximum.





#### **DETAILS**

DOOR 24 gauge Steel

FRAME 0.080 inch 6063-T5 Extruded Aluminum

#### SIZE

- Min: 18 inches by 18 inches
- Max: 36 inches by 48 inches

#### **INSTALLATION** Wall

#### **FLANGE** Exposed

HINGE Stainless Steel Continuous Piano

#### FINISH

- Door: Paint Grip Finish
- Frame: Mill

**INSULATION** 1.6 inch Polyurethane; R-11

**GASKETING** EPDM Self-Adhesive, Continuous

**COMPLIANCE** Tested to Miami-Dade County Performance Requirements, Florida Product Approval FL21058-R1

#### **ORDER GUIDE**

BASE	LATCH	WIDTH	Х	LENGTH	OPTIONS	
хнт			х			- H
	<ul><li>A Non-Locking Handle</li><li>L Locking Handle</li></ul>	Standard S 18" x 18" 20" x 30" 24" x 24"	-	(W × L) 24" x 30" 24" x 36" 36" x 36"	<ul><li>C Drip cap</li><li>S Stainless Steel, Type 304</li></ul>	

Rough opening is door size. Additional sizes available, call for more information.

#### **FLANGES**





#### LATCHES



Handle

Lockina Handle

# Lightweight ACCESS DOOR

Nystrom's non-rated insulated Lightweight Access Door offers a solution to larger openings in wall and ceiling applications. The door is available in pre-finished, embossed, galvanized steel and aluminum door skins.

#### DETAILS

DOOR 26 gauge Steel, Embossed

FRAME .045 inch 6063-T5 Extruded Aluminum

#### SIZE

- Min: 12 inches by 12 inches
- Max: 18 inches by 72 inches, 24 inches by 60 inches or 48 inches by 48 inches

**INSTALLATION** Ceiling or Wall

FLANGE Rolled 1-5/16 inches Wide

HINGE Aluminum Continuous Piano

#### FINISH

- Door Skin: Steel, White Embossed
- Frame: Aluminum, Clear Anodized

**INSULATION** 3/4 inch Polystyrene, R-3.8

# 

#### **ORDER GUIDE**

BASE	LATCH	WIDTH	Х	LENGTH	OPTIONS
LW			х		
	L Key Operated Cam Lock T Screwdriver Cam Latch	Standard Si 12" x 12" 2 18" x 18" 2 22" x 30" 2 22" x 36" 3	14" x 24 14" x 36 14" x 48	" 30" x 36" " 48" x 48"* " 60" x 48"*	<ul><li>A Aluminum Panel Insert</li><li>G Gasketing</li></ul>

Rough opening is door size + 1/4 inch minimum. Additional sizes available, call for more information. \*Double door construction.



The Plastic Access Door provides an economical alternative to traditional materials and is ideal for light-duty applications. The removable panel is easily installed - no fasteners required.

#### DETAILS

**DOOR** 1/8 inch High Impact Styrene, Removable

FRAME Reversible 3/4 inch Flange

#### SIZE

- Min: 4 inches by 6 inches
- Max: 22 inches by 22 inches

INSTALLATION Ceiling or Wall

FLANGE Exposed

LATCH Snap Latch

FINISH White, Texturized

#### **ORDER GUIDE**

BASE	WIDTH	Х	LENGTH
PL		х	
	Standard 5 4" x 6" 6" x 9" 8" x 8" 12" x 12"	14" x 1 14" x 2	4" 9"



# Materials

В

S

D

С



Galvannealed Steel With primer coat. Use where corrosive resistance is required.



Stainless Steel, Type 304 Extremely resistant to corrosion. With #4 satin polish finish.

# Additional



Double Leaf Panel Recommended for easy access to large openings.



Drip Cap Directs running water away from the face of the panel.



Gasketing Applied to the doorstops for weather resistance. Also available with UL listed smoke seal.



Louvered Door Provides ventilation for special applications.



M Masonry Anchors Attached to the frame to secure the panel when installed in masonry.

# Hinges





Continuous Piano H

#### Concealed Continuous Piano Z

# Flanges





1 inch Flange





# Latches + Locks



C

Screwdriver Operated Cam Latch Most common. Appropriate for standard applications.



S Security Screw – Pinned Hex Head Highest security without a lock – requires special pinned allen wrench to open the panel.



N Knurled Knob Cam Latch Unrestricted access – no tool required. Finger operated.



K Knurled Knob/Key Operated Latch Bolt Patented ball bearing latch bolt operated by a screwin type knurled knob or flush key.



D

М

Detention Lock Preparation For heavy-duty detention deadbolt lock. Used in maximum security applications.



Key Operated Cam Lock Provides an economical solution for controlled access when locks are required.

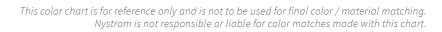


Mortise Cylinder Lock Preparation Matches project hardware. Accepts standard 1-1/8 inch mortise cylinder.

# Finishes



Note: White is the base color, all other colors have additional charges and may require longer lead times.



Visit www.nystrom.com for the latest version of this document and more information.



9300 73rd Avenue North Minneapolis, MN 55428

Phone (800) 547-2635 Fax (800) 317-8770



www.nystrom.com

ACCESS DOOR CATALOG 03/19

STATE OF MISSOURI OFFICE OF ADMINISTRATI DIVISION OF FACILITIES M PRODUCT SUBSTITU	ANAGEMENT, DESIGN AND CONSTRUCT	ION	project number D1911-01
	fe Safety Jefferson State Office Buil	ding	
	receipt of Bids as per Article 4 – Instructions	to Bidders)	
SUBSTITUTION FOLLOWING     (Maximum of (20) working days from N     FROM: BIDDER/CONTRACTOR (PRINT COMPANY NAME)	AWARD lotice to Proceed as per Article 3 – General (	Conditions)	
Audio Acoustics, Inc. To: Architect/Engineer (Print Company NAME)			
Arcturis / McClure Engineering			
Bidder/Contractor hereby requests acce provisions of Division One of the Bidding		ms as a substitu	tion in accordance with
SPECIFIED PRODUCT OR SYSTEM	(m)		
CRESTRON CPHN CONTROL SYSTE SPECIFICATION SECTION NO. 274100	· · · ·		
SUPPORTING DATA			
Product data for proposed substitution	n is attached (include description of product,	standards, perform	nance, and test data)
	ble will be sent, if requested		
QUALITY COMPARISON		OUDOTIT	
	SPECIFIED PRODUCT		UTION REQUEST
NAME, BRAND	CRESTRON CP4N	ATLONA VE	
CATALOG NO.		AT-VGW-H	ιω I
MANUFACTURER		ATLONA	
		AUDIO ALOUSTI	ks, lac
PREVIOUS INSTALLATIONS PROJECT	ARCHITECT/ENGINEER		
LOCATION			DATE INSTALLED
SIGNIFICANT VARIATIONS FROM SPECIFIED I $N/A$	PRODUCT		
-			
		<u>.</u>	

SECTION 006325 – SUBSTITUTION REQUEST 07/16

r

REASON FOR SUBSTITUTION	
10-MONTH LEAD TIME ON CRESTEON PRODUCTS	
· · · · · · · · · · · · · · · · · · ·	
DOES PROPOSED SUBSTITUTION AFFECT OTHER PARTS OF WORK?	
YES X NO	
IF YES, EXPLAIN	
· · · · · · · · · · · · · · · · · · ·	
SUBSTITUTION REQUIRES DIMENSIONAL REVISION OR REDESIGN OF STRUCTURE OR A/E W	/ORK
🗆 YES 🖾 NO	
BIDDER'S/CONTRACTOR'S STATEMENT OF CONFORMANCE OF PROPOSE REQUIREMENT:	ED SUBSTITUTION TO CONTRACT
We have investigated the proposed substitution. We believe that it is equal or super except as stated above; that it will provide the same Warranty as specified prod implications of the substitution; that we will pay redesign and other costs caused b become apparent; and that we will pay costs to modify other parts of the Work as the Work complete and functioning as a result of the substitution.	luct; that we have included complete y the substitution which subsequently
BIDDER/CONTRACTOR	DATE 1/8/24
My White	1/8/29
<b>REVIEW AND ACTION</b> Resubmit Substitution Request with the following additional information	n:
Substitution is accepted.	
Substitution is accepted with the following comments:	
The proposed substitute request is approved if the proposed product can pass	room peripherals including cameras
and conference audio back to host PC and guest laptop connection locations. Substitution is not accepted.	
ARCHITECT/ENGINEER David Bick	date 1/18/2024
SECTION 006325 – SUBSTITUTION REQUEST	





## Introduction

The Atlona AT-VGW-HW-3, AT-VGW-HW-10, and AT-VGW-HW-20 are Atlona Velocity<sup>™</sup> System server gateways for AV system control, plus room scheduling and AV asset management. These gateways feature a compact enclosure that easily installs into a rack. With a simple network connection and web browser access, an integrator, tech manager, or technician can quickly begin configuration and deployment of AV control systems, room scheduling touch panels, and AV devices such as matrix switchers. Velocity VGW-HW server gateways support industry-standard, secure data communications, and feature dual Gigabit Ethernet ports for isolating an AV device LAN from a facility or corporate network. An innovative, network-based system architecture allows full redundancy and failover with two gateways in operation, maximizing AV system reliability while preventing downtime in mission-critical applications.

## **Unit Capabilities**

SKU	AV Control	Room Scheduling	IP Device Capacity
AT-VGW-HW-3	Up to 3 rooms	Up to 6 rooms	250 simultaneous IP connections
AT-VGW-HW-10	Up to 10 rooms	Up to 20 rooms	250 simultaneous IP connections
AT-VGW-HW-20	Up to 20 rooms	Up to 40 rooms	500 simultaneous IP connections

A room can include AV control, room scheduling, or both. For example, with the AT-VGW-HW-10 there can be a total of 6 rooms with AV control only, 4 rooms for control and scheduling, and 16 rooms with scheduling only.



## **Key Features**

## Velocity AV system control

- Flexible scalability for integrating one or several AV systems over a network.
- Fast, agile, and highly intuitive control system configuration set up a room AV system in minutes.
- Configurations can easily be duplicated across devices, rooms, and sites.
- Make control system modifications in just minutes, including AV equipment changes
- Control system redundancy with automatic failover, available via primary and backup VGW-HW processors
- Velocity Command Converters available for IP conversion to RS-232, IR, and relay / sensor; IP to RS-232 available through Atlona AV devices

## Velocity room scheduling

- Easy to install and configure for integrators.
- Compatible with G Suite<sup>™</sup> and Microsoft<sup>®</sup> Office 365<sup>™</sup>.
- Simple to access for meeting participants though Velocity touch panels
- User-friendly GUI for viewing meeting room availability status, browsing for available rooms, and scheduling a meeting or event time
- · Ability to extend meetings and initiate ad hoc meeting sessions
- Can be configured with AV system control to automatically trigger AV functions and macros whenever a meeting begins or ends

## Velocity Cloud Lite remote configuration and management

- Online resource for creating and centrally managing Velocity control and room scheduling systems for multiple clients and sites.
- Remotely configure a new Velocity control system from scratch, or modify an existing system in minutes.
- Continuous system monitoring quickly assess system and device status
- Automate Velocity system backups to the cloud at defined intervals
- · Easy system restoration by accessing any time-stamped backup

## Atlona Management System (AMS)

- Centralized, network-based configuration and management of Atlona IP-controllable products and systems.
- Manage configuration and firmware updates for AV devices spanning a facility, building, enterprise, or residence.
- Automatically discovers Atlona devices on the network and adds them to the system configuration
- Organize Atlona device installations by room, floor, building, and site or campus
- Back up device configurations, duplicate configurations to identical Atlona products on the network, and restore configurations when devices are replaced
- Pre-configure Atlona devices prior to on-site installation and commissioning
- Manage firmware updates including the ability the push to multiple devices at once, and schedule updates at a convenient date and time
- Continuous system monitoring quickly assess system and device status



## **Features**

Hardware server gateways for AV system control, room scheduling, and AV asset management

Access from a web browser for setup and management

Simplify system or device configuration, deployment, and management with the interactions, flow, and visual elements of a web or mobile app GUI

Create role-based accounts for integrator, client, and AV/IT staff members, each with clearly defined access privileges

Dual Gigabit Ethernet ports for isolating a dedicated AV LAN from the facility or corporate network

Supports industry-standard, secure data communications through HTTP/2, HTTPS, SSH, SFTP, and WebSockets with TLS and AES-128 encryption

USB 3.0 and USB-C ports, plus HDMI® and Mini DisplayPort outputs for future expansion

Rack-mountable 1U, half rack width enclosure

Includes installation guide, rack mounting brackets, and external universal power supply

## **Specifications**

#### **Control Software**

Built-in web portal for system configuration and management; remote web access available through Velocity Cloud

IP			
NIC	Two Network Interface Controllers (NIC)	- supports segregated AV and facility LANs	
Ports	$2 \times RJ45$ ports, one to each NIC	- supports segregated AV and facility LANS	
Standards and Protocols	DHCP, HTTP, HTTPS, SFTP, SMTP, SNM		
Ethernet Speed	10/100/1000 Mbps		
Addressing	DHCP, static		
Environmental	Fahrenheit	Celsius	
Operating	32 to 122	0 to 50	
Storage	-4 to 140	-20 to 60	
Humidity (RH)	20% to 60%, non-condensing		
Power			
Consumption	40W (min) to 55W (max)		
Supply	Input: AC100~240V 50/60Hz		
	Output: DC 19V / 3.42A		
		N PUP and a second second	
Dimensions (H x W x D)		Millimeters	
Unit	1.73 x 8.64 x 4.48	44 x 219.5 x 114	
Power Supply	1.25 x 1.88 x 4.25	31.75 x 47.63 x 107.95	
Weight	Pounds	Kilograms	
Device	1.9	0.86	
Device	1.0	0.00	
Compliance			
ТАА	No		
Certification			
Device	CE, FCC, RoHS, VGW-HW-20: CB (safe	5,	
Supply	KC, UL, ETL, RCM, CE, FCC, TUV Safe	ety, CCC, EAC, BSMI, PSE	



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	PRODUCT SL	IINISTRATIO	ON ANAGEMENT, DESIGN AND CONSTRU <b>TION REQUEST</b>	CTION	project number 01911-01
Renovate	<u>Mechanical/Elec</u>	ctrical/Lif	e Safety Jefferson State Office Bi	uilding	
(Minim		ays prior to r	eceipt of Bids as per Article 4 – Instruction	ns to Bidders)	
(Maxin		days from N	AWARD otice to Proceed as per Article 3 – Genera	al Conditions)	
FROM: BIDDER/C Audio Acoust	ONTRACTOR (PRINT COMP)	ANY NAME)			
TO: ARCHITECT/	NGINEER (PRINT COMPANY	YNAME)			
	Clure Engineering				
	ractor hereby requ f Division One of t		ptance of the following product or sys	tems as a subst	itution in accordance with
SPECIFIED PROD	JCT OR SYSTEM				
SPECIFICATION S	ECTION NO.	4 ENCODE	@S		
274100					
SUPPORTING	DATA				
Drodu	ct data for proposed	substitution	is attached (include description of produc	t, standards, perfo	ormance, and test data)
Samp		Samp	le will be sent, if requested		
QUALITY C	OMPARISON			00000	TTUTION DEOLICOT
			SPECIFIED PRODUCT		TITUTION REQUEST
NAME, BRA			CRESTRON	ATLONA	
CATALOG			DM-NNX		200-TX /AT-OME-RX11
MANUFAC	URER			ATLONA	
VENDOR				Aworo Acc	austics, INC
PREVIOUS PROJECT	INSTALLATIONS	;	ARCHITECT/ENGINEER		
FROJECT			ARGHITEODENGINEER		
LOCATION					DATE INSTALLED
1 1 1 .	VARIATIONS FROM	SPECIFIED P	RODUCT		
N/A					
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REASON FOR SUBSTITUTION	
10-MONTH CRESTRON LEAD TIME	
	· · · ·
DOES PROPOSED SUBSTITUTION AFFECT OTHER PARTS OF WORK?	
VES S NO	
IF YES, EXPLAIN	
	· · · · ·
	· ·
	OR A/E WORK
BIDDER'S/CONTRACTOR'S STATEMENT OF CONFORMANCE OF PF REQUIREMENT:	ROPOSED SUBSTITUTION TO CONTRACT
We have investigated the proposed substitution. We believe that it is equal except as stated above; that it will provide the same Warranty as specifi implications of the substitution; that we will pay redesign and other costs cabecome apparent; and that we will pay costs to modify other parts of the Work complete and functioning as a result of the substitution.	ied product; that we have included complete aused by the substitution which subsequently
BIPPERICONTRACTOR	DATE
Applean C	1/8/29
, REVIEW AND ACTION	
Resubmit Substitution Request with the following additional info	ormation:
Substitution is accepted.	
Substitution is accepted with the following comments:	
The proposed substitute request is approved if the proposed product ca	an pass room peripherals including cameras
and conference audio back to host PC and guest laptop connection loc Substitution is not accepted.	· · · · ·
ARCHITECT/ENGINEER	DATE
David Bick	1/18/2024
SECTION 006325 – SUBSTITUTION REQUEST	

1

SECTION 00	)6325 – S	OBSIL	UT.
07/16			



with Ethernet-Enabled HDBaseT Output



## Introduction

The Atlona **AT-HDVS-200-TX** is a 3×1 switcher with display control for HDMI and VGA transmission over Ethernetenabled HDBaseT<sup>™</sup>. It features two HDMI inputs and a VGA input with 3.5mm audio connector. The AT-HDVS-200-TX combines the benefits of a switcher with built-in auto-switching and the advantages of extended-distance HDBaseT signal transmission over a single cable. HDMI signals up to 4K/UHD @ 60Hz with embedded audio, VGA input signals up to 1920x1200, and control signals can be extended up to 330 feet (100 meters). The switcher enables automatic display on/off, auto-switching, third-party control, plus other control features. The switcher receives power from the AT-HDVS-200-RX scaler receiver via Power over Ethernet and together they create a standalone AV switching system with scaling for classrooms and huddle rooms. HDVS-200 series devices are also useful as components in larger systems utilizing switchers such as the AT-UHD-CLSO-824 matrix switcher where they are used as input/output modules. Button pushes are transmitted via IP to any IP based control system or IP controllable device. When used with the AT-HDVS-200-RX, IP commands are converted to RS-232 or CEC commands for use with most displays.

The Atlona **AT-HDVS-200-TX-PSK** is identical to the AT-HDVS-200-TX, with the addition of an external power supply. This makes it ideal for extending AV and control directly to a projector with an HDBaseT input. The AT-HDVS-200-TX-PSK can serve as the central component of a small, automated AV system through automatic input selection, and by sending RS-232 or Ethernet control commands to the projector. With automatic display control capability, the AT-HDVS-200-TX-PSK can power the projector on or off whenever a source is connected or disconnected from the unit.

## **Applications**

- Simple yet complete AV systems with HDBaseT-equipped projectors and flat-panel displays.
- Installations in which HDVS-200 Series transmitters are to be used with third-party HDBaseT devices.



with Ethernet-Enabled HDBaseT Output

## **Key Features**

## 3×1 HDBaseT switcher

- Features two HDMI inputs plus a VGA input with 3.5mm audio connector.<sup>(1)</sup>
- Allows advanced HDMI display devices to be used with legacy VGA sources.

## Ethernet enabled, HDBaseT extension

- Transmits IP and HDMI signals up to 330 feet (100 meters) @ 1080p and 330 feet (100 meters) @ 4K/UHD<sup>(2)</sup> using CAT6a/7 cable.
- Uses easy-to-integrate category cable for low-cost, reliable system installation.

## Auto-switching

- Selects active input when sources are connected or if there is a change in source power status.
- Eliminates need for complex control system in small AV systems.

## TCP/IP and RS-232 control

- Flexible control options for compatibility with thirdparty control systems. RS-232 controlled from HDBaseT connection.
- Reduces integration time and costs.

## Front panel Input Select button

- Overrides auto-switching when two active sources are present.
- Simple manual control allows presenter to maintain control of AV system.

## Auto display control

- Automatically changes projector power state based on active or standby mode of scaler. Control signals transmitted via IP, RS-232, or CEC.
- Eliminates need for complex control system in small AV systems. Enables display and volume control with AT-UHD-CLSO-824. CEC enables control of low-cost consumer displays.

## Front panel input selection and on/off controls

- Remotely controls display power state; provides alternate 'Display Mute' mode.
- Eliminates need for manual operation of display or use of IR remote control.

## Front panel volume control

- Remotely controls audio volume; provides 'Mute' mode.
- Eliminates need for manual operation of display or use of IR remote control.

## Front panel power and input selection status LEDs

- LED indicators provide power and input selection status information.
- Provides easy setup and troubleshooting.

## Local AC-powered version of AT-HDVS-200-TX

- Includes external power supply (AT-HDVS-200-TX-PSK only) – ideal for point-to-point installations with an HDBaseT-equipped projector.
- Also can be powered via PoE provides an additional powering option through a compatible Atlona HDBaseT-equipped device, or the AT-PS-POE power injector.

## Award-winning 10 year limited product warranty

- Ensures long-term product reliability and performance in commercial and residential systems.
- Specify, purchase, and install with confidence.



with Ethernet-Enabled HDBaseT Output

# **Specifications**

Video		
Signal	HDMI	
Copy Protection	HDCP 1.4	
Pixel Clock	300 MHz	
UHD/HD/SD	4096x2160@60 <sup>(3)</sup> /50/30/25/24Hz 3840×2160@60 <sup>(3)</sup> /50/30/25/24Hz 1080p@60/59.9/50/30/29.97/25/ 24/23.98Hz 1080i@30/29.97/25Hz	720p@60/59.94/50Hz 576p@50Hz 576i@25Hz 480p@60/59.96Hz 480i@30Hz
VESA All resolutions are 60Hz	2560×1600 2048×1536 1920×1200 1680×1050 1600×1200 1440×900 1400×1050 1280×1024	1280×800 1366×768 1360×768 1152×864 1024×768 800×600 640×480
Color Space	YUV, RGB	
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0	
Color Depth	8-bit, 10-bit, 12-bit	
Audio		
HDMI	PCM 2.0	
Bit Depth	up to 24-bit	
Sample Rate	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96	6 kHz, 176.4 kHz, 192 kHz
Ethernet		
Port	1 x RJ45	
Standards and Protocols	HTTPS, Telnet, mDNS	
Speeds	Local: 10/100/1000 Mbps Over HDBaseT: 10/100 Mbps	
Addressing	DHCP, static - selectable through IP &	RS-232 commands, and built-in web server
RS-232		
Port	1 x 3-pin captive screw	
Use	Pass-through	
Baud Rates	2400, 4800, 9600, 19200, 38400, 5760	0. 115200
Data Flow	Bidirectional	-,
Data Flow	Didirootional	
CEC		
Port	1 x HDMI, Type A, 19-pin female	
Triggering	RS-232	

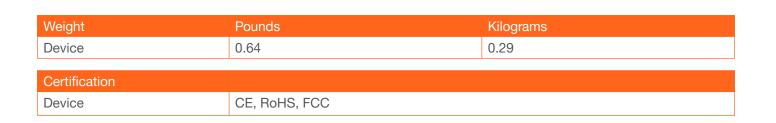


with Ethernet-Enabled HDBaseT Output

Resolution / Distance	4K/UHD - Feet / Me	ters	1080p - Feet / Meter	rs
HDMI IN	15	5	30	10
CAT5e	230	70	330	100
CAT6/6a/7	330	100	330	100
Buttons and Indicators				
<b>Buttons:</b> INPUT, VOL, DISPLAY, UP/DN	4 x push buttons, m	omentary, tact-type		
Indicators: PWR, VGA, 1, 2	4 x LED, green			
Connectors				
HDMI IN 1	1 - Type A, 19-pin fe	emale		
HDMI IN 2	1 - Type A, 19-pin fe	emale		
VGA IN	1 - 15-pin, VESA fer	nale		
HDBaseT OUT	1 - RJ45			
LAN	1 - RJ45			
AUDIO IN	1 - 3.6 mm, stereo			
RS-232	1 - 3-pin captive scr	1 - 3-pin captive screw		
FW	1 - micro-USB			
DC 48V (PSK only)	1 - 2-pin, captive sc	rew		
Environmental	Fahrenheit		Celsius	
Operating Temperature	+32 to +122 °F		0 to +50 °C	
Storage Temperature	-4 to +140 °F		-20 to +60 °C	
Operating Humidity (RH)	+20 to +90%, non-c	condensing		
Power	AT-HDVS-200-TX		AT-HDVS-200-TX-PS	SK
Consumption	30 W (when paired)		30 W (when paired)	
Idle Consumption	N/A		22 W	
Supply	N/A		Input: 100 - 240 V A Output: 48 V DC, 3.	
Safety	N/A		CE, FCC, cULus	
Dimensions (H x W x D)	Inches		Millimeters	
Unit	1.50 x 5.00 x 4.02		38 x 127 x 102	
Power Supply (AT-PS- 48083-D3) <sup>(4)</sup>	1.42 x 1.81 x 4.41		36 x 46 x 112	



with Ethernet-Enabled HDBaseT Output



## **Footnotes**

(1) Audio signals will not pass without an accompanying video signal.

(2) Allows 4K/UHD transmisstion when used with a compatible HDBaseT receiver.

(3) 4096×2160@50/60Hz & 3840×2160@50/60Hz supported @ chroma subsampling 4:2:0 8-bit only.

(4) Only included with AT-HDVS-200-TX-PSK.



with Ethernet-Enabled HDBaseT Output

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6



with Ethernet, Control, PoE, and Audio De-Embedding



## Introduction

The Atlona AT-OME-RX11 is an HDBaseT receiver for video up to 4K/60 4:2:0, plus embedded audio, control, and Ethernet over distances up to 330 feet (100 meters). Part of the Omega<sup>™</sup> Series of integration products for modern AV communications and collaboration, the OME-RX11 is HDCP 2.2 compliant and receives RS-232 and IP control signals. Additionally, this receiver features two-channel audio de-embedding to a balanced analog audio output. The OME-RX11 is locally powered, and can deliver Power over Ethernet (PoE) over HDBaseT to an Atlona Omega Series, HDVS-200 Series, or AT-UHD-EX-100CE-TX-PD transmitter.

The OME-RX11 incorporates many popular integration convenience features, while delivering excellent performance and value for 4K presentation applications. The Ethernet port on the OME-RX11 is for IP pass-through with the transmitter.

## Applications

.

Complete system integration

The OME-RX11 and an Omega Series switcher together provide a comprehensive and cost-effective integration solution for meeting rooms and other AV presentation spaces.

**Larger system applications** The OME-RX11 offers a new option for legacy Atlona transmitters and switchers with HDBaseT outputs, to provide audio de-embedding for feeding into an amplifier and speakers.



with Ethernet, Control, PoE, and Audio De-Embedding

# **Key Features**

## Video, audio, power, and data over category cable utilizing HDBaseT technology

- Receives up to 330 feet (100 meters) @ 1080p with CAT5e/6 or 4K/UHD using CAT6a/7 cable.
- Uses easy-to-integrate category cable for low-cost, reliable system installation.

## 4K/UHD capability @ 60 Hz with 4:2:0 chroma subsampling

- Compatible with sources up to 4K/60 4:2:0 and 4K/30 4:4:4.
- Supports HDMI data rates up to 10 Gbps from PCs, media players, and Ultra HD Blu-ray players.

## HDCP 2.2 compliant

- Adheres to latest specification for High-bandwidth Digital Content Protection.
- Allows protected content stream to pass between authenticated devices.

## Local AC powering – PoE (Power over Ethernet) source

- Supplies industry standard IEEE 802.3af PoE over HDBaseT to an Omega Series, HDVS-200 Series, or AT-UHD-EX-100CE-TX-PD transmitter.
- Allows convenient transmitter installation at any remote location, without the need for local AC power.

## Audio de-embedding

- De-embeds two channel PCM audio to a balanced, analog audio output.
- Deliver audio to an amplifier and speakers for sound reinforcement.

## Front panel power and signal status LEDs

- LED indicators provide power and HDBaseT link status information.
- Provides convenient setup and troubleshooting.

## Low-profile, 1.02 inch (26 mm) high enclosure

- Easy installation into confined spaces below tables, in furniture, and behind or above displays.
- Includes mounting hardware for installation onto surfaces.



with Ethernet, Control, PoE, and Audio De-Embedding

# **Specifications**

Video						
Signal	Input - HDMI					
Copy Protection	HDCP 2.2					
Pixel Clock	300 MHz					
HD/SD	3840×2160@60/50/30/25/24Hz 1920x1080p@60/59.9/50/30/29.97/25/ 24/23.98Hz		1280x720p@60/59.94/50Hz 720x576p@50Hz 720x576i@25Hz 640x480p@60/59.96Hz 640x480i@30Hz			
VESA All resolutions are 60Hz	1920x12001280x10241680x10501280x8001600x12001152x7681440x9001024x7681400x1050800x6001366x768640x4801360x768					
Color Space	YUV, RGB					
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0					
Color Depth	8-bit, 10-bit, 12-bit					
Audio					l	
HDMI Pass-Through Formats	PCM 2.0 LPCM 5.1 LPCM 7.1	Do Do	lby® Digita lby Digital lby TrueHE lby Atmos	Plus™ )		Digital Surround™ ID Master Audio™ ®
Bit Depth	Up to 24 bits		, ,		1	
Analog Audio						
Format	Stereo 2-Channel					
Output level	L: 5.883 Vrms R: 5.855 Vrms					
Frequency Response	20 Hz to 20 kHz, ± 0	).5 dB				
THD+N	< 0.00009% at 20 H	z to 20 kHz				
SNR	> 141.49 dB at 1 kH	Z				
Sample Rate	32 kHz, 44.1 kHz, 48		kHz, 96 kł	Hz, 176.4 kHz.	192 kH	lz
•	· · · · · · · ·			, ,		
Control						
RS-232	2-way device contro Supported baud rate			19200, 38400	, 57600	), 115200
CEC Support	Yes					
Resolution / Distance	4K/UHD - Feet / Met	ters		1080p - Feet	/ Meter	rs
HDMI IN/OUT	15	5		30		10
CAT5e	295	90		330		100
CAT6/6a/7	330	100		330		100
·						



with Ethernet, Control, PoE, and Audio De-Embedding

Buttons and Indicators		
Indicators:		
PWR 1 - LED,	areen	
LINK 1 - LED,		
Connectors		
HDBaseT IN 1 - RJ45	,	
	A, 19-pin female	
51	A, 19-pin female	
	a captive screw (bidirectional)	
	i, 100Base-T	
AUDIO OUT 1 - Mini-	USB, 5-pin female	
RS-232 1 - 4-pir	, mini-DIN locking connector	
Environmental Fahrenh	oit	Celsius
Operating Temperature +32 to +		0 to +50
Storage Temperature -4 to +14		-20 to +60
0 .	90%, non-condensing	2010100
Power		
Power Consumption 15.12 W		
PowerConsumption15.12 WExternal Power SupplyInput: 10		
PowerConsumption15.12 WExternal Power SupplyInput: 10Output:0	00 - 240 VAC, 50/60 Hz	Millimeters
PowerConsumption15.12 WExternal Power SupplyInput: 10Output:Output:Dimensions (H x W x D)Inches	00 - 240 VAC, 50/60 Hz DC 24 V / 2.7 A	Millimeters
PowerConsumption15.12 WExternal Power SupplyInput: 10 Output:Dimensions (H x W x D)Inches 1.02 x 4	00 - 240 VAC, 50/60 Hz DC 24 V / 2.7 A .29 x 5.24	26 x 109 x 133
PowerConsumption15.12 WExternal Power SupplyInput: 10 Output:Dimensions (H x W x D)Inches 1.02 x 4	00 - 240 VAC, 50/60 Hz DC 24 V / 2.7 A	
PowerConsumption15.12 WExternal Power SupplyInput: 10 Output:Dimensions (H x W x D)Inches 1.02 x 4	00 - 240 VAC, 50/60 Hz DC 24 V / 2.7 A .29 x 5.24	26 x 109 x 133
PowerConsumption15.12 WExternal Power SupplyInput: 10Output:Output:Dimensions (H x W x D)InchesUnit1.02 x 4Power Supply (AT-PS-54-C)1.26 x 1	00 - 240 VAC, 50/60 Hz DC 24 V / 2.7 A .29 x 5.24	26 x 109 x 133 32 x 49 x 119
PowerConsumption15.12 WExternal Power SupplyInput: 10Output:Output:Dimensions (H x W x D)InchesUnit1.02 x 4Power Supply (AT-PS-54-C)1.26 x 1WeightPoundsDevice0.90	00 - 240 VAC, 50/60 Hz DC 24 V / 2.7 A .29 x 5.24	26 x 109 x 133 32 x 49 x 119 Kilograms
PowerConsumption15.12 WExternal Power SupplyInput: 10Dimensions (H x W x D)InchesUnit1.02 x 4Power Supply (AT-PS-54-C)1.26 x 1WeightPoundsDevice0.90Certification	00 - 240 VAC, 50/60 Hz DC 24 V / 2.7 A .29 x 5.24 .93 x 4.69	26 x 109 x 133 32 x 49 x 119 Kilograms
PowerConsumption15.12 WExternal Power SupplyInput: 10Output:Output:Dimensions (H x W x D)InchesUnit1.02 x 4Power Supply (AT-PS-54-C)1.26 x 1WeightPoundsDevice0.90CertificationCE, FCC	00 - 240 VAC, 50/60 Hz DC 24 V / 2.7 A .29 x 5.24 .93 x 4.69	26 x 109 x 133 32 x 49 x 119 Kilograms
PowerConsumption15.12 WExternal Power SupplyInput: 10Dimensions (H x W x D)InchesUnit1.02 x 4Power Supply (AT-PS-54-C)1.26 x 1WeightPoundsDevice0.90Certification	00 - 240 VAC, 50/60 Hz DC 24 V / 2.7 A .29 x 5.24 .93 x 4.69	26 x 109 x 133 32 x 49 x 119 Kilograms
PowerConsumption15.12 WExternal Power SupplyInput: 10Output:Output:Dimensions (H x W x D)InchesUnit1.02 x 4Power Supply (AT-PS-54-C)1.26 x 1WeightPoundsDevice0.90CertificationCE, FCC	00 - 240 VAC, 50/60 Hz DC 24 V / 2.7 A .29 x 5.24 .93 x 4.69	26 x 109 x 133 32 x 49 x 119 Kilograms
PowerConsumption15.12 WExternal Power SupplyInput: 10Output:Output:Dimensions (H x W x D)InchesUnit1.02 x 4Power Supply (AT-PS-54-C)1.26 x 1WeightPoundsDevice0.90CertificationCE, FCCPower SupplyCE, FCC	00 - 240 VAC, 50/60 Hz DC 24 V / 2.7 A .29 x 5.24 .93 x 4.69	26 x 109 x 133 32 x 49 x 119 Kilograms

## Accessories

SKU	Description
AT-LC-H2H-1M	LinkConnect HDMI to HDMI Cable
AT-LC-H2H-2M	LinkConnect HDMI to HDMI Cable
AT-LC-H2H-3M	LinkConnect HDMI to HDMI Cable



with Ethernet, Control, PoE, and Audio De-Embedding

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5

<ul> <li>PROJECT TITLE AND LOCATION</li> <li>Renovate Mechanical/Electrical/Life Safe</li> <li>CHECK APPROPRIATE BOX</li> <li>SUBSTITUTION PRIOR TO BID OPE (Minimum of (5) working days prior to receipt</li> <li>SUBSTITUTION FOLLOWING AWAF (Maximum of (20) working days from Notice to FROM: BIDDER/CONTRACTOR (PRINT COMPANY NAME)</li> <li>Audio Acoustics, Inc.</li> </ul>	ENING of Bids as per Article 4 – Instructions to RD		
CHECK APPROPRIATE BOX           SUBSTITUTION PRIOR TO BID OPE (Minimum of (5) working days prior to receipt           SUBSTITUTION FOLLOWING AWAF (Maximum of (20) working days from Notice to FROM: BIDDER/CONTRACTOR (PRINT COMPANY NAME) Audio Acoustics, Inc.	ENING of Bids as per Article 4 – Instructions to RD		
(Minimum of (5) working days prior to receipt SUBSTITUTION FOLLOWING AWAF (Maximum of (20) working days from Notice to FROM: BIDDER/CONTRACTOR (PRINT COMPANY NAME) Audio Acoustics, Inc.	of Bids as per Article 4 – Instructions to RD	) Bidders)	
(Maximum of (20) working days from Notice to FROM: BIDDER/CONTRACTOR (PRINT COMPANY NAME) Audio Acoustics, Inc.			
Audio Acoustics, Inc.		onditions)	
TO: ARCHITECT/ENGINEER (PRINT COMPANY NAME)			
Arcturis / McClure Engineering			
Bidder/Contractor hereby requests acceptance provisions of Division One of the Bidding Docu		is as a substitution in accordance with	
SPECIFIED PRODUCT OR SYSTEM CRESTRON TOWCH PANELS SPECIFICATION SECTION NO. 274100			
SUPPORTING DATA			
Product data for proposed substitution is atta	iched (include description of product, st be sent, if requested	andards, performance, and test data)	
		· · · ·	
· · · · · · · · · · · · · · · · · · ·	SPECIFIED PRODUCT	SUBSTITUTION REQUEST	
NAME, BRAND	STRON	ATLONA VELOCITY	
CATALOG NO. TSW-1070-W-S AT-VTP-1000VL			
MANUFACTURER		ATLONA	
VENDOR		ANDIO ACOUSTICS, INC	
PREVIOUS INSTALLATIONS	L		
PROJECT ARCHI	TECT/ENGINEER		
LOCATION		DATE INSTALLED	
SIGNIFICANT VARIATIONS FROM SPECIFIED PRODUCE $N/A$			
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REASON FOR SUBSTITUTION	
10-MONTH LEAD TIME ON CRESTRON COMPONENTS	
DOES PROPOSED SUBSTITUTION AFFECT OTHER PARTS OF WORK?	
IF YES, EXPLAIN	
SUBSTITUTION REQUIRES DIMENSIONAL REVISION OR REDESIGN OF STRU	CTURE OR A/E WORK
YES X NO	
BIDDER'S/CONTRACTOR'S STATEMENT OF CONFORMANCE	C OF PROPOSED SUBSTITUTION TO CONTRACT
REQUIREMENT:	
We have investigated the proposed substitution. We believe that it is except as stated above; that it will provide the same Warranty as implications of the substitution; that we will pay redesign and other become apparent; and that we will pay costs to modify other parts the Work complete and functioning as a result of the substitution.	specified product; that we have included complete costs caused by the substitution which subsequently
BIDDERICONTRACTOR	DATE, 1/8/24
REVIEW AND AC	TION
Resubmit Substitution Request with the following additio	nal information:
Substitution is accepted.	
Substitution is accepted with the following comments: The proposed substitute request is approved if the proposed pro	oduct can pass room peripherals including cameras
and conference audio back to host PC and guest laptop connec	
Substitution is not accepted.	
ARCHITECT/ENGINEER David Bick	date 1/18/2024
SECTION 006325 – SUBSTITUTION REQUEST	1
07/16	Page 2 of 2





## Introduction

The Atlona AT-VTP-1000VL is a Velocity System 10" touch panel with integrated surround LED lighting. It features contemporary, refined styling with 1280×800 native resolution, and a capacitive glass surface that supports multi-touch. The large 10" touch panel provides additional space for more complex user control of video walls, high density matrix switchers, audio DSP's, or other applications that have greater control function requirements. Bright LED lighting surrounding the edge of the panel is ideal for providing a visual representation of room status in scheduling applications or for adding emphasis to AV control functions. The panel ships with a dual-purpose one-gang wall/glass mount kit, that is a standard VESA 75 pattern to provide compatibly with a wide variety of other options. The VTP-1000VL features Power over Ethernet (PoE), enabling a single network connection for data and power. Setting up the touch panel is easy, with room scheduling and AV control GUIs automatically uploaded from the Velocity System hardware or software server gateway during system configuration.

## Applications

- Ideal for large meeting rooms, board rooms, lecture hall, or video wall locations where more complex control functionality is required
- Ideal for lobbies, hallways, or outside of any meeting space that requires a quick and easy visual means of displaying room availability.



## **Key Features**

## 10" touch panel

- More graphical user interface area.
- Supports complex applications that require a greater number of user controls.

## Room scheduling and AV control touch panels

- Single, flexible touch panel platform that can be used for a variety of applications.
- Only need to stock a single panel to satisfy multiple requirements.

## Surround LED lighting

- Lights on the entire outer frame of the touch panel can be configured for room scheduling or AV control functions.
- LED's can be easily seen from the side in either landscape or portrait orientation.

## Fast streamlined setup

- Automatic network discovery and configuration by a Velocity System Gateway.
- Room scheduling and AV control GUIs are automatically loaded by a single configuration tool.

## **Contemporary styling**

- Refined aesthetics.
- Modern appearance matches any environment.

## **Flexible mounting**

- Dual-purpose one-gang wall/glass mount kit included.
- Standard VESA 75 pattern for compatibility with third party mounts.
- Optional AT-VTP-VTM tabletop mounting kit for placement on a meeting table or lectern.

## PoE

- Remotely powered via Power over Ethernet.
- Single cable network connection for data and power.



# **Specifications**

Billionene	10.04 x 7.13 x 0.98	255 x 181 x 25	
Dimensions	Inches	Millimeters	
PoE+	802.3at compliant		
Power			
Humidity (RH)	10% to 90%, non-condensing	10 10 00	
Storage	-5 to 149	-15 to 65	
Temperature Operating	14 to 122	Celsius -10 to 50	
Tomporturo	Fahrenheit		
Addressing	DHCP, static		
Ethernet Speed	10/100/1000 Mbps		
Standards and Protocols	DHCP, HTTP, HTTPS, SFTP, SM	TP, SNMP, SSH, TCP, UDP, IEEE 802.1x	
Port	1 x RJ45		
IP			
Speaker	2 x 2 W		
Audio			
Туре	Wall and glass		
Standard	VESA 75		
Mount			
Brightness	500 Cu/mz		
Viewing Area Brightness	10.1" LCD 500 cd/m2		
Viewing Angle	H 160° / V 160°		
Contrast Ratio	800:1		
Aspect Ratio	16:10 wide		
Resolution	1280 x 800		
	5 point touch projected capaciti	VC	

# Accessories

SKU	Description
AT-VTP-VTM	VESA Tabletop Mounting Kit for Velocity Control System Touch Panels



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4

Renovate Mechanical/Electrical/Life Safety Jefferson State Office Building         CHECK APPROPRATE BOX       CHECK APPROPRATE BOX         SUBSTITUTION PRIOR TO BID OPENING (Minimum of (5) working days prior to receipt of Bids as per Article 4 Instructions to Bidders)       SUBSTITUTION FOLLOWING AWARD (Maximum of (20) working days from Notice to Proceed as per Article 3 - General Conditions)         FROM: BIDDERICORM PRINT COMPANY NAME;       Audio Acoustics, Inc.         Audio Acoustics, Inc.       To: Architectrenoimeter RPRINT COMPANY NAME;         Andio Acoustics, Inc.       To: Architectrenoimeter RPRINT COMPANY NAME;         Ancturis / McClure Engineering       Bidder/Contractor hereby requests acceptance of the following product or systems as a substitution in accordance with provisions of Division One of the Bidding Documents:         SPECIFICE PRODUCT or System       Ling HTMARE (MCX - HX2 - HC3 o)         SPECIFICE PRODUCT OR SYSTEM       Septicication of product, standards, performance, and test data)         Septicication No.       Sample will be sent, if requested         QUALITY COMPARISON       SPECIFIED PRODUCT       SUBSTITUTION REQUEST         NAME, BRAND       Ling HTMARE       Artowa         CATALOG NO.       UCX-4Y2-HC3O       Artowa         VENDOR       Artowa       Product at a for cos 62       Prowa	STATE OF MISSOURI OFFICE OF ADMINISTRAT DIVISION OF FACILITIES M PRODUCT SUBSTITU	ANAGEMENT, DESIGN AND CONSTRU	CTION	project number 01911-01
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REASON FOR SUBSTITUTION         To MATCH OTHER ATLONA EQUIPMENT REQUESTED FOR SUBSTITUTION         DOES PROPOSED SUBSTITUTION AFFECT OTHER PARTS OF WORK?         □       YES         NO         IF YES, EXPLAIN         □         SUBSTITUTION REQUIRES DIMENSIONAL REVISION OR REDESIGN OF STRUCTURE OR A/E WORK         □       YES         NO         IF YES, EXPLAIN         □       YES         INO         BIDDER'S/CONTRACTOR'S STATEMENT OF CONFORMANCE OF PROPOSED S         REQUIREMENT:	
DOES PROPOSED SUBSTITUTION AFFECT OTHER PARTS OF WORK?         □       YES         □       YES         IF YES, EXPLAIN	
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REQUIREMENT:	SUBSTITUTION TO CONTRACT
We have investigated the proposed substitution. We believe that it is equal or superior except as stated above; that it will provide the same Warranty as specified product implications of the substitution; that we will pay redesign and other costs caused by th become apparent; and that we will pay costs to modify other parts of the Work as ma the Work complete and functioning as a result of the substitution.	; that we have included complete ne substitution which subsequently
BIDDER/CONTRACTOR	DATE 1/8/24
REVIEW AND ACTION	I
Resubmit Substitution Request with the following additional information:	
Substitution is accepted.	· · · · · · · · · · · · · · · · · · ·
Substitution is accepted with the following comments:	
The proposed substitute request is approved if the proposed product can pass root	m peripherals including cameras
and conference audio back to host PC and guest laptop connection locations. Substitution is not accepted.	
ARCHITECT/ENGINEER	DATE
David Bick	1/18/2024

07/16



Omega<sup>™</sup> **4K/UHD 6x2 Matrix Switcher** for HDMI, USB-C, and HDBaseT with USB



## Introduction

The Atlona **AT-OME-PS62** is a 6x2 matrix presentation switcher with HDMI, USB-C, and HDBaseT inputs, plus HDMI and HDBaseT outputs. Part of the Omega<sup>™</sup> Series of integration products for modern AV communications and collaboration, the OME-PS62 features HDBaseT extension for video up to 4K/60 4:2:0, plus embedded audio, control, Ethernet, and USB over distances up to 330 feet (100 meters). The HDMI and USB-C ports support video up to UHD/60 4:4:4. The OME-PS62 is HDCP 2.2 compliant and features 4K/60 4:4:4 upscaling and downscaling for the HDMI output. The integrated USB extension addresses the challenge of connecting between USB devices at remote locations, and is ideal for software video conferencing and touch or interactive displays. The OME-PS62 includes USB 3.0 and USB-C interfaces for three host PCs, plus two peripheral devices such as a camera, microphone, speaker phone, or keyboard and mouse. The OME-PS62 is ideal for a wide range of 4K presentation applications with Omega Series transmitters and receivers.

# Applications

## Meeting rooms and conference rooms

The OME-PS62 can serve as an AV integration centerpiece in a credenza, with interfacing into sources in the rack, plus remote AV and USB connectivity from wall, table, and display locations.

• Video conferencing and USB data

With compatible Omega Series endpoints, this presentation switcher provides interfacing for local and remote USB devices for soft codec conferencing, with video and USB switched together between host PCs. As a matrix switcher with scaling, the OME-PS62 is also ideal for hardware-based video conferencing, with the ability to route and optimize any source content to the codec far-end.

## Auditoriums and lecture halls

The HDBaseT output of the OME-PS62 can be used to extend 4K video to a projector, while the HDMI output serves to optimize for a 1080p or 4K confidence monitor. Also available is a microphone input and mixing with program audio.

• Active learning classrooms

In education applications, the OME-PS62 can be installed below each student table, with the HDMI output feeding a local display, and the HDBaseT output used to send content to the main classroom AV switcher and display.

## • Lecture capture

The secondary, HDMI output can also be used to feed into a lecture capture or streaming video system, with video scaled as appropriate for the application.



## **Key Features**

## 6×2 AV matrix switcher with HDBaseT, HDMI, and USB-C inputs

- Features two HDBaseT and three HDMI inputs, plus a USB-C input.
- Delivers flexible BYOD capability, as well as integration versatility for local and remote AV sources.

## USB-C input for AV, data, and device charging

- Provides immediate compatibility with laptops and tablets with USB-C ports supporting AV output.
- Allows clutter-free, single cable connectivity to a PC for video conferencing and collaboration.

## HDBaseT and HDMI outputs with selectable AV switching modes

- Enables simple configuration and effortless user operation, tailored to the specific AV application.
- Three selectable switching modes, including mirrored HDMI and HDBaseT outputs, matrixed outputs (default), and a special mode with one input fixed to one of the outputs.

## 4K/UHD downscaling and upscaling for HDMI output

- Preserves color and spatial detail when down-converting 4K content to 1080p or vice versa. Ideal for presentation applications where content is to be viewed on 4K and HD displays.
- Also ideal for downscaling to 1080p for hardware video conferencing codecs and lecture capture systems.

## USB 3.0 interface and extension up to 330 feet (100 meters)

- Two USB type B interfaces for connection to a host PC, plus two USB type A ports for peripheral devices such as cameras, soundbars, or touch displays. USB-C input is also available for data connection to a host PC or USB peripheral.
- Provides an ideal USB integration solution for software video conferencing and other applications. A maximum data rate of 120 Mbps is supported over HDBaseT.

## Comprehensive audio integration features

- Audio embedding and de-embedding, microphone/line level input with 48 volt phantom power and automatic ducking, audio output matrix mixing, and volume, mute, and five-band EQ for each output.
- Integrated audio processing and optimization features without the need for additional equipment.

## Power over Ethernet (PoE) for transmitters and receivers

- Supplies industry standard IEEE 802.3af PoE over HDBaseT to Omega Series and other compatible transmitters and receivers.
- Allows convenient endpoint installation at remote locations without the need for local AC power.

## **Display control**

- Supports CEC and bidirectional RS-232 to control local and remote displays.
- Bidirectional conversion of control data from TCP/IP to and from RS-232.



# **Specifications**

Video			
Signal Type	Input: HDMI and DisplayPort Alternate M	ode (USB-C)	
	Output: HDMI and HDBaseT		
Copy Protection	HDCP 2.2 / 1.4		
Pixel Clock	300MHz		
UHD/HD/SD	4096x2160@60 <sup>(1)</sup> /50/30/25/24Hz 3840×2160@60 <sup>(1)</sup> /50/30/25/24Hz 1080p@60/59.9/50/30/29.97/25/ 24/23.98Hz 1080i@30/29.97/25Hz	720p@60/59.94/50Hz 576p@50Hz 576i@25Hz 480p@60/59.96Hz 480i@30Hz	
VESA All resolutions are 60Hz	2560×1600 1920×1200 1680×1050 1600×1200 1440×900 1400×1050 1280×1024	1280×800 1366×768 1360×768 1152×864 1024×768 800×600 640×480	
Scaler Up/Down	4096x2160p60 4096x2160p50 4096x2160p25 4096x2160p25 4096x2160p24 3840x2160p60 3840x2160p50 3840x2160p30 3840x2160p25 3840x2160p24 1920x1080p60 (default) 1920x1080p50	1920x1080p25 1920x1080p24 1280x720p60 1280x720p50 2048x1080 1920x1200 1600x1200 1360x768 1280x800 1280x768 1024x768	
Color Space	YUV, RGB		
Chroma Subsampling	HDMI and HDBaseT: 4:4:4, 4:2:2, 4:2:0 USB-C: 4:4:4 only		
Color Depth	8-bit, 10-bit, 12-bit		
HDR	HDR10, Hybrid-Log Gamma (HLG), and I C ports only	Dolby® Vision™ @ 60Hz; HDMI and USB-	



# Omega<sup>™</sup> **4K/UHD 6x2 Matrix Switcher** for HDMI, USB-C, and HDBaseT with USB

A					
Audio					
HDMI / HDBaseT Inputs	PCM 2.0 LPCM 5.1 LPCM 7.1	Dolby® Digital Dolby Digital Plus™ Dolby TrueHD Dolby Atmos®	DTS® Digital Surround™ DTS-HD Master Audio™ DTS:X®		
HDMI / HDBaseT Outputs	PCM 2.0	Dolby® Digital Dolby Digital Plus™ Dolby TrueHD Dolby Atmos®	DTS® Digital Surround™ DTS-HD Master Audio™ DTS:X®		
Bit Depth	24 bits				
Analog Audio					
Format	Stereo 2-Channel				
Balanced Output	+4 dBu nominal gain, +20	dB headroom			
Frequency Response	20 Hz to 20 kHz, ± 0.5 dB				
Impedance	150 Ω				
Stereo channel separation	> 90 dB				
THD+N	< 0.004% at 20 Hz to 20 k	κHz			
SNR	> 103.7 dB at 1 kHz, zero	clipping @ 0 dBFS, unweig	hted		
EQ	5 band, 63Hz, 85Hz, 250H	5 band, 63Hz, 85Hz, 250Hz, 1kHz, 4kHz			
MIC					
Phantom Power	48V, enable and disable through webGUI / 3-pin MIC option				
Ducking	Selectable on/off	Selectable on/off			
Trigger level	Selectable, -60 to -10 dB				
Attack Time	Selectable, 1 to 5000 ms				
Release Time	Selectable, 1 to 5000 ms				
Sample Rate	32 kHz, 44.1 kHz, 48 kHz,	88.2 kHz, 96 kHz, 176.4 kHz	Hz, 192 kHz		
USB					
	Local - 3.0				
Compliance	HDBaseT - 2.0				
Maximum Data Rate	120 Mbps				
USB-C	Supports Audio, Video, ar	nd device & host data			
Internal Hubs		ed to USB type B host port	, 2 cascaded USB hubs when		
Ethernet					
Port	1 x RJ45				
Standards and Protocols	HTTPS, Telnet, mDNS, SS	SL. IEEE 802.1x			
Speeds	10/100/1000 Mbps				
Addressing		through rear panel, IP & RS	S-232 commands, and built-in		
RS-232					
Port	2 x 3-pin captive screw				
Use	2 x 3-pin captive screw Unit and external device control and configuration				
Baud Rates		Ť			
Data flow	2400, 4800, 9600, 19200, 38400, 57600, 115200				
Data IIOw	Bi-directional				



CEC				
Port	HDMI, Type A, 19-pin female			
Triggering	Through IP, RS-232, and built-in web server			
Resolution / Distance	4K/UHD - Feet /		1080p - Fee	
HDMI IN/OUT	15	5	30	10
CAT5e	295	90	330	100
CAT6/6a/7	330	100	330	100
Buttons and Indicators				
Control Buttons:				
MENU, NAV, and NUMBER	10 - momenta			
IP MODE and RESET	2 - momentary	, recessed		
Input Indicators: IP MODE, RESET				
IF WODE, NESEI	2 - LED, green			
Connectors				
HDMI IN	3 - Type A, 19-p	in female		
HDBaseT IN	2 - RJ45, female			
USB-C IN	1 - USB Type-C	v3.1, 24-pin fem	ale, AV input (Alternat	e Mode)
HDMI OUT	1 - Type A, 19-p	in female		
HDBaseT OUT <sup>(2)</sup>	1 - RJ45, female	Э		
USB HUB	2 - Type A, 4-pin female			
USB HOST	2 - Type B, fema	ale		
LINE/MIC IN	1 - 6-pin captive	e screw, balanced	d / unbalanced line lev	vel input w/3-pin MIC option
LINE/MIC Switch		vitch - MIC, 48V,		
AUDIO IN			d / unbalanced 2-char	
AUDIO OUT			d / unbalanced 2-char	nnel
RS-232		e screw (bidirectio	onal)	
LAN	2 - RJ45, 100Ba			
PWR	1 - Internal 100-	240 VAC 50/60H	z, IEC female connec	tor
Temperature	Fahrenheit		Celsius	
Operating	32 to 122		0 to 50	
Storage	-4 to 140		-20 to 60	
Humidity (RH)	20% to 60%, no	on-condensing		
Power				
Consumption	Unit only: 58W	(while now oring		60W, HDBaseT PoE devices
		· · · ·	evices up to 2.5W ead	
Supply	100-240 VAC, 5	21		
Dimensions	Inches		Millimeters	
H x W x D	1.73 x 17.24 x 1	0	44 x 438 x 2	254
Woight	Dounda		Kilograma	
Weight Device	Pounds 7.76		Kilograms 3.52	
Device	1.10		3.32	



Omega<sup>™</sup> **4K/UHD 6x2 Matrix Switcher** for HDMI, USB-C, and HDBaseT with USB

Certification		
Device	CE, FCC, UL	

## Accessories

SKU	Description
AT-LC-H2H-1M	LinkConnect HDMI to HDMI 1 Meter Cable
AT-LC-H2H-2M	LinkConnect HDMI to HDMI 2 Meter Cable
AT-LC-H2H-3M	LinkConnect HDMI to HDMI 3 Meter Cable

## **Footnotes**

- (1) 4K/UHD @ 60 Hz only supports 4:2:0.
- (2) Maximum limit of 6 USB hubs when traversing an HDBaseT link.



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7

STATE OF MISSOURI OFFICE OF ADMINISTRATI DIVISION OF FACILITIES M PRODUCT SUBSTITU	ANAGEMENT, DESIGN AND CONSTRUCTI	UN I	DJECT NUMBER 911-01			
PROJECT TITLE AND LOCATION Renovate Mechanical/Electrical/Life Safety Jefferson State Office Building						
CHECK APPROPRIATE BOX						
SUBSTITUTION PRIOR TO BID OPENING (Minimum of (5) working days prior to receipt of Bids as per Article 4 – Instructions to Bidders)						
SUBSTITUTION FOLLOWING AWARD (Maximum of (20) working days from Notice to Proceed as per Article 3 – General Conditions) FROM: BIDDER/CONTRACTOR (PRINT COMPANY NAME)						
Audio Acoustics, Inc.						
TO: ARCHITECT/ENGINEER (PRINT COMPANY NAME) Arcturis / McClure Engineering						
	ptance of the following product or system	ne se s substitution	in accordance with			
provisions of Division One of the Bidding		13 43 4 3403110401	The accordance with			
SPECIFIED PRODUCT OR SYSTEM CRESTRON DM-NWX-12-1G-W			· ·			
SPECIFICATION SECTION NO. 274100						
SUPPORTING DATA						
	n is attached (include description of product, s	tandards, performan	ce, and test data)			
	ple will be sent, if requested					
QUALITY COMPARISON	SPECIFIED PRODUCT	el detiti t	ION REQUEST			
NAME, BRAND	CRESTRON	ATLONA				
CATALOG NO. DM-NUX-LZ-16-W AT-OME-EX-TX-WPC						
MANUFACTURER		ATLONA				
VENDOR ANDIO ACONSTILS, ING						
PREVIOUS INSTALLATIONS	ARCHITECT/ENGINEER					
	ANDRECHLINGINEEN					
LOCATION		E	DATE INSTALLED			
SIGNIFICANT VARIATIONS FROM SPECIFIED	PRODUCT					
<u>N/A</u>						
····						
	-					

REASON FOR SUBSTITUTION	
10-MONTH CRESTOCON LEAD TIME	
<u> </u>	
DOES PROPOSED SUBSTITUTION AFFECT OTHER PARTS OF WORK?	
🗌 YES 🔯 NO	
IF YES, EXPLAIN	
·	
·····	
SUBSTITUTION REQUIRES DIMENSIONAL REVISION OR REDESIGN OF STRUC	TURE OR A/E WORK
🗌 YES 🔊 NO	
BIDDER'S/CONTRACTOR'S STATEMENT OF CONFORMANCE ( REQUIREMENT:	OF PROPOSED SUBSTITUTION TO CONTRACT
We have investigated the proposed substitution. We believe that it is equal or superior in all respects to specified product, except as stated above; that it will provide the same Warranty as specified product; that we have included complete implications of the substitution; that we will pay redesign and other costs caused by the substitution which subsequently become apparent; and that we will pay costs to modify other parts of the Work as may be needed, to make all parts of the Work complete and functioning as a result of the substitution.	
BIDDERICONTRACTOR	DATE ///
Helphas	1/8/24
REVIEW AND ACTION	
Resubmit Substitution Request with the following additional information:	
Substitution is accepted.	
Substitution is accepted with the following comments:	
The proposed substitute request is approved if the proposed prod	luct can pass room peripherals including cameras
and conference audio back to host PC and guest laptop connection Substitution is not accepted.	
ARCHITECT/ENGINEER	DATE
David Bick	1/18/2024
SECTION 006325 – SUBSTITUTION REQUEST	· · · · · · · · · · · · · · · · · · ·







### Introduction

The Atlona **AT-OME-EX-TX-WPC** is an HDBaseT transmitter with USB-C input. It sends video up to 4K/30 4:4:4, plus embedded audio, control, and USB over distances up to 330 feet (100 meters). It features a US one-gang, Decora-style wallplate form factor, and includes interchangeable black and white wallplates and faceplates. Part of the Omega<sup>™</sup> Series of integration products for modern AV communications and collaboration, the OME-EX-TX-WPC is HDCP 2.2 compliant and extends RS-232 control signals. The USB-C input is ideal for AV interfacing with newer Mac®, Chromebook<sup>™</sup>, and Windows® PCs, as well as smartphones and tablets. With a matching HDBaseT receiver, the integrated USB extension addresses the challenge of connecting between USB devices at remote locations, and is ideal for software video conferencing and touch or interactive displays. The OME-EX-TX-WPC includes a PC host interface over USB-C, plus a USB 2.0 interface for a peripheral device such as a speakerphone, microphone, or keyboard and mouse. This transmitter is ideal for use with Omega Series receivers as well as switchers with HDBaseT inputs.<sup>(1)</sup>

### Applications

Complete system integration

The OME-EX-TX-WPC and OME-SR21 together provide a compact, yet comprehensive and cost-effective integration solution, with 4K scaling, display control, HDBaseT link testing, and audio system interfacing provided by the receiver.

- Lecture hall and training room applications
   This transmitter is ideal for extending AV connectivity from an OME-PS62 in a central equipment rack to lecterns
   as well as remote wall and floor box locations, where presenters can easily access the system.
- Video conferencing

The OME-EX-TX-WPC and a compatible Omega Series receiver or switcher are ideal for soft codec and web-based conferencing applications, with the ability to integrate with PCs, cameras, speakerphones, and microphones.



### **Key Features**

### US one-gang enclosure for Decora-style wallplate openings - interchangeable black or white trim kits

- Allows inconspicuous installation on a wall, in furniture, or in a floor box. Includes black and white wallplates and faceplates.
- Meets end user requirements for conveniently accessible yet discreet AV connectivity.

### USB-C input for AV and data

- Immediate compatibility with laptops and tablets with USB-C ports supporting AV<sup>(2)</sup>.
- No need to provide USB-C to HDMI adapters.

### Video, audio, power, and data over category cable utilizing HDBaseT technology

- Transmits 4K/UHD video up to 330 feet (100 meters) with CAT6/6a/7 cable, or up to 295 feet (90 meters) using CAT5e cable.
- Uses easy-to-integrate category cable for low-cost, reliable system installation.

### USB 2.0 interfacing and extension up to 330 feet (100 meters)

- USB-C interface for connection to a host PC, plus a USB type A port for a peripheral device such as a microphone, speakerphone, or a keyboard and mouse.
- Provides an ideal USB integration solution for software video conferencing, and applications with interactive collaboration<sup>(3)</sup>.

### 4K/UHD capability @ 30 Hz with 4:4:4 chroma subsampling

- Transmits high resolution video up to and including 4K/UHD @ 30Hz 4:4:4 8 bit.
- Supports video data rates up to 10 Gbps from PCs, media players, and Ultra HD Blu-ray players.

### HDCP 2.2 compliant

- Adheres to latest specification for High-bandwidth Digital Content Protection.
- Allows protected content stream to pass between authenticated devices.

### Remote powering over HDBaseT

- Industry standard IEEE 802.3af PoE is supplied by an Atlona receiver or switcher over HDBaseT.
- Allows convenient wall, floor box, or furniture installation without the need for local AC power.



### **Specifications**

Video				
Signal Type	Input - DisplayPort Alternate Mode (USB-C)			
	Output - HDBaseT			
Copy Protection	HDCP 1.4/2.2			
Pixel Clock	300MHz			
UHD/HD/SD	4096×2160(DCl)@30/24 Hz 3840×2160(UHD)@30/25/24 2560x1440@30 Hz 1920x1080p@60/59.94/50/ /24/23.98 Hz	4 Hz		
VESA All resolutions are 60Hz	2560×1600 1920×1200 1680×1050 1600×1200 1440×900 1400×1050 1280×1024		1280×800 1366×768 1360×768 1152×864 1024×768 800×600 640×480	
Color Space	YUV, RGB			
Chroma Subsampling	4:4:4			
Color Depth	8-bit, 10-bit, 12-bit			
Audio	DOMAG			
Pass-Through	PCM 2.0 LPCM 5.1 LPCM 7.1	Dolby <sup>®</sup> Digita Dolby Digital Dolby TrueHI Dolby Atmos	Plus™ )	DTS <sup>®</sup> Digital Surround <sup>™</sup> DTS-HD Master Audio <sup>™</sup> DTS:X <sup>®</sup>
Bit Rate	24 Mbits/s max			
Sample Rate	32 kHz, 44.1 kHz, 48 kHz, 8	38.2 kHz, 96 kl	Hz, 176.4 kHz,	192 kHz
USB				
Signal	2.0			
Maximum Data Rate	120 Mbps			
Internal Hubs	1 USB hub			
			1	
RS-232				
Default Parameters	115200, 8-bit, None, 1			
Use	Connected display or source control			
Baud Rates	2400, 4800, 9600, 19200, 38400, 57600, 115200			
Data flow	Bidirectional			
Connectors				
USB-C	1 - USB Type-C, 24-pin fem	nale		
HDBaseT OUT	1 - RJ45			
DEVICE	1 - USB Type-A			
RS-232	1 - captive screw, 3-pin			



Indicators and Controls				
PWR LED indicator	1 - LED, green			
LINK LED indicator	1 - LED, yellow			
Resolution / Distance	4K/UHD - Feet / Me		1080p - Feet / Meter	
USB-C	6	2	6	2
CAT5e	295	90	330	100
CAT6/6a/7	330	100	330	100
Power				
Consumption	Unit only: 8.68 W			
		while powering a USE	3 type A device up to	2.5 W)
Supply	PoE via connected	receiver		
BTU/h	Unit only: 29.6	a neuroring a LICD tur		
	Full load: 34.1 (whit	e powering a USB typ	be A device up to 2.5	VV)
Temperature	Fahrenheit		Celsius	
Operating	+32 to +104		0 to +40	
Storage	-4 to 140		-20 to 60	
Humidity (RH)	20% to 60%, non-c	ondensing		
Dimensions (H x W x D)	Inches		Millimeters	
Unit	4.07 x 1.80 x 2.63		103.50 x 45.80 x 67	00
Onit	4.07 X 1.00 X 2.00		100.00 × 40.00 × 01	.00
Weight	Pounds		Kilograms	
Device	0.40		0.18	
Certification				
Device	CE, RoHS, FCC			
Device	02, 110110, 100			
Compliance				
NDAA-899	Yes			
Warranty				
Device	To view the product	warranty use the foll	owing link:	
DEVICE	To view the product warranty, use the following link: <u>https://atlona.com/warranty</u>			

### Footnotes

- 1 The OME-EX-TX-WPC is not compatible with the Atlona HDVS-300 system for USB extension.
- 2 USB-C port does not support device powering.
- 3 Maximum 120 Mbps data rate supported over HDBaseT.



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5

STATE OF MISSOURI	NC			
DIVISION OF FACILITIES M PRODUCT SUBSTITUT	ANAGEMENT, DESIGN AND CONSTRUCT	ION PRC	JECT NUMBER 01911-01	
PROJECT TITLE AND LOCATION Renovate Mechanical/Electrical/Life Safety Jefferson State Office Building, 205 Jefferson Street Jefferson City,				
Missouri	ety Jenerson State Onice Building, 205 J	Jenerson Street J	enerson City,	
CHECK APPROPRIATE BOX				
SUBSTITUTION PRIOR TO BID O	PENING			
	eceipt of Bids as per Article 4 – Instructions t	o Bidders)		
SUBSTITUTION FOLLOWING AW		,		
(Maximum of (20) working days from N	lotice to Proceed as per Article 3 – General C	Conditions)		
FROM: BIDDER/CONTRACTOR (PRINT COMPANY NAME)				
Electronic Contracting Company (EC TO: ARCHITECT/ENGINEER (PRINT COMPANY NAME)				
McClure Engineering				
Bidder/Contractor hereby requests acce	ptance of the following product or system	ns as a substituti	on in accordance with	
provisions of Division One of the Bidding				
SPECIFIED PRODUCT OR SYSTEM				
Lightware, MSW, MATRIX SWITCHER,				
E0.10				
SUPPORTING DATA				
Product data for proposed substitution	is attached (include description of product, s	standards, performa	ance, and test data)	
Sample Samp	le will be sent, if requested			
QUALITY COMPARISON				
	SPECIFIED PRODUCT	SUBSTITU	JTION REQUEST	
NAME, BRAND	Universal Matrix Switcher,	AT-OME-MS4		
	Lightware	switcher, Atlor	a	
CATALOG NO.				
MANUFACTURER	MANUFACTURER Lightware Atlona			
VENDOR				
PREVIOUS INSTALLATIONS				
PROJECT	ARCHITECT/ENGINEER			
LOCATION			DATE INSTALLED	

SIGNIFICANT	VARIATIONS	FROM	SPECIFIED	PRODUCT

Revised 06/16

Page 1 of 2

REASON FOR SUBSTITUTION – Specified product not carried by the bidder		
DOES PROPOSED SUBSTITUTION AFFECT OTHER PARTS OF WORK?		
YES 🛛 NO		
IF YES, EXPLAIN		
SUBSTITUTION REQUIRES DIMENSIONAL REVISION OR REDESIGN OF STRUCTURE OR A/E WORK		

# BIDDER'S/CONTRACTOR'S STATEMENT OF CONFORMANCE OF PROPOSED SUBSTITUTION TO CONTRACT REQUIREMENT:

We have investigated the proposed substitution. We believe that it is equal or superior in all respects to specified product, except as stated above; that it will provide the same Warranty as specified product; that we have included complete implications of the substitution; that we will pay redesign and other costs caused by the substitution which subsequently become apparent; and that we will pay costs to modify other parts of the Work as may be needed, to make all parts of the Work complete and functioning as a result of the substitution.

BIDDER/CONTRACTOR	DATE			
REVIEW AND ACTION				
Resubmit Substitution Request with the following additional information	ation:			
Substitution is accepted.				
Substitution is accepted with the following comments:	Substitution is accepted with the following comments:			
The proposed substitute request is approved if the proposed product can pass room peripherals including cameras				
and conference audio back to host PC and guest laptop connection	locations.			
Substitution is not accepted.				
ARCHITECT/ENGINEER	DATE			
David Bick	1/18/2024			
Revised 06/16 ORIGINAL: FILE/Bid Documents or Construc COPIES: Designer, Contractor, Agency, Project M				
SECTION 006325 - SUBSTITUTION	I REQUEST			

X

The proposed substitute request is approved if the proposed product can pass room peripherals including cameras and conference audio back to host PC and guest laptop connection locations.

**David Bick** 



Omega<sup>™</sup> Multi-format 4x2 matrix switcher

with HDMI, USB-C, and DisplayPort inputs, plus HDMI and HDBaseT outputs



### Introduction

The Atlona **AT-OME-MS42** is a 4x2 matrix switcher with HDMI, USB-C, and DisplayPort inputs, plus HDMI and HDBaseT outputs. Part of the Omega<sup>™</sup> Series of integration products for modern AV communications and collaboration, the OME-MS42 is HDCP 2.2 compliant and features HDBaseT extension for video up to 4K/60 4:2:0, plus embedded audio, control, Ethernet, and USB over distances up to 330 feet (100 meters). All inputs and the local HDMI output support 4K HDR and 4K/60 4:4:4 at HDMI data rates up to 18 Gbps. Additionally, 4K downscaling to 1080p @ 60, 30, or 24 Hz is available for the HDMI output when connected to an HD sink. The integrated USB extension addresses the challenge of connecting between USB devices at remote locations, and is ideal for software video conferencing and touch or interactive displays. The OME-MS42 includes USB 2.0 and USB-C interfaces for three host PCs, plus two peripheral devices such as a camera, microphone, speakerphone, or keyboard and mouse. It is ideal for video conferencing and many other 4K presentation applications with the OME-EX-RX receiver and OME-SR21 scaling receiver.

### **Applications**

Video conferencing

With the OME-EX-RX or OME-SR21 receiver, this switcher provides interfacing for local and remote USB devices for soft codec conferencing, with video and USB switched together between host PCs. As a matrix switcher with downscaling, the OME-MS42 is also ideal for hardware-based video conferencing, with the ability to route and optimize any source content to the codec far-end.

- **Meeting rooms and conference rooms** The OME-MS42 can serve as an AV integration centerpiece in a credenza, with interfacing into sources in the rack.
- Auditoriums and lecture halls

This switcher can be used for presenting 4K video content through the projector, while also optimizing for a 1080p confidence monitor.



Omega<sup>™</sup> **Multi-format 4x2 matrix switcher** with HDMI, USB-C, and DisplayPort inputs, plus HDMI and HDBaseT outputs

### **Key Features**

#### 4×2 AV matrix switcher

- HDMI, USB-C, and DisplayPort inputs.
- No need to provide adapters for USB-C or DisplayPort to HDMI.

#### USB-C input for AV, data, and device charging

- Provides immediate compatibility with laptops and tablets with USB-C ports supporting AV output.
- Allows clutter-free, single cable connectivity to a PC for video conferencing and collaboration.

#### HDBaseT and HDMI outputs with selectable AV switching modes

- HDBaseT output transmits AV, control, Ethernet, and USB up to 330 feet (100 meters) @ 1080p with CAT5e/6 or 4K/UHD using CAT6a/7 cable.
- Selectable switching modes available with auto-input selection when outputs are mirrored or matrixed.
- Enables simple configuration and effortless user operation, tailored to the specific AV application.

#### 4K to 1080p downscaling

- Integrated video processing available on the HDMI output for down-converting 4K/UHD @ 60 Hz to 1080p.
- Ideal for applications with 1080p displays, video conferencing codecs, and other HD sink devices.

#### USB 2.0 interface and extension up to 330 feet (100 meters)

- Two USB type B interfaces for connection to a host PC, plus two USB type A ports for peripheral devices such as cameras, soundbars, or touch displays. USB-C input is also available for data connection to a host PC or USB peripheral.
- Provides an ideal USB integration solution for software video conferencing and other applications. A maximum data rate of 120 Mbps is supported over HDBaseT.

#### Remote PoE+ (Power over Ethernet) or local powering

- Industry standard IEEE 802.3at PoE+ is supplied by an OME-EX-RX receiver or OME-SR21 scaling receiver over HDBaseT.
- Also can be locally powered by the optional AT-PS-2427-D4 power supply to supply PoE to a receiver and charge a USB-C mobile device.

#### Audio de-embedding

- De-embeds two channel PCM audio for the HDBaseT output and delivers to a balanced, analog audio output.
- Provides direct interfacing into an external audio system.

#### Automatic display control

- Automatically changes display power state based on active or standby mode of the switcher. Control signals to display are transmitted via IP, RS-232, or CEC.
- Enables effortless, automated system operation without the need for an external control system.



Omega<sup>™</sup> **Multi-format 4x2 matrix switcher** 

with HDMI, USB-C, and DisplayPort inputs, plus HDMI and HDBaseT outputs

### **Specifications**

Video				
Signal	Input - HDMI, USB-C, Disp Output - HDBaseT	olayPort		
HDCP	1.4 / 2.2	1.4 / 2.2		
Pixel Clock	300 MHz			
UHD/HD/SD	4096x2160@60 <sup>(1)</sup> /50/30/25 3840×2160@60 <sup>(1)</sup> /50/30/25 1080p@60/59.9/50/30/29.9 24/23.98Hz 1080i@30/29.97/25Hz	/24Hz	720p@60/59 576p@50Hz 576i@25Hz 480p@60/59 480i@30Hz	
VESA	2560×1600 2048×1536 1920×1200 1680×1050 1600×1200 1440×900 1400×1050 1280×1024		1280×800 1366×768 1360×768 1152×864 1024×768 800×600 640×480	
USB-C	Up to 4K/UHD @ 60 Hz			
Color Space	YUV, RGB			
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0			
Color Depth	8-bit, 10-bit, 12-bit			
HDR	HDR10, Hybrid-Log Gamm USB-C inputs only	HDR10, Hybrid-Log Gamma (HLG), and Dolby® Vision™ @ up to 60 Hz; HDMI and USB-C inputs only		
Audio				
HDMI / HDBaseT Pass-Through Formats	PCM 2.0 LPCM 5.1 LPCM 7.1	Dolby® Digit Dolby Digital Dolby TrueHI Dolby Atmos	Plus™ ⊃	DTS® Digital Surround™ DTS-HD Master Audio™ DTS:X®
Bit Depth	Up to 24 bits			
Analog Audio				
Format	Stereo 2-Channel			
Balanced Output	+4 dBu nominal gain, +20	+4 dBu nominal gain, +20 dB headroom		
Frequency Response	20 Hz to 20 kHz, ± 0.5 dB			
THD+N		< 0.004% at 20 Hz to 20 kHz		
SNR		> 105 dB at 1 kHz, zero clipping @ 0 dBFS, unweighted		
Sample Rate		32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz		
USB				
Signal	2.0			

0.9.100	
Maximum Data Rate	120 Mbps
USB-C	Supports Audio, Video, device and host data, and up to 60W power charging
	1 USB hub when connected to USB type B host port, 2 cascaded USB hubs when connected to USB-C port



Resolution / Distance

Omega<sup>™</sup> Multi-format 4x2 matrix switcher

with HDMI, USB-C, and DisplayPort inputs, plus HDMI and HDBaseT outputs

1080p - Feet / Meters

Resolution / Distance	4K/UHD - Feet / Me	ters	1080p - Feet / Mete	rs
HDMI IN/OUT	15	5	30	10
CAT5e	295	90	330	100
CAT6/6a/7	330	100	330	100
Ethernet				
Port	1 x RJ45			
Standards and Protocols	HTTPS, Telnet, mDN	1S		
Speeds	10/100/1000 Mbps			
Addressing		ctable through rear pa	anel, IP & RS-232 con	mands, and built-in
	web server			
RS-232				
Port	1 x 3-pin captive sc	rew; TX, RX, GND		
Use	Device control and	configuration		
	Bidirectional pass-th	nrough from control s	ystem over HDBaseT	
Baud Rates	2400, 4800, 9600, 1	9200, 38400, 57600,	115200	
Data flow	Bidirectional			
IP				
Port	1 x RJ45			
Protocols	HTTPS, Telnet, mDN			
Modes	DHCP, static - selec	table through front-pa	anel and web GUI	
CEC				
Port	HDMI, Type A, 19-p	in female		
Triggering	Through IP, RS-232, and built-in web server			
		, 		
Buttons and Indicators	1			
Buttons:				
HDMI OUT and HDBaseT OUT	2 - momentary, tact	51		
IP MODE, RESET, and TEST	3 - momentary, recessed			
Indicators:				
Inputs	8 - LED, blue			
IP MODE, RESET, and TEST	3 - LED, green			
Connectors				
HDMI IN	2 - Type A, 19-pin fe			
DP IN	1 - DisplayPort, fem			
USB-C IN		1, 24-pin female, AV in	nput (Alternate Mode)	
HDMI OUT	1 - Type A, 19-pin fe	emale		
HDBaseT OUT <sup>(2)</sup>	1 - RJ45, female			
USB HUB	2 - Type A, 4-pin fer	nale		
USB HOST	2 - Type B, female			
AUDIO OUT	1 - 5-pin captive sci	rew, balanced / unbal	anced 2-channel	
RS-232	1 - 3-pin captive sci	, ,		
LAN	1 - RJ45, 100Base-	Г		
PWR	1 - Internal 100-240	VAC 50/60Hz, IEC fe	male connector	
		17 18 887 881 12, 128 18		

4K/UHD - Feet / Meters



Omega<sup>™</sup> Multi-format 4x2 matrix switcher

with HDMI, USB-C, and DisplayPort inputs, plus HDMI and HDBaseT outputs

Environmental	Fahrenheit	Celsius	
Operating Temperature	+32 to +122	0 to +50	
Storage Temperature	-4 to +140	-20 to +60	
Operating Humidity (RH)	20% to 90%, non-condensing		
Maximum Operating Altitude	2000 meters		
Dewer			
Power			
Consumption	Unit only: 8.6W Full load: 104W (while powering USB-C of up 15W each, and USB type A devices up		
External Power Supply	Input: 100 - 240 V AC, 50/60 Hz Output: 24 V / 5A DC		
Dimensions (H x W x D)	Inches	Millimeters	
Unit	1.73 x 8.64 x 10	44 x 219.5 x 254	
Power Supply (AT-PS-245-D4)	1.60 x 2.60 x 6.20	40 x 66 x 157	
Weight	Pounds	Kilograms	
Device	3.46	1.57	
Certification			
Device	CE, FCC		
Power Supply	CE, FCC, cULus, RoHS		
Compliance	N		
NDAA-899	Yes		
Warranty			
Device	To view the product warranty, use the foll	owing link:	
	https://atlona.com/warranty		

### **Footnotes**

- (1) UHDp60 only supports 4:2:0 over HDBaseT.
- (2) Maximum limit of 6 USB hubs when traversing an HDBaseT link.

### Accessories

Compatible Receivers	
AT-OME-EX-RX	Omega HDMI Over HDBaseT Receiver with USB
AT-OME-SR21	Omega Scaler for HDBaseT and HDMI with USB
AT-LC-H2H-1M	LinkConnect HDMI to HDMI 1 Meter Cable
AT-LC-H2H-2M	LinkConnect HDMI to HDMI 2 Meter Cable
AT-LC-H2H-3M	LinkConnect HDMI to HDMI 3 Meter Cable
AT-LC-UC2UC-2M	LinkConnect USB-C to USB-C 2 Meter Cable
AT-LC-MDP2H-1M	LinkConnect Mini DisplayPort to HDMI 1 Meter Cable
AT-LC-MDP2H-2M	LinkConnect Mini DisplayPort to HDMI 2 Meter Cable
AT-LC-MDP2H-3M	LinkConnect Mini DisplayPort to HDMI 3 Meter Cable



Omega<sup>™</sup> **Multi-format 4x2 matrix switcher** with HDMI, USB-C, and DisplayPort inputs, plus HDMI and HDBaseT outputs

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